

Regional Program

Jeff Adams, Program Manager



Memorandum

DATE: December 1, 2004

TO: Dean Lessard

DEPT: Region 1

FROM: Scott A. Hayden

DEPT: Regional

SUBJECT: Final Soils Report# 2004-105 – Kennebunk Rte 35, Pin 11218.00

Site Description

A subsurface investigation has been completed for a 5.0 mile portion of Route 35 in the town of Kennebunk. The project begins at the intersection of Route 35 and Alfred Road and extends northerly 5.0 miles to 0.01 miles south of the Kennebunk River.

The investigation included the use of a drill rig and falling weight deflectometer (FWD). Project stationing was not present in the field at the time of testing. **Temporary stationing was assigned to FWD and boring locations using a distance measuring instrument (DMI). The temporary station unit is feet. The beginning station is designated as 38+26.**

FWD Results

The FWD results are included as a separate attachment to this memo. A summary of the results follows:

| | |
|--|-----------------|
| % of project found to be deficient | 83 % |
| Range of Recommended Overlay Thickness | 0.3– 8.4 inches |
| Average Recommended Overlay Thickness | 3.0 inches |

In addition to deficient areas the subgrade resilient modulus is low (< 2900 psi) for approximately 25 % of the project area (See FWD Summary Sheet and PDS). Areas with a low modulus are listed on Table 1 located on the next page. These areas could be soft especially during the spring. Depending on the conditions at the time of construction the use of geosynthetics and/or additional base material may be necessary to enable these soils to support traffic during construction. Construction operations should take this into consideration. The lowest subgrade modulus values were encountered between stations 213+00 – 228+00. See Table 1 for a listing of areas where a low subgrade modulus was encountered.

**Table 1.
Low Subgrade Modulus Areas**

| Station | Subgrade Conditions |
|----------------|---|
| 92+50-95+00 | Silty Fine Sand |
| 120+00-122+50 | Silty Clay, moist, 79% passing #200 |
| 155+00-165+00 | Silty Clay, moist, 95% passing #200 |
| 165+00-167+50 | Sandy Silt, moist, 55% passing #200 |
| 202+50-227+50 | Sandy Silt- Silty Clay, Wet@ 1.5'-2.6', 53-98% passing #200 |
| 245+00-247+50 | Silty Clay, moist, 97% passing #200 |
| 250+00-260+00 | Silty Clay, moist, 97% passing #200 |
| 267+50-280+00 | Silty Clay, moist, 91% passing #200 |
| | |

Boring Information

A total of 32 power augers were conducted along the project area (See Boring Logs and Data Summary Sheet). Boring locations were determined based upon FWD deflection results and visual observations during an on-site visit. Soils were described and sampled in the field. Samples of the existing base material and subgrade soils were collected and analyzed in the Bangor lab. Testing results are summarized on the attached Laboratory Testing Summary Sheet.

Pavement Conditions

Pavement conditions vary from fair to good. Considering the nature of the subgrade soils the existing pavement is performing adequately. Existing pavement thickness was generally consistent throughout the project area. A summary follows:

Range of Existing Pavement Thickness: 3.6" – 5.4"
 Average Existing Pavement Thickness: 4.7"

Note: Station delineation of pavement thickness is based upon boring information. Boring spacing is as much as 1400 feet in areas. Actual pavement thickness delineations may vary.

Base Material

Existing Base Material Type: Silty Gravelly Sand
 Percent Passing #200: 9%-23%
 Range of Base Material Thickness: 7.2" – 55.2"
 Average Base Material Thickness: Not representative
 Quality of Drainage (AASHTO): Poor – Fair

The base material consist of gravelly silty sand and silty gravelly sand. An average base thickness cannot be presented accurately because it appears that in many areas along the first third of the project the existing base actually consist of native outwash soils. In these areas the gravelly sands can extend to the entire depth of the boring (5').

The base material can be described as silty gravelly sand with as much as 23% passing the #200 sieve. Due to the lack of coarse material and the presence of fines, this material should be considered as granular borrow. Because of the high percentage of fines, the quality of drainage is poor to fair with permeabilities ranging between 1 to 28 feet/day. Performance expectations related to strength and drainage must take this into consideration. As a comparison, base material providing an excellent quality of drainage, as recommended by the AASHTO Guide for Design of Pavement Structures, provides a minimum permeability of 1000 ft/day.

Subgrade Soils

The subgrade soils along this project originated as glacial outwash/delta material (gravelly sands, silty sands), glacial till (silty sand, sandy silt) and glacial-marine deposits (sandy silt, clay silt, silty clay). The outwash and till soils tend to be encountered at the higher elevations whereas the glacial-marine deposits tend to be encountered at the lower elevations. The elevation difference resulting in a subgrade soil change is subtle in areas. A subgrade soil summary (Table 2) is presented at the end of this section.

Outwash

Outwash soils (A-1-b AASHTO classification) are the dominant soil type for the first third of this project. They consist of gravelly sands, silty sands, and fine sand. These soils are rather deep and are moderately well drained but can have a high water table in the spring. These soils are not isolated to only the first third of the project. These soils can also be encountered throughout at higher elevations. The gravelly sands and silty sands should perform well as subgrade soils. It is anticipated that the existing base for the first third of this project consists of this material.

The fine sands (A-3 AASHTO classification) can make suitable subgrade soils when confined and damp. However, they can be problematic due to a lack of soil binder. They are highly erodible and have been known to pump under rigid pavements. They can be compacted by vibratory, pneumatic-tired, and steel-tired rollers but not with a sheep's foot roller. Inslopes and backslopes consisting of this material must be vegetated to prevent excessive erosion and sedimentation within pipe structures.

Till

Till soils consist of sandy silts/silty sands (A-2-4, A-4, AASHTO classification). They were encountered in isolated areas. Shallow bedrock is frequently associated with these soils. These soils are not well drained and may absorb water by capillary action. These soils can perform adequately with proper moisture and compaction. However, they will swell and lose much of their stability unless properly compacted and drained. They are highly frost susceptible. Careful field control of moisture content and pneumatic-tired rollers are normally required for proper compaction.

Glacial-Marine

Glacial-Marine soils consist of sandy silts, clay silts, and clay (A-4,A-6,A-7-5,AASHTO classification). These soils are extremely silty with 53-98 % passing the #200 sieve. They are poorly drained and can absorb water by capillary action. These soils are plastic and are subject to considerable volume changes with changing water content.

These soils will lose much of their stability unless properly compacted and drained. Due to surface infiltration and capillary action it is anticipated that these soils are moist to wet year round. Borings encountered moist to wet subgrade conditions. Because of capillary action, moisture is being held above the ground water table against the force of gravity (capillary fringe). Thus it cannot be removed by gravity. The only way to affect the height of the capillary fringe is by lowering the water table (i.e. deep ditch, underdrain) or by providing a capillary break.

As previously mentioned in the FWD section, a low subgrade modulus (< 2900 psi) was encountered along 25% of the project area (See FWD Results and Performance Data Summary Sheet). These low subgrade modulus values are primarily associated with the glacial-marine sediments and could indicate potential problematic areas for construction, especially during the spring and early summer. These soils could be very soft in the spring.

These soils should be drained early in the construction process by drawing down the water table (i.e. deep ditching, underdrain). The existing pavement surface should be left in place as long as possible. This is especially important anywhere the existing base member is known to be less than 12 inches in thickness. If these measures are not taken and/or if construction begins too soon the use of geogrids and/or additional base material may be required to facilitate construction. The lowest subgrade modulus values were encountered between stations 207+50 and 227+50. Table 2 provides a summary of anticipated subgrade soil type and subgrade conditions.

Table 2.
Summary of the anticipated subgrade soil type

| Station | Soil Type | AASHTO | Sample | % #200 | Subgrade Modulus x1000 | Average RM x1000 |
|-----------------|--------------|---------------|----------|-------------|------------------------|------------------|
| 40+00 - 42+50 | Silty Sand | A-4 | S26 | 47.5 | 5.4 - 9.1 | 7.2 |
| 42+50 - 72+50 | SiGSa / SiSa | A-1-b | S1,S2,S3 | 7.8 - 33.4 | 3.7 - 7.0 | 4.7 |
| 72+50 - 77+50 | SaSi / Rock | A-4 | S6 | 56.0 | 3.4 - 7.0 | 4.7 |
| 77+50 - 82+50 | Silty Sand | A-2-4 | S7 | 29.5 | 3.4-- 4.2 | 3.8 |
| 82+50 - 100+00 | SiSa (Fine) | A-3 | S4 | 8.8 | 2.4 - 4.5 | 3.9 |
| 100+00 - 110+00 | Silty Sand | A-2-4 | S7,S10 | 29.5 - 36.0 | 3.5 - 4.9 | 4.4 |
| 110+00 - 115+00 | Silty Sand | A-3 | S4 | 8.8 | 4.4 - 6.0 | 5.2 |
| 115+00 - 135+00 | Clay Silt | A-7-5 | S11 | 79.0 | 2.9 - 4.7 | 3.9 |
| 135+00 - 145+00 | SiGSa (Fill) | A-1-b | S9 | 23.2 | 5.2 - 6.6 | 5.6 |
| 145+00 - 165+00 | Clay | A-7-5 | S13 | 94.7 | 2.1 - 4.2 | 3.0 |
| 165+00 - 190+00 | Sandy Silt | A-4 | S15 | 55.0 | 3.0 - 6.5 | 4.0 |
| 190+00 - 201+00 | SiSa / Rock | A-1-b / A-2-4 | S18,S16 | 11.6 - 33.8 | 3.7 - 7.0 | 5.5 |
| 201+00 - 207+50 | SiSa (Fill) | A-1-b / A-2-4 | S18,S16 | 11.6 - 33.8 | 2.9 - 4.3 | 3.5 |
| 207+50 - 227+00 | ClSi / Clay | A-6 / A-7-5 | S19,S20 | 70.1 - 97.6 | 1.5 - 2.8 | 2.2 |
| 227+00 - 242+50 | Silty Sand | A-2-4 | S16 | 33.8 | 3.4 - 5.5 | 4.4 |
| 242+50 - 258+00 | Clay | A-6 | S23 | 97.1 | 2.4 - 4.9 | 3.0 |
| 258+00 - 265+00 | Silty Sand | A-2-4 | S16 | 33.8 | 3.0 - 4.1 | 3.6 |
| 265+00 - 284+00 | Clay | A-7-5 | S24 | 91.0 | 2.7 - 3.8 | 3.1 |
| 284+00 - 288+00 | Silty Sand | A-2-4 | S16 | 33.8 | 3.8 - 4.6 | 4.2 |
| 288+00 - 300+00 | Clay | A-7-5 | S24 | 91.0 | 3.6 - 5.6 | 4.2 |
| | | | | | | |

Bedrock

It is anticipated that bedrock could be encountered at several locations depending on the final design. Several borings encountered refusals and FWD deflections indicate that bedrock could be relatively shallow (< 10') at several locations. A summary of possible shallow bedrock areas follows:

**Table 3.
Possible Shallow Bedrock Areas**

| Station | Boring / FWD | Weathered | Refusal | Proposed Design |
|-----------------|---------------------|------------------|----------------|------------------------|
| 70+00 – 80+00 | fwd | | < 10' | Underdrain |
| 71+00 | boring | | 5.7' | Underdrain |
| 76+00 | boring | 4.5'-5.5' | 5.5' | Underdrain |
| 190+00 – 193+00 | fwd | | < 10' | Cut |
| 193+00 | boring | | 2.3' | Cut |
| 227+50 | fwd | | <6' | - |
| 240+00 | fwd | | <6' | - |
| 290+00 – 300+00 | Bedrock Outcrop | | | |

Differential heaving may occur along shallow bedrock/soil contacts. Transition zones should be constructed along soil/bedrock contacts. See recommendations. These areas should be examined by the resident in late winter/early spring for existing heaving.

Performance Data Summary

A Performance Data Summary (PDS) sheet has been provided as a separate attachment. Existing base material quality/thickness, presence of saturated clay soils, and low subgrade modulus values are major concerns with respect to future performance expectations.

The PDS sheet indicates that the first half of the project (Sta. 40+00-155+00) is performing relatively well with only small isolated areas failing to meet 2 minimum performance data criteria. However, the last half of the project (Sta. 155+00-300+00) generally fails to meet 2-3 minimum performance data criteria. Based upon this, existing performance expectations for the latter half of the project are low and the risk of failure is high. Conditions are even more challenging than the PDS can indicate since the base material consists of gravelly sand rather than gravel. In addition, moisture sensitive subgrade soils were found to be moist to wet.

Additional pavement, base, and drainage improvements will be required if future performance expectations are to be met. Raising the grade in as many anticipated problem areas is highly recommended. Raising the grade provides several benefits for these problem areas: 1.) provides additional base material resulting in an increase in the structural capacity, 2.) the existing base member can serve as stable construction platform, 3.) the existing base member can act as a separator and capillary barrier, 4.) increase in grade elevation has the same effect of lowering the water table. Areas of concern identified by the performance data summary sheet are listed in Table 4 located on the following page.

Table 4.
Performance Data Summary Sheet -Areas of Concern

| Area of Concern | Comments |
|------------------------|--|
| | |
| 92+50-95+00 | Additional pavement required to meet future structural number. Low subgrade modulus. Fine sandy subgrade may be influencing the subgrade modulus. |
| 105+00-110+00 | Additional pavement and base required. Wet sandy soils. Drainage will be very important. Proposed cut section. |
| 120+00-122+50 | Additional pavement required to meet future structural number. Low subgrade modulus, wet moisture sensitive soils. Clay silt subgrade. Drainage and the lowering of the water table is critical if future performance expectations are to be met. Additional base/geosynthetics could be required to facilitate construction. |
| 155+00-167+50 | Additional pavement required to meet future structural number. Low subgrade modulus, wet moisture sensitive soils. Clay silt subgrade. Drainage and the lowering of the water table is critical if future performance expectations are to be met. Good area for variable depth gravel application. |
| 172+00-192+50 | Existing base is relatively thin especially considering the quality of the base and the moisture sensitive sandy silt subgrade. Additional pavement and base is required to meet future performance expectations. Much of this section is an existing cut section without any ditching. Ditching is critical if future performance expectations are to be met. |
| 207+50-222+50 | Additional pavement required to meet future structural number. Very low subgrade modulus, wet moisture sensitive soils. Clay silt subgrade. Drainage and the lowering of the water table is critical if future performance expectations are to be met. Additional base/geosynthetics could be required to facilitate construction. The proposed cut between 213+00-217+00 may be problematic (See Recommendation 7) |
| 222+50-227+00 | Lack of existing base thickness and drainage. Additional pavement and base is required to meet future structural number. Very low subgrade modulus, wet moisture sensitive soils. Clay silt subgrade. Drainage and the lowering of the water table is critical if future performance expectations are to be met. Additional base/geosynthetics could be required to facilitate construction. (See Recommendation 9) |
| 227+00-242+50 | Existing base is relatively thin. Granular subgrade is aiding performance. Additional pavement and base is required to meet future performance expectations. Ditching is critical if future performance expectations are to be met. |
| 242+50-258+00 | Lack of existing base thickness and drainage. Additional pavement required to meet future structural number. Low subgrade modulus, moist sensitive soils. Clay silt subgrade. Drainage and the lowering of the water table are critical if future performance expectations are to be met. Additional base/geosynthetics could be required to facilitate construction. |
| 267+50-280+00 | Additional pavement required to meet future structural number. Low subgrade modulus, wet moisture sensitive soils. Clay silt subgrade. Drainage and the lowering of the water table is critical if future performance expectations are to be met. Additional base/geosynthetics could be required to facilitate construction. |

Recommendations

1. Existing base quality and thickness, moisture sensitive subgrade soil conditions, and the lack of drainage are all major concerns with respect to future performance expectations. It is recommended that the Performance Data Summary (PDS) sheet be utilized to determine existing performance deficiencies, to identify future risk assessments, and to formulate realistic future performance expectations.
2. Moisture sensitive subgrade soils could become problematic during construction, especially during the spring and early summer. It is strongly recommended that the existing pavement surface not be removed for recycling until absolutely necessary. The roadway could become unstable under loading after the existing pavement surface is removed. The Resident Engineer may need to limit the weight and volume of traffic depending on field conditions. Additional base material and or geosynthetics could be required to facilitate construction if the subgrade soils become unstable. The new pavement surface should be placed as soon as possible. See Tables 1, 2, and 4 for possible problematic areas.
3. It is recommended that all areas containing moisture sensitive soils are drained well before the existing pavement surface is removed. Ditch construction and/or underdrain must be constructed as early as possible in the construction process. See Tables 1, 2, and 4 for possible problematic areas.
4. Variable depth gravel applications are recommended, whenever possible, within the sensitive soil areas. This will provide additional base material resulting in an increase in the structural capacity. In addition the existing base member will serve as a stable construction platform as well as a separator and capillary barrier. By raising the grade you in affect lower the water table. The new gravel should consist of Type A.
5. If new base material is to be placed upon native soils a 6 once, non-woven needle punched separation geotextile should be placed between the native soils and the new base material.
6. It is recommended that all areas be drained with aggressive ditching or underdrain. This is especially important beyond station 115+00 where the subgrade soils become dominantly glacial-marine. Ditching should be a minimum of 3 feet below finished grade. This will primarily draw down the water table resulting in the lowering of the height of the capillary fringe.
7. It is recommended that the proposed lowering of the grade between stations 213+00 and 217+00 be kept to a minimum. The existing subgrade soils consist of moisture sensitive clay soils. The water table is very shallow (1.5') and the subgrade modulus values are the lowest found on the project. A substantial lowering of the grade will require that the existing right backslope be laid back no steeper than 1:3. Vegetation must be established on this backslope to prevent future slumping. In addition, grade changes in combination with necessary drainage applications could affect the existing farm pond located on the right in the vicinity of station 217+50. Raising the grade on either side of the proposed cut section should be considered. This will reduce the need and affects of lowering the grade.

8. A minimum of 18 inches of base material is recommended within any proposed cut section beyond station 115+00.
9. An additional 6 inches of base gravel is recommended between stations 222+50 and 229+00. The existing base is as thin as 7 inches while moving up this hill. The existing subgrade soils consist of moisture sensitive clay soils. The water table is very shallow (2.6') and the subgrade modulus values are the lowest found on the project.
10. Shallow bedrock is present in several areas. Transition zones should be constructed along soil/bedrock contacts to aid in the prevention of differential heaving. It is recommended that a 2 foot undercut be constructed with a 20:1 transition.
11. It is recommended that the sandy soils within ditch cuts be stabilized by vegetation because these sands are highly erodible. These sands may be especially fine in the vicinity of stations 85+00-100+00, 110+00. It is recommended that the designer/resident contact their environmental representative for a recommendation concerning which type of vegetation should be used for stabilizing sandy soils.
12. As a cost saving measure the depth of the proposed underdrain between stations 45+00 and 82+50 could be lessened due to the presence of moderately well drained subgrade soils. If budget constraints require additional cost cutting measures, the elimination of the proposed underdrain could be considered.

**Materials Testing and Exploration
Falling Weight Deflectometer (FWD)
Summary Sheet**

Project #: 11218.00
Town(s): Kennebunk
Route(s): #35
Requested By: S Hayden
Direction of Testing: North

Of FWD tests: 103
Design Life: 12 Yrs
Initial Serviceability: 4.5
Reliability Level: 95%

Of Power Augers/Spoons 33/0
Future 18-kip ESALs (Design Life): 521,220
Terminal Serviceability: 2.5
Overall Standard Deviation: .45

Locations

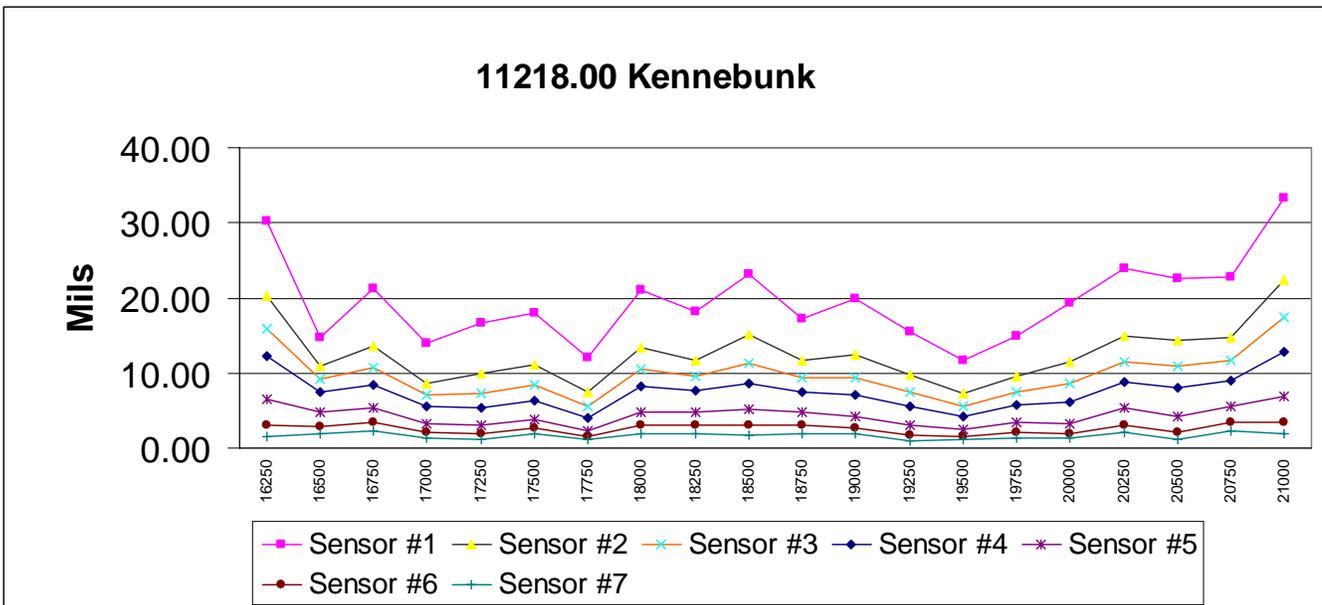
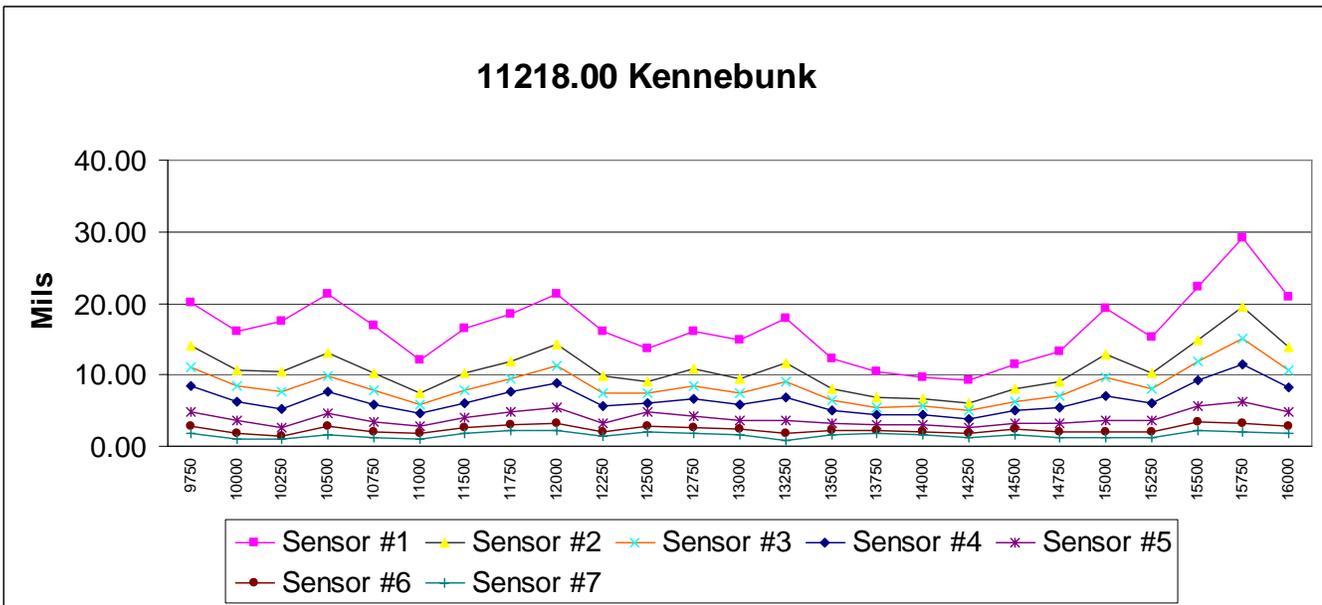
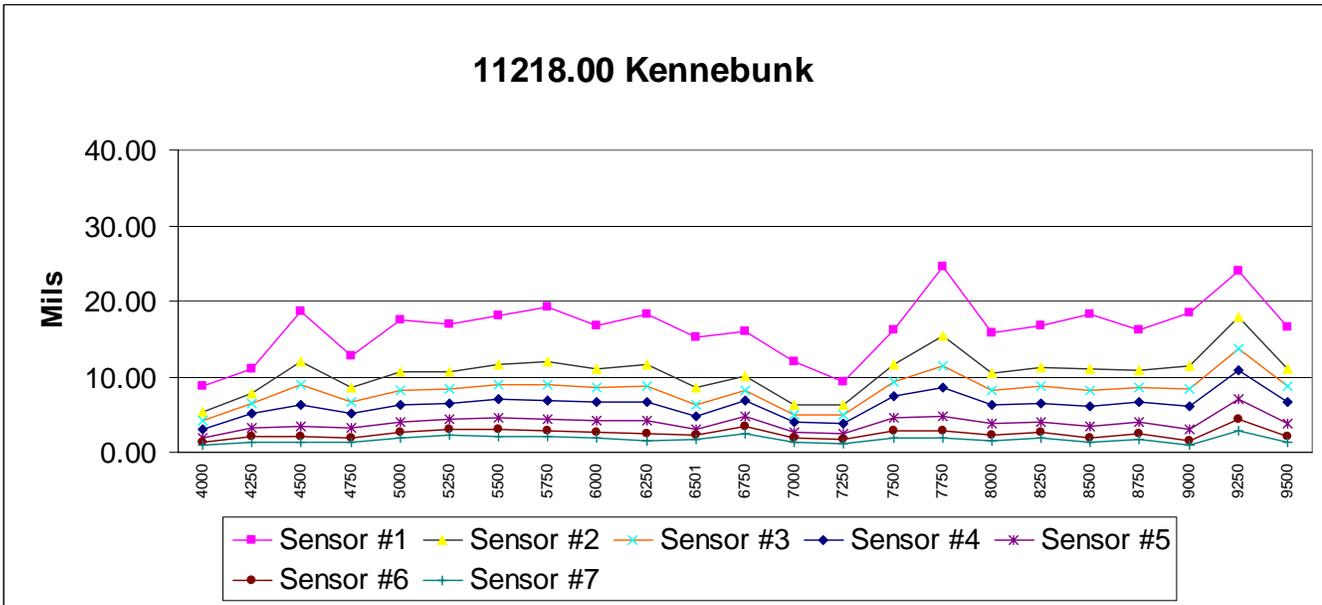
Distance (Feet)

Description

| | |
|--------|-------------------------------------|
| 38+26 | Start – Intersection of Alfred Road |
| 98+90 | Thompson Road |
| 116+14 | Downing Road |
| 151+43 | Taylor Lane |
| 165+09 | Kimball Lane |
| 231+76 | Perkins Lane |
| 249+37 | Alwive Farms Road |

Comments:

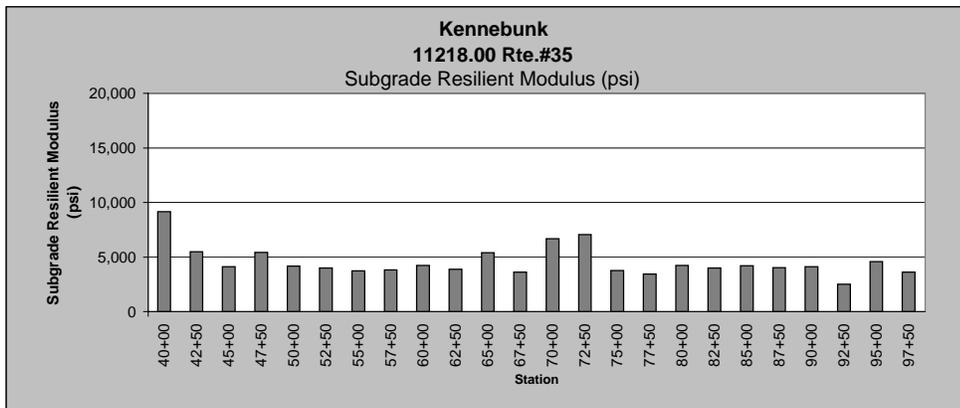
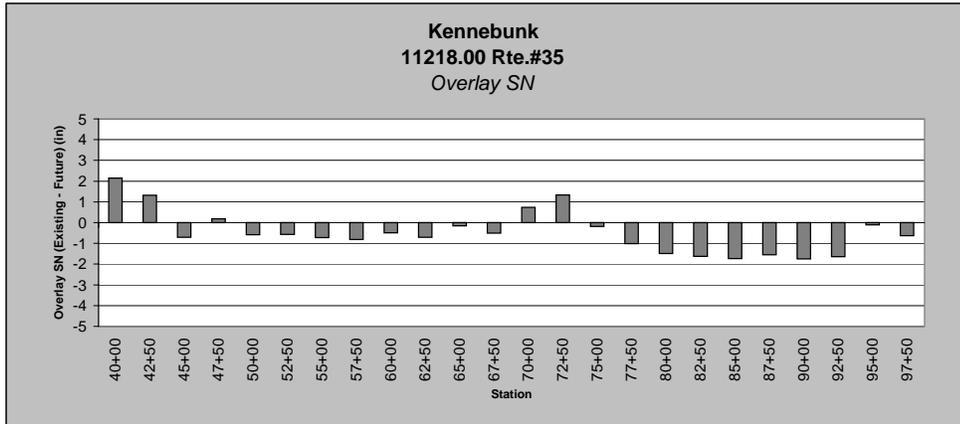
**Kennebunk Rte. 35 – 11218.00
FWD Deflections**



**Kennebunk
11218.00
Route #35**

| Station (Feet) | Existing Structural Number (in.) | Future Traffic Structural Number (in.) | Overlay Structural Number (Existing - Future) | Recommended Pavement Thickness (in.) | Existing Pavement Modulus (psi) | Subgrade Resilient Modulus (psi) | Pavement Depth (in.) | * Combined Pavement/Gravel Depth Used for Calculation (in.) |
|----------------|----------------------------------|--|---|--------------------------------------|---------------------------------|----------------------------------|----------------------|---|
| 40+00 | 5.15 | 3.01 | 2.14 | - | 108,694 | 9,147 | 5 | 24 |
| 42+50 | 4.94 | 3.62 | 1.32 | - | 95,834 | 5,485 | 5 | 24 |
| 45+00 | 3.3 | 4 | -0.7 | 1.59 | 57,302 | 4,103 | 5 | 19 |
| 47+50 | 3.82 | 3.63 | 0.19 | - | 89,135 | 5,419 | 5 | 19 |
| 50+00 | 3.4 | 3.98 | -0.58 | 1.32 | 63,018 | 4,166 | 5 | 19 |
| 52+50 | 3.47 | 4.04 | -0.57 | 1.3 | 67,113 | 3,985 | 5 | 19 |
| 55+00 | 3.41 | 4.13 | -0.72 | 1.64 | 63,223 | 3,734 | 5 | 19 |
| 57+50 | 3.29 | 4.1 | -0.81 | 1.84 | 57,006 | 3,824 | 5 | 19 |
| 60+00 | 3.47 | 3.96 | -0.49 | 1.11 | 66,716 | 4,237 | 5 | 19 |
| 62+50 | 3.38 | 4.08 | -0.7 | 1.59 | 61,698 | 3,881 | 5 | 19 |
| 65+00 | 3.49 | 3.64 | -0.15 | 0.34 | 68,225 | 5,406 | 4 | 19 |
| 67+50 | 3.68 | 4.18 | -0.5 | 1.14 | 79,532 | 3,602 | 4 | 19 |
| 70+00 | 4.11 | 3.37 | 0.74 | - | 82,421 | 6,671 | 4 | 21 |
| 72+50 | 4.65 | 3.31 | 1.34 | - | 119,368 | 7,050 | 4 | 21 |
| 75+00 | 3.93 | 4.12 | -0.19 | 0.43 | 71,943 | 3,766 | 4 | 21 |
| 77+50 | 3.23 | 4.24 | -1.01 | 2.3 | 39,795 | 3,453 | 4 | 21 |
| 80+00 | 2.47 | 3.96 | -1.49 | 3.39 | 124,387 | 4,232 | 5 | 11 |
| 82+50 | 2.42 | 4.04 | -1.62 | 3.68 | 116,273 | 3,997 | 5 | 11 |
| 85+00 | 2.23 | 3.97 | -1.74 | 3.95 | 90,864 | 4,211 | 5 | 11 |
| 87+50 | 2.48 | 4.03 | -1.55 | 3.52 | 126,420 | 4,026 | 5 | 11 |
| 90+00 | 2.25 | 4 | -1.75 | 3.98 | 93,884 | 4,113 | 5 | 11 |
| 92+50 | 3.09 | 4.73 | -1.64 | 3.73 | 55,580 | 2,493 | 5 | 18 |
| 95+00 | 3.75 | 3.86 | -0.11 | 0.25 | 62,619 | 4,563 | 5 | 21 |
| 97+50 | 3.55 | 4.18 | -0.63 | 1.43 | 53,008 | 3,611 | 5 | 21 |

* For actual Gravel Depths, see attached logdraft forms



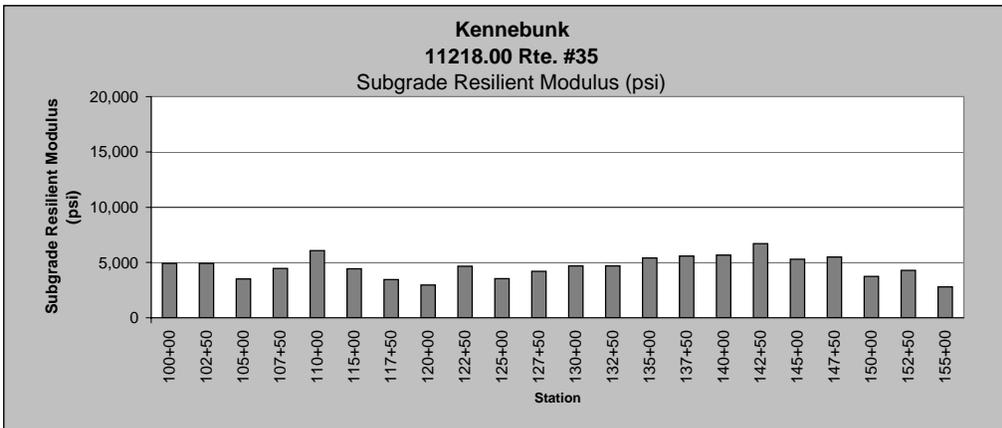
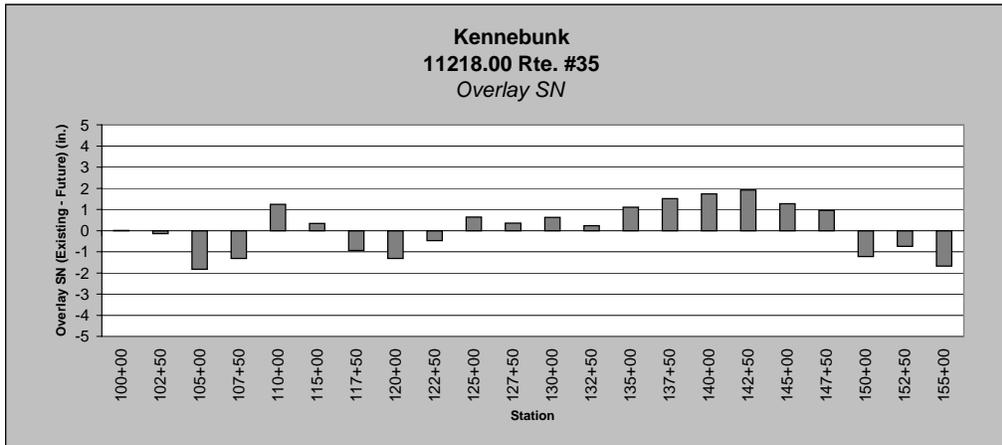
**Kennebunk
11218.00
Route #35**

November 2, 2004

| Station (Feet) | Existing Structural Number (in.) | Future Traffic Structural Number (in.) | Overlay Structural Number (Existing - Future) | Recommended Pavement Thickness (in.) | Existing Pavement Modulus (psi) | Subgrade Resilient Modulus (psi) | Pavement Depth (in.) | * Combined Pavement/Gravel Depth Used for Calculation (in.) |
|----------------|----------------------------------|--|---|--------------------------------------|---------------------------------|----------------------------------|----------------------|---|
| 100+00 | 3.77 | 3.76 | 0.01 | - | 63,582 | 4,908 | 5 | 21 |
| 102+50 | 3.61 | 3.76 | -0.15 | 0.34 | 55,819 | 4,925 | 5 | 21 |
| 105+00 | 2.4 | 4.22 | -1.82 | 4.14 | 68,626 | 3,502 | 5 | 13 |
| 107+50 | 2.58 | 3.89 | -1.31 | 2.98 | 85,845 | 4,459 | 5 | 13 |
| 110+00 | 4.73 | 3.49 | 1.24 | - | 83,821 | 6,077 | 5 | 24 |
| 115+00 | 4.24 | 3.9 | 0.34 | - | 60,576 | 4,429 | 5 | 24 |
| 117+50 | 3.3 | 4.24 | -0.94 | 2.14 | 67,792 | 3,453 | 5 | 18 |
| 120+00 | 3.16 | 4.47 | -1.31 | 2.98 | 59,643 | 2,958 | 5 | 18 |
| 122+50 | 3.35 | 3.83 | -0.48 | 1.09 | 70,750 | 4,663 | 5 | 18 |
| 125+00 | 4.85 | 4.21 | 0.64 | - | 90,706 | 3,541 | 5 | 24 |
| 127+50 | 4.33 | 3.97 | 0.36 | - | 64,637 | 4,200 | 5 | 24 |
| 130+00 | 4.44 | 3.82 | 0.62 | - | 69,329 | 4,683 | 5 | 24 |
| 132+50 | 4.06 | 3.82 | 0.24 | - | 53,044 | 4,704 | 5 | 24 |
| 135+00 | 4.75 | 3.64 | 1.11 | - | 85,122 | 5,406 | 5 | 24 |
| 137+50 | 5.1 | 3.59 | 1.51 | - | 105,352 | 5,589 | 5 | 24 |
| 140+00 | 5.32 | 3.58 | 1.74 | - | 119,215 | 5,659 | 5 | 24 |
| 142+50 | 5.28 | 3.37 | 1.91 | - | 116,998 | 6,692 | 5 | 24 |
| 145+00 | 4.94 | 3.67 | 1.27 | - | 95,672 | 5,282 | 5 | 24 |
| 147+50 | 4.56 | 3.61 | 0.95 | - | 75,410 | 5,490 | 5 | 24 |
| 150+00 | 2.91 | 4.13 | -1.22 | 2.77 | 66,112 | 3,732 | 5 | 16 |
| 152+50 | 3.2 | 3.94 | -0.74 | 1.68 | 88,186 | 4,281 | 5 | 16 |
| 155+00 | 2.87 | 4.55 | -1.68 | 3.82 | 63,426 | 2,797 | 5 | 16 |

* For actual Gravel Depths, see attached logdraft forms

Low Subgrade Modulus Area (<3000 psi)



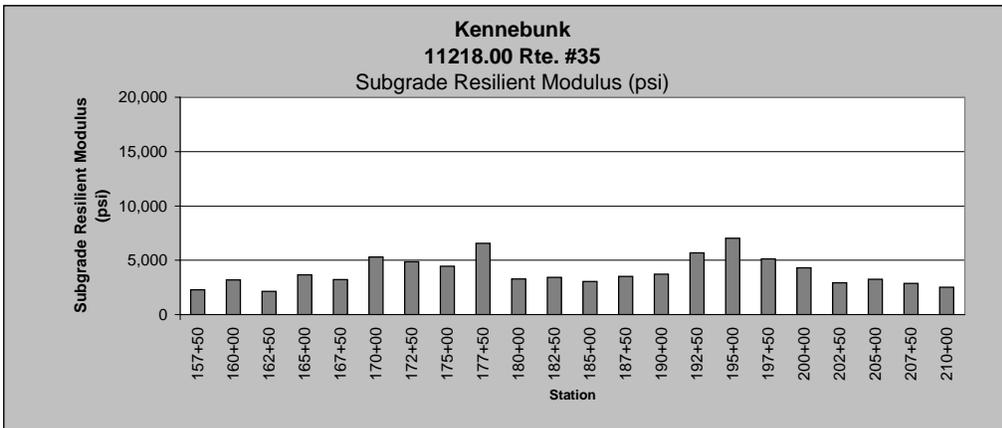
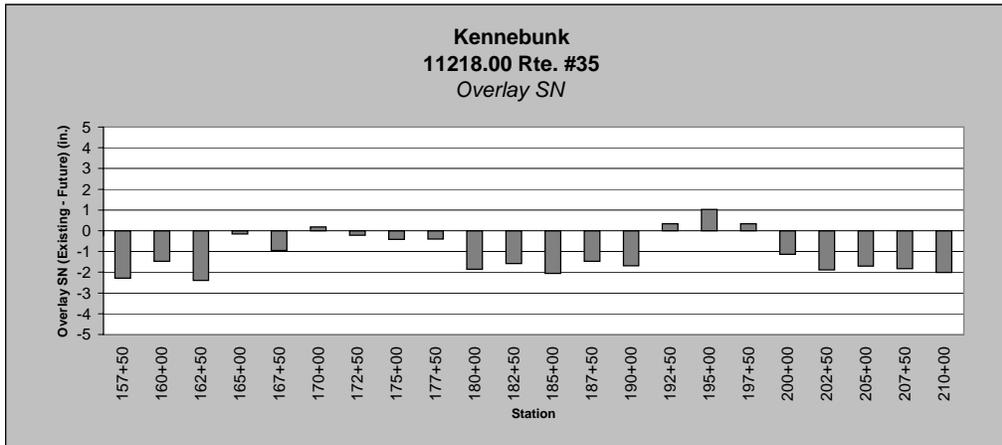
**Kennebunk
11218.00
Route #35**

November 2, 2004

| Station (Feet) | Existing Structural Number (in.) | Future Traffic Structural Number (in.) | Overlay Structural Number (Existing - Future) | Recommended Pavement Thickness (in.) | Existing Pavement Modulus (psi) | Subgrade Resilient Modulus (psi) | Pavement Depth (in.) | * Combined Pavement/Gravel Depth Used for Calculation (in.) |
|----------------|----------------------------------|--|---|--------------------------------------|---------------------------------|----------------------------------|----------------------|---|
| 157+50 | 2.58 | 4.86 | -2.28 | 5.18 | 46,276 | 2,285 | 5 | 16 |
| 160+00 | 2.89 | 4.36 | -1.47 | 3.34 | 64,591 | 3,189 | 5 | 16 |
| 162+50 | 2.57 | 4.96 | -2.39 | 5.43 | 45,463 | 2,146 | 5 | 16 |
| 165+00 | 4.01 | 4.16 | -0.15 | 0.34 | 88,659 | 3,654 | 5 | 20 |
| 167+50 | 3.39 | 4.34 | -0.95 | 2.16 | 53,216 | 3,229 | 5 | 20 |
| 170+00 | 3.84 | 3.66 | 0.18 | - | 77,681 | 5,309 | 5 | 20 |
| 172+50 | 3.56 | 3.78 | -0.22 | 0.5 | 62,094 | 4,854 | 5 | 20 |
| 175+00 | 3.48 | 3.89 | -0.41 | 0.93 | 58,050 | 4,454 | 5 | 20 |
| 177+50 | 2.99 | 3.39 | -0.4 | 0.91 | 106,618 | 6,564 | 5 | 14 |
| 180+00 | 2.47 | 4.32 | -1.85 | 4.2 | 74,916 | 3,285 | 5 | 13 |
| 182+50 | 2.67 | 4.25 | -1.58 | 3.59 | 95,387 | 3,439 | 5 | 13 |
| 185+00 | 2.37 | 4.42 | -2.05 | 4.66 | 66,834 | 3,057 | 5 | 13 |
| 187+50 | 2.75 | 4.22 | -1.47 | 3.34 | 103,606 | 3,520 | 5 | 13 |
| 190+00 | 2.45 | 4.14 | -1.69 | 3.84 | 73,535 | 3,713 | 5 | 13 |
| 192+50 | 3.91 | 3.57 | 0.34 | - | 61,755 | 5,667 | 5 | 22 |
| 195+00 | 4.33 | 3.31 | 1.02 | - | 83,833 | 7,020 | 5 | 22 |
| 197+50 | 4.04 | 3.71 | 0.33 | - | 67,820 | 5,113 | 5 | 22 |
| 200+00 | 2.8 | 3.93 | -1.13 | 2.57 | 58,519 | 4,314 | 5 | 16 |
| 202+50 | 2.6 | 4.48 | -1.88 | 4.27 | 56,866 | 2,938 | 5 | 15 |
| 205+00 | 2.61 | 4.32 | -1.71 | 3.89 | 57,538 | 3,265 | 5 | 15 |
| 207+50 | 2.69 | 4.51 | -1.82 | 4.14 | 63,043 | 2,882 | 5 | 15 |
| 210+00 | 2.69 | 4.7 | -2.01 | 4.57 | 31,242 | 2,531 | 5 | 19 |

* For actual Gravel Depths, see attached logdraft forms

Low Subgrade Modulus Area (<3000 psi)



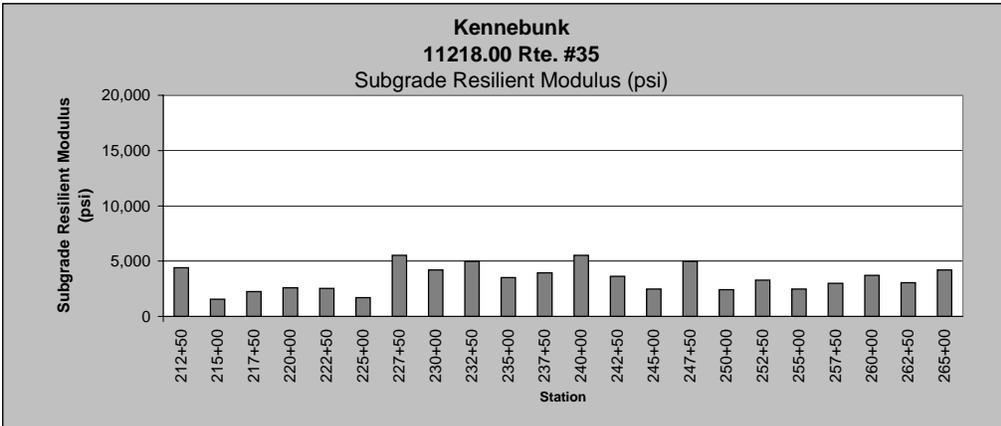
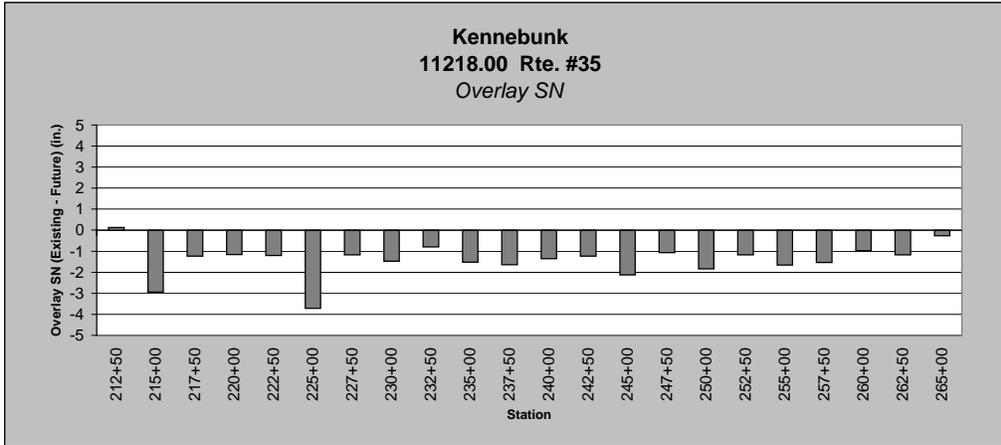
**Kennebunk
11218.00
Route #35**

November 2, 2004

| Station (Feet) | Existing Structural Number (in.) | Future Traffic Structural Number (in.) | Overlay Structural Number (Existing - Future) | Recommended Pavement Thickness (in.) | Existing Pavement Modulus (psi) | Subgrade Resilient Modulus (psi) | Pavement Depth (in.) | * Combined Pavement/Gravel Depth Used for Calculation (in.) |
|----------------|----------------------------------|--|---|--------------------------------------|---------------------------------|----------------------------------|----------------------|---|
| 212+50 | 4.04 | 3.91 | 0.13 | - | 105,493 | 4,390 | 5 | 19 |
| 215+00 | 2.53 | 5.48 | -2.95 | 6.7 | 25,766 | 1,567 | 5 | 19 |
| 217+50 | 3.67 | 4.9 | -1.23 | 2.8 | 44,592 | 2,235 | 5 | 23 |
| 220+00 | 3.51 | 4.67 | -1.16 | 2.64 | 39,064 | 2,582 | 5 | 23 |
| 222+50 | 3.49 | 4.7 | -1.21 | 2.75 | 38,414 | 2,538 | 5 | 23 |
| 225+00 | 1.61 | 5.33 | -3.72 | 8.45 | 45,635 | 1,708 | 5 | 10 |
| 227+50 | 2.43 | 3.6 | -1.17 | 2.66 | 117,861 | 5,533 | 5 | 11 |
| 230+00 | 2.5 | 3.97 | -1.47 | 3.34 | 129,066 | 4,196 | 5 | 11 |
| 232+50 | 2.94 | 3.74 | -0.8 | 1.82 | 209,244 | 4,975 | 5 | 11 |
| 235+00 | 2.71 | 4.23 | -1.52 | 3.45 | 163,944 | 3,497 | 5 | 11 |
| 237+50 | 2.42 | 4.06 | -1.64 | 3.73 | 117,151 | 3,943 | 5 | 11 |
| 240+00 | 2.26 | 3.61 | -1.35 | 3.07 | 95,531 | 5,515 | 5 | 11 |
| 242+50 | 2.94 | 4.18 | -1.24 | 2.82 | 208,597 | 3,621 | 5 | 11 |
| 245+00 | 2.61 | 4.74 | -2.13 | 4.84 | 147,111 | 2,478 | 5 | 11 |
| 247+50 | 2.67 | 3.74 | -1.07 | 2.43 | 156,165 | 4,979 | 5 | 11 |
| 250+00 | 2.93 | 4.77 | -1.84 | 4.18 | 40,202 | 2,424 | 5 | 19 |
| 252+50 | 3.14 | 4.32 | -1.18 | 2.68 | 49,444 | 3,276 | 5 | 19 |
| 255+00 | 3.09 | 4.75 | -1.66 | 3.77 | 47,180 | 2,461 | 5 | 19 |
| 257+50 | 2.91 | 4.45 | -1.54 | 3.5 | 39,329 | 2,996 | 5 | 19 |
| 260+00 | 3.16 | 4.14 | -0.98 | 2.23 | 50,307 | 3,712 | 5 | 19 |
| 262+50 | 3.25 | 4.42 | -1.17 | 2.66 | 54,950 | 3,057 | 5 | 19 |
| 265+00 | 3.71 | 3.97 | -0.26 | 0.59 | 81,597 | 4,188 | 5 | 19 |

* For actual Gravel Depths, see attached logdraft forms

Low Subgrade Modulus Area (<3000 psi)



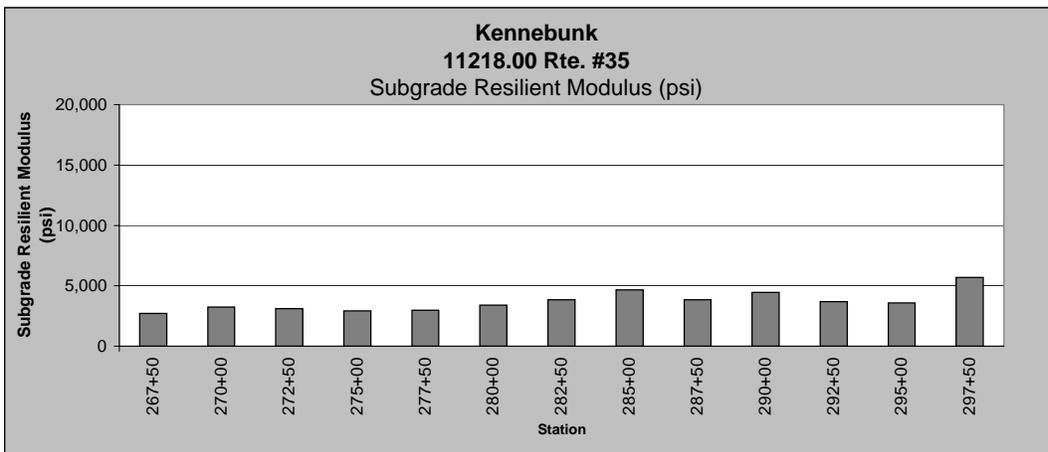
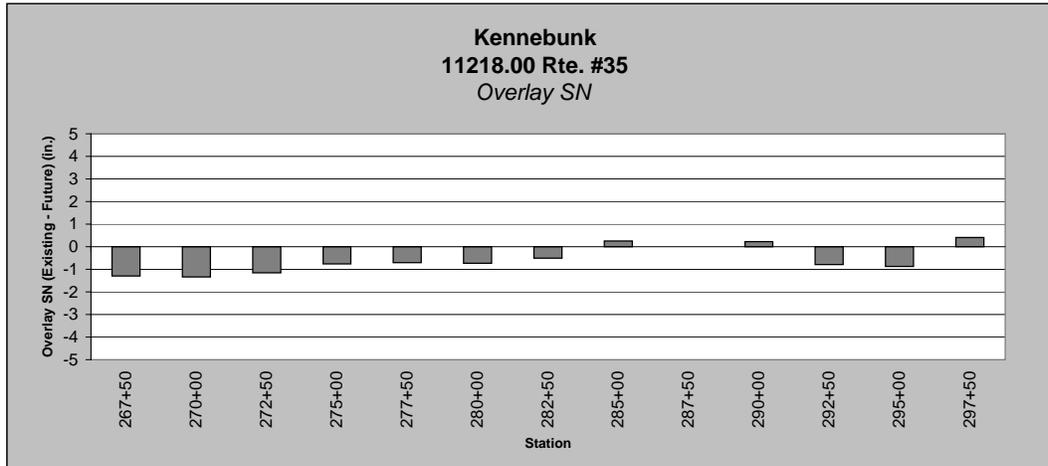
**Kennebunk
11218.00
Route #35**

November 2, 2004

| Station (Feet) | Existing Structural Number (in.) | Future Traffic Structural Number (in.) | Overlay Structural Number (Existing - Future) | Recommended Pavement Thickness (in.) | Existing Pavement Modulus (psi) | Subgrade Resilient Modulus (psi) | Pavement Depth (in.) | * Combined Pavement/Gravel Depth Used for Calculation (in.) |
|----------------|----------------------------------|--|---|--------------------------------------|---------------------------------|----------------------------------|----------------------|---|
| 267+50 | 3.3 | 4.6 | -1.3 | 2.95 | 57,239 | 2,705 | 5 | 19 |
| 270+00 | 3 | 4.34 | -1.34 | 3.05 | 50,752 | 3,233 | 5 | 18 |
| 272+50 | 3.25 | 4.4 | -1.15 | 2.61 | 64,719 | 3,101 | 5 | 18 |
| 275+00 | 3.73 | 4.49 | -0.76 | 1.73 | 53,683 | 2,925 | 5 | 22 |
| 277+50 | 3.74 | 4.45 | -0.71 | 1.61 | 53,956 | 2,990 | 5 | 22 |
| 280+00 | 3.54 | 4.27 | -0.73 | 1.66 | 45,616 | 3,398 | 5 | 22 |
| 282+50 | 3.58 | 4.09 | -0.51 | 1.16 | 47,484 | 3,836 | 5 | 22 |
| 285+00 | 4.08 | 3.83 | 0.25 | - | 69,858 | 4,654 | 5 | 22 |
| 287+50 | 4.09 | 4.09 | 0 | - | 70,316 | 3,840 | 5 | 22 |
| 290+00 | 4.11 | 3.89 | 0.22 | - | 71,425 | 4,452 | 5 | 22 |
| 292+50 | 3.36 | 4.15 | -0.79 | 1.8 | 39,117 | 3,684 | 5 | 22 |
| 295+00 | 3.32 | 4.19 | -0.87 | 1.98 | 37,753 | 3,594 | 5 | 22 |
| 297+50 | 3.98 | 3.57 | 0.41 | - | 65,027 | 5,691 | 5 | 22 |

* For actual Gravel Depths, see attached logdraft forms

Low Subgrade Modulus Area (<3000 psi)

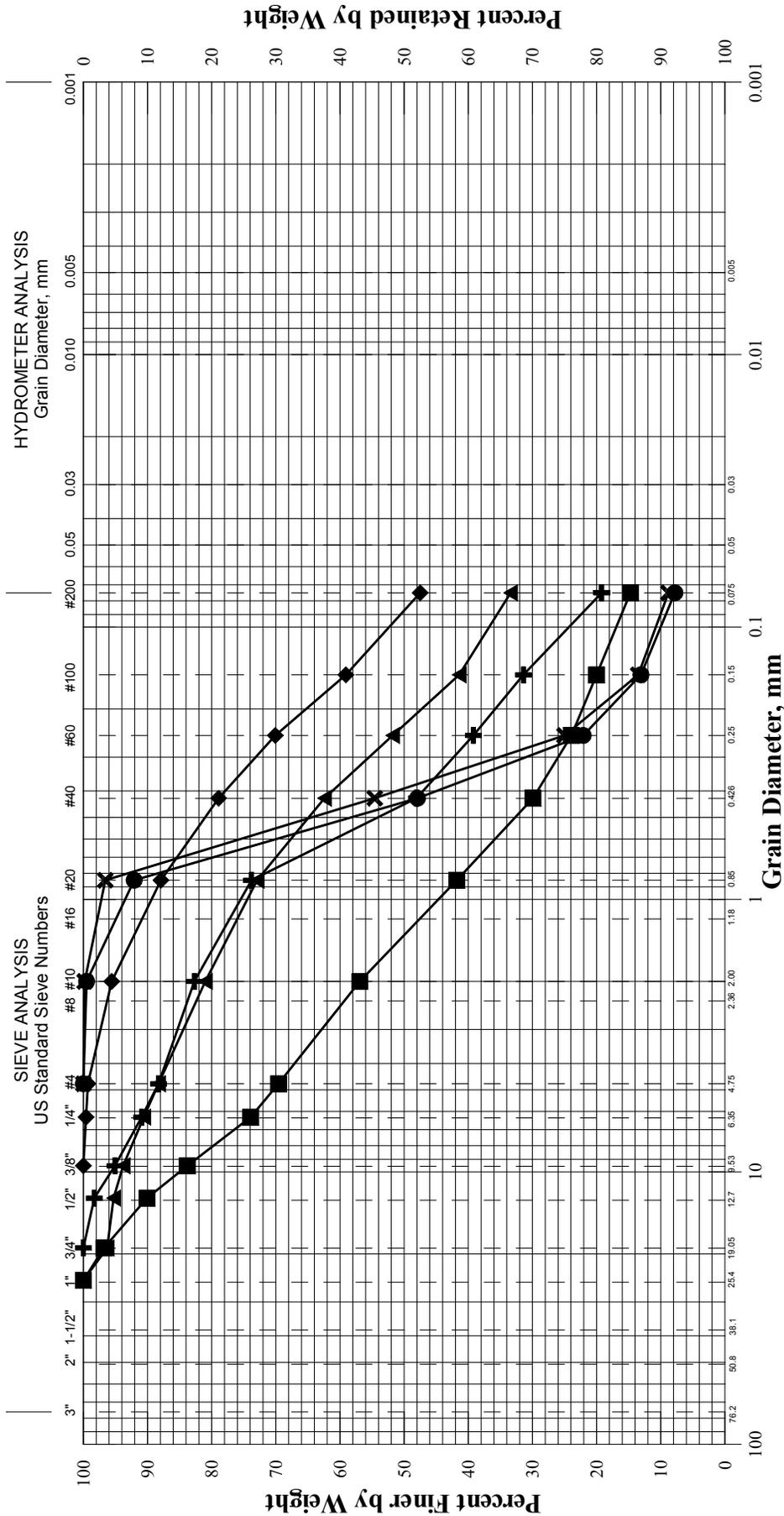


Performance Data Summary Sheet

Kennebunk Rte.35
CHIP
11218.00

| Station (FWD) | D E F | Minimum Performance Data Criteria | | | | Boring Location (Plan View) | Base Material | | Subgrade Soils | |
|---------------|-------------|-----------------------------------|--|--|--|---|---------------------------------|--------------------------------|---------------------------------|----------------------------|
| | | | | | | | AASHTO Class | % #200 | AASHTO Class | % #200 |
| | | | | | | | | | | |
| | | | | | | KEY | | | | |
| Station | | Red - Fail Green - Met | | | | Pavement Thickness Base Thickness X - Boring Location | Soil Type AASHTO Sample # | % 200 Frost Moistur e | Soil Type AASHTO Sample # | % 200 Frost Moisture |
| | | | | | | CL | | | | |
| 40+00 | 0 | | | | | 4.8 34.8 X | GSiSa A-1-b S25 | 19.2 II Damp | SiSa A-4 S26 | 47.5 III Wet 3.3' |
| 42+50 | 0 | | | | | | | | | |
| 45+00 | 1 | | | | | 0.0 24.0 X | GSiSa A-1-b S25 | 19.2 II Damp | SiGSa A-1-b S1 | 14.7 II Damp |
| 47+50 | 1 | | | | | 0.0 24.0 X | GSiSa A-1-b S25 | 19.2 II Damp | SiGSa A-1-b S1 | 14.7 II Damp |
| 50+00 | 1 | | | | | | | | | |
| 52+50 | 1 | | | | | | | | | |
| 55+00 | 1 | | | | | 4.8 55.2 X | SiGSa A-1-b S1 | 14.7 II Damp | SiSa A-1-b S2 | 7.8 0 Damp |
| 57+50 | 1 | | | | | | | | | |
| 60+00 | 2 | | | | | 3.6 55.2 X | SiGSa A-1-b S1 | 14.7 II Damp | SiSa A-1-b S2 | 7.8 0 Wet 1.1' |
| 62+50 | 1 | | | | | | | | | |
| 65+00 | 1 | | | | | | | | | |
| 67+50 | 1 | | | | | 4.2 19.8 X | GSiSa A-1-b S5 | 20.4 II Damp | SiSa A-2-4 S3 | 33.4 II Moist |
| 70+00 | 0 | | | | | | | | | |
| 72+50 | 0 | | | | | 4.2 22.2 X | GSiSa A-1-b S5 | 20.4 II Damp | SaSi A-4 S6 | 56.0 IV Ref 5.7' |
| 75+00 | 1 | | | | | | | | | |
| 77+50 | 1 | | | | | 4.2 22.2 X | GSiSa A-1-b S5 | 20.4 II Damp | SiSa/Rock A-2-4 S7 | 29.5 II Ref 5.5' |
| 80+00 | 1 | | | | | | | | | |
| 82+50 | 1 | | | | | | | | | |
| 85+00 | 1 | | | | | 4.8 55.2 X | SiGSa A-1-b S8 | 13.8 II Moist | SiSa A-3 S4 | 8.8 0 Damp |
| 87+50 | 1 | | | | | | | | | |
| 90+00 | 1 | | | | | | | | | |
| 92+50 | 2 | | | | | 4.8 55.2 X | SiGSa A-1-b S8 | 13.8 II Damp | SiSa A-3 S4 | 8.8 0 Damp |
| 95+00 | 1 | | | | | | | | | |
| 97+50 | 1 | | | | | | | | | |

State of Maine Department of Transportation
GRAIN SIZE DISTRIBUTION CURVE

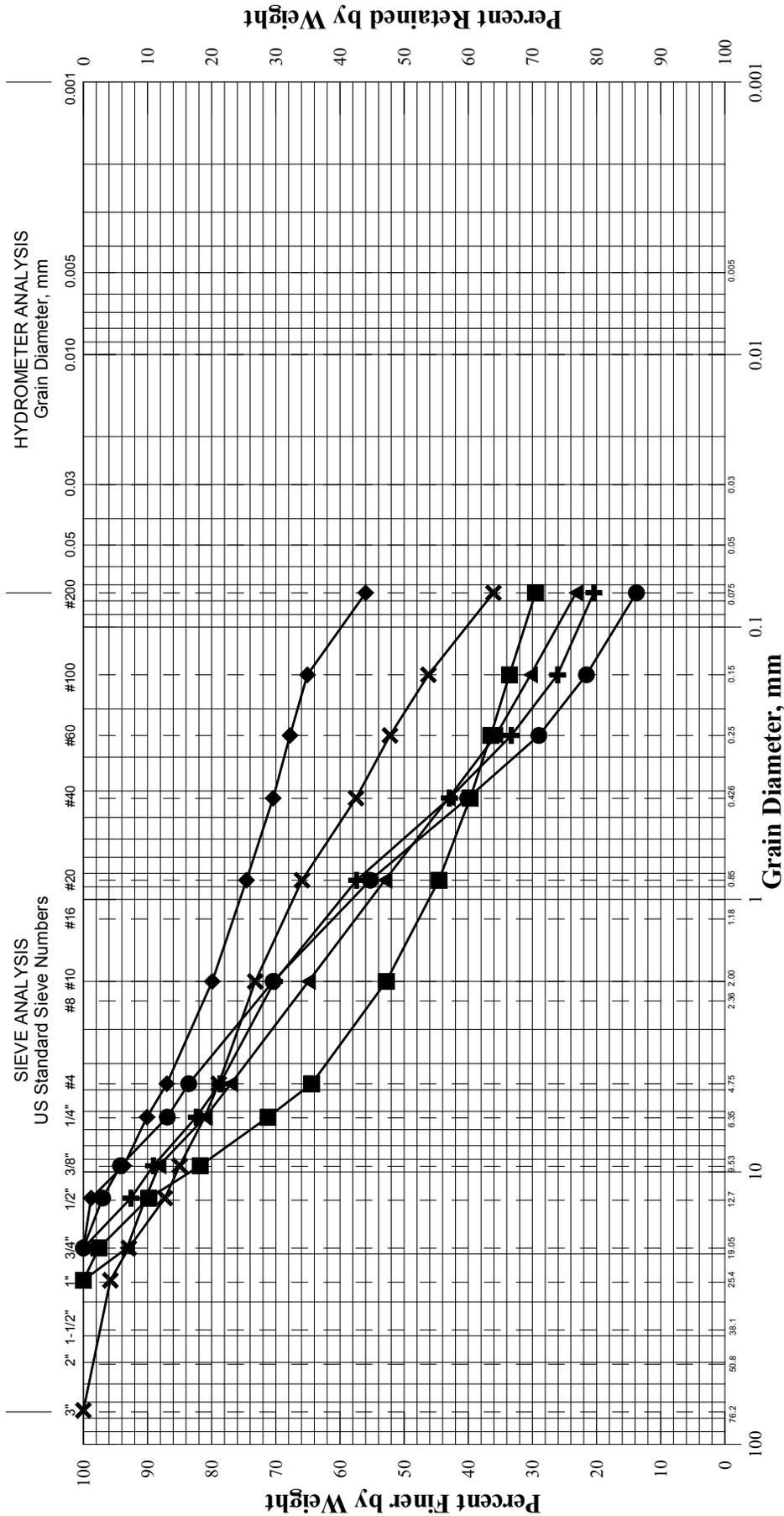


UNIFIED CLASSIFICATION

| Boring No. | Sample No. | Depth (ft) | Description | w% | LL | PL | PI |
|-------------|------------|------------|-----------------------------------|------|----|----|----|
| HB-KENN-102 | S25 | 0.40-3.3 | SAND, little silt, little gravel. | 7.5 | | | |
| HB-KENN-102 | S26 | 3.3-10.0 | Silty SAND, trace gravel. | 12.0 | | | |
| HB-KENN-105 | S1 | 0.40-1.9 | SAND, some gravel, little silt. | 4.1 | | | |
| HB-KENN-105 | S2 | 1.9-5.0 | SAND, trace silt. | 2.9 | | | |
| HB-KENN-107 | S3 | 2.0-4.3 | SAND, some silt, little gravel. | 12.5 | | | |
| HB-KENN-107 | S4 | 4.3-10.0 | SAND, trace silt. | 4.1 | | | |

PIN: 11218.00
Town: Kennebunk
Reported by: T. White
Date: 10/8/04

State of Maine Department of Transportation
GRAIN SIZE DISTRIBUTION CURVE



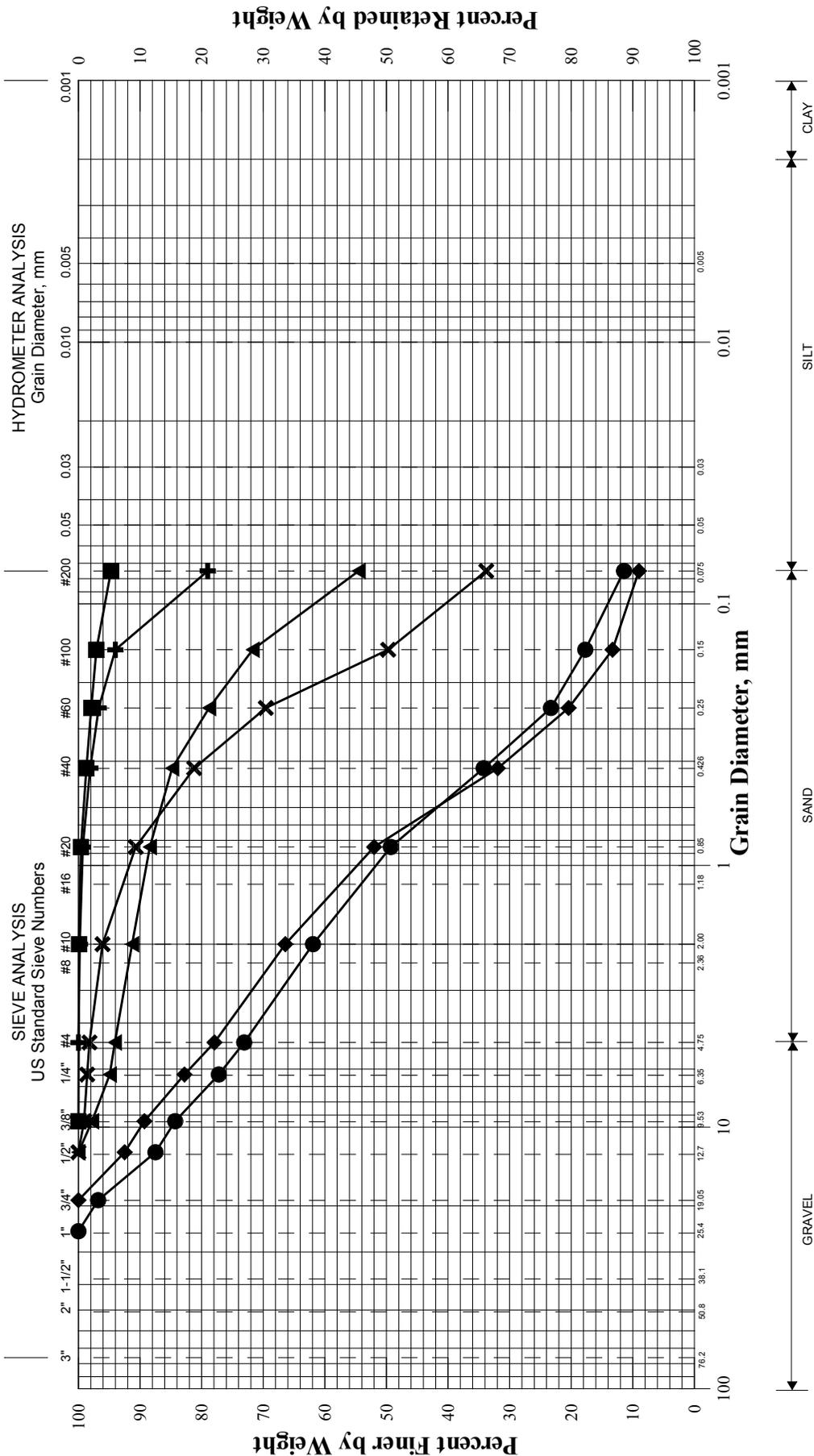
GRAVEL SAND SILT CLAY

UNIFIED CLASSIFICATION

| Boring No. | Sample No. | Depth (ft) | Description | w% | LL | PL | PI |
|------------|-------------|------------|-----------------------------------|------|----|----|----|
| + | HB-KENN-108 | 0.35-2.2 | SAND, some gravel, little silt. | 5.2 | | | |
| ◆ | HB-KENN-108 | 2.2-5.7 | SILT, some sand, little gravel. | 9.0 | | | |
| ■ | HB-KENN-109 | 2.2-4.5 | SANDY GRAVEL, some silt. | 4.3 | | | |
| ● | HB-KENN-110 | 0.40-1.1 | SAND, little gravel, little silt. | 5.0 | | | |
| ▲ | HB-KENN-113 | 0.40-1.3 | SAND, some gravel, some silt. | 6.8 | | | |
| × | HB-KENN-113 | 1.3-5.0 | Silty SAND, some gravel. | 19.9 | | | |

PIN: 11218.00
Town: Kennebunk
Reported by: T. White
Date: 10/8/04

State of Maine Department of Transportation
GRAIN SIZE DISTRIBUTION CURVE

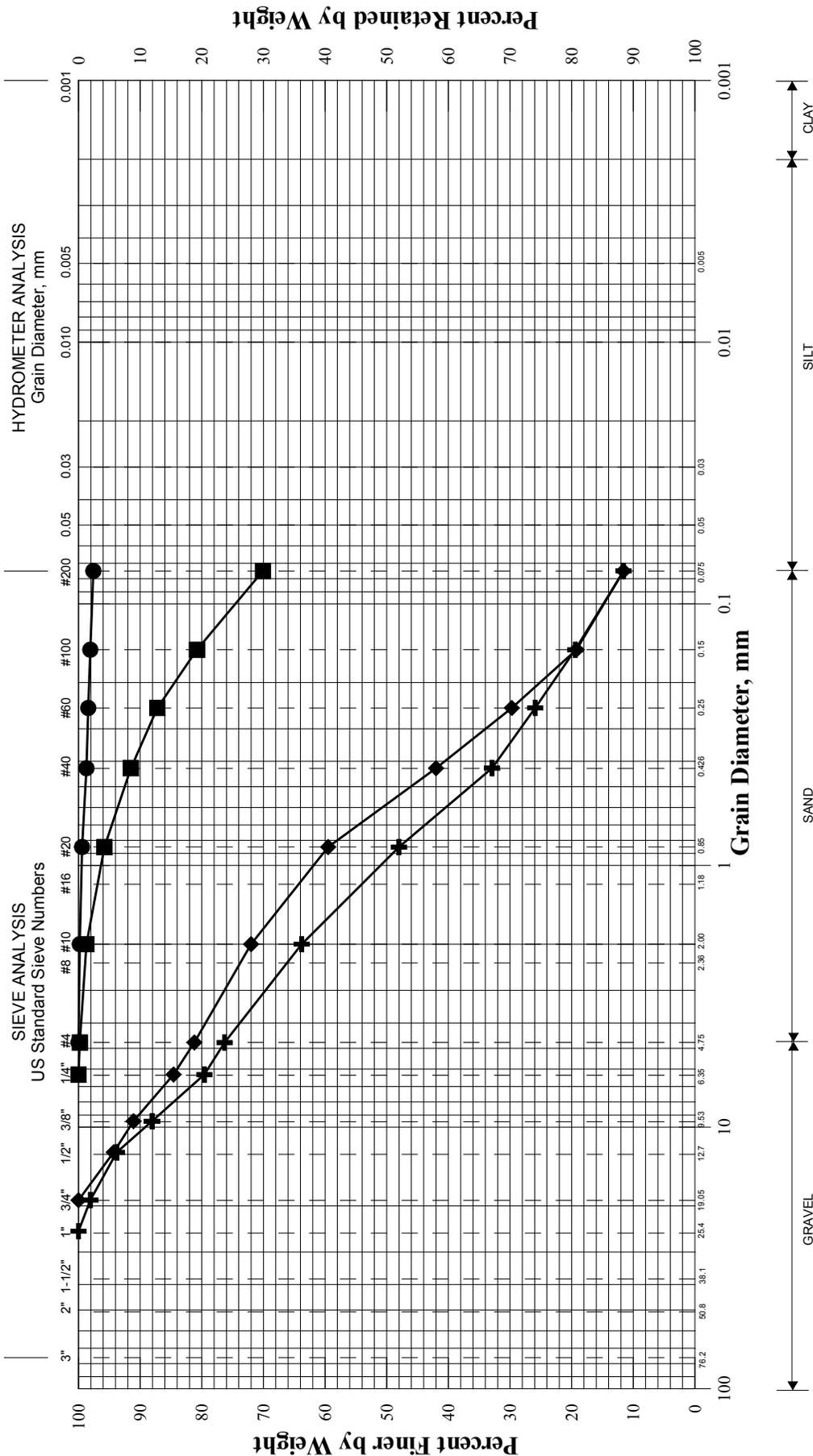


UNIFIED CLASSIFICATION

| Boring No. | Sample No. | Depth (ft) | Description | w% | LL | PL | PI |
|---------------|------------|------------|---|------|----|----|----|
| + HB-KENN-115 | S11 | 1.8-5.0 | SILT with clay, some sand, trace gravel. | 22.4 | | | |
| ◆ HB-KENN-116 | S12 | 0.40-3.6 | SAND, some gravel, trace silt. | 7.5 | | | |
| ■ HB-KENN-118 | S13 | 1.6-5.0 | SILT with clay, trace sand, trace gravel. | 22.8 | | | |
| ● HB-KENN-119 | S14 | 0.40-2.1 | SAND, some gravel, little silt. | 4.1 | | | |
| ▲ HB-KENN-119 | S15 | 2.1-5.0 | Sandy SILT, trace gravel. | 15.4 | | | |
| X HB-KENN-121 | S16 | 1.3-5.0 | SAND, some silt, trace gravel. | 18.9 | | | |

PIN: 11218.00
Town: Kennebunk
Reported by: T. White
Date: 10/8/04

State of Maine Department of Transportation
GRAIN SIZE DISTRIBUTION CURVE

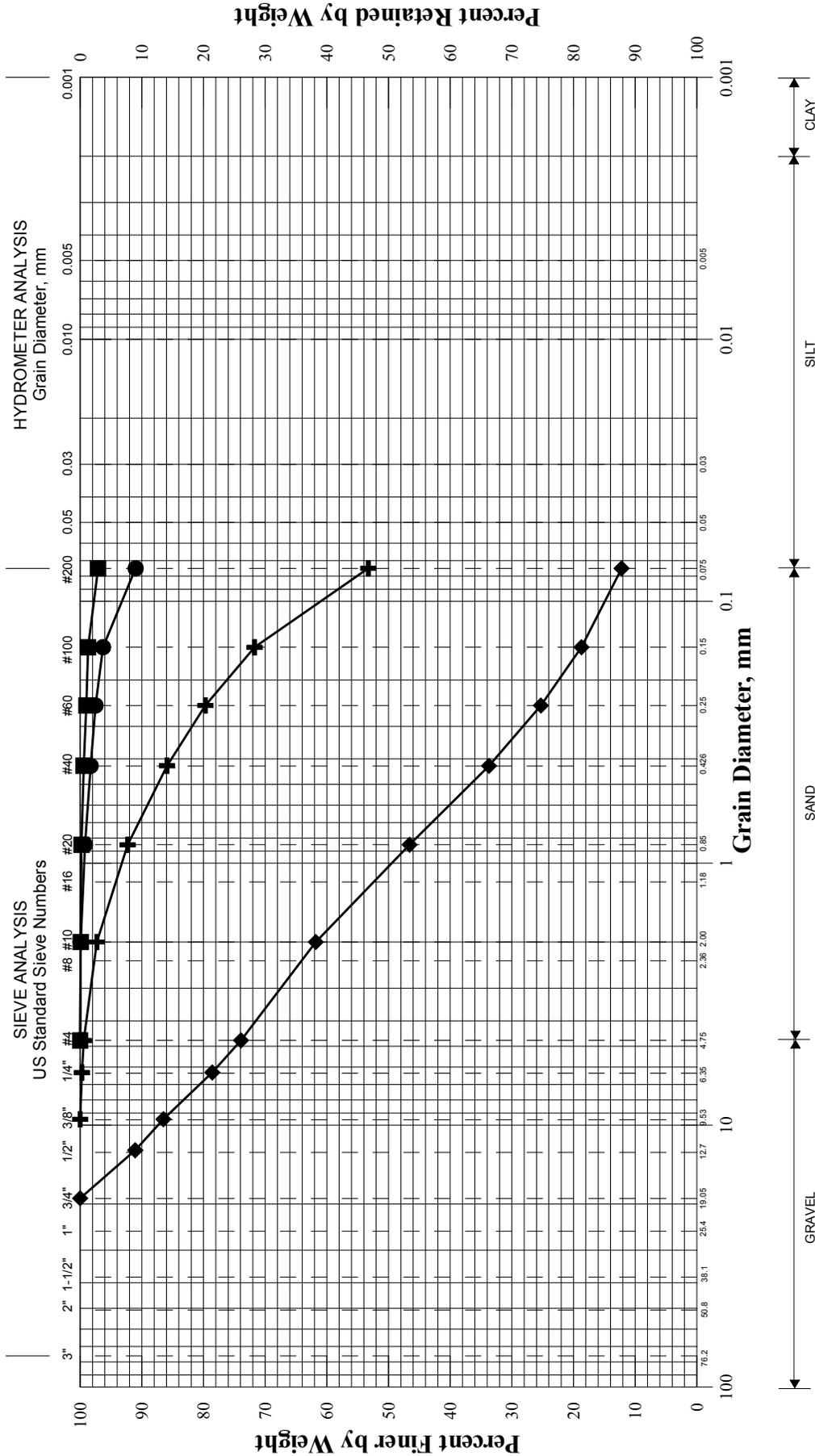


UNIFIED CLASSIFICATION

| Boring No. | Sample No. | Depth (ft) | Description | w% | LL | PL | PI |
|-------------|------------|------------|--|------|----|----|----|
| HB-KENN-123 | S17 | 0.40-1.6 | SAND, some gravel, little silt. | 5.1 | | | |
| HB-KENN-123 | S18 | 1.6-5.0 | SAND, little gravel, little silt. | 9.1 | | | |
| HB-KENN-124 | S19 | 1.5-5.0 | SILT with clay, some sand, trace gravel. | 22.5 | | | |
| HB-KENN-125 | S20 | 2.0-5.0 | Silty CLAY, trace sand. | 31.4 | | | |
| | | | | | | | |
| | | | | | | | |

PIN: 11218.00
Town: Kennebunk
Reported by: T. White
Date: 10/8/04

State of Maine Department of Transportation
GRAIN SIZE DISTRIBUTION CURVE



UNIFIED CLASSIFICATION

| Boring No. | Sample No. | Depth (ft) | Description | w% | LL | PL | PI |
|------------|-------------|------------|---------------------------------|------|----|----|----|
| + | HB-KENN-126 | 2.4-5.9 | Sandy SILT, trace gravel. | 20.2 | | | |
| ◆ | HB-KENN-129 | 0.40-2.0 | SAND, some gravel, little silt. | 3.3 | | | |
| ● | HB-KENN-129 | 2.0-5.0 | Silty CLAY, trace sand. | 22.0 | | | |
| ▲ | HB-KENN-131 | 1.8-5.0 | SILT with clay, trace sand. | 25.1 | | | |
| × | | | | | | | |

PIN: 11218.00
Town: Kennebunk
Reported by: T. White
Date: 10/8/04

**State of Maine - Department of Transportation
Power Auger Probe Summary Sheet**

Town(s): Kennebunk

Project Number: 11218.10

| Station (Feet) | Offset (Feet) | Weathered Rock (Feet) | Refusal (Feet) | No Refusal (Feet) | Water Depth (Ft.) | Comments / Date 9/11/2008 |
|----------------|---------------|-----------------------|----------------|-------------------|-------------------|------------------------------|
| 68+00 | 21.0 Lt. | | | 6.5 | | |
| 68+00 | 29.0 Rt. | | | 6.5 | | |
| 68+50 | Lt. | | | | | waterline, steep bank |
| 68+50 | 5.0 Lt. | 2.9 | 4.1 | | | |
| 68+50 | 28.0 Rt. | | 4.2 | | | |
| 69+50 | 21.0 Lt. | | 1.2 | | | |
| 69+50 | 5.5 Lt. | | 1.4 | | | |
| 69+50 | 16.5 Rt. | | | 6.5 | | |
| 70+50 | 22.0 Lt. | | 2.3 | | | |
| 70+50 | 5.0 Lt. | 2.1 | 3.5 | | | |
| 70+50 | 18.0 Rt. | | 8.8 | | | |
| 71+50 | 22.0 Lt. | | 5.3 | | | |
| 71+50 | 5.5 Lt. | | 4.4 | | | |
| 71+50 | 15.0 Rt. | | 4.2 | | | |
| 72+50 | 22.0 Lt. | | | 10.0 | | |
| 72+50 | 5.0 Lt. | | 6.1 | | | |
| 72+50 | 25.0 Rt. | | 8.4 | | | |
| 73+50 | 19.0 Lt. | | 4.3 | | | |
| 73+50 | 5.0 Lt. | 3.0 | 4.1 | | | |
| 73+50 | 13.0 Rt. | | | 6.5 | | |
| 74+50 | 23.0 Lt. | | 5.7 | | | |
| 74+50 | 5.5 Lt. | | 2.2 | | | |
| 74+50 | 13.0 Rt. | | | 6.5 | | |
| 75+50 | 21.0 Lt. | | | 6.5 | | |
| 75+50 | 5.0 Lt. | | 4.1 | | | |
| 75+50 | 12.5 Rt. | | 2.7 | | | |
| 76+50 | 22.0 Lt. | | | 6.5 | | |
| 76+50 | 5.0 Lt. | | 5.7 | | | |
| 76+50 | 15.5 Rt. | | 5.7 | | | |
| 78+00 | 18.0 Lt. | | 5.5 | | | |
| 78+00 | 4.0 Rt. | | | 6.5 | | |
| 78+00 | 16.0 Rt. | | 3.2 | | | |
| 79+00 | 20.0 Lt. | | | 6.5 | | |
| 79+00 | 5.0 Lt. | | 3.2 | | | |
| 79+00 | 15.0 Rt. | | 3.1 | | | |
| 79+50 | 20.0 Lt. | | 6.1 | | | |
| 79+50 | 5.0 Lt. | | 4.5 | | | |
| 79+50 | 15.5 Rt. | 3.8 | 4.1 | | | |
| 80+50 | 22.0 Lt. | | | 6.5 | | |
| 80+50 | 4.0 Lt. | | | 6.5 | | |
| 80+50 | 28.0 Rt. | | | 7.0 | | |
| 86+50 | 15.0 Lt. | | 7.4 | | | |
| 87+40 | 13.0 Lt. | 2.7 | 3.4 | | | |
| 87+50 | Lt. | | | | | overhead wires |
| 88+00 | 12.5 Lt. | 2.1 | 2.7 | | | |
| 89+00 | 17.5 Lt. | 3.2 | 4.9 | | | |

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 290+00, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S_u = Insitu Field Vane Shear Strength (psf) T_v = Pocket Torvane Shear Strength (psf) q_p = Unconfined Compressive Strength (ksf) $S_u(\text{lab})$ = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. Brown, damp, gravelly fine to coarse SAND. | -0.400 | |
| | | | | | | | -2.30 | | Olive-brown, moist, clayey-SILT, trace fine sand. ~S24 | -2.300 | |
| 5 | | | | | | ↓ | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | -5.000 | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/16/04-9/16/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 43+50, 9.2 Lt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Depth (ft.) | Sample Information | | | | | | | | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|-------------|--------------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|-----------------|--|----------------------------------|--|
| | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | | |
| 0 | S25 | 34.8/34.8 | 0.40 - 3.30 | | | | SSA | -0.40 | [Pattern] | PAVEMENT. Brown, damp, gravelly fine to coarse SAND. | G#175367 A-1-b, SM WC=7.5% | |
| | | | | | | | | | [Pattern] | | | |
| | S26 | 80.4/80.4 | 3.30 - 10.00 | | | | | -3.30 | [Pattern] | Grey-brown, wet, silty fine SAND. Wetter with depth. | G#175365 A-4, SM WC=12.0% | |
| 5 | | | | | | | | | [Pattern] | | | |
| | | | | | | | | | [Pattern] | | | |
| 10 | | | | | | | | -10.00 | [Pattern] | Bottom of Exploration at 10.00 feet below ground surface. No Refusal | | |
| | | | | | | | | | [Pattern] | | | |
| 15 | | | | | | | | | [Pattern] | | | |
| | | | | | | | | | [Pattern] | | | |
| 20 | | | | | | | | | [Pattern] | | | |
| | | | | | | | | | [Pattern] | | | |
| 25 | | | | | | | | | [Pattern] | | | |

Remarks:
 Environment and Geotech Boring.
 Offsets are from Proposed Construction CL.

| | | |
|---|--|--------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/16/04-9/16/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 46+00, 27.2 Lt. | Casing ID/OD: N/A | Water Level*: 5.5' bgs. |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|--|--|--|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | | |
| 0 | | | | | | SSA | | ●●●●●●●● | | | Brown, damp, gravelly fine to coarse SAND. | |
| | | | | | | | -2.00 | ●●●●●●●● | | | Light brown, wet, fine to coarse SAND. | -2.000 |
| 5 | | | | | | | | ●●●●●●●● | | | | |
| | | | | | | | -10.00 | ●●●●●●●● | | | Bottom of Exploration at 10.00 feet below ground surface. No Refusal | -10.000 |
| 10 | | | | | | | | ●●●●●●●● | | | | |
| 15 | | | | | | | | ●●●●●●●● | | | | |
| 20 | | | | | | | | ●●●●●●●● | | | | |
| 25 | | | | | | | | ●●●●●●●● | | | | |

Remarks:
 Offsets are from Proposed Construction CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/16/04-9/16/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 47+60, 44.8 Lt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
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| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|--|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.35 | | PAVEMENT. | 0.350 | |
| | | | | | | | -2.00 | | Brown, damp, gravelly fine to coarse SAND. | 2.000 | |
| | | | | | | | -10.00 | | Brown, moist, fine to medium SAND, trace fine gravel. Wetter with depth. | 10.000 | |
| 10 | | | | | | | -10.00 | | Bottom of Exploration at 10.00 feet below ground surface. No Refusal | 10.000 | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Proposed Construction CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 55+00, 9.2 Lt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|----------------------|---|--------------------------------|---|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | S1 | 18/18 | 0.40 - 1.90 | | | SSA | -0.40 | [Graphic Log Symbol] | PAVEMENT. | -0.400 | G#175361 A-1-b, SM WC=4.1% G#175353 A-1-b, SP-SM WC=2.9% |
| | S2 | 37.2/37.2 | 1.90 - 5.00 | | | | -1.90 | [Graphic Log Symbol] | Brown, damp, gravelly fine to coarse SAND. | -1.900 | |
| | | | | | | | | [Graphic Log Symbol] | Light brown, damp, fine to medium SAND. | -1.900 | |
| 5 | | | | | | ↓ | -5.00 | [Graphic Log Symbol] | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | -5.000 | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Proposed Construction CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 59+00, 5.3 Lt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _U = Insitu Field Vane Shear Strength (psf) T _V = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _U (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|--|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.30 | ●●●●●●●● | PAVEMENT. | 0.300 | |
| | | | | | | | -1.10 | ●●●●●●●● | Brown, damp, gravelly fine to coarse SAND. ~S1 | 1.100 | |
| | | | | | | | | ●●●●●●●● | Light brown, wet, fine to medium SAND. ~S2 Wetter with depth. | | |
| 5 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 10 | | | | | | | -10.00 | | Bottom of Exploration at 10.00 feet below ground surface. No Refusal | 10.000 | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Proposed Construction CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 66+50, 6.0 Lt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|---------------------------|--|-----------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.35 | [Graphic Log: Pavement] | PAVEMENT. | | |
| | | | | | | | -2.00 | [Graphic Log: Sand] | Brown, damp, gravelly fine to coarse SAND. | | |
| | S3 | 27.6/27.6 | 2.00 - 4.30 | | | | -4.30 | [Graphic Log: Sand] | Brown, moist, silty fine to medium SAND, trace fine gravel. | G#175351 A-2-4, SM WC=12.5% | |
| | S4 | 68.4/68.4 | 4.30 - 10.00 | | | | -10.00 | [Graphic Log: Sand] | Light brown, moist, fine to medium SAND. | G#175371 A-3, SP-SM WC=4.1% | |
| 10 | | | | | | | -10.00 | [Graphic Log: No Refusal] | Bottom of Exploration at 10.00 feet below ground surface. No Refusal | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Proposed Construction CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 71+00, 8.5 Lt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|----------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | S5 | 22.2/22.2 | 0.35 - 2.20 | | | SSA | -0.35 | | PAVEMENT. | G#175355 A-1-b, SM WC=5.2% | |
| | | | | | | | | | Brown, damp, gravelly fine to coarse SAND. | | |
| | S6 | 42/42 | 2.20 - 5.70 | | | | -2.20 | | Grey-brown, damp, sandy SILT. | G#175359 A-4, ML WC=9.0% | |
| 5 | | | | | | | -5.70 | | Bottom of Exploration at 5.70 feet below ground surface. Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Proposed Construction CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 76+00, 7.9 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|----------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.35 | | PAVEMENT. | | |
| | | | | | | | | | Brown, damp, gravelly fine to coarse SAND. | | |
| | S7 | 27.6/27.6 | 2.20 - 4.50 | | | | -2.20 | | Olive, damp, sandy-SILT, some gravel, (Till). | G#175352 A-2-4, GM WC=4.3% | |
| 5 | | | | | | | -4.50 | | Weathered ROCK. | | |
| | | | | | | | -5.50 | | Bottom of Exploration at 5.50 feet below ground surface. Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Proposed Construction CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 85+00, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------------------|---|----------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | S8 | 8.4/8.4 | 0.40 - 1.10 | | | SSA | -0.40 | [Graphic Log: PAVEMENT] | PAVEMENT. | G#175363 A-1-b, SM WC=5.0% | |
| | | | | | | | -1.10 | [Graphic Log: SAND] | Brown, moist, gravelly fine to coarse SAND. | | |
| | | | | | | | | [Graphic Log: SAND] | Light brown, damp, fine to medium SAND. | | |
| 5 | | | | | | ↓ | -5.00 | [Graphic Log: STOP] | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Proposed Construction CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 92+50, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S_u = Insitu Field Vane Shear Strength (psf) T_v = Pocket Torvane Shear Strength (psf) q_p = Unconfined Compressive Strength (ksf) $S_u(\text{lab})$ = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. Brown, damp, gravelly fine to coarse SAND with cobbles. | -0.400 | |
| | | | | | | | -1.80 | | Light brown, damp, fine to medium SAND. | -1.800 | |
| 5 | | | | | | ↙ | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | -5.000 | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Proposed Construction CL.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 102+00, 11.0 Lt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|---|---|--|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | | |
| 0 | | | | | | SSA | -0.40 |  | PAVEMENT. | | | |
| | | | | | | | | | Brown, damp, gravelly fine to coarse SAND with cobbles. | | 0.400 | |
| | | | | | | | -2.20 |  | Grey-brown, moist, silty fine to medium SAND, some gravel, (Till). | | 2.200 | |
| 5 | | | | | | | -5.00 |  | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | 5.000 | |
| 10 | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | |

Remarks:
 Offsets are from Proposed Construction CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 105+00, 8.0 Lt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | S9 | 10.8/10.8 | 0.40 - 1.30 | | | SSA | -0.40 | | PAVEMENT. | G#175369 | |
| | S10 | 44.4/44.4 | 1.30 - 5.00 | | | | -1.30 | | Brown, damp, gravelly fine to coarse SAND, trace silt. | A-1-b, SM | |
| | | | | | | | | | Brown, wet, sandy-SILT, little gravel. | WC=6.8% | |
| 5 | | | | | | | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | G#175375 | |
| | | | | | | | | | | A-2-4, SM | |
| | | | | | | | | | | WC=19.9% | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Proposed Construction CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 108+00, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. | -0.400 | |
| | | | | | | | | | Brown, damp, gravelly fine to coarse SAND. | | |
| | | | | | | | -3.10 | | Light brown, moist, fine to medium SAND. | -3.100 | |
| 5 | | | | | | ↙ | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | -5.000 | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Proposed Construction CL.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 120+00, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.45 | | PAVEMENT. | | |
| | S11 | 38.4/38.4 | 1.80 - 5.00 | | | | -1.80 | | Brown, damp, gravelly fine to coarse SAND. | 0.450 | |
| | | | | | | | | | Light brown, moist, fine sandy-SILT, little clay. | 1.800 | |
| 5 | | | | | | | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | 5.000 | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 130+00, 9.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|---|---|-------------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | S12 | 38.4/38.4 | 0.40 - 3.60 | | | SSA | -0.40 |  | PAVEMENT. Brown, damp, gravelly fine to coarse SAND. | G#175347 A-1-b, SW-SM WC=7.5% | |
| | | | | | | | -3.60 |  | Grey-brown, moist, silty fine SAND, trace clay. | | |
| 5 | | | | | | | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 142+50, 9.5 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S_u = Insitu Field Vane Shear Strength (psf) T_v = Pocket Torvane Shear Strength (psf) q_p = Unconfined Compressive Strength (ksf) $S_u(\text{lab})$ = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|--|--|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. Brown, damp, gravelly fine to coarse SAND, trace silt. (Fill Area). | | | |
| 5 | | | | | | ↓ | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | | |
| 10 | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 157+50, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. | -0.400 | G#175370 A-4, CL-ML WC=22.8% |
| | S13 | 40.8/40.8 | 1.60 - 5.00 | | | | -1.60 | | Brown, damp, gravelly fine to coarse SAND. | -1.600 | |
| | | | | | | | -5.00 | | Olive-brown, moist, clayey SILT, trace fine sand. | -5.000 | |
| 5 | | | | | | ↓ | | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 167+50, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|----------------------|-----------------|-------------------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | S14 | 20.4/20.4 | 0.40 - 2.10 | | | SSA | -0.40 | [Graphic Log: Pavement] | PAVEMENT. | -0.400 | G#175357 A-1-b, SW-SM WC=4.1% |
| | | | | | | | -2.10 | [Graphic Log: Sand] | Brown, damp, gravelly fine to coarse SAND. | -2.100 | |
| | S15 | 34.8/34.8 | 2.10 - 5.00 | | | | | [Graphic Log: Sand] | Grey-brown, moist, silty fine SAND, trace fine gravel. | -5.000 | G#175373 A-4, ML WC=15.4% |
| 5 | | | | | | [Graphic Log: Arrow] | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/14/04-9/14/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 178+00, 8.5 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. | -0.400 | |
| | | | | | | | -1.40 | | Brown, dry, gravelly fine to coarse SAND. | -1.400 | |
| | | | | | | | -5.00 | | Grey-brown, dry, silty fine to medium SAND, some gravel. | -5.000 | |
| 5 | | | | | | ↓ | | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 190+00, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | [Pattern] | PAVEMENT. | -0.400 | |
| | S16 | 44.4/44.4 | 1.30 - 5.00 | | | | -1.30 | [Pattern] | Brown, damp, gravelly fine to coarse SAND. | -1.300 | G#175354 A-2-4, SM WC=18.9% |
| | | | | | | | | [Pattern] | Brown, moist, fine to medium SAND, little silt. | | |
| 5 | | | | | | ↓ | -5.00 | [Pattern] | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | -5.000 | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 193+00, 8.0 Lt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|--|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. Brown, damp, gravelly fine to coarse SAND. | -0.400 -2.300 | |
| 5 | | | | | | | | | Bottom of Exploration at 2.30 feet below ground surface. Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 200+00, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | S17 | 14.4/14.4 | 0.40 - 1.60 | | | SSA | -0.40 | | PAVEMENT. | -0.400 | G#175364 A-1-b, SW-SM WC=5.1% G#175368 A-1-b, SW-SM WC=9.1% |
| | S18 | 40.8/40.8 | 1.60 - 5.00 | | | | -1.60 | | Brown, damp, gravelly fine to coarse SAND. | -1.600 | |
| | | | | | | | | | Brown, wet, fine to coarse SAND, little gravel. | | |
| 5 | | | | | | ∇ | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | -5.000 | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 208+50, 7.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
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| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. | -0.400 | G#175366 A-4, CL-ML WC=22.5% |
| | S19 | 42/42 | 1.50 - 5.00 | | | | -1.50 | | Brown, damp, gravelly fine to coarse SAND. | -1.500 | |
| | | | | | | | -5.00 | | Grey, wet, silty fine SAND, trace clay. | -5.000 | |
| 5 | | | | | | ↓ | | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 215+00, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

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|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
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| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. | -0.400 | G#175360 A-6, CL WC=31.4% |
| | | | | | | | -2.00 | | Brown, damp, gravelly fine to coarse SAND. | -2.000 | |
| | S20 | 36/36 | 2.00 - 5.00 | | | | -5.00 | | Olive, wet, silty CLAY. | -5.000 | |
| 5 | | | | | | ↓ | | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 220+00, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. | -0.400 | |
| | | | | | | | | | Brown, damp, gravelly fine to coarse SAND. | | |
| | S21 | 31.2/31.2 | 2.40 - 5.00 | | | | -2.40 | | Grey, wet, silty fine SAND. | -2.400 | G#175372 A-4, ML WC=20.2% |
| 5 | | | | | | ↓ | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | -5.000 | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 225+00, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
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| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|--|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | [Symbol] | PAVEMENT. -----0.400 Brown, damp, gravelly fine to coarse SAND. -----1.000 Grey-brown, moist, fine sandy SILT, trace clay. -----2.600 Light brown, wet, silty fine SAND. -----5.000 | | |
| 5 | | | | | | ↓ | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 237+50, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. -----0.400 Brown, damp, gravelly fine to coarse SAND. -----1.100 Light brown, moist, fine to medium SAND, trace silt. | | |
| 5 | | | | | | ↙ | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 250+00, 8.0 Lt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | S22 | 19.2/19.2 | 0.40 - 2.00 | | | SSA | -0.40 | | PAVEMENT. | -0.400 | G#175358 A-1-b, SW-SM WC=3.3% |
| | | | | | | | -2.00 | | Brown, damp, gravelly fine to coarse SAND. | -2.000 | |
| | S23 | 36/36 | 2.00 - 5.00 | | | | | | Olive-brown, moist, silty CLAY. | -5.000 | G#175362 A-6, CL WC=22.0% |
| 5 | | | | | | | | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 262+50, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|---|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows ((6 in.) Shear Strength (psf) or RQD (%)) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 |  | PAVEMENT. Brown, damp, gravelly fine to coarse SAND. | -0.400 | |
| | | | | | | | -1.90 |  | Brown, wet, fine to coarse SAND, little silt, trace gravel. | -1.900 | |
| 5 | | | | | | ↓ | -5.00 |  | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | -5.000 | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 273+50, 8.0 Lt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
|---|--|--|

| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|------------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. | | |
| | S24 | 38.4/38.4 | 1.80 - 5.00 | | | | -1.80 | | Brown, damp, gravelly fine to coarse SAND. | | |
| | | | | | | | | | Olive-brown, moist, clayey-SILT, trace fine sand. | G#175356 A-4, CL-ML WC=25.1% | |
| 5 | | | | | | | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

| | | |
|---|--|------------------------------------|
| Driller: MaineDOT | Elevation (ft.): | Auger ID/OD: 5" |
| Operator: C. Mann | Datum: NGVD | Sampler: Off Flights |
| Logged By: B. Wilder | Rig Type: CME 45C | Hammer Wt./Fall: N/A |
| Date Start/Finish: 9/15/04-9/15/04 | Drilling Method: Solid Stem Auger | Core Barrel: N/A |
| Boring Location: 277+50, 8.0 Rt. | Casing ID/OD: N/A | Water Level*: None Observed |

| | | |
|---|--|--|
| Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample attempt U = Thin Wall Tube Sample R = Rock Core Sample V = Insitu Vane Shear Test SSA = Solid Stem Auger | Definitions: S _u = Insitu Field Vane Shear Strength (psf) T _v = Pocket Torvane Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) S _u (lab) = Lab Vane Shear Strength (psf) WOH = weight of 140lb. hammer WOR = weight of rods. WOC = weight of casing | Definitions: WC = water content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test |
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| Sample Information | | | | | | | | | | Visual Description and Remarks | Laboratory Testing Results/AASHTO and Unified Class. |
|--------------------|------------|-----------------|--------------------|---|---------|--------------|-----------------|-------------|---|--------------------------------|--|
| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (6 in.) Shear Strength (psf) or RQD (%) | N-value | Casing Blows | Elevation (ft.) | Graphic Log | | | |
| 0 | | | | | | SSA | -0.40 | | PAVEMENT. Brown, damp, gravelly fine to coarse SAND. | -0.400 | |
| | | | | | | | -2.30 | | Olive-brown, moist, clayey-SILT, trace fine sand. ~S24 | -2.300 | |
| 5 | | | | | | ↓ | -5.00 | | Bottom of Exploration at 5.00 feet below ground surface. No Refusal | -5.000 | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |

Remarks:
 Offsets are from Existing Roadway CL.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.