

10/26/04



PROJECT REFERENCE NO. R-513 BB	SHEET NO. 52
ROADWAY DESIGN ENGINEER 06-03-04	HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 17691 RICHARD A. SHILLING	NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18800 RANDALL C. HENNING
CONST. REV.	
R / W REV.	

BEGIN GRADE
 -RD- Sta10+06.139 =
 -YS- Sta.12+64.910 (6.000m RT)
 - EL 54.021m

PI = 10+15.000
 EL = 53.459 m
 K = 3
 VC = 17 m

-RD-

PIPE HYDRAULIC DATA
 DRAINAGE STRUCTURE NO.28
 DRAINAGE AREA = 1.016 HA
 DESIGN FREQUENCY = 50 YRS
 DESIGN DISCHARGE = 0.173 CMS
 DESIGN HW ELEVATION = 45.82 M
 100 YEAR DISCHARGE = 0.189 CMS
 100 YEAR HW ELEVATION = 45.89 M
 OVERTOPPING FREQUENCY = 500+ YRS
 OVERTOPPING DISCHARGE = 0.345 CMS
 OVERTOPPING ELEVATION = 46.82 M

PIPE HYDRAULIC DATA
 DRAINAGE STRUCTURE NO.43
 DRAINAGE AREA = 14.510 HA
 DESIGN FREQUENCY = 50 YRS
 DESIGN DISCHARGE = 0.589 CMS
 DESIGN HW ELEVATION = 46.01 M
 100 YEAR DISCHARGE = 0.712 CMS
 100 YEAR HW ELEVATION = 46.15 M
 OVERTOPPING FREQUENCY = 500+ YRS
 OVERTOPPING DISCHARGE = 1.765 CMS
 OVERTOPPING ELEVATION = 48.215 M

54.021
 -6.3413%

-1.0833%

450mm

750mm

10+00 +20 +40 +60 +80 11+00 +20 +40 +60 +80 12+00 +20 +40 +60 +80 13+00 +20 +40 +60 +80

-RD-

PI = 14+60.000
 EL = 48.638 m
 K = 108
 VC = 150 m

PI = 15+95.000
 EL = 49.059 m
 K = 191
 VC = 120 m

END GRADE
 -RD- Sta.16+56.436 =
 -L- Sta.184+18.495 (14.2m RT)
 - EL 48.864m

49.505

-1.0833%

+0.3116%

+0.3116%

-0.3774%

48.864

+80 14+00 +20 +40 +60 +80 15+00 +20 +40 +60 +80 16+00 +20 +40 +60

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