3.1 Exploration Pits

Exploration pits were excavated with a Case 580K backhoe. The pits permitted direct, visual observation of subsurface conditions. Materials encountered in the exploration pits were studied and classified in the field by a geotechnical engineer from our firm. All exploration pits were backfilled immediately after examination and logging. Selected samples were then transported to our laboratory for further visual classification and testing, as necessary.

4.0 SUBSURFACE CONDITIONS

Subsurface conditions within the proposed development area were inferred from the field explorations accomplished for this study, visual reconnaissance of the site, and review of topography provided on the previously mentioned topographic survey. As shown on the field logs, the exploration holes generally encountered fill materials overlying soft to medium stiff silts overlying weathered bedrock. The following section presents more detailed subsurface information organized from the upper (youngest) to the lower (oldest) sediment types.

4.1 Stratigraphy

Fill soils (those not naturally placed) were encountered in exploration pits EP-3 and EP-5. The fill ranged in thickness from 2 to 6 feet in EP-5 and EP-3, respectively. As noted on the exploration logs, the fill consisted of soft to medium stiff, moist, tannish-orange silt with some sand, trace to some gravel, with organics and charred wood. These materials appear to vary in both quality and depth across the site. Since the quality, thickness, and compaction of the fill materials are low or variable, the fill is unsuitable for structural support.

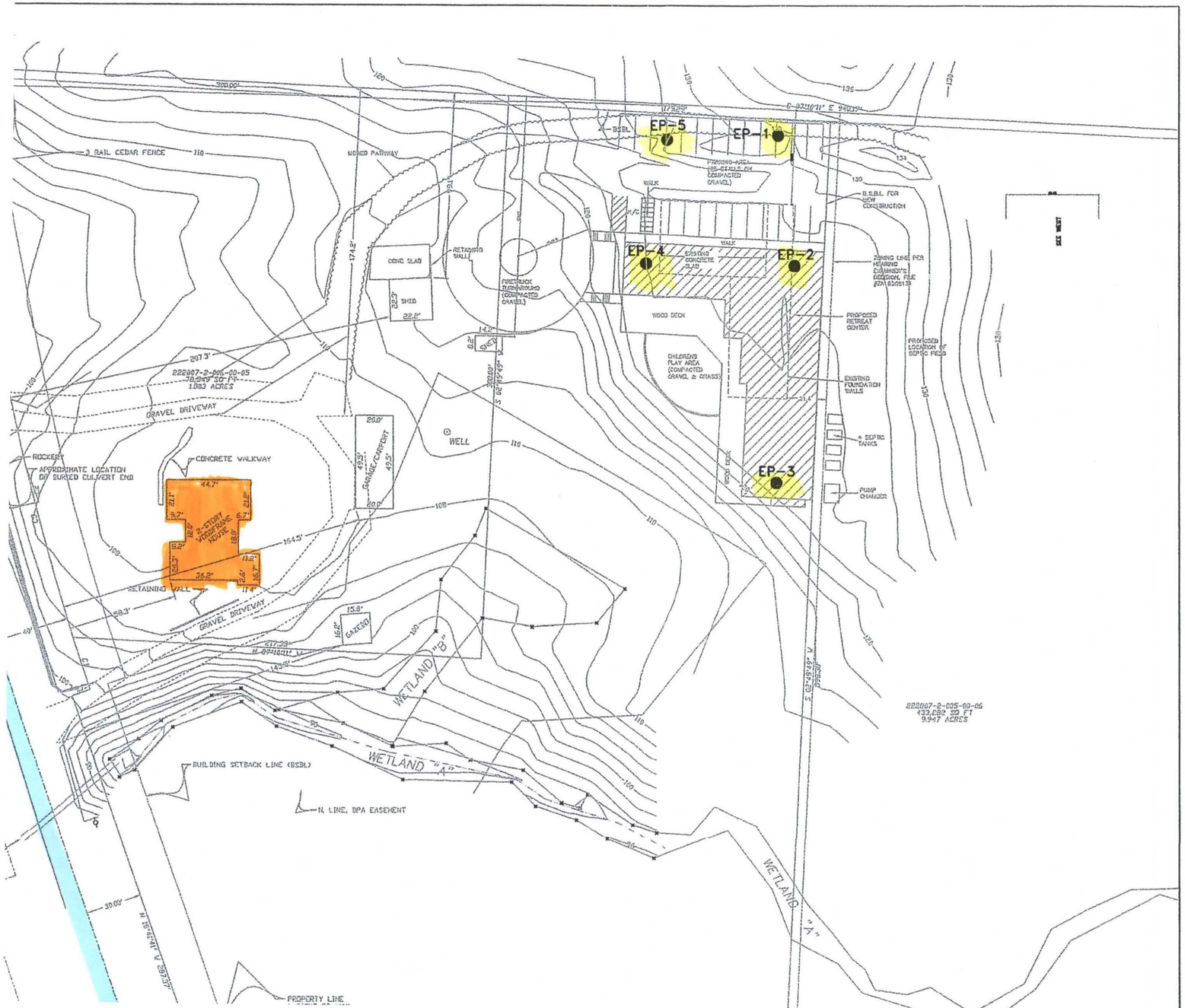
Recessional lacustrine (pond) sediment was exposed in exploration pits EP-1, EP-4, and EP-5. These sediments typically consisted of soft to stiff, tan to orange silt with varying amounts of sand and gravel to loose to medium dense, gray, fine sand with trace silt. This material was likely deposited in slow moving water during the retreat of the Vashon age glaciers.

Weathered bedrock was exposed in EP-1, EP-2, EP-3, and EP-5. This material has been mapped as pre-Tertiary melange (Booth, 1990). Refusal with the Case backhoe was encountered at depths ranging from 5 to 9 feet.

4.2 Hydrology

Ground water seepage was encountered in one exploration pit, EP-4, at the time of our field study. The seepage was located at a depth of approximately 7 feet and was accompanied by localized caving of the exploration pit walls.

Based on the stratigraphy exposed in our explorations, it is our opinion that this ground water is likely perched within a depression of the underlying bedrock. Perched water occurs when



LEGEND

EP-1● Approximate location of exploration pit, February 22, 1999

REFERENCE: BASE MAP PROVIDED BY CLIENT.

10211 Bollenbaugh Hill Rd

N

0 60 120

FEET

3%

EXPLORATION PIT LOG

Number EP-1 TP 74

0

Topsoil.

Medium stiff, moist, tannish-orange SILT with some sand and trace gravel. (Recessional Lacustrine)

Medium stiff to stiff, moist, tan SILT with some sand and gravel, occasional cobbles.

5

Weathered BEDROCK. (pre-Tertiary melange)

BOH @ 8' Refusal
Note: No seepage; no caving.

10

15

Number EP-2 TP 75

0

Topsoil.

Weathered BEDROCK. (pre-Tertiary melange)

5

BOH @ 5' Refusal
Note: No seepage; no caving.

10

15

Subsurface conditions depicted represent our observation at the time and location of this exploratory hole, modified by geologic interpretation, engineering analysis, and judgment. They are not necessarily representative of other times and locations. We will not accept responsibility for the use or interpretation by others of information presented on this log.

Reviewed By

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Project No. KE99075A
February 1999

EXPLORATION PIT LOG

Number EP-3 TP 76

0

Topsoil.

Soft to medium stiff, moist, tannish-orange SILT with some sand, trace to some gravel with organics and charred wood. (Fill)

5

Weathered BEDROCK. (pre-Tertiary melange)

10

BOH @ 9' Refusal
Note: No seepage; no caving.

15

Number EP-4 TP 77

0

Topsoil.

Soft to medium stiff, moist, tannish-brown, sandy SILT with trace to some gravel. (Recessional Lacustrine)

5

Soft, moist, tan, fine sandy SILT.

@ 7' grades to loose to medium dense, wet, gray, fine SAND with trace silt.

10

@ 12' sand interbedded with soft to medium stiff, wet, oxidized gray CLAY.

BOH @ 12'
Note: Rapid seepage at 7' with local caving.

15

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EXPLORATION PIT LOG

Number EP-5 TP 78

0

Topsoil with charred wood. (Fill)

Medium dense to stiff, moist, tan, silty, fine SAND to fine sandy SILT with occasional cobbles.

5

Weathered BEDROCK. (pre-Tertiary melange)

BOH @ 8' Refusal
Note: No seepage; no caving.

10

15

Number

0

5

10

15

Subsurface conditions depicted represent our observation at the time and location of this exploratory hole, modified by geologic interpretation, engineering analysis, and judgment. They are not necessarily representative of other times and locations. We will not accept responsibility for the use or interpretation by others of information presented on this log.

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