PROJECT REFERENCE NO.	SHEET NO.
B-5166	5

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034407 ENGINEER ANDREW P YOUNG

DocuSigned by: Andrew P. Young 1/17/2017

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 20147 ENGINEER FRANK F. FLEMING

DocuSigned by: Frank F Fleming 1/17/2017

STEWART

Firm License No. C-1051
421 Fayetteville St.
Suite 400
Raleigh, NC 27601
T 919.380.8750
www.stewartinc.com

NC FIRM LICENSE No: F-1148
1151 SE Cary Parkway, Suite 101
Cary, NC 27518
(919) 567-0929

ECOLOGICAL ENGINEERING

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS

5/28/99

-L-

℄ STA.16+34.00 -L-
1 @ 55'; 1 @ 65', 24" CORED SLAB
EL=385.71' SKEW=90°

BEGIN GRADE
-L- STA.12+00.00
EL.=383.75'

BEGIN BRIDGE
-L- STA.15+72.81

END BRIDGE
-L- STA.16+95.19

PI =18+00.00
EL = 400.99'
PI =18+15.00
EL = 401.60'

BM 50
-L- STA. 17+07.00 (62' RT)
RRS IN 14" BLACK OAK
ELEV = 391.21'

PI =19+00.00
EL = 400.48'

END DITCH RT
STA.19+40.00 -L-
EL=401.72'

END GRADE
-L- STA.21+00.00
EL.=401.10'

(+)17.6700% (+)4.0667% (-)1.3176% (+)3.1000% (+)4.5020% (+)5.2000% (+)1.4435% (+)1.8632% (+)3.3000%

(-)1.4500% (+)1.8632%

BM 51
FROM -L- STA. 10+00.00
S 07° 25' 41" E Dist. 341.20'
RRS IN 24" BLACK OAK
ELEV = 380.41'

PI = 13+85.00
EL = 381.07'
VC = 320'
K = 97
V_D = 50 MPH

PI = 18+40.00
EL = 389.55'
VC = 250'
K = 97
V_D = 50 MPH

PI =19+00.00
EL = 389.92'

END DITCH LT
STA.21+00.00 -L-
EL=399.00'

END DITCH RT
STA.21+00.00 -L-
EL=400.32'

BEGIN DITCH RT
STA.17+00.00 -L-
EL=383.32'

BEGIN DITCH LT
STA.18+55.00 -L-
EL=387.97'

1.5:1

CLASS II RIP RAP (TYP.)
SEE STRUCTURE PLANS
(STRUCTURE PAY ITEM)

MWS
ELEV=364.7'

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 3400	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 376.1	FT
BASE DISCHARGE	= 4930	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 378.23	FT
OVERTOPPING DISCHARGE	= 10000	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 382.4	FT
ESTIMATED N.W.S. ELEVATION	= 364.7	FT
DATE OF SURVEY	= 3/4/2015	
W.S. ELEVATION AT DATE OF SURVEY	= 364.7	FT

DITCH LEGEND	
LEFT DITCH	----·----·----
RIGHT DITCH	----------
END BENT EXCAVATION SEE STRUCTURE PLANS (STRUCTURE PAY ITEM)	

FOR -L- PLAN VIEW, SEE SHEET 4

FOR STRUCTURE PLANS, SEE SHEETS S-1 THRU S-20

1/17/2017
B5166_rdy_psh_05.dgn
USER#kbeus

430 420 410 400 390 380 370 360 350

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24