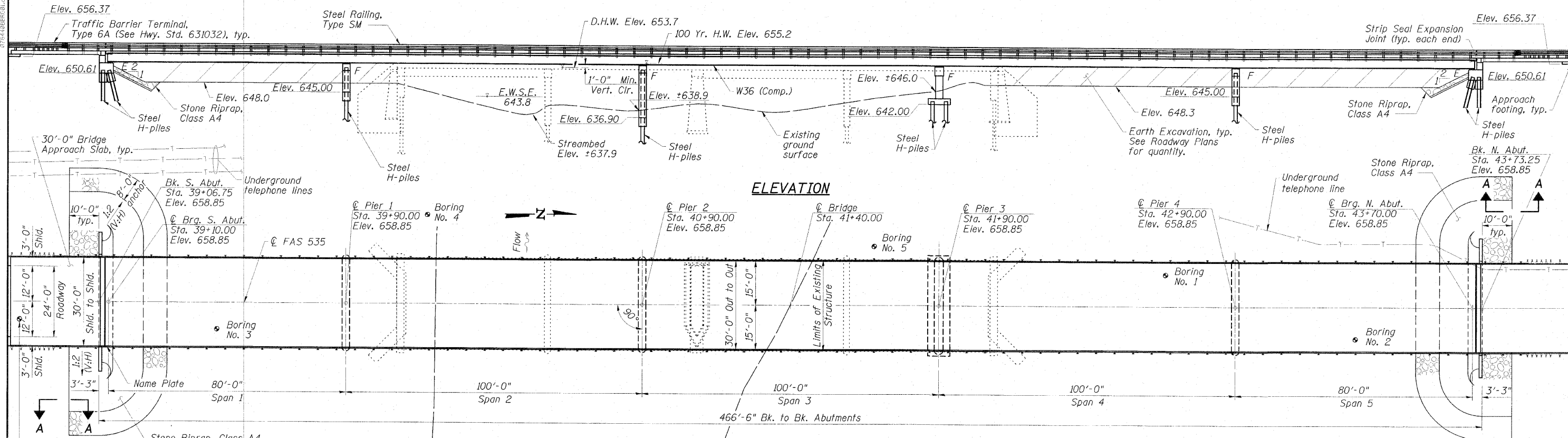


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCHMARK: Chiseled Square on 1/4 hubguard at NW corner of bridge over Sangamon River, Elev. 655.89

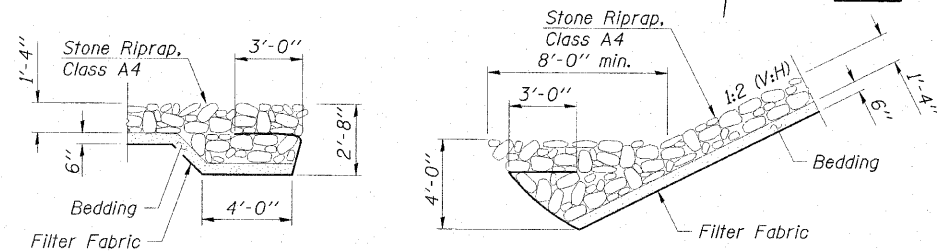
EXISTING STRUCTURE: SN 074-0025 was originally built in 1908 as S.A. Rte. 2 Section J-15D, reconstructed in 1977 as FAS 535 Section J-BR, and reinforced with 3 W33x130 beams in 2007. It is a four span structure consisting of 21" PPC Deck Beams on closed abutments, two pile bent piers and a solid shaft pier. The deck width is 31'-0" and the length is 202'-8" back-to-back of abutments. Traffic shall be detoured during construction.

No salvage.



SANGAMON RIVER
BUILT 20... BY
PIATT COUNTY
SEC. 08-00255-00-BR
F.A.S. RT. 535 STA. 41+40
STR. NO. 074-0085 LOADING HL-93

NAME PLATE
See Std. 515001



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	N. Abut.
	650.6	642.0	633.9	642.0	642.0	650.6

WATERWAY INFORMATION

Frequency Year	Q-ft ³ /s	Opening - ft ²		Nat. H.W.E.	Head - ft.		Headwater El.	
		Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Overtop (E)	<5	6000	1716	651.2	0.5	651.7		
Design	10	9950	1999	652.7	0.4	653.1	653.2	
	20	12800	2068	653.7	0.4	654.1	654.3	
Base	50	15920	2068	654.5	0.5	655.0	655.2	
	100	18720	2068	655.2	0.4	655.6	655.9	
Max Calc.	500	25820	2068	656.9	0.2	657.1	657.8	

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Bridge Design Specifications."

LOADING HL-93

Allow 50 psf for future wearing surface.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 & 2009 Interims

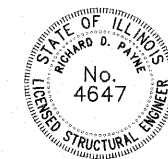
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S₀₁) = 0.14g
Design Spectral Acceleration at 0.2 sec. (S₀₅) = 0.25g
Soil Site Class = D



EXPIRES 11-30-10

SIGNATURE

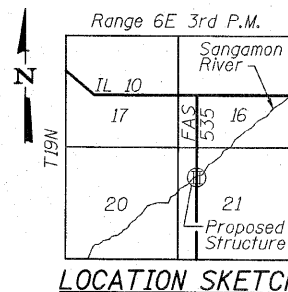
051210
DATE

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GENERAL PLAN

SHADY REST ROAD OVER SANGAMON RIVER
FAS ROUTE 535 - SECTION 08-00255-00-BR
PIATT COUNTY
STATION 41+40.00
STRUCTURE NO. 074-0085



ESCA
CONSULTANTS, INC.

DESIGNED BY: MTD 11/09
DRAWN BY: DWH/HAS 11/09
CHECKED BY: MTD 11/09
APPROVED BY: RDP 05/10

SHEET NO. 1	F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 25
25 SHEETS	CONTRACT NO. 91436		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		