

GEOTECHNICAL UNIT

SOIL AND ROCK CLASSIFICATION, LEGEND, AND ABBREVIATIONS

| SOIL LEGEND AND AASHTO CLASSIFICATION | | | | | | | | | | CONSISTENCY OR DENSENESS | | | |
|---------------------------------------|--|-----|-----|---|-----|-----|-------------------|---------|---------|---|----------------------------|--|---|
| GENERAL CLASS. | GRANULAR MATERIALS (≤ 35% PASSING #200) | | | SILT-CLAY MATERIALS (> 35% PASSING #200) | | | ORGANIC MATERIALS | | | PRIMARY SOIL TYPE | COMPACTNESS OR CONSISTENCY | RANGE OF STANDARD PENETRATION RESISTANCE (BLOWS PER FOOT) | RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) |
| GROUP CLASS. | A-1 | A-3 | A-2 | A-4 | A-5 | A-6 | A-7 | A-1-A-2 | A-4-A-5 | | VERY LOOSE | < 4 | |
| SYMBOL | | | | | | | | | | GENERALLY GRANULAR MATERIAL | LOOSE | 4 TO 10 | N/A |
| % PASSING | #10, #40, #200 | | | #10, #40, #200 | | | #10, #40, #200 | | | | DENSE | 10 TO 30 | |
| USUAL TYPES OF MAJOR MATERIALS | | | | | | | | | | | VERY DENSE | > 50 | |
| TEXTURE OR GRAIN SIZE | | | | | | | | | | GROUND WATER | | | |
| SOIL MOISTURE - CORRELATION OF TERMS | | | | | | | | | | MISCELLANEOUS SYMBOLS AND ABBREVIATIONS | | | |
| ROCK DESCRIPTION | | | | | | | | | | ABBREVIATIONS | | | |

LEGEND SUPPLEMENT

In addition to the terms and abbreviations listed on the Legend Sheet, the following will be used to further describe rock quality on this project. Because of limited space on the logs, abbreviations are in parenthesis.

WEATHERING

- Fresh** Rock fresh, crystals bright, few joints may show slight staining. Rock rings under hammer in crystalline.
- Very Slight (V. SLI.)** Rock generally fresh, joints stained, some joints may show thin clay coatings if open, crystals on a broken specimen face shine brightly. Rock rings under hammer blows if of a crystalline nature.
- Slight (SLI.)** Rock generally fresh, joints stained and discoloration extends into rock up to 0.025 m (1 in.). Open joints may contain clay. In granitoid rocks some occasional feldspar crystals are dull and discolored.
- Moderate (MOD.)** Significant portions of rock show discoloration and weathering effects. In granitoid rocks, most feldspars are dull and discolored, some show clay. Rock has dull sound under hammer blows and show significant loss of strength as compared with fresh rock.
- Moderately Severe (MOD. SEV.)** All rock except quartz discolored or stained. In granitoid rocks, all feldspars dull and discolored and a majority show kaolinization. Rock shows severe loss of strength & can be excavated with geologist's pick. Rock gives "clunk" sound when struck. **Comparable to hard weathered rock.**
- Severe (SEV.)** All rocks except quartz discolored or stained. Rock "fabric" clear and evident but reduced in strength to strong soil. In granitoid rocks all feldspars are kaolinized to some extent. Some fragments of strong rock usually remain. **Comparable to soft weathered rock.**
- Very Severe (V. SEV.)** All rock except quartz discolored or stained. Rock fabric elements are discernible but the mass is effectively reduced to soil status, with only fragments of strong rock remaining. Saprolite is an example of rock weathered to a degree such that only minor vestiges of the original rock fabric remain. **Comparable to soil.**
- Complete** Rock reduced to soil. Rock fabric not discernible only in small and scattered concentrations. Quartz may be present as dikes or stringers. Saprolite is also an example. **Comparable to soil.**

ROCK CONTINUITY

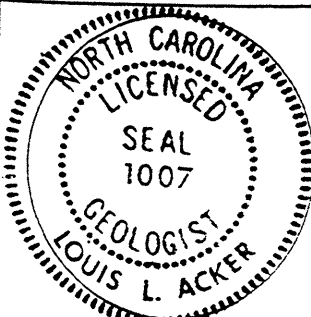
- Sound** Core pieces larger than 20cm.
- Slightly Fractured (SLI. FRAC.)** Core pieces between 10cm and 20cm
- Moderately Fractured (MOD. FRAC.)** Core pieces between 2.5cm and 10cm
- Extremely Fractured (EXT. FRAC.)** Core pieces less than 2.5cm

JOINT SPACING

Average Discontinuity Spacing (ADS)
The average measured distance (in meters) between joints in the same set. Will not apply to individual joints.

JOINT THICKNESS

Average Discontinuity Thickness (ADT)
The average thickness or width of gap in the joint (in meters).



SEAL

Signature of Louis L. Acker

BENCH MARK: BM # 24, 200 Nail set in base of 280 Cherry Tree
46.5m RT of -L- Sta 69+00

STATE PROJECT NO. 8.1910203
T.L.P. NO. R977-A F.A. NO. _____
COUNTY CHEROKEE ROUTE US 64

SITE DESCRIPTION Bridge on US 64, over Hiwassee River at Peachtree (Bridge No. 4)

PROJECT GEOLOGIST LL ACKER SUBMITTED BY FR GLASS

PERSONNEL TP SHELTON WA BOSNELL DK KEEVER BL CREASMAN
DATE SUBMITTED 4/98