PROJECT REFERENCE NO.	SHEET NO.
R-2237B	29
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 20677 ENGINEER GREGORY A. KEMPF — 11-3-04

HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 14160 ENGINEER DOUGLAS E. HARTMAN — 11/8/04

HDR Engineering, Inc. of the Carolinas
3733 National Drive, Suite 207 Raleigh, N.C. 27612

TRANSITE CONSULTING ENGINEERS, INCORPORATED
1300 Paddock Drive, Suite G-10 Raleigh, N.C. 27609

8/17/99

REVISIONS

NOTE: NO RIP RAP TO BE PLACED IN STREAM BED

CL. 'I' RIP-RAP EST. II TONS EST. 22 SYFF

60" CSP, 8 Ga., 3x1 In., CORR.

60" CSP, 8 Ga., 3x1 In., CORR.

JB W/ SLAB LID

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60" CSP, 8 Ga., 3x1 In. CORR. 'B' INSTALLATION W/METHOD

60" STRUCTURAL PLATE PIPE, 10Ga., 6x2 In. CORR.

PROP. R/W

PROP. SLOPE LIMIT

113 J.EARL TINDEL DB 0699 PG 1015

-L- CURVE LR25
PI = 317+45.57
Δ = 26° 04' 49.7" (RT)
Dc = 2° 00' 00.0"
Os = 1° 30' 00.0"
Ls = 150.00'
Ts = 738.58'
Lc = 1,154.02'
Rc = 2,864.79'
LT = 100.00'
ST = 50.00'
e = 0.04
DS = 50 mph

-L- CURVE LR26
PI = 332+86.01
Δ = 31° 03' 53.7" (LT)
Dc = 7° 30' 00.0"
Os = 10° 30' 00.0"
Ls = 280.00'
Ts = 353.36'
Lc = 134.20'
Rc = 763.94'
LT = 187.00'
ST = 93.63'
e = 0.08
DS = 50 mph

NAD 83

+10.00 400.00 ft. 670.70' N02°07'07"E

+35.00 385.00 ft.

CL. 'I' RIP-RAP EST. 7 TONS EST. 15 SYFF

TOE PROTECTION SEE DETAIL B EST. 113 TONS EST. 160 SYFF

24" CSP W/ 2 ELBOWS

-L- TS Sta. 329+32.66

BL-42 PINC 338+29.80

+21.78 205.70 ft.

+83.70 198.05 ft.

+50.00 175.90 ft.

PROPOSED SOIL DRIVE

+50.02 199.66 ft.

+94.93 181.96 ft.

+49.46 155.86 ft.

+13.00 124.44 ft.

TOE PROTECTION SEE DETAIL B EST. 370 TONS EST. 522 SYFF

-L- SRS Sta. 336+26.85

END EXPWY. GUTTER +00

PROP. GUARDRAIL

PROP. EXP. GUTTER

+74 TIE TO EXISTING GUARDRAIL

BEGIN EXPWY. GUTTER +00 335+00

JB W/ SLAB LID

24" CSP

MATCHLINE -L- STA. 337+00.00 SEE SHEET NO. 30

-L- ST Sta. 324+61.01

BEGIN EXPWY. GUTTER +00

-L- CS Sta. 323+11.01

BEGIN EXPWY. GUTTER +00

6" PVC

PROP. EXPWAY GUTTER

PROP. GUARDRAIL

+74 TIE TO EXISTING GUARDRAIL

END EXPWY. GUTTER +50

TBJB w/ SLAB LID

BREMCO POWER EASEMENT

325+00

330+00

-L- N 14° 09' 02.8" W

+50 END EXPWY. GUTTER

PERENNIAL EPHEMERAL

5' RCP

15" RCP

18" RCP

2GI

JB W/ SLAB LID

SPRING BOX

PROP. EXP. GUTTER

PROP. GUARDRAIL

15" CSP W/ 2 ELBOWS

60" STRUCTURAL PLATE PIPE, 10Ga., 6x2 In. CORR.

TOE PROTECTION SEE DETAIL B EST. 212 TONS EST. 300 SYFF

PROP. SLOPE LIMIT

CL. 'I' RIP-RAP EST. 2 TONS EST. 6 SYFF

BL-41 PINC 334+89.59

113 J.EARL TINDEL DB 0699 PG 1015

SPECIAL LAT. 'V' DITCH SEE DETAIL A

FSR SEE DETAIL

+74 BEGIN DOUBLE-FACED BARRIER TYPE 'B-77'

-L- SC Sta. 332+12.66

CL. 'I' RIP-RAP EST. 4 TONS EST. 10 SYFF

PROP. DOUBLE-FACED BARRIER

-L- CS Sta. 333+46.85

+07.00 138.88 ft.

114 EVERETTE F.& CHERYL P.TUCKER,JR DB 0953 PG 0096 PB 11 PG 19

+76.08 207.68 ft.

+30.04 268.97 ft.

+61.22 325.19 ft.

+70.21 364.79 ft.

+20.17 374.47 ft.

114 EVERETTE F.& CHERYL P.TUCKER,JR. DB 1171 PG 0857 DB 0953 PG 0094 PB 11 PG 19

N36°39'49"E 622.51'

+50.00 275.00 ft.

+50.00 280.00 ft.

607.27' N75°58'29"E

+20.00 137.00 ft.

+00.00 125.00 ft.

FILL WITH FLOWABLE MATERIAL

+10 END OF TYPE B-77

+20 CAT-1

BL-43 PINC 342+16.11

SPECIAL LAT. 'V' DITCH SEE DETAIL A

116 JAMES E.& MARY B.DAYE DB 0700 PG 1327

526.14' N02°46'09"E

PROP. R/W

115 RUPERT T.& WILLA DEAN SIGMON DB 0773 PG 0030 PB 11 PG 19

MATCHLINE -L- STA. 323+00.00 SEE SHEET NO. 28

+64.74 303.11 ft.

BL-40 PINC 329+33.40

+46.75 349.89 ft.

+35.11 373.85 ft.

PROP. R/W

ROCK

EXISTING R/W

RETAIN

5' CURB

24" CMP

DETAIL FSR FALSE SUMP

Outside Ditch Traffic Flow — 20:1 — 10:1 — 0.5 Ft. Min. — 1.0 Ft. Max. — 2.0 Ft — 6:1 min. — S — (Not to Scale) — S=Ditch Slope — Proposed Ditch

-L- 329+50 (RT.)
-L- 334+00 (RT.)
-L- 329+77 (RT.)

DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground — 1.5:1 — D — 4:1 or Flatter — Fill Slope — Min. D = 1.0 Ft.

-L- 329+65 TO 330+50 (LT.)
-L- 329+50 TO 330+00 (RT)
-L- 334+00 TO 336+00 (RT)

DETAIL B
TOE PROTECTION
(Not to Scale)

Natural Ground — d:1 — Fill Slope — Filter Fabric — Type of Liner = CL. 'I' — d= 1.0 Ft

-L- 323+00 TO 328+32 (RT.)
-L- 323+00 TO 328+75 (LT.)
-L- 333+60 TO 334+50 (LT.)

NOTES:

1. DRIVEWAY RETURN RADII ARE 10' UNLESS OTHERWISE SHOWN
2. ALL CSP WILL BE ROD LUG AND GASKET CONNECTOR

REFERENCES:

FOR -L- PROFILE SEE SHEET 57

ROADWAY TO BE OBLITERATED

10/28/2004
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