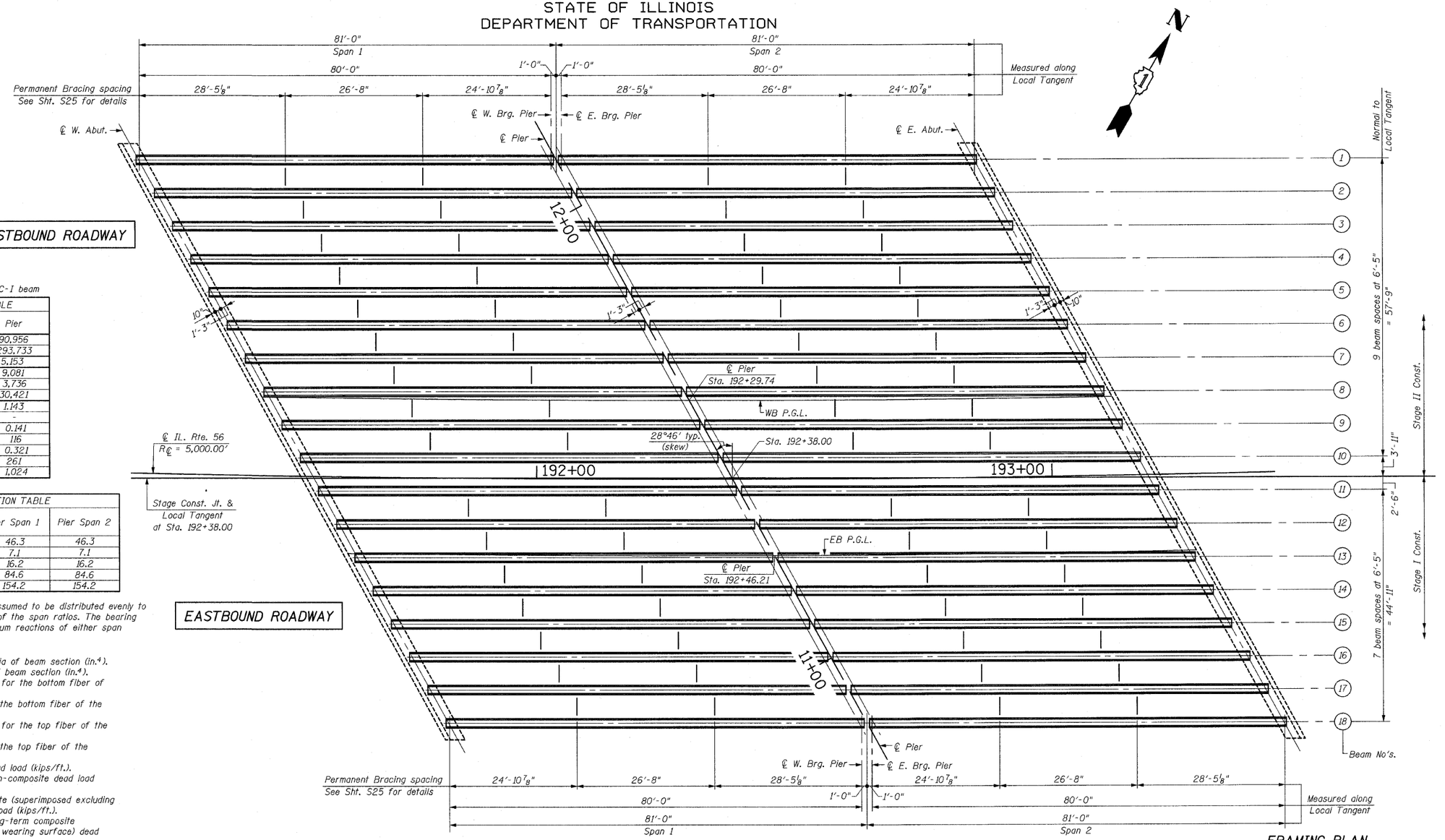
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

Moment table: Symmetrical 2 span PPC-I beam

INTERIOR BEAM MOMENT TABLE			
		0.4 Sp. 1 0.6 Sp 2	Pier
I	(in^4)	90,956	90,956
I'	(in^4)	293,733	293,733
S_b	(in^3)	5,153	5,153
S_b'	(in^3)	9,081	9,081
S_t	(in^3)	3,736	3,736
S_t'	(in^3)	30,421	30,421
$DC1$	(k/')	1.143	1.143
M_{DC1}	('k)	914	-
$DC2$	(k/')	0.141	0.141
M_{DC2}	('k)	65	116
DW	(k/')	0.321	0.321
M_{DW}	('k)	149	261
M_{L+IM}	('k)	999	1,024

INTERIOR BEAM REACTION TABLE				
		Abut's.	Pier Span 1	Pier Span 2
	R_{DC1} (k)	46.3	46.3	46.3
*	R_{DC2} (k)	4.3	7.1	7.1
*	R_{DW} (k)	9.7	16.2	16.2
*	R_{L+IM} (k)	73.5	84.6	84.6
	R_{Total} (k)	133.8	154.2	154.2

*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 is based on the maximum reactions of either span

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 (klps/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.).

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

FRAMING PLAN
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
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SHEET NO. S23	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	229
			CONTRACT NO. 62420		
		ILLINOIS FED. AID PROJECT			