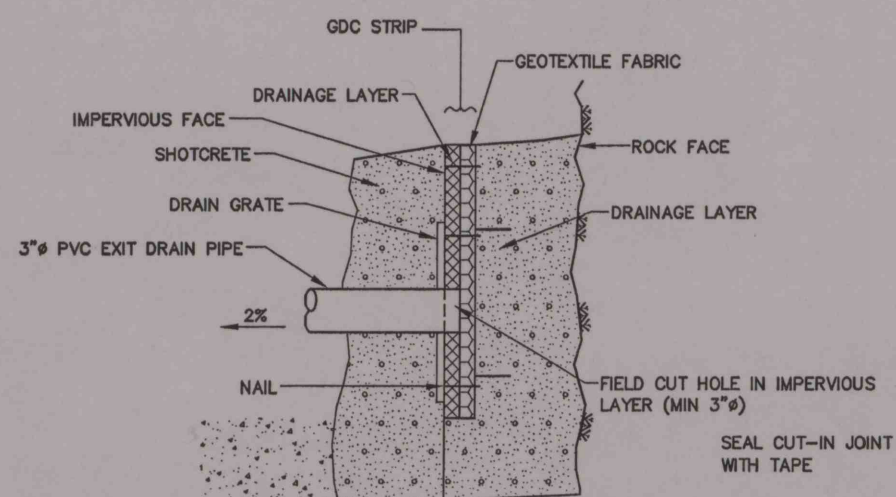
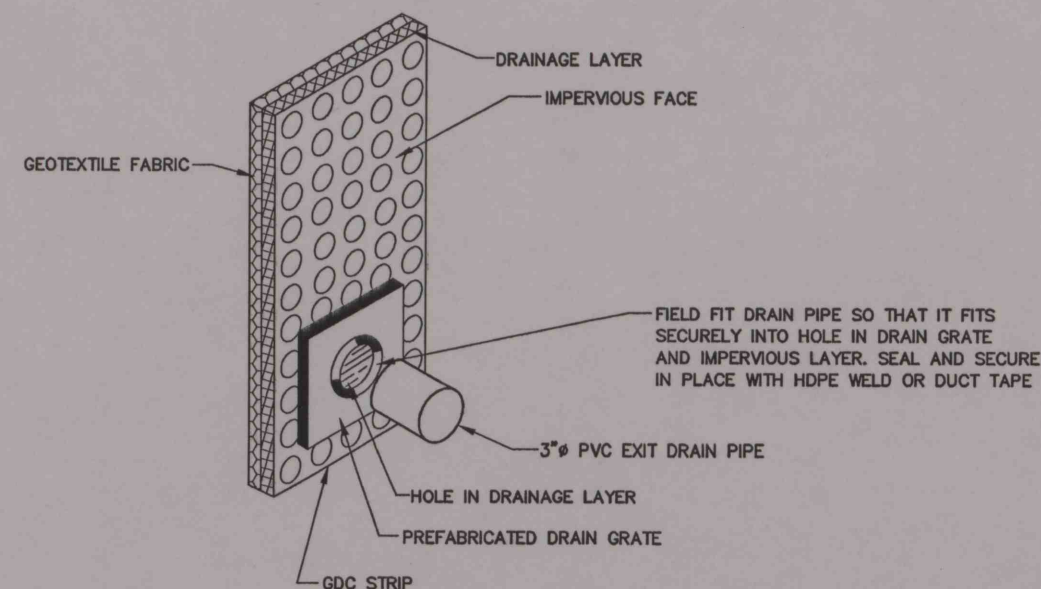


TYPICAL CROSS SECTION DETAIL OF DRAIN STRIP AND DRAIN HOLE

N.T.S.



SECTIONAL VIEW



(SHOTCRETE LAYER OVER GDC NOT SHOWN)

ISOMETRIC VIEW

THIS DESIGN IS BASED ON THE SUBSURFACE CONDITIONS DESCRIBED IN GOLDER ASSOCIATES' REPORT TITLED "GEOTECHNICAL FEASIBILITY REPORT", DATED AUGUST 1998. IF ACTUAL SUBSURFACE CONDITIONS ENCOUNTERED DURING CONSTRUCTION ARE DIFFERENT THAN THOSE DESCRIBED IN THE "GEOTECHNICAL FEASIBILITY REPORT" OR SHOWN ON THE CONSTRUCTION DRAWINGS, GOLDER ASSOCIATES SHALL BE NOTIFIED AND GIVEN THE OPPORTUNITY TO REVIEW, AND IF APPROPRIATE, MODIFY THE DESIGN. ANY QUESTIONS THAT ARISE WITH RESPECT TO THE INTERPRETATION OF THE DESIGN BY ANY PARTY, GOLDER ASSOCIATES SHALL BE NOTIFIED AND GIVEN THE OPPORTUNITY TO PROVIDE CLARIFICATION.

DRAIN INSTALLATION NOTES:

1. FOLLOWING EXCAVATION OF THE TUNNEL AND INSTALLATION OF THE INITIAL SHOTCRETE LAYER, THE LOCATION OF WATER SEEPS IN THE TUNNEL SHOULD BE IDENTIFIED BY COMIN AND ESSROC.
2. AT LOCATION OF SEEPS, A DRAIN HOLE SHOULD BE DRILLED THROUGH SHOTCRETE EXTENDING A MINIMUM OF 2 FEET INTO THE ROCK AS SHOWN ON DETAIL 1 THIS SHEET.
3. A GEOSYNTHETIC DRAINAGE COMPOSITE STRIP (GDC) SHOULD BE PLACED OVER THE DRAIN HOLE AND THE GDC SHOULD BE EXTENDED TO THE TUNNEL INVERT AS SHOWN IN DETAIL 1 THIS SHEET. ADDITIONAL DRAIN STRIPS MAY BE REQUIRED FOR HIGH FLOW AREAS.
4. A PRE-FABRICATED DRAIN GRATE SHOULD BE ATTACHED TO THE GDC AS SHOWN IN DETAIL 2 THIS SHEET. THE END OF THE PIPE SHOULD BE TEMPORARILY SEALED TO PREVENT PLUGGING DURING PLACEMENT OF SECOND LAYER OF SHOTCRETE.
5. GDC STRIP TO BE AMERDRAIN 500 OR EQUIVALENT WITH A MINIMUM WIDTH OF 8 INCHES.
6. GDC STRIP TO BE SECURELY FASTENED TO ROCK OR SHOTCRETE SURFACE.

[illegible]