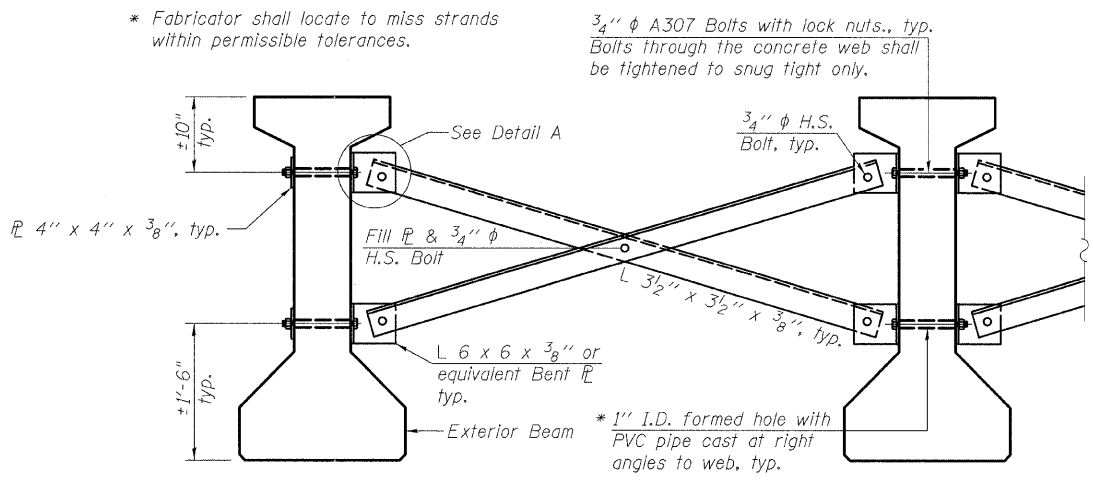
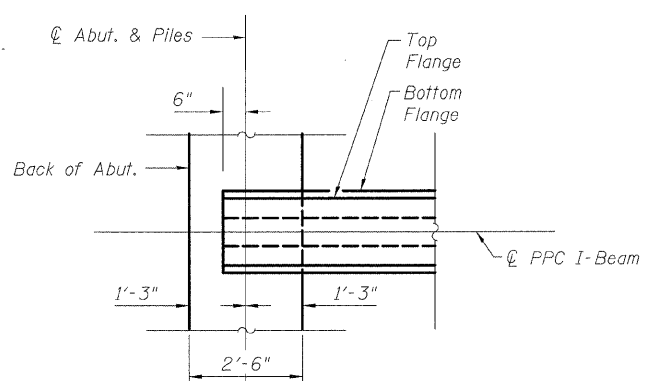
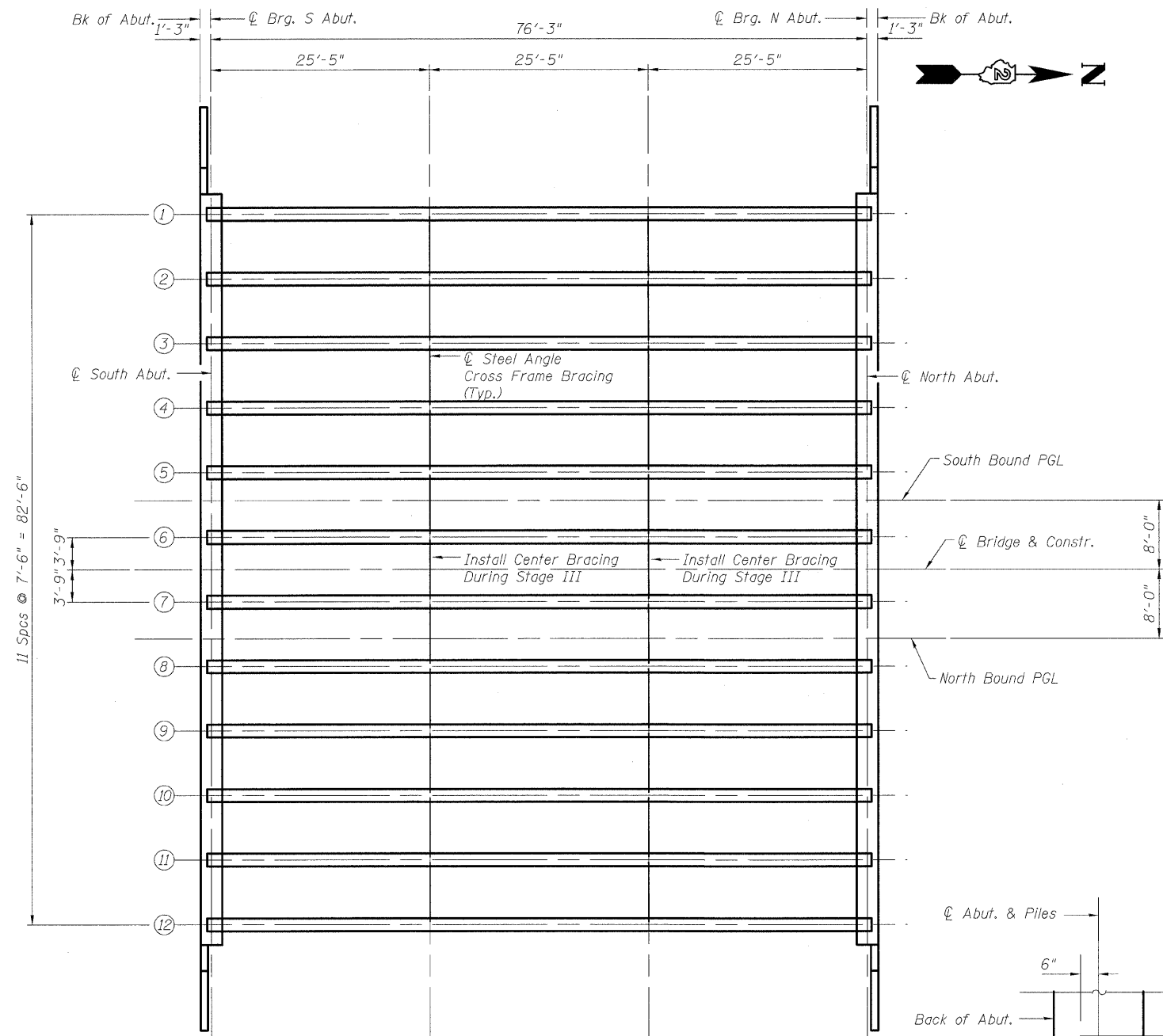
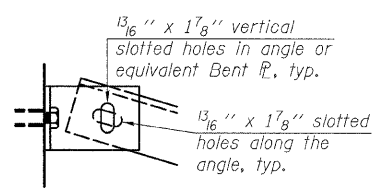


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



Notes:

- All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
- Two hardened washers are required for each set of oversized holes.
- All holes shall be 15/16" φ unless otherwise noted.
- 5/16" x 3" x 3" plate washers are required over all slotted holes.
- All bolts shall be galvanized according to AASHTO M232.
- Bracing shall be installed as beams are erected and tightened as soon as possible during erection.



PERMANENT BRACING DETAILS FOR 48" PPC I-BEAMS

Cost of permanent bracing included with Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48"

INTERIOR BEAM MOMENT TABLE		
I	(in <sup>4</sup> )	144,117
I'	(in <sup>4</sup> )	430,525
S <sub>b</sub>	(in <sup>3</sup> )	6834.1
S <sub>b</sub> '	(in <sup>3</sup> )	11,738.3
S <sub>t</sub>	(in <sup>3</sup> )	5,355.1
S <sub>t</sub> '	(in <sup>3</sup> )	38,022.3
DC1	(k/')	1.362
M <sub>DC1</sub>	(k)	990
DC2	(k/')	.150
M <sub>DC2</sub>	(k)	109
DW	(k/')	.30
M <sub>DW</sub>	(k)	218
M <sub>L + IM</sub>	(k)	1295.3

INTERIOR BEAM REACTION TABLE		
		Abut.
R <sub>DC1</sub>	(k)	51.9
R <sub>DC2</sub>	(k)	5.72
R <sub>DW</sub>	(k)	11.44
R <sub>L + IM</sub>	(k)	84.1
R <sub>Total</sub>	(k)	153.5

I: Non-composite moment of inertia of beam section (in.<sup>4</sup>).  
 I': Composite moment of inertia of beam section (in.<sup>4</sup>).  
 S<sub>b</sub>: Non-composite section modulus for the bottom fiber of the prestressed beam (in.<sup>3</sup>).  
 S<sub>b</sub>': Composite section modulus for the bottom fiber of the prestressed beam (in.<sup>3</sup>).  
 S<sub>t</sub>: Non-composite section modulus for the top fiber of the prestressed beam (in.<sup>3</sup>).  
 S<sub>t</sub>': Composite section modulus for the top fiber of the prestressed beam (in.<sup>3</sup>).  
 DC1: Un-factored non-composite dead load (kips/ft.).  
 M<sub>DC1</sub>: Un-factored moment due to non-composite dead load (kip-ft.).  
 DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).  
 M<sub>DC2</sub>: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).  
 DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).  
 M<sub>DW</sub>: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).  
 M<sub>L + IM</sub>: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

FRAMING PLAN AND SUPERSTRUCTURE DETAILS  
STRUCTURE NO. 101-0184

DESIGNED	PRD
CHECKED	WAT
DRAWN	RTG/PRD
CHECKED	ASP

**DLZ** DLZ Illinois, Inc.  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

SHEET NO. 14 OF 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	742	34BR-1	WINNEBAGO	78	49
CONTRACT NO. 64E68					
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT					