

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. Rt. 305	28R-2-RS-1	McHenry	53	38
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT NUMBER: 60756				

**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 400 MPa yield strength, threaded or called 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.

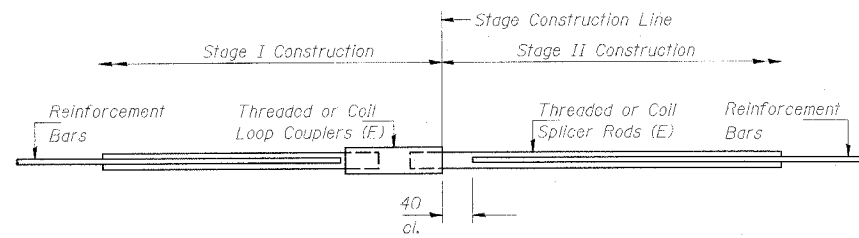
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity =  $1.25 \times 10^3 \times f_y \times A_1$   
(Tension in kN)
- ② Minimum \*Pull-out Strength =  $1.25 \times 10^3 \times f_{s \text{ allow}} \times A_1$   
(Tension in kN)

Where  $f_y$  = Yield strength of lapped reinforcement bars in MPa.  
 $f_{s \text{ allow}}$  = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)  
 $A_1$  = Tensile stress area of lapped reinforcement bars (mm<sup>2</sup>).  
\* = 28 day concrete

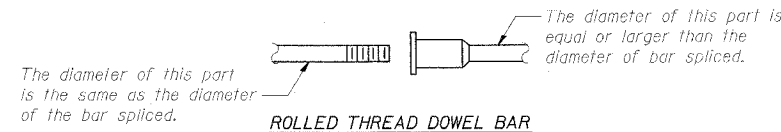
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	610 mm	100	40
#20	790 mm	150	60
#25	1.04 m	250	100
#30	1.37 m	350	140

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."  
All dimensions are in millimeters (mm) except as noted.



**BAR SPLICER ASSEMBLY DETAIL**

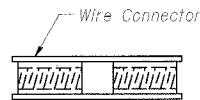
Bar Size	No. Assemblies Required	Location
#15	599	Deck
#15	18	Piers
#20	16	End Diaphragms
#25	16	Abutments
#30	18	Piers



**ROLLED THREAD DOWEL BAR**



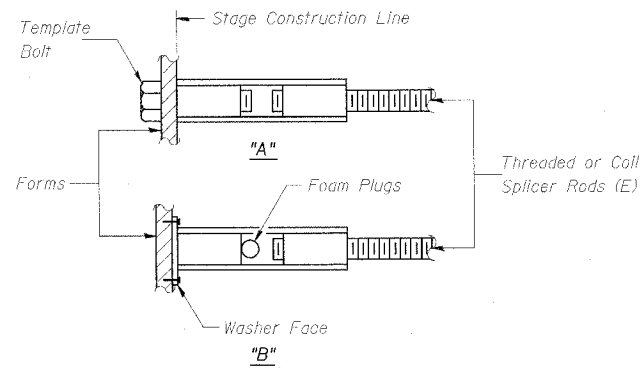
**\*\* ONE PIECE**



**WELDED SECTIONS**

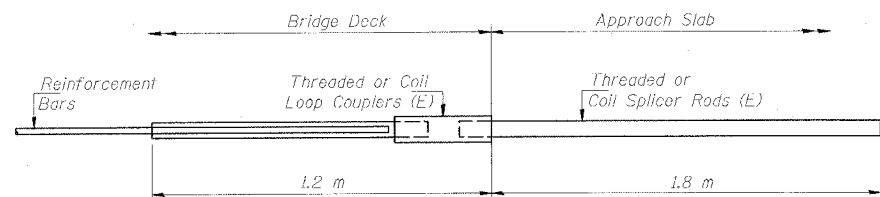
**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\* Heavy Hex Nuts conforming to ASTM A 563M, 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.



**INTEGRAL ABUTMENT  
BAR SPLICER ASSEMBLY DETAIL  
FOR #15 BAR**

Min. Capacity = 100 kN - tension
Min. Pull-out Strength = 40 kN - tension
No. Required = 62

BAR SPLICER DETAILS				
Date	Designed MR	SOUTH ST. OVER US 14 FAP ROUTE NO. 305 SECTION 28R-2-RS-1 STATION 29+999.897 COUNTY McHENRY STRUCTURE NO. 056-3015	Sheet No.	
Revisions	Drawn MR		25	
	Checked KSM		of 31	
	Approved KSM			
HARRY O. HEFTER-ASSOCIATES, INC. DESIGN AND CONSULTING ENGINEERS		56 East Jackson Blvd. Chicago, Illinois 60604 312946-8181	File Name: 1962S25.DGN	Job No. 1962

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