

## **Field Quality Control Procedures For Pavement Area Subgrade**

The following procedures are recommended in order to prepare the subgrade for the project.

- A. The work area will first be stripped of vegetation or, in cut areas, excavated to a Design Subgrade Elevation as shown on the plans.
1. The subgrade after cut will be proof rolled to verify a stable subgrade as directed by the soils engineer.
  2. A series of test pits may be needed as directed by the soils engineer to verify additional undercut as predicted or estimated by Boring Logs and the Earthwork Undercut Plan.
- Proof rolling procedures will be as follows:
- a. Two (2) to four (4) passes with a 25 ton rubber tire roller or equivalent; and
  - b. Concentrate additional passes in areas that exhibit instability as directed by the soils engineer.
- B. Unstable and unsuitable subgrade materials will be removed to the depth encountered as directed by the Soils Engineer.
1. Materials at undercut subgrade elevation should:
    - a. Have an unconfined compressive strength ( $Q_u$ ) of 2.0 tsf minimum, or cone index of 250 minimum;
    - b. Contain no foreign materials or have organic contents in excess of six (6) percent total organic matter as determined by the Wet Combustion Method (AASHTO T-194); or maximum dry densities less than 105 pcf as determined by AASHTO T-180 (ASTM D-1557); and
    - c. Be able to support necessary construction equipment without severe rutting or deflection.
- C. At undercut subgrade elevation, the upper eight (8)-inches of soil shall be scarified or disced and recompacted to 95 percent of the maximum dry density as defined by AASHTO T-180 (ASTMD-1557), prior to remedial work fill placement.
- D. Proof rolling of the prepared undercut subgrade will be done if required by the soils engineer to further verify a stable subgrade prior to fill placement.
- E. Roadway FILL shall be placed in successive horizontal lifts of not more than six (6)-inches in loose depth (cohesive material), or not more than nine (9)-inches in loose depth (porous granular material.)
- F. The upper eight (8)-inches of subgrade in areas not undercut shall also be scarified and recompacted to 95 percent of the maximum dry density as defined by AASHTO T-180 (ASTM D-1557), prior to placement of subsequent lift of FILL material.
- G. Once the existing subgrade is stabilized, FILL can be placed and compacted in lifts to Design Subgrade Elevation. All roadway FILL materials shall be compacted to 95 percent of AASHTO T-180 (ASTM D-1557.)
- H. When the work listed in the steps above has been completed, the subgrade will be checked by proof rolling and approved by the Village before construction of the subbase, base course, or pavement is started. The Village will make the determination as to whether areas failing this proof roll require additional drying and recompaction or whether the soil conditions warrant more extensive treatment.

