

INTERIOR BEAM MOMENT TABLE		
0.5 Span		
$I_s$	(in <sup>4</sup> )	11,174
$I_c(n)$	(in <sup>4</sup> )	28,812
$I_c(3n)$	(in <sup>4</sup> )	20,915
$S_s$	(in <sup>3</sup> )	615
$S_c(n)$	(in <sup>3</sup> )	896
$S_c(3n)$	(in <sup>3</sup> )	806
DC1	(k/')	0.98
M <sub>DC1</sub>	(k)	558
DC2	(k/')	0.45
M <sub>DC2</sub>	(k)	256
DW	(k/')	0.38
M <sub>DW</sub>	(k)	216
$M_L + IM$	(k)	1,050
$M_u$ (Strength I)	(k)	3,179
$\phi_r M_n$	(k)	4,438
$f_s$ DC1	(ksi)	10.89
$f_s$ DC2	(ksi)	3.82
$f_s$ DW	(ksi)	3.22
$f_s$ 1.3(L+IM)	(ksi)	18.27
$f_s$ (Service II)	(ksi)	35.49
$f_s$ (Total)(Strength I)	(ksi)	46.75
$V_r$	(k)	25.1

INTERIOR BEAM REACTION TABLE		
Abut.		
R <sub>DC1</sub>	(k)	33
R <sub>DC2</sub>	(k)	15
R <sub>DW</sub>	(k)	10
$R_L + IM$	(k)	92
R <sub>Total</sub>	(k)	150

**TOP OF BEAM ELEVATIONS  
(FOR FABRICATION ONLY)**

Beam No.	☉ Brg. N. Abut.	☉ Brg. S. Abut.
Girder 1	670.97	671.29
Girder 2	671.21	671.53
Girder 3	671.45	671.78
Girder 4	671.69	672.02
Girder 5	671.93	672.26
Girder 6	672.17	672.51
Girder 7	672.41	672.75
Girder 8	672.65	672.99
Girder 9	672.89	673.24
Girder 10	673.13	673.48
Girder 11	673.37	673.72

$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in<sup>4</sup> and 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</sub> + IM: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).  
M<sub>u</sub> (Strength I): Factored design moment (kip-ft.).  
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$   
 $\phi_r M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).  
 $f_s$  (Service II): Sum of stresses as computed from the moments below (ksi).  
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_L + IM$   
 $f_s$  (Total)(Strength I): Sum of stresses as computed from the moments below (ksi).  
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$   
V<sub>r</sub>: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



FILE NAME =	USER NAME =	DESIGNED - JY	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>BEAM MOMENT AND REACTION TABLE STRUCTURE NO. 049-0199</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
*FILEL*		CHECKED - WPM	REVISED -			330	128R-2-F	LAKE	28	18	
		DRAWN - JY	REVISED -			CONTRACT NO. 60P54					
		CHECKED - WPM	REVISED -			ILLINOIS FED. AID PROJECT					
				SHEET NO. 28 OF 43 SHEETS							