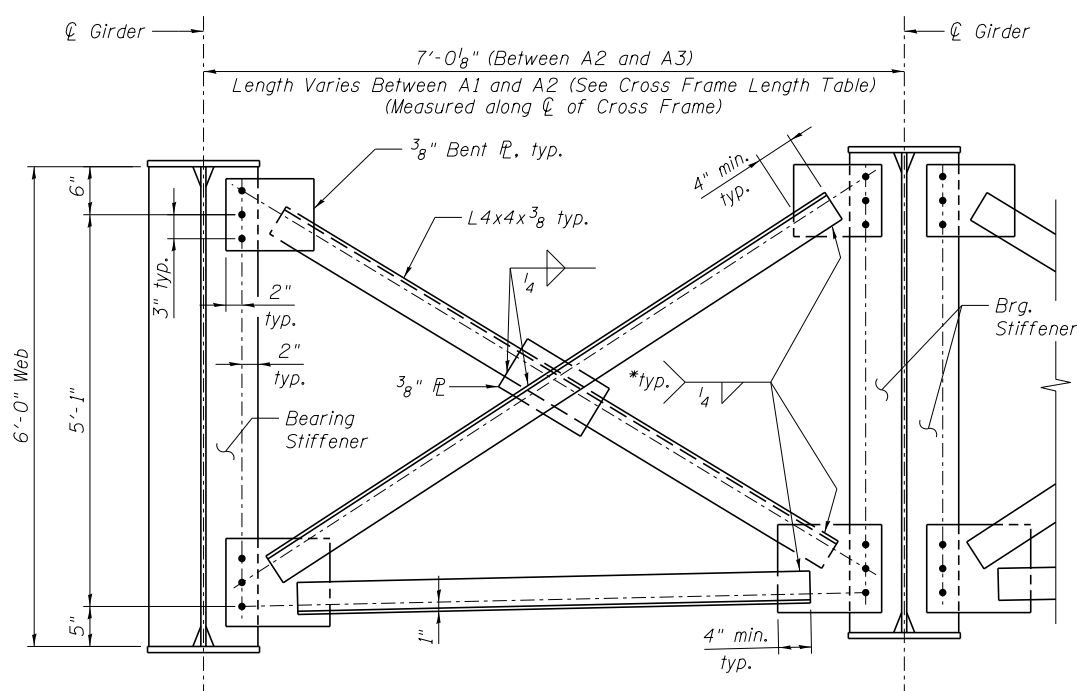


**TYPE CF1 & CF1A-CF1G AND
TYPE CF5 & CF5A-CF5C CROSS FRAME**

(No. Req'd CF1 = 7) (No. Req'd CF5 = 3)
(No. Req'd CF1A-CF1G = 1 each) (No. Req'd CF5A-CF5C = 1 each)



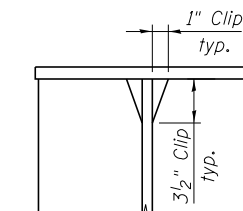
**TYPE CF2, CF2A & CF2B
CROSS FRAME AT PIERS 5 & 6**

(No. Req'd CF2 = 2)
(No. Req'd CF2A & CF2B = 1 each)

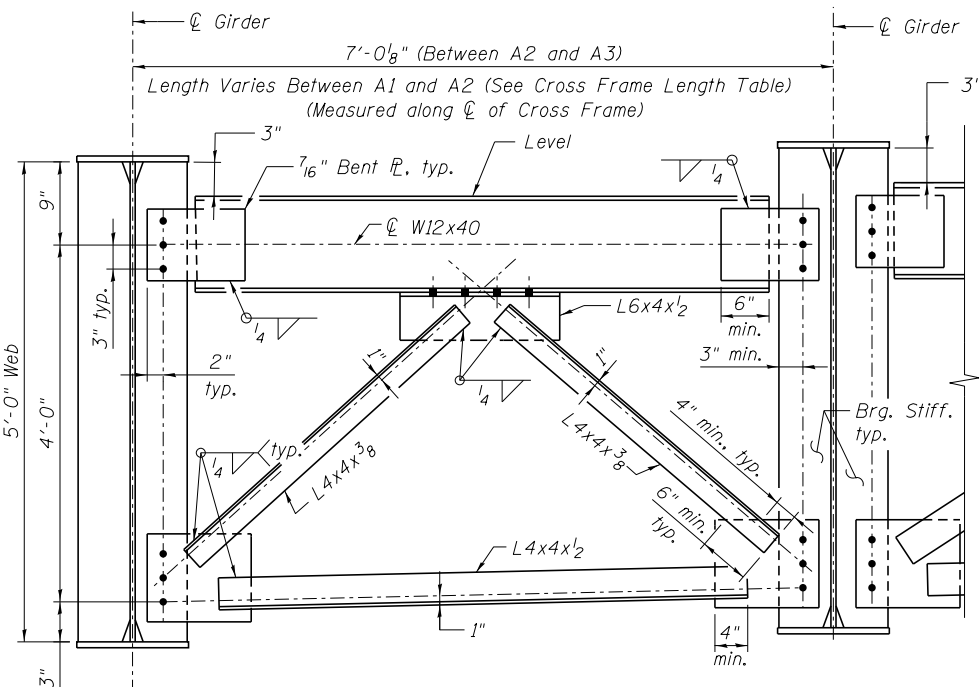
CROSS FRAME LENGTH

Cross Frame	Length
CF1	7'-0"
CF1A	9'-1 1/4"
CF1B	8'-10"
CF1C	8'-6 3/4"
CF1D	8'-0"
CF1E	7'-8 5/8"
CF1F	7'-5 1/4"
CF1G	7'-1 7/8"
CF2	7'-0 1/8"
CF2A	8'-3 1/4"
CF2B	6'-10 1/2"
CF3	7'-0 1/8"
CF3A	9'-4 1/2"
CF4	7'-0 1/8"
CF4A	4'-1 1/8"
CF5	7'-0"
CF5A	6'-7 1/8"
CF5B	5'-9 7/8"
CF5C	4'-11 3/4"

(Measured along \bar{C} of Cross Frame)

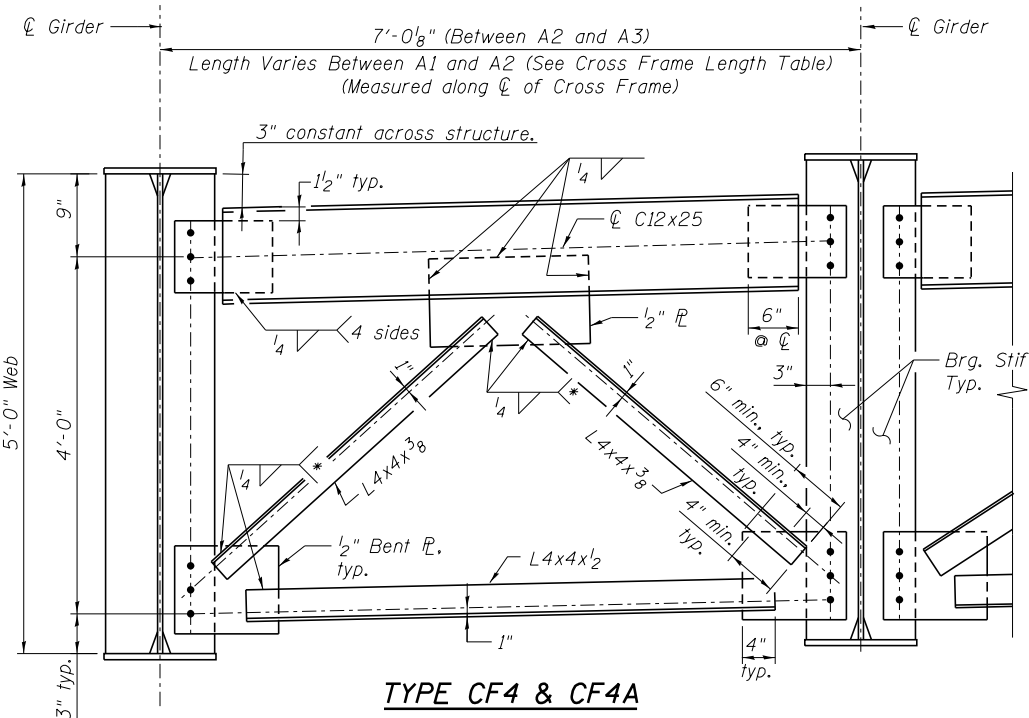


DETAIL 1
(Typical top & bottom flanges)



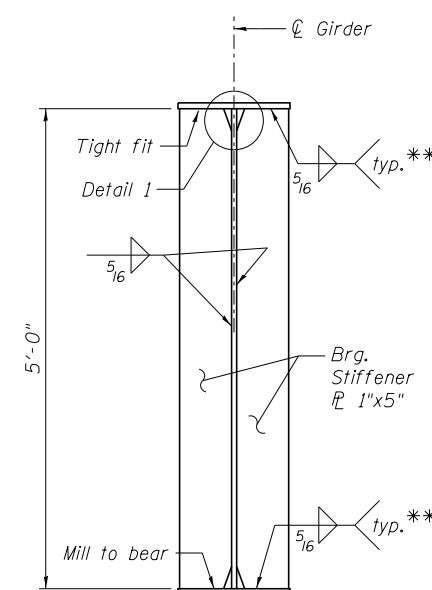
**TYPE CF3 & CF3A
CROSS FRAME AT PIER 4S**

(No. Req'd CF3 & CF3A = 1 each)

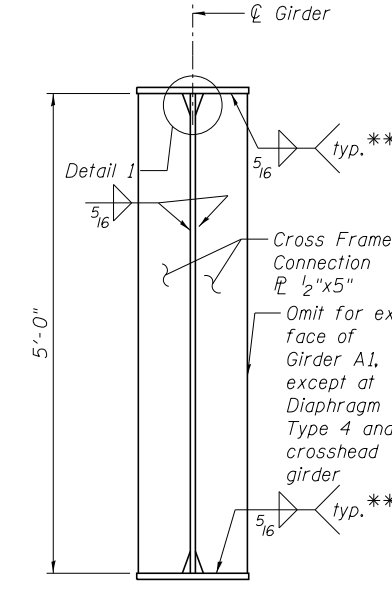


**TYPE CF4 & CF4A
CROSS FRAME AT PIER 7N**

(No. Req'd CF4 & CF4A = 1 each)



BEARING STIFFENER
(No. of Plates Required = 16)



CONNECTION PLATE DETAIL
(No. of Plates Req'd = 33)

NOTES:

- All cross frames between girders shall be installed as steel is erected and secured with erection pins and bolts. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.
- Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 3/4" ϕ , holes 15/16" ϕ . Two hardened washers required for each set of oversized holes.
- See Sheet SD67 for Cross Frame Connection Detail to Existing Steel.

* Fillet weld angles along 3 sides on one face of gusset plate.
** Terminate weld 1/4" from edges of stiffener flange.

FILE NAME =	USER NAME = ksnider	DESIGNED - DTS	REVISIONS -
		CHECKED - MJF	REVISIONS -
		DRAWN - KMS	REVISIONS -
		CHECKED - KMP	REVISIONS -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-038B-R	COOK	821	431
CONTRACT NO. 60J16			ILLINOIS FED. AID PROJECT	

Y:\chicago\100005\10093\Eng_Docs\Phase_1\11\SN_016-2456-2457-1st_Ave.-over_Des_Plans-River_Valley\Final\0162457-Final\0162457-Steel_Cross-Frame_Details.dgn 3:49:14 PM 8/6/2014