Benchmark: Chiseled square on East end of NE wingwall of I-57 overhead S.N. 041-0054; Elev. 451.01

Existing Structure: S.N. 041-0054 built in 1964 as F.A.I. 57, Section 41-1HB-2 at Sta. 310+00.00. The existing structure consists of a four-span steel 33WF118 superstructure with a 6½ inch concrete deck, bituminous wearing surface and waterproofing membrane supported by single hammerhead piers and pile bent abutments founded on steel H-piles. The back-to-back abutment length is 224′-6″ and the out-to-out deck width is 30′-0″. Traffic is to be detoured during construction.

No salvage.

Precast deck panels must be used.

Slip formed parapets are not allowed.

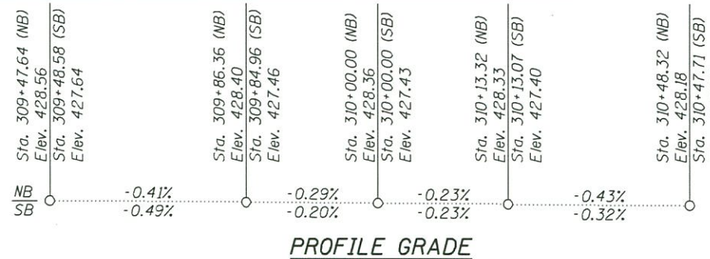
Note:
Panel width and transverse joint locations to be determined by design.

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 Interims
2006 Seismic Retrofitting Manual for Highway Structures: FHWA-HRT-06-032

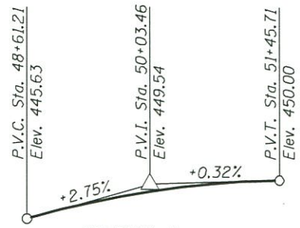
PROFILE GRADE

(Along ℄ NB and SB F.A.I. Rte. 57)



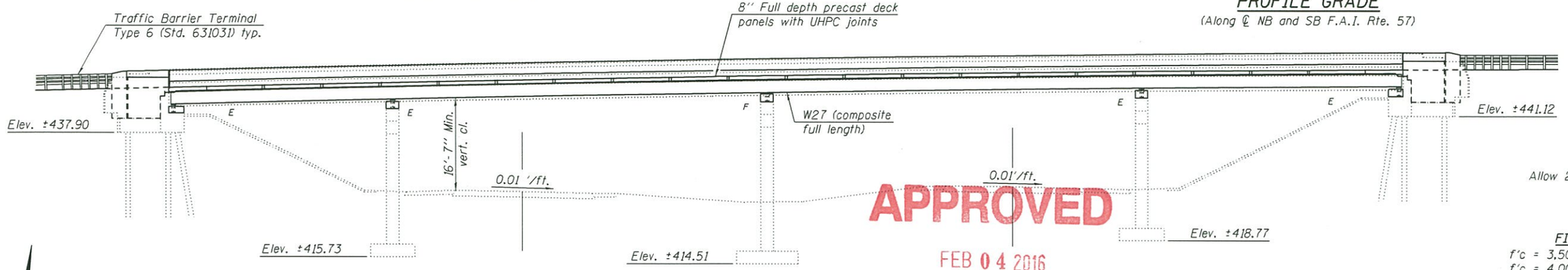
PROFILE GRADE

(Along F.A.S. Rte. 2830 (C.H. 13))



284.50′ Vert. curve

ELEVATION



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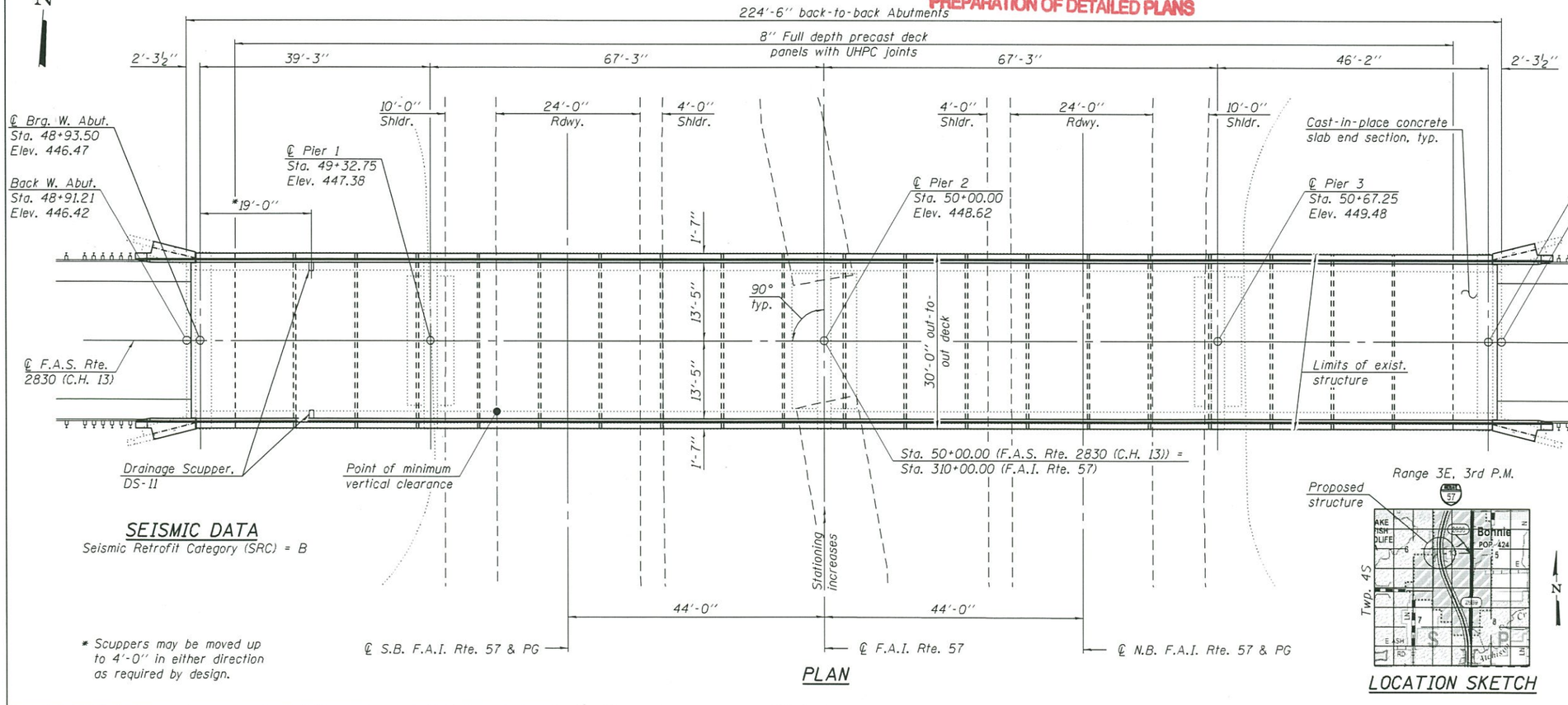
PLAN



* Scuppers may be moved up to 4′-0″ in either direction as required by design.

SEISMIC DATA

Seismic Retrofit Category (SRC) = B

LOADING HL-93

Allow 25#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS (NEW CONSTRUCTION)

f′c = 3,500 psi (field)
f′c = 4,000 psi (superstructure)
f′c = 5,000 psi (precast units)
f′c = 21,000 psi (ultra-high performance concrete)
fy = 50,000 (M270 Grade 50)
fy = 60,000 psi (reinforcement)

FIELD UNITS (EXISTING CONSTRUCTION)

f′c = 3,500 psi
fy = 40,000 psi

HIGHWAY CLASSIFICATION

F.A.S. Rte. 2830 - C.H. 13
Functional Class: Major Collector
ADT: 710 (2015); 870 (2035)
ADTT: 7 (2015)
DHV: 90
Design Speed: 30 m.p.h.
Posted Speed: 30 m.p.h.
Two-Way Traffic
Directional Distribution: 50:50

F.A.I. Rte. 57 - I-57
Functional Class: Interstate
ADT: 30,700 (2014); 31,161 (2032)
ADTT: 7,675 (2014)
DHV: 2,700
Design Speed: 65 m.p.h.
Posted Speed: 65 m.p.h.
Two-Way Traffic
Directional Distribution: 50:50

LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.S. RTE. 2830 (C.H. 13) OVER I-57
F.A.I. RTE. 57 - SEC. 41BR-1
JEFFERSON COUNTY
STATION 50+00.00
STRUCTURE NO. 041-0054

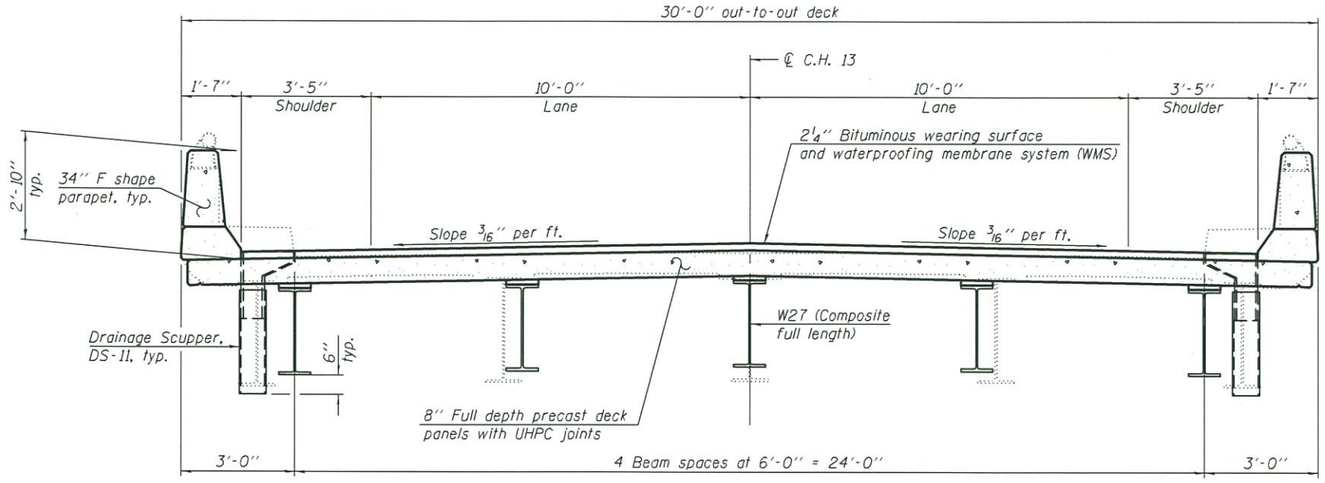
DESIGNED -	JEFFREY S. BURKE
CHECKED -	DEREK G. VERHULST
DRAWN -	MICHAEL B. MOSSMAN
CHECKED -	J.S.B. / D.G.V.

FEBRUARY 3, 2016

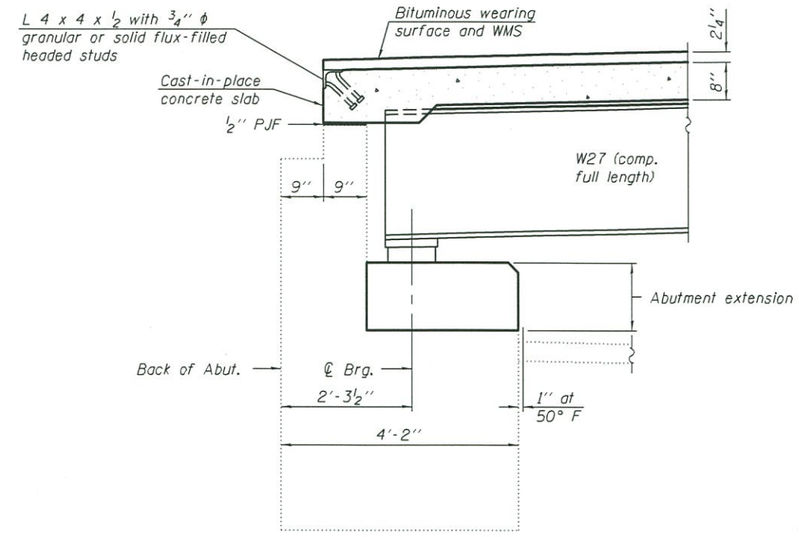
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 2 SHEETS

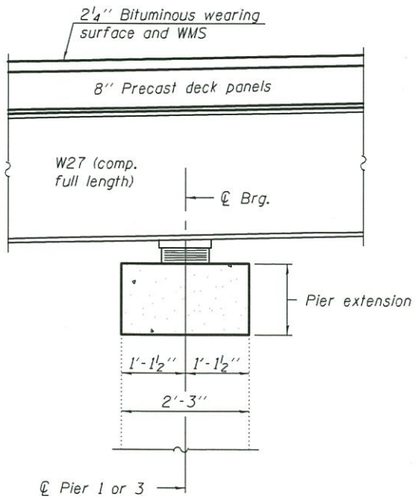
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	41BR-1	JEFFERSON	____	____
		CONTRACT NO. 78365		
	ILLINOIS FED. AID PROJECT			



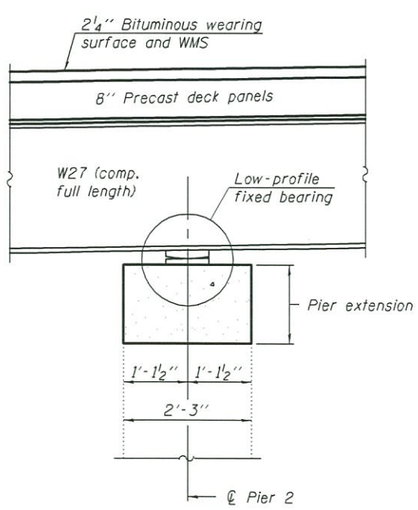
CROSS SECTION



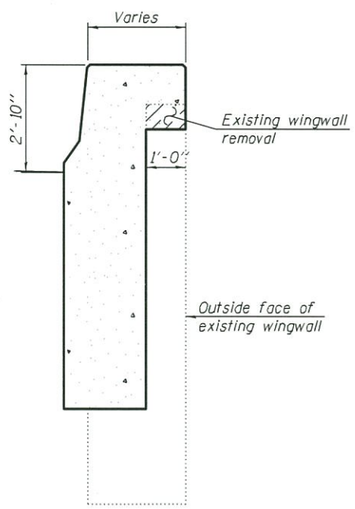
SECTION THRU ABUTMENT



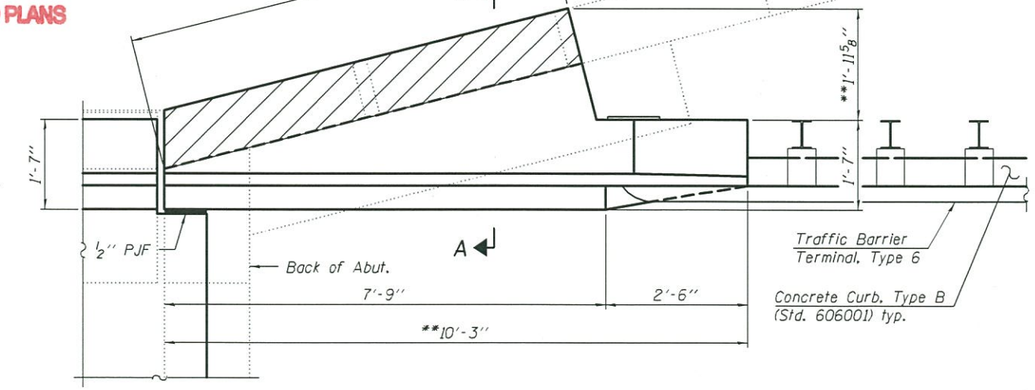
SECTION THRU PIER 1 OR 3



SECTION THRU PIER 2



SECTION A-A



WINGWALL MODIFICATION PLAN

** Limits of concrete determined to provide space for type 6 traffic barrier terminal connection.

APPROVED
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DETAILS
F.A.S. RTE. 2830 (C.H. 13) OVER I-57
F.A.I. RTE. 57 - SEC. 41BR-1
JEFFERSON COUNTY
STATION 50+00.00
STRUCTURE NO. 041-0054

DESIGNED -	JEFFREY S. BURKE
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STATE OF ILLINOIS
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