

The static groundwater table will be within 1 to 2 meters of proposed grade at the following Stations:

13+00 to 14+46

Water can be seen flowing in the existing ditchline in this area, and the proposed ditchline will be below the water table, in loose, silty sand or gravel.

### Geotechnical Descriptive Analysis

The project has been divided into 5 segments for purposes of geotechnical description. They are as follows:

#### -L- 10+40 to 11+10

Construction in this segment will consist of a cut on the Left Side. The maximum depth of cut will be approximately 4 meters at the ditch line, and the maximum height of exposed cut face will be about 8 meters.

The proposed cut will begin in residual material consisting of 1 to 2 meters of dense to very dense silty sand saprolite (A-2-4) overlying weathered rock to hard rock. The weathered rock stratum is less than a meter thick. Two meters or more of hard, granite gneiss will occupy the lower half of the proposed cut.

At Station 10+75 the material changes abruptly from residual to alluvial soil comprising an old, well consolidated alluvial terrace deposit. That soil is composed chiefly of orange, moist, stiff sandy clay (A-6), from Station 10+75 to the end of the cut at about Station 11+10.

#### -L- Station 11+10 to 12+15

Plans call for a cut in this segment that varies from a shallow through-cut to a small Left Side cut. The alignment here traverses an alluvial terrace deposit composed of medium stiff sandy clay (A-6) overlying sandy, clayey gravel (A-1-b). The base of the alluvium lies at elevations between 389 and 392 meters, and the substrate varies from saprolite to hard rock. The ground water table is within 1 meter of proposed grade throughout this segment, and the Left Side ditch will be as much as 1 meter below the water table.

A mobile home lies about 5 meters Left of Centerline at Station 11+28. A septic tank is located near Centerline at Station 11+40. A small pond is located Left of Stations 11+43 to 11+53, with an earth dam about a meter high on Centerline.

A small Left Side cut is called for where a low hill borders the floodplain terrace at Station 11+80. The cut will extend beyond the edge of the alluvial terrace, where it will encounter residual materials probably including weathered rock and/or hard rock.

#### -L- Station 12+15 to 12+80

This segment coincides with the proposed new bridge.

#### -L- Station 12+80 to 13+20

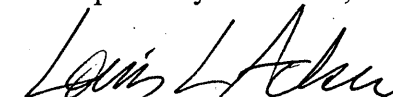
This segment lies on the floodplain between the end of the bridge and the existing roadway embankment. Plans call for approximately 2 meters of new embankment to be placed over the flood plain at the left side of the existing embankment. The flood plain soils are composed of about 0.5 meter of loose, silty sand and 2.0 meters of silty sand and gravel overlying saprolite. The ground water table here is about 1 meter below the natural ground surface.

#### -L- Station 13+20 to 14+46

This segment lies approximately along the existing roadway on an alignment that is straighter than the existing. It is situated on a low floodplain terrace composed of at least 1.5 meters of moist to wet, loose, silty sand (A-2-4) overlying gravel.

Water may be found flowing in the existing roadway ditch from Station 13+00 back to the river and from Station 14+20 forward to a culvert. A hand auger boring in the existing ditchline at Station 13+61 found wet sand 1.5 meters below the natural ground surface, but did not reach the water table. It can be estimated that, for most of this segment, the static groundwater table lies within 1 to 2 meters of proposed grade, and the proposed Right Side ditchline will lie at or below the water table.

Respectfully submitted,



Louis L. Acker, LG  
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