

GENERAL STRUCTURAL STEEL NOTES

MISCELLANEOUS:
The structure and its several parts have been designed for the in-service loads only. The methods, means, procedures, and sequences of construction shall be responsibility of the Contractor. The Contractor shall take all necessary precautions to insure safe working conditions and maintain the integrity of the structure during all stages of construction. The adequacy of the design of temporary bracing, shoring, etc. is the Contractor's responsibility.

STRUCTURAL STEEL:
Structural steel detailing, fabrication and erection shall conform to the AISI 360-2005 Specification for Structural Steel Buildings, latest edition with amendments, and the AISC Code of Standard Practice for Steel Buildings and Bridges, latest edition with amendments.

Erector shall maintain adequate temporary bracing in each direction until diaphragm and lateral brace construction is completed.

Structural steel rolled shapes shall conform to A992 GR. 50, except as noted.
Structural steel plates & angles shall conform to ASTM A36, except as noted. Structural tubes shall conform to ASTM A500 Grade B (Fy 46 ksi)

Structural steel shall be shop-painted with a gray rust-inhibiting primer. Steel which will be exposed to weather shall receive one additional finish coat. All abrasions caused by handling after shop painting shall be touched-up after erection is complete.

Unless otherwise noted, bolted connections for structural steel members shall be made with 3/4" diameter high strength bolts, conforming to ASTM A325. Except as noted, bolted connections shall be tightened to the snug tight condition. Bolted connections in wind brace elements shall be tightened using the turn-of-nut method. Connections shall conform to the Specification for Structural Joints Using ASTM A325 or A490 Bolts, approved by the Research Council on Structural Connections of the Engineering Foundation.

Welding procedures shall conform to the latest edition of the American Welding Society's (AWS) Structural Welding Codes for: Steel ANSI / AWS D1.1, Sheet Steel ANSI / AWS D1.3, and Reinforcing Steel ANSI / AWS D1.4.

Splicing of structural steel members where not detailed on the contract documents is prohibited without the prior approval of the Structural Engineer as to location, type of splice and connection to be made.

The Structural Steel Contractor shall prepare detailed working or shop drawings to enable him to fabricate, erect and construct all parts of the work in accordance with the drawings and specifications, and shall submit one electronic copy (PDF) to the Structural Engineer for approval. These shop drawings will be reviewed for design concepts expressed in the contract documents only. The Contractor shall be responsible for all dimensions, accuracy, and fit of work.

STEEL DECK:
Metal deck shall be installed in accordance with the latest edition of the Steel Deck Institute's Specifications and Code of Standard Practice.

Deck manufacturer shall provide all roof deck accessories, including closures, supplementary framing, and sump pans.

Steel roof deck and accessories shall be shop-painted with a rust-inhibiting paint, white on exposed bottom.

Roof deck shall be attached to the structural steel in accordance with the details shown in the plans. Welding shall be performed in accordance with the latest edition of the American Welding Society's Structural Welding Code - Sheet Steel ANSI / AWS D1.3.

STEEL JOISTS:
Steel joist supplier to submit joist and deck shop drawings to the Building Official when approved for field use drawings are complete.
Steel bar joists shall be designed, fabricated, erected and braced in accordance with the latest Steel Joist Institute (SJI) specifications (SJK-1.1, SJI LH/DLH-1.1).

All bar joists shall be shop painted with a gray, rust-inhibiting primer.
Steel joists shall be fabricated in accordance with the design specification shown for each joist on the drawings. Deflection due to live load shall be limited to 1/240 of the joist span.

Where bearing depth, length and end anchorages for steel joists are not shown or noted, provide anchorages as required by the SJI specifications.

Horizontal bridging and diagonal bridging for steel joists shall be located and designed as required by the SJI specifications. Bridging members shall be connected to the joist chords by welding or other mechanical means. The ends of bridging lines terminating at concrete block walls or steel beams shall be securely anchored thereto at top and bottom chords.

Hangers and other supports for mechanical, electrical, or plumbing systems shall be located at the intersection of the chord and web members. Concentrated loads in excess of 100 pounds must be reviewed by the Structural Engineer.

Where columns are not framed in at least two directions with steel beams, the joist at or nearest each column line shall be bolted to supporting members during erection.

STEEL JOIST GIRDERS:
Steel joist girders shall be designed, fabricated, erected and braced in accordance with the latest Steel Joist Institute (SJI) specifications (SJI JG-1.1).

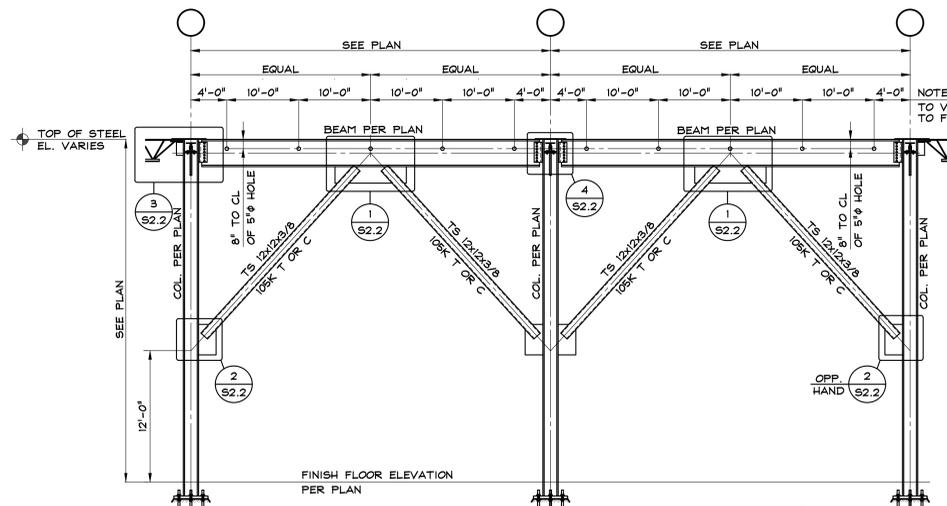
All joist girders shall be shop-painted with a gray, rust-inhibiting primer.
Joist girders shall be fabricated in accordance with the design specification shown for each joist girder on the drawings. The design specifications follow the form:

DD G XN TLK
where DD indicates the maximum joist girder depth, G indicates joist girder type, X indicates the number of joist spaces (equal or unequal) occurring in the joist girder span, and TL indicates the total panel point design load (excluding joist girder self weight) in kips. Where "VG" replaces "G", joist must bear only at vertical joist girder web members. Deflection due to live load shall be limited to 1/240 of the joist girder span.

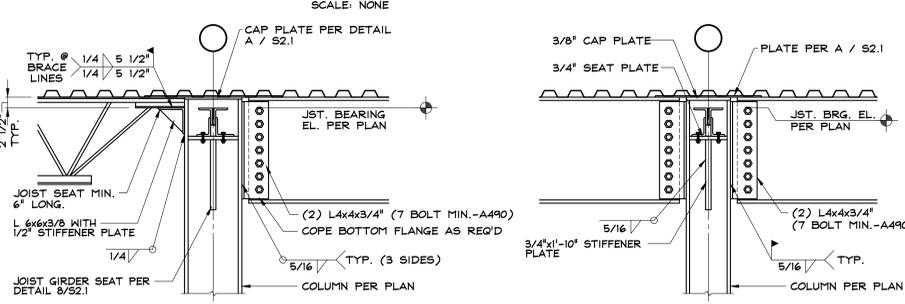
Stabilizer plates shall be provided on the columns between the joist girder bottom chord angles as required by SJI specifications. DO NOT WELD BOTTOM CHORD ANGLES TO STABILIZER PLATES UNLESS NOTED.

Where end anchorages for joist girders are not shown or noted, provide anchorages as required by the SJI specifications.

Joist girder bracing shall be as shown on the shop drawings and as required by the joist girder manufacturer.

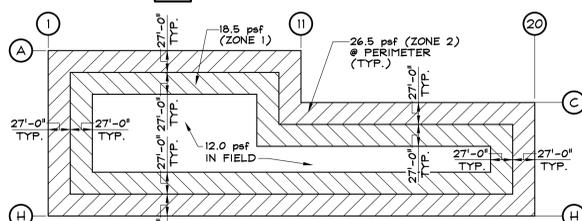


TYPICAL BRACE ELEVATION
SCALE: NONE



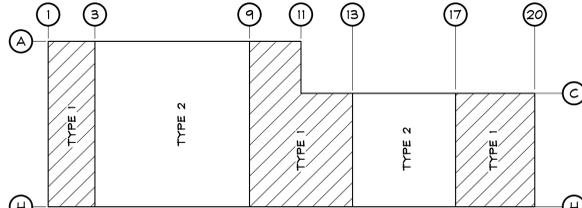
SECTION 3
SCALE: 3/4" = 1'-0"

SECTION 4
SCALE: 3/4" = 1'-0"

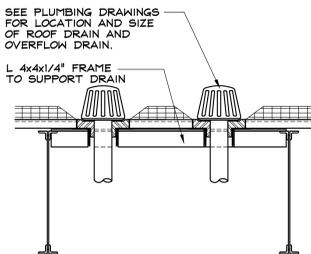


NET UPLIFT DIAGRAM ON JOIST & JOIST GIRDER
SCALE: NONE

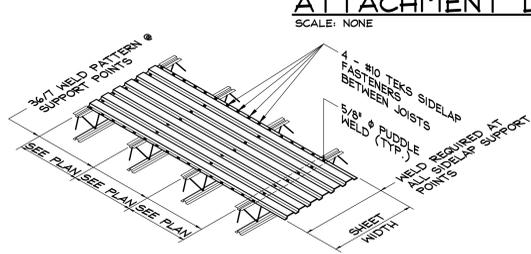
NOTE: 1. LOADS INDICATED REPRESENT NET UPLIFT VALUES.



ROOF DECK ATTACHMENT LAYOUT PLAN
SCALE: NONE

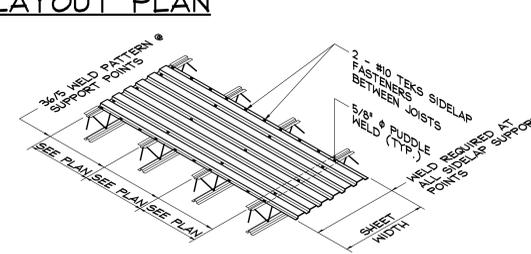


TYPICAL ROOF DRAIN SUPPORT
SCALE: NONE



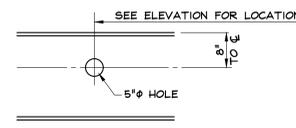
ROOF DECK ATTACHMENT TYPE 1
SCALE: NONE

NOTES:
1) ROOF DECK PER PLAN. MINIMUM THREE SPAN CONDITION.
2) WELD THROUGH MULTIPLE SHEETS AT ALL END AND SIDE LAPS.
3) END LAPS SHALL OCCUR ONLY AT SUPPORT POINTS.



ROOF DECK ATTACHMENT TYPE 2
SCALE: NONE

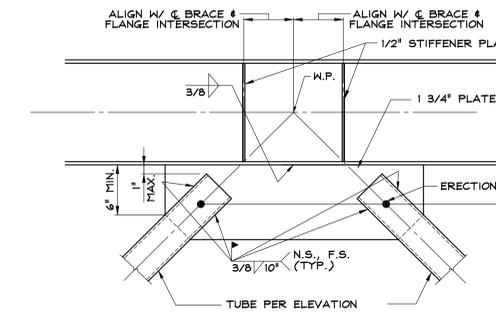
NOTES:
1) ROOF DECK PER PLAN. MINIMUM THREE SPAN CONDITION.
2) WELD THROUGH MULTIPLE SHEETS AT ALL END AND SIDE LAPS.
3) END LAPS SHALL OCCUR ONLY AT SUPPORT POINTS.



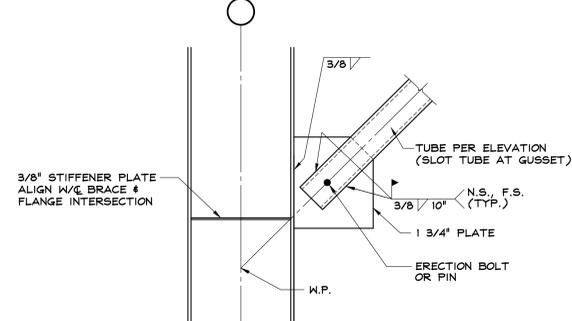
TYPICAL SPRINKLER HOLE AT LATERAL BRACES
SCALE: 3/4" = 1'-0"

NOTE: SPRINKLER CONTRACTOR SHALL REVIEW AND APPROVE LAYOUT ON STEEL SHOP DRAWINGS.

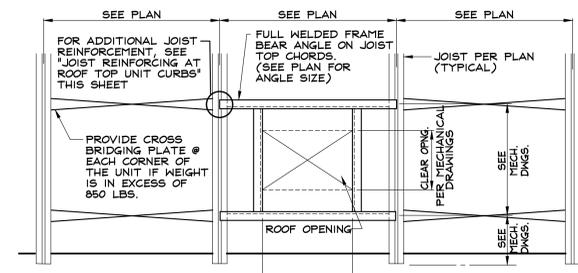
NOTES:
1. FORCES SHOWN ARE DESIGN SERVICE LOADS.
2. CONNECTIONS SHALL BE DESIGNED FOR FORCE INDICATED ON ELEVATION.
3. ALL BOLTED CONNECTIONS SHALL BE "SLIP-CRITICAL" CONNECTIONS.
4. EACH MEMBER'S CONNECTION SHALL BE SYMMETRIC ABOUT THE CENTER OF GRAVITY OF THAT MEMBER.



SECTION 1
SCALE: 3/4" = 1'-0"

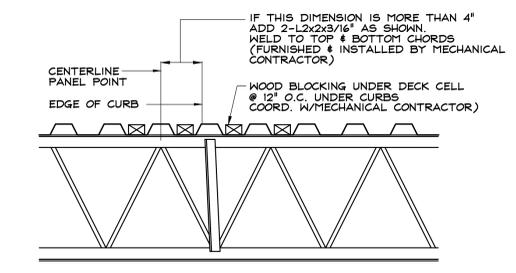


SECTION 2
SCALE: 3/4" = 1'-0"

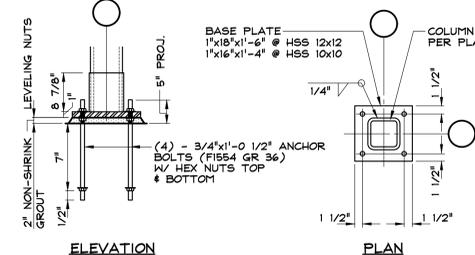


TYPICAL ROOF OPENING
SCALE: NONE

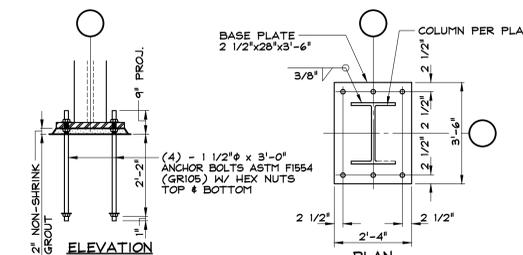
NOTE: THE UNIT IS SUPPORTED BY THE UNIT CURB WHICH MUST BE DESIGNED TO SPAN TO SUPPORTING MEMBERS.



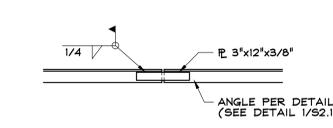
JOIST REINFORCEMENT AT ROOF TOP UNIT CURBS
SCALE: NONE



TYPICAL TUBE COLUMN BASE DETAIL
SCALE: NONE



TYPICAL WIND BRACE COLUMN BASE DETAIL
SCALE: NONE



TYPICAL DIAPHRAM CHORD SPLICE
SCALE: NONE

DESIGNER / BUILDER

ARCO
DESIGN/BUILD INDUSTRIAL

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FXB ENGINEERING
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PLUMBING ENGINEER
MCCARTHY ENGINEERING ASSOCIATES, INC.
315 EAST SECOND STREET
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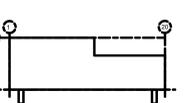
FIRE PROTECTION ENGINEER
S A COMUNALE CO. INC.
2900 NEWPARK DRIVE
BARBERTON, OH 44203

SEAL



THOMAS G. SMITH | NY: 042283

KEY PLAN



Legend for North arrows and symbols.

SUBMITTALS		
NO.	DATE	DESCRIPTION
12.08.21		PROGRESS
1.28.22		PROGRESS
2.28.22		95% PROGRESS
3.9.22		100% PROGRESS
5.24.22		PUMP HOUSE
6.9.22		PERMIT
1	7.8.22	FTG STEPS & JOIST SEAT @ A

PROJECT NO. AS286-21 | NY131 | 21-154
DRAWN BY DTC

STRUCTURAL DETAILS

SHEET NO.

S2.2