

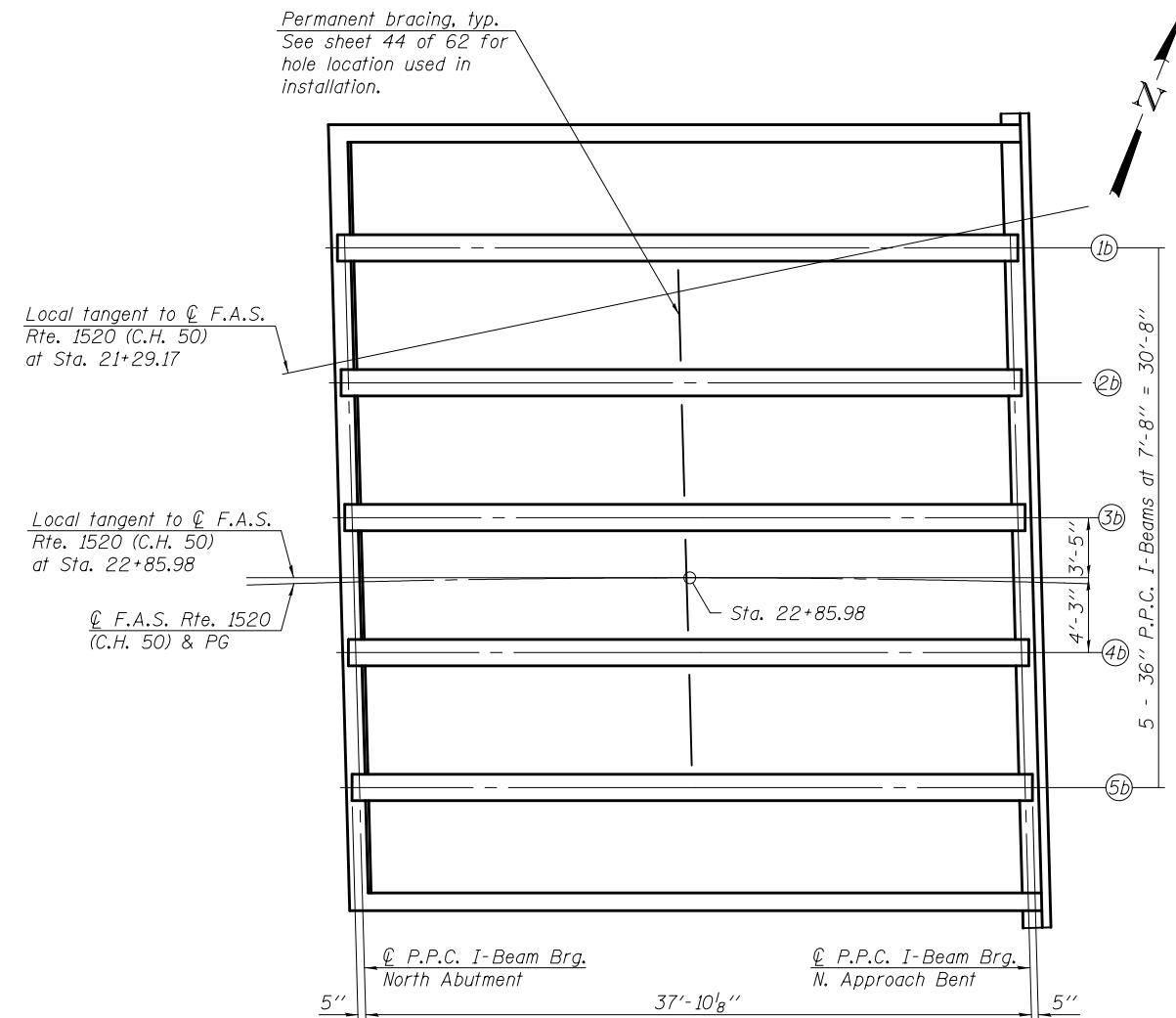
**SOUTH VAULTED ABUTMENT  
FRAMING PLAN**

**SHIM PLATE THICKNESS**

Beam	S. Appr. Bent	S. Abut.
1a	-	-
2a	1/8"	1/4"
3a	-	-
4a	-	-
5a	-	-

INTERIOR BEAM MOMENT TABLE			
		South vaulted abutment span	North vaulted abutment span
I	(in <sup>4</sup> )	48648	48648
I'	(in <sup>4</sup> )	189538	189538
S <sub>b</sub>	(in <sup>3</sup> )	3165	3165
S <sub>b</sub> '	(in <sup>3</sup> )	6166	6166
S <sub>t</sub>	(in <sup>3</sup> )	2358	2358
S <sub>t</sub> '	(in <sup>3</sup> )	36034	36034
DC1	(k/ft)	1.144	1.144
M <sub>DC1</sub>	(k)	110.8	204.8
DC2	(k/ft)	0.200	0.200
M <sub>DC2</sub>	(k)	19.4	35.8
DW	(k/ft)	0.383	0.383
M <sub>DW</sub>	(k)	37.1	68.6
M <sub>L + IM</sub>	(k)	376.6	526.9

INTERIOR BEAM REACTION TABLE			
		South vaulted abutment	North vaulted abutment
R <sub>DC1</sub>	(k)	15.9	21.6
R <sub>DC2</sub>	(k)	2.8	3.8
R <sub>DW</sub>	(k)	5.3	7.2
R <sub>L + IM</sub>	(k)	57.4	67.0
R <sub>Total</sub>	(k)	81.4	99.6



**NORTH VAULTED ABUTMENT  
FRAMING PLAN**

**SHIM PLATE THICKNESS**

Beam	N. Appr. Bent	N. Abut.
1b	-	-
2b	3/8"	3/8"
3b	-	-
4b	-	-
5b	-	-

- 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.).

DESIGNED - NICHOLAS R. BARNETT  
 CHECKED - DEWEY H. COULTAS  
 DRAWN - MICHAEL B. MOSSMAN  
 CHECKED - D.H.C. / N.R.B.

EXAMINED  
 PASSED  
 ACTING ENGINEER OF BRIDGE DESIGN  
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - FEBRUARY 25, 2013  
 REVISED  
 REVISED

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

VAULTED ABUTMENT FRAMING PLAN  
 STRUCTURE NO. 010 - 0289

SHEET NO. 42 OF 62 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	10-4BR	CHAMPAIGN	290	127
CONTRACT NO. 70700				

ILLINOIS FED. AID PROJECT