

Bench Mark: F-291, NGS Monument on east abutment of S.N. 039-0013, 22' left of Sta. 339+04, Elev. 373.18.

Existing Structure: S.N. 039-0049 was originally built in 1974 along F.A. 14, Section 12-2B-2. The back to back abutment length is 416'-5" and the out-to-out deck width is 42'-0". The structure consists of a three span continuous steel plate girder superstructure horizontally curved supported on pile stub abutments and solid wall piers. Structure to be removed and replaced.

Traffic Control: Traffic will be maintained by providing a temporary crossover from the existing eastbound roadway to the existing westbound structure for Stage I. Upon completion of the new eastbound structure, traffic will be maintained with a temporary crossover from the existing westbound roadway to the eastbound structure for Stage II.

Salvage: None

Notes:

- ① Bridge Fence Railing, Std. R-33 on north side of structure and light poles not shown for clarity.
- ② Measured radially.
- ③ For Section A-A, see sheet 2 of 53.
- ④ DS-II Drainage Scuppers to be located on the south side only at each end of the structure.
- ⑤ For light pole locations, pole heights, and anchor bolt patterns, see Lighting Plan Details.
- ⑥ Slope 1:2 (V:H) at right angles to abutment along face of wingwalls, typical.
- ⑦ Permanent Ground Anchor and Tie Rod, typical.

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi  
 fy = 60,000 psi (Reinforcement)  
 fy = 50,000 psi (AASHTO M 270 Grade 50W)  
 fy = 50,000 psi (AASHTO M 270 Grade 50)  
 fy = 150,000 psi (AASHTO M 275 Grade 150)

SEISMIC DATA

Seismic Performance Zone (SP2) = 3  
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.35g  
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.82g  
 Soil Site Class = D

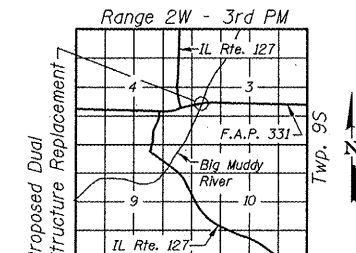
LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

STATION 340+69.53  
 BUILT 20\_\_ BY  
 STATE OF ILLINOIS  
 FAP ROUTE 331 SEC (12-DB-1)  
 LOADING HL-93  
 STRUCTURE NO. 039-0076

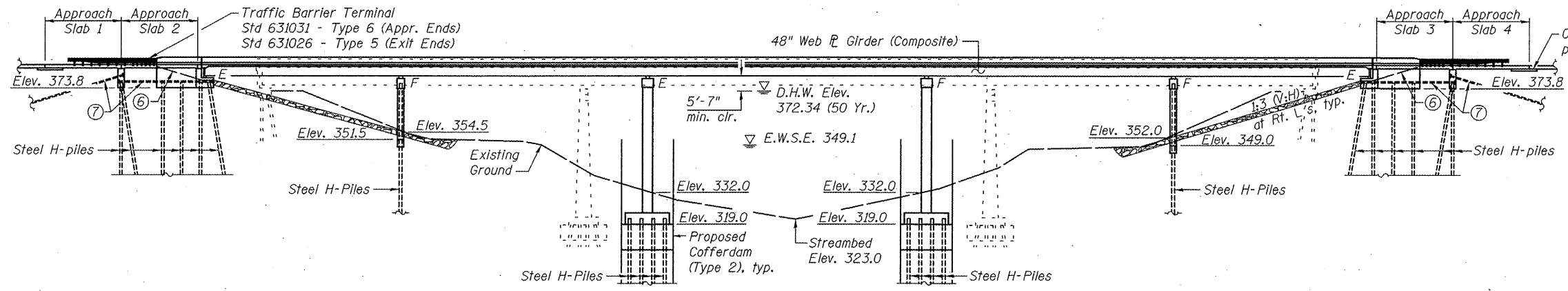
NAME PLATE

See Std. 515001

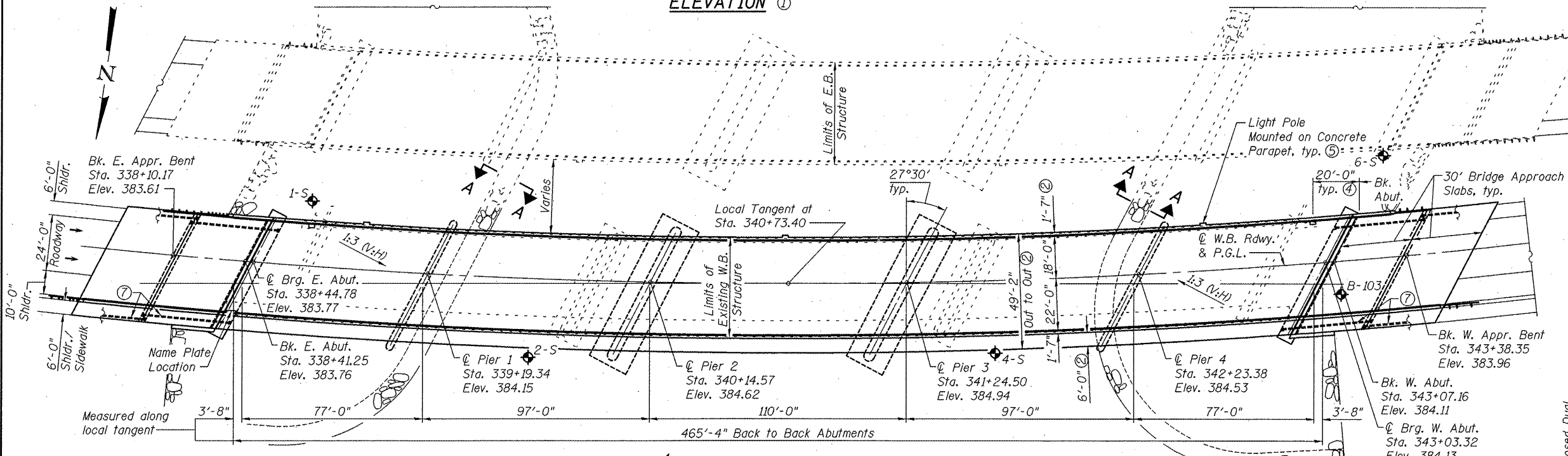


LOCATION SKETCH

GENERAL PLAN & ELEVATION  
 IL RTE. 13 OVER BIG MUDDY RIVER  
 F.A.P. RTE. 331 - SEC. (12-DB-1)  
 JACKSON COUNTY  
 STATION 340+69.53 (W.B.)  
 STRUCTURE NO. 039-0076 (W.B.)



ELEVATION ①



PLAN

WATERWAY INFORMATION

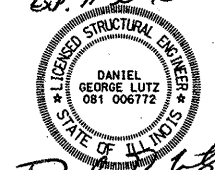
Drainage Area = 2,159 Sq. Mi.		Exist. Low Grade Elev. 382.5 @ Sta. 337+50					
		Prop. Low Grade Elev. 382.5 @ Sta. 337+50					
Flood	Freq. Yr.	Q	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.	Headwater El.
		C.F.S.	Exist.	Prop.	Exist.	Prop.	Exist.
Design	10	26,344	7,286	7,458	366.94	0.05	0.05
	50	38,509	9,259	9,562	372.34	0.08	0.07
	100	43,714	10,054	10,601	374.84	0.23	0.14
Base							
Overtopping							
Max. Calc.	500	55,669	10,054	11,926	378.10	0.27	0.18

DESIGN SCOUR ELEVATION TABLE

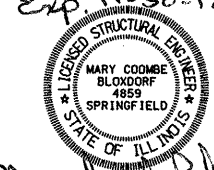
Design Scour Elevation (ft.)	E. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	W. Abut.
	373.8	349.1	314.8	314.8	345.0	373.8

APPROVED  
 For Structural Adequacy Only  
*Dr. Carl Perry*  
 Engineer of Bridges & Structures

Plans prepared by  
 Oates Associates, Inc.  
 Sheets 1-12, 18-24  
 & 27-53 of 53  
 Exp. 11-30-12



Plans prepared by  
 Coombe-Bloxdorf P.C.  
 Sheets 13-17 & 25-26 of 53  
 Exp. 11-30-12



USER NAME =  
 PLOT SCALE =  
 PLOT DATE =

DESIGNED - JAD  
 CHECKED - DGL  
 DRAWN - MAG  
 CHECKED - DGL

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 53 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(12-1)B-1	JACKSON	200	113
			CONTRACT NO.	78056

ILLINOIS FED. AID PROJECT