

10/25/08  
23-OCT-2003 14:45  
Y:\amord AT\10186652

**METRIC**

PROJECT REFERENCE NO. R-2610B  
ROADWAY DESIGN ENGINEER  
NORTH CAROLINA PROFESSIONAL ENGINEER  
SEAL 17691  
RICHARD A. SHILLING

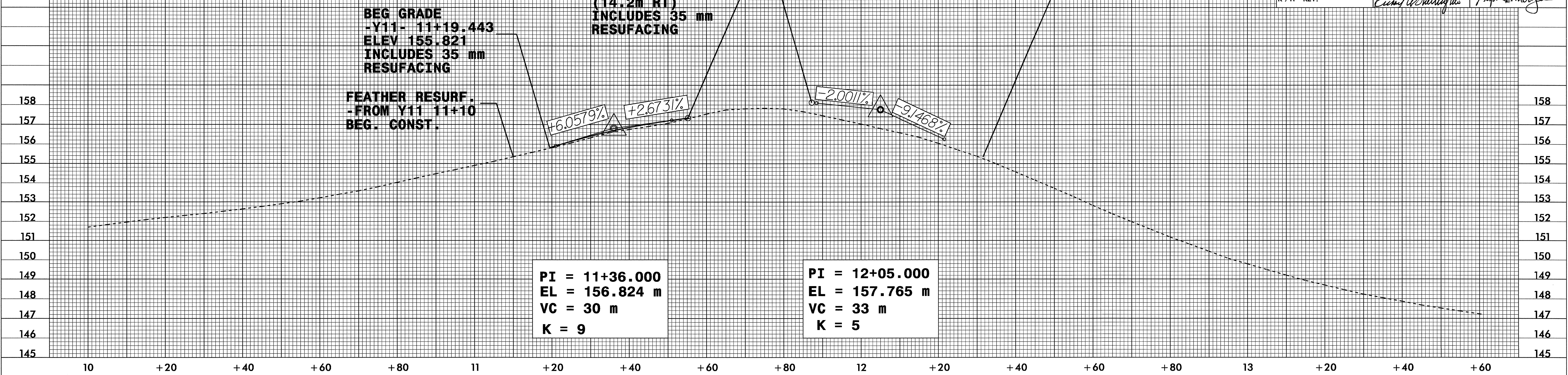
SHEET NO. 59  
HYDRAULICS ENGINEER  
NORTH CAROLINA PROFESSIONAL ENGINEER  
SEAL 22100  
STEPHEN R. MORROW

CONST. REV.  
R / W REV.

5 0 10

*Richard A. Shilling*  
*Stephen R. Morrow*

-Y11-



**BEG GRADE**  
-Y11- 11+19.443  
ELEV 155.821  
INCLUDES 35 mm  
RESUFACING

**END GRADE**  
-Y11- 11+55.191 =  
-L- 45+46.304  
ELEV 157.337  
(14.2m RT)  
INCLUDES 35 mm  
RESUFACING

**BEG GRADE**  
-Y11- 11+87.210 =  
-L- 45+61.091  
(14.2m LT)  
ELEV 158.121

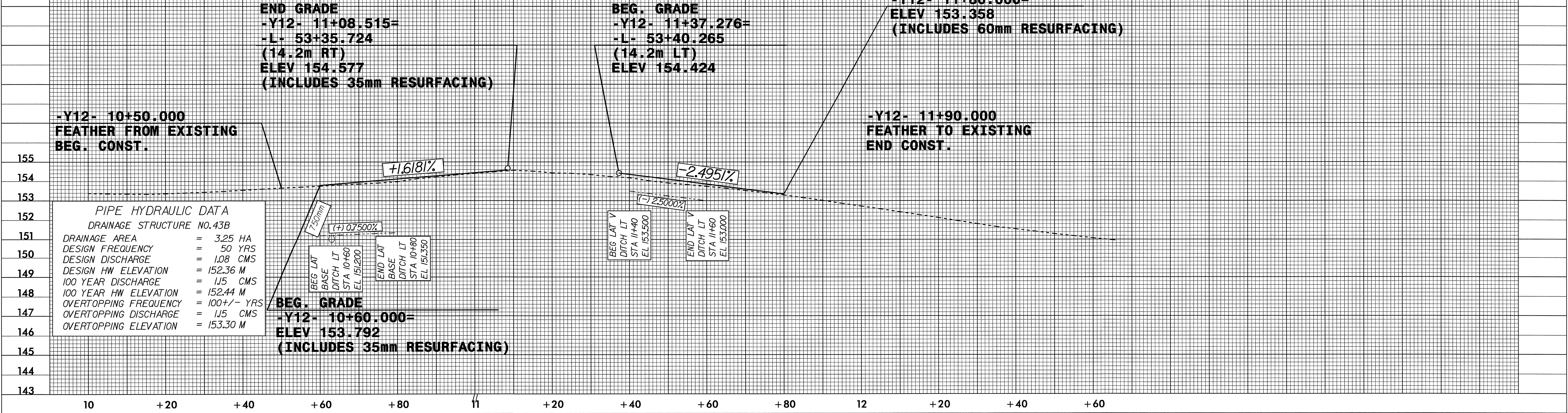
**END GRADE**  
-Y11- 12+31.501  
ELEV 155.341m

**FEATHER RESURF.**  
-FROM Y11 11+10  
BEG. CONST.

PI = 11+36.000  
EL = 156.824 m  
VC = 30 m  
K = 9

PI = 12+05.000  
EL = 157.765 m  
VC = 33 m  
K = 5

-Y12-



**END GRADE**  
-Y12- 11+08.515=  
-L- 53+35.724  
(14.2m RT)  
ELEV 154.577  
(INCLUDES 35mm RESURFACING)

**BEG. GRADE**  
-Y12- 11+37.276=  
-L- 53+40.265  
(14.2m LT)  
ELEV 154.424

**END GRADE**  
-Y12- 11+80.000=  
ELEV 153.358  
(INCLUDES 60mm RESURFACING)

-Y12- 10+50.000  
FEATHER FROM EXISTING  
BEG. CONST.

-Y12- 11+90.000  
FEATHER TO EXISTING  
END CONST.

**PIPE HYDRAULIC DATA**  
DRAINAGE STRUCTURE NO.43B

DRAINAGE AREA	=	3.25 HA
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	1.08 CMS
DESIGN HW ELEVATION	=	152.36 M
100 YEAR DISCHARGE	=	1.15 CMS
100 YEAR HW ELEVATION	=	152.44 M
OVERTOPPING FREQUENCY	=	100+/- YRS
OVERTOPPING DISCHARGE	=	1.15 CMS
OVERTOPPING ELEVATION	=	153.30 M

**BEG. GRADE**  
-Y12- 10+60.000=  
ELEV 153.792  
(INCLUDES 35mm RESURFACING)

150mm  
BEG LAT V  
BASE  
DITCH LT  
STA 10+60  
EL 153.200

(+) 0.7500%

END LAT V  
BASE  
DITCH LT  
STA 10+80  
EL 151.350

(-) 2.5000%

BEG LAT V  
DITCH LT  
STA 11+40  
EL 153.500

END LAT V  
DITCH LT  
STA 11+60  
EL 153.000