

HIGHWAY CONSTRUCTION

**km 1915 to km 1932
ALASKA HIGHWAY, Y.T.**

**VOLUME 2
GRAIN SIZE SUMMARIES
CENTRELINE TESTING**

This Data Package prepared for project viewing:

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GEOTECHNICAL INVESTIGATION
HIGHWAY CONSTRUCTION
km 1915 to km 1932, ALASKA HIGHWAY, Y.T.
CENTRELINE TESTING

CONTENTS

INTRODUCTION

Investigation notes, classification methods and legends

VOLUME 1

CENTRELINE TESTING

Subsurface exploration and testing report sheets are provided. The reports for the centreline holes are arranged according to project location, starting at km 1915+600 and increasing to km 1932+900.

Auger and Backhoe Testing

1990	TEST HOLE 01	shown with prefix 107-
1991	TEST HOLES 56 to 138	shown with prefix 141- thru 144-
	TEST HOLES 158 to 183	shown with prefix 145-
	TEST HOLES 184 to 195	shown with prefix 157- and 158-
	TEST HOLES 200 to 215	shown with prefix 157-
1992	TEST HOLES 01 to 20	shown with prefix 174-
1993	TEST HOLES 05 to 18	shown with prefix 212-
Air Rotary Test Drilling		
1993	TEST HOLES 100 to 118	shown with prefix 214- thru 216-
	TEST HOLES 119 to 122	shown with prefix 218-

NOTE: Gravel sizes larger than 12.5 mm are crushed during the air rotary drilling process, and therefore do not appear on the test hole logs. Maximum sizes are indicated in the backhoe test pit logs.

VOLUME 2

GRAIN SIZE SUMMARIES - CENTRELINE TESTING AND GRANULAR INVESTIGATIONS

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-18
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1915+625 O/S 20M LT
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 39
 LAB NO: 5794
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 40
 LAB NO: 5795
 DEPTH: 2.7-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	100
2.0	--
1.25	100
0.840	--
0.630	99
0.420	--
0.315	99
0.160	97
0.150	--
0.080	95

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	100
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	99
0.160	98
0.150	--
0.080	96

M.C. (%): 48

M.C. (%): 29

LIMITS

LIQUID: 39.4
 PLASTIC: 36.4
 P.I.: 3.0

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-17
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1915+725 O/S 15M LT
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 36
 LAB NO: 5791
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 37
 LAB NO: 5792
 DEPTH: 2.7-3.0
 TYPE: AUGER
 ORGANIC

FIELD NO: 38
 LAB NO: 5793
 DEPTH: 4.2-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	100
0.840	--
0.630	100
0.420	--
0.315	99
0.160	99
0.150	--
0.080	97

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	100
0.420	--
0.315	100
0.160	100
0.150	--
0.080	99

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	--
2.0	--
1.25	--
0.840	--
0.630	100
0.420	--
0.315	100
0.160	99
0.150	--
0.080	98

M.C. (%): 33

M.C. (%): 45

M.C. (%): 37

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: 35.0
 PLASTIC: 34.1
 P.I.: 0.9

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

% GRAVEL: 0
 % SAND: 1
 % FINES: 99

% GRAVEL: 0
 % SAND: 2
 % FINES: 98

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 141-60
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1915+800 O/S 7M RT.
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 165
 LAB NO: 4542
 DEPTH: 1.3-1.5
 TYPE: AUGER
 ORGANICS

FIELD NO: 166
 LAB NO: 4543
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 167
 LAB NO: 4544
 DEPTH: 4.3-4.5
 TYPE: AUGER
 ORGANICS

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	90
12.7	87
9.5	87
4.76	85
2.38	--
2.00	82
1.19	--
0.841	79
0.595	--
0.42	77
0.297	--
0.177	--
0.149	74
0.074	69

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	94

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	96
0.074	95

M.C. (%): 25

M.C. (%): 32

M.C. (%): 51

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 15
 % SAND: 16
 % FINES: 69

% GRAVEL: 1
 % SAND: 6
 % FINES: 94

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 141-61
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1915+975
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 168
 LAB NO: 4545
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 169
 LAB NO: 4546
 DEPTH: 2.8-3.0
 TYPE: AUGER
 ORGANIC

FIELD NO: 170
 LAB NO: 4547
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	96
19.0	93
12.7	92
9.5	90
4.76	86
2.38	--
2.00	81
1.19	--
0.841	77
0.595	--
0.42	74
0.297	--
0.177	--
0.149	68
0.074	64

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	80
25.4	80
19.0	78
12.7	73
9.5	67
4.76	60
2.38	--
2.00	52
1.19	--
0.841	47
0.595	--
0.42	43
0.297	--
0.177	--
0.149	38
0.074	31

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	97
19.0	90
12.7	87
9.5	85
4.76	79
2.38	--
2.00	74
1.19	--
0.841	69
0.595	--
0.42	65
0.297	--
0.177	--
0.149	58
0.074	52

M.C. (%): 17

M.C. (%): 8

M.C. (%): 15

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 14
 % SAND: 22
 % FINES: 64

% GRAVEL: 40
 % SAND: 28
 % FINES: 31

% GRAVEL: 21
 % SAND: 27
 % FINES: 52

CLASSIFICATION:
 SANDY SILT (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 141-62
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1916+060 O/S 5M LT.
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 171
 LAB NO: 4548
 DEPTH: 1.5-1.7
 TYPE: AUGER

FIELD NO: 172
 LAB NO: 4549
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 173
 LAB NO: 4550
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	93
25.4	83
19.0	74
12.7	57
9.5	48
4.76	33
2.38	--
2.00	21
1.19	--
0.841	12
0.595	--
0.42	6
0.297	--
0.177	--
0.149	3
0.074	2

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	92
25.4	85
19.0	79
12.7	61
9.5	50
4.76	32
2.38	--
2.00	19
1.19	--
0.841	12
0.595	--
0.42	6
0.297	--
0.177	--
0.149	3
0.074	3

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	85
25.4	76
19.0	63
12.7	54
9.5	48
4.76	39
2.38	--
2.00	30
1.19	--
0.841	21
0.595	--
0.42	13
0.297	--
0.177	--
0.149	7
0.074	4

M.C. (%): 2

M.C. (%): 1

M.C. (%): 5

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 67
 % SAND: 31
 % FINES: 2

% GRAVEL: 68
 % SAND: 30
 % FINES: 3

% GRAVEL: 61
 % SAND: 34
 % FINES: 4

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SAND
 (GP)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-16
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1916+175
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 35
 LAB NO: 5790
 DEPTH: 1.3-1.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	89
20.0	81
12.5	67
10.0	62
5.0	49
2.5	42
2.0	--
1.25	35
0.840	--
0.630	28
0.420	--
0.315	23
0.160	17
0.150	--
0.080	14

M.C. (%): 6

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 51
 % SAND: 36
 % FINES: 14

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-15
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1916+275
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 32
 LAB NO: 5787
 DEPTH: 1.2-1.5
 TYPE: AUGER

FIELD NO: 33
 LAB NO: 5788
 DEPTH: 2.7-3.0
 TYPE: AUGER

FIELD NO: 34
 LAB NO: 5789
 DEPTH: 4.2-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	100
5.0	98
2.5	97
2.0	--
1.25	95
0.840	--
0.630	92
0.420	--
0.315	89
0.160	86
0.150	--
0.080	81

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	95
10.0	92
5.0	86
2.5	80
2.0	--
1.25	75
0.840	--
0.630	69
0.420	--
0.315	63
0.160	58
0.150	--
0.080	51

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	75
20.0	71
12.5	58
10.0	54
5.0	43
2.5	35
2.0	--
1.25	27
0.840	--
0.630	19
0.420	--
0.315	12
0.160	10
0.150	--
0.080	9

M.C. (%): 42

M.C. (%): 14

M.C. (%): 8

LIMITS
 LIQUID: 19.2
 PLASTIC: 14.2
 P.I.: 5.0

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 2
 % SAND: 16
 % FINES: 81

% GRAVEL: 14
 % SAND: 34
 % FINES: 51

% GRAVEL: 57
 % SAND: 34
 % FINES: 9

CLASSIFICATION:
 SILTY CLAY WITH
 SAND (CL-ML)

CLASSIFICATION:
 SANDY SILT (ML)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 141-63
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1916+375 O/S 4M RT.
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 174
 LAB NO: 4551
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 175
 LAB NO: 4552
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	89
25.4	83
19.0	78
12.7	65
9.5	59
4.76	48
2.38	--
2.00	38
1.19	--
0.841	25
0.595	--
0.42	15
0.297	--
0.177	--
0.149	8
0.074	5

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	86
19.0	70
12.7	54
9.5	46
4.76	31
2.38	--
2.00	20
1.19	--
0.841	12
0.595	--
0.42	8
0.297	--
0.177	--
0.149	4
0.074	3

M.C. (%): 3

M.C. (%): 2

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 52
 % SAND: 43
 % FINES: 5

% GRAVEL: 69
 % SAND: 28
 % FINES: 3

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 218-119
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1916+450 O/S 50M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.16

FIELD NO: 56
 LAB NO: 97
 DEPTH: 3.8-4.5
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	97
5.0	69
2.5	36
2.0	--
1.25	13
0.840	--
0.630	9
0.420	--
0.315	7
0.160	6
0.150	--
0.080	5

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 31
 % SAND: 64
 % FINES: 5

CLASSIFICATION:
 POORLY GRADED
 SAND WITH SILT &
 GRAVEL (SP-SM)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 218-122
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1916+450 O/S 100M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.16

FIELD NO: 59
 LAB NO: 100
 DEPTH: 3.2-3.7
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	97
10.0	94
5.0	76
2.5	59
2.0	--
1.25	43
0.840	--
0.630	29
0.420	--
0.315	19
0.160	13
0.150	--
0.080	10

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 24
 % SAND: 66
 % FINES: 10

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 141-64
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1916+475 O/S 7M LT.
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 176
 LAB NO: 4553
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 177
 LAB NO: 4554
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 178
 LAB NO: 4555
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	86
19.0	73
12.7	59
9.5	53
4.76	44
2.38	--
2.00	34
1.19	--
0.841	21
0.595	--
0.42	9
0.297	--
0.177	--
0.149	5
0.074	2

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	86
12.7	65
9.5	55
4.76	37
2.38	--
2.00	26
1.19	--
0.841	17
0.595	--
0.42	11
0.297	--
0.177	--
0.149	4
0.074	3

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	93
25.4	87
19.0	77
12.7	63
9.5	53
4.76	39
2.38	--
2.00	27
1.19	--
0.841	18
0.595	--
0.42	11
0.297	--
0.177	--
0.149	4
0.074	3

M.C. (%): 2

M.C. (%): 2

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 56
 % SAND: 41
 % FINES: 2

% GRAVEL: 63
 % SAND: 34
 % FINES: 3

% GRAVEL: 61
 % SAND: 36
 % FINES: 3

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SAND
 (GP)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 218-120
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1916+550 O/S 50M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.16

FIELD NO: 57
 LAB NO: 98
 DEPTH: 3.8-4.4
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	100
5.0	86
2.5	50
2.0	--
1.25	18
0.840	--
0.630	6
0.420	--
0.315	4
0.160	4
0.150	--
0.080	4

M.C. (%): 4

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 14
 % SAND: 82
 % FINES: 4

CLASSIFICATION:
 POORLY GRADED
 SAND (SP)

PROJECT NUMBER: 745927 HOLE NUMBER: 141-65
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1916+575 O/S 8M LT.
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 179
 LAB NO: 4556
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 180
 LAB NO: 4557
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 181
 LAB NO: 4558
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	87
25.4	63
19.0	57
12.7	43
9.5	39
4.76	32
2.38	--
2.00	26
1.19	--
0.841	20
0.595	--
0.42	14
0.297	--
0.177	--
0.149	11
0.074	9

101.6	--
76.2	--
50.8	100
38.1	90
25.4	78
19.0	62
12.7	49
9.5	41
4.76	29
2.38	--
2.00	21
1.19	--
0.841	14
0.595	--
0.42	9
0.297	--
0.177	--
0.149	7
0.074	5

101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	77
12.7	64
9.5	56
4.76	41
2.38	--
2.00	28
1.19	--
0.841	17
0.595	--
0.42	11
0.297	--
0.177	--
0.149	7
0.074	6

M.C. (%): 6

M.C. (%): 3

M.C. (%): 3

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 68
 % SAND: 22
 % FINES: 9

% GRAVEL: 71
 % SAND: 24
 % FINES: 5

% GRAVEL: 59
 % SAND: 36
 % FINES: 6

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 218-121
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1916+650 O/S 75M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.16

FIELD NO: 58
 LAB NO: 99
 DEPTH: 4.3-4.9
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	99
5.0	76
2.5	44
2.0	--
1.25	17
0.840	--
0.630	7
0.420	--
0.315	6
0.160	5
0.150	--
0.080	5

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 24
 % SAND: 71
 % FINES: 5

CLASSIFICATION:
 POORLY GRADED
 SAND WITH SILT &
 GRAVEL (SP-SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 141-66
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1916+675 O/S 7M RT.
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 182
 LAB NO: 4559
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 183
 LAB NO: 4560
 DEPTH: 2.8-3.0
 TYPE: AUGER
 ORGANIC

FIELD NO: 184
 LAB NO: 4561
 DEPTH: 4.3-4.5
 TYPE: AUGER
 ORGANICS

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	89
19.0	81
12.7	72
9.5	65
4.76	49
2.38	--
2.00	37
1.19	--
0.841	28
0.595	--
0.42	22
0.297	--
0.177	--
0.149	15
0.074	12

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	93
25.4	93
19.0	88
12.7	82
9.5	78
4.76	69
2.38	--
2.00	61
1.19	--
0.841	54
0.595	--
0.42	49
0.297	--
0.177	--
0.149	45
0.074	41

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	75
12.7	70
9.5	66
4.76	57
2.38	--
2.00	49
1.19	--
0.841	42
0.595	--
0.42	39
0.297	--
0.177	--
0.149	35
0.074	33

M.C. (%): 5

M.C. (%): 16

M.C. (%): 12

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 51
 % SAND: 37
 % FINES: 12

% GRAVEL: 31
 % SAND: 27
 % FINES: 41

% GRAVEL: 43
 % SAND: 24
 % FINES: 33

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-67
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1916+780 O/S 7M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 185
 LAB NO: 4562
 DEPTH: 1.3-1.5
 TYPE: AUGER
 EST. 80% ORGANIC

FIELD NO: 186
 LAB NO: 4563
 DEPTH: 2.8-3.0
 TYPE: AUGER
 ORGANICS

FIELD NO: 187
 LAB NO: 4564
 DEPTH: 4.3-4.5
 TYPE: AUGER
 ORGANICS

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	98
1.19	--
0.841	94
0.595	--
0.42	89
0.297	--
0.177	--
0.149	81
0.074	77

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	98
12.7	96
9.5	95
4.76	91
2.38	--
2.00	88
1.19	--
0.841	85
0.595	--
0.42	82
0.297	--
0.177	--
0.149	78
0.074	74

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	77
38.1	77
25.4	67
19.0	63
12.7	59
9.5	57
4.76	53
2.38	--
2.00	51
1.19	--
0.841	48
0.595	--
0.42	45
0.297	--
0.177	--
0.149	42
0.074	39

M.C. (%): 47

M.C. (%): 31

M.C. (%): 19

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 2
 % SAND: 22
 % FINES: 77

% GRAVEL: 9
 % SAND: 17
 % FINES: 74

% GRAVEL: 47
 % SAND: 14
 % FINES: 39

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILTY GRAVEL (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-68
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1916+875 O/S 10M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 188
 LAB NO: 4565
 DEPTH: 1.3-1.5
 TYPE: AUGER
 ORGANICS

FIELD NO: 189
 LAB NO: 4566
 DEPTH: 2.8-3.0
 TYPE: AUGER
 ORGANICS

FIELD NO: 190
 LAB NO: 4567
 DEPTH: 4.3-4.5
 TYPE: AUGER
 ORGANICS

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	99
12.7	94
9.5	91
4.76	83
2.38	--
2.00	76
1.19	--
0.841	70
0.595	--
0.42	66
0.297	--
0.177	--
0.149	58
0.074	53

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	93
9.5	88
4.76	83
2.38	--
2.00	78
1.19	--
0.841	74
0.595	--
0.42	70
0.297	--
0.177	--
0.149	66
0.074	64

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	94
12.7	88
9.5	83
4.76	74
2.38	--
2.00	68
1.19	--
0.841	62
0.595	--
0.42	50
0.297	--
0.177	--
0.149	41
0.074	40

M.C. (%): 21

M.C. (%): 24

M.C. (%): 15

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 17
 % SAND: 30
 % FINES: 53

% GRAVEL: 17
 % SAND: 19
 % FINES: 64

% GRAVEL: 26
 % SAND: 34
 % FINES: 40

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-69
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1916+975 O/S 9M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.15

FIELD NO: 191
 LAB NO: 4568
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 192
 LAB NO: 4569
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 193
 LAB NO: 4570
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	94
12.7	90
9.5	88
4.76	81
2.38	--
2.00	73
1.19	--
0.841	64
0.595	--
0.42	54
0.297	--
0.177	--
0.149	44
0.074	39

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	71
19.0	61
12.7	53
9.5	47
4.76	38
2.38	--
2.00	31
1.19	--
0.841	26
0.595	--
0.42	22
0.297	--
0.177	--
0.149	19
0.074	15

M.C. (%): 3

M.C. (%): 14

M.C. (%): 6

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 19
 % SAND: 42
 % FINES: 39

% GRAVEL: 62
 % SAND: 22
 % FINES: 15

CLASSIFICATION:

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-70
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1917+075 O/S 6M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 194
 LAB NO: 4766
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 195
 LAB NO: 4767
 DEPTH: 2.8-3.0
 TYPE: AUGER
 ORGANIC

FIELD NO: 196
 LAB NO: 4768
 DEPTH: 4.3-4.5
 TYPE: AUGER
 ORGANIC

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	82
12.7	69
9.5	59
4.76	46
2.38	--
2.00	35
1.19	--
0.841	27
0.595	--
0.42	22
0.297	--
0.177	--
0.149	15
0.074	12

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	86
0.595	--
0.42	81
0.297	--
0.177	--
0.149	76
0.074	73

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	95
0.595	--
0.42	92
0.297	--
0.177	--
0.149	85
0.074	82

M.C. (%): 6

M.C. (%): 82

M.C. (%): 65

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 54
 % SAND: 34
 % FINES: 12

% GRAVEL: 1
 % SAND: 26
 % FINES: 73

% GRAVEL: 1
 % SAND: 17
 % FINES: 82

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT WITH SAND
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-71
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1917+175 O/S 5M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 197
 LAB NO: 4769
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 198
 LAB NO: 4770
 DEPTH: 2.8-3.0
 TYPE: AUGER
 ORGANICS

FIELD NO: 199
 LAB NO: 4771
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	72
19.0	72
12.7	70
9.5	68
4.76	65
2.38	--
2.00	62
1.19	--
0.841	59
0.595	--
0.42	57
0.297	--
0.177	--
0.149	52
0.074	48

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	95
0.074	92

M.C. (%): 10

M.C. (%): 66

M.C. (%): 38

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 35
 % SAND: 18
 % FINES: 48

% GRAVEL: 0
 % SAND: 7
 % FINES: 92

CLASSIFICATION:

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-72
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1917+300 O/S 4M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 200
 LAB NO: 4772
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 201
 LAB NO: 4773
 DEPTH: 2.8-3.0
 TYPE: AUGER
 ORGANIC

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	97
2.38	--
2.00	94
1.19	--
0.841	80
0.595	--
0.42	74
0.297	--
0.177	--
0.149	65
0.074	61

M.C. (%): 7

M.C. (%): 112

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 3
 % SAND: 36
 % FINES: 61

CLASSIFICATION:

CLASSIFICATION:
 SANDY SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-73
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1917+400 O/S 7M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 202
 LAB NO: 4774
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 203
 LAB NO: 4775
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 204
 LAB NO: 4776
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	97
4.76	96
2.38	--
2.00	96
1.19	--
0.841	95
0.595	--
0.42	94
0.297	--
0.177	--
0.149	91
0.074	89

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	98
0.297	--
0.177	--
0.149	94
0.074	90

M.C. (%): 12

M.C. (%): 27

M.C. (%): 27

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 4
 % SAND: 8
 % FINES: 89

% GRAVEL: 0
 % SAND: 10
 % FINES: 90

CLASSIFICATION:

CLASSIFICATION:
SILT (ML)

CLASSIFICATION:
SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-74
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1917+600 O/S 15M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 205
 LAB NO: 4777
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 206
 LAB NO: 4778
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 207
 LAB NO: 4779
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	82
19.0	77
12.7	72
9.5	67
4.76	62
2.38	--
2.00	56
1.19	--
0.841	51
0.595	--
0.42	48
0.297	--
0.177	--
0.149	45
0.074	43

M.C. (%): 12

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 38
 % SAND: 19
 % FINES: 43

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	100
50.8	78
38.1	71
25.4	54
19.0	45
12.7	35
9.5	32
4.76	28
2.38	--
2.00	24
1.19	--
0.841	21
0.595	--
0.42	19
0.297	--
0.177	--
0.149	16
0.074	13

M.C. (%): 4

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 72
 % SAND: 14
 % FINES: 13

CLASSIFICATION:
 SILTY GRAVEL (GM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	89
25.4	68
19.0	64
12.7	49
9.5	43
4.76	32
2.38	--
2.00	26
1.19	--
0.841	23
0.595	--
0.42	20
0.297	--
0.177	--
0.149	11
0.074	8

M.C. (%): 3

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 68
 % SAND: 23
 % FINES: 8

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-107
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAMM ROTORY DRILL
 HOLE LOCATION: 1917+600 O/S 50M RT
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 28
 LAB NO: 69
 DEPTH: 5.5-6.3
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	95
5.0	76
2.5	57
2.0	--
1.25	41
0.840	--
0.630	31
0.420	--
0.315	23
0.160	18
0.150	--
0.080	14

M.C. (%): 3

LIMITS

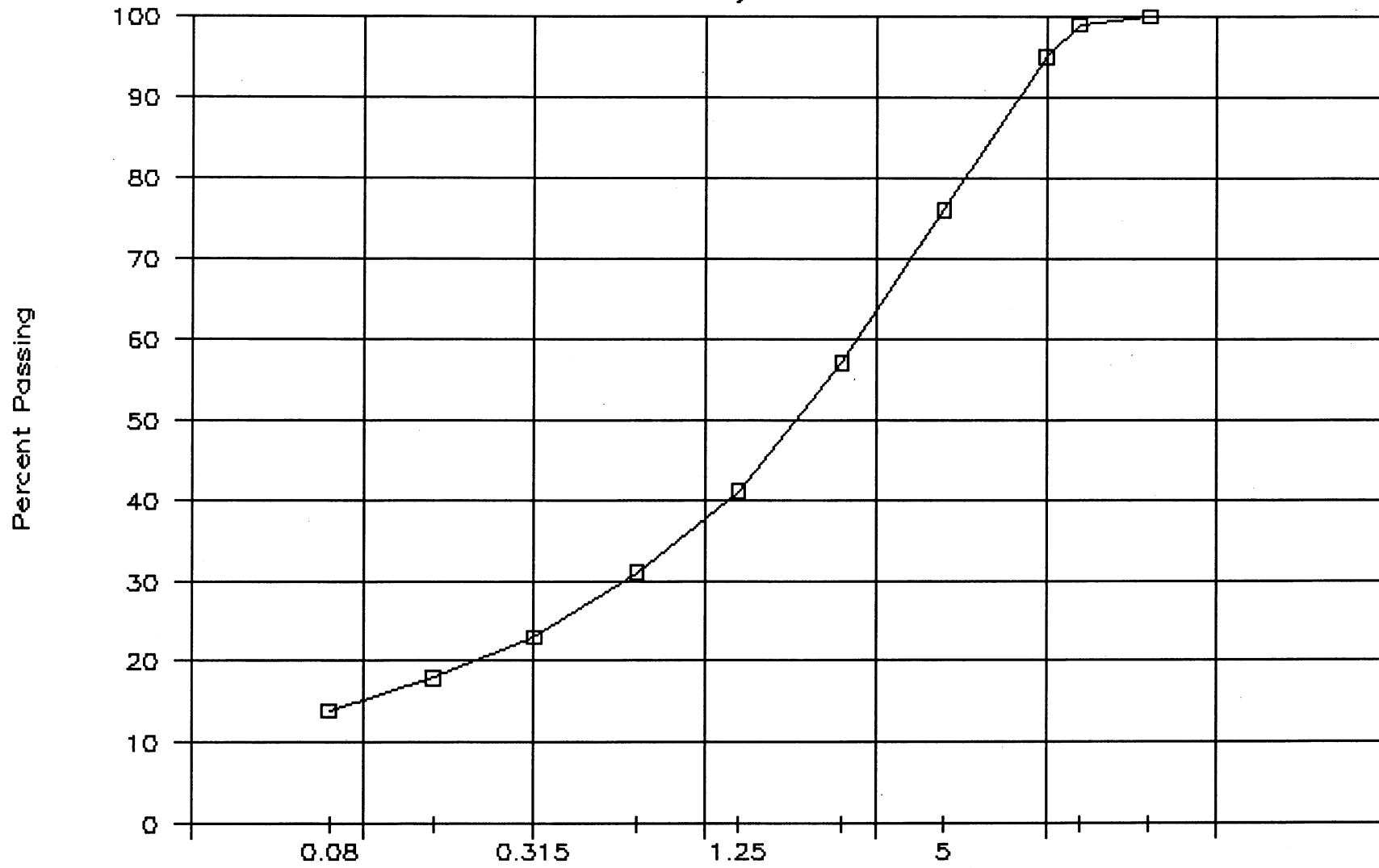
LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 24
 % SAND: 62
 % FINES: 14

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 107



□ SAMP. 28

◇ SAMP.

△ SAMP.

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PROJECT NUMBER: 745927 HOLE NUMBER: 142-75
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1917+700 O/S 5M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 208
 LAB NO: 4780
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 209
 LAB NO: 4781
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 210
 LAB NO: 4782
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	100
50.8	83
38.1	83
25.4	56
19.0	52
12.7	40
9.5	35
4.76	28
2.38	--
2.00	23
1.19	--
0.841	19
0.595	--
0.42	14
0.297	--
0.177	--
0.149	10
0.074	8

101.6	--
76.2	--
50.8	--
38.1	100
25.4	80
19.0	63
12.7	48
9.5	39
4.76	29
2.38	--
2.00	23
1.19	--
0.841	18
0.595	--
0.42	13
0.297	--
0.177	--
0.149	8
0.074	6

101.6	--
76.2	--
50.8	--
38.1	100
25.4	88
19.0	75
12.7	57
9.5	48
4.76	35
2.38	--
2.00	27
1.19	--
0.841	21
0.595	--
0.42	15
0.297	--
0.177	--
0.149	7
0.074	6

M.C. (%): 6

M.C. (%): 2

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 72
 % SAND: 20
 % FINES: 8

% GRAVEL: 71
 % SAND: 23
 % FINES: 6

% GRAVEL: 65
 % SAND: 30
 % FINES: 6

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-106
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAMM ROTORY DRILL
 HOLE LOCATION: 1917+700 O/S 50M RT
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 26
 LAB NO: 67
 DEPTH: 4.2-5.0
 TYPE: RETURN

FIELD NO: 27
 LAB NO: 68
 DEPTH: 10.7-11.
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	98
10.0	93
5.0	61
2.5	35
2.0	--
1.25	19
0.840	--
0.630	10
0.420	--
0.315	7
0.160	6
0.150	--
0.080	5

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	96
5.0	80
2.5	67
2.0	--
1.25	56
0.840	--
0.630	49
0.420	--
0.315	42
0.160	34
0.150	--
0.080	28

M.C. (%): 4

M.C. (%): 8

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 39
 % SAND: 56
 % FINES: 5

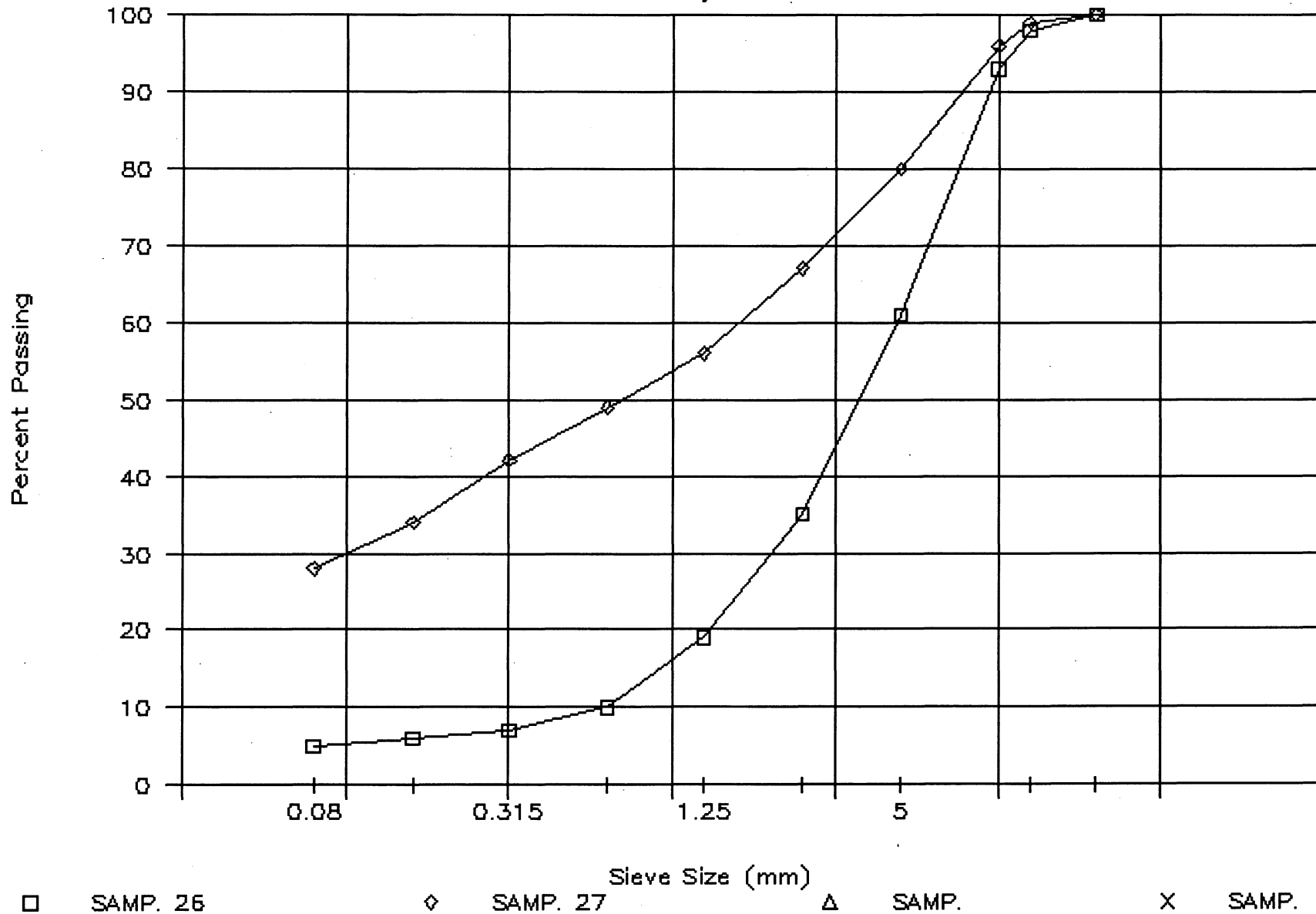
% GRAVEL: 20
 % SAND: 52
 % FINES: 28

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis — Hole 106



PROJECT NUMBER: 202101 0302 HOLE NUMBER: 215-108
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1917+750 O/S 100M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.13

FIELD NO: 29
 LAB NO: 70
 DEPTH: 5.2-5.8
 TYPE: RETURN

FIELD NO: 30
 LAB NO: 71
 DEPTH: 10.4-11.
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	88
10.0	76
5.0	47
2.5	31
2.0	--
1.25	20
0.840	--
0.630	15
0.420	--
0.315	13
0.160	11
0.150	--
0.080	9

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	94
10.0	85
5.0	46
2.5	26
2.0	--
1.25	16
0.840	--
0.630	12
0.420	--
0.315	10
0.160	9
0.150	--
0.080	7

M.C. (%): 2

M.C. (%): 3

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 53
 % SAND: 39
 % FINES: 9

% GRAVEL: 54
 % SAND: 39
 % FINES: 7

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-76
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1917+800 O/S 5M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 211
 LAB NO: 4783
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 212
 LAB NO: 4784
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 213
 LAB NO: 4785
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	84
19.0	75
12.7	62
9.5	52
4.76	38
2.38	--
2.00	25
1.19	--
0.841	19
0.595	--
0.42	16
0.297	--
0.177	--
0.149	7
0.074	4

101.6	--
76.2	--
50.8	--
38.1	100
25.4	96
19.0	80
12.7	55
9.5	41
4.76	21
2.38	--
2.00	12
1.19	--
0.841	9
0.595	--
0.42	7
0.297	--
0.177	--
0.149	5
0.074	4

101.6	--
76.2	--
50.8	--
38.1	100
25.4	83
19.0	70
12.7	55
9.5	46
4.76	32
2.38	--
2.00	23
1.19	--
0.841	15
0.595	--
0.42	9
0.297	--
0.177	--
0.149	5
0.074	3

M.C. (%): 2

M.C. (%): 3

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 62
 % SAND: 34
 % FINES: 4

% GRAVEL: 79
 % SAND: 17
 % FINES: 4

% GRAVEL: 68
 % SAND: 29
 % FINES: 3

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SAND
 (GP)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-105
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAMM ROTORY DRILL
 HOLE LOCATION: 1917+800 O/S 50M RT
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 24
 LAB NO: 65
 DEPTH: 2.9-3.5
 TYPE: RETURN

FIELD NO: 25
 LAB NO: 66
 DEPTH: 10.6-11.
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	94
10.0	88
5.0	59
2.5	43
2.0	--
1.25	29
0.840	--
0.630	19
0.420	--
0.315	14
0.160	10
0.150	--
0.080	8

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	98
10.0	95
5.0	78
2.5	64
2.0	--
1.25	48
0.840	--
0.630	36
0.420	--
0.315	24
0.160	17
0.150	--
0.080	15

M.C. (%): 2

M.C. (%): 5

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 41
 % SAND: 51
 % FINES: 8

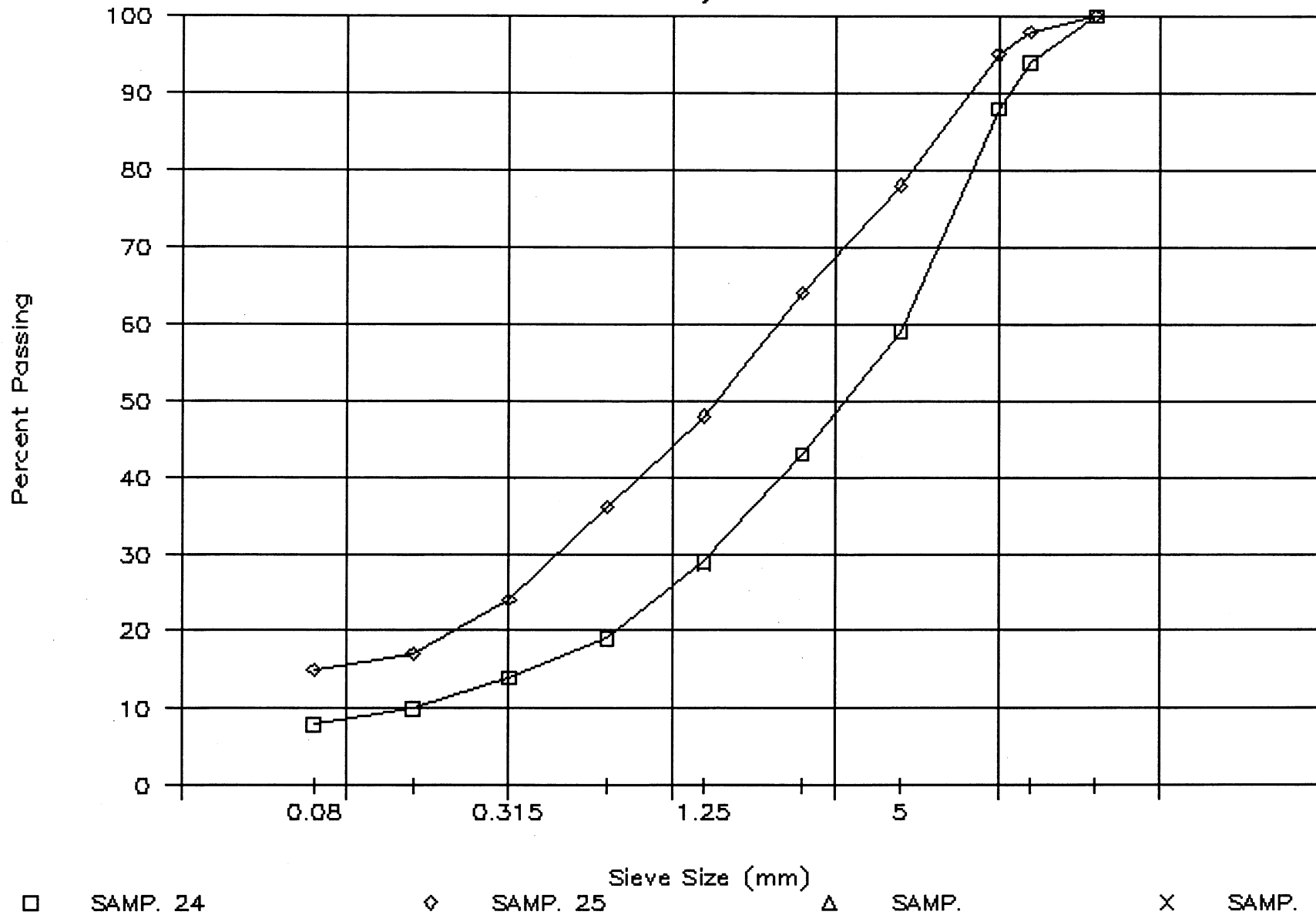
% GRAVEL: 22
 % SAND: 64
 % FINES: 15

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 105



PROJECT NUMBER: 202101 0302 HOLE NUMBER: 215-109
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1917+850 O/S 100M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.13

FIELD NO: 31
 LAB NO: 72
 DEPTH: 4.2-5.0
 TYPE: RETURN

FIELD NO: 32
 LAB NO: 73
 DEPTH: 10.5-11.
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	97
5.0	76
2.5	51
2.0	--
1.25	37
0.840	--
0.630	21
0.420	--
0.315	10
0.160	7
0.150	--
0.080	6

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	98
10.0	91
5.0	50
2.5	16
2.0	--
1.25	5
0.840	--
0.630	-9
0.420	--
0.315	-9
0.160	-9
0.150	--
0.080	-10

M.C. (%): 4

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 24
 % SAND: 70
 % FINES: 6

% GRAVEL: 50
 % SAND: 60
 % FINES: -10

CLASSIFICATION:
 POORLY GRADED
 SAND WITH SILT &
 GRAVEL (SP-SM)

CLASSIFICATION:
 POORLY GRADED
 SAND WITH GRAVEL
 (SP)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-77
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1917+900 O/S 9M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 214
 LAB NO: 4786
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 215
 LAB NO: 4787
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 216
 LAB NO: 4788
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	93
19.0	84
12.7	60
9.5	53
4.76	38
2.38	--
2.00	29
1.19	--
0.841	21
0.595	--
0.42	15
0.297	--
0.177	--
0.149	10
0.074	8

101.6	--
76.2	--
50.8	100
38.1	88
25.4	75
19.0	60
12.7	43
9.5	36
4.76	24
2.38	--
2.00	17
1.19	--
0.841	12
0.595	--
0.42	8
0.297	--
0.177	--
0.149	5
0.074	3

101.6	--
76.2	--
50.8	100
38.1	80
25.4	63
19.0	51
12.7	40
9.5	35
4.76	27
2.38	--
2.00	20
1.19	--
0.841	15
0.595	--
0.42	10
0.297	--
0.177	--
0.149	6
0.074	4

M.C. (%): 3

M.C. (%): 2

M.C. (%): 2

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 62
 % SAND: 31
 % FINES: 8

% GRAVEL: 76
 % SAND: 21
 % FINES: 3

% GRAVEL: 73
 % SAND: 23
 % FINES: 4

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SAND
 (GP)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SAND
 (GP)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-104
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAMM ROTORY DRILL
 HOLE LOCATION: 1917+900 O/S 50M RT
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 22
 LAB NO: 63
 DEPTH: 3.9-4.7
 TYPE: RETURN

FIELD NO: 23
 LAB NO: 64
 DEPTH: 9.0-9.8
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	95
5.0	77
2.5	58
2.0	--
1.25	38
0.840	--
0.630	23
0.420	--
0.315	15
0.160	12
0.150	--
0.080	11

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	96
10.0	94
5.0	77
2.5	58
2.0	--
1.25	39
0.840	--
0.630	24
0.420	--
0.315	14
0.160	10
0.150	--
0.080	8

M.C. (%): 4

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 23
 % SAND: 66
 % FINES: 11

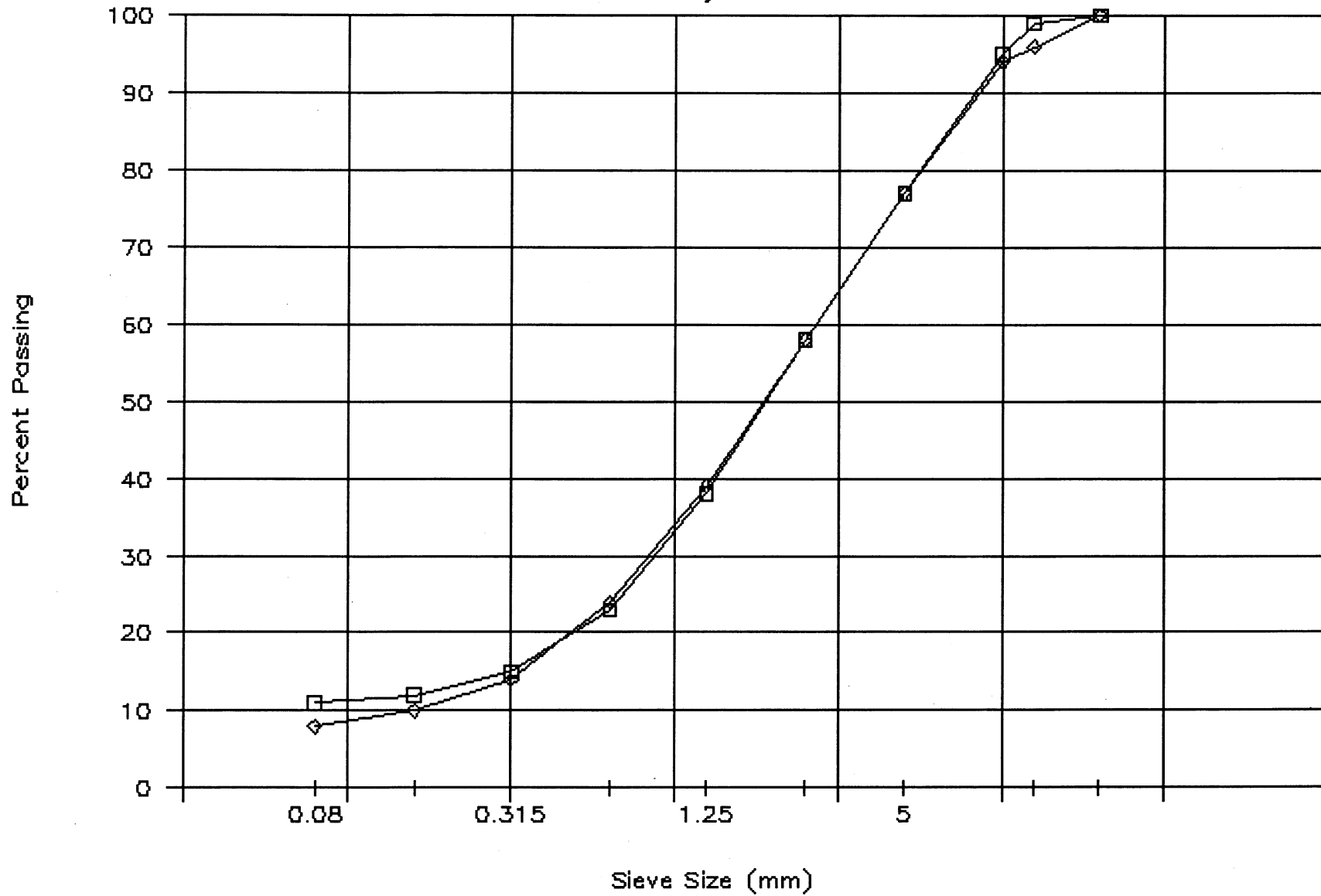
% GRAVEL: 23
 % SAND: 68
 % FINES: 8

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 104



□ SAMP. 22

◇ SAMP. 23

△ SAMP.

× SAMP.

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 215-110
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1917+950 O/S 100M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.13

FIELD NO: 33
 LAB NO: 74
 DEPTH: 4.6-5.4
 TYPE: RETURN

FIELD NO: 34
 LAB NO: 75
 DEPTH: 16.2-17.
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	95
5.0	62
2.5	33
2.0	--
1.25	14
0.840	--
0.630	6
0.420	--
0.315	6
0.160	5
0.150	--
0.080	4

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	98
10.0	91
5.0	56
2.5	28
2.0	--
1.25	8
0.840	--
0.630	3
0.420	--
0.315	2
0.160	2
0.150	--
0.080	2

M.C. (%): 3

M.C. (%): 3

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 38
 % SAND: 58
 % FINES: 4

% GRAVEL: 44
 % SAND: 54
 % FINES: 2

CLASSIFICATION:
 POORLY GRADED
 SAND WITH GRAVEL
 (SP)

CLASSIFICATION:
 POORLY GRADED
 SAND WITH GRAVEL
 (SP)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-78
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1918+000 O/S 3M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 217
 LAB NO: 4789
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 218
 LAB NO: 4790
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 219
 LAB NO: 4791
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	89
25.4	78
19.0	70
12.7	55
9.5	45
4.76	32
2.38	--
2.00	24
1.19	--
0.841	18
0.595	--
0.42	14
0.297	--
0.177	--
0.149	7
0.074	5

M.C. (%): 3

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 68
 % SAND: 28
 % FINES: 5

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	86
12.7	65
9.5	54
4.76	36
2.38	--
2.00	26
1.19	--
0.841	19
0.595	--
0.42	11
0.297	--
0.177	--
0.149	5
0.074	4

M.C. (%): 2

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 64
 % SAND: 32
 % FINES: 4

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	91
19.0	82
12.7	68
9.5	59
4.76	42
2.38	--
2.00	25
1.19	--
0.841	14
0.595	--
0.42	9
0.297	--
0.177	--
0.149	4
0.074	3

M.C. (%): 2

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 58
 % SAND: 39
 % FINES: 3

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-103
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAMM ROTARY DRILL
 HOLE LOCATION: 1918+000 O/S 50M RT
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 20
 LAB NO: 61
 DEPTH: 3.2-4.0
 TYPE: RETURN

FIELD NO: 21
 LAB NO: 62
 DEPTH: 7.4-8.0
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	92
5.0	66
2.5	50
2.0	--
1.25	38
0.840	--
0.630	29
0.420	--
0.315	23
0.160	18
0.150	--
0.080	14

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	99
5.0	90
2.5	78
2.0	--
1.25	60
0.840	--
0.630	42
0.420	--
0.315	25
0.160	14
0.150	--
0.080	10

M.C. (%): 3

M.C. (%): 2

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 34
 % SAND: 51
 % FINES: 14

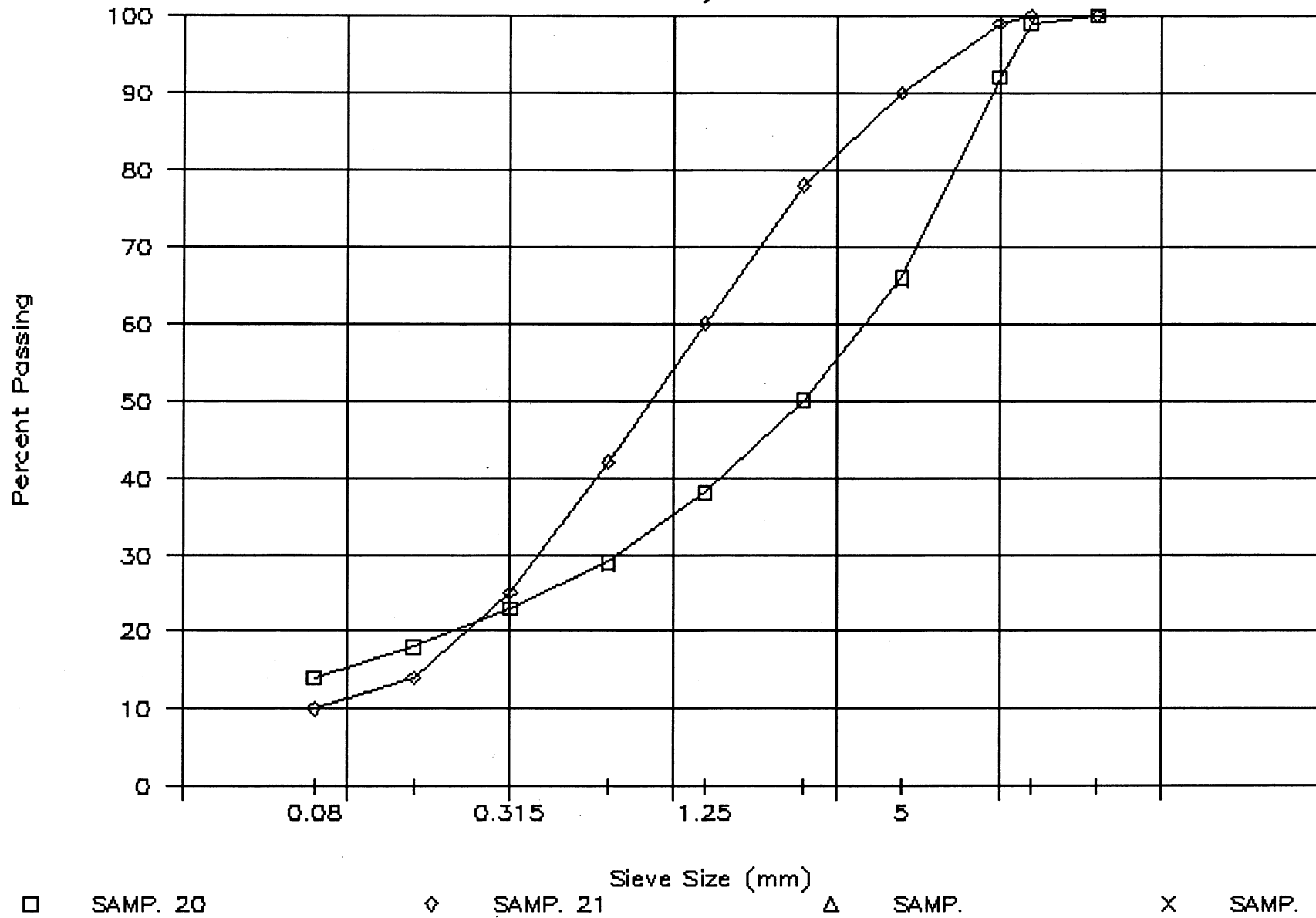
% GRAVEL: 10
 % SAND: 80
 % FINES: 10

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT (SW-SM)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 103



PROJECT NUMBER: 202101 0302 HOLE NUMBER: 215-111
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1918+050 O/S 100M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.13

FIELD NO: 35
 LAB NO: 76
 DEPTH: 5.1-5.7
 TYPE: RETURN

FIELD NO: 36
 LAB NO: 77
 DEPTH: 16.2-17.
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	97
5.0	73
2.5	49
2.0	--
1.25	29
0.840	--
0.630	17
0.420	--
0.315	11
0.160	9
0.150	--
0.080	8

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	91
10.0	81
5.0	50
2.5	31
2.0	--
1.25	20
0.840	--
0.630	14
0.420	--
0.315	11
0.160	9
0.150	--
0.080	7

M.C. (%): 5

M.C. (%): 2

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 27
 % SAND: 65
 % FINES: 8

% GRAVEL: 50
 % SAND: 43
 % FINES: 7

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-79
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1918+100 O/S 2M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 220
 LAB NO: 4792
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 221
 LAB NO: 4793
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 222
 LAB NO: 4794
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	89
25.4	80
19.0	62
12.7	55
9.5	50
4.76	38
2.38	--
2.00	28
1.19	--
0.841	20
0.595	--
0.42	14
0.297	--
0.177	--
0.149	9
0.074	8

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	91
19.0	89
12.7	80
9.5	74
4.76	57
2.38	--
2.00	40
1.19	--
0.841	26
0.595	--
0.42	16
0.297	--
0.177	--
0.149	9
0.074	5

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	91
19.0	84
12.7	74
9.5	68
4.76	53
2.38	--
2.00	37
1.19	--
0.841	24
0.595	--
0.42	15
0.297	--
0.177	--
0.149	10
0.074	5

M.C. (%): 3

M.C. (%): 3

M.C. (%): 3

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 62
 % SAND: 30
 % FINES: 8

% GRAVEL: 43
 % SAND: 52
 % FINES: 5

% GRAVEL: 47
 % SAND: 48
 % FINES: 5

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 215-112
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1918+175 O/S 100M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.14

FIELD NO: 37
 LAB NO: 78
 DEPTH: 9.1-9.8
 TYPE: RETURN

FIELD NO: 38
 LAB NO: 79
 DEPTH: 15.5-15.
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	98
10.0	96
5.0	77
2.5	56
2.0	--
1.25	31
0.840	--
0.630	16
0.420	--
0.315	10
0.160	8
0.150	--
0.080	7

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	98
5.0	93
2.5	88
2.0	--
1.25	81
0.840	--
0.630	71
0.420	--
0.315	57
0.160	43
0.150	--
0.080	32

M.C. (%): 4

M.C. (%): 4

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 23
 % SAND: 70
 % FINES: 7

% GRAVEL: 7
 % SAND: 61
 % FINES: 32

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

CLASSIFICATION:
 SILTY SAND (SM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-14
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1918+200 O/S 12M LT
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 29
 LAB NO: 5765
 DEPTH: 1.2-1.5
 TYPE: AUGER

FIELD NO: 30
 LAB NO: 5766
 DEPTH: 2.7-3.0
 TYPE: AUGER

FIELD NO: 31
 LAB NO: 5767
 DEPTH: 4.2-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	91
20.0	79
12.5	62
10.0	57
5.0	43
2.5	33
2.0	--
1.25	25
0.840	--
0.630	14
0.420	--
0.315	8
0.160	6
0.150	--
0.080	5

M.C. (%): 5

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 57
 % SAND: 38
 % FINES: 5

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	63
20.0	54
12.5	44
10.0	41
5.0	31
2.5	25
2.0	--
1.25	18
0.840	--
0.630	12
0.420	--
0.315	6
0.160	4
0.150	--
0.080	3

M.C. (%): 5

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 69
 % SAND: 28
 % FINES: 3

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	79
20.0	70
12.5	64
10.0	56
5.0	40
2.5	29
2.0	--
1.25	20
0.840	--
0.630	12
0.420	--
0.315	8
0.160	6
0.150	--
0.080	5

M.C. (%): 6

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 60
 % SAND: 36
 % FINES: 5

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-102
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAMM ROTORY DRILL
 HOLE LOCATION: 1918+200 O/S 50M RT
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 18
 LAB NO: 59
 DEPTH: 3.8-4.6
 TYPE: RETURN

FIELD NO: 19
 LAB NO: 60
 DEPTH: 7.3-8.3
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	93
10.0	87
5.0	66
2.5	52
2.0	--
1.25	41
0.840	--
0.630	33
0.420	--
0.315	28
0.160	23
0.150	--
0.080	19

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	99
5.0	83
2.5	66
2.0	--
1.25	42
0.840	--
0.630	23
0.420	--
0.315	12
0.160	8
0.150	--
0.080	8

M.C. (%): 5

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 34
 % SAND: 46
 % FINES: 19

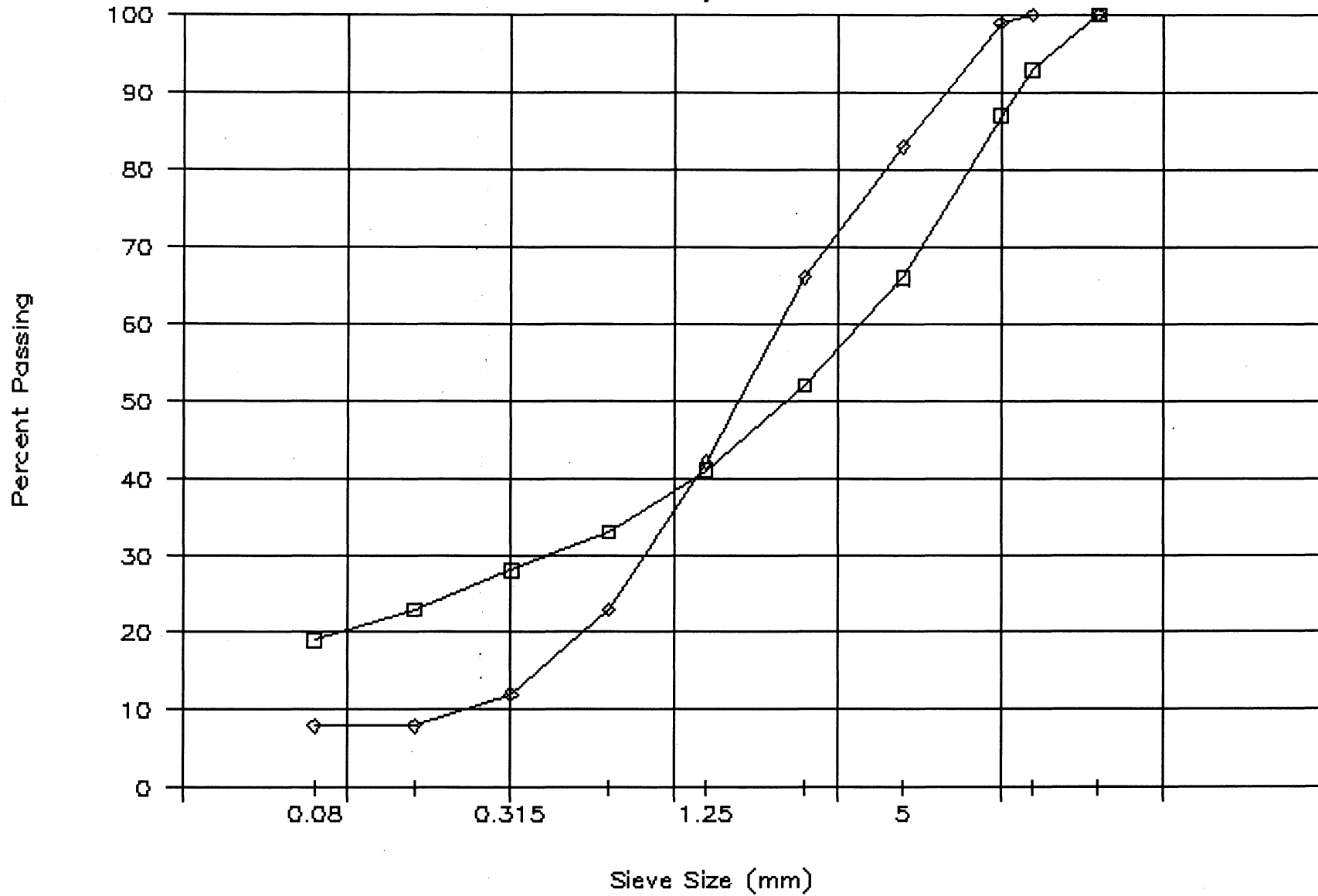
% GRAVEL: 17
 % SAND: 76
 % FINES: 8

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 102



□ SAMP. 18

◇ SAMP. 19

△ SAMP.

X SAMP.

PROJECT NUMBER: 202101 0310 HOLE NUMBER: 212-18
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17B
 DRILL UNIT: BACKHOE: CAT 235
 HOLE LOCATION: 1918+230 O/S 90-100M RT
 LOGGED BY: BS DATE COMPLETED: 92.04.02

FIELD NO: 8
 LAB NO: 41
 DEPTH: 2.8-4.7
 TYPE: BULK

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	100
50.0	91
31.5	--
25.0	65
20.0	58
12.5	46
10.0	41
5.0	29
2.5	21
2.0	--
1.25	14
0.840	--
0.630	10
0.420	--
0.315	6
0.160	5
0.150	--
0.080	4

M.C. (%): --

LIMITS

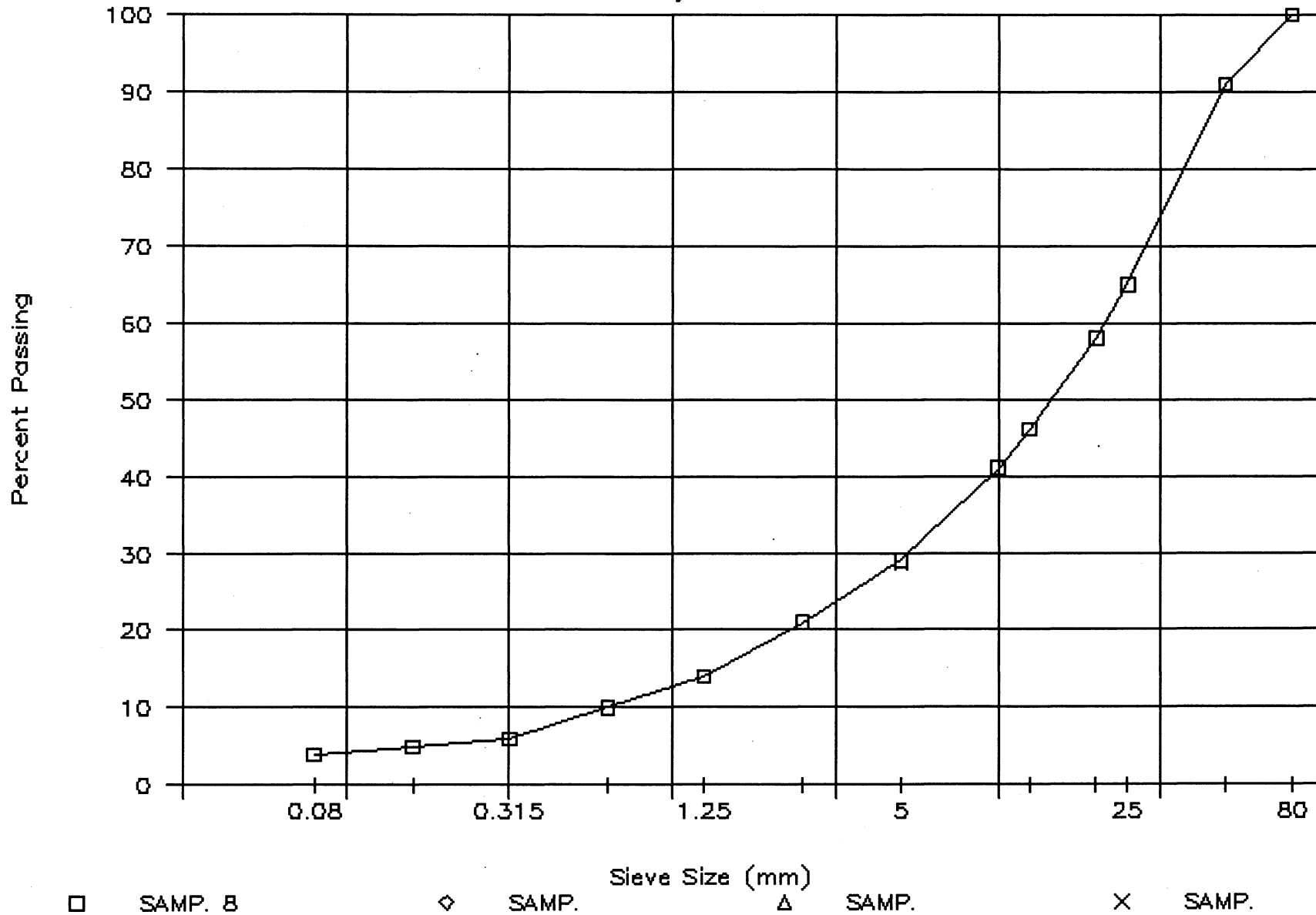
LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 71
 % SAND: 25
 % FINES: 4

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis — Hole 212-18



PROJECT NUMBER: 202101 0310 HOLE NUMBER: 212-17
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17B
 DRILL UNIT: BACKHOE: CAT 235
 HOLE LOCATION: 1918+285 O/S 15M RT
 LOGGED BY: BS DATE COMPLETED: 92.04.02

FIELD NO: 7
 LAB NO: 40
 DEPTH: 3.0-3.1
 TYPE: BULK

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	100
50.0	82
31.5	--
25.0	69
20.0	60
12.5	49
10.0	44
5.0	31
2.5	24
2.0	--
1.25	20
0.840	--
0.630	16
0.420	--
0.315	10
0.160	6
0.150	--
0.080	4

M.C. (%): 6

LIMITS

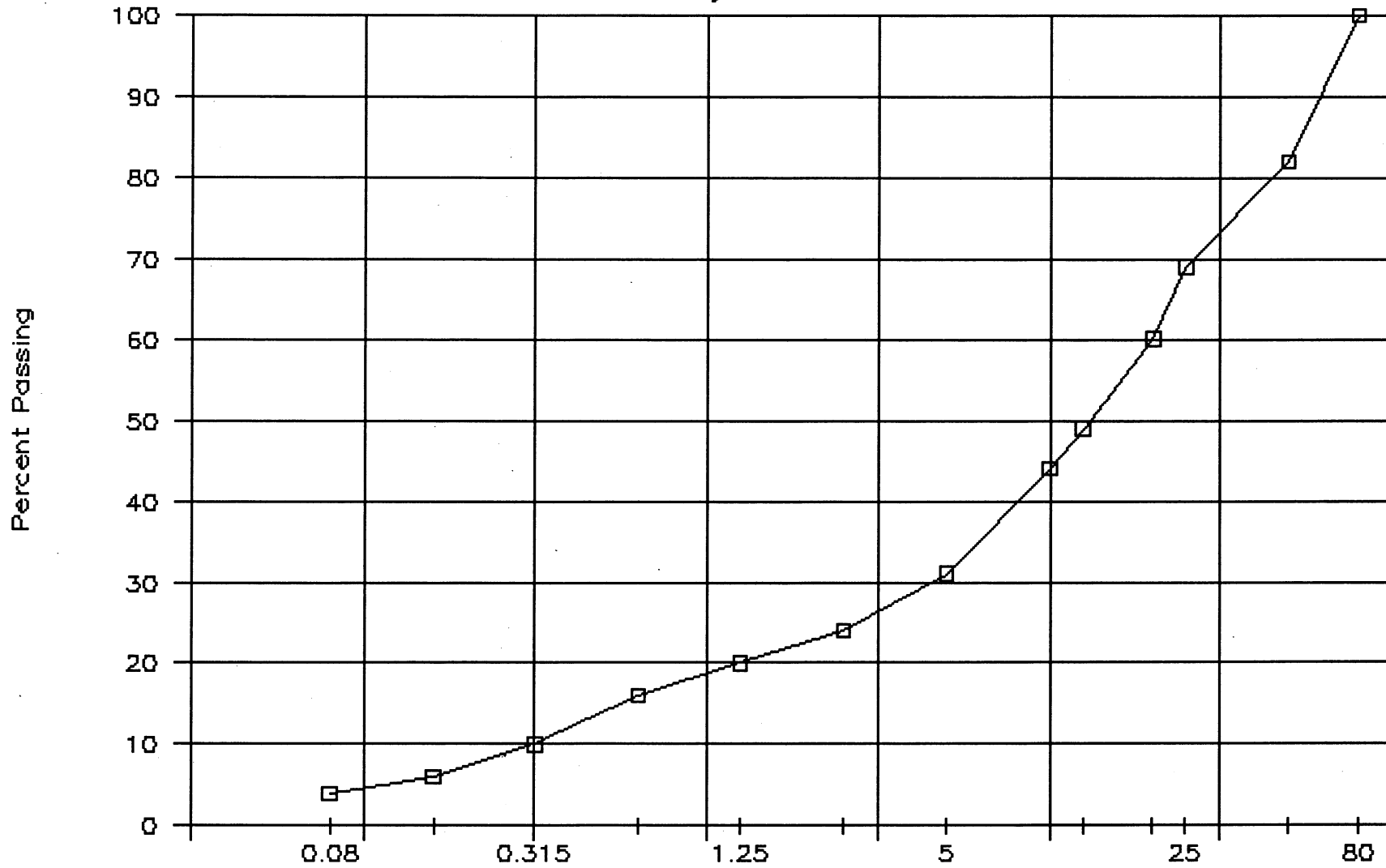
LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 69
 % SAND: 27
 % FINES: 4

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SAND
 (GP)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 212-17



□ SAMP. 7

◇ SAMP.

△ SAMP.

× SAMP.

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-13
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1918+300
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 26
 LAB NO: 5762
 DEPTH: 1.2-1.5
 TYPE: AUGER

FIELD NO: 27
 LAB NO: 5763
 DEPTH: 2.7-3.0
 TYPE: AUGER

FIELD NO: 28
 LAB NO: 5764
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	82
20.0	76
12.5	59
10.0	52
5.0	34
2.5	24
2.0	--
1.25	17
0.840	--
0.630	11
0.420	--
0.315	7
0.160	4
0.150	--
0.080	3

M.C. (%): 5

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 66
 % SAND: 31
 % FINES: 3

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	78
20.0	66
12.5	55
10.0	49
5.0	35
2.5	25
2.0	--
1.25	17
0.840	--
0.630	12
0.420	--
0.315	8
0.160	5
0.150	--
0.080	4

M.C. (%): 5

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 65
 % SAND: 31
 % FINES: 4

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	72
20.0	65
12.5	53
10.0	48
5.0	33
2.5	23
2.0	--
1.25	16
0.840	--
0.630	10
0.420	--
0.315	6
0.160	4
0.150	--
0.080	3

M.C. (%): 5

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 67
 % SAND: 30
 % FINES: 3

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 215-113
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1918+300 O/S 100M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.14

FIELD NO: 39
 LAB NO: 80
 DEPTH: 8.4-9.0
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	98
5.0	78
2.5	52
2.0	--
1.25	30
0.840	--
0.630	17
0.420	--
0.315	11
0.160	9
0.150	--
0.080	8

M.C. (%): 6

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 22
 % SAND: 70
 % FINES: 8

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-12
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1918+400
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 25
 LAB NO: 5761
 DEPTH: 1.2-1.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	95
20.0	87
12.5	74
10.0	64
5.0	44
2.5	34
2.0	--
1.25	27
0.840	--
0.630	23
0.420	--
0.315	18
0.160	13
0.150	--
0.080	9

M.C. (%): 6

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 56
 % SAND: 35
 % FINES: 9

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

PROJECT NUMBER: 202101 0310 HOLE NUMBER: 212-14
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17B
 DRILL UNIT: BACKHOE: CAT 235
 HOLE LOCATION: 1918+400 O/S 10M RT
 LOGGED BY: BS DATE COMPLETED: 93.04.02

FIELD NO: 6
 LAB NO: 39
 DEPTH: 4.4-4.5
 TYPE: BULK

SIEVE SIZE	PERCENT PASSING
100.0	100
80.0	66
50.0	66
31.5	--
25.0	42
20.0	37
12.5	31
10.0	27
5.0	18
2.5	12
2.0	--
1.25	8
0.840	--
0.630	6
0.420	--
0.315	3
0.160	2
0.150	--
0.080	2

M.C. (%): 4

LIMITS

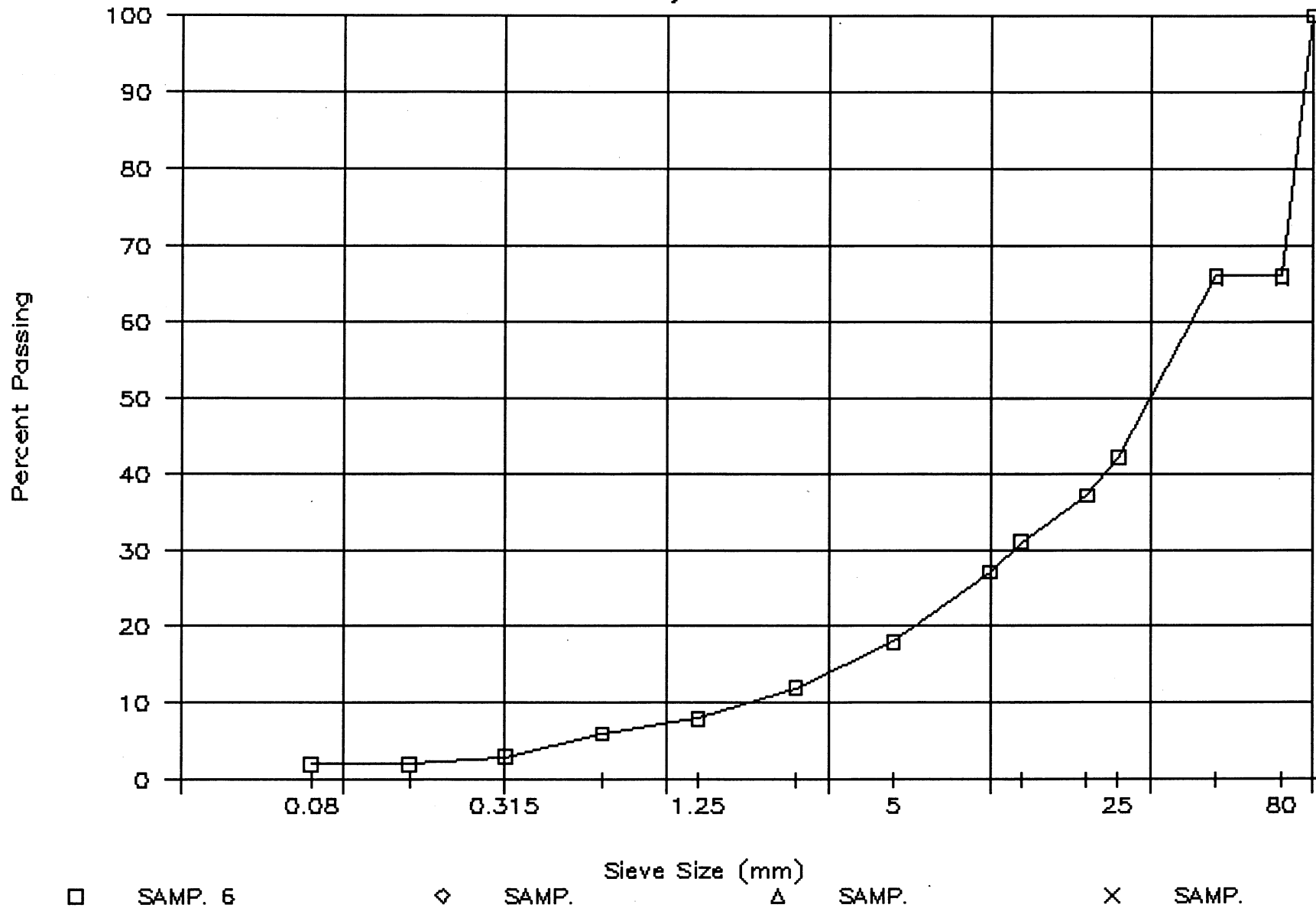
LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 82
 % SAND: 16
 % FINES: 2

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 212-14



PROJECT NUMBER: 202101 0302 HOLE NUMBER: 216-114
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1918+425 O/S 100M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.14

FIELD NO: 40
 LAB NO: 81
 DEPTH: 9.3-10.0
 TYPE: RETURN

FIELD NO: 41
 LAB NO: 82
 DEPTH: 16.3-16.
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	93
10.0	86
5.0	55
2.5	32
2.0	--
1.25	20
0.840	--
0.630	14
0.420	--
0.315	11
0.160	9
0.150	--
0.080	7

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	97
10.0	88
5.0	54
2.5	34
2.0	--
1.25	20
0.840	--
0.630	14
0.420	--
0.315	10
0.160	7
0.150	--
0.080	6

M.C. (%): 3

M.C. (%): 2

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 45
 % SAND: 47
 % FINES: 7

% GRAVEL: 46
 % SAND: 48
 % FINES: 6

CLASSIFICATION:
 POORLY GRADED
 SAND WITH SILT &
 GRAVEL (SP-SM)

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-11
CLIENT: SHAKWAK PROJECT
PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
PROJECT LOCATION: SEGMENT 17
DRILL UNIT: 36002
HOLE LOCATION: 1918+500
LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 24
LAB NO: 5760
DEPTH: 1.3-1.5
TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	100
50.0	87
31.5	--
25.0	68
20.0	64
12.5	55
10.0	51
5.0	41
2.5	34
2.0	--
1.25	29
0.840	--
0.630	25
0.420	--
0.315	22
0.160	18
0.150	--
0.080	15

M.C. (%): 8

LIMITS

LIQUID: --
PLASTIC: --
P.I.: N.P.

% GRAVEL: 59
% SAND: 26
% FINES: 15

CLASSIFICATION:
SILTY GRAVEL
WITH SAND (GM)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 2/4- 101
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAMM ROTORY DRILL
 HOLE LOCATION: 1918+500 O/S 50M RT
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 16
 LAB NO: 57
 DEPTH: 3.2-3.9
 TYPE: RETURN

FIELD NO: 17
 LAB NO: 58
 DEPTH: 6.7-7.4
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	96
5.0	70
2.5	48
2.0	--
1.25	28
0.840	--
0.630	16
0.420	--
0.315	10
0.160	8
0.150	--
0.080	7

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	98
5.0	74
2.5	52
2.0	--
1.25	32
0.840	--
0.630	19
0.420	--
0.315	15
0.160	13
0.150	--
0.080	11

M.C. (%): 4

M.C. (%): 5

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 30
 % SAND: 63
 % FINES: 7

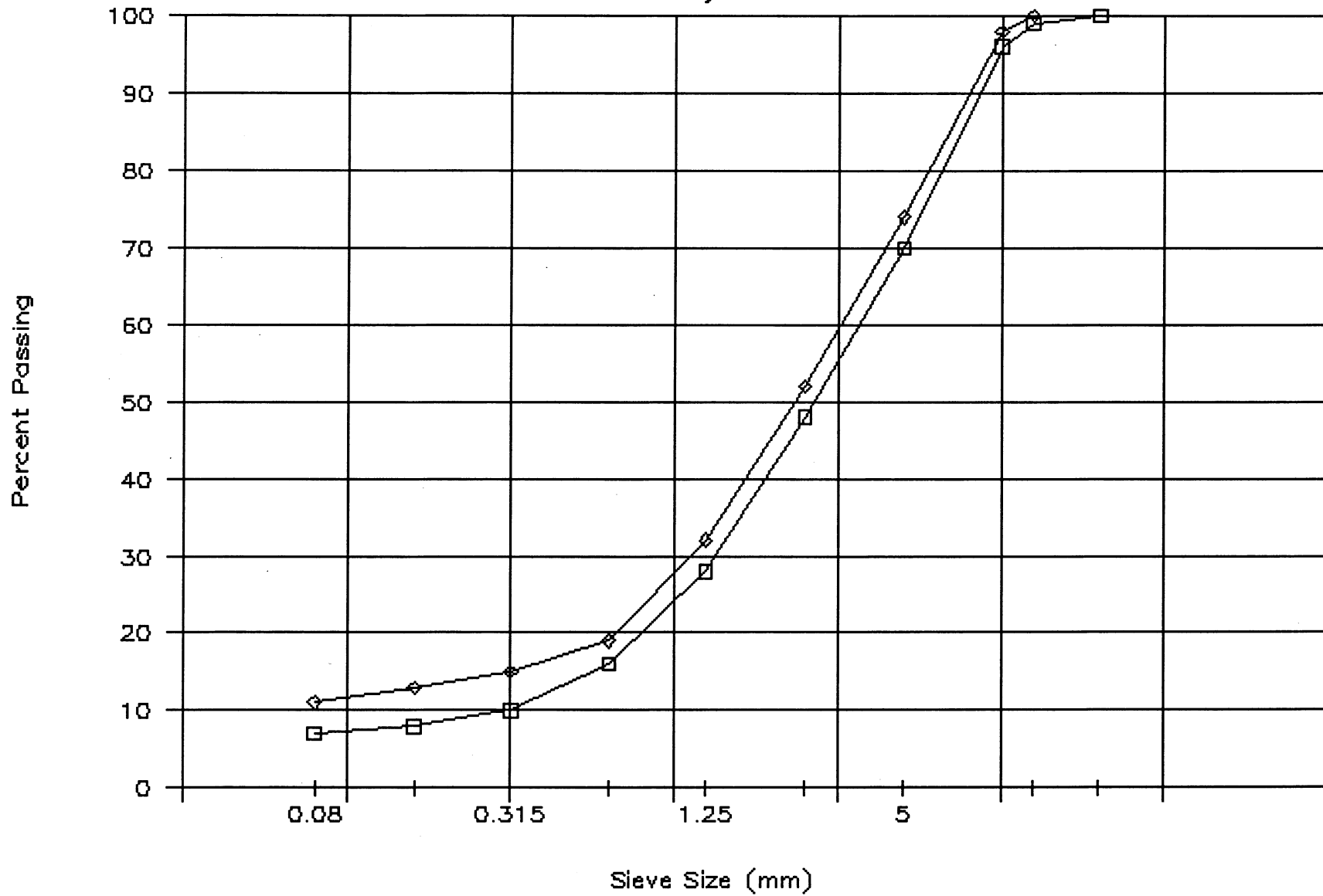
% GRAVEL: 26
 % SAND: 63
 % FINES: 11

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 101



□ SAMP. 16

◇ SAMP. 17

△ SAMP.

X SAMP.

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-10
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1918+600
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 23
 LAB NO: 5759
 DEPTH: 1.3-1.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	94
20.0	94
12.5	94
10.0	94
5.0	91
2.5	89
2.0	--
1.25	87
0.840	--
0.630	83
0.420	--
0.315	70
0.160	35
0.150	--
0.080	24

M.C. (%): 14

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 9
 % SAND: 67
 % FINES: 24

CLASSIFICATION:
 SILTY SAND (SM)

PROJECT NUMBER: 202101 0310 HOLE NUMBER: 212-13
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17B
 DRILL UNIT: BACKHOE: CAT 235
 HOLE LOCATION: 1918+600 O/S 10M RT
 LOGGED BY: BS DATE COMPLETED: 93.04.02

FIELD NO: 5
 LAB NO: 38
 DEPTH: 4.0-4.1
 TYPE: BULK

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	100
50.0	78
31.5	--
25.0	55
20.0	51
12.5	40
10.0	36
5.0	25
2.5	18
2.0	--
1.25	13
0.840	--
0.630	8
0.420	--
0.315	5
0.160	3
0.150	--
0.080	2

M.C. (%): 4

LIMITS

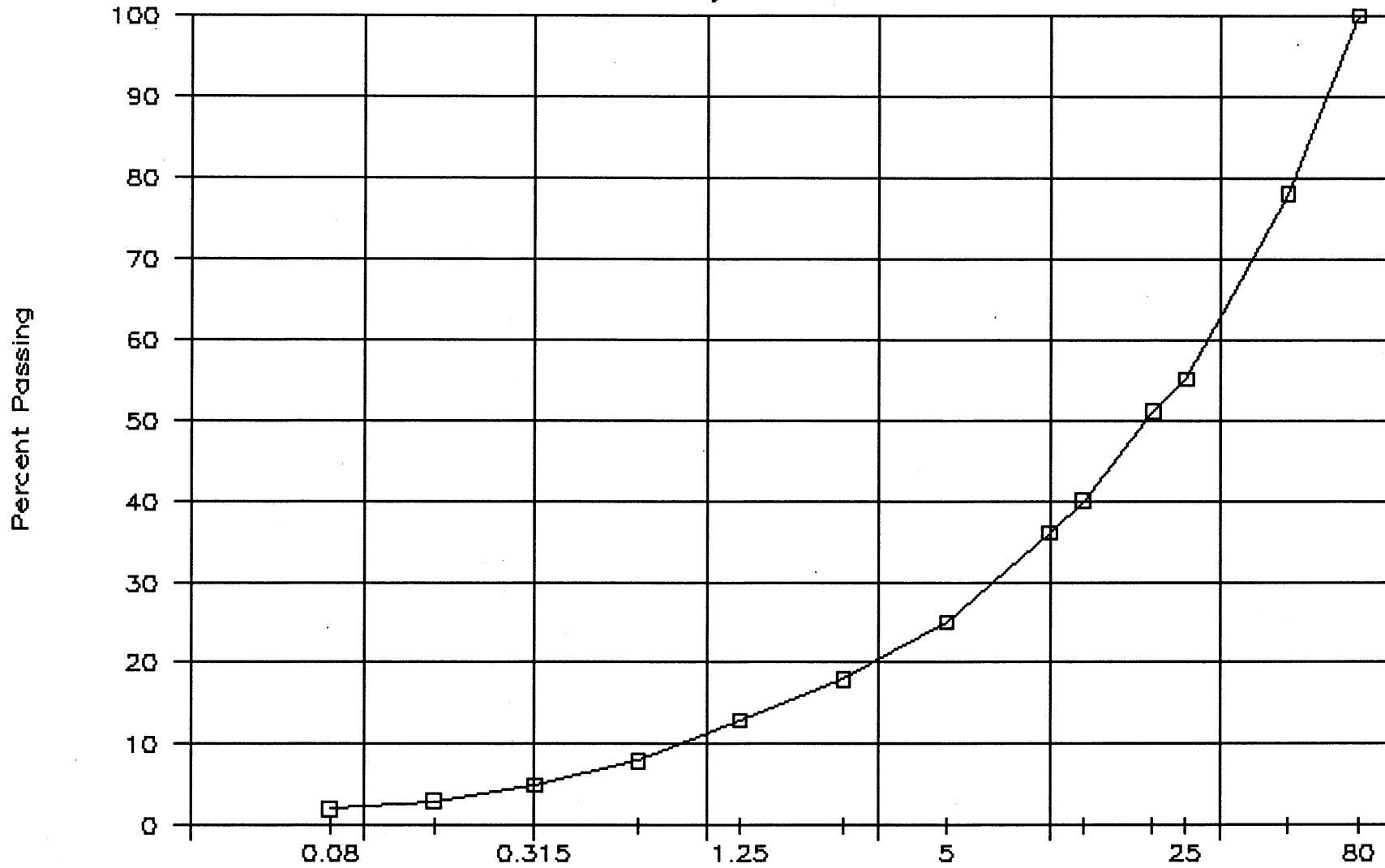
LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 75
 % SAND: 22
 % FINES: 2

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 212-13



□ SAMP. 5 ◇ SAMP. △ SAMP. × SAMP.

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 216-115
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1918+600 O/S 100M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.14

FIELD NO: 42
 LAB NO: 83
 DEPTH: 10.0-10.
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	90
5.0	58
2.5	36
2.0	--
1.25	20
0.840	--
0.630	10
0.420	--
0.315	7
0.160	5
0.150	--
0.080	4

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 42
 % SAND: 53
 % FINES: 4

CLASSIFICATION:
 WELL-GRADED SAND
 WITH GRAVEL (SW)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-09
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1918+700
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 22
 LAB NO: 5758
 DEPTH: 1.1-1.3
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	100
20.0	98
12.5	79
10.0	71
5.0	50
2.5	42
2.0	--
1.25	36
0.840	--
0.630	32
0.420	--
0.315	26
0.160	18
0.150	--
0.080	14

M.C. (%): 8

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 50
 % SAND: 36
 % FINES: 14

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 214-100
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAMM ROTORY DRILL
 HOLE LOCATION: 1918+700 O/S 50M RT
 LOGGED BY: DT DATE COMPLETED: 93.04

FIELD NO: 14
 LAB NO: 55
 DEPTH: 3.0-3.6
 TYPE: RETURN

FIELD NO: 15
 LAB NO: 56
 DEPTH: 7.4-8.2
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	94
5.0	52
2.5	32
2.0	--
1.25	17
0.840	--
0.630	12
0.420	--
0.315	9
0.160	8
0.150	--
0.080	7

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	99
10.0	97
5.0	71
2.5	44
2.0	--
1.25	21
0.840	--
0.630	8
0.420	--
0.315	5
0.160	5
0.150	--
0.080	4

M.C. (%): 4

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 48
 % SAND: 45
 % FINES: 7

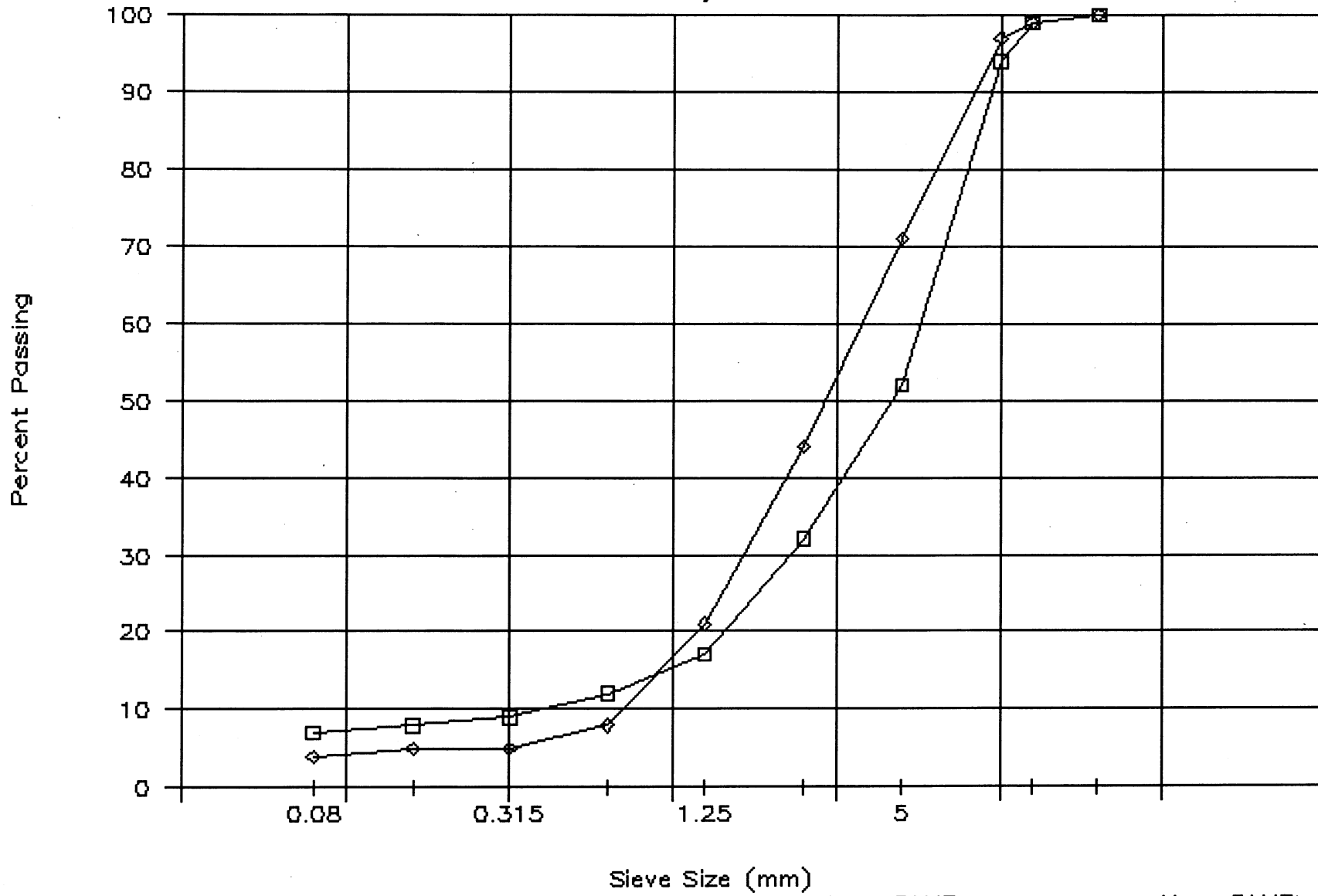
% GRAVEL: 29
 % SAND: 67
 % FINES: 4

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 POORLY GRADED
 SAND WITH GRAVEL
 (SP)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis - Hole 100



□ SAMP. 14

◇ SAMP. 15

△ SAMP.

× SAMP.

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 216-116
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1918+700 O/S 75M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.14

FIELD NO: 43
 LAB NO: 84
 DEPTH: 9.0-9.6
 TYPE: RETURN

FIELD NO: 44
 LAB NO: 85
 DEPTH: 14.3-15.
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	97
5.0	65
2.5	36
2.0	--
1.25	17
0.840	--
0.630	10
0.420	--
0.315	8
0.160	7
0.150	--
0.080	6

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	100
5.0	87
2.5	64
2.0	--
1.25	39
0.840	--
0.630	22
0.420	--
0.315	12
0.160	9
0.150	--
0.080	8

M.C. (%): 3

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 35
 % SAND: 59
 % FINES: 6

% GRAVEL: 13
 % SAND: 79
 % FINES: 8

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT (SW-SM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-08
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1918+800
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 20
 LAB NO: 5756
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 21
 LAB NO: 5757
 DEPTH: 1.3-1.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	100
50.0	78
31.5	--
25.0	63
20.0	60
12.5	51
10.0	46
5.0	34
2.5	27
2.0	--
1.25	23
0.840	--
0.630	20
0.420	--
0.315	17
0.160	15
0.150	--
0.080	12

100.0	--
80.0	--
50.0	100
31.5	--
25.0	66
20.0	58
12.5	37
10.0	32
5.0	23
2.5	18
2.0	--
1.25	16
0.840	--
0.630	14
0.420	--
0.315	13
0.160	11
0.150	--
0.080	9

M.C. (%): 5

M.C. (%): 6

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 66
 % SAND: 21
 % FINES: 12

% GRAVEL: 77
 % SAND: 14
 % FINES: 9

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 (GP-GM)

PROJECT NUMBER: 202101 0310 HOLE NUMBER: 212-12
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17B
 DRILL UNIT: BACKHOE: CAT 235
 HOLE LOCATION: 1918+800 O/S 10M RT
 LOGGED BY: BS DATE COMPLETED: 93.04.02

FIELD NO: 4
 LAB NO: 37
 DEPTH: 3.0-3.1
 TYPE: BULK

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	100
50.0	88
31.5	--
25.0	65
20.0	64
12.5	54
10.0	49
5.0	32
2.5	23
2.0	--
1.25	15
0.840	--
0.630	9
0.420	--
0.315	6
0.160	5
0.150	--
0.080	4

M.C. (%): --

LIMITS

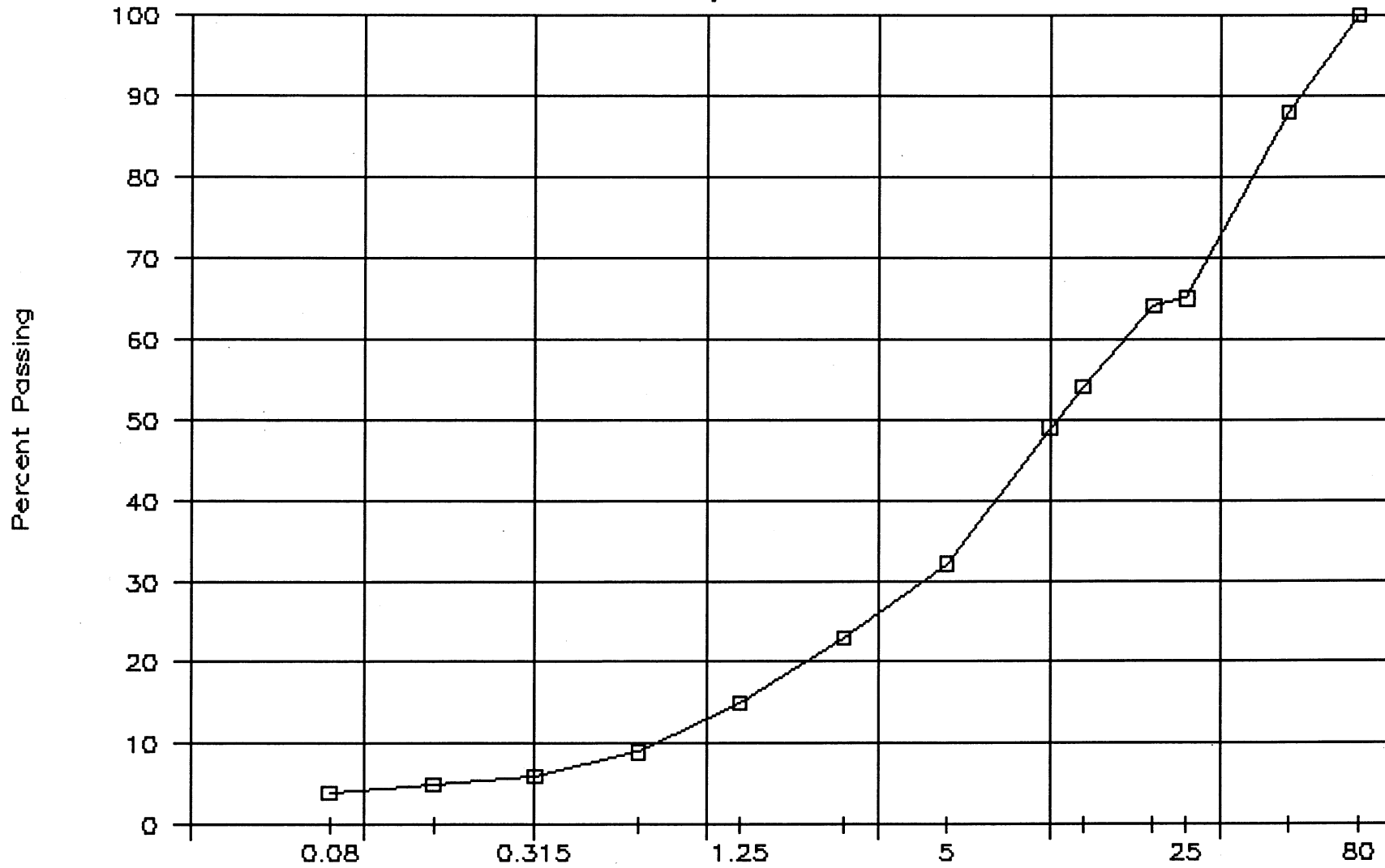
LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 68
 % SAND: 28
 % FINES: 4

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

Y.T.G. TRANSPORTATION ENGINEERING

Grain Size Analysis — Hole 212-12



□ SAMP. 4 ◇ SAMP. △ SAMP. × SAMP.

PROJECT NUMBER: 202101 0302 HOLE NUMBER: 216-117
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: SCHRAM ROTARY DRILL
 HOLE LOCATION: 1918+800 O/S 75M RT
 LOGGED BY: DT DATE COMPLETED: 93.04.14

FIELD NO: 45
 LAB NO: 86
 DEPTH: 8.2-8.8
 TYPE: RETURN

FIELD NO: 46
 LAB NO: 87
 DEPTH: 15.5-16.
 TYPE: RETURN

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	100
10.0	98
5.0	81
2.5	65
2.0	--
1.25	43
0.840	--
0.630	18
0.420	--
0.315	9
0.160	8
0.150	--
0.080	7

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	100
12.5	100
10.0	97
5.0	82
2.5	64
2.0	--
1.25	42
0.840	--
0.630	22
0.420	--
0.315	11
0.160	9
0.150	--
0.080	8

M.C. (%): 4

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 19
 % SAND: 74
 % FINES: 7

% GRAVEL: 18
 % SAND: 73
 % FINES: 8

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-07
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1918+900 O/S 4M LT
 LOGGED BY: AW DATE COMPLETED: 92.06.06

FIELD NO: 17
 LAB NO: 5753
 DEPTH: 1.1-1.3
 TYPE: AUGER

FIELD NO: 18
 LAB NO: 5754
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 19
 LAB NO: 5755
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	76
20.0	71
12.5	54
10.0	49
5.0	38
2.5	31
2.0	--
1.25	26
0.840	--
0.630	21
0.420	--
0.315	16
0.160	13
0.150	--
0.080	11

M.C. (%): 4

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 62
 % SAND: 27
 % FINES: 11

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	100
50.0	83
31.5	--
25.0	62
20.0	54
12.5	43
10.0	38
5.0	29
2.5	23
2.0	--
1.25	19
0.840	--
0.630	15
0.420	--
0.315	12
0.160	9
0.150	--
0.080	7

M.C. (%): 2

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 71
 % SAND: 22
 % FINES: 7

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	79
20.0	72
12.5	59
10.0	55
5.0	42
2.5	32
2.0	--
1.25	18
0.840	--
0.630	18
0.420	--
0.315	12
0.160	9
0.150	--
0.080	7

M.C. (%): 2

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 58
 % SAND: 35
 % FINES: 7

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-80
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1919+000 O/S 3M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 223
 LAB NO: 4795
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 224
 LAB NO: 4796
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 225
 LAB NO: 4797
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	100
50.8	80
38.1	80
25.4	66
19.0	60
12.7	52
9.5	45
4.76	30
2.38	--
2.00	18
1.19	--
0.841	9
0.595	--
0.42	6
0.297	--
0.177	--
0.149	4
0.074	3

101.6	--
76.2	--
50.8	100
38.1	81
25.4	71
19.0	56
12.7	41
9.5	33
4.76	21
2.38	--
2.00	12
1.19	--
0.841	7
0.595	--
0.42	5
0.297	--
0.177	--
0.149	3
0.074	2

101.6	--
76.2	--
50.8	100
38.1	90
25.4	72
19.0	64
12.7	53
9.5	43
4.76	31
2.38	--
2.00	19
1.19	--
0.841	10
0.595	--
0.42	6
0.297	--
0.177	--
0.149	2
0.074	2

M.C. (%): 2

M.C. (%): 2

M.C. (%): 2

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 70
 % SAND: 27
 % FINES: 3

% GRAVEL: 79
 % SAND: 19
 % FINES: 2

% GRAVEL: 69
 % SAND: 29
 % FINES: 2

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-81
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1919+100 O/S 4M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 226
 LAB NO: 4798
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 227
 LAB NO: 4799
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 228
 LAB NO: 4800
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	79
19.0	71
12.7	60
9.5	51
4.76	38
2.38	--
2.00	26
1.19	--
0.841	17
0.595	--
0.42	12
0.297	--
0.177	--
0.149	7
0.074	5

101.6	--
76.2	--
50.8	100
38.1	91
25.4	87
19.0	78
12.7	62
9.5	54
4.76	38
2.38	--
2.00	26
1.19	--
0.841	16
0.595	--
0.42	10
0.297	--
0.177	--
0.149	5
0.074	4

101.6	--
76.2	100
50.8	79
38.1	79
25.4	73
19.0	71
12.7	58
9.5	52
4.76	40
2.38	--
2.00	27
1.19	--
0.841	17
0.595	--
0.42	10
0.297	--
0.177	--
0.149	5
0.074	4

M.C. (%): 3

M.C. (%): 2

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 62
 % SAND: 33
 % FINES: 5

% GRAVEL: 62
 % SAND: 35
 % FINES: 4

% GRAVEL: 60
 % SAND: 35
 % FINES: 4

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-82
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1919+200 O/S 7M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 229
 LAB NO: 4801
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 230
 LAB NO: 4802
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 231
 LAB NO: 4803
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	77
19.0	67
12.7	59
9.5	51
4.76	37
2.38	--
2.00	25
1.19	--
0.841	19
0.595	--
0.42	10
0.297	--
0.177	--
0.149	4
0.074	3

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	95
25.4	71
19.0	64
12.7	52
9.5	43
4.76	28
2.38	--
2.00	19
1.19	--
0.841	12
0.595	--
0.42	7
0.297	--
0.177	--
0.149	3
0.074	2

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	87
25.4	64
19.0	60
12.7	52
9.5	45
4.76	31
2.38	--
2.00	20
1.19	--
0.841	12
0.595	--
0.42	6
0.297	--
0.177	--
0.149	3
0.074	2

M.C. (%): 2

M.C. (%): 2

M.C. (%): 2

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 63
 % SAND: 34
 % FINES: 3

% GRAVEL: 72
 % SAND: 26
 % FINES: 2

% GRAVEL: 69
 % SAND: 29
 % FINES: 2

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-83
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1919+300 O/S 2M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 232
 LAB NO: 4804
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 233
 LAB NO: 4805
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 234
 LAB NO: 4806
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	90
25.4	72
19.0	66
12.7	59
9.5	52
4.76	42
2.38	--
2.00	34
1.19	--
0.841	28
0.595	--
0.42	23
0.297	--
0.177	--
0.149	18
0.074	16

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	85
38.1	85
25.4	73
19.0	72
12.7	58
9.5	51
4.76	38
2.38	--
2.00	27
1.19	--
0.841	19
0.595	--
0.42	14
0.297	--
0.177	--
0.149	9
0.074	7

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	66
38.1	52
25.4	46
19.0	42
12.7	38
9.5	34
4.76	26
2.38	--
2.00	19
1.19	--
0.841	14
0.595	--
0.42	10
0.297	--
0.177	--
0.149	7
0.074	6

M.C. (%): 6

M.C. (%): 3

M.C. (%): 4

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 58
 % SAND: 27
 % FINES: 16

% GRAVEL: 62
 % SAND: 31
 % FINES: 7

% GRAVEL: 74
 % SAND: 21
 % FINES: 6

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-84
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1919+400
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 235
 LAB NO: 4807
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 236
 LAB NO: 4808
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 237
 LAB NO: 4809
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	87
19.0	79
12.7	61
9.5	56
4.76	43
2.38	--
2.00	32
1.19	--
0.841	24
0.595	--
0.42	16
0.297	--
0.177	--
0.149	8
0.074	6

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	76
19.0	70
12.7	53
9.5	44
4.76	31
2.38	--
2.00	22
1.19	--
0.841	16
0.595	--
0.42	13
0.297	--
0.177	--
0.149	7
0.074	6

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	91
25.4	80
19.0	74
12.7	66
9.5	55
4.76	39
2.38	--
2.00	25
1.19	--
0.841	16
0.595	--
0.42	11
0.297	--
0.177	--
0.149	6
0.074	4

M.C. (%): 4

M.C. (%): 3

M.C. (%): 3

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 57
 % SAND: 37
 % FINES: 6

% GRAVEL: 69
 % SAND: 25
 % FINES: 6

% GRAVEL: 61
 % SAND: 34
 % FINES: 4

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-85
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1919+500 O/S 2M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 238
 LAB NO: 4810
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 239
 LAB NO: 4811
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 240
 LAB NO: 4812
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	90
25.4	63
19.0	56
12.7	50
9.5	43
4.76	31
2.38	--
2.00	20
1.19	--
0.841	13
0.595	--
0.42	9
0.297	--
0.177	--
0.149	5
0.074	4

101.6	--
76.2	100
50.8	87
38.1	79
25.4	74
19.0	62
12.7	50
9.5	41
4.76	30
2.38	--
2.00	22
1.19	--
0.841	15
0.595	--
0.42	8
0.297	--
0.177	--
0.149	4
0.074	3

101.6	--
76.2	--
50.8	100
38.1	90
25.4	75
19.0	66
12.7	53
9.5	45
4.76	32
2.38	--
2.00	23
1.19	--
0.841	15
0.595	--
0.42	8
0.297	--
0.177	--
0.149	6
0.074	3

M.C. (%): 5

M.C. (%): 3

M.C. (%): 3

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 69
 % SAND: 27
 % FINES: 4

% GRAVEL: 70
 % SAND: 27
 % FINES: 3

% GRAVEL: 68
 % SAND: 29
 % FINES: 3

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-06
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1919+600 O/S 2M LT
 LOGGED BY: AW DATE COMPLETED: 92.06.04

FIELD NO: 14
 LAB NO: 5750
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 15
 LAB NO: 5751
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 16
 LAB NO: 5752
 DEPTH: 3.9-4.1
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	66
20.0	55
12.5	44
10.0	36
5.0	29
2.5	25
2.0	--
1.25	23
0.840	--
0.630	20
0.420	--
0.315	18
0.160	16
0.150	--
0.080	13

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	100
50.0	76
31.5	--
25.0	65
20.0	54
12.5	41
10.0	38
5.0	29
2.5	24
2.0	--
1.25	21
0.840	--
0.630	18
0.420	--
0.315	15
0.160	13
0.150	--
0.080	11

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	82
20.0	71
12.5	51
10.0	47
5.0	37
2.5	33
2.0	--
1.25	30
0.840	--
0.630	27
0.420	--
0.315	25
0.160	22
0.150	--
0.080	19

M.C. (%): 5

M.C. (%): 4

M.C. (%): 8

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 71
 % SAND: 16
 % FINES: 13

% GRAVEL: 71
 % SAND: 18
 % FINES: 11

% GRAVEL: 63
 % SAND: 18
 % FINES: 19

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-05
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1919+700 O/S 2M LT
 LOGGED BY: AW DATE COMPLETED: 92.06.04

FIELD NO: 11
 LAB NO: 5747
 DEPTH: 1.3-1.5
 TYPE: AUGER
 ORGANIC

FIELD NO: 12
 LAB NO: 5748
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 13
 LAB NO: 5749
 DEPTH: 3.0-3.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	98
2.0	--
1.25	94
0.840	--
0.630	90
0.420	--
0.315	87
0.160	81
0.150	--
0.080	75

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	95
20.0	86
12.5	70
10.0	62
5.0	47
2.5	39
2.0	--
1.25	34
0.840	--
0.630	30
0.420	--
0.315	27
0.160	25
0.150	--
0.080	22

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	96
20.0	93
12.5	86
10.0	80
5.0	62
2.5	49
2.0	--
1.25	39
0.840	--
0.630	33
0.420	--
0.315	27
0.160	22
0.150	--
0.080	18

M.C. (%): 73

M.C. (%): 9

M.C. (%): 8

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 25
 % FINES: 75

% GRAVEL: 53
 % SAND: 26
 % FINES: 22

% GRAVEL: 38
 % SAND: 43
 % FINES: 18

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-04
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1919+800 O/S 2M LT
 LOGGED BY: AW DATE COMPLETED: 92.06.04

FIELD NO: 8
 LAB NO: 5744
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 9
 LAB NO: 5745
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 10
 LAB NO: 5746
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	79
20.0	73
12.5	72
10.0	72
5.0	70
2.5	70
2.0	--
1.25	69
0.840	--
0.630	68
0.420	--
0.315	67
0.160	65
0.150	--
0.080	62

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	77
20.0	67
12.5	51
10.0	48
5.0	37
2.5	32
2.0	--
1.25	28
0.840	--
0.630	24
0.420	--
0.315	21
0.160	19
0.150	--
0.080	17

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	62
20.0	50
12.5	33
10.0	27
5.0	20
2.5	17
2.0	--
1.25	15
0.840	--
0.630	13
0.420	--
0.315	12
0.160	11
0.150	--
0.080	9

M.C. (%): 22

M.C. (%): 8

M.C. (%): 5

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 30
 % SAND: 8
 % FINES: 62

% GRAVEL: 63
 % SAND: 20
 % FINES: 17

% GRAVEL: 80
 % SAND: 10
 % FINES: 9

CLASSIFICATION:
 GRAVELLY SILT
 (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 (GP-GM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-03
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1919+900 O/S 2M RT
 LOGGED BY: AW DATE COMPLETED: 92.06.04

FIELD NO: 5
 LAB NO: 5741
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 6
 LAB NO: 5742
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 7
 LAB NO: 5743
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	--
2.5	100
2.0	--
1.25	100
0.840	--
0.630	99
0.420	--
0.315	98
0.160	97
0.150	--
0.080	97

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	--
31.5	--
25.0	--
20.0	--
12.5	--
10.0	--
5.0	100
2.5	100
2.0	--
1.25	100
0.840	--
0.630	99
0.420	--
0.315	99
0.160	98
0.150	--
0.080	96

SIEVE SIZE	PERCENT PASSING
100.0	--
80.0	--
50.0	100
31.5	--
25.0	79
20.0	62
12.5	57
10.0	48
5.0	43
2.5	39
2.0	--
1.25	36
0.840	--
0.630	33
0.420	--
0.315	31
0.160	29
0.150	--
0.080	26

M.C. (%): 41

M.C. (%): 42

M.C. (%): 14

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

% GRAVEL: 57
 % SAND: 17
 % FINES: 26

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-02
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1920+000 O/S 2M LT
 LOGGED BY: AW DATE COMPLETED: 92.06.04

FIELD NO: 3	FIELD NO: 4
LAB NO: 5739	LAB NO: 5740
DEPTH: 1.3-1.5	DEPTH: 2.8-3.0
TYPE: AUGER	TYPE: AUGER

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
100.0	--	100.0	--
80.0	--	80.0	--
50.0	--	50.0	100
31.5	--	31.5	--
25.0	--	25.0	87
20.0	--	20.0	84
12.5	--	12.5	74
10.0	--	10.0	70
5.0	--	5.0	55
2.5	--	2.5	48
2.0	--	2.0	--
1.25	100	1.25	43
0.840	--	0.840	--
0.630	100	0.630	37
0.420	--	0.420	--
0.315	99	0.315	32
0.160	98	0.160	28
0.150	--	0.150	--
0.080	96	0.080	25

M.C. (%): 43 M.C. (%): 10

LIMITS		LIMITS	
LIQUID: --		LIQUID: --	
PLASTIC: --		PLASTIC: --	
P.I.: TRACE		P.I.: N.P.	

% GRAVEL: 0	% GRAVEL: 45
% SAND: 4	% SAND: 31
% FINES: 96	% FINES: 25

CLASSIFICATION: SILT (ML)
 CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)

PROJECT NUMBER: 202101 0304 HOLE NUMBER: 174-01
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY RE-CONSTRUCTION
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 36002
 HOLE LOCATION: 1920+100
 LOGGED BY: AW DATE COMPLETED: 92.06.04

FIELD NO: 1
 LAB NO: 5737
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 2
 LAB NO: 5738
 DEPTH: 1.8-2.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	74
20.0	66
12.5	58
10.0	53
5.0	41
2.5	33
2.0	--
1.25	27
0.840	--
0.630	22
0.420	--
0.315	18
0.160	13
0.150	--
0.080	11

SIEVE SIZE	PERCENT PASSING
------------	-----------------

100.0	--
80.0	--
50.0	100
31.5	--
25.0	71
20.0	65
12.5	59
10.0	52
5.0	35
2.5	26
2.0	--
1.25	21
0.840	--
0.630	17
0.420	--
0.315	13
0.160	10
0.150	--
0.080	8

M.C. (%): 7

M.C. (%): 5

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 59
 % SAND: 31
 % FINES: 11

% GRAVEL: 65
 % SAND: 28
 % FINES: 8

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-86
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1920+175 O/S 4M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 241
 LAB NO: 4813
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 242
 LAB NO: 4814
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 243
 LAB NO: 4815
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	88
12.7	71
9.5	65
4.76	52
2.38	--
2.00	41
1.19	--
0.841	33
0.595	--
0.42	26
0.297	--
0.177	--
0.149	19
0.074	17

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	80
25.4	64
19.0	61
12.7	53
9.5	49
4.76	42
2.38	--
2.00	36
1.19	--
0.841	32
0.595	--
0.42	28
0.297	--
0.177	--
0.149	24
0.074	22

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	100
50.8	77
38.1	77
25.4	73
19.0	65
12.7	55
9.5	51
4.76	44
2.38	--
2.00	37
1.19	--
0.841	32
0.595	--
0.42	29
0.297	--
0.177	--
0.149	28
0.074	24

M.C. (%): 4

M.C. (%): 9

M.C. (%): 9

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 48
 % SAND: 36
 % FINES: 17

% GRAVEL: 58
 % SAND: 20
 % FINES: 22

% GRAVEL: 56
 % SAND: 19
 % FINES: 24

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-87
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1920+275 O/S 8M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 244
 LAB NO: 4816
 DEPTH: 1.0-1.2
 TYPE: AUGER

FIELD NO: 245
 LAB NO: 4817
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 246
 LAB NO: 4818
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	77
12.7	72
9.5	65
4.76	53
2.38	--
2.00	43
1.19	--
0.841	35
0.595	--
0.42	28
0.297	--
0.177	--
0.149	24
0.074	19

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	98
9.5	98
4.76	96
2.38	--
2.00	96
1.19	--
0.841	95
0.595	--
0.42	95
0.297	--
0.177	--
0.149	93
0.074	91

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	100
9.5	99
4.76	99
2.38	--
2.00	98
1.19	--
0.841	98
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	96

M.C. (%): 7

M.C. (%): 26

M.C. (%): 37

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 47
 % SAND: 35
 % FINES: 19

% GRAVEL: 4
 % SAND: 6
 % FINES: 91

% GRAVEL: 1
 % SAND: 3
 % FINES: 96

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-88
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1920+375 O/S 7M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 247
 LAB NO: 4819
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 248
 LAB NO: 4820
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	82
19.0	77
12.7	68
9.5	62
4.76	52
2.38	--
2.00	44
1.19	--
0.841	38
0.595	--
0.42	33
0.297	--
0.177	--
0.149	27
0.074	25

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	94
0.074	89

M.C. (%): 11

M.C. (%): 29

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 48
 % SAND: 27
 % FINES: 25

% GRAVEL: 0
 % SAND: 10
 % FINES: 89

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-89
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1920+475 O/S 7M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.21

FIELD NO: 249
 LAB NO: 4821
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 250
 LAB NO: 4822
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 251
 LAB NO: 4823
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	93
25.4	88
19.0	82
12.7	77
9.5	70
4.76	58
2.38	--
2.00	48
1.19	--
0.841	41
0.595	--
0.42	35
0.297	--
0.177	--
0.149	26
0.074	22

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	95

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	87
0.074	78

M.C. (%): 13

M.C. (%): 30

M.C. (%): 22

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 42
 % SAND: 36
 % FINES: 22

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

% GRAVEL: 0
 % SAND: 22
 % FINES: 78

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT WITH SAND
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-90
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1920+575 O/S 4M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 252
 LAB NO: 4824
 DEPTH: 1.0-1.2
 TYPE: AUGER

FIELD NO: 253
 LAB NO: 4825
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 254
 LAB NO: 4826
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	81
19.0	69
12.7	58
9.5	51
4.76	37
2.38	--
2.00	27
1.19	--
0.841	20
0.595	--
0.42	16
0.297	--
0.177	--
0.149	10
0.074	8

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	96

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	95

M.C. (%): 6

M.C. (%): 24

M.C. (%): 37

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 63
 % SAND: 29
 % FINES: 8

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 142-91
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1920+675 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 255
 LAB NO: 4827
 DEPTH: 1.0-1.2
 TYPE: AUGER

FIELD NO: 256
 LAB NO: 4828
 DEPTH: 2.6-2.8
 TYPE: AUGER

FIELD NO: 257
 LAB NO: 4829
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	92
25.4	82
19.0	74
12.7	58
9.5	52
4.76	36
2.38	--
2.00	25
1.19	--
0.841	17
0.595	--
0.42	12
0.297	--
0.177	--
0.149	11
0.074	6

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	97
0.297	--
0.177	--
0.149	97
0.074	93

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	96

M.C. (%): 4

M.C. (%): 23

M.C. (%): 46

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 64
 % SAND: 30
 % FINES: 6

% GRAVEL: 1
 % SAND: 5
 % FINES: 93

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-92
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1920+775 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 258
 LAB NO: 4930
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 259
 LAB NO: 4831
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 260
 LAB NO: 4832
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	76
12.7	68
9.5	62
4.76	50
2.38	--
2.00	41
1.19	--
0.841	34
0.595	--
0.42	29
0.297	--
0.177	--
0.149	21
0.074	18

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	94

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	95
0.074	91

M.C. (%): 12

M.C. (%): 34

M.C. (%): 25

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 50
 % SAND: 32
 % FINES: 18

% GRAVEL: 1
 % SAND: 5
 % FINES: 94

% GRAVEL: 0
 % SAND: 9
 % FINES: 91

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-215
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1920+850 O/S 15M RT
 LOGGED BY: B DATE COMPLETED: 91.11.17

FIELD NO: 567
 LAB NO: 5544
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 568
 LAB NO: 5545
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 569
 LAB NO: 5546
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	97

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	97

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	93

M.C. (%): 74

M.C. (%): 39

M.C. (%): 64

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

% GRAVEL: 0
 % SAND: 7
 % FINES: 93

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-214
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1920+950 O/S 15M RT
 LOGGED BY: CB DATE COMPLETED: 91.11.17

FIELD NO: 564
 LAB NO: 5541
 DEPTH: 1.3-1.5
 TYPE: AUGER
 95% ORGANIC

FIELD NO: 565
 LAB NO: 5542
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 566
 LAB NO: 5543
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	97

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	95
0.074	89

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	94
0.074	89

M.C. (%): 109

M.C. (%): 37

M.C. (%): 87

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

% GRAVEL: 0
 % SAND: 11
 % FINES: 89

% GRAVEL: 0
 % SAND: 11
 % FINES: 89

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-213
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1921+050 O/S 15M RT
 LOGGED BY: CB DATE COMPLETED: 91.11.17

FIELD NO: 561
 LAB NO: 5538
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 562
 LAB NO: 5539
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 563
 LAB NO: 5540
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	95

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	95

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	80
12.7	74
9.5	64
4.76	47
2.38	--
2.00	37
1.19	--
0.841	31
0.595	--
0.42	27
0.297	--
0.177	--
0.149	22
0.074	20

M.C. (%): 80

M.C. (%): 32

M.C. (%): 12

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.:

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

% GRAVEL: 53
 % SAND: 27
 % FINES: 20

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-212
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1921+175 O/S 15M RT
 LOGGED BY: CB DATE COMPLETED: 91.11.17

FIELD NO: 558
 LAB NO: 5535
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 559
 LAB NO: 5536
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 560
 LAB NO: 5537
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	94
4.76	91
2.38	--
2.00	88
1.19	--
0.841	84
0.595	--
0.42	82
0.297	--
0.177	--
0.149	71
0.074	63

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	97

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	97

M.C. (%): 52

M.C. (%): 39

M.C. (%): 41

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 9
 % SAND: 27
 % FINES: 63

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

CLASSIFICATION:
 SANDY SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-211
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1921+275 O/S 15M RT
 LOGGED BY: CB DATE COMPLETED: 91.11.17

FIELD NO: 555
 LAB NO: 5532
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 556
 LAB NO: 5533
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 557
 LAB NO: 5534
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	90
9.5	84
4.76	75
2.38	--
2.00	67
1.19	--
0.841	60
0.595	--
0.42	56
0.297	--
0.177	--
0.149	47
0.074	42

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	96
19.0	96
12.7	92
9.5	89
4.76	85
2.38	--
2.00	80
1.19	--
0.841	77
0.595	--
0.42	74
0.297	--
0.177	--
0.149	69
0.074	65

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	90
12.7	88
9.5	85
4.76	77
2.38	--
2.00	71
1.19	--
0.841	66
0.595	--
0.42	62
0.297	--
0.177	--
0.149	54
0.074	51

M.C. (%): 15

M.C. (%): 24

M.C. (%): 19

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: *NP*

% GRAVEL: 25
 % SAND: 32
 % FINES: 42

% GRAVEL: 15
 % SAND: 19
 % FINES: 65

% GRAVEL: 23
 % SAND: 27
 % FINES: 51

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-93
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1921+325 O/S 7M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 261
 LAB NO: 4833
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 262
 LAB NO: 4834
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 263
 LAB NO: 4835
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	87
9.5	84
4.76	77
2.38	--
2.00	70
1.19	--
0.841	66
0.595	--
0.42	63
0.297	--
0.177	--
0.149	63
0.074	54

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	96
9.5	93
4.76	88
2.38	--
2.00	79
1.19	--
0.841	72
0.595	--
0.42	67
0.297	--
0.177	--
0.149	56
0.074	51

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	100
50.8	76
38.1	76
25.4	76
19.0	72
12.7	66
9.5	64
4.76	56
2.38	--
2.00	50
1.19	--
0.841	45
0.595	--
0.42	42
0.297	--
0.177	--
0.149	39
0.074	29

M.C. (%): 26

M.C. (%): 17

M.C. (%): 9

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 23
 % SAND: 22
 % FINES: 54

% GRAVEL: 12
 % SAND: 36
 % FINES: 51

% GRAVEL: 44
 % SAND: 27
 % FINES: 29

CLASSIFICATION:
 GRAVELLY SILT
 WITH SAND (ML)

CLASSIFICATION:
 SANDY SILT (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-210
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1921+502
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 552
 LAB NO: 5529
 DEPTH: 1.3-1.5
 TYPE: AUGER
 ORGANIC

FIELD NO: 553
 LAB NO: 5530
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 554
 LAB NO: 5531
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	85
12.7	80
9.5	78
4.76	76
2.38	--
2.00	72
1.19	--
0.841	67
0.595	--
0.42	63
0.297	--
0.177	--
0.149	56
0.074	53

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	96
4.76	92
2.38	--
2.00	88
1.19	--
0.841	83
0.595	--
0.42	80
0.297	--
0.177	--
0.149	76
0.074	73

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	96
0.595	--
0.42	95
0.297	--
0.177	--
0.149	92
0.074	90

M.C. (%): 97

M.C. (%): 38

M.C. (%): 43

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 24
 % SAND: 23
 % FINES: 53

% GRAVEL: 8
 % SAND: 19
 % FINES: 73

% GRAVEL: 1
 % SAND: 9
 % FINES: 90

CLASSIFICATION:
 GRAVELLY SILT
 WITH SAND (ML)

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-209
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1921+625 O/S 2M LT
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 549
 LAB NO: 5526
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 550
 LAB NO: 5527
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 551
 LAB NO: 5528
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	96
12.7	94
9.5	92
4.76	82
2.38	--
2.00	76
1.19	--
0.841	70
0.595	--
0.42	66
0.297	--
0.177	--
0.149	58
0.074	51

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	90
4.76	82
2.38	--
2.00	75
1.19	--
0.841	69
0.595	--
0.42	64
0.297	--
0.177	--
0.149	56
0.074	51

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	95

M.C. (%): 44

M.C. (%): 31

M.C. (%): 31

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 18
 % SAND: 30
 % FINES: 51

% GRAVEL: 18
 % SAND: 32
 % FINES: 51

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-94
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1921+675 O/S 8M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 264
 LAB NO: 4836
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 265
 LAB NO: 4837
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 266
 LAB NO: 4838
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	95
12.7	84
9.5	77
4.76	64
2.38	--
2.00	51
1.19	--
0.841	42
0.595	--
0.42	36
0.297	--
0.177	--
0.149	29
0.074	26

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	93
12.7	85
9.5	79
4.76	69
2.38	--
2.00	59
1.19	--
0.841	52
0.595	--
0.42	48
0.297	--
0.177	--
0.149	48
0.074	40

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	90
12.7	90
9.5	89
4.76	87
2.38	--
2.00	85
1.19	--
0.841	82
0.595	--
0.42	80
0.297	--
0.177	--
0.149	80
0.074	77

M.C. (%): 12

M.C. (%): 13

M.C. (%): 26

LIMITS

LIQUID: 29.5
 PLASTIC: 24.0
 P.I.: 5.5

LIMITS

LIQUID: 28.0
 PLASTIC: 23.5
 P.I.: 4.5

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 36
 % SAND: 38
 % FINES: 26

% GRAVEL: 31
 % SAND: 30
 % FINES: 40

% GRAVEL: 13
 % SAND: 10
 % FINES: 77

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILT WITH GRAVEL
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 158-208
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1921 + 775
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 546
 LAB NO: 5523
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 547
 LAB NO: 5524
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 548
 LAB NO: 5525
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	91
25.4	91
19.0	79
12.7	68
9.5	64
4.76	55
2.38	--
2.00	44
1.19	--
0.841	35
0.595	--
0.42	29
0.297	--
0.177	--
0.149	22
0.074	19

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	95
12.7	83
9.5	80
4.76	69
2.38	--
2.00	54
1.19	--
0.841	40
0.595	--
0.42	32
0.297	--
0.177	--
0.149	24
0.074	20

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	96
9.5	93
4.76	79
2.38	--
2.00	62
1.19	--
0.841	46
0.595	--
0.42	37
0.297	--
0.177	--
0.149	27
0.074	23

M.C. (%): 6

M.C. (%): 5

M.C. (%): 5

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 45
 % SAND: 36
 % FINES: 19

% GRAVEL: 31
 % SAND: 49
 % FINES: 20

% GRAVEL: 21
 % SAND: 56
 % FINES: 23

CLASSIFICATION:
 WEATHERED
 BEDROCK

CLASSIFICATION:
 WEATHERED
 BEDROCK

CLASSIFICATION:
 WEATHERED
 BEDROCK

PROJECT NUMBER: 745927 HOLE NUMBER: 157-207
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1921+925 O/S 2M LT
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 544
 LAB NO: 5521
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 545
 LAB NO: 5522
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	90
12.7	85
9.5	80
4.76	69
2.38	--
2.00	58
1.19	--
0.841	49
0.595	--
0.42	42
0.297	--
0.177	--
0.149	35
0.074	31

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	96
0.074	92

M.C. (%): 16

M.C. (%): 32

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 31
 % SAND: 37
 % FINES: 31

% GRAVEL: 0
 % SAND: 7
 % FINES: 92

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-206
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1922+075 O/S 2M LT
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 542
 LAB NO: 5519
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 543
 LAB NO: 5520
 DEPTH: 2.5-2.7
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	94

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	89
9.5	85
4.76	68
2.38	--
2.00	49
1.19	--
0.841	35
0.595	--
0.42	27
0.297	--
0.177	--
0.149	18
0.074	14

M.C. (%): 141

M.C. (%): 9

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 6
 % FINES: 94

% GRAVEL: 32
 % SAND: 54
 % FINES: 14

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-205
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1922+200 O/S 2M LT
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 540
 LAB NO: 5517
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 541
 LAB NO: 5518
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	89
19.0	84
12.7	82
9.5	82
4.76	81
2.38	--
2.00	79
1.19	--
0.841	78
0.595	--
0.42	77
0.297	--
0.177	--
0.149	72
0.074	68

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	95
12.7	85
9.5	81
4.76	65
2.38	--
2.00	48
1.19	--
0.841	36
0.595	--
0.42	30
0.297	--
0.177	--
0.149	23
0.074	20

M.C. (%): 101

M.C. (%): 12

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 19
 % SAND: 12
 % FINES: 68

% GRAVEL: 35
 % SAND: 45
 % FINES: 20

CLASSIFICATION:
 GRAVELLY SILT
 (ML)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-204
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1922+325 O/S 2M LT
 LOGGED BY: CB DATE COMPLETED: 91.11.15

FIELD NO: 537
 LAB NO: 5514
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 538
 LAB NO: 5515
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 539
 LAB NO: 5516
 DEPTH: 4.4-4.6
 TYPE: AUGER
 ORGANICS

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	92
12.7	92
9.5	88
4.76	82
2.38	--
2.00	77
1.19	--
0.841	73
0.595	--
0.42	69
0.297	--
0.177	--
0.149	64
0.074	59

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	96
9.5	94
4.76	88
2.38	--
2.00	83
1.19	--
0.841	78
0.595	--
0.42	75
0.297	--
0.177	--
0.149	71
0.074	68

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	97

M.C. (%): 48

M.C. (%): 28

M.C. (%): 34

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 18
 % SAND: 23
 % FINES: 59

% GRAVEL: 12
 % SAND: 20
 % FINES: 68

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

CLASSIFICATION:
 SANDY SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-203
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1922+400 O/S 15M RT
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 534
 LAB NO: 5511
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 535
 LAB NO: 5512
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 536
 LAB NO: 5513
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	83
25.4	83
19.0	80
12.7	73
9.5	67
4.76	58
2.38	--
2.00	48
1.19	--
0.841	41
0.595	--
0.42	37
0.297	--
0.177	--
0.149	29
0.074	24

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	91
9.5	78
4.76	50
2.38	--
2.00	29
1.19	--
0.841	20
0.595	--
0.42	16
0.297	--
0.177	--
0.149	12
0.074	10

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	93
12.7	91
9.5	89
4.76	78
2.38	--
2.00	58
1.19	--
0.841	42
0.595	--
0.42	34
0.297	--
0.177	--
0.149	25
0.074	20

M.C. (%): 8

M.C. (%): 3

M.C. (%): 3

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 42
 % SAND: 33
 % FINES: 24

% GRAVEL: 50
 % SAND: 40
 % FINES: 10

% GRAVEL: 22
 % SAND: 58
 % FINES: 20

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 WEATHERED
 BEDROCK

PROJECT NUMBER: 745927 HOLE NUMBER: 143-95
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1922+425 O/S 11M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 267A
 LAB NO: 4839
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 268A
 LAB NO: 4840
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	89
25.4	76
19.0	63
12.7	57
9.5	55
4.76	49
2.38	--
2.00	45
1.19	--
0.841	41
0.595	--
0.42	38
0.297	--
0.177	--
0.149	35
0.074	33

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	75
19.0	66
12.7	57
9.5	53
4.76	44
2.38	--
2.00	36
1.19	--
0.841	30
0.595	--
0.42	26
0.297	--
0.177	--
0.149	21
0.074	18

M.C. (%): 11

M.C. (%): 6

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 51
 % SAND: 16
 % FINES: 33

% GRAVEL: 56
 % SAND: 26
 % FINES: 18

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-96
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1922+525 O/S 7M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 267
 LAB NO: 4841
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 268
 LAB NO: 4842
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 269
 LAB NO: 4843
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	75
25.4	57
19.0	52
12.7	43
9.5	38
4.76	28
2.38	--
2.00	20
1.19	--
0.841	15
0.595	--
0.42	12
0.297	--
0.177	--
0.149	12
0.074	10

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	74
19.0	62
12.7	47
9.5	39
4.76	26
2.38	--
2.00	17
1.19	--
0.841	11
0.595	--
0.42	7
0.297	--
0.177	--
0.149	7
0.074	3

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	84
12.7	71
9.5	62
4.76	46
2.38	--
2.00	31
1.19	--
0.841	19
0.595	--
0.42	12
0.297	--
0.177	--
0.149	5
0.074	3

M.C. (%): 3

M.C. (%): 2

M.C. (%): 5

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 72
 % SAND: 18
 % FINES: 10

% GRAVEL: 74
 % SAND: 23
 % FINES: 3

% GRAVEL: 54
 % SAND: 43
 % FINES: 3

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-202
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1922+630 O/S 5M RT
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 531
 LAB NO: 5508
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 532
 LAB NO: 5509
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 533
 LAB NO: 5510
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	96
0.297	--
0.177	--
0.149	89
0.074	83

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	98
0.297	--
0.177	--
0.149	96
0.074	94

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	98

M.C. (%): 33

M.C. (%): 47

M.C. (%): 40

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 1
 % SAND: 16
 % FINES: 83

% GRAVEL: 1
 % SAND: 5
 % FINES: 94

% GRAVEL: 0
 % SAND: 2
 % FINES: 98

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-201
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1922+725 O/S 5M RT
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 528
 LAB NO: 5505
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 529
 LAB NO: 5506
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 530
 LAB NO: 5507
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	95

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	96
0.074	92

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	95

M.C. (%): 27

M.C. (%): 86

M.C. (%): 48

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

% GRAVEL: 0
 % SAND: 8
 % FINES: 92

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-200
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1922+825 O/S 11M LT
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 525
 LAB NO: 5502
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 526
 LAB NO: 5503
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 527
 LAB NO: 5504
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	95

M.C. (%): 40

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 4
 % FINES: 95

CLASSIFICATION:
 SILT (ML)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	96
0.074	93

M.C. (%): 39

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 7
 % FINES: 93

CLASSIFICATION:
 SILT (ML)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	96
0.074	91

M.C. (%): 36

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 8
 % FINES: 91

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-97
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1922+925 O/S 8M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 270
 LAB NO: 4844
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 271
 LAB NO: 4845
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 272
 LAB NO: 4846
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	100
50.8	78
38.1	78
25.4	74
19.0	67
12.7	56
9.5	50
4.76	41
2.38	--
2.00	32
1.19	--
0.841	30
0.595	--
0.42	21
0.297	--
0.177	--
0.149	21
0.074	16

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	100
50.8	83
38.1	83
25.4	63
19.0	60
12.7	51
9.5	44
4.76	33
2.38	--
2.00	23
1.19	--
0.841	17
0.595	--
0.42	12
0.297	--
0.177	--
0.149	8
0.074	7

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	77
25.4	69
19.0	62
12.7	50
9.5	41
4.76	31
2.38	--
2.00	23
1.19	--
0.841	18
0.595	--
0.42	14
0.297	--
0.177	--
0.149	10
0.074	9

M.C. (%): 5

M.C. (%): 2

M.C. (%): 3

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 59
 % SAND: 25
 % FINES: 16

% GRAVEL: 67
 % SAND: 26
 % FINES: 7

% GRAVEL: 69
 % SAND: 22
 % FINES: 9

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-98
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1923+025 O/S 9M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 273
 LAB NO: 4847
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 274
 LAB NO: 4848
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 275
 LAB NO: 4849
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	74
19.0	58
12.7	46
9.5	39
4.76	29
2.38	--
2.00	20
1.19	--
0.841	14
0.595	--
0.42	10
0.297	--
0.177	--
0.149	6
0.074	5

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	80
19.0	64
12.7	49
9.5	39
4.76	25
2.38	--
2.00	15
1.19	--
0.841	9
0.595	--
0.42	5
0.297	--
0.177	--
0.149	2
0.074	2

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	100
50.8	81
38.1	81
25.4	66
19.0	60
12.7	47
9.5	40
4.76	29
2.38	--
2.00	21
1.19	--
0.841	12
0.595	--
0.42	7
0.297	--
0.177	--
0.149	3
0.074	2

M.C. (%): 2

M.C. (%): 1

M.C. (%): 2

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 71
 % SAND: 24
 % FINES: 5

% GRAVEL: 75
 % SAND: 23
 % FINES: 2

% GRAVEL: 71
 % SAND: 27
 % FINES: 2

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SAND
 (GW)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-99
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1923+125 O/S 5M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 276
 LAB NO: 4850
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 277
 LAB NO: 4851
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 278
 LAB NO: 4852
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	88
19.0	74
12.7	58
9.5	51
4.76	41
2.38	--
2.00	31
1.19	--
0.841	23
0.595	--
0.42	19
0.297	--
0.177	--
0.149	13
0.074	10

101.6	--
76.2	--
50.8	--
38.1	100
25.4	86
19.0	80
12.7	70
9.5	64
4.76	52
2.38	--
2.00	43
1.19	--
0.841	36
0.595	--
0.42	30
0.297	--
0.177	--
0.149	23
0.074	20

101.6	--
76.2	100
50.8	81
38.1	75
25.4	57
19.0	53
12.7	45
9.5	40
4.76	29
2.38	--
2.00	21
1.19	--
0.841	15
0.595	--
0.42	11
0.297	--
0.177	--
0.149	7
0.074	6

M.C. (%): 3

M.C. (%): 6

M.C. (%): 2

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 59
 % SAND: 30
 % FINES: 10

% GRAVEL: 48
 % SAND: 32
 % FINES: 20

% GRAVEL: 71
 % SAND: 23
 % FINES: 6

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-100
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1923+225 O/S 9M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 279
 LAB NO: 4853
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 280
 LAB NO: 4854
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 281
 LAB NO: 4855
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	72
25.4	71
19.0	58
12.7	54
9.5	49
4.76	42
2.38	--
2.00	35
1.19	--
0.841	30
0.595	--
0.42	26
0.297	--
0.177	--
0.149	22
0.074	21

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	92
12.7	90
9.5	89
4.76	86
2.38	--
2.00	84
1.19	--
0.841	83
0.595	--
0.42	82
0.297	--
0.177	--
0.149	82
0.074	78

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	80
25.4	72
19.0	72
12.7	59
9.5	57
4.76	52
2.38	--
2.00	47
1.19	--
0.841	43
0.595	--
0.42	40
0.297	--
0.177	--
0.149	39
0.074	35

M.C. (%): 5

M.C. (%): 20

M.C. (%): 10

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 58
 % SAND: 21
 % FINES: 21

% GRAVEL: 14
 % SAND: 8
 % FINES: 78

% GRAVEL: 48
 % SAND: 17
 % FINES: 35

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILT WITH GRAVEL
 (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-101
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1923+325 O/S 7M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.22

FIELD NO: 282
 LAB NO: 4856
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 283
 LAB NO: 4857
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 284
 LAB NO: 4858
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	93
25.4	63
19.0	55
12.7	46
9.5	41
4.76	33
2.38	--
2.00	28
1.19	--
0.841	22
0.595	--
0.42	19
0.297	--
0.177	--
0.149	15
0.074	11

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	85
12.7	61
9.5	50
4.76	33
2.38	--
2.00	24
1.19	--
0.841	17
0.595	--
0.42	12
0.297	--
0.177	--
0.149	7
0.074	5

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	97
19.0	90
12.7	77
9.5	65
4.76	50
2.38	--
2.00	38
1.19	--
0.841	28
0.595	--
0.42	19
0.297	--
0.177	--
0.149	14
0.074	9

M.C. (%): 4

M.C. (%): 2

M.C. (%): 3

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 67
 % SAND: 22
 % FINES: 11

% GRAVEL: 67
 % SAND: 28
 % FINES: 5

% GRAVEL: 50
 % SAND: 40
 % FINES: 9

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-102
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1923+425 O/S 7M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 285
 LAB NO: 4859
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 286
 LAB NO: 4860
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 287
 LAB NO: 4861
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	82
25.4	78
19.0	72
12.7	63
9.5	56
4.76	46
2.38	--
2.00	37
1.19	--
0.841	30
0.595	--
0.42	24
0.297	--
0.177	--
0.149	18
0.074	16

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	94
0.074	92

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	94
0.074	89

M.C. (%): 7

M.C. (%): 35

M.C. (%): 26

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: 26.1
 PLASTIC: 28.0
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 54
 % SAND: 31
 % FINES: 16

% GRAVEL: 1
 % SAND: 8
 % FINES: 92

% GRAVEL: 0
 % SAND: 11
 % FINES: 89

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-103
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1923+525 O/S 6M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 288
 LAB NO: 4862
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 289
 LAB NO: 4863
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 290
 LAB NO: 4864
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	91
19.0	88
12.7	81
9.5	74
4.76	64
2.38	--
2.00	54
1.19	--
0.841	48
0.595	--
0.42	43
0.297	--
0.177	--
0.149	36
0.074	32

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	86
25.4	78
19.0	70
12.7	63
9.5	59
4.76	52
2.38	--
2.00	45
1.19	--
0.841	40
0.595	--
0.42	36
0.297	--
0.177	--
0.149	31
0.074	28

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	93
19.0	88
12.7	73
9.5	66
4.76	53
2.38	--
2.00	42
1.19	--
0.841	33
0.595	--
0.42	28
0.297	--
0.177	--
0.149	23
0.074	21

M.C. (%): 11

M.C. (%): 11

M.C. (%): 10

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 36
 % SAND: 32
 % FINES: 32

% GRAVEL: 48
 % SAND: 24
 % FINES: 28

% GRAVEL: 47
 % SAND: 32
 % FINES: 21

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-195
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1923+625 O/S 8M LT
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 512
 LAB NO: 5489
 DEPTH: 1.3-1.5
 TYPE: AUGER
 95% ORGANIC

FIELD NO: 513
 LAB NO: 5490
 DEPTH: 2.8-3.0
 TYPE: AUGER
 ORGANICS

FIELD NO: 514
 LAB NO: 5491
 DEPTH: 4.0-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	68
2.38	--
2.00	54
1.19	--
0.841	44
0.595	--
0.42	38
0.297	--
0.177	--
0.149	30
0.074	27

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	92
4.76	88
2.38	--
2.00	84
1.19	--
0.841	80
0.595	--
0.42	77
0.297	--
0.177	--
0.149	71
0.074	68

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	92
12.7	87
9.5	82
4.76	69
2.38	--
2.00	55
1.19	--
0.841	44
0.595	--
0.42	36
0.297	--
0.177	--
0.149	27
0.074	24

M.C. (%): 105

M.C. (%): 46

M.C. (%): 12

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 32
 % SAND: 40
 % FINES: 27

% GRAVEL: 12
 % SAND: 20
 % FINES: 68

% GRAVEL: 31
 % SAND: 45
 % FINES: 24

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

CLASSIFICATION:
 SANDY SILT (ML)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-194
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1923+725 O/S 10M LT
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 509
 LAB NO: 5486
 DEPTH: 1.3-1.5
 TYPE: AUGER
 85% ORGANIC

FIELD NO: 510
 LAB NO: 5487
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 511
 LAB NO: 5488
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	96
1.19	--
0.841	92
0.595	--
0.42	89
0.297	--
0.177	--
0.149	82
0.074	79

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	96
12.7	88
9.5	78
4.76	68
2.38	--
2.00	63
1.19	--
0.841	61
0.595	--
0.42	59
0.297	--
0.177	--
0.149	54
0.074	51

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	84
12.7	77
9.5	71
4.76	61
2.38	--
2.00	52
1.19	--
0.841	43
0.595	--
0.42	37
0.297	--
0.177	--
0.149	30
0.074	26

M.C. (%): 49

M.C. (%): 19

M.C. (%): 10

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 1
 % SAND: 19
 % FINES: 79

% GRAVEL: 32
 % SAND: 16
 % FINES: 51

% GRAVEL: 39
 % SAND: 34
 % FINES: 26

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 GRAVELLY SILT
 WITH SAND (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-193
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1923+825 O/S 11M LT
 LOGGED BY: CB DATE COMPLETED: 91.11.14

FIELD NO: 506
 LAB NO: 5483
 DEPTH: 1.3-1.5
 TYPE: AUGER
 ORGANICS

FIELD NO: 507
 LAB NO: 5484
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 508
 LAB NO: 5485
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	93
0.074	90

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	78
12.7	70
9.5	64
4.76	51
2.38	--
2.00	37
1.19	--
0.841	25
0.595	--
0.42	17
0.297	--
0.177	--
0.149	13
0.074	12

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	95
19.0	81
12.7	77
9.5	74
4.76	64
2.38	--
2.00	54
1.19	--
0.841	44
0.595	--
0.42	39
0.297	--
0.177	--
0.149	35
0.074	34

M.C. (%): 41

M.C. (%): 4

M.C. (%): 13

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 10
 % FINES: 90

% GRAVEL: 49
 % SAND: 39
 % FINES: 12

% GRAVEL: 36
 % SAND: 30
 % FINES: 34

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-104
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1923+900 O/S 7M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 291
 LAB NO: 4865
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 292
 LAB NO: 4866
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 293
 LAB NO: 4867
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	87
19.0	72
12.7	59
9.5	51
4.76	39
2.38	--
2.00	29
1.19	--
0.841	21
0.595	--
0.42	15
0.297	--
0.177	--
0.149	9
0.074	8

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	62
25.4	62
19.0	59
12.7	56
9.5	55
4.76	54
2.38	--
2.00	52
1.19	--
0.841	51
0.595	--
0.42	50
0.297	--
0.177	--
0.149	48
0.074	47

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	97
2.38	--
2.00	95
1.19	--
0.841	94
0.595	--
0.42	93
0.297	--
0.177	--
0.149	91
0.074	89

M.C. (%): 3

M.C. (%): 20

M.C. (%): 30

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 61
 % SAND: 31
 % FINES: 8

% GRAVEL: 46
 % SAND: 7
 % FINES: 47

% GRAVEL: 3
 % SAND: 8
 % FINES: 89

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 SILTY GRAVEL (GM)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-105
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1924+010 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 294
 LAB NO: 4868
 DEPTH: 1.0-1.2
 TYPE: AUGER

FIELD NO: 295
 LAB NO: 4869
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 296
 LAB NO: 4870
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	93
19.0	81
12.7	71
9.5	62
4.76	45
2.38	--
2.00	33
1.19	--
0.841	24
0.595	--
0.42	18
0.297	--
0.177	--
0.149	12
0.074	11

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	85
12.7	74
9.5	65
4.76	53
2.38	--
2.00	43
1.19	--
0.841	36
0.595	--
0.42	28
0.297	--
0.177	--
0.149	26
0.074	22

M.C. (%): 5

M.C. (%): 31

M.C. (%): 10

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 55
 % SAND: 34
 % FINES: 11

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 47
 % SAND: 30
 % FINES: 22

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-106
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1924+100 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 297
 LAB NO: 4871
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 298
 LAB NO: 4872
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 299
 LAB NO: 4873
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	96
1.19	--
0.841	93
0.595	--
0.42	91
0.297	--
0.177	--
0.149	89
0.074	85

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	89
19.0	85
12.7	74
9.5	69
4.76	63
2.38	--
2.00	60
1.19	--
0.841	57
0.595	--
0.42	54
0.297	--
0.177	--
0.149	53
0.074	48

M.C. (%): 44

M.C. (%): 30

M.C. (%): 14

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 2
 % SAND: 13
 % FINES: 85

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 37
 % SAND: 15
 % FINES: 48

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-107
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1924+200 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 300
 LAB NO: 4874
 DEPTH: 1.0-1.2
 TYPE: AUGER

FIELD NO: 301
 LAB NO: 4875
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	96
9.5	95
4.76	93
2.38	--
2.00	91
1.19	--
0.841	89
0.595	--
0.42	86
0.297	--
0.177	--
0.149	83
0.074	76

M.C. (%): 7

M.C. (%): 30

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 7
 % SAND: 17
 % FINES: 76

CLASSIFICATION:

CLASSIFICATION:
 SILT WITH SAND
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-108
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1924+300 O/S 6M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 302
 LAB NO: 4876
 DEPTH: 1.0-1.2
 TYPE: AUGER

FIELD NO: 303
 LAB NO: 4877
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 304
 LAB NO: 4878
 DEPTH: 3.9-4.1
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	89
25.4	80
19.0	76
12.7	57
9.5	50
4.76	35
2.38	--
2.00	25
1.19	--
0.841	16
0.595	--
0.42	11
0.297	--
0.177	--
0.149	6
0.074	5

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	98
1.19	--
0.841	96
0.595	--
0.42	95
0.297	--
0.177	--
0.149	94
0.074	90

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	94
4.76	90
2.38	--
2.00	85
1.19	--
0.841	78
0.595	--
0.42	69
0.297	--
0.177	--
0.149	67
0.074	62

M.C. (%): 9

M.C. (%): 25

M.C. (%): 23

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 65
 % SAND: 30
 % FINES: 5

% GRAVEL: 2
 % SAND: 8
 % FINES: 90

% GRAVEL: 10
 % SAND: 27
 % FINES: 62

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SANDY SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-109
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1924+400 O/S 6M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 305
 LAB NO: 4879
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 306
 LAB NO: 4880
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 307
 LAB NO: 4881
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	98
2.38	--
2.00	97
1.19	--
0.841	94
0.595	--
0.42	92
0.297	--
0.177	--
0.149	85
0.074	81

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	99
2.38	--
2.00	97
1.19	--
0.841	95
0.595	--
0.42	94
0.297	--
0.177	--
0.149	93
0.074	89

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	59
38.1	59
25.4	45
19.0	45
12.7	41
9.5	37
4.76	32
2.38	--
2.00	29
1.19	--
0.841	26
0.595	--
0.42	24
0.297	--
0.177	--
0.149	22
0.074	21

M.C. (%): 36

M.C. (%): 33

M.C. (%): 10

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 2
 % SAND: 17
 % FINES: 81

% GRAVEL: 1
 % SAND: 10
 % FINES: 89

% GRAVEL: 68
 % SAND: 11
 % FINES: 21

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILTY GRAVEL (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-110
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1924+500 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.24

FIELD NO: 308
 LAB NO: 4882
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 309
 LAB NO: 4883
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 310
 LAB NO: 4884
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	98
2.38	--
2.00	96
1.19	--
0.841	94
0.595	--
0.42	92
0.297	--
0.177	--
0.149	88
0.074	85

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	93
0.074	90

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	92
12.7	84
9.5	78
4.76	67
2.38	--
2.00	58
1.19	--
0.841	51
0.595	--
0.42	46
0.297	--
0.177	--
0.149	43
0.074	40

M.C. (%): 26

M.C. (%): 23

M.C. (%): 12

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 2
 % SAND: 13
 % FINES: 85

% GRAVEL: 1
 % SAND: 9
 % FINES: 90

% GRAVEL: 33
 % SAND: 28
 % FINES: 40

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-111
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1924+600 O/S 6M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 311
 LAB NO: 4885
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 312
 LAB NO: 4886
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 313
 LAB NO: 4887
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	94
0.074	91

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	98

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	95
12.7	86
9.5	80
4.76	71
2.38	--
2.00	61
1.19	--
0.841	54
0.595	--
0.42	47
0.297	--
0.177	--
0.149	41
0.074	37

M.C. (%): 34

M.C. (%): 41

M.C. (%): 15

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 1
 % SAND: 8
 % FINES: 91

% GRAVEL: 0
 % SAND: 2
 % FINES: 98

% GRAVEL: 29
 % SAND: 33
 % FINES: 37

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-112
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1924+700 O/S 6M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 314
 LAB NO: 4888
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 315
 LAB NO: 4889
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 316
 LAB NO: 4890
 DEPTH: 4.2-4.4
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	95
4.76	92
2.38	--
2.00	89
1.19	--
0.841	86
0.595	--
0.42	84
0.297	--
0.177	--
0.149	80
0.074	75

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	98
4.76	95
2.38	--
2.00	91
1.19	--
0.841	89
0.595	--
0.42	88
0.297	--
0.177	--
0.149	86
0.074	82

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	94
0.297	--
0.177	--
0.149	92
0.074	88

M.C. (%): 29

M.C. (%): 39

M.C. (%): 29

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 8
 % SAND: 17
 % FINES: 75

% GRAVEL: 5
 % SAND: 12
 % FINES: 82

% GRAVEL: 1
 % SAND: 11
 % FINES: 88

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-113
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1924+800 O/S 4M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 317
 LAB NO: 4891
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 318
 LAB NO: 4892
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 319
 LAB NO: 4893
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	96
9.5	95
4.76	93
2.38	--
2.00	91
1.19	--
0.841	89
0.595	--
0.42	86
0.297	--
0.177	--
0.149	82
0.074	78

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	97
1.19	--
0.841	94
0.595	--
0.42	92
0.297	--
0.177	--
0.149	90
0.074	88

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

M.C. (%): 28

M.C. (%): 45

M.C. (%): 8

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 7
 % SAND: 16
 % FINES: 78

% GRAVEL: 2
 % SAND: 10
 % FINES: 88

% GRAVEL: --
 % SAND: --
 % FINES: --

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:

PROJECT NUMBER: 745927 HOLE NUMBER: 143-114
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1924+900 O/S 3M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 320
 LAB NO: 4894
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 321
 LAB NO: 4895
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	97
2.38	--
2.00	94
1.19	--
0.841	90
0.595	--
0.42	87
0.297	--
0.177	--
0.149	78
0.074	68

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	97
12.7	96
9.5	95
4.76	94
2.38	--
2.00	93
1.19	--
0.841	91
0.595	--
0.42	89
0.297	--
0.177	--
0.149	85
0.074	82

M.C. (%): 36

M.C. (%): 32

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 3
 % SAND: 28
 % FINES: 68

% GRAVEL: 6
 % SAND: 12
 % FINES: 82

CLASSIFICATION:
 SANDY SILT (ML)

CLASSIFICATION:
 SILT WITH SAND
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-115
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1925+000 O/S 4M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 322
 LAB NO: 4896
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 323
 LAB NO: 4897
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	97
4.76	94
2.38	--
2.00	91
1.19	--
0.841	88
0.595	--
0.42	86
0.297	--
0.177	--
0.149	82
0.074	80

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	97
1.19	--
0.841	95
0.595	--
0.42	95
0.297	--
0.177	--
0.149	93
0.074	91

M.C. (%): 39

M.C. (%): 31

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 6
 % SAND: 15
 % FINES: 80

% GRAVEL: 2
 % SAND: 8
 % FINES: 91

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 143-116
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-225 & 17-174
 HOLE LOCATION: 1925+100 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 324
 LAB NO: 4898
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 325
 LAB NO: 4899
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 326
 LAB NO: 4900
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	98
2.38	--
2.00	97
1.19	--
0.841	95
0.595	--
0.42	93
0.297	--
0.177	--
0.149	90
0.074	86

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	100
4.76	99
2.38	--
2.00	97
1.19	--
0.841	94
0.595	--
0.42	91
0.297	--
0.177	--
0.149	88
0.074	84

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	84
9.5	77
4.76	63
2.38	--
2.00	51
1.19	--
0.841	39
0.595	--
0.42	26
0.297	--
0.177	--
0.149	14
0.074	12

M.C. (%): 41

M.C. (%): 32

M.C. (%): 9

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 2
 % SAND: 12
 % FINES: 86

% GRAVEL: 1
 % SAND: 15
 % FINES: 84

% GRAVEL: 37
 % SAND: 50
 % FINES: 12

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 WELL-GRADED SAND
 WITH SILT &
 GRAVEL (SW-SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-117
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1925+200 O/S 3M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 327
 LAB NO: 4901
 DEPTH: 1.0-1.2
 TYPE: AUGER

FIELD NO: 328
 LAB NO: 4902
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	90
12.7	82
9.5	74
4.76	64
2.38	--
2.00	51
1.19	--
0.841	42
0.595	--
0.42	35
0.297	--
0.177	--
0.149	27
0.074	24

M.C. (%): 7

M.C. (%): 13

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 36
 % SAND: 40
 % FINES: 24

CLASSIFICATION:

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-118
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1925+300 O/S 3M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.26

FIELD NO: 329
 LAB NO: 4903
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 330
 LAB NO: 4904
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 331
 LAB NO: 4905
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	94
12.7	82
9.5	80
4.76	74
2.38	--
2.00	70
1.19	--
0.841	67
0.595	--
0.42	64
0.297	--
0.177	--
0.149	57
0.074	54

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	95

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	94
19.0	90
12.7	82
9.5	67
4.76	45
2.38	--
2.00	30
1.19	--
0.841	22
0.595	--
0.42	15
0.297	--
0.177	--
0.149	9
0.074	7

M.C. (%): 42

M.C. (%): 53

M.C. (%): 7

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 26
 % SAND: 20
 % FINES: 54

% GRAVEL: 1
 % SAND: 4
 % FINES: 95

% GRAVEL: 55
 % SAND: 38
 % FINES: 7

CLASSIFICATION:
 GRAVELLY SILT
 WITH SAND (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-119
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1925+425 O/S 6M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 332
 LAB NO: 4906
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 333
 LAB NO: 4907
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 334
 LAB NO: 4908
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	98
0.074	91

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	90
9.5	86
4.76	70
2.38	--
2.00	54
1.19	--
0.841	44
0.595	--
0.42	38
0.297	--
0.177	--
0.149	32
0.074	28

M.C. (%) : 10

M.C. (%) : 54

M.C. (%) : 14

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 0
 % SAND: 9
 % FINES: 91

% GRAVEL: 30
 % SAND: 42
 % FINES: 28

CLASSIFICATION:

CLASSIFICATION:
SILT (ML)

CLASSIFICATION:
SILTY SAND WITH GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-120
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1925+525 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 335
 LAB NO: 4909
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 336
 LAB NO: 4910
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 337
 LAB NO: 4911
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	64
25.4	64
19.0	64
12.7	64
9.5	64
4.76	63
2.38	--
2.00	60
1.19	--
0.841	56
0.595	--
0.42	54
0.297	--
0.177	--
0.149	51
0.074	45

M.C. (%): 33

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 37
 % SAND: 18
 % FINES: 45

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	98
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	95

M.C. (%): 29

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 2
 % SAND: 4
 % FINES: 95

CLASSIFICATION:
 SILT (ML)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	97

M.C. (%): 28

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-121
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1925+625 O/S 6M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 338
 LAB NO: 4912
 DEPTH: 1.0-1.2
 TYPE: AUGER

FIELD NO: 339
 LAB NO: 4913
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	98
9.5	98
4.76	97
2.38	--
2.00	96
1.19	--
0.841	96
0.595	--
0.42	95
0.297	--
0.177	--
0.149	93
0.074	90

M.C. (%) : 6

M.C. (%) : 21

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 3
 % SAND: 7
 % FINES: 90

CLASSIFICATION:

CLASSIFICATION:
SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-122
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1925+725 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 340
 LAB NO: 4914
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 341
 LAB NO: 4915
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 342
 LAB NO: 4916
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	98
1.19	--
0.841	94
0.595	--
0.42	91
0.297	--
0.177	--
0.149	86
0.074	80

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	98
0.074	97

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	98

M.C. (%): 35

M.C. (%): 32

M.C. (%): 66

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 0
 % SAND: 20
 % FINES: 80

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

% GRAVEL: 0
 % SAND: 2
 % FINES: 98

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-123
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1925+825 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 343
 LAB NO: 4917
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 344
 LAB NO: 4918
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	94
12.7	92
9.5	89
4.76	87
2.38	--
2.00	83
1.19	--
0.841	80
0.595	--
0.42	77
0.297	--
0.177	--
0.149	70
0.074	65

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	98
9.5	98
4.76	98
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	93

M.C. (%): 44

M.C. (%): 27

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 13
 % SAND: 22
 % FINES: 65

% GRAVEL: 2
 % SAND: 5
 % FINES: 93

CLASSIFICATION:
 SANDY SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-124
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1925+925
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 345
 LAB NO: 4919
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 346
 LAB NO: 4920
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 347
 LAB NO: 4921
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	95

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	98

M.C. (%): 10

M.C. (%): 29

M.C. (%): 35

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

% GRAVEL: 0
 % SAND: 2
 % FINES: 98

CLASSIFICATION:

CLASSIFICATION:
SILT (ML)

CLASSIFICATION:
SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-125
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1926+025 O/S 4M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 348
 LAB NO: 4922
 DEPTH: 1.0-1.2
 TYPE: AUGER

FIELD NO: 349
 LAB NO: 4923
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	93

M.C. (%): 12

M.C. (%): 46

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 0
 % SAND: 7
 % FINES: 93

CLASSIFICATION:

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-126
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1926+125 O/S 7M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 350
 LAB NO: 4924
 DEPTH: 1.0-1.2
 TYPE: AUGER

FIELD NO: 351
 LAB NO: 4925
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 352
 LAB NO: 4926
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	93

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	92
12.7	86
9.5	83
4.76	76
2.38	--
2.00	68
1.19	--
0.841	61
0.595	--
0.42	56
0.297	--
0.177	--
0.149	47
0.074	42

M.C. (%): 6

M.C. (%): 30

M.C. (%): 12

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 0
 % SAND: 6
 % FINES: 93

% GRAVEL: 24
 % SAND: 34
 % FINES: 42

CLASSIFICATION:

CLASSIFICATION:
SILT (ML)

CLASSIFICATION:
SILTY SAND WITH
GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-127
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1926+225 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 353
 LAB NO: 4927
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 354
 LAB NO: 4928
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 355
 LAB NO: 4929
 DEPTH: 4.3-4.5
 TYPE: AUGER
 MOSTLY ORGANIC

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

M.C. (%): 24

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: --

% GRAVEL: --
 % SAND: --
 % FINES: --

CLASSIFICATION:

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	94

M.C. (%): 44

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 6
 % FINES: 94

CLASSIFICATION:
SILT (ML)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	99
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	93
0.074	90

M.C. (%): 92

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 10
 % FINES: 90

CLASSIFICATION:
SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-128
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1926+325 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 356
 LAB NO: 4930
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 357
 LAB NO: 4931
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 358
 LAB NO: 4932
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	94
0.074	90

M.C. (%): 26

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 0
 % SAND: 10
 % FINES: 90

CLASSIFICATION: SILT (ML)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	96
4.76	93
2.38	--
2.00	90
1.19	--
0.841	88
0.595	--
0.42	86
0.297	--
0.177	--
0.149	83
0.074	81

M.C. (%): 33

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 7
 % SAND: 13
 % FINES: 81

CLASSIFICATION: SILT WITH SAND (ML)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	82
12.7	73
9.5	68
4.76	60
2.38	--
2.00	53
1.19	--
0.841	49
0.595	--
0.42	46
0.297	--
0.177	--
0.149	40
0.074	37

M.C. (%): 20

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 40
 % SAND: 22
 % FINES: 37

CLASSIFICATION: SILTY GRAVEL WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-129
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1926+425 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 359
 LAB NO: 4933
 DEPTH: 1.0-1.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	100
50.8	80
38.1	80
25.4	80
19.0	74
12.7	60
9.5	56
4.76	48
2.38	--
2.00	41
1.19	--
0.841	35
0.595	--
0.42	32
0.297	--
0.177	--
0.149	29
0.074	25

M.C. (%): 9

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 52
 % SAND: 23
 % FINES: 25

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-130
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1926+525 O/S 4M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 360
 LAB NO: 4934
 DEPTH: 1.2-1.4
 TYPE: AUGER

FIELD NO: 361
 LAB NO: 4935
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 362
 LAB NO: 4936
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	81
12.7	69
9.5	60
4.76	49
2.38	--
2.00	39
1.19	--
0.841	29
0.595	--
0.42	23
0.297	--
0.177	--
0.149	17
0.074	14

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	94
0.074	92

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	96

M.C. (%): 9

M.C. (%): 57

M.C. (%): 75

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 51
 % SAND: 35
 % FINES: 14

% GRAVEL: 0
 % SAND: 8
 % FINES: 92

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-131
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1926+625 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 363
 LAB NO: 4937
 DEPTH: 1.0-1.2
 TYPE: AUGER

FIELD NO: 364
 LAB NO: 4938
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 365
 LAB NO: 4939
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	100
0.074	98

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	96
4.76	92
2.38	--
2.00	88
1.19	--
0.841	85
0.595	--
0.42	83
0.297	--
0.177	--
0.149	80
0.074	78

M.C. (%): 9

M.C. (%): 30

M.C. (%): 37

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 0
 % SAND: 2
 % FINES: 98

% GRAVEL: 8
 % SAND: 14
 % FINES: 78

CLASSIFICATION:

CLASSIFICATION:
SILT (ML)

CLASSIFICATION:
SILT WITH SAND
(ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-132
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1926+725 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 366
 LAB NO: 4940
 DEPTH: 1.1-1.3
 TYPE: AUGER

FIELD NO: 367
 LAB NO: 4941
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 368
 LAB NO: 4942
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	89
25.4	79
19.0	64
12.7	54
9.5	47
4.76	35
2.38	--
2.00	27
1.19	--
0.841	20
0.595	--
0.42	15
0.297	--
0.177	--
0.149	11
0.074	8

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	94
0.074	92

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	100
9.5	99
4.76	97
2.38	--
2.00	95
1.19	--
0.841	93
0.595	--
0.42	92
0.297	--
0.177	--
0.149	91
0.074	86

M.C. (%): 8

M.C. (%): 59

M.C. (%): 32

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 65
 % SAND: 28
 % FINES: 8

% GRAVEL: 1
 % SAND: 7
 % FINES: 92

% GRAVEL: 3
 % SAND: 11
 % FINES: 86

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-133
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1926+925 O/S 4M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 369
 LAB NO: 4943
 DEPTH: 1.1-1.3
 TYPE: AUGER

FIELD NO: 370
 LAB NO: 4944
 DEPTH: 2.8-3.0
 TYPE: AUGER
 100% ORGANIC

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

M.C. (%): 7

M.C. (%): 444

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: --
 % SAND: --
 % FINES: --

CLASSIFICATION:

CLASSIFICATION:

PROJECT NUMBER: 745927 HOLE NUMBER: 144-134
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1927+125 O/S 4M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 371
 LAB NO: 4945
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 372
 LAB NO: 4946
 DEPTH: 2.8-3.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	98
12.7	97
9.5	97
4.76	95
2.38	--
2.00	93
1.19	--
0.841	90
0.595	--
0.42	88
0.297	--
0.177	--
0.149	84
0.074	80

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	95

M.C. (%): 24

M.C. (%): 69

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 5
 % SAND: 15
 % FINES: 80

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-135
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1927+325 O/S 4M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 373
 LAB NO: 4947
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 374
 LAB NO: 4948
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 375
 LAB NO: 4949
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	96
0.297	--
0.177	--
0.149	94
0.074	93

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	99
4.76	97
2.38	--
2.00	96
1.19	--
0.841	94
0.595	--
0.42	92
0.297	--
0.177	--
0.149	90
0.074	87

M.C. (%): 9

M.C. (%): 73

M.C. (%): 47

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 0
 % SAND: 7
 % FINES: 93

% GRAVEL: 3
 % SAND: 10
 % FINES: 87

CLASSIFICATION:

CLASSIFICATION:
SILT (ML)

CLASSIFICATION:
SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-136
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1927+525 O/S 5M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 376
 LAB NO: 4950
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 377
 LAB NO: 4951
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 378
 LAB NO: 4952
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	--
0.595	--
0.42	--
0.297	--
0.177	--
0.149	--
0.074	--

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	94

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	93
0.074	88

M.C. (%): 8

M.C. (%): 33

M.C. (%): 29

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: --

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: --
 % SAND: --
 % FINES: --

% GRAVEL: 1
 % SAND: 5
 % FINES: 94

% GRAVEL: 0
 % SAND: 12
 % FINES: 88

CLASSIFICATION:

CLASSIFICATION:
SILT (ML)

CLASSIFICATION:
SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-137
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1927+725 O/S 6M LT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 379
 LAB NO: 4953
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 380
 LAB NO: 4954
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 381
 LAB NO: 4955
 DEPTH: 4.3-4.5
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	97
19.0	95
12.7	86
9.5	79
4.76	64
2.38	--
2.00	51
1.19	--
0.841	62
0.595	--
0.42	31
0.297	--
0.177	--
0.149	23
0.074	19

M.C. (%): 8

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 36
 % SAND: 45
 % FINES: 19

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	97
0.297	--
0.177	--
0.149	96
0.074	94

M.C. (%): 33

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 1
 % SAND: 5
 % FINES: 94

CLASSIFICATION:
 SILT (ML)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	95
1.19	--
0.841	92
0.595	--
0.42	90
0.297	--
0.177	--
0.149	87
0.074	84

M.C. (%): 27

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 2
 % SAND: 13
 % FINES: 84

CLASSIFICATION:
 SILT WITH SAND
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 144-138
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-225 17-174
 HOLE LOCATION: 1927+925 O/S 7M RT
 LOGGED BY: DT DATE COMPLETED: 91.08.27

FIELD NO: 382
 LAB NO: 4956
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 383
 LAB NO: 4957
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 384
 LAB NO: 4958
 DEPTH: 4.3-4.5
 TYPE: AUGER

FIELD NO: 385
 LAB NO: 4959
 DEPTH: 5.8-6.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	82
12.7	73
9.5	65
4.76	51
2.38	--
2.00	40
1.19	--
0.841	31
0.595	--
0.42	25
0.297	--
0.177	--
0.149	17
0.074	14

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	90
25.4	90
19.0	80
12.7	69
9.5	64
4.76	50
2.38	--
2.00	39
1.19	--
0.841	31
0.595	--
0.42	25
0.297	--
0.177	--
0.149	17
0.074	14

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	94
12.7	89
9.5	86
4.76	78
2.38	--
2.00	71
1.19	--
0.841	65
0.595	--
0.42	61
0.297	--
0.177	--
0.149	55
0.074	52

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	90
12.7	88
9.5	85
4.76	82
2.38	--
2.00	78
1.19	--
0.841	74
0.595	--
0.42	70
0.297	--
0.177	--
0.149	63
0.074	59

M.C. (%): 5

M.C. (%): 6

M.C. (%): 19

M.C. (%): 50

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 49
 % SAND: 37
 % FINES: 14

% GRAVEL: 50
 % SAND: 36
 % FINES: 14

% GRAVEL: 22
 % SAND: 26
 % FINES: 52

% GRAVEL: 18
 % SAND: 23
 % FINES: 59

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-192
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1928+095
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 503
 LAB NO: 5480
 DEPTH: 1.3-1.5
 TYPE: AUGER
 ORGANICS

FIELD NO: 504
 LAB NO: 5481
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 505
 LAB NO: 5482
 DEPTH: 4.4-4.6
 TYPE: AUGER
 ORGANICS

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	95
1.19	--
0.841	92
0.595	--
0.42	90
0.297	--
0.177	--
0.149	87
0.074	84

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	99
12.7	97
9.5	96
4.76	95
2.38	--
2.00	93
1.19	--
0.841	92
0.595	--
0.42	90
0.297	--
0.177	--
0.149	88
0.074	86

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	94
12.7	88
9.5	85
4.76	76
2.38	--
2.00	69
1.19	--
0.841	63
0.595	--
0.42	59
0.297	--
0.177	--
0.149	53
0.074	49

M.C. (%): 123

M.C. (%): 37

M.C. (%): 41

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 2
 % SAND: 14
 % FINES: 84

% GRAVEL: 5
 % SAND: 9
 % FINES: 86

% GRAVEL: 24
 % SAND: 27
 % FINES: 49

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-191
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1928+225
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 500
 LAB NO: 5477
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 501
 LAB NO: 5478
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 502
 LAB NO: 5479
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	95

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	98
0.074	95

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	95

M.C. (%): 82

M.C. (%): 95

M.C. (%): 96

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-190
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1928+375
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 497
 LAB NO: 5474
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 498
 LAB NO: 5475
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 499
 LAB NO: 5476
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	96

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	96

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	--
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	92

M.C. (%): 159

M.C. (%): 48

M.C. (%): 1077

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

% GRAVEL: 0
 % SAND: 8
 % FINES: 92

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-189
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1928+500
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 494
 LAB NO: 5471
 DEPTH: 1.3-1.5
 TYPE: AUGER
 ORGANIC

FIELD NO: 495
 LAB NO: 5472
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 496
 LAB NO: 5473
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	99
1.19	--
0.841	96
0.595	--
0.42	91
0.297	--
0.177	--
0.149	86
0.074	83

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	96

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	97

M.C. (%): 143

M.C. (%): 67

M.C. (%): 38

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 17
 % FINES: 83

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-188
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1928+600
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 491
 LAB NO: 5468
 DEPTH: 1.3-1.5
 TYPE: AUGER
 100% ORGANIC

FIELD NO: 492
 LAB NO: 5469
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 493
 LAB NO: 5470
 DEPTH: 4.4-4.6
 TYPE: AUGER
 ORGANICS

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	93
2.38	--
2.00	87
1.19	--
0.841	79
0.595	--
0.42	73
0.297	--
0.177	--
0.149	67
0.074	65

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	97
0.074	94

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	97

M.C. (%): 148

M.C. (%): 121

M.C. (%): 46

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 7
 % SAND: 28
 % FINES: 65

% GRAVEL: 0
 % SAND: 6
 % FINES: 94

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

CLASSIFICATION:
 SANDY SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-187
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1928+725
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 488
 LAB NO: 5465
 DEPTH: 1.3-1.5
 TYPE: AUGER

FIELD NO: 489
 LAB NO: 5466
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 490
 LAB NO: 5467
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	98
0.074	95

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	97

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	95
0.074	94

M.C. (%): 104

M.C. (%): 34

M.C. (%): 39

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 5
 % FINES: 95

% GRAVEL: 0
 % SAND: 3
 % FINES: 97

% GRAVEL: 1
 % SAND: 5
 % FINES: 94

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-186
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1928+850
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 485
 LAB NO: 5462
 DEPTH: 1.1-1.3
 TYPE: AUGER
 ORGANIC

FIELD NO: 486
 LAB NO: 5463
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 487
 LAB NO: 5464
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	96
0.074	93

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	98

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	96

M.C. (%): 109

M.C. (%): 54

M.C. (%): 32

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 7
 % FINES: 93

% GRAVEL: 0
 % SAND: 2
 % FINES: 98

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-185
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1929+025 O/S 11M L
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 482
 LAB NO: 5459
 DEPTH: 0.8-1.0
 TYPE: AUGER

FIELD NO: 483
 LAB NO: 5460
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 484
 LAB NO: 5461
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	98

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	96

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	95
0.074	89

M.C. (%): 25

M.C. (%): 130

M.C. (%): 73

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 2
 % FINES: 98

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

% GRAVEL: 0
 % SAND: 11
 % FINES: 89

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 157-184
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: SEGMENT 17
 DRILL UNIT: 17-174
 HOLE LOCATION: 1929+225 O/S 9M L
 LOGGED BY: CB DATE COMPLETED: 91.11.13

FIELD NO: 479
 LAB NO: 5456
 DEPTH: 0.8-1.0
 TYPE: AUGER

FIELD NO: 480
 LAB NO: 5457
 DEPTH: 2.8-3.0
 TYPE: AUGER

FIELD NO: 481
 LAB NO: 5458
 DEPTH: 4.4-4.6
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	96
4.76	93
2.38	--
2.00	88
1.19	--
0.841	83
0.595	--
0.42	80
0.297	--
0.177	--
0.149	74
0.074	70

M.C. (%): 22

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 7
 % SAND: 22
 % FINES: 70

CLASSIFICATION: SANDY SILT (ML)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	94
9.5	91
4.76	83
2.38	--
2.00	75
1.19	--
0.841	68
0.595	--
0.42	61
0.297	--
0.177	--
0.149	51
0.074	45

M.C. (%): 18

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 17
 % SAND: 38
 % FINES: 45

CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	97
19.0	96
12.7	91
9.5	87
4.76	75
2.38	--
2.00	63
1.19	--
0.841	55
0.595	--
0.42	49
0.297	--
0.177	--
0.149	43
0.074	40

M.C. (%): 16

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 25
 % SAND: 35
 % FINES: 40

CLASSIFICATION: SILTY SAND WITH GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-183
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1929+325 O/S 9M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.25

FIELD NO: 477
 LAB NO: 5397
 DEPTH: 0.9-1.2
 TYPE: AUGER

FIELD NO: 478
 LAB NO: 5398
 DEPTH: 4.0-4.3
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	96

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	97
1.19	--
0.841	96
0.595	--
0.42	95
0.297	--
0.177	--
0.149	92
0.074	90

M.C. (%) : 31

M.C. (%) : 36

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

% GRAVEL: 1
 % SAND: 9
 % FINES: 90

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-182
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1929+450 O/S 8M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.25

FIELD NO: 475
 LAB NO: 5395
 DEPTH: 0.9-1.2
 TYPE: AUGER
 80-85% ORGANIC

FIELD NO: 476
 LAB NO: 5396
 DEPTH: 3.9-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	94
2.38	--
2.00	89
1.19	--
0.841	84
0.595	--
0.42	81
0.297	--
0.177	--
0.149	77
0.074	74

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	91
4.76	85
2.38	--
2.00	82
1.19	--
0.841	80
0.595	--
0.42	79
0.297	--
0.177	--
0.149	77
0.074	75

M.C. (%) : 75

M.C. (%) : 31

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 6
 % SAND: 19
 % FINES: 74

% GRAVEL: 15
 % SAND: 11
 % FINES: 75

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILT WITH GRAVEL
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-181
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1929+550 O/S 10M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.25

FIELD NO: 473
 LAB NO: 5393
 DEPTH: 0.9-1.2
 TYPE: AUGER

FIELD NO: 474
 LAB NO: 5394
 DEPTH: 3.9-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	98
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	95
0.074	93

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	--
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	100
0.297	--
0.177	--
0.149	99
0.074	98

M.C. (%) : 24

M.C. (%) : 26

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 2
 % SAND: 5
 % FINES: 93

% GRAVEL: 0
 % SAND: 2
 % FINES: 98

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-180
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1929+650 O/S 16M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.25

FIELD NO: 471
 LAB NO: 5391
 DEPTH: 0.9-1.2
 TYPE: AUGER

FIELD NO: 472
 LAB NO: 5392
 DEPTH: 4.0-4.3
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	94
0.074	87

M.C. (%) : 23

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 13
 % FINES: 87

CLASSIFICATION:
 SILT (ML)

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	97
9.5	96
4.76	95
2.38	--
2.00	93
1.19	--
0.841	91
0.595	--
0.42	89
0.297	--
0.177	--
0.149	88
0.074	81

M.C. (%) : 21

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 5
 % SAND: 13
 % FINES: 81

CLASSIFICATION:
 SILT WITH SAND
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-179
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1929+750 O/S 18M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 469
 LAB NO: 5389
 DEPTH: 0.9-1.2
 TYPE: AUGER

FIELD NO: 470
 LAB NO: 5390
 DEPTH: 3.7-4.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	82
19.0	74
12.7	68
9.5	64
4.76	60
2.38	--
2.00	57
1.19	--
0.841	55
0.595	--
0.42	53
0.297	--
0.177	--
0.149	49
0.074	46

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	93
19.0	88
12.7	86
9.5	83
4.76	79
2.38	--
2.00	75
1.19	--
0.841	73
0.595	--
0.42	71
0.297	--
0.177	--
0.149	68
0.074	66

M.C. (%) : 12

M.C. (%) : 18

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 40
 % SAND: 14
 % FINES: 46

% GRAVEL: 21
 % SAND: 13
 % FINES: 66

CLASSIFICATION:
 SILTY GRAVEL (GM)

CLASSIFICATION:
 GRAVELLY SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-178
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1929+850 O/S 1M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 467
 LAB NO: 5387
 DEPTH: 1.3-1.6
 TYPE: AUGER

FIELD NO: 468
 LAB NO: 5388
 DEPTH: 3.5-3.8
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	97
1.19	--
0.841	95
0.595	--
0.42	94
0.297	--
0.177	--
0.149	90
0.074	88

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	98
9.5	98
4.76	98
2.38	--
2.00	97
1.19	--
0.841	95
0.595	--
0.42	94
0.297	--
0.177	--
0.149	91
0.074	90

M.C. (%): 43

M.C. (%): 49

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 1
 % SAND: 11
 % FINES: 88

% GRAVEL: 2
 % SAND: 8
 % FINES: 90

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-177
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1929+950 O/S 2M RT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 465
 LAB NO: 5385
 DEPTH: 0.9-1.2
 TYPE: AUGER

FIELD NO: 466
 LAB NO: 5386
 DEPTH: 3.9-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	92

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	97
2.38	--
2.00	94
1.19	--
0.841	90
0.595	--
0.42	85
0.297	--
0.177	--
0.149	76
0.074	71

M.C. (%): 54

M.C. (%): 25

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 8
 % FINES: 92

% GRAVEL: 3
 % SAND: 26
 % FINES: 71

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT WITH SAND
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-176
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1930+050 O/S 2M RT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 463
 LAB NO: 5383
 DEPTH: 0.9-1.2
 TYPE: AUGER
 75% ORGANICS

FIELD NO: 464
 LAB NO: 5384
 DEPTH: 3.9-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	97
0.297	--
0.177	--
0.149	92
0.074	89

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	96
12.7	94
9.5	90
4.76	83
2.38	--
2.00	74
1.19	--
0.841	68
0.595	--
0.42	64
0.297	--
0.177	--
0.149	63
0.074	57

M.C. (%): 71

M.C. (%): 21

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

% GRAVEL: 0
 % SAND: 11
 % FINES: 89

% GRAVEL: 17
 % SAND: 27
 % FINES: 57

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-175
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1930+150
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 461
 LAB NO: 5381
 DEPTH: 1.1-1.4
 TYPE: AUGER

FIELD NO: 462
 LAB NO: 5382
 DEPTH: 3.9-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	86
12.7	75
9.5	68
4.76	57
2.38	--
2.00	49
1.19	--
0.841	41
0.595	--
0.42	34
0.297	--
0.177	--
0.149	24
0.074	19

101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	85
12.7	83
9.5	80
4.76	71
2.38	--
2.00	63
1.19	--
0.841	56
0.595	--
0.42	50
0.297	--
0.177	--
0.149	44
0.074	34

M.C. (%): 7

M.C. (%): 12

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 43
 % SAND: 38
 % FINES: 19

% GRAVEL: 29
 % SAND: 37
 % FINES: 34

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-174
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1930+250 O/S 5M RT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 459
 LAB NO: 5379
 DEPTH: 0.9-1.2
 TYPE: AUGER

FIELD NO: 460
 LAB NO: 5380
 DEPTH: 3.9-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	97
0.074	94

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	98
0.074	96

M.C. (%): 36

M.C. (%): 56

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 6
 % FINES: 94

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-173
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1930+373
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 457
 LAB NO: 5377
 DEPTH: 0.9-1.2
 TYPE: AUGER

FIELD NO: 458
 LAB NO: 5378
 DEPTH: 3.0-3.3
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	98
0.595	--
0.42	97
0.297	--
0.177	--
0.149	95
0.074	93

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	92
12.7	82
9.5	76
4.76	67
2.38	--
2.00	59
1.19	--
0.841	53
0.595	--
0.42	47
0.297	--
0.177	--
0.149	43
0.074	35

M.C. (%): 25

M.C. (%): 11

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 1
 % SAND: 6
 % FINES: 93

% GRAVEL: 33
 % SAND: 32
 % FINES: 35

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-172
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1930+475 O/S 17M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 455
 LAB NO: 5375
 DEPTH: 1.1-1.4
 TYPE: AUGER

FIELD NO: 456
 LAB NO: 5376
 DEPTH: 3.9-4.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	92
12.7	90
9.5	90
4.76	88
2.38	--
2.00	86
1.19	--
0.841	84
0.595	--
0.42	82
0.297	--
0.177	--
0.149	76
0.074	71

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	97
12.7	85
9.5	78
4.76	67
2.38	--
2.00	58
1.19	--
0.841	51
0.595	--
0.42	45
0.297	--
0.177	--
0.149	37
0.074	33

M.C. (%) : 60

M.C. (%) : 11

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 12
 % SAND: 16
 % FINES: 71

% GRAVEL: 33
 % SAND: 34
 % FINES: 33

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-171
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1930+575 O/S 18M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 453
 LAB NO: 5373
 DEPTH: 0.9-1.2
 TYPE: AUGER

FIELD NO: 454
 LAB NO: 5374
 DEPTH: 3.9-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	100
0.595	--
0.42	99
0.297	--
0.177	--
0.149	99
0.074	96

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	88
19.0	84
12.7	75
9.5	72
4.76	62
2.38	--
2.00	55
1.19	--
0.841	47
0.595	--
0.42	40
0.297	--
0.177	--
0.149	32
0.074	28

M.C. (%) : 24

M.C. (%) : 8

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 4
 % FINES: 96

% GRAVEL: 38
 % SAND: 35
 % FINES: 28

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-170
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: ALASKA HIGHWAY PRE-ENGINEERING
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1930+675 O/S 13M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 451
 LAB NO: 5371
 DEPTH: 0.9-1.2
 TYPE: AUGER

FIELD NO: 452
 LAB NO: 5372
 DEPTH: 3.9-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	86
19.0	75
12.7	70
9.5	62
4.76	50
2.38	--
2.00	42
1.19	--
0.841	35
0.595	--
0.42	30
0.297	--
0.177	--
0.149	23
0.074	19

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	97
19.0	92
12.7	88
9.5	84
4.76	74
2.38	--
2.00	64
1.19	--
0.841	55
0.595	--
0.42	48
0.297	--
0.177	--
0.149	37
0.074	31

M.C. (%): 6

M.C. (%): 9

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 50
 % SAND: 30
 % FINES: 19

% GRAVEL: 26
 % SAND: 42
 % FINES: 31

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-169
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: SEGMENT 17
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1930+775 O/S 11M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 449
 LAB NO: 5369
 DEPTH: 0.9-1.2
 TYPE: AUGER

FIELD NO: 450
 LAB NO: 5370
 DEPTH: 3.7-4.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	98
0.595	--
0.42	96
0.297	--
0.177	--
0.149	93
0.074	88

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	100
38.1	89
25.4	89
19.0	89
12.7	85
9.5	81
4.76	74
2.38	--
2.00	66
1.19	--
0.841	58
0.595	--
0.42	51
0.297	--
0.177	--
0.149	41
0.074	36

M.C. (%): 35

M.C. (%): 10

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 11
 % FINES: 88

% GRAVEL: 26
 % SAND: 38
 % FINES: 36

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-168
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: SEGMENT 17
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1930+876 O/S 1M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 448
 LAB NO: 5368
 DEPTH: 0.9-1.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	85
19.0	77
12.7	73
9.5	68
4.76	58
2.38	--
2.00	50
1.19	--
0.841	43
0.595	--
0.42	37
0.297	--
0.177	--
0.149	29
0.074	26

M.C. (%): 11

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 42
 % SAND: 32
 % FINES: 26

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-167
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: SEGMENT 17
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1930+950
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 446
 LAB NO: 5366
 DEPTH: 0.9-1.2
 TYPE: AUGER

FIELD NO: 447
 LAB NO: 5367
 DEPTH: 3.9-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	98
9.5	97
4.76	95
2.38	--
2.00	92
1.19	--
0.841	89
0.595	--
0.42	86
0.297	--
0.177	--
0.149	82
0.074	78

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	92
19.0	89
12.7	84
9.5	81
4.76	75
2.38	--
2.00	71
1.19	--
0.841	67
0.595	--
0.42	64
0.297	--
0.177	--
0.149	59
0.074	56

M.C. (%): 21

M.C. (%): 23

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 5
 % SAND: 16
 % FINES: 78

% GRAVEL: 25
 % SAND: 19
 % FINES: 56

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 GRAVELLY SILT
 WITH SAND (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-166
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: SEGMENT 17
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1931+050 O/S 19M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 444
 LAB NO: 5364
 DEPTH: 1.0-1.3
 TYPE: AUGER

FIELD NO: 445
 LAB NO: 5365
 DEPTH: 4.0-4.3
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	95
9.5	90
4.76	82
2.38	--
2.00	75
1.19	--
0.841	68
0.595	--
0.42	64
0.297	--
0.177	--
0.149	56
0.074	49

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	97
12.7	90
9.5	88
4.76	79
2.38	--
2.00	72
1.19	--
0.841	66
0.595	--
0.42	62
0.297	--
0.177	--
0.149	60
0.074	51

M.C. (%): 18

M.C. (%): 21

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 18
 % SAND: 33
 % FINES: 49

% GRAVEL: 21
 % SAND: 28
 % FINES: 51

CLASSIFICATION:
 SILTY SAND WITH
 GRAVEL (SM)

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-165
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: SEGMENT 17
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1931+150 O/S 18M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 442
 LAB NO: 5362
 DEPTH: 0.9-1.2
 TYPE: AUGER

FIELD NO: 443
 LAB NO: 5363
 DEPTH: 3.9-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	99
1.19	--
0.841	97
0.595	--
0.42	96
0.297	--
0.177	--
0.149	92
0.074	89

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	100
25.4	87
19.0	87
12.7	87
9.5	87
4.76	87
2.38	--
2.00	86
1.19	--
0.841	85
0.595	--
0.42	83
0.297	--
0.177	--
0.149	80
0.074	77

M.C. (%): 43

M.C. (%): 42

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 10
 % FINES: 89

% GRAVEL: 13
 % SAND: 9
 % FINES: 77

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT WITH GRAVEL
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-164
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: SEGMENT 17
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1931+250 O/S 1M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 440
 LAB NO: 5360
 DEPTH: 0.7-1.0
 TYPE: AUGER

FIELD NO: 441
 LAB NO: 5361
 DEPTH: 4.0-4.3
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	--
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	99
0.297	--
0.177	--
0.149	96
0.074	94

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	98
2.38	--
2.00	97
1.19	--
0.841	94
0.595	--
0.42	91
0.297	--
0.177	--
0.149	83
0.074	78

M.C. (%): 47

M.C. (%): 59

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 6
 % FINES: 94

% GRAVEL: 2
 % SAND: 20
 % FINES: 78

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILT WITH SAND
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-163
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: SEGMENT 17
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1931+350 O/S 5M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 438
 LAB NO: 5358
 DEPTH: 0.7-1.0
 TYPE: AUGER

FIELD NO: 439
 LAB NO: 5359
 DEPTH: 3.9-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	99
2.38	--
2.00	98
1.19	--
0.841	96
0.595	--
0.42	94
0.297	--
0.177	--
0.149	90
0.074	87

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	95
12.7	91
9.5	89
4.76	84
2.38	--
2.00	79
1.19	--
0.841	76
0.595	--
0.42	74
0.297	--
0.177	--
0.149	72
0.074	66

M.C. (%) : 29

M.C. (%) : 44

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 1
 % SAND: 12
 % FINES: 87

% GRAVEL: 16
 % SAND: 18
 % FINES: 66

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SANDY SILT WITH
 GRAVEL (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-162
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: SEGMENT 17
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1931+452 O/S 13M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 435
 LAB NO: 5355
 DEPTH: 0.7-1.0
 TYPE: AUGER

FIELD NO: 436
 LAB NO: 5356
 DEPTH: 3.3-3.6
 TYPE: AUGER

FIELD NO: 437
 LAB NO: 5357
 DEPTH: 3.9-4.2
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	97
4.76	95
2.38	--
2.00	91
1.19	--
0.841	88
0.595	--
0.42	85
0.297	--
0.177	--
0.149	79
0.074	75

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	90
19.0	81
12.7	79
9.5	78
4.76	75
2.38	--
2.00	72
1.19	--
0.841	70
0.595	--
0.42	68
0.297	--
0.177	--
0.149	65
0.074	62

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	100
12.7	99
9.5	97
4.76	97
2.38	--
2.00	96
1.19	--
0.841	92
0.595	--
0.42	89
0.297	--
0.177	--
0.149	85
0.074	81

M.C. (%) : 36

M.C. (%) : 24

M.C. (%) : 26

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 5
 % SAND: 19
 % FINES: 75

% GRAVEL: 25
 % SAND: 13
 % FINES: 62

% GRAVEL: 3
 % SAND: 17
 % FINES: 81

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 GRAVELLY SILT
 (ML)

CLASSIFICATION:
 SILT WITH SAND
 (ML)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-161
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: SEGMENT 17
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1931+550 O/S 11M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 433
 LAB NO: 535
 DEPTH: 0.7-1.0
 TYPE: AUGER

FIELD NO: 434
 LAB NO: 5354
 DEPTH: 3.0-3.3
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	95
12.7	69
9.5	54
4.76	35
2.38	--
2.00	20
1.19	--
0.841	17
0.595	--
0.42	15
0.297	--
0.177	--
0.149	14
0.074	6

SIEVE SIZE	PERCENT PASSING
101.6	--
76.2	--
50.8	--
38.1	100
25.4	83
19.0	83
12.7	73
9.5	65
4.76	46
2.38	--
2.00	34
1.19	--
0.841	26
0.595	--
0.42	20
0.297	--
0.177	--
0.149	12
0.074	9

M.C. (%): 5

M.C. (%): 5

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS
 LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 65
 % SAND: 28
 % FINES: 6

% GRAVEL: 54
 % SAND: 37
 % FINES: 9

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

CLASSIFICATION:
 WELL-GRADED
 GRAVEL WITH SILT
 & SAND (GW-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-160
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: SEGMENT 17
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1931+650 O/S 11M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 432
 LAB NO: 5352
 DEPTH: 0.7-1.0
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	100
19.0	87
12.7	73
9.5	63
4.76	47
2.38	--
2.00	37
1.19	--
0.841	29
0.595	--
0.42	24
0.297	--
0.177	--
0.149	11
0.074	7

M.C. (%): 9

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 53
 % SAND: 40
 % FINES: 7

CLASSIFICATION:
 POORLY GRADED
 GRAVEL WITH SILT
 & SAND (GP-GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-159
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: SEGMENT 17
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1931+775 O/S 7M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 430
 LAB NO: 5350
 DEPTH: 1.1-1.4
 TYPE: AUGER

FIELD NO: 431
 LAB NO: 5351
 DEPTH: 2.8-3.1
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	98
0.297	--
0.177	--
0.149	92
0.074	85

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	74
25.4	74
19.0	74
12.7	67
9.5	62
4.76	54
2.38	--
2.00	48
1.19	--
0.841	45
0.595	--
0.42	44
0.297	--
0.177	--
0.149	38
0.074	33

M.C. (%) : 36

M.C. (%) : 15

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: TRACE

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 15
 % FINES: 85

% GRAVEL: 46
 % SAND: 21
 % FINES: 33

CLASSIFICATION:
 SILT WITH SAND
 (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)

PROJECT NUMBER: 745927 HOLE NUMBER: 145-158
 CLIENT: SHAKWAK PROJECT
 PROJECT NAME: SEGMENT 17
 PROJECT LOCATION: A/H KM 1904-1932
 DRILL UNIT: 17-132
 HOLE LOCATION: 1931+878 O/S 9M LT
 LOGGED BY: DJ DATE COMPLETED: 91.09.24

FIELD NO: 428
 LAB NO: 5348
 DEPTH: 0.5-0.8
 TYPE: AUGER

FIELD NO: 429
 LAB NO: 5349
 DEPTH: 3.5-3.8
 TYPE: AUGER

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	--
38.1	--
25.4	--
19.0	--
12.7	--
9.5	100
4.76	100
2.38	--
2.00	100
1.19	--
0.841	99
0.595	--
0.42	97
0.297	--
0.177	--
0.149	92
0.074	87

SIEVE SIZE	PERCENT PASSING
------------	-----------------

101.6	--
76.2	--
50.8	100
38.1	81
25.4	74
19.0	71
12.7	58
9.5	56
4.76	48
2.38	--
2.00	42
1.19	--
0.841	38
0.595	--
0.42	31
0.297	--
0.177	--
0.149	23
0.074	18

M.C. (%) : 44

M.C. (%) : 16

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

LIMITS

LIQUID: --
 PLASTIC: --
 P.I.: N.P.

% GRAVEL: 0
 % SAND: 13
 % FINES: 87

% GRAVEL: 52
 % SAND: 30
 % FINES: 18

CLASSIFICATION:
 SILT (ML)

CLASSIFICATION:
 SILTY GRAVEL
 WITH SAND (GM)