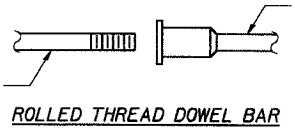


The diameter of this part is equal or larger than the diameter of bar spliced.

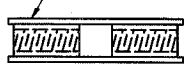


ROLLED THREAD DOWEL BAR



** ONE PIECE

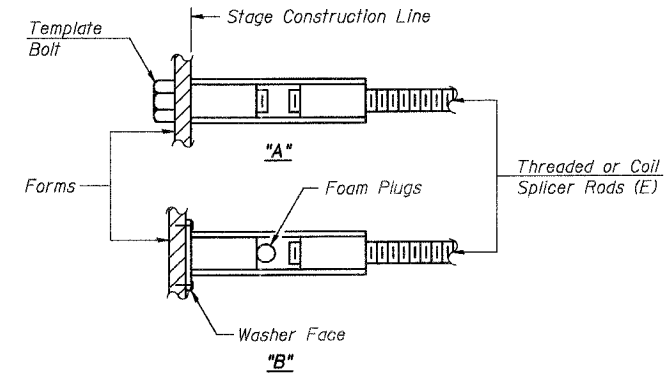
Wire Connector



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.

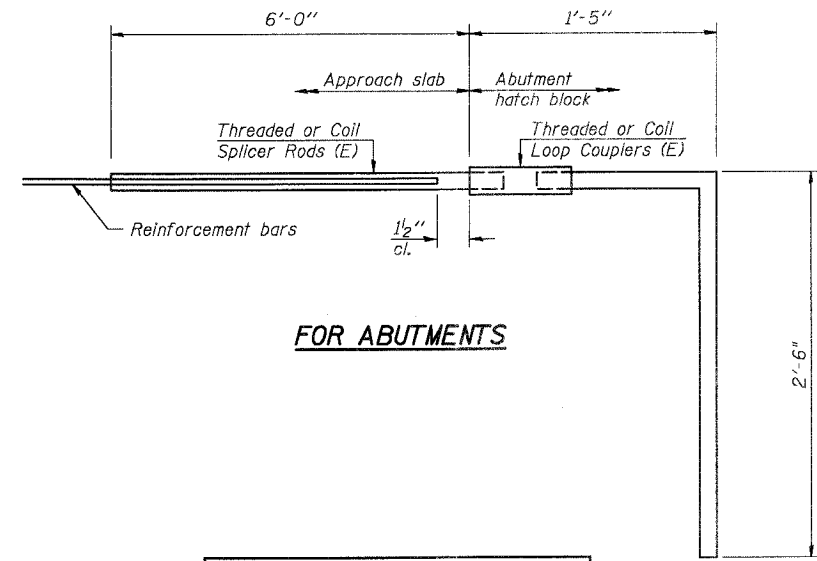
NOTES

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 (Tension in kips) = $1.25 \times f_y \times A_f$
 - ② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{s,allow} \times A_f$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s,allow}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_f = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

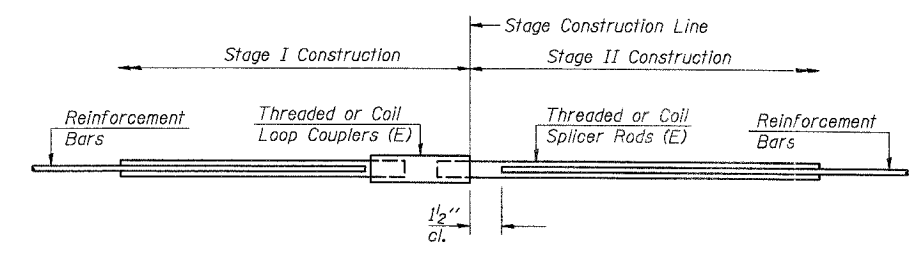
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

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."



FOR ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	9.2 kips - tension
No. Required =	112



STANDARD

Bar Size	No. Assemblies Required	Location
#5	297	Deck
#5	223	Deck
#5	20	W. Abut.
#6	4	W. Abut.
#7	7	W. Abut.
#5	11	Pier 1
#8	10	Pier 1
#5	20	E. Abut.
#6	4	E. Abut.
#7	7	E. Abut.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.	
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REVISIONS	
NAME	DATE

CITY OF AURORA

BAR SPLICER DETAILS
 ILLINOIS AVENUE
 OVER THE FOX RIVER
 SECTION NO. 03-00247-00-BR
 KANE COUNTY
 STRUCTURE NO. 045-6008

DATE 7-28-2006

CONTRACT NAME: I-55 Jct. I-74
 PROJECT NO.: 03-00247-00-BR
 SHEET NO.: SE-27
 DATE: 7/28/06
 DRAWN BY: WJH
 CHECKED BY: NRF
 PROJECT LOCATION: I-55 Jct. I-74, Aurora, IL
 PROJECT OWNER: ILLINOIS DEPARTMENT OF TRANSPORTATION
 PROJECT NO.: 03-00247-00-BR
 SHEET NO.: SE-27