

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 627	SECTION (1)BR	COUNTY LASALLE	TOTAL SHEETS 69	SHEET NO. 29	SHEET NO. 12 31 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Two strut coil inserts cast in beam.
Inserts shall be galvanized in accordance with AASHTO M232. After removal of the bracing, inserts shall be filled with 3/4" ϕ bolts galvanized in accordance with AASHTO M232.

Contract #66556

		0.4 Span 1	Pier 1	0.5 Span 2	Pier 2	0.6 Span 3
I	(in ⁴)	545894		545894		545894
I'	(in ⁴)	950049		950049		950049
S _b	(in ³)	14915		14915		14915
S _b '	(in ³)	19001		19001		19001
S _t	(in ³)	15421		15421		15421
S _t '	(in ³)	43184		43184		43184
DL	(k/')	1.39		1.39		1.39
M DL	(k)	2682		2936		1560
SDL	(k/')	0.442	0.442	0.442	0.442	0.442
M SDL	(k)	520	772	299	542	267
M LL	(k)	841	856	716	714	628
M Imp	(k)	168	171	136	150	145

		W. Abut.	Pier 1 Span 1	Pier 1 Span 2	Pier 2 Span 2	Pier 2 Span 3	E. Abut.
R DL	(k)	86.9	86.9	91.4	91.4	66.4	66.4
*R SDL	(k)	21.5	32.3	32.3	27.0	27.0	15.4
*R L	(k)	34.6	32.7	32.7	29.9	29.9	33.6
*R Imp	(k)	6.9	6.5	6.5	6.3	6.3	7.7
R Total	(k)	149.9	158.4	162.9	154.6	129.6	123.1

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.

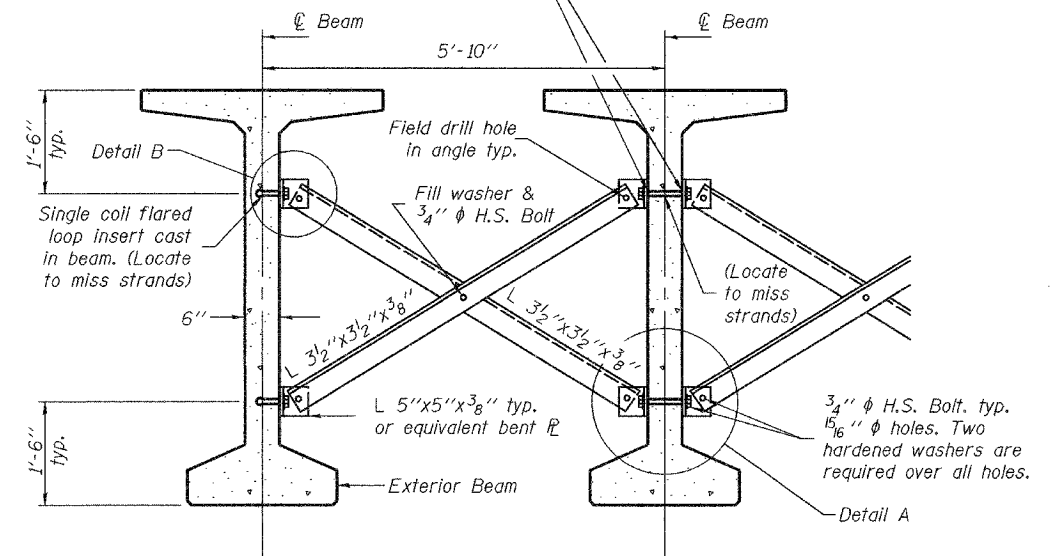
M ϕ is the moment due to dead loads on the non-composite prestressed beam. It is conservatively calculated at 0.5 of the span.

M S ϕ is the moment due to dead loads on the composite section.

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

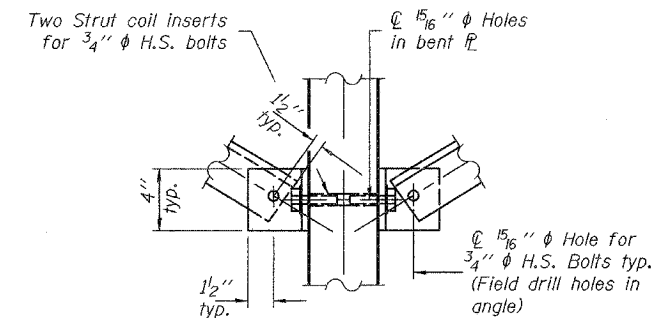
M (Imp) is the moment due to live load impact on the composite section.

*The total R SDL, R L and R Imp are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios.

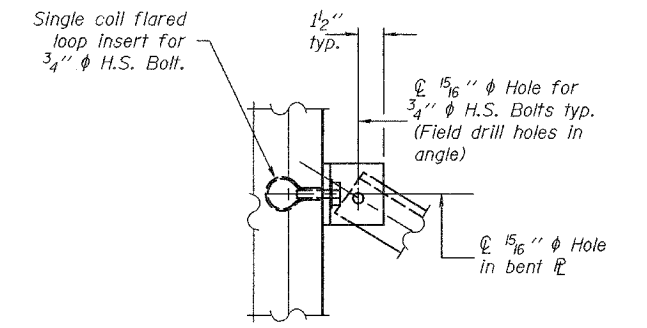


TEMPORARY BRACING

Notes: Fasteners shall be high strength bolts. 3/4" ϕ , open holes 15/16".
Details other than those shown are allowed subject to approval of the Engineer.
All inserts shall be galvanized in accordance with AASHTO M232.
Remove temporary bracing after falsework for deck is removed and fill inserts with 3/4" ϕ bolts galvanized in accordance with AASHTO M232.
For insert locations see sheets 13 and 14 of 31.
Temporary bracing, inserts, and all associated hardware are included with "Furnishing and Erecting Precast Prestressed Concrete Bulb-T Beams, 72".



DETAIL A



DETAIL B

DESIGNED	M.D.S.
CHECKED	S.M.R.
DRAWN	W.D.C.
CHECKED	M.D.S./S.M.R.

February 3, 2006
EXAMINED *Thomas J. Domagalaki*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

FRAMING DETAILS
F.A.P. ROUTE 627 - SECTION (1)BR
LASALLE COUNTY
STATION 26+61.50
STRUCTURE NO. 050-0242