DocuSign Envelope ID: 58F09E62-71AC-44F0-B35F-1E0F88AC8CC0

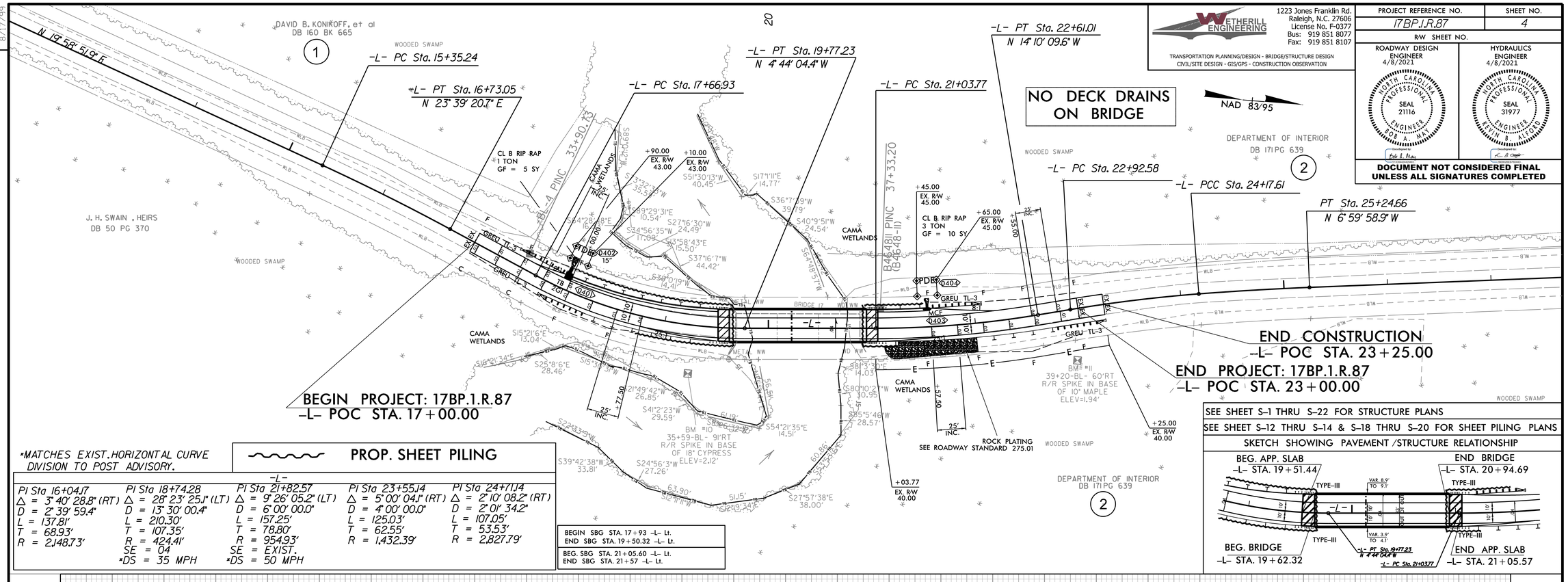
WETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
17BP.1.R.87	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER 4/8/2021	HYDRAULICS ENGINEER 4/8/2021

NORTH CAROLINA PROFESSIONAL SEAL 21116 ENGINEER BOB A. MAY — DocuSigned by: Bob A. May

NORTH CAROLINA PROFESSIONAL SEAL 31977 ENGINEER ALVIN R. ALFORD — DocuSigned by: A. R. Alford

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



*MATCHES EXIST. HORIZONTAL CURVE DIVISION TO POST ADVISORY.

PROP. SHEET PILING

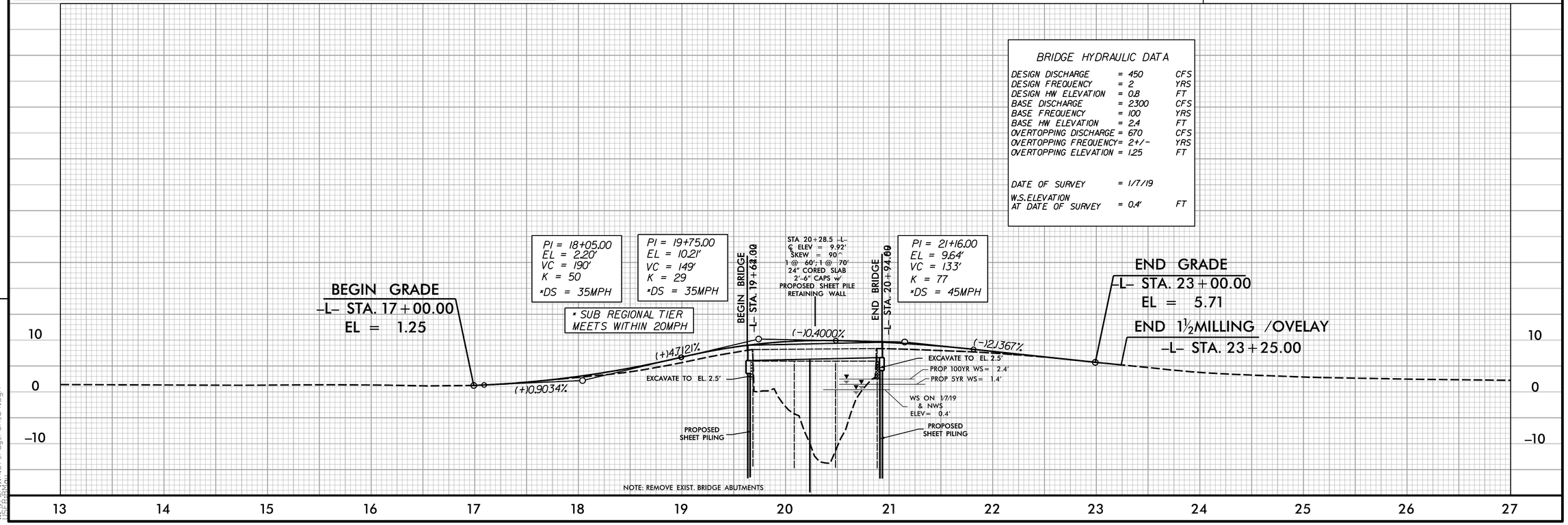
-L-				
PI Sta 16+04.17	PI Sta 18+74.28	PI Sta 21+82.57	PI Sta 23+55.14	PI Sta 24+71.14
Δ = 3° 40' 28.8" (RT)	Δ = 28° 23' 25.1" (LT)	Δ = 9° 26' 05.2" (LT)	Δ = 5° 00' 04.1" (RT)	Δ = 2° 10' 08.2" (RT)
D = 2° 39' 59.4"	D = 13° 30' 00.4"	D = 6° 00' 00.0"	D = 4° 00' 00.0"	D = 2° 01' 34.2"
L = 137.81'	L = 210.30'	L = 157.25'	L = 125.03'	L = 107.05'
T = 68.93'	T = 107.35'	T = 78.80'	T = 62.55'	T = 53.53'
R = 2,148.73'	R = 424.41'	R = 954.93'	R = 1,432.39'	R = 2,827.79'
	SE = 04	SE = EXIST.		
	*DS = 35 MPH	*DS = 50 MPH		

BEGIN SBG STA. 17+93 -L- Lt.
END SBG STA. 19+50.32 -L- Lt.

BEG. SBG STA. 21+05.60 -L- Lt.
END SBG STA. 21+57 -L- Lt.

SEE SHEET S-1 THRU S-22 FOR STRUCTURE PLANS
SEE SHEET S-12 THRU S-14 & S-18 THRU S-20 FOR SHEET PILING PLANS

SKETCH SHOWING PAVEMENT /STRUCTURE RELATIONSHIP



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 450	CFS
DESIGN FREQUENCY	= 2	YRS
DESIGN HW ELEVATION	= 0.8	FT
BASE DISCHARGE	= 2300	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 2.4	FT
OVERTOPPING DISCHARGE	= 670	CFS
OVERTOPPING FREQUENCY	= 2+/-	YRS
OVERTOPPING ELEVATION	= 1.25	FT
DATE OF SURVEY	= 1/7/19	
W.S. ELEVATION AT DATE OF SURVEY	= 0.4'	FT

REVISIONS

8/17/99

4/7/2021
17BP.1.R.87_rdy_PSH_04.dgn