

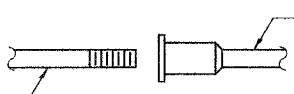
NOTES

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 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'-0"	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.



ROLLED THREAD DOWEL BAR



**** ONE PIECE**

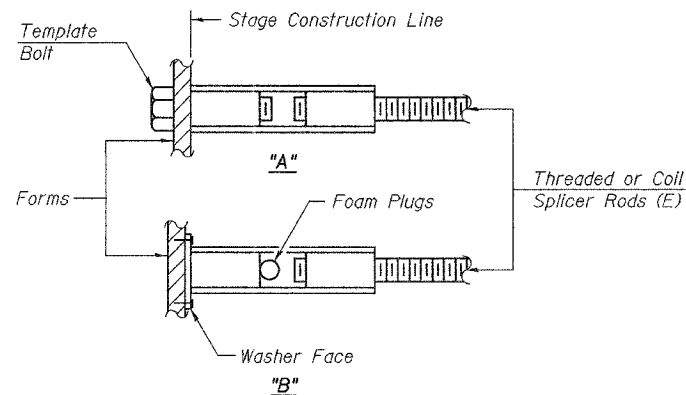
Wire Connector



WELDED SECTIONS

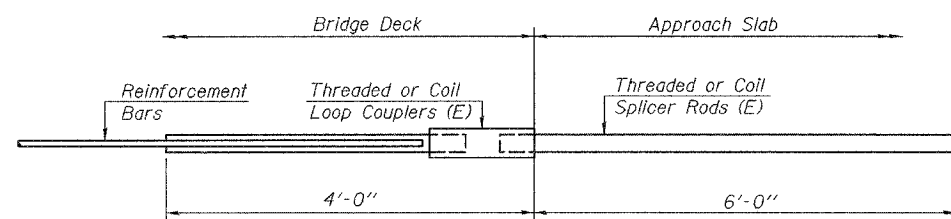
BAR SPLICER ASSEMBLY ALTERNATIVES

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



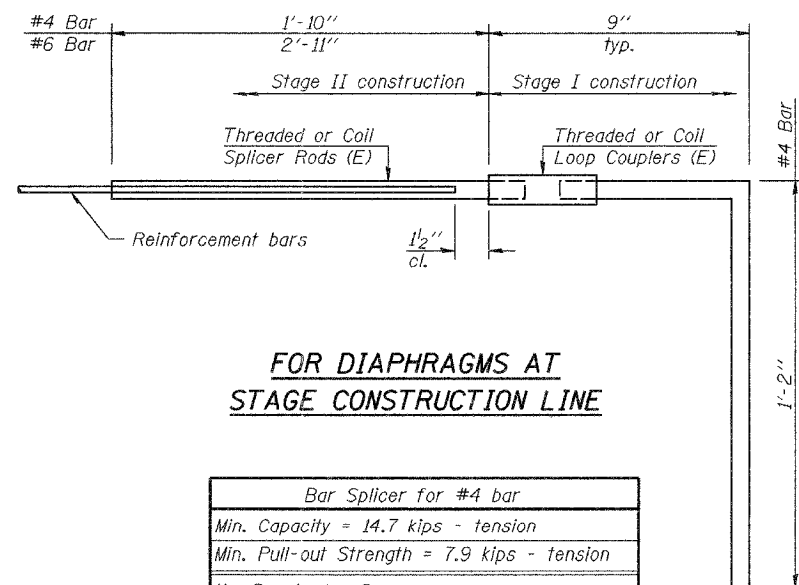
INSTALLATION AND SETTING METHODS

"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

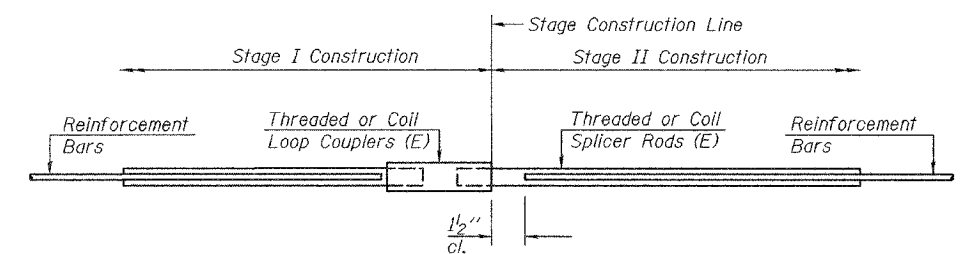
Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 82



FOR DIAPHRAGMS AT STAGE CONSTRUCTION LINE

Bar Splicer for #4 bar
Min. Capacity = 14.7 kips - tension
Min. Pull-out Strength = 7.9 kips - tension
No. Required = 8

Bar Splicer for #6 bar
Min. Capacity = 33.1 kips - tension
Min. Pull-out Strength = 17.4 kips - tension
No. Required = 4



STANDARD

Bar Size	No. Assemblies Required	Location
#5	372	Superstructure
#6	16	Superstructure
#7	14	N & S Abuts.
#5	48	Piers 1 & 2
#7	14	Piers 1 & 2

COLLINS ENGINEERS
 123 N. WACKER DR., SUITE 300
 CHICAGO, IL 60606
 (312) 704-9300
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LICENSE NO. 184-000993

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 US ROUTE 52 (STATE STREET)
 OVER PRAIRIE CREEK
 FAP RTE. 852 SEC. 18B-5-R
 WILL COUNTY
 STA. 1008+00.00 STRUCTURE NO. 099-4643
BAR SPLICER ASSEMBLY DETAILS
 DRAWN BY: MBM
 CHECKED BY: PRL/GRA
 DATE: MARCH, 2007