5/14/99

Kimley»Horn
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421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, N.C. 27601. NC LICENSE #F-0102

PROJECT REFERENCE NO.	SHEET NO.
U-5725/R-3822	23

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 029876 ENGINEER MATTHEW S. WEST
DocuSigned by: Matthew S. West
ACTIVE
6/28/2018

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 042551 ENGINEER BRYAN T. MCKEE
DocuSigned by: Bryan T. McKee
6/29/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CULVERT HYDRAULIC DATA
I @ 6'W x 7'H RCBC (BURIED 1')

DESIGN DISCHARGE	= 360 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 110.3 FT
BASE DISCHARGE	= 400 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 110.9 FT
OVERTOPPING DISCHARGE	= 550 CFS
OVERTOPPING FREQUENCY	= > 500 YRS
OVERTOPPING ELEVATION	= 114.31 FT
DATE OF SURVEY	= 8/30/2017
W.S.ELEVATION AT DATE OF SURVEY	= 102.7 FT

BM#4 (U-5725)
-L- STA 88+99.77
89.74' RT.
ELEV. 114.93'

VC = 190'
PI = 84+00.00
EL = 112.91'
K = 100
DS = 50

VPT Sta.84+95.00
EL.=114.19'

(+)11.3450%

PROPOSED GRADE

-L- POT Sta.88+50.13 =
-Y4- POT Sta.17+12.45
ELEV = 118.97'

VPC Sta.88+65.00
EL.=119.17'

VC = 250'
PI = 89+90.00
EL = 120.85'
K = 105
DS = 50

(+)11.3450%

(-)11.0406%

(+)10.91%

VPT Sta.91+15.00
EL.=119.55'

END SPECIAL DITCH GRADE LT
-L- STA 91+50
ELEV = 120.00'

VC = 150'
PI = 92+60.00
EL = 118.04'
K = 152
DS = 60

VPC Sta.91+85.00
EL.=118.82'

(-)11.0406%

(-)12.0282%

VPT Sta.93+35.00
EL.=116.52'

END GRADE
BEGIN MILLING FOR KEY-IN
BEGIN OVERLAY
-L- Sta. 93+30.00
ELEV = 116.62'

END TIP PROJECT U-5725
END MILLING FOR KEY-IN
END OVERLAY
-L- Sta. 93+80.00
ELEV = 115.60'

PROP CULVERT
I @ 6' X 7' RCBC

(+)10.82 %

EXISTING GROUND

BEGIN SPECIAL DITCH GRADE LT
-L- STA 84+20
ELEV = 103.50'

-L- STA 87+75 LT
ELEV = 106.42'
SEE -Y4- PFL FOR
DITCH CONTINUATION

BEGIN SPECIAL DITCH GRADE LT
-L- STA 89+30
ELEV = 118.00'

-L- NC 125

SEE SHEET NO. 10 FOR -L- PLAN

BEGIN MILLING FOR KEY-IN
BEGIN OVERLAY
-L1- Sta. 14+95.00
ELEV = 160.27'

END OVERLAY
END MILLING FOR KEY-IN
BEGIN GRADE
-L1- Sta. 15+45.00
ELEV = 160.26'

VC = 70'
PI = 15+30.00
EL = 160.17'
K = 88
DS = 45

VPT Sta.15+65.00
EL.=160.34'

VPC Sta.16+70.00
EL.=160.86'

VC = 120'
PI = 17+30.00
EL = 161.16'
K = 89
DS = 50

VPT Sta.17+90.00
EL.=160.65'

-L1- POT Sta.20+95.48 =
-Y1- POT Sta.10+00.00
ELEV = 158.06'

PROPOSED GRADE

BEGIN SPECIAL DITCH GRADE RT
-L1- STA 14+50
ELEV = 158.23'

(-)0.3000%

(+)0.4966%

(-)0.8493%

(-)11.64%

(-)11.33%

18" RCP

(+)0.50%

(-)12.20%

(-)11.33%

(-)0.8493%

BEGIN SPECIAL DITCH GRADE LT
-L1- STA 14+50
ELEV = 158.15'

END SPECIAL DITCH GRADE LT
-L1- STA 15+25
ELEV = 157.15'

-L1- STA 15+40 RT
ELEV = 156.75'

END SPECIAL DITCH GRADE RT
-L1- STA 17+50
ELEV = 157.81'

BEGIN SPECIAL DITCH GRADE RT
-L1- STA 18+50
ELEV = 158.75'

EXISTING GROUND

END SPECIAL DITCH GRADE RT
-L1- STA 20+50
ELEV = 154.35'

BEGIN SPECIAL DITCH GRADE RT
-L1- STA 21+50
ELEV = 153.00'

END SPECIAL DITCH GRADE RT
-L1- STA 23+00
ELEV = 155.00'

BM#5 (U-5725)
-L1- STA 10+00.00 (-6.71')
60.27' RT.
ELEV. 160.84

CULVERT HYDRAULIC DATA
I @ 18" RCP
(DO NOT BURY)

DESIGN DISCHARGE	= 1.20 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 157.74FT
BASE DISCHARGE	= 1.40 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 157.78 FT
OVERTOPPING DISCHARGE	= 13.20 CFS
OVERTOPPING FREQUENCY	= > 100 YRS
OVERTOPPING ELEVATION	= 160.23 FT

LEGEND
UNDERCUT EXCAVATION

-L1- SR 1627 (THREE BRIDGES RD)

SEE SHEET NO. 11 FOR -L1- PLAN

6/28/2018