

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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:

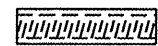
- ① Minimum Capacity =  $1.25 \times f_y \times A_l$   
(Tension in kips)
  - ② Minimum \*Pull-out Strength =  $0.66 \times f_y \times A_l$   
(Tension in kips)
- Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_l$  = Tensile stress area of lapped reinforcement bars.  
\* = 28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

BAR SPLICER ASSEMBLIES			
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

The diameter of this part is the same as the diameter of the bar spliced.

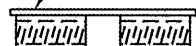
The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



\*\* ONE PIECE

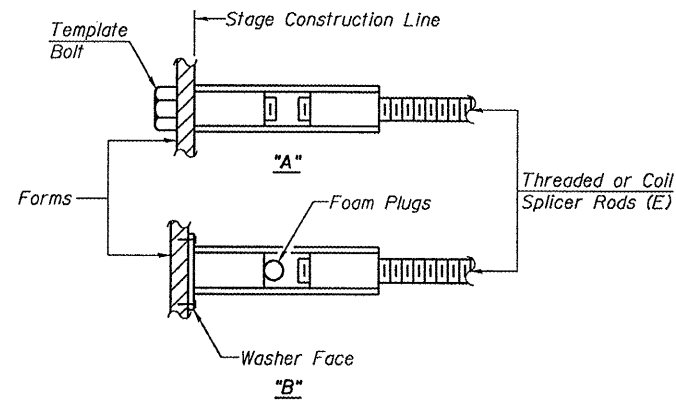
Wire Connector



WELDED SECTIONS

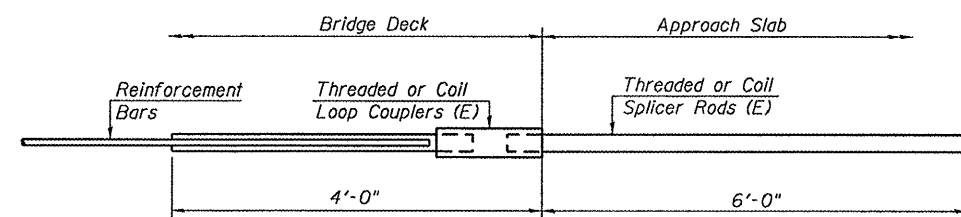
BAR SPLICER ASSEMBLY ALTERNATIVES

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

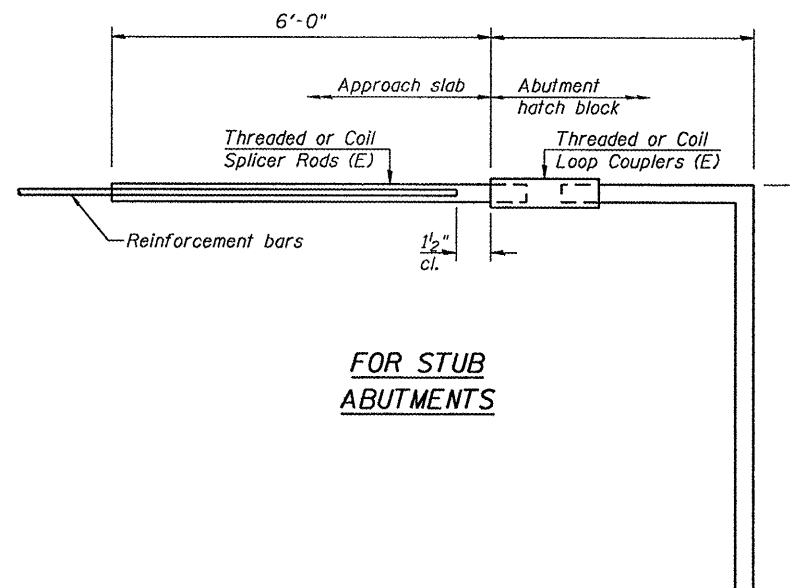


INSTALLATION AND SETTING METHODS

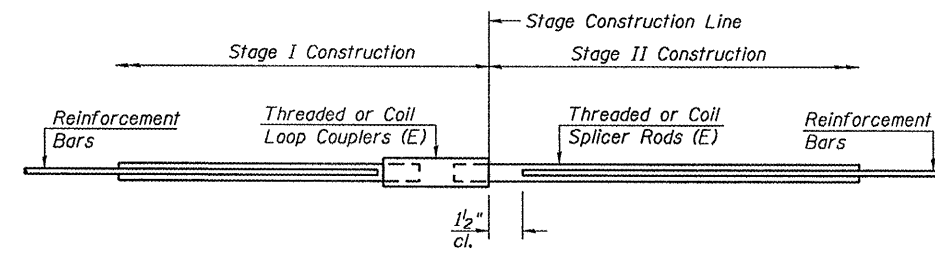
"A" : Set bar splicer assembly by means of a template bolt.  
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
(E) : Indicates epoxy coating.



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS



FOR STUB ABUTMENTS



STANDARD

Bar Size	No. Assemblies Required	Location
#5	24	S. Abutment
#5	18	N. Abutment

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

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

BAR SPLICER ASSEMBLY DETAILS  
SN 057-0202

DESIGNED	G.G.E.
CHECKED	A.T.H.
DRAWN	Drew Christopher
CHECKED	G.G.E. A.T.H.

March 9, 2009
EXAMINED <i>A. Carl Krusey</i>
PASSED <i>Ralph E. Anderson</i>
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

BSD-1 10-1-08

SHEET NO. 6	F.A.P. RTE. 676	SECTION (9-1)BJR	COUNTY McLEAN	TOTAL SHEETS 17	SHEET NO. 17
6 SHEETS	FED. ROAD DIST. NO. ILLINOIS		FED. AID PROJECT CONTRACT NO. 70731		