Benchmark: Chiseled "□" in south end of east headwall of SN 001-0012, NAVD88 Elev. 542.088.

Existing S.N. 001-0012: The existing structure was originally built in 1959 as F.A. Route 36, Section 53VB. In 1994 a waterproofing membrane system and new wearing surface were placed along with the replacement of the expansion joints and new floor drains. The existing bridge is a three-span steel built-up girder bridge on stub abutments supported by piles. The piers are multi-column piers with crashwalls and footings on piles. The overall length measures 289'-6" back-to-back of abutments with a 63'-8" out-to-out width.

The existing deck and abutment bearings shall be removed and replaced.

Traffic to be maintained utilizing stage construction.

No Salvage.

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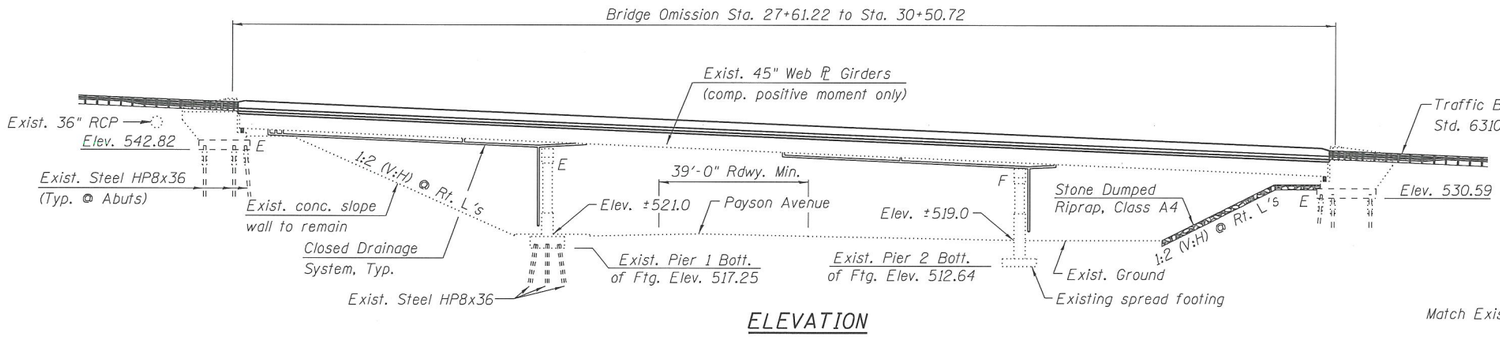
NOV 26 2019

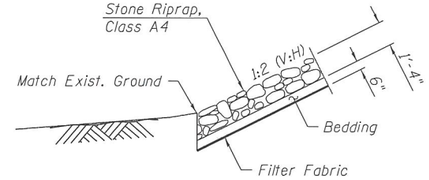
AS A BASIS FOR
PREPARATION OF DETAILED PLANS

SCOPE OF WORK

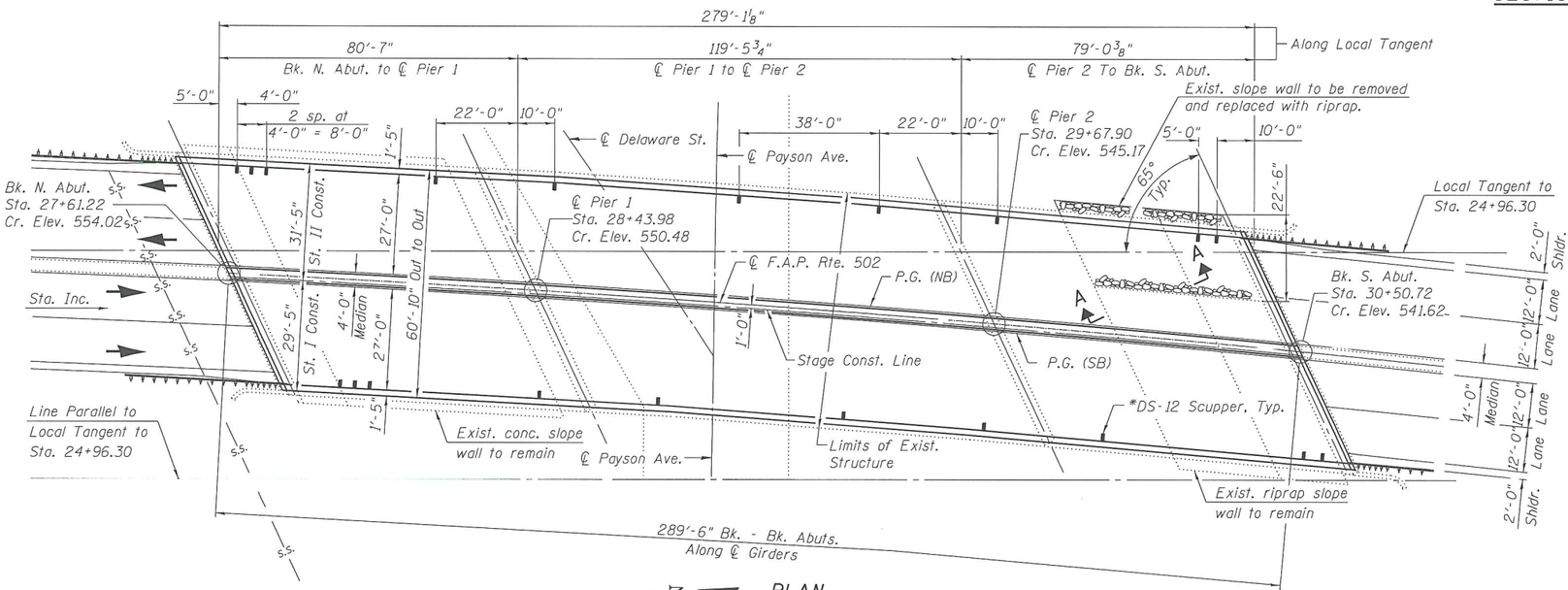
1. Remove railing, curbs, deck and top of abutment backwalls for Stage I.
2. Remove existing rocker expansion bearings at abutments and replace with elastomeric bearings for Stage I.
3. Install shear connectors across positive moment areas and replace abutment diaphragms for Stage I. Add new interior cross frames between girders 5 and 6.
4. Construct 8" deck, top of abutment backwalls, parapets and preformed joint seals for Stage I.
5. Repeat above steps for Stage II.
6. Place riprap for slope wall replacment.
7. Repair Pier 1 cap.



ELEVATION



SECTION A-A



PLAN

*The two DS-12 Scuppers nearest to the South Abutment may free fall at each side of the bridge. All other DS-12 scuppers shal be collected into a closed drainage system.

UTILITY LEGEND

S.S. = Storm Sewer

LOADING HS20-44 (New Const.)

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

DESIGN SPECIFICATIONS (New Const.)

2002 AASHTO Standard Specifications
for Highway Bridges, 17th Edition

DESIGN STRESSES

FIELD UNITS (New Construction)

f'_c = 4,000 psi
f_y = 50,000 psi (Structural Steel)
f_y = 60,000 psi (Reinforcement)

FIELD UNITS (Exist. Construction)

f'_c = 3,500 psi (Superstructure)
f'_c = 3,500 psi (Substructure)
f_y = 33,000 psi (Structural Steel)
f_y = 40,000 psi (Reinforcement)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Horizontal Bedrock Acceleration Coefficient (A) = 0.044g
Site Coefficient (S) = 1.0

HIGHWAY CLASSIFICATION

Payson Avenue	F.A.P. Rte. 502 - IL. Rte. 57
Functional Class: Local (Municipal St.)	Functional Class: Other Principal Arterial
ADT: 175 (2014); 285 (2032)	ADT: 5,238 (2011); 6,000 (2038)
ADTT: 25 (2014); 40 (2032)	ADTT: 800 (2011); 900 (2038)
DHV: 30 (2032)	DHV: 540 (2038)
Design Speed: 30 m.p.h.	Design Speed: 45 m.p.h.
Posted Speed: 30 m.p.h.	Posted Speed: 40 m.p.h.
Two-Way Traffic	Two-Way Traffic
Directional Distribution: 50/50	Directional Distribution: 50/50

LOCATION SKETCH

GENERAL PLAN
IL 57 OVER PAYSON AVENUE
FAP ROUTE 502
SECTION (53RS10, 42RS) BRR, I-3
ADAMS COUNTY
STATION 29+05.97
STRUCTURE NO. 001-0012

KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME = rjp	DESIGNED - RJP	REVISED -
	CHECKED - ADL	REVISED -
PLOT SCALE = 25:0 '1' / in.	DRAWN - RJP	REVISED -
PLOT DATE = 11/26/2019	CHECKED - ADL	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
STRUCTURE NO. 001-0012
SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
502	(53RS10, 42RS) BRR, I-3	ADAMS	2	1
		CONTRACT NO. 72A91		
	ILLINOIS	FED. AID PROJECT		

Klingner & Associates P.C.

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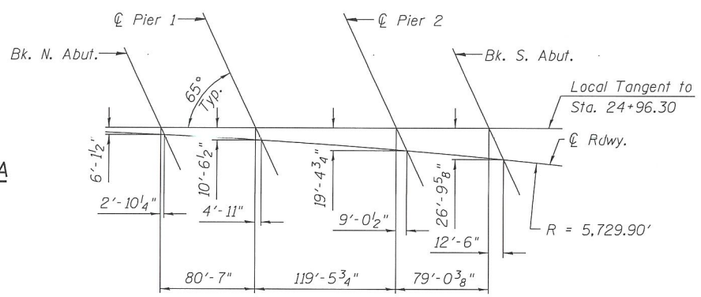
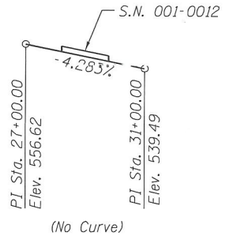
CURVE DATA

(IL Rte. 57)

Δ = 6°37'00"
D = 1°00'00"
R = 5,729.90'
T = 331.22'
L = 661.70'
E = 9.57'
S.E. = No S.E. on Bridge
P.C. Sta. = 24+96.30
P.T. Sta. = 31+58.00
P.I. Sta. = 28+27.52



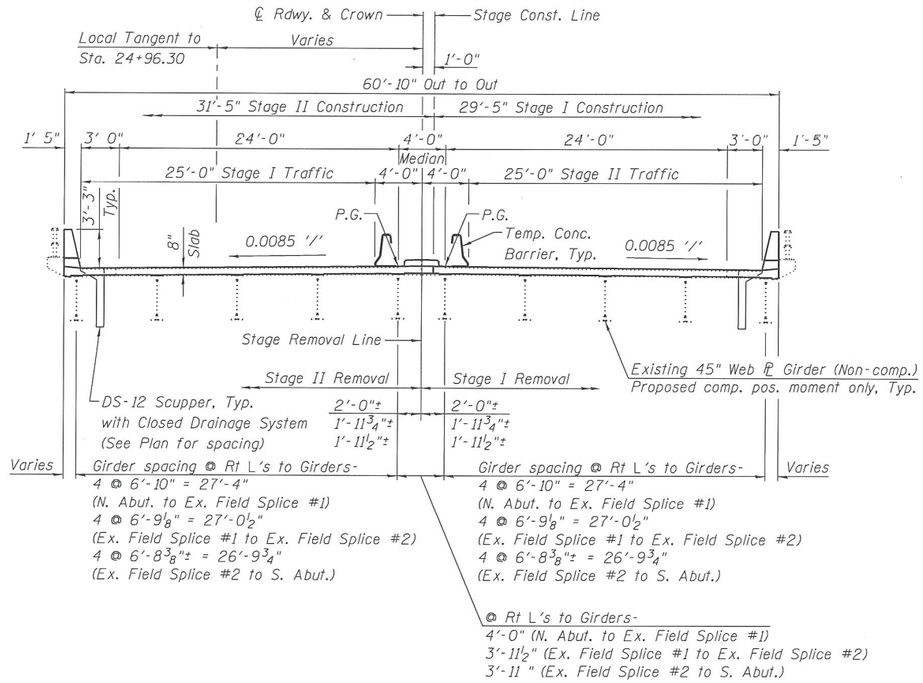
OFFSET SKETCH



(No Curve)

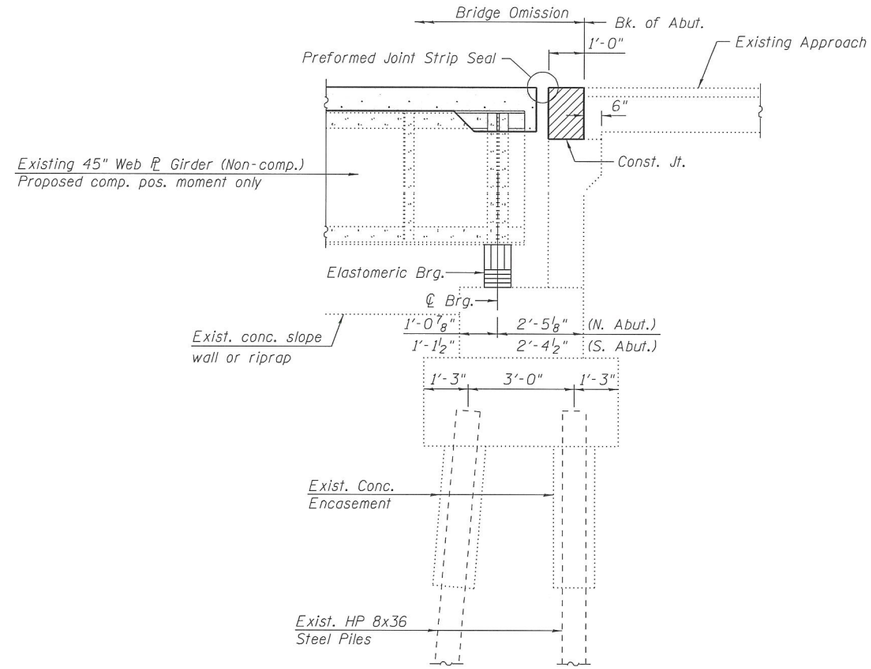
PROFILE GRADE

(Along Median Edge IL Rte. 57)



CROSS SECTION

(Looking South)



SECTION THRU ABUTMENT

(Horiz. dim. @ Rt. L's)

Note:
Hatched area indicates Concrete Removal.

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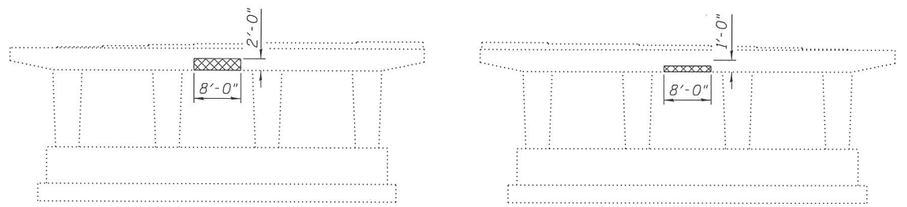

(Looking North)

(Looking South)

PIER 1 REPAIR SKETCH

Note:
Cross-Hatched areas indicate Structural Repair of Concrete.

KLINGNER & ASSOCIATES, P.C. Engineers · Architects · Surveyors	USER NAME = rjp	DESIGNED - RJP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL DETAILS STRUCTURE NO. 001-0012	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - ADL	REVISED -			502	(53RS10, 42RS) BRR, I-3	ADAMS	2	2
	PLOT SCALE = 25:0 '/' in.	DRAWN - RJP	REVISED -					CONTRACT NO. 72A91		
	PLOT DATE = 11/26/2019	CHECKED - ADL	REVISED -		SHEET NO. 2 OF 2 SHEETS		ILLINOIS	FED. AID PROJECT		

Klingner & Associates P.C.

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