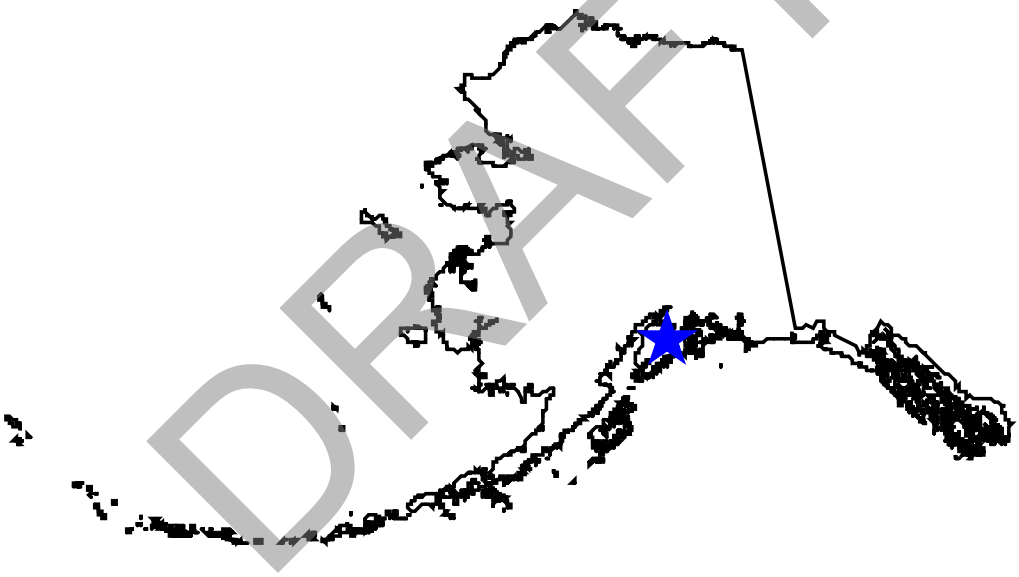
DRAFT GEOTECHNICAL REPORT

SEWARD HIGHWAY MP 17-22.5 REHABILITATION

AKSAS # Z536100000

SEPTEMBER 2016



Prepared By
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ALASKA
Department of Transportation
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Central Region Materials

DRAFT GEOTECHNICAL REPORT

Seward Highway MP17-22.5
Rehabilitation
Project No. Z536100000

September 2016

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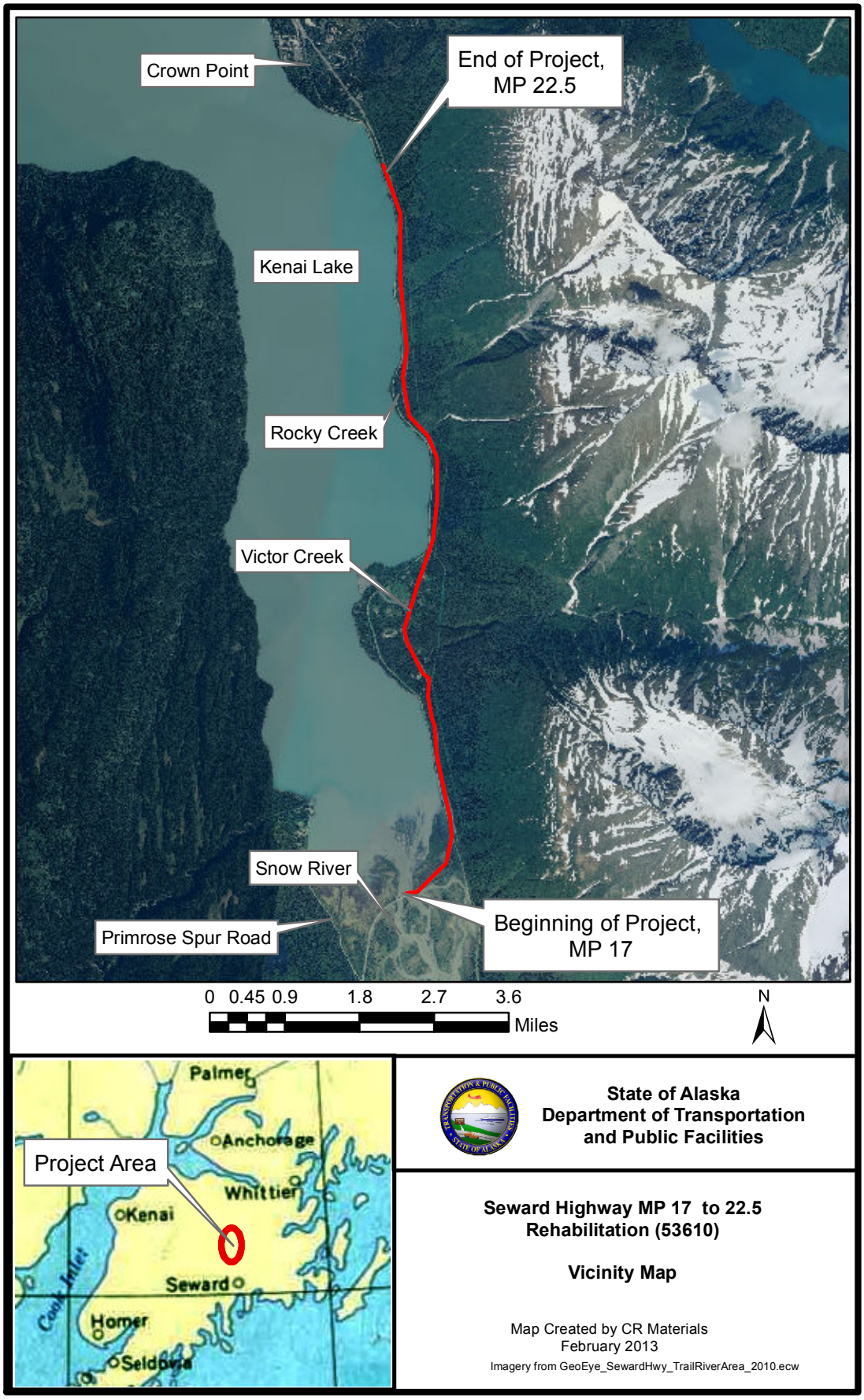
Crown Point
End of Project, MP 22.5
Kenai Lake
Rocky Creek
Victor Creek
Snow River
Primrose Spur Road
Beginning of Project, MP 17
0 0.45 0.9 1.8 2.7 3.6
Miles
N
Palmer
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Whittier
Kenai
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Homer
Seldovia
Project Area
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Vicinity Map
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February 2013
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PROJECT DESCRIPTION

The Alaska Department of Transportation & Public Facilities (ADOT&PF) plans to rehabilitate the Seward Highway from about Mile Post (MP) 17 (near Primrose Spur Road) to about MP 22.5 (south of Ptarmigan Creek) (Figure 1). The project includes constructing passing lanes, widening the shoulders, and realigning some of the corners to improve visibility. The project also includes upgrades to the Snow River Bridges and replacing the Victor Creek Bridge.

In support of Highway Design Section, Central Region Materials (CRM) performed three separate geotechnical investigations within this project area between 2000 and 2016. The first geotechnical investigation work was performed in 2000 and 2001 for the Seward Highway MP 18 to MP 25 Project (#53919). This project was later divided into several projects that are briefly described below.

- In 2009/2010 ADOT&PF installed Bailey bridges at Falls Creek and Ptarmigan Creek. In addition a temporary bridge was also constructed at Trail River. The rock cut north of Trail River was excavated just enough to provide access onto the temporary bridge. This work was a temporary measure while the permanent replacement for these bridges were designed (see project below).
- Trail River, Falls Creek, and Ptarmigan Creek Bridge Replacement Project (#52035). This project was constructed in 2011/2012. Permanent structures were constructed at Trail River, Falls Creek, and Ptarmigan Creek. The rock cut north of Trail River was further excavated to provide a wider ditch adjacent to the highway and provide a safer slope. A Geotechnical Investigation report was prepared for this work in 2011 (see references).
- Seward Highway MP 17.5 to 22.5 Pavement Preservation NH-0311(33)/55256. This paving was performed in 2012/2013 immediately after the completion of the above bridge replacement project (52035). It included placing rip rap at the down slope side of the concrete box culvert at Rocky Creek.
- Seward Highway MP 17-22.5 Rehabilitation Project (#Z536100000) (**Current Project**). This report presents the results of our geotechnical exploration(s) and laboratory testing for the currently proposed project.

SITE DESCRIPTION

Regional Geology

The Kenai Mountains are in a geologic region known as the Chugach Terrane. Two principal suites of rock in the Chugach Terrane are the McHugh Complex mélange (blocks and fragments of rock in a sheared matrix) and the Valdez Group flysch (interbedded marine deposits of shale, conglomerates, coarse sandstone and graywacke). The rock type within this project site is of the Valdez Group generally consisting of thinly bedded argillite, phyllite and jointed greywacke.

Topography along the project generally consists of a steep bedrock ridge east of the highway. The soil over the bedrock is generally glacial in origin consisting of varying amounts of silt with sand, gravel, cobbles, and boulders. The glacial till is covered by organic and silt layers. The topography

at Snow River is generally flat with soils consisting of alluvial sand and gravel deposits with intermittent layers of silt.

Site Geology

The terrain within this project consists of the Snow River flood plain from about MP 17 to MP 17.9 transitioning to steep mountainous terrain above the highway from about MP 18 to 22.7. The steep terrain is cut by Victor Creek and Rocky Creek drainages that have formed alluvial fan deposits.

The steep mountain hillsides from about MP 18 to 19.2, MP 20.4 to 20.9, and MP 21.3 to 22.7 consist of about 2 to 20 ft (or more) of soil overlying bedrock. The soil overburden, in general, consists of organic soil, silty layers, sand and gravel. Cobbles and boulders are also present in the overburden. In some areas bedrock outcrops are visible under tree roots, or in deeply incised drainages.

An undated small landslide occurred at about MP 18.2 that exposed the underlying bedrock surface. The slide extended from the power line corridor to the top of the existing rock cut adjacent to the highway. This slope is very steep and appeared to only have a relatively thin mantle of soil overburden (see photo above).

Rock fall events have occurred from the existing rock cuts at various locations.

Terrain, Surface Water, and Avalanche Chutes

Several prominent creeks (Victor Creek, Rocky Creek, and Snow River) are within the project area, In addition there are numerous drainages from the steep mountain ridges east of the highway that have variable flow depending on the season and climate. Many of these drainages are relatively shallow depressions with boggy ground to v-shaped drainages with bedrock outcrops on both sides. The drainages generally flow past the power line corridor that is upslope of the highway, over the existing rock cuts, under the highway and railroad corridors through culverts, and into Kenai Lake.

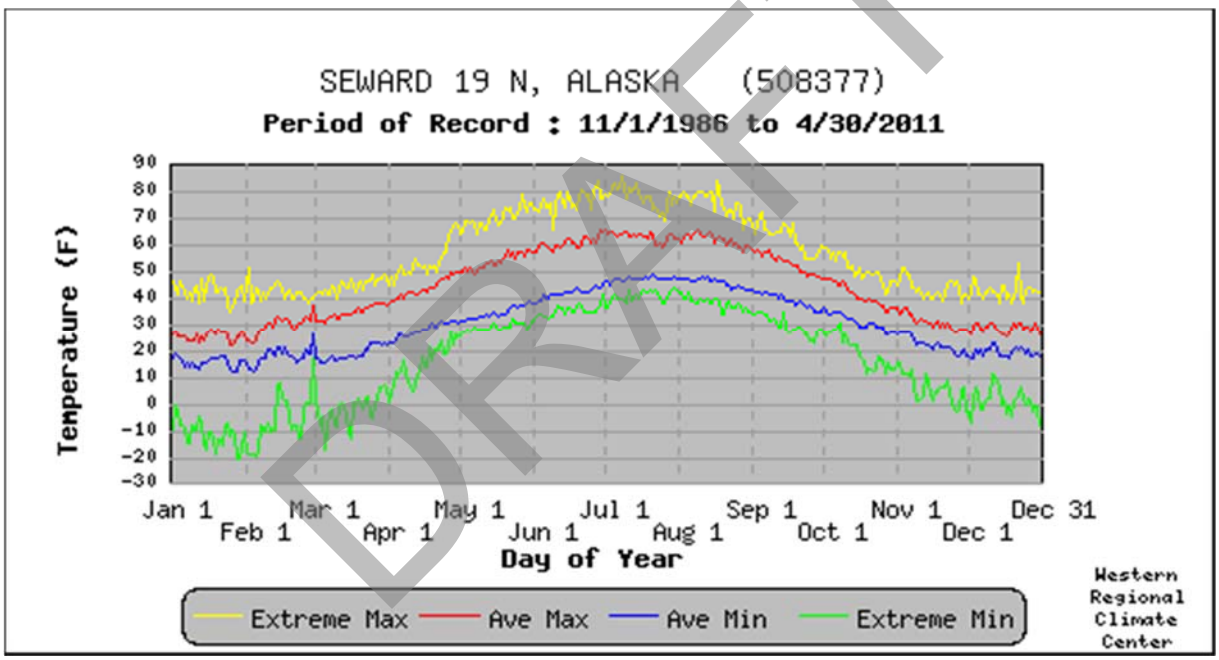
The project area has had some large avalanches that have blocked the highway. The avalanche chute at about MP 21 has had several avalanches block the highway, one of which occurred about the time of our 2001 investigation. The City of Seward has buried their power line through this chute due to avalanches. There was also an avalanche at about MP 21.9 that stopped at the power

line corridor, just above the highway. There were very large downed trees just upslope of the power line at this location that were observed during our 2001 field work. Large avalanche(s) also have reportedly occurred at about MP 18 that impacted the highway. The railroad undercrossing (large culvert) was constructed in response to this avalanche area.

Climate

This project is located in a transition zone between maritime and continental climates. A National Oceanic and Atmospheric Administration (NOAA) Cooperative Station is maintained at Victor Creek, at about MP 19.5. Data from the Victor Creek site is presented in Graph 1 (below).

Extreme temperatures range from 86°F (30°C) to -20°F (-29°C). January's average minimum temperature is 15°F (-9°C) and July's average maximum temperature is 63°F (17°C). The Victor Creek Station has 44 inches annual average precipitation and 91 inches annual average snowfall.



Graph 1: Temperature Data for the Victor Creek Site

GEOTECHNICAL INVESTIGATIONS

2000 – 2001 Geotechnical Investigation

In summer of 2000 sixty five (65) test pits were excavated to determine soil types and depth to bedrock in the existing cuts adjacent to the highway. In winter/fall 2001 sixty eight (68) test holes and one penetrometer were drilled. Thirty seven (37) of these test holes were drilled on the road. Since the time of this drilling (2001) the highway has been repaved (2012) therefore the asphalt

thickness and underlying surfacing that is indicated in the 2001 test hole logs are no longer applicable of the exiting conditions.

2013 – 2014 Geotechnical Investigation

In summer of 2013 and 2014 seventeen (17) test holes were advanced using a track-mounted CME 850 Drill Rig and 9 test holes were drilled using the hand operated Minuteman Drill Rig. Most of the test holes were advanced near the MP 22 avalanche chute where a re-alignment and avalanche berm are being evaluated. Locations of the borings are shown in the Test Hole Location Maps (Appendix A). Details of the soils encountered in the borings are shown in the Boring Logs (Appendix B).

2016 Geotechnical Investigation

In February 2016 additional drilling to define soil layers and depth to bedrock at select locations for culvert replacement. In addition test holes were drilled to determine underlying soil layers and depth to groundwater or bedrock at a proposed retention pond area across the highway from the IRBI Knife Shop. Five (5) test holes were drilled at the proposed retention pond area and piezometers and percolation pipes were installed to monitor groundwater elevations and to test the percolation rate of the soils. An additional 5 borings (TH16-06 to TH16-10) were drilled at locations of existing culverts to verify presence of bedrock.

Field Methods

CRM Engineering Geologists supervised the 2000-2001 and 2013-2014 drilling work and logged the subsurface conditions.

Drilling services for both the 2001 and 2013/2014 test holes were provided by Statewide Materials drill crews using a truck-mounted CME-75, a track-mounted CME-55 or CME-850 to advance an 8-inch outside diameter hollow stem auger. A hand operated Minuteman Drill Rig (MM) was also by Statewide Materials drillers to advance a 3-inch outside diameter solid flight auger in difficult access areas. The Test Pits dug in 2000 were excavated by a Contractor (D&L Construction) using a Kobelco SK260LC-9 tracked excavator.

Drilling services for the 2016 field efforts were provided by Denali Drilling of Anchorage, Alaska using a truck-mounted CME-75 to advance an 8-inch outside diameter hollow stem auger. Off road holes drilled for the retention pond were advanced using a track mounted Geo-probe 6610 equipped with a vibratory hammer to advance a continuous sampler into the undisturbed soils.

Locations of the test holes and test pits are presented in Appendix A. The test hole and test pit logs are presented in Appendix B that provide additional details about the drilling and sampling methods including detailed description of the soils encountered during our field investigations. 2013/2014 test holes were located using a hand held Trimble GPS. The 2000 test pits and 2001 test holes were located by Plan Sheets and aerial photos.

The following field sampling techniques and tests were performed:

- Grab samples from the test pits were obtained from the spoils pile adjacent to the test pit,
- Grab samples during drilling were obtained from cuttings extruded by the auger,
- Undisturbed samples collected from the continuously driven tube sampler advance by the vibratory hammer attached to the 6610 Geoprobe,
- Standard penetration tests (*SPT*) were performed using a split barrel sampler driven by a 140 pound auto hammer dropped 30 inches to collect soil samples. The number of blows required to drive the sampler through undisturbed soil was recorded for each 6 inch increment. N values are uncorrected.
- Percolation Tests installed to measure soil absorption rates.

Test holes drilled with the Minuteman (MM) typically hit refusal from 2 to 9 feet below ground surface (bgs). Refusal could have been on bedrock, or a large cobble or boulder. A few of the Minuteman holes were drilled next to test holes drilled with a track-mounted CME 850 drill rig to compare refusal depths. At about station 217+00, about 120 ft of centerline, MM test hole TH14-25 was drilled next to CME 850 test hole TH13-16. At about station 276+00, about 200 ft right of centerline, MM test hole TH14-24 was drilled next to CME 850 test hole TH13-17. Bedrock was typically 10 feet deeper in test holes drilled with the CME 850 compared to the refusal depth achieved with the MM drill. Therefore refusal depth(s) indicated by the MM drill may not have been bedrock but merely a cobble, or hard gravels, or a boulder.

Laboratory Testing

Geologists examined and visually classified soil samples in the field following the Unified Soil Classification System (USCS). Select soil samples were submitted to the Central Region Materials Laboratory in Anchorage for testing. The test results are presented in the Sample Summary Sheets in Appendix C. Field and laboratory testing followed the appropriate AKDOT&PF Geotechnical Procedures Manual, AASHTO, or ASTM procedures.

SITE CONDITIONS

Refer to the test hole and test pit location Maps in Appendix A. The test hole and test pit logs in Appendix B. The Soil Sample Summary Sheets in Appendix C. The Photo Log in Appendix D.

BOP to 160+00

This section the road is situated on a thick fill over the outwash plane of Snow River. It also includes the AKRR underpass.

Test holes TH01-52, TH01-53, TH13-14 and TH13-15 were advanced within this section. Marsh, shallow surface water, and sloughs are located on either side of the embankment. Soil probes on either side of the embankment indicate about 3 to 4 feet of very loose soil at the base of the embankment.

The embankment is composed of medium dense to very dense fill consisting of a Sand with silt and gravel. The fill is about 16 to 26 feet thick with groundwater ranging from 17 to 21 feet. Beneath the fill are alluvial granular soils typically consisting of sands, silts and gravels that are loose to very dense.

Station 160+00 to 210+00

North of the railroad underpass the highway embankment consists of a relatively thin layer of shot rock fill over either bedrock or the original ground surface. The soil layers below the asphalt and base course layers tended to be thicker toward the outer edge of the highway, opposite the rock cut, and consist of gravel with silt and sand over organic silt, silty sand, or silt overlying the bedrock. Bedrock ranged from 3.5 to 14ft bgs. At about Sta 181+60 to 182+60 (Lt) there is a tall concrete retaining wall. Test hole TH01-60 was drilled in the northbound lane near this wall location. A culvert is at the base of the wall.

Rock mapping conducted from about station (Sta) 161+50 to 171+00 and from Sta 191+00 to 200+00 indicated that bedding planes are the most dominant structure in the rock cut (see rock mapping data in Appendix E). The bedding dips into the hillside at about 35^0 to 60^0. There are three persistent joint sets. One joint set dips toward the road at angles of about 28^0 to 58^0, the other two joint sets dip about 60^0 to 90^0 to the NNE and SSW. At about Sta 184+00 joint patterns dipping toward the road have potential for planar sliding failure. There is water draining over the rock cut in this location (as well as many other locations) that will also give more potential for the rock to slide. Horizontal drain holes were drilled during previous construction projects near Sta 184+50 and 184+75.

From station 162+00 to 169+00 and from 172+50 to 174+00 the rock quality is relatively weak due to weathering (See Table 1). The rock type is generally thinly bedded phyllite with some interbedded graywacke.

Table 1: Rock Sample Quality Summary

Sample ID	Station	Test Results			Rock Type
		Degradation	LA Abrasion	Sulfate Soundness	
RS00-15	167+15	11	37	0	Phyllite
RS00-14	171+85	9	48	NA	Phyllite
RS00-13	202+20	75	15	NA	Greywacke with some phyllite

On the slopes above the highway the thickness of soil overburden (over bedrock) was determined by digging test pits above the highway ditch and drilling test holes on the slope. Thickness of soil overburden ranged from 2.5 to 9 feet in test holes drilled above the slope between Sta 185+00 to 195+00. Groundwater was observed in test holes TH01-02 (4.5ft) and TH01-03 (3.5ft) at the time of drilling. Test holes were not able to be drilled on the slope between Sta 160+00 and 185+00 due to the steep slopes. There is no information for soil overburden between these stations.

Test pits TP00-01 and TP00-02 were excavated on the slope above the ditch between Sta 196+00 and 197+00. Bedrock was noted in TP00-01 at 5ft. Groundwater seeping into the excavation, above the bedrock, at 4ft. TP00-02 had bedrock at 10 ft.

Four minuteman holes, designated TH13-18 through 21 were drilled between Sta 200+50 and 204+00 approximately 130 right of the centerline. A minuteman drill rig is a low power drill that is hand held. Generally, drilling refusal with the Minuteman ranged from 2.5 to 7 feet below the ground surface. Test holes were not able to be drilled on the slope with a tracked drill rig in this area due to the steep slopes.

Station 210+00 to 224+50

Longitudinal cracks in the pavement were observed from about Sta 210+00 to 212+00 during the 2013 field work. Test hole TH01-66 indicates loose organic soil at about 5 to 8 feet below the road surface in this area. Bedrock was not encountered in the drilling in this station range.

From about Sta 210+00 to 224+50 the proposed centerline will move to the left approximately 20 feet to improve the line-of-sight around a corner obstructed by a hill. TH13-01, 02 and 3 were advanced in this area. TH13-01 advanced through 5 feet of soft Silt with sand overlying 15 feet of very dense silty Sand with gravel. The soils at TH13-02 consist of thin vegetative mat over 6 feet of medium dense Sand with silt and gravel, over 5 feet of dense, silty Sand with gravel and then a medium dense Sand with silt and gravel. The soils in TH13-03 consist of 3.5 feet of Sand with gravel fill over a silty Sand with gravel to 27 feet. The native silty Sands are medium dense too loose in the upper 12 feet and become dense to very dense with depth.

The existing cut slope of the hill to the right of centerline has been stripped of organic soil and laid back during previous construction. There is a power pole on top of this hill. The organic layer above the cut is about 3 feet thick. The soil type ranges from Gravel with silt and sand to silty gravel with sand, with occasional layers of silt, and containing cobbles and boulders. After test pit TP00-10 was excavated and backfilled, water was observed to be seeping into the ditch from the location of the test pit for the next several weeks. A pond was observed on top of the ridge at about Sta 219+00, 325 feet right.

Station 224+50 to 245+00

This section of the planned highway is generally level with no cuts. Minor fills are planned left and right. The thickness of organic soil in test pits (TP00-16 and TP00-17) right of centerline, in the ditch of the existing highway, ranged from about 1 to 3 feet. Test hole TH01-68 consisted of about 6 feet of fill over original ground (organic soil). A new bridge is planned for Victor Creek.

Between stations 241+00 to 243+00 (left of centerline) a sedimentation basin was proposed. Test holes TH16-01 and 02 were drilled to 20 feet bgs. Test holes TH16-03, TH16-04, and TH16-05 were drilled to refusal at 8.5ft, 6ft, and 12ft bgs, respectively. Generally, the soils observed in 01, 02, 03 and 04 consisted of 1.5 to 2 feet of vegetative mat over an organic silt, typically followed by granular native soils described as Gravels with silt and sand, Sand with silt and gravel, or silty Sand or Gravel with sand or gravel. The geotechnical investigation included the installation of "perc pipes", consisting of 3-inch PVC pipe riser that was hand slotted at the bottom foot of the

pipe (see typical in Appendix F). The bottom of the perc pipes were typically installed at 3, 5 or 12 feet below ground surface (the estimated bottom depth of the retention basin). Test hole logs for the sedimentation basin investigation can be found in (Appendix B) logs TH16-01 to TH16-05.

Station 245+00 to 288+00
In this proposed cut section the eastern edge of the highway will move into the hillside as much as 80 feet to provide a wider ditch and shoulder.

Grab samples were collected from the existing cuts and analyzed for rock quality. The results from these tests are shown below in Table 2.

Table 2: Rock Sample Quality Summary

Sample ID	Station	Test Results			Rock Type
		Degradation	LA Abrasion	Sulfate Soundness	
RS00-12	261+80	7	46	0	Phyllite/Argillite
RS00-11	275+65	24	24	NA	Phyllite/Argillite
RS00-10	285+00	7	35	NA	Phyllite/Argillite

Rock mapping conducted from about station 261+50 to 270+00 indicated that bedding planes are the dominant structure in the rock cut. The prominent bedding set dips into the hillside at about 38^0 to 82^0. One persistent joint set dips about 70^0 to 90^0 to the NNE and SSW. There is an additional joint set that dips toward the road at about 45^0. However the occurrence of this joint set is infrequent. Bedrock type is thinly bedded phyllite with some argillite. From about station 279+00 to 286+00 the rock appears to be very poor in quality, possibly due to weathering, and the slope is raveling back into hillside.

Based on the test holes drilled in 2001 (TH01-70 through TH01-74) and the test hole drilled in 2016 (TH16-10) the soil beneath the pavement and base course consisted of about 4.5 to 9 ft of Sand with Silt and Gravel or Gravel with silt and sand with a P200 ranging from 8 to 12%. Below these soils were silty sand, silty gravel, or bedrock. Shallow groundwater was observed in TH01-72 at 3.5 ft below the paved surface. One exception to the above soil types was test hole TH01-73 where a layer of organic silt was logged from about 1.5 ft to 10 ft below the pavement. Longitudinal cracking in the pavement surface was observed at the time of drilling test holes TH01-71, TH01-73, and TH01-74.

Test hole TH16-10 was drilled near a culvert to be replaced. This test hole consisted of 2.5-inches of pavement over 10 ft of sand with silt and gravel with a P200 ranging from 8 to 10%. The test hole met refusal at about 10 ft either on a boulder or bedrock.

On the slopes above the highway soil overburden over bedrock was determined by digging test pits above the highway ditch and drilling test holes on the slope. Thickness of soil overburden ranged from 2.5 to 13 feet in test holes drilled above the slope in this station range. Groundwater

was observed in test holes TH01-07 (5ft), TH01-10 (3ft), TH01-11 (2ft), TH01-12 (6.5ft), TH01-15 (8.5ft), and TH01-16 (6ft) at the time of drilling. Between Sta 277+00 and 285+00 a Minuteman hand operated drill rig (low powered) was used to drill test holes TH14-22, TH14-23, and TH14-24 This drill is towed behind an ATV. It was used due to inaccessible areas that the tracked drill rig wasn't able to access without building a pioneer trail. Refusal depths ranged from 4 to 7.5 feet. These refusal depths may not be on top of bedrock but could merely be on top of a granular soil or large cobble.

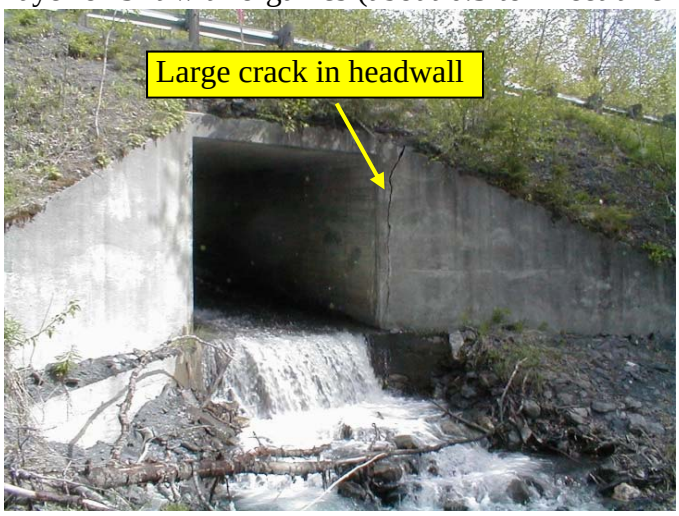
Station 288+00 to 315+00

A large fill is planned to elevate the road through the MP 21 avalanche chute area. An avalanche berm is also being proposed.

Two test holes TH13-10 and 11 were drilled off the highway, left of centerline near Station 292+00, generally in the avalanche chute area. The material encountered in these two holes consisted of medium dense Sand with silt and gravel with one of two layers of Sand or Sand with silt that are 0.5 to 1.5 feet thick. Groundwater was observed in TH13-10 at a depth of 31.5 feet.

A number of holes were advanced on the uphill side of the road, right of centerline, within the avalanche chute area. TH13-04, 05, 06 and 12 typically encountered 2.5 to 3.5 feet of Silt with organics over a medium dense Sand with silt and gravel. Several layers of Silt with gravel or silt were observed in TH13-04 to 9 feet before grading into the Sand with silt. TH13-13 drilled further up the hill encountered Silt with organics, Silt with gravel, and Sand with silt and gravel to a depth of about 25 feet. At 25 feet a weathered bedrock was encountered.

Borings TH13-07, 08 and 09 were drilled north of the avalanche chute and south of Rocky Creek. The test holes generally consisted of a thin layer of Silt with organics (about 0.5 to 2 feet thick) over loose to medium dense Sand with silt and gravel or silty Sand with gravel. Groundwater was not observed in these borings.



The concrete box culvert at about station 306+00 is the Rocky Creek drainage. The depth to bedrock at Rocky Creek and the highway is more than 157 feet based on a penetrometer advanced in 2001 (P01-51). A test hole was also drilled at this location in 2001. Test hole TH01-50 encountered loose layers of gravel, sand, and silt to about 26 feet below the ground surface.
The box culvert has a large crack in the wing wall (see photo). In addition an area of settlement has developed in the highway just south of the box culvert, in the north bound lane, that requires M&O to occasionally patch the area settling (see Photo Log in Appendix D).

Sta**tion 315+00 to 335+25**

In this proposed cut section the eastern edge of the planned highway is to move into the hillside as much as 23 feet. There is an avalanche chute at about 321+00 to 324+00 and another at about 335+00 (deep drainage valley). The slopes above the rock cut at about stations 317+00, 320+00, and 330+00 are very steep.

Thickness of soil overburden ranged from 3 to 13.5 feet in test pits excavated either in the cut bank above the ditch or on the slope above the highway between Sta 321+00 to 335+00. The soils observed in the test pits ranged from silty gravel, silty sand, silt, gravelly silt, gravel with silt and sand, and organic soil. Cobbles and boulders were observed in some of the test pits. Groundwater was observed in test pits TP00-37 and TP00-39. Test pits were not able to be excavated on the slope between Sta 315+00 and 321+00 due to steep slopes making the area inaccessible (there is no information for soil overburden between these stations). The slopes above test pit TP00-29 (dug in the cut slope above the highway ditch) appeared to be raveling and eroding. Test pit TP00-37 was not excavated deep enough to determine the depth to bedrock (excavated to 11 feet).

Rock mapping from about station 315+00 to 321+00 indicated bedding planes as the dominant structure in the rock cut. The prominent bedding set dips into the hillside at about 49^0 to 86^0 that will permit the toppling of rock on to the highway. A persistent joint set dips alternately NNE and SSW at 65^0 to 88^0. A third joint set dips to the west (toward the highway) at about 17^0 to 58^0. Much of the rock cut is covered by soil. The rock mass is weak in some sections with raveling slopes. The rock type is thinly bedded phyllite with minor graywacke.

Grab samples were collected from the existing cuts and analyzed for rock quality. The results from these tests are shown below in Table 3.

Table 3: Rock Sample Quality Summary

Sample ID	Station	Test Results			Rock Type
		Degradation	LA Abrasion	Sulfate Soundness	
RS00-09	326+55	37	21	NA	Phyllite

The current rock slope angle along the highway ranges from about 63 to 76 degrees with a general dip direction to the W. The rock cut is partially covered by soil from about station 316+00 to 334+00.

Longitudinal cracks in the pavement were observed during the 2000 and 2001 field work at about station 321+00 to 322+50 (before the 2012/2013 pavement preservation work). Standard penetration testing (SPT) in test hole TH01-79 indicated loose organic soil at about 2 to 5 feet below the road surface. Groundwater was about 29 feet below the top of pavement. The approximate thickness of the embankment and/or the depth to bedrock below the highway ranges from 12 to 29 feet.

Station 335+25 to 336+50
This section of the alignment runs through an avalanche chute. The thickness of organic soil on the slope is about 5 feet. Depth to bedrock is about 8 to 13 feet (based on test pits TP00-42, TP00-43, and TP00-45).

Station 336+50 to 372+00
In this proposed cut section the eastern edge of the planned highway is to move into the hillside about 6 feet. A deep V-shaped drainage cuts through slope at about 367+75 to 369+00.

Thickness of soil overburden ranged from 3 to 9.5 feet in test holes (TH01-24 to TH01-28 and TH14-26) drilled on the slope above the highway between Sta 341+00 to 367+50. The soils observed in the test holes ranged from silty sand, silt, gravel with silt and sand, and organic soil. Groundwater was observed in test hole TH01-24 at 3.5 feet and TH01-26 at 4 feet.

Rock mapping from about station 346+00 to 356+00 indicated that bedding planes are the dominant structure in the rock. The bedding dips southeast, into the hillside, at about 38^0 to 86^0 that would permit toppling of rock on to the road way. One persistent joint set is nearly 63^0 to 89^0 and dips alternately northeast or southwest. A less persistent joint set dips toward the road at about 28^0 to 65^0. At about 348+50 there is planar rock fall toward the road where there is water infiltration into the rock. Bedrock type is thinly bedded phyllite with some greywacke.

Grab samples were collected from the existing cuts and analyzed for rock quality. The results from these tests are shown below in Table 4.

Table 4: Rock Sample Quality Summary

Sample ID	Station	Test Results			Rock Type
		Degradation	LA Abrasion	Sulfate Soundness	
RS00-08	346+55	54	14	0	Mostly greywacke some phyllite
RS00-07	355+40	7	28	NA	Phyllite
RS00-06	369+30	8	30	NA	Phyllite

Test pits indicated the soil overburden thickness in this area ranging from 3 to 12 feet.

During the 2000 and 2001 field efforts, longitudinal cracks in the pavement were observed at about station 336+75 to 337+50 (before the 2012/2013 pavement preservation work). Test hole TH01-82 was drilled in this area and consisted of loose organic soil at about 3.5 to 5ft below the road surface. Bedrock was encountered at about 5 feet below the asphalt.

In February 2016 five (5) borings, designated TH16-06 through TH16-09 was advanced between Stations 353+50 and 364+00 at culvert replacement locations. Refer to Appendix B to review the specific test hole logs for this area. Appendix F contains Gradation charts of samples recovered from these test holes.

Station 372+00 to 395+50
In this proposed cut section the eastern edge of the planned highway is to move into the hillside as much as 15 feet.

Thickness of soil overburden ranged from 1.5 to 8.5 feet in test holes TH01-29 to TH01-32 and test pits TP00-52 and TP00-55 drilled and/or excavated on the slope above the highway between Sta 372+00 to 391+00. The soils observed in the test holes and test pits ranged from silty sand, silty gravel, silt, gravel with silt and sand, and organic soil.

Rock mapping from about Sta 376+00 to 380+00 indicated that the bedding is less prominent along this rock cut area and dips into the hillside at about 62^0 to 78^0. What is more prominent are the two joint sets that dip alternately NNE and SSW at about 60^0 to 90^0. A less prominent joint set dips toward the road at about 57^0 to 90^0. This rock structure is different from the rest of the cuts evaluated along this project. The rock type is mostly greywacke with less prominent (although still present) poor quality phyllite.

Grab samples were collected from the existing cuts and analyzed for rock quality. The results from these tests are shown below in Table 5.

Table 5: Rock Sample Quality Summary

Sample ID	Station	Test Results			Rock Type
		Degradation	LA Abrasion	Sulfate Soundness	
RS00-05	376+25	61	13	NA	Greywacke
RS00-04	392+40	33	17	NA	Greywacke/Phyllite

REFERENCES

Western Regional Climate Center, "Alaska Climate Summary"
http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ak9765

State of Alaska DOT&PF, "*Alaska Geotechnical Procedures Manual"*, May 2007.

State of Alaska DOT&PF, Geotechnical Report, *Bridge Repair-Trail River, Fall Creek, Ptarmigan (GO), Phase III.* Project No. 51967. May 2009.

APPENDIX A

Test Hole Location Maps

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 1 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
RockSample
FILL
CUT
ROW

Feet
0 100 200 300 400

Map Created by Central Region Materials August 2016

105+00
TH13-15
110+00
115+00
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.
Kenai Lake
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 2 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 100 200 300 400

Map Created by Central Region Materials August 2016

115+00

120+00

TH13-14

125+00

N

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

Kenai Lake

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 3 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet

0 90 180 270 360

Map Created by Central Region Materials August 2016

120+00
TH13-14
125+00
130+00
135+00
TH01-52
8'
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

Kenai Lake

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 4 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 170 340 510 680

Map Created by Central Region Materials August 2016

135+00
TH01-52
8'
140+00
4'
TH01-53
145+00
3'
3'
3'
150
4'
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

Kenai Lake

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 5 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 150 300 450 600

Map Created by Central Region Materials August 2016

TH01-53

145+00

150+00

155+00

4'

3'

3'

3'

4'

4'

4'

N

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 6 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet

0 90 180 270 360

Map Created by Central Region Materials August 2016

RS00-15

TH01-55

165+00

TH01-54

160+00

155+00

150+00

3'

4'

4'

4'

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 7 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet

0 110 220 330 440

Map Created by Central Region Materials August 2016

TP00-63
TH01-58
175+00
TH01-59
TH01-57
RS00-14
170+00
TH01-56
RS00-15
TH01-55
165+00
TH01-54
160+00
155+00
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 8 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet

0 160 320 480 640

Map Created by Central Region Materials August 2016

TH01-61
185+00
TH01-60
TH01-1
TP00-64
180+00
TP00-63
175+00
TH01-58
TH01-59
TH01-57
RS00-14
170+00
TH01-56
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 9 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 150 300 450 600

Map Created by Central Region Materials August 2016

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 10 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 130 260 390 520

Map Created by Central Region Materials August 2016

TP00-6
TH01-65
TP00-5
205+00
TP00-3
TP00-4
RS00-13
TH13-18
TH01-64
200+00
TH13-19
TH13-20
TH13-21
TH01-63
TP00-2
TP00-1
195+00
TH01-3
TH01-62
TH01-2
190+00
TH01-61
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

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Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 11 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

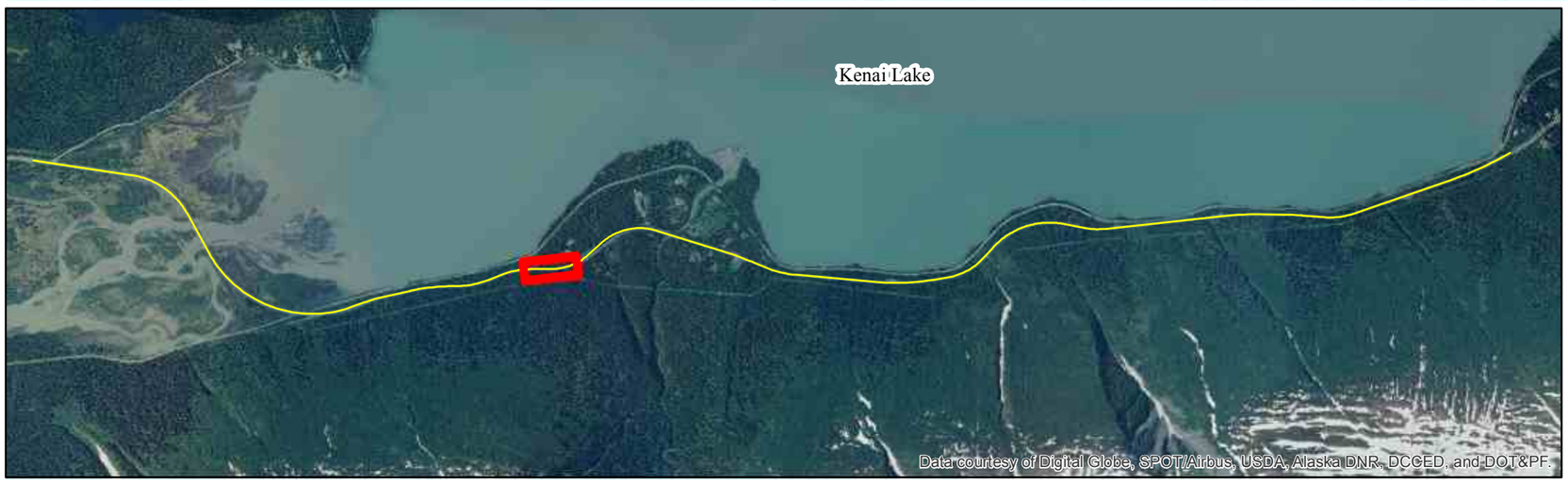
Feet
0 160 320 480 640

Map Created by Central Region Materials August 2016

TH13-01
TP00-7
TH01-66
210+00
TP00-6
TH01-65
TP00-5
205+00
TP00-3
TP00-4
RS00-13
TH13-18
TH01-64
200+00
TH13-19
TH13-21
TH13-20
TH01-63
TP00-2
TP00-1

N

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.



State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 12 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
RockSample
FILL
CUT
ROW

Feet
0 140 280 420 560

Map Created by Central Region Materials August 2016

TP00-11
TP00-10
220+00
TP00-9
TH13-03
TH01-20
TP00-8
TH13-02
215+00
TH01-67
TH13-01
TP00-7
TH01-66
210+00
TP00-6
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 13 of 32

2000 TestPits
2013-2014 Test Holes
Penetrometer
2001 TestHoles
2016 Test Holes
SoilProbe
FILL
CUT
ROW
RockSample

Feet

0 190 380 570 760

Map Created by Central Region Materials August 2016

TP00-11
225+00
230+00
TP00-10
220+00
TP00-9
TH13-03
TH01-20
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

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Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 14 of 32

2000 TestPits
2013-2014 Test Holes
Penetrometer
2001 TestHoles
2016 Test Holes
SoilProbe
FILL
CUT
ROW
RockSample

Feet

0 125 250 375 500

Map Created by Central Region Materials August 2016

230+00
235+00
TP00-17
TH01-68
240+00
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.
Kenai Lake
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 15 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 80 160 240 320

Map Created by Central Region Materials August 2016

TH16-03
TH16-04
TH16-01
TH16-02
TH16-05
TH01-68
240+00
TP00-16
TH01-69
245+00
TP00-15
TP00-13
TP00-14
TP00-12
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
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Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 16 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet

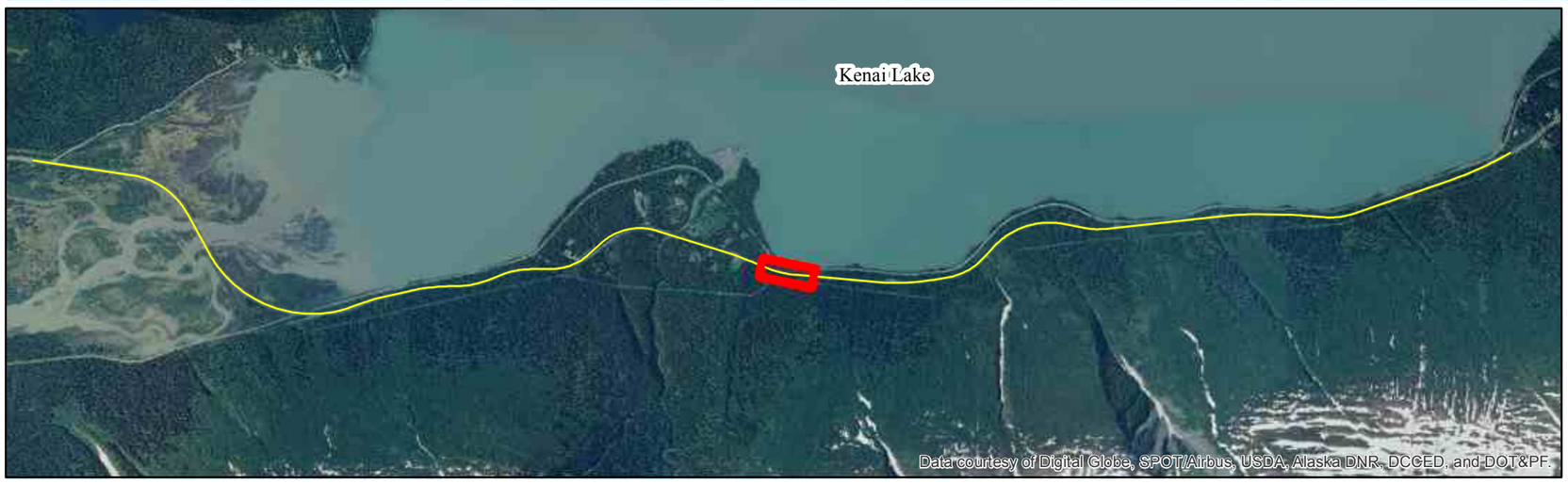
0 80 160 240 320

Map Created by Central Region Materials August 2016

TP00-15
TP00-14
TP00-13
250+00
TP00-19
TP00-18
TH01-70
255+00
TH01-71
260+00
TH01-9
TH01-19
TH01-8
TH01-7
TH01-6
TH01-4
TH01-5

N

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.



State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 17 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

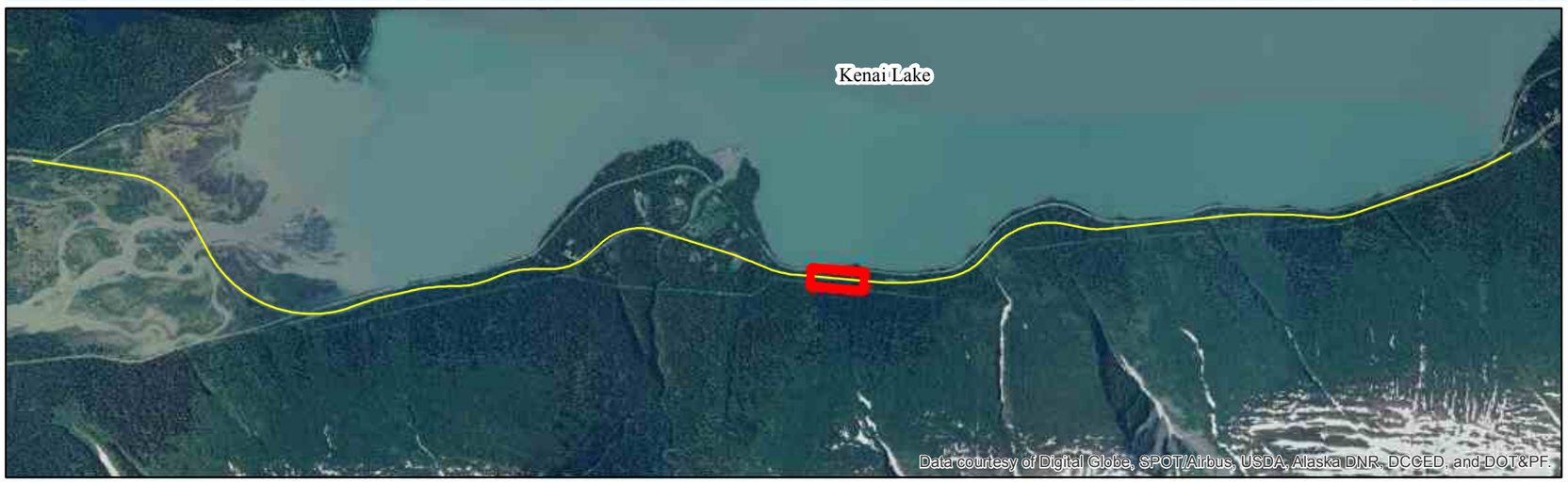
Feet
0 90 180 270 360

Map Created by Central Region Materials August 2016

TP00-62
TH01-73
270+00
265+00
TH01-72
TH01-14
TP00-61
RS00-12
TH01-11
TH01-13
TH01-71
260+00
TH01-12
TH01-10
TH01-9
255+00
TH01-19
TH01-8
TH01-7

N

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.



State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 18 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
RockSample
FILL
CUT
ROW

Feet
0 110 220 330 440

Map Created by Central Region Materials August 2016

TH01-74
280+00
TH16-10
TP00-20
275+00
RS00-11
TH14-24
TH13-17
TH13-16
TH01-15
TH14-25
TH01-16
TH01-18
TH01-17
270+00
TP00-62
TH01-73
TH01-14
265+00
TH01-72
TH01-13
TH01-11
TH01-12
TH01-10
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 19 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet

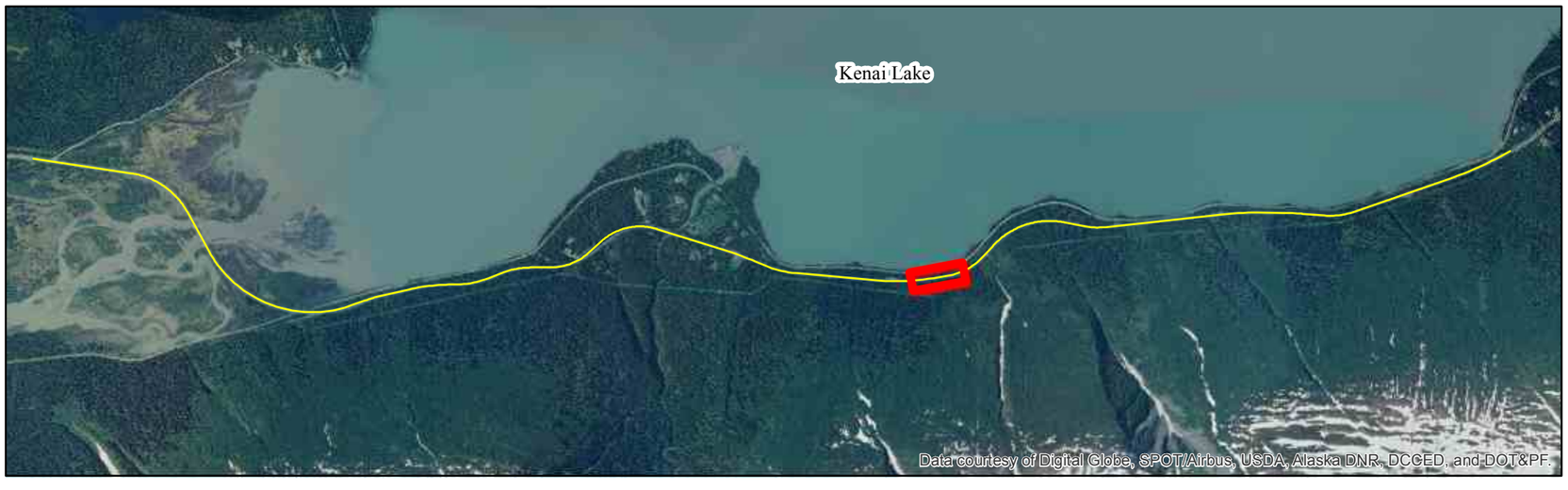
0 120 240 360 480

Map Created by Central Region Materials August 2016

TP00-67
TH01-75
TH13-12
TH13-13
TP00-22
285+00
TP00-21
RS00-10
TH14-22
TH01-74
TH14-23
280+00
TH16-10
TP00-20
275+00
RS00-11
TH14-24
TH13-17
TH13-16
270+00
TH01-15
TH01-16
TH14-25

N

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.



State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 20 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet

0 150 300 450 600

Map Created by Central Region Materials August 2016

TH13-08
3'
TP00-25
TH13-07
4'
295+00
TH13-06
TH13-05
TH13-11
TH01-76
TH13-10
TP00-24
TH13-04
TP00-67
290+00
TH13-12
TH01-75
TH13-13
TP00-22
TP00-21
285+00
RS00-10
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

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Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 21 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

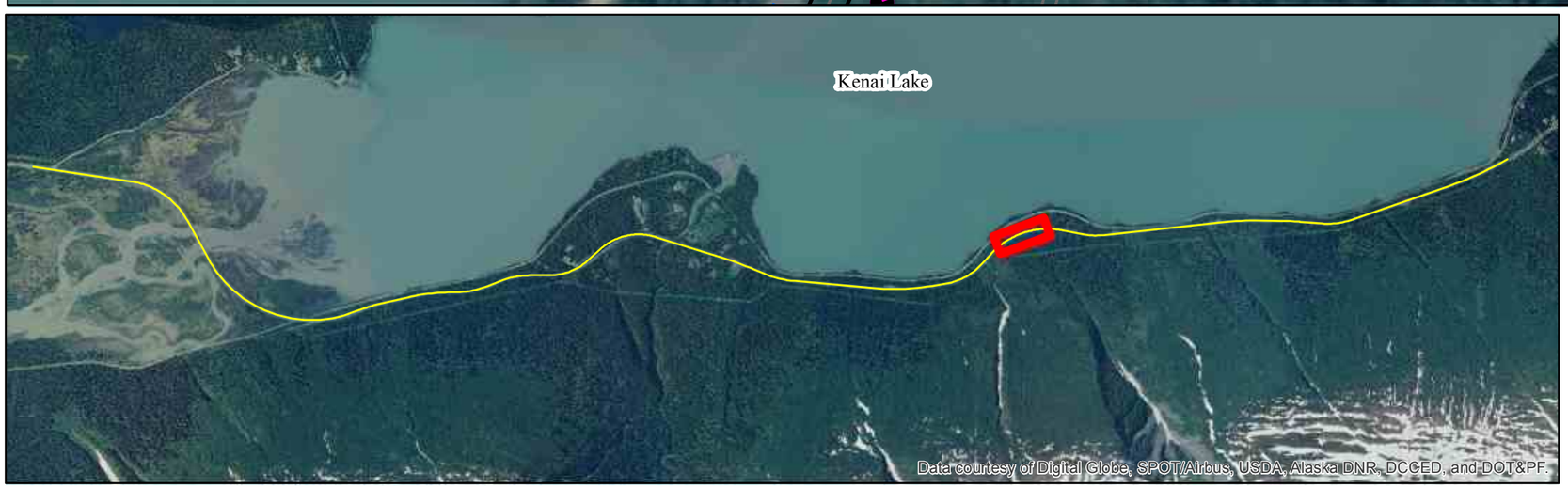
Feet
0 190 380 570 760

Map Created by Central Region Materials August 2016

TH01-78
TP00-28
310+00
TH01-50
PEN01-51
305+00
TP00-27
TH13-09
TP00-26
300+00
TH01-77
TH13-08
3'
TP00-25
TH13-07
4'
295+00
TH13-06
TH13-05

N

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.



State of Alaska
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Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 22 of 32

2000 TestPits
2013-2014 Test Holes
Penetrometer
2001 TestHoles
2016 Test Holes
SoilProbe
FILL
CUT
ROW
RockSample

Feet

0 170 340 510 680

Map Created by Central Region Materials August 2016

TH13-09
TH01-50
PEN01-51
TP00-27
305+00
310+00
TP00-28
TH01-78
315+00
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

Kenai Lake
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 23 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 100 200 300 400

Map Created by Central Region Materials August 2016

TP00-39
TH01-80
TP00-38
RS00-09
325+00
TP00-35
TP00-37
TP00-34
TP00-36
TP00-33
TP00-30
TP00-31
TH01-79
TP00-32
320+00
TP00-29
315+00
TH01-78
TP00-28
310+00
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

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Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
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2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 140 280 420 560

Map Created by Central Region Materials August 2016

TH01-82
TP00-46
TP00-44
TP00-42
335+00
TP00-45
TP00-43
TH01-81
TP00-41
TP00-40
330+00
TP00-39
TH01-80
TP00-38
RS00-09
325+00
TP00-35
TP00-37
TP00-34
TP00-36
TP00-33
TP00-30
TP00-31
TH01-79
TP00-32
320+00

N

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Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
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2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 140 280 420 560

Map Created by Central Region Materials August 2016

TP00-47
RS00-08
345+00
TH01-83
340+00
TH01-82
TP00-46
TH14-26
TP00-44
335+00
TP00-42
TP00-45
TP00-43
TH01-81
TP00-41
TP00-40
330+00
TP00-39
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

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Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
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2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 140 280 420 560

Map Created by Central Region Materials August 2016

TP00-49
355+00
RS00-07
TH16-08
TP00-48
TH01-84
350+00
TP00-47
TH01-24
RS00-08
345+00
TH01-83
340+00
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

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Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 27 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 120 240 360 480

Map Created by Central Region Materials August 2016

TP00-47
TP00-48
TP00-49
TH16-06
TH16-07
TH16-08
TH16-09
TH01-24
TH01-26
TH01-27
TH01-28
TH01-84
TH01-85
RS00-07
350+00
355+00
360+00
365+00
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 28 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet

0 125 250 375 500

Map Created by Central Region Materials August 2016

TP00-53
375+00
TP00-51
TP00-55
TH01-88
TP00-52
370+00
RS00-06
TP00-50
TH01-87
TH01-25
TH01-86
365+00
TH16-06
TH01-26
TH16-07
TH01-27
360+00
TH16-09
TH01-85
TP00-49
355+00
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

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Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 29 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 170 340 510 680

Map Created by Central Region Materials August 2016

TP00-58
TP00-57
TH01-30
TP00-56
380+00
TH01-89
TH01-29
TP00-54
RS00-05
TP00-53
375+00
TP00-51
TP00-55
TH01-88
TP00-52
370+00
RS00-06
TH01-87
TP00-50

N

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 30 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet

0 170 340 510 680

Map Created by Central Region Materials August 2016

RS00-04
390+00
TH01-32
TH01-90
TP00-59
TH01-31
385+00
TP00-58
TP00-57
TH01-30
TP00-56
380+00
TH01-89
TH01-29
TP00-54
N
Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 31 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet
0 175 350 525 700

Map Created by Central Region Materials August 2016

TP00-60

394+14.42

394+14.42

RS00-04

390+00

TH01-32

N

Data courtesy of Digital Globe, SPOT/Airbus, USDA, Alaska DNR, DCCED, and DOT&PF.

State of Alaska
Department of Transportation & Public Facilities
Central Region Materials

Test Hole Location Map

Seward Highway MP 17 - 22.5
Project No. 53610
Sheet 32 of 32

2000 TestPits
2001 TestHoles
2013-2014 Test Holes
2016 Test Holes
Penetrometer
SoilProbe
FILL
CUT
ROW
RockSample

Feet

0 180 360 540 720

Map Created by Central Region Materials August 2016

APPENDIX B

Test Hole/Pit Logs

LOG OF TEST HOLE

HOLE # LEGEND

STATE OF ALASKA DOT&PF
Central Region Materials
Geology Section

PROJECT NUMBER : TH/TP Year - Sequential Number
PROJECT : *TEST HOLE EXPLANATION*
NORTHING : *1000*, ***EASTING :*** *2000*

Station / Location: *Hole Location, Station or Coordinates*
Offset: *Offset Location if applicable*
Elevation: *Elevation*

Equipment Type:
Drilling Method: *Drilling Method*
Field Crew: *Driller, Helper*

Total Depth: *19.0 feet*
Date: *1/18/2005 -*
Geologist: *Geologist*

Ground Water Data		
Depth in (ft.)	15	15.5
Time	10:00	15:05
Date	1/1/04	1/2/04
Symbol	▼	▽

Weather: This section is for weather notes

SUBSURFACE MATERIAL

SOIL GRAPHIC AND SOIL TYPE EXPLANATION All graphics are generic representations of soil type and do not match soils as seen in-situ. Graphics are combined for different classifications

GP **GRAVEL** (GP)
GW **GRAVEL** (GW)
SP **SAND** (SP)
SW **SAND** (SW)
ML **SILT** (ML)
MH **SILT** (MH)
CL **CLAY** (CL)
CH **CLAY** (CH)
PT **Peat** (PT) fibric (f), hemic (h), or sapric (s)
OL **ORGANICS** (OL)

TRANSITIONAL SOIL CHANGE
ICE or Frozen Soil Interval
Cobble or Boulder Location
BEDROCK

SAMPLE DATA EXPLANATION Standard Penetration Test Split Spoon Sample 1.4" ID x 2" OD with Uncorrected N-Value
Split Spoon Sample 2.0" ID x 2.5" OD
Split Spoon Sample 2.5" ID x 3" OD
Grab Sample
Auger Cuttings Grab Sample
Excavator Bucket Grab Sample
Rock Core
Shelby Tube thin wall 3" OD
Modified Shelby Tube (size)
No Recovery
Sample Not Tested or Retained
Field Weighted Sample
Undisturbed Sample
Vane Shear Test: Vane Radius =X", Vane Height = X", Vane Shear Undisturbed Torque=X, Vane Shear Remoulded Torque=X

Groundwater level while drilling
Groundwater level after drilling

LABORATORY TEST RESULTS EXPLANATION
1234 p200=(passing the #200 sieve)%, Sa=(retained between #200 - #4 sieve)%, Gr=(retained between #4 - 3" sieve)%, +3"=(retained between 3" -12" sieve)%, +12"=(>12" sieve)%, Moisture=(raw)%, Org=(organic content)%, PI=(Plastic Index, NP=nonplastic), LL=(Liquid Limit, NV=No Value), Degradation=#, LA Abrasion=#%, Max. Dry Dens=#pcf, Opt. Moisture=#%, Sodium Sulfate Soundness (coarse)=#%, Sodium Sulfate Soundness (fine)=#%, p0.0075µ=(from hydrometer smaller than 0.0075µ)%

BOH 19

Notes:
This section is for drilling notes and additional equipment descriptions

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value
8	SPT	Sample Number	1			5
	SS		2			
	MC		3			
9	GRAB					
	AUGER					
10	EB					
	CORE					
11	ST					
	MS					
12	NR					
	SNT					
13	FLD WT					
	UNDIST					
14	VANE					
15						
16		1234	1			
			2			
17	SPT		3			5
			4			
18						
19						

A USCS LOG OF TEST HOLE FEB 13 2007 LOG LEGEND.GPJ 2006DATATEMPLATE.GDT 2/13/07

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Laboratory Classification

of Soils for Engineering Purposes
Unified Soil Classification System
ASTM D2487

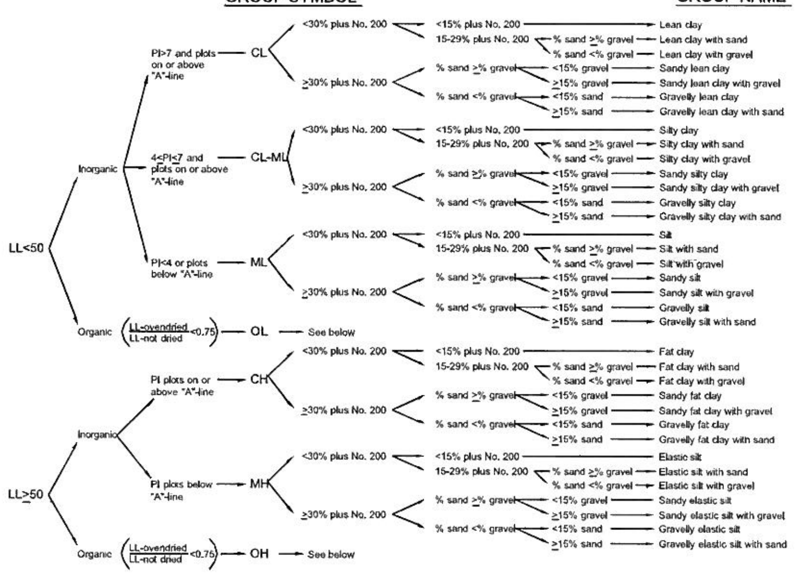


Figure 1: Flow Chart for Classifying Fine-Grained Soil (50% or More Passes No. 200 Sieve)

Use Figure 2 to classify silt or clay soils that have sufficient organic content to influence soil properties. When the oven dried liquid limit is less than 75% of the non-oven dried liquid limit use Figure 2.

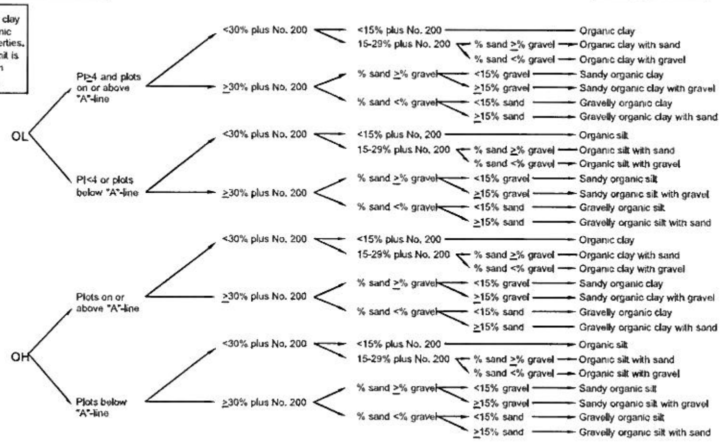


Figure 2: Flow Chart for Classifying Organic Fine-Grained Soil (50% or More Passes No. 200 Sieve)

Coefficient of Uniformity, Cu
the ratio D60/D10, where D60 and D10 are the particle diameters corresponding to 60 and 10 % finer on the cumulative particle-size distribution curve respectively.

Coefficient of Curvature, Cc
the ratio (D30)*(D30)/(D10)*(D60) where D60 and D10 are the particle diameters corresponding to 60, 30, and 10 % finer on the cumulative particle-size distribution curve respectively.

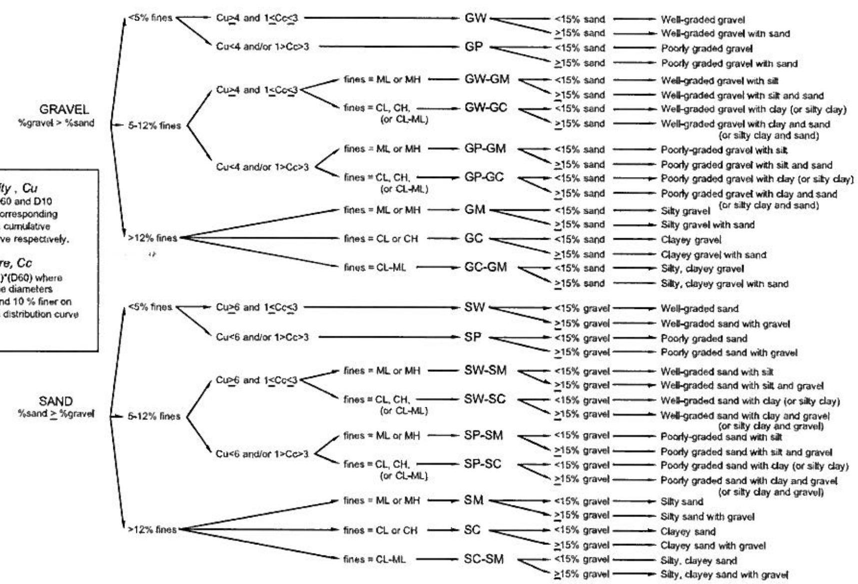


Figure 3: Flow Chart for Classifying Coarse-Grained Soil (More Than 50% Retained on No. 200 Sieve)

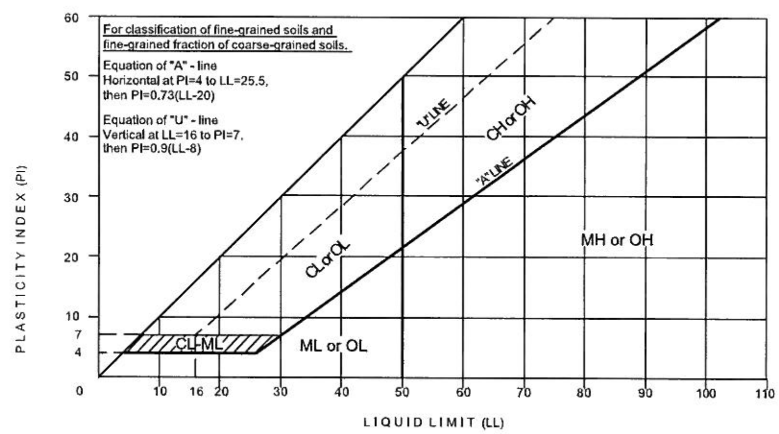
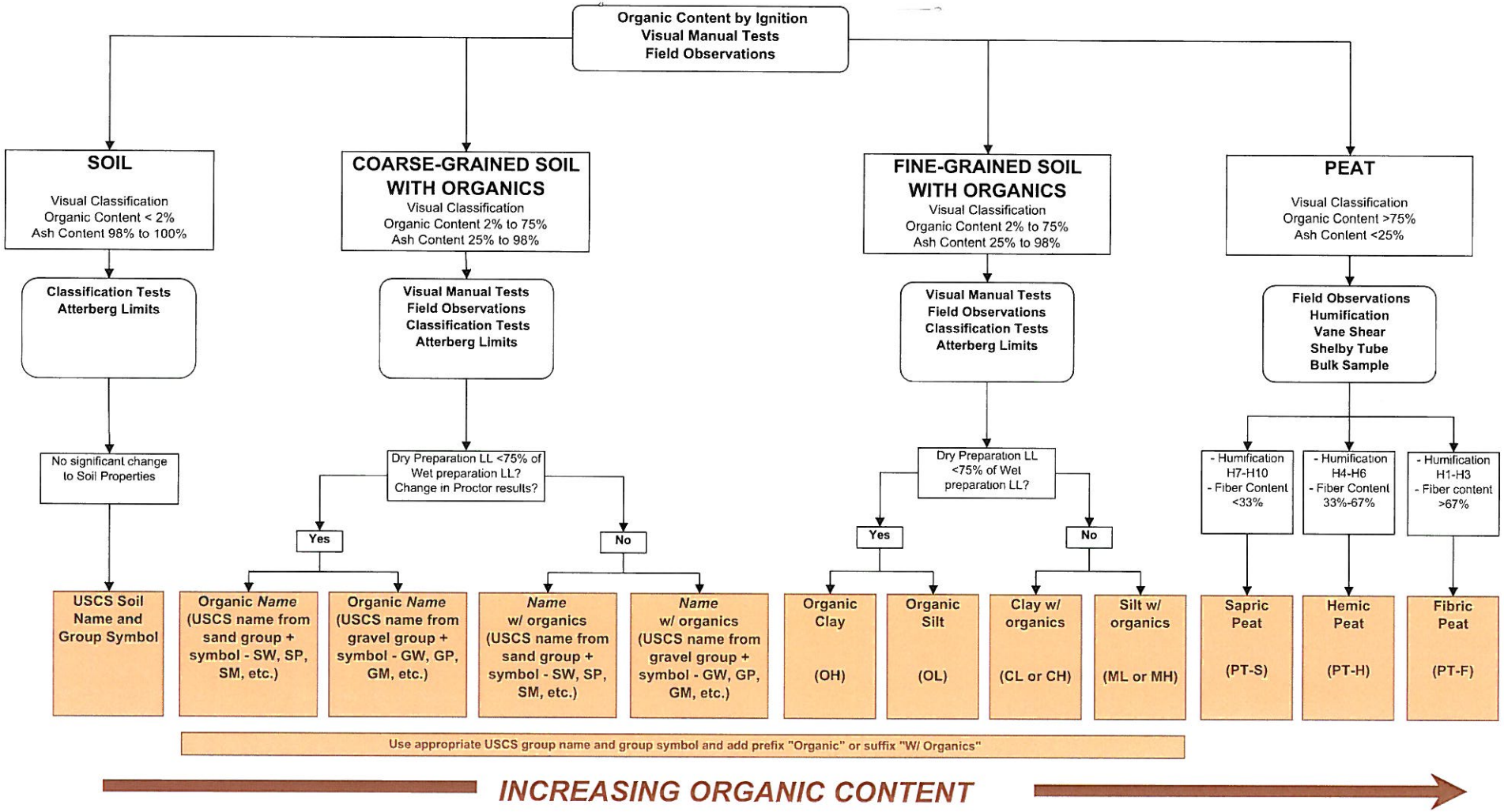


Figure 4: Plasticity Chart

Peat and Organic Soil Classification System



Bedrock Weathering and Alteration Grades (ASRM 1977)

Grade	Term	Description
I	Fresh	No visible sign of rock material weathering; perhaps slight discoloration on major discontinuity surfaces.
II	Slightly Weathered	Discoloration indicated weathering of rock material and discontinuity surfaces. All the rock material may be discolored by weathering and may be somewhat weaker externally than in its fresh condition.
III	Moderately Weathered	Less than half the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present as a discontinuous framework or as corestones.
IV	Highly Weathered	More than half the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present as a discontinuous framework or as corestones.
V	Completely Weathered	All rock material is decomposed and/or disintegrated to soil. The original mass structure is still largely intact.
VI	Residual Soil	All rock material is converted to soil. The mass structure and material fabric are destroyed. There is a large change in volume, but the soil has not been significantly transported.

2000 Test Pit Logs

LOG OF TEST HOLE

HOLE # TP00-01

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.347511* ***LONGITUDE :*** *60.348724*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *5.5 feet*
Date: *10/11/2000 - 10/11/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)	4	
Time		
Date	10/11/00	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand and cobbles — 0.0
2						SM		**SILTY SAND with Gravel** (SM) Brown, moist — 2.0
3						SM		**SILTY SAND with Gravel** (SM) Brown, wet, contains cobbles — 3.0
4 ▼								
5							BOH 5.5	Grey, Slightly weathered bedrock? Excavator bucket refusal at 5.5ft. Water draining into excavation above bedrock. — 5.0 / 5.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-02

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.347765* ***LONGITUDE :*** *60.349022*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *10.5 feet*
Date: *10/11/2000 - 10/11/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**SANDY SILT** (OL) Dark brown, moist, Organic — 0.0
2							OL		**SANDY SILT** (OL) Light yellowish brown, moist, Organic — 2.0
3							GP-GM		**SILTY GRAVEL with Sand** (GP-GM) Brown, moist, Containing rounded to subrounded cobbles and boulders — 3.0
5	GRAB	TP00-2-5							TP00-2-5 p200=21%, Sa=37%, Gr=42%, Moisture=7%
9									← — 9.0
10									Dark gray, wet, Slightly weathered bedrock? — 10.0
								BOH 10.5	10.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-03

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.348134* ***LONGITUDE :*** *60.35079*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *18.0 feet*
Date: *10/11/2000 - 10/11/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Brownish yellow, moist, with sand — 0.0
2						SM		**SILTY SAND with Gravel** (SM) Brown, moist, Containing rounded to subrounded cobbles and boulders — 2.0
5								← — 5.0
10.5								← — 10.5
14						ML		**SANDY SILT with Gravel** (ML) Greyish brown, moist — 14.0
18								BOH 18 — 18.0

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-04

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.348138* ***LONGITUDE :*** *60.351227*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *16.0 feet*
Date: *10/11/2000 - 10/11/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)	4.5	
Time		
Date	10/11/00	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANICS** (OL) Brownish yellow, moist, Organics with silt and gravel — 0.0
1	GRAB	TP00-4-1							TP00-4-1 p200=13%, Sa=38%, Gr=49%, Moisture=26.8%, Org=12%
2							SM		**SILTY SAND with Gravel** (SM) Brown, moist to wet, with angular cobbles and boulders — 2.0
3									
4									
4.5	▼								Wet at 4.5 ft.. Water seeping into excavation — 4.5
5									
6									
6.5								←	— 6.5
7									
7.5									— 7.5
8	Gt	TP00-4-8					GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, Slightly organic, containing angular to subangular cobbles and boulders TP00-4-8 p200=8%, Sa=28%, Gr=64%, Moisture=14.2%, Org=1.4%
9									
10									
11									
12									
12.5									— 12.5
12.8							ML		**SILT** (ML) Grey — 12.8
13							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, Slightly organic, contains subrounded cobbles and boulders
14									
15								←	— 15.0
16								BOH 16	— 16.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-05

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.34794* ***LONGITUDE :*** *60.351445*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *11.5 feet*
Date: *10/12/2000 - 10/12/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)	7	
Time		
Date	10/12/00	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Brownish yellow, moist, with sand — 0.0
3							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist to wet, contains subrounded cobbles and boulders — 3.0
7	▼								
9	GRAB	TP00-5-8							TP00-5-8 p200=14%, Sa=39%, Gr=47%, Moisture=7.7% — 9.0
11									Grey, wet, Slightly weathered bedrock? — 11.0
								BOH 11.5	11.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-06

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.348299* ***LONGITUDE :*** *60.351902*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *6.5 feet*
Date: *10/12/2000 - 10/12/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
0							OL					**ORGANICS** (OL) Dark brown, moist, with silt, sand and gravel — 0.0
1												
2												
3												
4												
5							SM					**SILTY SAND with Gravel** (SM) Brown, moist, contains cobbles and boulers — 5.0
6								BOH 6.5				6.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-07

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.348957* ***LONGITUDE :*** *60.352851*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *7.0 feet*
Date: *10/12/2000 - 10/12/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						ML					**SANDY SILT** (ML) Dark brown to brown, moist, slightly organic 0.0
1											
2											
3											
4						SP-SM					**SILTY SAND with Gravel** (SP-SM) Grey, moist, containing cobbles and boulders 4.0
5											
6											
7							BOH 7				7.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-08

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.350387* ***LONGITUDE :*** *60.353918*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *4.0 feet*
Date: *10/12/2000 - 10/12/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL	
									Depth in (ft.)				
									Time				
									Date				
									Symbol				
0							OL					**ORGANIC SILT** (OL) Dark brown, wet, with sand	0.0
1													
2	GRAB	TP00-8-2										TP00-8-2 Moisture=87.8%, Org=23.5%	
3							SM						3.0
												SILTY SAND with Gravel (SM) Grey, moist, containing cobbles and boulders	3.5
4								BOH 4					4.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-09

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.351381* ***LONGITUDE :*** *60.354645*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *11.5 feet*
Date: *10/12/2000 - 10/12/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand and cobbles — 0.0
3						SM		**SILTY SAND with Gravel** (SM) containing subrounded cobbles and boulders — 3.0
6								← — 6.0
9								← — 9.0
11							BOH 11.5	11.5

Notes:
Excavated in the ditch next to the pullout.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-10

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352007* ***LONGITUDE :*** *60.355112*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *10.5 feet*
Date: *10/12/2000 - 10/12/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Brown, moist — 0.0
0.5							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist to wet, containing subrounded cobbles and boulders — 0.5
4	GRAB	TP00-10-4							TP00-10-4 p200=13%, Sa=43%, Gr=44%, Moisture=5.5%, Org=0.6%
6							GM		**SILTY GRAVEL with Sand** (GM) Grey, moist to wet, containing subrounded cobbles — 6.0
8	GRAB	TP00-10-8							TP00-10-8 p200=32%, Sa=18%, Gr=50%, Moisture=9.1%, Org=0.7%
10.5								BOH 10.5	10.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-11

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352234* ***LONGITUDE :*** *60.355829*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *10.0 feet*
Date: *10/12/2000 - 10/12/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL	
									Depth in (ft.)				
									Time				
									Date				
									Symbol				
0							OL					**ORGANIC SILT** (OL) Brown, moist	0.0
1							GM					**SILTY GRAVEL with Sand** (GM) Grey, moist to wet, containing rounded to subrounded cobbles and boulders	0.7
2													
3													
4													
5													
6													
7													
8													
9													
10								BOH 10					10.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-12

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.348634* ***LONGITUDE :*** *60.361192*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *6.0 feet*
Date: *10/12/2000 - 10/12/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						OL					**ORGANIC SILT** (OL) Dark brown to yellow, moist, with some sand — 0.0
1											
2											
2.5						SM					**SILTY SAND with Gravel** (SM) Grey, moist, containing cobbles and boulders
3											
4											
5											
6							BOH 6				6.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-13

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.347938* ***LONGITUDE :*** *60.362429*
Coordinate System: State Plane; NAD 83
Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Station / Location: *See TH Location Map*
Offset:
Elevation:

Total Depth: *12.0 feet*
Date: *10/12/2000 - 10/12/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
2							GM		**SILTY GRAVEL with Sand** (GM) Brown, moist, contains organics and augular/blocky cobbles and boulders (Talus) — 2.0
3.5									← — 3.5
5							GW-GM		**GRAVEL with Silt and Sand** (GW-GM) Grey, moist, containing subrounded cobbles and boulders (Till) — 5.0
6	GRAB	TP00-13-6							TP00-13-6 p200=13%, Sa=39%, Gr=48%, Moisture=7.6%
9.5									← — 9.5
11.5									Grey, hard, Slightly weathered bedrock? — 11.5
12								BOH 12	12.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TP00-14

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.347943* ***LONGITUDE :*** *60.362189*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *5.0 feet*
Date: *10/13/2000 - 10/13/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown, moist — 0.0
2								Grey, Moderately weathered bedrock from 3 to 4.5 ft. Platy, thinnly bedded. — 2.0
4.5								Harder bedrock at 5 ft. — 4.5
5						BOH 5		5.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-15

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.34865* ***LONGITUDE :*** *60.361606*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *11.5 feet*
Date: *10/13/2000 - 10/13/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Brown, moist — 0.0
0.5						SM		**SILTY SAND with Gravel** (SM) Grey, moist, dense, containing rounded to subrounded cobbles and boulders — 0.5
2.0								← 2.0
9.5								← 9.5
11.5							BOH 11.5	11.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-16

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.349618* ***LONGITUDE :*** *60.360344*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *2.0 feet*
Date: *10/13/2000 - 10/13/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							SM		**SILTY SAND** (SM) Brown, moist, with organics — 0.0
1							SM		**SILTY SAND with Gravel** (SM) Grey, moist, containing subangular to subrounded cobbles and boulders — 1.0
2								BOH 2	2.0

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-17

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.350447* ***LONGITUDE :*** *60.359108*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *3.5 feet*
Date: *10/13/2000 - 10/13/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						OL					**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1											
2											
3						SM					**SILTY SAND with Gravel** (SM) Grey, moist, containing cobbles — 3.0
							BOH 3.5				3.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-18

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.347474* ***LONGITUDE :*** *60.363289*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *9.5 feet*
Date: *10/13/2000 - 10/13/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)	7	
Time		
Date	10/13/00	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
2.5							GM		**SILTY GRAVEL with Sand** (GM) Grey, moist, with organics, containg blocky subangular (3ft. diameter) cobbles and boulders (Talus) — 2.5
6.0									← — 6.0
7.0	▼						SM		**SILTY SAND with Gravel** (SM) Grey, moist to wet, with silt layers, containing rounded to subrounded cobbles and boulders, less then 3 ft. in diameter — 7.0
9.0									Slightly weathered bedrock? — 9.0
9.5							BOH 9.5		— 9.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-19

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.346982* ***LONGITUDE :*** *60.364301*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *4.0 feet*
Date: *10/13/2000 - 10/13/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Dark brown, moist, loose, With organics. Containing containing angular cobbles and boulders (Fill) — 0.0
1									
2									
3									
4	GRAB	TP00-19-4							TP00-19-4 p200=9%, Sa=28%, Gr=63%, Moisture=11.6% — 4.0
								BOH 4	

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-20

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.346737* ***LONGITUDE :*** *60.369603*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *6.5 feet*
Date: *10/13/2000 - 10/13/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						GP-GM		**SILTY GRAVEL with Sand** (GP-GM) Brown, moist, with organics and containing angular to subangular cobbles and boulders (Fill) — 0.0
1								
2						OL		**ORGANIC SILT** (OL) Brown, moist, with sand — 2.0
3								
4								
5								
6								Slightly weathered bedrock? — 6.0
							BOH 6.5	— 6.5

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-21

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.347197* ***LONGITUDE :*** *60.371666*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *9.5 feet*
Date: *10/13/2000 - 10/13/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Brown, moist, with sand and organics — 0.0
1									
									1.5
2							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, containing subrounded cobbles and boulders (Till)
3									
4									
5									5.0
6	GRAB								p200=7%, Sa=31%, Gr=62%, Moisture=5.9%
7									
8									
9									9.0
									Slightly weathered bedrock? — 9.5
								BOH 9.5	

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-22

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.347394* ***LONGITUDE :*** *60.372409*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *10.0 feet*
Date: *10/13/2000 - 10/13/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Brown, moist, with sand and cobbles — 0.0
3						SM		**SILTY SAND with Gravel** (SM) Grey, moist, containing subangular to subrounded cobbles and boulders — 3.0
6.5								←
8.5								moderately weathered bedrock. Platy, thinnly bedded — 8.5
9.5								slightly weathered bedrock? Harder digging — 9.5
10						BOH 10		10.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-23

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.348305* ***LONGITUDE :*** *60.373129*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *10.0 feet*
Date: *10/13/2000 - 10/13/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown to yellow, moist, with sand — 0.0
3						SM		**SILTY SAND with Gravel** (SM) Grey, moist, containing subrounded cobbles and boulders — 3.0
7								7.0
10							BOH 10	10.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

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LOG OF TEST HOLE

HOLE # TP00-24

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.349304* ***LONGITUDE :*** *60.373661*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *4.5 feet*
Date: *10/13/2000 - 10/13/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						OL					**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1											
2											
3											
4						SM	BOH 4.5				**SILTY SAND with Gravel** (SM) Grey, moist, containing subangular cobbles and boulders — 4.0 / 4.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-25

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.3511* ***LONGITUDE :*** *60.374598*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *8.0 feet*
Date: *10/14/2000 - 10/14/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Brown, moist, with sand — 0.0
0.5						SM		**SILTY SAND with Gravel** (SM) Grey, moist, containing subrounded cobbles and boulders
2.5						OL		**ORGANIC SILT** (OL) Dark brown, moist, soft, with sand
3.5						SM		**SILTY SAND with Gravel** (SM) Grey, moist
8.0						BOH 8		

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-26

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352094* ***LONGITUDE :*** *60.375675*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *7.0 feet*
Date: *10/14/2000 - 10/14/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Brown, moist, with sand — 0.0
0.5							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, containing rounded cobbles and boulders. Platey sand and gravels — 0.5
5.0	GRAB	TP00-26-6							TP00-26-6 p200=8%, Sa=25%, Gr=67%, Moisture=5.2% — 5.0
7.0								BOH 7	7.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

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A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-27

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352411* ***LONGITUDE :*** *60.37647*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *9.0 feet*
Date: *10/14/2000 - 10/14/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0							OL		**ORGANIC SILT** (OL) Brown, moist, with sand	0.0
0.5							SM		**SILTY SAND with Gravel** (SM) Grey, moist	0.5
2							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand	2.0
6							SM		**SILTY SAND with Gravel** (SM) Grey, moist, containing subrounded to rounded cobbles and boulders	6.0
9								BOH 9		9.0

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-28

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.351953* ***LONGITUDE :*** *60.378247*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *12.5 feet*
Date: *10/14/2000 - 10/14/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1									
									1.5
2							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, containing rounded to subrounded cobbles and boulders
3									
4									
5	GRAB	TP00-28-5							TP00-28-5 p200=14%, Sa=23%, Gr=63%, Moisture=7.1%
6									
7									
8									
9									
10									← 10.0
11									
12									
								BOH 12.5	12.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-29

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.351835* ***LONGITUDE :*** *60.380223*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *5.5 feet*
Date: *10/14/2000 - 10/14/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
0							GM					**SILTY GRAVEL with Sand** (GM) Grey, moist, containing angular to subangular cobbles and boulders — 0.0
1												
2												
3												
4												← — 4.0
5												— 5.0
												Slightly weathered bedrock? — 5.5
								BOH 5.5				Notes: Slope is ravelling, erodible slope above this test pit.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-30

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352054* ***LONGITUDE :*** *60.381367*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *14.0 feet*
Date: *10/14/2000 - 10/14/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
0							OL					**ORGANIC SILT** (OL) Brown, moist, with sand. Containing cobbles and boulders. 0.0
6							SM					**SILTY SAND with Gravel** (SM) Grey, moist, containing subangular to subrounded cobbles and boulders 6.0
10												← 10.0
13.5												Slightly weathered bedrock or vary large boulders in the glacial till? 13.5
14								BOH 14				14.0

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-31

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.351751* ***LONGITUDE :*** *60.381396*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *3.5 feet*
Date: *10/14/2000 - 10/14/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						OL					**ORGANIC SILT** (OL) Dark brown, moist, containing cobbles and boulders — 0.0
1											
2											
3											3.0
											slightly weathered bedrock?
							BOH 3.5				3.5

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-32

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.351728* ***LONGITUDE :*** *60.381318*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *8.5 feet*
Date: *10/14/2000 - 10/14/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						SM					**SILTY SAND with Gravel** (SM) Brown, moist, with organics and containing cobbles and boulders — 0.0
1											
2											
3											
4											
5											
6											← 6.0
7											
8											8.0
											slightly weathered bedrock?
											BOH 8.5 — 8.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-33

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352355* ***LONGITUDE :*** *60.381141*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *4.5 feet*
Date: *10/16/2000 - 10/16/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0						OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand	0.0
1									
2									
3									
4						GM	BOH 4.5	**SILTY GRAVEL with Sand** (GM) Grey, moist, containing cobbles and boulders	4.0
									4.5

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-34

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352143* ***LONGITUDE :*** *60.381736*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *5.0 feet*
Date: *10/16/2000 - 10/16/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand and cobbles — 0.0
1								
								1.5
2						ML		**SANDY SILT** (ML) Brown, moist, with organics
3								
4								
								4.5
5						GM	BOH 5	**SILTY GRAVEL with Sand** (GM) Brown, moist — 5.0

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-35

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352192* ***LONGITUDE :*** *60.382015*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *9.5 feet*
Date: *10/16/2000 - 10/16/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							GM		**SILTY GRAVEL with Sand** (GM) Dark brown, moist, with organics — 0.0
4							GM		**SILTY GRAVEL with Sand** (GM) Grey, moist, containing subrounded to rounded cobbles and boulders — 4.5
7									← — 7.0
9									— 9.0
									slightly weathered bedrock? — 9.5
									BOH 9.5

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-36

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352076* ***LONGITUDE :*** *60.38211*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *9.0 feet*
Date: *10/16/2000 - 10/16/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							ML		**GRAVELLY SILT with Sand** (ML) Black, moist, with organics — 0.0
4							GP		**GRAVEL with Sand** (GP) Grey, moist, containing subangular cobbles and boulders (Talus) — 4.0
7	GRAB	TP00-36-7							TP00-36-7 p200=4%, Sa=18%, Gr=78%, Moisture=6.3%
7.5									←
8.5									slightly weathered bedrock?
9								BOH 9	9.0

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-37

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.351947* ***LONGITUDE :*** *60.382205*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *11.0 feet*
Date: *10/16/2000 - 10/16/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)	6	
Time		
Date	10/16/00	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown to yellow, moist, with sand — 0.0
4						SM		**SILTY SAND with Gravel** (SM) Brown, moist to wet, containing subangular cobbles and boulders — 4.0
7						ML		**GRAVELLY SILT** (ML) Grey, moist, containing subrounded cobbles and boulders — 7.0
10								10.0
11							BOH 11	11.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-38

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352567* ***LONGITUDE :*** *60.382322*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *8.0 feet*
Date: *10/16/2000 - 10/16/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data		
								Depth in (ft.)		
								Time		
								Date		
								Symbol		

SUBSURFACE MATERIAL

Depth (Feet)	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0	SM		**SILTY SAND with Gravel** (SM) Brown, moist, fill, slightly organic, containing angular to subangular cobbles and boulders 0.0
8		BOH 8	8.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-39

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.35244* ***LONGITUDE :*** *60.383256*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *7.5 feet*
Date: *10/16/2000 - 10/16/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)	4	
Time		
Date	10/16/00	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							SM		**SILTY SAND with Gravel** (SM) Brown, moist, 0.0
1									at 2 ft. increased gravels and containing cobbles (platy gravel pieces)
2									
3									
4							ML		**SILT** (ML) Grey, wet 4.0
5	GRAB	TP00-39-5					GM		**SILTY GRAVEL with Sand** (GM) Grey, moist, containing cobbles and boulders 5.0 TP00-39-5 p200=21%, Sa=37%, Gr=42%, Moisture=7.1%
6									
7									slightly weathered bedrock? 7.0
								BOH 7.5	7.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TP00-40

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352775* ***LONGITUDE :*** *60.383425*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *3.0 feet*
Date: *10/16/2000 - 10/16/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL	
								Depth in (ft.)				
								Time				
								Date				
								Symbol				
0						OL					**ORGANIC SILT** (OL) Brown, moist	0.0
						GP-GM					**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, slightly organic, containing angular to subangular cobbles and boulders	0.5
1												
2												
3							BOH 3					3.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-41

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352571* ***LONGITUDE :*** *60.383987*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *6.5 feet*
Date: *10/16/2000 - 10/16/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1								
2								
3								
4								
5								
6								slightly weathered bedrock? — 6.0
						BOH 6.5		6.5

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Excavated in the slope above the ditch. Bedrock outcrops in the ditch

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-42

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352752* ***LONGITUDE :*** *60.384889*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *9.0 feet*
Date: *10/16/2000 - 10/16/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand 0.0
1								(layers of organic sandy silt and silty sand that is slightly organic)
2								
3								
4								
5						SM		**SILTY SAND with Gravel** (SM) Grey, moist, containing rounded to subrounded cobbles and boulders 5.0
6								
7								
8								← 8.0
9							BOH 9	9.0

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-43

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352593* ***LONGITUDE :*** *60.384712*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *8.5 feet*
Date: *10/17/2000 - 10/17/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1								
1.5						ML		**SANDY SILT** (ML) Yellow brown, moist, slightly organic
2								
3								
4								
5						SM		**SILTY SAND with Gravel** (SM) Grey, moist, Containing subrounded cobbles and boulders — 5.0
6								
7								
8								slightly weathered bedrock? — 8.0
8.5						BOH 8.5		8.5

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-44

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.35238* ***LONGITUDE :*** *60.385642*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *5.5 feet*
Date: *10/17/2000 - 10/17/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
3							SP-SM		**SAND with Silt and Gravel** (SP-SM) Dark brown, moist, slightly organic, containing cobbles — 3.0
5									slightly weathered bedrock? — 5.0
								BOH 5.5	5.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-45

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.352475* ***LONGITUDE :*** *60.385154*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *13.5 feet*
Date: *10/17/2000 - 10/17/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
2.5						ML		**SANDY SILT** (ML) Brown to yellow, moist, slightly organic — 2.5
5.0						SM		**SILTY SAND with Gravel** (SM) Grey, moist, containing cobbles — 5.0
7.0								← 7.0
11.0								← 11.0
13.0								slightly weathered bedrock? — 13.0
13.5								BOH 13.5 — 13.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-46

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.35291* ***LONGITUDE :*** *60.38548*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *14.0 feet*
Date: *10/17/2000 - 10/17/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1									
1.5							ML		**SANDY SILT** (ML) Yellow brown, moist, slightly organic
2									
3									
3.5							SP-SM		**SAND with Silt and Gravel** (SP-SM) Brown, moist, containing subrounded cobbles and boulders
4									
5									
6									
7									
7.8	GRAB	TP00-46-8							TP00-46-8 p200=14%, Sa=57%, Gr=29%, Moisture=7.1%
8							ML SP		**SILT** (ML) Grey, moist — 8.0 **SAND with Gravel** (SP) Grey, moist, containing subrounded cobbles
9									
10									
11									
12									
13									
13.5									slightly weathered bedrock?
14									14.0
									BOH 14

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-47

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.353351* ***LONGITUDE :*** *60.388279*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *7.5 feet*
Date: *10/17/2000 - 10/17/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
0							ML					**GRAVELLY SILT with Sand** (ML) Grey, moist, with organics, containing angular to subangular cobbles and boulders — 0.0
1												
2												
3												
4												
5												
6												
7												7.0
												slightly weathered bedrock? — 7.5
								BOH 7.5				

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-48

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.353241* ***LONGITUDE :*** *60.389533*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *5.5 feet*
Date: *10/17/2000 - 10/17/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
0							GM					**SILTY GRAVEL with Sand** (GM) Grey, moist, with organics, containing angular cobbles and boulders — 0.0
1												
2												
3												
4												
5												5.0
												slightly weathered bedrock? — 5.5
								BOH 5.5				

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-49

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.353054* ***LONGITUDE :*** *60.390439*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *6.0 feet*
Date: *10/17/2000 - 10/17/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data		
									Depth in (ft.)		
									Time		
									Date		
									Symbol		

SUBSURFACE MATERIAL

0 — GP-GM — **GRAVEL with Silt and Sand** (GP-GM) Brown, moist, with organics, containing cobbles and boulders — 0.0

Large boulder in the excavation that could not be removed from the test pit

6 — BOH 6 — 6.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-50

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.354214* ***LONGITUDE :*** *60.39355*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *9.0 feet*
Date: *10/17/2000 - 10/17/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
0							GM					**SILTY GRAVEL with Sand** (GM) Brown, moist, with organics and angular cobbles and boulders 0.0
1												
2												
3							GM					**SILTY GRAVEL with Sand** (GM) Grey, moist, containing angular cobbles and boulders 3.0
4												
5												
6												
7												
8												
9								BOH 9				9.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

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A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-51

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.355307* ***LONGITUDE :*** *60.395193*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *3.0 feet*
Date: *10/17/2000 - 10/17/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Sample Data: Number	Sample Data: Blow Count	Sample Data: Sample	Sample Data: Recovery	Sample Data: N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							GP		**GRAVEL with Sand** (GP) Brown, moist, slightly organic, containing augular to subangular cobbles 0.0
1									
2									
3	GRAB	TP00-51-3						BOH 3	TP00-51-3 p200=6%, Sa=29%, Gr=65%, Moisture=8.1%, Org=2.2% 3.0

Notes:
Bedrock outcrops were observed further downslope of this test pit

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-52

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.354456* ***LONGITUDE :*** *60.394776*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *2.5 feet*
Date: *10/17/2000 - 10/17/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						OL					**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1											
2											slightly weathered bedrock? — 2.0
							BOH 2.5				2.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-53

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.355107* ***LONGITUDE :*** *60.395845*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *3.5 feet*
Date: *10/17/2000 - 10/17/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						OL					**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1											
2											
3											3.0
											slightly weathered bedrock?
							BOH 3.5				3.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TP00-54

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.355418* ***LONGITUDE :*** *60.396332*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *4.5 feet*
Date: *10/17/2000 - 10/17/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						OL					**ORGANIC SILT** (OL) Dark brown, moist, with sand and containing cobbles 0.0
1											
2											
3											
4											4.0
											slightly weathered bedrock?
							BOH 4.5				4.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-55

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.355204* ***LONGITUDE :*** *60.395513*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *4.5 feet*
Date: *10/18/2000 - 10/18/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL	
									Depth in (ft.)				
									Time				
									Date				
									Symbol				
0							OL					**ORGANIC SILT** (OL) Dark brown, moist to wet, with sand	0.0
1													
2													
3													
4													4.0
												slightly weathered bedrock?	
								BOH 4.5					4.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-56

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.356271* ***LONGITUDE :*** *60.396635*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *8.0 feet*
Date: *10/18/2000 - 10/18/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
0							GP-GM					**GRAVEL with Silt and Sand** (GP-GM) Brown, moist, with organics and containing cobbles and large boulders 0.0
1												
2												
3												
4												
5												
6												
7												
8								BOH 8				8.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

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LOG OF TEST HOLE

HOLE # TP00-57

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.356883* ***LONGITUDE :*** *60.397549*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *2.5 feet*
Date: *10/18/2000 - 10/18/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						OL					**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1											
2											slightly weathered bedrock? — 2.0
							BOH 2.5				2.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-58

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.356969* ***LONGITUDE :*** *60.398073*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *7.5 feet*
Date: *10/18/2000 - 10/18/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)	6.5	
Time		
Date	10/18/00	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown, moist to wet, with sand — 0.0
4						ML		**GRAVELLY SILT with Sand** (ML) Brown, wet, slightly organic, containing cobbles — 4.0
6	▼							6.0
7								slightly weathered bedrock? — 7.0
							BOH 7.5	7.5

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

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LOG OF TEST HOLE

HOLE # TP00-59

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.357235* ***LONGITUDE :*** *60.398395*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *6.0 feet*
Date: *10/18/2000 - 10/18/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
0							OL					**ORGANIC SILT** (OL) Dark brown, moist, with sand 0.0
1												
2							SP-SM					**SAND with Silt and Gravel** (SP-SM) Grey, wet, slightly organic, containing cobbles and boulders 2.0
3												
4												
5												5.0
6								BOH 6				6.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

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A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-60

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.3598* ***LONGITUDE :*** *60.400914*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *4.0 feet*
Date: *10/18/2000 - 10/18/2000*
Geologist: *C. Boeckman, C.P.G.*

Ground Water Data		
Depth in (ft.)	4	
Time		
Date	10/18/00	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0						OL		**ORGANIC SILT** (OL) Brown, moist, with sand	0.0
1									
2						ML		**GRAVELLY SILT with Sand** (ML) Grey, moist	1.5
3						OL		**ORGANIC SILT** (OL) Brown, wet, with sand	3.0
4	▼					SM	BOU	**SILTY SAND with Gravel** (SM) Grey, wet, containing cobbles and boulders	4.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TP00-61

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.347293* ***LONGITUDE :*** *60.365348*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *9.0 feet*
Date: *10/18/2000 - 10/18/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						GM					**SILTY GRAVEL with Sand** (GM) Brown, moist, with organics, containing cobbles 0.0
1											
2						OL					**ORGANIC SILT** (OL) Dark brown, moist, with sand, containing angular cobbles and boulders 2.0
3											
4											
5											5.0
6						SP-SM					**SILTY SAND with Gravel** (SP-SM) Brown, moist, containing subangular to subrounded cobbles and boulders 6.0
7											
8											
9							BOH 9				9.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

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LOG OF TEST HOLE

HOLE # TP00-62

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.346994* ***LONGITUDE :*** *60.367002*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *4.0 feet*
Date: *10/18/2000 - 10/18/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL	
									Depth in (ft.)				
									Time				
									Date				
									Symbol				
0							GM					**SILTY GRAVEL with Sand** (GM) Brown, moist, containing cobbles	0.0
1													
2							OL					**ORGANIC SILT** (OL) Dark brown, moist, with sand	2.0
3													
4								BOH 4					4.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

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A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-63

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.345879* ***LONGITUDE :*** *60.343064*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *8.0 feet*
Date: *10/18/2000 - 10/18/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Sample Data: Number	Sample Data: Blow Count	Sample Data: Sample	Sample Data: Recovery	Sample Data: N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
0							GP-GM					**GRAVEL with Silt and Sand** (GP-GM) Brown, moist, slightly organic, containing angular cobbles and boulders 0.0
1												
2												
3												
4												
5												
6												
7												
8	GRAB	TP00-63-7						BOH 8				TP00-63-7 p200=11%, Sa=31%, Gr=58%, Moisture=10.2% 8.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

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A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-64

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.346606* ***LONGITUDE :*** *60.344854*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *3.0 feet*
Date: *10/18/2000 - 10/18/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						GP-GM					**SILTY GRAVEL with Sand** (GP-GM) Brown, moist, slightly organic, containing cobbles 0.0
1											
2											
3							BOH 3				3.0

Notes:
Excavated west of the guard rail, and south of the concrete retaining wall.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TP00-67

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53919*
PROJECT : *Seward Hwy 18-25*
LATITUDE : *-149.348433* ***LONGITUDE :*** *60.372998*
Coordinate System: State Plane; NAD 83

Station / Location: *See TH Location Map*
Offset:
Elevation:

Equipment_Type: *Excavator*
Drilling Method: *Test Pit*
Field Crew: *D&L Construction*

Total Depth: *6.0 feet*
Date: *10/13/2000 - 10/13/2000*
Geologist: *C. Boeckman, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						SP-SM					**SILTY SAND with Gravel** (SP-SM) Brown, moist, slightly organic — 0.0
1											
2											
2.5						SP-SM					**SILTY SAND with Gravel** (SP-SM) Brown, moist, containing cobbbles and boulders
3											
4											
5											
6							BOH 6				6.0

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HIGHWAY MP 18-25 TEST PITS.GPJ 2006DATATEMPLATE.GDT 12/21/15

2001 Test Hole Logs

LOG OF TEST HOLE

HOLE # TH01-01

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.346221* ***LONGITUDE :*** *-149.345412*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *Hollow-Stem Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *9.0 feet*
Date: *1/4/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand, Fill for powerline access — 0.0
1							ML		**SILT with Gravel** (ML) Brown, moist, slightly organic, Fill for powerline access — 1.0
2									
3							OL		**ORGANIC SILT** (OL) Brown, moist — 3.0
4							ML		**SANDY SILT** (ML) Brown, moist, with organics and containing cobbles — 4.0
5									
6							SM		**SILTY SAND with Gravel** (SM) Grey, moist, medium dense, containing cobbles and boulders — 6.0
7									
8	SPT	1-7	15 / R	☒	■				1-7 p200=34%, Sa=41%, Gr=25%, Moisture=8%, PI=NP, LL=16
									Slightly weathered bedrock? Auger refusal at 9' — 8.5
9							BOH 9		9.0

Notes:
Drilled in the cut/fill for the powerline access

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-02

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.347776* ***LONGITUDE :*** *-149.346291*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *Hollow-Stem Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *6.0 feet*
Date: *1/4/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	4.5	
Time		
Date	1/4/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Brown, moist to wet, and sand, containing angular cobbles and boulders — 0.0
2							ML		**GRAVELLY SILT with Sand** (ML) Brown, wet, slightly organic, containing cobbles and boulders — 2.0
4	▼								← 4.5
5									5.5
6								BOH 6	Slightly weathered bedrock? Auger refusal at 6' — 6.0

Notes:
Drilled in a drainage and avalanche path. Drilled off the powerline access road.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-03

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.348515* ***LONGITUDE :*** *-149.346852*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *Hollow-Stem Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *5.5 feet*
Date: *1/4/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	3.5	
Time		
Date	1/4/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand, containing cobbles and boulders 0.0
1									
2									Boulder 2.0
3	SPT	3-3	7 22 24			46	SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey, moist, dense, slighty organic, containing cobbles and boulders 3-3 p200=11%, Sa=45%, Gr=44%, Moisture=5.5%, PI=NP, LL=NP 3.0
4									
5									Slightly weathered bedrock? Auger refusal at 5.5' 5.0
								BOH 5.5	5.5

Notes:
Drilled about 14 ft. downslope from the powerline access road.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-04

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.362646* ***LONGITUDE :*** *-149.347242*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation: *Powerline trail*

Total Depth: *6.0 feet*
Date: *1/9/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	5	
Time		
Date	1/9/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1									
2									
2.5							ML		**GRAVELLY SILT with Sand** (ML) Brown, wet, slightly organic, containing cobbles and boulders
3									
4									
5	▼								
5.5									Slightly weathered bedrock? Auger refusal at 6 ft.
6							BOH 6		6.0

Notes:
Drilled just off the powerline access road.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-05

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.362468* ***LONGITUDE :*** *-149.347261*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation: *Powerline trail*

Total Depth: *5.0 feet*
Date: *1/9/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1								
2								
2.5						ML		**GRAVELLY SILT with Sand** (ML) Brown, wet, containing cobbles and boulders
3								
4								
4.5								Slightly weathered bedrock? Auger refusal at 5 ft.
5						BOH 5		5.0

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-06

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.363263* ***LONGITUDE :*** *-149.346934*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation: *Powerline trail*

Total Depth: *3.0 feet*
Date: *1/9/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1									
2									
									2.5
3									Slightly weathered bedrock? Auger refusal at 3 ft. — 3.0
								BOH 3	

Notes:
Drilled on the powerline access road.

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-07

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.364074* ***LONGITUDE :*** *-149.346754*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation: *Powerline trail*

Total Depth: *8.5 feet*
Date: *1/9/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	5	
Time		
Date	1/8/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
2							SM		**SILTY SAND with Gravel** (SM) Brown, wet, containing cobbles and boulders — 2.0
4									← — 4.0
5	▼								
7	GRAB	7-7							7-7 p200=36%, Sa=42%, Gr=22%, Moisture=26.3%, PI=NP, LL=25
8									— 8.0
							BOH 8.5		Slightly weathered bedrock? Auger refusal at 8.5 ft. — 8.5

Notes:
Drilled at edge of powerline access road, in the middle of a few drainage features.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-08

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.364277* ***LONGITUDE :*** *-149.346813*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation: *Powerline trail*

Total Depth: *4.0 feet*
Date: *1/9/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0						OL		**ORGANIC SILT** (OL) Dark brown, firm, with sand	0.0
						ML			0.5
1								**GRAVELLY SILT with Sand** (ML) Brown, wet, medium dense, containing boulders	
2									
3								←	3.0
								Slightly weathered bedrock? Auger refusal at 4 ft.	3.5
4							BOH 4		4.0

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled on edge of powerline access road. Just north of a drainage.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-09

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.365111* ***LONGITUDE :*** *-149.346525*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation: *Powerline trail*

Total Depth: *5.0 feet*
Date: *1/9/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand, containing cobbles and boulders — 0.0
1									
2									
3							SM		**SILTY SAND with Gravel** (SM) Grey, moist, containing cobbles and boulders — 3.0
4									— 4.5
5							BOH 5		Slightly weathered bedrock? Auger refusal at 5 ft. — 5.0

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled on powerline access road.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-10

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.365989* ***LONGITUDE :*** *-149.346332*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation: *Powerline trail*

Total Depth: *4.5 feet*
Date: *1/10/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	3	
Time		
Date	1/10/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand, containing cobbles and boulders — 0.0
1								
2								
2.5								
3 ▼						GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, wet, containing cobbles and boulders
4								— 4.0
								Slightly weathered bedrock? Auger refusal at 4.5 ft. — 4.5
						BOH 4.5		Notes: Drilled on powerline access road, just north of a set of drainages.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-11

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.366521* ***LONGITUDE :*** *-149.346271*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *10.5 feet*
Date: *1/10/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	2	
Time		
Date	1/10/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1									
									1.5
2							GM		**SILTY GRAVEL with Sand** (GM) Brown, wet, with cobbles and boulders
	GRAB	11-3							11-3 p200=22%, Sa=33%, Gr=45%, Moisture=12.4%, PI=NP, LL=18
3									
4									
5							SM		**SILTY SAND with Gravel** (SM) Grey, moist, with cobbles and boulders — 5.0
6									
7									
8									8.0
9									
10									10.0
									slightly weathered bedrock, auger refusal at 10.5' — 10.5
							BOH 10.5		

Notes:
Drilled off the access road about 50 ft. downslope of the overhead powerlines, just south of a V-shaped drainage, where bedrock is exposed on both sides of the drainage.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-12

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.366169* ***LONGITUDE :*** *-149.346331*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *13.5 feet*
Date: *1/10/801 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	6.5	
Time		
Date	1/10/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
2							GM		**SILTY GRAVEL with Sand** (GM) Brown, wet, containing cobbles and boulders — 2.0
6.5									←
7							SM		**SILTY SAND with Gravel** (SM) Grey, moist, containing cobbles and boulders — 7.0
13									slightly weathered bedrock, auger refusal at 13.5' — 13.0
							BOH 13.5		13.5

Notes:
Drilled off the powerline access road, about 36 ft. south and 38 ft. west of powerline pole T-236.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-13

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.36695* ***LONGITUDE :*** *-149.346004*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *5.5 feet*
Date: *1/10/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1									
2							SM		**SILTY SAND with Gravel** (SM) Grey, moist, containing cobbles and boulders — 2.0
3									
4									
5									slightly weathered bedrock, auger refusal at 5.5' — 5.0
							BOH 5.5		5.5

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled off the powerline access road, about 17 ft. south and 30 ft. west of powerline pole T-237.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-14

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.367745* ***LONGITUDE :*** *-149.345831*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *4.5 feet*
Date: *1/10/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1									
2							GM		**SILTY GRAVEL with Sand** (GM) Grey, moist, containing cobbles and boulders — 2.0
3									
4	GRAB	14-4							14-4 p200=19%, Sa=26%, Gr=55%, Moisture=9.5%, PI=NP, LL=23 — 4.0
									slightly weathered bedrock, auger refusal at 4.5' — 4.5
							BOH 4.5		

Notes:
Drilled on the powerline access road.

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-15

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.368395* ***LONGITUDE :*** *-149.346054*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *13.0 feet*
Date: *1/11/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	8.5	
Time		
Date	1/12/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, firm, with sand, containing cobbles and boulders — 0.0
1									
2							SM		**SILTY SAND with Gravel** (SM) Grey, moist, medium dense, containing cobbles and boulders — 1.5
3									
4									
5									
6									6.0
7	GRAB	15-7							15-7 p200=23%, Sa=50%, Gr=27%, Moisture=16.1%, PI=NP, LL=NV — 7.5
8									
9									
10									
11									
12									12.5
13							BOH 13		slightly weathered bedrock, auger refusal at 13' — 13.0

Notes:
Drilled 110 ft. south of powerline pole T-239 and 100 ft. downslope of powerline.

Bedrock visible under some of the nearby tree roots.

Initially drilled and had refusal at 2 ft. Moved rig over and had refusal at 12.5 ft. Area contains boulders.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-16

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.369236* ***LONGITUDE :*** *-149.34536*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *12.5 feet*
Date: *1/11/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	6	
Time		
Date	1/11/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification / Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
2							SM		**SILTY SAND with Gravel** (SM) Brown, moist to wet, containing cobbles and boulders — 2.0
5	GRAB	S01-16-5							FS01-16-5 p200=25%, Sa=42%, Gr=33%, Moisture=13.9%, PI=NP, LL=18
11									← — 11.0
12									slightly weathered bedrock, auger refusal at 12.5' — 12.0
							BOH 12.5		12.5

Notes:
Drilled at edge of powerline access road, near a drainage.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-17

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.368422* ***LONGITUDE :*** *-149.345568*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *11.0 feet*
Date: *1/12/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	5	
Time		
Date	1/12/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1									
1.5							SM		**SILTY SAND with Gravel** (SM) Grey, moist to wet, containing cobbles and boulders
2									
3									
4									
5	▼								← 5.0
6									
7									
8									
9									
10									10.5
11									slightly weathered bedrock, auger refusal at 11' — 11.0
							BOH 11		Notes: Drilled 20 ft. west of power lines, at edge of access road, in line with TH01-15.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-18

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.368412* ***LONGITUDE :*** *-149.345836*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *12.5 feet*
Date: *1/12/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	9	
Time		
Date	1/12/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
2							SM		**SILTY SAND with Gravel** (SM) Grey, moist to wet, containing cobbles and boulders — 2.0
4									← — 4.0
8									← — 8.0
12									slightly weathered bedrock, auger refusal at 12.5' — 12.0
							BOH 12.5		12.5

Notes:
Drilled between test holes TH01-15 and TH01-17.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-19

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.364301* ***LONGITUDE :*** *-149.346979*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *2.5 feet*
Date: *1/12/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
0							OL					**ORGANIC SILT** (OL) Dark brown, moist, with sand — 0.0
1												
2												slightly weathered bedrock, auger refusal at 2.5' — 2.0
								BOH 2.5				2.5

Notes:
Drilled about 33 ft. down slope from TH01-18, off the powerline access road

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/29/15

LOG OF TEST HOLE

HOLE # TH01-20

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.354575* ***LONGITUDE :*** *-149.351326*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *19.0 feet*
Date: *1/13/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	17	
Time		
Date	1/13/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							SM		**SILTY SAND with Gravel** (SM) Grey, wet, containing cobbles and organics 0.0
1	GRAB	20-2							20-2 p200=33%, Sa=39%, Gr=28%
2									
3									
4			5						**ORGANICS** 6 inch lense of organics 20-4 p200=23%, Sa=33%, Gr=44%, PI=NP, LL=38 4.0
5	SPT	20-4	3 2 1				GM		**SILTY GRAVEL with Sand** (GM) Grey, moist to wet, loose to medium dense, containing cobbles 4.5
6									
7									7.5
8									
9			5						
10	SPT	20-9	8 R						10.5
11									
12									
13									
14			5				ML		**SANDY SILT with Gravel** (ML) Grey, moist, medium dense, containing cobbles and boulders. Auger refusal at 19' 13.5
15	SPT	20-14	6 12			18			
16			R						16.0
17	▼								
18	SPT	20-19	20						
19			R					BOH 19	19.0

Notes:
Drilled in turnout parking area, gravel pad.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/29/15

Test Holes TH01-21, 22 and 23 drilled outside of the project limits

LOG OF TEST HOLE

HOLE # TH01-24

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.38912* ***LONGITUDE :*** *-149.352504*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *5.0 feet*
Date: *2/1/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	3.5	
Time		
Date	2/1/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0						OL		**ORGANIC SILT** (OL) Dark brown, moist	0.0
1									
2									
3	▼					ML		**SANDY SILT with Gravel** (ML) Grey, wet, medium dense, with cobbles	3.0
4								slightly weathered bedrock? Auger refusal at 4.5'	4.0
5							BOH 5		5.0

Notes:
Drilled 150 ft. south of power pole T-262 and 120 ft. downslope from powerline.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-25

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.393655* ***LONGITUDE :*** *-149.353616*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *Mobile B-61*
Drilling Method: *Hollow-Stem Auger*
Field Crew: *R. Wagster + E. Carman*

Station / Location:
Offset:
Elevation:

Total Depth: *9.0 feet*
Date: *2/1/2001 -*
Geologist: *B. Benko*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Dark brown, moist, with sand
0.0									
2.0							ML		**SILT** (ML) Brown, wet
3.0	GRAB	25-3					SM		**SILTY SAND with Gravel** (SM) Grey, moist 25-3 p200=16%, Sa=56%, Gr=28%, Moisture=13.7%
4.5							SM		**SILTY SAND** (SM) Brown, moist, slightly organic 25-5 p200=39%, Sa=56%, Gr=5%, Moisture=16.5%, Org=1.4%
7.0							SM		**SILTY SAND with Gravel** (SM) Grey, moist, with cobbles
8.0									←
8.5									slightly weathered bedrock, auger refusal at 9'
9.0							BOH 9		

Notes:
Drilled about 46 ft. downslope from powerline access road. Just north of power poles T-268 (triple poles). South of a deep drainage valley.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-26

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.393022* ***LONGITUDE :*** *-149.353203*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *5.0 feet*
Date: *2/1/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	4	
Time		
Date	2/1/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							SM		**SILTY SAND** (SM) Dark brown, moist, With ORGANICS. 0.0
1									
2	GRAB	26-2							26-2 p200=22%, Sa=41%, Gr=37%, Moisture=28.2%, Org=6.5%, PI=NP, LL=NV
3							SM		**SILTY SAND with Gravel** (SM) Grey, moist, containing cobbles 3.0
4	▼								
									slightly weathered bedrock, auger refusal at 5' 4.5
5							BOH 5		5.0

Notes:
Drilled downslope of the powerline access road, about 27' south of power pole T-267 and 66 ft. west of the powerline.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-27

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.392173* ***LONGITUDE :*** *-149.352546*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *6.5 feet*
Date: *2/1/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Brown, moist to wet, with ORGANICS. Containing cobbles and boulders — 0.0
1									
2									
3	GRAB	27-3							27-3 p200=10%, Sa=29%, Gr=61%, Moisture=37.2%, Org=19.7%
4							ML		**SANDY SILT with Gravel** (ML) Grey, moist, containing cobbles — 4.0
5									← 5.5
6									slightly weathered bedrock, auger refusal at 6.5' — 6.0
							BOH 6.5		6.5

Notes:
Drilled near a drainage valley, just off the powerline access trail.

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-28

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.391071* ***LONGITUDE :*** *-149.352088*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *9.5 feet*
Date: *2/1/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

SUBSURFACE MATERIAL

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	
0							OL		**ORGANIC SILT** (OL) Brown, moist — 0.0
2							ML		**SANDY SILT** (ML) Light brown — 2.0
3							SM		**SILTY SAND** (SM) Brown, moist to wet, with ORGANICS. Containing cobbles and boulders — 3.0
4									← — 4.0
5	GRAB	28-5							28-5 p200=28%, Sa=41%, Gr=31%, Moisture=29.4%, Org=7.2%
8									← — 8.0
9									— 9.0
									slightly weathered bedrock, auger refusal at 9.5' — 9.5
								BOH 9.5	

Notes:
Drilled just off the powerline access road, about 40 ft. north of power pole T-264.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/29/15

LOG OF TEST HOLE

HOLE # TH01-29

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.396727* ***LONGITUDE :*** *-149.355555*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *9.0 feet*
Date: *2/2/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) 0.0
2							SM		**SILTY SAND with Gravel** (SM) Brown, moist, loose, with organics 2.0
4	GRAB	29-4.5							29-4.5 p200=29%, Sa=37%, Gr=34%, Moisture=27.5%, Org=5.3%, PI=NP, LL=NV
5							GM		**SILTY GRAVEL with Sand** (GM) Grey, moist, medium dense, with ORGANICS, containing cobbles and boulders 5.0
7	GRAB	29-7							29-7 p200=31%, Sa=30%, Gr=39%, Moisture=12.2%, Org=2.8%
8									← 8.0
8.5									slightly weathered bedrock, auger refusal at 9'
9							BOH 9		9.0

Notes:
Drilled on the powerline access road.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-30

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.397916* ***LONGITUDE :*** *-149.356278*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *5.0 feet*
Date: *2/2/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0									**Vegetative Mat**	0.0
							ML		**SILT** (ML) with sand	0.3
1										
							SM		**SILTY SAND with Gravel** (SM) Grey, moist, containing cobbles and boulders	1.6
2										
3									←	3.5
4										
									slightly weathered bedrock, auger refusal at 5'	4.5
5							BOH 5			5.0

Notes:
Drilled on the powerline access road.

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-31

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.398634* ***LONGITUDE :*** *-149.356793*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *3.0 feet*
Date: *2/2/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
0												**Vegetative Mat** 0.0
							SM					**SILTY SAND with Gravel** (SM) Grey, wet, containing cobbles and boulders 0.3
1												
2												2.5
												slightly weathered bedrock, aguer refusal at 3'
3								BOH 3				3.0

Notes:
Drilled on powerline access road, about 160 ft. north of power pole T-272.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-32

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.399843* ***LONGITUDE :*** *-149.357742*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 45*
Drilling Method: *6" OD Solid Auger*
Field Crew: *Abbott, Briggs*

Station / Location:
Offset:
Elevation:

Total Depth: *2.0 feet*
Date: *2/2/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Brown, moist, with sand — 0.0
1									
									slightly weathered bedrock, auger refusal at 2' — 1.5
2								BOH 2	— 2.0

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drill off the powerline access road, about 210 ft. north of power pole T-274 and 40' west and downslope of the power lines.

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Test Holes TH01-33 through TH01-49 drilled outside of project limits

LOG OF TEST HOLE

HOLE # TH01-50

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.376847* ***LONGITUDE :*** *-149.352442*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 75 Truck*
Drilling Method: *Casing Size NW*
Field Crew: *Wagster and Abbott*

Station / Location:
Offset:
Elevation:

Total Depth: *75.0 feet*
Date: *6/1/2001 - 6/2/2001*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Note Scale Change - 40 feet per log page

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) — 0.0
							SM		**SILTY SAND with Gravel** (SM) Grey, moist, very loose, Fill, slightly organic, containing cobbles — 0.5
									3.0
5	SPT	50-5	1 2 1 1				OL		**ORGANIC SILT** (OL) Brown, moist, soft, with sand and some gravel — 5.0
							SM		**SILTY SAND with Gravel** (SM) Grey, moist, very loose — 6.5
							SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey, moist to wet, loose to medium dense with depth, containing cobbles — 8.0
10	SPT	50-10	12 4 4 6			8			
15	SPT	50-15	12 10 10 11			20			
20	SPT	50-20	9 7 5 4			12			
25	SPT	50-25	6 4 3 6			7	ML		**SANDY SILT with Gravel** (ML) Brown, wet, firm, iron staining — 25.0
							SM		**SILTY SAND with Gravel** (SM) Grey, wet, medium dense to dense, containing cobbles and boulders — 27.5
30	SPT	50-30	14 9 9 8			18			
35	SPT	50-35	16 12 12 13			24			
40									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-50

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.376847* ***LONGITUDE :*** *-149.352442*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 75 Truck*
Drilling Method: *Casing Size NW*
Field Crew: *Wagster and Abbott*

Station / Location:
Offset:
Elevation:

Total Depth: *75.0 feet*
Date: *6/1/2001 - 6/2/2001*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
40	SPT	50-40	17 12 16 14			28			**SILTY SAND with Gravel** (SM) Grey, wet, medium dense to dense, containing cobbles and boulders (cont.)
									42.0
45									45.5
50	SPT	50-50	19 12 18 11			30			50-50 No recovery
55									54.5
60	SPT	50-60	14 28 16 16			44			
65									65.0
70	SPT	50-70	19 15 17			32			
			Refusal						71.5
									72.5
75								BOH 75	75.0 At 75ft. No split spoon sampler driven. No sample obtained

Notes:
Rocky Creek Concrete Box Culvert

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

PENETROMETER LOG

HOLE # PEN01-51

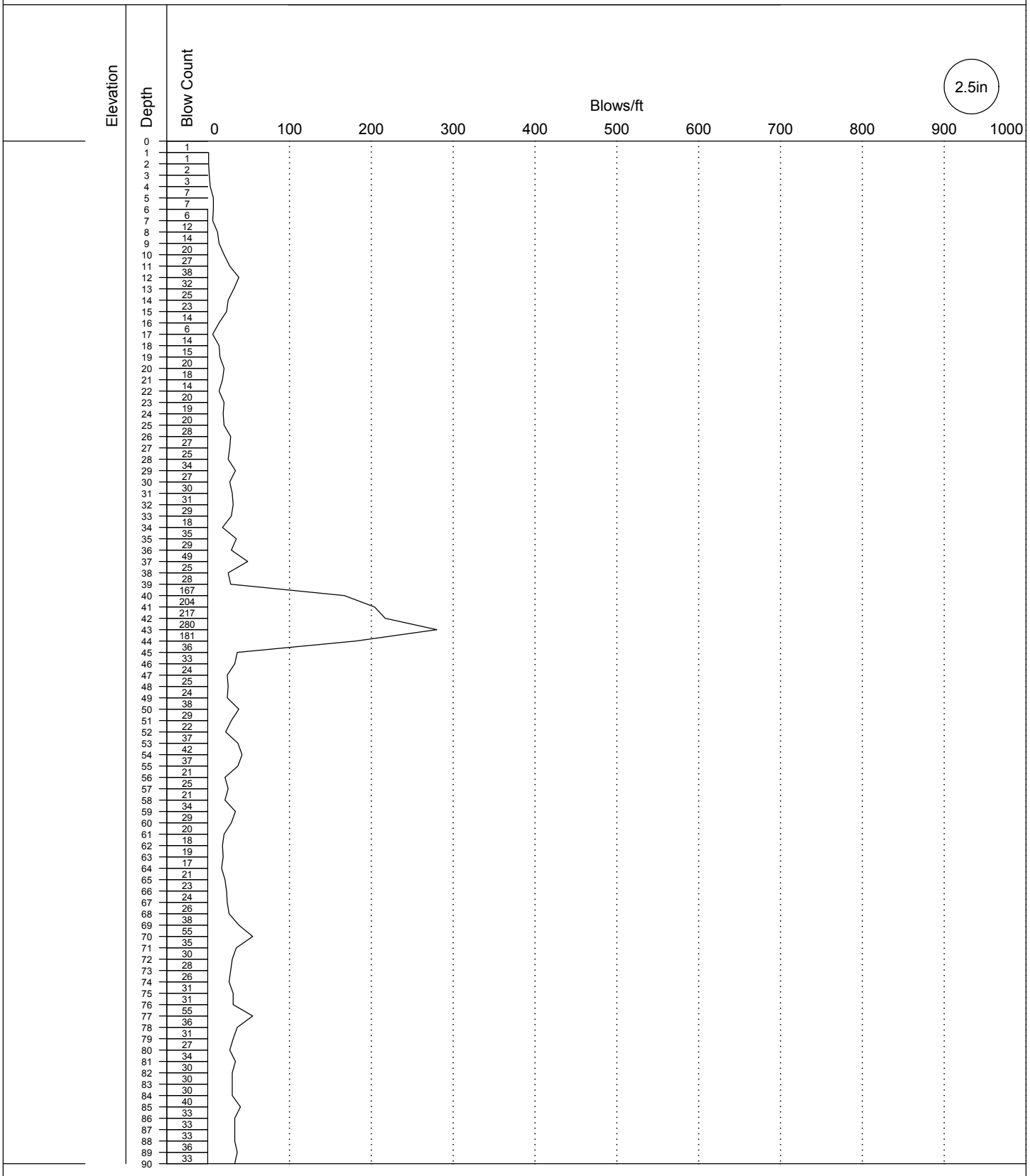
STATE OF ALASKA DOT&PF
Statewide Geotechnical Services
Foundation Geology

PROJECT NUMBER: *53610*
PROJECT: *Seward Highway Rehabilitation, MP 17-22.5*
NORTHING: *-149.352393*, ***EASTING***: *60.376977*

Station / Location:
Offset:
Elevation:

Equipment Type: *CME 75 Truck*
Drilling Method: *Penetrometer*
Field Crew: *Wagster and Abbott*

Total Depth: *162.0 feet*
Date: *6/2/2001 - 6/5/2001*
Geologist: *C. Boeckman*



D USCS PEN LOG SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/21/15

PENETROMETER LOG

HOLE # PEN01-51

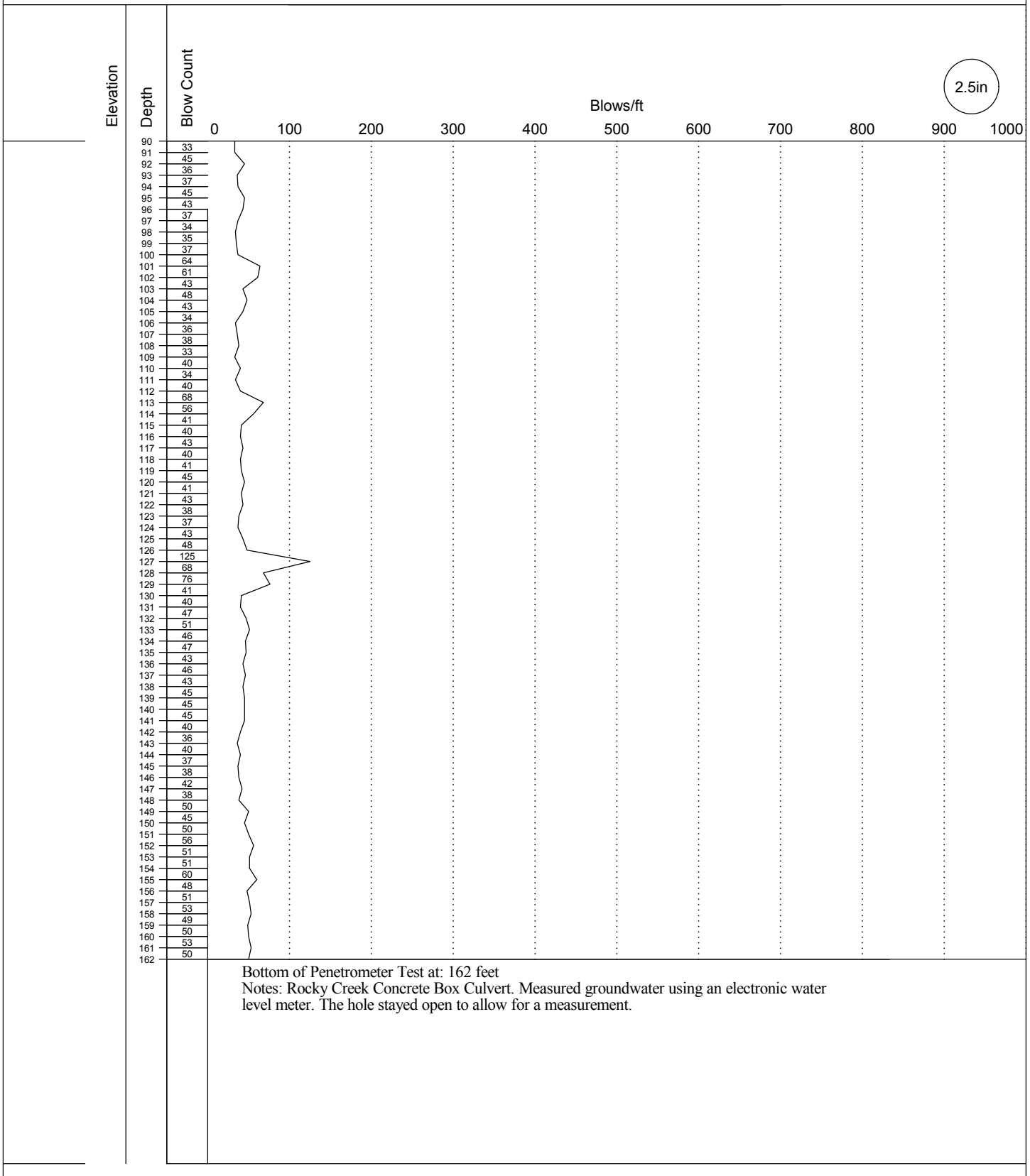
STATE OF ALASKA DOT&PF
Statewide Geotechnical Services
Foundation Geology

PROJECT NUMBER: *53610*
PROJECT: *Seward Highway Rehabilitation, MP 17-22.5*
NORTHING: *-149.352393*, ***EASTING***: *60.376977*

Station / Location:
Offset:
Elevation:

Equipment Type: *CME 75 Truck*
Drilling Method: *Penetrometer*
Field Crew: *Wagster and Abbott*

Total Depth: *162.0 feet*
Date: *6/2/2001 - 6/5/2001*
Geologist: *C. Boeckman*



Bottom of Penetrometer Test at: 162 feet
Notes: Rocky Creek Concrete Box Culvert. Measured groundwater using an electronic water level meter. The hole stayed open to allow for a measurement.

D USCS PEN LOG SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/21/15

LOG OF TEST HOLE

HOLE # TH01-52

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.333858* ***LONGITUDE :*** *-149.350042*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *17.0 feet*
Date: *8/10/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							GP-GM		2 inches of pavement, prior to 2013 overlay project — 0.0
1									**GRAVEL with Silt and Sand** (GP-GM) Grey, dry to moist, medium dense to very dense, containing cobbles — 0.2
2									
3	SPT	52-2.5	17 35 40 38			75			52-2.5 p200=9%, Sa=34%, Gr=52%, Moisture=1.9%
4									
5									
6	SPT	NA	16 20 24 24			44			
7									
8									
9									
10									
11	SPT	52-10	7 10 20 13			30			52-10 p200=10%, Sa=34%, Gr=56%, Moisture=3%
12									
13									
14									
15									
16	SPT	NA	16 23 40 50			63			
17								BOH 17	17.0

Notes:
Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-53

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.335169* ***LONGITUDE :*** *-149.346841*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *30.0 feet*
Date: *8/10/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	21	
Time		
Date	8/10/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
									6-inches leveling coarse — 0.2
0.5							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey to brown, moist to wet, medium dense to dense, fill. Containing cobbles
3.5									
5	SPT	53-5	11 18 20 15			38			
8.5									
10	SPT	53-10	16 14 14 15			28			
15.0									As above, more fines, slightly organic (wood fragments observed at 15')
15	SPT	53-15	13 22 18 17			40			
20									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/29/15

LOG OF TEST HOLE

HOLE # TH01-53

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.335169* ***LONGITUDE :*** *-149.346841*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *30.0 feet*
Date: *8/10/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	21	
Time		
Date	8/10/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20			7						**GRAVEL with Silt and Sand** (GP-GM) Grey to brown, moist to wet, medium dense to dense, fill. Containing cobbles (cont.)
21	SPT	53-20	9 12 25			21			
22									
23									
24									
25			5				SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey, wet, dense, native soils with cobbles — 25.0
26	SPT	53-25	10 11 10			21			
27									
28									
29									5 ft. of heave in auger, no sample — 29.0
30								BOH 30	— 30.0 Notes: Drilled in Northbound (NB) Lane Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-54

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.339433* ***LONGITUDE :*** *-149.343969*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *12.5 feet*
Date: *8/10/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
0.2							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, dry to moist, very dense, containing cobbles
3	SPT	54-2.5	22, 36, 42			78			
6	SPT	54-5	14, 30, 20, 12			50			
8.5									Slightly weathered bedrock
12.0									Auger refusal at 12.5 ft
12.5								BOH 12.5	

Notes:
Drilled in Southbound (SB) Lane

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-55

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.340536* ***LONGITUDE :*** *-149.34427*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *6.5 feet*
Date: *8/10/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement — 0.0 / 0.2
1	GRAB	55-1					GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, medium dense 55-1 p200=7%, Sa=25%, Gr=68%, Moisture=1.8%
2									
3	SPT	55-2.5	12 18 ~~25R~~						
4									Slightly weathered bedrock. Auger refusal at 6.5' — 4.0
5									
6								BOH 6.5	6.5

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled in Southbound (SB) Lane

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-56

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.341527* ***LONGITUDE :*** *-149.34485*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *7.5 feet*
Date: *8/3/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							GP-GM		2 inches of pavement, prior to 2013 overlay project — 0.0
									SILTY GRAVEL with Sand (GP-GM) Grey, moist, dense, containing cobbles — 0.2
1	GS	56-2							
2									
3			19						
4	SPT	56-4	18 31			49			
5			50						
6	SPT		50R						slightly weathered bedrock. Auger refusal at 7.5' wet — 6.0
7									BOH 7.5 — 7.5

Notes:
Drilled in NB Lane. About 27 ft north of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-57

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.342178* ***LONGITUDE :*** *-149.345367*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *16.5 feet*
Date: *8/10/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							GP-GM		2 inches of pavement, prior to 2013 overlay project — 0.0
0.2									**GRAVEL with Silt and Sand** (GP-GM) Brown to grey, moist, medium dense, Fill
3	SPT	57-2.5	11, 18, 18, 16	X	■	36			57-2.5 p200=12%, Sa=39%, Gr=49%, Moisture=4.9%
6	SPT	57-6.5	5, 12, 8, 7	X	■	20			
9							OL		**ORGANIC SILT** (OL) Brown, moist, loose, with sand — 9.0
11	SPT	57-10	1, 3, 50R	X	■				Slightly weathered bedrock — 11.5
16									Auger refusal at 16.5 ft — 16.0
								BOH 16.5	16.5

Notes:
Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/29/15

LOG OF TEST HOLE

HOLE # TH01-58

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.343031* ***LONGITUDE :*** *-149.345776*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *12.0 feet*
Date: *8/10/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	10	
Time		
Date	8/10/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									1.5 inches of pavement, prior to 2013 overlay project — 0.0
									2 inches of crushed aggregate base course — 0.1
1							GP-GM		4-inches of oiled gravel or crushed pavement — 0.3 / 0.7
									GRAVEL with Silt and Sand (GP-GM) Grey, dry to moist, dense
2									
3	SPT	58-2.5	9 12 15 15			27			
4									
5							OL		**SANDY SILT with Gravel** (OL) Brown, moist, Slightly organic — 5.0
6	GRAB	58-5							
7									
8							SM		**SILTY SAND with Gravel** (SM) Brown, moist to wet, loose to medium dense, Slightly organic — 8.0
9									
10	SPT	NA	15R						Slightly weathered bedrock, auger refusal at 12' — 10.0
11									
12								BOH 12	12.0

Notes:
Drilled in SB lane. Across from TH01-59 and near TP00-63.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-59

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.343045* ***LONGITUDE :*** *-149.345664*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *8.0 feet*
Date: *8/3/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	4.5	
Time		
Date	8/3/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
									1-inch of oiled gravel or crushed ashpalt — 0.2
1							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist to wet, dense — 0.3
2									
3	GRAB	59-2							
4									
5									
6									
7									
									Slightly weathered bedrock, auger refusal at 8' — 7.5
8							BOH 8		— 8.0

Notes:
Drilled in NB Lane

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-60

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.345112* ***LONGITUDE :*** *-149.346564*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *5.5 feet*
Date: *8/3/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
1							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, dense, containing cobbles — 0.2
2									
3	SPT	60-2.5	7 20			38			
4			18 27						
5									Slightly weathered bedrock, auger refusal at 5.5' — 5.0
								BOH 5.5	— 5.5

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled in NB Lane. About 66 ft south of a culvert. Across the road from a concrete retaining wall.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-61

STATE OF ALASKA DOT&PF
Central Region Materials
Geology Section

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.346227*, ***LONGITUDE :*** *-149.346631*

Station / Location:

Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Total Depth: *15.0*
Date: *8/3/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							GP-GM		2 inches of pavement, prior to 2013 overlay project — 0.0
0.2									**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, medium dense, slightly organic
3	SPT	61-2.5	6, 14, 6, 6				SM		61-2.5 p200=11%, Sa=32%, Gr=57%
3.5									**SILTY SAND with Gravel** (SM) Brown, moist to wet, loose to medium dense, slightly organic
6	SPT	61-5	3, 3, 4, 3			7			
8	SPT	61-7.5	4, 8, 6, 8			14			61-7.5 p200=14%, Sa=46%, Gr=40%, Moisture=17.9%, Org=2.2%
12.5	SPT	61-12.5	16, 26, 50				ML		**SANDY SILT with Gravel** (ML) Grey, moist to wet, very dense
14.0									Slightly weathered bedrock, auger refusal at 15'
15.0								BOH 15	

Notes:
Drilled in NB Lane. About 24 ft north of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-62

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.347344* ***LONGITUDE :*** *-149.346807*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *5.0 feet*
Date: *8/3/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
									0.2
1							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, dry, dense
2									
3	SPT	62-2.5	8 26 72						
									Slightly weathered bedrock, auger refusal at 5' — 3.5
4									
5								BOH 5	5.0

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled in NB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-63

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.349006* ***LONGITUDE :*** *-149.347912*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *5.5 feet*
Date: *8/4/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
									GRAVEL with Sand Black, moist, with Asphalt pieces — 0.2
1							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Brown, moist, dense, containing cobbles — 0.5
2			11						
3	SPT	63-2.5	14 16			30			
4			20						
5									Slightly weathered bedrock, auger refusal at 5.5' — 5.0
								BOH 5.5	— 5.5

Notes:
Drilled in NB Lane. Near TP00-02.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-64

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.349585* ***LONGITUDE :*** *-149.348245*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *17.0 feet*
Date: *8/17/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	12.5	
Time		
Date	8/17/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									1.5 inches of pavement, prior to 2013 overlay project — 0.0
									4 inches of leveling course — 0.1
1							SP-SM		1.5 inches of oiled gravel or crushed asphalt — 0.4 / 0.6
2									**SAND with Silt and Gravel** (SP-SM) Grey, moist, loose to medium dense, slightly organic, containing cobbles
3	SPT	64-2.5	5, 9, 12, 13			21			
4									
5									
6	SPT	NA	3, 4, 4, 3			8			
7									
8									
9									← 9.0
10									
11	SPT	64-10	1, 3, 3, 3			6			
12									▼
13									13.5
14									Slightly weathered bedrock.
15	SPT	NA	50R						harder drilling at 15', auger refusal at 17' — 15.0
16									
17								BOH 17	17.0

Notes:
Drilled in SB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-65

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.351167* ***LONGITUDE :*** *-149.348322*
Coordinate System: State Plane; NAD 1983

Station / Location:
Offset:
Elevation: *top of pavement*

Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Total Depth: *8.5 feet*
Date: *8/4/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
									4 inches of Crushed aggregate base course — 0.2
1							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, medium dense, containing cobbles — 0.6
2									
3									
4									
5			5				GM		**SILTY GRAVEL** (GM) Brown, moist, loose, with organics — 4.5
6	SPT	65-5	4 6 10			10			
7									
8									Slightly weathered bedrock, auger refusal at 8.5' — 8.0
								BOH 8.5	— 8.5

Notes:
Drilled in SB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-66

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.352566* ***LONGITUDE :*** *-149.348806*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *17.0 feet*
Date: *8/4/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
									4 inches of crushed aggregate base course — 0.2
1							GP-GM		3 inches of oiled gravel or crushed asphalt — 0.5 / 0.7
									GRAVEL with Silt and Sand (GP-GM) Brown to grey, moist, medium dense
2									
3	SPT		9 12 14 15			26			
4									
5									5.0
							OL		**ORGANIC SILT** (OL) Brown, moist, firm, with sand
6	SPT	66-5	1 2 3 3			5			
7									
8									8.0
							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Greyish brown, moist, dense to very dense, containing cobbles
9									
10			20 21 23 37						
11	SPT					44			
12									
13									
14									← 14.0
15									
16	SPT		11 18 37 50			55			
17									17.0
								BOH 17	

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled in NB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/29/15

LOG OF TEST HOLE

HOLE # TH01-67

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.353605* ***LONGITUDE :*** *-149.350163*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *5.0 feet*
Date: *8/4/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0									2 inches of pavement, prior to 2013 overlay project	0.0
									2 inches of base course	0.2
1							GP-GM		1.5 inches of oiled gravel or crushed asphalt	0.5
									GRAVEL with Silt and Sand (GP-GM) Grey, moist, dense, containing cobbles	0.6
2										
			12						67-2.5 p200=12%, Sa=32%, Gr=56%	
3	SPT	67-2.5	18			42				
4			24							
			24						← auger refusal at 5 ft., on boulder or bedrock?	4.5
5								BOH 5		5.0

Notes:
Drilled in SB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-68

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.359645* ***LONGITUDE :*** *-149.350187*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *13.5 feet*
Date: *8/6/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									1.5 inches of pavement, prior to 2013 overlay project — 0.0
									4 inches of oiled base course — 0.2
1							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Greyish brown, moist, dense, slightly organic — 0.5
2									
3	SPT	68-2.5	11, 23, 19, 12			42			
4									
5									
6	SPT	68-5	9, 6, 3, 4				OL		**ORGANIC SILT** (OL) Brown, moist, firm, with sand — 6.0
7									
8									
9							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, dense, containing cobbles and boulders — 9.0
10									
11	SPT	68-10	12, 15, 27, 28			42			
12									12.0
13									Auger refusal at 13.5'. (Boulder?) — 13.0
								BOH 13.5	13.5

Notes:
Drilled in NB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-69

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.361102* ***LONGITUDE :*** *-149.34917*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *10.0 feet*
Date: *8/6/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
									5 inch leveling coarse — 0.2
1							SP-SM		**SAND with Silt and Gravel** (SP-SM) Greyish brown, moist, dense, containing cobbles and boulders — 0.5
2									2.0
3	SPT	69-2.5	9 15 16 15			31			69-2.5 p200=13%, Sa=46%, Gr=41%
4									
5									
6	SPT	69-5	11 15 19 13			34			
7									
8									8.0
9	SPT		10						
			50R						Split spoon refusal at 10 ft. — 9.5
10								BOH 10	10.0

Notes:
Drilled in NB Lane. Near the IRBI Knife Shop.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-70

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.363564* ***LONGITUDE :*** *-149.347554*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *12.0 feet*
Date: *8/9/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
0.2							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, dense
3	SPT	70-2.5	15 16 13 12			29			
5									5.0
5			3				GM		**SILTY GRAVEL with Sand** (GM) Brown, moist, stiff, slightly organic
6	SPT	70-5	5 6 7			11			
9.5									Slightly weathered bedrock, auger refusal at 12'
10	SPT		50R						
12								BOH 12	12.0

Notes:
Drilled in SB Lane, about 108 ft. south of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-71

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.365037* ***LONGITUDE :*** *-149.347235*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *17.0 feet*
Date: *8/9/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	14	
Time		
Date	8/9/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									1.75 inches of pavement, prior to 2013 overlay project — 0.0
							GP-GM		2 inches of base course — 0.2
									1 inch of oiled gravel or crushed asphalt — 0.3
									GRAVEL with Silt and Sand (GP-GM) Grey, dry to moist, dense — 0.4
1									
2									
3	SPT	71-2.5	9, 18, 20, 17	X	■	38			
4									
							GW-GM		**GRAVEL with Silt and Sand** (GW-GM) Grey, moist to wet, dense, with pieces of asphalt, containing cobbles — 4.5
5									71-5 p200=8%, Sa=29%, Gr=63%, Moisture=6.7%, PI=NP, LL=NV
6	SPT	71-5	12, 14, 13, 7	X	■	27			
7									
							SM		**SILTY SAND with Gravel** (SM) Brown, moist, loose, with organics — 7.0
8	SPT	71-7.5	4, 3, 3, 4	X	■	6			71-7.5 p200=22%, Sa=43%, Gr=35%, Moisture=63%, Org=19.6%
9									
10									
11									
12									
							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Brown, moist to wet, dense, containing cobbles — 12.0
13	SPT	71-12.5	9, 18, 20, 17	X	■	38			
14	▼								
15									slightly weathered bedrock, auger refusal at 17' — 15.0
16									
17							BOH 17		— 17.0

Notes:
Drilled in SB Lane, about 15 ft north of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-72

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.36611* ***LONGITUDE :*** *-149.347018*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *11.0 feet*
Date: *8/9/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	3.5	
Time		
Date	8/9/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
									2 inches of crushed asphalt — 0.2
									6 inches of base course — 0.3
1	GRAB	72-1					GW-GM		**GRAVEL with Silt and Sand** (GW-GM) Black, wet, medium dense, containing cobbles — 0.8
2									
3			13						72-2.5 p200=11%, Sa=32%, Gr=57%, Moisture=2.4%, PI=NP, LL=NV
	SPT	72-2.5	9			16			
4			7						
			7						
5									
			8						72-5 p200=12%, Sa=36%, Gr=52%, Moisture=6.7%
6	SPT	72-5	6			13			
			7						
7			18						
8									
9									slightly weathered bedrock, auger refusal at 11' — 9.0
10									
11									BOH 11 — 11.0

Notes:
Drilled in SB Lane, about 5 ft south of a culvert.

This drilling project was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-73

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.366993* ***LONGITUDE :*** *-149.346834*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *13.0 feet*
Date: *8/9/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0									2 inches of pavement, prior to 2013 overlay project	0.0
									2 inches of crushed asphalt	0.2
1							SP-SM		2 inches of base course	0.3
									SAND with Silt and Gravel (SP-SM) Brown, moist, containing cobbles	0.5
2							OL		**ORGANIC SILT** (OL) Brown, moist, firm, containing cobbles	1.5
3										
4										
5			3							
6	SPT	73-5	2			5				
7			3							
8			2							
9										
10			11				GM		**SILTY GRAVEL with Sand** (GM) Grey, moist, dense, slightly organic	10.0
11	SPT	73-10	10							
12			15R						slightly weathered bedrock, auger refusal at 13'	12.0
13								BOH 13		13.0

Notes:
Drilled in SB Lane, about 7.5 ft south of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-74

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.370835* ***LONGITUDE :*** *-149.346776*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *7.0 feet*
Date: *8/11/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									1.5 inches of pavement, prior to 2013 overlay project — 0.0
									2 inches of base coarse — 0.1
1							GM		2 inches oiled gravel — 0.3
									SILTY GRAVEL with Sand (GM) Brown, moist, dense, containing cobbles and boulders — 0.5
2									2.0
3	SPT	74-2.5	15 17			32			
4			15 20R						
									slightly weathered bedrock, auger refusal at 7 ft — 4.5
5									
6									
7								BOH 7	7.0

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled in the NB Lane, about 132 ft north of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-75

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373017* ***LONGITUDE :*** *-149.348354*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *32.0 feet*
Date: *8/9/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							GP-GM		2 inches of pavement, prior to 2013 overlay project — 0.0
0.2									**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, medium dense, containing cobbles
3	SPT	75-2.5	6, 9, 15, 14			24			
5	SPT		20, 30R						
6.5									←
8.5									←
9.0							SM		**SILTY SAND with Gravel** (SM) Greyish brown, moist, loose, slighty organic, containing cobbles
11	SPT	75-10	6, 6, 4, 5			10			
13.0							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, dense, containing cobbles
16	SPT	75-15	6, 13, 18, 12			31			
18.0									←
20									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-75

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373017* ***LONGITUDE :*** *-149.348354*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *32.0 feet*
Date: *8/9/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20									**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, dense, containing cobbles (cont.)
21	SPT	75-20	7 15 12 11			27			
22									
23									
24									
25									
26									← 25.5
27									
28									
29									
30	SPT	75-30	5 7 13 17			20			
31									
32								BOH 32	32.0

Notes:
Drilled in SB Lane, about 90 ft north of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-76

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373616* ***LONGITUDE :*** *-149.349416*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *15.0 feet*
Date: *8/13/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	14	
Time		
Date	8/13/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									1.5 inches of pavement, prior to 2013 overlay project — 0.0
									4 inches of Oiled gravel or crushed asphalt — 0.2
1	GRAB	76-1					SM		0.5 **SILTY SAND with Gravel** (SM) Brown, moist, medium dense, containing cobbles
2									
3			15						
	SPT	76-2.5	13			27			
4			14						
			16						
5									
			5						
6	SPT		8			23			
			15						
7			14						
8									
9							GM		9.0 **SILTY GRAVEL** (GM) Brown, moist, loose, with organics and containing cobbles
10			3						
	SPT	76-10	6			9			
11			3						
			4						
12									12.5 ←
13									
14							GM		14.0 **SILTY GRAVEL with Sand** (GM) wet, auger refusal at 15'
15								BOH 15	15.0

Notes:
Drilled in NB Lane, about 162 ft north of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-77

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.375124* ***LONGITUDE :*** *-149.351822*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *17.0 feet*
Date: *8/13/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0								1.5 inches of pavement, prior to 2013 overlay project — 0.0 2 inches of base course — 0.2 1 inch of oiled gravel or crushed asphalt — 0.3 0.4
1						GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Greyish brown, moist, medium dense
2								
3	SPT	77-2.5	6 6 7 5		13			
4								
5								
6	SPT	77-5	9 10 7 8		17			
7								
8						OL		**ORGANIC SILT** (OL) Brown, moist, firm, with sand, containing cobbles and boulders — 8.0
9								Boulder at 9.5 ft — 9.5
10								
11	SPT	77-10	1 2 8 10			GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist to wet, medium dense, containing cobbles and silt lenses — 11.0
12								
13								
14								14.0
15								
16	SPT	77-15	8 6 6 7		12			
17						BOH 17		17.0

Notes:
Drilled in NB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-78

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.379112* ***LONGITUDE :*** *-149.351838*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *17.0 feet*
Date: *8/13/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									1.5 inches of pavement — 0.0
									2 inches of base course — 0.1
1							GM		1 inch of oiled gravel or crushed asphalt — 0.3 **SILTY GRAVEL with Sand** (GM) Greyish brown, moist, medium dense — 0.4
2							SM		**SILTY SAND with Gravel** (SM) Brown, moist, loose, slightly organic — 2.0
3	SPT		6 30 31				GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, very dense, containing cobbles — 3.0
4									
5			8 15				OL		**ORGANIC SILT** (OL) Brown, firm — 5.0
6	SPT	78-5	18 12				SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey, moist to wet, loose to medium dense, containing cobbles — 6.0
7									
8									
9									
10			7						
11	SPT	78-10	6 4 3			10			
12									
13									
14									← 14.5
15			5						
16	SPT		10 11 15			21			
17							BOH 17		17.0

Notes:
Drilled in NB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/29/15

LOG OF TEST HOLE

HOLE # TH01-79

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.38119* ***LONGITUDE :*** *-149.352219*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *30.0 feet*
Date: *8/8/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	29	
Time		
Date	8/8/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
									2 inches of base course — 0.2
									2 inches of oiled gravel or crushed asphalt — 0.3
1							SP-SM		**SAND with Silt and Gravel** (SP-SM) Brown, moist, medium dense — 0.5
2							OL		**ORGANIC SILT** (OL) Brown, moist, firm, with sand — 2.0
3	SPT	79-2.5	1 5 4 5			9			
4									
5							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, dense, containing cobbles and bolders — 5.0
6	SPT	79-5	7 14 14 13			28			
7									
8									← — 8.0
9									— 9.5
10									
11	SPT	79-10	7 15 15 17			30			
12									
13									
14							GM		**SILTY GRAVEL with Sand** (GM) Brown, moist to wet, medium dense — 14.0
15									
16	SPT	79-15	6 5 8 8			13			
17									
18									
19							SW-SM		**SAND with Silt and Gravel** (SW-SM) Brown, moist, medium dense, containing cobbles — 19.0
20									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/29/15

LOG OF TEST HOLE

HOLE # TH01-79

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.38119* ***LONGITUDE :*** *-149.352219*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *30.0 feet*
Date: *8/8/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	29	
Time		
Date	8/8/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20			7						**SAND with Silt and Gravel** (SW-SM) Brown, moist, medium dense, containing cobbles (cont.)
21	SPT	79-20	9			17			
22			8						
23			11						
24									
25									← 25.0
26									
27									
28									
29	▼								29.0
									slightly weathered bedrock, auger refusal at 30'
30									30.0
									BOH 30

Notes:
Drilled in SB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-80

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.382633* ***LONGITUDE :*** *-149.352525*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *21.0 feet*
Date: *8/8/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	15	
Time		
Date	8/8/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0									2 inches of pavement, prior to 2013 overlay project	0.0
							GP-GM		1 inch of base course	0.2
1									1 inch oiled gravel or crushed asphalt	0.3
									GRAVEL with Silt and Sand (GP-GM) Grey to brown, moist, medium dense	0.5
2										
3	SPT	80-2.5	9 9 10 5							
4							OL		**ORGANIC SILT** (OL) Brown, moist, firm, with sand	4.0
5	SPT	80-5	3 13							
6	SPT	80-6	11 9				SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey to brown, moist, medium dense	6.0
7										
8										
9										
10			3				SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey to brown, moist, loose, slightly organic	10.0
11	SPT	80-10	5 4 3			9				
12										
13										
14							GM		**SILTY GRAVEL with Sand** (GM) Grey, wet, dense, containing cobbles	13.5
15 ▼	SPT	80-15	11 24/2							
16							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Brown, wet, dense, containing cobbles	16.0
									←	16.5
17									←	17.5
18										
19									slightly weathered bedrock, auger refusal at 21'	19.0
20										

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/29/15

LOG OF TEST HOLE

HOLE # TH01-80

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.382633* ***LONGITUDE :*** *-149.352525*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *21.0 feet*
Date: *8/8/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)	15	
Time		
Date	8/8/01	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20	SPT		50/1						slightly weathered bedrock, auger refusal at 21' (cont.)
21								BOH 21	21.0

Notes:
Drilled in SB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-81

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.383869* ***LONGITUDE :*** *-149.352788*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *16.0 feet*
Date: *8/8/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
									2 inches of base course — 0.2
1							GW-GM		1 inch of oiled gravel or crushed asphalt — 0.3 / 0.4
2									**GRAVEL with Silt and Sand** (GW-GM) Grey, moist, medium dense, containing cobbles
3	SPT	81-2.5	9 11 10 12			21			81-2.5 p200=10%, Sa=40%, Gr=50%, Moisture=4.3%
4									
5									
6	SPT		6 9 11 10			20			
7									
8									← 8.0
9									
10	SPT		21 37						
11									
12									slightly weathered bedrock, auger refusal at 16' — 12.0
13									
14									
15	SPT		50/1 refusal						
16								BOH 16	16.0

Notes:
Drilled in SB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-82

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.385405* ***LONGITUDE :*** *-149.353101*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *6.5 feet*
Date: *8/8/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0									1.5 inches of pavement, prior to 2013 overlay project	0.0
									4 inches of oiled gravel or crushed asphalt	0.1
1	GRAB	82-1					GM		**SILTY GRAVEL with Sand** (GM) Brown, moist, medium dense, Fill 82-1 p200=15%, Sa=30%, Gr=55%, Moisture=3.4%	0.5
							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, medium dense	1.5
2										
3	SPT	82-2.5	7 9							
							ML		**SANDY SILT** (ML) Brown, wet, stiff	3.5
4	SPT	82-3.5	5 4							
5	SPT		50/1						slightly weathered bedrock, auger refusal at 6.5'	5.0
6								BOH 6.5		6.5

Notes:
Drilled in SB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-83

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.387023* ***LONGITUDE :*** *-149.353296*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *8.5 feet*
Date: *8/8/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2.25 inches of pavement, prior to 2013 overlay project — 0.0
									1.5 inches of base course — 0.2
1									2 inches of oiled gravel or crushed asphalt — 0.3
							GP-GM		0.5
2									**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, dense
3	SPT	83-2.5	11 23 15 16			38			
4									
5									
6	SPT	83-5	16 43						
7									slightly weathered bedrock, auger refusal at 8.5' — 7.0
8								BOH 8.5	8.5

Notes:
Drilled in SB Lane, about 24 ft south of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-84

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.390116* ***LONGITUDE :*** *-149.352945*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *8.5 feet*
Date: *8/15/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0									1.5 inches of pavement, prior to 2013 overlay project	0.0
									4 inches of oiled gravel or crushed asphalt	0.1
1							GP-GM		0.5
									GRAVEL with Silt and Sand (GP-GM) Brown, moist, dense, Fill	
2										2.0
							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, very dense, containing cobbles	
3	SPT	84-2.5	8 50							
4										4.0
5	SPT		50							5.5
			refusal							
6									slightly weathered bedrock, auger refusal at 8.5'	6.0
7										
8										
								BOH 8.5		8.5

Notes:
Drilled in NB Lane.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-85

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.391412* ***LONGITUDE :*** *-149.352885*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *5.0 feet*
Date: *8/7/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0								2 inches of pavement, prior to 2013 overlay project — 0.0
								2 inches of base course — 0.2
1						SP-SM		1 inch of oiled gravel or crushed asphalt — 0.3 / 0.4
								SAND with Silt and Gravel (SP-SM) Brown, moist, medium dense, containing cobbles
2								
3								3.0
								slightly weathered bedrock, auger refusal at 5'
4								
5						BOH 5		5.0

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled in SB Lane, about 72 ft north of a culvert. Bedrock outcrop outside of guard rail.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-86

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.393139* ***LONGITUDE :*** *-149.353793*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *13.5 feet*
Date: *8/7/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement, prior to 2013 overlay project — 0.0
									2 inches of base course — 0.2
1							SP-SM		1 inch of oiled gravel or crushed asphalt — 0.3 / 0.4
2									**SAND with Silt and Gravel** (SP-SM) Brown to grey, moist, loose to medium dense, slightly organic, cotaining cobbles and boulders
3	SPT	86-2.5	10 13 6 12			19			
4									
5									5.0
6									
7									
8	SPT		5 4 6 4			10			
9									
10									
11									
12									12.5
13									slightly weathered bedrock, auger refusal at 13.5'
								BOH 13.5	13.5

Notes:
Drilled in SB Lane about 36 ft south of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-87

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.393723* ***LONGITUDE :*** *-149.354184*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *37.0 feet*
Date: *8/15/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement — 0.0
									4 inches of base course — 0.2
1							GP-GM		2 inches of oiled gravel or crushed asphalt — 0.5
									GRAVEL with Silt and Sand (GP-GM) Grey, dry to moist, dense, Fill, containing cobbles — 0.7
2									
3	SPT	87-2.5	10 22 31 20			53			
4									
									4.5
5							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, medium dense, Fill with more fines then above
6	SPT	87-5	10 11 10 12			21			
7									
8									← 8.5
9									
10									10.0
			7				SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey, moist, loose to medium dense, containing cobbles
11	SPT	87-10	6 5 8			11			
12									
13									
14									
15									
16									
17									
18									
19									← 19.0
20									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/29/15

LOG OF TEST HOLE

HOLE # TH01-87

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.393723* ***LONGITUDE :*** *-149.354184*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *37.0 feet*
Date: *8/15/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20							OL		**ORGANIC SILT** (OL) Brown, moist to wet, soft, with sand — 20.0
21	SPT	87-20	1 1 2 3			3			
22									
23									
24									
25									
26							SM		**SILTY SAND with Gravel** (SM) Grey, moist, loose to medium dense — 25.5
27									
28									← — 28.0
29									
30			3 3 4 4						
31	SPT	87-30				7			
32									
33									
34									
35			4 7 9 15						
36	SPT					16			
37							BOH 37		— 37.0

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled in SB Lane, about 36 ft south of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-88

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.395032* ***LONGITUDE :*** *-149.355094*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *19.0 feet*
Date: *8/7/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement — 0.0
									2 inches of base course — 0.2
1							SP-SM		1.5 inches of oiled gravel or crushed asphalt — 0.3 / 0.5
									SAND with Silt and Gravel (SP-SM) Brown, moist, medium dense to dense, slightly organic, containing cobbles
2									
3	SPT	88-2.5	9 18 18 17			36			
4									
5									
6	SPT		4 8 9 15			17			
7									7.5
8									
9									9.0
10									
11	SPT	88-10	5 10 25				ML		**SILT** (ML) — 11.0
							SP-SM		**SAND with Silt and Gravel** (SP-SM) Brown, moist, dense, slightly organic, containing cobbles — 11.5
12									12.5
13									
14									
15									
16	SPT		6 12 8R						
17									slightly weathered bedrock, auger refusal at 19' — 17.0
18									
19								BOH 19	19.0

Notes:
Drilled in SB Lane. Across from a pullout.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-88

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.395032* ***LONGITUDE :*** *-149.355094*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *19.0 feet*
Date: *8/7/2001 -*
Geologist: *C. Boeckman*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

SUBSURFACE MATERIAL

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-89

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.396764* ***LONGITUDE :*** *-149.35624*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *6.5 feet*
Date: *8/7/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement — 0.0
									4 inches of leveling course — 0.2
1							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Brown, moist, loose, with organics, containing cobbles — 0.5
2									
3	SPT	89-2.5	6 6 3 6			9			
4									
5	SPT		10 50						
6			refusal						slightly weathered bedrock, auger refusal at 6.5' — 6.0
								BOH 6.5	— 6.5

Notes:
Drilled in SB Lane, about 63 ft south of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH01-90

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.398436* ***LONGITUDE :*** *-149.357483*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *30.5 feet*
Date: *8/7/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement — 0.0
									2 inches of leveling course — 0.2
1	Fg	90-1					GP-GM		1.5 inches of oiled gravel or crushed asphalt — 0.3 / 0.4
									GRAVEL with Silt and Sand (GP-GM) Brown to grey, moist, dense, containing cobbles
2									
3			20						
	SPT		22			36			
4			14						
			21						4.5
5									
	SPT		23						
			50R						6.0
6									
7									7.0
							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, medium dense, with ORGANICS
8			10						
	SPT	90-7	13			24			
9			11						
			12						
10									
11									
12									
13									
14									14.0
							SP-SM		**SAND with Silt and Gravel** (SP-SM) Brown, moist, dense, containing cobbles and boulders. Slightly organic.
15	SPT		50R						
									15.5
16									
17									
18									18.0
19									
20									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/29/15

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH01-90

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.398436* ***LONGITUDE :*** *-149.357483*
Coordinate System: State Plane; NAD 1983
Equipment_Type: *CME 55*
Drilling Method: *8" Hollow Auger*
Field Crew: *abbott/saena*

Station / Location:
Offset:
Elevation: *top of pavement*

Total Depth: *30.5 feet*
Date: *8/7/2001 -*
Geologist: *C. Boeckman*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20									**SAND with Silt and Gravel** (SP-SM) Brown, moist, dense, containing cobbles and boulders. Slightly organic. (cont.)
21									
22									
23									22.5 ←
24									
25	SPT		63						
26									
27									
28									
29									
30	SPT		50R						30.5
								BOH 30.5	

Notes:
Drilled in SB Lane, about 20 ft north of a culvert.

Asphalt thickness has changed. This drilling in 2001 was completed prior to a 2013 overlay project. See As-Builts for project NH-0311(33)/55256, for a description of the pavement preservation activities.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

2013 Test Hole Logs

LOG OF TEST HOLE

HOLE # TH13-01

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.352708*, ***LONGITUDE :*** *-149.349362*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *211+75*
Offset: *27' LT.*
Elevation: *3.3' below top of pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *20.5 feet*
Date: *8/20/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									**Vegetative Mat** 0.0
0.2							SW		**SAND with Gravel** (SW) Grey, moist
1							ML		**SILT with Sand** (ML) Brown, moist 1.0
2	SPT	FS01	2 1 2 1			3			
3									
4									
5	SPT	FS02	3 11 12 12				SM		**SILTY SAND with Gravel** (SM) Grey, moist 5.0
6									
7	SPT	FS03	17 45						
8			refusal						8.0
9									
10	SPT	FS04	18 25 26 25			51			FS04 p200=14%, Sa=48%, Gr=38%
11									
12									
13									
14									
15	SPT	FS05	23 48 56			104			
16									
17									
18									
19									
20									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH13-01

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.352708*, ***LONGITUDE :*** *-149.349362*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *211+75*
Offset: *27' LT.*
Elevation: *3.3' below top of pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *20.5 feet*
Date: *8/20/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
20	SPT	FS06	85/5"	☒	■			BOH 20.5				**SILTY SAND with Gravel** (SM) Grey, moist (cont.) 20.5

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-02

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.353614*, ***LONGITUDE :*** *-149.350336*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *215+00*
Offset: *25' LT.*
Elevation: *3' below top of pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *21.5 feet*
Date: *8/20/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							SW-SM		**Vegetative Mat** 0.0
1									**SAND with Silt and Gravel** (SW-SM) Greyish brown, moist 0.2
2									
3	SPT	FS07	8 15 10 12			25			FS07 p200=8%, Sa=60%, Gr=32%
4									
5	SPT	FS08	6 10 17 18						
6							SM		**SILTY SAND with Gravel** (SM) Brown, moist 6.0
7									
8	SPT	FS09	9 21 20			41			FS09 p200=18%, Sa=51%, Gr=31%
9			31/4" refusal						9.0
10	SPT		25/0" refusal						
11							SW-SM		**SAND with Silt and Gravel** (SW-SM) Greyish brown, moist 11.0
12									
13	SPT	FS10	21 16 18 19			34			
14									
15	SPT	FS11	36/5" refusal						
16									
17									
18									
19									
20									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/2/15

LOG OF TEST HOLE

HOLE # TH13-02

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.353614*, ***LONGITUDE :*** *-149.350336*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *215+00*
Offset: *25' LT.*
Elevation: *3' below top of pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *21.5 feet*
Date: *8/20/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
20												**SAND with Silt and Gravel** (SW-SM) Greyish brown, moist (cont.)
21												21.5
								BOH 21.5				

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-03

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.354286*, ***LONGITUDE :*** *-149.351364*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *218+60*
Offset: *22' LT.*
Elevation: *1.8' below top of pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *26.9 feet*
Date: *8/20/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							SW		**Vegetative Mat** 0.0
1									**SAND with Gravel** (SW) Grey, moist to wet 0.1
2									
3	SPT	FS13	6 6 6 15						
4							SM		**SILTY SAND with Gravel** (SM) Greyish brown, moist 3.5
5									FS14 p200=16%, Sa=51%, Gr=33%
6	SPT	FS14	9 11 5 8			16			
7									
8	SPT	FS15	2 3 4 4			7			
9									
10	SPT	FS17	2						
11	SPT	FS16	1 2 1			3	ML		**SILT with Sand** (ML) Light brown, moist to wet 10.5
12							SM		**SILTY SAND with Gravel** (SM) Greyish brown, moist 12.0
13	SPT	FS18	16 55 50/5"						FS18 p200=12%, Sa=55%, Gr=33%
14									
15									FS19 Moisture=7.0%
16	SPT	FS19	30 56 42			98			
17									
18									
19									
20									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-03

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.354286*, ***LONGITUDE :*** *-149.351364*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *218+60*
Offset: *22' LT.*
Elevation: *1.8' below top of pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *26.9 feet*
Date: *8/20/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20									**SILTY SAND with Gravel** (SM) Greyish brown, moist (cont.)
									FS20 Moisture=7.2%
21	SPT	FS20	16 23 21 34			44			
22									
23									
24									
25									FS21 Moisture=6.0%
26	SPT	FS21	10 11 23 40/5" refusal						
								BOH 26.9	26.9

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-04

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.37403*, ***LONGITUDE :*** *-149.34873*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *292+00*
Offset: *220' RT.*
Elevation: *13' above pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *32.0 feet*
Date: *8/26/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification	Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0										**Vegetative Mat** 0.0
0.2							ML			**SILT with Gravel** (ML) Brown, moist, organics present
2.5										
3	SPT	FS20	2 3 4 7			7	ML			**SILT with Gravel** (ML) Greyish brown, moist
4.5										
5							SM			**SILTY SAND with Gravel** (SM) Grey, dry to moist
6	SPT	FS21	6 7 6 11			13				
7										
8	SPT	FS22	3 1 2 7				ML			FS22 Moisture=13.3% **SILT** (ML) Brown, moist to wet
9							SM			**SILTY SAND with Gravel** (SM) Grey, dry to moist
10										FS23 Moisture=8.2%
11	SPT	FS23	4 3 3 4			6				
12										
13										
14										
15										FS24 Moisture=6.3%
16	SPT	FS24	5 3 2 3			5				
17										FS25 p200=15%, Sa=47%, Gr=38%, Moisture=9%, PI=NP, LL=NV
18	GRAB	FS25								
19										
20										

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH13-04

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.37403*, ***LONGITUDE :*** *-149.34873*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *292+00*
Offset: *220' RT.*
Elevation: *13' above pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *32.0 feet*
Date: *8/26/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20			9						**SILTY SAND with Gravel** (SM) Grey, dry to moist (cont.)
21	SPT	FS26	12 15 12			27			
22									
23									
24									
25			16						
26	SPT	FS27	15 17 18			32			
27									
28									
29									
30			7						FS28 Moisture=9.0%
31	SPT	FS28	18 14 11			32			
32								BOH 32	32.0

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

22.5

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-05

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.37404*, ***LONGITUDE :*** *-149.349635*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *293+50*
Offset: *100' RT.*
Elevation: *1' above pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *37.0 feet*
Date: *8/26/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							ML		**Vegetative Mat** 0.0 **SILT** (ML) Brown, moist to wet, with organics 0.2
3	SPT	FS29	3 6 7 5				SW-SM		**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist 3.5
5	SPT	FS30	20 8 7 7			15			FS30 p200=12%, Sa=51%, Gr=37%, Moisture=6.4%
8	SPT	FS31	7 10 11 8			21			FS31 p200=11%, Sa=57%, Gr=32%, Moisture=5.3%, PI=NP, LL=NV
11	SPT	FS32	6 11 11 9			22			13.5
16	SPT	FS33	10 14 14 11			28			
20									

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/2/15

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH13-05

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.37404*, ***LONGITUDE :*** *-149.349635*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *293+50*
Offset: *100' RT.*
Elevation: *1' above pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *37.0 feet*
Date: *8/26/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20			12						**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist (cont.)
21	SPT	FS34	19			39			FS34 Moisture=5.6%
22			20 41						22.0
23									
24									
25			12						
26	SPT	FS35	21 18			39			
27			12						
28									
29									
30			40						
31	SPT		50/3"						31.5
32									
33									
34									
35			10						FS36 Moisture=9.7%
36	SPT	FS36	16 16			32			
37			13						37.0
									BOH 37

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-06

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.374488*, ***LONGITUDE :*** *-149.349675*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *295+00*
Offset: *220' RT.*
Elevation:

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *32.0 feet*
Date: *8/27/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							ML		**Vegetative Mat** Boulders on surface 0.0
0.2									**SILT** (ML) Brown, moist to wet, organics present
1									
2	SPT	FS37	2 2 9 8						FS37 Moisture=5%
3							SW-SM		**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist 3.0
4									
5	SPT	FS38	6 6 6 7			12			FS38 p200=9%, Sa=62%, Gr=29%, Moisture=2.8%
6									
7	SPT	FS39	32 37 28 14			65			FS39 Moisture=4.8%
8									
9									
10	SPT	FS40	9 12 10 10			22			
11									
12									
13									
14									
15	SPT	FS41	7 17 18 14			35			
16									
17									
18									
19									
20			10 11						FS42 Moisture=5.2%

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-06

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.374488*, ***LONGITUDE :*** *-149.349675*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *295+00*
Offset: *220' RT.*
Elevation:

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *32.0 feet*
Date: *8/27/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20	SPT	FS42	11 13			22			**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist (cont.)
21									
22									
23									
24			7 10						
25	SPT	FS43	11 13			21			
26									
27									
28									
29			10 14						FS44 Moisture=5.3%
30	SPT	FS44	12 13			26			
31									
32								BOH 32	32.0

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-07

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.374629*, ***LONGITUDE :*** *-149.350567*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *296+00*
Offset: *100' RT.*
Elevation:

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *27.0 feet*
Date: *8/27/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							SW-SM		**Vegetative Mat** Cobbles on surface 0.0
1									**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist 0.1
2	SPT	FS45	6 6 6 13			12			FS45 p200=9%, Sa=60%, Gr=31%
3									
4									
5	SPT	FS46	9 9 11 11			20			FS46 Moisture=3.9%
6									
7									
8	SPT	FS47	8 13 4 3			17			
9									
10							SM		**SILTY SAND with Gravel** (SM) Grey, moist FS48 p200=17%, Sa=53%, Gr=30%, Moisture=3.4% 10.0
11	SPT	FS48	7 7 7 8			14			
12									
13	SPT	FS49	13 20 20 14			40			FS49 Moisture=2.6%
14									
15									
16	SPT	FS50	13 17 12 12			29			
17									
18									
19									
20									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/2/15

LOG OF TEST HOLE

HOLE # TH13-07

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.374629*, ***LONGITUDE :*** *-149.350567*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *296+00*
Offset: *100' RT.*
Elevation:

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *27.0 feet*
Date: *8/27/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic
20			5					
21	SPT	FS51	14 15 16			29		
22								
23								
24								
25			9					
26	SPT	FS52	8 3 2			11		
27								BOH 27

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

SUBSURFACE MATERIAL

SILTY SAND with Gravel (SM) Grey, moist FS48 p200=17%, Sa=53%, Gr=30%, Moisture=3.4% (cont.)
FS51 Moisture=4.9%

27.0

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-08

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.375109*, ***LONGITUDE :*** *-149.351285*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *299+00*
Offset: *130' RT.*
Elevation: *7.5' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *24.5 feet*
Date: *8/28/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									**Vegetative Mat** 5' diameter boulders present in area — 0.0
0.2							ML		**SILT** (ML) Brown, moist, organics present
1	SPT	FS53	3 4 4 2						FS53 Moisture=7.1%
2							SW-SM		**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist — 2.0
3									
4	SPT	FS54	2 5 3 7			8			FS54 Moisture=4.6%
5									5.5
6									
7									7.0
8	SPT	FS55	5 4 4 8			8			FS55 Moisture=7.8%
9									
10									
11	SPT	FS56	8 15 11 11			26			FS56 p200=13%, Sa=52%, Gr=35%
12									
13									
14									
15	SPT	FS57	11 13 16 18			29			FS57 Moisture=4.3%
16									
17									
18	SPT	FS58	5 17 18 16			35			
19									
20									

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/2/15

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-08

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.375109*, ***LONGITUDE :*** *-149.351285*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *299+00*
Offset: *130' RT.*
Elevation: *7.5' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *24.5 feet*
Date: *8/28/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20									**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist (cont.)
21									
22									
23	SPT	FS59	7 16 13 9			29			FS59 Moisture=4.3%
24								BOH 24.5	24.5

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-09

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.376014*, ***LONGITUDE :*** *-149.352054*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *303+00*
Offset: *85' RT.*
Elevation: *4.5' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *29.5 feet*
Date: *8/29/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							ML		**Vegetative Mat** 0.0
							SW-SM		**SILT** (ML) Brown, moist, organics present 0.2
1									**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist 0.5
2									
3			2						FS60 Moisture=6.4%
4	SPT	FS60	7 7 6			14			
5									5.0
6			12						FS61 p200=9%, Sa=48%, Gr=43%, Moisture=3.3%
7	SPT	FS61	12 11 14			23			7.5
8			12						
9	SPT	FS62	13 11 17			24			
10									10.0
11			9						FS63 p200=14%, Sa=58%, Gr=28%, Moisture=4.1%
12	SPT	FS63	14 12 7			26			
13			6						
14	SPT	FS64	8 7 6			15			
15									
16									
17									
18			6						FS65 Moisture=5.1%
19	SPT	FS65	7 5			12			
20			8						

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-09

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.376014*, ***LONGITUDE :*** *-149.352054*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *303+00*
Offset: *85' RT.*
Elevation: *4.5' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *29.5 feet*
Date: *8/29/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20									**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist (cont.)
21									
22									
23	SPT	FS66	10 13 13 11			26			
24									
25									
26									
27									
28	SPT	FS67	15 14 12 11			26			
29									29.5
									BOH 29.5

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-10

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373206*, ***LONGITUDE :*** *-149.349464*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *291+60*
Offset: *100' RT.*
Elevation: *24' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *42.0 feet*
Date: *8/30/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)	31.5	
Time		
Date	8/30/13	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									**Vegetative Mat** 0.0
0.3							ML		**SILT** (ML) Brown, moist, organics present
2	SPT	FS68	4 3 3 3				SW-SM		FS68 Moisture=7.9%
2.5									**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist
5	SPT	FS69	2 4 12 6			16			
7	SPT	FS70	5 8 8 8			16			FS70 Moisture=4.3%
10	SPT	FS71	9 11 16 21			27			FS71 p200=10%, Sa=51%, Gr=39%, Moisture=2.6%
12.5									
14.0									
15	SPT	FS72	15 12 10 6			22			
20									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-10

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373206*, ***LONGITUDE :*** *-149.349464*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *291+60*
Offset: *100' RT.*
Elevation: *24' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *42.0 feet*
Date: *8/30/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)	31.5	
Time		
Date	8/30/13	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20			16						**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist (cont.)
21	SPT		18 9 17			27			
22									
23									
24									
25			3						FS73 Moisture=9.7%
26	SPT	FS73	6 8 4			14			
27									
28									
29									
30			5						FS74 Moisture=9.2%
31	SPT	FS74	5 3 14				SP		31.0 **SAND** (SP) Grey, moist
32							SW-SM		31.5 **SAND with Silt and Gravel** (SW-SM) Grey, moist to wet
33									
34									
35									
36									
37									
38									
39									
40									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH13-10

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373206*, ***LONGITUDE :*** *-149.349464*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *291+60*
Offset: *100' RT.*
Elevation: *24' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *42.0 feet*
Date: *8/30/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)	31.5	
Time		
Date	8/30/13	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
40								**SAND with Silt and Gravel** (SW-SM) Grey, moist to wet (cont.)
41								
42							BOH 42	42.0

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-11

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373457*, ***LONGITUDE :*** *-149.349941*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *293+20*
Offset: *100' RT.*
Elevation: *21.5' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *31.5 feet*
Date: *8/30/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0								**Vegetative Mat** 0.0
0.3						ML		**SILT** (ML) Brown, moist, organic present
2	SPT	FS77	3 6 4 4			SW-SM		FS77 Moisture=5.2% 2.5 **SAND with Silt and Gravel** (SW-SM) Grey, moist
4						ML		4.5 **SILT** (ML) Brown, moist
5	SPT	FS78	1 3 3 3			SW-SM		5.0 **SAND with Silt and Gravel** (SW-SM) Grey, moist
7	SPT	FS79	7 8 7 8		15			FS79 p200=10%, Sa=59%, Gr=31%, Moisture=4.1%
10	SPT	FS80	6 7 9 13		16			
12						SM		12.0 **SILTY SAND with Gravel** (SM) Grey, moist
15	SPT	FS81	5 7 28 5		35			FS81 p200=16%, Sa=62%, Gr=22%, Moisture=8.9%
16.5						SP-SM		**SAND with Silt** (SP-SM) Grey, moist
18						SW-SM		18.0 **SAND with Silt and Gravel** (SW-SM) Grey, moist to wet
20			8					

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/2/15

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH13-11

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373457*, ***LONGITUDE :*** *-149.349941*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *293+20*
Offset: *100' RT.*
Elevation: *21.5' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *31.5 feet*
Date: *8/30/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20	SPT	FS82	16 13 12			29			**SAND with Silt and Gravel** (SW-SM) Grey, moist to wet (cont.)
25	SPT	FS83	3 5 7 8			12			FS83 Moisture=7.4%
30	SPT	FS84	8 7 8 6			15			
31								BOH 31.5	31.5

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-12

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373335*, ***LONGITUDE :*** *-149.347977*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *289+80*
Offset: *130' RT.*
Elevation: *30' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *42.0 feet*
Date: *8/31/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									**Vegetative Mat** 0.0
0.2							ML		**SILT** (ML) Brown, moist, organics present
2							SW-SM		**SAND with Silt and Gravel** (SW-SM) Grey, moist 2.0
5	SPT	FS85	3, 6, 13, 15			19			FS85 Moisture=6.0%
8	SPT	FS86	9, 13, 14, 12			27			FS86 p200=8%, Sa=58%, Gr=34%, Moisture=2.8%, PI=NP, LL=NV
10	SPT	FS87	6, 16, 15, 17			31			FS87 p200=10%, Sa=54%, Gr=36%, Moisture=3.3%
15	SPT	FS88	10, 12, 11, 11			23			FS88 Moisture=4.5%

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-12

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373335*, ***LONGITUDE :*** *-149.347977*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *289+80*
Offset: *130' RT.*
Elevation: *30' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *42.0 feet*
Date: *8/31/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20			19						**SAND with Silt and Gravel** (SW-SM) Grey, moist (cont.)
21	SPT	FS89	20 15 13			35			
22									
23									
24									
25			13						FS90 Moisture=4.8%
26	SPT	FS90	11 13 14			24			
27									
28									
29									
30			12						
31	SPT	FS91	18 16 16			34			
32									
33									
34									
35			19						FS92 Moisture=4.2%
36	SPT	FS92	40 18 17			58			
37									
38									
39									
40									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-12

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373335*, ***LONGITUDE :*** *-149.347977*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *289+80*
Offset: *130' RT.*
Elevation: *30' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *42.0 feet*
Date: *8/31/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
40			17									**SAND with Silt and Gravel** (SW-SM) Grey, moist (cont.)
41	SPT	FS93	19			41						FS93 Moisture=5.1%
			22									
42			25					BOH 42				42.0

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-13

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373667*, ***LONGITUDE :*** *-149.347046*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *290+20*
Offset: *310' RT.*
Elevation: *75' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *35.0 feet*
Date: *8/31/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									**Vegetative Mat** 0.0
0.3							ML		**SILT** (ML) Brown, moist, organics present
2.5							ML		**SILT with Gravel** (ML) Brown, moist
3.0									
5	SPT	FS94	5 2 2 3			4			FS94 Moisture=23.5%
7.0									
7.5							SW-SM		**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist
10	SPT	FS95	14 13 9 11			22			FS95 Moisture=5.4%
15	SPT	FS96	5 16 21 21			37			FS96 p200=11%, Sa=58%, Gr=31%, Moisture=4.9%
20									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/2/15

LOG OF TEST HOLE

HOLE # TH13-13

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.373667*, ***LONGITUDE :*** *-149.347046*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *290+20*
Offset: *310' RT.*
Elevation: *75' above top of adjacent pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *35.0 feet*
Date: *8/31/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20									**SAND with Silt and Gravel** (SW-SM) Grey, dry to moist (cont.) FS97 Moisture=5.5%
21	SPT	FS97	7 15 15 11			30			
22									
23									
24									
25	SPT	FS98	60						**Weathered Bedrock** Grey, dry, highly weathered FS98 Moisture=2.0% — 25.0
26			refusal						
27									— 27.5
28									**Weathered Bedrock** Grey, dry, moderately weathered
29									
30	SPT	FS99	30/2" refusal						
31									
32									
33									
34									
35								BOH 35	— 35.0

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-14

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.331715*, ***LONGITUDE :*** *-149.356654*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *121+50*
Offset: *24' RT.*
Elevation: *Top of pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *32.0 feet*
Date: *9/3/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)	18.5	
Time		
Date	9/3/13	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							SW-SM		**SAND with Silt and Gravel** (SW-SM) Grey, moist, FILL — 0.0
1									FS100 &101 GR=35, SA=52, SI=13
2									
3	SPT	FS100	22 11 14 16			25			FS100 Moisture=3.7%
4									
5			7 14 19 14						FS101 Moisture=8.8%
6	SPT	FS101				33			
7									
8			7 14 15 17						
9	SPT	FS102				29			
10									FS103 Moisture=4.5%
11	SPT	FS103	11 16 23 27			39			
12									
13							SM		**SILTY SAND** (SM) Grey, moist to wet — 13.0
14									
15	SPT	FS104	12 20 21 14			41			FS104 Moisture=3.5%
16									
17									
18									
19									
20			11						FS105 p200=15%, Sa=50%, Gr=35%, Moisture=7%

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-14

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.331715*, ***LONGITUDE :*** *-149.356654*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *121+50*
Offset: *24' RT.*
Elevation: *Top of pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *32.0 feet*
Date: *9/3/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)	18.5	
Time		
Date	9/3/13	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20	SPT	FS105	31						**SILTY SAND** (SM) Grey, moist to wet (cont.)
21			29			60			
22			19						
23							SP		**SAND** (SP) Gray, wet, with some silt — 23.0
24									
25			4						
26	SPT	FS106	4			8			
27			4						
28			8						
29									
30			16						
31	SPT	FS107	14			20			
32			6					BOH 32	— 32.0
			8						

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-15

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.32736*, ***LONGITUDE :*** *-149.359106*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *103+50*
Offset: *24' RT.*
Elevation: *4-inches below top of pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *36.5 feet*
Date: *9/4/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)	17.5	
Time		
Date	9/4/13	
Symbol	▼	

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							GW		**GRAVEL with Sand** (GW) Gray, moist to wet — 0.0
2.5	SPT	FS108	12 9 13 19			22	SW-SM		**SAND with Silt and Gravel** (SW-SM) Gray, moist, (FILL) FS108 p200=11%, Sa=54%, Gr=35%, Moisture=4% — 2.5
6	SPT	FS109	12 18 20 31			38			
8	SPT	FS110	12 36 53 25/2" refusal			89			FS110 Moisture=3.9%
10	SPT	FS111	26 47 50/5"						FS111 Moisture=2.5%
13.5							SW-SM		**SAND with Silt and Gravel** (SW-SM) Gray, moist to wet — 13.5
15	SPT	FS112	28 54 50			104			FS112 p200=12%, Sa=49%, Gr=39%, Moisture=2.7%
17	▼								
20									

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH13-15

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.32736*, ***LONGITUDE :*** *-149.359106*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *103+50*
Offset: *24' RT.*
Elevation: *4-inches below top of pavement*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *36.5 feet*
Date: *9/4/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)	17.5	
Time		
Date	9/4/13	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
20	SPT	FS114	7 5				ML		**SAND with Silt and Gravel** (SW-SM) Gray, moist to wet (cont.)
20.5									**SILT** (ML) Brown, moist to wet
21	SPT	FS113	5 5				SP		**SAND** (SP) Gray, wet
21.0									
22									
23									
24									
25			5						
26	SPT	FS115	2 1 1			3			
27									
28									
29									
30			3						
31	SPT		3 4 2			7			
32									
33									
34									
35			5						
36	SPT	FS116	4 8			12			
36.5								BOH 36.5	

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-16

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.368856*, ***LONGITUDE :*** *-149.345894*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *274+00*
Offset: *146' RT. of CL*
Elevation: *top of cut*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *17.0 feet*
Date: *9/5/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)	10	
Time		
Date	9/5/13	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									**Vegetative Mat** 0.0
0.3							OL		**ORGANIC SILT** (OL) Dark brown, wet
1.0							SM		**SILTY SAND with Gravel** (SM) Brown, moist to wet
2.0									
3.0									
5	SPT	FS117	6 8 10 11			18			FS117 p200=26%, Sa=48%, Gr=26%, Moisture=7.2%
7.0									
9.0									
10.0	SPT	FS118	40/4" refusal						FS118 Moisture=1.5%
12.0									
12.5									**Weathered Bedrock** Grayish brown, dry, moderately weathered
15	SPT		40/3" refusal						
17.0								BOH 17	

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/2/15

LOG OF TEST HOLE

HOLE # TH13-17

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.386559*, ***LONGITUDE :*** *-149.351893*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *276+50*
Offset: *208' RT. of CL*
Elevation: *top of cut*

Equipment_Type: *CME 850*
Drilling Method: *3.75" ID x 8" OD Hollow Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *17.0 feet*
Date: *9/6/2013 -*
Geologist: *S. Browne, C.P.G.*

Ground Water Data		
Depth in (ft.)	9	
Time		
Date	9/6/13	
Symbol	▼	

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									**Vegetative Mat** 0.0
0.2							OL		**ORGANIC SILT** (OL) Dark brown, moist to wet
2.5							SM		**SILTY SAND with Gravel** (SM) Gray, moist
5	SPT	FS119	7 17 13 17			30			FS119 p200=16%, Sa=61%, Gr=23%
9	SPT	FS120	65						FS120 Moisture=1.2%
10.0									
12.0									
13.0									**Weathered Bedrock** Gray, dry to moist, moderately weathered
15	SPT	FS121	50/3" refusal						FS121 Moisture=5.1%
17.0								BOH 17	

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/2/15

LOG OF TEST HOLE

HOLE # TH13-18

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.350772*, ***LONGITUDE :*** *-149.347779*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *203+80*
Offset: *105' RT of CL*
Elevation:

Equipment_Type: *Minuteman*
Drilling Method: *3" OD Solid Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *2.7 feet*
Date: *8/22/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Brown, moist to wet — 0.0
1								
2								Refusal at 2.7' — 2.5 / 2.7
							BOH 2.7	

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Second hole drilled 20 ft from first, refusal at 2.5 ft

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-19

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.350334*, ***LONGITUDE :*** *-149.347758*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *202+30*
Offset: *120' RT of CL*
Elevation:

Equipment_Type: *Minuteman*
Drilling Method: *3" OD Solid Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *3.3 feet*
Date: *8/24/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Brown, moist to wet — 0.0
1								
2								
3								Refusal at 3.3' — 3.0
							BOH 3.3	3.3

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Second hole drilled 6 ft north of first, refusal at 2.7 ft

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH13-20

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.350066*, ***LONGITUDE :*** *-149.347685*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *201+20*
Offset: *135' RT of CL*
Elevation:

Equipment_Type: *Minuteman*
Drilling Method: *3" OD Solid Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *2.8 feet*
Date: *8/24/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL	
								Depth in (ft.)				
								Time				
								Date				
								Symbol				
0						OL					**ORGANIC SILT** (OL) Brown, moist to wet	0.0
1												
2											Refusal at 2.8'	2.6 2.8
							BOH 2.8					

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

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A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/2/15

LOG OF TEST HOLE

HOLE # TH13-21

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.349935*, ***LONGITUDE :*** *-149.347747*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *200+80*
Offset: *118' RT of CL*
Elevation:

Equipment_Type: *Minuteman*
Drilling Method: *3" OD Solid Auger*
Field Crew: *Bill Platt, Bo Coke*

Total Depth: *6.8 feet*
Date: *8/25/2013 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
									Depth in (ft.)			
									Time			
									Date			
									Symbol			
0							ML					**SILT** (ML) Brown, moist to wet, trace gavel 0.0
1												
2												
3												
4												
5												
6												6.7
								BOH 6.8				Refusal at 6.8' 6.8

Notes:
Second hole drilled 8 ft south of first, refusal at 5.8 ft

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

2014 Test Hole Logs

LOG OF TEST HOLE

HOLE # TH14-22

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.372046*, ***LONGITUDE :*** *-149.346154*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *285+00*
Offset: *200' RT of CL*
Elevation:

Equipment_Type: *Minuteman*
Drilling Method: *3" OD Solid Auger*
Field Crew: *Bo Coke, Lyle Cain*

Total Depth: *2.8 feet*
Date: *9/3/2014 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Brown, moist to wet, with cobbles 0.0
1									
2									Refusal at 2.8' 2.6 2.8
								BOH 2.8	

Notes:
Drilled 2 additional holes, 5 and 10 ft from the first, refusal for both holes at 2.5 ft

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

Sheet Number 1 of 1

A USCS LOG OF TEST HOLE SEWARD HWY REHAB MP 18-22.GPJ 2006DATATEMPLATE.GDT 12/2/15

LOG OF TEST HOLE

HOLE # TH14-23

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.371297*, ***LONGITUDE :*** *-149.346248*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *282+50*
Offset: *133' RT of CL*
Elevation:

Equipment_Type: *Minuteman*
Drilling Method: *3" OD Solid Auger*
Field Crew: *Bo Coke, Lyle Cain*

Total Depth: *5.5 feet*
Date: *9/4/2014 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0							OL		**ORGANIC SILT** (OL) Brown, moist to wet, with cobbles	0.0
1										
2										
3										
4										
5									Refusal at 5.5'	5.3 5.5
								BOH 5.5		

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled one additional hole 5 ft from the first. Refusal at 7.5 ft

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH14-24

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.369711*, ***LONGITUDE :*** *-149.345523*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *276+50*
Offset: *208' RT of CL*
Elevation:

Equipment_Type: *Minuteman*
Drilling Method: *3" OD Solid Auger*
Field Crew: *Bo Coke, Lyle Cain*

Total Depth: *4.0 feet*
Date: *9/10/2014 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Brown, moist to wet, with some gravel and cobbles 0.0
1									
2									
3									
4								BOH 4	Refusal at 4' 3.8 4.0

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled two additional holes, 5 and 7 ft from the first, refusal at 3.5 and 4 ft

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH14-25

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.368856*, ***LONGITUDE :*** *-149.345894*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *274+00*
Offset: *146' RT of CL*
Elevation:

Equipment_Type: *Minuteman*
Drilling Method: *3" OD Solid Auger*
Field Crew: *Bo Coke, Lyle Cain*

Total Depth: *8.5 feet*
Date: *9/11/2014 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data			SUBSURFACE MATERIAL
								Depth in (ft.)			
								Time			
								Date			
								Symbol			
0						OL					**ORGANIC SILT** (OL) Brown, moist to wet — 0.0
1											
2											
2.5						ML					**SILT with Gravel** (ML) Gray, wet, with cobbles — 2.5
3											water at 4.5 ft bgs
4											
5											
6											
7											
8											Refusal at 8.5' — 8.3 / 8.5
							BOH 8.5				

Notes:
Drilled two additional holes 4 and 10 ft from first, refusal at 2.5 and 8.5 ft

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH14-26

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway Rehabilitation, MP 17-22.5*
LATITUDE : *60.386559*, ***LONGITUDE :*** *-149.351893*, Coordinate System: NAD 1983, Stateplane Alaska 4

Station / Location: *341+50*
Offset: *250' RT of CL*
Elevation:

Equipment_Type: *Minuteman*
Drilling Method: *3" OD Solid Auger*
Field Crew: *Bo Coke, Lyle Cain*

Total Depth: *3.0 feet*
Date: *9/12/2014 -*
Geologist: *S. Browne, C.P.G.*

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL	
0							OL		**ORGANIC SILT** (OL) Brown, moist to wet, with cobbles	0.0
1										
2										
3									refusal at 3'	2.8 / 3.0
								BOH 3		

Ground Water Data

Depth in (ft.)		
Time		
Date		
Symbol		

Notes:
Drilled two additional holes 10 and 4 ft from the first, refusal at 1.5 and 3 ft

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

2016 Test Hole Logs

LOG OF TEST HOLE

HOLE # TH16-01

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway MP 17-22*
LATITUDE : *60.36059613*, ***LONGITUDE :*** *-149.3501674*, Coordinate System: NAD83

Station / Location:
Offset:
Elevation:

Equipment_Type: *Geoprobe 6610*
Drilling Method: *Vibratory Hammer*
Field Crew: *Denali Drilling*

Total Depth: *20.0 feet*
Date: *2/16/2016 - 2/16/2016*
Geologist: *C. Bruns*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Weather: Clear

Vegitation: Moss/Forest

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							OL		**ORGANIC SILT** (OL) Brown Dark brown, moist, Contains cobbles root and wood fragments — 0.0
1	UNDIST	FS01							
1.5							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, Contains cobbles FS02 p200=8%, Sa=43%, Gr=49%
2									
3	UNDIST	FS02							
4									
4.5									
5							SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey, moist, Contains cobbles FS03 p200=10%, Sa=49%, Gr=41%, Moisture=5% — 5.0
6									6.5
7	UNDIST	FS03							7.5
8									
9									
10							SM		**SILTY SAND with Gravel** (SM) Contains cobbles FS04 p200=13%, Sa=46%, Gr=41%, Moisture=5.4% — 10.0
11									11.5
12	UNDIST	FS04							12.5
13									
14									
15									FS05 p200=14%, Sa=63%, Gr=23%, Moisture=6.6%
16									16.0
17	UNDIST	FS05							
18									
19									
20							BOH 20		20.0

Notes:
Piezometer installed to 20' with 10' slotted interval
Percolation test installed at 10'
Percolation test installed at 5'

A USCS LOG OF TEST HOLE SEWARD 17-22 FEB 2016 CJB.GPJ 2006DATATEMPLATE.GDT 3/21/16

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH16-02

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway MP 17-22*
LATITUDE : *60.36072797*, ***LONGITUDE :*** *-149.3499713*, Coordinate System: NAD83

Station / Location:
Offset:
Elevation:

Equipment_Type: *Geoprobe 6610*
Drilling Method: *Vibratory Hammer*
Field Crew: *Denali Drilling*

Total Depth: *20.0 feet*
Date: *2/17/2016 - 2/17/2016*
Geologist: *C. Bruns*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Weather: Clear

Vegitation: Moss/Forest

Depth (Feet)	Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						OL		**ORGANIC SILT** (OL) Dark brown, moist, Contains roots and wood fragments — 0.0
1	UNDIST	FS06						
2						SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey Brown, moist, Contains cobbles FS07 p200=6%, Sa=51%, Gr=43% — 2.0
3	UNDIST	FS07						3.5
4								4.5
5						GM		**SILTY GRAVEL with Sand** (GM) Grey, moist, Contains cobbles FS08 p200=19%, Sa=39%, Gr=42%, Moisture=7% — 5.0
6								
7	UNDIST	FS08						7.5
8								
9								
10						SM		**SILTY SAND with Gravel** (SM) Grey Brown, moist FS09 p200=16%, Sa=54%, Gr=30%, Moisture=6.1% — 10.0
11								
12	UNDIST	FS09						
13								
14								
15								FS10 p200=13%, Sa=65%, Gr=22%, Moisture=5.4%
16								
17	UNDIST	FS10						
18								
19								
20						BOH 20		20.0

Notes:
Piezometer installed slotted 10-20'
Percolation test installed at 5'

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH16-03

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway MP 17-22*
LATITUDE : *60.36045908*, ***LONGITUDE :*** *-149.3504863*, Coordinate System: NAD83

Station / Location:
Offset:
Elevation:

Equipment_Type: *Geoprobe 6610*
Drilling Method: *Vibratory Hammer*
Field Crew: *Denali Drilling*

Total Depth: *8.5 feet*
Date: *2/17/2016 - 2/17/2016*
Geologist: *C. Bruns*

Depth (Feet)	Sample Data: Sample Type	Sample Data: Number	Sample Data: Blow Count	Sample Data: Sample Recovery	Sample Data: N-Value	USCS Classification Frozen Zone	Soil Graphic	Ground Water Data		
								Depth in (ft.)		
								Time		
								Date		
								Symbol		

Weather: Clear

Vegitation: Moss/Forest

SUBSURFACE MATERIAL

Depth (Feet)	Sample Type	Number	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0			OL		**ORGANIC SILT** (OL) Brown, moist, Contains roots — 0.0
1	UNDIST	FS11			
1.5			SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey, moist — 1.5
2					
3					
4	UNDIST	FS12			
5					FS13 p200=12%, Sa=58%, Gr=30%, Moisture=5.6%
6					
7	UNDIST	FS13			
8				BOH 8.5	8.5

Notes:
Sampler refusal at 8.5'
Piezometer installed to 8.5' slotted 4-8'
Percolation test installed at 3'

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH16-04

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway MP 17-22*
LATITUDE : *60.36032538*, ***LONGITUDE :*** *-149.3503554*, Coordinate System: NAD83

Station / Location:
Offset:
Elevation:

Equipment_Type: *Geoprobe 6610*
Drilling Method: *Vibratory Hammer*
Field Crew: *Denali Drilling*

Total Depth: *6.0 feet*
Date: *2/18/2016 - 2/18/2016*
Geologist: *C. Bruns*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Weather: Clear

Vegitation: Moss/Forest

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0						ML		**ORGANIC SILT** (ML) Dark brown, moist, Contains roots — 0.0
1	UNDIST	FS14						
2	UNDIST	FS15				SP-SM		**SAND with Silt** (SP-SM) Greyish brown, moist — 1.5
3						SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey, moist FS16 Moisture=5.6% — 2.5
4	UNDIST	FS16						
5	UNDIST	FS17						FS17 Moisture=4%
6						BOH 6		6.0

Notes:
Piezometer installed to 6' slotted 3-6'
Percolatoin test installed at 3'
Sampler refusal at 6'

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

STATE OF ALASKA DOT&PF
Central Region Materials

LOG OF TEST HOLE

HOLE # TH16-05

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway MP 17-22*
LATITUDE : *60.36058106*, ***LONGITUDE :*** *-149.3499353*, Coordinate System: NAD83

Station / Location:
Offset:
Elevation:

Equipment_Type: *Geoprobe 6610*
Drilling Method: *Vibratory Hammer*
Field Crew: *Denali Drilling*

Total Depth: *12.0 feet*
Date: *2/19/2016 - 2/19/2016*
Geologist: *C. Bruns*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Weather: Clear

Vegitation: Moss/Forest

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							GP-GM		**GRAVEL with Silt and Sand** (GP-GM) Grey, moist, Contains minor organics<2% — 0.0
1	UNDIST	FS18							
2									
3							PTf		**Peat** (PTf) Reddish brown, moist — 3.0
4	UNDIST	FS20							
5							SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey, moist FS21 p200=11%, Sa=53%, Gr=36%, Moisture=4.3% — 5.0
6									
7	UNDIST	FS21							
8									
9									
10									
11	UNDIST	FS22							
12								BOH 12	12.0

Notes:
Piezometer installed to 12' slotted 6-12'
Percolation test installed at 10'
Sampler refusal at 12'

☐ CME Auto Hammer ☐ Cathead Rope Method ☐ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH16-06

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway MP 17-22*
LATITUDE : *60.39261039*, ***LONGITUDE :*** *-149.3535203*, Coordinate System: NAD83

Station / Location:
Offset:
Elevation:

Equipment_Type: *CME 75 Truck*
Drilling Method: *Hollow-Stem Auger*
Field Crew: *Denali Drilling*

Total Depth: *11.5 feet*
Date: *2/22/2016 - 2/22/2016*
Geologist: *C. Bruns*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Weather: Overcast/Snow

Vegitation: Asphalt Road

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement — 0.0
0.2							SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey Brown — 0.2
									FS23 and FS24 combined gradation, p200=11%, Sa=58%, Gr=31%, Moisture=4.7%
1	SPT	FS23	65 61 59 38			120			
2									2.3
									FS24 Moisture=6.7%
3	SPT	FS24	15 20 8 6			28			
3.5									3.5
4									4.0
5									FS25 p200=6%, Sa=58%, Gr=36%, Moisture=6.8%
6	SPT	FS25	2 2 4 3			6			
7									FS26 p200=7%, Sa=49%, Gr=44%, Moisture=6.7%
8	SPT	FS26	6 5 4 9			9			
9									
10									FS27 p200=8%, Sa=55%, Gr=37%, Moisture=1.2%
11	SPT	FS27	27 52 81			133			
11.5								BOH 11.5	11.5

Notes:
Sampler and Auger refusal at 11.5'

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH16-07

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway MP 17-22*
LATITUDE : *60.39256632*, ***LONGITUDE :*** *-149.3534832*, Coordinate System: NAD83

Station / Location:
Offset:
Elevation:

Equipment_Type: *CME 75 Truck*
Drilling Method: *Hollow-Stem Auger*
Field Crew: *Denali Drilling*

Total Depth: *15.0 feet*
Date: *2/22/2016 - 2/22/2016*
Geologist: *C. Bruns*

Ground Water Data		
Depth in (ft.)	14	
Time		
Date	2/23/16	
Symbol	▼	

Weather: Overcast/Snow

Vegitation: Asphalt Road

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0							SP-SM		2.5 inches of pavement 0.0
1	SPT	FS28	65 88 76 69			164			**SAND with Silt and Gravel** (SP-SM) Grey 0.3
2									
3	SPT	FS29	13 18 9 9			27			
4									
5	SPT	FS30	4 3 2 2			5			FS30 p200=7%, Sa=48%, Gr=45%, Moisture=8.2%
6									
7									
8									
9									Potential void 9-12' see drilling notes 9.0
10	SPT	FS31	2 1 1 2			2			Minor Organcis<2.5% wood fragments FS31 Moisture=18.1% 10.0
11									
12									
13									
14 ▼									
15	SPT		80/0"				BOH 15		**Boulder/Bedrock** Sampler and Auger refusal at 15' 15.0

Notes:
Backfilling test hole required all auger cuttings plus 7 (60lb) bags of pea gravel and 35lb of bentonite to back fill to 6' from surface. An additional 1.5 (60lb) bags of pea gravel and cold patch were required to seal test hole. Potential void space between 9-12 feet.

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH16-08

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway MP 17-22*
LATITUDE : *60.38977148*, ***LONGITUDE :*** *-149.3531741*, Coordinate System: NAD83

Station / Location:
Offset:
Elevation:

Equipment_Type: *CME 75 Truck*
Drilling Method: *Hollow-Stem Auger*
Field Crew: *Denali Drilling*

Total Depth: *7.5 feet*
Date: *2/22/2016 - 2/22/2016*
Geologist: *C. Bruns*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Weather: Overcast/Snow

Vegitation: Asphalt Road

Depth (Feet)	Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement — 0.0
0.2							SM		**SILTY SAND with Gravel** (SM) Grey, moist FS32 p200=13%, Sa=59%, Gr=28%, Moisture=4.9%
1	SPT	FS32	43						
2			37 50 41			87			
2.5									— 2.5
3	SPT	FS33	7 7				SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey, moist, Sampler refusal at 7.5' FS33 p200=7%, Sa=49%, Gr=44%
4			7 12			14			
5									FS34 Moisture=5.1%
6	SPT	FS34	13 12 12			24			
7			7						
7.5	SPT		60/0"					BOH 7.5	**Boulder/Bedrock** Sampler and Auger refusal at 7.5' — 7.5

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH16-09

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway MP 17-22*
LATITUDE : *60.39122209*, ***LONGITUDE :*** *-149.3529328*, Coordinate System: NAD83

Station / Location:
Offset:
Elevation:

Equipment_Type: *CME 75 Truck*
Drilling Method: *Hollow-Stem Auger*
Field Crew: *Denali Drilling*

Total Depth: *5.0 feet*
Date: *2/23/2016 - 2/23/2016*
Geologist: *C. Bruns*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Weather: Overcast/Snow

Vegitation: Asphalt Road

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2 inches of pavement — 0.0
0.2							SM		**SILTY SAND with Gravel** (SM) Brown Grey, moist FS35 p200=14%, Sa=60%, Gr=26%, Moisture=4.7%
1	SPT	FS35	51						
2			79			148			
			69						
			52						
2.5									
3			38				SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey, moist FS36 p200=9%, Sa=54%, Gr=37%, Moisture=0.8%
	SPT	FS36	35						
4			39			74			
			41						
5	SPT		80/0"					BOH 5	**Boulder/Bedrock** Sampler and auger refusal at 5' — 5.0

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

LOG OF TEST HOLE

HOLE # TH16-10

STATE OF ALASKA DOT&PF
Central Region Materials

PROJECT NUMBER : *53610*
PROJECT : *Seward Highway MP 17-22*
LATITUDE : *60.36989541*, ***LONGITUDE :*** *-149.3467141*, Coordinate System: NAD83

Station / Location:
Offset:
Elevation:

Equipment_Type: *CME 75 Truck*
Drilling Method: *Hollow-Stem Auger*
Field Crew: *Denali Drilling*

Total Depth: *10.0 feet*
Date: *2/23/2016 - 2/23/2016*
Geologist: *C. Bruns*

Ground Water Data		
Depth in (ft.)		
Time		
Date		
Symbol		

Weather: Overcast/Snow

Vegitation: Asphalt Road

Depth (Feet)	Sample Data: Sample Type	Number	Blow Count	Sample	Recovery	N-Value	USCS Classification Frozen Zone	Soil Graphic	SUBSURFACE MATERIAL
0									2.5 inches of pavement — 0.0
0.3							SP-SM		**SAND with Silt and Gravel** (SP-SM) Grey Brown, moist — 0.3
1	SPT	FS37	40 69 67 58			136			FS37 p200=10%, Sa=59%, Gr=31%, Moisture=4.4%
2									
3	SPT	FS38	7 5 6 12			11			FS38 p200=10%, Sa=61%, Gr=29%, Moisture=15.1%
4									
5	SPT	FS39	12 23 39 44			62			FS39 p200=8%, Sa=76%, Gr=16%, Moisture=4.7%
6									
7	SPT	FS40	42 27 56			83			FS40 p200=10%, Sa=77%, Gr=13%, Moisture=2.3%
8									
9									No advance of sampler at 9' — 9.0
10	SPT		70/0"				BOH 10		**Boulder/Bedrock** Sampler and auger refusal at 10' — 10.0

☒ CME Auto Hammer ☐ Cathead Rope Method ☒ 140 lb. hammer with 30 in. drop ☐ 340 lb. hammer with 30 in. drop

APPENDIX C

Sample Summary

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station				36+505	36+015	35+805	35+380
Offset (feet)							
Depth (feet)		Surface	Surface				
Test Site ID		Bedrock Ridge	Bedrock Ridge	Rock Cut	Rock Cut	Rock Cut	Rock Cut
Field No.		RS 01-1	RS 01-2	RS00-04	RS00-05	RS00-06	RS00-07
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		5/16/2001	5/18/2001	9/13/2000	9/13/2000	9/13/2000	9/13/2000
Lab No.		2001A-0864	2001A-0865	2000A-3341	2000A-3342	2000A-3343	2000A-3344
Percent Passing Sieve Size	3"						
	2"						
	1"						
	3/4"						
	1/2"						
	3/8"						
	#4						
	#10						
	#40						
	#80						
	#200						
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		/	/	/	/	/	/
% Grvl / Snd / Fines		/ /	/ /	/ /	/ /	/ /	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value		35	48	33	61	8	7
LA / LA Low / Nordic		13 / /	12 / /	17 / /	13 / /	30 / /	28 / /
Sulfate Soundness C/F		0 / 2	0 / 2	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station		34+500	33+220	32+880	32+520	30+720	29+800
Offset (feet)							
Depth (feet)							
Test Site ID		Rock Cut	Rock Cut	Rock Cut	Rock Cut	Rock Cut	Rock Cut
Field No.		RS00-09	RS00-10	RS00-11	RS00-12	RS00-13	RS00-14
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		9/13/2000	9/13/2000	9/13/2000	9/13/2000	9/13/2000	9/13/2000
Lab No.		2000A-3346	2000A-3347	2000A-3348	2000A-3349	2000A-3350	2000A-3351
Percent Passing Sieve Size	3"						
	2"						
	1"						
	3/4"						
	1/2"						
	3/8"						
	#4						
	#10						
	#40						
	#80						
	#200						
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		/	/	/	/	/	/
% Grvl / Snd / Fines		/ /	/ /	/ /	/ /	/ /	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value		37	7	24	7	75	9
LA / LA Low / Nordic		21 / /	35 / /	24 / /	46 / /	15 / /	48 / /
Sulfate Soundness C/F		/	/	/	0 /	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station		29+650	29+720	36+120	35+680	33+170	29+720
Offset (feet)							
Depth (feet)			Surface	Surface	Surface	Surface	Surface
Test Site ID		Rock Cut	Rock Cut	Rock Cut	Rock Cut	Rock Cut	Rock Cut
Field No.		RS00-15	RS 01-16	RS 01-17	RS 01-18	RS 01-19	RS 01-16
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		9/13/2000					
Lab No.		2000A-3352	2001A-2516	2001A-2517	2001A-2518	2001A-2519	2001A-2651
Percent Passing Sieve Size	3"		100	100	100	100	
	2"		92	96	92	91	
	1"		66	47	61	65	
	3/4"		55	35	51	54	100
	1/2"		41	23	37	40	88
	3/8"		33	18	31	33	79
	#4		18	10	17	19	56
	#10		9	5	9	10	33
	#40		3	2	4	4	12
	#80						
	#200		1.3	0.8	1.5	1.5	5.1
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		/	/	/	/	/	/
% Grvl / Snd / Fines		/ /	82 / 17 / 1	90 / 9 / 1	83 / 15 / 2	81 / 17 / 2	44 / 51 / 5
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value		11					
LA / LA Low / Nordic		37 / /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		0 /	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station		36+120	35+680	33+170	35+115		
Offset (feet)							
Depth (feet)		Surface	Surface	Surface		2.2 m	0.91 m
Test Site ID		Rock Cut	Rock Cut	Rock Cut	Rock Cut, MP 22	TH01-1	TH01-11
Field No.		RS 01-17	RS 01-18	RS 01-19	RS00-08	FS-01-1-7.5	FS-01-11-3
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled					9/13/2000	1/4/2001	1/10/2001
Lab No.		2001A-2652	2001A-2653	2001A-2654	2000A-3345	2001A-0076	2001A-0079
Percent Passing Sieve Size	3"						
	2"						
	1"					100	97
	3/4"	100	100	100		97	94
	1/2"	75	85	90		95	86
	3/8"	59	76	81		93	80
	#4	33	51	56		86	67
	#10	18	31	34		75	55
	#40	8	13	14		52	35
	#80						
	#200	3.2	5.9	5.3		33.6	21.6
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	A-2-4(0) / Grl Si Sa	A-1-b(0) / Si Sa Grl
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	16 / NV / NP	18 / NV / NP
Sample Prep							
Nat Moist / Organic		/	/	/	/	8 /	12.4 /
% Grvl / Snd / Fines		67 / 30 / 3	49 / 45 / 6	44 / 51 / 5	/ /	14 / 52 / 34	33 / 45 / 22
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value					54		
LA / LA Low / Nordic		/ /	/ /	/ /	14 / /	/ /	/ /
Sulfate Soundness C/F		/	/	/	0 /	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)		1.2 m	2.1 m	1.5 m	0.61 m	1.2 m	0.4-0.6 m
Test Site ID		TH01-14	TH01-15	TH01-16	TH01-20	TH01-20	TH01-21
Field No.		FS-01-14-4	FS-01-15-7	FS-01-16-5	FS-01-20-2	FS-01-20-4	FS-01-21-2
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		1/10/2001	1/11/2001	1/11/2001	1/12/2001	1/12/2001	1/25/2001
Lab No.		2001A-0080	2001A-0082	2001A-0081	2001A-0083	2001A-0084	2001A-0155
Percent Passing Sieve Size	3"						
	2"			100			100
	1"	95	100	97		92	89
	3/4"	93	99	96	100	92	81
	1/2"	87	98	92	99	82	63
	3/8"	79	96	89	96	79	54
	#4	62	87	79	85	68	37
	#10	45	73	67	72	56	28
	#40	30	46	43	50	37	17
	#80						
	#200	18.7	22.7	24.9	33.4	23.2	10.1
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		A-1-b(0) / Si Sa Grl	A-1-b(0) / Si Grl Sa	A-1-b(0) / Si Grl Sa	/	A-1-b(0) / Si Sa Grl	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		23 / NV / NP	NV / NV / NP	18 / NV / NP	/ /	38 / NV / NP	/ /
Sample Prep							
Nat Moist / Organic		9.5 /	16.1 /	13.9 /	21.4 /	17.4 /	12.7 /
% Grvl / Snd / Fines		38 / 43 / 19	13 / 64 / 23	21 / 54 / 25	15 / 52 / 33	32 / 45 / 23	63 / 27 / 10
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)		1.2-1.8 m	2.7-3.3 m	4.3-4.9 m	5.8-6.2 m	1.2-6.2 m	1.5-2.1 m
Test Site ID		TH01-21	TH01-21	TH01-21	TH01-21	TH01-21	TH01-22
Field No.		FS-01-21-5	FS-01-21-10	FS-01-21-15	FS-01-21-20	FS-01-21	FS-01-22-2
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		1/25/2001	1/25/2001	1/25/2001	1/25/2001	1/30/2001	1/26/2001
Lab No.		2001A-0156	2001A-0157	2001A-0158	2001A-0159	2001A-0161	2001A-0152
Percent Passing Sieve Size	3"						
	2"						
	1"	92	97	91			87
	3/4"	85	88	86			79
	1/2"	72	81	76			62
	3/8"	64	75	71			53
	#4	50	62	56			36
	#10	35	48	43			30
	#40	17	23	22			22
	#80						
	#200	8.5	12.1	12.2			14.5
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		A-1-a(0) / Sl Si Sa Grl	/	A-1-a(0) / Sl Si Sa Grl	/	/	A-1-a(0) / Si Grl
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		NV / NV / NP	/ /	18 / NV / NP	/ /	/ /	NV / NV / NP
Sample Prep							
Nat Moist / Organic		4.5 /	/	/	6.5 /	/	/
% Grvl / Snd / Fines		50 / 41 / 9	38 / 50 / 12	44 / 44 / 12	/ /	/ /	64 / 21 / 15
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)		3.6-4.3 m	0.6-1.9 m	1.2-1.8 m	0.1-0.7 m	0.9-1.2 m	1.2-1.8 m
Test Site ID		TH01-22	TH01-25	TH01-25	TH01-26	TH01-27	TH01-28
Field No.		FS-01-22-12	FS-01-25-3	FS-01-25-5	FS-01-26-2	FS-01-27-3	FS-01-28-5
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		1/26/2001	2/1/2001	2/1/2001	2/1/2001	2/1/2001	2/1/2001
Lab No.		2001A-0153	2001A-0162	2001A-0163	2001A-0164	2001A-0165	2001A-0166
Percent Passing Sieve Size	3"					100	
	2"				100	100	
	1"	97	100		94	77	97
	3/4"	96	99		93	75	97
	1/2"	91	96	100	88	70	94
	3/8"	86	92	99	85	64	90
	#4	72	84	98	76	51	80
	#10	53	72	95	63	39	69
	#40	34	39	75	42	23	47
	#80						
	#200	22.4	15.9	39.4	21.6	9.8	27.7
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	A-1-b(0) / Si Grl Sa	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	NV / NV / NP	/ /	/ /
Sample Prep							
Nat Moist / Organic		5.3 /	13.7 /	16.5 / 1.4	28.2 / 6.5	37.2 / 19.7	29.4 / 7.2
% Grvl / Snd / Fines		28 / 50 / 22	16 / 68 / 16	2 / 59 / 39	24 / 54 / 22	49 / 41 / 10	20 / 52 / 28
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)		1.4-1.5 m	1.8-2.4 m	0.9-1.3 m	3.0-3.6 m	6.1-6.7 m	9.1-9.7 m
Test Site ID		TH01-29	TH01-29	TH01-3	TH01-50	TH01-50	TH01-50
Field No.		FS-01-29-4.5	FS-01-29-7	FS-01-3-3	FS01-50-10	FS01-50-20	FS01-50-30
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		2/2/2001	2/2/2001	1/4/2001	6/1/2001	6/1/2001	6/1/2001
Lab No.		2001A-0167	2001A-0168	2001A-0077	2001A-1562	2001A-1563	2001A-1564
Percent Passing Sieve Size	3"						
	2"						
	1"	99	99		94	93	100
	3/4"	96	96	100	86	87	98
	1/2"	90	89	98	82	79	97
	3/8"	86	84	94	76	75	92
	#4	76	73	79	63	62	79
	#10	66	61	56	47	48	61
	#40	47	45	25	21	24	29
	#80						
	#200	29.3	30.9	10.7	9.8	10.3	11.5
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		A-2-4(0) / Si Grl Sa	/	A-1-b(0) / Sl Si Grl Sa	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		NV / NV / NP	/ /	NV / NV / NP	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		27.5 / 5.3	12.2 / 2.8	5.5 /	/	/	/
% Grvl / Snd / Fines		24 / 47 / 29	27 / 42 / 31	21 / 68 / 11	37 / 53 / 10	38 / 52 / 10	21 / 67 / 12
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)							
Test Site ID		TH01-52	TH01-52	TH01-55	TH01-57	TH01-61	TH01-61
Field No.		FS 01-52-2.5	FS 01-52-10	FS 01-55-1	FS 01-57-2.5	FS 01-61-2.5	FS 01-61-5
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		8/10/2001	8/10/2001	8/10/2001	8/10/2001	8/3/2001	8/3/2001
Lab No.		2001A-2493	2001A-2494	2001A-2495	2001A-2496	2001A-2497	2001A-2498
Percent Passing Sieve Size	3"						
	2"						
	1"	97	100	94	100	90	
	3/4"	90	95	87	96	83	
	1/2"	84	87	80	88	75	
	3/8"	75	79	69	82	70	
	#4	59	62	47	67	56	
	#10	43	44	32	51	43	
	#40	21	22	16	27	24	
	#80						
	#200	8.7	9.9	7.4	12.4	11.4	
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		1.9 /	3 /	1.8 /	4.9 /	12.4 /	/
% Grvl / Snd / Fines		41 / 50 / 9	38 / 52 / 10	53 / 40 / 7	33 / 55 / 12	44 / 45 / 11	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)							
Test Site ID		TH01-61	TH01-61	TH01-63	TH01-63	TH01-67	TH01-69
Field No.		FS 01-61-7.5	FS 61 5+7.5	FS 01-63-1	FS 01-63-5	FS 01-67-2.5	FS 01-69-2.5
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		8/3/2001	8/3/2001	8/4/2001	8/6/2001	8/9/2001	8/9/2001
Lab No.		2001A-2499	2001A-2520	2001A-2500	2001A-2501	2001A-2502	2001A-2503
Percent Passing Sieve Size	3"						
	2"						
	1"		100	100	97	100	100
	3/4"		97	97	91	96	98
	1/2"		92	89	75	85	95
	3/8"		88	75	62	80	92
	#4		75	40	41	62	77
	#10		60	14	29	44	59
	#40		34	3	19	23	30
	#80						
	#200		14.4	1.1	11.2	11.6	13.3
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		/	17.9 / 2.2	5.3 /	3.4 /	/	4.5 /
% Grvl / Snd / Fines		/ /	25 / 61 / 14	60 / 39 / 1	59 / 30 / 11	38 / 50 / 12	23 / 64 / 13
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)		2.1 m					
Test Site ID		TH01-7	TH01-71	TH01-71	TH01-72	TH01-72	TH01-81
Field No.		FS-01-7-7	FS 01-71-5	FS 01-71-7.5	FS 01-72-1	FS 01-72-2.5	FS 01-81-2.5
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		1/9/2001	8/9/2001	8/9/2001	8/9/2001	8/9/2001	8/8/2001
Lab No.		2001A-0078	2001A-2504	2001A-2505	2001A-2506	2001A-2507	2001A-2508
Percent Passing Sieve Size	3"						
	2"						
	1"	100	100		100	100	98
	3/4"	100	83	100	99	95	96
	1/2"	98	77	93	90	91	91
	3/8"	96	70	87	82	84	83
	#4	89	53	76	61	65	68
	#10	78	37	65	43	48	50
	#40	58	17	43	22	24	23
	#80						
	#200	36.3	7.8	21.8	10.8	11.6	9.9
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		A-4(0) / Grl Sa Si	A-1-a(0) / Sl Si Sa Grl	/	A-1-a(0) / Sl Si Sa Grl	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		25 / NV / NP	NV / NV / NP	/ /	NV / NV / NP	/ /	/ /
Sample Prep							
Nat Moist / Organic		26.3 /	6.7 /	63 / 19.6	2.4 /	6.7 /	4.3 /
% Grvl / Snd / Fines		11 / 53 / 36	47 / 45 / 8	24 / 54 / 22	39 / 50 / 11	35 / 53 / 12	32 / 58 / 10
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)				1.2-7.3 m	1.2 m	2.4 m	1.8 m
Test Site ID		TH01-82	TH01-91	TH21 & 23	TP00-10	TP00-10	TP00-13
Field No.		FS 01-82-1	FS 01-91-2.5	FS-01-21+23	TP00-10-4	TP00-10-8	TP00-13-6
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		8/8/2001	8/15/2001		10/12/2000	10/12/2000	10/12/2000
Lab No.		2001A-2509	2001A-2510	2001A-0267	2000A-3699	2000A-3700	2000A-3704
Percent Passing Sieve Size	3"					100	100
	2"				100	92	100
	1"	99	94		98	73	92
	3/4"	97	83		97	71	88
	1/2"	92	72		93	66	81
	3/8"	84	65		89	62	76
	#4	64	51		74	56	63
	#10	45	37		56	50	52
	#40	25	18		30	42	29
	#80						
	#200	14.6	8.5		12.8	32	12.9
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		3.4 /	3.2 /	/	5.5 / 0.6	9.1 / 0.7	7.6 /
% Grvl / Snd / Fines		36 / 49 / 15	49 / 42 / 9	/ /	26 / 61 / 13	44 / 24 / 32	37 / 50 / 11
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value				44			
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)		1.2 m	1.5 m	1.8 m	1.8 m	1.5 m	2.1 m
Test Site ID		TP00-19	TP00-2	TP00-21	TP00-26	TP00-28	TP00-36
Field No.		TP00-19-4	TP00-2-5	TP00-21-6	TP00-26-6	TP00-28-5	TP00-36-7
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckmann
Date Sampled		10/13/2000	10/12/2000	10/13/2000	10/14/2000	10/14/2000	10/16/2000
Lab No.		2000A-3702	2000A-3698	2000A-3706	2000A-3705	2000A-3703	2000A-3753
Percent Passing Sieve Size	3"	100	100	100	100		100
	2"	93	96	98	92	100	88
	1"	77	88	90	80	87	63
	3/4"	72	85	85	75	81	56
	1/2"	63	79	77	66	69	46
	3/8"	59	76	72	60	63	40
	#4	47	67	57	47	49	30
	#10	37	58	38	33	37	22
	#40	20	38	17	14	20	10
	#80						
	#200	9.3	21	6.9	7.6	13.7	3.8
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		11.6 /	7 /	5.9 /	5.2 /	7.1 /	6.3 /
% Grvl / Snd / Fines		53 / 38 / 9	33 / 46 / 15	43 / 50 / 7	53 / 39 / 8	51 / 35 / 14	70 / 26 / 3
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)		1.5 m	0.30 m	2.4 m	2.4 m	2.4 m	0.9 m
Test Site ID		TP00-39	TP00-4	TP00-4	TP00-46	TP00-5	TP00-51
Field No.		TP00-39-5	TP00-4-1	TP00-4-8	TP00-46-8	TP00-5-8	TP00-51-3
Submitted By		C. Boeckmann	C. Boeckman	C. Boeckman	C. Boeckmann	C. Boeckman	C. Boeckmann
Date Sampled		10/16/2000	10/11/2000	10/11/2000	10/17/2000	10/12/2000	10/17/2000
Lab No.		2000A-3756	2000A-3697	2000A-3701	2000A-3751	2000A-3695	2000A-3752
Percent Passing Sieve Size	3"	100		100	100	100	100
	2"	98	100	94	97	95	93
	1"	91	87	75	96	91	81
	3/4"	88	84	70	95	86	76
	1/2"	82	76	64	92	82	67
	3/8"	79	73	60	91	78	61
	#4	68	63	48	83	66	48
	#10	58	51	36	71	53	35
	#40	36	30	17	38	29	15
	#80						
	#200	21.4	12.7	8	13.9	13.6	6.3
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		7.1 /	26.8 / 12	14.2 / 1.4	7.1 /	7.7 /	8.1 / 2.2
% Grvl / Snd / Fines		32 / 47 / 20	37 / 50 / 13	52 / 40 / 8	17 / 69 / 14	34 / 52 / 14	52 / 42 / 6
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)		2.1 m	1.8 m	0.61 m	0.91-1.5 m	4.6-5.9 m	0.61-5.8 m
Test Site ID		TP00-63	TP00-66	TP00-8	TP01-1	TP01-1	TP01-10
Field No.		TP00-63-7	TP00-66-6	TP00-8-2	TP 01-1-3	TP 01-1-15	TP 01-10-10
Submitted By		C. Boeckmann	C. Boeckmann	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		10/18/2000	10/18/2000	10/12/2000	5/15/2001	5/15/2001	5/17/2001
Lab No.		2000A-3755	2000A-3754	2000A-3696	2001A-0852	2001A-0853	2001A-0861
Percent Passing Sieve Size	3"	100	100		100	100	100
	2"	97	100		92	94	93
	1"	85	90		80	79	81
	3/4"	79	85		73	71	78
	1/2"	72	78		66	62	72
	3/8"	67	73		61	55	68
	#4	53	59		50	43	58
	#10	42	42		41	34	48
	#40	22	15		19	16	27
	#80						
	#200	10.7	4.2		8.2	7.6	14.2
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		10.2 /	14.8 /	87.8 / 23.5	/	/	/
% Grvl / Snd / Fines		47 / 42 / 11	41 / 55 / 3	/ /	50 / 42 / 8	57 / 35 / 7	42 / 44 / 12
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value					38		
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	0 / 6	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)		1.2-2.4 m	0.91-1.8 m	1.5-5.2 m	1.2-1.8 m	1.8-4.6 m	1.5-2.4 m
Test Site ID		TP01-11	TP01-12	TP01-2	TP01-3	TP01-4	TP01-5
Field No.		TP 01-11-7	TP 01-12-6	TP 01-2-5	TP 01-3-6	TP 01-4-8	TP 01-5-5
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		5/17/2001	5/18/2001	5/15/2001	5/15/2001	5/15/2001	5/16/2001
Lab No.		2001A-0862	2001A-0863	2001A-0854	2001A-0855	2001A-0856	2001A-0857
Percent Passing Sieve Size	3"	100	100	100	100	100	100
	2"	87	91	94	95	88	92
	1"	70	77	78	82	73	78
	3/4"	63	72	70	78	67	72
	1/2"	54	65	60	71	60	62
	3/8"	49	59	54	67	55	55
	#4	37	48	40	57	45	39
	#10	29	38	31	46	37	28
	#40	15	19	11	29	16	10
	#80						
	#200	7.8	9.6	6.2	16.7	7.3	5.4
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		/	/	/	/	/	/
% Grvl / Snd / Fines		63 / 29 / 7	52 / 38 / 8	60 / 34 / 5	43 / 40 / 15	55 / 38 / 7	61 / 34 / 5
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53919 Project Name Seward Hwy MP 18-25

Station							
Offset (feet)							
Depth (feet)		3.0-3.9 m	2.1-3.4 m	0.91-1.8 m	1.5-2.4 m		
Test Site ID		TP01-5	TP01-6	TP01-7	TP01-9		
Field No.		TP 01-5-10	TP 01-6-8	TP 01-7-5	TP 01-9-6	RS 16 THRU 19	ROCK BREAKDOWN
Submitted By		C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman	C. Boeckman
Date Sampled		5/16/2001	5/16/2001	5/16/2001	5/17/2001		
Lab No.		2001A-0858	2001A-0866	2001A-0859	2001A-0860	2001A-2521	2001A-2655
Percent Passing Sieve Size	3"	100	100	100	100		
	2"	91	92	85	95		
	1"	74	78	65	79		
	3/4"	68	71	61	74		
	1/2"	60	60	54	66		
	3/8"	55	55	49	61		
	#4	42	40	38	51		
	#10	32	31	30	43		
	#40	15	14	12	28		
	#80						
	#200	9.5	6.1	5.6	16.1		
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		/	/	/	/	/	/
% Grvl / Snd / Fines		58 / 33 / 9	60 / 34 / 6	62 / 32 / 5	49 / 35 / 13	/ /	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value			30				
LA / LA Low / Nordic		/ /	17 / /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	0 / 5	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		9.5-11.5'	2-4'	7-9'	5-7'	12.5-13.9'	15.0-16.5'
Test Site ID		TH13-01	TH13-02	TH13-02	TH13-03	TH13-03	TH13-03
Field No.		FS-04	FS-07	FS-09	FS-14	FS-18	FS-19
Submitted By		S. Browne	S. Browne	S. Browne	S. Browne	S. Browne	S. Browne
Date Sampled		8/20/2013	8/20/2013	8/20/2013	8/20/2013	8/20/2013	8/20/2013
Lab No.		2013A-3300	2013A-3301	2013A-3302	2013A-3303	2013A-3304	2013A-3305
Percent Passing Sieve Size	3"						
	2"						
	1"	100	96	100	93	96	
	3/4"	90	90	91	92	91	
	1/2"	80	86	85	83	85	
	3/8"	75	82	81	78	78	
	#4	62	68	69	67	67	
	#10	47	48	55	52	50	
	#40	26	22	33	32	26	
	#80						
	#200	13.7	8.2	17.7	16.2	12.3	
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		/	/	/	/	/	7 /
% Grvl / Snd / Fines		38 / 48 / 14	32 / 60 / 8	31 / 51 / 18	33 / 51 / 16	33 / 55 / 12	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		20-22'	25-27'	7.5-9.5'	10-12'	15-17'	17-20'
Test Site ID		TH13-03	TH13-03	TH13-04	TH13-04	TH13-04	TH13-04
Field No.		FS-20	FS-21	FS-22	FS-23	FS-24	FS-25
Submitted By		S. Browne	S. Browne	S. Browne	S. Browne	S. Browne	S. Browne
Date Sampled		8/20/2013	8/20/2013	8/26/2013	8/26/2013	8/26/2013	8/26/2013
Lab No.		2013A-3306	2013A-3307	2013A-3308	2013A-3309	2013A-3310	2013A-3311
Percent Passing Sieve Size	3"						
	2"						
	1"						100
	3/4"						96
	1/2"						85
	3/8"						78
	#4						62
	#10						49
	#40						30
	#80						
	#200						14.6
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	A-1-b(0) /
Unified Class							SM
USCSD Class							Silty sand with gravel
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	NV / NV / NP
Sample Prep							Dry
Nat Moist / Organic		7.2 /	6 /	13.3 /	8.2 /	6.3 /	9 /
% Grvl / Snd / Fines		/ /	/ /	/ /	/ /	/ /	38 / 47 / 15
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		30-32'	5-7'	7.5-9.5'	20-22'	35-37'	1.5-3.5'
Test Site ID		TH13-04	TH13-05	TH13-05	TH13-05	TH13-05	TH13-06
Field No.		FS-28	FS-30	FS-31	FS-34	FS-36	FS-37
Submitted By		S. Browne	S. Browne	S. Browne	S. Browne	S. Browne	S. Browne
Date Sampled		8/26/2013	8/26/2013	8/26/2013	8/26/2013	8/26/2013	8/27/2013
Lab No.		2013A-3312	2013A-3313	2013A-3314	2013A-3315	2013A-3316	2013A-3317
Percent Passing Sieve Size	3"						
	2"						
	1"		92	95			
	3/4"		91	87			
	1/2"		83	84			
	3/8"		78	80			
	#4		63	68			
	#10		47	51			
	#40		25	25			
	#80						
	#200		11.8	10.6			
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	A-1-b(0) /	/	/	/
Unified Class				SW-SM			
USCSD Class				Well graded sand with silt, and gravel			
Atterburg LL/PL/PI		/ /	/ /	NV / NV / NP	/ /	/ /	/ /
Sample Prep				Dry			
Nat Moist / Organic		9 /	6.4 /	5.3 /	5.6 /	9.7 /	5 / 2.3
% Grvl / Snd / Fines		/ /	37 / 51 / 12	32 / 57 / 11	/ /	/ /	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		4-6'	6.5-8.5'	19-21'	29-31'	2-4'	5-7'
Test Site ID		TH13-06	TH13-06	TH13-06	TH13-06	TH13-07	TH13-07
Field No.		FS-38	FS-39	FS-42	FS-44	FS-45	FS-46
Submitted By		S. Browne	S. Browne	S. Browne	S. Browne	S. Browne	S. Browne
Date Sampled		8/27/2013	8/27/2013	8/27/2013	8/27/2013	8/27/2013	8/27/2013
Lab No.		2013A-3318	2013A-3319	2013A-3320	2013A-3321	2013A-3322	2013A-3323
Percent Passing Sieve Size	3"						
	2"						
	1"	100				100	
	3/4"	98				93	
	1/2"	92				87	
	3/8"	87				83	
	#4	71				69	
	#10	54				52	
	#40	24				23	
	#80						
	#200	8.7				9.1	
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		2.8 /	4.8 /	5.2 /	5.3 /	/	3.9 /
% Grvl / Snd / Fines		29 / 62 / 9	/ /	/ /	/ /	31 / 60 / 9	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		10-11'	12.5-14.5'	20-22'	1-3'	3.5-5.5'	7.5-9.5'
Test Site ID		TH13-07	TH13-07	TH13-07	TH13-08	TH13-08	TH13-08
Field No.		FS-48	FS-49	FS-51	FS-53	FS-54	FS-55
Submitted By		S. Browne	S. Browne	S. Browne	S. Browne	S. Browne	S. Browne
Date Sampled		8/27/2013	8/27/2013	8/27/2013	8/28/2013	8/28/2013	8/28/2013
Lab No.		2013A-3324	2013A-3325	2013A-3326	2013A-3327	2013A-3328	2013A-3329
Percent Passing Sieve Size	3"						
	2"						
	1"	95					
	3/4"	94					
	1/2"	84					
	3/8"	81					
	#4	70					
	#10	62					
	#40	48					
	#80						
	#200	16.7					
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		3.4 /	2.6 /	4.9 /	7.1 /	4.6 /	7.8 /
% Grvl / Snd / Fines		30 / 53 / 17	/ /	/ /	/ /	/ /	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		10.5-12.5'	15-17'	22.5-24.5'	3-5'	5.5-7.5'	10.5-12.5'
Test Site ID		TH13-08	TH13-08	TH13-08	TH13-09	TH13-09	TH13-09
Field No.		FS-56	FS-57	FS-59	FS-60	FS-61	FS-63
Submitted By		S. Browne	S. Browne	S. Browne	S. Browne	S. Browne	S. Browne
Date Sampled		8/28/2013	8/28/2013	8/28/2013	8/30/2013	8/30/2013	8/30/2013
Lab No.		2013A-3330	2013A-3331	2013A-3332	2013A-3333	2013A-3334	2013A-3335
Percent Passing Sieve Size	3"						
	2"						
	1"	96				96	100
	3/4"					85	98
	1/2"	84				75	92
	3/8"	78				69	87
	#4	65				57	72
	#10	50				43	55
	#40	27				23	29
	#80						
	#200	12.6				9.3	14.1
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		/	4.3 /	4.3 /	6.4 /	3.3 /	4.1 /
% Grvl / Snd / Fines		35 / 52 / 13	/ /	/ /	/ /	43 / 48 / 9	28 / 58 / 14
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		18-20'	2-4'	7-9'	9.5-11.5'	25-27'	30-32'
Test Site ID		TH13-09	TH13-10	TH13-10	TH13-10	TH13-10	TH13-10
Field No.		FS-65	FS-68	FS-70	FS-71	FS-73	FS-74
Submitted By		S. Browne	S. Browne	S. Browne	S. Browne	S. Browne	S. Browne
Date Sampled		8/30/2013	8/30/2013	8/30/2013	8/30/2013	8/30/2013	8/30/2013
Lab No.		2013A-3336	2013A-3337	2013A-3338	2013A-3339	2013A-3340	2013A-3341
Percent Passing Sieve Size	3"						
	2"						
	1"				97		
	3/4"				88		
	1/2"				81		
	3/8"				77		
	#4				61		
	#10				44		
	#40				22		
	#80						
	#200				9.9		
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		5.1 /	7.9 /	4.3 /	2.6 /	9.7 /	9.2 /
% Grvl / Snd / Fines		/ /	/ /	/ /	39 / 51 / 10	/ /	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		2-4'	7-9'	14.5-16.5'	24.5-26.5'	5-7'	7.5-9.5'
Test Site ID		TH13-11	TH13-11	TH13-11	TH13-11	TH13-12	TH13-12
Field No.		FS-77	FS-79	FS-81	FS-83	FS-85	FS-86
Submitted By		S. Browne	S. Browne	S. Browne	S. Browne	S. Browne	S. Browne
Date Sampled		8/30/2013	8/30/2013	8/30/2013	8/30/2013	8/31/2013	8/31/2013
Lab No.		2013A-3342	2013A-3343	2013A-3344	2013A-3345	2013A-3346	2013A-3347
Percent Passing Sieve Size	3"						
	2"						
	1"			100			93
	3/4"		100	99			91
	1/2"		89	94			85
	3/8"		83	90			81
	#4		69	78			66
	#10		50	61			48
	#40		24	32			22
	#80						
	#200		10.4	16			8.4
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	A-1-a(0) /
Unified Class							SW-SM
USCSD Class							Well graded sand with silt, and gravel
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	NV / NV / NP
Sample Prep							Dry
Nat Moist / Organic		5.2 /	4.1 /	8.9 /	7.4 /	6 /	2.8 /
% Grvl / Snd / Fines		/ /	31 / 59 / 10	22 / 62 / 16	/ /	/ /	34 / 58 / 8
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		10-12'	15-17'	25-27'	35-37'	40-42'	5-7'
Test Site ID		TH13-12	TH13-12	TH13-12	TH13-12	TH13-12	TH13-13
Field No.		FS-87	FS-88	FS-90	FS-92	FS-93	FS-94
Submitted By		S. Browne	S. Browne	S. Browne	S. Browne	S. Browne	S. Browne
Date Sampled		8/31/2013	8/31/2013	8/31/2013	8/31/2013	8/31/2013	8/31/2013
Lab No.		2013A-3348	2013A-3349	2013A-3350	2013A-3351	2013A-3352	2013A-3353
Percent Passing Sieve Size	3"						
	2"						
	1"	97					
	3/4"	93					
	1/2"	87					
	3/8"	80					
	#4	64					
	#10	47					
	#40	24					
	#80						
	#200	10.2					
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		3.3 /	4.5 /	4.8 /	4.2 /	5.1 /	23.5 /
% Grvl / Snd / Fines		36 / 54 / 10	/ /	/ /	/ /	/ /	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		10-12'	15-17'	20-22'	25-27'	2.5-4.5'	5-7'
Test Site ID		TH13-13	TH13-13	TH13-13	TH13-13	TH13-14	TH13-14
Field No.		FS-95	FS-96	FS-97	FS-98	FS-100	FS-101
Submitted By		S. Browne	S. Browne	S. Browne	S. Browne	S. Browne	S. Browne
Date Sampled		8/31/2013	8/31/2013	8/31/2013	8/31/2013	9/3/2013	9/3/2013
Lab No.		2013A-3354	2013A-3355	2013A-3356	2013A-3357	2013A-3358	2013A-3359
Percent Passing Sieve Size	3"						
	2"						
	1"		100				
	3/4"		99				
	1/2"		89				
	3/8"		83				
	#4		69				
	#10		52				
	#40		27				
	#80						
	#200		10.7				
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		5.4 /	4.9 /	5.5 /	2 /	3.7 /	8.8 /
% Grvl / Snd / Fines		/ /	31 / 58 / 11	/ /	/ /	/ /	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		2.5-7.0'	10-12'	14.5-16.5'	19.5-21.5'	2.5-4.5'	7.5-9.5'
Test Site ID		TH13-14	TH13-14	TH13-14	TH13-14	TH13-15	TH13-15
Field No.		FS-100, 101	FS-103	FS-104	FS-105	FS-108	FS-110
Submitted By		S. Browne	S. Browne	S. Browne	S. Browne	S. Browne	S. Browne
Date Sampled		9/3/2013	9/3/2013	9/3/2013	9/3/2013	9/4/2013	9/4/2013
Lab No.		2013A-3360	2013A-3361	2013A-3362	2013A-3363	2013A-3364	2013A-3365
Percent Passing Sieve Size	3"						
	2"						
	1"	100			100	100	
	3/4"	97			94	99	
	1/2"	90			87	88	
	3/8"	83			80	81	
	#4	65			65	65	
	#10	47			50	46	
	#40	25			34	24	
	#80						
	#200	12.7			14.8	11.1	
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		/	4.5 /	3.5 /	7 /	4 /	3.9 /
% Grvl / Snd / Fines		35 / 52 / 13	/ /	/ /	35 / 50 / 15	35 / 54 / 11	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		10.0-11.4'	15.0-16.5'	4.5-6.5'	10.0-10.3'	4.5-6.5'	9.5-9.8'
Test Site ID		TH13-15	TH13-15	TH13-16	TH13-16	TH13-17	TH13-17
Field No.		FS-111	FS-112	FS-117	FS-118	FS-119	FS-120
Submitted By		S. Browne	S. Browne	S. Browne	S. Browne	S. Browne	S. Browne
Date Sampled		9/4/2013	9/4/2013	9/5/2013	9/5/2013	9/6/2013	9/6/2013
Lab No.		2013A-3366	2013A-3367	2013A-3368	2013A-3369	2013A-3370	2013A-3371
Percent Passing Sieve Size	3"						
	2"						
	1"		97	95		100	
	3/4"		93	91		97	
	1/2"		85	87		91	
	3/8"		79	84		86	
	#4		61	74		77	
	#10		45	63		62	
	#40		26	43		35	
	#80						
	#200		12.1	25.9		16	
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		2.5 /	2.7 /	7.2 /	1.5 /	5.6 /	1.2 /
% Grvl / Snd / Fines		/ /	39 / 49 / 12	26 / 48 / 26	/ /	23 / 61 / 16	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		15.0-15.3'					
Test Site ID		TH13-17					
Field No.		FS-121					
Submitted By		S. Browne					
Date Sampled		9/6/2013					
Lab No.		2013A-3372					
Percent Passing Sieve Size	3"						
	2"						
	1"						
	3/4"						
	1/2"						
	3/8"						
	#4						
	#10						
	#40						
	#80						
	#200						
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		5.1 /	/	/	/	/	/
% Grvl / Snd / Fines		/ /	/ /	/ /	/ /	/ /	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		1.5-3.5'	5-9'	10-14'	15-18.5'	2-3.5'	5-7'
Test Site ID		TH16-01	TH16-01	TH16-01	TH16-01	TH16-02	TH16-02
Field No.		FS02	FS03	FS04	FS05	FS07	FS08
Submitted By		C. Bruns	C. Bruns	C. Bruns	C. Bruns	C. Bruns	C. Bruns
Date Sampled		2/16/2016	2/16/2016	2/16/2016	2/16/2016	2/17/2016	2/17/2016
Lab No.		2016A-0044	2016A-0045	2016A-0046	2016A-0047	2016A-0048	2016A-0049
Percent Passing Sieve Size	3"						
	2"			100			
	1"	90	94	93	99	94	93
	3/4"	87	90	87	97	89	88
	1/2"	74	80	78	92	79	78
	3/8"	67	74	72	88	71	72
	#4	51	59	59	77	57	58
	#10	37	43	48	61	43	48
	#40	18	21	24	30	17	32
	#100	10	13	16	18	8	23
	#200	7.7	10.3	12.7	13.6	6	19
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		/	5 /	5.4 /	6.6 /	/	7 /
% Grvl / Snd / Fines		49 / 43 / 8	41 / 49 / 10	41 / 46 / 13	23 / 63 / 14	43 / 51 / 6	42 / 39 / 19
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		10-14'	15-18'	5-8.5'	2.5-3.5'	5-6'	2.5-6'
Test Site ID		TH16-02	TH16-02	TH16-03	TH16-04	TH16-04	TH16-04
Field No.		FS09	FS10	FS13	FS16	FS17	FS16 & FS17
Submitted By		C. Bruns	C. Bruns	C. Bruns	C. Bruns	C. Bruns	C. Bruns
Date Sampled		2/17/2016	2/17/2016	2/17/2016	2/18/2016	2/18/2016	2/18/2016
Lab No.		2016A-0050	2016A-0051	2016A-0052	2016A-0053	2016A-0054	2016A-0055
Percent Passing Sieve Size	3"						
	2"						
	1"	98	99	96			96
	3/4"	95	98	92			92
	1/2"	89	94	86			80
	3/8"	84	90	82			73
	#4	70	78	70			57
	#10	54	63	56			41
	#40	32	33	26			22
	#100	21	18	15			14
	#200	16.3	13.2	11.6			10.9
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		6.1 /	5.4 /	5.6 /	5.6 /	4 /	/
% Grvl / Snd / Fines		30 / 54 / 16	22 / 65 / 13	30 / 58 / 12	/ /	/ /	43 / 46 / 11
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		5-9'	0.5-4.5'	5-6'	10-10.5'	0.5-2.5'	2.5-4.5'
Test Site ID		TH16-05	TH16-06	TH16-07	TH16-07	TH16-08	TH16-08
Field No.		FS21	FS23 & FS24	FS30	FS31	FS32	FS33
Submitted By		C. Bruns	C. Bruns	C. Bruns	C. Bruns	C. Bruns	C. Bruns
Date Sampled		2/19/2016	2/19/2016	2/22/2016	2/22/2016	2/22/2016	2/22/2016
Lab No.		2016A-0056	2016A-0059	2016A-0063	2016A-0064	2016A-0065	2016A-0066
Percent Passing Sieve Size	3"						
	2"						
	1"	97	97	100			100
	3/4"	94	97	85		100	93
	1/2"	84	90	76		92	84
	3/8"	77	85	69		87	75
	#4	64	69	55		72	56
	#10	49	50	41		54	38
	#40	25	24	20		27	18
	#100	14	15	10		17	10
	#200	10.6	11	6.5		12.9	7.1
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		4.3 /	/	8.2 /	18.1 /	4.9 /	/
% Grvl / Snd / Fines		36 / 53 / 11	31 / 58 / 11	45 / 48 / 7	/ /	28 / 59 / 13	44 / 49 / 7
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		5-6.5'	0.5-2.5'	2.5-4.5'	0.5-2.5'	2.5-4'	5-6'
Test Site ID		TH16-08	TH16-09	TH16-09	TH16-10	TH16-10	TH16-10
Field No.		FS34	FS35	FS36	FS37	FS38	FS39
Submitted By		C. Bruns	C. Bruns	C. Bruns	C. Bruns	C. Bruns	C. Bruns
Date Sampled		2/22/2016	2/23/2016	2/23/2016	2/23/2016	2/23/2016	2/23/2016
Lab No.		2016A-0067	2016A-0068	2016A-0069	2016A-0070	2016A-0071	2016A-0072
Percent Passing Sieve Size	3"						
	2"						
	1"			100		100	
	3/4"		100	95	100	95	100
	1/2"		96	90	94	88	98
	3/8"		93	84	86	83	95
	#4		74	63	69	71	84
	#10		55	43	50	55	60
	#40		28	20	23	27	25
	#100		18	12	14	15	12
	#200		13.7	9.1	10.1	10.4	8.2
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		5.1 /	4.7 /	0.8 /	4.4 /	15.1 /	4.7 /
% Grvl / Snd / Fines		/ /	26 / 60 / 14	37 / 54 / 9	31 / 59 / 10	29 / 61 / 10	16 / 76 / 8
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

PRECONSTRUCTION SAMPLE SUMMARY

Project No. 53610 Project Name Seward Highway Rehabilitation, MP 17-22.5

Station							
Offset (feet)							
Depth (feet)		7.5-9.0'					
Test Site ID		TH16-10					
Field No.		FS40					
Submitted By		C. Bruns					
Date Sampled		2/23/2016					
Lab No.		2016A-0073					
Percent Passing Sieve Size	3"						
	2"						
	1"						
	3/4"	100					
	1/2"	99					
	3/8"	98					
	#4	87					
	#10	62					
	#40	26					
	#100	14					
	#200	10.1					
	.02mm						
	.002mm						
FSV Class							
AASHTO / DOTTSD		/	/	/	/	/	/
Unified Class							
USCSD Class							
Atterburg LL/PL/PI		/ /	/ /	/ /	/ /	/ /	/ /
Sample Prep							
Nat Moist / Organic		2.3 /	/	/	/	/	/
% Grvl / Snd / Fines		13 / 77 / 10	/ /	/ /	/ /	/ /	/ /
Opt Mois/Max Dry Den		/	/	/	/	/	/
SpG Bulk Coarse/Fine		/	/	/	/	/	/
SpG SSD Coarse/Fine		/	/	/	/	/	/
SpG App Coarse/Fine		/	/	/	/	/	/
Absorption Coarse/Fine		/	/	/	/	/	/
Degradation Value							
LA / LA Low / Nordic		/ /	/ /	/ /	/ /	/ /	/ /
Sulfate Soundness C/F		/	/	/	/	/	/
Comment:							

Gradation tests based on minus 3" material.

APPENDIX D

Photo Logs

TH13-01 looking west

Minuteman drill on slope above road

Moving Minuteman to TH13-20 using zip line during 2013 field efforts

Preparing to pull Minuteman up the slope during 2013 field efforts

Minuteman set up at TH13-21

Drill rig set up in the “horse pasture” at TH13-05, looking east

TH13-10 set up between highway and railroad tracks

Drill rig set up at TH13-13

TH13-14 Looking east toward Snow River bridge(s)

Rig set up below power line access at TH13-16

Drill rig negotiating the power line trail at TH13-17

Using a zip line to drag equipment up to power line trail at TH14-22

Setting up Minuteman at TH14-23 with zip line

Maneuvering Minuteman to boring location using zip line during 2014 field efforts

Recent rock fall September 2014 at MP18.5 Seward Highway, facing south

Rock fall at MP 18.5, September 2014

Test Pit TP 00-38

Test Pit TP 00-40

Test Pit TP 00-52

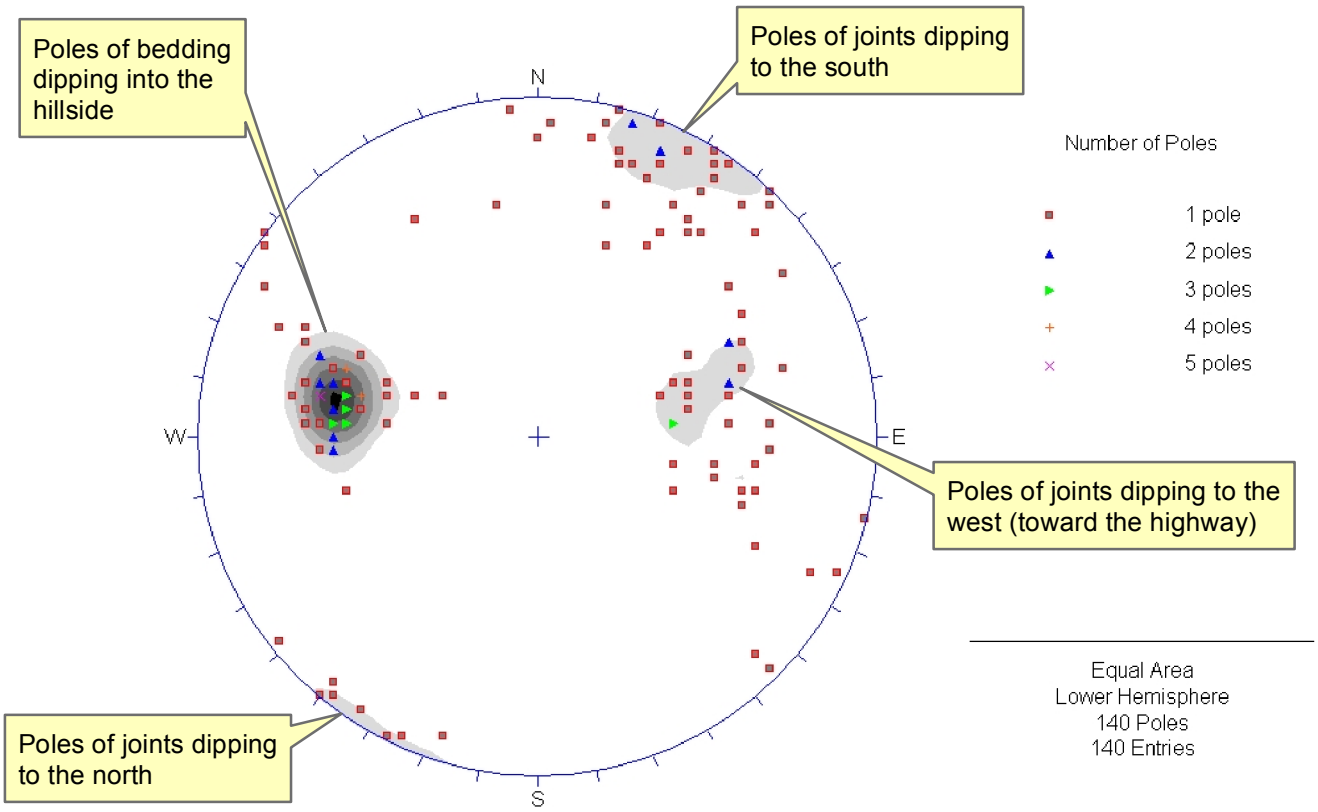
Concrete retaining wall at STA 182+50

Concrete retaining wall at STA 182+50

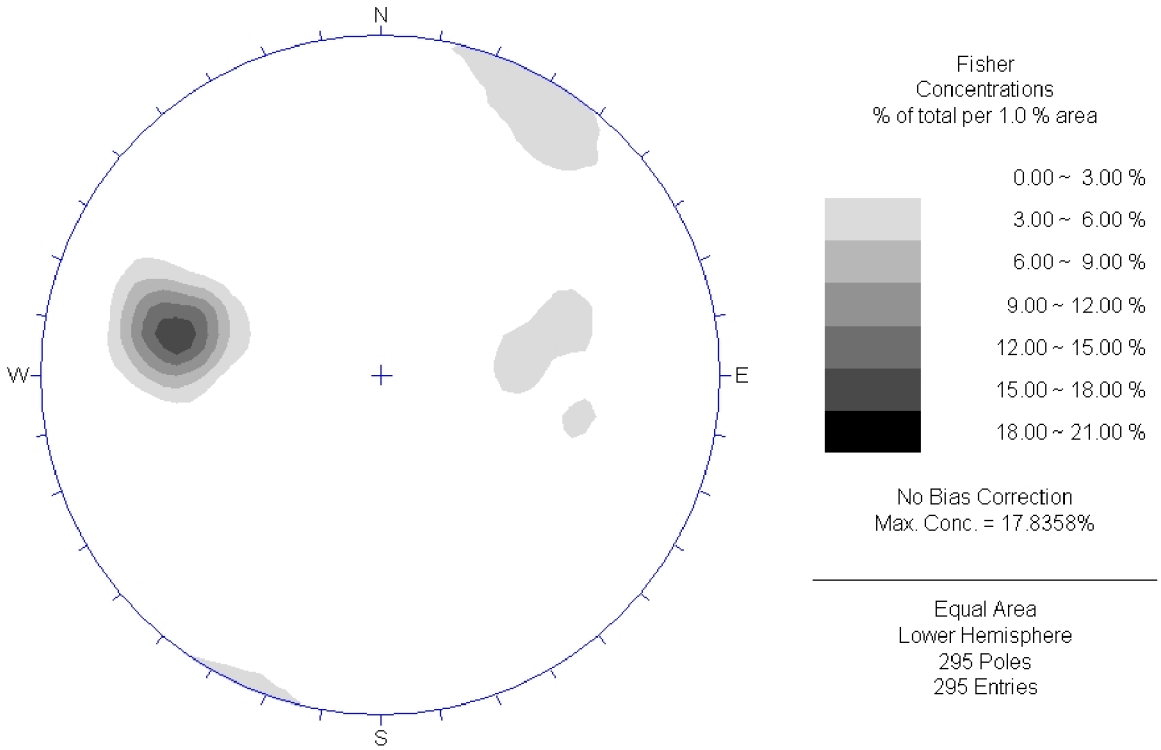
APPENDIX E

Rock Mapping Data

ROCK MAPPING DATA: SEWARD HWY MP 17-22.5
DATA POINTS COLLECTED SUMMER 2000

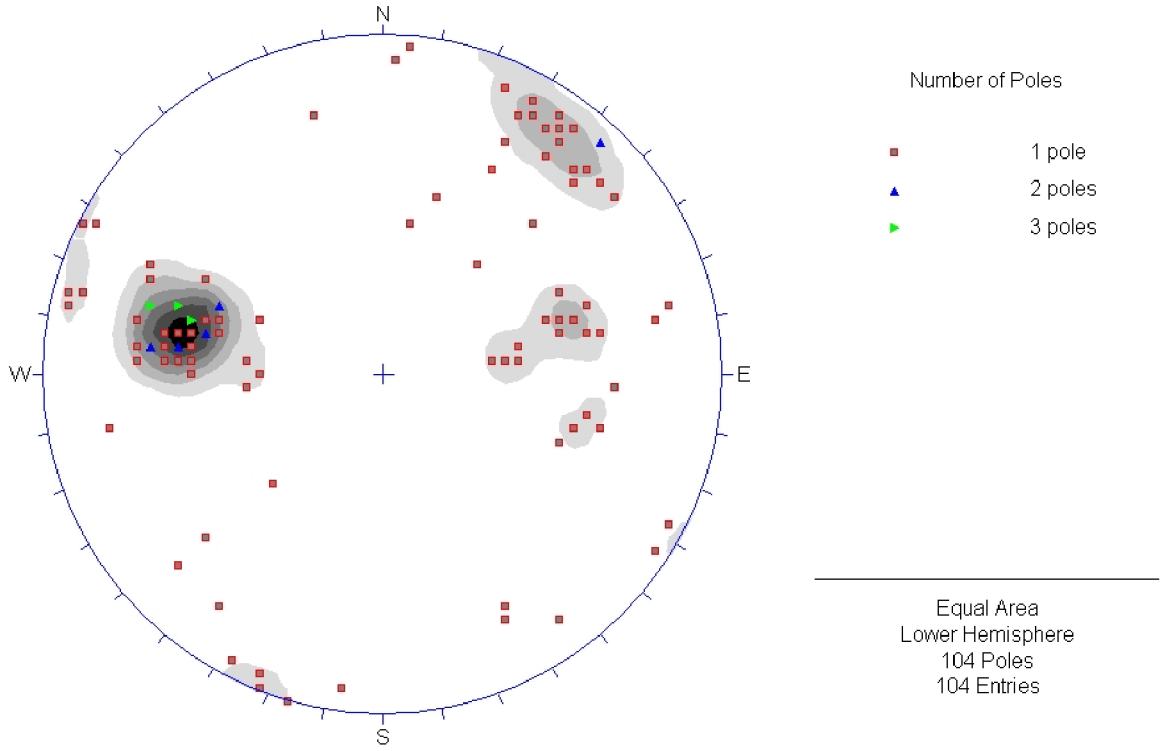


STA 161+50 to Sta 171+00: Stereonet of poles from line mapping bedrock slope adjacent to the Seward Highway.

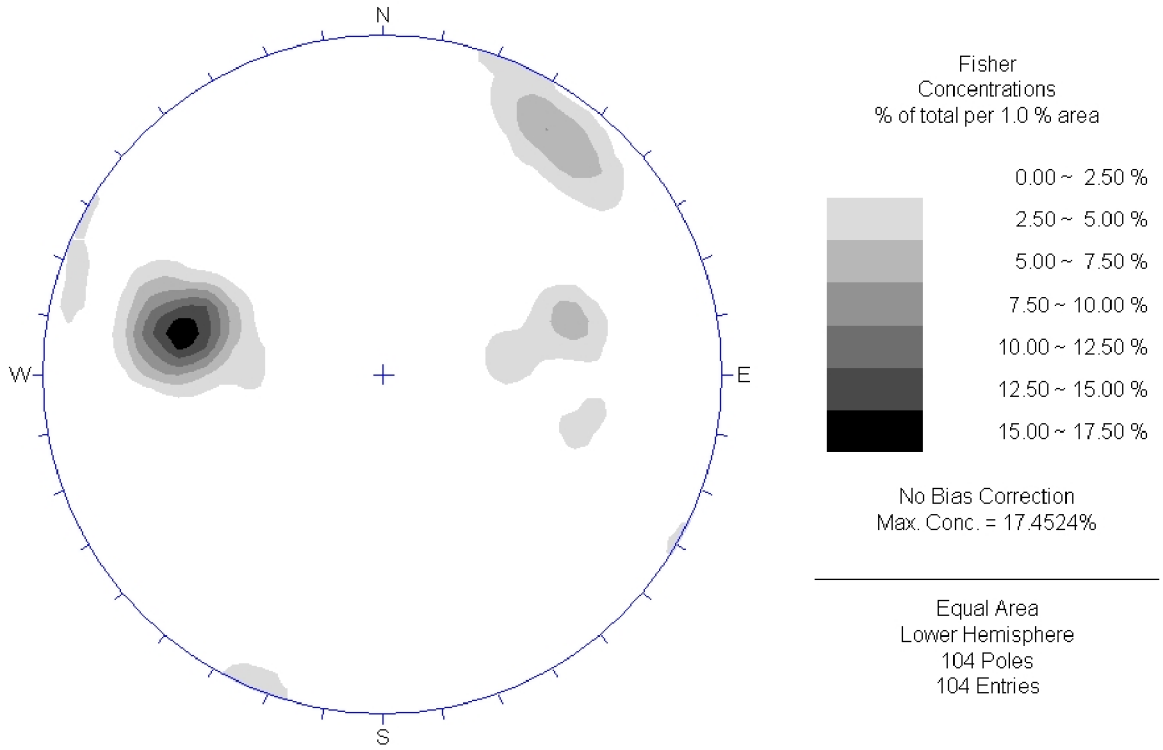


STA 161+50 to Sta 171+00: Contour Stereonet from line mapping bedrock slope adjacent to the Seward Highway.

ROCK MAPPING DATA: SEWARD HWY MP 17-22.5
DATA POINTS COLLECTED SUMMER 2000

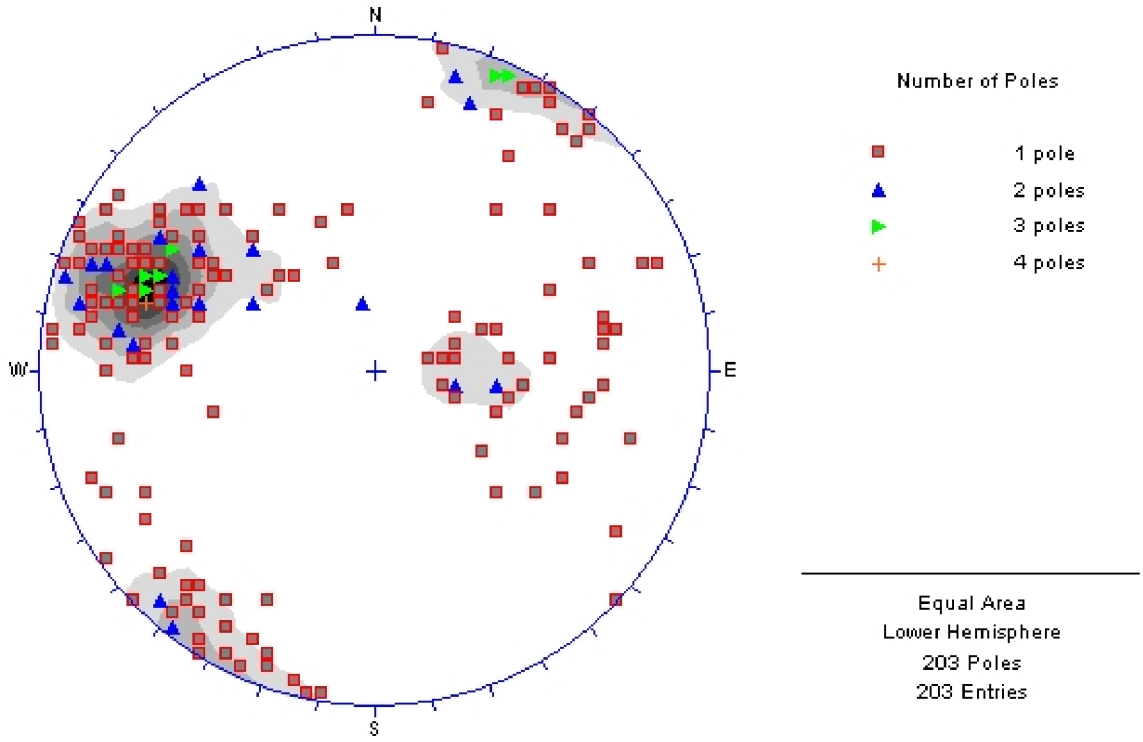


STA 191+00 to Sta 200+00: Stereonet of poles from line mapping bedrock slope adjacent to the Seward Highway. The trend of the Seward Highway is generally north/south.

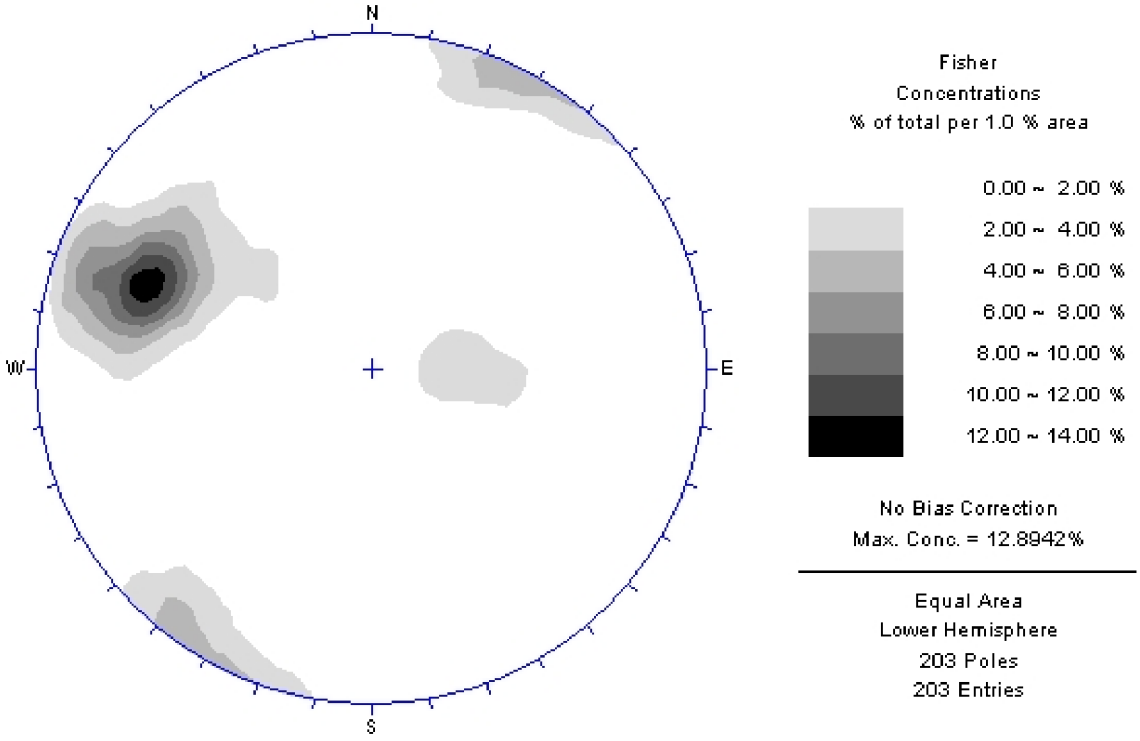


STA 191+00 to Sta 200+00: Contour Stereonet from line mapping bedrock slope adjacent to the Seward Highway.

ROCK MAPPING DATA: SEWARD HWY MP 17-22.5
DATA POINTS COLLECTED SUMMER 2000

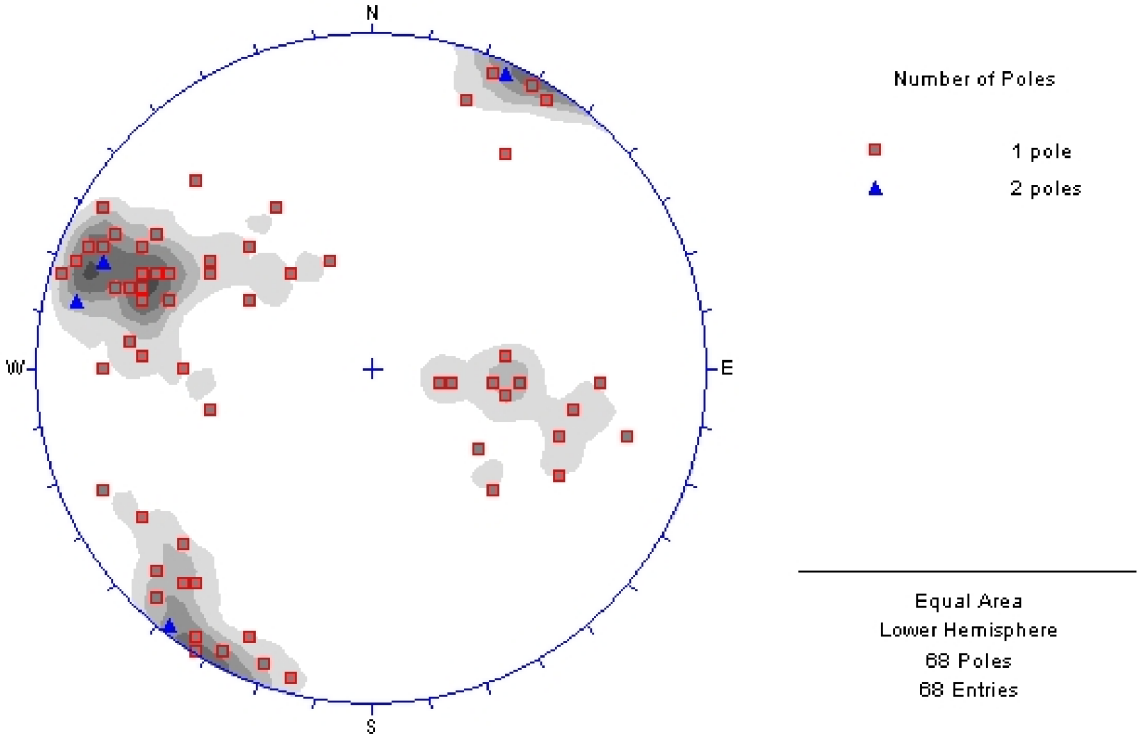


STA 261+50 to 270+00: Stereonet of poles from line mapping bedrock slope adjacent to the Seward Highway. The trend of the Seward Highway is generally north/south.

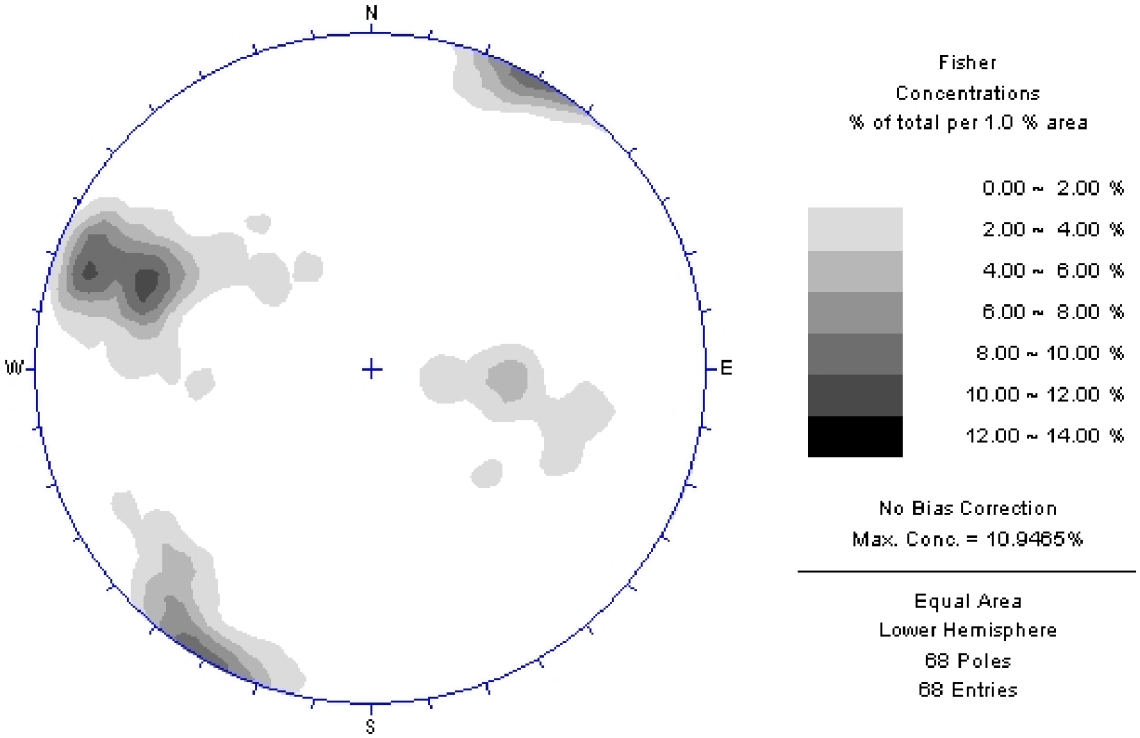


STA 261+50 to 270+00: Contour Stereonet from line mapping bedrock slope adjacent to the Seward Highway. The trend of the Seward Highway is generally north/south.

ROCK MAPPING DATA: SEWARD HWY MP 17-22.5
DATA POINTS COLLECTED SUMMER 2000

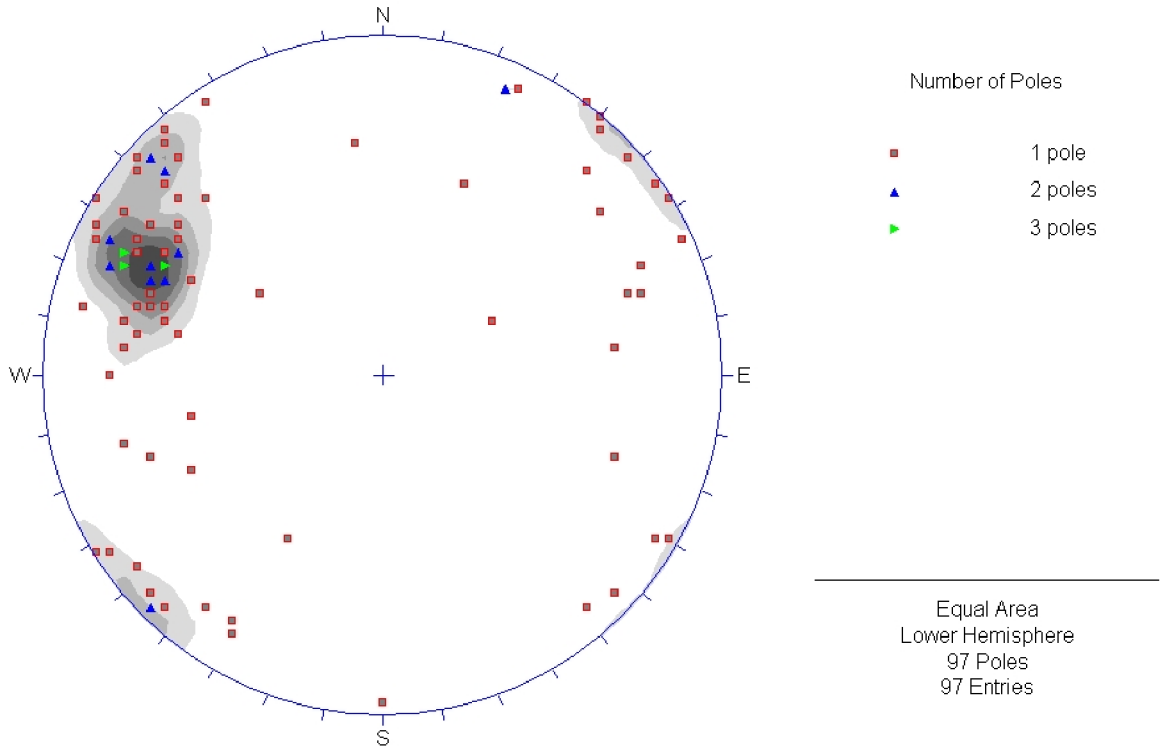


STA 315+00 to Sta 321+00: Stereonet of poles from line mapping bedrock slope adjacent to the Seward Highway. The trend of the Seward Highway is generally north/south.

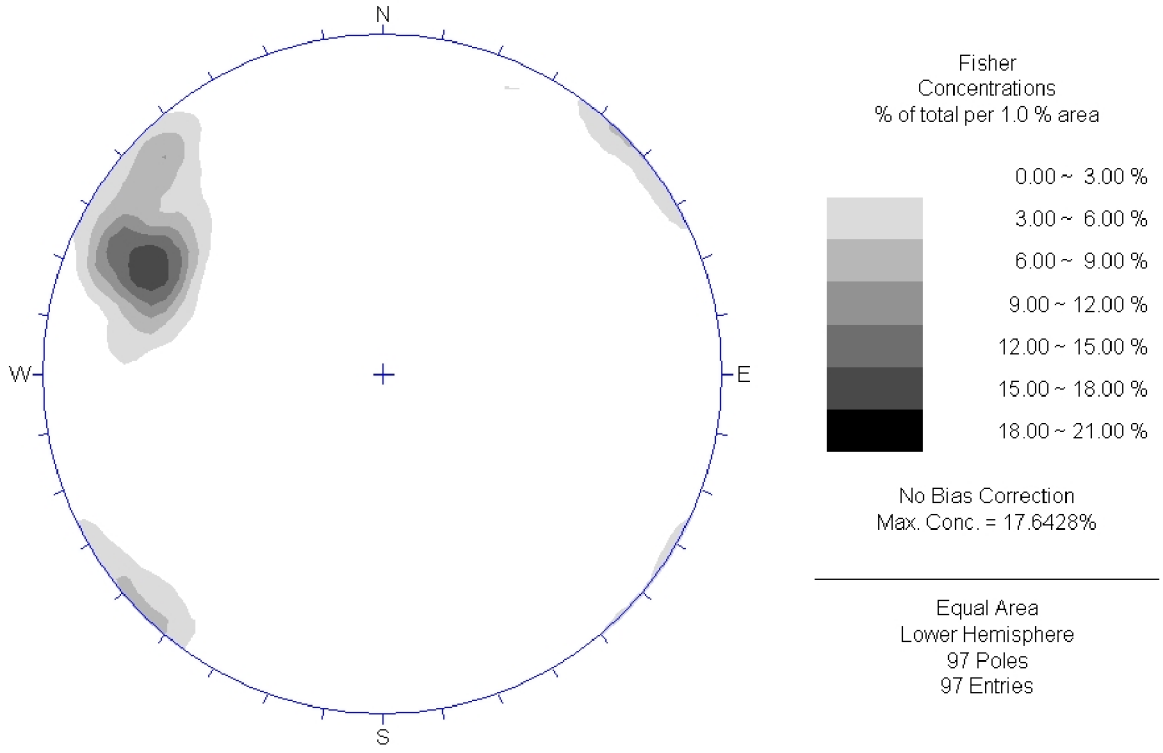


STA 315+00 to Sta 321+00: Contour Stereonet from line mapping bedrock slope adjacent to the Seward Highway.

ROCK MAPPING DATA: SEWARD HWY MP 17-22.5
DATA POINTS COLLECTED SUMMER 2000

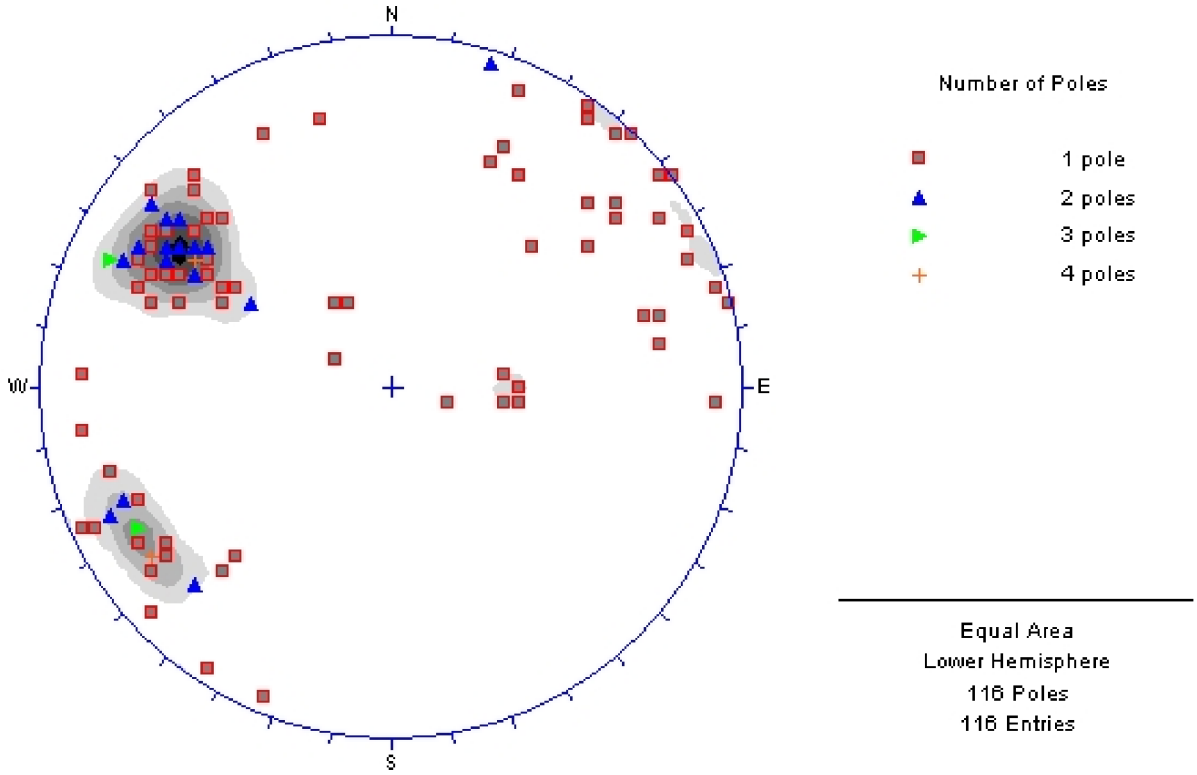


STA 346+00 to Sta 350+00: Stereonet of poles from line mapping bedrock slope adjacent to the Seward Highway. The trend of the Seward Highway is generally north/south.

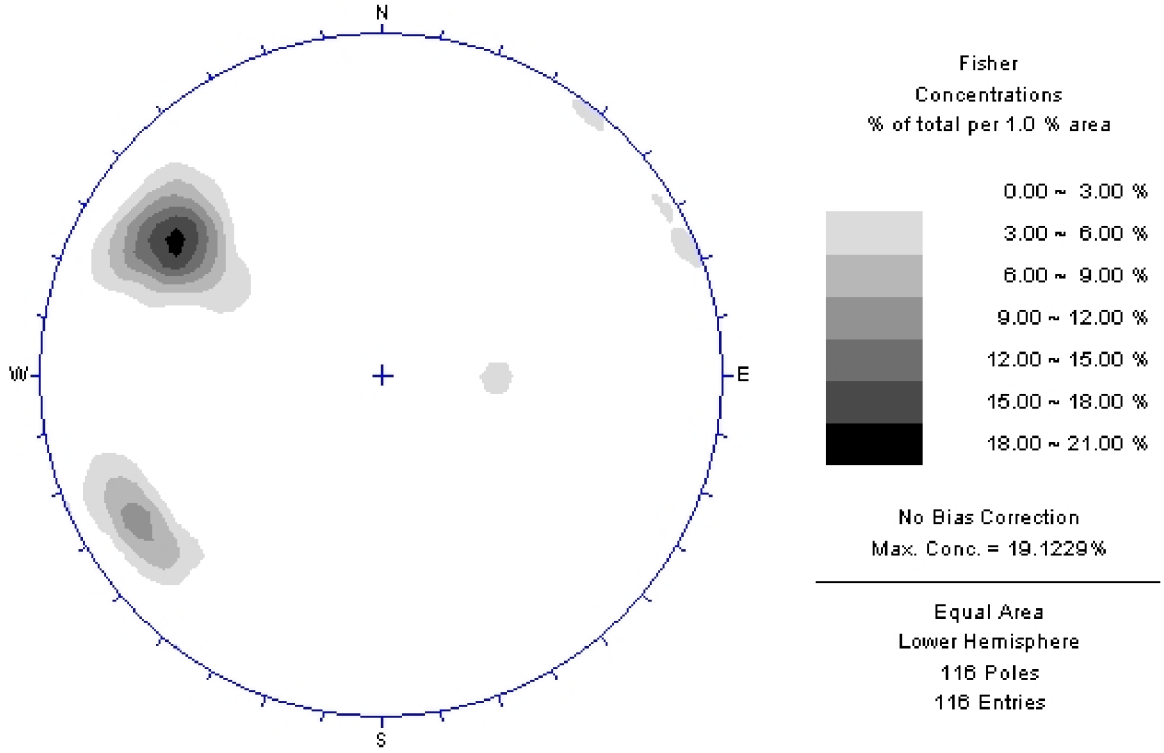


STA 346+00 to Sta 350+00: Contour Stereonet from line mapping bedrock slope adjacent to the Seward Highway.

ROCK MAPPING DATA: SEWARD HWY MP 17-22.5
DATA POINTS COLLECTED SUMMER 2000

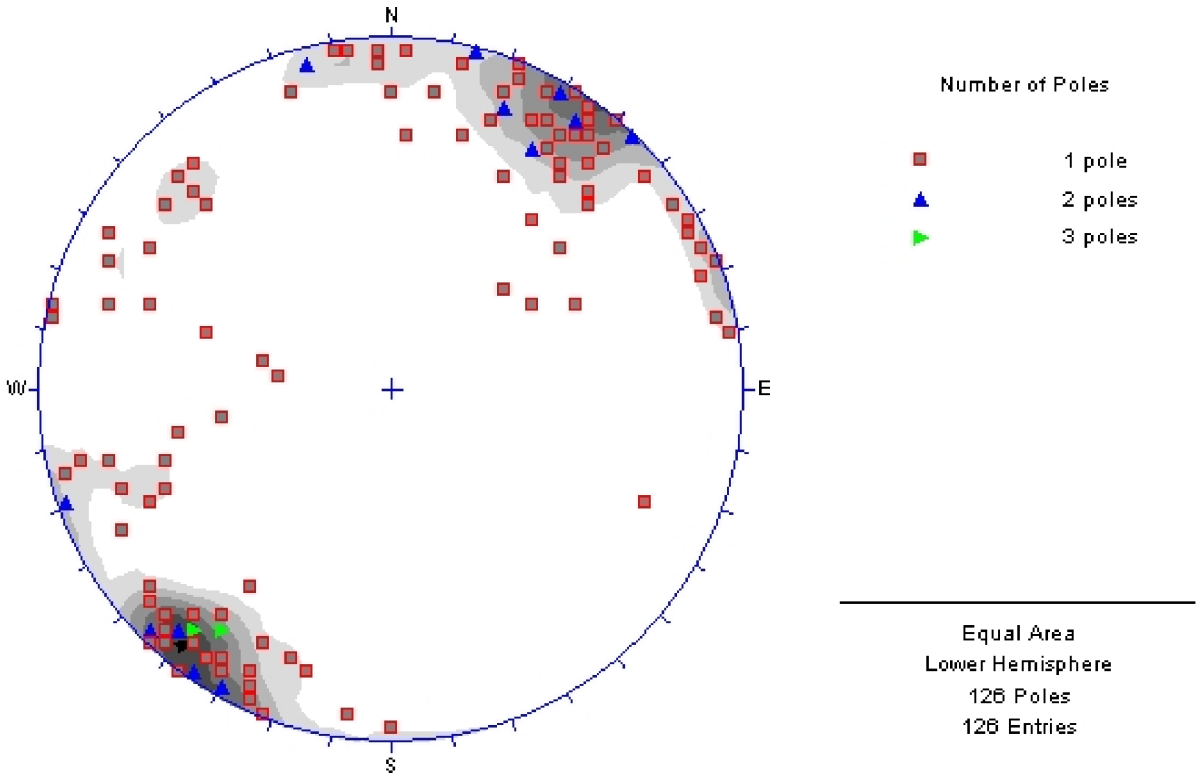


STA 351+00 to Sta 356+00: Stereonet of poles from line mapping bedrock slope adjacent to the Seward Highway. The trend of the Seward Highway is generally north/south.

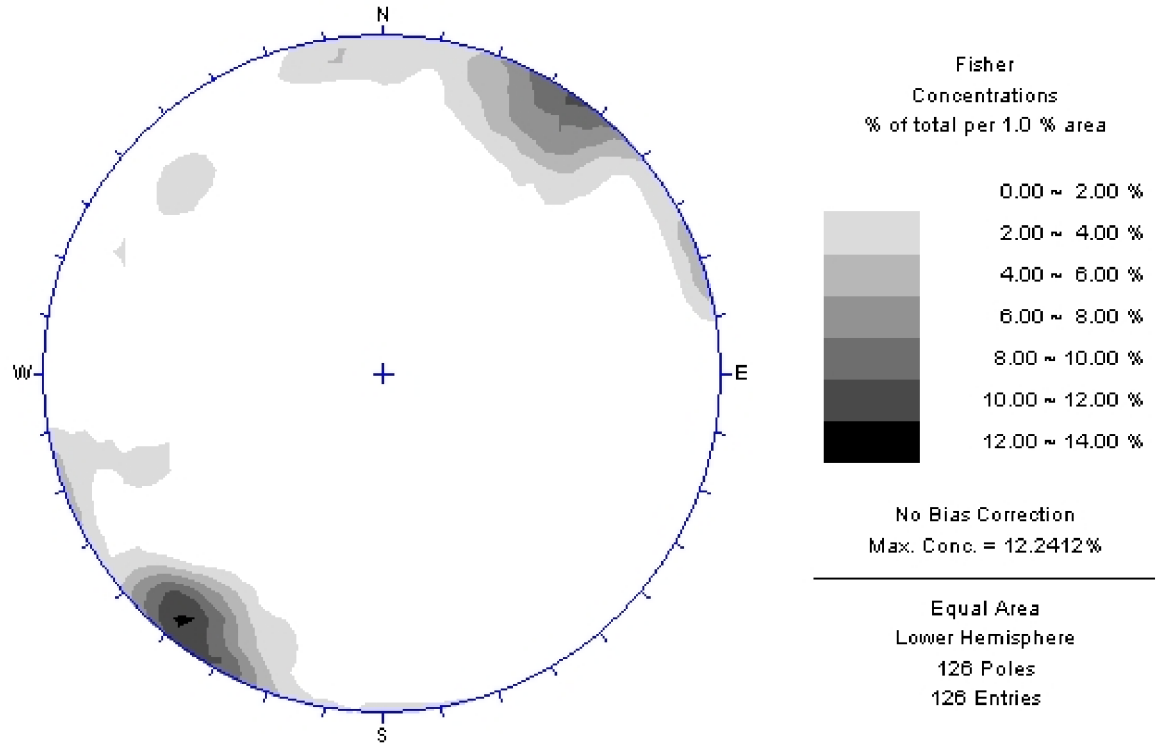


STA 351+00 to Sta 356+00: Contour Stereonet from line mapping bedrock slope adjacent to the Seward Highway.

ROCK MAPPING DATA: SEWARD HWY MP 17-22.5
DATA POINTS COLLECTED SUMMER 2000



STA 376+00 to Sta 380+00: Stereonet of poles from line mapping bedrock slope adjacent to the Seward Highway. The trend of the Seward Highway is generally north/south.



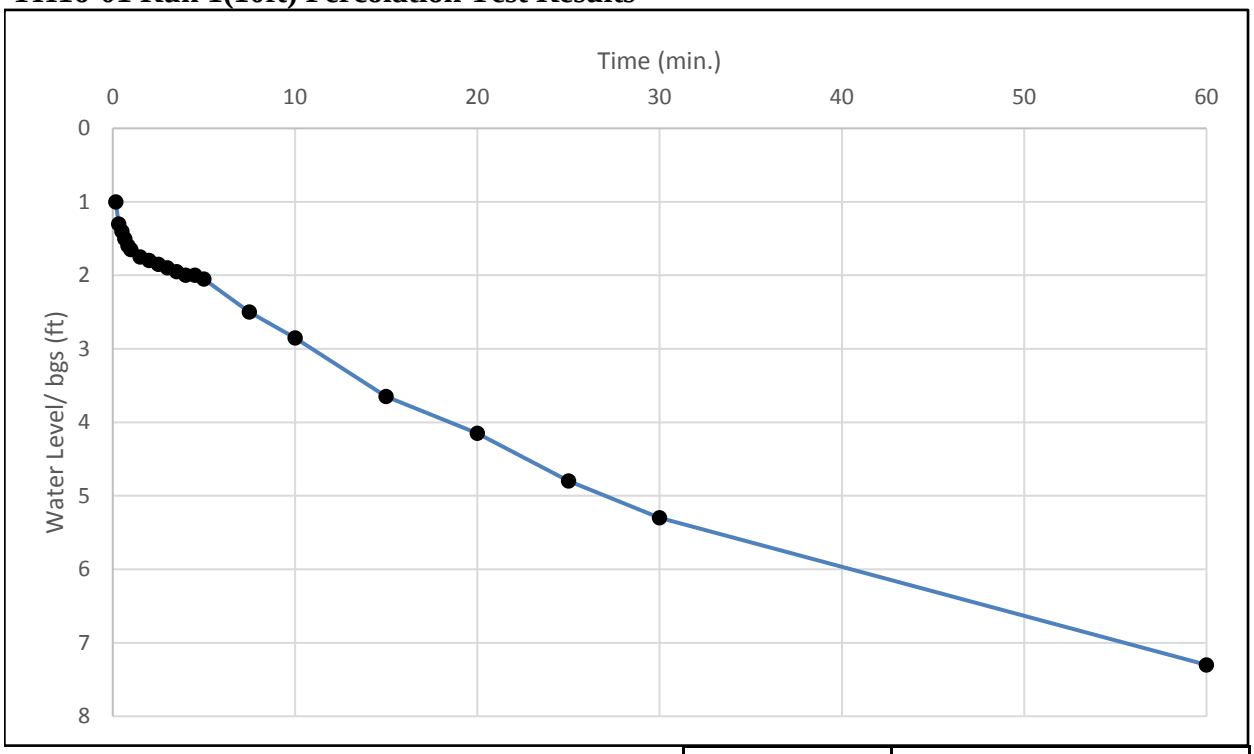
STA 376+00 to Sta 380+00: Contour Stereonet from line mapping bedrock slope adjacent to the Seward Highway.

APPENDIX F

Percolation Test Results and Sample Gradation Data

Seward Highway MP17-22

TH16-01 Run 1(10ft) Percolation Test Results

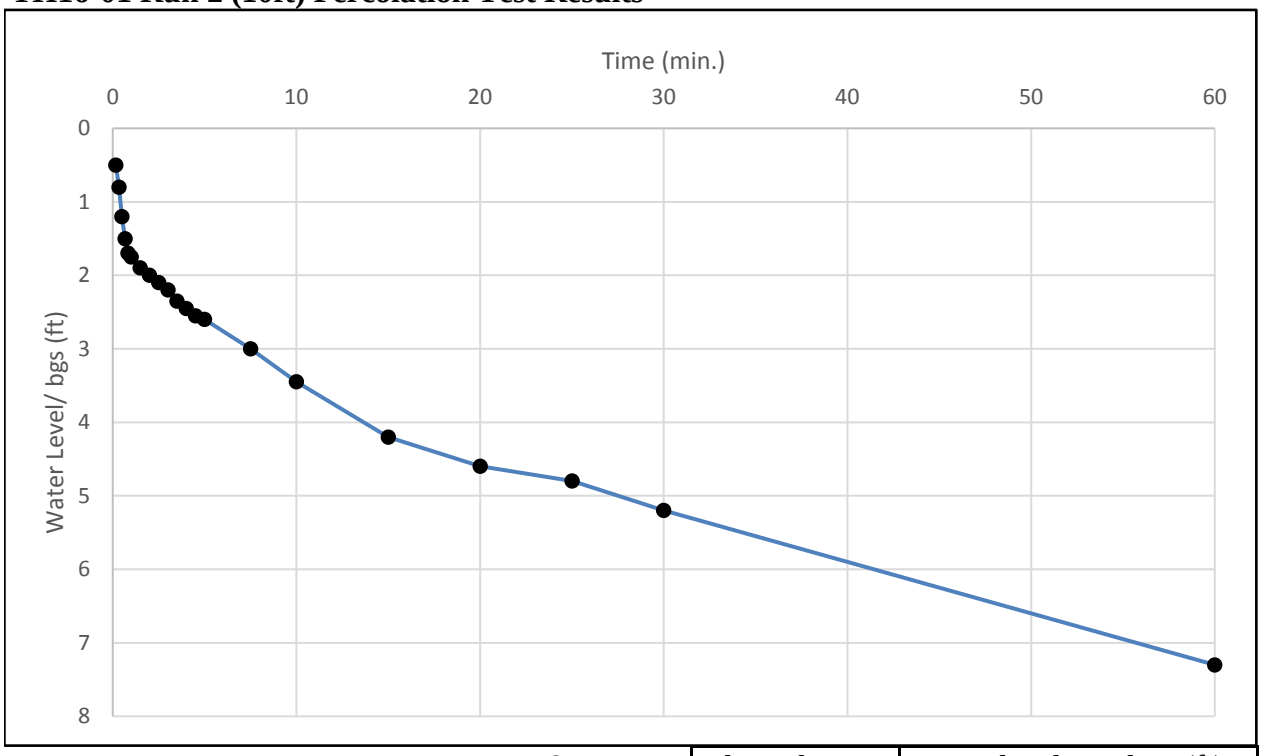


Date:	4/22/2016
TH ID:	TH16-01 Run 1(10ft)
Volume water added:	8 Gal
Length of PVC:	10ft
Depth of screen interval:	9-10ft
Initial water level reading:	>10

Elapsed Time	Water level Reading (ft)
10 sec	1
20 sec	1.3
30 sec	1.4
40 sec	1.5
50 sec	1.6
1 min	1.65
1.5 min	1.75
2 min	1.8
2.5 min	1.85
3 min	1.9
3.5 min	1.95
4 min	2
4.5 min	2
5 min	2.05
7.5 min	2.5
10 min	2.85
15 min	3.65
20 min	4.15
25 min	4.8
30 min	5.3
1 hr	7.3

Seward Highway MP17-22

TH16-01 Run 2 (10ft) Percolation Test Results

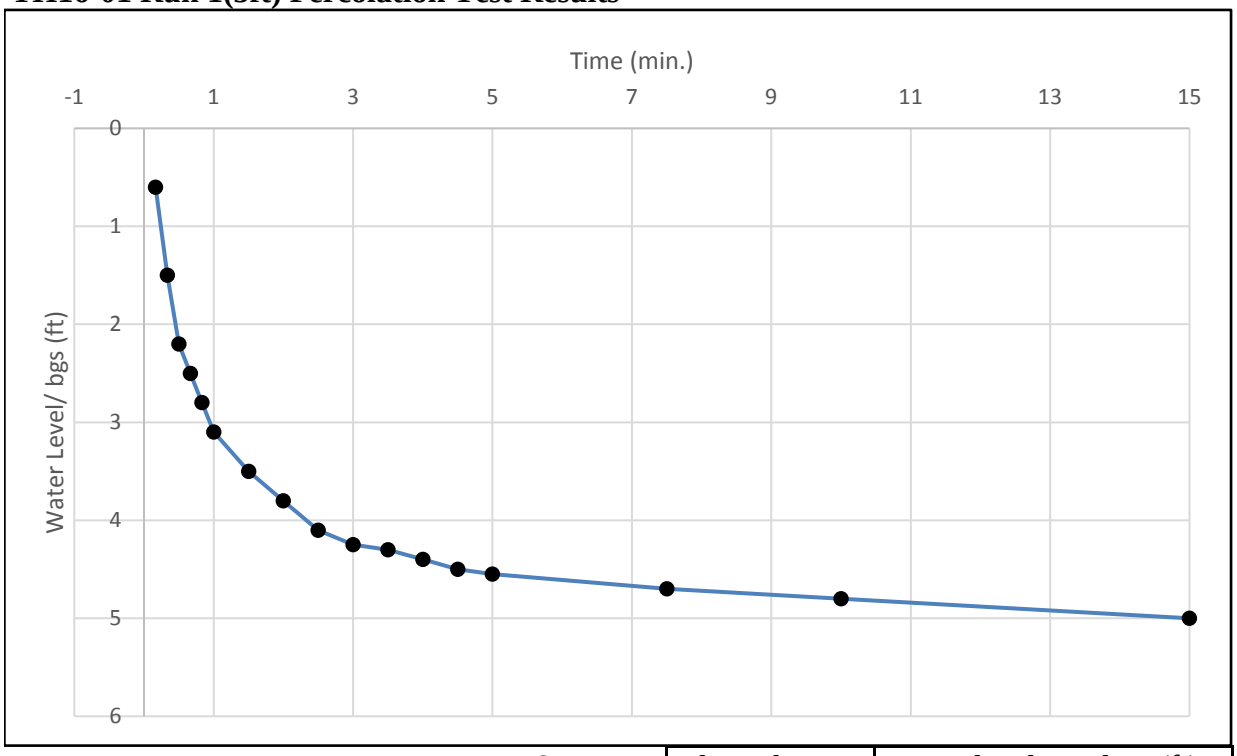


Date:	42482
TH ID:	TH16-01 Run 2 (10ft)
Volume water added:	5 Gal
Length of PVC:	10ft
Depth of screen interval:	9-10ft
Initial water level reading:	9.5ft

Elapsed Time	Water level Reading (ft)
10 sec	0.5
20 sec	0.8
30 sec	1.2
40 sec	1.5
50 sec	1.7
1 min	1.75
1.5 min	1.9
2 min	2
2.5 min	2.1
3 min	2.2
3.5 min	2.35
4 min	2.45
4.5 min	2.55
5 min	2.6
7.5 min	3
10 min	3.45
15 min	4.2
20 min	4.6
25 min	4.8
30 min	5.2
1 hr	7.3

Seward Highway MP17-22

TH16-01 Run 1(5ft) Percolation Test Results

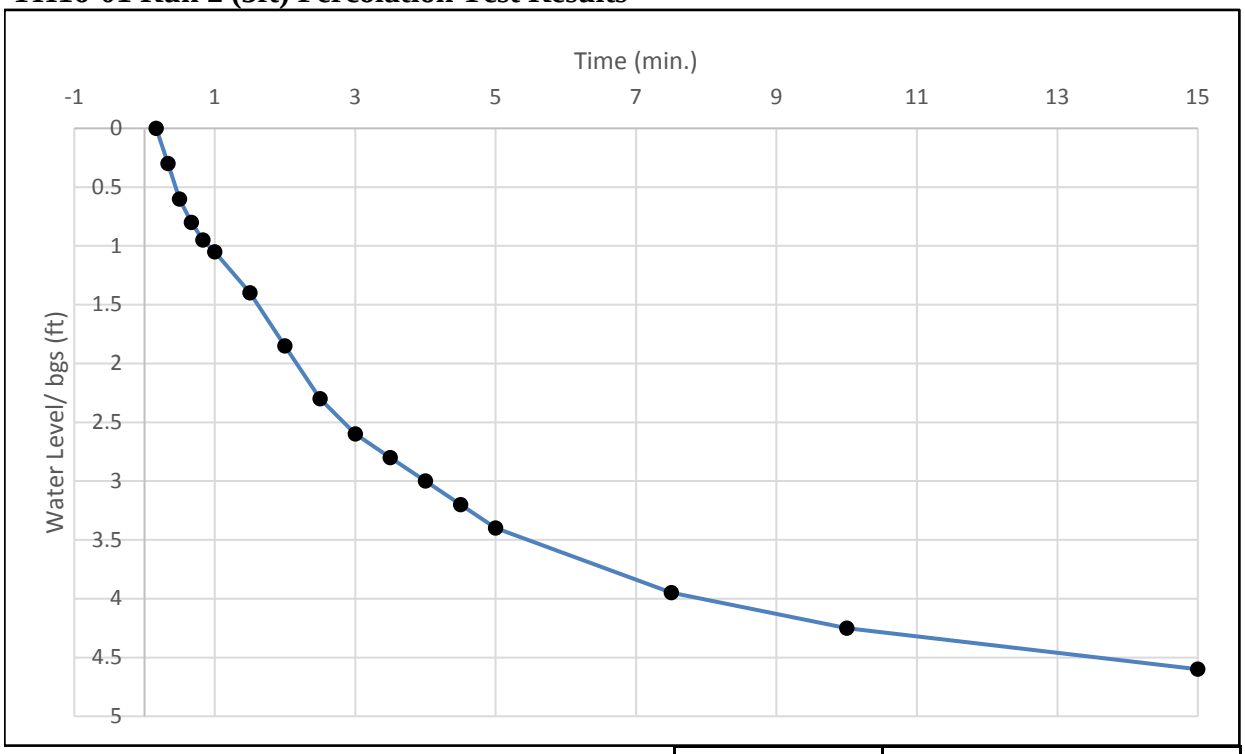


Date:	42482
TH ID:	TH16-01 Run 1(5ft)
Volume water added:	8 gal
Length of PVC:	5ft
Depth of screen interval:	4-5ft
Initial water level reading:	>5

Elapsed Time	Water level Reading (ft)
10 sec	0.6
20 sec	1.5
30 sec	2.2
40 sec	2.5
50 sec	2.8
1 min	3.1
1.5 min	3.5
2 min	3.8
2.5 min	4.1
3 min	4.25
3.5 min	4.3
4 min	4.4
4.5 min	4.5
5 min	4.55
7.5 min	4.7
10 min	4.8
15 min	5

Seward Highway MP17-22

TH16-01 Run 2 (5ft) Percolation Test Results

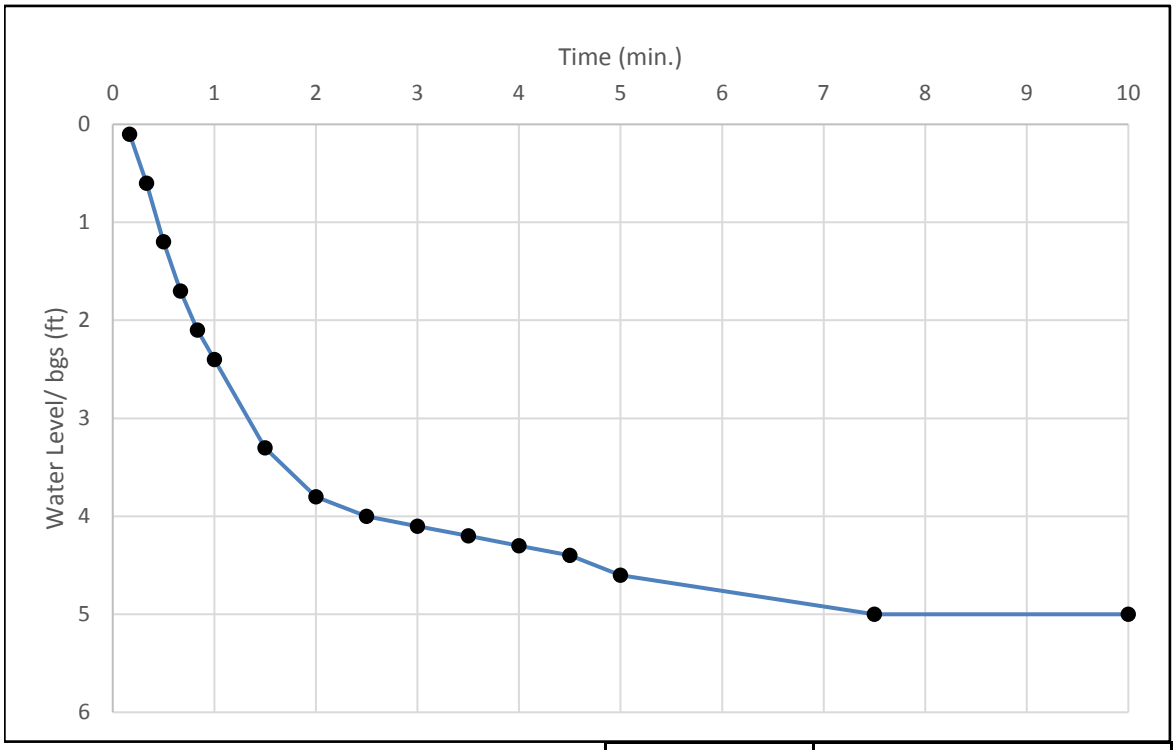


Date:	42482
TH ID:	TH16-01 Run 2 (5ft)
Volume water added:	16 gal
Length of PVC:	5ft
Depth of screen interval:	4-5ft
Initial water level reading:	>5

Elapsed Time	Water level Reading (ft)
10 sec	0
20 sec	0.3
30 sec	0.6
40 sec	0.8
50 sec	0.95
1 min	1.05
1.5 min	1.4
2 min	1.85
2.5 min	2.3
3 min	2.6
3.5 min	2.8
4 min	3
4.5 min	3.2
5 min	3.4
7.5 min	3.95
10 min	4.25
15 min	4.6

Seward Highway MP17-22

TH16-02 Run 1 Percolation Test Results

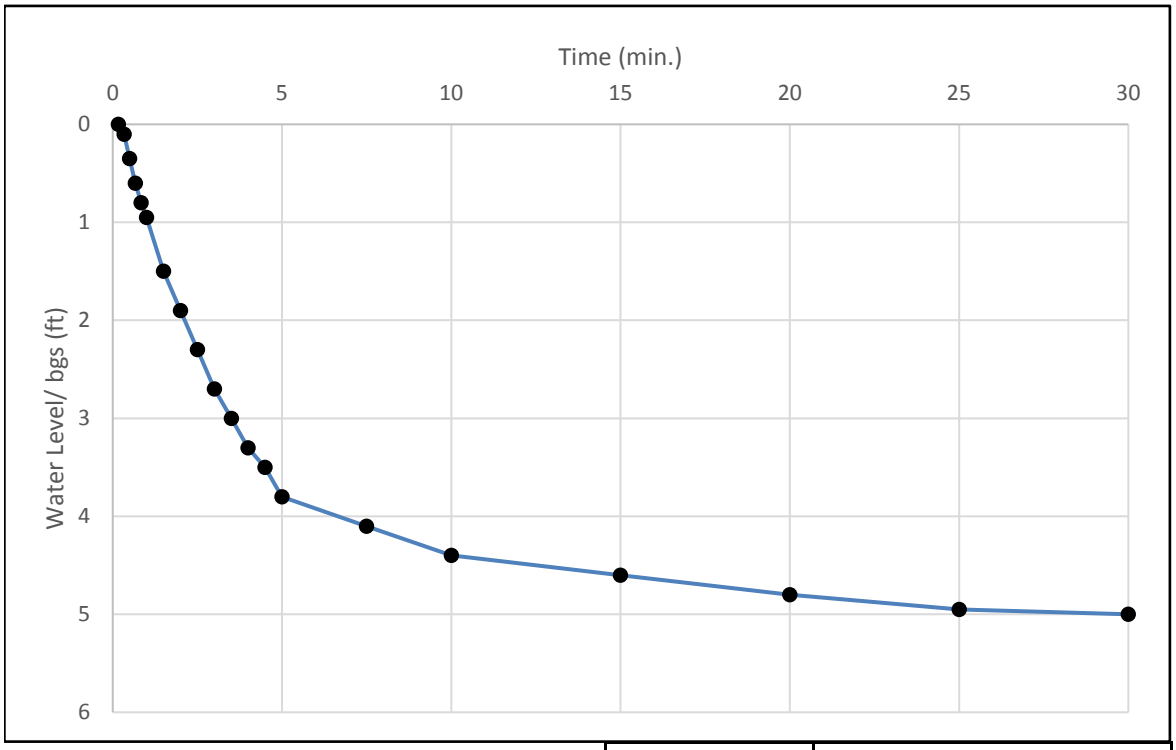


Date:	42482
TH ID:	TH16-02 Run 1
Volume water added:	8 gal
Length of PVC:	5ft
Depth of screen interval:	4-5ft
Initial water level reading:	>5

Elapsed Time	Water level Reading (ft)
10 sec	0.1
20 sec	0.6
30 sec	1.2
40 sec	1.7
50 sec	2.1
1 min	2.4
1.5 min	3.3
2 min	3.8
2.5 min	4
3 min	4.1
3.5 min	4.2
4 min	4.3
4.5 min	4.4
5 min	4.6
7.5 min	5
10 min	5

Seward Highway MP17-22

TH16-02 Run 2 Percolation Test Results

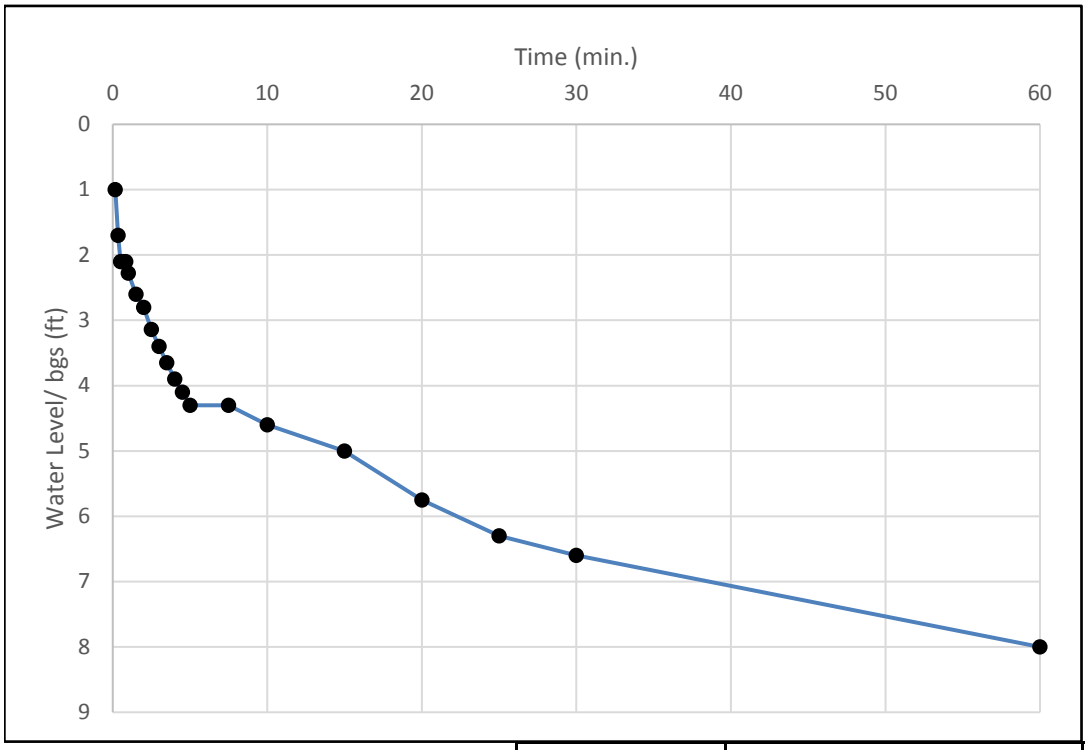


Date:	42482
TH ID:	TH16-02 Run 2
Volume water added:	6 gal
Length of PVC:	5ft
Depth of screen interval:	4-5ft
Initial water level reading:	>5

Elapsed Time	Water level Reading (ft)
10 sec	0
20 sec	0.1
30 sec	0.35
40 sec	0.6
50 sec	0.8
1 min	0.95
1.5 min	1.5
2 min	1.9
2.5 min	2.3
3 min	2.7
3.5 min	3
4 min	3.3
4.5 min	3.5
5 min	3.8
7.5 min	4.1
10 min	4.4
15 min	4.6
20 min	4.8
25 min	4.95
30 min	5

Seward Highway MP17-22

TH16-05 Percolation Test Results



Date:	42482
TH ID:	TH16-05
Volume water added:	8 gal
Length of PVC:	10ft
Depth of screen interval:	9-10ft
Initial water level reading:	>10

Elapsed Time	Water level Reading (ft)
10 sec	1
20 sec	1.7
30 sec	2.1
40 sec	2.1
50 sec	2.1
1 min	2.28
1.5 min	2.6
2 min	2.8
2.5 min	3.14
3 min	3.4
3.5 min	3.65
4 min	3.9
4.5 min	4.1
5 min	4.3
7.5 min	4.3
10 min	4.6
15 min	5
20 min	5.75
25 min	6.3
30 min	6.6
1 hr	8

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

Test Hole No. TH16-01

Sample No. FS02

USCS Soil Classification: Gravel with Silt and Sand (GP-GM)

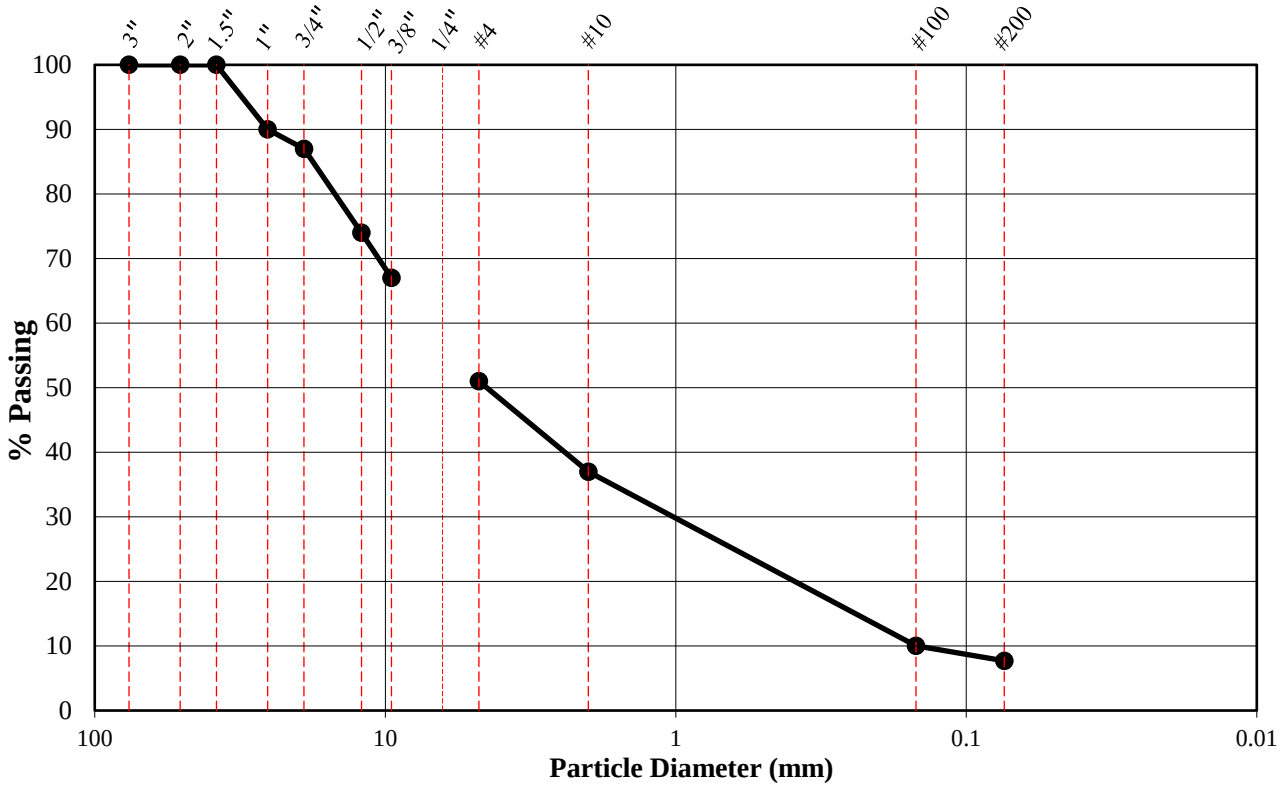
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	90
3/4"	19.05	87
1/2"	12.07	74
3/8"	9.525	67
1/4"	6.35	
#4	4.76	51
#10	2	37
#100	0.149	10
#200	0.074	7.7

Particle Distrubiton

Gravel	49%
Sand	43%
Silt/Clay	8%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities
Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

Test Hole No. TH16-10

Sample No. FS40

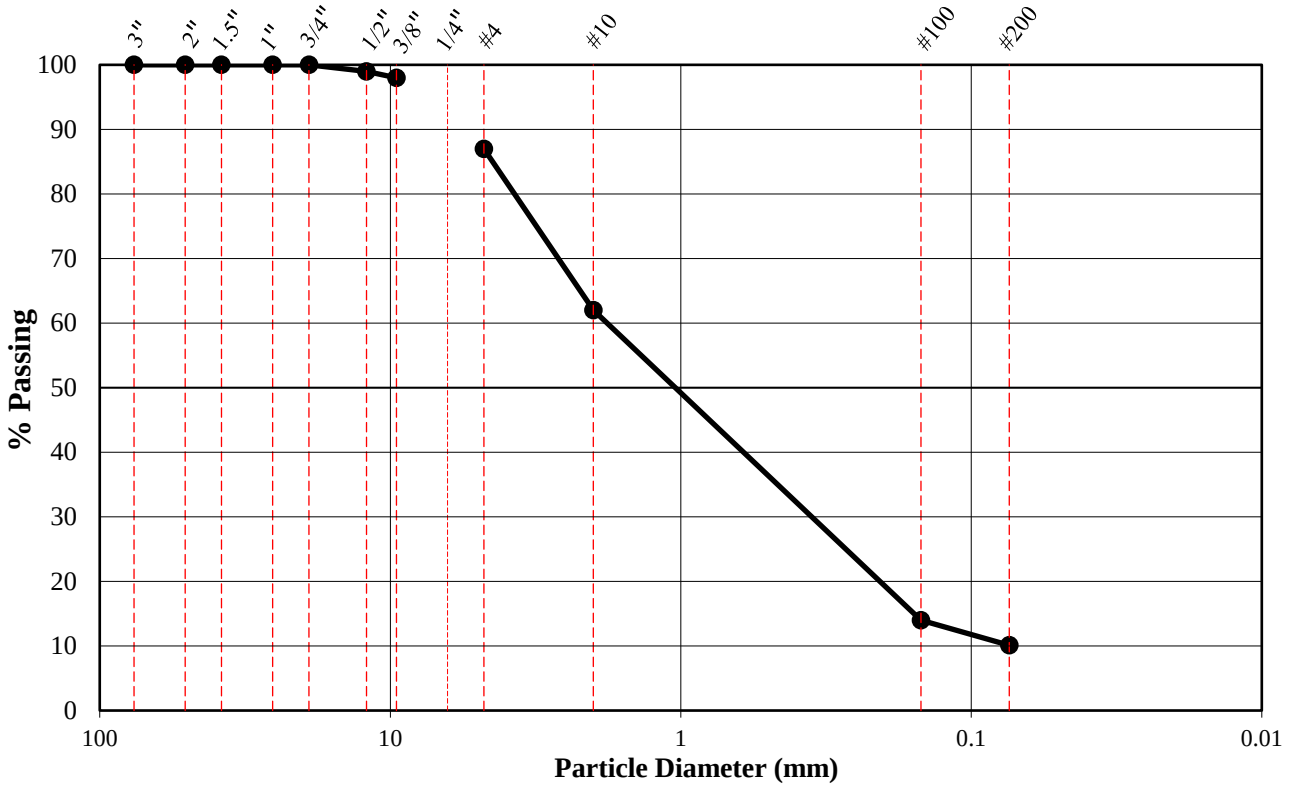
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	100
3/4"	19.05	100
1/2"	12.07	99
3/8"	9.525	98
1/4"	6.35	
#4	4.76	87
#10	2	62
#100	0.149	14
#200	0.074	10.1

Particle Distrubiton

Gravel	13%
Sand	77%
Silt/Clay	10%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities
Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

Test Hole No. TH16-10

Sample No. FS39

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

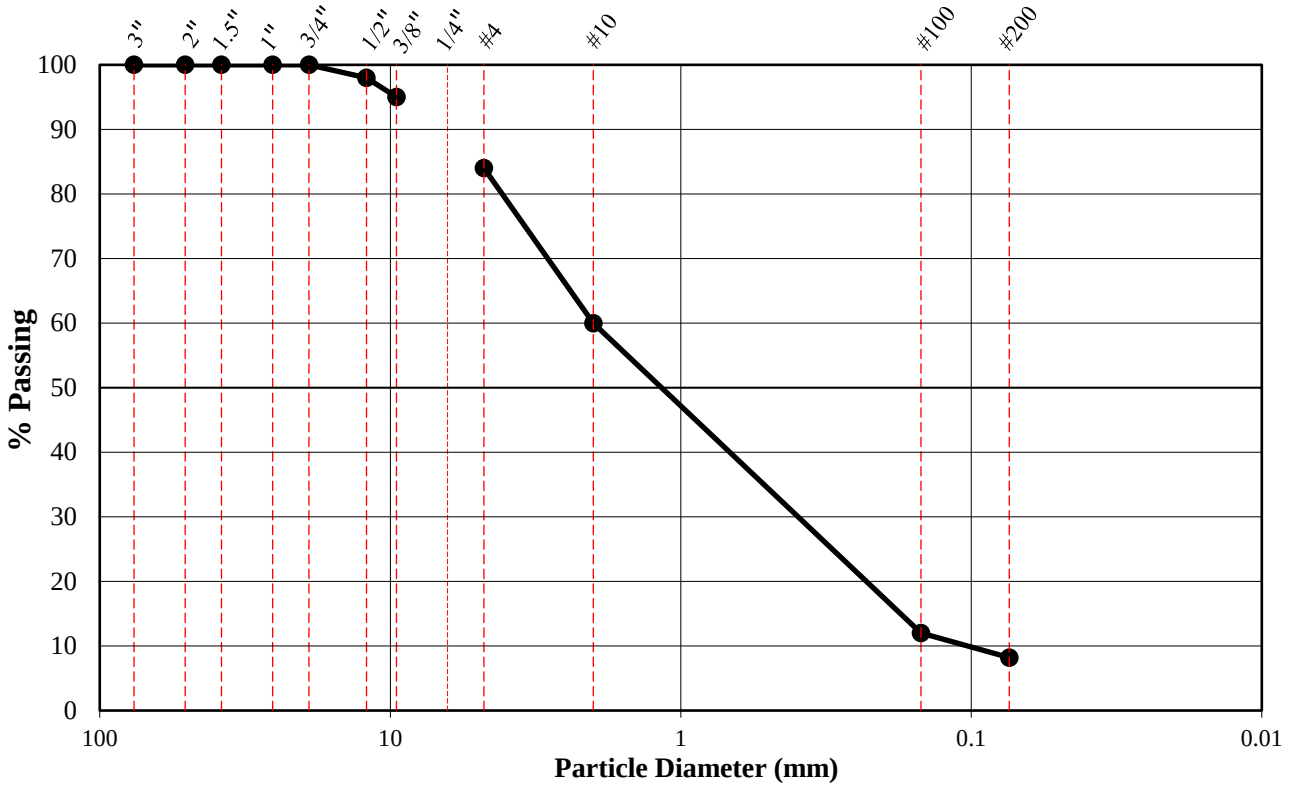
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	100
3/4"	19.05	100
1/2"	12.07	98
3/8"	9.525	95
1/4"	6.35	
#4	4.76	84
#10	2	60
#100	0.149	12
#200	0.074	8.2

Particle Distrubiton

Gravel	16%
Sand	76%
Silt/Clay	8%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities
Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

Test Hole No. TH16-10

Sample No. FS38

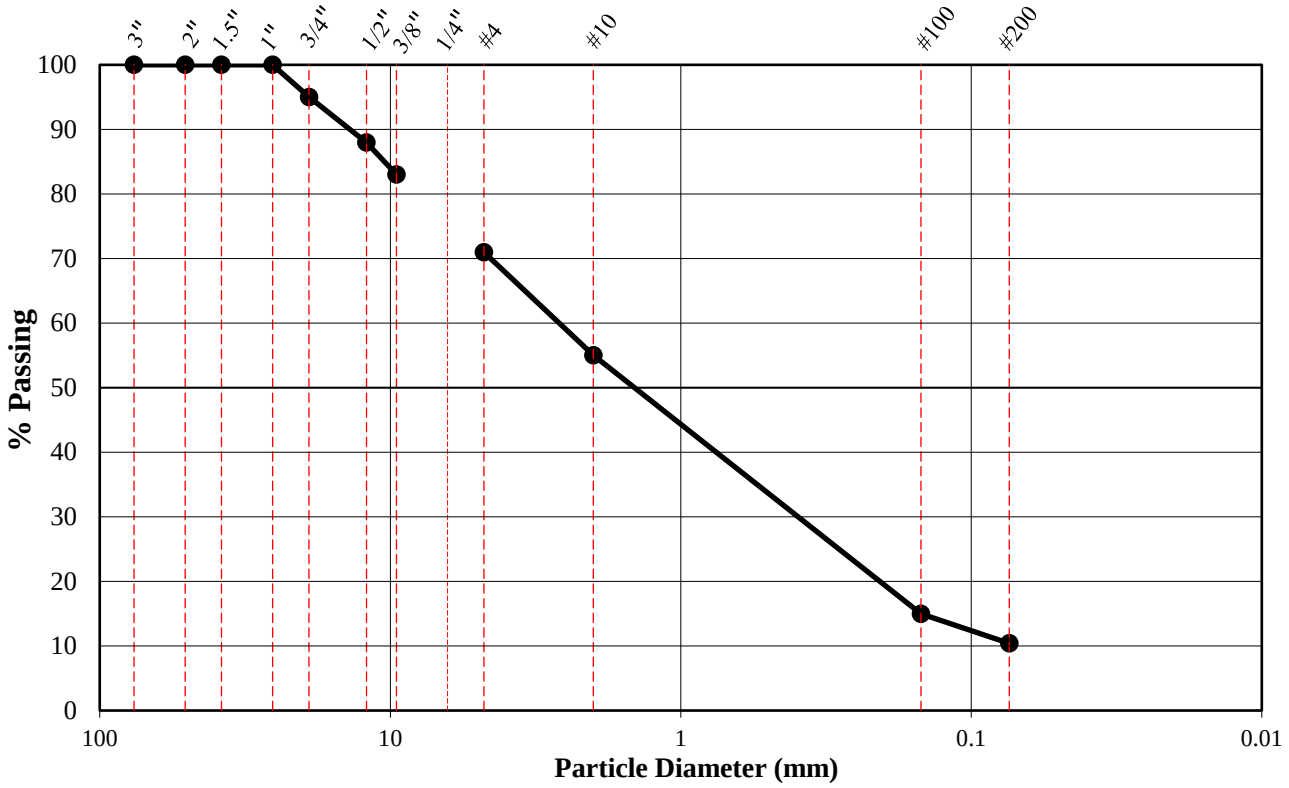
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	100
3/4"	19.05	95
1/2"	12.07	88
3/8"	9.525	83
1/4"	6.35	
#4	4.76	71
#10	2	55
#100	0.149	15
#200	0.074	10.4

Particle Distrubiton

Gravel	29%
Sand	61%
Silt/Clay	10%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities

Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

Test Hole No. TH16-10

Sample No. FS37

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

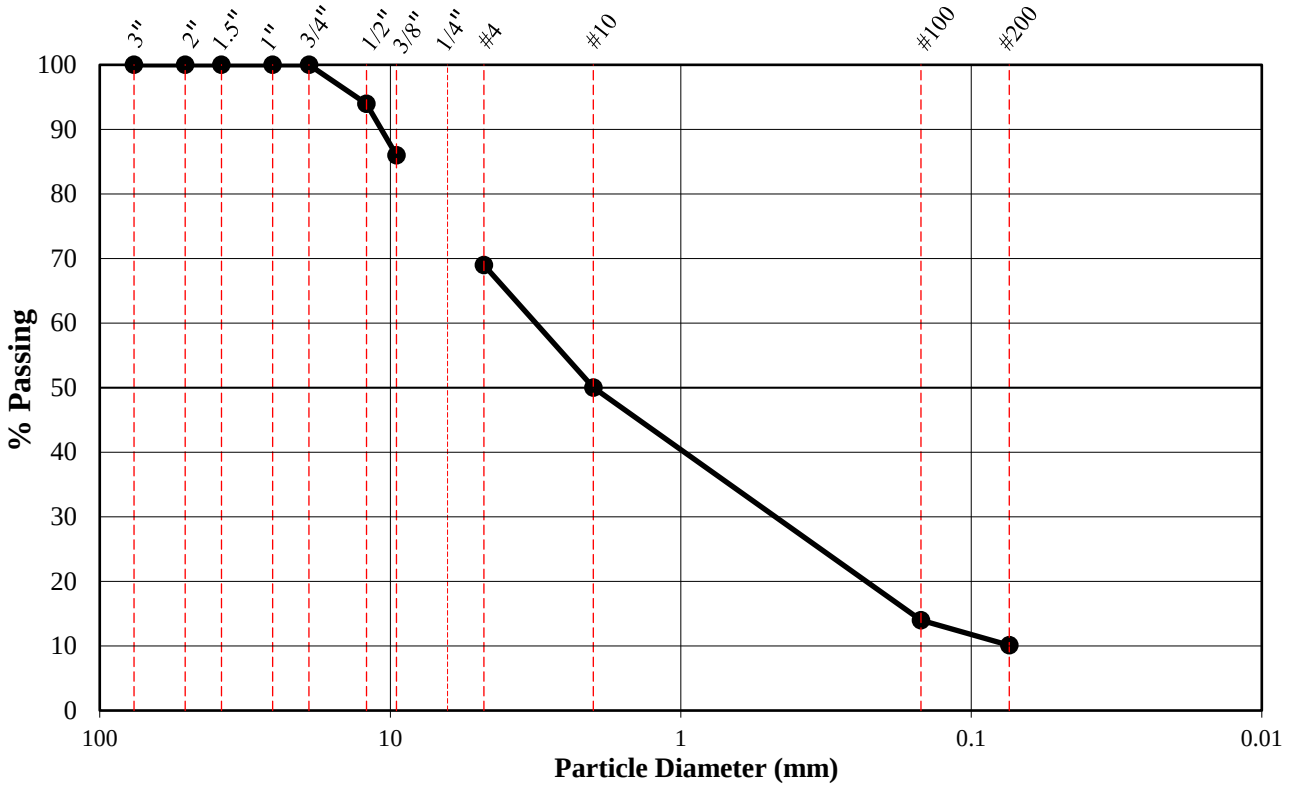
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	100
3/4"	19.05	100
1/2"	12.07	94
3/8"	9.525	86
1/4"	6.35	
#4	4.76	69
#10	2	50
#100	0.149	14
#200	0.074	10.1

Particle Distrubiton

Gravel	31%
Sand	59%
Silt/Clay	10%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities
Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Silty Sand with Gravel (SM)

Test Hole No. TH16-09

Sample No. FS36

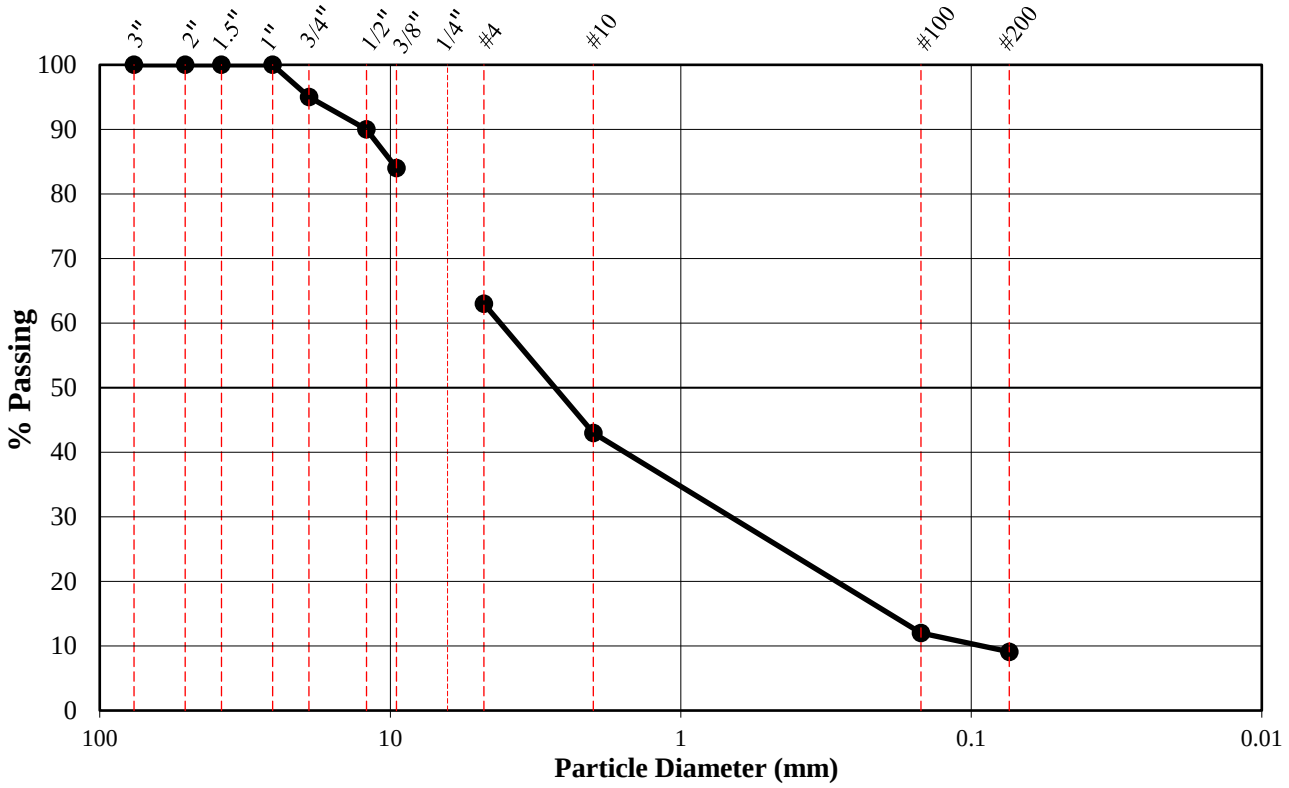
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	100
3/4"	19.05	95
1/2"	12.07	90
3/8"	9.525	84
1/4"	6.35	
#4	4.76	63
#10	2	43
#100	0.149	12
#200	0.074	9.1

Particle Distrubiton

Gravel	37%
Sand	54%
Silt/Clay	9%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities
Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Silty Sand with Gravel (SM)

Test Hole No. TH16-09

Sample No. FS35

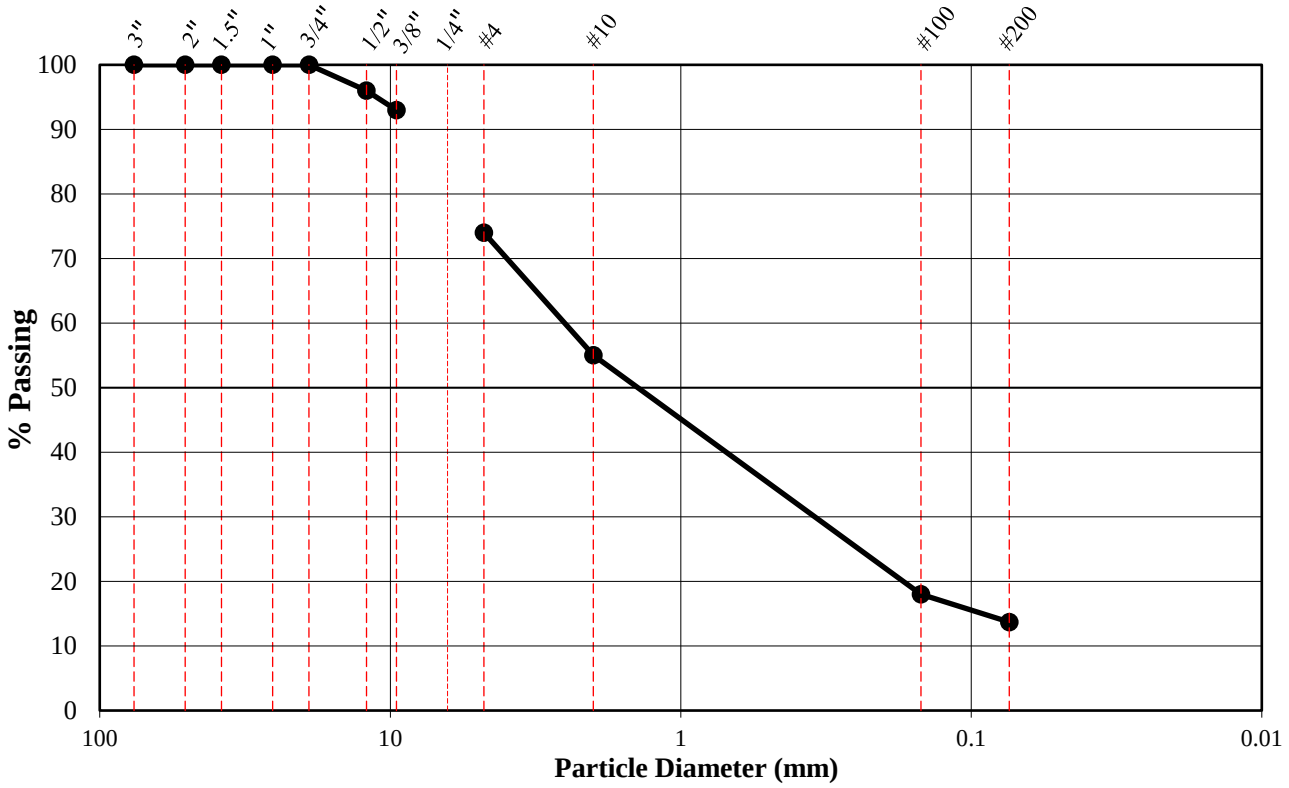
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	100
3/4"	19.05	100
1/2"	12.07	96
3/8"	9.525	93
1/4"	6.35	
#4	4.76	74
#10	2	55
#100	0.149	18
#200	0.074	13.7

Particle Distrubiton

Gravel	26%
Sand	60%
Silt/Clay	14%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities

Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

Test Hole No. TH16-08

Sample No. FS33

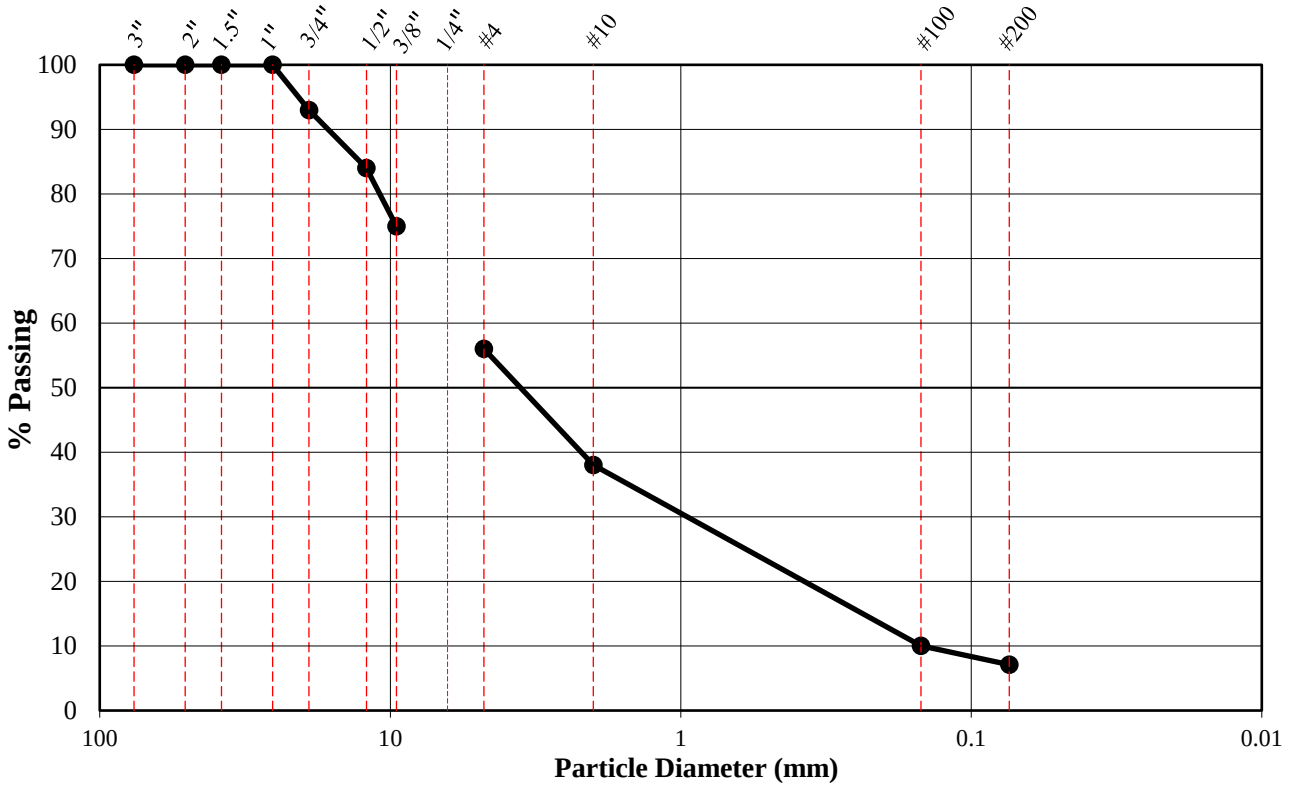
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	100
3/4"	19.05	93
1/2"	12.07	84
3/8"	9.525	75
1/4"	6.35	
#4	4.76	56
#10	2	38
#100	0.149	10
#200	0.074	7.1

Particle Distrubiton

Gravel	44%
Sand	49%
Silt/Clay	7%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities

Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Silty Sand with Gravel (SM)

Test Hole No. TH16-08

Sample No. FS32

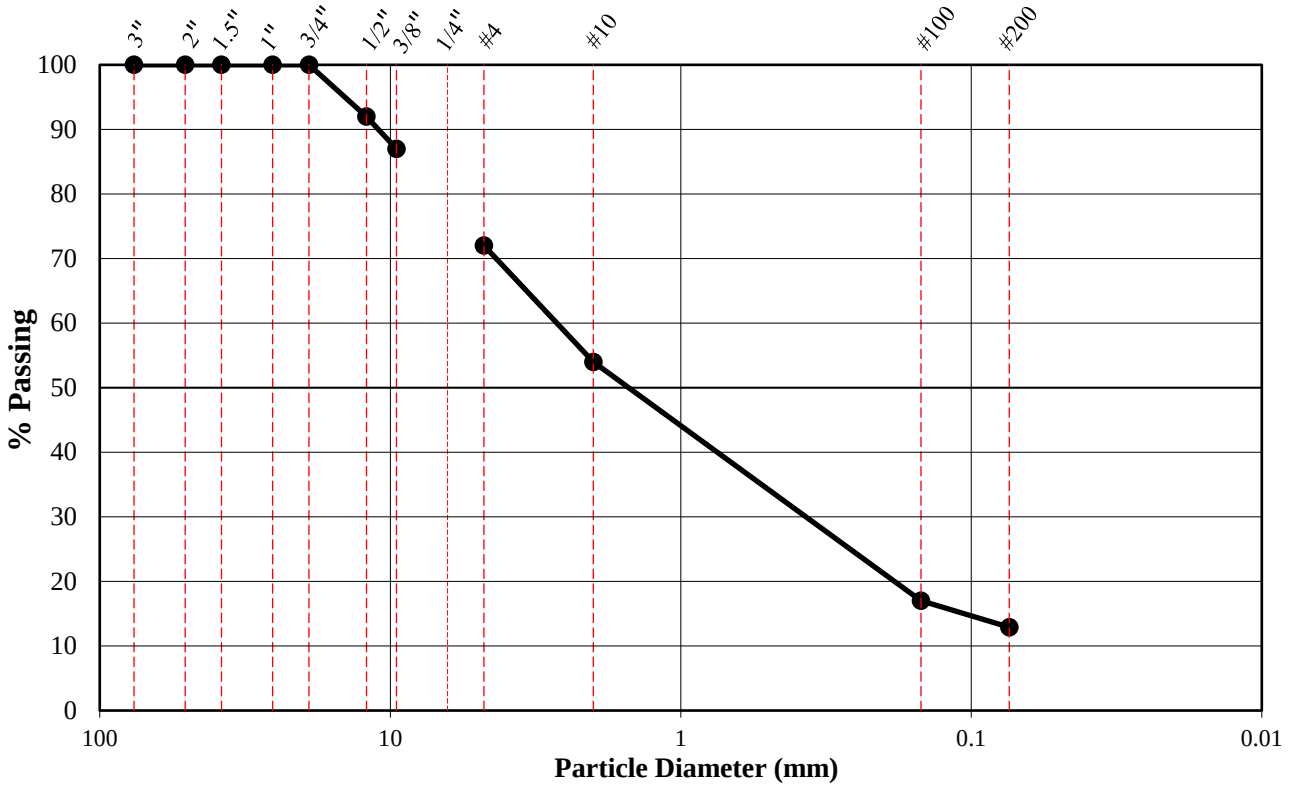
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	100
3/4"	19.05	100
1/2"	12.07	92
3/8"	9.525	87
1/4"	6.35	
#4	4.76	72
#10	2	54
#100	0.149	17
#200	0.074	12.9

Particle Distrubiton

Gravel	28%
Sand	59%
Silt/Clay	13%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities
Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

Test Hole No. TH16-07

Sample No. FS30

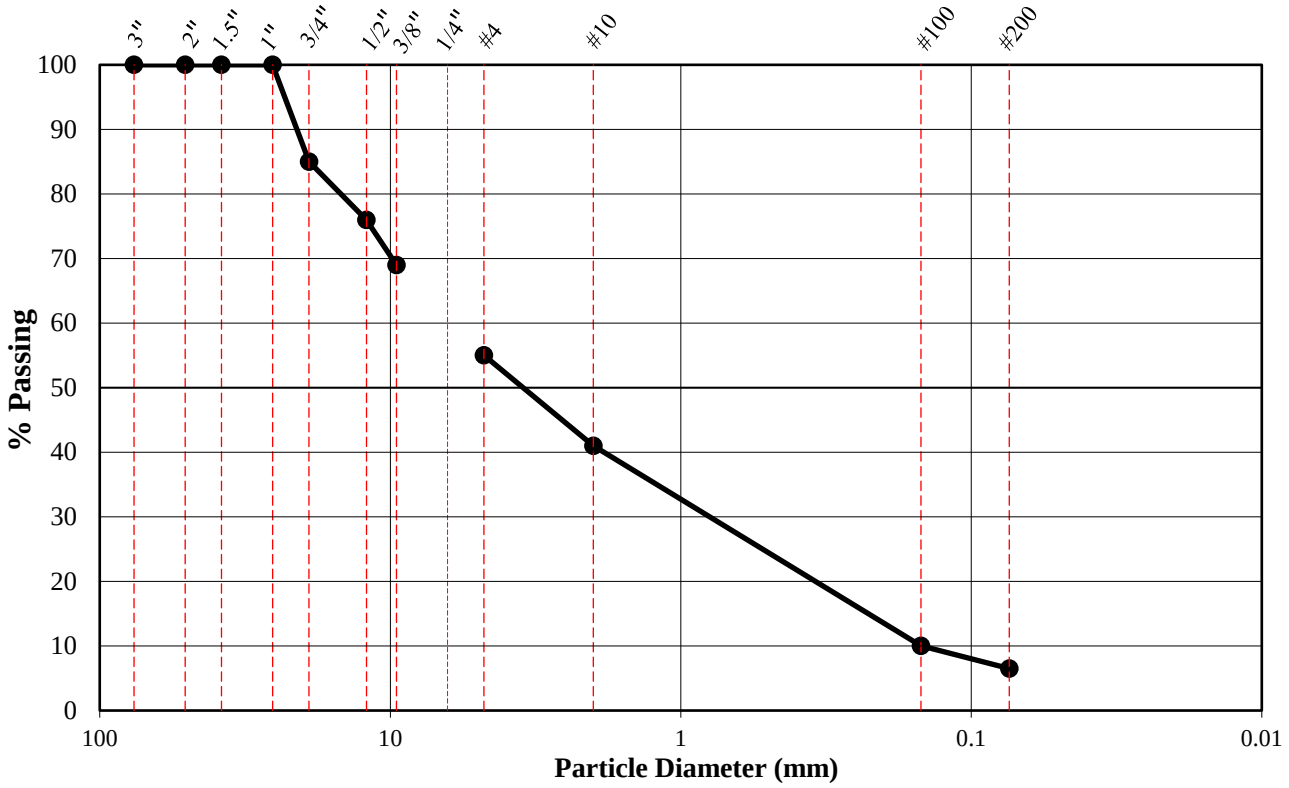
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	100
3/4"	19.05	85
1/2"	12.07	76
3/8"	9.525	69
1/4"	6.35	
#4	4.76	55
#10	2	41
#100	0.149	10
#200	0.074	6.5

Particle Distrubiton

Gravel	45%
Sand	48%
Silt/Clay	7%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities
Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

Test Hole No. TH16-06

Sample No. FS27

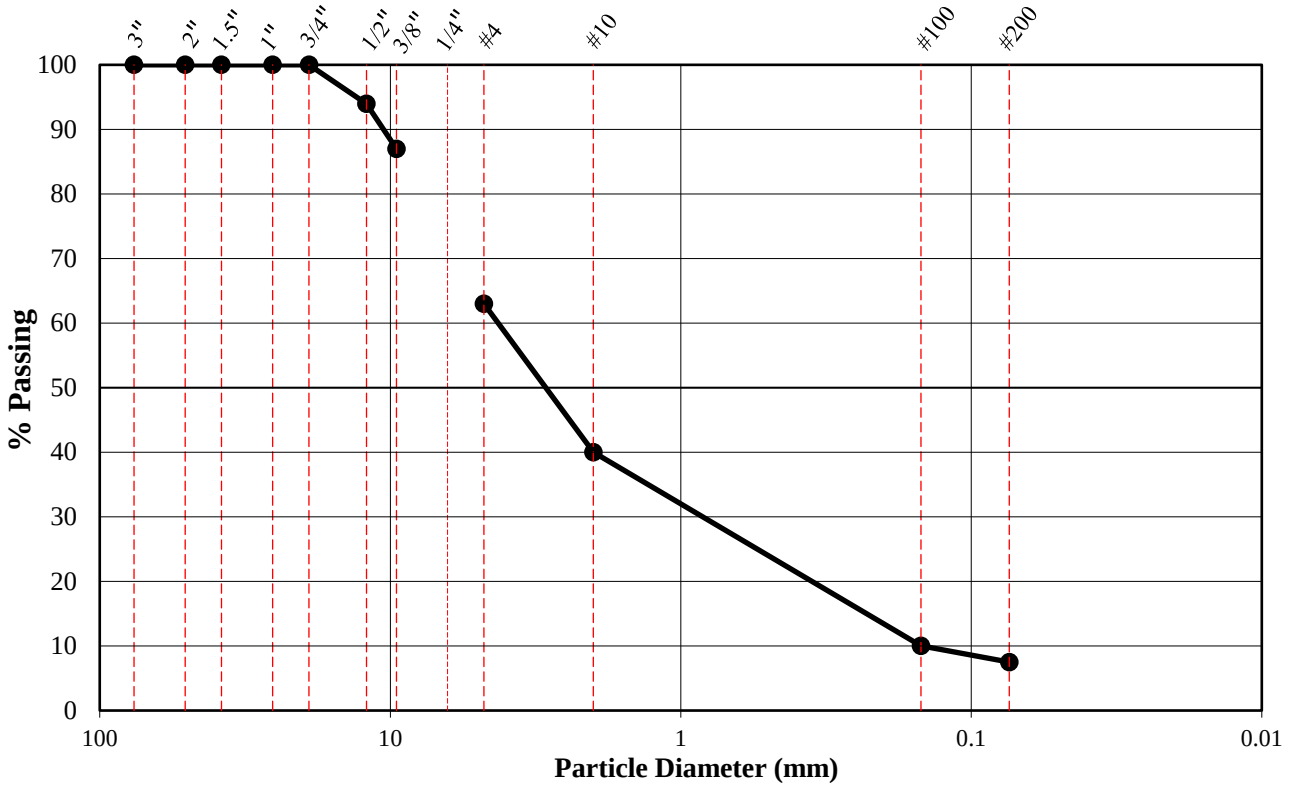
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	100
3/4"	19.05	100
1/2"	12.07	94
3/8"	9.525	87
1/4"	6.35	
#4	4.76	63
#10	2	40
#100	0.149	10
#200	0.074	7.5

Particle Distrubiton

Gravel	37%
Sand	55%
Silt/Clay	8%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities

Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

Test Hole No. TH16-06

Sample No. FS26

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

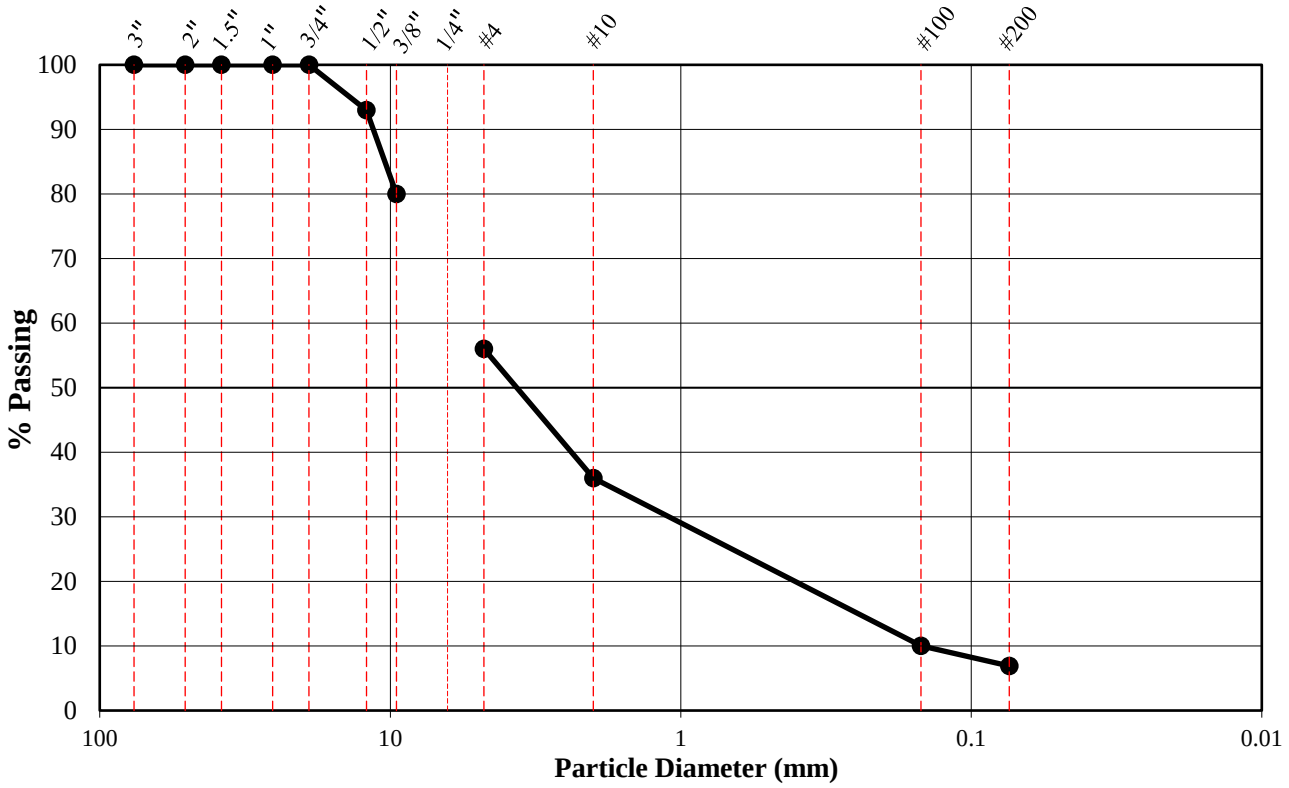
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	100
3/4"	19.05	100
1/2"	12.07	93
3/8"	9.525	80
1/4"	6.35	
#4	4.76	56
#10	2	36
#100	0.149	10
#200	0.074	6.9

Particle Distrubiton

Gravel	44%
Sand	49%
Silt/Clay	7%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities
Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

Test Hole No. TH16-06

Sample No. FS23 & FS24

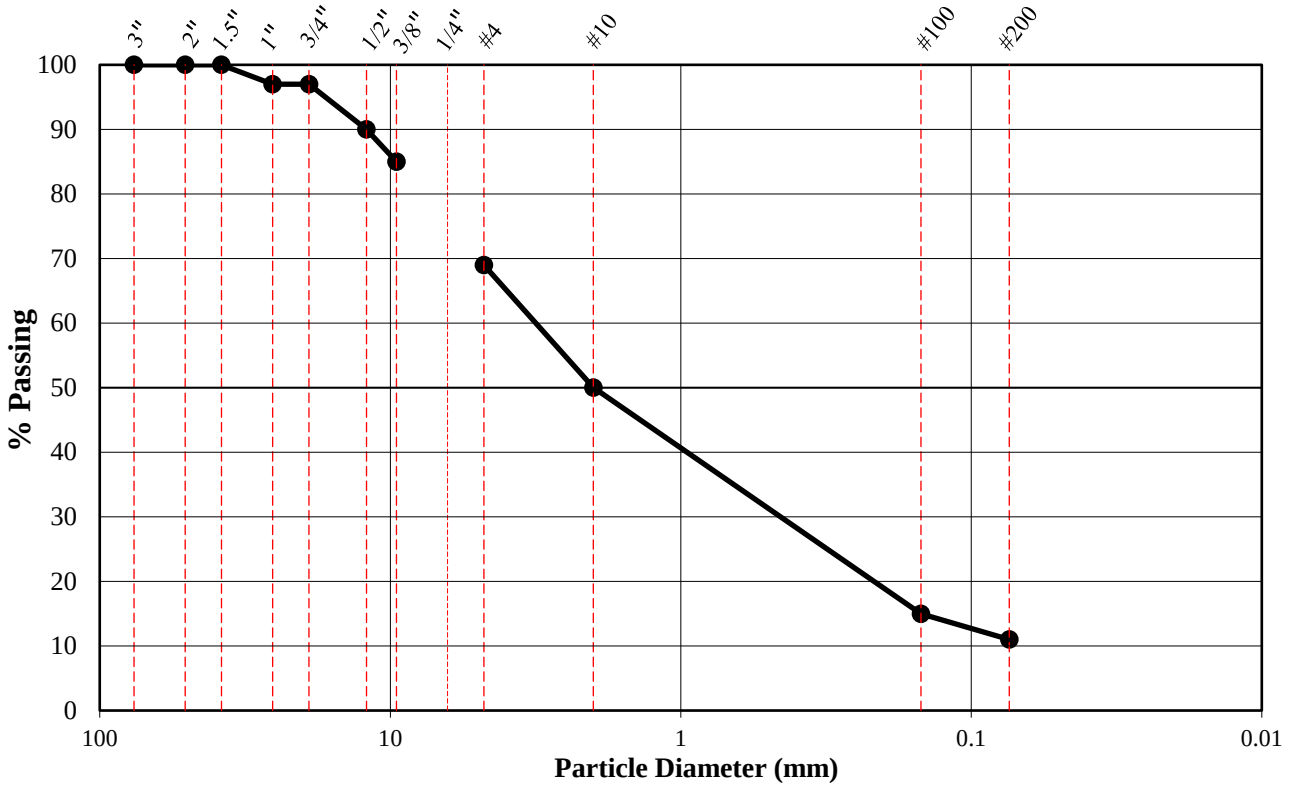
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	97
3/4"	19.05	97
1/2"	12.07	90
3/8"	9.525	85
1/4"	6.35	
#4	4.76	69
#10	2	50
#100	0.149	15
#200	0.074	11

Particle Distrubiton

Gravel	31%
Sand	58%
Silt/Clay	11%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities
Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

Test Hole No. TH16-06

Sample No. FS25

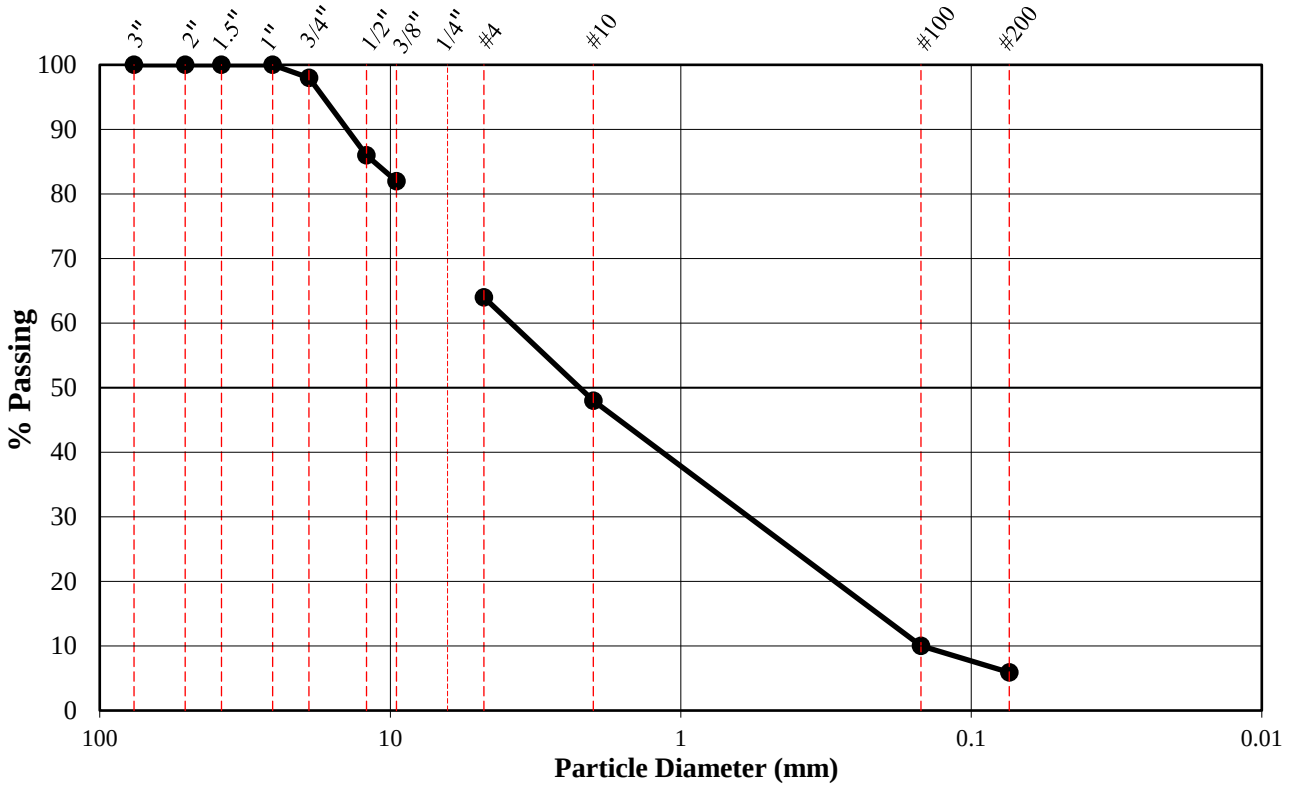
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	100
3/4"	19.05	98
1/2"	12.07	86
3/8"	9.525	82
1/4"	6.35	
#4	4.76	64
#10	2	48
#100	0.149	10
#200	0.074	5.9

Particle Distrubiton

Gravel	36%
Sand	58%
Silt/Clay	6%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities

Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

Test Hole No. TH16-05

Sample No. FS21

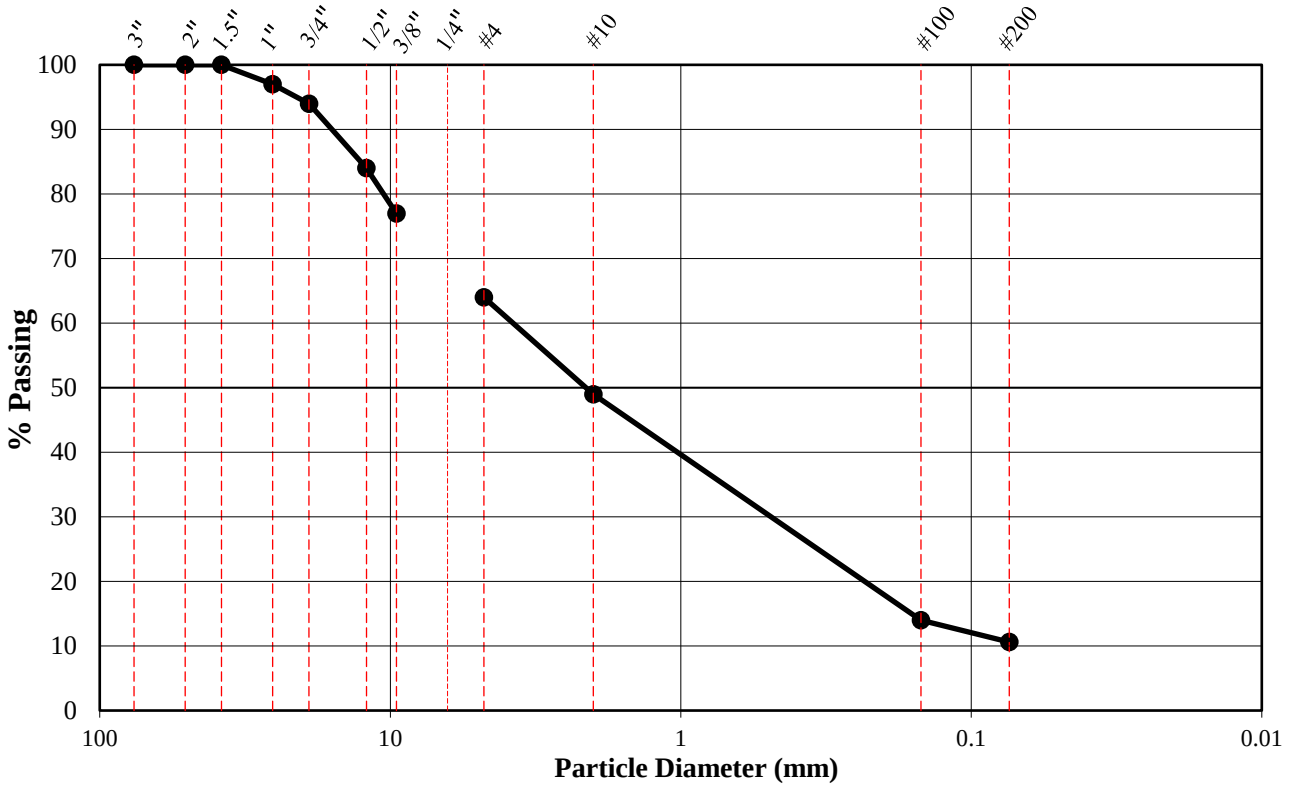
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	97
3/4"	19.05	94
1/2"	12.07	84
3/8"	9.525	77
1/4"	6.35	
#4	4.76	64
#10	2	49
#100	0.149	14
#200	0.074	10.6

Particle Distrubiton

Gravel	36%
Sand	53%
Silt/Clay	11%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities

Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

Test Hole No. TH16-04

Sample No. FS16 & FS17

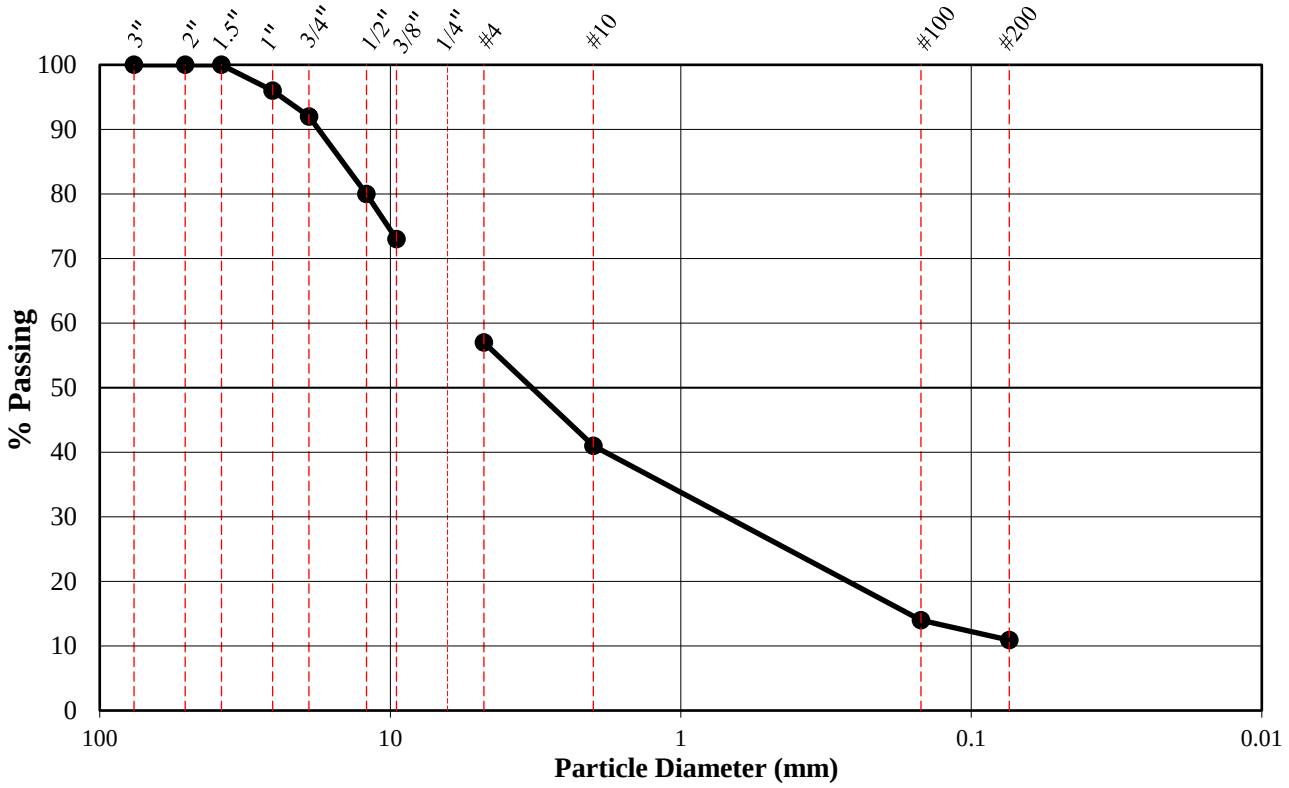
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	96
3/4"	19.05	92
1/2"	12.07	80
3/8"	9.525	73
1/4"	6.35	
#4	4.76	57
#10	2	41
#100	0.149	14
#200	0.074	10.9

Particle Distrubiton

Gravel	43%
Sand	46%
Silt/Clay	11%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities

Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

Test Hole No. TH16-03

Sample No. FS13

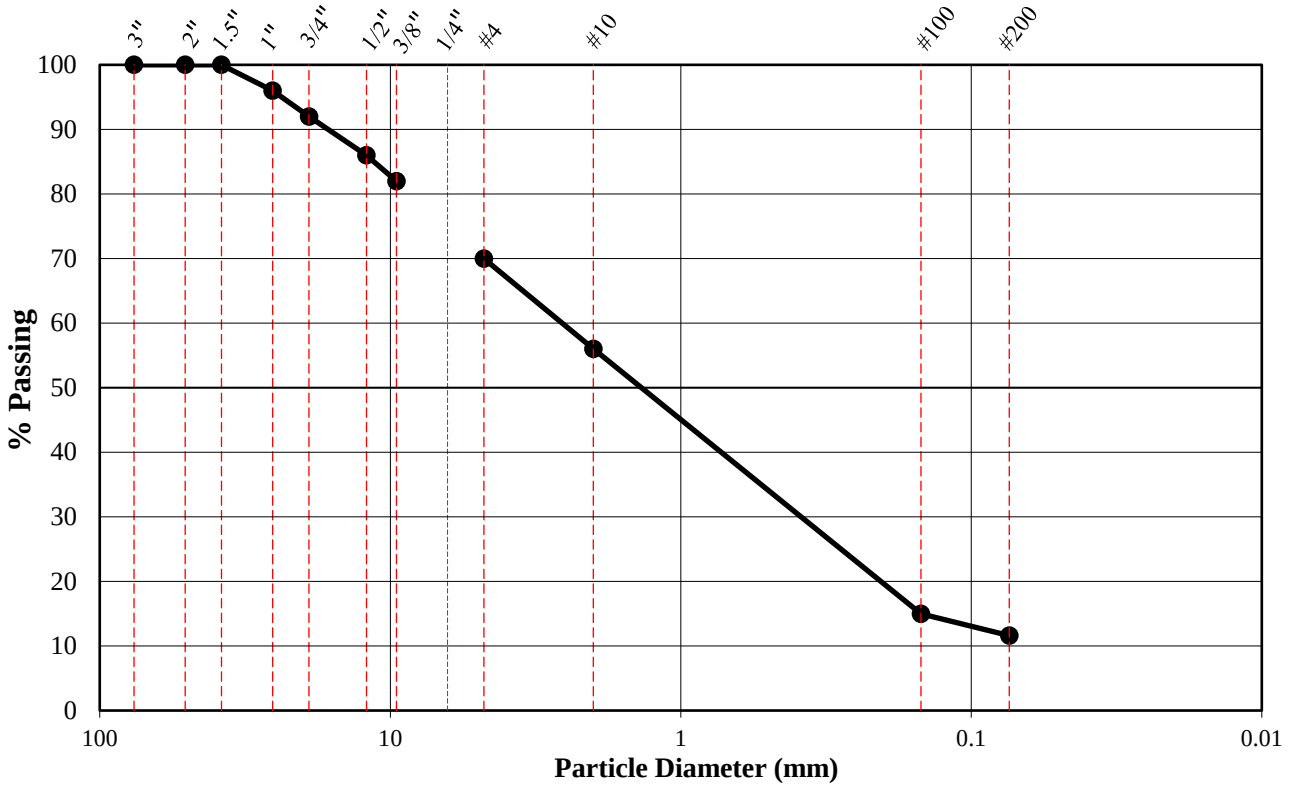
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	96
3/4"	19.05	92
1/2"	12.07	86
3/8"	9.525	82
1/4"	6.35	
#4	4.76	70
#10	2	56
#100	0.149	15
#200	0.074	11.6

Particle Distrubiton

Gravel	30%
Sand	58%
Silt/Clay	12%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities
Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Silty Sand with Gravel (SM)

Test Hole No. TH16-02

Sample No. FS10

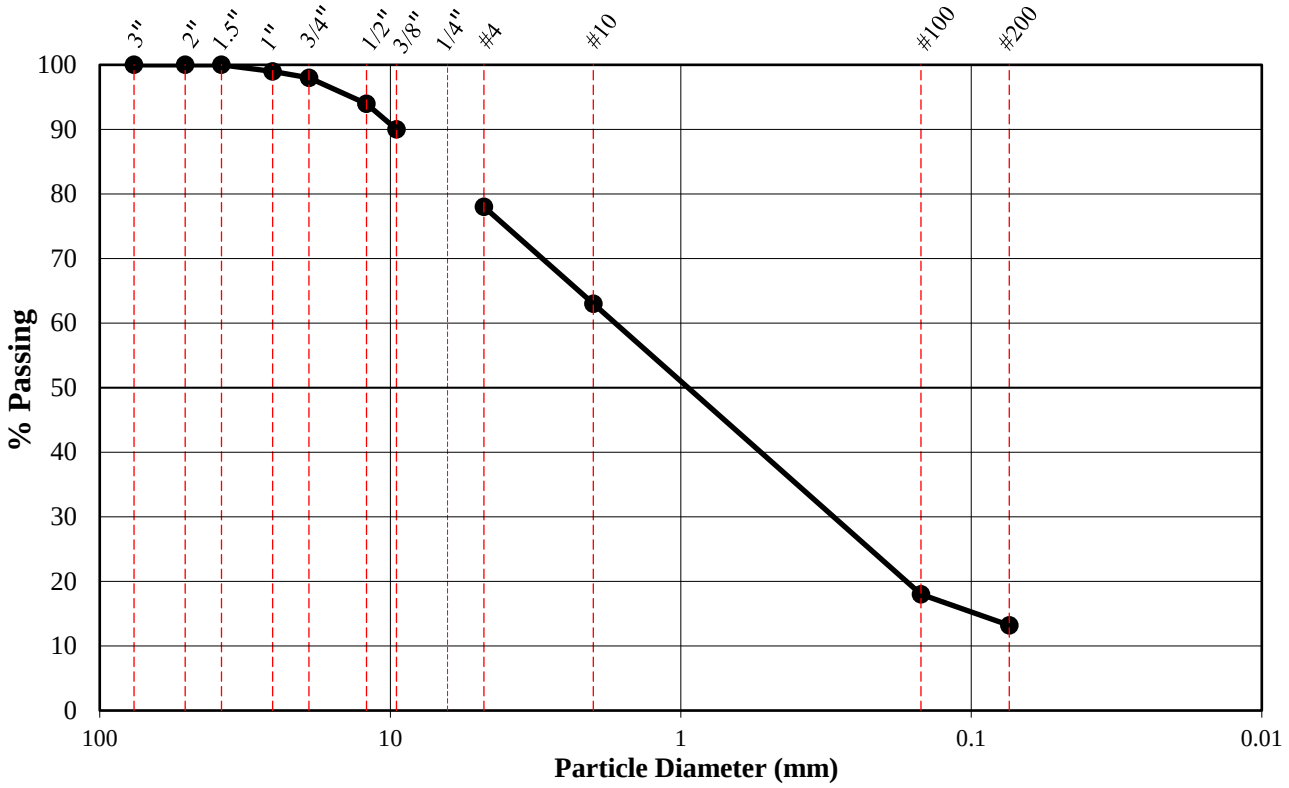
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	99
3/4"	19.05	98
1/2"	12.07	94
3/8"	9.525	90
1/4"	6.35	
#4	4.76	78
#10	2	63
#100	0.149	18
#200	0.074	13.2

Particle Distrubiton

Gravel	22%
Sand	65%
Silt/Clay	13%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities

Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Silty Sand with Gravel (SM)

Test Hole No. TH16-02

Sample No. FS09

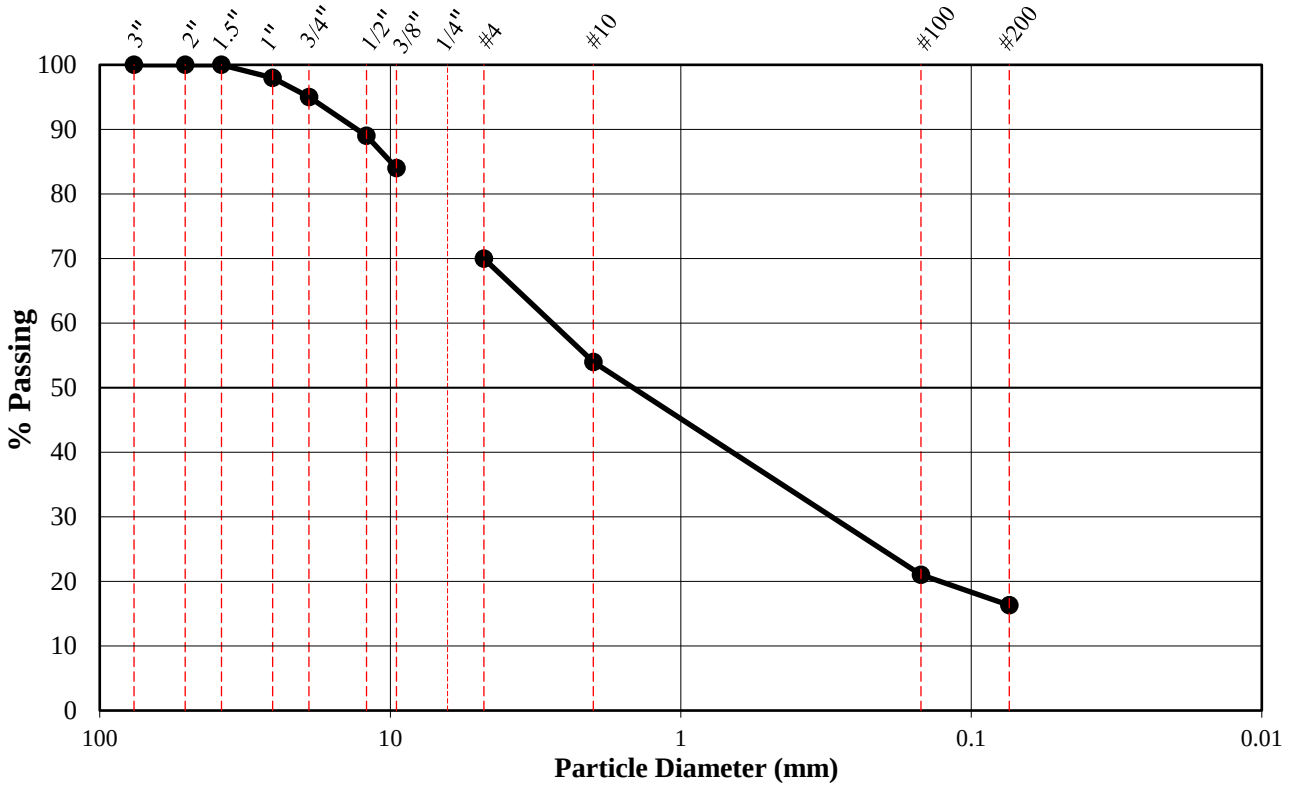
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	98
3/4"	19.05	95
1/2"	12.07	89
3/8"	9.525	84
1/4"	6.35	
#4	4.76	70
#10	2	54
#100	0.149	21
#200	0.074	16.3

Particle Distrubiton

Gravel	30%
Sand	54%
Silt/Clay	16%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities

Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Silty Gravel with Sand (GM)

Test Hole No. TH16-02

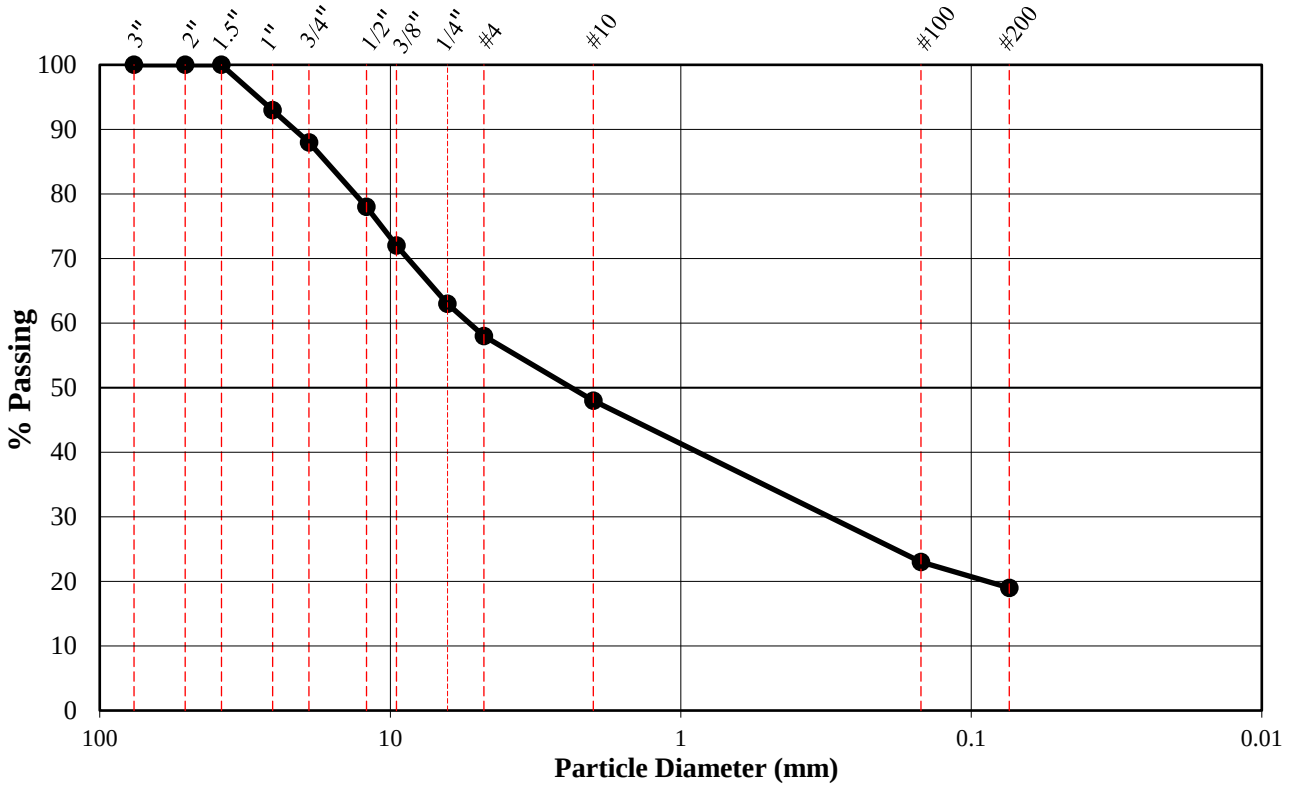
Sample No. FS08

Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	93
3/4"	19.05	88
1/2"	12.07	78
3/8"	9.525	72
1/4"	6.35	63
#4	4.76	58
#10	2	48
#100	0.149	23
#200	0.074	19

Particle Distrubiton

Gravel	42%
Sand	39%
Silt/Clay	19%

Additional Information



Alaska Department of Transportation & Public Facilities
Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

Test Hole No. TH16-02

Sample No. FS07

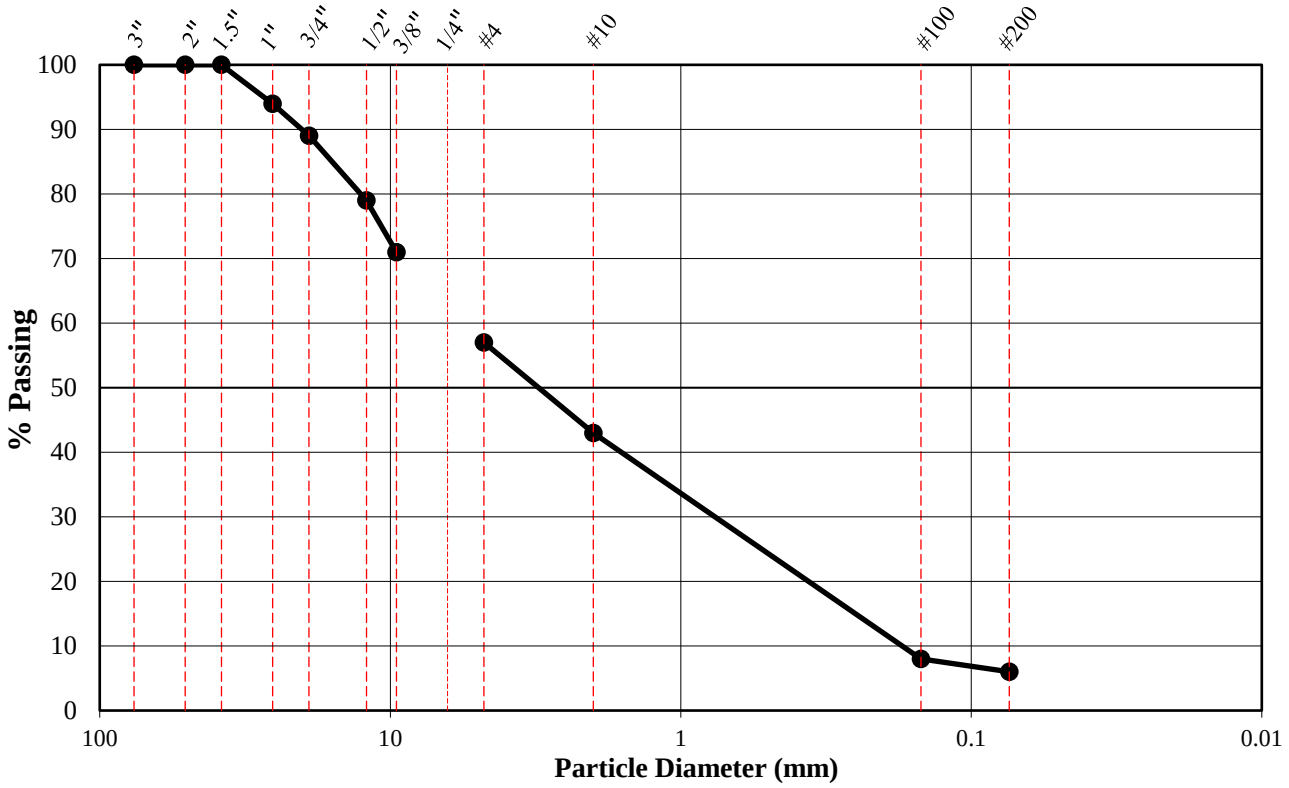
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	94
3/4"	19.05	89
1/2"	12.07	79
3/8"	9.525	71
1/4"	6.35	
#4	4.76	57
#10	2	43
#100	0.149	8
#200	0.074	6

Particle Distrubiton

Gravel	43%
Sand	51%
Silt/Clay	6%

Additional Information

1/4" not screened for this sample



Alaska Department of Transportation & Public Facilities

Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Silty Sand with Gravel (SM)

Test Hole No. TH16-01

Sample No. FS05

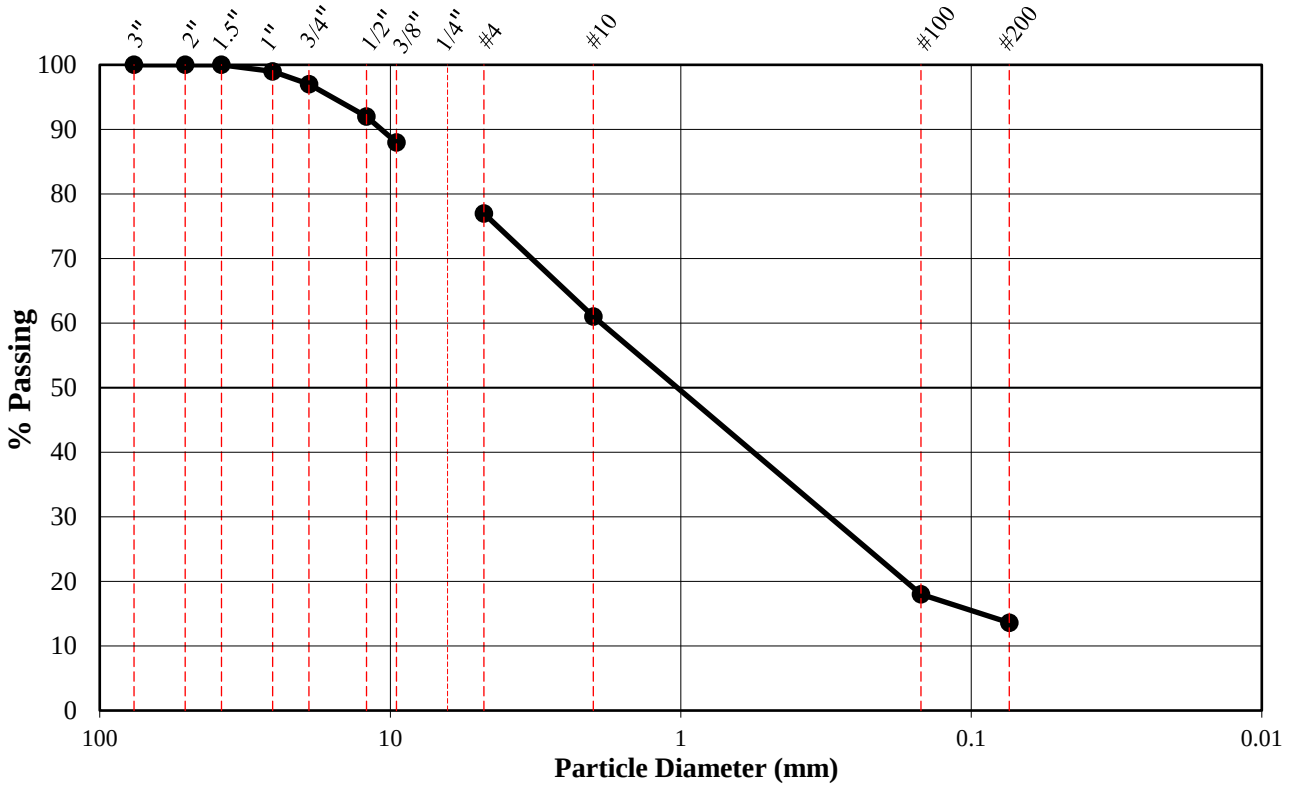
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	99
3/4"	19.05	97
1/2"	12.07	92
3/8"	9.525	88
1/4"	6.35	
#4	4.76	77
#10	2	61
#100	0.149	18
#200	0.074	13.6

Particle Distrubiton

Gravel	23%
Sand	63%
Silt/Clay	14%

Additional Information

1/4" not screened for this sample



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Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Silty Sand with Gravel (SM)

Test Hole No. TH16-01

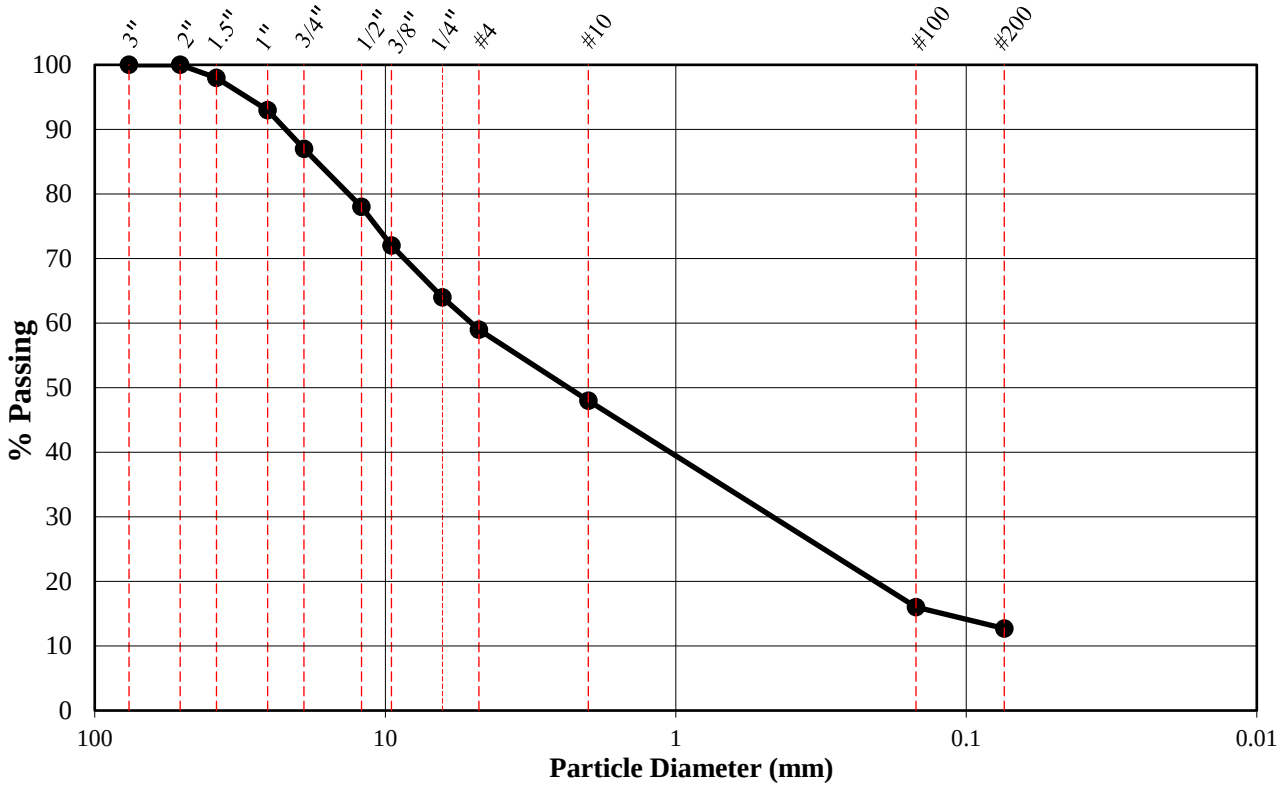
Sample No. FS04

Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	98
1"	25.4	93
3/4"	19.05	87
1/2"	12.07	78
3/8"	9.525	72
1/4"	6.35	64
#4	4.76	59
#10	2	48
#100	0.149	16
#200	0.074	12.7

Particle Distrubiton

Gravel	41%
Sand	46%
Silt/Clay	13%

Additional Information



Alaska Department of Transportation & Public Facilities
Central Region Materials

Sieve Analysis Data Sheet

AASHTO T27 & T11

Project Name: Seward Highway Shoulder Widening MP 17-22

Project No. 53610

USCS Soil Classification: Sand with Silt and Gravel (SP-SM)

Test Hole No. TH16-01

Sample No. FS03

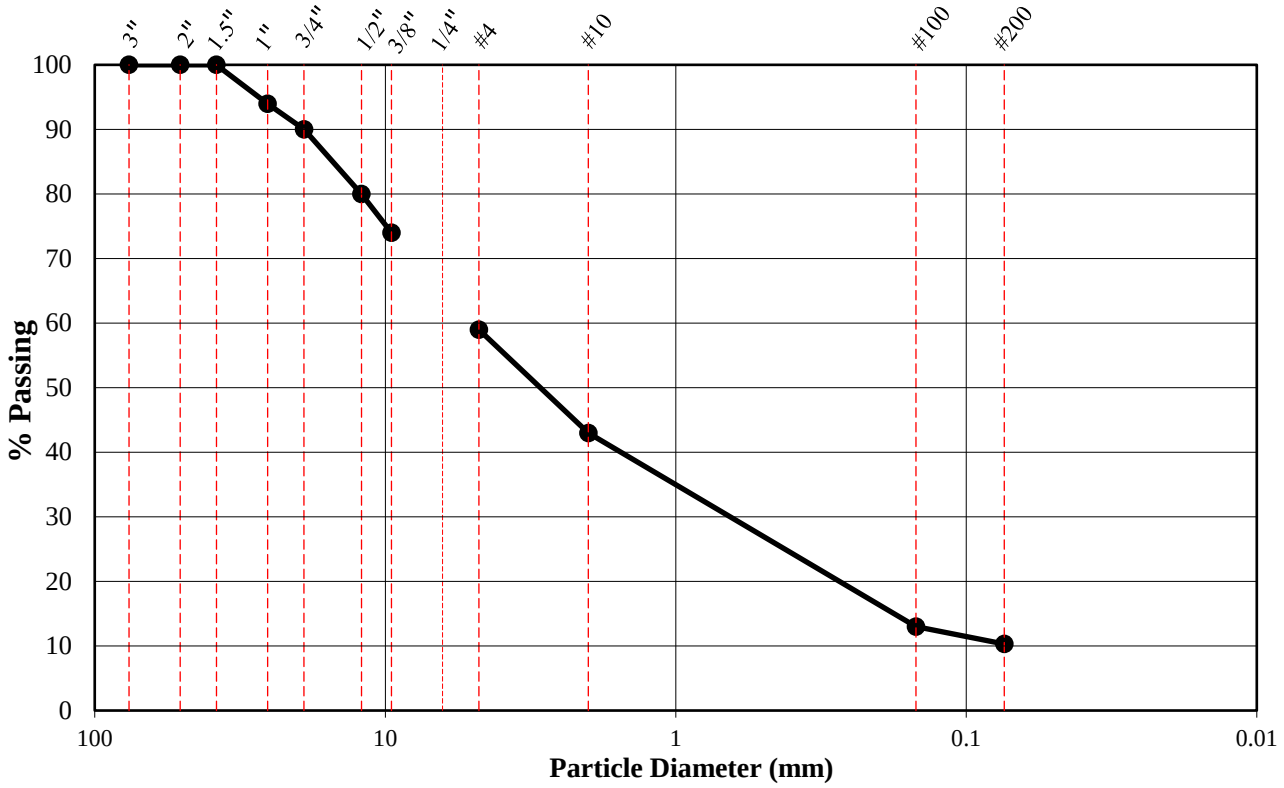
Sieve Number	Diameter (mm)	Soil Passing (%)
3"	76.2	100
2"	50.8	100
1.5"	38.1	100
1"	25.4	94
3/4"	19.05	90
1/2"	12.07	80
3/8"	9.525	74
1/4"	6.35	
#4	4.76	59
#10	2	43
#100	0.149	13
#200	0.074	10.3

Particle Distrubiton

Gravel	41%
Sand	49%
Silt/Clay	10%

Additional Information

1/4" not screend for this sample



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