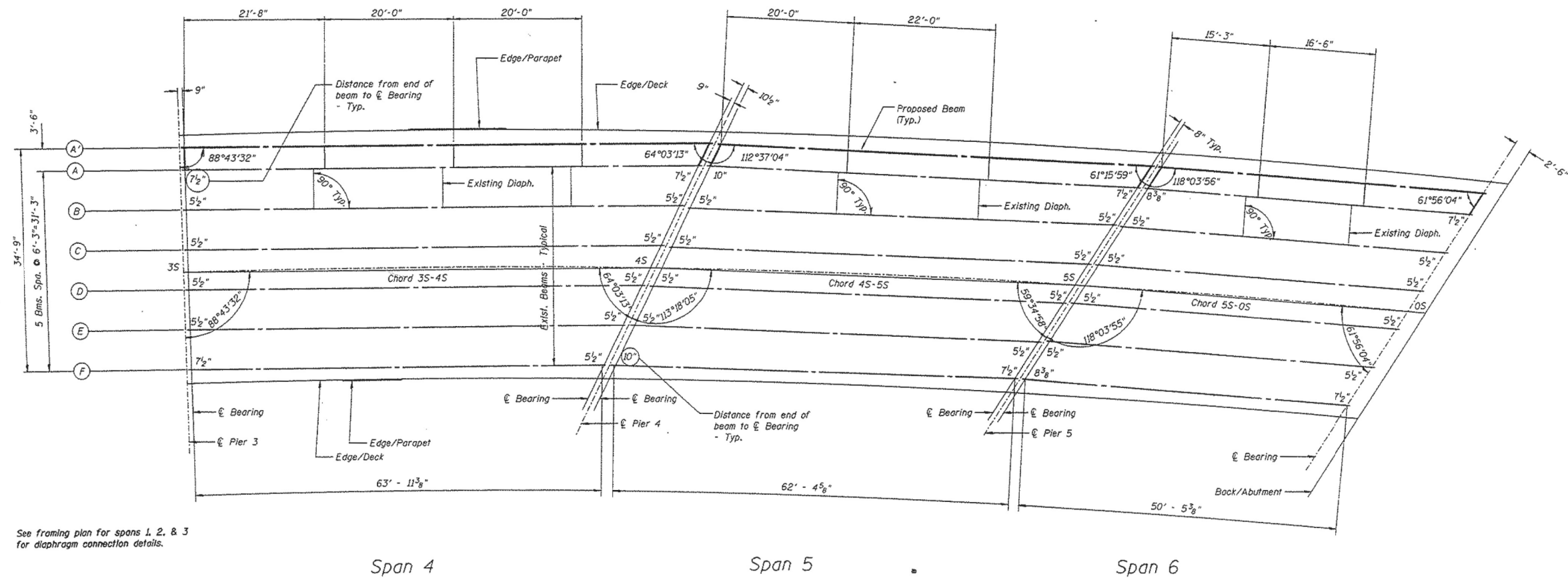


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. S-12 SHEETS S-48
D. O. I.	F. A. U. 2746	COOK	303	117	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contractor shall exercise extreme care to not damage the existing beams during removal of the concrete deck.  
Saw cutting of existing slab over stringers will not be allowed.



See framing plan for spans 1, 2, & 3 for diaphragm connection details.

Span 4

Span 5

Span 6

	Sp. 4	Sp. 5	Sp. 7	Sp. 12
Similar for Spans	2, 3, 8	-	1, 9, 10	5, 11
Sections	W33x221	W27x178	W33x118	W27x84
$I_s$ (in <sup>4</sup> )	12800	6990	5900	2850
$I_c$ (in <sup>4</sup> )	22410	13503	13337	7404
$S_s$ (in <sup>3</sup> )	755	503	359	214
$S_c$ (in <sup>3</sup> )	942	929	498	313
$Z$ (in <sup>3</sup> )	855	567	415	244
$I_p$ (K/ft.)	0.643	0.600	0.540	0.506
$M_p$ (K)	539	335	172	168
$s_p$ (K/ft.)	0.488	0.488	0.488	0.488
$M_s$ (K)	409	272	155	162
$M_t$ (K)	483	373	253	262
$M$ (Imp) (K)	117	97	72	74
$S_y(M \cdot I)$ (K)	1000	784	544	561
$M_o$ (K)	2533	1809	1131	1159
$M_u$ (K)	2632	1960	1043	1273
$f_s$ non-comp (r.s.i.)	8.6	8.0	5.7	9.5
$f_s$ comp (r.s.i.)	14.4	13.6	9.9	16.4
$f_s$ (k-l) (r.s.i.)	12.9	14.6	13.1	21.5
$f_s$ (Overload) (r.s.i.)	27.3	28.2	23.1	37.9
$f_s$ (Total) (r.s.i.)	-	-	-	-
$V_R$ (K)	33	33	31	32

	Sp. 4	Sp. 5	Sp. 7	Sp. 12
Similar for Spans	2, 3, 8	-	1, 9, 10	5, 11
Sections	W33x221	W27x178	W33x118	W27x84
$R_E + R_S$ (K)	46.5	36.4	25.9	25.7
$R_L$ (K)	26.6	25.8	24.5	24.6
Imp. (K)	6.5	6.7	7.0	7.0
$R$ (Total) (K)	79.4	68.9	57.4	57.3

$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $f_s$  (Total & Overload).  
 $I_c$  and  $S_c$  are the moment of inertia and section modulus of the composite section used in computing  $f_s$  (Total & Overload).  
 $V_R$  is the maximum live load + impact shear range in span.  
 $Z$  is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.  
 $M_o$  (Applied Moment) =  $1.3[M_p + M_s + \frac{1}{2}M_t + I]$ .  
 $M_u$  is the Full Plastic Moment Capacity for Compact, Braced section.  
 $f_s$  (Overload) is the sum of the stresses due to  $M_p + M_s + \frac{1}{2}M_t + I$ .  
 $f_s$  (Total) is the sum of the stresses due to  $1.3[M_p + M_s + \frac{1}{2}M_t + I]$ .

Note: For new beam dimensions and other data, see previous sheet.

DESIGNED	JAA
CHECKED	ELD
DRAWN	JAA
CHECKED	ELD

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
28 N. MICHIGAN AVENUE SUITE 2000 CHICAGO, ILLINOIS 60601  
JOB NO. 124

FRAMING PLAN SPANS 4, 5, & 6  
BRIDGE REHABILITATION ILLINOIS ROUTE 171  
SOUTHBOUND  
OVER JOLIET RD. & AT&SF R.R.  
FAU 2746 SECTION 606-628 VB  
STATION 77+49.4  
COOK COUNTY  
STRUCTURE NO. 016-1005 S.B.

**benesch**  
engineers · scientists · planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10093

FILE NAME =	USER NAME = tjenicke	DESIGNED - CMK	REVISED -
		CHECKED - JAW	REVISED -
		DRAWN - CMK	REVISED -
		CHECKED - JAW	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION 7 OF 7  
STRUCTURE NO. 016-1005

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	326
CONTRACT NO. 60J16				
ILLINOIS FED. AID PROJECT				

SHEET NO. SBX7 OF SBX7 SHEETS

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6/23/2014