

Bench Mark: Chiseled square on raised concrete median at center of US 45 approximately 140'-0" North of I-57/70 centerline. US Route 45 Sta. 60+10. Elev. 592.07.

Existing Structure: S.N. 025-0013 (WB) & 025-0014 (EB), built in 1960 and widened in 1994, are each five spans consisting of one two span unit and one three span unit. Each superstructure is a reinforced concrete deck 63'-2" out to out and is supported on steel stringers. All of the spans are noncomposite except for the fourth spans. The back to back of abutment length of each structure is 355'-8". The superstructure is supported by spill through abutments and reinforced concrete hammer head piers. Existing Structure shall be removed and replaced. Construction shall be staged so that two lanes remain open at all times.

Weather Station to be Salvaged.

Traffic Barrier Terminal Type 6 Std. 631031 (For locations see Plan View)

* 73" Web R Girder (Composite, Full Length)

Bridge Parapet Mounted Lighting

±58'-2" Limits of Protective Shield

±91'-8" Limits of Protective Shield

60' Const. Berm (Ends Only)

Traffic Barrier Terminal Type 6 Std. 631031 (For locations see Plan View)

* The plate girder will utilize HPS 70W steel flanges over the pier.

** Existing attached electrical utility to be removed.

*** Indicates locations on existing structure where pre-stage I or stage I removal and replacement of existing neoprene expansion joints with Polymer Concrete is required as detailed on sheet 4 of 79.

**** The profile grades & bridge deck shown are the final elevations after grinding.

W Abut. Elev. 620.66 (WB) Elev. 620.58 (EB)

Top of Crashwall Elev. 590.98 (WB) 591.02 (EB)

E Abut. Elev. 620.10 (WB) Elev. 620.33 (EB)

Elev. 570.98 (WB) Elev. 573.51 (EB)

Steel H-Piles See sheets 61, 62, 67 & 68 of 79 for driving order

Existing 10'x8' Box Culvert to be extended (See Roadway Plans)

APPROVED
For Structural Adequacy Only

Chadwick J. Fuesting
Engineer of Bridges & Structures

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.150
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.350
Soil Site Class = C

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2012 Interim

LOADING HL-93

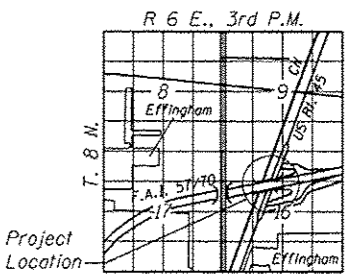
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

f_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
f_y = 50,000 psi (M270 Grade 50W)
f_y = 70,000 psi (M270 Grade HPS 70W)

Notes:
Borings marked with A were drilled in 1989. For Section A-A see Sheet 2A of 79. A closed drainage system will be required (Not shown for clarity). Up to 1/4" will be ground off the bridge deck and the bridge approach slabs. For offset sketch of Ramps see sheet 2A of 79. See Sheet 2A of 79 for Section B-B.



LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.I. ROUTE 57/70 E.B. AND W.B.

OVER CN & U.S. RTE. 45
SECTION (25-4HVB-1)BY

EFFINGHAM COUNTY
STATION 2294+16.66

SN 025-0111 (WB) & 025-0112 (EB)



EXP. 11-30-2014
Chadwick J. Fuesting
8/14/13

EXISTING PROFILE GRADE
(U.S. Route 45)

PROFILE GRADE
(CN)

PROFILE GRADE
(F.A.I. Route 57/70 EB & WB)

PROFILE GRADE
(Ramp A)

PROFILE GRADE
(Ramp C)

ELEVATION

PLAN

FILE NAME = 0250111-74295-001-GPE.dgn	USER NAME = chad	DESIGNED - BB	REVISED
Illinois Design Firm Number 184,001670	CHECKED - ACS	REVISED	REVISED
PLOT SCALE =	DRAWN - WJS	REVISED	REVISED
PLOT DATE = 5:00:59 PM 8/14/2013	CHECKED - CJF	REVISED	REVISED

STATE OF ILLINOIS	DEPARTMENT OF TRANSPORTATION
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F.A.I. RTE. 57/70	SECTION (25-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1760	SHEET NO. 535
CONTRACT NO. 74295			ILLINOIS FED. AID PROJECT	

SHEET NO. 1 OF 79 SHEETS