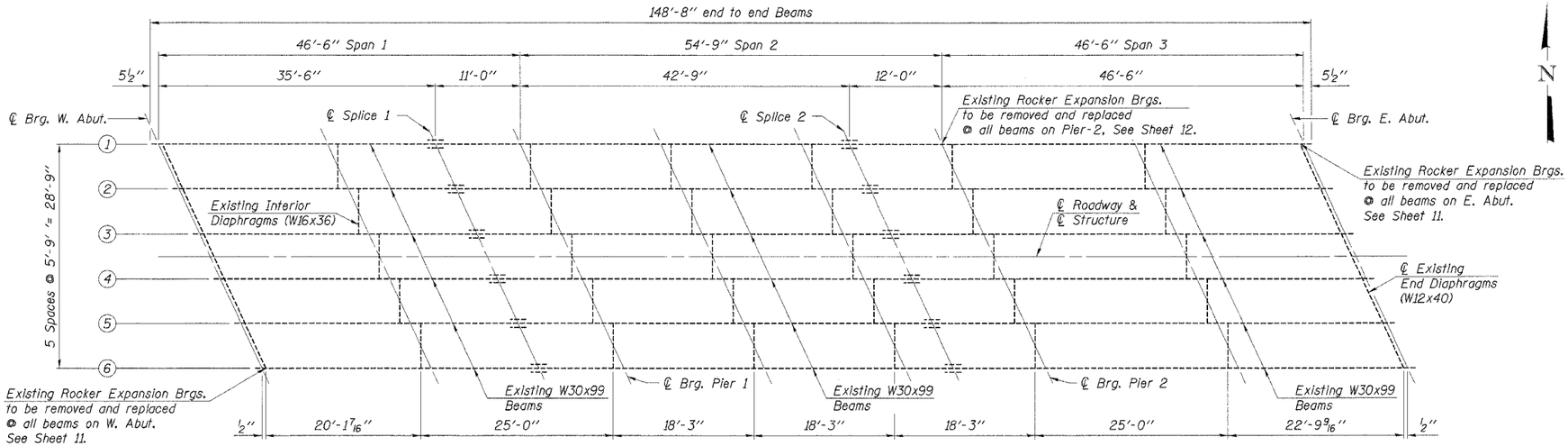
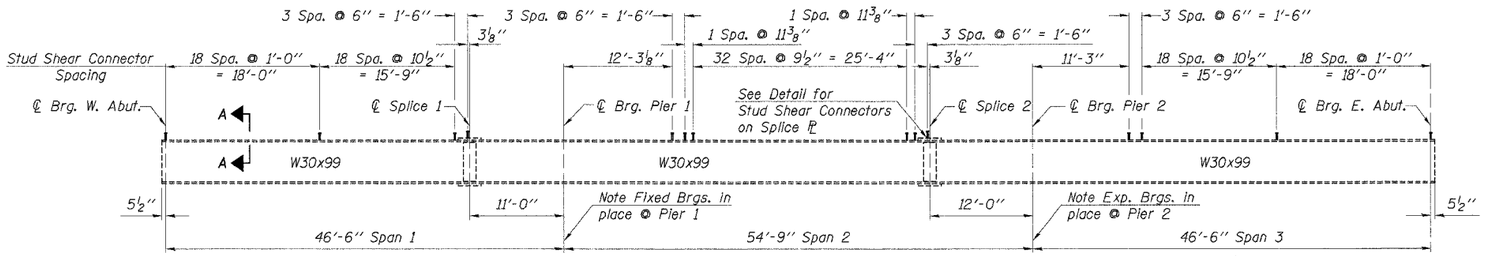
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 16	04-00209 -01-BR	PIATT	18	13
	ILLINOIS			

CONTRACT NO. 91339
Sheet 10 of 15



FRAMING PLAN



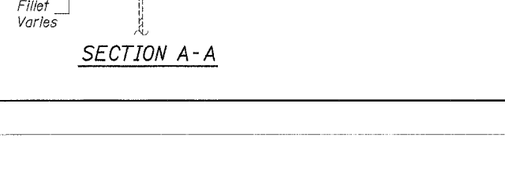
ELEVATION

(Showing Stud Shear Connector Spacing)

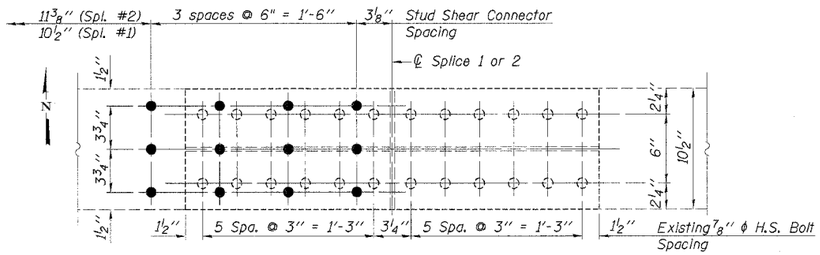
TOP OF BEAM ELEVATIONS

(For Information Only - Computed from Survey Elevations shot @ Bottom of Flange or Splice Plates.)

	℄ Brg. W. Abut.	℄ Splice 1	℄ Brg. Pier 1	℄ Splice 2	℄ Brg. Pier 2	℄ Brg. E. Abut.
Beam 1	661.86	661.85	661.87	661.83	661.90	662.00
Beam 2	661.98	661.94	661.95	661.95	662.00	662.09
Beam 3	662.05	661.97	662.01	661.99	662.03	662.15
Beam 4	662.04	661.99	662.01	662.00	662.05	662.14
Beam 5	661.99	661.93	661.97	661.97	662.00	662.09
Beam 6	661.90	661.82	661.85	661.86	661.89	661.95



SECTION A-A



FLANGE SPLICE PLATE DETAIL

Showing location of new ¾" granular or solid flux filled headed studs on existing splice plate.

INTERIOR BEAM MOMENT TABLE

		0.4 Span 1 or 0.6 Span 3	Pier	0.5 Span 2
Is	(in^4)	3,990	3,990	3,990
Ic (n)	(in^4)	11,293	———	11,293
Ic (3n)	(in^4)	8,295	———	8,295
Ss	(in^3)	269	269	269
Sc (n)	(in^3)	411	———	411
Sc (3n)	(in^3)	370	———	370
M℄	(k/ft.)	0.983	1.196	0.983
M℄	('k)	154	299	115
s℄	(k/ft.)	0.213	———	0.213
Ms℄	('k)	37	———	31
M℄	('k)	253	137	259
M (Imp)	('k)	73	38	74
5/3[M℄+M(Imp)]	('k)	543	292	555
Ma	('k)	954	768	911
Mu	('k)	1,377	———	1,377
fs℄ non-comp	(k.s.i.)	6.9	13.3	5.1
fs℄ (comp)	(k.s.i.)	1.2	———	1.0
fs 5/3(M℄+Imp)	(k.s.i.)	15.9	13.0	16.2
fs (Overload)	(k.s.i.)	24.0	26.3	22.3
fs (Total)	(k.s.i.)	———	34.2	———
VR	(k)	41.2	———	41.2

INTERIOR BEAM REACTION TABLE

		Abut.	Pier
R℄	(k)	21.4	67.0
R℄	(k)	29.3	35.1
Imp.	(k)	8.5	9.9
R (Total)	(k)	59.2	112.0

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads.

VR is the maximum Live Load + Impact shear range in the composite portion of the span.

Ma (Applied Moment)$=1.3[M℄ + Ms℄ + 5/3(M℄ + M_{Imp})]$.

The plastic moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1

fs (Overload) is the sum of the stresses due to $M℄ + Ms℄ + 5/3(M℄ + M_{Imp})$.

fs (Total) (Non-compact section) is the sum of the stresses due to $1.3[M℄ + Ms℄ + 5/3(M℄ + M_{Imp})]$.

REHABILITATION PROJECT

DESIGNED	A.R.K.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	F.J.S.

STRUCTURAL STEEL

C.H. 16 OVER LAKE FORK
SECTION 04-00209-01-BR
PIATT COUNTY
STATION 29+55

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CONSULTING ENGINEERS

JOB NO.: 0418
FILE: 0418STEEL.DGN
DATE: 05-23-05