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GENERAL NOTES:

1. DO NOT SCALE DRAWINGS.
2. ALL WORK SHALL BE DONE IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
3. **RECORD DRAWINGS OF THE WORK AREA ARE NOT AVAILABLE AND THE AREA IS NOT ACCESSIBLE. INFORMATION SHOWN IS ASSUMED, REPRESENTATIVE IN NATURE ONLY, AND FOR INFORMATION ONLY.**
4. **THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEASURING ALL EXISTING MEMBERS INDICATED ON THE DRAWINGS, INCLUDING BEAMS AND COLUMNS, AND PROVIDE EXISTING MEMBER DIMENSIONS AND SPACING AT THE START OF CONSTRUCTION FOR SUPPORT VERIFICATION.**
5. ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE VERIFIED AT THE SITE PRIOR TO FABRICATION AND CONSTRUCTION. IF CONDITIONS EXIST OTHER THAN WHAT ARE SHOWN ON THE DRAWINGS, CONTACT THE ENGINEER IMMEDIATELY.
6. ASSUMED MEMBER SIZES ARE SHOWN ON THE DRAWINGS AND SHALL BE VERIFIED AT THE START OF CONSTRUCTION
7. EXISTING STEEL AND CONNECTIONS REQUIRING MODIFICATIONS SHALL BE CLEANED OF ALL RUST AND DIRT PRIOR TO INSTALLATION OF NEW CONNECTIONS.
8. EXISTING STEEL SHALL BE INSPECTED BY THE CONTRACTOR AT THE START OF PROJECT TO CONFIRM THAT STEEL IS IN GOOD CONDITION. ALL DEFICIENCIES FOUND SHALL BE REPORTED AND CORRECTED PRIOR TO START OF NEW STEEL INSTALLATION.
9. WHERE NEW STEEL IS SHOWN LOCATED BETWEEN EXISTING FRAMING, CONTRACTOR SHALL VERIFY EXISTING MEMBER SIZES, LOCATIONS AND DIMENSIONS PRIOR TO CONSTRUCTION AND COORDINATE WITH THE FABRICATOR.
10. FIREPROOFING REMOVED TO ACCOMMODATE CONSTRUCTION SHALL BE REPLACED TO MAINTAIN THE SAME FIRE RATING. FIREPROOFING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

COORDINATION

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING NEW WORK SHOWN ON THE STRUCTURAL DRAWINGS WITH OTHER DISCIPLINES. THESE DRAWINGS ARE NOT INTENDED TO STAND ALONE.
2. CONTRACTOR SHALL COORDINATE THESE DRAWINGS WITH MECHANICAL DRAWINGS FOR LOCATIONS AND QUANTITIES OF NEW PENETRATIONS THROUGH THE ROOF, NEW ROOFTOP EQUIPMENT. PROVIDE NEW SUPPORTS AT DECK EDGES AS SHOWN ON TYPICAL DETAILS FOR ROOF PENETRATIONS.
3. WHERE INFORMATION SHOWN ON THESE DRAWINGS CONFLICTS WITH INFORMATION SHOWN ELSEWHERE IN CONSTRUCTION DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

SPECIAL INSPECTION

1. INSPECTION AND TESTING FOR THE ACCEPTANCE OF MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS FOR SPECIAL INSPECTION AND FOR QUALITY ASSURANCE SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE (IBC) AND LOCAL ENFORCEMENT AGENCY.
2. ALL CONTRACTORS ARE REQUIRED TO COOPERATE, ACCOMMODATE AND COORDINATE WITH INSPECTING AND TESTING PERSONNEL. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT THE TESTS AND INSPECTIONS ARE PERFORMED.
3. THE OWNER SHALL EMPLOY A QUALIFIED AND INDEPENDENT INSPECTION AGENCY, APPROVED BY THE CODE OFFICIAL, TO PERFORM INSPECTIONS AND TESTS DURING CONSTRUCTION. ALL INSPECTORS SHALL BE QUALIFIED BY TRAINING AND EXPERIENCE FOR THE REQUIRED INSPECTIONS AND TEST PROCEDURES. THE INSPECTION AGENCY CANNOT BE EMPLOYED BY THE CONTRACTOR.
4. TESTING AND INSPECTION REPORTS SHALL BE PREPARED FOR EACH INSPECTION ITEM. REPORTS SHALL BE DISTRIBUTED TO THE OWNER, CONTRACTOR, ENGINEER, AND BUILDING OFFICIAL (IF REQUESTED) FOR REVIEW, COMMENT, AND ACTION. REPORTS SHALL INDICATED THAT WORK WAS OR WAS NOT PERFORMED IN ACCORDANCE WITH THE APPROVED CONTRACT DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
5. INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE BUILDING CODE AND LOCAL CODE REQUIREMENTS FOR:

A. FABRICATED ITEMS

B. STEEL CONSTRUCTION

a. MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS AND WASHERS

b. INSPECTION OF HIGH STRENGTH BOLTING

c. MATERIAL VERIFICATION OF STRUCTURAL STEEL

d. MATERIAL VERIFICATION OF WELD FILLER MATERIAL

DEMOLITION

1. WHERE INDICATED, EXISTING STRUCTURE SHALL BE REMOVED IN ORDER TO FACILITATE NEW CONSTRUCTION.
2. EXISTING CONSTRUCTION SHALL BE REMOVED WITHOUT DAMAGING THE REMAINING STRUCTURES. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN REMOVING EXISTING STRUCTURAL COMPONENTS.
3. CONTRACTOR SHALL PROTECT THE REMAINING STRUCTURES FROM WEATHER AND DUST DURING DEMOLITION WORK.
4. WHERE DEMOLITION WORK IS REQUIRED TO FACILITATE NEW WORK, THE CONTRACTOR SHALL PROVIDE ALL SHORING AND SUPPORT NECESSARY TO PROTECT THE EXISTING STRUCTURE DURING CONSTRUCTION. SHORING SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED
5. THE CONTRACTOR SHALL EXAMINE THE EXISTING STRUCTURE PRIOR TO START OF ANY WORK TO DETERMINE THE EXTENT OF SHORING REQUIRED.

EXISTING ROOFING MODIFICATIONS

1. EXISTING ROOF IS A FIRESTONE RUBBER GUARD, SINGLE PLY RUBBER ROOF.
2. ALL ROOF FLASHING MATERIALS AND ACCESSORIES SHALL BE OF THE SAME TYPE AS, OR COMPATIBLE WITH, THE CURRENTLY INSTALLED ROOF. ALL ROOF CUTTING AND PATCHING WORK SHALL PROVIDE A WATERTIGHT SYSTEM CAPABLE OF WITHSTANDING SNOW, WIND AND THERMAL LOADS.
3. ALL MODIFICATIONS TO THE EXISTING ROOF MEMBRANE SHALL BE COORDINATED WITH AND APPROVED BY THE MANUFACTURER OF THE EXISTING ROOF. INSTALLATION OF FLASHING SHALL PERFORMED IN ACCORDANCE WITH APPROVED STANDARD ROOFING DETAILS DEVELOPED BY THE MANUFACTURER OF THE EXISTING ROOF. WORK MUST BE PERFORMED IN A MANNER WHICH WILL MAINTAIN THE EXISTING ROOF WARRANTY.
4. THE CONTRACTOR SHALL CUT THE EXISTING ROOF AND ROOF DECK AS NEEDED TO INSTALL NEW PENETRATION. IF ANY ROOF DECK IS DAMAGED, REPLACE WITH DECK IN KIND AND CONNECT TO EXISTING STEEL FRAMING.

STEEL

1. ALL STRUCTURAL STEEL WORK SHALL COMPLY WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AISC 360-10, ALLOWABLE STRESS DESIGN.
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:

A. WIDE FLANGE SHAPES - ASTM A992 HAVING A MINIMUM YIELD STRENGTH OF 50,000 PSI.

B. CHANNELS, ANGLES S & M SHAPES, BARS, PLATES – ASTM A36 HAVING A MINIMUM YIELD STRENGTH OF 36,000 PSI.

C. PIPE – ASTM A53 HAVING A MINIMUM YIELD STRENGTH OF 35,000 PSI, TYPE E OR S, GRADE B.

D. STRUCTURAL TUBING-ASTM A500 GRADE B, HAVING A MINIMUM YIELD STRENGTH OF 46,000 PSI.

E. CONNECTION BOLTS - ASTM A325-N, ¾ INCH DIAMETER, WITH ASTM A563 HEAVY HEX NUTS, AND ASTM F436 T YPE 1 HARDENED CARBON STEEL WASHERS, FULLY PRETENSIONED, UNLESS NOTED OTHERWISE.

F. THREADED RODS – ASTM A36, HAVING A MINIMUM TENSILE STRENGTH OF 58,000 PSI AND A MINIMUM YIELD STRENGTH OF 36,000 PSI.
3. SHEAR CONNECTIONS SHALL BE SELECTED BY THE DETAILER IN ACCORDANCE WITH AISC 303 REQUIREMENTS, ALLOWABLE STRESS DESIGN.
4. CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE AISC STEEL CONSTRUCTION MANUAL. CONNECTIONS SHALL BE DOUBLE ANGLE SHOP AND FIELD BOLTED. THE BOLTED CONNECTIONS SHALL HAVE THE MAXIMUM NUMBER FASTENERS IN A SINGLE VERTICAL ROW FOR THE SIZE OF FRAMING MEMBERS. CONNECTION ANGLES SHALL BE FURNISHED FULL DEPTH ON BOTH SIDES.
5. THE FABRICATOR SHALL PROVIDE CONNECTIONS HAVING THE SHEAR CAPACITY TO RESIST A MINIMUM OF 1/2 THE TOTAL UNIFORM LOAD CAPACITY OF THE MEMBER AS INDICATED IN THE AISC SPECIFICATION. USE A MINIMUM OF 2 (TWO) FASTENERS PER CONNECTION.

6. STANDARD SIZE CONNECTION HOLES SHALL BE PROVIDED FOR NEW BEAM CONNECTIONS TO NEW BEAMS UNLESS NOTED OTHERWISE. SLOTTED AND OVERSIZED HOLES ARE NOT PERMITTED UNLESS SHOWN ON THE DRAWINGS.
7. CONNECTION ANGLES SHALL BE 5/16" MINIMUM THICKNESS.
8. SINGLE SIDED CONNECTIONS SHALL NOT BE PERMITTED UNLESS INDICATED ON THE DESIGN DRAWINGS.
9. CONNECTIONS TO EXISTING STEEL SHALL BE FIELD BOLTED. FIELD DRILL STANDARD SIZE HOLES INTO EXISTING MEMBERS.
10. WELDING TO EXISTING STEEL IS STRICTLY PROHIBITED.
11. BRACING CONNECTIONS SHALL BE DESIGNED FOR THE FORCES SHOWN ON THE DRAWINGS OR 10 KIPS (SERVICE LOAD), WHICHEVER IS GREATER. BRACING CONNECTIONS SHALL HAVE A MINIMUM OF TWO (2) BOLTS FOR ANGLE SECTIONS AND FOUR (4) BOLTS FOR WT SECTIONS. ALL "X" BRACING SHALL BE BOLTED AT THE INTERSECTIONS.
12. SPLICES, IF REQUIRED, SHALL BE DESIGNED FOR THE FULL CAPACITY OF THE MEMBER. UNLESS SHOWN OTHERWISE, SPLICES SHALL BE LOCATED AT 1/3 OF THE MEMBER LENGTH FROM THE ENDS. SPLICES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED AND THE CONNECTION DETAILS SUBMITTED FOR REVIEW PRIOR TO START OF FABRICATION.
13. GUSSET PLATES SHALL BE 3/8" THICK, MINIMUM.
14. WELDING SHALL BE IN STRICT ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) D1.1 "STRUCTURAL WELDING CODE", AND THE AISC REQUIREMENTS. ALL WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED TO WELD IN THE REQUIRED POSITIONS. WELDING ELECTRODES SHALL BE E70XX.
15. NEW INTERIOR STEEL SHALL BE PRIMED.
16. NEW STEEL IN EXISTING FACILITIES SHALL BE CLEANED AFTER INSTALLATION AND FIELD PAINTED TO MATCH THE EXISTING ADJACENT STEEL COLOR AND PAINT TYPE.
17. ALL NEW STRUCTURAL LOCATED ABOVE FINISHED ROOF SHALL BE HOT DIP GALVANIZED.
18. GALVANIZED STRUCTURAL STEEL SHALL COMPLY WITH ASTM A123 SPECIFICATION FOR HOT-DIP GALVANIZED COATING. STEEL SHALL BE GALVANIZED AFTER FABRICATION, UNLESS NOTED OTHERWISE.
19. WELDING OF GALVANIZED SURFACES SHALL COMPLY WITH AWS D19.0 REQUIREMENTS
20. GALVANIZING REPAIR PAINT SHALL COMPLY WITH ASTM A780

WOOD FRAMING:

1. ROOF FRAMING ENCOUNTERED WITH DEFICIENCIES SHALL BE REPLACED IN KIND AND CONNECTED TO SUPPORTING MEMBERS.
2. WOOD FOR USE IN ROOF FRAMING SHALL BE PRESSURE TREATED AND FOR EXTERIOR USE.

SUBMITTALS/SHOP DRAWINGS:

1. THE CONTRACTOR SHALL SUBMIT FOR REVIEW ALL PRODUCT DATA USED ON THE PROJECT. SUBMITTALS SHALL INCLUDE MATERIAL CERTIFICATIONS. ITEMS TO BE SUBMITTED SHALL BE PROVIDED FOR, BUT ARE NOT LIMITED TO:

A. STRUCTURAL STEEL INCLUDING CONNECTORS
2. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO START OF CONSTRUCTION OR FABRICATION OF THE FOLLOWING ITEMS:

A. STRUCTURAL STEEL
3. STRUCTURAL STEEL SHOP DRAWINGS SHALL SHOW CUTS, HOLES, CONNECTIONS, WELDS, SIZES AND OTHER PERTINENT DATA.

QUALITY CONTROL:

STRUCTURAL STEEL:

1. ALL WELDS SHALL BE VISUALLY INSPECTED BY A QUALIFIED WELDING INSPECTOR ACCORDING TO AWS D1.1. IN ADDITION TO VISUAL INSPECTION, FIELD WELDS SHALL BE TESTED AS REQUIRED ACCORDING TO AWS D1.1.
2. ALL FULL PENETRATION WELDS SHALL BE TESTED BY NON-DESTRUCTIVE METHOD IN ACCORDING TO AWS D1.1.

EQUIPMENT

1. THE GENERAL CONTRACTOR SHALL COORDINATE ALL SUPPORT REQUIREMENTS WITH THE MECHANICAL CONTRACTOR.
2. ROOF TOP UNIT SUPPORTS ARE BASED ON TRANE AIR HANDLER AND CONDENSING UNIT. MAXIMUM AIR HANDLER UNIT WEIGHT IS 12,039 LB. MAXIMUM CONDENSING UNIT WEIGHT IS 3,325 LB. REFER TO MECHANICAL DRAWINGS FOR EQUIPMENT SCHEDULES AND BASIS OF DESIGN INFORMATION.
3. THE SUPPORT STEEL SHALL BE INSTALLED LEVEL TO A TOLERANCE OF +/- 1/4" MAXIMUM OVER THE LENGTH AND WIDTH OF THE UNIT, OR AS REQUIRED BY THE MANUFACTURER. SHIM THE BASE OF THE UNIT AT ONE OR MORE POINTS ALONG THE RAILS AS NEEDED TO PREVENT DISTORTION. COORDINATE WITH THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
4. ALL DEVIATIONS MADE TO THE FRAMING AND CONNECTIONS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DESIGN AND DETAIL. MODIFICATIONS SHALL BE SUPPORTED BY CALCULATIONS. CALCULATIONS SHALL BE PREPARED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE SUBMITTED FOR REVIEW PRIOR TO THE START OF ANY FABRICATION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING EQUIPMENT LOCATIONS, DIMENSIONS, WEIGHT AND SUPPORT REQUIREMENTS WITH FINAL EQUIPMENT SELECTED AND WITH THE MANUFACTURER'S REQUIREMENTS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR CHANGES ASSOCIATED WITH AN ALTERNATE MANUFACTURER CHOSEN.

DESIGN CRITERIA:

BUILDING CODE:	2017 OHIO BUILDING CODE/ 2015 IBC
RISK CATEGORY:	III
SNOW LOAD:	
GROUND SNOW LOAD (Pg):	25 PSF
SNOW EXPOSURE FACTOR (Ce):	1.0
SNOW THERMAL FACTOR (Ct):	1.0
SNOW IMPORTANCE FACTOR (I):	1.1
WIND LOAD:	
BASIC WIND SPEED (V):	120 MPH
EXPOSURE:	B
SEISMIC LOAD:	
0.2 SEC SPECTRAL RESPONSE ACCELERATION (Ss):	10.5%.
1.0 SEC SPECTRAL RESPONSE ACCELERATION (S1):	5.5%.
SEISMIC IMPORTANCE FACTOR (I):	1.25
SOIL SITE CLASS:	D
SEISMIC DESIGN CATEGORY:	B

STRUCTURAL CONTINGENCY

1. RECORD DRAWINGS OF THE WORK AREA ARE NOT AVAILABLE AND THE AREA IS NOT ACCESSIBLE. INFORMATION SHOWN IS ASSUMED, REPRESENTATIVE IN NATURE ONLY, AND FOR INFORMATION ONLY.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING MEMBER SIZES AND PROVIDE DETAILED FIELD MEASUREMENTS OF EXISTING MEMBERS INDICATED ON S101 TO ENGINEER FOR CONFIRMATION. MEASUREMENTS SHALL BE OBTAINED WITH A MINIMUM OF 1/16" ACCURACY.

CONTRACTOR SHALL PROVIDE THE FOLLOWING MEASUREMENTS OF EXISTING BEAMS AND COLUMNS:

OVERALL DEPTH

FLANGE WIDTH

FLANGE THICKNESS

WEB THICKNESS
3. THE CONTRACTOR SHALL INCLUDE A STRUCTURAL CONTINGENCY FOR ROOF FRAMING REINFORCEMENT. THE MAGNITUDE OF THE REINFORCEMENT SHALL BE DETERMINED LATER AND SHALL BE BASED ON THE FIELD OBTAINED DIMENSIONS.
4. FOR THE PURPOSE OF THIS CONTINGENCY, THE CONTRACTOR SHALL ASSUME THAT ALL EXISTING BEAM FRAMING MEMBERS SUPPORTING THE ROOFTOP EQUIPMENT, DIRECTLY AND INDIRECTLY, WILL REQUIRE REINFORCEMENT. REINFORCEMENT SHALL CONSIST OF NEW WIDE FLANGE BEAMS, FIELD BOLTED TO THE BOTTOM FLANGE OF THE EXISTING BEAMS. EXISTING BEAM FLANGES SHALL BE FIELD DRILLED FOR NEW CONNECTION BOLTS AT A SPACING NOT EXCEEDING 12 INCHES CENTER TO CENTER. BOLTS SHALL BE ¾ INCH DIAMETER A325 BOLTS.
5. FOR THE PURPOSE OF THIS CONTINGENCY, THE CONTRACTOR SHALL ASSUME THAT ALL COLUMNS SUPPORTING THE ROOFTOP EQUIPMENT, DIRECTLY AND INDIRECTLY, WILL REQUIRE REINFORCEMENT. REINFORCEMENT SHALL CONSIST OF THE ADDITION OF NEW WIDE FLANGE BEAMS, SPANNING WEB TO WEB AND CONNECTING AT LEAST THREE (3) COLUMNS. IN ADDITION, NEW BEAMS CONNECTING COLUMNS BELOW THE WORK AREA FLANGE TO FLANGE WILL ALSO BE REQUIRED. NEW BEAMS SHALL BE FIELD BOLTED TO THE EXISTING COLUMNS. EXISTING COLUMNS SHALL BE FIELD DRILLED FOR NEW CONNECTION BOLTS AT A SPACING NOT EXCEEDING 12 INCHES CENTER TO CENTER.

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BID DOCUMENTS

ISSUES


REVISIONS


Sheet Title:

STRUCTURAL GENERAL NOTES

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AMH

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