

MULKEY ENGINEERS & CONSULTANTS
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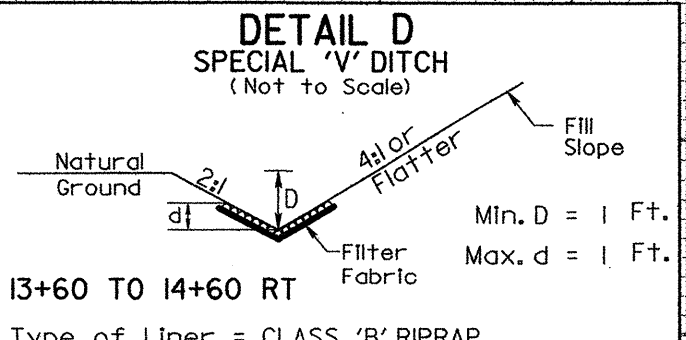
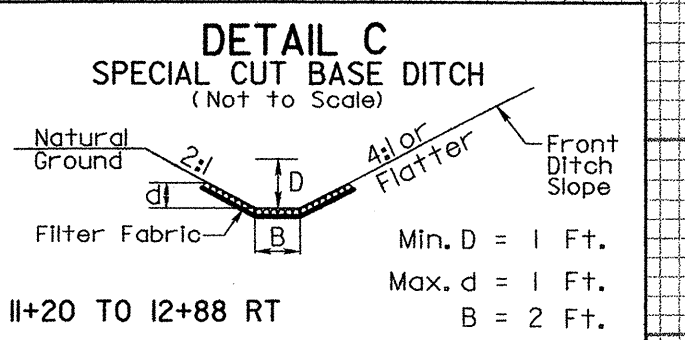
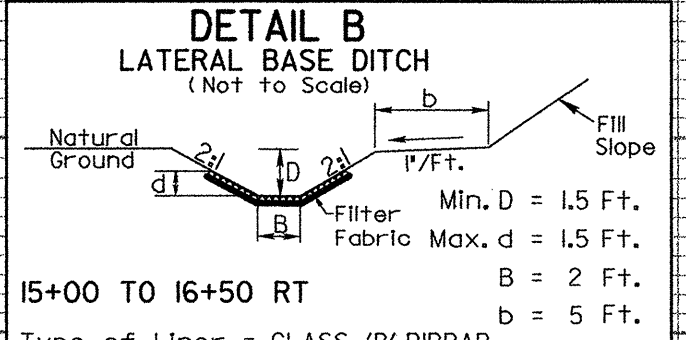
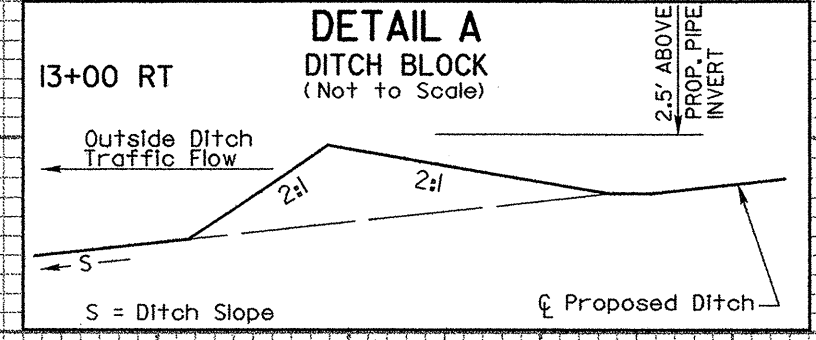
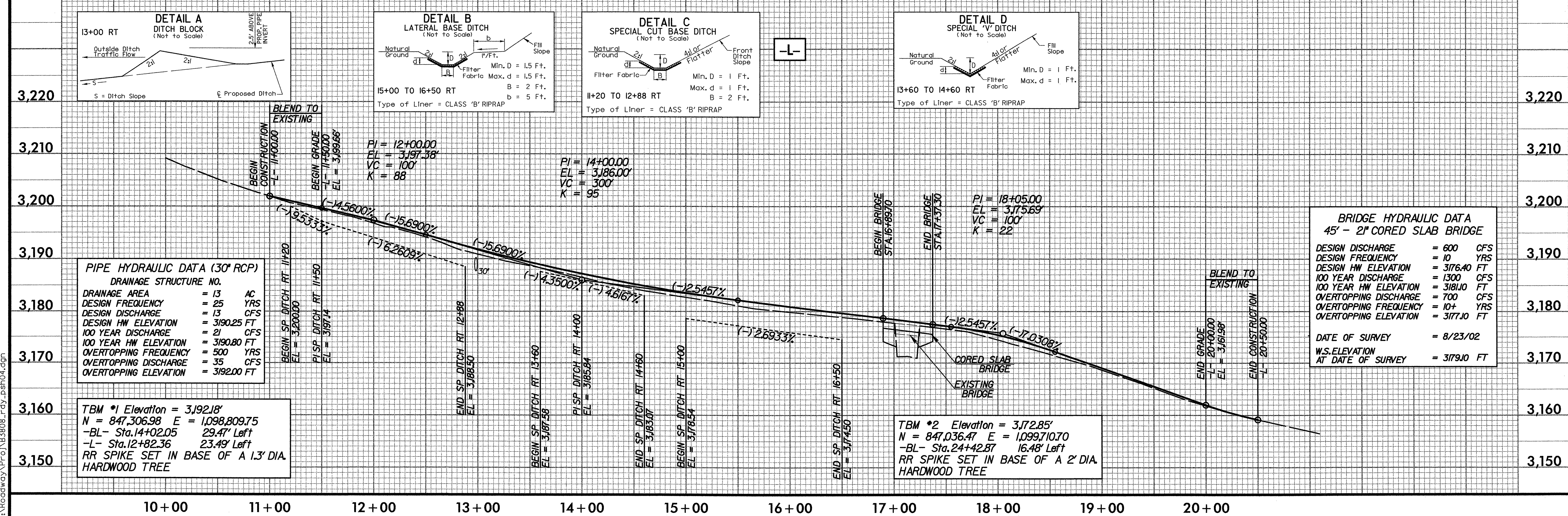
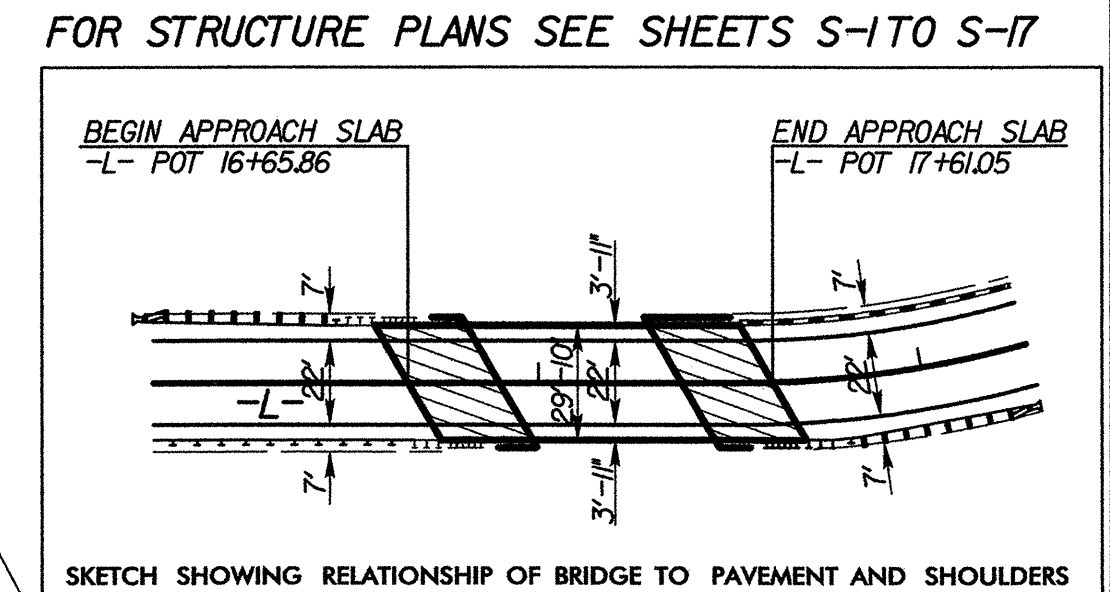
PROJECT REFERENCE NO. **B-3808** SHEET NO. **4**
 RW SHEET NO. _____

ROADWAY DESIGN ENGINEER
 HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 21102
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 20737

ZODIAC DEVELOPERS, INC.
 D.B. 104 PG. 270

PI Sta 12+07.73 Δ = 3° 12' 16.5" (RT) D = 1° 30' 00.0" L = 213.64' T = 106.85' R = 3,819.72' Se = NC	PI Sta 14+15.39 Δ = 34° 59' 27.9" (LT) D = 17° 54' 17.8" L = 195.43' T = 100.87' R = 320.00' Se = 0.06	PI Sta 18+36.86 Δ = 33° 21' 40.1" (LT) D = 20° 06' 13.6" L = 165.94' T = 85.40' R = 285.00' Se = 0.06
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PIPE HYDRAULIC DATA (30" RCP)
 DRAINAGE STRUCTURE NO. _____

DRAINAGE AREA	= 13	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 13	CFS
DESIGN HW ELEVATION	= 3190.25	FT
100 YEAR DISCHARGE	= 21	CFS
100 YEAR HW ELEVATION	= 3190.80	FT
OVERTOPPING FREQUENCY	= 500	YRS
OVERTOPPING DISCHARGE	= 35	CFS
OVERTOPPING ELEVATION	= 3192.00	FT

TBM #1 Elevation = 3,192.18'
 N = 847,306.98 E = 1,098,809.75
 -BL- Sta. 14+02.05 29.47' Left
 -L- Sta. 12+82.36 23.49' Left
 RR SPIKE SET IN BASE OF A 1.3' DIA. HARDWOOD TREE

TBM #2 Elevation = 3,172.85'
 N = 847,036.47 E = 1,099,710.70
 -BL- Sta. 24+42.87 16.48' Left
 RR SPIKE SET IN BASE OF A 2' DIA. HARDWOOD TREE

BRIDGE HYDRAULIC DATA
 45' - 2" CORED SLAB BRIDGE

DESIGN DISCHARGE	= 600	CFS
DESIGN FREQUENCY	= 10	YRS
DESIGN HW ELEVATION	= 3176.40	FT
100 YEAR DISCHARGE	= 1300	CFS
100 YEAR HW ELEVATION	= 3181.0	FT
OVERTOPPING DISCHARGE	= 700	CFS
OVERTOPPING FREQUENCY	= 10+	YRS
OVERTOPPING ELEVATION	= 3177.0	FT

DATE OF SURVEY = 8/23/02
 W.S. ELEVATION AT DATE OF SURVEY = 3179.0 FT

11/24/2004 09:57:54 AM
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