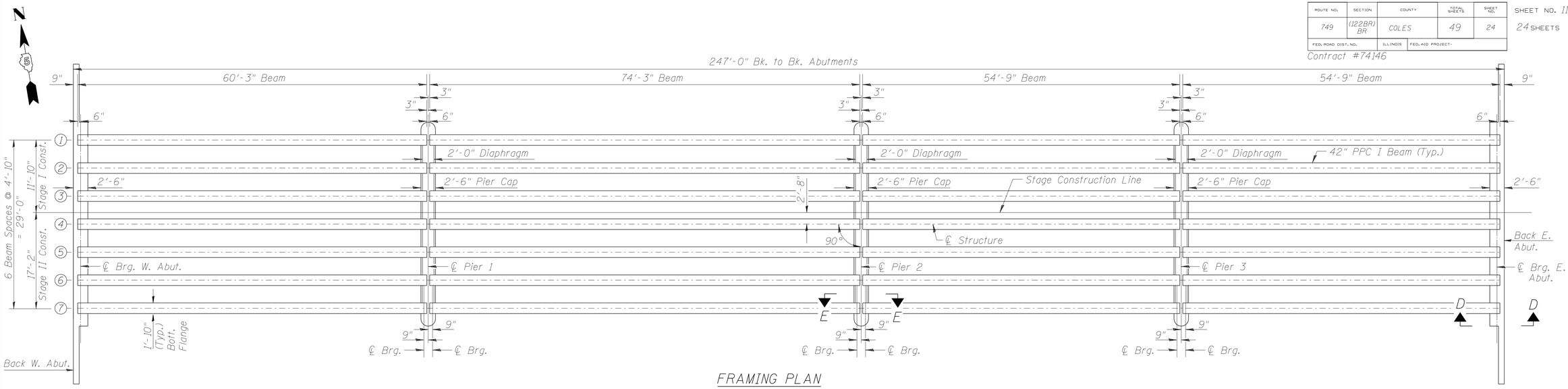
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
749	(122BR) BR	COLES	49	24
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 11
24 SHEETS

Contract #74146



FRAMING PLAN

BEAM MOMENT TABLE																
		0.4 Sp. #1		Pier 1		0.5 Sp. #2		Pier 2		0.5 Sp. #3		Pier 3		0.6 Sp. #4	
Strand Pattern		12-A				16-A				12-A				12-A	
I	(in^4)	90,956				90,956				90,956				90,956	
I'	(in^4)	251,900				251,900				251,900				251,900	
S_b	(in^3)	5,153				5,153				5,153				5,153	
S_b'	(in^3)	8,489				8,489				8,489				8,489	
S_t	(in^3)	3,736				3,736				3,736				3,736	
S_t'	(in^3)	20,436				20,436				20,436				20,436	
Beam Location		Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior
D_{ℓ}	(k/')	1.059	0.971			1.059	0.971			1.059	0.971			1.059	0.971
M_{ℓ}	('k)	477	437			740	679			405	371			394	361
s_{ℓ}	(k/')	0.357	0.357	0.357	0.357	0.357	0.357	0.357	0.357	0.357	0.357	0.357	0.357	0.357	0.357
Ms_{ℓ}	('k)	86	86	173	173	100	100	129	129	22	22	101	101	87	87
M_L	('k)	292	286	246	241	291	285	226	221	210	206	186	183	251	246
M (Imp)	('k)	78	77	64	63	73	71	59	59	58	57	52	50	70	68

BEAM REACTION TABLE																	
		W. Abut.		Pier 1 Span 1		Pier 1 Span 2		Pier 2 Span 2		Pier 2 Span 3		Pier 3 Span 3		Pier 3 Span 4		E. Abut.	
Beam Location		Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior	Exterior	Interior
R_{ℓ}	(k)	31.8	29.1	31.8	29.1	39.6	36.3	39.6	36.3	29.3	26.8	29.3	26.8	28.9	26.5	28.9	26.5
Rs_{ℓ}	(k)	7.8	7.8	13.6	13.6	13.9	13.9	12.8	12.8	10.4	10.4	9.4	9.4	11.6	11.6	7.9	7.9
R_L	(k)	26.2	25.6	34.6	33.9	34.6	33.9	33.2	32.5	33.2	32.5	31.1	30.4	31.1	30.4	25.5	25.0
Imp.	(k)	7.9	7.7	6.7	6.5	6.7	6.5	6.5	6.4	6.5	6.4	6.6	6.5	6.6	6.5	7.7	7.5
R (Total)	(k)	73.7	70.2	86.7	83.1	94.8	90.6	92.1	88.0	79.4	76.1	76.4	73.1	78.2	75.0	70.0	66.9

I and I' are the moment of inertia and composite moment of inertia of the beam section.

S_b and S_b' are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.

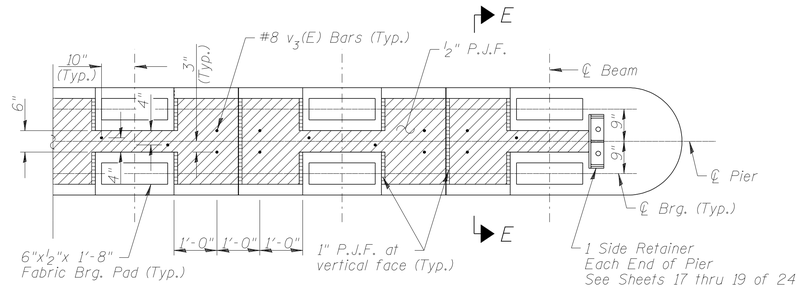
S_t and S_t' are the non-composite and composite section modulus for the top fiber of the prestressed beam.

M D is the moment due to dead loads on the non-composite prestressed beam. It is conservatively calculated at 0.5 of the span.

Ms D is the moment due to dead loads on the composite section.

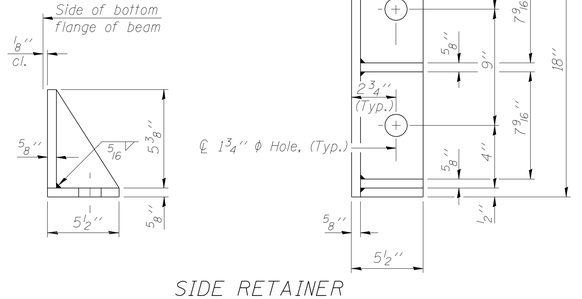
M L is the moment due to live load on the composite section.

M (Imp) is the moment due to live load impact on the composite section.



PLAN AT PIER

(Showing bearing pad and PJF details)



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

NOTES:

After beams have been erected, holes at fixed piers and anchor bolts shall be grouted in place.

See sheet 21 of 24 for anchor bolt installation.

See sheets 17 thru 19 of 24 for v_3(E) bar Bill of Materials.

See sheet 9 of 24 for sections E-E and D-D.

The cost of P.J.F. and Fabric Bearing Pad included in Concrete Superstructure.

Structural Steel for side retainers shall be in accordance with Section 505 of the Standard Specifications.

The side retainers shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM 385.

The cost of Side Retainers and anchor bolts shall be included in the unit bid price for Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42".

ILLINOIS DEPARTMENT OF TRANSPORTATION

FRAMING PLAN AND PIER SEAT DETAILS

IL ROUTE 133 OVER THE
LITTLE EMBARRAS RIVER
F.A.P. ROUTE 749 SECTION (122BR)BR
COLES COUNTY
STATION 933+50.00
STRUCTURE NO. 015-0074

DATE: MARCH 2006

DRAWN BY: MLO
CHECKED BY: PBB