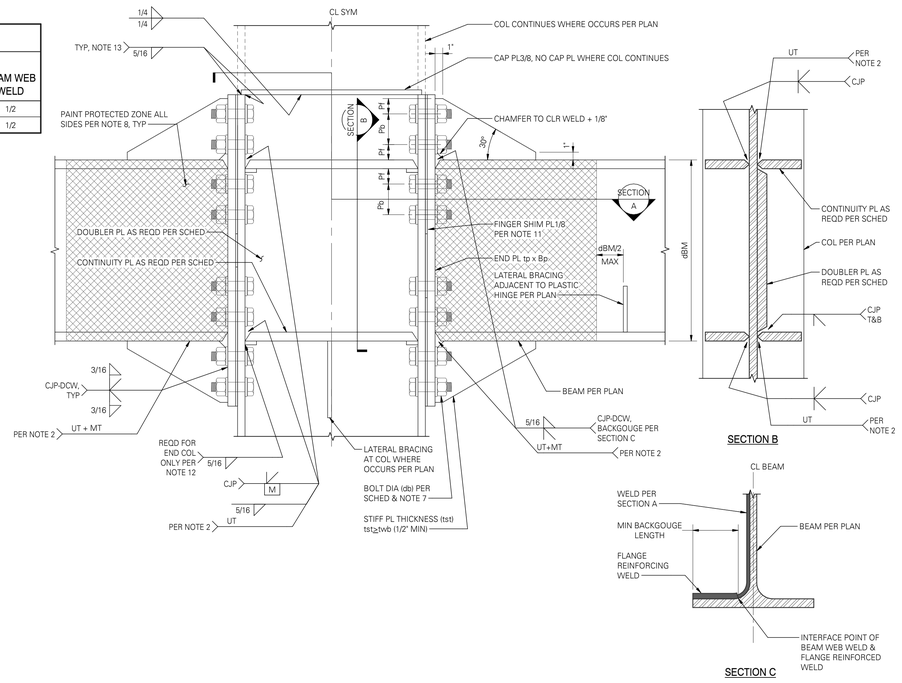
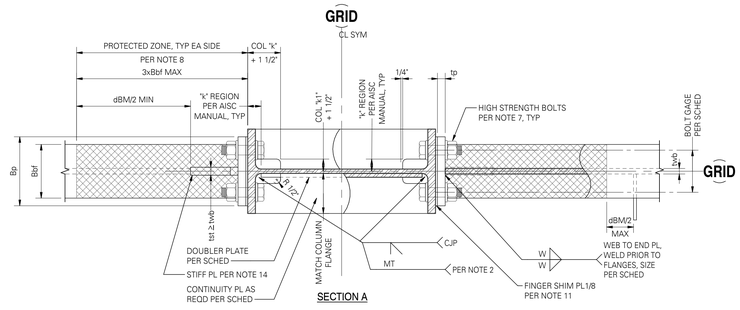
Anatomtc Steel Detailing TRON
Received: 07/13/2023

SPECIAL MOMENT FRAME (8ES) CONNECTION SCHEDULE										
MARK	STIFFENED END PLATE (8ES)					COLUMN STIFFENERS			BOLTS (A490)		BEAM WEB WELD
	BEAM	tp	Bp	Pf	Pb	COLUMN	DOUBLER PLATES	CONTINUITY PLATES	DIA	GAGE	
SMFBES1	W21x122	1 1/2"	13 1/2"	2 1/2"	4"	W12x136	3" THICK	2" THICK	1 3/8"	5 1/2"	1/2
SMFBES2	W21x122	1 1/2"	13 1/2"	2 1/2"	4"	W12x136	3" THICK	1 1/2" THICK	1 3/8"	5 1/2"	1/2

NOTES PER 16/SD.6.50





6 SPECIAL MOMENT FRAME - EIGHT BOLT STIFFENED EXTENDED END PLATE (8ES) CONNECTION

SCALE: 1 1/2" = 1'-0" (05303AM)

SPECIAL MOMENT FRAME (4ES) CONNECTION SCHEDULE										
MARK	STIFFENED END PLATE (4ES)				COLUMN STIFFENERS			BOLTS (A490)		BEAM WEB WELD	DOUBLER PL FILLET WELD
	BEAM	tp	Bp	Pf	COLUMN	DOUBLER PLATES	CONTINUITY PLATES	DIA	GAGE	W	D
SMF1	W14x48	1 1/4"	9"	2 1/2"	W12x106	3/4" THICK	1/2" THICK	1 3/8"	5 1/2"	3/8	1
SMF2	W14x53	1 1/4"	9"	2 1/2"	W12x	3/4" THICK	1/2" THICK	1 3/8"	5 1/2"	7/16	1
SMF3	W14x53	1 1/4"	9"	2 1/2"	W10x88	1" THICK	1/2" THICK	1 1/4"	5 1/2"	5/16	1 3/8
SMF4	W18x	1 1/4"	9"	2 1/2"	W12x106	3/4" THICK	3/8" THICK	1 3/8"	5 1/2"	7/16	1
SMF5	W21x62	1 1/4"	9"	2 1/2"	W12x106	3/4" THICK	1/2" THICK	1 1/4"	5 1/2"	7/16	1
SMF6	W14x48	1 1/4"	9"	2 1/2"	W12x120	5/8" THICK	3/8" THICK	1 3/8"	5 1/2"	3/8	7/8
SMF7	W14x48	1 1/4"	9"	2 1/2"	W12x152	1/2" THICK	3/8" THICK	1 3/8"	5 1/2"	3/8	3/4
SMF8	W14x48	1 1/4"	9"	2 1/2"	W12x96	5/8" THICK	1" THICK	1 3/8"	5 1/2"	3/8	7/8
SMF9	W14x53	1 1/4"	9"	2 1/2"	W12x96	1 1/4" THICK	1 1/4" THICK	1 3/8"	5 1/2"	3/8	1 3/4
SMF10	W14x48	1 1/4"	9"	2 1/2"	W8x67	1 1/2" THICK	2" THICK	1 3/8"	5 1/2"	3/8	2
SMF11	W12x	1 1/4"	9"	2 1/2"	-	3/4" THICK	1/2" THICK	1 1/4"	5 1/2"	3/8	1

PREQUALIFIED STIFFENED END PLATE MOMENT CONNECTION NOTES:

1. SPECIAL MOMENT FRAME (SMF) CONNECTION (4ES) SHALL COMPLY WITH AISC 358-10, CHAPTER 6. ADDITIONAL INFORMATION PER STRUCTURAL GENERAL NOTES AND STEEL SEISMIC PROVISIONS.

2. QUALITY CONTROL (SHOP AND FIELD QC), QUALITY ASSURANCE (SPECIAL INSPECTION QA) AND NONDESTRUCTIVE TESTING (NDT) SHALL BE IN ACCORDANCE WITH AISC 341-10, CHAPTER J. ULTRASONIC (UT) TESTING IS REQUIRED ON 100% OF ALL CJP WELDS. MAGNETIC PARTICLE (MT) TESTING IS REQUIRED ON 25% OF ALL "DEMAND CRITICAL WELDS" (DCW) AND 100% MT TESTING IS REQUIRED AT THE COLUMN "x" AREA AFTER WELDING DOUBLER PLATE. MT TESTING OF THE COLUMN WEB IS REQUIRED WITHIN 2" OF THE DOUBLER PLATE WELD. AT OTHER LOCATIONS TESTING IS REQUIRED BY AISC 341-10, SECTION J6.2. REDUCTION OF NDT REQUIREMENTS MAY BE PER AISC 341-10, SECTIONS J6.2g AND h.

3. ALL CONNECTION PLATES SHALL BE Fy = 50KSI MINIMUM YIELD.

4. WELDING PROCEDURES AND FILLER METALS SHALL BE IN ACCORDANCE WITH AISC 341-10, SECTIONS A3.4 AND I2.3.

5. WELD DENOTED AS "DEMAND CRITICAL WELD" (DCW), SHALL BE MADE WITH FILLER METAL CONFORMING TO THE REQUIREMENTS OF AISC 341-10, SECTION A3.4b.

6. METAL BACKING BARS USED IN CJP GROOVE WELD SHALL BE PERMITTED ONLY WHERE SHOWN AND SHALL BE REMOVED. BACKGOUGED TO SOUND METAL, AND REINFORCED WITH A CONTINUOUS 5/16" FILLET WELD.

7. ALL BOLTS SHALL BE PRE-TENSIONED HIGH-STRENGTH BOLTS CONFORMING TO ASTM A490. TWIST-OFF TYPE TENSION CONTROL ASSEMBLIES OF EQUIVALENT MECHANICAL PROPERTIES MAY BE SUBSTITUTED. FAYING SURFACES FOR PREQUALIFIED BOLTED END PLATE MOMENT CONNECTIONS ARE PERMITTED TO BE COATED WITH COATING NOT TESTED FOR SLIP RESISTANCE, OR WITH COATINGS WITH A SLIP COEFFICIENT LESS THAN THAT OF A CLASS A FAYING SURFACE.

8. BEAM REGIONS DESIGNATED AS "PROTECTED ZONE" SHALL BE DISTINCTLY MARKED WITH CONTRASTING PAINT OR OTHER ACCEPTABLE MEANS. WELDED STUDS, DRILLED, BORED OR BURNED-IN HOLES FOR BOLTS, DRIVEN PINS OR OTHER ATTACHMENTS USED FOR CONSTRUCTION ARE PROHIBITED WITHIN THE "PROTECTED ZONE". ANY DISCONTINUITIES CREATED BY FABRICATION OR ERECTION OPERATIONS WITHIN THE "PROTECTED ZONE" SHALL BE REPAIRED AS REQUIRED BY DCI ENGINEERS.

9. NON-FUSIBLE BACKING IS PERMITTED AT CONTRACTOR'S OPTION IN ACCORDANCE WITH AISC 358-10, SECTION 3.3.5.

10. WELD (RUN-OFF) TAB REMOVAL AND SURFACE FINISH REQUIREMENTS SHALL COMPLY WITH AISC 358-10, SECTION 3.4.

11. FINGER SHIM PLATES SHALL BE IN ACCORDANCE WITH AISC 358-10, SECTION 6.9.5.

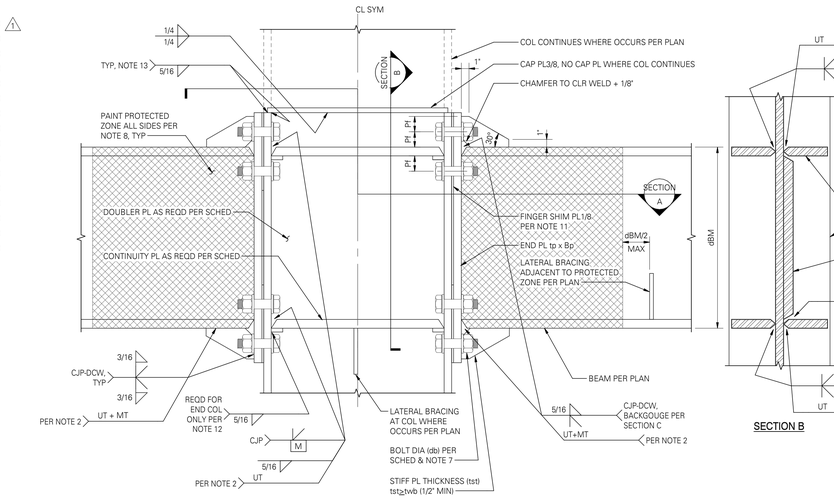
12. WELD OF THE LOWER CONTINUITY PLATE TO COLUMN FLANGE NOT CONNECTED TO A FRAME BEAM ON ONE SIDED CONNECTIONS IS PERMITTED TO BE A DOUBLE SIDED 5/16" FILLET.

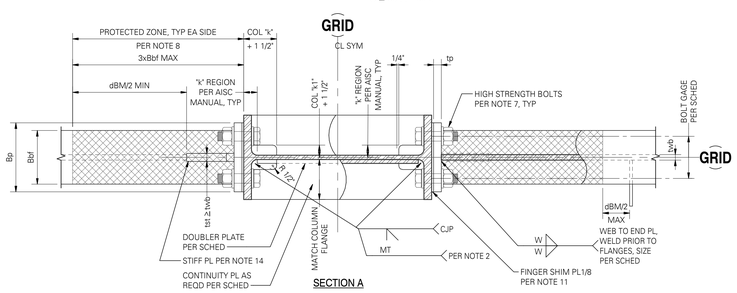
13. WELD OF CAP PLATE TO COLUMN FLANGE NOT CONNECTED TO FRAME BEAM ON ONE SIDED CONNECTIONS IS PERMITTED TO BE A SINGLE SIDED 5/16" FILLET.

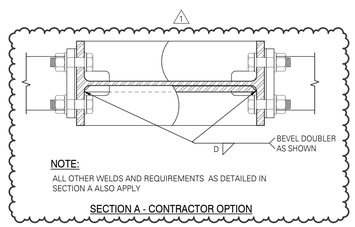
14. STIFFENER PLATE SHALL BE WELDED WITH COMPLETE JOINT PENETRATION (CJP) WELD TO BOTH BEAM FLANGE AND END PLATE. 1

15. CONTRACTOR OPTION TO FILLET WELD DOUBLER PLATES TO COLUMN PER SECTION CONTRACTOR OPTION PLAN.
FILLET WELD SIZE REQUIRED = 1.4 x DOUBLE PL THICKNESS

16. CONTRACTOR OPTION TO USE DOUBLE PLATE EA SIDE OF COLUMN. DOUBLER PLATE THICKNESS EA SIDE CAN BE ONE-HALF THE THICKNESS NOTED IN CONNECTION TABLE.







16 SPECIAL MOMENT FRAME - FOUR BOLT STIFFENED EXTENDED END PLATE (4ES) CONNECTION

SCALE: 1 1/2" = 1'-0"

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SCALE: 1 1/2" = 1'-0"
NOTE: THIS DRAWING IS ONLY A 30 NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY, OR SEEK CLARIFICATION FROM ARCHITECT FOR MEASUREMENTS THAT ARE NOT INDICATED.

MILESTONES

DATE	ISSUE
06/30/2022	CD BID SET
08/05/2022	PERMIT SET
11/11/2022	CONST. SET

REVISIONS

NO.	DATE	ISSUE
1	06.30.23	SI# 05

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DRAWN BY: TRM
CHECKED BY: JAL

DRAWING NO:
SD.6.50