

BIDDING AND CONTRACT DOCUMENTS

Section 00 21 15 – Addendum No. 4

DATE: February 11, 2020

Hurst-Rosche, Inc.
200 N. Market
Marion, Illinois 62959

TO: PROSPECTIVE BIDDERS

SUBJECT: ADDENDUM NO. 4 TO THE BIDDING DOCUMENTS FOR

Murphysboro CUSD #186
Murphysboro Middle School HVAC – Phase 2
Murphysboro, Jackson County, Illinois
HR: 365-3198

This addendum forms a part of the bidding and contract documents and modifies the bidding documents dated January 21, 2019. Acknowledge receipt of this addendum in space provided on Bid Form.

FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION.

CLARIFICATIONS

1. Contractor will be responsible to patch walls, ceilings, and floors after removal of specified items. Contractor will be required to patch with materials similar to existing materials.
2. RTU 1 (gymnasium) will be mounted to the existing concrete roof deck. No existing structural information is available.
3. Kitchen RTU – framing for this unit will follow the framing from S100 distributed with this addendum #4
4. Contractor is responsible to remove the existing FAF units (2) in the rooms attached to the north side of the gymnasium. Refer to Addendum #3 for the required piping connections.
5. As stated in Addendum #3 – Hard duct will be required from the 2 FAF units serving the gymnasium to the “T” into the main duct that is around the bleachers. The duct for the RTU will need to transition to Fabric duct as soon as feasible once it enters the gymnasium. This duct will be a fabric duct as specified in Addendum #3
6. Structural steel tube shown on A-402 is an existing member.
7. FAF Units duct connections should be installed per manufacturing requirements. Whether ducted or free, a control damper as specified in 23 33 00 Air Duct Accessories will need to be placed at outside air, return air and mixed air to allow for economizer mode, unoccupied mode, etc. See Direct Digital Controls and Sequence of operations sections of the specification manual
8. Existing roof is an EPDM manufacturer is Firestone.
9. Gym Lobby diffusers shall be Krueger 24”x24” or approved equal to meet the required CFM. These will be surface mounted.

SPECIFICATIONS

1. 05 12 00 – **ADD** attached specification in its entirety.
2. 08 56 59 – **DELETE** specification in its entirety.

DRAWINGS

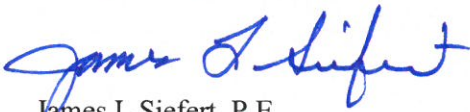
1. S 100 – **REMOVE** sheet in its entirety and **REPLACE** with attached S-100
2. M 103
 - a. Key note #2 – **DELETE** “Remove existing louver”.
 - b. Key note #3 – **DELETE** “Remove existing louver”.
3. A 102 – Key note #7 – **ADD** “floor base to be rubber base to match color as close as possible”.

This addendum **DOES** alter the previously published bid date of **February 12, 2020** at 593 Ava Road, Murphysboro, IL 62966. The new bid date is **February 14, 2020 at 10:00 a.m.** at 593 Ava Road, Murphysboro, IL 62966.

UPON RECEIPT OF THIS ADDENDUM, PLEASE SIGN BELOW AND E-MAIL TO HURST-ROSCHE ENGINEERS, INC., AT jsiefert@hurst-rosche.com WITHIN 24 HOURS OF RECEIPT.

Respectfully submitted,

HURST-ROSCHE, INC.



James L Siefert, P.E.

cc: All planholders

RECEIVED BY:

Authorized Representative

Company Name

Date

SECTION 05 12 00 - STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Structural shapes.
 - 2. Channel and angles.
 - 3. Structural plates and bars.

1.2 DEFINITIONS

- A. Structural Steel: Elements of the structural frame indicated on Drawings and as described in AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."

1.3 COORDINATION

- A. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Show fabrication of structural-steel components.
 - 1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
 - 2. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For installer, fabricator, shop-painting applicators, structural engineer, and testing agency.

- B. Welding Certificates: Certify welders employed on the work, verifying AWS qualification within previous 12 months.
- C. Mill test reports for structural steel, including chemical and physical properties.
- D. Survey of existing conditions.
- E. Source quality-control reports.
- F. Field quality-control and special inspection reports.

1.7 QUALITY ASSURANCE

- A. Fabricator Qualifications: A qualified fabricator with minimum of 5 years documented experience.
- B. Installer Qualifications: A qualified installer with minimum of 5 years documented experience.
- C. Shop-Painting Applicators: Qualified with minimum of 5 years documented experience.
- D. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1, "Structural Welding Code - Steel."
- E. Comply with applicable provisions of the following specifications and documents:
 - 1. AISC 303.
 - 2. AISC 360.
 - 3. RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.
 - 1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.

PART 2 - PRODUCTS

2.1 STRUCTURAL-STEEL MATERIALS

- A. Channels, Angles-Shapes: ASTM A992.
- B. Plate and Bar: ASTM A572.
- C. Welding Electrodes: Comply with AWS requirements.

2.2 FABRICATION

- A. Continuously seal joined members by intermittent welds and plastic filler. Continuous welds. Grind exposed welds smooth.
- B. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.
 - 1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1.
- C. Cleaning: Clean and prepare steel surfaces that are to remain unpainted according to SSPC-SP 2, "Hand Tool Cleaning".

2.3 SOURCE QUALITY CONTROL

- A. Contractor shall retain an independent third party for testing and inspection services. Services shall include shop testing bolted and weld connections as specified for field quality control tests.
 - 1. Provide testing agency with access to places where structural-steel work is being fabricated or produced to perform tests and inspections.
- B. Welded Connections: Visually inspect shop-welded connections according to AWS D1.1 and the following inspection procedures, at testing agency's option:
 - 1. Liquid Penetrant Inspection: ASTM E 165.
 - 2. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.
 - 3. Ultrasonic Inspection: ASTM E 164.
 - 4. Radiographic Inspection: ASTM E 94.
- C. Contractor shall submit testing and inspection reports to E.O.R.
- D. When fabricator is approved by authority having jurisdiction, submit certificate of compliance indicating work performed at fabricator's facility conforms to Contract Documents.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify, with certified steel erector present.
 - 1. Prepare a certified survey of existing conditions.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity

to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.

3.3 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Maintain erection tolerances of structural steel within AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."
- C. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that are in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
 - 1. Level and plumb individual members of structure.
 - 2. Make allowances for difference between temperature at time of erection and mean temperature when structure is completed and in service.
- D. Splice members only where indicated.
- E. Do not use thermal cutting during erection unless approved by Architect. Finish thermally cut sections within smoothness limits in AWS D1.1.
- F. Do not field cut or alter structural members without approval of Architect/Engineer.
- G. After erection, touch up welds and abrasions to match shop finishes.

3.4 FIELD CONNECTIONS

- A. Weld Connections: Comply with AWS D1.1 for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
 - 1. Comply with AISC 303 and AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.

3.5 FIELD QUALITY CONTROL

- A. Special Inspections: Engage a qualified special inspector to perform the following special inspections:
 - 1. Verify structural-steel materials and inspect steel frame joint details.
 - 2. Verify weld materials and inspect welds.
- B. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- C. Welded Connections: Visually inspect field welds according to AWS D1.1.

1. In addition to visual inspection, test and inspect field welds according to AWS D1.1 and the following inspection procedures, at testing agency's option:
 - a. Liquid Penetrant Inspection: ASTM E 165.
 - b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.
 - c. Ultrasonic Inspection: ASTM E 164.
 - d. Radiographic Inspection: ASTM E 94.

- D. Correct defective welds.

- E. Contractor shall retain an independent third party for testing and inspection services. Services shall include bolted and welded connections.

- F. Contractor shall submit testing and inspection reports to E.O.R.

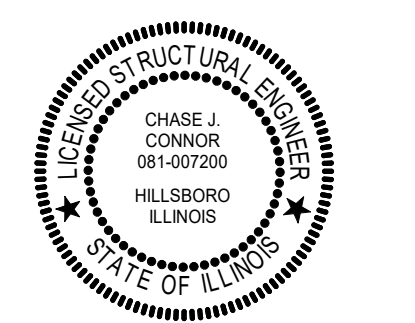
END OF SECTION



HURST-ROSCHKE, INC.
PROFESSIONAL DESIGN NUMBER: 184-000298

200 N. MARKET STREET
MARION, IL
PH: 618.998.0075

www.hurst-rosche.com
HILLSBORO, IL
EAST ST. LOUIS, IL
ARNOLD, MO
NEOSHO, MO
NASHVILLE, TN



SIGNATURE 02-07-2020
DATE 11-30-2020
LICENSE EXPIRES

MURPHYSBORO CUSD #186 - MURPHYSBORO MIDDLE SCHOOL
BUILDING RENOVATIONS - PHASE 2
2125 SPRUCE STREET
MURPHYSBORO, IL 62966

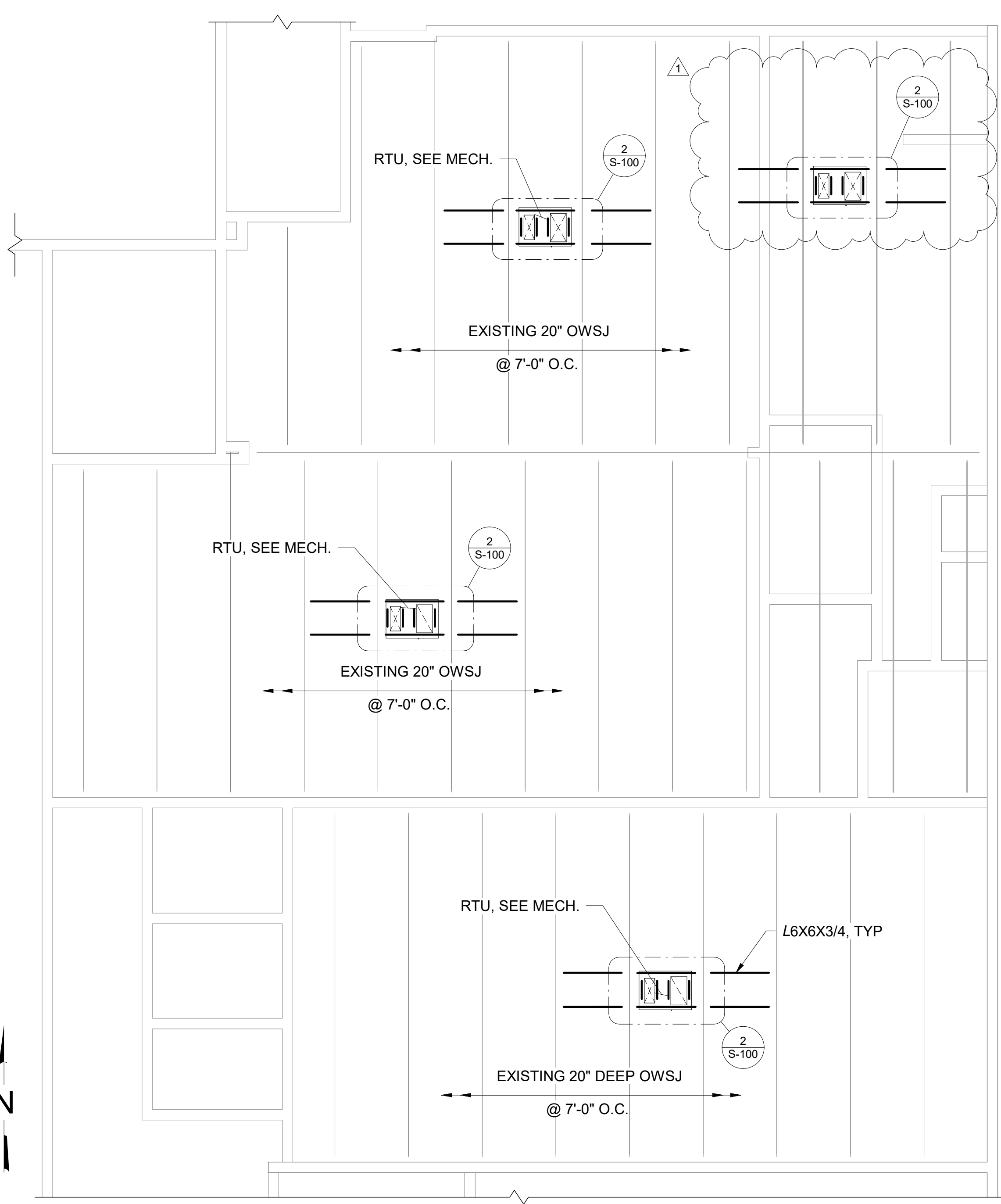
MARK	DATE	DESCRIPTION
1	2/12/20	Addendum 4

DATE: 02-07-2020
PROJECT NO: 365-3198
DESIGN: C.J.C. DRAWN: N.A.L. CHECK: J.J.C.

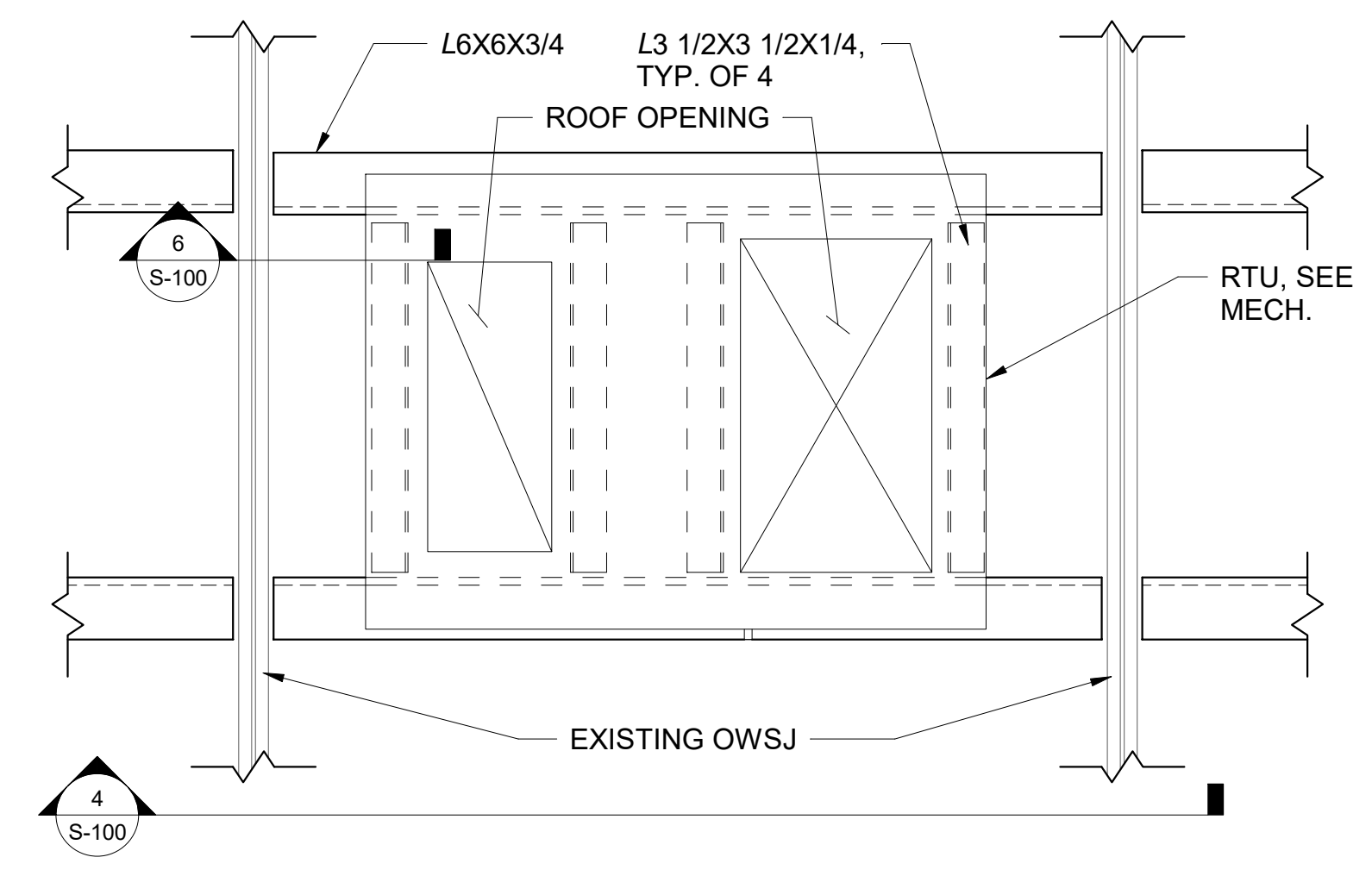
Structural Modifications

S-100

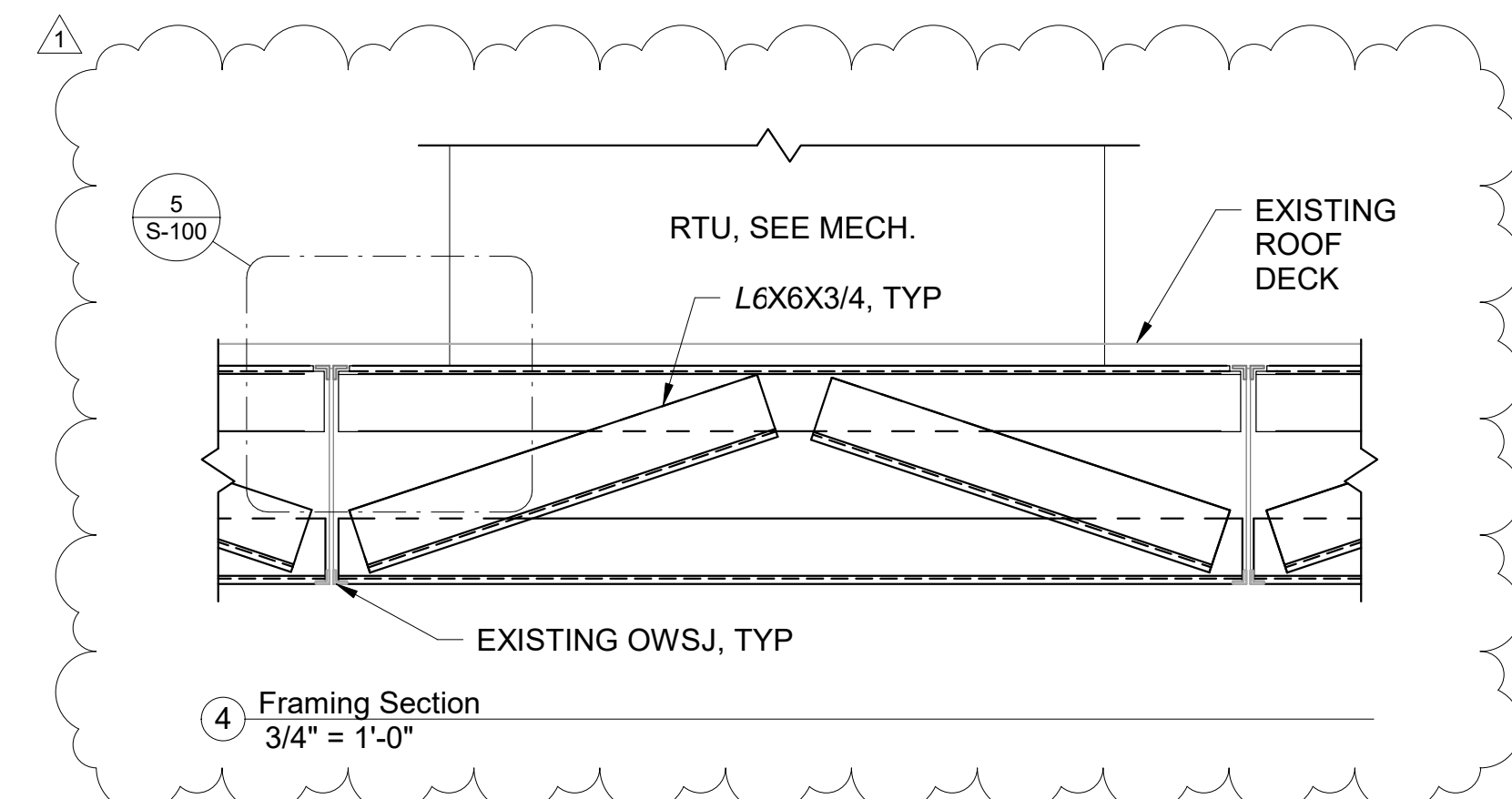
© 2020 HURST-ROSCHKE, INC.



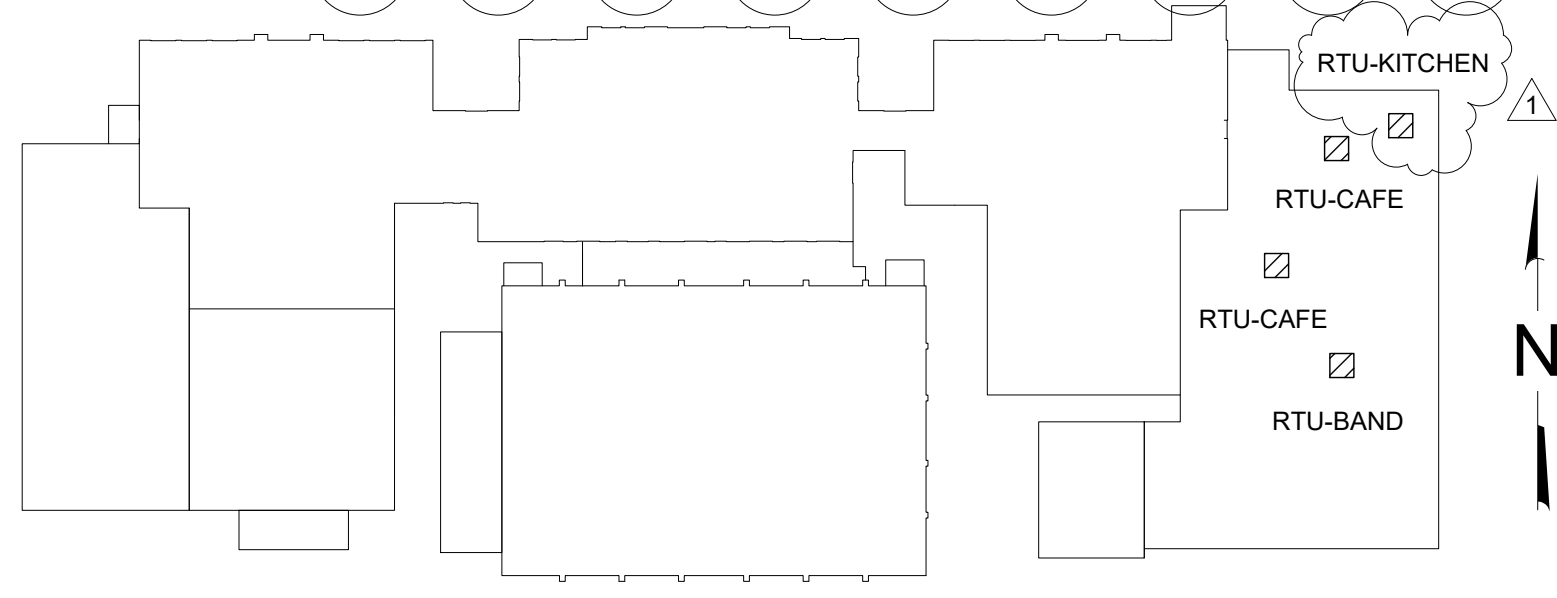
1 Cafeteria/Band RTU Layout Plan
1/8" = 1'-0"



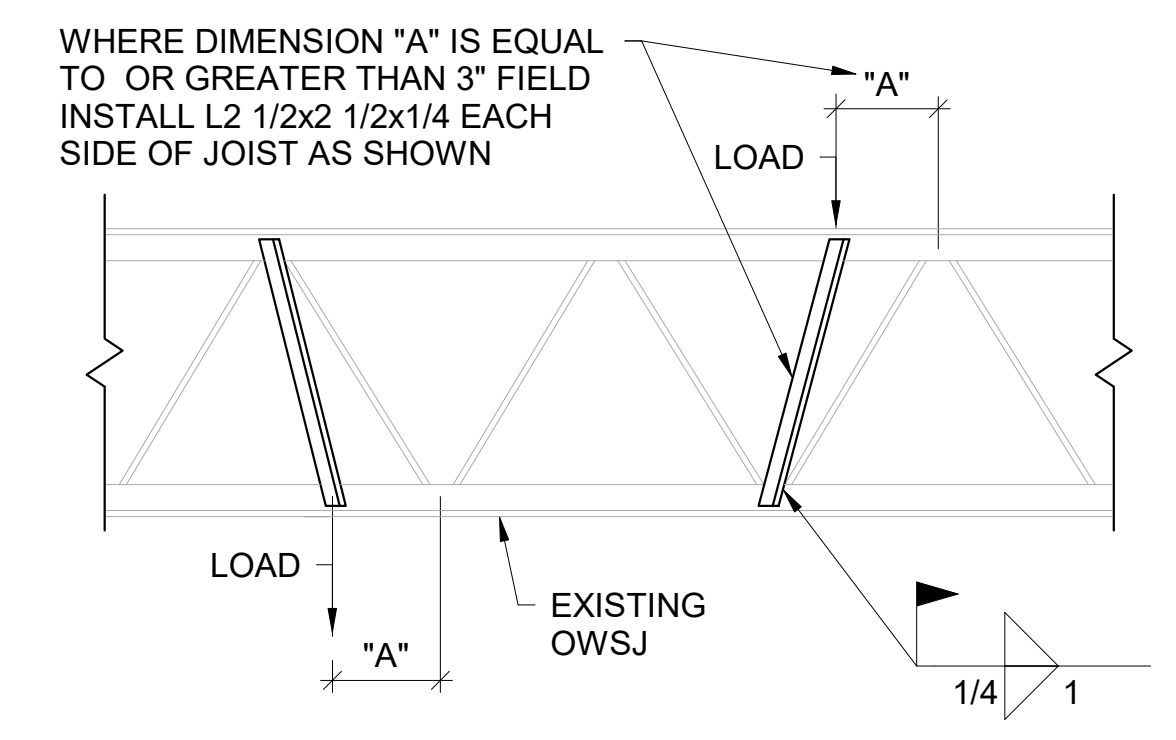
2 Typical Roof Opening for RTU
3/4" = 1'-0"



4 Framing Section
3/4" = 1'-0"



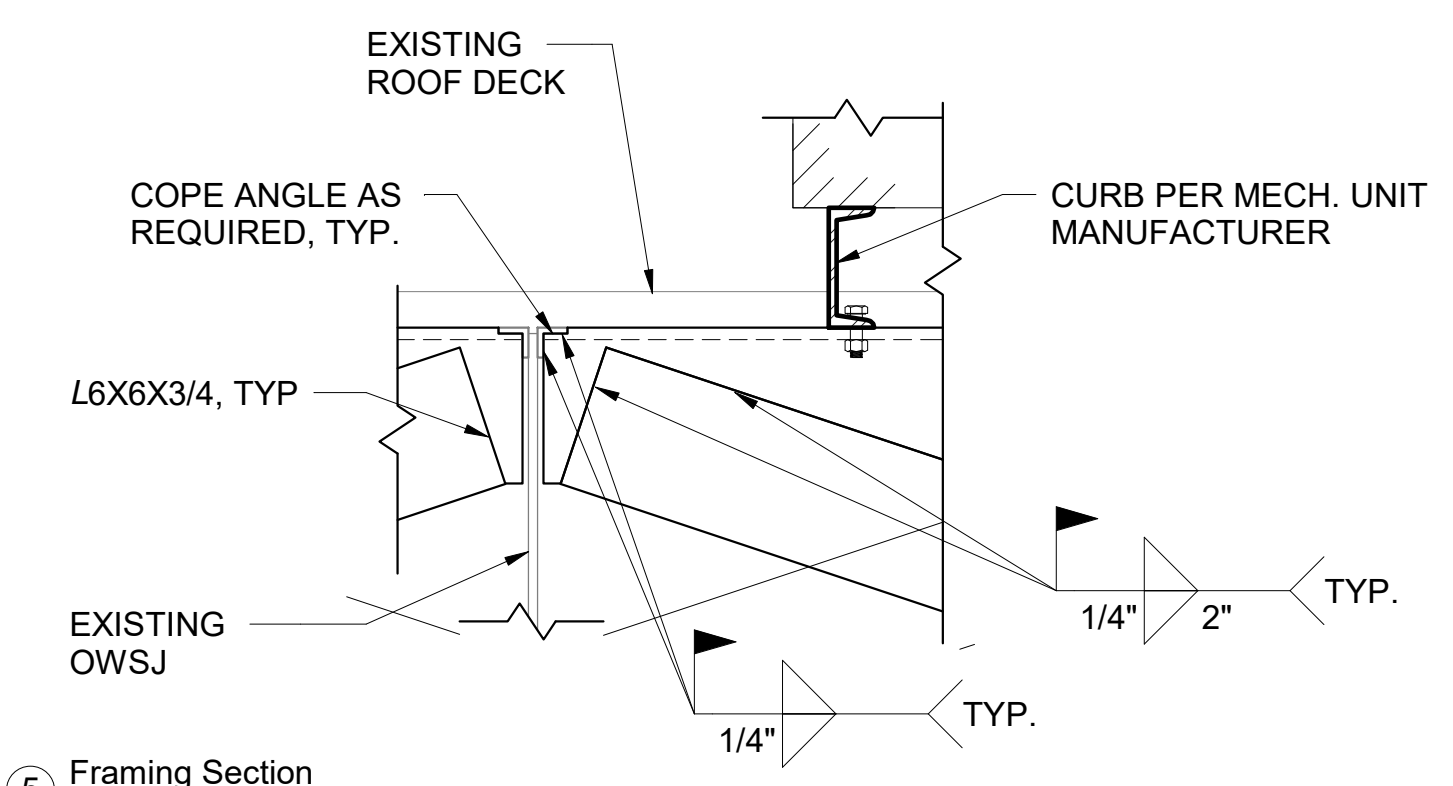
KEY PLAN



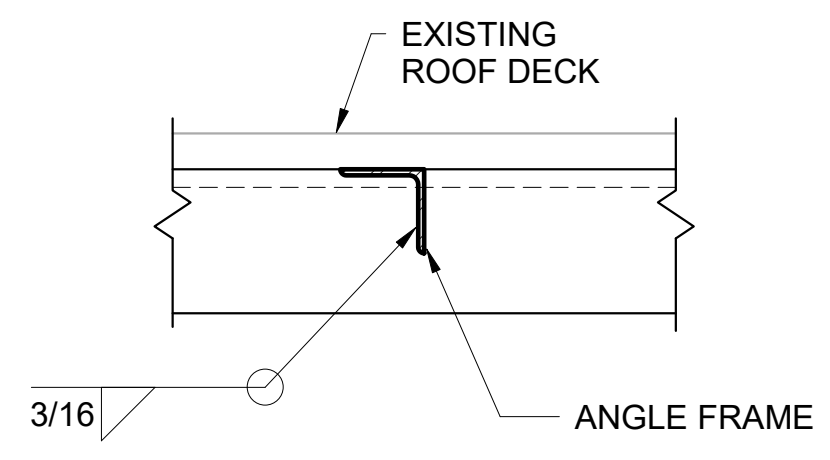
WHERE DIMENSION "A" IS EQUAL TO OR GREATER THAN 3" FIELD INSTALL L2 1/2X2 1/2X1/4 EACH SIDE OF JOIST AS SHOWN

NOTE: THE ANGLE STRUT SHOWN TO TRANSFER THE LOAD TO A PANEL POINT ON THE OPPOSITE CHORD SHALL NOT BE REQUIRED, PROVIDED THE SUM OF THE CONCENTRATED LOADS WITHIN A CHORD PANEL DOES NOT EXCEED 100 POUNDS AND THE ATTACHMENTS ARE CONCENTRIC TO THE CHORD.

3 Typ. Joist Load Strut Detail
3/4" = 1'-0"



5 Framing Section
1 1/2" = 1'-0"



6 Framing Section
1 1/2" = 1'-0"

- GENERAL NOTES:**
- CENTER RTU BETWEEN OWSJ TO DISTRIBUTE THE LOAD EVENLY.
 - STRUCTURAL DESIGN BASED ON THE FOLLOWING RTU WEIGHTS. EOR SHALL BE NOTIFIED IF ACTUAL WEIGHTS DIFFER.
 - A. RTU-BAND: 1265 LBS (+/- 5%)
 - B. RTU-CAFETERIA: 1817 LBS (+/- 5%)
 - EXISTING OWSJ ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL LOCATIONS OF THE OWSJ SHALL BE VERIFIED IN THE FIELD.

1. DESIGN CRITERIA:

- A. CODES AND STANDARDS: ALL DESIGN AND CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE 2015 INTERNATIONAL BUILDING CODE.
- B. LIVE LOAD DATA:
 - ROOF.....20 PSF
 - ALL LIVE LOADS NON-REDUCIBLE
- C. SNOW LOAD DATA:
 - GROUND SNOW LOAD.....15 PSF
 - FLAT ROOF SNOW LOAD.....17 PSF
 - SNOW EXPOSURE FACTOR.....1.0
 - SNOW LOAD IMPORTANCE FACTOR.....1.10
 - THERMAL EXPOSURE FACTOR.....1.0
 - DESIGN SNOW LOAD.....17 PSF
- D. IN CASE OF CONFLICT BY GOVERNING CODES, THE MOST STRINGENT REQUIREMENT SHALL GOVERN.

2. EXISTING CONDITIONS:

- A. BECOME FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING. PROVIDE NECESSARY MEANS AND METHODS TO ACCOMPLISH THE SPECIFIED WORK.
- B. FIELD VERIFY CONDITIONS, SIZES, SPACINGS, AND DIMENSIONS OF EXISTING STRUCTURE TO FABRICATIONS AND NEW CONSTRUCTION. CONTACT THE STRUCTURAL ENGINEER IF EXISTING CONDITIONS, ETC. VARY FROM THOSE SHOWN ON THESE DRAWINGS.
- C. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY REMOVAL AND REPLACEMENT/RELOCATION OF ANY NON-STRUCTURAL ELEMENTS NECESSARY TO COMPLETE THE STRUCTURAL WORK. FOLLOW ALL APPLICABLE CODES AND REQUIREMENTS OF AFFECTED TRADES. PROVIDE FOR THIS REQUIREMENT IN THE BID.

3. STRUCTURAL STEEL:

- A. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE, EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS.
- B. ALL STRUCTURAL STEEL EXPOSED TO VIEW ON INTERIOR OR EXTERIOR OF THE BUILDING SHALL CONFORM TO THE REQUIREMENTS OF ARCHITECTURALLY EXPOSED STEEL OF AISC CODE OF STANDARD PRACTICE SECTION 10.
- C. BOLTED CONNECTIONS:
 - 1. ALL EXTERIOR EXPOSED BOLTS, NUTS, AND WASHERS SHALL BE TYPE 3 U.N.O.
 - 2. SHOP DRAWINGS SHALL INDICATE THE TYPE OF BOLT USED IN EACH CONNECTION AND THE DESIGN VALUES USED FOR THE VARIOUS BOLT TYPES
- D. ALL WELDS EXPOSED TO VIEW SHALL BE GROUND SMOOTH.
- E. SPLICING OF STEEL MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
- F. NO CHANGE IN SIZE OR POSITION OF STRUCTURAL ELEMENTS SHALL BE MADE AND HOLES, SLOTS, CUTS, ETC. ARE NOT PERMITTED THROUGH ANY MEMBER UNLESS THEY ARE APPROVED BY THE ARCHITECT/ENGINEER.
- G. FABRICATE ALL BEAMS WITH THE MILL CAMBER UP
- H. ALL CONNECTIONS TO BE SHOP WELDED AND FIELD BOLTED WHERE PRACTICALLY POSSIBLE EXCEPT AS INDICATED ON DRAWINGS.
- I. ALL STRUCTURAL STEEL SHALL HAVE ONE SHOP COAT OF RUST INHIBITING PRIMER PAINT.
- J. ALL ADDITIONAL STEEL OR OTHER MATERIALS REQUIRED BY THE CONTRACTOR FOR ERECTION PURPOSES AND SITE ACCESS OF STOCKPILED MATERIALS SHALL BY PROVIDED AT NO COST TO THE OWNER. ALL SUCH ADDITIONAL MATERIALS SHALL BE REMOVED BY THE CONTRACTOR UNLESS APPROVED BY THE OWNER IN WRITING.
- K. ANGLES SHALL BE GRADE ASTM A992. PLATES SHALL BE GRADE ASTM A572.

4. MISCELLANEOUS:

- A. STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS, SHOP DRAWINGS, AND WORK.
- B. NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
- C. NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
- D. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME LOADS ARE IMPOSED.
- E. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
- F. DO NOT SCALE THESE DRAWINGS. USE DIMENSIONS.
- G. THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY THE ARCHITECT'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS HE/SHE HAS SPECIFICALLY INFORMED THE ARCHITECT OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
- H. ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS, OR AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. PLANS AND/OR SPECIFICATIONS WILL BE CORRECTED, OR WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ARCHITECT/ENGINEER BEFORE THE AFFECTED WORK PRECEEDS.
- I. FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHOWN OR INFERRED BY THESE DRAWINGS.
- J. DETAILS LABELED "TYPICAL DETAILS" ON THE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. THE APPLICABILITY OF THE DETAIL TO ITS LOCATION ON THE PLANS CAN BE DETERMINED BY THE TITLE OF THE DETAIL. SUCH DETAILS SHALL APPLY WHETHER OR NOT THEY ARE KEYED IN AT EACH LOCATION. DECISIONS REGARDING APPLICABILITY OF TYPICAL DETAILS SHALL BE DETERMINED BY THE ARCHITECT/ENGINEER.
- K. REVIEW OF THE SHOP DRAWINGS SHALL NOT BE CONSTRUED AS AN AUTHORIZATION TO DEVIATE FROM CONTRACT DOCUMENTS.

WRFT
ENGINEERS, LLC
4503 WEST DAYOUNG ST. P. 618-659-8709
MARION, IL 62959 P. 618-656-8353