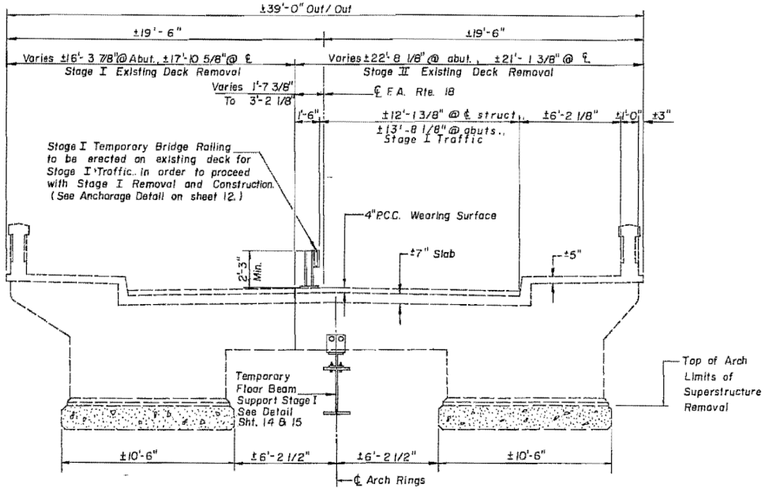
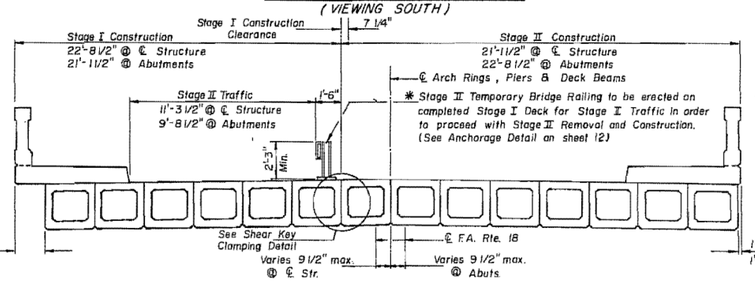
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 18	103-0-BR	JO DAVIESS	27	21

SHEET 13 OF 15 SHEETS

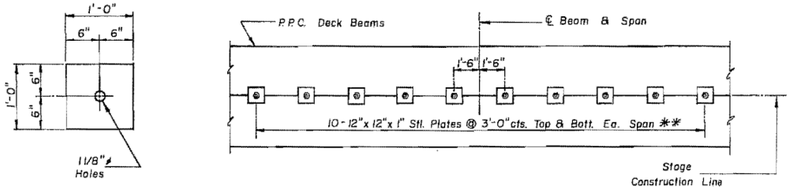


EXISTING CROSS SECTION
(VIEWING SOUTH)



* Remove Rail & Post material from Stage I Temporary Bridge Railing for reuse on the Stage II Temporary Railing.

PROPOSED CROSS SECTION
(VIEWING SOUTH)



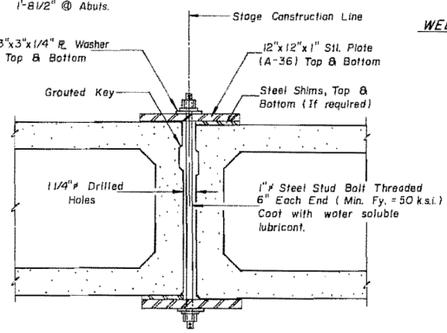
TOP & BOTTOM PLATE DETAIL

PLAN

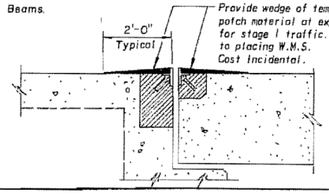
** Space plates to miss Temporary Bridge Rail Posts.

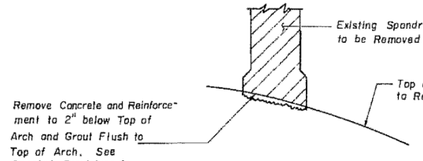
SHEAR KEY CLAMPING DETAILS AT STAGE CONSTRUCTION JOINT

NOTES: Cost incidental to Prec. Press. Concrete Deck Beams.
See Special Provisions for Stage Construction Precast Prestressed Concrete Deck Beams.
See Stage Construction Details for Traffic Lane.



SECTION

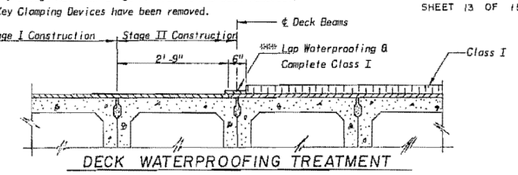




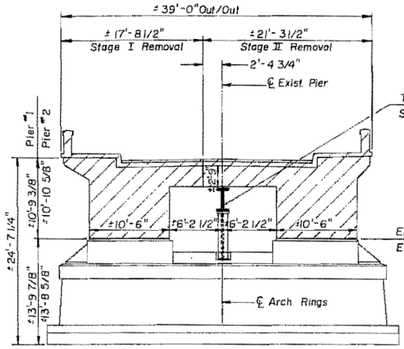
SPANDREL REMOVAL DETAIL AT TOP OF ARCH RING TYPICAL

Class I and Waterproofing shall be completed after:

1.) The deck beams for Stage II Constr. are erected, grouted and waterproofing and Class I are in place.
2.) Temporary Bridge Rail for Stage II Traffic has been removed.
3.) Shear Key Clamping Devices have been removed.

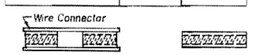


DECK WATERPROOFING TREATMENT

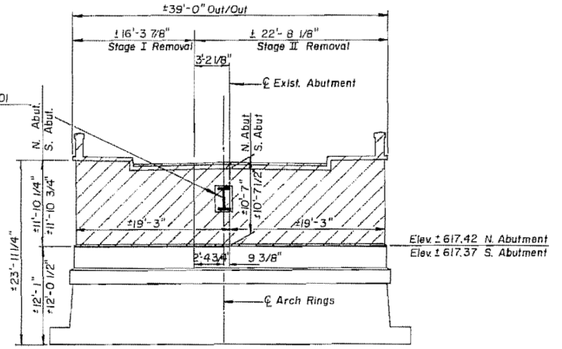


ELEVATION EXISTING PIERS
(VIEWING SOUTH)

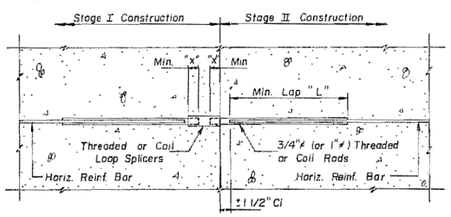
	3/4" ϕ Rod	1" ϕ Rod
Root Diameter	0.625"	0.838"
Threaded Dist. "x"	1 1/2"	2 1/4"
Lap Length "L"	2'-2"	4'-9"
Tension Pull Out	10,124 Lbs.	18,201 Lbs.
Shear Strength	7,363 Lbs.	13,237 Lbs.



WELDED SECTIONS ONE PIECE SPLICER ALTERNATIVES



ELEVATION EXISTING ABUTMENTS
(VIEWING SOUTH)



NOTES:

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the spliced reinforcement bars.

Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal or greater than that of the spliced reinforcement bars.

Splicer rods shall extend minimum 1-1/2 inches into the couplers.

All reinforcement bars shall be lapped and tied to the splicer rods.

Splicer (Coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

Other systems of similar design may be submitted to the engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_f$

② Minimum % Pull-Out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_f$

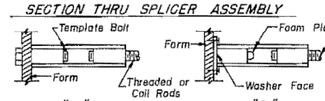
Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi. (Service Load)
A_f = Tensile stress area of spliced reinforcement bars.
@ 28 day concrete

Typical Splicer (coupler) assembly Sizes:

In Slabs
- #5 bar lap with 3/4"Φ Splicer (Coupler) x 2'-0" Splicer Rods — Minimum Capacity = 23.0 Kips - tension; Minimum Pull-out Strength = 9.2 kips - tension
- #7 bar lap with 1" Φ Splicer (Coupler) x 3'-5" Splicer rods — Minimum Capacity = 45.1 kips - tension; Minimum Pull-out Strength = 18.0 kips - tension

In Sub-structures
- #8 bar lap with 1-1/4"Φ Splicer (Coupler) x 4'-6" Splicer rods — Minimum Capacity = 58.9 kips - tension; Minimum Pull-out Strength = 23.6 kips - tension

SECTION THRU SPLICER ASSEMBLY



"A": Set splicer by means of a template bolt.
"B": Set splicer by nailing to wood forms or cementing to steel forms.
"E": Indicates epoxy coating, see special provisions.

INSTALLATION AND SETTING METHODS

3/4" ϕ & 1" ϕ SPLICER ASSEMBLY DETAILS

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

STAGE CONSTRUCTION DETAILS

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. 184001036
whks engineers • planners • land surveyors

USER NAME = dheberling	DESIGNED -	REVISED
FILE NAME = 0430828-64E08.dgn	CHECKED -	REVISED
PLOT SCALE = 82.00000 '/ / in.	DRAWN -	REVISED
PLOT DATE = 8/5/2013	CHECKED -	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
STRUCTURE NO. 043-0080
SHEET NO. 58 OF 60 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
308	103BR-4	JoDAVIESS	159	108
		CONTRACT NO. 64E08		
	ILLINOIS	FED. AID PROJECT		