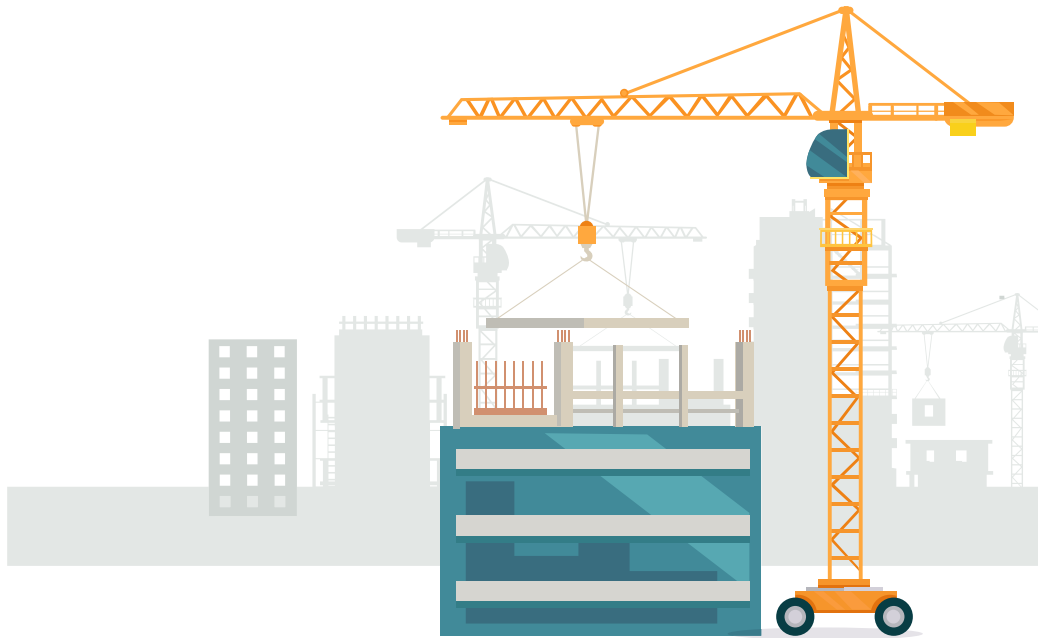


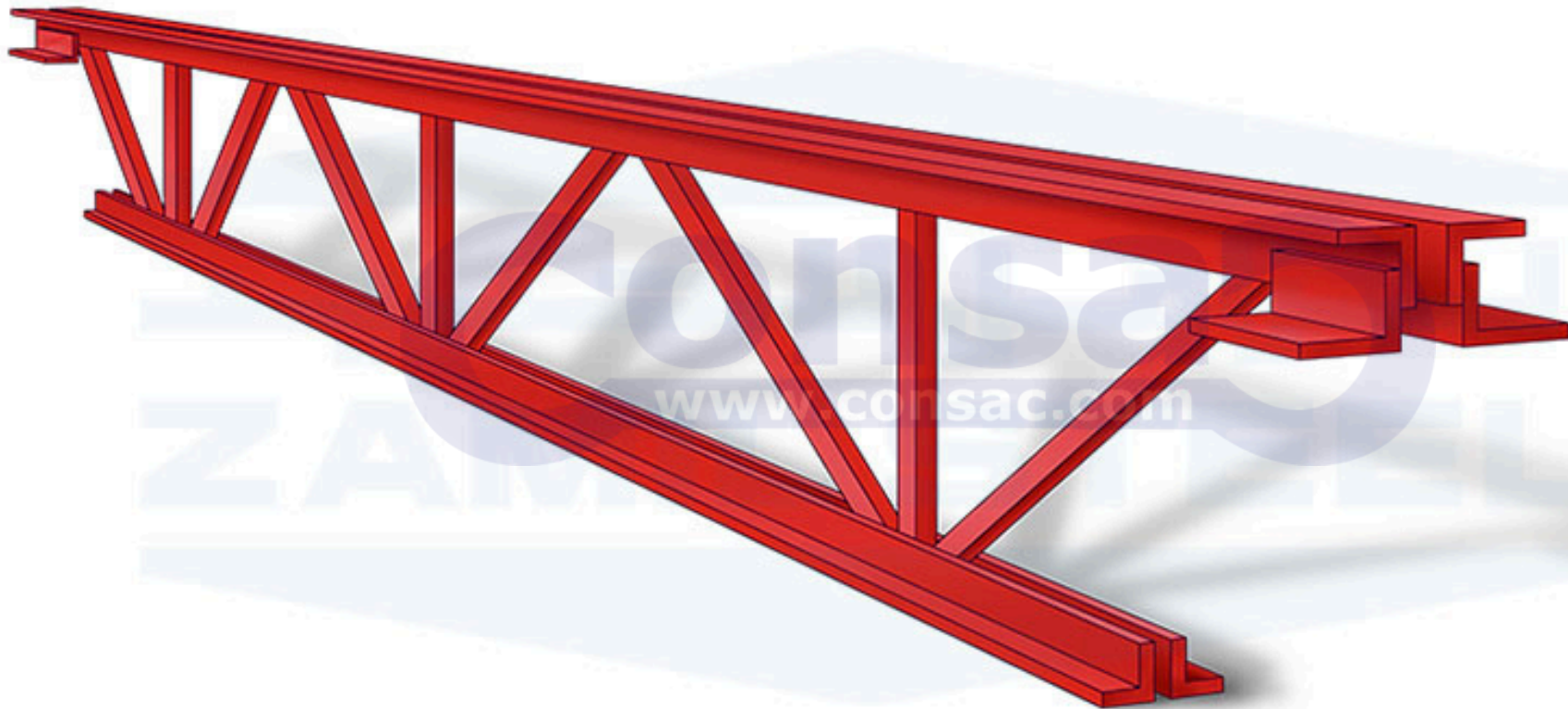
CONSAC



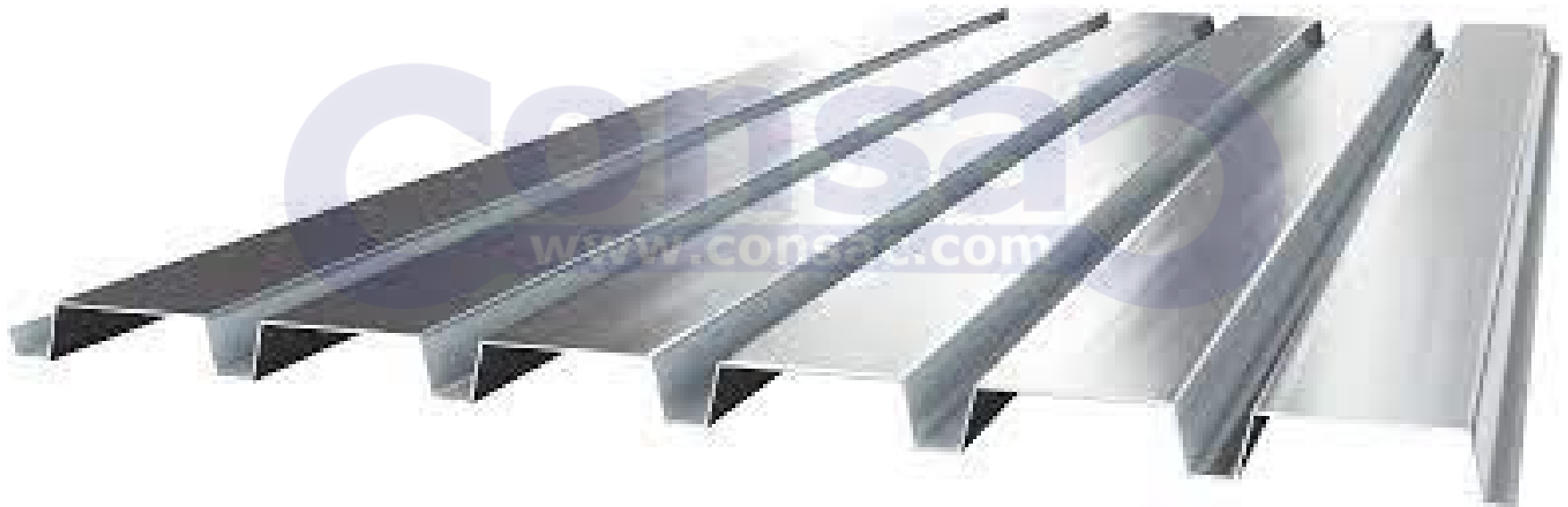
JOIST & DECK DETAILING



CONSAC



CONSAC



WE HELP BUSINESSES LIKE YOURS SAVE MONEY THROUGH STREAMLINING SERVICES. WE HAVE IN-DEPTH KNOWLEDGE OF THE WORKS BELOW. OUR QUALITY OF WORK, MOST COMPETITIVE PRICING, AND LEAD TIME WILL SURELY IMPRESS YOU.

- **DETAIL ANY TYPE OF JOISTS SUCH AS K, LH, DLH-SERIES, SPECIAL JOISTS (SINGLE PITCHED, DOUBLE PITCHED, SCISSOR JOIST, BOWSTRING JOIST, ETC.), AND GIRDER.**
- **DETAIL ANY TYPE OF COMPOSITE DECK, FORM DECK & ROOF DECK.**
- **DETAIL WOODNAILER PROJECTS.**

JOIST DETAILING:

- K-Series
- DLH-Series
- LH-Series
- Single, Double, Parallel, One Way and Two Way Pitched Cords

STEEL DECK DETAILING:

- Design and Layout
- Connection Details
- Cross-Sectional Drawings
- Reinforcement and Accessories
- Edge and End Details
- Camber and Slope
- Fireproofing and Acoustic Considerations
- Coordination with Other Trades
- Compliance with Codes and Standards



SHEAR STUD LAYOUT:

- Composite Action
- Design Requirements
- Shear Stud Types
- Spacing and Arrangement
- Welding Details
- Code Compliance
- Construction Tolerances

WOODNAILER JOIST DETAILING:

- Composite Action
- Design Requirements
- Shear Stud Types
- Spacing and Arrangement
- Welding Details
- Code Compliance
- Construction Tolerances



JOIST AND DECK ESTIMATION:

- Composite Action
- Design Requirements
- Shear Stud Types
- Spacing and Arrangement
- Welding Details
- Code Compliance
- Construction Tolerances



DRAWING INDEX

SHEET. # **DWG. NAME**

J1	JOIST COVER - TITLE PAGE
J2	ROOF JOIST ERECTION PLAN
J3	ROOF JOIST ERECTION PLAN
J4	JOIST SECTIONS

JOIST ERECTION NOTES

DO NOT ERECT STEEL JOISTS WITHOUT OBTAINING A COPY AND THOROUGHLY READING THE SA TO 9. HAVING AN ERECTOR OF STEEL, JOISTS AND JOIST ACCESSORIES. SERIOUS INJURY OR DEATH CAN RESULT FROM FAILURE TO FAMILIARIZE AND COMPLY WITH ALL APPLICABLE SAFETY REQUIREMENTS OF FEDERAL, STATE AND LOCAL REGULATIONS AND THE SAFETY GUIDELINES OUTLINED IN THE SA TO 9. THIS MANUAL IS INTENDED TO BE AN AID AND GENERAL GUIDE FOR THE SAFE AND PROPER ERECTION OF STEEL JOIST PRODUCTS.

SA TO 9 IS AVAILABLE FROM:
 STEEL JOIST INSTITUTE PHONE: 843-407-4091
 234 N. CHEVY STREET FAX: 843-407-4044
 FLORENCE, SC 29502 WEB: WWW.STEELJOIST.ORG

JOIST DELIVERY AND UNLOADING:

- VERIFY QUANTITIES AND CONDITION OF JOISTS AND JOIST ACCESSORIES UPON ARRIVAL. INFORM JOIST MANUFACTURER IMMEDIATELY OF ANY SHORTAGES, DISCREPANCIES OR DAMAGE.
- THE MATERIAL LISTED ON THE BILL OF LADING ARE THE ONLY ITEMS BEING SUPPLIED.
- WHEN UNLOADING JOISTS BY CRANE, ALWAYS HOIST JOISTS BY TOP OR BOTTOM CHORD PANEL POINTS (NOT BY WEB MEMBERS), AT OR NEAR 1/2 POINTS.
- IF NOT ERECTED IMMEDIATELY, STORE JOISTS AND JOIST ACCESSORIES OFF THE GROUND AND KEEP THEM COVERED TO PROTECT THE PRIMER COATING.

JOIST INSTALLATION:

- FOLLOW ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) FEDERAL REGISTER SUPPLEMENT 9/18/88. IMMEDIATELY AFTER JOIST IS SET, ATTACH JOIST TO SUPPORTS AS REQUIRED BY SA AND OSHA. AS BRIDGING IS INSTALLED, REMOVE SWAYE IN THE JOIST AND CORRECT ANY VERTICAL MISALIGNMENT. ONCE THE BRIDGING IS INSTALLED, ATTACH JOISTS TO SUPPORTS PER FINAL ERECTION DRAWINGS.
- REFER TO THE ERECTION SECTIONS FOR JOIST AND JOIST GIRDERS END ANCHORAGE REQUIREMENTS. JOISTS, JOIST GIRDERS, AND ACCESSORIES SHALL BE ATTACHED TO STEEL SUPPORTS WITH A MINIMUM OF:

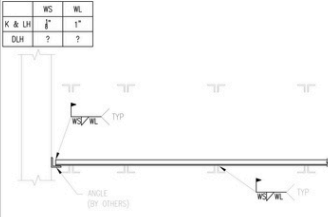
K-SERIES JOISTS – THE EQUIVALENT OF TWO 1/8" FLETT WELDS (W) 2 1/2" LONG (L), AND BOLTED WITH TWO 3/4" A307 BOLTS WHERE SLOTS ARE INDICATED IN SECTION.
LU-SERIES JOISTS – SECTION NUMBERS 02 THRU 06 – THE EQUIVALENT OF TWO 3/16" FLETT WELDS (W) 2 1/2" LONG (L), AND BOLTED WITH TWO 3/4" A307 BOLTS WHERE SLOTS ARE INDICATED IN SECTION.
LU-SERIES A-DUAL-SERIES JOISTS – SECTION NUMBERS 02 THRU 12 – THE EQUIVALENT OF TWO 1/4" FLETT WELDS (W) 2 1/2" LONG (L), AND BOLTED WITH TWO 3/4" A307 BOLTS WHERE SLOTS ARE INDICATED IN SECTION.
DU-SERIES JOISTS – SECTION NUMBERS 13 THRU 25 – THE EQUIVALENT OF TWO 1/4" FLETT WELDS (W) 4" LONG (L), AND BOLTED WITH TWO 3/4" A307 BOLTS WHERE SLOTS ARE INDICATED IN SECTION.
JOIST GIRDERS – THE EQUIVALENT OF TWO 1/4" FLETT WELDS (W) 2 1/2" LONG (L), AND BOLTED WITH TWO 3/4" A307 BOLTS WHERE SLOTS ARE INDICATED IN SECTION.
BRIDGING – THE EQUIVALENT OF A 1/8" FLETT WELD (W) 1" LONG (L), WITH THE EXCEPTION OF BRIDGING FOR K-SERIES JOISTS.
DU-SERIES JOISTS – SECTION NUMBERS 02 THRU 15 – THE EQUIVALENT OF A 1/8" FLETT WELD (W) 1 1/2" LONG (L), WITH THE EXCEPTION OF BRIDGING.
DU-SERIES JOISTS – SECTION NUMBERS 16 THRU 20 – THE EQUIVALENT OF A 1/8" FLETT WELD (W) 2 1/4" LONG (L), WITH THE EXCEPTION OF BRIDGING.
DU-SERIES JOISTS – SECTION NUMBERS 21 THRU 25 – THE EQUIVALENT OF A 1/8" FLETT WELD (W) 1 1/2" LONG (L).
 * = SAME AS BRACE ANGLE THICKNESS. ** = SAME AS BRACE ANGLE LENGTH. † = NOT WELD BRACE TO JOIST GIRDERS UNTIL ALL DEAD LOAD HAS BEEN APPLIED.

DONNELL GENERAL NOTES:

- NC – NOT IN CONTRACT. UNO – UNLESS NOTED OTHERWISE.
- TYPICAL PRIMER COATING, UNO ON PLANS.
- SHD. SHOP COAT GREAT PRIMER – FOR ALL JOISTS, JOIST GIRDERS & JOIST ACCESSORIES. SHOP PRIMER COMPLES WITH SSPC-Paint 15 AND FS TT-1-B36.
- NOTE: SHOP PRIMER IS APPLIED BY ERECTOR. COATING MAY NOT BE UNIFORM AND REQUIRE REMOVAL OF ACCUMULATING BEFORE FINISH COAT IS APPLIED.
- UNBRIDGED JOISTS MAY EXHIBIT SOME DEGREE OF INSTABILITY UNDER THE ERECTOR'S WEIGHT. THEREFORE, EXTREME CAUTION MUST BE EXERCISED WHEN IT IS NECESSARY FOR THE ERECTOR TO CLIMB ON THE JOIST. REFER TO SA AND OSHA REQUIREMENTS FOR MINIMUM BEARING PLATE WIDTHS.
- VERIFY THAT ALL BRIDGING IS COMPLETELY INSTALLED, WITH JOIST AND JOIST GIRDERS ENDS PERMANENTLY ATTACHED, BEFORE APPLYING CONSTRUCTION LOADS TO JOIST.
- ACCURATE MEANS FOR DISTRIBUTING CONCENTRATED LOADS SHOULD BE PROVIDED SO THAT THE CAPACITY OF ANY JOIST IS NOT EXCEEDED.
- JOIST CHORDS ARE NOT EXPOSED FOR BRIDGING OVER TO CONCENTRATED LOADS, UNO ON PLANS. EITHER PLACE LOADS AT JOIST PANEL POINTS OR SEE THE FIELD INSTALLED WEB MEMBERS AT CONCENTRATED LOADS' DETAIL.

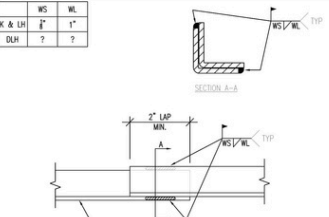
CONTRACT NOTE:

DONNELL WILL NOT ACCEPT THE RESPONSIBILITY OR CHARGES FOR ANY FIELD CORRECTIONS MADE WITHOUT PRIOR DONNELL APPROVAL.



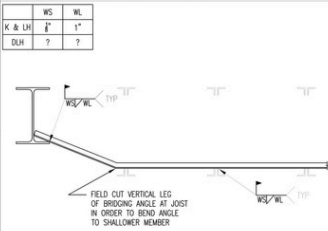
CUT BRIDGING LENGTHS TO FIT AT END OF RUNS. WHEN REQUIRED INSTALL ALL DROPS, OBTAINED FROM CUTTING WITHIN SUBSEQUENT BRIDGING RUNS TO AVOID ANY POTENTIAL SHORTAGES OF BRIDGING MATERIAL. REFERENCE * TYPICAL CONNECTION DETAIL FOR: HORIZONTAL BRIDGING AT LAPS*, FOR FURTHER INSTALLATION REQUIREMENTS.

TYPICAL INSTALLATION DETAIL FOR: UPLIFT BRIDGING
 REFERENCE: NOT PROVIDED (AT ROOF ONLY)



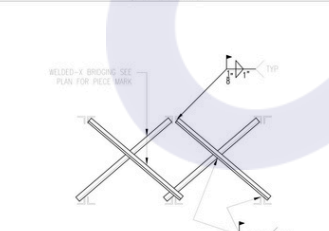
CUT BRIDGING LENGTHS TO FIT AT END OF RUNS. WHEN REQUIRED INSTALL ALL DROPS, OBTAINED FROM CUTTING WITHIN SUBSEQUENT BRIDGING RUNS TO AVOID ANY POTENTIAL SHORTAGES OF BRIDGING MATERIAL. REFERENCE * TYPICAL CONNECTION DETAIL FOR: HORIZONTAL BRIDGING AT LAPS*, FOR FURTHER INSTALLATION REQUIREMENTS.

TYPICAL INSTALLATION DETAIL FOR: CONTINUOUS HORIZONTAL BRIDGING (LAP DETAIL)



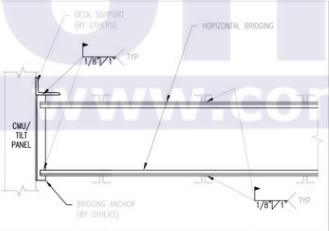
CUT BRIDGING LENGTHS TO FIT AT END OF RUNS. WHEN REQUIRED INSTALL ALL DROPS, OBTAINED FROM CUTTING WITHIN SUBSEQUENT BRIDGING RUNS TO AVOID ANY POTENTIAL SHORTAGES OF BRIDGING MATERIAL. REFERENCE * TYPICAL CONNECTION DETAIL FOR: HORIZONTAL BRIDGING AT LAPS*, FOR FURTHER INSTALLATION REQUIREMENTS.

TYPICAL INSTALLATION DETAIL FOR: UPLIFT BRIDGING
 REFERENCE: NOT PROVIDED (AT ROOF ONLY)



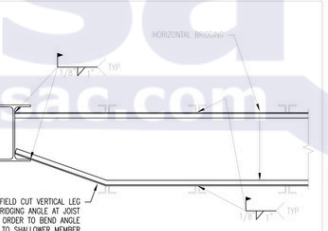
CUT BRIDGING LENGTHS TO FIT AT END OF RUNS. WHEN REQUIRED INSTALL ALL DROPS, OBTAINED FROM CUTTING WITHIN SUBSEQUENT BRIDGING RUNS TO AVOID ANY POTENTIAL SHORTAGES OF BRIDGING MATERIAL. REFERENCE * TYPICAL CONNECTION DETAIL FOR: HORIZONTAL BRIDGING AT LAPS*, FOR FURTHER INSTALLATION REQUIREMENTS.

TYPICAL INSTALLATION DETAIL FOR: WELDED DIAGONAL BRIDGING



CUT BRIDGING LENGTHS TO FIT AT END OF RUNS. WHEN REQUIRED INSTALL ALL DROPS, OBTAINED FROM CUTTING WITHIN SUBSEQUENT BRIDGING RUNS TO AVOID ANY POTENTIAL SHORTAGES OF BRIDGING MATERIAL. REFERENCE * TYPICAL CONNECTION DETAIL FOR: HORIZONTAL BRIDGING AT LAPS*, FOR FURTHER INSTALLATION REQUIREMENTS.

TYPICAL INSTALLATION DETAIL FOR: HORIZONTAL BRIDGING @ ROOF
 REFERENCE: 8/542 (#2 BUILDING & BUILDING 4)



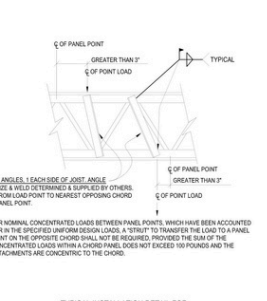
CUT BRIDGING LENGTHS TO FIT AT END OF RUNS. WHEN REQUIRED INSTALL ALL DROPS, OBTAINED FROM CUTTING WITHIN SUBSEQUENT BRIDGING RUNS TO AVOID ANY POTENTIAL SHORTAGES OF BRIDGING MATERIAL. REFERENCE * TYPICAL CONNECTION DETAIL FOR: HORIZONTAL BRIDGING AT LAPS*, FOR FURTHER INSTALLATION REQUIREMENTS.

TYPICAL INSTALLATION DETAIL FOR: HORIZONTAL BRIDGING @ ROOF
 REFERENCE: NOT PROVIDED



CUT BRIDGING LENGTHS TO FIT AT END OF RUNS. WHEN REQUIRED INSTALL ALL DROPS, OBTAINED FROM CUTTING WITHIN SUBSEQUENT BRIDGING RUNS TO AVOID ANY POTENTIAL SHORTAGES OF BRIDGING MATERIAL. REFERENCE * TYPICAL CONNECTION DETAIL FOR: HORIZONTAL BRIDGING AT LAPS*, FOR FURTHER INSTALLATION REQUIREMENTS.

TYPICAL INSTALLATION DETAIL FOR: HORIZONTAL BRIDGING @ ROOF
 REFERENCE: NOT PROVIDED



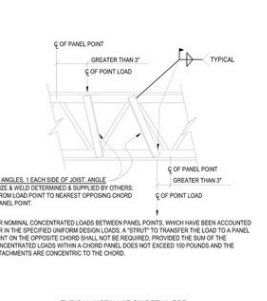
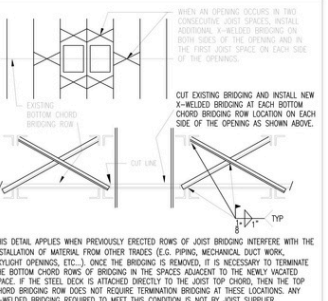
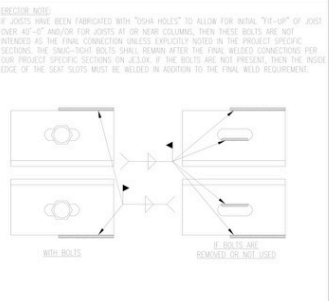
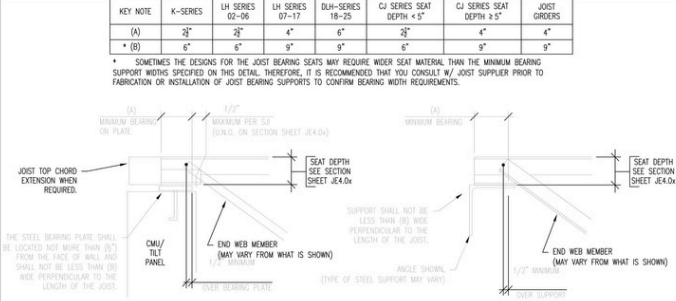
TYPICAL INSTALLATION DETAIL FOR: BOLTED JOIST CONNECTION
 REFERENCE: 3/842 (#2 BUILDING & BUILDING 4)

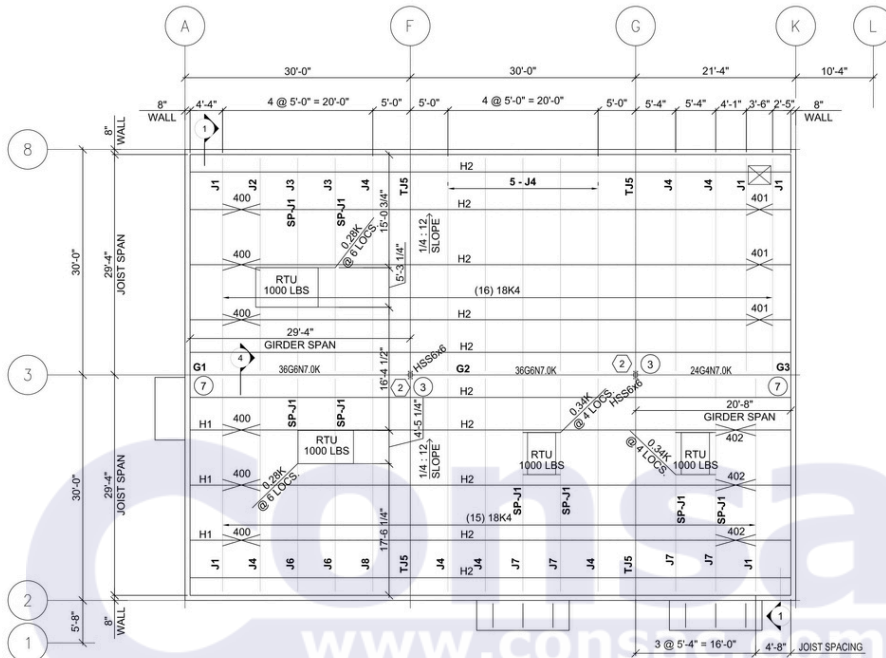


TYPICAL INSTALLATION DETAIL FOR: DISCONTINUOUS HORIZONTAL BRIDGING
 REFERENCE: 3/842 (#2 BUILDING & BUILDING 4)

FOR FIELD USE

consac
 www.consac.com



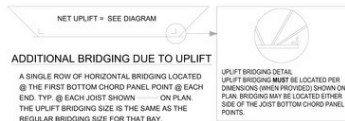


ROOF JOIST ERECTION PLAN (OUTPARCEL #2 BUILDING)

REF. S2-1 (OUTPARCEL #2 BUILDING)

PLAN NOTES:

1. THE TAG END OF THE JOIST IS THE END AT WHICH THE PIECE MARK IS LOCATED.
2. REFERENCE DWG J1 FOR LEGEND, SYMBOLS & ABBREVIATIONS.
3. FOR JOIST SECTIONS SEE J4.
4. ALL JOIST & BRIDGING WILL BE PAINTED WITH ONE COAT OF SJI STANDARD GRAY DIP PRIMER.
5. FOR SP-J1 LOADING SEE LOADING DIAGRAM ON THIS SHEET.
6. DEFLECTION: TL = L/360



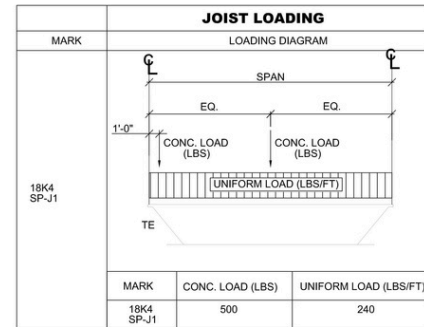
NET UPLIFT DIAGRAM

REF. : S5-1 #2 BUILDING

NET UPLIFT VALUE :

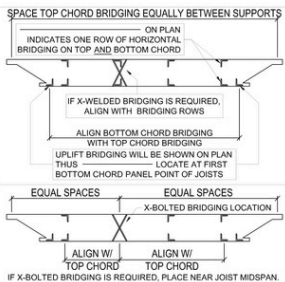
TRIBUTARY AREA	ZONE - 1	ZONE - 2	ZONE - 3
10 SQ FT	-24.2 PSF	-43.9 PSF	-68.6 PSOF
20 SQ FT	-23.9 PSF	-39.0 PSF	-56.3 PSF
50 SQ FT	-22.9 PSF	-31.6 PSF	-39.0 PSF
100 SQ FT	-21.7 PSF	-26.6 PSF	-26.6 PSF

NET UPLIFT = GROSS UPLIFT - DEAD LOAD (5 PSF)



BRIDGING LEGEND WITH ANGLE SIZE

- 400 - 799 = WELDED-X BRIDGING, IDENTIFIED ON PLACEMENT PLAN L 1 x1 x0.109
- H8 = CONTINUOUS ROW OF HORIZONTAL BRIDGING AT TOP AND BOTTOM CHORD, IDENTIFIED BY MARKS H1 - H8 ON PLACEMENT PLAN. REFERENCE TYPICAL BRIDGING SPACING DETAIL ON EACH PLACEMENT PLAN FOR SPACING REQUIREMENTS, UNLESS SPECIFIC LOCATIONS ARE SHOWN.
 - H2 = L 1 1/4x1 1/4x0.109
- H8 = CONTINUOUS ROW OF HORIZONTAL UPLIFT BRIDGING INSTALLED AT FIRST BOTTOM CHORD PANEL POINT. IDENTIFIED ON PLAN BY H1 - H8 (REFERENCE TYPICAL BRIDGING SPACING DETAIL ON ROOF PLACEMENT PLANS).
 - H2 = L 1 1/4x1 1/4x0.109

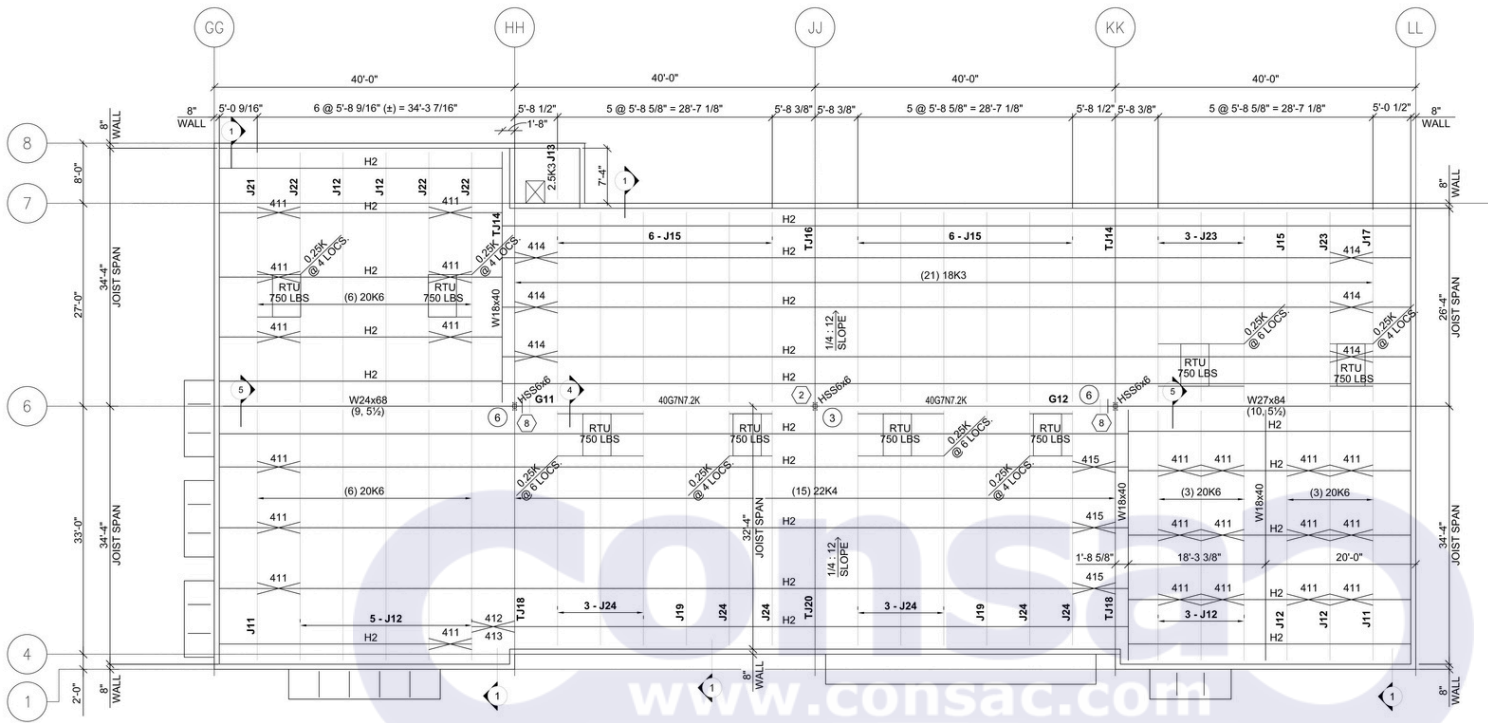


TYPICAL BRIDGING SPACING (W/ UPLIFT)

NOTE: BRIDGING ROW QUANTITIES WILL VARY. (SEE JOIST ERECTION PLANS FOR BRIDGING ROW REQUIREMENTS.) N.T.S.

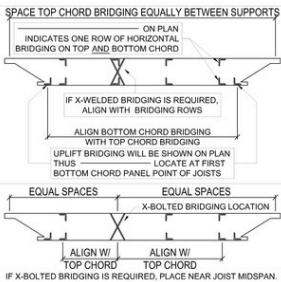
FOR FIELD USE





ROOF JOIST ERECTION PLAN (RETAIL BUILDING 4)
REF. S2.1 (RETAIL BUILDING 4)

- PLAN NOTES:**
1. THE TAG END OF THE JOIST IS THE END AT WHICH THE PRICE MARK IS LOCATED.
 2. REFERENCE DWG. J1 FOR LEGEND, SYMBOLS & ABBREVIATIONS.
 3. FOR JOIST SECTIONS SEE J4.
 4. ALL JOIST & BRIDGING WILL BE PAINTED WITH ONE COAT OF SLR STANDARD GRAY DIP PRIMER.
 5. DEFLECTION: TL = L/360



TYPICAL BRIDGING SPACING (W/ UPLIFT)

NOTE: BRIDGING ROW QUANTITIES WILL VARY. (SEE JOIST ERECTION PLANS FOR BRIDGING ROW REQUIREMENTS.)
N.T.S.



NET UPLIFT DIAGRAM
REF. : S1

NET UPLIFT VALUE :

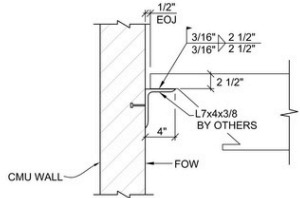
TRIBUTARY AREA	ZONE - 1	ZONE - 2	ZONE - 3
10 SQ FT	-24.3 PSF	-44.2 PSF	-69.0 PSF
20 SQ FT	-24.1 PSF	-39.2 PSF	-56.6 PSF
50 SQ FT	-23.1 PSF	-31.8 PSF	-39.2 PSF
100 SQ FT	-21.8 PSF	-26.8 PSF	-26.8 PSF

NET UPLIFT = GROSS UPLIFT - DEAD LOAD (5 PSF)

BRIDGING LEGEND WITH ANGLE SIZE

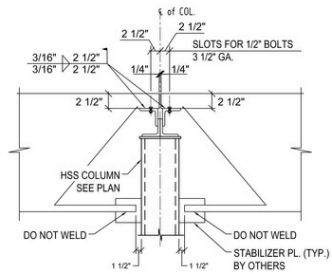
- 400 - 799
- WELDED-X BRIDGING
- WELDED-X BRIDGING, IDENTIFIED ON PLACEMENT PLAN L 1 X1 X0.109
- H1
- CONTINUOUS ROW OF HORIZONTAL BRIDGING AT TOP AND BOTTOM CHORD, IDENTIFIED BY MARKS H1 - H6 ON PLACEMENT PLAN. REFERENCE TYPICAL BRIDGING SPACING DETAIL ON EACH PLACEMENT PLAN FOR SPACING REQUIREMENTS, UNLESS SPECIFIC LOCATIONS ARE SHOWN.
 - H1 = L 1 X1 X0.109
 - H2 = L 1 1/4 X1 1/4 X0.109
- H6
- CONTINUOUS ROW OF HORIZONTAL UPLIFT BRIDGING INSTALLED AT FIRST BOTTOM CHORD PANEL POINT, IDENTIFIED ON PLAN BY H1 - H6 (REFERENCE TYPICAL BRIDGING SPACING DETAIL ON ROOF PLACEMENT PLANS)
 - H1 = L 1 X1 X0.109

FOR FIELD USE



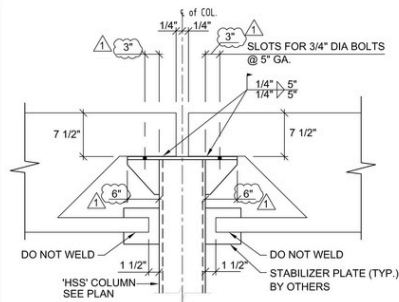
JOIST SECTION 1

REF: 12/S4.2 BUILDING 4
REF: 12/S4.2 #2 BUILDING



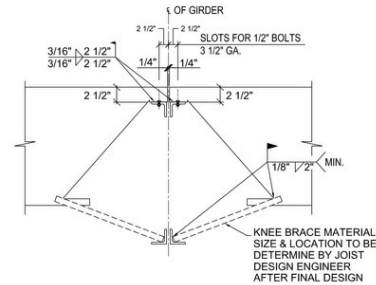
JOIST SECTION 2

REF: 6/S4.2 BUILDING 4
REF: 6/S4.2 #2 BUILDING



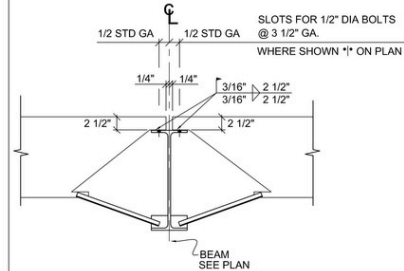
GIRDER SECTION 3

REF: 4/S4.3 BUILDING 4
REF: 4/S4.2 #2 BUILDING



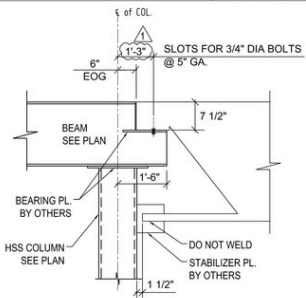
JOIST SECTION 4

REF: 5/S4.2 BUILDING 4
REF: 5/S4.2 #2 BUILDING



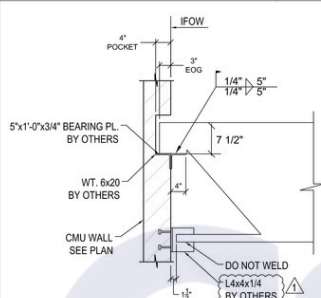
JOIST SECTION 5

REF: 8/S4.3 BUILDING 4
REF:



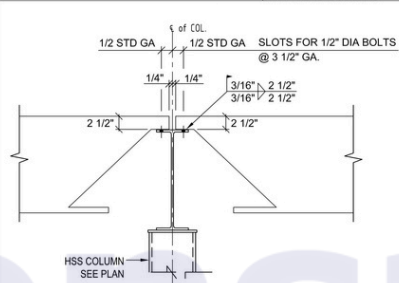
GIRDER SECTION 6

REF: 11/S4.1 (BUILDING 4)
REF:



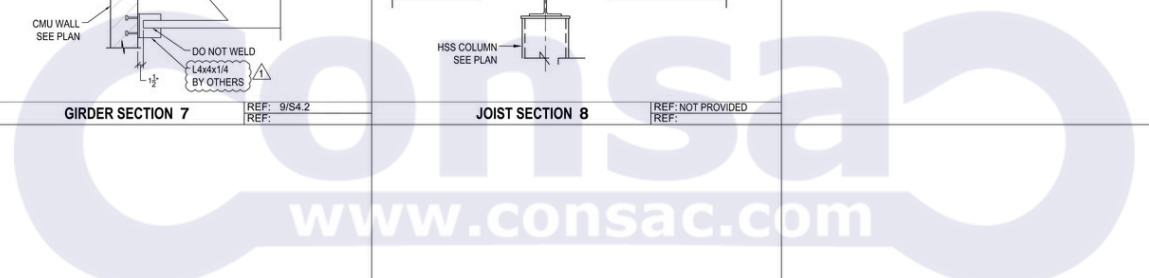
GIRDER SECTION 7

REF: 9/S4.2
REF:



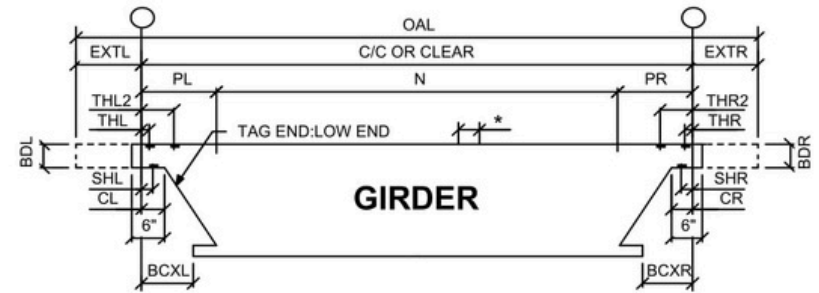
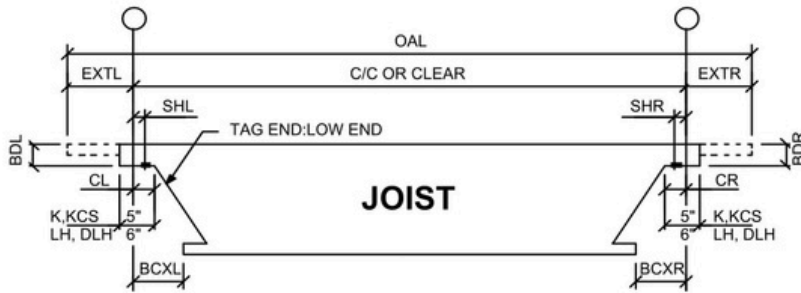
JOIST SECTION 8

REF: NOT PROVIDED
REF:



FOR FIELD USE





LENGTHS SHOWN ARE IN HORIZONTAL PROJECTION
DT= Danger Tag (per OSHA)

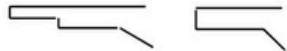
LENGTHS SHOWN ARE IN HORIZONTAL PROJECTION

FL & FR = Type S, F & R
or dimension to end of
seats from center line.

Seat Standards UNLESS NOTED ON THE LIST
BDL, BDR: H & K = 2 1/2"
LH & DLH = 5"
Slots: H & K = 5/8", 3 1/2" Gage
LH & DLH = 7/8", 4" Gage

* OSHA JOIST TO GIRDER CONNECTION
WS= Welded Seats
NS= Joist Bolted on Near Side
FS= Joist Bolted on Far Side
BS= Joist Bolted on Both Sides

Seat Standards UNLESS NOTED ON THE LIST
BDL, BDR: = 7 1/2"
SLOTS: = 7/8", 5"
THL, THR = 5/8" Holes, 4 1/2" Gage
Holes for LH Series Must be Noted



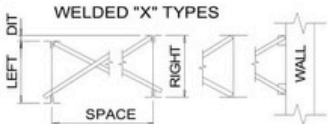
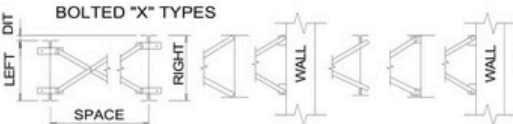
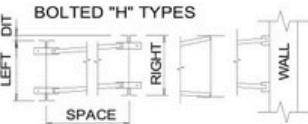
TYPE "S" EXT

TYPE "F" & "R" EXT

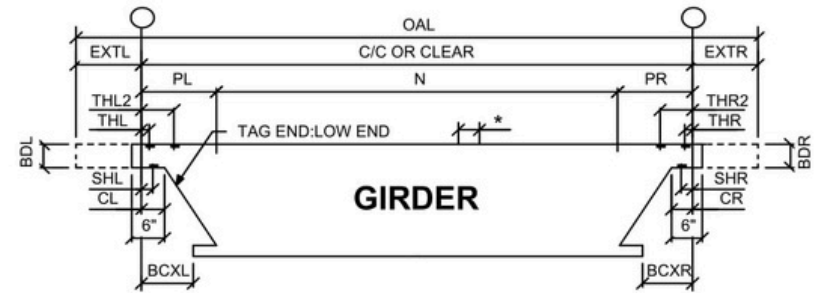
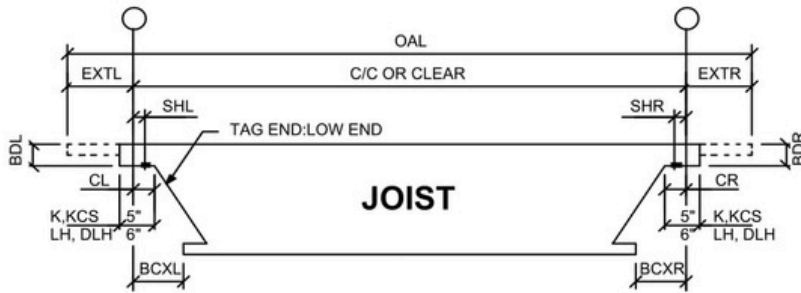
C/C or Clear = C/C of Grid or Inside Face of Wall
OAL Over All Length
N = Number of Joist Spacings

EXTL = EXTension Top Left
CL = Clearance Left
BDL = Bearing Depth Left
SHL = Seat Holes Left
BCXL = Bottom Chord Extension Left
THL = Top Chord Hole Left (Girder)
THL2 = Top Chord Hole Left 2nd (Girder)
PL = Panel Left (Girder)

EXTR = EXTension Top Right
CR = Clearance Right
BDR = Bearing Depth Right
SHR = Seat Holes Right
BCXR = Bottom Chord Extension Right
THR = Top Chord Hole Right (Girder)
THR2 = Top Chord Hole Right 2nd (Girder)
PR = Panel Right (Girder)

<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>WELDED "X" TYPES</p>  <p>TYPE 1 TYPE 2 TYPE 3</p> </div> <div style="width: 30%;"> <p>BOLTED "X" TYPES</p>  <p>TYPE 4 TYPE 5 TYPE 6 TYPE 7 TYPE 8 TYPE 9</p> </div> <div style="width: 30%;"> <p>BOLTED "H" TYPES</p>  <p>TYPE 13 TYPE 14 TYPE 15</p> </div> </div> <p style="text-align: center; font-size: small;">NOTE FOR "D1T" USE "+" WHEN "LEFT" IS LOWER THAN "RIGHT" & USE "-" WHEN "RIGHT" IS LOWER THAN "LEFT"</p>													NOTES:										
SEQUENCE				QTY	MARK	TYPE	LEFT MARK	LEFT DEPTH	RIGHT MARK	RIGHT DEPTH	SPACING	DIT = DIFF IN TOP	SIZE	REMARKS	HORIZONTAL BRIDGING								
1	2	3	4												1	2	3	4	QTY	MARK	LENGTH	SIZE	REMARKS
				12	400	1	J1	18"	J2	18"	5'-0"		1 x 1 x 0.109						54	H2	25'-0"	L1 1/4 x 1 1/4 x 0.109	
				6	401	1	J1	18"	J1	18"	3'-6"		1 x 1 x 0.109										
				6	402	1	J7	18"	J1	18"	5'-4"		1 x 1 x 0.109										
															BRIDGING ANCHOR CLIPS								
SEQUENCE				QTY	MARK	LENGTH	SIZE	REMARKS															
1	2	3	4																				
															GIRDER KNEE BRACE / LOOSE BOTTOM CHORD								
SEQUENCE				QTY	MARK	LENGTH	SIZE	GIRDER DEPTH	JOIST DEPTH	SEAT DEPTH													
1	2	3	4																				
															BOLT/NUT/WASHER				BOLT/NUT/WASHER				
SEQUENCE				QTY	SIZE					SEQUENCE				QTY	SIZE								
1	2	3	4							1	2	3	4										
				24 TOTAL QTY		LAST SHOP ORDER		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>		PROJECT: 22-01854 - OUTPARCEL #2 BUILDING				PAINT: GRAY		REV#		DATE:				





LENGTHS SHOWN ARE IN HORIZONTAL PROJECTION
DT= Danger Tag (per OSHA)

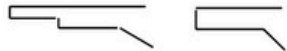
LENGTHS SHOWN ARE IN HORIZONTAL PROJECTION

FL & FR = Type S, F & R
or dimension to end of
seats from center line.

Seat Standards UNLESS NOTED ON THE LIST
BDL,BDR: H & K = 2 1/2"
LH & DLH = 5"
Slots: H & K = 5/8", 3 1/2" Gage
LH & DLH = 7/8", 4" Gage

* OSHA JOIST TO GIRDER CONNECTION
WS= Welded Seats
NS= Joist Bolted on Near Side
FS= Joist Bolted on Far Side
BS= Joist Bolted on Both Sides

Seat Standards UNLESS NOTED ON THE LIST
BDL,BDR: = 7 1/2"
SLOTS: = 7/8", 5"
THL, THR = 5/8"Holes, 4 1/2" Gage
Holes for LH Series Must be Noted



TYPE "S" EXT TYPE "F" & "R" EXT

C/C or Clear = C/C of Grid or Inside Face of Wall
OAL Over All Length
N = Number of Joist Spacings

- EXTL = EXTension Top Left
- CL = CLearance Left
- BDL = BEARING DEPTH Left
- SHL = SEAT HOLES Left
- BCXL = Bottom Chord EXTension Left
- THL = Top Chord Hole Left (Girder)
- THL2 = Top Chord Hole Left 2nd (Girder)
- PL = Panel Left (Girder)

- EXTR = EXTension Top Right
- CR = CLearance Right
- BDR = BEARING DEPTH Right
- SHR = SEAT HOLES Right
- BCXR = Bottom Chord EXTension Right
- THR = Top Chord Hole Right (Girder)
- THR2 = Top Chord Hole Right 2nd (Girder)
- PR = Panel Right (Girder)

NOTES:				NET UPLIFT: _____ PLF																		
				ASD <input checked="" type="checkbox"/> LRFD <input type="checkbox"/> FACTORED <input type="checkbox"/>																		
DEFLECTION: TL = L/360																						
L11) ADD'L +0.25K LOAD AT ANY TCPP DUE TO RTU																						
U11) NU= 154 PLF																						
U12) NU = 125 PLF + ADD'L PNU = 39 PLF FOR 6'-0" FTE																						
SEQUENCE				QTY	MARK	TYPE	ELEV. SLOPE	EXTL	C/C OR CLEAR	EXTR	FL / TYPE	CL	FR/ TYPE	CR	BDL	BDR	SHL	SHR	BCXL	BCXR	OAL	NOTES
1	2	3	4																			
				2	J11	20K6		- 1/2"	34'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"					34'-3 1/4"	U11
				12	J12	20K6		- 1/2"	34'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"					34'-3 1/4"	U12
				1	J13	2.5K3		- 1/2"	7'-4"	- 1/2"					2 1/2"	2 1/2"					7'-3"	
				2	TJ14	18K3		- 1/2"	26'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"		2 3/4"			26'-3 1/4"	U12 (DT)
				13	J15	18K3		- 1/2"	26'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"					26'-3 1/4"	U12
				1	TJ16	18K3		- 1/2"	26'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"		2 1/2"		4 1/2"	26'-3 1/4"	U12 (DT)
				1	J17	18K3		- 1/2"	26'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"					26'-3 1/4"	L11, U11
				2	TJ18	22K4		- 1/2"	32'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"		2 3/4"			32'-3 1/4"	U12 (DT)
				2	J19	22K4		- 1/2"	32'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"					32'-3 1/4"	U12
				1	TJ20	22K4		- 1/2"	32'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"		2 1/2"		4 1/2"	32'-3 1/4"	U12 (DT)
				1	J21	20K6		- 1/2"	34'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"					34'-3 1/4"	L11, U11
				3	J22	20K6		- 1/2"	34'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"					34'-3 1/4"	L11, U12
				4	J23	18K3		- 1/2"	26'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"					26'-3 1/4"	L11, U12
				10	J24	22K4		- 1/2"	32'-4"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"					32'-3 1/4"	L11, U12
				55	TOTAL QTY			LAST SHOP ORDER YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		PROJECT: 22-01854 - RETAIL BUILDING 4								PAINT: GRAY		REV #	DATE:	



DRAWING INDEX

SHEET. # DWG. NAME

- J1 JOIST COVER - TITLE PAGE
- J2 ROOF JOIST ERECTION PLAN
- J3 JOIST SECTIONS

JOIST ERECTION NOTES
 REFER TO THE JOIST COVER IDENTIFIER TAG SPECIFICATIONS AND ITS TECHNICAL DIGEST (TD)

GC / ERECTOR NOTE:
 DO NOT ERECT STEEL JOISTS WITHOUT OBTAINING A COPY AND THOROUGHLY READING THE SA TO 9. HANGING AND ERECTION OF STEEL JOISTS AND JOIST BRIDGES, SERIOUS INJURY OR DEATH CAN RESULT FROM FAILURE TO FAMILIARIZE AND COMPLY WITH ALL APPLICABLE SAFETY REQUIREMENTS OF FEDERAL, STATE AND LOCAL REGULATIONS AND THE SAFETY GUIDELINES OUTLINED IN THE SA TO 9. THIS MANUAL IS INTENDED TO BE AN AID AND GENERAL GUIDE FOR THE SAFE AND PROPER ERECTION OF STEEL JOIST PRODUCTS.
 SA TO 9 IS AVAILABLE FROM:
 STEEL JOIST INSTITUTE, PHONE: 843-407-4091
 234 N. CHEVIE STREET, FLORENCE, SC 29502 FAX: 843-407-4044
 WWW.STEELJOIST.ORG

- JOIST DELIVERY AND UNLOADING:**
- VERIFY QUANTITIES AND CONDITION OF JOISTS AND JOIST ACCESSORIES UPON ARRIVAL. INFORM JOIST MANUFACTURER IMMEDIATELY OF ANY SHORTAGES, DISCREPANCIES OR DAMAGE.
 - THE MATERIAL LISTED ON THE BILL OF LADING ARE THE ONLY ITEMS BEING SUPPLIED.
 - WHEN UNLOADING JOISTS BY CRANE, ALWAYS HOIST JOISTS BY TOP OR BOTTOM CHORD PANEL POINTS (NOT BY WEB MEMBERS), AT OR NEAR 1/3 POINTS.
 - IF NOT ERECTED IMMEDIATELY, STORE JOISTS AND JOIST ACCESSORIES OFF THE GROUND AND KEEP THEM COVERED TO PROTECT THE PRIMER COATING.

- JOIST INSTALLATION:**
- FOLLOW ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) FEDERAL REGISTER SUBPART 1926. IMMEDIATELY AFTER JOIST IS SET, ATTACH JOIST TO SUPPORTS AS REQUIRED BY SA AND OSHA. AS BRIDGING IS INSTALLED, REMOVE TWIST IN THE JOIST AND CORRECT ANY VERTICAL MISALIGNMENT. ONCE THE BRIDGING IS INSTALLED, ATTACH JOISTS TO SUPPORTS PER FINAL ERECTION DRAWINGS.
 - REFER TO THE ERECTION SECTIONS FOR JOIST AND JOIST ORDER END ANCHORAGE REQUIREMENTS, JOISTS, JOIST ORDERS, AND ACCESSORIES SHALL BE ATTACHED TO STEEL SUPPORTS WITH A MINIMUM OF:

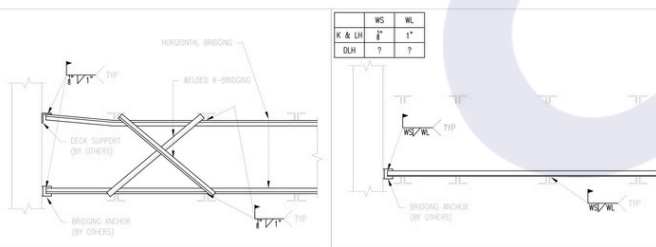
- K-SERIES JOISTS – THE EQUIVALENT OF TWO 1/8" FILLET WELDS (W) 2 1/2" LONG (L), AND BOLTED WITH TWO 3/4" A307 BOLTS WHERE SLOTS ARE INDICATED IN SECTION.
- LH-SERIES JOISTS, SECTION NUMBERS 02 THRU 04 – THE EQUIVALENT OF TWO 3/16" FILLET WELDS (W) 2 1/2" LONG (L), AND BOLTED WITH TWO 3/4" A307 BOLTS WHERE SLOTS ARE INDICATED IN SECTION.
- LH-SERIES JOISTS, SECTION NUMBERS 05 THRU 12 – THE EQUIVALENT OF TWO 1/4" FILLET WELDS (W) 2 1/2" LONG (L), AND BOLTED WITH TWO 3/4" A307 BOLTS WHERE SLOTS ARE INDICATED IN SECTION.
- DL-SERIES JOISTS, SECTION NUMBERS 13 THRU 25 – THE EQUIVALENT OF TWO 1/4" FILLET WELDS (W) 4" LONG (L), AND BOLTED WITH TWO 3/4" A307 BOLTS WHERE SLOTS ARE INDICATED IN SECTION.
- JOIST BRIDGES – THE EQUIVALENT OF TWO 1/4" FILLET WELDS (W) 2 1/2" LONG (L), AND BOLTED WITH TWO 3/4" A307 BOLTS WHERE SLOTS ARE INDICATED IN SECTION.
- BRIDGING – THE EQUIVALENT OF A 1/8" FILLET WELD (W) 1" LONG (L), WITH THE EXCEPTION OF BOLTING FOR K-SERIES JOISTS.
- THE EQUIVALENT OF A 1/8" FILLET WELD (W) 1" LONG (L), WITH THE EXCEPTION OF BOLTING FOR LK-SERIES JOISTS, SECTION NUMBERS 02 THRU 15.
- THE EQUIVALENT OF A 1/8" FILLET WELD (W) 1 1/2" LONG (L), WITH THE EXCEPTION OF BOLTING FOR DLH-SERIES JOISTS, SECTION NUMBERS 16 THRU 20.
- THE EQUIVALENT OF A 1/8" FILLET WELD (W) 2 1/4" LONG (L), WITH THE EXCEPTION OF BOLTING FOR DLH-SERIES JOISTS, SECTION NUMBERS 21 THRU 25.
- DLH-SERIES JOISTS, SECTION NUMBERS 26 THRU 28 – THE EQUIVALENT OF TWO 1/4" FILLET WELDS (W) 4" LONG (L), AND BOLTED WITH TWO 3/4" A307 BOLTS WHERE SLOTS ARE INDICATED IN SECTION.
- ** = SAME AS BRACE ANGLE THICKNESS. ** = SAME AS BRACE ANGLE LEG LENGTH.
- DO NOT WELD BRACE TO JOIST GIRDER UNTIL ALL DEAD LOAD HAS BEEN APPLIED.

- KEY:**
- 1. ALL STEEL BEARING JOISTS IN BAYS 45'-0" AND MORE, ARE TO BE BOLTED TO SUPPORTS PER OSHA. UNLESS JOISTS ARE PRE-ASSEMBLED INTO PANELS.
 - 2. ACCORDING TO SA, BEARING PLATES SHALL BE LOCATED NO MORE THAN 1/2" FROM THE FACE OF MASONRY OR CONCRETE SUPPORTS. REFER TO SA SPECIFICATIONS FOR MINIMUM BEARING PLATE WIDTHS.
 - 3. UNBROCKED JOISTS MAY EXHIBIT SOME DEGREE OF INSTABILITY UNDER THE ERECTOR'S WEIGHT. THEREFORE, EXTREME CAUTION MUST BE EXERCISED WHEN IT IS NECESSARY FOR THE ERECTOR TO CLIMB ON THE JOIST. REFER TO SA AND OSHA REQUIREMENTS.
 - 4. VERIFIED JOISTS MAY EXHIBIT SOME DEGREE OF INSTABILITY UNDER THE ERECTOR'S WEIGHT. THEREFORE, EXTREME CAUTION MUST BE EXERCISED WHEN IT IS NECESSARY FOR THE ERECTOR TO CLIMB ON THE JOIST. REFER TO SA AND OSHA REQUIREMENTS.
 - 5. VERIFY THAT ALL BRIDGING IS COMPLETELY INSTALLED, WITH JOIST AND JOIST ORDER ENDS PERMANENTLY ATTACHED, BEFORE APPLYING CONSTRUCTION LOADS TO JOIST.
 - 6. ADEQUATE MEANS FOR DISTRIBUTING CONCENTRATED LOADS SHOULD BE PROVIDED SO THAT THE CAPACITY OF ANY JOIST IS NOT EXCEEDED.
 - 7. JOIST CHORDS ARE NOT DESIGNED FOR BRIDGING DUE TO CONCENTRATED LOADS. UNLESS WEB MEMBERS AT CONCENTRATED LOADS' DETAIL.

- O'DONNELL GENERAL NOTES:**
- NC – NOT IN CONTRACT. UNO – UNLESS NOTED OTHERWISE.
 - TYPICAL PRIMER COATING, UNO AND ON PLANS.
 - SDS SHOP COAT GREAT PRIMER – FOR ALL JOISTS, JOIST ORDERS & JOIST ACCESSORIES. SHOP PRIMER COMPLIES WITH SSPC-PAINT 15 AND FS 11-PR-636.
 - NOTES SHOP PRIMER IS APPLIED BY ERECTOR. COATING MAY NOT BE UNIFORM AND REQUIRE REMOVAL OF ACCUMULATING BRIDGE FINISH COAT IS APPLIED.
 - WELDED HORIZONTAL BRIDGING IS SUPPLIED IN 25'-0" LENGTHS. FIELD CUT WELDED HORIZONTAL BRIDGING AS REQUIRED AND UTILIZE ALL DROP.
 - WELDED BRIDGING IS TO BE EQUALLY SPACED BETWEEN SUPPORTS. UNO AND ON PLANS. DECK MUST BE POSITIVELY ATTACHED TO JOIST TOP CHORDS IN ACCORDANCE WITH DECK FASTENING REQUIREMENTS TO PROVIDE LATERAL STABILITY. UNO AND ON PLANS.
 - JOISTS MARKED TJ, INDICATES TIE-JOISTS. THESE JOISTS ARE NOT DESIGNED TO SATISFY OSHA 29 CFR 1926.757 (a)(3). REFER TO "TANGLER" TAG ON JOIST FOR ERECTION REQUIREMENTS.
 - DO NOT CUT AWAY ANY CHORDS OR WEBS.
 - PRODUCTS ARE FABRICATED TO MEET THE ERECTION REQUIREMENTS OF OSHA. FIELD COMPLIANCE WITH OSHA IS NECESSARY.

CONTRACT NOTE:
 O'DONNELL WILL NOT ACCEPT THE RESPONSIBILITY OR CHARGES FOR ANY FIELD CORRECTIONS MADE WITHOUT PRIOR O'DONNELL APPROVAL.

FOR FIELD USE

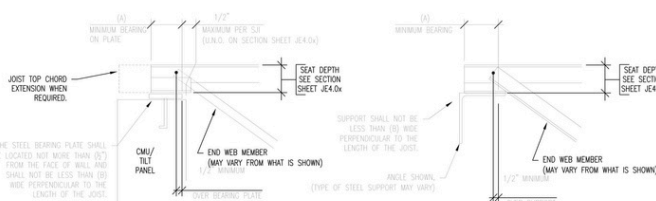


CUT BRIDGING LENGTHS TO FIT AT END OF RUNS, WHEN REQUIRED. INSTALL ALL DROPS, OBTAINED FROM CUTTING WITHIN SUBSEQUENT BRIDGING RUNS TO AVOID ANY POTENTIAL SHORTAGES OF BRIDGING MATERIAL. REFERENCE: TYPICAL CONNECTION DETAIL FOR HORIZONTAL BRIDGING AT LAP'S, FOR FURTHER INSTALLATION REQUIREMENTS.

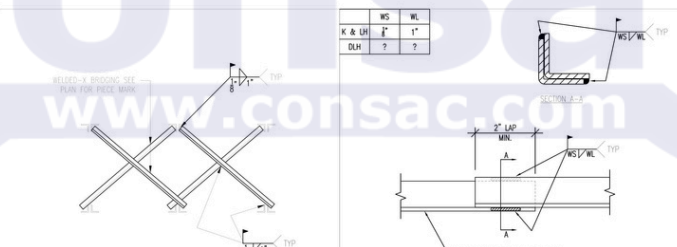
TYPICAL INSTALLATION DETAIL FOR: HORIZONTAL BRIDGING @ ROOF
 REFERENCE: 4/S4.3

KEY NOTE	K-SERIES	LH SERIES 02-06	LH SERIES 07-17	DLH-SERIES 18-23	CJ SERIES SEAT DEPTH 4.5"	CJ SERIES SEAT DEPTH 2.5"	JOIST ORDERS
(A)	2"	2"	4"	6"	2"	4"	4"
(B)	6"	6"	4"	6"	4"	4"	6"

* SOMETIMES THE DESIGNS FOR THE JOIST BEARING SEATS MAY REQUIRE WIDER SEAT MATERIAL THAN THE MINIMUM BEARING SUPPORT WIDTHS SPECIFIED ON THIS DETAIL. THEREFORE, IT IS RECOMMENDED THAT YOU CONSULT W/JOIST SUPPLIER PRIOR TO FABRICATION OR INSTALLATION OF JOIST BEARING SUPPORTS TO CONFIRM BEARING WIDTH REQUIREMENTS.



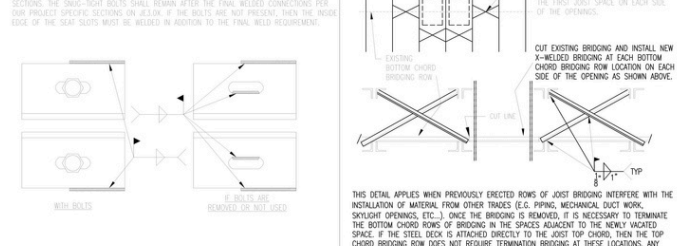
MINIMUM JOIST BEARING DETAIL



CUT BRIDGING LENGTHS TO FIT AT END OF RUNS, WHEN REQUIRED. INSTALL ALL DROPS, OBTAINED FROM CUTTING WITHIN SUBSEQUENT BRIDGING RUNS TO AVOID ANY POTENTIAL SHORTAGES OF BRIDGING MATERIAL. REFERENCE: TYPICAL CONNECTION DETAIL FOR HORIZONTAL BRIDGING AT LAP'S, FOR FURTHER INSTALLATION REQUIREMENTS.

TYPICAL INSTALLATION DETAIL FOR: WELDED DIAGONAL BRIDGING
 REFERENCE: NOT PROVIDED

ERECTOR NOTE:
 IF JOISTS HAVE BEEN FABRICATED WITH "TOSH HOLES" TO ALLOW FOR TYPICAL "TIT-UP" OF JOIST OVER 45'-0" SPAN FOR JOISTS AT OR NEAR COLUMNS, THEN THESE SLOTS ARE NOT WELDED AS THE FINAL CONNECTION UNLESS EXPLICITLY NOTED IN THE PROJECT SPECIFIC SECTIONS. THE SMOG-NIGHT BOLTS SHALL REMAIN AFTER THE FINAL WELD CONNECTIONS PER THIS PROJECT SPECIFIC SECTIONS ON JOIST. IF THE BOLTS ARE NOT PRESENT, THEN THE INSIDE EDGE OF THE SEAT SLOTS MUST BE WELDED IN ADDITION TO THE FINAL WELD REQUIREMENT.



BOLTED JOIST CONNECTION DETAIL



WHEN AN OPENING OCCURS IN TWO CONSECUTIVE JOIST SPACES, INSTALL ADDITIONAL X-WELDED BRIDGING ON BOTH SIDES OF THE OPENING AND IN THE FIRST JOIST SPACE ON EACH SIDE OF THE OPENING.

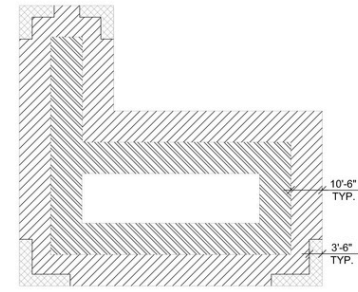
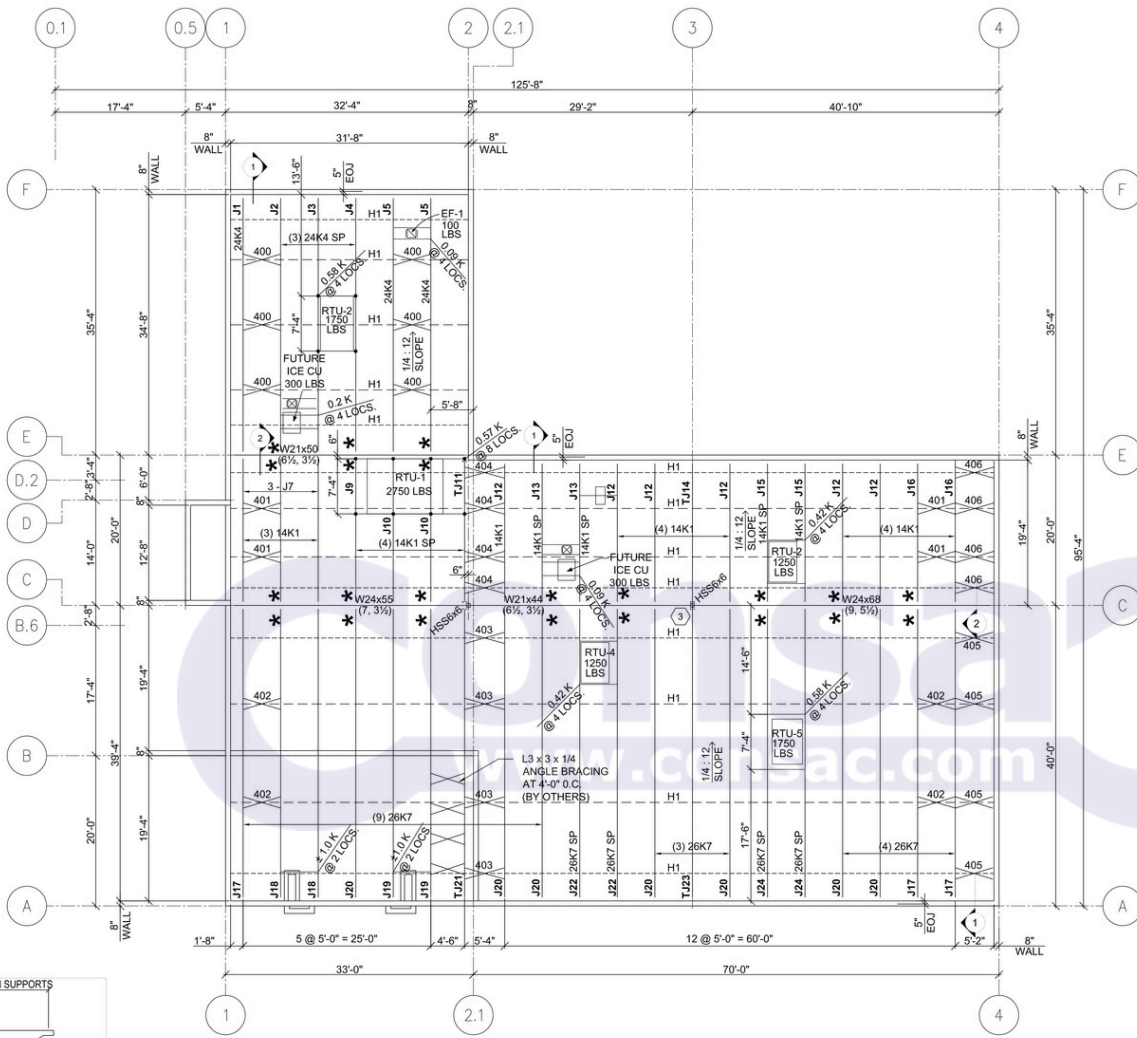
TYPICAL INSTALLATION DETAIL FOR: CONTINUOUS HORIZONTAL BRIDGING (LAP DETAIL)



THE DETAIL APPLIES WHEN PREVIOUSLY ERECTED ROWS OF JOIST BRIDGING INTERFERE WITH THE INSTALLATION OF MATERIAL FROM OTHER TRUCKS (E.G. PIPING, MECHANICAL DUCT WORK, SKYLIGHT OPENINGS, ETC.). ONCE THE BRIDGING IS REMOVED, IT IS NECESSARY TO TERMINATE THE BOTTOM CHORD ROWS OF BRIDGING IN THE SPACES ADJACENT TO THE NEARBY HAZARDOUS SPACE. IF THE STEEL DECK IS ATTACHED DIRECTLY TO THE JOIST TOP CHORD, THEN THE TOP CHORD BRIDGING ROW DOES NOT REQUIRE TERMINATION BRIDGING AT THESE LOCATIONS. ANY X-WELDED BRIDGING REQUIRED TO MEET THIS CONDITION IS NOT BY JOIST SUPPLIER.

DISCONTINUOUS HORIZONTAL BRIDGING DETAIL

TYPICAL INSTALLATION DETAIL FOR: JOIST REINFORCEMENT AT CONCENTRATED LOADS
 REFERENCE: 12S4.2



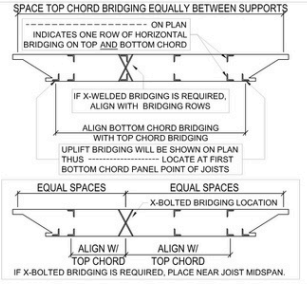
NET UPLIFT DIAGRAM
REF.: S0.1

NET UPLIFT VALUE:

TRIBUTARY AREA	ZONE - 1	ZONE - 1'	ZONE - 2	ZONE - 3
10 SQ FT	-10.0 PSF	-18.45 PSF	-27.51 PSF	-41.13 PSF
50 SQ FT	-10.0 PSF	-14.09 PSF	-21.90 PSF	-29.94 PSF
100 SQ FT	-10.0 PSF	-14.09 PSF	-21.90 PSF	-29.94 PSF

BRIDGING LEGEND WITH ANGLE SIZE

- 400 - 799 = WELDED-X BRIDGING, IDENTIFIED ON PLACEMENT PLAN
L 1 x 1 @ 109
- H1 = CONTINUOUS ROW OF HORIZONTAL BRIDGING AT TOP AND BOTTOM CHORD, IDENTIFIED BY MARKS H1 - H6 ON PLACEMENT PLAN. REFERENCE TYPICAL BRIDGING SPACING DETAIL ON EACH PLACEMENT PLAN FOR SPACING REQUIREMENTS, UNLESS SPECIFIC LOCATIONS ARE SHOWN.
H1 = L 1 x 1 @ 109
- H6 = CONTINUOUS ROW OF HORIZONTAL UPLIFT BRIDGING INSTALLED AT FIRST BOTTOM CHORD PANEL POINT, IDENTIFIED ON PLAN BY H1 - H6 (REFERENCE TYPICAL BRIDGING SPACING DETAIL ON ROOF PLACEMENT PLANS).
H1 = L 1 x 1 @ 109

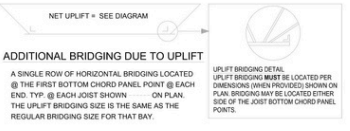


TYPICAL BRIDGING SPACING (W/ UPLIFT)

NOTE: BRIDGING ROW QUANTITIES WILL VARY. (SEE JOIST ERECTION PLANS FOR BRIDGING ROW REQUIREMENTS.)
N.T.S.

ROOF JOIST ERECTION PLAN
REF. S2.1

- PLAN NOTES:
1. THE TAG END OF THE JOIST IS THE END AT WHICH THE PECEMARK IS LOCATED.
 2. REFERENCE DWG. J1 FOR LEGEND, SYMBOLS & ABBREVIATIONS.
 3. FOR JOIST SECTIONS SEE J3.
 4. ALL JOIST & BRIDGINGS WILL BE PAINTED WITH ONE COAT OF S-1 STANDARD GRAY DIP PRIMER.

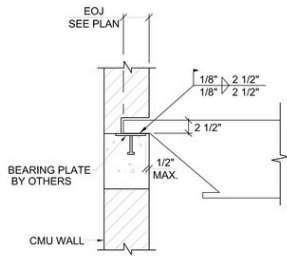


ADDITIONAL BRIDGING DUE TO UPLIFT

UPLIFT BRIDGING DETAIL
UPLIFT BRIDGING MUST BE LOCATED PER DIMENSIONS (WHEN PROVIDED) SHOWN IN PLAN. BRIDGING MAY BE LOCATED EITHER SIDE OF THE JOIST BOTTOM CHORD PANEL POINTS.

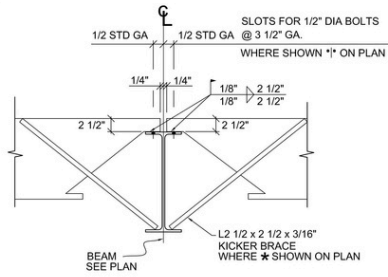
FOR FIELD USE





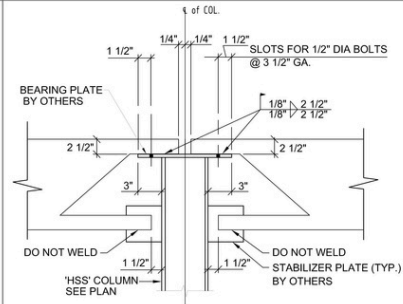
JOIST SECTION 1

REF: 2, 3, 4/S3.2
REF: 3A, 3B/S4.3



JOIST SECTION 2

REF: 8/S4.3
REF:



JOIST SECTION 3

REF: 9/S4.3
REF:



FOR FIELD USE



DRAWING INDEX

SHEET. #	DWG. NAME
D1	DECK COVER - TITLE PAGE
D2	ROOF DECK ERECTION PLAN
D3	DECK SECTIONS

DECK ERECTION NOTES

REFER TO THE STEEL DECK MANUFACTURER'S EROSION MANUAL AND ITS MANUAL OF CONSTRUCTION (MOC)

GC / ERECTOR NOTE:
 DO NOT ERECT STEEL DECK WITHOUT OBTAINING A COPY AND THOROUGHLY READING SDI MOC. SEVERE INJURY OR DEATH CAN RESULT FROM FAILURE TO FAMILIARIZE AND COMPLY WITH ALL APPLICABLE SAFETY REQUIREMENTS OF FEDERAL, STATE, AND LOCAL REGULATIONS AND THE SAFETY GUIDANCE OUTLINED IN THE SDI MOC. THIS MANUAL IS INTENDED TO BE AN AID AND GENERAL GUIDE FOR THE SAFE AND PROPER ERECTION OF STEEL DECK.
 SDI MOC IS AVAILABLE FROM:
 STEEL DECK INSTITUTE
 P.O. BOX 419
 GLENSHAW, PA 15116
 PHONE: 412-487-3325
 FAX: 412-487-3326
 WEB: WWW.SDI.ORG

DECK DELIVERY AND UNLOADING:

- THE GENERAL CONTRACTOR (GC) AND/OR THEIR DESIGNATE SHALL TAKE FULL RESPONSIBILITY OF THE CARGO DURING THE OFF LOADING PROCESS, AS WELL AS COUNT AND VERIFY THAT THE QUANTITIES AND CONDITION OF DECK AND ACCESSORIES ARE IN AGREEMENT WITH THE BILL OF LADING PRIOR TO THE CARRIER LEAVING THE UNLOADING ZONE. ANY SHORTAGES, DAMAGES OR DISCREPANCIES IN BUNDLES AND OR SHEETS WITH BUNDLES SHOULD BE NOTED ON THE BILL OF LADING PRIOR TO SIGNING FOR THE MATERIAL AND THE DECK MANUFACTURER SHOULD BE IMMEDIATELY NOTIFIED.
- THE MATERIAL LISTED ON THE BILL OF LADING ARE THE ONLY ITEMS BEING SUPPLIED.
- EXERCISE CARE WHEN UNLOADING DECK. BUNDLE STAMPS APPLIED AT FACTORY ARE TO REMAIN ON BUNDLE UNTIL PLACED FOR ERECTION AND SHEETS ARE READY TO SPREAD. BUNDLES MUST BE PROTECTED FOR LIFTING SO THAT SHIPPING AND EXCESS SWAPPING WILL NOT OCCUR AND THE LIFTING DEVICE WILL NOT DAMAGE THE DECK. SEE SDI MOC.
- IF DECK BUNDLES ARE STORED ON THE GROUND, A PLASTIC COVER SHOULD BE PLACED UNDER THE BUNDLES TO MINIMIZE CONCENTRATION OF WATER FROM THE GROUND ONTO THE DECK. THE STEEL DECK SHALL BE STORED OFF THE GROUND WITH ONE END ELEVATED TO PROVIDE DRAINAGE AND ALLOW AIR CIRCULATION. BUNDLES SHOULD BE STACKED SO THAT THERE IS NO CONTACT BETWEEN BUNDLES. BUNDLES SHOULD BE PROTECTED FROM PHYSICAL DAMAGE, BLEEDING OR CHEMICALLY PRETREATED LUMBER SHOULD NOT COME INTO DIRECT CONTACT WITH THE BUNDLES.
- THE DECK SHALL BE PROTECTED FROM THE ELEMENTS BY A VENTILATED WATERPROOF COVERING TO AVOID CONDENSATION.

DECK INSTALLATION:

- ERECT ALL DECK PRODUCTS AND ACCESSORIES IN ACCORDANCE WITH THE SPECIFICATIONS OF THE SDI.
- ONLY PLANS HAVING A "FIELD USE" STAMP SHALL BE USED FOR ERECTION.
- DECK BUNDLES MUST ALWAYS BE PLACED ON THE FRAME NEAR A MAIN SUPPORTING BEAM, AT A COLUMN, OR WALL AND ADJUSTED TO THE FINAL POSITION WITH ALIGNED SIDELAPS AND END BEARING. IF A BEARING IS REQUIRED, THE END BEARING SHALL BE LOCATED ON THE SUPPORTING MEMBERS BEFORE PERMANENTLY FASTENING THE DECK UNITS. IN NO CASE SHALL THE BUNDLES BE PLACED ON UNBROOKED FRAMES OR ON UNFASTENED OR UNBROOKED JOISTS.
- OSHA FEDERAL REGISTER SUBPART 1926.757 INCLUDES REQUIREMENTS AS TO HOW AND WHEN DECK BUNDLES MAY BE LANDED ON OPEN WEB STEEL JOISTS DURING THE STRUCTURE'S ERECTION. THE OSHA REGULATION MUST BE EXAMINED BY ANYONE ENGAGED IN THIS ACTIVITY, SUCH THAT ALL CRITERIA IS UNDERSTOOD AND MET.
- EACH UNIT SHALL BE BROUGHT TO PROPER BEARING ON THE SUPPORT TO PREVENT SLIP OFF. MINIMUM BEARING OF DECK ENDS ON SUPPORTS SHALL BE 18" FOR ALL DECKS EXCEPT 2" DEEP FLOOR DECKS (RESURE 2") AND 3" DEEP FLOOR DECKS (RESURE 2S) AND IN NO CASE LESS THAN 18". THE DESIGNER MUST CHECK WEB CROPPING IF BEARING IS LESS THAN LISTED. THE DESIGNER MAY HAVE SPECIFIED BEARING ABOVE THE MINIMUM REQUIREMENTS; ENGINEER PROJECT SPECIFIC BEARING REQUIREMENTS ARE MET.
- IF THE SUPPORTING BEAMS AND/OR JOISTS ARE NOT PROPERLY ALIGNED OR SUFFICIENTLY LEVEL TO PERMIT PROPER BEARING OF THE UNITS, THE DECK ERECTOR SHALL BRING THE MATTER TO THE ATTENTION OF THE GC FOR CORRECTION. DECK UNITS ARE NOT TO BE PLACED UNTIL NECESSARY CORRECTIONS ARE MADE.
- THE DECK ERECTOR SHALL ADJUST AND FIELD OUT UNITS AS REQUIRED FOR DECK LENGTHS SHORTER THAN 6'-0" AND AT OPENINGS, WHICH ARE NOT SHOWN ON THE O'DONNELL DRAFTING FIELD USE DRAWINGS.
- TO FORM A WORKING PLATFORM, IMMEDIATELY FASTEN DECK PANELS TO THE SUPPORTS IN ACCORDANCE WITH OSHA REGULATION 29CFR SECTION 1926.754(e), PER SECTION 1926.754(e)(2). RUN DECK UNITS CONTINUOUSLY OVER OPENINGS WHEN POSSIBLE. UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS, OPENINGS THROUGH THE DECK SHOWN ON O'DONNELL FIELD USE DRAWINGS, AS WELL AS SKINNED AREAS, SHALL BE CUT IN THE FIELD BY THE DECK ERECTOR. OPENINGS REQUIRED THROUGH THE DECK UNIT THAT ARE NOT SHOWN ON THE O'DONNELL FIELD USE DRAWINGS SHALL ALSO BE CUT IN THE FIELD AND REINFORCED, IF NECESSARY, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE SDI MOC.

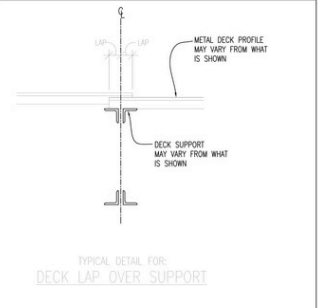
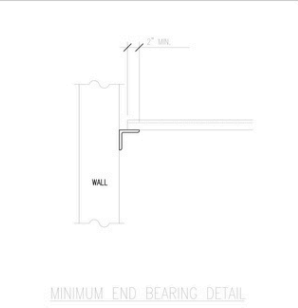
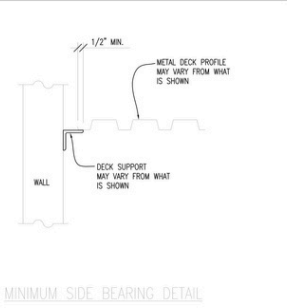
DECK ATTACHMENT:

- ALL WELDING OF DECK UNITS SHALL BE IN STRICT ACCORDANCE WITH AWS/AISC D1.3 STRUCTURAL WELDING CODE FOR SHEET STEEL AND SHALL PROVIDE LATERAL STABILITY TO THE TOP FLANGE OF THE SUPPORTING STRUCTURAL MEMBERS. EACH WELDER MUST DEMONSTRATE AN ABILITY TO PRODUCE SATISFACTORY WELDS USING A PROCEDURE AS SHOWN IN THE SDI MOC OR AS SPECIFIED IN AWS/AISC D1.3.
- WHEN WELDING, ALL WELDS ARE MADE FROM THE TOP OF THE DECK DOWN THROUGH THE LAPS AND SPOT WELDS SHOULD PENETRATE AND ATTACH ALL THICKNESSES OF MATERIAL TO THE STRUCTURAL SUPPORTS. CARE IN THE SELECTION OF ELECTRODES AND AMPERAGE SHOULD BE EXERCISED TO ENSURE POSITIVE ATTACHMENT.

O'DONNELL GENERAL NOTES:

- NIC - NOT IN CONTRACT. UNO - UNLESS NOTED OTHERWISE.
- TOUCH UP OF DECK FINISH AT WELD LOCATIONS OR OTHERWISE IS INSTALLERS RESPONSIBILITY.
- CONCRETE PLACEMENT PROCEDURES SHALL AVOID HIGH FLE UPS OF CONCRETE OR IMPACTS CAUSED BY DROPPING OR DUMPING. DO NOT EXCEED LOAD CARRYING CAPACITY OF STEEL DECK WITH CONSTRUCTION LOADS AND EQUIPMENT.
- CONCRETE WITH CALCIUM CHLORIDE OR ANY OTHER ADMIXTURE CONTAINING CHLORIDE SALTS SHALL NOT BE USED WITH ANY STEEL DECK INSULATION IN CONTACT WITH STEEL DECK. DECK CAN BE VERY CORROSIVE WHEN WATER IS PRESENT. WOOD FIBER BOARD INSULATION CONTAINING CONCENTRATED LEVELS OF CHLORINE IS HIGHLY CORROSIVE TO STEEL DECK AND IS NOT RECOMMENDED.
- PRESSURE TREATED LUMBER HAS BEEN SHOWN TO BE HIGHLY CORROSIVE WHEN IN DIRECT CONTACT WITH SHEET METAL AND IS TO BE AVOIDED. SDI RECOMMENDS A BARRIER OF WATER AND ICE SHIELD OR EQUIVALENT TO BE USED BETWEEN PRESSURE TREATED LUMBER AND STEEL DECK PRODUCTS OR ACCESSORIES.
- DESIGN RESPONSIBILITY FOR THE SDI CODE OF STANDARD PRACTICE, THE SELLER AND MANUFACTURER SHALL ASSUME NO RESPONSIBILITY OTHER THAN TO FURNISH MATERIALS, DATES, SPECIES, DIMENSIONS. THE DESIGNER IS RESPONSIBLE FOR SPECIFYING DECK TYPES, FINISHES, ATTACHMENTS AND BEARING CONDITIONS TO FACILITATE ALL LOADING, DEFLECTION, SPAN AND EXPOSURE CONDITIONS. THE COORDINATION OF SHIPPING REQUIREMENTS IS THE RESPONSIBILITY OF THE DESIGNER AND THE GENERAL CONTRACTOR.

CONTRACT NOTE:
 O'DONNELL WILL NOT ACCEPT THE RESPONSIBILITY OR CHARGES FOR ANY FIELD CORRECTIONS MADE WITHOUT PRIOR O'DONNELL APPROVAL.

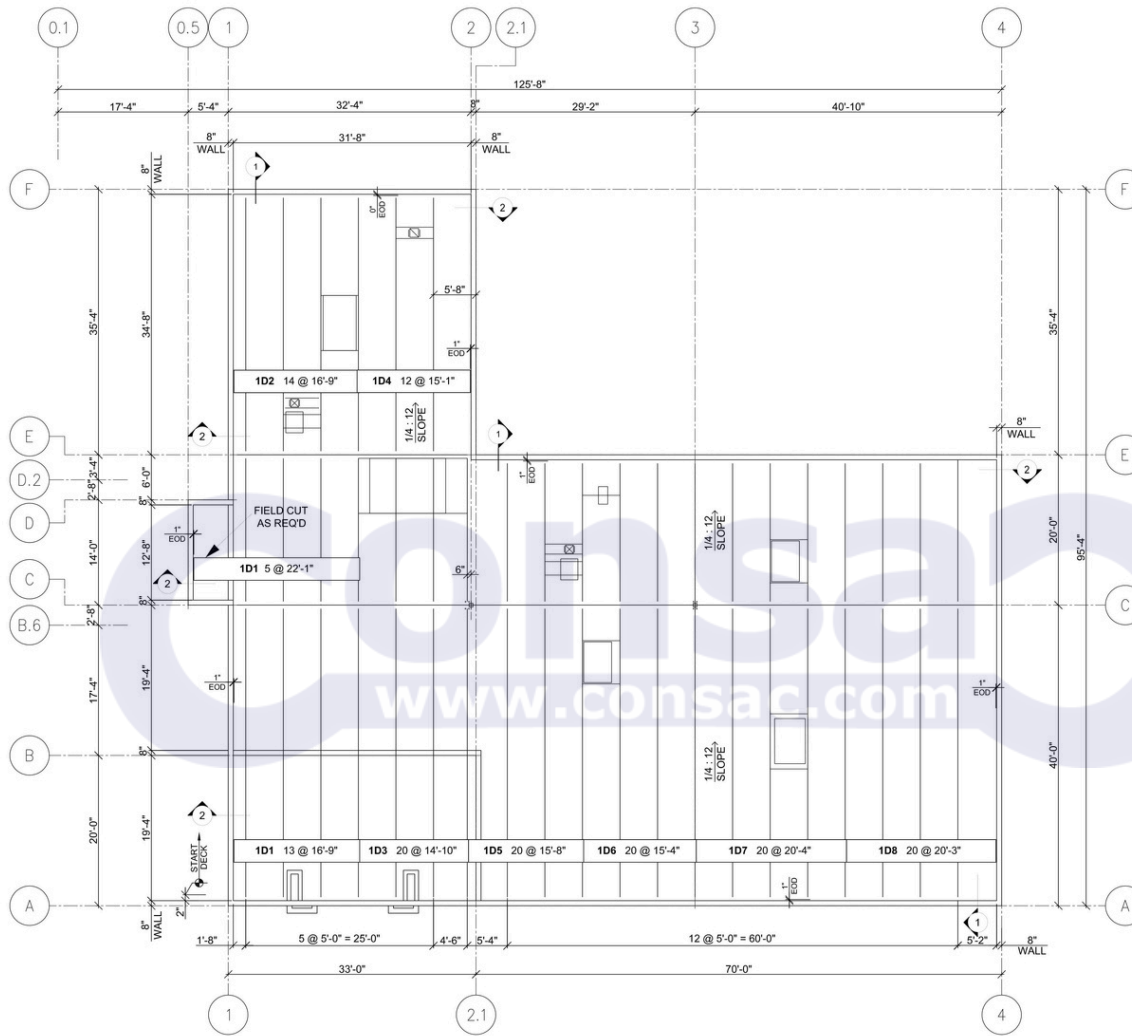


SYMBOLS

⊕	= SUGGESTED ERECTION STARTING POINT
□	= ROOF DUMP PAN SHOWN FOR GENERAL LOCATION ONLY. EXACT LOCATION TO BE VERIFIED IN FIELD.
★	= FIELD CUTTING OF DECK REQUIRED
∩	= TEMPORARY SHORING REQUIRED. (SHORING IS BY OTHERS)
⊠	= FIELD CUT OPENING BY OTHERS
⊕	= CENTERLINE

FOR FIELD USE





DECK FASTENER SCHEDULE				
FASTENER PATTERN @ SUPPORT:				
BUILDING ZONE	PATTERN @ INTERMEDIATE SUPPORT	PATTERN @ PERIMETER SUPPORT	FASTENER TYPE @ SUPPORT	SIDLAP FASTENER
1 1/2' ROOF	36/7	6'	1/2" @ PUDDLE WELD	5 - #10 TEK SCREWS PER SPAN
REMARKS:				

ROOF DECK ERECTION PLAN
REF. S2.1

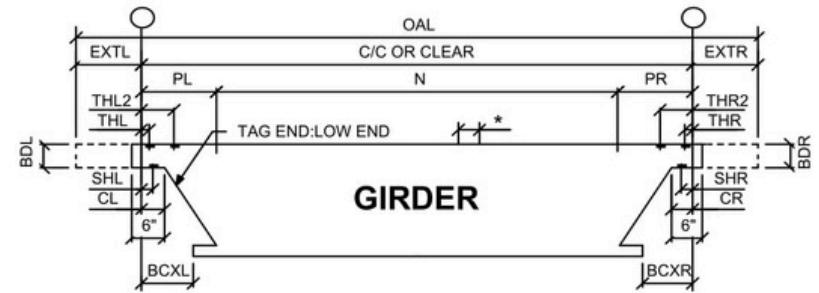
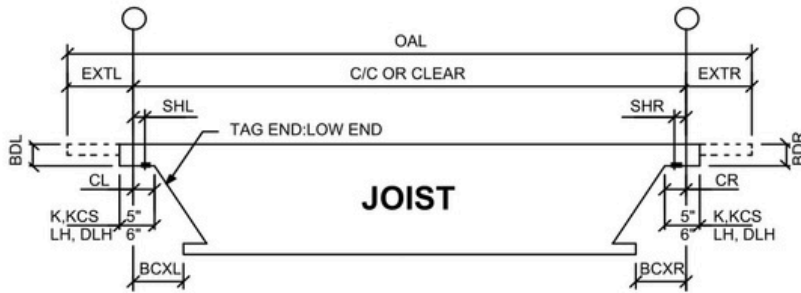
- PLAN NOTES**
1. REFERENCE SHEET D1 FOR GENERAL NOTES & TYP. DETAILS.
 2. SEE SHEET D3 FOR DECK SECTIONS.

FOR FIELD USE



DECK GAGE & FINISH						
FM DECK	UL DECK	MARK	TYPE	GAGE	FINISH	COVER
<input type="checkbox"/>	<input type="checkbox"/>	"D"	1.5TYPE"B"ROOF	22GA	GALV.G60	36"





LENGTHS SHOWN ARE IN HORIZONTAL PROJECTION
DT= Danger Tag (per OSHA)

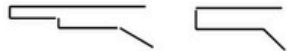
LENGTHS SHOWN ARE IN HORIZONTAL PROJECTION

FL & FR = Type S, F & R
or dimension to end of
seats from center line.

Seat Standards UNLESS NOTED ON THE LIST
BDL, BDR: H & K = 2 1/2"
LH & DLH = 5"
Slots: H & K = 5/8", 3 1/2" Gage
LH & DLH = 7/8", 4" Gage

* OSHA JOIST TO GIRDER CONNECTION
WS= Welded Seats
NS= Joist Bolted on Near Side
FS= Joist Bolted on Far Side
BS= Joist Bolted on Both Sides

Seat Standards UNLESS NOTED ON THE LIST
BDL, BDR: = 7 1/2"
SLOTS: = 7/8", 5"
THL, THR = 5/8" Holes, 4 1/2" Gage
Holes for LH Series Must be Noted



TYPE "S" EXT TYPE "F" & "R" EXT

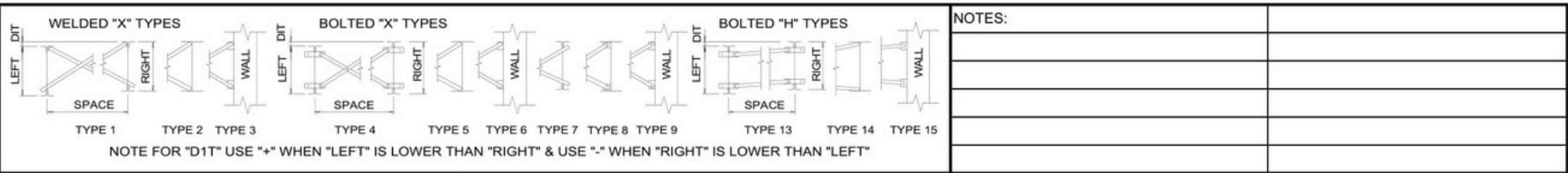
C/C or Clear = C/C of Grid or Inside Face of Wall
OAL Over All Length
N = Number of Joist Spacings

EXTL = EXTension Top Left
CL = CLearance Left
BDL = Bearer Depth Left
SHL = SEat Holes Left
BCXL = Botton Chord EXTension Left
THL = Top Chord Hole Left (Girder)
THL2 = Top Chord Hole Left 2nd (Girder)
PL = Panel Left (Girder)

EXTR = EXTension Top Right
CR = CLearance Right
BDR = Bearer Depth Right
SHR = SEat Holes Right
BCXR = Botton Chord EXTension Right
THR = Top Chord Hole Right (Girder)
THR2 = Top Chord Hole Right 2nd (Girder)
PR = Panel Right (Girder)

NOTES:				NET UPLIFT: _____ PLF		L5) ADD'L (2) +0.09K LOAD AT ANY TCPP DUE TO RTU										U4) NU = 73 PLF + ADD'L PNU = 41 PLF FOR 10'-6" FTE						
				ASD <input checked="" type="checkbox"/>	LRFD <input type="checkbox"/>	FACTORED <input type="checkbox"/>	L6) ADD'L (2) +0.2K LOAD AT ANY TCPP DUE TO RTU										U5) NU = 110 PLF					
L1) ADD'L +0.58K LOAD ON TC @ 13'-6" & 20'-10" FTE DUE TO RTU				L7) Add'L ±1.0 K @ ANY TCPP										U6) NU = 73 PLF + ADD'L PNU = 41 PLF FOR 11'-2" FTE								
L2) ADD'L +0.57K LOAD ON TC @ 6" & 7'-10" FTE DUE TO RTU				U1) NU = 73 PLF																		
L3) ADD'L +0.58K LOAD ON TC @ 17'-6" & 24'-10" FTE DUE TO RTU				U2) NU = 110 PLF + ADD'L PNU = 45 PLF FOR 3'-6" FTE																		
L4) ADD'L (2) +0.42K LOAD AT ANY TCPP DUE TO RTU				U3) NU = 110 PLF + ADD'L PNU = 45 PLF FOR 10'-6" FTE																		
SEQUENCE				QTY	MARK	TYPE	ELEV. SLOPE	EXTL	C/C OR CLEAR	EXTR	FL / TYPE	CL	FR/ TYPE	CR	BDL	BDR	SHL	SHR	BCXL	BCXR	OAL	NOTES
1	2	3	4																			
				1	J1	24K4		5"	34'-8"	- 1/4"	F	0"	F	5 1/4"	2 1/2"	2 1/2"					35'-0 3/4"	U3
				1	J2	24K4SP		5"	34'-8"	- 1/4"	F	0"	F	5 1/4"	2 1/2"	2 1/2"					35'-0 3/4"	L6, U2
				1	J3	24K4SP		5"	34'-8"	- 1/4"	F	0"	F	5 1/4"	2 1/2"	2 1/2"					35'-0 3/4"	L1, L6, U2
				1	J4	24K4SP		5"	34'-8"	- 1/4"	F	0"	F	5 1/4"	2 1/2"	2 1/2"					35'-0 3/4"	L1, U4
				2	J5	24K4		5"	34'-8"	- 1/4"	F	0"	F	5 1/4"	2 1/2"	2 1/2"					35'-0 3/4"	L5, U2
				3	J7	14K1		- 1/4"	20'-0"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"					19'-11 1/2"	U5
				1	J9	14K1SP		- 1/4"	20'-0"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"					19'-11 1/2"	L2, U1
				2	J10	14K1SP		- 1/4"	20'-0"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"					19'-11 1/2"	L2, U6
				1	TJ11	14K1SP		- 1/4"	20'-0"	- 1/4"	F	5 1/4"	F	5 1/4"	2 1/2"	2 1/2"	1 1/2"	1 1/2"			19'-11 1/2"	L2, U6 (DT)
				6	J12	14K1		5"	19'-4"	- 1/4"	F	0"	F	5 1/4"	2 1/2"	2 1/2"					19'-8 3/4"	U4
				2	J13	14K1SP		5"	19'-4"	- 1/4"	F	0"	F	5 1/4"	2 1/2"	2 1/2"					19'-8 3/4"	L5, U4
				1	TJ14	14K1		5"	19'-4"	- 1/4"	F	0"	F	5 1/4"	2 1/2"	2 1/2"		4 1/2"		4 1/2"	19'-8 3/4"	U4 (DT)
				2	J15	14K1SP		5"	19'-4"	- 1/4"	F	0"	F	5 1/4"	2 1/2"	2 1/2"					19'-8 3/4"	L4, U4
				2	J16	14K1		5"	19'-4"	- 1/4"	F	0"	F	5 1/4"	2 1/2"	2 1/2"					19'-8 3/4"	U2
				3	J17	26K7		5"	39'-4"	- 1/4"	F	0"	F	5 1/4"	2 1/2"	2 1/2"					39'-8 3/4"	U2
				2	J18	26K7		5"	39'-4"	- 1/4"	F	0"	F	5 1/4"	2 1/2"	2 1/2"					39'-8 3/4"	U2, L7
				31	TOTAL QTY		LAST SHOP ORDER YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		PROJECT: 22-02986										PAINT: GRAY		REV #	DATE:





NOTES:

SEQUENCE				QTY	MARK	TYPE	LEFT MARK	LEFT DEPTH	RIGHT MARK	RIGHT DEPTH	SPACING	DIT = DIFF IN TOP	SIZE	REMARKS	SEQUENCE				HORIZONTAL BRIDGING							
1	2	3	4												1	2	3	4	QTY	MARK	LENGTH	SIZE	REMARKS			
				12	400	1	J1	24"	J2	24"	5'-0"		1 x 1 x 0.109					63	H1	25'-0"	L1 x 1 x 0.109					
				8	401	1	J7	14"	J7	14"	5'-0"		1 x 1 x 0.109													
				8	402	1	J17	26"	J18	26"	5'-0"		1 x 1 x 0.109													
				8	403	1	TJ21	26"	J20	26"	5'-4"		1 x 1 x 0.109													
				8	404	1	TJ11	14"	J12	14"	5'-4"		1 x 1 x 0.109													
				8	405	3	J17	26"	WALL	26"	5'-2"		1 x 1 x 0.109													
				8	406	3	J16	14"	WALL	14"	5'-2"		1 x 1 x 0.109													
															SEQUENCE				BRIDGING ANCHOR CLIPS							
															1	2	3	4	QTY	MARK	LENGTH	SIZE	REMARKS			
															SEQUENCE				GIRDER KNEE BRACE / LOOSE BOTTOM CHORD							
															1	2	3	4	QTY	MARK	LENGTH	SIZE	GIRDER DEPTH	JOIST DEPTH	SEAT DEPTH	
															SEQUENCE				BOLT/NUT/WASHER		SEQUENCE				BOLT/NUT/WASHER	
															1	2	3	4	QTY	SIZE	1	2	3	4	QTY	SIZE

60	TOTAL QTY	LAST SHOP ORDER	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	PROJECT: 22-02986	PAINT: GRAY	REV#	DATE:
----	-----------	-----------------	------------------------------	--	-------------------	-------------	------	-------



CONSAC

