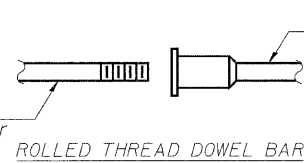


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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

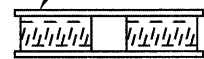


ROLLED THREAD DOWEL BAR



** ONE PIECE

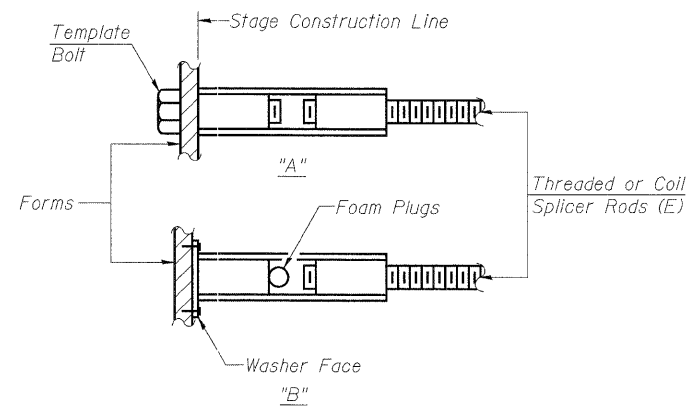
Wire Connector



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

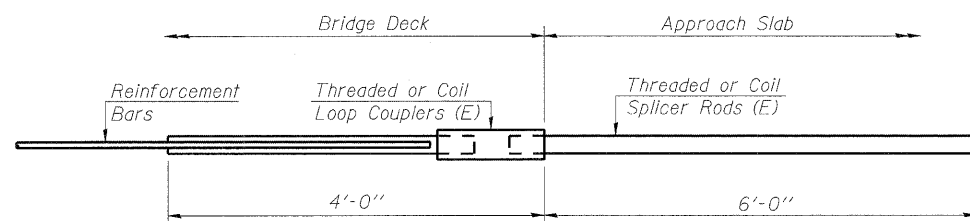
"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

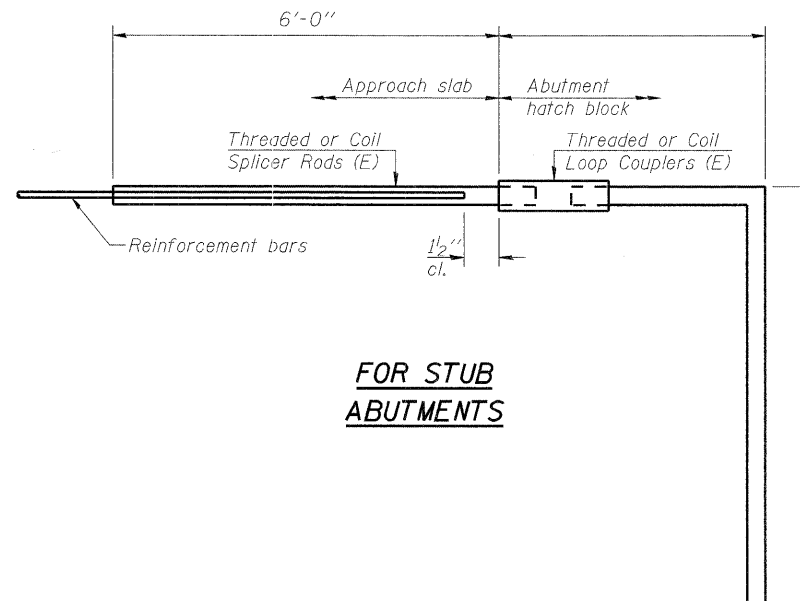
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the 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) = $1.25 \times f_y \times A_l$
Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_l$
 - ② Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_l$
Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_l$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_l = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

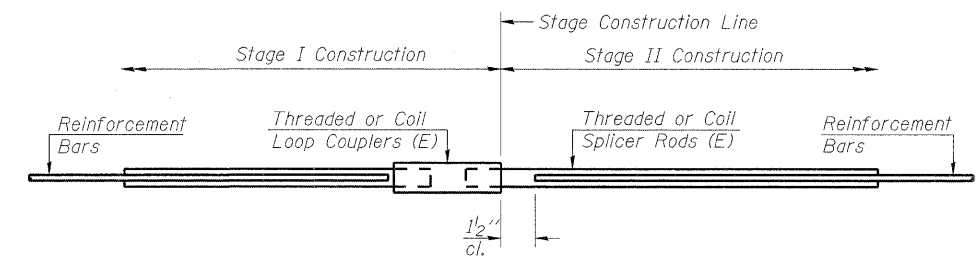
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS



FOR STUB ABUTMENTS



STANDARD

Bar Size	No. Assemblies Required	Location
#5	15	Bottom of Bottom Slab
#5	15	Top of Bottom Slab
#6	12	Side Walls
#8	15	Bottom of Top Slab
#5	15	Top of Top Slab

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

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

DESIGNED - GBC/GMK
CHECKED - GBC/GMK/SMK
DRAWN - RR
CHECKED - GBC/GMK/SMK

BSD-1

BAR SPLICER (COUPLER) DETAILS
ILLINOIS ROUTE 9 OVER DRAINAGE DITCH
F.A.P. ROUTE 697 - SECTION 17(I)
FORD COUNTY
STATION 50+55.00
SN 027-2552

Scale: None December 2008

SHEET NO. 54	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	697				
S5 SHEETS	CONTRACT NO. 66874				
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT	