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PROJECT REFERENCE NO.	SHEET NO.
I-5883	112

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 027373 ENGINEER SUSAN C. LANCASTER
DocuSign Susan C Lancaster 5/11/2021
4FB985A28CEFC49...

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
DocuSign Joshua G Dalton 5/11/2021
4980ABB9409403...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL
8000 Regency Pkwy Suite 600 Cary, NC 27518 Nc License: F-1084

SUNGATE DESIGN GROUP, P.A.
905 JONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27606
NC COA No. C-0890

5/28/99

-Y17-

BEGIN GRADE
-Y17- Sta. 13+50.00
EL. 235.98'

PI = 14+00.00
EL = 236.85'
VC = 100'
K = 182
DS = 60 mph

PI = 19+00.00
EL = 242.80'
VC = 410'
K = 137
DS = 60 mph

PI STA=13+50 -Y17- RT
ELEV=232.70

BEG SPEC CUT DITCH
PI STA=12+70 -Y17- RT
ELEV=232.30

BEG SPEC CUT DITCH
PI STA=13+00 -Y17- LT
ELEV=232.45

PI STA=14+00 -Y17- LT
ELEV=232.75

BEG SPEC LAT V DITCH
PI STA=16+86 -Y17- RT
ELEV=236.30

END SPEC CUT DITCH
PI STA=16+12 -Y17- RT
ELEV=236.00

END SPEC CUT DITCH
PI STA=18+00 -Y17- LT
ELEV=237.15

END SPEC LAT V DITCH
PI STA=19+00 -Y17- RT
ELEV=238.44

BEG SPEC LAT V DITCH
PI STA=20+50 -Y17- LT
ELEV=240.00

END SPEC LAT V DITCH
PI STA=21+00 -Y17- LT
ELEV=238.00

PROPOSED GRADE
PROPOSED UNDERCUT
EXISTING GROUND

(+)1.7400% (+)1.1900% (+)0.5000% (+)0.3000% (+)1.2595% (+)1.1000% (+)1.0000% (+)4.1786% (+)4.1786% (-)0.4000%

-SR16- POT Sta. 86+06.16 =
-Y17- POT Sta. 16+34.80

-Y17RPA- POT Sta. 22+07.26 =
-Y17RPB- POT Sta. 29+15.50 =
-Y17- POT Sta. 21+93.77

258.62'

FOR -Y17- ALIGNMENT, SEE SHEET 64 & 32

-Y17-

PIPE HYDRAULIC DATA
42" RCP-III Sta. 25+91 -Y17-

DRAINAGE AREA	= 19.5	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 60	CFS
DESIGN HW ELEVATION	= 237.4	FT
100 YEAR DISCHARGE	= 62	CFS
100 YEAR HW ELEVATION	= 237.4	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 70+	CFS
OVERTOPPING ELEVATION	= 239.9	FT

PI = 27+40.00
EL = 277.90'
VC = 1,200'
K = 152
DS = 60 mph

PIPE HYDRAULIC DATA
36" RCP-III Sta. 27+70 -Y17-

DRAINAGE AREA	= 8.7	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 42	CFS
DESIGN HW ELEVATION	= 239.2	FT
100 YEAR DISCHARGE	= 44	CFS
100 YEAR HW ELEVATION	= 239.3	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 50+	CFS
OVERTOPPING ELEVATION	= 240.6	FT

PI = 36+00.00
EL = 245.75'
VC = 420'
K = 136
DS = 60 mph

BEGIN BRIDGE
-Y17- POT STA. 25+73.98

END BRIDGE
-Y17- POT STA. 27+87.48

PROPOSED GRADE
EXISTING GROUND

(+)4.1786% (-)3.7384% (-)3.7384% (+)0.2024% (+)0.3333% (+)0.6000%

-TL- POT Sta. 1206+59.51 =
-Y17- POT Sta. 26+81.73

-Y17RPC- POT Sta. 25+63.76 =
-Y17RPD- POT Sta. 25+46.89 =
-Y17- POT Sta. 32+06.36

42" 36"

258.62' 247.32'

BEG SPEC LAT 3' DITCH
PI STA=23+05 -Y17- RT
ELEV=234.42

END SPEC LAT 3' DITCH
PI STA=26+36 -Y17- RT
ELEV=233.75

BEG SPEC LAT 2' BASE DITCH
PI STA=29+35 -Y17- RT
ELEV=236.10

END SPEC LAT 2' BASE DITCH
PI STA=30+25 -Y17- RT
ELEV=236.40

BEG LAT V DITCH
PI STA=33+65 -Y17- RT
ELEV=238.30

END LAT V DITCH
BEG SPEC CUT DITCH
PI STA=36+00 -Y17- RT
ELEV=239.71

FOR -Y17- ALIGNMENT, SEE SHEET 32 & 65

ILWAY 2021.00.48
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$$$$USERNAME$$$$