

SOIL CLASSIFICATION

AASHTO

A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R. Q. D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH	CONSISTENCY
<12	Very Soft
12-24	Soft
24-48	Med. Stiff
48-96	Stiff
96-192	Very Stiff
>192	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

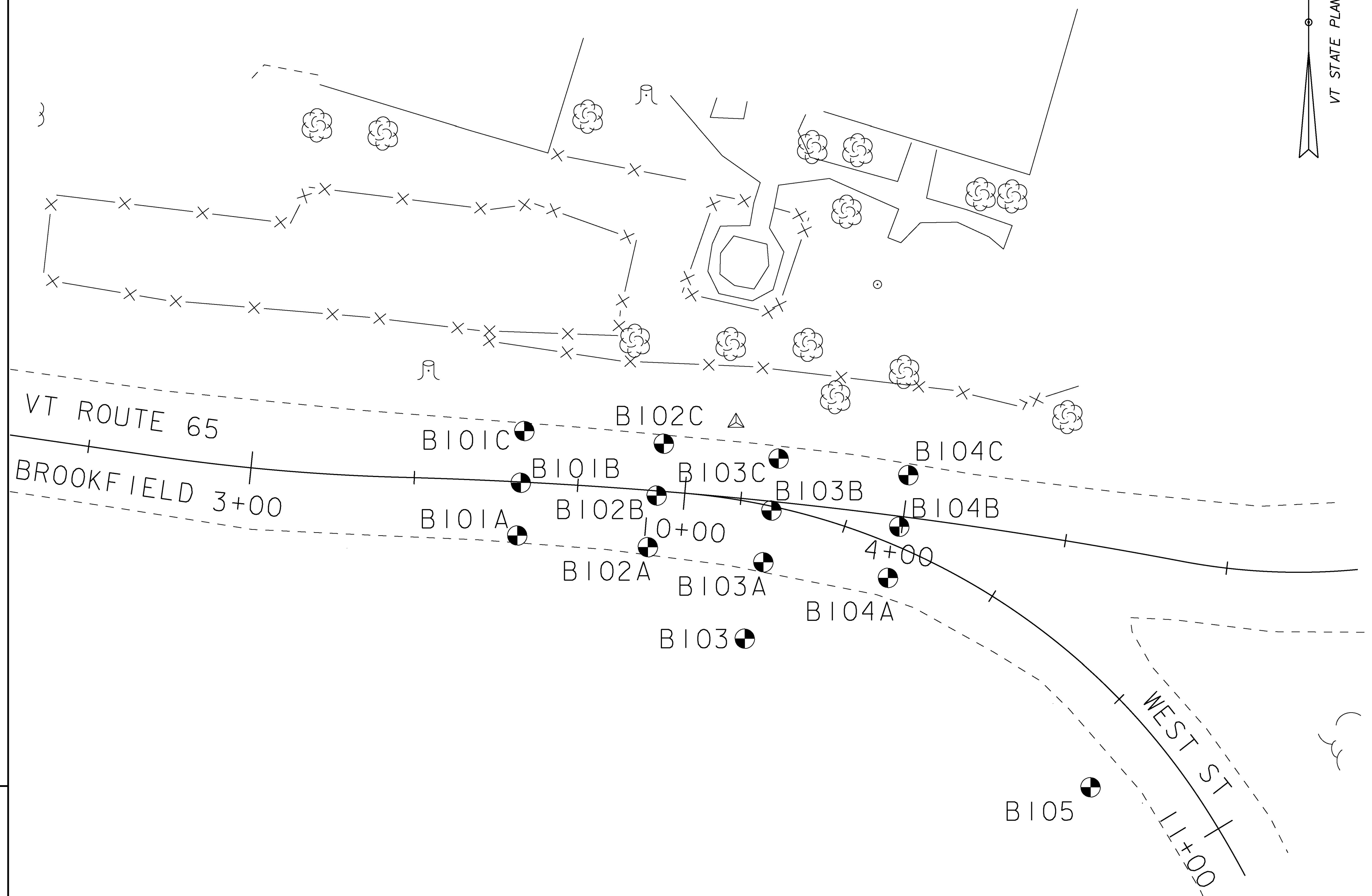
DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

- ▼ Water Elevation
 - ⊕ Standard Penetration Boring
 - ⊗ Auger Boring
 - ⊙ Rod Sounding
 - S Sample
 - N Standard Penetration Test
 - Blow Count Per 300 mm For:
 - 50.8 mm O. D. Sampler
 - 35.0 mm I. D. Sampler
 - Hammer Weight Of 63.5 kg.
 - Hammer Fall Of 762 mm
 - VS Field Vane Shear Test
 - US Undisturbed Soil Sample
 - B Blast
 - DC Diamond Core
 - MD Mud Drill
 - WA Wash Ahead
 - HSA Hollow Stem Auger
 - AX Core Size 30.1 mm
 - BX Core Size 42.0 mm
 - NX Core Size 54.7 mm
 - M Double Tube Core Barrel Used
 - LL Liquid Limit
 - PL Plastic Limit
 - PI Plasticity Index
 - NP Non Plastic
 - w Moisture Content (Dry Wgt. Basis)
 - D Dry
 - M Moist
 - MTW Moist To Wet
 - W Wet
 - Sat Saturated
 - Bo Boulder
 - Gr Gravel
 - Sa Sand
 - Si Silt
 - Cl Clay
 - HP Hardpan
 - Le Ledge
 - NLTD No Ledge To Depth
 - CNPF Can Not Penetrate Further
 - TLOB To Ledge Or Boulder
 - NR No Recovery
 - Rec. Recovery
 - %Rec. Percent Recovery
 - RQD Rock Quality Designation
 - CBR California Bearing Ratio
 - < Less Than
 - > Greater Than
 - R Refusal XN 100)
 - OW Indicates a temporary observation well installed
- COLOR**
- | | | | |
|-----|--------|------|--------------|
| bk | Black | pnk | Pink |
| bl | Blue | pu | Purple |
| brn | Brown | rd | Red |
| dk | Dark | tn | Tan |
| gry | Gray | wh | White |
| gn | Green | yel | Yellow |
| lt | Light | mltc | Multicolored |
| or | Orange | | |

DEFINITIONS (AASHTO)

- BEDROCK (LEDGE)** Rock in its native location of indefinite thickness.
- BOULDER** - A rock fragment with an average dimension > 304.8 mm.
- COBBLE** - Rock fragments with an average dimension between 76.2 and 304.8 mm.
- GRAVEL** - Rounded particles of rock < 76.2 mm and > 2 mm (#10 sieve).
- SAND** - Particles of rock < 2 mm (#10 sieve) and > 75 μ (#200 sieve).
- SILT** - Soil < 75 μ (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.
- CLAY** - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.
- VARVED** - Alternate layers of silt and clay.
- HARDPAN** - Extremely dense soil, cemented layer, not softened when wet.
- MUCK** - Soft organic soil (containing > 10% organic material).
- MOISTURE CONTENT** - Weight of water divided by dry weight of soil.
- FLOWING SAND** - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.
- STRIKE** - Angle from magnetic north to line of intersection of bed with a horizontal plane.
- DIP** - Inclination of bed with a horizontal plane.



NOT TO SCALE

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PROJECT NUMBER: STP 2960(I)	DRAWN BY: J. GOODALL
FILE NAME: z15v023+yp.dgn	CHECKED BY: C. LATHROP
DESIGNED BY: S. SOLLA	SHEET 153 OF 202
BORING LAYOUT SHEET	