

Architectural drawing showing structural details and specifications for a building project. The drawing includes a detailed view of a structural member (likely a beam or column) with dimensions and material specifications. The drawing is labeled with various dimensions and notes, including: 1. DETAIL FABRICATE AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH THE LATEST AISC AND OTHER RELATED CODES, STANDARDS AND SPECIFICATIONS LISTED IN THE PROJECT SPECIFICATIONS, EXCEPT AS MODIFIED THEREIN OR IN THE DRAWINGS. 2. THE CONTRACTOR IS RESPONSIBLE FOR ALL MISCELLANEOUS/ORNAMENTAL STEEL NOT SHOWN ON THE STRUCTURAL DRAWINGS. 3. STRUCTURAL STEEL: A. ASTM A592 Fy = 50 KSI FOR ROLLED STEEL WIDE FLANGE SHAPES B. ASTM A36 Fy = 36 KSI FOR CHANNELS, ANGLES, PLATES, BARS, RODS, UNO C. ASTM A500 GRADE C FOR HSS TUBING Fy = 50 KSI FOR RECTANGULAR HIGH STRENGTH BOLTS: ASTM A325 OR A490, 3/4" DIAMETER MINIMUM UNO ANCHOR RODS: ASTM F1554, GRADE 36 UNO 4. WORK STRUCTURAL DRAWINGS WITH ARCHITECTURAL, HVAC, PLUMBING, FIRE PROTECTION & ELECTRICAL DRAWINGS FOR CLEARANCES, ATTACHMENTS, ETC. 5. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISED CODE OF THE AMERICAN WELDING SOCIETY, AWS D1.1 AND SHALL BE PERFORMED BY CERTIFIED WELDERS IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY STANDARDS. PROVIDE MINIMUM 1/4" FILLET WELD, UNO. 6. PROVIDE ANGLE WALL ANCHORS, PER PART 4. AISC MANUAL OF STEEL CONSTRUCTION, FOR BEAMS BEARING ON MASONRY WALLS. ANGLE ANCHORS SHALL BE WELDED TO BEAMS. 7. CONNECTIONS: WELD OR BOLT CONNECTIONS, AS INDICATED: A. CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL CONFORM TO THE REQUIREMENTS OF THE CITED AISC SPECIFICATION. B. WHERE THE REACTION VALUES OF BEAMS ARE NOT SHOWN ON THE DRAWINGS, EACH END CONNECTION SHALL BE DESIGNED TO SUPPORT 55% OF THE TOTAL UNIFORM LOAD CAPACITY DERIVED FROM THE ASD VALUE OF THE TABLES AND FORMULA OF THE MAXIMUM TOTAL UNIFORM LOAD IN PART 3, FIFTEENTH EDITION, OF THE AISC MANUAL OF STEEL CONSTRUCTION FOR THE GIVEN MEMBER SIZE, SPAN AND YIELD STRENGTH. COMPOSITE BEAM CONNECTIONS MUST DEVELOP 75% OF THE TOTAL BEAM ALLOWABLE UNIFORM LOAD CAPACITY AS GIVEN IN THE AISI TABLES BASED ON SIZE, SPAN, & YIELD STRENGTH. C. THE MINIMUM LENGTH OF CONNECTION ANGLES SHALL BE EQUAL TO ONE HALF THE DEPTH OF THE MEMBER TO BE SUPPORTED. D. ONE SIDED CONNECTIONS WILL NOT BE PERMITTED UNLESS SPECIFICALLY DETAILED ON THE DRAWINGS OR SEALED DESIGN CALCULATIONS ARE SUBMITTED WITH THE SHOP DRAWINGS. E. THE MINIMUM NUMBER OF BOLTS IN BOLTED CONNECTIONS SHALL BE TWO (2) BOLTS. F. MINIMUM 1/4" FILLET WELD SHALL APPLY UNLESS NOTED OTHERWISE. G. MINIMUM SIZE OF CLIP ANGLE SHALL BE 1/3x5/8x1/4 UNLESS NOTED OTHERWISE. 8. UTILIZE THROUGH PLATES FOR ALL CONNECTIONS TO TUBES AND PIPE UNLESS SHOWN OTHERWISE. 9. TRUSS AND BRACING MEMBER CONNECTIONS SHALL BE DESIGNED FOR THE FORCES INDICATED ON THE DRAWINGS. 10. TYPICAL CONNECTION DETAILS INDICATED ON THE STRUCTURAL DESIGN DRAWINGS SHALL DICTATE THE FORM AND GEOMETRY OF THE CONNECTIONS. THE FABRICATOR SHALL DETERMINE OR VERIFY TYPE, SIZE AND NUMBER OF BOLTS, PLATE THICKNESS AND SIZES, WELD SIZES AND LENGTHS, AND ALL REQUIRED INFORMATION NOT SPECIFIED ON THE TYPICAL CONNECTION DETAILS. 11. THE DESIGN OF ALL STEEL CONNECTIONS (EXCEPT PREDESIGNED CONNECTIONS THAT HAVE BEEN ENGINEERED ON THESE DRAWINGS) SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT. EMPLOYED BY THE FABRICATOR, THE FABRICATOR'S REGISTERED PROFESSIONAL ENGINEER SHALL SUBMIT COMPLETE DESIGN CALCULATIONS FOR EACH CONNECTION. SUCH CALCULATIONS SHALL SHOW DETAILS OF THE ASSEMBLED JOINT WITH ALL BOLTS AND WELDS REQUIRED. 12. ALL DESIGN CALCULATIONS SHALL BE SEALED BY THE FABRICATOR'S PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT. SHOP DRAWINGS SUBMITTED WITHOUT COMPLETE DESIGN CALCULATIONS WILL NOT BE REVIEWED. 13. WELDING ELECTRODES SHALL BE E 70XX OR BETTER, FOR WELDING SYMBOLS WITH NO LENGTH DIMENSION GIVEN, THE WELDING SHALL BE CONTINUOUS BETWEEN ABRUPT CHANGES IN DIRECTION. 14. UTILIZE SLIP CRITICAL BOLTS AT ALL MOMENT CONNECTIONS, HANGING CONNECTIONS, BRACING CONNECTIONS, AND COLUMN SPLICES. 15. ALL STRUCTURAL STEEL MEMBERS EXPOSED TO THE EXTERIOR SHALL BE GALVANIZED UNLESS NOTED OTHERWISE. THIS INCLUDES BUT IS NOT LIMITED TO MASONRY UNITS AND SHELF ANGLES, INCLUDING BEARING PLATES AND ANCHOR BOLTS, AND ANY OTHER ITEM LISTED ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS. UNLESS NOTED OTHERWISE, ALL PIPE AND TUBE COLUMNS SHALL BE SEAL WELDED WITH CLOSURE PLATES TO BE AIR TIGHT. ARCHITECTURAL PIPES AND TUBULAR BEAMS SHALL BE PROVIDED WITH 3/8" DIAMETER WEEP HOLES. 16. LOCATION OF ANCHOR RODS SHALL BE CONFIRMED BY A LICENSED SURVEYOR BEFORE ERECTION OF STEEL. 17. COLUMNS AND BEAMS WITH BASE, CAP OR END PLATES SHALL HAVE SQUARE CUT OR MILLED ENDS. 18. THE FRAMING SHALL BE ERECTED TRUE AND PLUMB. TEMPORARY BRACING SHALL BE PROVIDED AND SHALL REMAIN IN PLACE UNTIL THE LATERAL BRACING SYSTEM IS IN PLACE AND CONNECTIONS OF ALL MEMBERS ARE FINAL AND ALL DECK IS COMPLETELY ERECTED, WELDED AND SCREWED IN PLACE. 19. NON-METALLIC, NON-SHRINK, NON-STAINING GROUT UNDER ALL COLUMN BASE PLATES AND BEAM BEARING PLATES SHALL CONSIST OF A PREMIXED PRODUCT COMPLYING WITH ALL REQUIREMENTS OF CRD-C22, ASTM C227, AND C109. 20. HEADED SHEAR CONNECTORS SHALL BE MADE FROM STEEL CONFORMING TO ASTM A108, TYPE B, GRADE 1010 THROUGH 1020. 21. STUD TYPE EXPANSION ANCHORS SHALL BE CARBON STEEL (UNLESS NOTED OTHERWISE ON DRAWINGS) CONFORMING TO THE REQUIREMENTS OF THE MANUFACTURER'S RECOMMENDATIONS. SEE DRAWINGS FOR LOCATIONS AND TYPE. 22. ALL STRUCTURAL STEEL MEMBERS (BEAMS AND COLUMNS) ADJACENT TO OR BUILT INTO MASONRY CONSTRUCTION SHALL BE PROVIDED WITH 1/2 GAUGE GALVANIZED WELD-ON CHANNEL SLOTS AND 3/16" x 1 1/4" HOOKED GALVANIZED ANCHORS, SPACED 16" ON CENTER VERTICALLY AND 24" ON CENTER HORIZONTALLY, MAXIMUM. 23. ALL DISSIMILAR METALS TO BE SEPARATED BY ELECTROLYTIC SEPARATORS. 24. DO NOT PAINT: A. SURFACES OF CONNECTIONS INDICATED AS SLIP CRITICAL. B. SURFACES OF CONNECTIONS TO BE FIELD WELDED. C. SURFACES TO RECEIVE HEADED SHEAR CONNECTIONS. D. MEMBERS TO BE EMBEDDED IN CONCRETE OR MASONRY. E. SURFACES TO RECEIVE SPRAYED ON INSULATION. F. MEMBERS TO BE GALVANIZED. 25. COLD FORMED LIGHT GAGE STEEL FRAMING: 1. ALL COLD FORMED FRAMING SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST AMERICAN IRON AND STEEL INSTITUTE (AISI) SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS". 2. ALL COLD FORMED STEEL FRAMING SHALL BE GALVANIZED, CONFORMING TO ASTM A653. 3. COLD FORM STEEL MEMBER 18 GA. OR THICKER SHALL BE FORMER FROM 50 KSI YIELD STRENGTH STEEL. COLD FORMED MEMBERS THINNER THAN 18 GA. SHALL BE FORMED FROM 33 KSI YIELD STRENGTH STEEL. 4. SCREW OF WELD ALL CONNECTIONS. TOUCH UP ALL WELDS WITH ASTM A505 ZINC RICH PAINT. 5. ANXILY LOADED STUDS SHALL BE INSTALLED SO THE ENDS POSITIONED AGAINST THE INSIDE OF THE RUNNER TRACK WEB PRIOR TO FASTENING AND SHALL BE ATTACHED TO BOTH FLANGES OF THE UPPER AND LOWER RUNNER TRACKS. 6. DIAGONAL STRAP BRACING SHALL BE CONNECTED TO ALL CROSSING VERTICAL MEMBERS. 7. SUGGESTED MEMBER SIZES INDICATED ON DRAWINGS ARE BASED ON DETRICH INDUSTRIES' 158' FLANGE CSI SECTION PROPERTIES. ALTERNATE MANUFACTURERS ARE PERMITTED PROVIDED THEY MATCH OR EXCEED SPANNING DETRICH SECTION PROPERTIES AND MEMBER CAPACITIES. 8. THE CONTRACTOR SHALL SUBMIT CALCULATIONS, CONNECTIONS, AND SHOP DRAWINGS STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. 26. STRUCTURAL DELEGATED DESIGN AND DEFERRED SUBMITTALS: 1. STRUCTURAL DELEGATED DESIGN AND SUBSEQUENT DEFERRED SUBMITTALS ARE FOR ELEMENTS, PARTS, OR PORTIONS OF THE OVERALL STRUCTURAL SYSTEM THAT ARE INDICATED OR REFERRED TO ON THESE DRAWINGS AND THAT ARE DELEGATED TO THE PERFORMANCE OF THE OVERALL STRUCTURAL SYSTEM DESIGN CRITERIA HAS BEEN PROVIDED FOR THESE ITEMS IN THE STRUCTURAL NOTES, PLANS, AND DETAILS. 2. STRUCTURAL DEFERRED SUBMITTALS ARE COMPLETE PACKAGE TO BE SUBMITTED FOR REVIEW THAT INCLUDE DRAWINGS AND CALCULATIONS FOR ALL DELEGATED DESIGN ITEMS AND THEIR CONNECTIONS. DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THEIR DESIGN. 3. OEC WILL REVIEW STRUCTURAL DEFERRED SUBMITTALS TO VERIFY DESIGN CRITERIA IS COMPLIANT WITH THE APPROVED CONSTRUCTION DOCUMENTS. 4. STRUCTURAL DELEGATED DESIGN COMPONENTS SHALL NOT BE INSTALLED UNTIL APPROVED BY THE BUILDING OFFICIAL. 5. STRUCTURAL DELEGATED DESIGN ITEMS REQUIRING SUBMITTALS INCLUDE, BUT ARE NOT LIMITED TO: A. OPEN WEB JOIST & GIRDERS, BRACING, CONNECTIONS, AND RELATED COMPONENTS. B. PRE-CAST CONCRETE ELEMENTS AND THEIR CONNECTIONS. C. STRUCTURAL STEEL BRACES, GUSSET PLATES, AND CONNECTIONS. 27. NON-STRUCTURAL DELEGATED DESIGN AND DEFERRED SUBMITTALS: 1. NON-STRUCTURAL DELEGATED DESIGN AND SUBSEQUENT DEFERRED SUBMITTALS ARE FOR ITEMS NOT INCLUDED IN THE STRUCTURAL DELEGATED DESIGN SECTION. THESE ARE ITEMS THAT ARE NOT CRITICAL TO THE OVERALL PERFORMANCE OF THE STRUCTURAL SYSTEM BUT THAT IMPACT LOADS AND FORCES TO THE STRUCTURAL SYSTEM. 2. NON-STRUCTURAL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN. 3. OEC WILL REVIEW NON-STRUCTURAL DEFERRED SUBMITTALS TO VERIFY DESIGN CRITERIA IS COMPLIANT WITH THE APPROVED CONSTRUCTION DOCUMENTS. 4. IF THE STRUCTURAL DRAWINGS INCLUDE LOADS TO ACCOMMODATE NON-STRUCTURAL ELEMENTS, THE CONTRACTOR SHALL SUBMIT DOCUMENTS INDICATING THAT THE NON-STRUCTURAL ELEMENTS COMPLY WITH THE LOADING CRITERIA PROVIDED HEREIN. SUCH DOCUMENTATION SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN. 5. WHEN THE NON-STRUCTURAL DEFERRED SUBMITTAL INDICATES THAT THE ELEMENT WILL IMPACT FORCES IN EXCESS OF LOADS THAT ARE INDICATED ON THE STRUCTURAL DRAWINGS, THE CONTRACTOR SHALL SUBMIT A DETAILED GRAPHICAL REPRESENTATION OF THESE DESIGN LOADS, INCLUDING MAGNITUDE, AND LOCATION. THE GRAPHIC SHALL BE ACCOMPANIED BY DOCUMENTATION INDICATING THAT THE NON-STRUCTURAL ELEMENT DESIGN COMPLIES WITH THE LOADING CRITERIA PROVIDED HEREIN. THE LETTER SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN. 6. NON-STRUCTURAL DELEGATED DESIGN ITEMS REQUIRING SUBMITTALS INCLUDE, BUT ARE NOT LIMITED TO: A. COLD FORMED STEEL STUDS / JOISTS / HEADERS / JAMBS / TRUSSES. B. STRUCTURAL STEEL STAIRS. 28. MECH, ELEC, PLUMBING, FIRE PROTECTION & OTHER SUSPENDED ITEM: 1. SUPPORT ROOF TOP MECHANICAL EQUIPMENT ON STEEL FRAMES (UNO). MECHANICAL CONTRACTOR MUST SUPPLY SIZES, LOCATIONS AND OPENING REQUIREMENTS TO THE STEEL FABRICATOR PRIOR TO FABRICATION. DEVIATIONS AND/OR MODIFICATIONS TO THE SUPPORTING STRUCTURE AFTER FABRICATION AND/OR ERECTION HAVE COMMENCED SHALL BE THE RESPONSIBILITY OF THE SPECIFIED EQUIPMENT SUPPLIER AT NO ADDITIONAL COST TO THE STEEL FABRICATOR, OWNER OR CONSTRUCTION MANAGER. 2. THE STRUCTURE IN THE VICINITY OF LOADS IN EXCESS OF 400 POUNDS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER, PRIOR TO INSTALLATION. 3. SUPPORT OF CONDUIT, SPRINKLER, HVAC OR PLUMBING PIPING SHALL BE DISTRIBUTED SO AS NOT TO EXCEED THE UNIFORM LOADS INDICATED ON THE DRAWINGS. SUPPORT PIPING FROM ROLLED BEAMS OR CHANNELS FROM ANY LOCATION FROM EITHER TOP OR BOTTOM FLANGES. SUPPORT ITEMS FROM OPEN WEB JOISTS OR RW MEMBERS FROM THE TOP CHORD WHENEVER POSSIBLE. SUPPORT FROM TOP OR BOTTOM CHORDS OF JOISTS SHALL ONLY BE PERMITTED WITHIN 8" OF A PANEL POINT. RESULTING SINGLE JOIST MORE THAN TWO 300 POUND POINT LOADS ON A K-SERIES JOIST IS STRICTLY PROHIBITED. STAGGER HANGERS AND SUPPORTS FROM THE STRUCTURE SO AS TO DISTRIBUTE THE LOADS UNIFORMLY ACROSS STRUCTURAL MEMBERS. HANGERS FROM METAL ROOF DECK ARE STRICTLY PROHIBITED. DEVIATIONS FROM THE ABOVE CRITERIA SHALL BE REMEDIED BY THE INSTALLING CONTRACTOR. 4. CONNECTIONS TO SUPPORTING STRUCTURAL MEMBERS, WHETHER NEW OR EXISTING CONSTRUCTION, SHALL BE CLAMPING DEVICE WHICH DO NOT DAMAGE OR DEFORM THE STRUCTURAL ELEMENTS. WELDING TO OR DRILLING HOLES IN STRUCTURAL MEMBERS IS NOT PERMITTED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO LOCATE AND DISTRIBUTE HANGING LOADS AS REQUIRED SO AS TO NOT EXCEED THE LOAD CARRYING CAPACITY OF THE MEMBER. 5. COORDINATE CONNECTIONS AND ATTACHMENTS OF ALL MEPPFP ITEMS SUSPENDED FROM PRECAST CONCRETE PLANKS WITH PLANK MANUFACTURER'S REQUIREMENTS. 6. TRAPPEZING IS PERMITTED FOR MULTIPLE PIPE OR CONDUIT RUNS. LOADS FROM TRAPEZE HANGERS SHALL BE AS PREVIOUSLY NOTED FOR SUPPORTS FROM JOIST ELEMENTS. TRAPPEZING IS NOT PERMITTED FOR PIPING AND/OR CONDUIT GREATER THAN 5" IN DIAMETER. 7. THE APPROPRIATE INSTALLING CONTRACTOR IS RESPONSIBLE FOR DETERMINING LOADS IMPOSED BY THE INSTALLED ITEMS. STAGGER HANGERS AND SUPPORTS FROM THE STRUCTURE SO AS TO DISTRIBUTE THE LOADS UNIFORMLY ACROSS STRUCTURAL MEMBERS. 8. WHERE 6" OR GREATER DIAMETER PIPES ARE PERPENDICULAR TO THE JOISTS, PROVIDE HANGER SUPPORTS FROM EVERY JOIST WITHIN TWELVE FEET OF THE END OF THE JOIST. STAGGER HANGERS TO DISTRIBUTE THE LOAD UNIFORMLY ACROSS THE STRUCTURE. 9. WHERE 6" OR GREATER DIAMETER PIPE ARE PARALLEL TO THE JOISTS, CENTER THE PIPE AND HANG THE PIPE FROM TWO JOISTS. 10. WHERE SUPPORT FROM JOISTS AT LOCATIONS OTHER THAN AT A PANEL POINT IS NOT POSSIBLE, ADDITIONAL WEB REINFORCING IS REQUIRED. REFER TO THE JOIST SUPPLIER AND/OR TYPICAL DETAIL INDICATED ON THE PLANS. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO COORDINATE THE LOCATIONS WITH THE STRUCTURAL STEEL FABRICATOR AND/OR ERECTOR PRIOR TO INSTALLATION. 11. CONTRACTORS INSTALLING MEP & FP SYSTEMS SHALL COORDINATE ROUTING PRIOR TO INSTALLATION SO AS TO DISTRIBUTE THE LOADING TO THE STRUCTURE UNIFORMLY. DO NOT HANG ALL SYSTEMS FROM THE SAME FRAMING MEMBER. 12. ALL HANGERS, WIRES, RODS ETC. FOR SUSPENDED ITEMS SUCH AS PIPING, CONDUIT, DUCT WORK, FIRE PROTECTION, SUSPENDED CEILING, TECHNOLOGY, ETC. SHALL BE INSTALLED FROM MAIN STRUCTURAL MEMBERS. HANGERS ATTACHED TO METAL ROOF DECK, JOIST BRIDGING OR FROM OTHER NON-STRUCTURAL SYSTEMS IS STRICTLY PROHIBITED. 29. SPECIAL INSPECTIONS: 1. THE FOLLOW

PROJECT NO
2203-2

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| PROJECT NO | 2203-2 | DRAWN BY | OEC |
| CHECKED BY | OEC | DATE | |
| | | 7/25/23 | 100% BID PERMIT SET |
| | | DRAWN BY | DESCRIPTION |
| | | ISSUED AS: | |

GENERAL NOTES

SCALE: 1/2" = 1'

SHEET NO

S-002