

# Tri-Planar Geocomposite for Roadway Subsurface Drainage

**PROJECT NAME:** VA Route 58 from Emporia to Capron

**LOCATION:** Franklin, VA

**PRoDUCTS:** RoaDrain

**DATE:** September 2001

**iNSTALLER:** Landsaver Environnemental

**ENGINEER:** Virginia Department of Transportation



This project specifies a triplanar geocomposite as a drainage layer on top of existing concrete pavement with full depth asphalt overlay. Roadrain will be used for 1 mile of roadway 2 lanes wide, i.e. milepost 14.65 to 15.65. The existing pavement is hydraulic cement concrete paving of varying depth and reinforcement. This pavement is jointed.

The work consists of breaking and seating the existing concrete paving for full depth

and full panel width; installing Roadrain drainage geocomposite on the existing concrete pavement section and overlaying with asphalt concrete. The pavement structure consisted of three layers totaling 9.5 in of asphalt concrete, i.e. 6 in BM-25

(Base), 2 in IM-19A (Intermediate), and 1.5 in SM-12.5D (Surface). The geocomposite will consist of a Triplanar geonet core with 8 ounce nonwoven geotextile laminated to each side.

Prior to the RoaDrain installation, an asphalt tackifier was placed on the existing concrete paving. The RoaDrain was then installed directly in the tackifier minimizing any wrinkles in the drainage geocomposite. A steel drum roller made two passes on top of the geocomposite to ensure good adherence to the existing pavement section. A 3.5-inch lift of base asphalt was then placed directly on top a RoaDrain using a rubber tracked asphalt box. The asphalt was then compacted with standard static steel drum rollers.

After the initial lift of asphalt was placed, the road section was then opened to traffic with 3" of compacted asphalt directly on top of the RoaDrain Triplanar geonet. The next lift of base asphalt was placed within 30 days to a final asphalt thickness of 9.5-inches.

