

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | | |
|-----------------------|---------|----------|-------------------|-----------|---------------------------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | SHEET NO. 27 29 SHEETS |
| F. A. I. 80/94 | . | COOK | 870 | 469 | |
| FED. ROAD DIST. NO. 1 | | ILLINOIS | FED. AID PROJECT- | | CONTRACT NO. 62108 |
| | | | | | |

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.

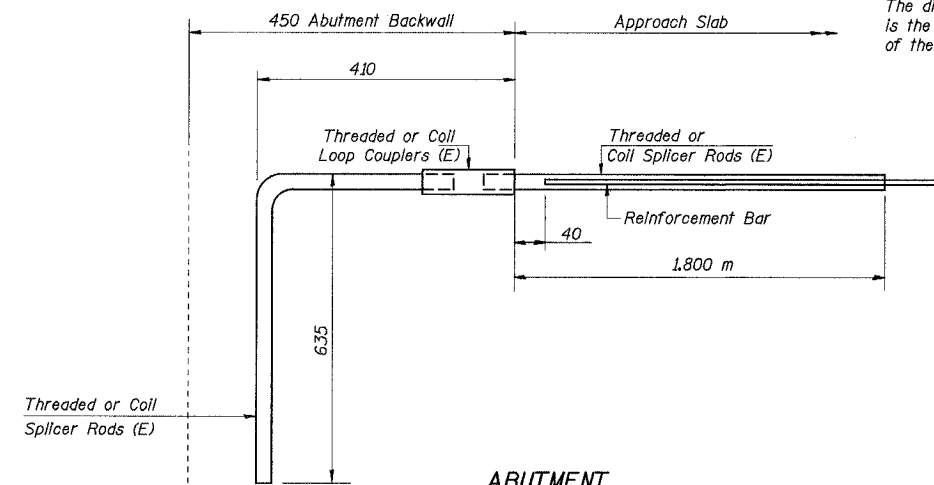
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times 10^{-3} \times f_y \times A_t$
(Tension in kN)
- ② Minimum *Pull-out Strength = $1.25 \times 10^{-3} \times f_{s\ allow} \times A_t$
(Tension in kN)

Where f_y = Yield strength of lapped reinforcement bars in MPa,
 $f_{s\ allow}$ = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars (mm²).
* = 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 |
| #15 | 610 mm | 100 | 40 |
| #20 | 790 mm | 150 | 60 |
| #25 | 1.04 m | 250 | 100 |
| #30 | 1.37 m | 350 | 140 |

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."
All dimensions are in millimeters (mm) except as noted.

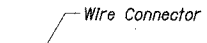


**ABUTMENT
BAR SPLICER ASSEMBLY DETAIL
FOR #15 BAR**

| |
|---|
| Min. Capacity = 100 kN - tension |
| Min. Pull-out Strength = 40 kN - tension |
| No. Required = 49 (S. Abut.) 49 (N. Abut.) |
| 98 Total |

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

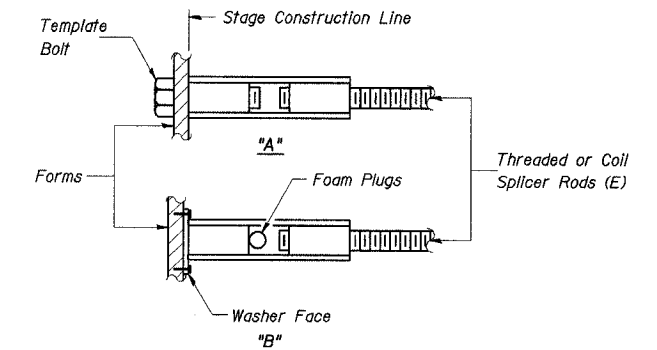
ROLLED THREAD DOWEL BAR



WELDED SECTIONS

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.

| | |
|----------|-----|
| DESIGNED | JFA |
| CHECKED | MEA |
| DRAWN | LK |
| CHECKED | MEA |

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
BAR SPLICER ASSEMBLY DETAILS
SB ILLINOIS ROUTE 394 OVER INTERSTATE 80
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+193.335 STRUCTURE NO. 016-2796
DATE 07/18/05
SCALE ---

HNTB