About 20 to 30 feet of embankment material is to be added to the left side. The existing left side slope is underlain partly by very bouldery embankment and partly by hard silty saprolite and weathered rock. Borings on the left side encountered hard rock at depths of 12 to 20 feet.

-L- Station 47+50 to 58+50

Proposed construction in this segment consists of widening the existing embankment on the left side. Plans call for as much as 50 feet of new embankment.

The existing embankment is extremely bouldery. Large areas of the slope surface consist solely of hard, fresh boulders 3 to 5 feet in diameter. The embankment material extends only part way downslope from the shoulder. Its lower margin overlies bouldery colluvial soil between Stations 48+00 and 54+50.

Borings in the colluvium encountered up to 17 feet of orange-brown, moist, soft to medium stiff, sandy clay and silt (A-6, A-4) with cobbles and boulders. The colluvium, and natural slopes beyond the margin of the colluvium, are underlain by saprolite composed of medium dense to dense silty sand and hard sandy silt (A-2-4, A-4). Groundwater was found in only one boring at a depth of about 12 feet in the colluvium.

Slopes on the right side are very steep, with extensive hard rock outcrops and high overhanging cliffs.

-L- Station 58+50 to 79+00

Proposed construction in this segment calls for a series of cuts into hard rock, principally on the right side. The cuts will achieve a maximum height of about 125 feet assuming 1:1 slopes. New embankment material up to 20 feet in depth is to be placed on the left side as far as Station 64+00. Only minimal construction is called for on the left beyond Station 64+00 so as to preserve an existing runaway truck ramp and to avoid disturbing Silvervale Falls.

The depth to hard rock in this area varies sharply from near zero to 50 feet or more over short distances. The lithology is biotite- or amphibole-mylonite gneiss up to Station 65+00 and granite gneiss beyond that point. The rock exposed in existing cuts is highly jointed. Large natural exposures of fresh, sound granite gneiss are found around Silvervail Falls.

Saprolite soil varies in thickness from zero to 40 feet. Saprolite up to Station 65+00 is orange-brown, moist, stiff to hard sandy silt (A-4). Saprolite beyond Station 65+00 is chiefly yellow-brown to orange-brown, loose to dense, silty sand (A-2-4). Weathered rock varies in thickness from about 2 feet to 25 feet.

An existing concrete retaining wall about 6 feet high is located on the left side between Stations 72+50 and 74+00.

-L- Stations 79+00 to 109+00

The roadway in this segment traverses the drainage basin of Greenfield Branch, above Silvervale Falls. This is an area of relatively low hills and narrow floodplains. Relief on slopes adjacent to the highway is little more than 100 feet.

Construction will consist of widening existing embankments across small stream valleys and widening low cuts on the interfluves. Embankments are to be raised a maximum of 4 feet, to achieve a maximum height of about 40 feet. A maximum of about 35 feet of new embankment will be placed over natural ground. Cuts will achieve a maximum depth of 48 feet at ditchline.

The typical soil profile in this segment consists of 2 to 4 feet of clayey residual soil overlying 20 to 30 feet of saprolite. Residual clay soils are orange-brown to yellow-brown, moist, medium stiff, sandy clay and sandy, silty clay (A-7-5, A-7-6, A-6). Saprolite is orange-brown to yellow-brown, moist, loose to dense, silty sand (A-2-4) and medium stiff to hard sandy silt (A-4, A-5). Weathered rock varies from a few feet to about 30 feet in thickness beneath the saprolite.

Alluvial floodplain soils are not more than 3 to 5 feet thick, consisting of dark brown to gray, moist to wet, very soft to soft, sandy silt and loose, silty sand (A-4, A-5, A-2-4).

Small colluvial deposits are found on the left side between Stations 100+00 and 103+00. They are composed of brown, moist, medium stiff, sandy silt with pebbles and cobbles (A-4).

Artificial fill has been placed to a depth of about 25 feet over shallow floodplain soil on the right side between Stations 83+00 and 86+00, in a field beside Waterfalls Store. Two borings were made beside the highway where the fill overlaps the roadway embankment. Artificial fill and roadway embankment soils were similar. The borings penetrated brown to gray, moist to wet, loose, silty coarse sand with rock fragments and boulders (A-1-b).

Hard rock may be expected in the lower 5 to 10 feet of the deepest cuts. Hard rock up to Station 90+00 is granite gneiss. Beyond there the rock is well foliated, interlayered, fine granite gneiss and mylonite gneiss.

Stations 109+00 to 113+50

Construction in this segment consists of widening a through-cut on the divide between Greenfield Branch and Puncheon Camp Creek drainage basins. The existing cut of about 80 feet is to be widened by cutting back both sides.

Four SPT borings were made at this site. Subsurface conditions are highly variable. Saprolite with a thin clay cap varies in thickness from about 10 to 55 feet overlying weathered rock. The weathered rock varies in thickness from 0 to 55 feet over hard rock. Saprolite soils are moist, stiff to hard, micaceous, sandy silt (A-4, A-5) and minor amounts of dense to very dense silty sand (A-2-4).