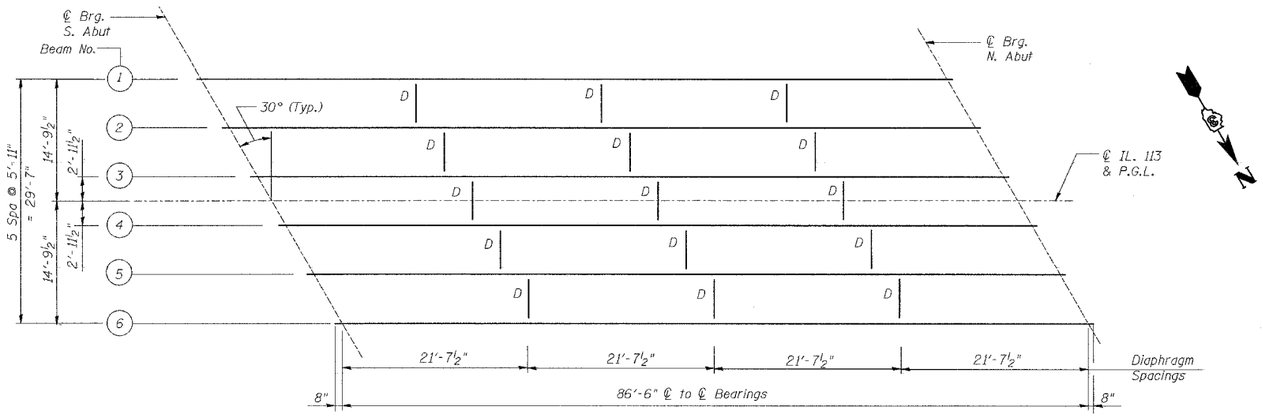
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

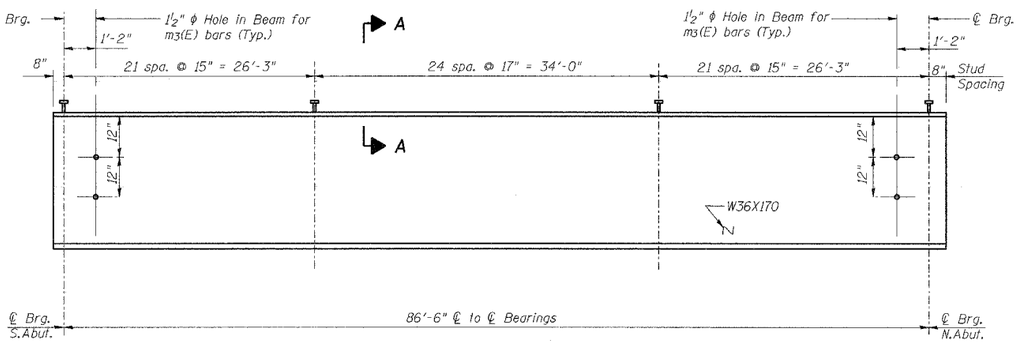
	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 113	109BR. N	KANKAKEE COUNTY	58	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
14 SHEETS

CONTRACT # 66410

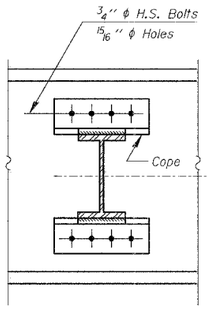


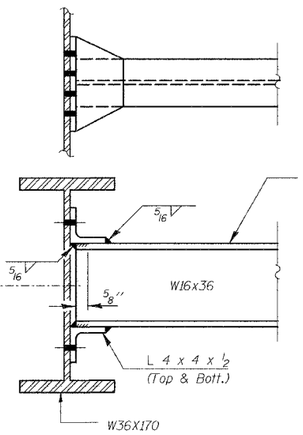
FRAMING PLAN



BEAM ELEVATION

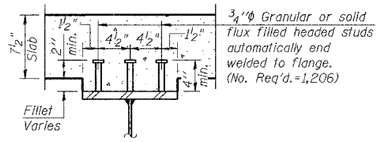
"NTR" denotes to which notch toughness requirements are applicable.





DIAPHRAGM D

(15 Required)



¾"ϕ Granular or solid flux filled headed studs automatically end welded to flange. (No. Req'd.=1,206)

SECTION A-A

INTERIOR GIRDER MOMENT TABLE		
		Sp. 1
Is	(in⁴)	10500
Ic (n)	(in⁴)	24703
Ic (3n)	(in³)	17811
Ss	(in³)	580
Sc (n)	(in³)	809.6
Sc (3n)	(K/ft.)	724.5
Z	('K)	-
℘	(K/')	0.74
M℘	('K)	692.1
s℘	('K)	0.42
Ms℘	('K)	392.9
M½	('K)	689.7
M (Imp)	('K)	163.1
⅘s(M½+I)	('K)	1421.3
Ma	('K)	3258.2
Mu	('K)	4331.2
fs℘ non-comp	(ksi)	14.3
fs℘ (comp)	(ksi)	6.5
fs⅘s(½+I)	(ksi)	21.1
fs (Overload)	(ksi)	41.5
fs (Total)	(ksi)	-
VR	(K)	42.8

INTERIOR GIRDER REACTION TABLE		
		N.Abut. & S.Abut.
R℘	(K)	* 76.4
R½	(K)	38.4
Imp.	(K)	9.1
R (Total)	(K)	123.9

* Dead Load Reaction includes the weight of Abutment Diaphragm & Bridge Approach Pavement.

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

Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).

VR 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.

Ma (Applied Moment)=1.3[M℘ + Ms℘ + ⅘s(M½ + I)].

Mu is the Full Plastic Moment Capacity for Compact, Braced section.

fs (Overload) is the sum of the stresses due to M℘ + Ms℘ + ⅘s(M½ + I).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[M℘ + Ms℘ + ⅘s(M½ + I)].

*TOP OF BEAM ELEVATIONS

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
N. Abutment	590.02	590.12	590.21	590.20	590.09	589.98
S. Abutment	589.98	590.09	590.20	590.21	590.12	590.02

* For Fabrication only

DESIGNED	M.R./R.A.
CHECKED	H.T.
DRAWN	J.S.
CHECKED	H.T./M.R.

Notes:

Two hardened washers shall be required over all oversize holes for diaphragms.

STRUCTURAL STEEL

IL. 113 OVER WILEY CREEK (PUBLIC WATERS)
FAS ROUTE 1317 (IL 113), SECTION 109BR, N
KANKAKEE COUNTY
STATION 260+00.00
STRUCTURE NO. 046-0137

SCALE: NONE DATE: AUGUST, 2005

Soodan

Soodan & Associates, Inc.
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Chicago, Illinois 60602