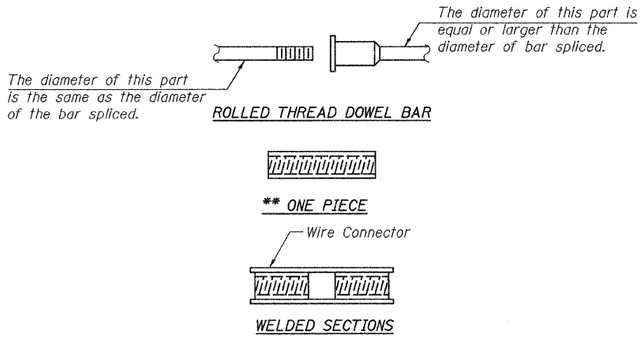
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 312	101B-1	ALEXANDER	152	90
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

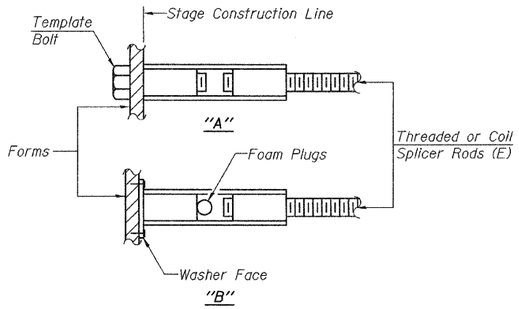
SHEET NO. 8
11 SHEETS

Contract No. 98577



BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563M, 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 400 MPa 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.

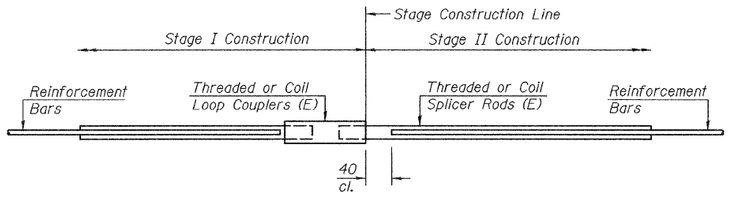
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kN) = $1.25 \times f_y \times A_t$

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

Where f_y = Yield strength of lapped reinforcement bars in MPa.
A_t = 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 kN - tension	Min. Pull-Out Strength kN - tension
#16	620 mm	104	55
#19	800 mm	149	79
#22	1.06 m	203	107
#25	1.39 m	268	142



STANDARD

Bar Size	No. Assemblies Required	Location
#16	48	Top slab
#16	39	Walls
#16	53	Bottom slab

DESIGNED	J.S.B.
CHECKED	C.C.C.
DRAWN	h.t.duong
CHECKED	J.S.B./C.C.C.

Jan 26, 2009
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

BAR SPLICER ASSEMBLY DETAILS
F.A.P. RTE. 312 - SECTION 101B-1
ALEXANDER COUNTY
STATION 5+699.435
STRUCTURE NO. 002-2002