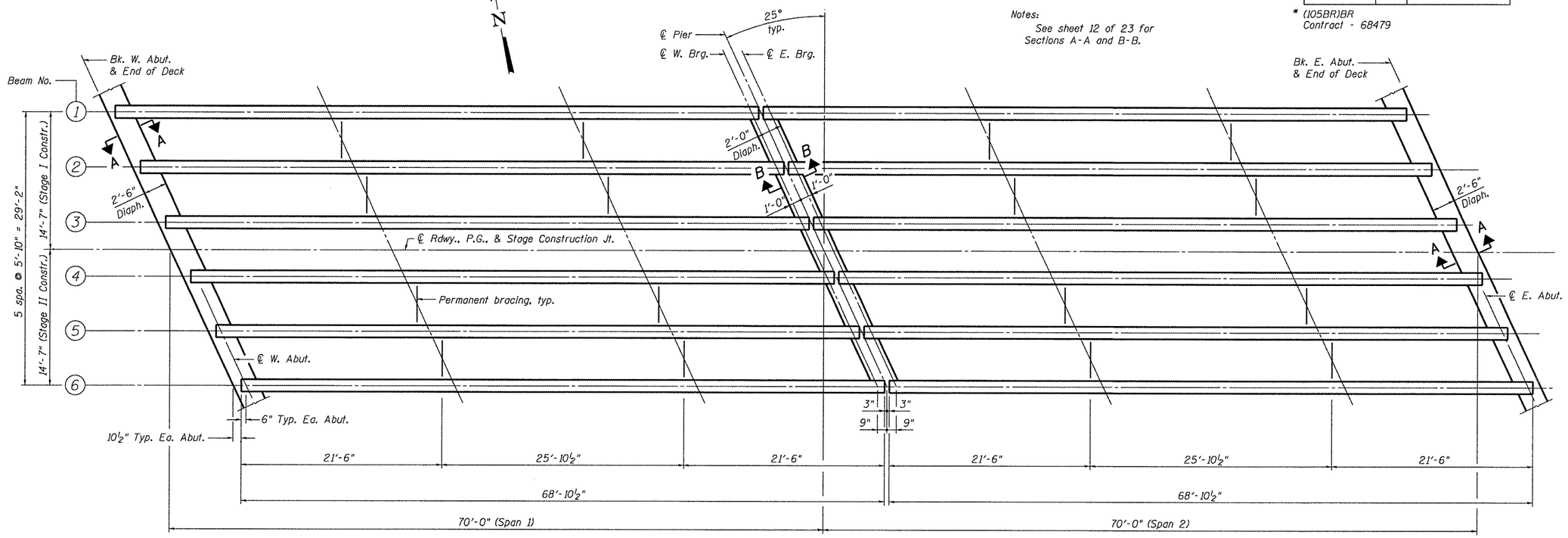
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 645	*	Marshall	71	31
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
23 SHEETS

* (105BR)BR
Contract - 68479



Notes:
See sheet 12 of 23 for Sections A-A and B-B.

- I — Non-composite moment of inertia of beam section ($in.^4$).
- I' — Composite moment of inertia of beam section ($in.^4$).
- S_b — Non-composite section modulus for bottom fiber of the prestressed beam ($in.^3$).
- S_b' — Composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
- S_t — Non-composite section modulus for top fiber of the prestressed beam ($in.^3$).
- S_t' — Composite section modulus for the top fiber of the prestressed beam ($in.^3$).
- $DC1$ — Un-factored non-composite dead load (kips/ft.).
- M_{DC1} — 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_{DC2} — 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 (kip/ft.).
- M_{DW} — Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- M_{LL+Imp} — Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

INTERIOR BEAM MOMENT TABLE

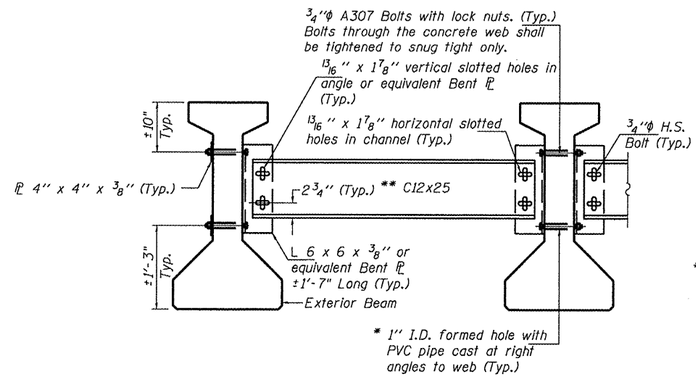
		0.4 Sp. 1 0.6 Sp. 2	Pier
I	($in.^4$)	90956	———
I'	($in.^4$)	286454	———
S_b	($in.^3$)	5153	———
S_b'	($in.^3$)	8988	———
S_t	($in.^3$)	3735	———
S_t'	($in.^3$)	28278	———
$DC1$	(k/')	1.09	———
M_{DC1}	('k)	600	———
$DC2$	(k/')	0.15	0.15
M_{DC2}	('k)	49	88
DW	(k/')	0.30	0.30
M_{DW}	('k)	99	176
M_{LL+Imp}	('k)	755	768

INTERIOR BEAM REACTION TABLE

HL93 Loading

		Abut.	Pier - Span 1 Pier - Span 2
R_{DC1}	(k)	36.8	36.8
R_{DC2}	(k)	3.9	6.5
R_{DW}	(k)	7.7	13.0
R_{LL+Imp}	(k)	73.1	50
R_{Total}	(k)	121.5	106.3

FRAMING PLAN



PERMANENT BRACING DETAILS

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.
Furnishing and erecting all components of the permanent bracing is included with the cost of Furnishing and Erecting Precast Prestressed Concrete I Beams.

* Fabricator shall locate to miss strands within permissible tolerances.

** Alternate C12x30 channels are permitted to facilitate material acquisition. The alternate, if utilized, shall be provided at no extra cost to the Department.

DESIGNED	CEH
CHECKED	CWC
DRAWN	DLH
CHECKED	CEH / CWC

WHKS & CO.
ENGINEERS PLANNERS LAND SURVEYORS
MASON CITY, IOWA DUBUQUE, IOWA AMES, IOWA
E. DUBUQUE, ILLINOIS SPRINGFIELD, ILLINOIS ROCHESTER, MINNESOTA

FRAMING PLAN
IL ROUTE 17 OVER SENACHWINE CREEK
FAP ROUTE 645 - SECTION (105BR)BR
MARSHALL COUNTY
STATION 334+90.00
STRUCTURE NO. 062-0072