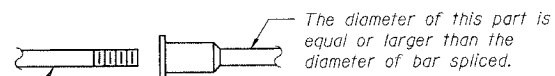


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

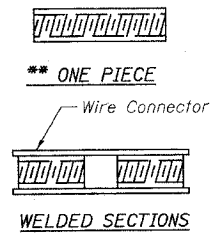
SHEET 9
OF 9

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10B	MADISON	156	116
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. T6857	

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

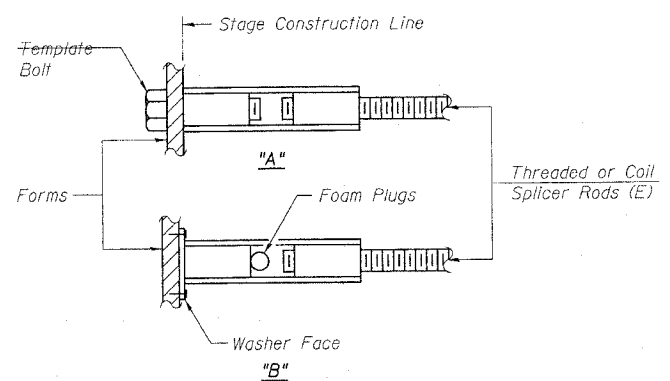


ROLLED THREAD DOWEL BAR



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

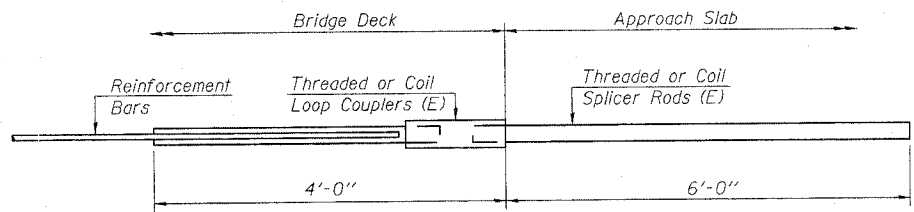
"A": Set bar splicer assembly by means of a template bolt.
 "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E): Indicates epoxy coating.

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:

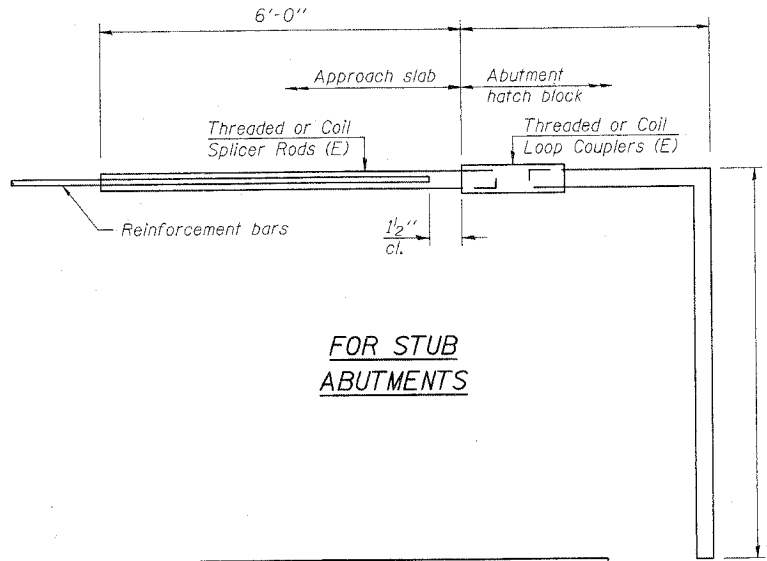
- ① Minimum Capacity = $1.25 \times f_y \times A_l$
(Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_l$
(Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_l = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

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'-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



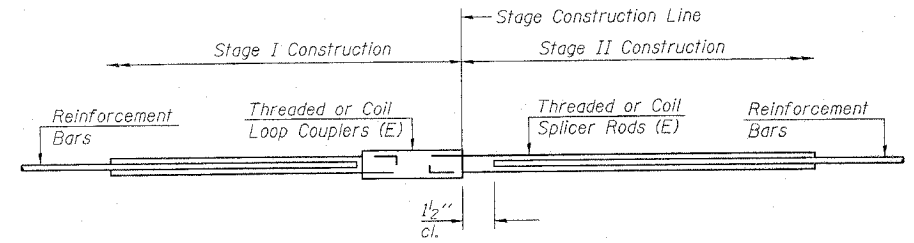
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR STUB ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	20	Slab
#6	8	Backwall

BAR SPLICER ASSEMBLY DETAILS

FAI 70 (WB) OVER
 WENDELL BRANCH
 FAI ROUTE 70 SECTION 60-10B
 MADISON COUNTY
 STATION 996+66.15
 STRUCTURE NO. 060-0024

FILE: J:\A\DD\1042 IL-08\VV5 1-70 Bridge Repairs\3-S\NO60-0024 WendellB-WB\09bar-splicers.dgn
 USER: DCD
 DATE: 01/12/2007 11:22:13

JD Johnson, Depp & Quisenberry
 CONSULTING ENGINEERS
 Springfield, Illinois

DESIGNED: CDB	DRAWN: P. Ray
CHECKED: DCD	CHECKED: CDB/DCD