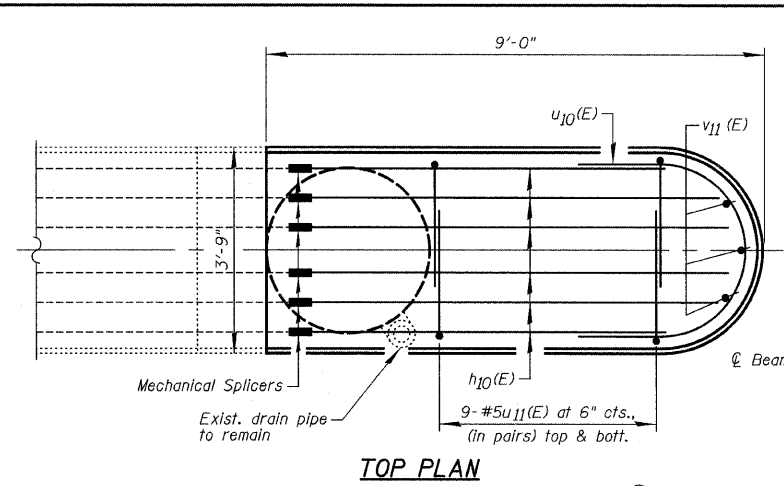
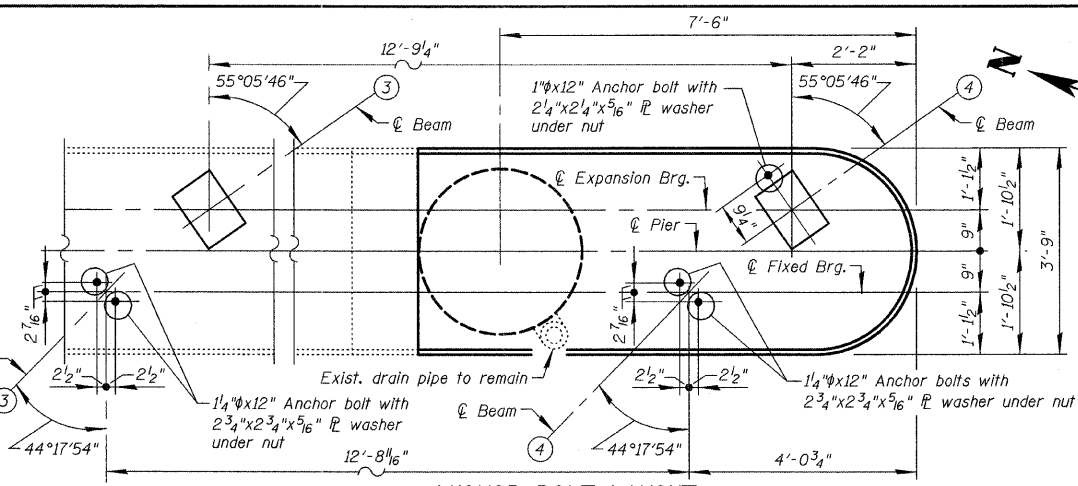


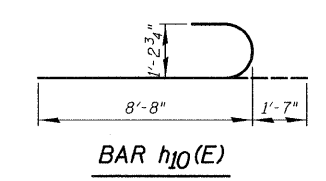
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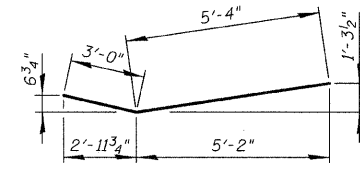
TOP PLAN



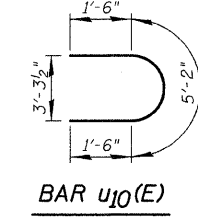
ANCHOR BOLT LAYOUT



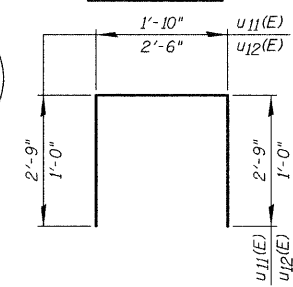
BAR h10(E)



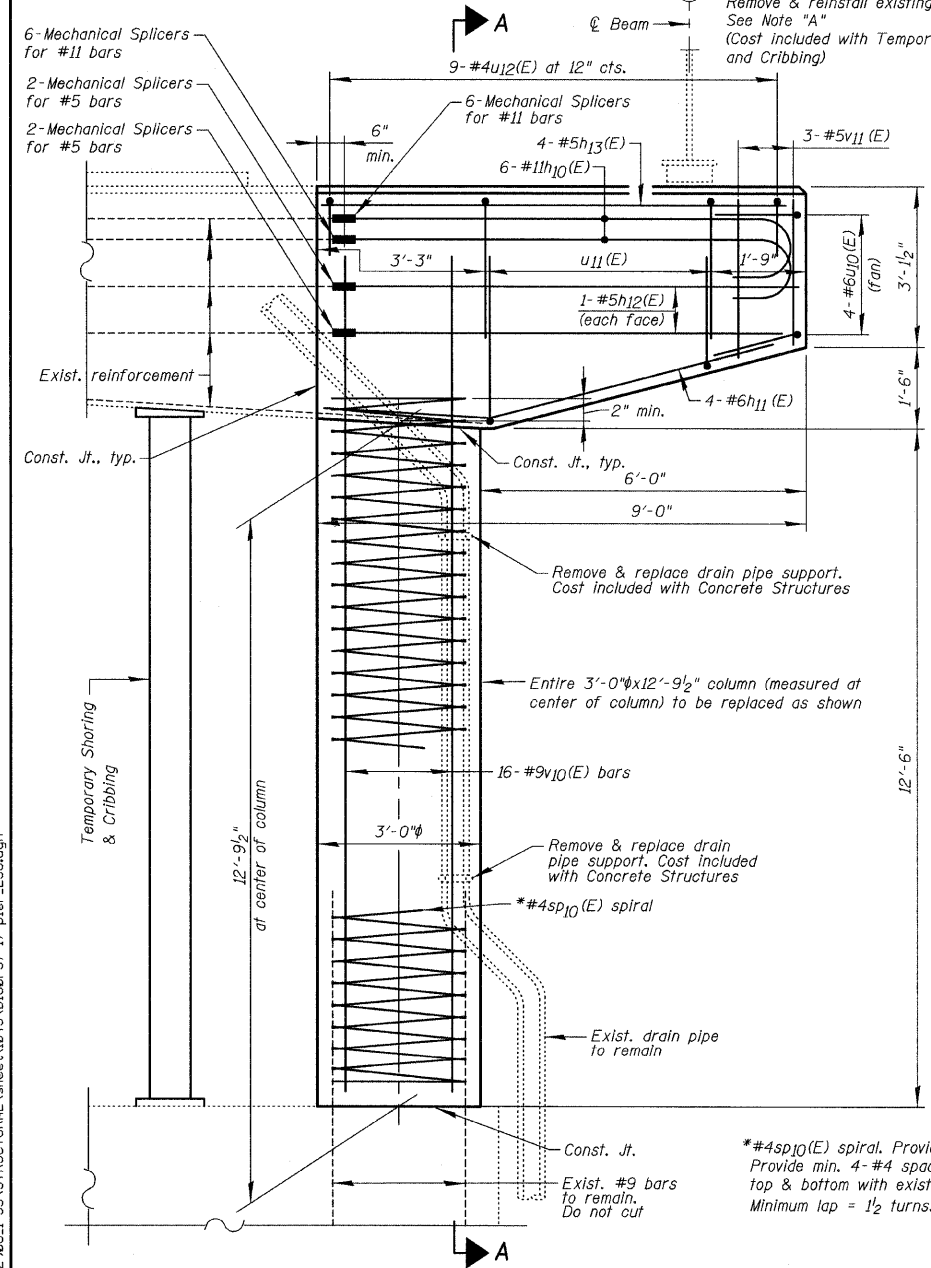
BAR h11(E)



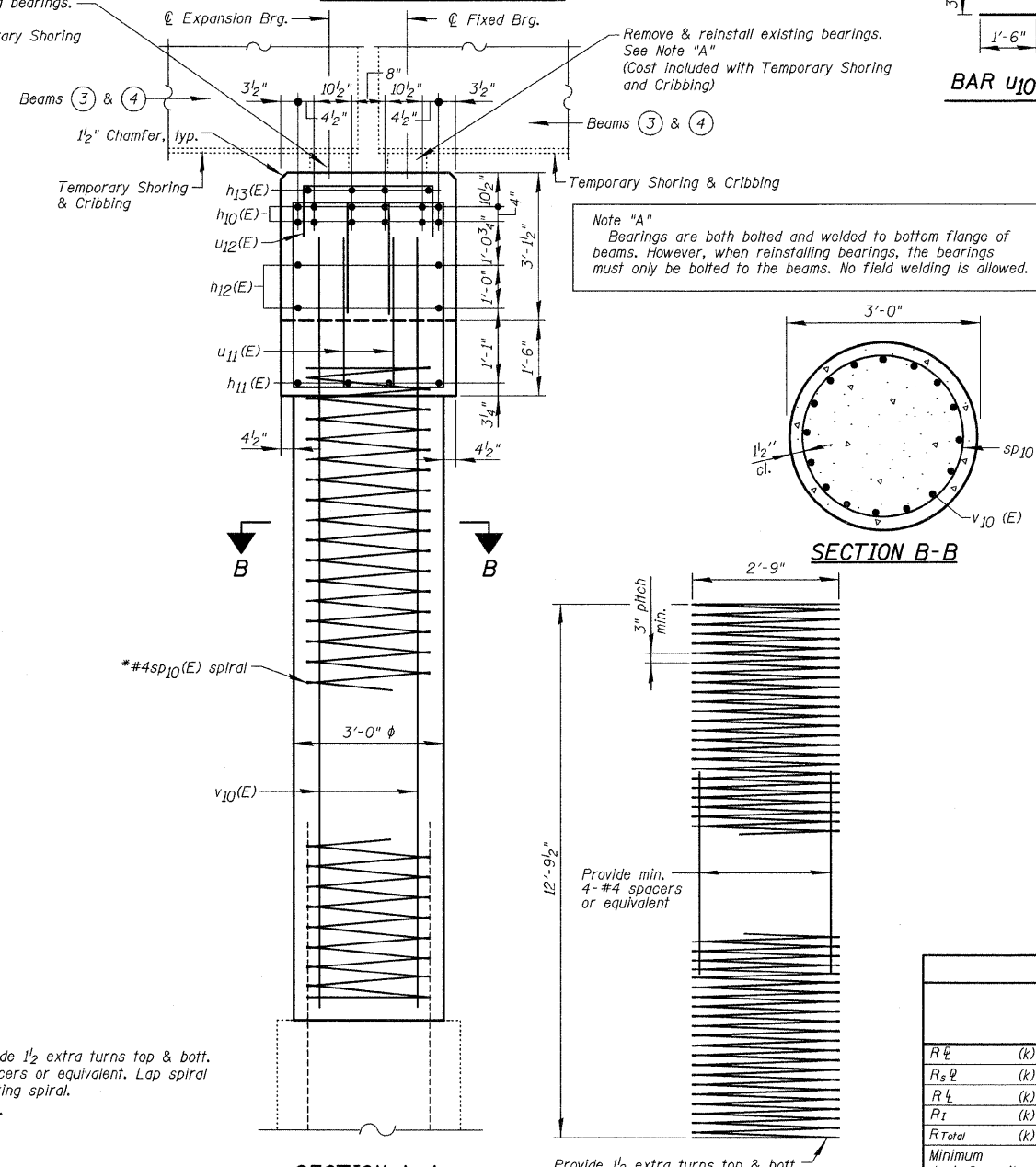
BAR u10(E)



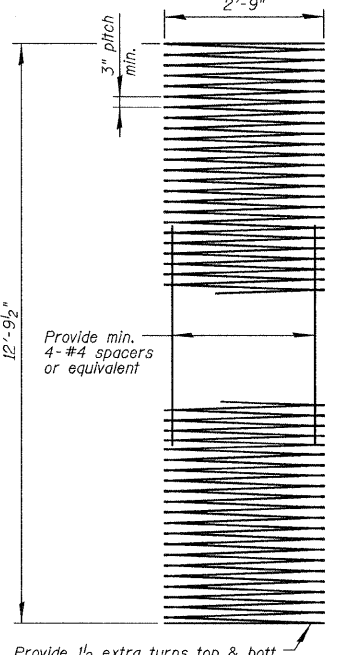
BARS u11(E) & u12(E)



ELEVATION - SOUTH END (Looking East)



SECTION A-A



SPIRAL DETAIL

Note "A"
Bearings are both bolted and welded to bottom flange of beams. However, when reinstalling bearings, the bearings must only be bolted to the beams. No field welding is allowed.

Notes:

Existing reinforcement bars projecting from the pier cap shall be cut 6" minimum from the concrete removal line. Cost included with "Concrete Removal".
Existing reinforcement bars projecting from the pier column to remain.
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.
It shall be the Contractor's responsibility to verify all dimensions between the bottom of the bridge beams and the top of the bearing seats, in the field, prior to construction or ordering of materials.
The Contractor shall supply additional shim plates, if required, to bring devices to grade. Cost included with Concrete Structures.
Anchor bolts must be installed in holes drilled after the supported member is in place. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications. Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade and diameter specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
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.
Temporary shoring and cribbing, as described in the Special Provisions, is to be installed prior to any concrete removal.
If existing vertical reinforcement bars or spiral extending into removal area to be reused are found to have a cross sectional area lost greater than 10% the Contractor shall notify the Bureau of Bridges and structures for further disposition before installation of the new reinforcement.
If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.
Reinforcement bars shall conform to the requirements of AASHTO A 706, Gr. 60, see Special Provisions.
Reinforcement bars designated (E) shall be epoxy coated.

BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
h10(E)	12	#11	10'-3"	U
h11(E)	4	#6	8'-4"	U
h12(E)	4	#5	7'-8"	U
h13(E)	4	#5	8'-8"	U
sp10(E)	1	#4	12'-9 1/2"	W
u10(E)	4	#6	8'-2"	U
u11(E)	36	#5	7'-4"	U
u12(E)	9	#4	4'-6"	U
v10(E)	16	#9	15'-0"	U
v11(E)	3	#5	2'-8"	U
Concrete Removal			Cu. Yd.	8.2
Concrete Structures			Cu. Yd.	8.2
Reinforcement Bars, Epoxy Coated			Pound	2,260
Anchor Bolts, 1"			Each	1
Anchor Bolts, 1 1/4"			Each	4
Mechanical Splicers			Each	16
Temporary Shoring and Cribbing			Each	5

**Length is height of spiral at center of column
***Includes weight of spiral & spacers

BEAM REACTION TABLE			
	at Expansion Bearings Beam 3	at Expansion Bearings Beam 4	at Fixed Bearings
R _φ	(k) 29.6	23.0	49.9
R _g	(k) 12.1	9.7	16.9
R _t	(k) 38.0	36.8	41.8
R _l	(k) 9.4	9.8	9.1
R _{Total}	(k) 89.1	79.3	117.7
Minimum Jack Capacity	70 tons	60 tons	90 tons

Girder reactions shown are from the existing plan Bearing Data Tables, At Roadway E.N. & Ramp E.S. from S. Prairie Ave. to S. Lake Shore Dr. F.A.I. Rte. I-55, dated June 18, 1991.

	USER NAME == IDOT	DESIGNED - J.C.N./B.N.S.	REVISED -
	PLOT SCALE = 50,0000' / IN.	CHECKED - B.N.S./J.C.N.	REVISED -
	PLOT DATE == 10/12/2011	DRAWN - F.M.	REVISED -
		DATE - OCTOBER 12, 2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER ES6 REPAIRS
STRUCTURE NO. 016-1045
SHEET NO. S17 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2011-031-BR	COOK	41	17
CONTRACT NO. 60P37				
ILLINOIS FED. AID PROJECT				