

5/14/99

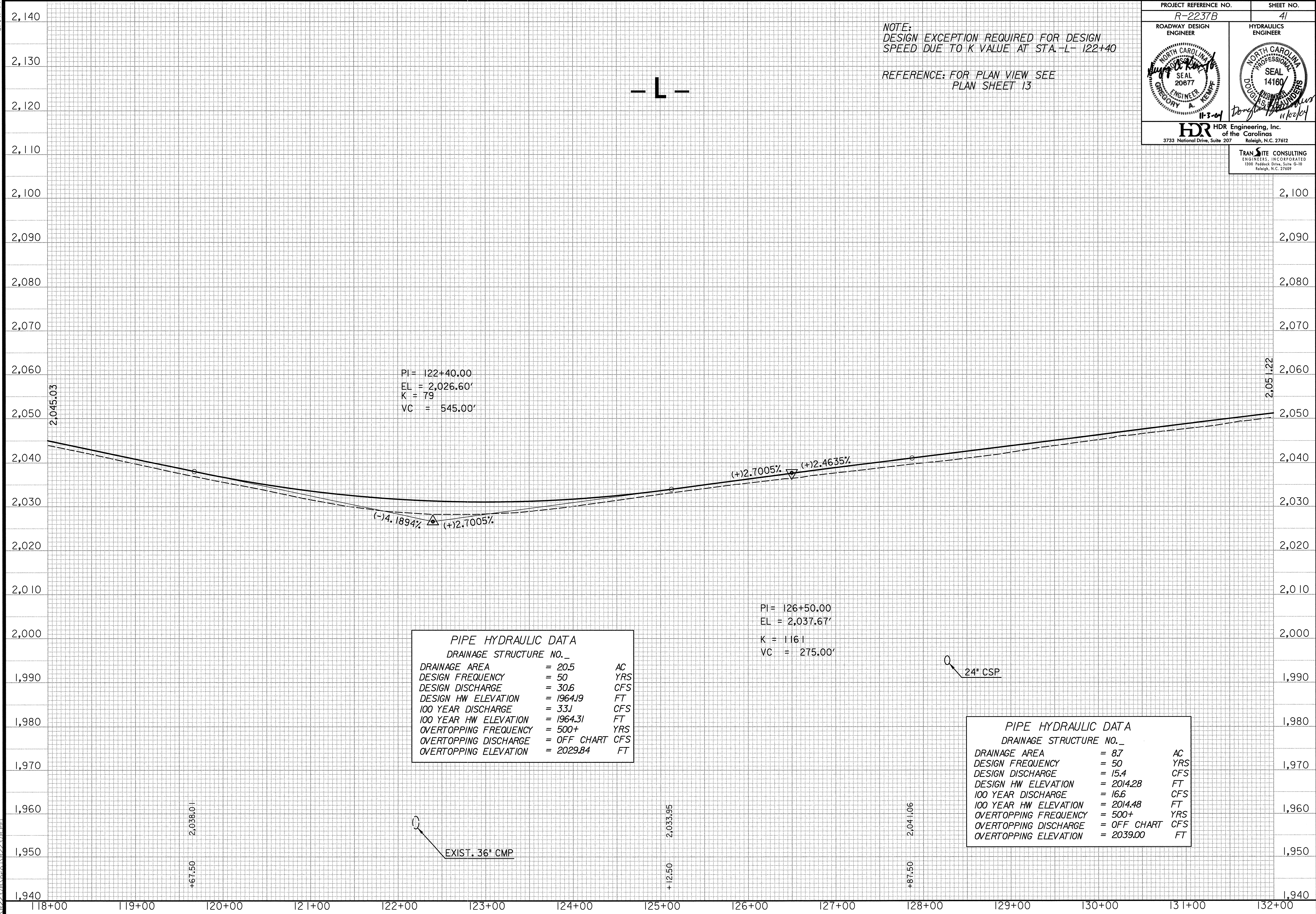
1/02/2004  
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PROJECT REFERENCE NO. R-2237B	SHEET NO. 41
ROADWAY DESIGN ENGINEER <i>[Signature]</i> SEAL 20677 11-3-04	HYDRAULICS ENGINEER <i>[Signature]</i> SEAL 14160 11/02/04
HDR Engineering, Inc. of the Carolinas 3733 National Drive, Suite 207 Raleigh, N.C. 27612	
TRAN SITE CONSULTING ENGINEERS, INCORPORATED 1306 Piedmont Drive, Suite G-10 Raleigh, N.C. 27609	

NOTE:  
DESIGN EXCEPTION REQUIRED FOR DESIGN  
SPEED DUE TO K VALUE AT STA. L- 122+40

REFERENCE: FOR PLAN VIEW SEE  
PLAN SHEET 13

- L -



PI = 122+40.00  
EL = 2,026.60'  
K = 79  
VC = 545.00'

PI = 126+50.00  
EL = 2,037.67'  
K = 116.1  
VC = 275.00'

PIPE HYDRAULIC DATA		
DRAINAGE STRUCTURE NO. _		
DRAINAGE AREA	= 20.5	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 30.6	CFS
DESIGN HW ELEVATION	= 1964.19	FT
100 YEAR DISCHARGE	= 33.1	CFS
100 YEAR HW ELEVATION	= 1964.31	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= OFF CHART	CFS
OVERTOPPING ELEVATION	= 2029.84	FT

PIPE HYDRAULIC DATA		
DRAINAGE STRUCTURE NO. _		
DRAINAGE AREA	= 8.7	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 15.4	CFS
DESIGN HW ELEVATION	= 2014.28	FT
100 YEAR DISCHARGE	= 16.6	CFS
100 YEAR HW ELEVATION	= 2014.48	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= OFF CHART	CFS
OVERTOPPING ELEVATION	= 2039.00	FT

EXIST. 36" CMP

24" CSP