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Green label

Site address (may be on 1<sup>st</sup> or 2<sup>nd</sup> page of text)

Executive Summary and associated figures

Table of Contents

Project Location Plan/Map or Vicinity Map

Site Plans, Boring Location Plans, or Exploration Plans

Survey

Geologic Maps

Cross Sections/Subsurface Profiles

Fill or Peat Thickness Maps and Contour Maps

Boring Logs

Geology Text (if no logs)

Soil Classification Key/Boring Log Key

Probe Logs

Test Pit Logs

Monitoring Well Logs

Cone Penetrometer Logs

Shear Wave Velocity Measurements

Groundwater Maps

GW Elevation Tables/Data

Soils Lab Testing (Geotechnical) Summary Tables

Grain Size Analyses/Hydrometer Analyses

Atterberg Limits

Strength tests: Triaxial, Unconfined, Direct Shear

Organic Content

<sup>14</sup>C or Radiocarbon Testing

Other \_\_\_\_\_

Soil Chemical Analytical Testing Summary Tables

Water/Groundwater Chemical Analytical Summary Tables

Comments \_\_\_\_\_

Date Copied 06/21/01 By SURANN

SUBSURFACE EXPLORATION AND  
GEOTECHNICAL ENGINEERING REPORT

5/5  
3956

**BRANCH VILLA CCF**  
**Seattle, Washington**

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Prepared For

Branch Villa Health Care Center

W-6747

April, 1990

**RITTENHOUSE-ZEMAN & ASSOCIATES**

*Geotechnical & Environmental Consultants*





RITTENHOUSE-ZEMAN & ASSOCIATES, INC.  
Geotechnical & Environmental Consultants

1400 140th Avenue N.E.  
Bellevue, Washington 98005-4594  
(206) 746-8020/FAX (206) 746-6364

24 April 1990

W-6747

Branch Villa Health Care Center  
2611 South Dearborn Street  
Seattle, Washington 98144

Attention: Mr. Andrew Branch

Subject: Subsurface Exploration and Geotechnical Engineering Report  
Branch Villa CCF  
Martin Luther King Jr. Way South & South Charles Street  
Seattle, Washington

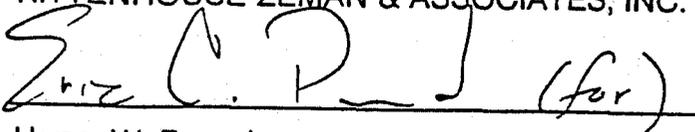
Gentlemen:

We are pleased to present herein a copy of the above referenced report. This report presents the results of our subsurface exploration and geotechnical engineering study relative to the foundation and construction considerations for the proposed project. Written authorization to proceed with this study was granted by Mr. Andrew Branch, on 8 March 1990.

We appreciate this opportunity to be of service to you and would be pleased to discuss the contents of this report or other aspects of the project with you at your convenience.

Respectfully submitted,

RITTENHOUSE-ZEMAN & ASSOCIATES, INC.

 (for)

Henry W. Brenniman  
Engineering Geologist

**SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT**

Branch Villa CCF  
Martin Luther King Jr. Way & South Charles Street  
Seattle, Washington

Prepared for,

Branch Villa Health Care Center  
2611 South Dearborn Street  
Seattle, Washington 98144

Prepared by,

**RITTENHOUSE-ZEMAN & ASSOCIATES, INC.**  
1400 140th Avenue N.E.  
Bellevue, Washington 98005

April 1990

**W-6747**

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Appendix A - Subsurface Exploration

Appendix B - Laboratory Procedures

## **SUBSURFACE EXPLORATION AND GEOTECHNICAL**

### **ENGINEERING REPORT**

Branch Villa CCF

Martin Luther King Jr. Way & South Charles Street

Seattle, Washington

#### **1.0 SUMMARY**

The proposed project is considered feasible based on the subsurface conditions encountered on the site. A brief summary of the project geotechnical considerations is presented below:

- A total of five borings were advanced with a hollow-stem auger across the site. The borings were accomplished to depths ranging from 13.5 to 29.0 feet. The borings with exception of B-4, disclosed subsurface conditions consisting of topsoil over loose to medium dense, gravelly silty sand, all underlain by weathered to increasingly non-weather glacial till at depth. A wedge of fill 3 feet thick underlying the topsoil and above the weathered till, was encountered in Borings B-4; Boring B-1 penetrated through the glacial till at approximately 20 feet and encountered a silty, fine to medium sand to the depth of our exploration. Boring B-2 encountered very dense, interbedded silty sand and glacial till from 24 feet to the full depth of our exploration.
- Groundwater seepage was not observed in any of our explorations. However, we did observe wet sand interbeds within the glacial till soils and seepage was observed coming from the slope exposed along Martin Luther King Jr. Way. We anticipate that seepage will be manifested as perched groundwater above the glacial till soils during wetter portions of the year.

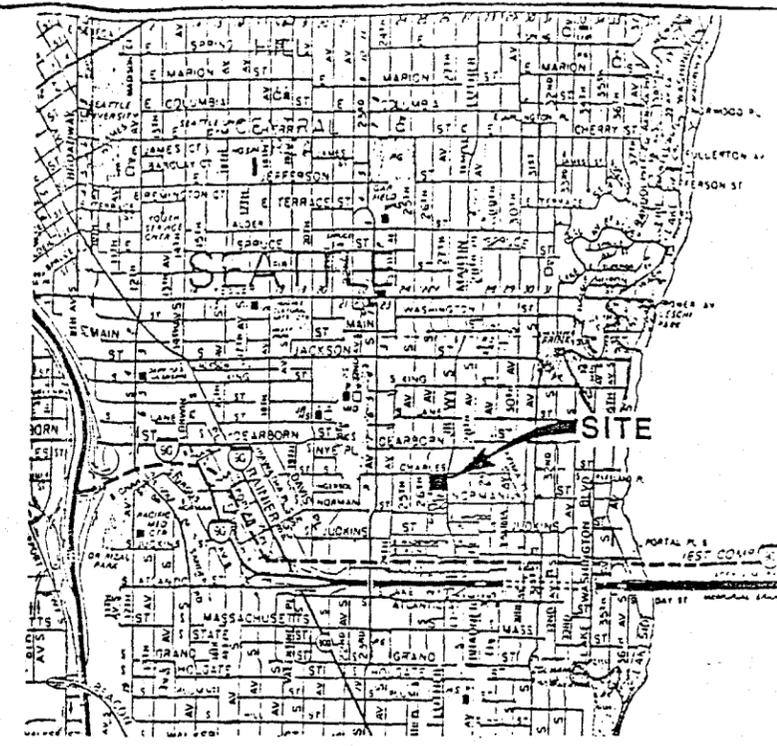
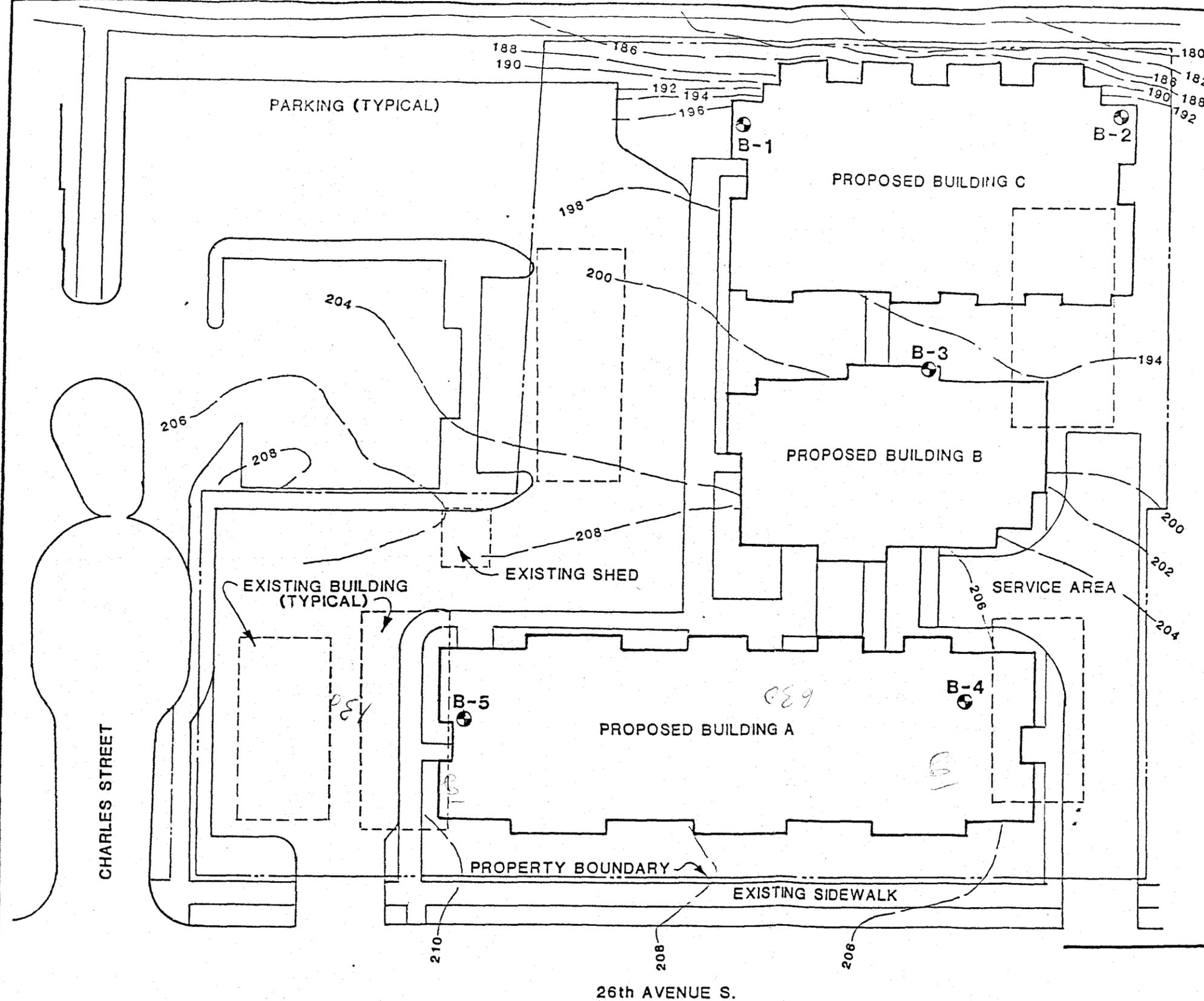
- o For the structures anticipated on site, shallow spread footing foundations are feasible. We recommend utilizing a maximum allowable soil bearing pressure of 2500 psf for buildings founded on structural fill and/or at least medium dense weathered glacial till soils. If desired, higher bearing pressures on the order of 5000 psf could be used for footings if extended to bear directly on the very dense native glacial till soils.

This summary is presented for introductory purposes only and should be used in conjunction with the full text of this report. Project description, site conditions and detailed geotechnical design recommendations are presented in the text of this report. Exploration procedures and logs are presented in Appendix A.

## 2.0 PROJECT DESCRIPTION

The project site comprises approximately 1.2 acres and is located immediately south of the right-of-way of Charles Street between Martin Luther King Jr. Way and 26th Avenue South, in Seattle, Washington. According to the plans provided to us, we understand that the new facility will consist of three interconnected 3 to 4-story structures. We understand that the easterly margin of the facility would be erected in close proximity to the existing rockery along Martin Luther King Jr. Way. The parcel is roughly L shaped, extending approximately 265 feet south from the southeast corner of the intersection of Charles Street and 26th Avenue South. The property then extends 235 feet due east to the southeast corner of the site, with a 5 foot jog south midway across the parcel. The property boundary then extends roughly 180 feet north before returning due west 120 feet. The property jogs again due north for 85 feet to the northeast corner of the parcel. This intersects the east extension of the property from the northwest corner of the site. The buildings will be serviced by entrance drives on Charles Street and 26th Avenue South. Proposed building, parking, and road locations as well as the approximate locations of the explorations accomplished for this study are shown on the Site and Exploration Plan, Figure 1.

The purpose of this study was to establish general subsurface conditions at the site from which conclusions and recommendations for building foundation design and site improvements could be formulated. The scope of work consisted of field explorations, visual assessment of site conditions, geotechnical engineering analyses and report



- LEGEND**
- B-5 INDICATES BORING NUMBER AND APPROXIMATE LOCATION
  - 210 ——— INDICATES EXISTING GROUND SURFACE CONTOUR

**BRANCH VILLA CCF  
SEATTLE, WASHINGTON  
SITE & EXPLORATION PLAN**

**FIGURE 1**

CHARLES STREET

26th AVENUE S.

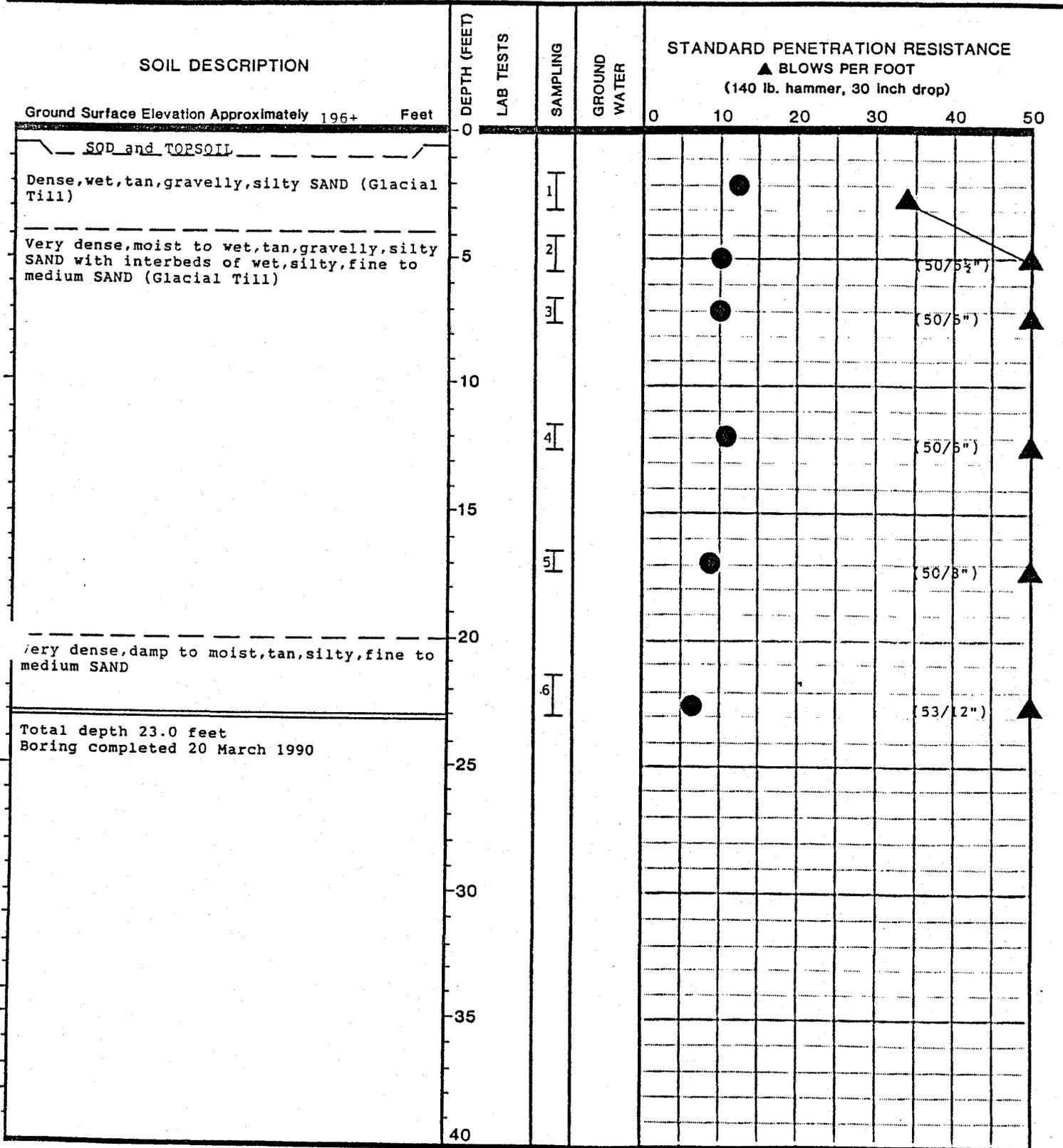


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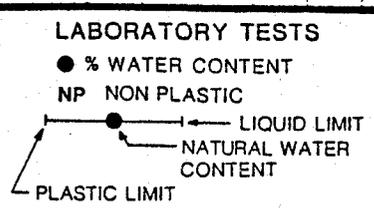
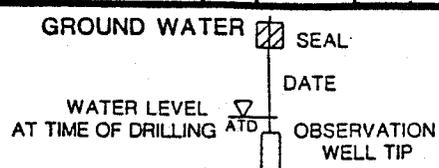
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1400 140th Avenue N.E.  
Bellevue, Washington 98005

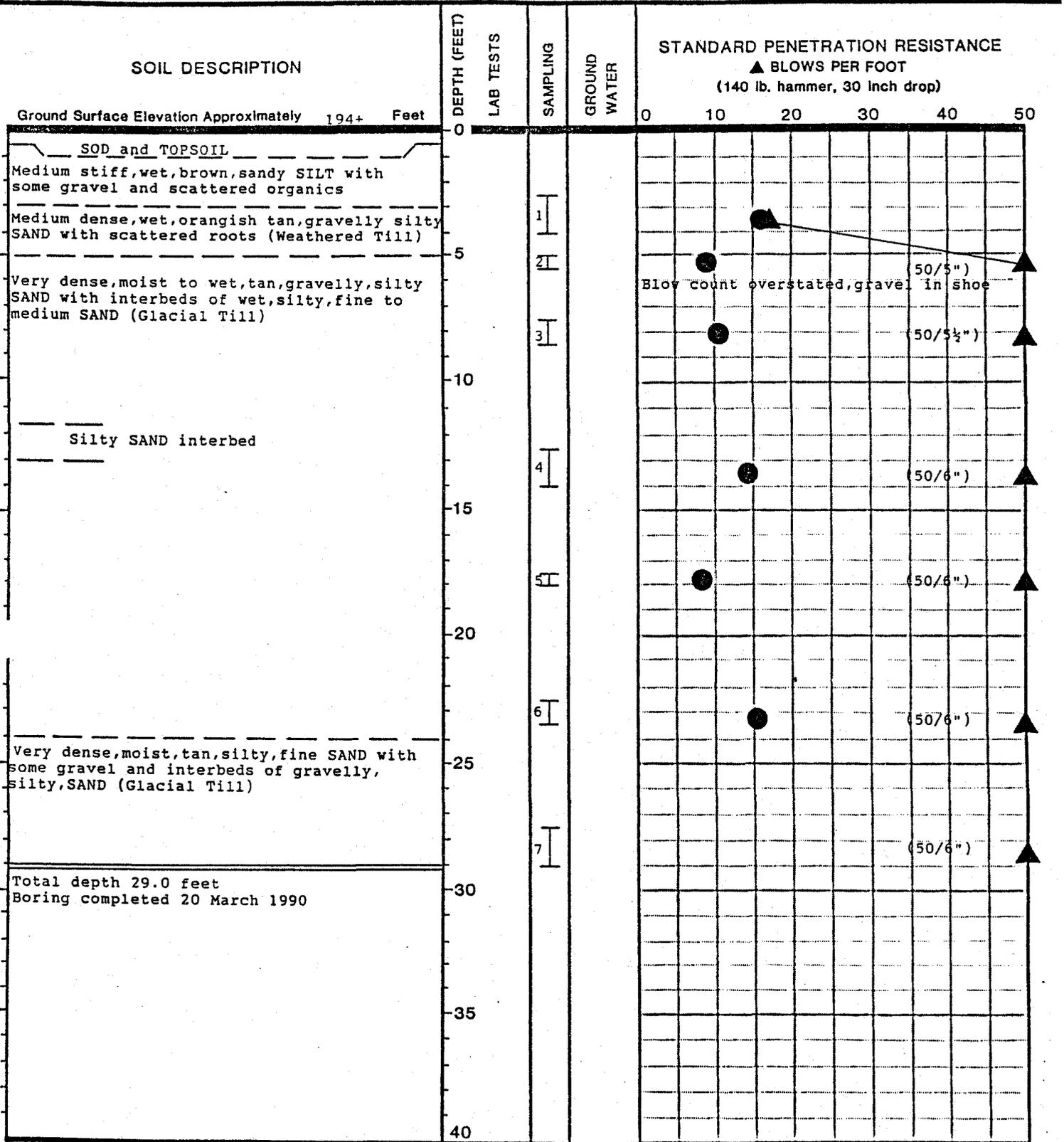


DRAWING BASED ON PLAN BY HDI ARCHITECTS DATED 8 SEPTEMBER 1989.

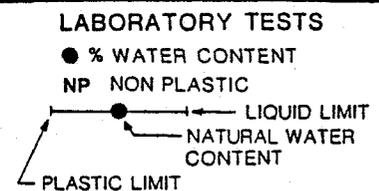
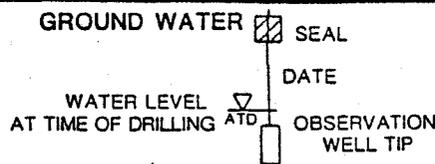


- SAMPLING**
- I 2' OD SPLIT SPOON SAMPLE
  - II 3' OD SHELBY SAMPLE
  - III 2.5' ID RING SAMPLE
  - d BULK SAMPLE
  - \* SAMPLE NOT RECOVERED





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  - II 3" OD SHELBY SAMPLE
  - ☒ 2.5" ID RING SAMPLE
  - B BULK SAMPLE
  - \* SAMPLE NOT RECOVERED





**SOIL DESCRIPTION**

Ground Surface Elevation Approximately 199 Feet

SOD and TOPSOIL

Medium dense, wet, mottled orange-tan, gravelly, silty SAND (Weathered Till)

Dense, wet, tan, gravelly, silty SAND (Glacial Till)

Very dense, moist to wet, tan, gravelly, silty SAND with wet, silty, fine to medium SAND interbeds (Glacial Till)

Total depth 23.0 feet  
Boring completed 20 March 1990

DEPTH (FEET)

LAB TESTS

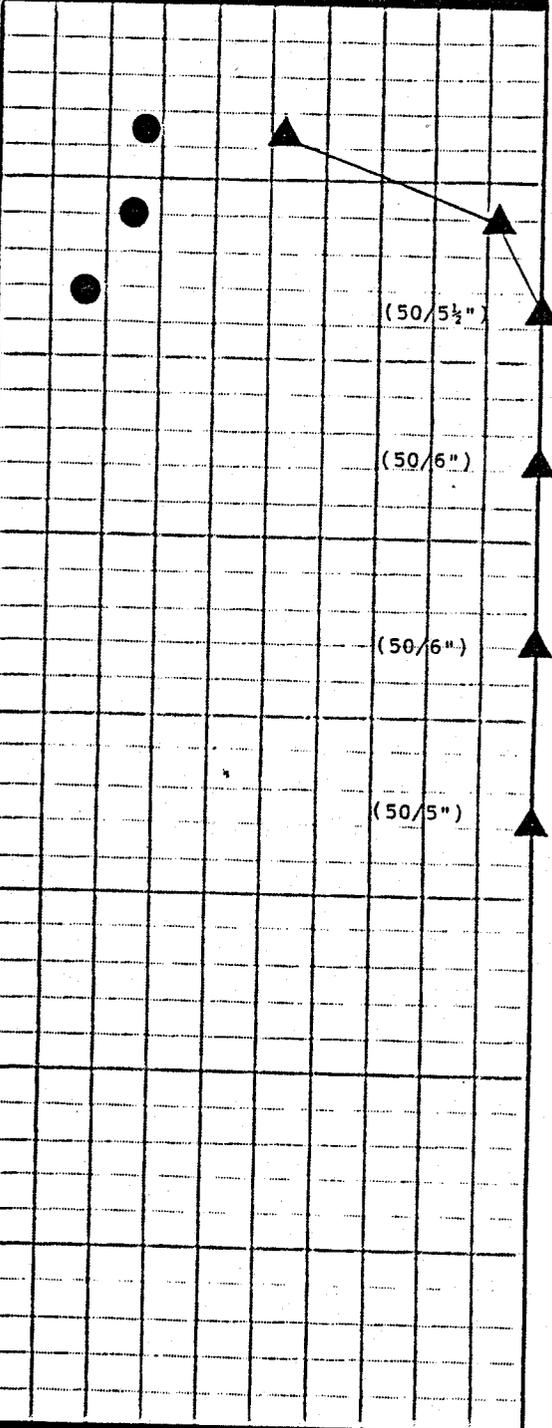
SAMPLING

GROUND WATER

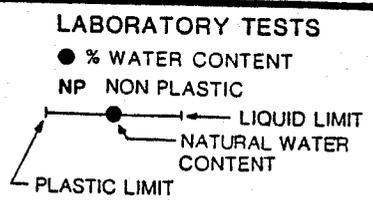
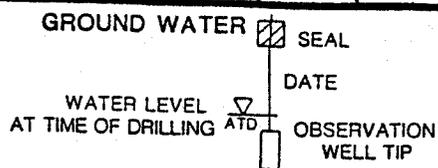
**STANDARD PENETRATION RESISTANCE**  
▲ BLOWS PER FOOT  
(140 lb. hammer, 30 inch drop)

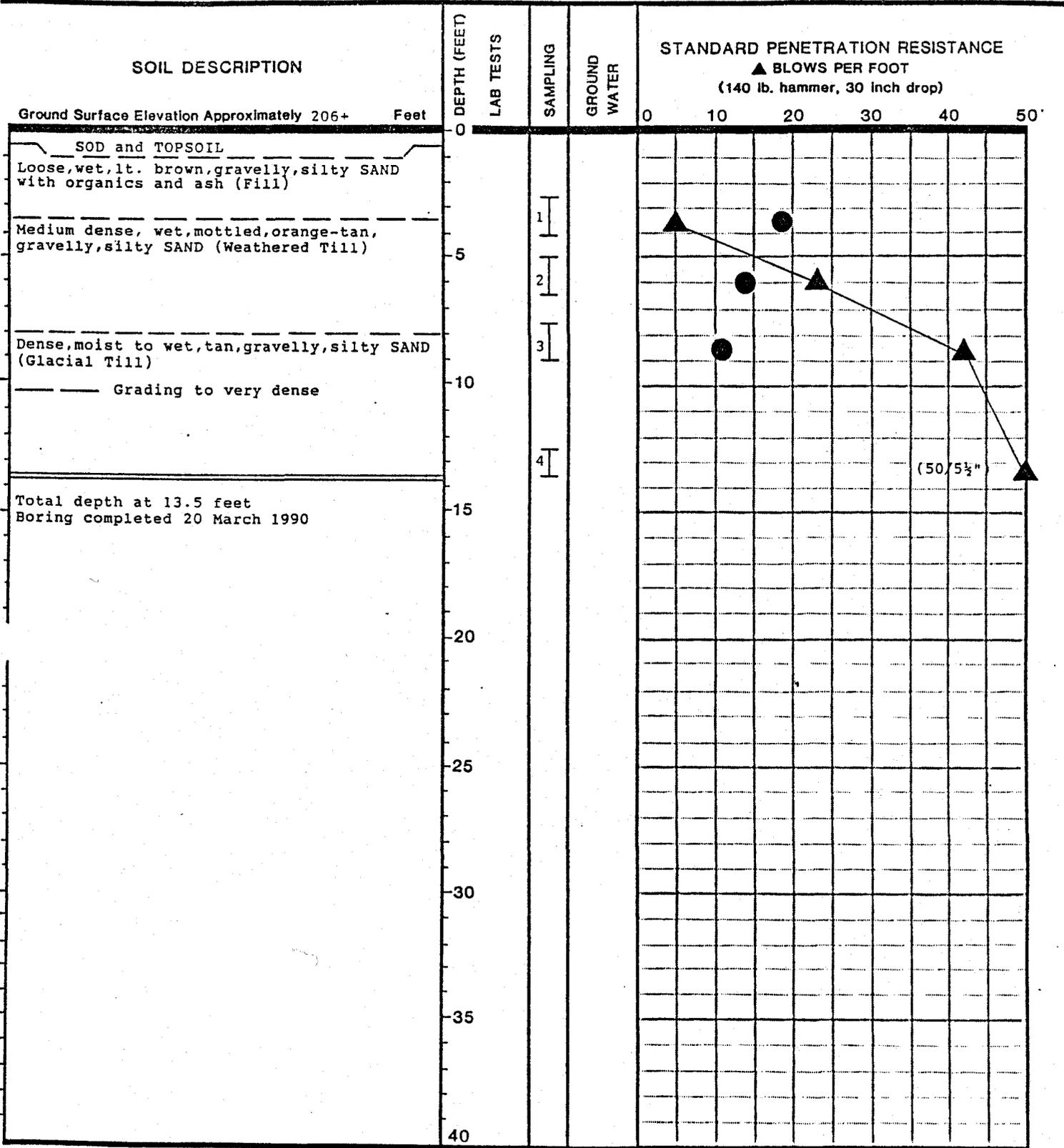
0 10 20 30 40 50

1  
2  
3  
4  
5  
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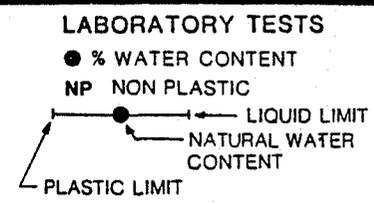
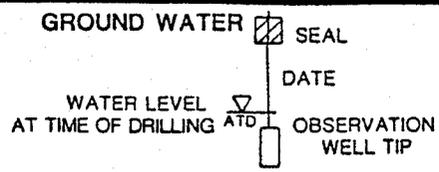


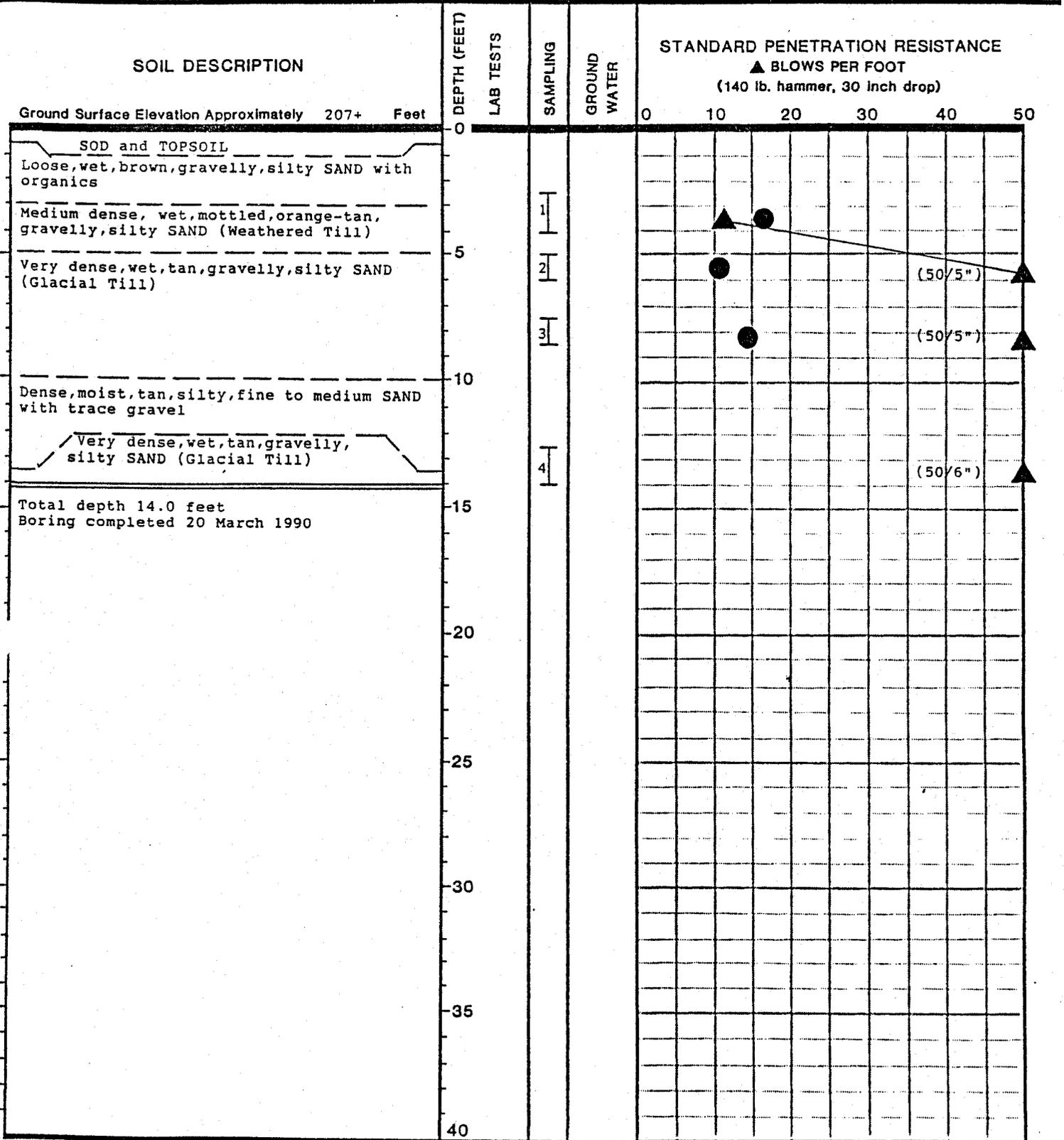
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  - B BULK SAMPLE
  - \* SAMPLE NOT RECOVERED

- GROUND WATER**
- SEAL
  - DATE
  - WATER LEVEL AT TIME OF DRILLING
  - OBSERVATION WELL TIP

- LABORATORY TESTS**
- % WATER CONTENT
  - NP NON PLASTIC
  - LIQUID LIMIT
  - NATURAL WATER CONTENT
  - PLASTIC LIMIT