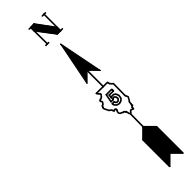
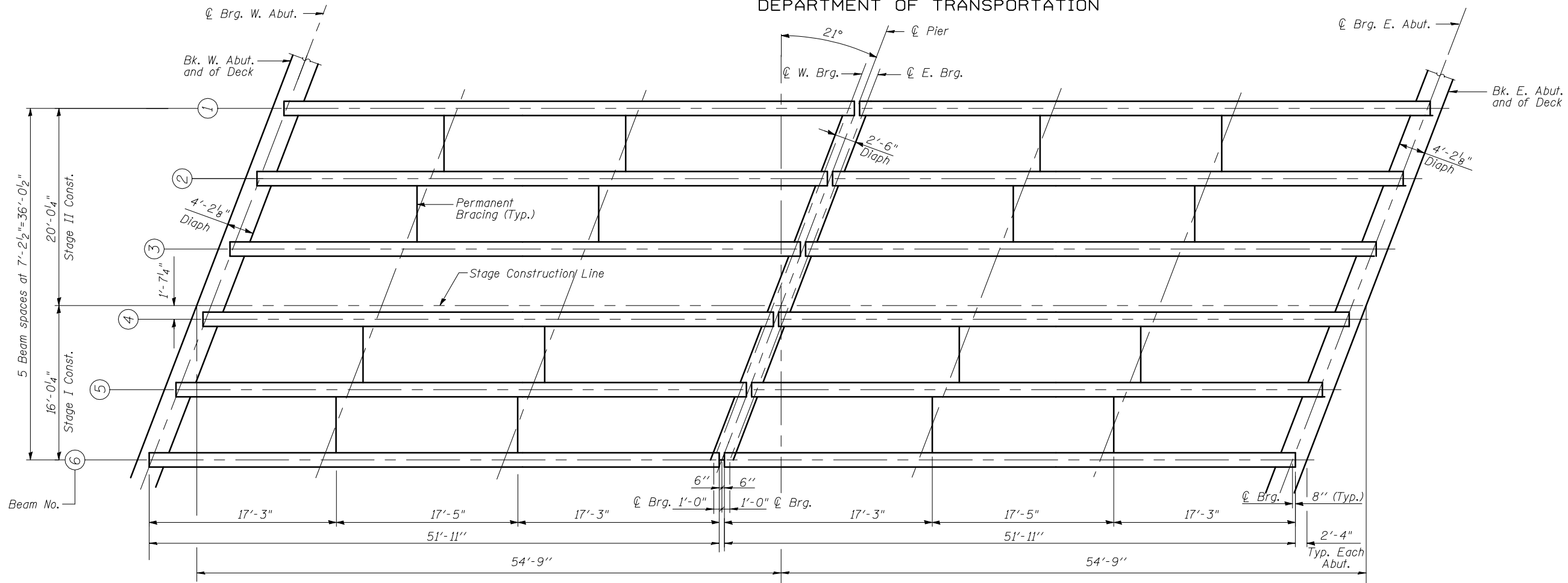


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

INTERIOR BEAM MOMENT TABLE

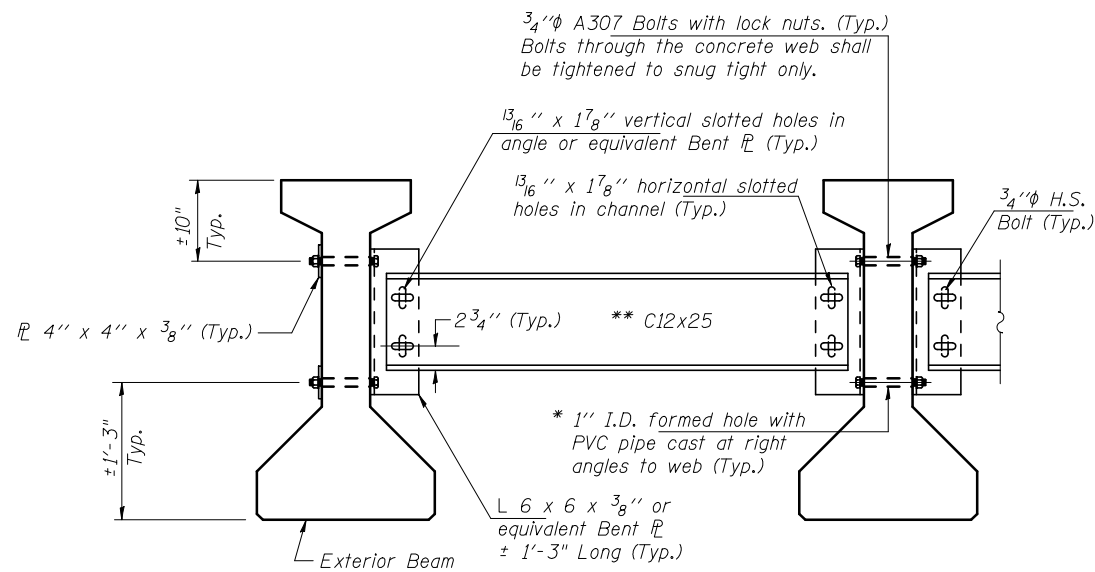
	0.4 Sp. 1	0.6 Sp. 2	Pier 1
I	(in ⁴)	48648	
I'	(in ⁴)	180453	180453
S_b	(in ³)	3165	
S_b'	(in ³)	6007	6007
S_t	(in ³)	2358	
S_t'	(in ³)	30277	30277
$dc1$	(k/')	1.105	
M_{dc1}	('k)	355	
$dc2$	(k/')	0.15	0.15
M_{dc2}	('k)	28	50
DW	(k/')	0.18	0.18
M_{dw}	('k)	34	60
$M_L + IM$	('k)	607	460

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 the 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 the 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 (kips/ft.).
 M_{dw} : Un-factored moment due to long term composite (superimposed future wearing surface only) dead load (kip-ft.).
 $M_L + IM$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

INTERIOR BEAM REACTION TABLE

	Abut.	Pier 1 Span 1	Pier 1 Span 2
R_{dc1}	(k)	28.6	28.6
R_{dc2}	(k)	2.9	4.9
R_{dw}	(k)	7.0	11.6
$R_L + IM$	(k)	73.0	50.4
R_{Total}	(k)	111.5	95.5

*The total R_{dc2} , R_{dw} , and $R_L + IM$ are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier shall be based on the maximum reactions of either span.



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 1/8" 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-beam.

* Fabricator shall locate to miss strands within permissible tolerances.
 ** Alternate C12x30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on lighter section. The alternate, if utilized, shall be provided at no extra cost to the Department.

FRAMING PLAN & PERM. BRACING DETAILS
STRUCTURE NO. 057-0129

SHEET NO. 12 26 SHEETS	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	74	(57-22B-1)BR	Mc LEAN	46	22
			CONTRACT NO. 70721		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

THE UPCHURCH GROUP, INC.