

904.00 SUBDRAIN EARTHWORK

904.01 SUBDRAINS

Subdrains are constructed on grading, paving, and structures contracts. Refer to *SSHC Sections 914 and 915*.

Subdrains are used for tile relocations, backslope drains, longitudinal and cross drains under the roadway area.

Subdrains are also used with granular blankets to develop a drainage layer in areas where the soil has a high moisture content and poor stability.

904.02 BACKSLOPE DRAINS

Backslope drains are used in areas where seepage and/or a slide is possible. Where a water table is perched on a very dense layer, a subdrain is installed at or below the surface of the very dense layer. The flow line is very important in this case. A backslope drain may also be used to drain a sand pocket, again plan flow line is important.

904.03 LONGITUDINAL DRAINS

Longitudinal drains are usually installed at the pavement edge to remove any water that accumulates under the pavement.

Inspection considerations must include:

- **Trench Excavation**

The trenching equipment must be adjusted and maintained so the trench is excavated to the specified depth. It is important that all of the loose excavated material is removed from the bottom of the trench to minimize settlement of the trench backfill. Trenchers have a metal device on the end of the trencher's boom called a "cumber." The "cumber" is to be adjusted so the loose material is scraped off of the bottom and removed.

- **Outlets**

All outlets should be inspected prior to backfilling. The pipe coupling should be inspected to assure proper installation. The flow line of the outlet should be checked for uniform downward grade toward the ditch. All outlets are to be marked with an orange fence post.

Some projects require that existing subdrain outlets be extended, for example, on a shoulder widening project. On these projects, the contractor must remove the existing rodent guard before extending the pipe.

Porous Backfill

Porous backfill material must be in contact with the base of the pavement for the subdrain system to operate correctly. This may require hand work by the contractor. No soil shall remain between the pavement edge and the subdrain trench.