

BAR SPLICER ASSEMBLY ALTERNATIVES

Approach Slab

6'-0"

Threaded or Coil

Splicer Rods (E)

**Heavy Hex Nuts conforming to ASTM

A 563, Grade C, D or DH may be used.

Bridge Deck

4'-0"

Threaded or Coil

Loop Couplers (E)

No. Required = N.A.

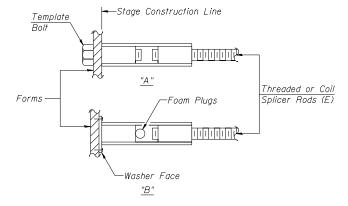
FOR INTEGRAL OR

SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar Min. Capacity = 23.0 kips - tension Min. Pull-out Strength = 12.3 kips - tension

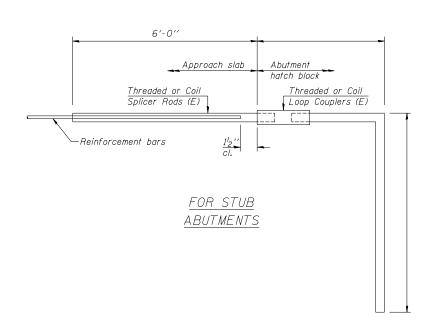
Reinforcement

Bars



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

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.

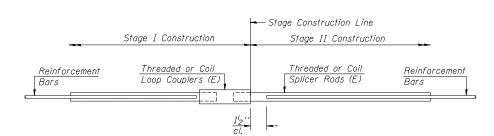
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$
- Minimum *Pull-out Strength = 0.66 x fy x A_t (Tension in kips)
- Where fy = Yield strength of lapped reinforcement bars in ksi.

 A_t = Tensile stress area of lapped reinforcement bars.

 * = 28 day concrete

BAR SPLICER ASSEMBLIES						
	Splicer Rod or Dowel Bar Length	Strength Requirements				
Bar Size to be Spliced		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			



STANDARD

Bar Size	No. Assemblies Required	Location
#5	80	Deck Ends
#6	24	Approach Pav't.

BAR SPLICER ASSEMBLY DETAILS STRUCTURE NO. 057-0047 (EB) STRUCTURE NO. 057-0048 (WB)

BSD-1

10 - 1 - 08

FILE NAME =	USER NAME = \$USER\$	DESIGNED -	REVISED -	
\$FILEL\$		DRAWN -	REVISED -	
	PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -	
	PLOT DATE = \$DATE\$	DATE -	REVISED -	

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE:

BAR SPLICER ASSEMBLY DETAILS S.N. 057-0047 (EB) & S.N. 057-0048 (WB)		F.A.I. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.		
		74	57-20(1)&(57-4,5,6)R-3 MCL		MCLEAN	160	113		
					CONTRACT	NO.	70505		
	SHEET NO. 10A OF 11A SHEETS	STA.	TO STA.	FED. RC	AD DIST. NO.	ILLINOIS FED. AI	D PROJECT		