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PROJECT REFERENCE NO.	SHEET NO.
14SP.20451.1	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 26960 ENGINEER PATRICK McSCHILLER
DocuSigned by: Patrick McSchiller
9/14/2016

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 12575 ENGINEER PAUL A. FISHER
DocuSigned by: Paul A. Fisher
9/15/2016

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "440073 BL-2"
WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
NORTHING: 568488.128(ft) EASTING: 960536.269(ft)
ELEVATION: 2127.27(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999775575
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "440073 BL-2" TO -L- STATION IS 51.63' AT S27°10'19"W
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

V&M
Vaughn & Melton
Consulting Engineers
Asheville, North Carolina
828-253-2796
Tri-Cities, TN 423-467-8401
Knoxville, TN 865-546-5800
Spartanburg, SC 864-574-4775
Charleston, SC 843-974-6650
Middlesboro, KY 606-248-6600
Atlanta, GA 770-627-3509
Charlotte, NC 704-357-0488
Boone, NC 828-355-9933
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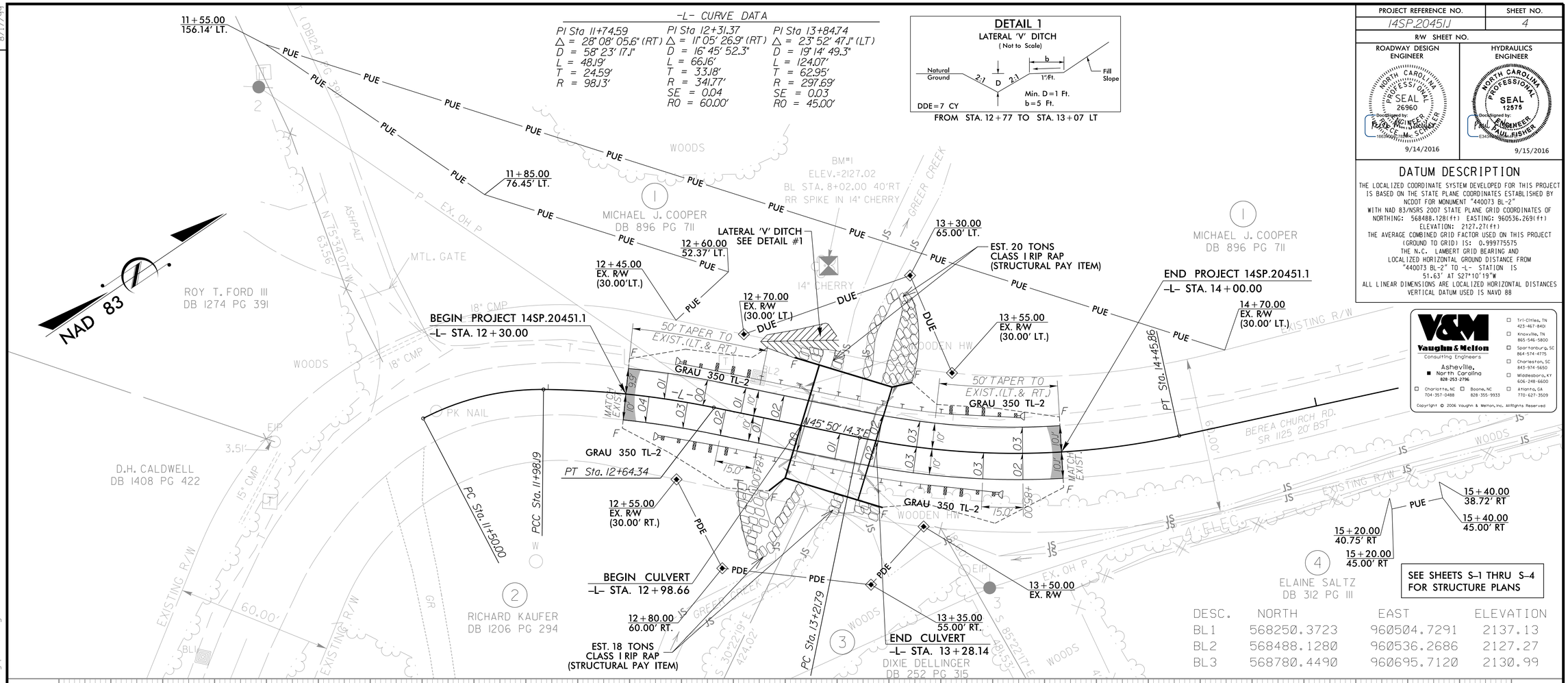
-L- CURVE DATA

PI Sta 11+74.59	PI Sta 12+31.37	PI Sta 13+84.74
Δ = 28° 08' 05.6" (RT)	Δ = 11° 05' 26.9" (RT)	Δ = 23° 52' 47.1" (LT)
D = 58° 23' 17.1"	D = 16° 45' 52.3"	D = 19° 14' 49.3"
L = 48.19'	L = 66.16'	L = 124.07'
T = 24.59'	T = 33.18'	T = 62.95'
R = 98.13'	R = 341.77'	R = 297.69'
	SE = 0.04	SE = 0.03
	R0 = 60.00'	R0 = 45.00'

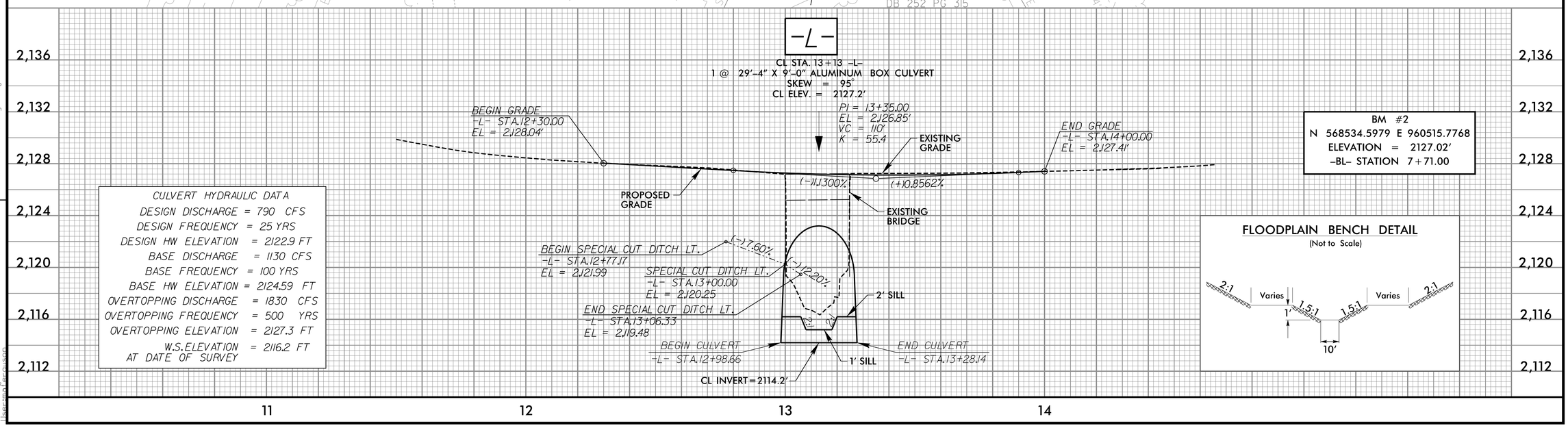
DETAIL 1
LATERAL 'V' DITCH
(Not to Scale)

DDE=7 CY
FROM STA. 12+77 TO STA. 13+07 LT



SEE SHEETS S-1 THRU S-4 FOR STRUCTURE PLANS

DESC.	NORTH	EAST	ELEVATION
BL1	568250.3723	960504.7291	2137.13
BL2	568488.1280	960536.2686	2127.27
BL3	568780.4490	960695.7120	2130.99



BM #2
N 568534.5979 E 960515.7768
ELEVATION = 2127.02'
-BL- STATION 7+71.00

CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 790 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 2122.9 FT
BASE DISCHARGE	= 1130 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 2124.59 FT
OVERTOPPING DISCHARGE	= 1830 CFS
OVERTOPPING FREQUENCY	= 500 YRS
OVERTOPPING ELEVATION	= 2127.3 FT
W.S.ELEVATION AT DATE OF SURVEY	= 2116.2 FT

FLOODPLAIN BENCH DETAIL
(Not to Scale)

REVISIONS

8/17/99

9/14/2016
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jlsmith