

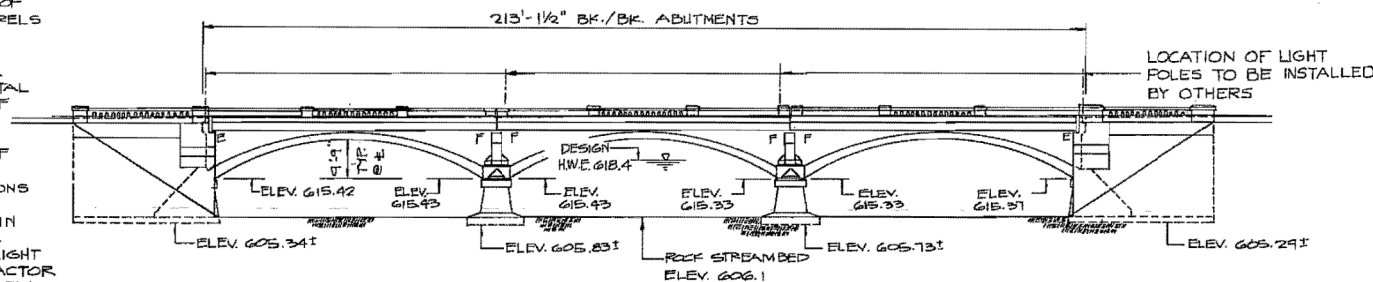
BENCHMARK: TOP NORTH BOLT ON RIM OF FIRE HYDRANT AT SOUTHEAST CORNER OF WASHINGTON & MONROE STREETS. ELEV. 631.25

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 18	103-D-BR	JO DAVIESS	27	9

SHEET 1 OF 15 SHEETS

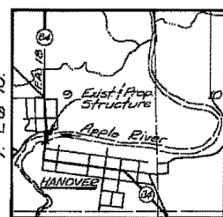
EXISTING STRUCTURE:

Structure No. 043-0028; BUILT 1934 AS S.D.1. RTE. 20, SECTION 103-D CONSISTS OF THREE SPANS, CONCRETE ARCHES WITH SPANDRELS SUPPORTING CONCRETE DECK. SUBSTRUCTURE CONSISTS OF CONCRETE PIERS AND CLOSED CONCRETE ABUTMENTS. ARCHES HAVE CLEAR SPAN OF 65'-0". TOTAL LENGTH OF STRUCTURE BACK TO BACK OF EXISTING ABUTMENTS IS 209'-6"; OUT TO OUT OF EXISTING DECK IS 39'-0". CONTRACTOR TO REMOVE AND DISPOSE OF EXISTING SUPERSTRUCTURE DECK AND SPANDRELS TO TOP OF ARCHES AND PORTIONS OF EXISTING PIERS AND ABUTMENTS AS SHOWN IN DETAIL PLANS IN STAGES ALL IN ACCORDANCE WITH SECTION 501 OF THE STANDARD SPECIFICATIONS. EXISTING LIGHT STANDARDS TO BE SALVAGED BY CONTRACTOR AND STOCKPILED AT SITE AS DIRECTED BY ENGINEER FOR REINSTALLATION BY OTHERS.



ELEVATION

* LIGHT POLE BASE LOCATIONS - 8 REQ'D (SEE SHEET 5)

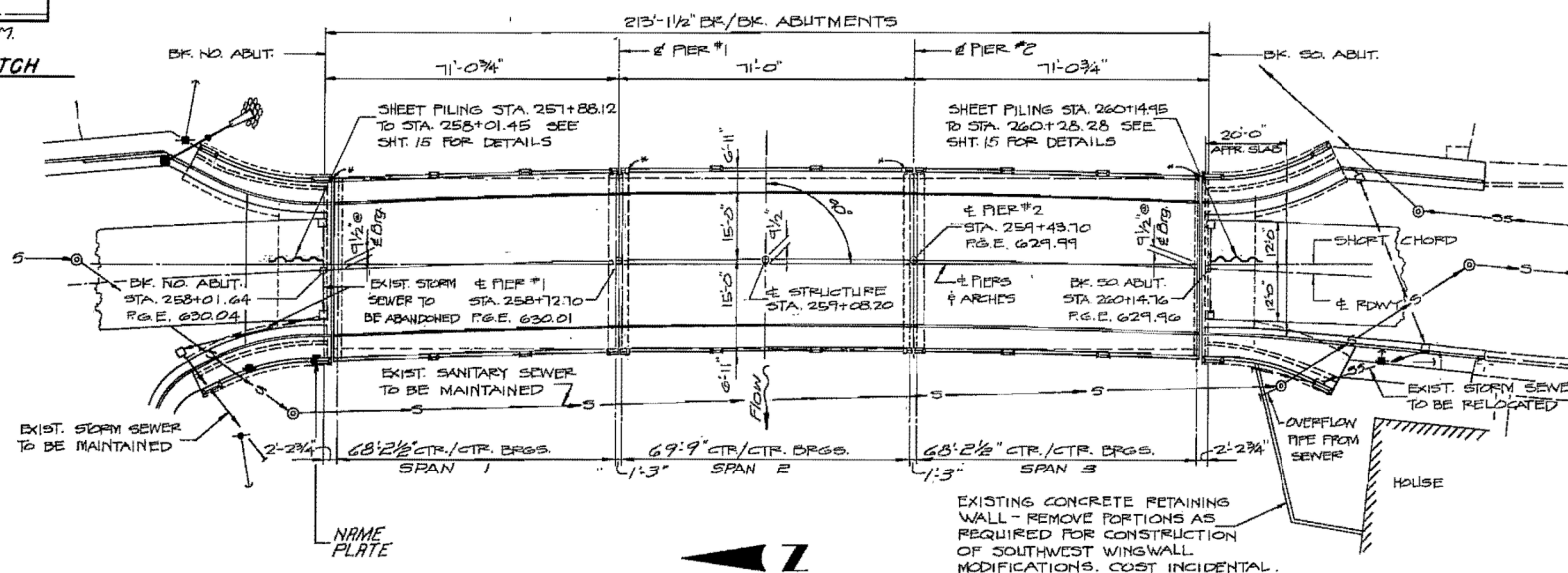


LOCATION SKETCH

Structure Sta. 259+08.20 P.G.E. 630.00

-0.40%

PROFILE GRADE
(Top of Class I)



PLAN

NOTE: ALL LONGITUDINAL DIMENSIONS AND STATIONING SHOWN ON PLAN ARE MEASURED ALONG THE SHORT CHORD.

HORIZONTAL CURVE DATA

PI STATION 259+16.70
 $\Delta = 9^{\circ} 46' 00''$
 $D = 1^{\circ} 40' 00''$
 $R = 3437.75'$
 $T = 293.71'$
 $L = 586.00'$
 $P = 12.52'$

WATERWAY INFORMATION

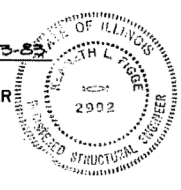
DRAINAGE AREA = 248 SQ.MI. LOW GRADE ELEV. = 624.24 @ STA. 261+00										
FLOOD	PER	Q	OPENING SQ. FT.		NAT. H.W.E.		HEAD-FT.		HEADWATER EL.	
	YR.	C.F.S.	EXIST.	PROP.	EXIST.	PROP.	EXIST.	PROP.	EXIST.	PROP.
DESIGN	50	14,244	2048	2048	618.4	0.16	0.16	618.56	618.56	
BASE	100	15,821	2143	2143	618.9	0.2	0.2	619.10	619.10	
OVERTOPPING	N/A									
MAX. CALC.	300	19,900	2377	2377	620.0	0.26	0.26	620.26	620.26	

STATION 259+08.20
 APPLE RIVER
 BUILT 198
 F.A. RTE. 18 SEC. 103 D BR
 F.A. PROJECT NO. 8HF-18(121)
 LOADING HS 20
 STRUCT. NO. 043-0028

NAME PLATE
(SEE STD. 2113)

DESIGNED: V.S.N.
 CHECKED: D.H.C.
 DRAWN: R.A.W.
 CHECKED: K.L.F.

DATE 5-23-83
 KENNETH L. FIGGE
 REGISTERED STRUCTURAL ENGINEER
 IN ILLINOIS. NO. 2992



GENERAL NOTES:

- ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH TWO COATS OF BASIC LEAD SILICO CHROMATE PAINT.
- EXPANSION GUARDS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ARTICLE 503.07(C) OF THE STANDARD SPECIFICATIONS, AND ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL.
- THE TOP SURFACE OF THE BEAMS SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 505.06 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE SURFACE SHALL NOT BE ROUGHENED BY BROOMING. THE FINISHED SURFACE SHALL BE FREE OF DEPRESSIONS OR HIGH SPOTS WITH SHARP CORNERS, AND THE TOP EDGE OF KEYS SHALL BE ROUNDED OR CHAMFERED A MINIMUM OF 1/4".
- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
- PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATERPROOFING MEMBRANE SYSTEM IS APPLIED.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. M-31 OR M-53 GRADE 60.
- A CALCIUM NITRITE CORROSION INHIBITOR, AS COVERED IN THE SPECIAL PROVISIONS, SHALL BE USED IN THE CONCRETE FOR PRECAST PRESTRESSED CONCRETE DECK BEAMS.
- EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4080 LBS., AND 3/4" x 12" HOOKED BOLTS AS INDICATED ON PLANS (unless noted otherwise)
- DECK BEAMS & PIERS TO BE BUILT ON A ϕ OFFSET 9 1/2" FROM A SHORT CHORD FROM CENTER TO CENTER OF ABUTMENT BEARINGS. WALKWAYS AND PARAPETS TO BE BUILT ON TRUE CURVE WITH THE ϕ OF ROAD AS ϕ .

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER.	SUB.	TOTAL
CONCRETE REMOVAL	CU. YD.	-	96.0	96.0
REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	-	-	-
PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ. FT.	8806	-	8806
CLASS X CONCRETE	CU. YD.	151.2	189.6	340.8
REINFORCEMENT BARS	LBS.	810	15,460	16,270
REINFORCEMENT BARS (EPOXY COATED)	LBS.	16,340	-	16,340
TEMPORARY SLAB SUPPORT SYSTEM	EACH	1	-	1
NAME PLATES	EACH	-	-	1
PORTLAND CEMENT MORTAR FAIRING COURSE	LIN. FT.	2240	-	2240
WATERPROOFING MEMBRANE SYSTEM	SQ. YD.	707	-	707
BITUMINOUS CONCRETE SURFACE COURSE (MIX D) CLASS I	TON	83.2	-	83.2
PROTECTIVE COAT	SQ. YD.	546	-	546
PREFORMED JOINT SEAL 2 1/2"	LIN. FT.	136	-	136
EXPANSION BOLTS 3/4"	EACH	-	114	114
TEMPORARY BRIDGE RAILING	LIN. FT.	258	-	258
TEMPORARY SHEET PILING	SQ. FT.	-	-	404
STRUCTURAL STEEL	LBS.	5,330	-	5,330
FLOOR DRAIN SPECIAL	EACH	12	-	12

DESIGN STRESSES

PRECAST PRESTRESSED UNITS
 $f_c = 5,000$ P.S.I.
 $f_{ci} = 4,000$ P.S.I.
 $f_s = 270,000$ P.S.I. (1/2" ϕ Strands)
 $f_{si} = 187,000$ P.S.I. (1/2" ϕ Strands)

CAST IN PLACE CONCRETE
 $f_c = 3500$ P.S.I.
 $f_y = 60,000$ P.S.I. (REINFORCEMENT)
 $n = 9$
 STRUCTURAL STEEL (FOR TEMP SUPPORT SYSTEM)
 $f_y = 36,000$ P.S.I. (MIN.)

LOADING HS 20-44

Design Specification: 1977 A.A.S.H.T.O.; 1978; 1979; 1980; 1981 & 1982 Interim Specifications (Allow 25 p.s.f. for future wearing surface)

GENERAL PLAN & ELEVATION

F.A. RTE. 18 OVER APPLE RIVER
 F.A. RTE. 18, SEC. 103-D-BR
 JO DAVIESS COUNTY
 STATION 259+08.20

FOR INFORMATION ONLY

Design firm no. 18400036



USER NAME	DESIGNED	REVISOR
dheberling	-	REVISOR
FILE NAME = 0430028-64E08.dgn	CHECKED -	REVISOR
PLOT SCALE = 0:2.00000 '1' / in.	DRAWN -	REVISOR
PLOT DATE = 8/5/2013	CHECKED -	REVISOR

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
 STRUCTURE NO. 043-0080
 SHEET NO. 47 OF 60 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
308	103BR-4	JO DAVIESS	159	97

CONTRACT NO. 64E08
 ILLINOIS FED. AID PROJECT

H. M. B. G. NO. 1930 / 0028