

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 13
S.B.I. F.A.I. 255	60-8B-II	Madison	35	42	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract # 76A25		

NOTES

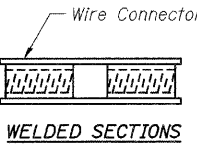
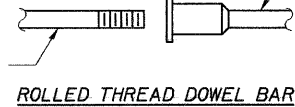
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the 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 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

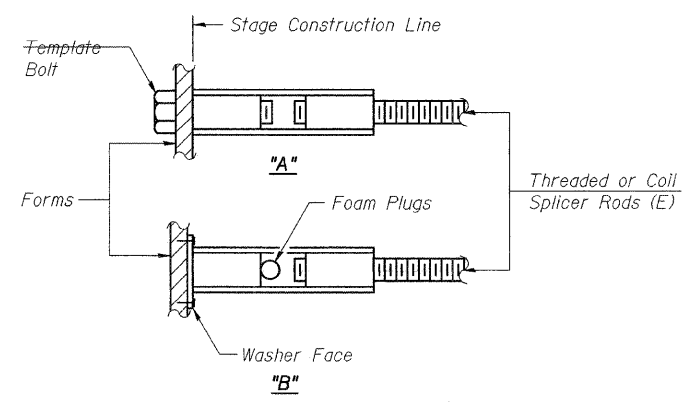
The diameter of this part is the same as the diameter of the bar spliced.

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



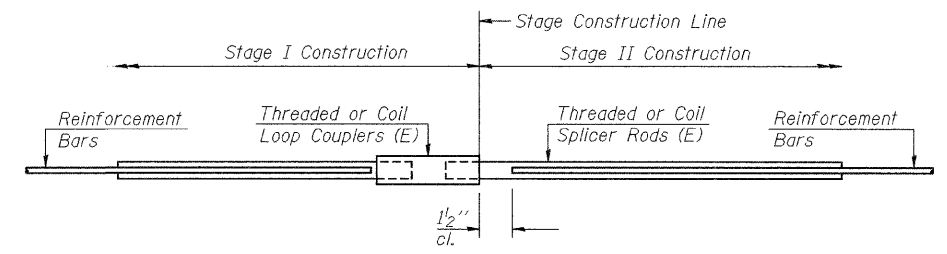
BAR SPLICER ASSEMBLY ALTERNATIVES

** 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.



STANDARD

SOUTHBOUND LANES

Bar Size	No. Assemblies Required	Location
#5	12	Deck
#6	4	Deck
#6	10	Abut. Diaphragm

NORTHBOUND LANES

Bar Size	No. Assemblies Required	Location
#5	12	Deck
#6	4	Deck
#6	10	Abut. Diaphragm

DESIGNED	DB
CHECKED	RS
DRAWN	CLS
CHECKED	WWH

BAR SPLICER ASSEMBLY DETAILS
F.A.I. RTE. 255 OVER CAHOKIA CANAL
SECTION 60-8B-II
STATION 1479+10.00
MADISON COUNTY
S.N. 060-0218 & 0219