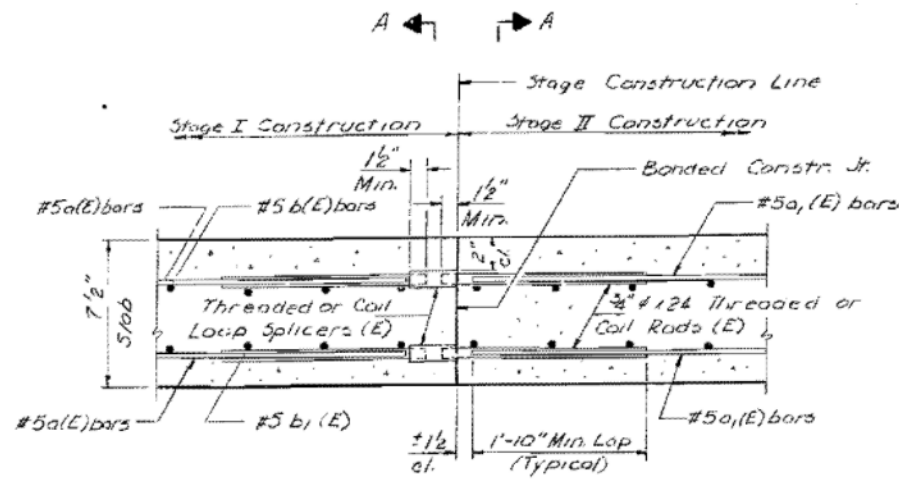


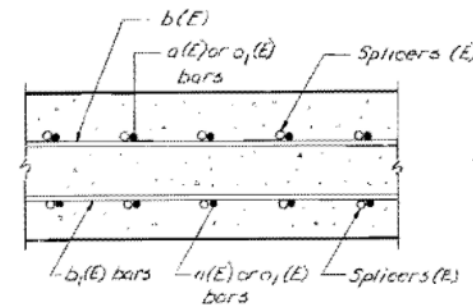
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5/4	110R, BR & BR-1	GRUNDY	644	401

15 SHEETS

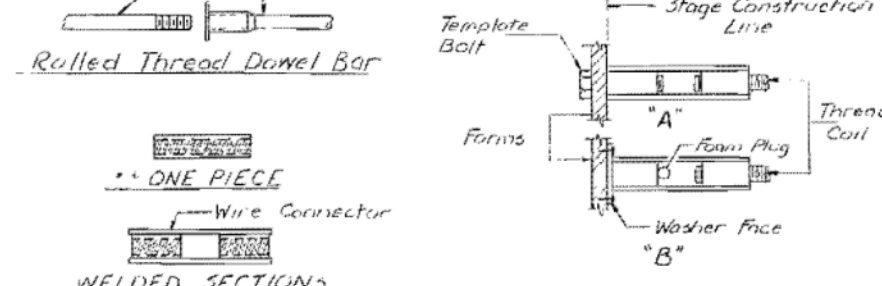


SECTION THRU SLAB
(Looking North)



SPLICER DETAILS
(No. Req'd. 243)

This splicer bar is same diameter as bar spliced.
This splicer bar is one size larger diameter than bar spliced.



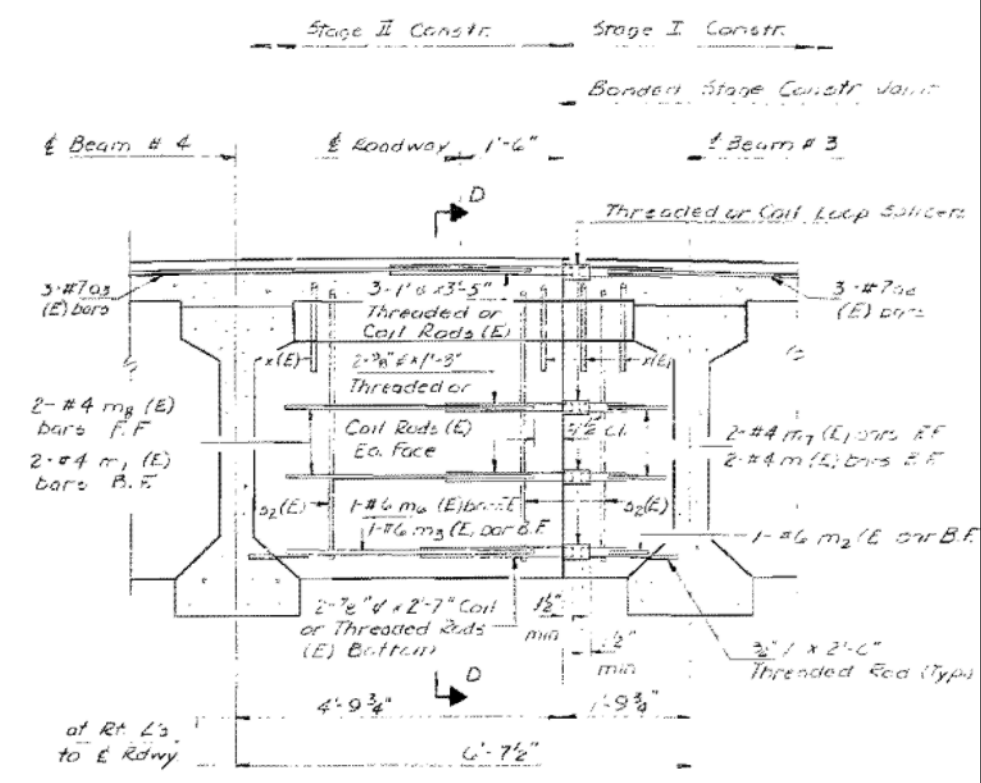
SPLICER ALTERNATIVES

Heavy Hex Nuts conforming to ASTM A563, Grade C, D or DH may be used.

NOTES

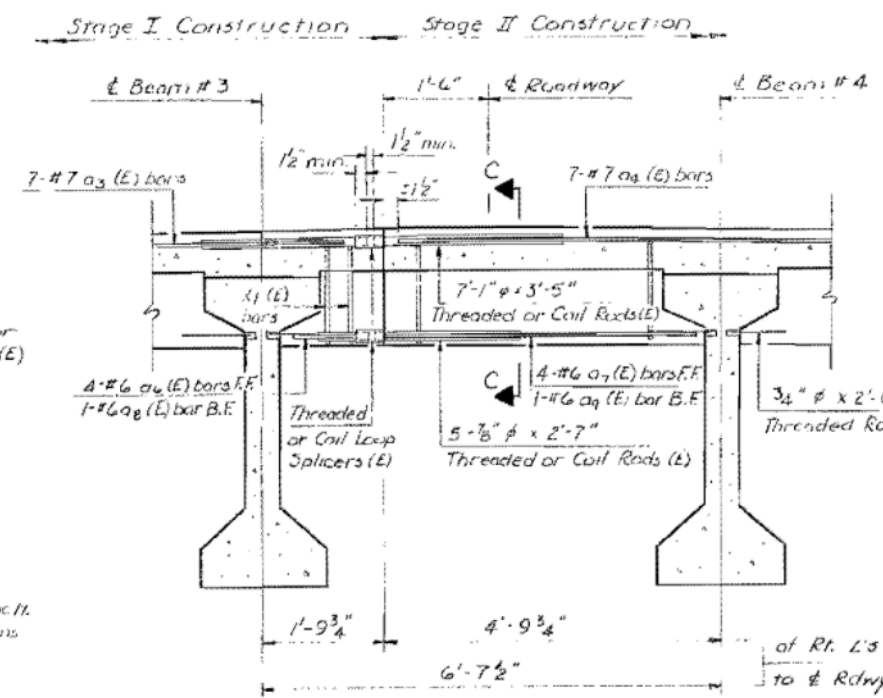
Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal or greater than that of the lapped reinforcement bars.
Splicer rods shall extend minimum 1/2 inches into the couplers.
All reinforcement bars shall be lapped and tied to the splicer rods.
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 splicer (coupler) assembly satisfies the following requirements:

- Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_s$
 - Minimum Pull-out Strength (Tension in kips) = $1.25 \times f_{s,allow} \times A_s$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s,allow}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_s = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete
- Typical Splicer (Coupler) Assembly Sizes:
- | | | |
|---------------|---|---|
| In Slab | #5 bar lap with 3/4" Splicer (Coupler) x 2'-0" Splicer Rods | Minimum Capacity = 23.0 kips-tension
Minimum Pull-out Strength = 9.2 kips-tension |
| In Diaphragms | #4 bar lap with 5/8" Splicer (Coupler) x 1'-8" Splicer Rods | Minimum Capacity = 14.7 kips-tension
Minimum Pull-out Strength = 5.9 kips-tension |
| | #5 bar lap with 7/8" Splicer (Coupler) x 2'-7" Splicer Rods | Minimum Capacity = 33.1 kips-tension
Minimum Pull-out Strength = 13.3 kips-tension |
| | #7 bar lap with 1" Splicer (Coupler) x 3'-5" Splicer Rods | Minimum Capacity = 45.1 kips-tension
Minimum Pull-out Strength = 18.0 kips-tension |



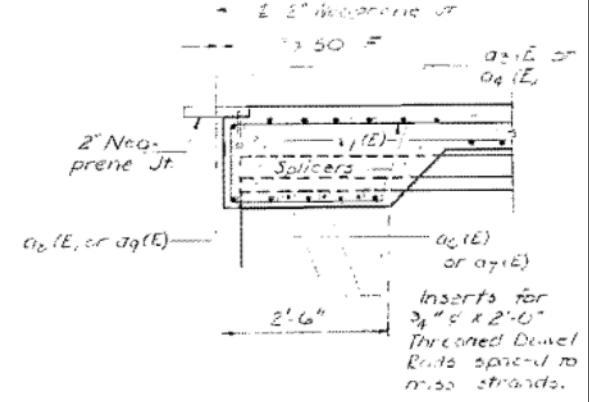
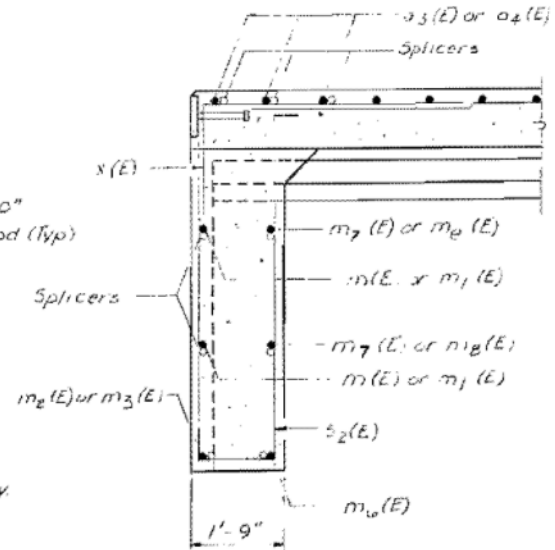
DIAPHRAGM AT SOUTH ABUTMENT

4-#4 bar splicers req'd.
2-#6 bar splicers req'd.
3-#7 bar splicers req'd.
(Looking South)



DIAPHRAGM AT NORTH ABUTMENT

5-#6 bar splicers req'd.
7-#7 bar splicers req'd.
(Looking North)



FOR INFORMATION ONLY

BAR SPLICER (COUPLER) DETAILS
AT STAGE CONSTRUCTION
FA ROUTE 100 SECTION 110 BR
GRUNDY COUNTY
STATION 136+58.25