STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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) $= 1.25 \times f_y \times A_t$

② Minimum *Pull-out Strength (Tension in kips) $= 0.66 \times f_y \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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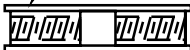
The diameter of this part is the same as the diameter of the bar spliced.

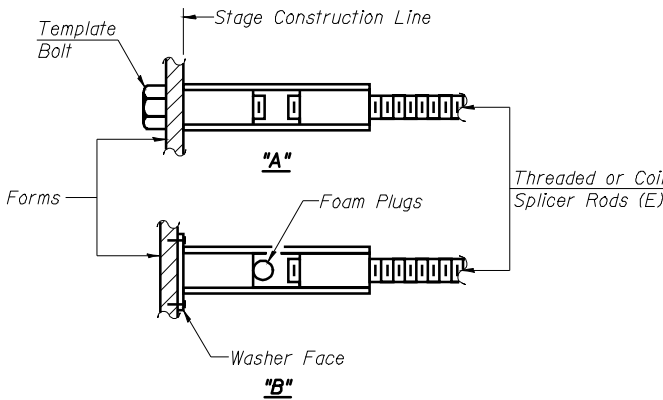### ROLLED THREAD DOWEL BAR

** ONE PIECE
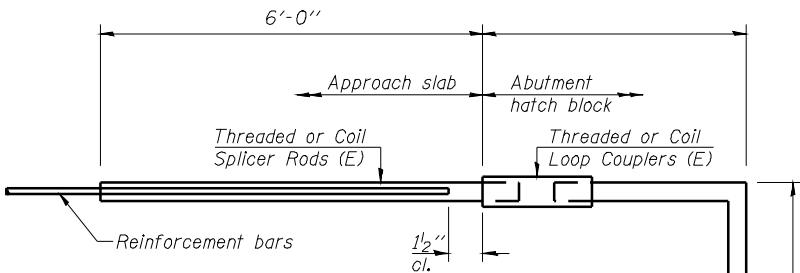
Wire Connector

WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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

Template Bolt — Stage Construction Line

Forms

"A"

Threaded or Coil Splicer Rods (E)
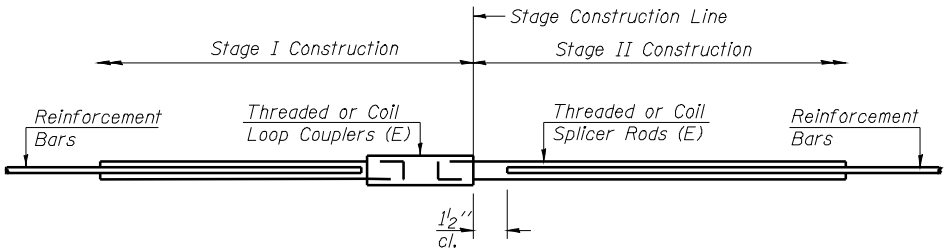
Foam Plugs

Washer Face

"B"

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.
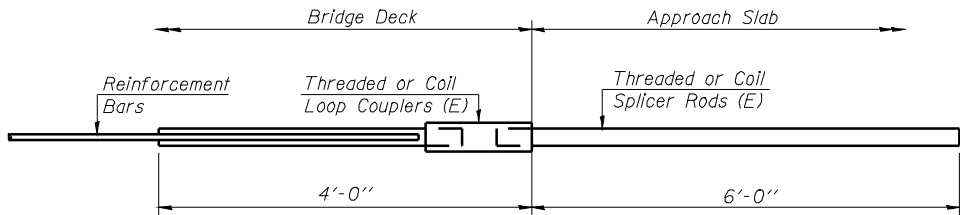(E) : Indicates epoxy coating.

BAR SPLICER ASSEMBLIES

Bar Size to be Spliced	SpFlicer 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

6'-0''

Approach slab

Abutment hatch block

Threaded or Coil Splicer Rods (E)

Threaded or Coil Loop Couplers (E)

Reinforcement bars

$1\frac{1}{2}''$ cl.

FOR STUB ABUTMENTS

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

Stage Construction Line

Stage I Construction — Stage II Construction

Reinforcement Bars

Threaded or Coil Loop Couplers (E)

Threaded or Coil Splicer Rods (E)

Reinforcement Bars

$1\frac{1}{2}''$ cl.

STANDARD

Bar Size	No. Assemblies Required	Location
#5	1007	Superstructure
#6	14	End Diaphragms
#8	16	Abutment Caps
#7	20	Abutment Caps
#9	12	Pier Caps
#8	12	Pier Caps
#5	20	Pier Caps

Bridge Deck — Approach Slab

Reinforcement Bars

Threaded or Coil Loop Couplers (E)

Threaded or Coil Splicer Rods (E)

4'-0''

6'-0''

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 = 74

BAR SPLICER ASSEMBLY DETAILS
F.A.P. 614 (IL 78) OVER WOLF LAKE
(PUBLIC BODY OF WATER)
SECTION 144 (B-2)
MASON COUNTY
STA. 862+41.25
STRUCTURE NUMBER 063-0500

HANSON
Hanson Professional Services Inc.

JOB NO. 07S2026	SHEET NO. 24	
DATE 03/27/09	29 SHEETS	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	144(B-1, B-2)	Mason	351	131

CONTRACT NO. 72A76

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

BSD-1   10-1-08

LAYOUT | TEH | 10/25/08
DRAWN | Rod | 12/15/08
REVIEWED | TEH | 12/19/08