

**BAR SPLICER ASSEMBLY DETAIL**

Bar Size	No. Assemblies Required	Location
#15	779	Superstructure
#25	12	Piers 1 and 3
#35	28	Piers 1 and 3
#15	10	N. & S. Abut.
#20	14	Superstructure

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

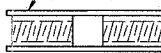
The diameter of this part is equal or larger than the diameter of bar spliced.

**ROLLED THREAD DOWEL BAR**



**\*\* ONE PIECE**

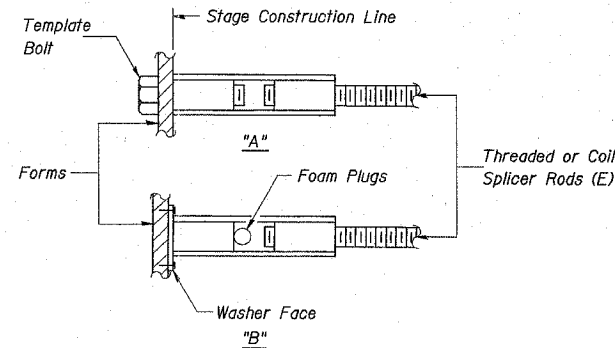
Wire Connector



**WELDED SECTIONS**

**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\* Heavy Hex Nuts conforming to ASTM A 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.

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

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

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
#35	1.98 m	500	200

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.

<p><b>COLLINS ENGINEERS</b>                  123 N. WACKER DR., SUITE 300                  CHICAGO, IL 60606                  (312) 704-9300                  ILLINOIS PROFESSIONAL DESIGN FIRM                  LICENSE NO. 184-000993</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>NAME</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	NAME	DATE											<p>ILLINOIS DEPARTMENT OF TRANSPORTATION                  F.A.I. 90 (I-90)                  AT NAGLE AVENUE                  F.A.U. RTE. 2783 SEC 1314B                  COOK COUNTY STATION 0+998.813                  STRUCTURE NO. 016-0708</p> <p><b>BAR SPLICER DETAILS</b></p> <p>DRAWN BY KAC                  CHECKED BY LDB/DGS                  DATE: DEC. 2004</p>
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