

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 331	(8X-1)B	SALINE CO.	220	138
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

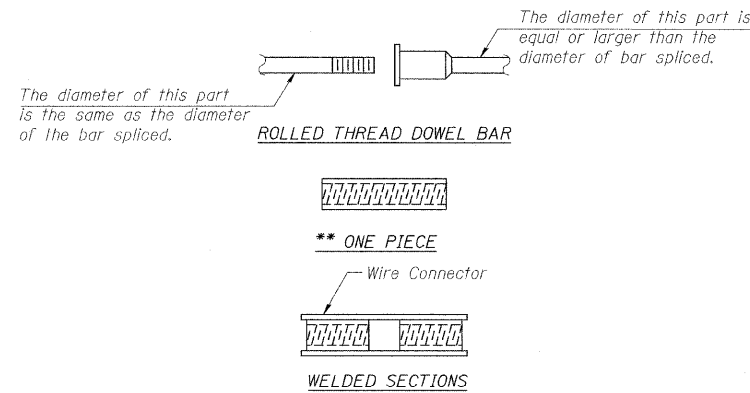
Contract # 78058

**NOTES**

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.  
 Bar splicer assemblies shall be epoxy coated according to 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 bar splicer assembly satisfies the following requirements:

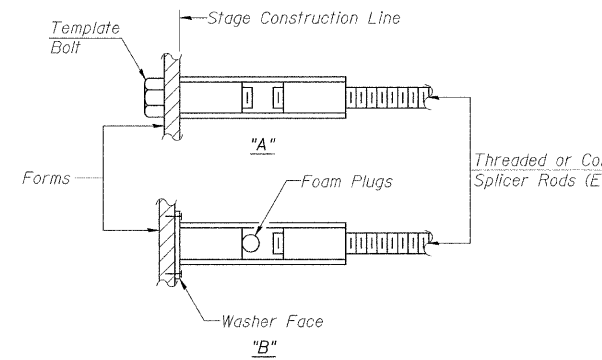
- ① Minimum Capacity =  $1.25 \times f_y \times A_t$   
(Tension in kips)
  - ② Minimum \*Pull-out Strength =  $0.66 \times f_y \times A_t$   
(Tension in kips)
- Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_t$  = Tensile stress area of lapped reinforcement bars.  
 \* = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



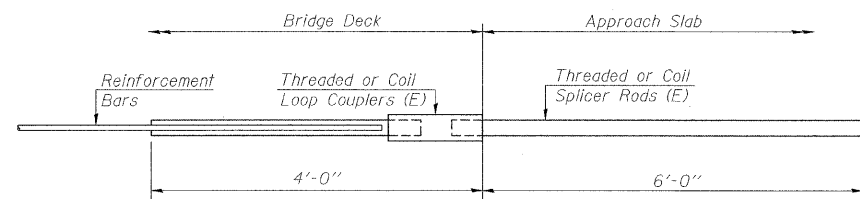
**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\*Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



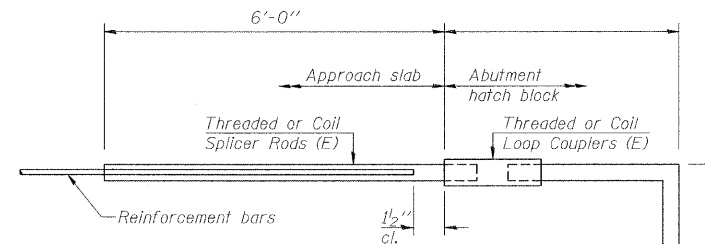
**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.



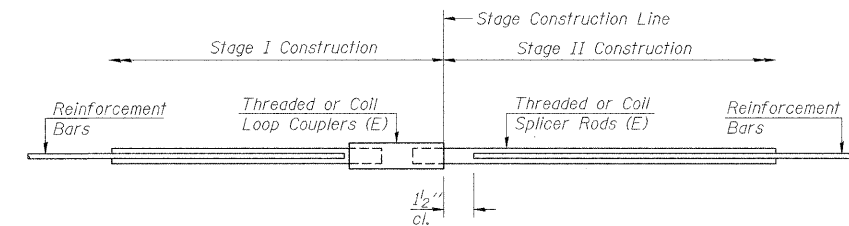
**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	



**FOR STUB ABUTMENTS**

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	121 W. Abutment
No. Required =	121 E. Abutment



**STANDARD**

Bar Size	No. Assemblies Required	Location

DESIGNED	WJZ
CHECKED	MRB
DRAWN	LM
CHECKED	HMA

BSD-1

10-1-08

**benesch**

alfred benesch & company  
 Engineers • Surveyors • Planners  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-565-0450

JOB NO. 3526

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 RELOCATED ILLINOIS ROUTE 13 OVER  
 HARRISBURG DITCH  
 F.A.P. 331 SECTION (8X-1)B

**BAR SPLICER ASSEMBLY DETAILS**

SN: 083-0060  
 SALINE CO., IL.

STA. 1013+38.50  
 DATE: FEB 4, 2009