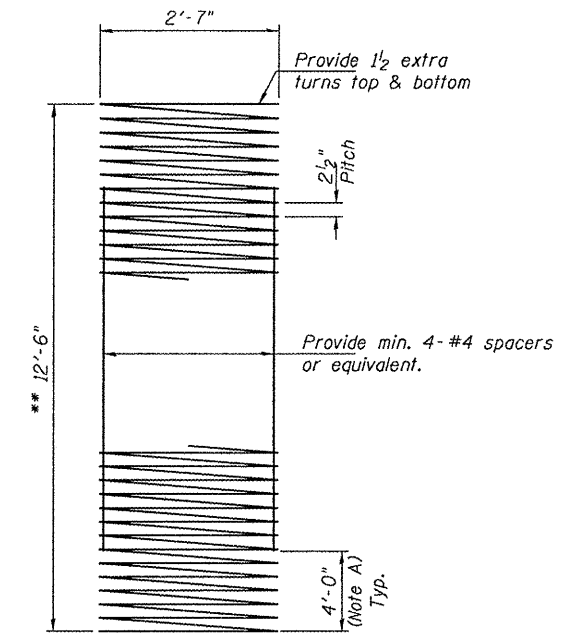
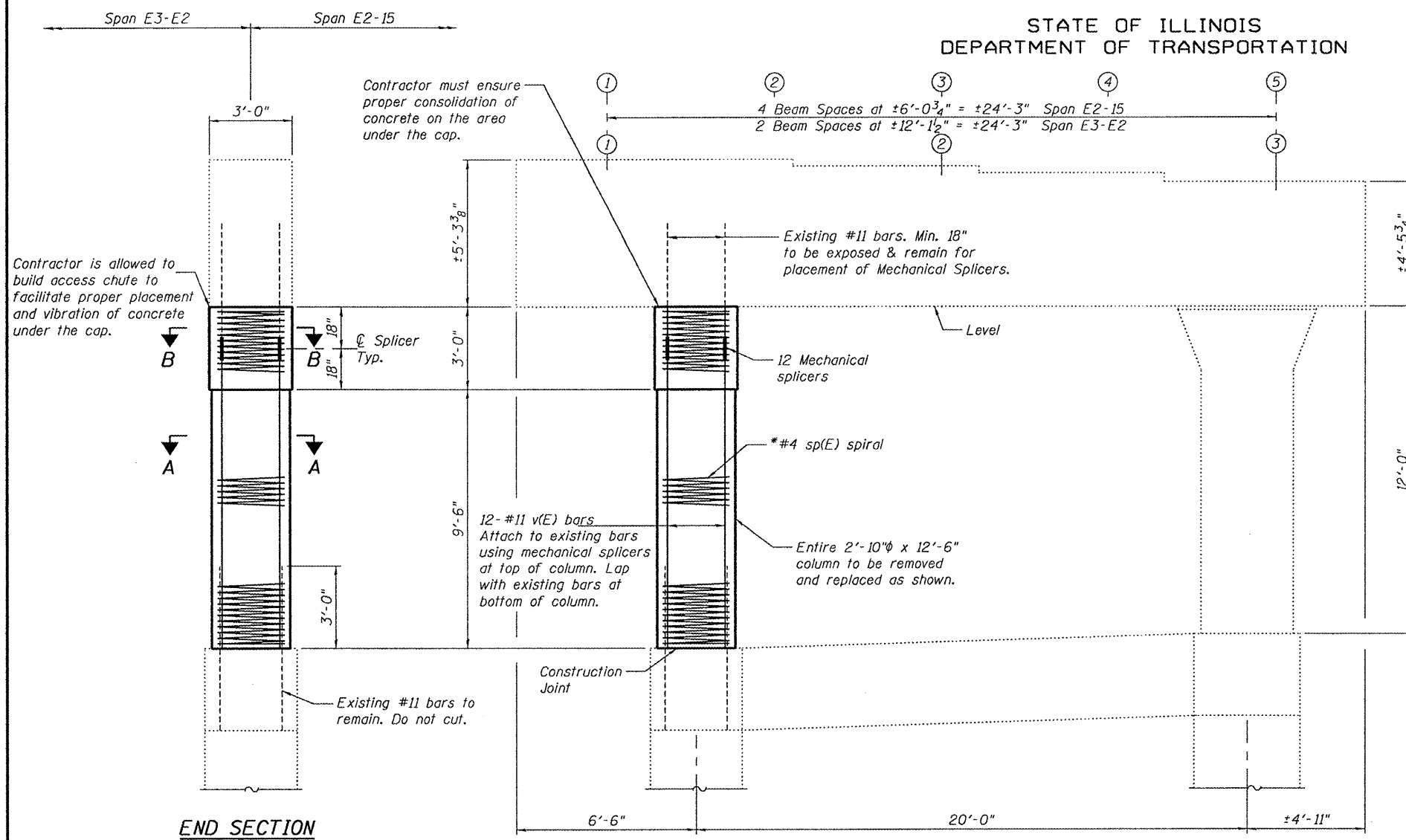


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



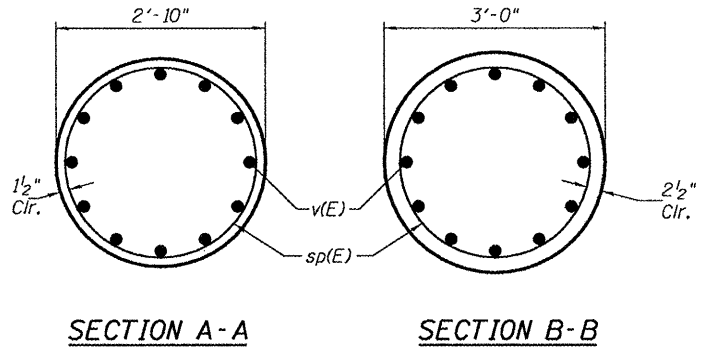
**SPIRAL DETAIL**

Note A:  
No spacers in this area (top & bottom), to allow for compression of spiral for placement, lapping and mechanically splicing existing vertical bars as shown. After installation of vertical bars, spiral is to be expanded and lapped with the existing spiral maintaining the proper pitch.

REACTIONS (Girder loads only)			
		Span E2-15 Bm 2	Span E3-E2 Bm 1
R <sub>φ</sub>	(k)	23.9	18.6
R <sub>s</sub>	(k)	10.8	9.9
R <sub>t</sub>	(k)	33.8	24.8
R <sub>i</sub>	(k)	8.8	7.4
R <sub>Total</sub>	(k)	77.3	60.7

\*\*\*\*Girder reactions provided are for the heaviest expected loads on each span. Temporary shoring and cribbing must include load from all contributing girders.

**ELEVATION BENT E2**  
(Looking Northwest)



\*#4 sp(E) spiral. Provide 1/2 extra turns top and bottom. Provide min. 4-#4 spacers or equivalent. Lap spiral top and bottom with existing spiral. Minimum lap = 1 1/2 turns.

**NOTES**

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.  
Reinforcement bars designated (E) shall be epoxy coated.  
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.  
Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

The Contractor must submit a procedure for installation of the spiral and vertical bars for approval prior to any installation of the reinforcement. Temporary shoring and cribbing, as described in the Special Provisions, is to be installed prior to any concrete removal.  
If existing #11 vertical bars or spiral extending into removal area to be reused are found to have a cross sectional area loss greater than 10% the Contractor shall notify the Bureau of Bridges and structures for further disposition before installation of the new reinforcement.

**TOTAL BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
** sp(E)	1	#4	12'-6"	
v(E)	12	#11	10'-10"	—
Concrete Removal		Cu. Yd.		2.9
Concrete Structures		Cu. Yd.		3.0
Mechanical Splicers		Each		12
*** Reinforcement Bars, Epoxy Coated		Pound		1,060
Temporary Shoring and Cribbing		L. Sum		1

\*\* Length is height of spiral  
\*\*\* Includes weight of spiral & spacers

**PIER REPAIR DETAILS**  
**SOUTHEAST RAMP**  
**SN 016-2452**

SHEET NO. 7 7 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	VAR	2009-069BR	Cook	39	34
			CONTRACT NO. 60H77		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			



DESIGNED: [Signature]  
CHECKED: [Signature]  
DRAWN: [Signature]  
CHECKED: [Signature]

EXAMINED: [Signature]  
PASSED: [Signature]

January 25, 2010

Expires: November 30, 2010