GENERAL NOTES

GENERAL REQUIREMENTS:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (IBC), LATEST EDITION ADOPTED BY THE STATE OF OHIO AND IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT REQUIREMENTS.
2. ALL REFERENCED STANDARDS REFER TO LATEST EDITION, UNLESS NOTED OTHERWISE.
3. THE CONTRACTOR SHALL REVIEW CIVIL, ARCHITECTURAL, PLUMBING AND MECHANICAL DRAWINGS FOR DIMENSIONS, DETAILS, OPENINGS AND PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
4. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND CONDITIONS BEFORE PREPARING SHOP DRAWINGS, ORDERING OR FABRICATING ANY MATERIALS. REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO PROCEEDING WITH WORK.
5. CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITY LINES: FROM DAMAGE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE BRACING OF STRUCTURAL MEMBERS, WALLS, AND NON-STRUCTURAL ITEMS DURING CONSTRUCTION.
7. STRUCTURAL COMPONENTS AND SYSTEMS SHALL BE ERECTED AND INSPECTED FROM SHOP DRAWINGS, STAMPED APPROVED BY THE ENGINEER OF RECORD.
8. DRAWINGS ARE NOT TO BE SCALED FOR LOCATIONS, QUANTITY TAKEOFFS, MATERIAL SIZES, ETC. (DIMENSIONS GOVERN).

DESIGN DATA: ASCE 7-16

9. RISK CATEGORY II
10. SNOW LOADS:

IMPORTANCE FACTOR	I_S=1.0
TERRAIN CATEGORY	B
GROUND SNOW LOAD	P_g= 20 PSF
SNOW EXPOSURE FACTOR	C_e= VARIES
THERMAL FACTOR	C_t= VARIES

11. WIND LOADS:

EXPOSURE CATEGORY	B
ULTIMATE WIND SPEED (3-SEC GUST)	V= 108 MPH
INTERNAL PRESSURE COEFFICIENT	+0.18/-0.18
BASIC VELOCITY PRESSURE	14.1 PSF

12. SEISMIC DATA:

SEISMIC DESIGN CATEGORY	B	
SOIL SITE CLASSIFICATION	D	
SEISMIC IMPORTANCE FACTOR	I_e= 1.0	
	S_S = 0.116	S_1 = 0.057
	S_{DS} = 0.124	S_{D1} = 0.092

SEISMIC RESISTING SYSTEMS:
INTERMEDIATE REINFORCED MASONRY SHEAR WALLS (R=3.5)

MASONRY:

13. PROVIDE ALL MASONRY CONSTRUCTION IN ACCORDANCE WITH TMS 402 & 602/ACI 530 & 530.1/ASCE 5 & 6 (LATEST EDITION ADOPTED BY STATE) "BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES" BY THE MASONRY STANDARDS JOINT COMMITTEE (MSJC).
14. PROVIDE MATERIALS THAT CONFORM TO THE FOLLOWING:

HOLLOW CONCRETE BLOCK UNITS	ASTM C90 NON-MOISTURE CONTROLLED
SOLID CONCRETE BLOCK UNITS	ASTM C145
MORTAR	ASTM C150
TYPE M (BELOW GRADE)	
TYPE S (ABOVE GRADE)	
GROUT	ASTM C476, HIGH SLUMP
JOINT REINFORCING	ASTM A82
REINFORCING STEEL	ASTM A615, GRADE 60
MASONRY COMPRESSIVE STRENGTH	f'_M = 2,150 PSI

15. PROVIDE CONCRETE MASONRY UNITS WITH A COMPRESSIVE STRENGTH OF 2,150 PSI.
16. PROVIDE GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS.
17. DO NOT USE ADMIXTURES IN MORTAR OR GROUT THAT CONTAIN CHLORIDES.
18. DO NOT SUBSTITUTE MORTAR FOR GROUT.
19. CONSTRUCT ALL MASONRY IN A RUNNING BOND PATTERN, CORNERS SHALL HAVE A STANDARD BOND BY OVERLAPPING, UNLESS OTHERWISE NOTED.
20. LAY MASONRY IN A FULL BED OF MORTAR.
21. VERTICAL REINFORCING BARS SHALL BE INSTALLED IN ALL WALLS AND PARTITIONS AS SHOWN ON PLANS. IN ADDITION TO THE ABOVE NOTED REINFORCING; INSTALL TWO (2) VERTICAL BARS ON BOTH SIDES OF CONTROL JOINTS, AT ALL EXTERNAL CORNERS, AT INTERSECTIONS OF ALL WALLS AND PARTITIONS, AND WHERE HORIZONTAL BARS ARE INTERRUPTED BY ANY INTERFERENCES. INSTALL TWO (2) VERTICAL BARS ON BOTH SIDES OF ALL OPENINGS & EXTEND BARS INTO BOND BEAMS ABOVE AND BELOW. THE SIZE OF ALL BARS NOTED ABOVE SHALL BE #5 BARS.
22. VERTICAL REINFORCING SHALL BE CONTINUOUS FROM FOOTING TO TOP OF WALL. REINFORCING SHALL BE LAPPED 40 BAR DIAMETERS OR 24 INCHES. WHICHEVER IS GREATER AT ALL SPLICES.
23. ALL CELLS OF CMU CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT AS SPECIFIED.
24. ALL VERTICAL REINFORCING IN WALLS SHALL BE CENTERED UNLESS OTHERWISE NOTED.
25. PROVIDE HOT DIP GALVANIZED LADDER TYPE HORIZONTAL JOINT REINFORCEMENT 16"o.c. ABOVE & BELOW GRADE.
26. IN ADDITION, PLACE MASONRY JOINT REINFORCEMENT IN FIRST & SECOND HORIZONTAL JOINTS ABOVE AND BELOW OPENINGS. EXTEND MINIMUM 16" EACH SIDE OF OPENING. USE SHOP FABRICATED SPECIAL PIECES AT ALL CORNERS AND TEES.
27. INSTALL HORIZONTAL REINFORCING IN BOND BEAMS, AS NOTED ON DRAWINGS.
28. REINFORCING BARS IN BOND BEAMS SHALL BE LAPPED 40 BAR DIAMETERS OR 24" WHICHEVER IS GREATER, AT CORNERS AND INTERSECTIONS.
29. ALL HORIZONTAL AND VERTICAL REINFORCING BARS IN MASONRY WALLS SHALL BE SUPPORTED BY GALVANIZED WIRE CENTERING DEVICES AND CAGING CLIPS TO INSURE PROPER COVERAGE OF STEEL.
30. HORIZONTAL JOINT REINFORCEMENT SHALL BE DISCONTINUOUS AT CONTROL JOINTS, UNLESS OTHERWISE NOTED.
31. INTERLOCK CORNERS AND INTERSECTIONS OF ALL MASONRY WORK, ALL WALLS AND PARTITIONS SHALL BE ANCHORED TO INTERSECTION WALLS BY RIGID STEEL ANCHORS AS SPECIFIED.
32. BEAR LINTELS A MINIMUM OF ONE INCH PER FOOT OF OPENING WIDTH WITH A MINIMUM BEARING OF 8 INCHES, (UNLESS NOTED OTHERWISE). LINTELS SHALL BEAR ON GROUTED HOLLOW OR SOLID MASONRY.
33. FILL CORES OF MASONRY WITH GROUT A MINIMUM OF 2 COURSES BELOW LINTELS AND STEEL BEAMS UNLESS OTHERWISE NOTED.
34. WHEN AMBIENT TEMPERATURE IS BELOW 40°F, OR EXCEEDS 100°F OR 90°F WITH A WIND VELOCITY GREATER THAN 8 mph, IMPLEMENT COLD/HOT WEATHER PROCEDURES IN ACCORDANCE WITH ACI 530.1 SPECIFICATION FOR MASONRY STRUCTURES.
35. SUBMIT SHOP DRAWINGS WHICH DETAIL REINFORCEMENT FOR ALL WALLS AND PIERS.
36. CONTRACTOR TO DESIGN, FURNISH AND INSTALL ALL SHORING & BRACING NECESSARY FOR ERECTION OF THE MASONRY.

SHOP DRAWING SUBMITTALS:

37. REVIEW BY ARCHITECT OR STRUCTURAL ENGINEER OF RECORD OF SUBMITTALS IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AS PRESENTED BY THE CONTRACT DOCUMENTS. NO DETAILED CHECK OF QUANTITIES OR DIMENSIONS WILL BE MADE.
38. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ASSURING THAT ALL SUBMITTALS COMPLY WITH THE LATEST PROJECT PLANS, SPECIFICATIONS, GOVERNING CODES AND REGULATIONS; AND, IS SOLELY RESPONSIBLE FOR CONFIRMING ALL QUANTITIES, DIMENSIONS, FABRICATION TECHNIQUES AND COORDINATING WORK WITH ALL TRADES.
39. SHOP DRAWINGS ARE TO BE SUBMITTED IN A TIMELY MANNER ALLOWING ADEQUATE TIME FOR PROCESSING. AN AVERAGE SUBMITTAL WILL BE REVIEWED WITHIN FOURTEEN (14) CALENDAR DAYS OF RECEIPT BY ARCHITECT/STRUCTURAL ENGINEER OF RECORD.
40. ALL SUBMITTALS ARE TO BE ACCOMPANIED BY A LETTER OF TRANSMITTAL.
41. ALL SHOP DRAWINGS MUST BEAR EVIDENCE OF THE CONTRACTOR'S APPROVAL PRIOR TO SUBMITTING TO ARCHITECT/STRUCTURAL ENGINEER OF RECORD.
42. ALL CHANGES AND ADDITIONS MADE ON RE-SUBMITTALS MUST BE CLEARLY FLAGGED AND NOTED. THE PURPOSE OF THE RE-SUBMITTALS MUST BE CLEARLY NOTED ON THE LETTER OF TRANSMITTAL. THE REVIEW OF THE RE-SUBMITTALS WILL BE LIMITED TO THOSE ITEMS CAUSING THE RESUBMISSION.
43. FOR CRITERIA APPLICABLE TO SHOP DRAWINGS REQUIRING ENGINEERING INPUT BY A SPECIALTY ENGINEER, SEE THE FOLLOWING NOTES FOR "SHOP DRAWINGS REQUIRING ENGINEERING INPUT BY SPECIALTY ENGINEER" AND THE NOTES FOR THE INDIVIDUAL COMPONENTS AND SYSTEMS.
44. SHOP DRAWINGS NOT MEETING THE ABOVE CRITERIA OR SUBMITTED AFTER FABRICATION WILL NOT BE REVIEWED.
45. THE STRUCTURAL CONTRACT DOCUMENTS ARE NOT TO BE REPRODUCED FOR USE AS SHOP DRAWINGS.

SHOP DRAWINGS REQUIRING ENGINEERING INPUT BY SPECIALTY ENGINEER:

46. SHOP DRAWINGS AND CALCULATIONS ARE REQUIRED TO BE PREPARED BY SPECIALTY ENGINEER, (NOT THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD) WHO SPECIALIZES IN AND WHO UNDERTAKES THE DESIGN OF STRUCTURAL COMPONENTS OR STRUCTURAL SYSTEMS INCLUDED IN THE SPECIFIED SUBMITTALS FOR THIS PROJECT. SPECIALTY ENGINEER SHALL BE:
    A) AN EMPLOYEE OR OFFICER OF A FABRICATOR.
    B) AN EMPLOYEE OR OFFICER OF AN ENTITY SUPPLYING COMPONENTS TO FABRICATOR.
    C) AN INDEPENDENT CONSULTANT RETAINED BY THE FABRICATOR OR THEIR SUPPLIER.
47. SHOP DRAWINGS REQUIRING A SPECIALTY ENGINEER ARE FABRICATION AND ERECTION
48. DRAWINGS PREPARED FOR, BUT NOT LIMITED TO; CONCRETE REINFORCEMENT BARS, WOOD I-JOISTS, WOOD ROOF TRUSSES, STRUCTURAL STEEL, STEEL STAIRS AND MISCELLANEOUS STRUCTURAL STEEL AND PLATFORMS.
49. CALCULATIONS AND SHOP DRAWINGS SHALL IDENTIFY SPECIFIC PRODUCTS UTILIZED. GENERIC SUBMITTALS WILL NOT BE ACCEPTED.
50. COMPUTER PRINTOUTS ARE AN ACCEPTABLE SUBSTITUTE FOR MANUAL, COMPUTATIONS, WHEN REQUIRED, PROVIDED THEY ARE ACCOMPANIED BY SUFFICIENT DESCRIPTIVE INFORMATION TO PERMIT THEIR PROPER EVALUATION. SUCH DESCRIPTIVE INFORMATION SHALL BEAR THE IMPRESSED SEAL AND SIGNATURE OF THE SPECIALTY ENGINEER AS AN INDICATION THAT THEY HAVE ACCEPTED RESPONSIBILITY FOR THE RESULTS.
51. CATALOG INFORMATION ON STANDARD PRODUCTS DOES NOT REQUIRE THE SEAL OF A SPECIALTY ENGINEER.
52. REVIEW BY ARCHITECT OR STRUCTURAL ENGINEER OF RECORD OF SUBMITTALS IS LIMITED TO VERIFYING THE FOLLOWING:
    A) SPECIFIED STRUCTURAL SUBMITTALS HAVE BEEN FURNISHED.
    B) STRUCTURAL SUBMITTALS HAVE BEEN SIGNED AND SEALED BY THE SPECIALTY ENGINEER.
    C) SPECIALTY ENGINEER HAS UNDERSTOOD THE DESIGN INTENT AND HAS USED THE SPECIFIED STRUCTURAL CRITERIA. NO DETAILED CHECK OF CALCULATIONS WILL BE MADE.
    D) THE CONFIGURATION SET FORTH IN THE STRUCTURAL SUBMITTALS IS CONSISTENT WITH THE CONTRACT DOCUMENTS. NO DETAILED CHECK OF DIMENSIONS OR QUANTITIES WILL BE MADE.

WOOD FRAMING:

53. WOOD FRAMING SHALL CONFORM TO THE 2018 "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" (NDS 2018) AND ALL OTHER APPLICABLE BUILDING CODES.
54. ALL LUMBER AND PLYWOOD SHALL BE GRADE-STAMPED BY THE APPROPRIATE MANUFACTURER'S ASSOCIATION FOR THE APPROPRIATE USE.
55. ALL TWO (2) INCH NOMINAL LUMBER, AND TIMBER MEMBERS SHALL BE SEASONED TO 19% MAXIMUM MOISTURE CONTENT.
56. ALL WOOD FRAMING MEMBERS SHALL BE CUT TO PROVIDE A TIGHT FIT. THE USE OF SHIMS SHALL NOT BE ALLOW U.N.O.
57. WOOD FRAMING INCLUDED PREFABRICATED WOOD TRUSSES AND ENGINEERED LUMBER SHALL BE CONSTRUCTED PLUM, LEVEL AND SQUARE.
58. WOOD FRAMING MEMBERS SHALL BE ADEQUATELY TEMPORARILY BRACED AS REQUIRED DURING CONSTRUCTION TO PROVIDE SAFE WORKING CONDITIONS.
59. DO NOT NOTCH JOISTS, RAFTERS OR BEAMS, UNLESS NOTED OTHERWISE ON THE PLANS. APPROVAL FOR ANY HOLES OR NOTCHES NOT INDICATED ON THE PLANS SHALL BE PROVIDED BY THE ENGINEER OF RECORD, IN WRITING, PRIOR TO THE WORK BEING DONE ON THE SITE.
60. BOLT HOLES SHALL HAVE A MINIMUM OF 1/32" AND MAXIMUM OF 1/16" LARGER THAN THE BOLT DIAMETER.
61. ALL WOOD SHEATHING SHALL BE APA RATED EXPOSURE 1 U.N.O. SHEATHING SHALL BE ADEQUATELY SPACED AT ⅛" JOINTS AS RECOMMENDED BY THE APA FOR EXPANSION.
62. ROOF SHEATHING SHALL BE ⅜" APA RATED SHEATHING NAILED WITH 10d COMMON AT 6" O.C. AT PANEL EDGES, AND 8d COMMON AT 12" O.C. AT INTERMEDIATE FRAMING.
63. NAILS SHALL NOT BE PLACED CLOSER THAN ⅜" TO PANEL EDGES.
64. FASTENERS IN A COMMON MEMBER AT ADJOINING STRUCTURAL PANEL EDGES SHALL BE STAGGERED.
65. ALL SHEATHING SHALL BE LAID WITH LONG DIMENSIONS PERPENDICULAR TO SUPPORTS AND BE CONTINUOUS OVER TWO OUR MORE SUPPORTS. STAGGER ALL JOINTS.
66. SIMPSON CONSTRUCTION HARDWARE, OR AN APPROVED EQUIVALENT, SHALL BE INSTALLED IN COMPLIANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND NAILING SCHEDULE. THE GENERAL CONTRACTOR MUST ENSURE FAMILIARITY WITH AND MAINTAIN THE RELEVANT PRODUCT CATALOGS ON-SITE. SUBSTITUTIONS FOR THE SPECIFIED CONNECTORS OR FASTENERS ARE PROHIBITED WITHOUT APPROVAL FROM THE ENGINEER OF RECORD (EOR).
67. UNLESS NOTED OTHERWISE, MINIMUM FASTENING OF WOOD MEMBERS SHALL CONFIRM TO TABLE 2304.10.1 OF THE 2021 IBC.
68. ALL POSTS SHALL BE CONTINUOUS TO THE FOUNDATION UNLESS INDICATED, INSTALL SOLID BLOCKING WITHIN FLOOR PLENUM TO PROVIDE CONTINUITY OF THE LOAD PATH.
69. ALL FRAMING SHALL BE SPRUCE-PINE-FIR, NO.2 OR BETTER, U.N.O. ON THE DRAWINGS. DESIGN VALUES MUST MEET OR EXCEED THE FOLLOWING:
    F_b = 875 PSI $F_{c\parallel}$ = 1150 PSI E = 1,400,000 PSI
    F_v = 135 PSI $F_{c\perp}$ = 425 PSI
70. MEMBERS NOTED AS "LVL" SHALL BE "Microllam LVL" AS MANUFACTURED BY TRUS-JOIST MACMILLAN OR APPROVED EQUIVALENT U.N.O. ON THE DRAWINGS. BUILT UP LVL BEAMS SHALL BE FASTENED PER THE MANUFACTURED SPECIFICATIONS DESIGN VALUES MUST MEET OR EXCEED THE FOLLOWING:
    F_b = 2600 PSI $F_{c\parallel}$ = 2510 PSI E = 2,000,000 PSI
    F_v = 285 PSI $F_{c\perp}$ = 750 PSI
71. COLUMNS NOTED AS "PSL" SHALL BE "Parallam PSL" AS MANUFACTURED BY TRUS-JOIST MACMILLAN OR APPROVED EQUIVALENT U.N.O. ON THE DRAWINGS. DESIGN VALUES MUST MEET OR EXCEED THE FOLLOWING:
    F_b = 2400 PSI $F_{c\parallel}$ = 2500 PSI E = 1,800,000 PSI
    F_v = 190 PSI $F_{c\perp}$ = 545 PSI
72. TIMBER MEMBER MEMBERS SHALL BE HEM-FIR SELECT STRUCTURAL OR BETTER U.N.O. DESIGN VALUES MUST MEET OR EXCEED THE FOLLOWING:
    Fb = 1200 PSI $F_{c\parallel}$ = 975 PSI E = 1,300,000 PSI
    Fv = 140 PSI $F_{c\perp}$ = 405 PSI

CAST IN PLACE CONCRETE

73. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE (ACI) AND THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
74. CONCRETE WORK SHALL CONFORM WITH THE LATEST EDITION OF THE FOLLOWING ACI CODES:
    - ACI 117 - STANDARD SPEC. FOR TOLERANCES FOR CONC. CONSTRUCTION AND MATERIALS
    - ACI 301 - SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
    - ACI 305R - HOT WEATHER CONCRETING
    - ACI 306 - COLD WEATHER CONCRETING
    - ACI 309 - GUIDE FOR CONSOLIDATION OF CONCRETE
    - ACI 318 - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
    - ACI 350 - CODE REQUIREMENTS FOR ENVIRONMENTAL CONCRETE
75. CONCRETE IN THE LISTED AREAS SHALL BE NORMAL WEIGHT ¾" AGGREGATE AND WILL HAVE THE FOLLOWING MINIMUM ULTIMATE COMPRESSIVE STRENGTH (f'c) AT 28 DAYS U.N.O.(CYLINDERS SHALL BE TAKEN AND TESTED IN ACCORDANCE WITH ACI RECOMMENDATIONS):
    - FOOTINGS 4,000 PSI
    - FOUNDATION WALLS 4,500 PSI
    - INTERIOR SLAB ON GRADE 4,000 PSI
    - EXTERIOR SLAB ON GRADE 4,500 PSI
76. ALL FOOTINGS ARE TO REST ON UNDISTURBED SOIL, OR CLEAN GRANULAR FILL COMPACTED IN LAYERS OF 12" OR LESS TO 95% COMPACTION.
77. HORIZONTAL CONSTRUCTION JOINTS THROUGH CAST IN PLACE CONCRETE ARE NOT PERMITTED UNLESS INDICATED ON THE STRUCTURAL PLANS.
78. REQUIREMENTS FOR CONCRETE QUALITY, MIXING, PLACING AND CURING SHALL CONFORM TO THE REQUIREMENTS OF ACI.
79. VERIFY LOCATION OF OPENINGS SHOWN THROUGH CONCRETE SLABS AND COORDINATE ANY OTHER REQUIRED OPENINGS WITH OTHER TRADES AND THE ARCHITECTURE/ENGINEER.
80. CONTRACTOR TO PROVIDE TEMPLATES TO SET EMBEDDED ITEMS.
81. THE USE OF CALCIUM CHLORIDE IS PROHIBITED IN ANY CONCRETE MIX.
82. SLOPE SLABS TO DRAINS PER ARCHITECT AND M.E.P.
83. ALL CONCRETE EXPOSED TO FREEZING AND THAWING SHALL CONTAIN 6% (±1.5%) ENTRAINED AIR. THIS INCLUDES EXTERIOR FOUNDATION WALLS, EXTERIOR PIERS, AND EXTERIOR SLABS.
84. CORING OF CONCRETE IS NOT PERMITTED UNLESS APPROVED BY E.O.R.
85. ALUMINUM CONDUIT OR PIPING MAY NOT BE EMBEDDED IN ANY CONCRETE.
86. DRY PACK AND GROUT SHALL HAVE MIN F_c = 8,000 PSI
87. GALVANIZED ANCHOR BOLTS WITH GALVANIZED NUTS AND WASHERS SHALL BE USED TO ATTACH FOUNDATION WALL SILL PLATES TO THE FOUNDATION WALL. ANCHOR BOLTS SHALL HAVE A MINIMUM DIAMETER OF ½ INCH AND SHALL BE EMBEDDED AT LEAST 7 INCHES INTO THE CONCRETE. ANCHOR BOLTS SHALL BE SPACED NO MORE THAN 4 FEET ON CENTER AND THERE SHALL BE ONE (1) ANCHOR BOLT AT EACH END OF EACH SILL PLATE LOCATED BETWEEN 4 AND 12 INCHES OF THE END.
88. CONTRACTOR SHALL PREDETERMINE LOCATION AND AVOID CUTTING/CORING/DRILLING EXISTING REBAR FOR POST INSTALLED REBAR AND/OR ANCHOR BOLT INSTALLATIONS.
89. FORMWORK FOR ALL CONCRETE THAT WILL BE EXPOSED IN THE COMPLETED STRUCTURE, SHALL BE CONSTRUCTED FROM A METAL OR SUITABLE SURFACE PLYWOOD THAT WILL PRODUCE AN ACCEPTABLY SMOOTH SURFACE.

REINFORCING STEEL:

90. REINFORCING STEEL SHALL BE NEW DEFORMED BARS. REINFORCING STEEL SHALL BE FREE OF LOOSE RUST, DIRT, OR ANY OTHER FOREIGN MATERIAL.
91. CONCRETE REINFORCEMENT SHALL BE DEFORMED AND DETAILED IN ACCORDANCE WITH THE LATEST ACI DETAILING MANUAL AND SPECIFICATIONS. ALL CONCRETE REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING MATERIALS:
    - REINFORCING STEEL - ASTM A615 - GRADE 60
    - WELDED WIRES AND FABRIC ASTM A185
92. CONTRACTOR TO PROVIDE SUITABLE WIRE SPACERS, CHAIRS, TIES, ECT., FOR SUPPORTING REINFORCING STEEL IN THE PROPER POSITION WHILE PLACING CONCRETE.
93. THE MINIMUM CONCRETE CLEARANCE FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
    - SURFACE CAST AGAINST EARTH: 3"
    - FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:
      1½" INCHES FOR #5 BARS AND SMALLER
      2 INCHES FOR #6 BARS AND LARGER
    - FOR BEAMS COLUMNS, PEDESTALS, AND TENSION TIES:
      2" ALL BARS INCLUDING STIRRUPS, TIES, AND HOOPS
96. WHERE CONTINUOUS BARS ARE REQUIRED, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS, LAP AT NECESSARY SPLICES, AND SPLICES SHALL BE STAGGERED AND HOOKED AT DISCONTINUOUS ENDS. LAP LENGTHS SHALL BE SHOWN OR NOTED ON THE DRAWINGS. IF LAP/SPLICE LENGTHS ARE NOT INDICATED, USE 40 BAR DIAMETERS.
97. REINFORCEMENT AND EMBEDDED ITEMS MUST BE ACCURATELY POSITIONED AND TIED IN PLACE PRIOR TO CONCRETE PLACEMENT. "WET SETTING" OF ANCHOR BOLTS, VERTICAL REINFORCEMENT, IS NOT ACCEPTABLE
98. REINFORCING STEEL SHALL NOT BE TACK WELDED FOR ANY REASON. WELDED REINFORCING STEEL SPLICES ARE NOT PERMITTED.

WELDED STEEL GRATING:

99. PROVIDE BAR GRATING IN ACCORDANCE WITH ANSI/NAAMM MBG 531-24:

BEARING BAR THICKNESS	⅛"
BEARING BAR DEPTH	¾"
BEARING BAR SPACING	1 3/16"
CROSSBAR SPACING	2"
STEEL FINISH	HOT DIPPED GALVANIZED 1.8 oz./sq.ft. (550g/sq. M)

100. ALL GRATING SHALL BE WELDED STEEL TYPE.
101. EXTERIOR GRATING SHALL HAVE A SERRATED SURFACE AND A GALVANIZED COATING.
102. BAND ALL EDGES.

EXCAVATION:

103. IF WATER IS ENCOUNTERED IN THE EXCAVATION, THE CONTRACTOR IS RESPONSIBLE FOR DE-WATERING AS REQUIRED FOR INSPECTION, CONSTRUCTION OF FOOTINGS AND PLACEMENT OF BACKFILL.
104. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES.
105. DIVERT ALL SURFACE RUNOFF AWAY FROM THE EXCAVATION USING CURBING OR BARRIER PLACED ALONG THE TOP OF THE SLOPE. IF REQUIRED, COVER THE EXCAVATED SLOPE WITH PLASTIC TO PROTECT AGAINST INFILTRATION.
106. PERFORM EXCAVATION IN ACCORDANCE WITH OSHA REQUIREMENTS.
107. PRIOR TO EXCAVATION OR DEMOLITION, NOTIFY THE OHIO811 TO ASSURE THAT UNDERGROUND UTILITIES ARE IDENTIFIED.THE PHONE NUMBER OF THE OHIO811 IS 1-800-362-2764.

FOUNDATIONS:

108. REFER TO GEOTECHNICAL EXPLORATION REPORT PREPARED BY CT CONSULTANTS DATED DECEMBER 16, 2024 FOR FOUNDATION AND EARTHWORK REQUIREMENTS.
109. MAXIMUM ALLOWABLE BEARING PRESSURE = 2,000 PSF (SOIL).
110. UNLESS OTHERWISE NOTED BOTTOM OF EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 3'-6" BELOW FINISHED GRADE, STEPPED DOWN AS NECESSARY TO AVOID UTILITY INTERFERENCE.
111. REGARDLESS OF ELEVATIONS SHOWN, ALL FOOTINGS SHALL BEAR ON FIRM ORIGINAL SOIL OR LOAD-BEARING FILL. IN THE EVENT THAT FIELD CONDITIONS INDICATE A DEVIATION FROM DESIGN ASSUMPTIONS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
112. BACKFILL FOR STRUCTURES (STRUCTURAL FILL) SEE GEOTECHNICAL INVESTIGATION REPORT OR USE GRANULAR MATERIAL WITH A MINIMUM INTERNAL FRICTION ANGLE OF 30°, A MAX DENSITY OF 128 PCF, MAXIMUM PARTICLE SIZE OF 3", MAXIMUM 25% FINES, AND MAXIMUM 5% ORGANIC CONTENT BY DRY WEIGHT.
113. PREPARE SUBGRADE BY VIBRATORY COMPACTION PRIOR TO FINAL GRADING. COMPACT TO AT LEAST 98% OF THE MAXIMUM DRY WEIGHT DENSITY OR 85% MINIMUM RELATIVE DENSITY OF THE SUBGRADE MATERIAL, PER ASTM D-1557.
114. PLACE FILL IN LIFTS NOT TO EXCEED 8" LOOSE THICKNESS FOR HEAVY MECHANICAL COMPACTION EQUIPMENT AND 4" FOR MECHANICAL HAND METHODS, COMPACT TO 98% OF THE MAXIMUM DRY WEIGHT DENSITY OR 85% MINIMUM RELATIVE DENSITY ACHIEVED PER ASTM D-1557.
115. REMOVE ALL UNSUITABLE MATERIAL OR LOOSE SOIL WHICH CANNOT BE ADEQUATELY COMPACTED AND REPLACE WITH COMPACTED STRUCTURAL FILL

verdantas

STATE OF OHIO
CHRISTIAN S. MODESTO
E-92388
REGISTERED
PROFESSIONAL ENGINEER
11/21/25

DESIGNED BY	DRAWN BY	CHECKED BY	PROJECT NO.
JAY	JAY	CSM	41545

No.	REVISION	CHK'D BY	DATE
0	ISSUED FOR BIDDING AND PERMIT		11/21/2025

STRUCTURAL NOTES

SUNBURY OHIO
JR SMITH PARK PAVILLION

DATE 11/17/2025

SCALE N/A

SHEET SHEET SN.1

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GENERAL:

GENERAL CONTRACTOR SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS AS NECESSARY TO PROVIDE INSPECTIONS AND VERIFICATIONS DURING CONSTRUCTION.

PRIOR TO THE START OF CONSTRUCTION, THE APPROVED AGENCIES SHALL PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING THE COMPETENCE AND RELEVANT EXPERIENCE OR TRAINING OF THE SPECIAL INSPECTORS WHO WILL PERFORM THE SPECIAL INSPECTION AND TESTS DURING CONSTRUCTION. EXPERIENCE OR TRAINING SHALL BE CONSIDERED TO BE RELEVANT WHERE THE DOCUMENTED EXPERIENCED OR TRAINING IS RELATED IN COMPLEXITY TO THE SAME TYPE OF SPECIAL INSPECTION OR TESTING ACTIVITIES FOR THE PROJECTS OF SIMILAR COMPLEXITY AND MATERIAL QUALITIES.

SPECIAL INSPECTIONS AND TEST, STATEMENT OF SPECIAL INSPECTIONS, RESPONSIBILITIES OF CONTRACTORS, SUBMITTALS TO THE BUILDING OFFICIAL, AND STRUCTURAL OBSERVATIONS SHALL MEET THE REQUIREMENTS INDICATED BY THESE CONTRACT DOCUMENTS AND SECTION 1704 OF THE INTERNATIONAL BUILDING CODE.

FOR ADDITIONAL INFORMATION ON SPECIAL INSPECTION REQUIREMENTS, NOT INCLUDED IN THE CONTRACT DOCUMENTS, CAST-IN-PLACE FOUNDATION ELEMENTS, TIMBER FRAMING AND STRUCTURAL ELEMENTS (BEAMS, COLUMNS, SHEATHING, ETC), PRE-ENGINEERED TRUSSES, AND ANYTHING NOT COVERED BY SPECIAL INSPECTIONS PROVIDED, REFERENCE THE INTERNATIONAL BUILDING CODE INSPECTIONS SECTION 1705. FOR MASONRY CONSTRUCTION, REFERENCE TMS 402/602: BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES - QUALITY AND CONSTRUCTION CHAPTER.

FOR ADDITIONAL INFORMATION ON SPECIAL INSPECTION REQUIREMENTS, NOT INCLUDED IN THE CONTRACT DOCUMENTS, FOR STEEL CONSTRUCTION, REFERENCE ANSI/AISC 360: SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - CHAPTER N: QUALITY CONTROL AND QUALITY ASSURANCE.

ANY DEFICIENCIES FOUND DURING THE INSPECTIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER, CONTRACTOR, AND OWNER.

REQUIRED SPECIAL INSPECTIONS OF MASONRY CONSTRUCTION

INSPECTION TASK	FREQUENCY			REFERENCE FOR CRITERIA	
	LEVEL A	LEVEL B	LEVEL C	TMS 402	TMS 602
1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS	P	P	C		
2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
a. PROPORTIONS OF THE SITE-PREPARED MORTAR	-	P	P		ART. 2.1 & 2.6 A & C
b. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	-	P	P		ART. 2.4 B & 2.4 M & N
c. GRADE, TYPE, AND SIZE OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	-	P	P		ART. 2.4 A & D THRU L
d. PRESTRESSING TECHNIQUES	-	P	P		ART. 3.6 B
e. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	-	C[b]/ P[c]	C		ART. 2.1 DC.1
f. SAMPLE PANEL CONSTRUCTION	-	P	C		ART. 1.6 D
3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
a. GROUT SPACE	-	P	C		ART. 3.2 D & 3.2 F
b. PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES	-	P	P	SEC. 10.8 & 10.9	ART. 3.6
c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	-	P	C	SEC. 6.1, 6.3.1, 6.3.6, & 6.3.7	ART. 3.2 E & 3.4
d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	-	P	P		ART. 2.6 B & 2.4 M.1.b
4. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION:					
a. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	-	P	P		ART. 1.5
b. PLACEMENT OF MASONRY UNITS AND MORTAR JOIN CONSTRUCTION	-	P	P		ART. 3.3 B
c. SIZE AND LOCATION OF STRUCTURAL MEMBERS	-	P	P		ART. 3.3 G
d. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	-	P	C	SEC. 1.2.1(e), 6.2.1, & 6.3.1	
e. TYPE, SIZE, AND LOCATION OF VENEER TIES AND MOVEMENT JOINTS	P[d]	P[d]	P[d]	SEC. 13.2	ART. 3.4 D
f. INSTALLATION OF ADHERED VENEER	P[d]	P[d]	P[d]	SEC. 13.3	ART. 3.3 D
g. WELDING OF REINFORCEMENT	-	C	C	SEC. 6.1.7.3	
h. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMP. BELOW 40°F) OR HOT WEATHER (TEMP. ABOVE 90°F)	-	P	P		ART. 1.8 C & D
i. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	-	C	C		ART. 3.6 B
j. PLACEMENT OF GROUT	-	C	C		ART. 3.5
k. PLACEMENT OF PRESTRESSING GROUT FOR BONDED TENDONS	-	C	C		ART. 3.6 C
l. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	-	C[b]/ P[c]	C		ART. 3.3 B.8 & 3.3 G.1.b
5. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	-	P	C		ART. 1.4 B.2.a.3, B.2.b.3, B.2.c.3, B.3, & B.4

- = NOT REQUIRED P = PERIODIC C = CONTINUOUS
(a) FREQUENCY REFERS TO THE INSPECTION, WHICH MAY BE CONTINUOUS DURING THE LISTED TASK OR PERIODICALLY DURING THE LISTED TASK, AS DEFINED IN THE TABLE
(b) REQUIRED FOR THE FIRST 5,000 SQUARE FEET OF AAC MASONRY
(c) REQUIRED AFTER THE FIRST 5,000 SQUARE FEET OF AAC MASONRY
(d) PERIODIC INSPECTION OF VENEERS IS REQUIRED WHEN THE HEIGHT OF THE VENEER EXCEEDS 60 FEET ABOVE GRADE

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

INSPECTION TASK	FREQUENCY		REFERENCE FOR CRITERIA	
	CONTINUOUS	PERIODIC	REF. STANDARD	IBC 2018 REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	-	X	ACI 318: Ch 20, 25.2, 25.3, & 26.6.1-26.6.3	1908.4
2. REINFORCED BAR WELDING:				
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	-	X	AWS D1.4	
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16 INCH	-	X	ACI 318: 26.6.4	
c. INSPECT ALL OTHER WELDS	X	-		
3. INSPECT ANCHORS CAST IN CONCRETE	-	X	ACI 318: 17.8.2	
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:				
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIS SUSTAINED TENSION LOAS	X	-	ACI 318: 17.8.2.4	
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a	-	X	ACI 318: 17.8.2	
5. VERIFY USE OF REQUIRED DESIGN MIX	-	X	ACI 318: Ch. 19, 26.4.3, & 26.4.4	1904.1, 1904.2, 1908.2, & 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X	-	ASTM C172, ASTM C31, ACI 318: 26.5 & 26.12	1908.10
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	-	ACI 318: 26.5	1908.6, 1908.7, & 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	X	-	ACI 318: 26.5.3-26.5.5	1908.9
9. INSPECT PRESTRESSED CONCRETE FOR:				
a. APPLICATION OF PRESTRESSING FORCES	X	-	ACI 318: 26.10	
b. GROUTING OF BONDED PRESTRESSING TENDONS	X	-		
10. INSPECT ERECTION OF PRECAST CONCRETE MEMEBERS	-	X	ACI 318: 26.9	
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONC. AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	-	X	ACI 318: 26.11.2	
12. INSPECT FORMS FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONC. MEMBER BEING FORMED	-	X	ACI 318: 26.11.1.2(b)	

(a) WHERE APPLICABLE, SEE SECTION 1705.12, SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE
(b) SPECIFIC REQUIREMENTS FOR SPECIAL INSTRUCTIONS SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHORS ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFIED PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSTRUCTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK

REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

INSPECTION TASK	FREQUENCY	
	CONTINUOUS	PERIODIC
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	-	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X
4. DURING FILL PLACEMENT, VERIFY USE OF PROPER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X

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STATE OF OHIO
CHRISTIAN S. MODESTO
E-92388
REGISTERED PROFESSIONAL ENGINEER
11/21/25

DESIGNED BY	DRAWN BY	CHECKED BY	PROJECT NO.
JAY	JAY	CSM	41545

No.	REVISION	CH'KD BY	DATE
0	ISSUED FOR BIDDING AND PERMIT	JAY	11/21/2025

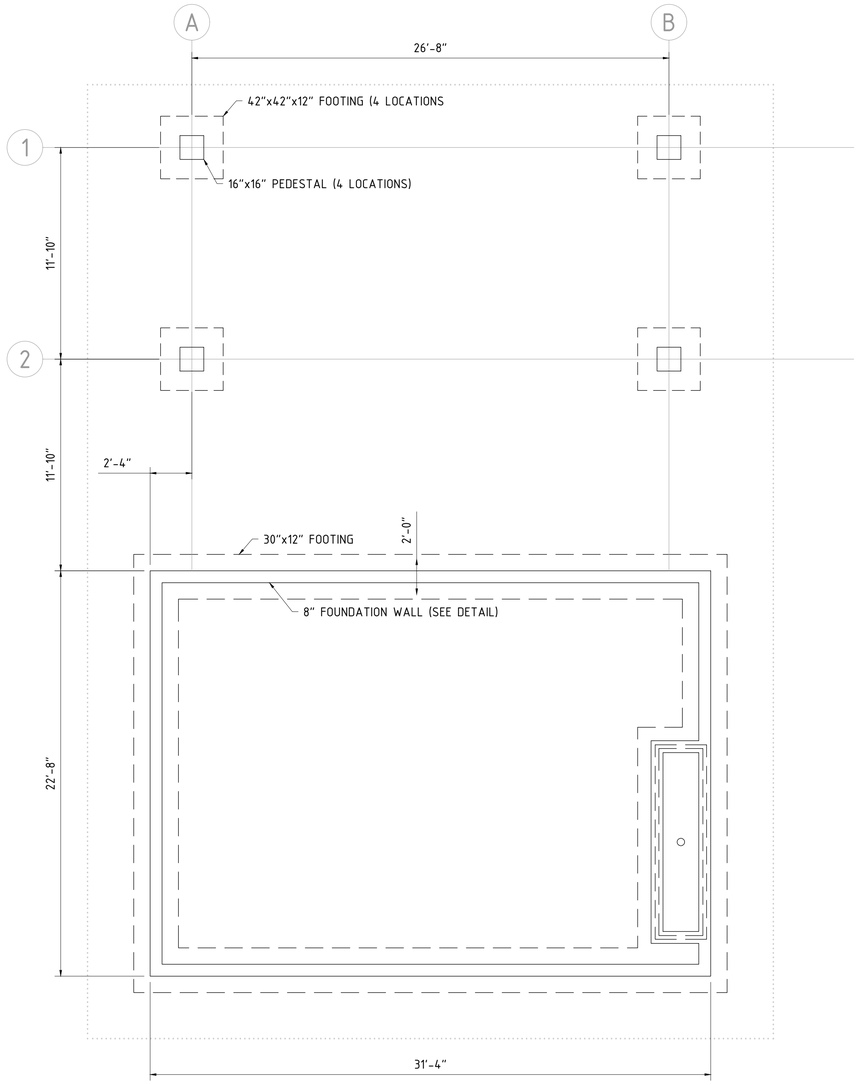
SCHEDULE OF SPECIAL INSPECTIONS

SUNBURY OHIO
JR SMITH PARK PAVILLION

DATE 11/17/2025

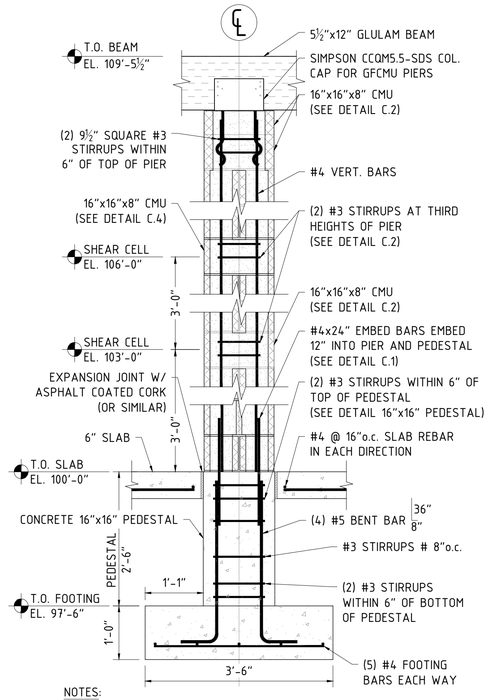
SCALE N/A

SHEET SHEET SN.2



FOUNDATION PLAN

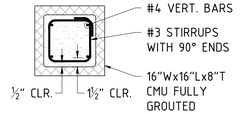
SCALE: ¼" = 1'-0"



NOTES:
1. REMOVE UNSUITABLE BASE SOILS MATERIAL REFERENCED IN GEOTECHNICAL REPORT

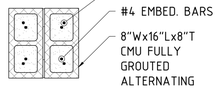
TYPICAL PIER COLUMN DETAIL

SCALE: ¾" = 1'-0"



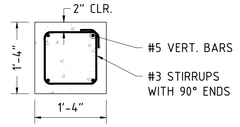
DETAIL C.2

SCALE: ¾" = 1'-0"



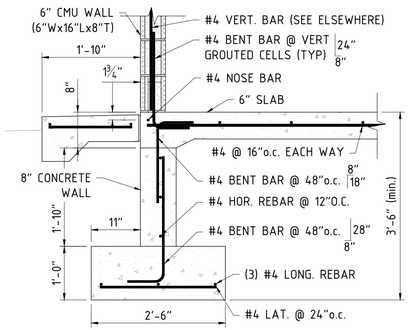
DETAIL C.1

SCALE: ¾" = 1'-0"



16"x16" PEDESTAL

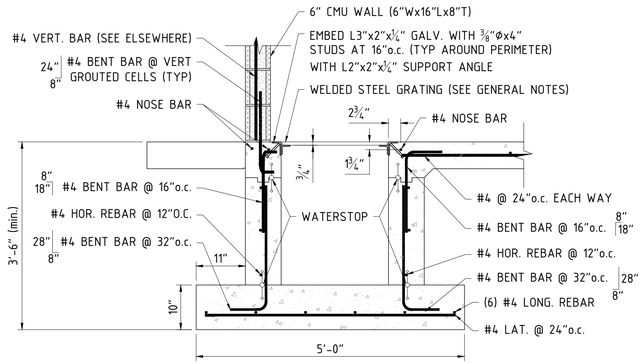
SCALE: ¾" = 1'-0"



NOTES:
1. REMOVE UNSUITABLE BASE SOILS MATERIAL REFERENCED IN GEOTECHNICAL REPORT

8" FOUNDATION WALL

SCALE: ¾" = 1'-0"



NOTES:
* EXACT SIZE AND LOCATION OF WINTERIZATION PIT SHALL BE COORDINATED WITH THE SPLASHPAD SUPPLIER/INSTALLER

30" DEEP WINTERIZATION PIT*

SCALE: ¾" = 1'-0"

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STATE OF OHIO
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11/21/25

DESIGNED BY	DRAWN BY	CHECKED BY	PROJECT NO.
JAY	JAY	CSM	41545

No.	REVISION	CHK'D BY	DATE
0	ISSUED FOR BIDDING AND PERMIT		11/21/2025

FOUNDATION PLANS AND DETAILS

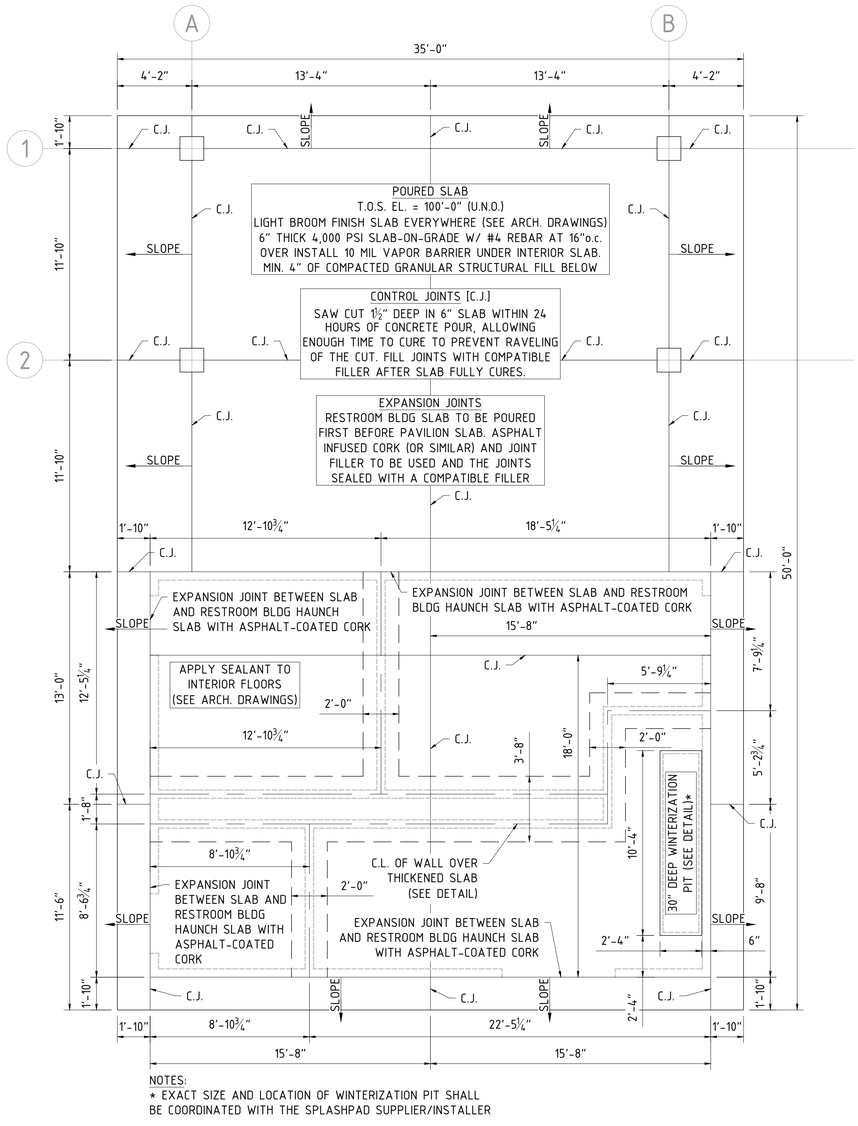
SUNBURY OHIO
JR SMITH PARK PAVILLION

DATE 11/17/2025

SCALE AS SHOWN

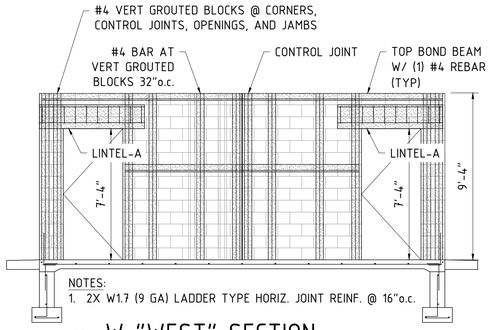
SHEET SHEET S1.0

t:\proj_2025\250692 verdantas - jr smith park pavilion - sunbury, ohio\internal\structural\drawings\250692 cad 2025-11-20 verdantas - jr smith park pavilion.dwg 11/20/2025 5:13 PM



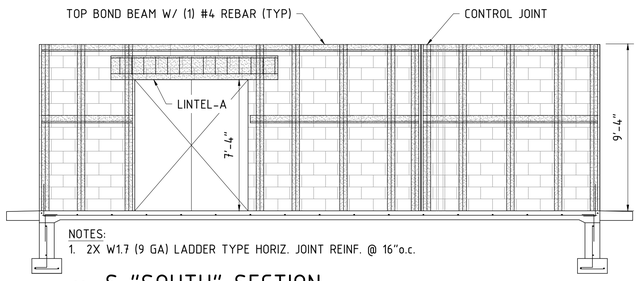
NOTES:
★ EXACT SIZE AND LOCATION OF WINTERIZATION PIT SHALL BE COORDINATED WITH THE SPLASHPAD SUPPLIER/INSTALLER

SLAB PLAN
SCALE: ¼" = 1'-0"



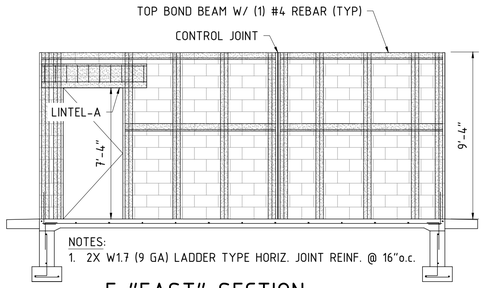
NOTES:
1. 2X W1.7 (9 GA) LADDER TYPE HORIZ. JOINT REINF. @ 16"o.c.

W "WEST" SECTION
SCALE: ¼" = 1'-0"



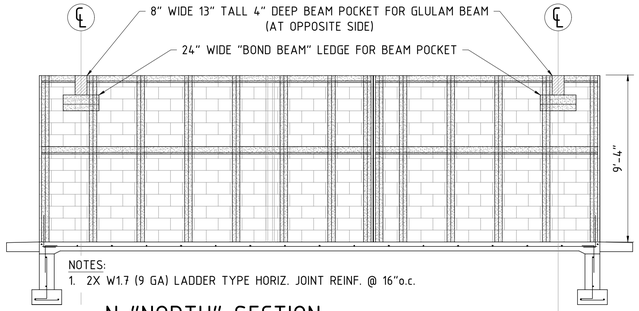
NOTES:
1. 2X W1.7 (9 GA) LADDER TYPE HORIZ. JOINT REINF. @ 16"o.c.

S "SOUTH" SECTION
SCALE: ¼" = 1'-0"



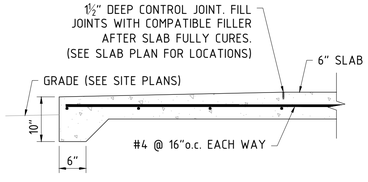
NOTES:
1. 2X W1.7 (9 GA) LADDER TYPE HORIZ. JOINT REINF. @ 16"o.c.

E "EAST" SECTION
SCALE: ¼" = 1'-0"

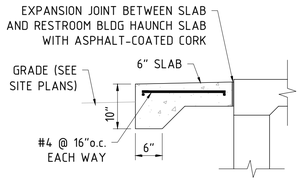


NOTES:
1. 2X W1.7 (9 GA) LADDER TYPE HORIZ. JOINT REINF. @ 16"o.c.

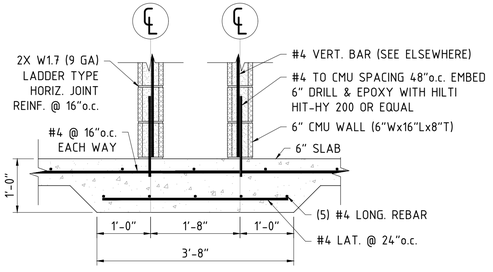
N "NORTH" SECTION
SCALE: ¼" = 1'-0"



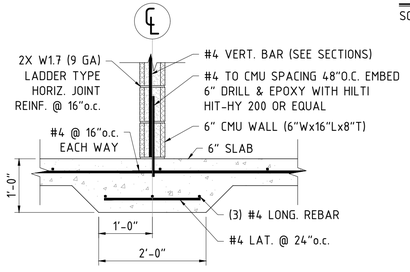
SLAB EDGE DETAIL AT PATIO
SCALE: ¾" = 1'-0"



SLAB EDGE DETAIL AT BLDG
SCALE: ¾" = 1'-0"



INTERIOR WALL THICKENED SLAB DETAIL
SCALE: ¾" = 1'-0"



INTERIOR WALL THICKENED SLAB DETAIL
SCALE: ¾" = 1'-0"

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STATE OF OHIO
CHRISTIAN S. MODESTO
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REGISTERED PROFESSIONAL ENGINEER
11/21/25

No.	REVISION	CHK'D BY DATE
0	ISSUED FOR BIDDING AND PERMIT	11/21/2025

DESIGNED BY JAY
DRAWN BY JAY
CHECKED BY CSM
PROJECT NO. 41545

SLAB PLANS AND DETAILS

SUNBURY OHIO
JR SMITH PARK PAVILLION

DATE 11/17/2025
SCALE AS SHOWN
SHEET SHEET S1.1

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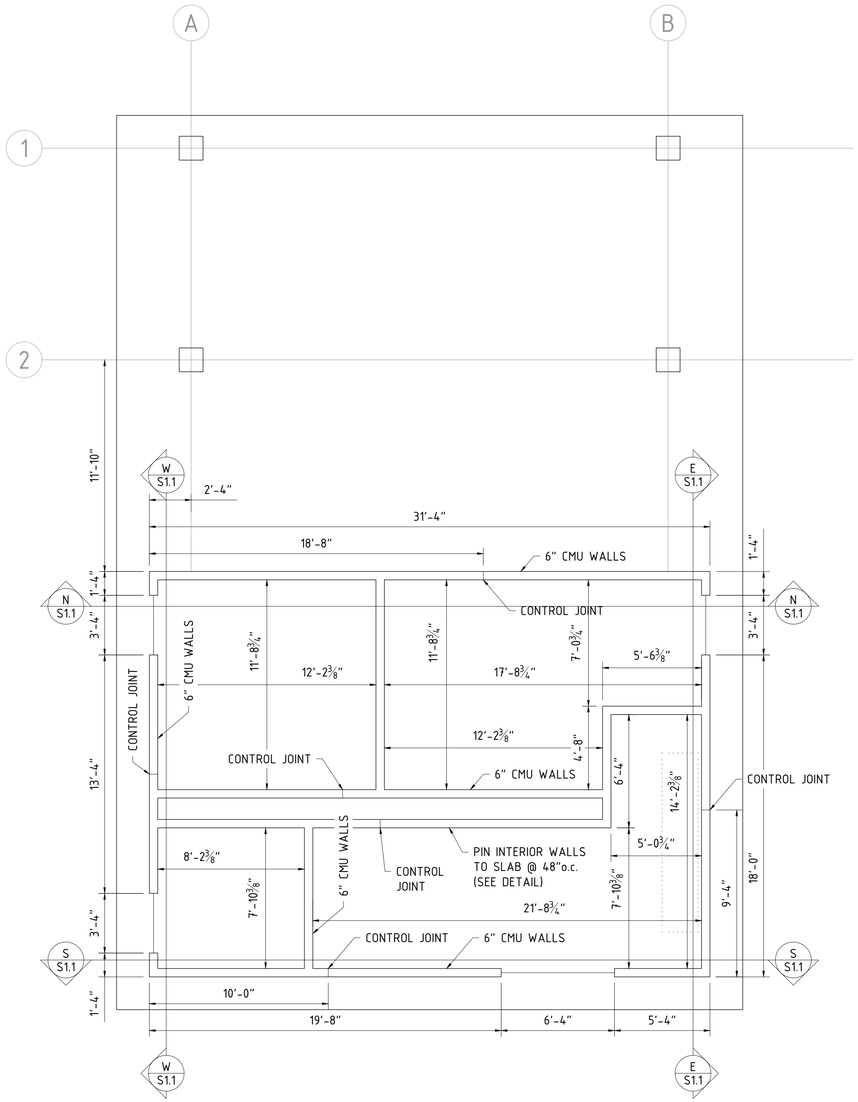
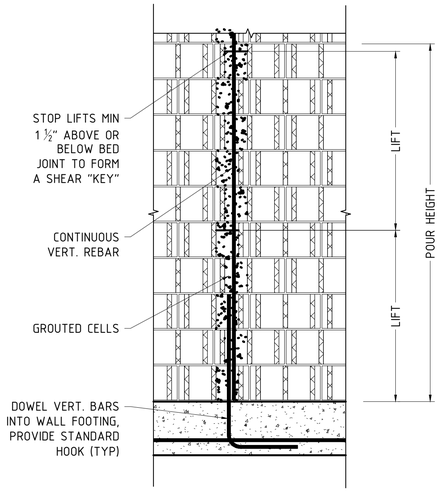


CMU WALL PLANS

SCALE: ¼" = 1'-0"



CMU WALL GROUT REQUIREMENTS

SCALE: ¾" = 1'-0"

GENERAL GROUTING REQUIREMENTS:

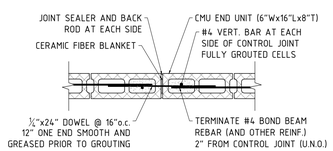
1. ALL REINFORCED CELLS SHALL BE GROUTED SOLID.
2. REINFORCING BARS SHALL BE IN PROPER POSITION PRIOR TO PLACEMENT OF GROUT, NOT PUSHED DOWN INTO PREVIOUSLY PLACED GROUT. SAME REQUIREMENTS APPLIES FOR EMBEDED BOLTS AND FASTENERS.
3. MORTAR BEDDING UNDER THE FIRST COURSE OF BLOCK CELLS TO BE GROUTED SHALL PERMIT GROUT TO COME INTO DIRECT CONTACT WITH FOUNDATION.
4. PLACE MORTAR ON CROSS WEBS ADJACENT TO ALL GROUTED CELLS.
5. MORTAR THAT PROJECTS MORE THAN ½" INTO CELLS THAT ARE TO BE GROUTED SHALL BE REMOVED.
6. GROUTED CELLS SHALL BE MECHANICALLY VIBRATED DURING PLACEMENT OF GROUT. TEN MINUTES AFTER PLACING GROUT, EACH GROUTED CELL SHALL BE RECONSOLIDATED WITH A VIBRATOR.
7. METAL LATH SHALL BE PLACED UNDER ALL BOND BEAMS IN ORDER TO CONTAIN GROUT. AS AN ALTERNATE TO THIS, "U" SHAPED LINTEL BLOCKS MAY BE USED FOR BOND BEAMS.
8. CONTRACTOR COORDINATE GROUT PLACEMENT TO ENSURE MINIMUM SPLICE LENGTHS PER THE GENERAL NOTES.
9. EXCEPT AS PROHIBITED BY SEISMIC DESIGN CATEGORY, LOW LIFT GROUTING OR HIGH LIFT GROUTING PROCEDURES MAY BE UTILIZED, AT THE CONTRACTOR'S OPTION.

LOW LIFT GROUTING PROCEDURE:

1. LAY WALL TO MAXIMUM OF 5'-0".
2. CLEAN MORTAR AND OTHER DEBRIS FROM CELLS TO BE GROUTED.
3. PLACE REINFORCING BARS IN PROPER POSITION.
4. PLACE GROUT UP TO LIFT HEIGHT AND VIBRATE.

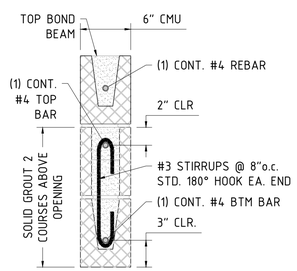
HIGH LIFT GROUTING PROCEDURE: (NOT PERMITTED IN SEISMIC DESIGN CATEGORY D, E, OR F)

1. CLEAN-OUT OPENINGS SHALL BE PROVIDED IN THE FACE SHELLS OF THE BOTTOM COURSE OF ALL CELLS TO BE GROUTED. OPENING SHALL BE LARGE ENOUGH TO ALLOW REMOVAL OF DEBRIS.
2. LAY WALL TO MAXIMUM POUR HEIGHT AND CLEAN DEBRIS FROM OPENINGS. PLACE REINFORCING BARS IN PROPER POSITION.
3. PLACE GROUT TO THE FOLLOWING HEIGHTS; MAXIMUM LIFT HEIGHT IS 5'-0"; MAXIMUM POUR HEIGHT IS 12'-0" UNLESS EXPRESSLY COORDINATED WITH THE STRUCTURAL ENGINEER.
4. AFTER INITIAL LIFT IS POURED AND VIBRATED, WAIT A MINIMUM OF 30 MINUTES AND A MAXIMUM OF 60 MINUTES BEFORE PLACING SUCCESSIVE LIFT. CONTINUE THIS PROCEDURE FOR FULL POUR HEIGHT.



CONTROL JOINT

SCALE: ¾" = 1'-0"

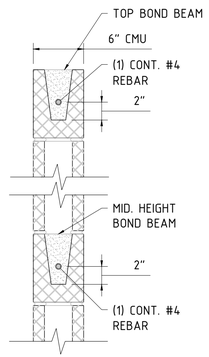


NOTES:

1. ¾" MIN. CLEAR COVER FOR REBAR
2. LAP MIN. 40 BAR DIA. FOR CONT. LONG. REINFORCEMENT

LINTEL-A

SCALE: 1½" = 1'-0"

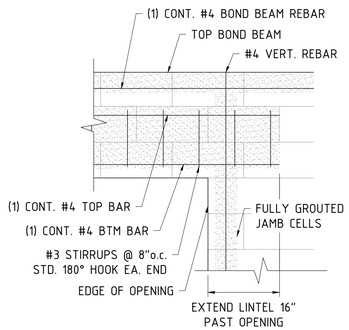


NOTES:

1. ¾" MIN. CLEAR COVER FOR REBAR
2. LAP MIN. 40 BAR DIA. FOR CONT. LONG. REINFORCEMENT

BOND-BEAM

SCALE: 1½" = 1'-0"

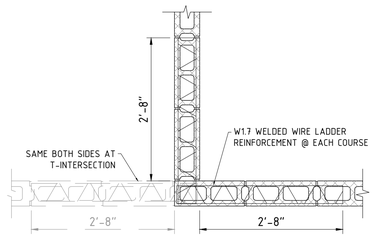


NOTES:

1. SEE ELSEWHERE FOR OTHER REINCORCEMENT

TYP JAMB/LINTEL DETAIL

SCALE: ¾" = 1'-0"

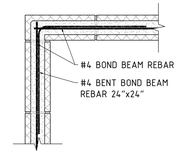


NOTES:

1. SEE ELSEWHERE FOR OTHER REINFORCEMENT NOT SHOWN.
2. AT ALL MASONRY INTERSECTIONS, UNITS MUST INTERLOCK, OR IN LIEU OF INTERLOCKING, PROVIDE A MECHANICAL CONNECTION AS SHOWN ABOVE.

TYPICAL CMU WALL INTERSECTION DETAIL

SCALE: ¾" = 1'-0"



NOTES:

1. SEE ELSEWHERE FOR OTHER REINFORCEMENT NOT SHOWN.
2. OCCURS AT ALL EXTERIOR CORNERS, TOP AND MIDDLE BOND BEAMS (SEE ELSEWHERE)

BOND BEAM CMU WALL INTERSECTION DETAIL

SCALE: ¾" = 1'-0"

verdantas

STATE OF OHIO
CHRISTIAN S. MODESTO
E-92388
REGISTERED PROFESSIONAL ENGINEER
11/21/25

DESIGNED BY	DRAWN BY	CHECKED BY	PROJECT NO.
JAY	JAY	CSM	41545

No.	REVISION	CHK'D BY DATE
0	ISSUED FOR BIDDING AND PERMIT	11/21/2025

CMU WALL PLANS AND DETAILS

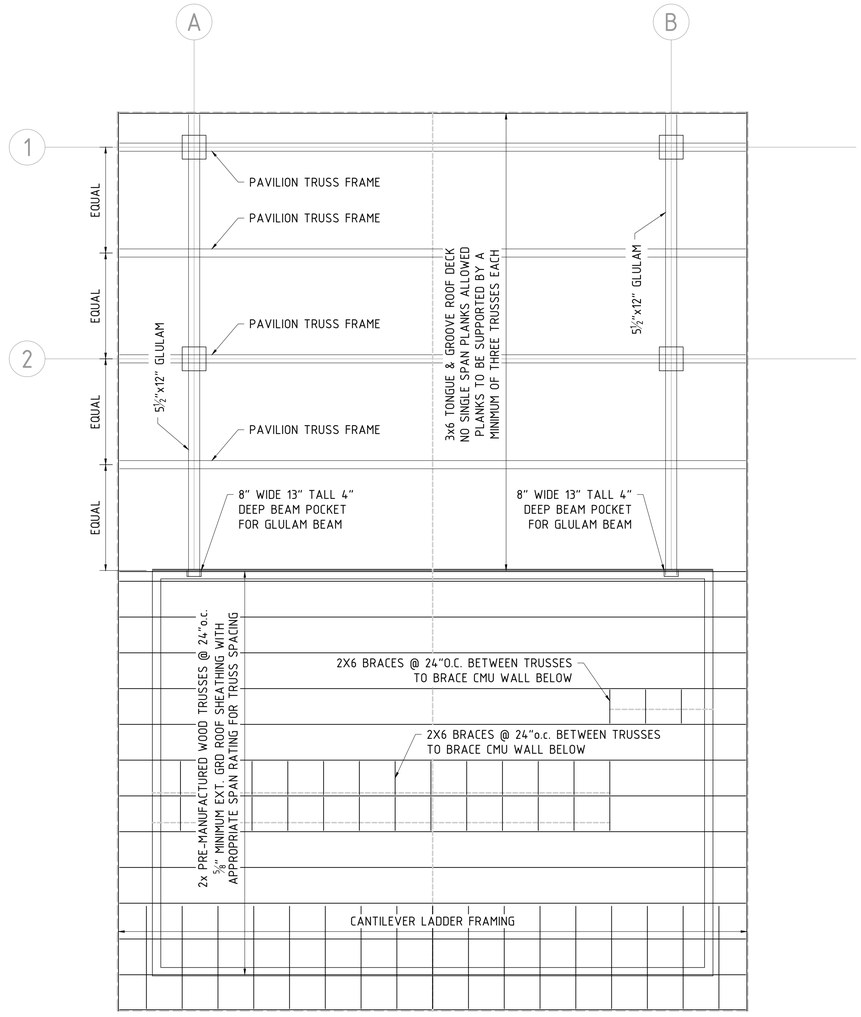
SUNBURY OHIO
JR SMITH PARK PAVILLION

DATE 11/17/2025

SCALE AS SHOWN

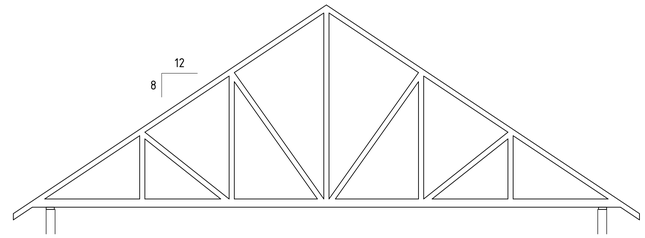
SHEET SHEET S1.2

t:\proj_2025\250692 verdantas - jr smith park pavillion - sunbury, ohio\internal\structural\drawings\250692 cad 2025-11-20 verdantas - jr smith park pavillion.dwg 11/20/2025 5:13 PM



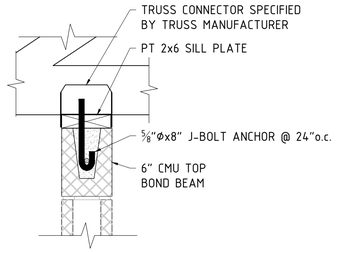
ROOF FRAMING PLAN
SCALE: ¼" = 1'-0"

WOOD TRUSS NOTES:
1. COMPLY WITH TRUSS PLATE INSTITUTE (TPI) "DESIGN AND SPECIFICATIONS FOR METAL PLATE CONNECTED WOOD TRUSSES" (LATEST EDITION).
2. ROOF TRUSS LAYOUT SHOWN IS CONCEPTUAL AND MUST BE VERIFIED BY THE TRUSS MANUFACTURER AND SHOWN ON SHOP DRAWINGS FOR APPROVAL. ANY REVISIONS TO THE TRUSS LAYOUT MAY AFFECT OTHER FRAMING AND THEREFORE MUST BE APPROVED BY ENGINEER.
3. BOTTOM CHORD SHALL BE A MINIMUM 2x6, TYPICAL ALL TRUSSES.
4. ALL TRUSSES SHALL BE ERECTED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND AS RECOMMENDED B "HIB-91:2013 EDITION WITH 2015 UPDATES, HANDLING, INSTALLING, AND BRACING METAL PLATE CONNECTED WOOD TRUSSES" BY TPI.
5. CONTRACTOR TO SUBMIT SHOP DRAWINGS SEALED BY PROFESSIONAL ENGINEER LICENSED IN OHIO FOR ALL TRUSS TYPES FOR ENGINEER'S APPROVAL PRIOR TO MANUFACTURING.
6. TRUSS MANUFACTURER TO PROVIDE ALL TRUSS-TO-TRUSS CONNECTORS.
7. ALL TRUSS PRESS PLATE CONNECTORS SHALL BE STAINLESS STEEL.
8. TYPICAL LOADS FOR ALL TRUSSES:
   - TOP CHORD DEAD LOAD 10 PSF
   - TOP CHORD ROOF LIVE/SNOW LOAD 20 PSF
   - BOTTOM CHORD DEAD LOAD 15 PSF (COLLATERAL)
   - END 8FT WIND ULTIMATE UPLIFT 31 PSF
   - MIDDLE WIND ULTIMATE UPLIFT 28 PSF
   - WIND ULTIMATE LATERAL: WINDWARD 17 PSF
   - WIND ULTIMATE LATERAL: LEEWARD -21 PSF
9. TRUSS DOCUMENTS ARE NOT TO INCLUDE TRUSS BLOCKING REQUIREMENTS. TRUSS PROCEDURES ARE TO INCLUDING INSTALLING, SECURING, BRACING, ETC. OF ALL TRUSSES.

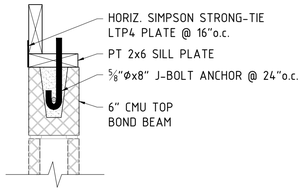


NOTES:
1. ALL DIMENSIONS NOT SHOWN TO MATCH ARCHITECTURAL PLANS

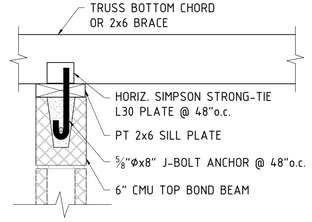
EXAMPLE PRE-MANUFACTURER ROOF TRUSS
SCALE: ¼" = 1'-0"



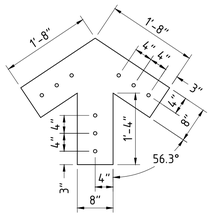
TRUSS CONN. PERP. TO EXT. WALL
SCALE: 1½" = 1'-0"



TRUSS CONN. PARA. TO EXT. WALL
SCALE: 1½" = 1'-0"

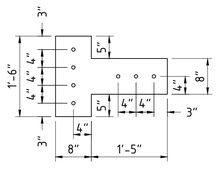


INT. WALL CONN. TO TRUSS
SCALE: 1½" = 1'-0"



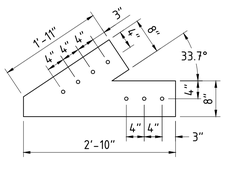
NOTES:
PLATE MADE OF ½" A36 STEEL

TRUSS PLATE 1
SCALE: ¾" = 1'-0"



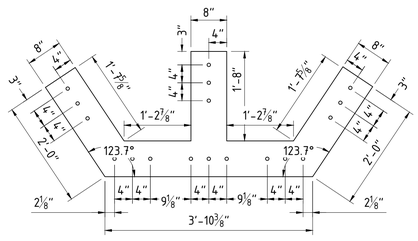
NOTES:
PLATE MADE OF ½" A36 STEEL

TRUSS PLATE 2
SCALE: ¾" = 1'-0"



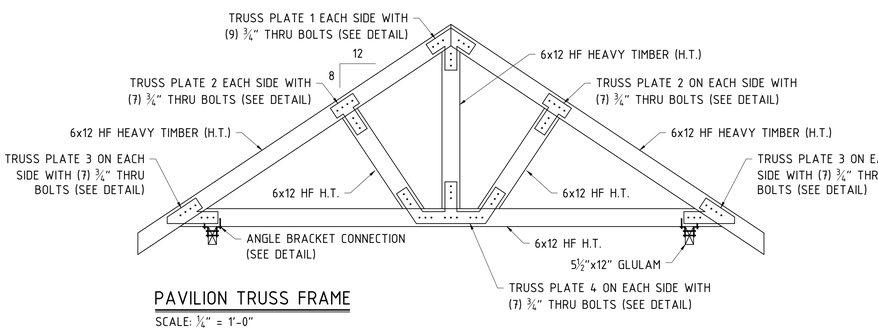
NOTES:
PLATE MADE OF ½" A36 STEEL

TRUSS PLATE 3
SCALE: ¾" = 1'-0"

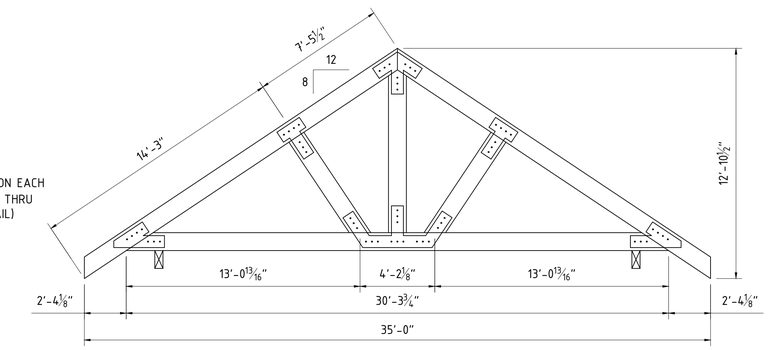


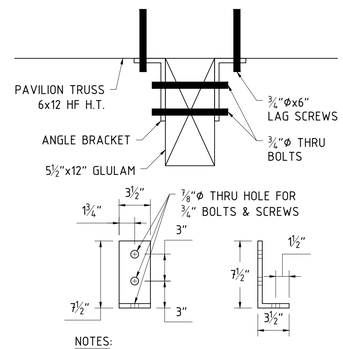
NOTES:
PLATE MADE OF ½" A36 STEEL

TRUSS PLATE 4
SCALE: ¾" = 1'-0"



PAVILION TRUSS FRAME
SCALE: ¼" = 1'-0"





NOTES:
PLATE MADE OF ½" A36 STEEL

ANGLE BRACKET CONNECTION
SCALE: 1½" = 1'-0"

verdantas

STATE OF OHIO
CHRISTIAN S. MODESTO
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REGISTERED PROFESSIONAL ENGINEER
11/21/25

DESIGNED BY	DRAWN BY	CHECKED BY	PROJECT NO.
JAY	JAY	CSM	41545

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ROOF FRAMING PLAN AND TRUSS DETAILS

SUNBURY OHIO
JR SMITH PARK PAVILLION

DATE 11/17/2025

SCALE AS SHOWN

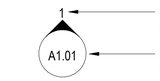
SHEET SHEET S1.3

t:\proj_2025\250692 verdantas - jr smith park pavilion - sunbury, ohio\internal\structural\drawings\250692.cad 2025-11-20 verdantas - jr smith park pavilion.dwg 11/20/2025 5:13 PM

DRAWING ABBREVIATIONS

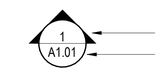
AB	ANCHOR BOLT
ABV	ABOVE
AC	ACOUSTICAL / AIR CONDITIONING
ACT	ACOUSTICAL CEILING TILE
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
ADJT	ADJACENT
A/E	ARCHITECT/ENGINEER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFS	ABOVE FINISHED SLAB
AGG	AGGREGATE
AHU	AIR HANDLING UNIT
AIB	AIR INFILTRATION BARRIER
AL	ALIGN
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZE
APPROX	APPROXIMATE
ARCH	ARCHITECT
AUX	AUXILIARY
A/V	AUDIO / VISUAL
AVG	AVERAGE
B/	BOTTOM OF
B/B	BACK TO BACK
B/F	BOTTOM OF FOOTING
BD	BOARD
BDRY	BOUNDARY
BHMA	BUILDER'S HARDWARE MANUFACTURER'S ASSOCIATION
BLDG	BUILDING
BLKG	BLOCKING
BOD	BASIS OF DESIGN
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BP	BASE PLATE
BRG	BEARING
BRK	BRICK
BRKT	BRACKET
BSMT	BASEMENT
BTWN	BETWEEN
BUR	BUILT-UP ROOFING
BW	BOTH WAYS
CAB	CABINET
CB	CATCH BASIN
CCTV	CLOSED CIRCUIT TV
CD	CONSTRUCTION DOCUMENTS
CDR	CARD READER
CEM	CEMENT
CER	CERAMIC
CF	CONTRACTOR FURNISHED
CF/CI	CONTRACTOR FURNISHED /CONTRACTOR INSTALLED
CFMF	COLD-FORMED METAL FRAMING
CG	CORNER GUARD
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLG HT	CEILING HEIGHT
CLO	CLOSET
CLR	COLOR, CLEARANCE
CLRM	CLASSROOM
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COMB	COMBINATION
COMM	COMMUNICATION
CONC	CONCRETE
CONF	CONFERENCE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR, CORRUGATED
CPT	CARPET
CSWK	CASEWORK
CT	CERAMIC TILE
CTR	CENTER
CU FT	CUBIC FEET
D	DEPTH
DBL	DOUBLE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL. DIAGRAM
DIM	DIMENSION
DIR	DIRECTION
DIST	DISTANCE
DL	DEAD LOAD
DN	DOWN
DOC	DOCUMENT
DR	DOOR
DS	DOWNSPOUT
DWG	DRAWING
EA	EACH
EF	EACH FACE
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EB	EXPANSION BOLT
EJ	EXPANSION JOINT
ES	EACH SIDE
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATOR
EMER	EMERGENCY
EPS	EXPANDED POLYSTYRENE BOARD (INSULATION)
EQ	EQUAL
EWC	ELECTRIC WATER COOLER
EXP	EXPOSED
EXT	EXTERIOR, EXTINGUISHER
F/	FACE OF
F/C	FACE OF CONCRETE
F/F	FACE TO FACE, FLOOR TO FLOOR
F/M	FACE OF MASONRY
F/S	FACE OF STUDS
FA	FIRE ALARM
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FF&E	FIXTURE, FURNISHING & EQUIPMENT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FIN	FINISH
FLR	FLOOR
FM	FACTORY MUTUAL
FP	FIRE PROOFING
FR	FRAME
FTG	FOOTING
FUR	FURRING
FUT	FUTURE
FVC	FIRE VALVE CABINET
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERAL, GENERATOR
GFCI	GOVERNMENT FURNISHED CONTRACTOR INSTALLED
GFGI	GOVERNMENT FURNISHED INSTALLED BY GOVERNMENT
GL	GLASS
GR	GRADE
GR BM	GRADE BEAM
GRD	GROUND
GUT	GUTTER
GYP BD	GYPSUM BOARD
H	HIGH
HB	HOSE BIBB
HC	HANDICAPPED
HD	HEAVY DUTY
HDR	HEADER
HDW	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HT	HEIGHT
HTR	HEATER
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
HWD	HARDWOOD
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
ILO	IN LIEU OF
IN	INCH
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
J	JOIST
JAN	JANITOR
JB	JUNCTION BOX
JT	JOINT
KD	KNOCK DOWN
KIP	KILO-POUND
KIT	KITCHEN
KO	KNOCKOUT
KPL	KICKPLATE
LAM	LAMINATE
LAV	LAVATORY
LBR	LUMBER
LB	POUND
LF	LINEAR FEET (FOOT)
LH	LEFT HAND
LIN	LINEAR
LKR	LOCKER
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LP	LOW POINT
LT	LIGHT
LTWT	LIGHT WEIGHT
LVR	LOUVER
M	METER
MAINT	MAINTENANCE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM, MINUTE
MISC	MISCELLANEOUS
MM	MILLIMETER
MO	MASONRY OPENING
MOD	MODULAR, MODIFY
MOV	MOVABLE
MTD	MOUNTED
MTL	METAL
MULL	MULLION
NA	NOT APPLICABLE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OFD	OVERFLOW DRAIN
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OWSJ	OPEN WEB STEEL JOIST
OPR	OPERABLE
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
OZ	OUNCE
PA	PUBLIC ADDRESS
PAR	PARAPET
PAT	PATTERN
PB	PULL BOX
PBD	PARTICLEBOARD
PCF	POUNDS PER CUBIC FOOT
PCT	PERCENT
PERF	PERFORATED
PERIM	PERIMETER
PH	PHASE
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER, PLASTIC
PLBG	PLUMBING
PLG	PILING
PLYWD	PLYWOOD
PNL	PANEL
PR	PAIR
PRCST	PRECAST
PRKG	PARKING
PROP	PROPERTY, PROPOSED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT, POINT, PRESSURE TREATED
PTN	PARTITION
PWR	POWER
QT	QUARRY TILE
QTY	QUANTITY
R	RADIUS, RISER
RB	RESILIENT BASE
RBM	REINFORCED BRICK MASONRY
RBR	RUBBER
RC	REINFORCED CONCRETE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RDG INS	RIGID INSULATION, SOLID
REC	RECESSED
REF	REFERENCE
REM	REMOVABLE
REP	REPAIR
REPL	REPLACE
REQ	REQUIRE
REQD	REQUIRED
RESIL	RESILIENT
REV	REVISED, REVISION
RFG	ROOFING
RH	RIGHT HAND
RHR	RIGHT HAND REVERSE
RL	ROOF LEADER
RLG	RAILING
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
RVL	REVEAL
SAN	SANITARY
SB	SPLASH BLOCK
SCHED	SCHEDULE
SD	SMOKE DETECTOR
SF	SQUARE FOOT (FEET)
SGL	SINGLE
SH	SHOWER
SHT	SHEET
SHTHG	SHEATHING
SHV	SHELVING
SIM	SIMILAR
SJ	SCORED JOINT
SK	SINK
SLV	SLEEVE
SM	SHEET METAL
SPEC	SPECIFICATION
SQ	SQUARE
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
SST	STAINLESS STEEL
ST	STAIRS
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STL	STEEL
STOR	STORAGE
STR	STRUCTURAL
SUB FL	SUBFLOOR
SUPP	SUPPLEMENTAL
SW	SIDEWALK, SHORT WAY
SYM	SYMMETRICAL
SYS	SYSTEM
T	TREAD
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
T/	TOP OF
T/BM	TOP OF BEAM
T/C	TOP OF CONCRETE, TOP OF CURB
T/COL	TOP OF COLUMN
T/FTG	TOP OF FOOTING
T/J	TOP OF JOIST
T/S	TOP OF STEEL
TB	TEST BORING
TD	TRENCH DRAIN
TEL	TELEPHONE
TEMP	TEMPORARY
TER	TERRAZZO
THK	THICK
TBD	BACKBOARD
TOPO	TOPOGRAPHY
TV	TELEVISION
TYP	TYPICAL
UC	UNDERCUT
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
UNF	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
USG	UNITED STATES GEOLOGICAL SURVEY
VAR	VARIES
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VTR	VENT THRU ROOF
VWC	VINYL WALL COVERING
W	WIDE, WIDTH
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WF	WIDE FLANGE
WH	WALL HYDRANT, WATER HEATER
WL	WIND LOAD
WP	WATERPROOFING, WORK POINT
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD DRAIN

REFERENCE SYMBOLS



1 — ELEVATION NUMBER ON SHEET
A1.01 — SHEET NUMBER WHERE ELEVATION IS DRAWN

INTERIOR ELEVATION



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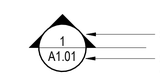
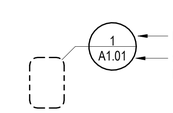
A1.01 — SHEET NUMBER WHERE ELEVATION IS DRAWN

EXTERIOR ELEVATION



1 — SECTION NUMBER ON SHEET
A1.01 — SHEET NUMBER WHERE SECTION IS DRAWN

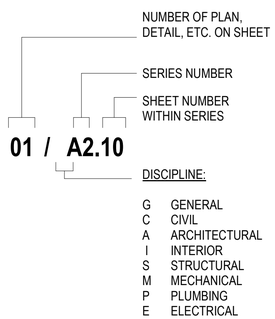
SECTION



1 — DETAIL NUMBER ON SHEET
A1.01 — SHEET NUMBER WHERE DETAIL IS DRAWN

DETAIL

DRAWING REFERENCE



NUMBER OF PLAN, DETAIL, ETC. ON SHEET
SERIES NUMBER
SHEET NUMBER WITHIN SERIES

DISCIPLINE:

G	GENERAL
C	CIVIL
A	ARCHITECTURAL
I	INTERIOR
S	STRUCTURAL
M	MECHANICAL
P	PLUMBING
E	ELECTRICAL

DRAWING SYMBOLS

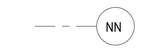
ROOM NAME / NUMBER

DOOR NUMBER

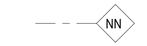
WINDOW TYPE

INTERIOR PARTITIONS

DRAWING NOTE



COLUMN CENTERLINE



FACE OF BUILDING

REVISION CLOUD

REVISION NUMBER

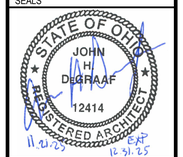
CEILING HEIGHT AFF

SPOT ELEVATION

FLOOR LEVEL & NAME

verdantas
4420 COOPER RD, SUITE 200
CINCINNATI, OH 45242

SEALS



REVISIONS

No.	REVISION	DATE	BY
0	ISSUED FOR BIDDING AND PERMIT	11/21/2025	BSAB

DRAWING TITLE & PROJECT NAME

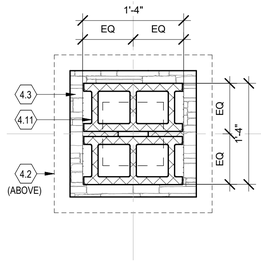
ABBREVIATIONS & SYMBOLS

SUNBURY OHIO
JR SMITH PARK PAVILLION
STANDARD SIGNAGE

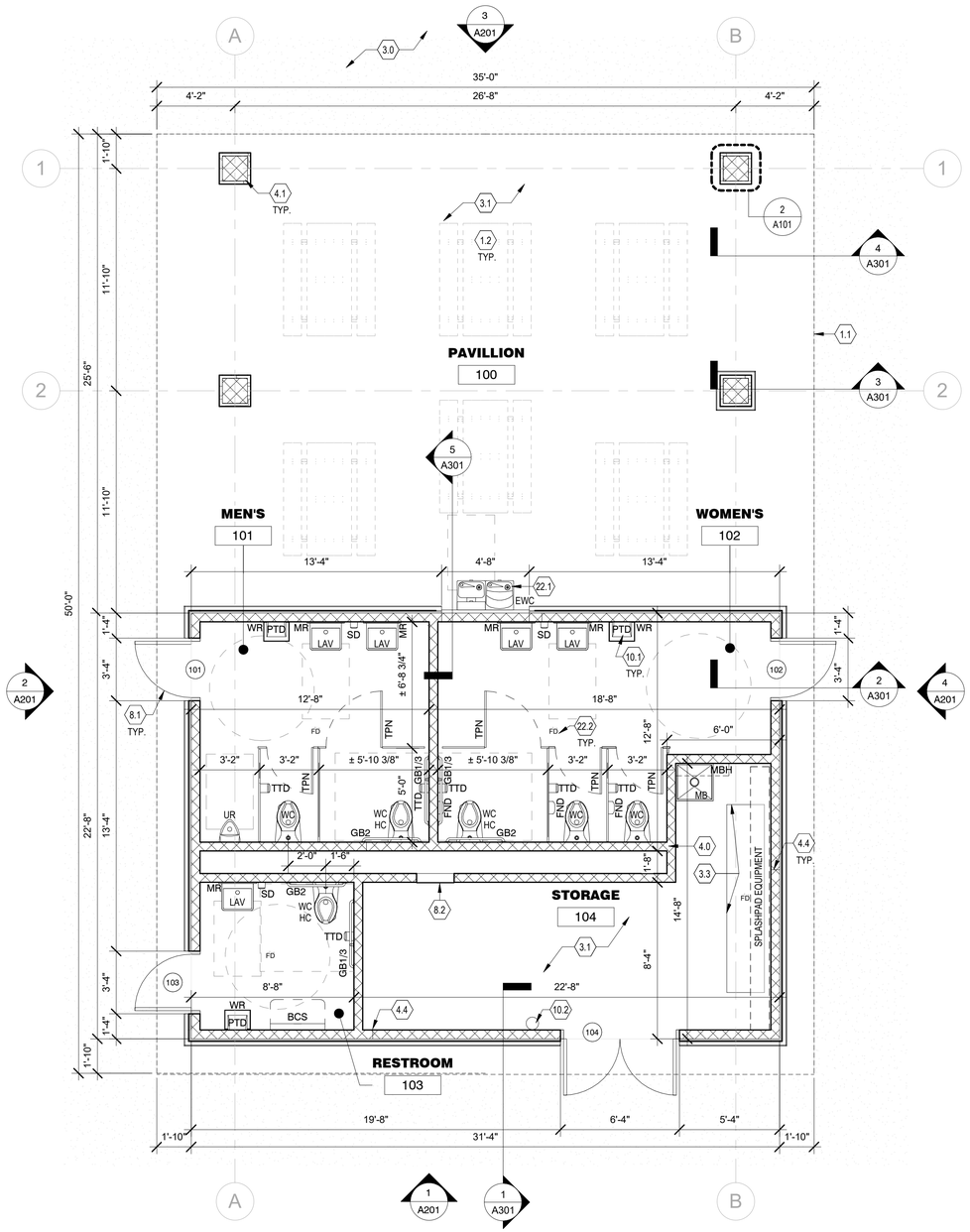
DRAWN BY	ARUW
CHECKED BY	BSAB
DATE	11/21/2025
PROJECT NO.	41545
PROJECT STATUS	

DRAWING NO.

A001



2 / A101 **COLUMN DETAIL**
1" = 1'-0"



1 / A101 **FLOOR PLAN**
SCALE: 1/4" = 1'-0"

CODE COMPLIANCE

PROJECT DESCRIPTION:
THE OVERALL PARK IMPROVEMENT PROJECT WILL INCLUDE A STAND ALONE, OPEN SHELTER/PAVILION WITH AN ENCLOSED BUILDING THAT INCLUDES RESTROOMS AND A STORAGE AREA. THE SHELTER WILL BE UTILIZED IN THE SPRING, SUMMER, AND FALL (3-SEASONS) AND IS CONSIDERED AN UNCONDITIONED SPACE WITH EXHAUST/VENTILATION AND MINIMAL HEAT TO PREVENT FREEZING IN THE "SHOULDER SEASONS".

APPLICABLE CODES:
2024 OHIO BUILDING CODE (IBC 2021 AMENDED)
2021 OHIO ENERGY CONSERVATION CODE / ASHRAE 90.1-2019
2017 OHIO FIRE CODE
2024 OHIO MECHANICAL CODE
2024 OHIO PLUMBING CODE
ICC/ANSI A117.1-2017
2023 NFPA 70 (NATIONAL ELECTRICAL CODE)

USE AND OCCUPANCY:
MIXED USE, NON-SEPARATED. THE FOLLOWING USE GROUPS ARE INCLUDED:
- ASSEMBLY GROUP "A-3". (885 SQUARE FEET)
- LOW HAZARD STORAGE GROUP "S-2" (200 SQUARE FEET)
- RESTROOMS ARE 665 SQUARE FEET

CONSTRUCTION TYPE:
VB (COMBUSTIBLE, UNPROTECTED).

HEIGHT & AREA:

ALLOWABLE AREA (TABULAR):
ASSEMBLY = 6,000 SF AND LOW HAZARD STORAGE = 13,500 SF.
ASSEMBLY IS MOST RESTRICTIVE AT 6,000 SF.
ACTUAL AREA: 1,750 SF.

ALLOWABLE HEIGHT (TABULAR) FOR A-3 (MOST RESTRICTIVE):
ONE STORY / 40'-0".
ACTUAL HEIGHT: ONE STORY / 20'-6" AT RIDGE.

FIRE PROTECTION:
FIRE PROTECTION IS NOT REQUIRED OR PROVIDED.
PORTABLE FIRE EXTINGUISHERS REQUIRED AND WILL BE PROVIDED.
0 HOUR RATING REQUIRED FOR BUILDING ELEMENTS.

OCCUPANT LOAD:

ASSEMBLY AREA (A-3)	885 / 5 SF / PERSON NET	177 PEOPLE
STORAGE (S-2)	200 / 300 SF / PERSON GROSS	1 PERSON
RESTROOMS	665 / 100 SF / PERSON GROSS	7 PEOPLE
TOTAL OCCUPANTS		185 PEOPLE

MINIMUM RESTROOM FIXTURE REQUIREMENTS:

ASSEMBLY AREA: ASSUME 93 MALE AND 93 FEMALE CODE ALLOWABLE OCCUPANTS.
- WATER CLOSETS/URINALS – 1/40 REQUIRED. THREE EACH REQUIRED; THREE EACH PROVIDED.
- LAVATORIES – 1/75 REQUIRED. TWO EACH REQUIRED; TWO EACH PROVIDED.
- DRINKING FOUNTAIN – 1/500 – ONE REQUIRED; TWO (HIGH/LOW) PROVIDED.
- SERVICE SINK – ONE REQUIRED/ONE PROVIDED.

GENERAL NOTES

A. FINISH FLOOR/SLAB ELEVATION OF 100'-0" IS EQUAL TO USGS ELEVATION OF 967.50'. COORDINATE WITH CIVIL DRAWINGS.
B. VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ARCHITECT OF ANY DISCREPANCIES.
C. DIMENSIONS SHOWN ARE TO FACE OF MASONRY, TYPICAL UNLESS NOTED OTHERWISE.
D. PROVIDE SEALANT AT JOINTS BETWEEN ALL DISSIMILAR MATERIALS.
E. PAINT ALL EXPOSED, UNFINISHED EXTERIOR STEEL (DOORS, FRAMES, LINTELS, BOLLARDS, ETC.).
F. PROVIDE BULLNOSE CMU AT DOOR JAMBS AND OPENINGS EXPOSED TO VIEW.
G. PROVIDE MASONRY CONTROL JOINT (C.J.) AT EACH OPENING AND AS INDICATED.
H. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SHORING AND BRACING.
I. SEE FINISH SCHEDULE FOR ADDITIONAL INFORMATION ON LOCATIONS AND TYPES OF FINISH MATERIALS.
J. SEE STRUCTURAL DRAWINGS FOR LOCATIONS OF ALL STEEL REINFORCING IN WALL AND FOUNDATION CONSTRUCTION.
K. MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE ON HOUSEKEEPING PADS. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
L. COORDINATE WORK BETWEEN TRADES AND OTHER DISCIPLINES. ADDITIONAL ITEMS OF WORK MAY APPEAR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS.

KEYED NOTES

	DESCRIPTION
1.1	ROOF LINE ABOVE AND EXTENT OF BUILDING SLAB (BELOW).
1.2	OWNER FURNISHED SITE FURNISHINGS.
3.0	ADJACENT CONCRETE SLAB. COORDINATE WITH CIVIL DRAWINGS.
3.1	CONCRETE SLAB-ON-GRADE OVER GRANULAR BASE. SEE STRUCTURAL DRAWINGS.
3.3	WINTERIZATION PIT. SEE STRUCTURAL DRAWINGS. CONTRACTOR TO COORDINATE THE EXACT SIZE AND LOCATION OF THE WINTERIZATION PIT WITH THE SPLASHPAD SUPPLIER/INSTALLER.
4.0	6" (NOM.) CONCRETE MASONRY UNIT INTERIOR PARTITION, FULL HEIGHT. PAINT. SEE STRUCTURAL DRAWINGS FOR WALL REINFORCEMENT.
4.1	16"x16" CMU COLUMN WITH MANUFACTURED STONE VENEER. SEE STRUCTURAL DRAWINGS FOR REINFORCEMENT.
4.2	MANUFACTURED STONE SILL. COLOR "A".
4.3	MANUFACTURED STONE VENEER. COLOR "A" BELOW SILL AND COLOR "B" (AT COLUMNS) ABOVE SILL.
4.4	SEALANT FILLED CONTROL JOINT. SEE EXTERIOR ELEVATIONS AND STRUCTURAL DRAWINGS FOR LOCATIONS.
4.11	8" (NOM.) CMU COLUMN. SEE STRUCTURAL DRAWINGS FOR REINFORCEMENT.
8.1	DOOR AND FRAME. PAINT.
8.2	24"x24" ACCESS PANEL. COORDINATE LOCATION WITH PLUMBING NEEDING ACCESS.
10.1	RESTROOM ACCESSORIES. SEE SCHEDULE ON A401.
10.2	SURFACE MOUNTED MULTIPURPOSE FIRE EXTINGUISHER.
22.1	ELECTRIC WATER COOLER (WITH BOTTLE FILLER) HIGH/LOW, SEE PLUMBING DRAWINGS.
22.2	FLOOR DRAIN, SEE PLUMBING DRAWINGS.

PROJECT NORTH

verdantas
4420 COOPER RD, SUITE 200
CINCINNATI, OH 45242

SEALS

STATE OF OHIO
JOHN H DEGRAAF
12414
REGISTERED ARCHITECT
11.21.25 EXP 12.31.25

REVISIONS

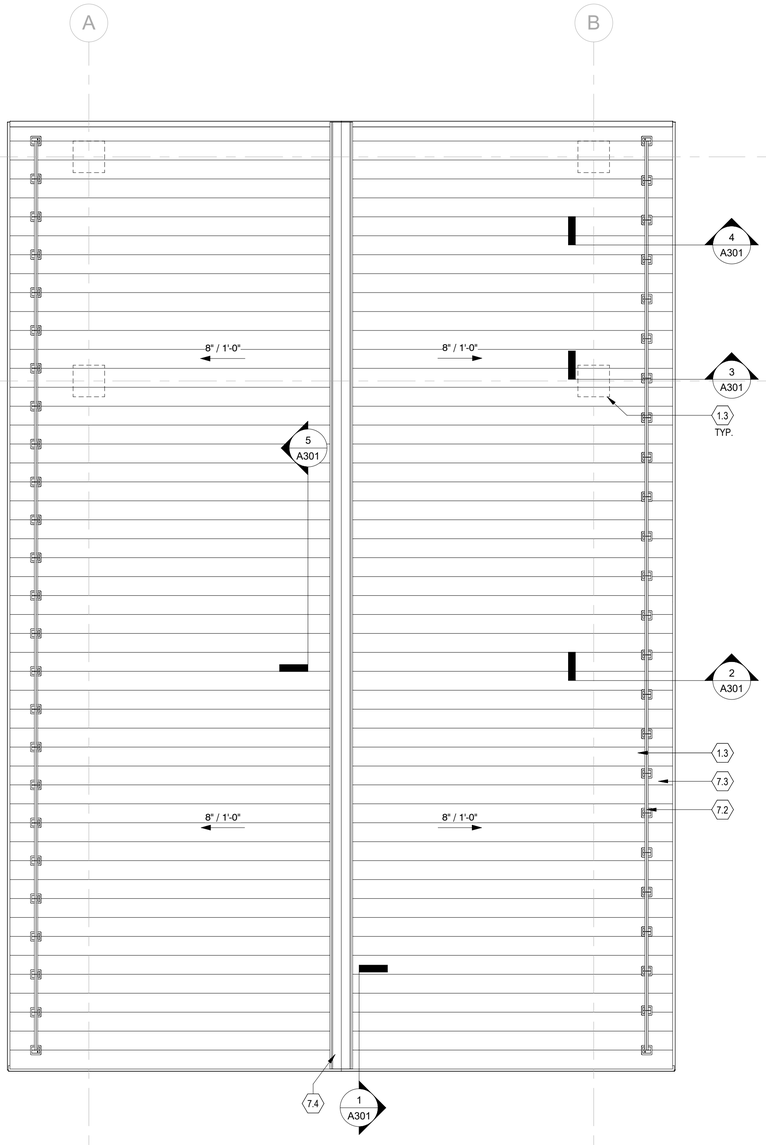
No.	REVISION	DATE	BY
0	ISSUED FOR BIDDING AND PERMIT	11/21/2025	BSAB

DRAWING TITLE & PROJECT NAME

FLOOR PLAN

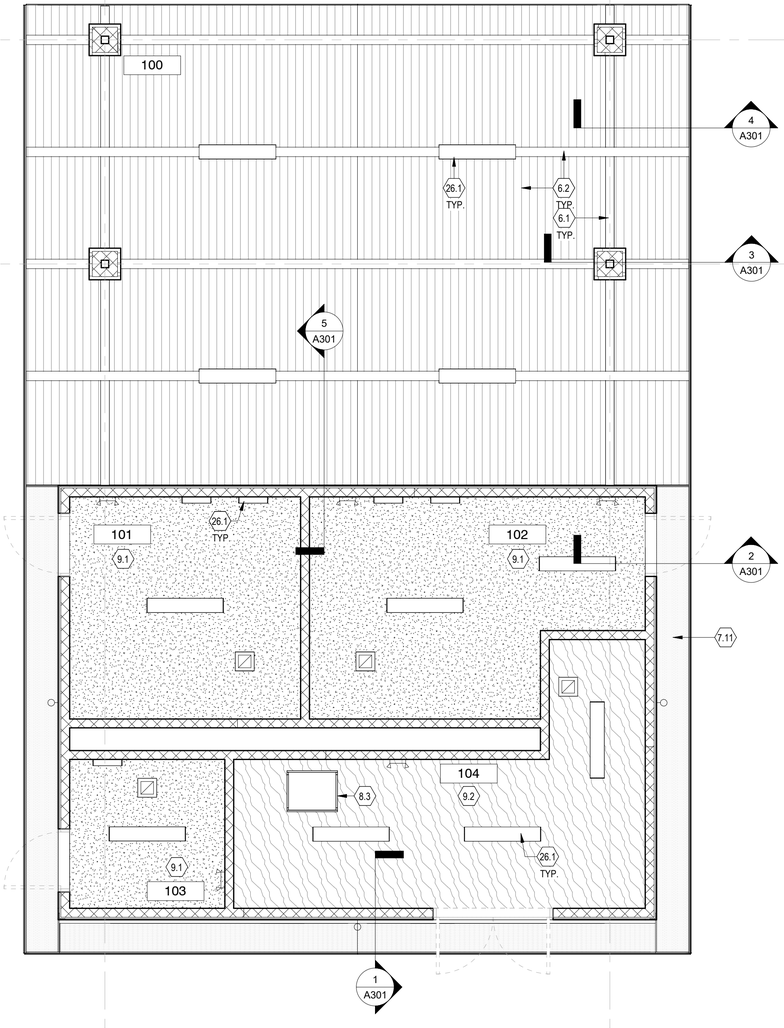
SUNBURY OHIO
JR SMITH PARK PAVILLION
STANDARD SIGNAGE

DRAWN BY	ARUW
CHECKED BY	BSAB
DATE	11/21/2025
PROJECT NO.	41545
PROJECT STATUS	
DRAWING NO.	A101



2 A102 ROOF PLAN

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



1 A102 REFLECTED CEILING PLAN

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

PROJECT NORTH

KEYED NOTES	
	DESCRIPTION
1.3	OUTSIDE FACE OF WALL OR COLUMN BELOW.
6.1	EXPOSED WOOD BEAM - STAINED. SEE STRUCTURAL DRAWINGS.
6.2	EXPOSED HEAVY TIMBER TRUSS AND ROOF DECK BOARDS - STAINED. SEE STRUCTURAL DRAWINGS.
7.2	SNOW GUARD.
7.3	STANDING-SEAM METAL ROOF.
7.4	RIDGE CAP.
7.11	FIBER-CEMENT SOFFIT PANELING.
8.3	ACCESS PANEL (24"x30") IN CEILING. FIT BETWEEN TRUSSES.
9.1	GYPSUM BOARD CEILING ATTACHED TO UNDERSIDE OF STRUCTURE.
9.2	PLYWOOD CEILING ATTACHED TO UNDERSIDE OF STRUCTURE.
26.1	LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS.

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REFLECTED CEILING AND ROOF PLANS

SUNBURY OHIO
JR SMITH PARK PAVILLION
STANDARD SIGNAGE

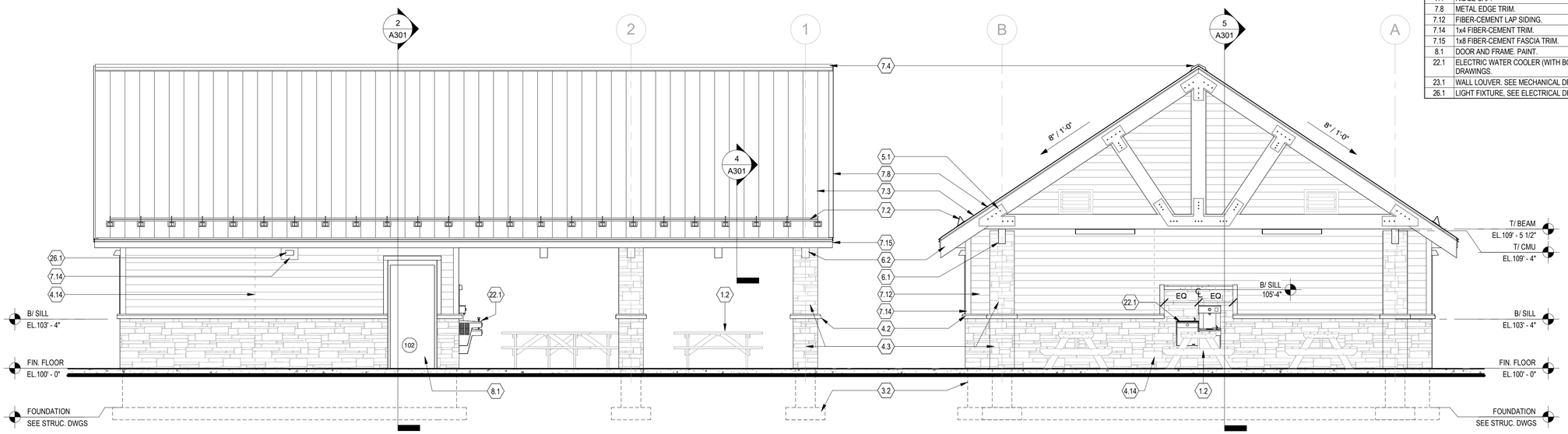
DRAWN BY	ARUW
CHECKED BY	BSAB
DATE	11/21/2025
PROJECT NO.	41545
PROJECT STATUS	

DRAWING NO.

A102

KEYED NOTES

	DESCRIPTION
1.2	OWNER FURNISHED SITE FURNISHINGS.
3.2	CONCRETE FOUNDATION. SEE STRUCTURAL DRAWINGS.
4.2	MANUFACTURED STONE SILL. COLOR "A".
4.3	MANUFACTURED STONE VENEER. COLOR "A" BELOW SILL AND COLOR "B" (AT COLUMNS) ABOVE SILL.
4.14	SEALANT FILLED CONTROL JOINT IN CMU WALL BEYOND.
5.1	TRUSS CONNECTOR PLATE, PAINTED. SEE STRUCTURAL DRAWINGS.
6.1	EXPOSED WOOD BEAM - STAINED. SEE STRUCTURAL DRAWINGS.
6.2	EXPOSED HEAVY TIMBER TRUSS AND ROOF DECK BOARDS - STAINED. SEE STRUCTURAL DRAWINGS.
6.12	4"x12" HEAVY TIMBER "FAUX" TRUSS ATTACHED TO SHEATHING AND GABLE END PRE-ENGINEERED ROOF TRUSS.
7.2	SNOW GUARD.
7.3	STANDING-SEAM METAL ROOF.
7.4	RIDGE CAP.
7.8	METAL EDGE TRIM.
7.12	FIBER-CEMENT LAP SIDING.
7.14	1x4 FIBER-CEMENT TRIM.
7.15	1x8 FIBER-CEMENT FASCIA TRIM.
8.1	DOOR AND FRAME. PAINT.
22.1	ELECTRIC WATER COOLER (WITH BOTTLE FILLER) HIGH/LOW, SEE PLUMBING DRAWINGS.
23.1	WALL LOUVER. SEE MECHANICAL DRAWINGS.
26.1	LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS.

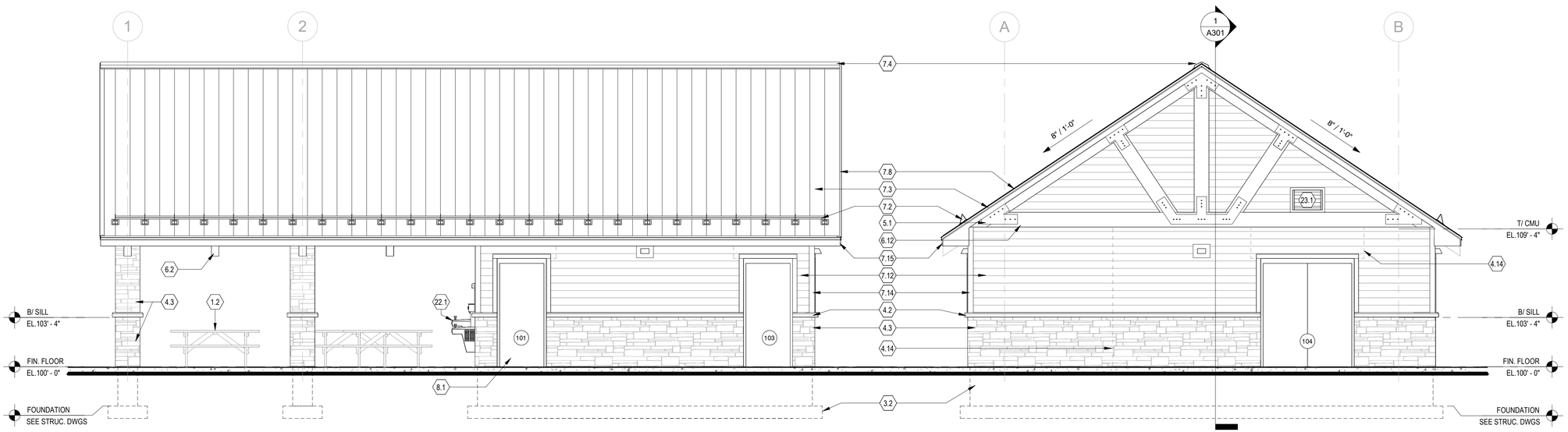


EAST ELEVATION

4 / A201 SCALE: 1/4" = 1'-0"

NORTH ELEVATION

3 / A201 SCALE: 1/4" = 1'-0"



WEST ELEVATION

2 / A201 SCALE: 1/4" = 1'-0"

SOUTH ELEVATION

1 / A201 SCALE: 1/4" = 1'-0"

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BUILDING ELEVATIONS

SUNBURY OHIO
JR SMITH PARK PAVILLION
STANDARD SIGNAGE

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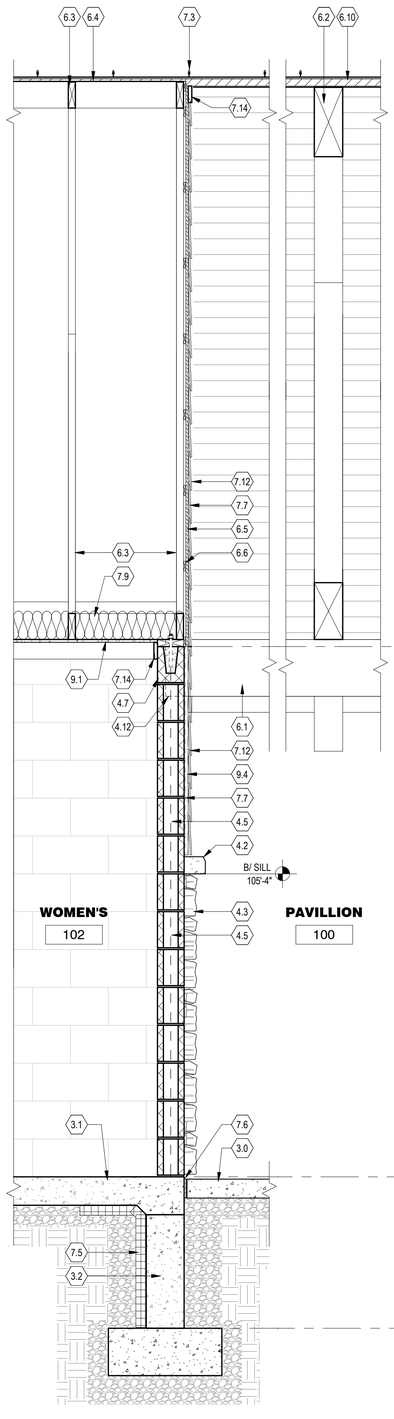
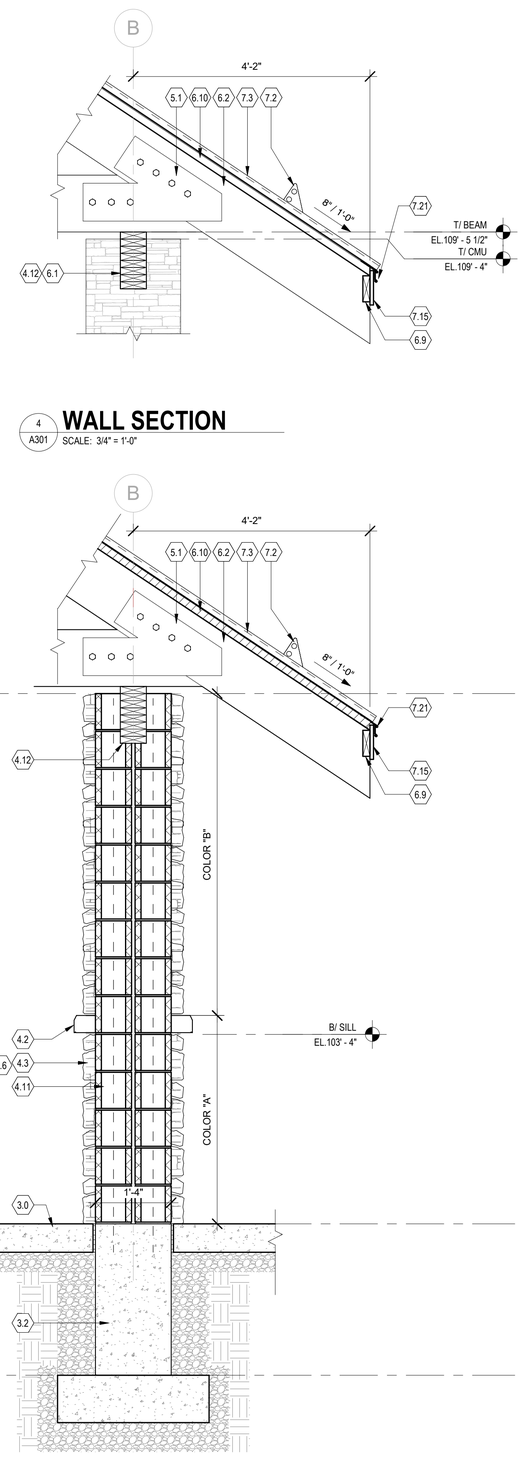
PROJECT NO.	41545
PROJECT STATUS	

DRAWING NO.

A201

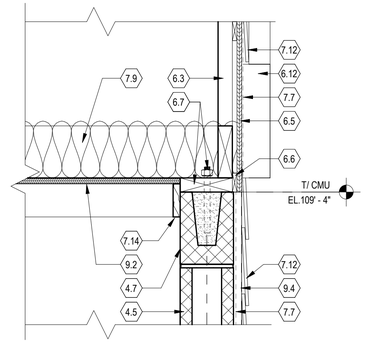


5 A301 **WALL SECTION**
SCALE: 3/4" = 1'-0"

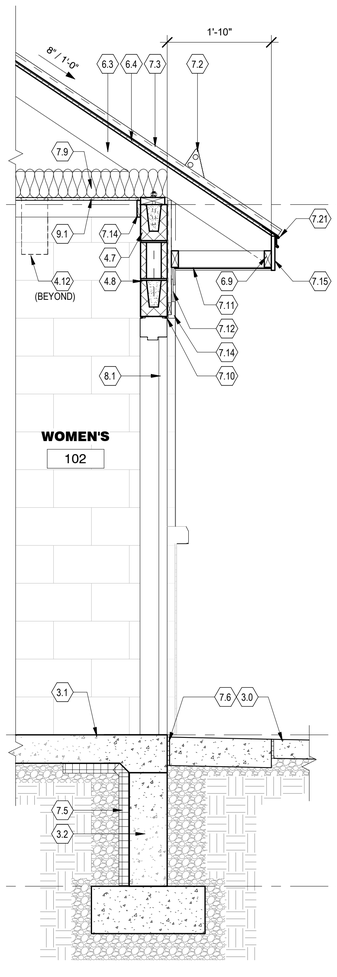


3 A301 **WALL SECTION**
SCALE: 3/4" = 1'-0"

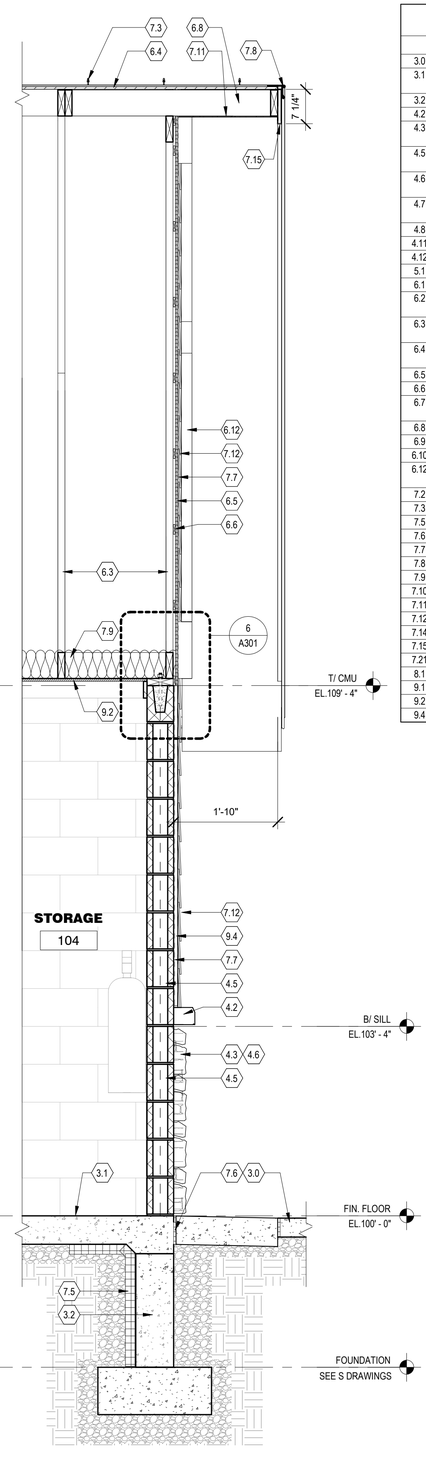
4 A301 **WALL SECTION**
SCALE: 3/4" = 1'-0"



6 A301 **WALL SECTION**
SCALE: 1 1/2" = 1'-0"



2 A301 **WALL SECTION**
SCALE: 3/4" = 1'-0"



1 A301 **WALL SECTION**
SCALE: 3/4" = 1'-0"

KEYED NOTES

	DESCRIPTION
3.0	ADJACENT CONCRETE SLAB. COORDINATE WITH CIVIL DRAWINGS.
3.1	CONCRETE SLAB-ON-GRADE OVER GRANULAR BASE. SEE STRUCTURAL DRAWINGS.
3.2	CONCRETE FOUNDATION. SEE STRUCTURAL DRAWINGS.
4.2	MANUFACTURED STONE SILL. COLOR "A".
4.3	MANUFACTURED STONE VENEER. COLOR "A" BELOW SILL AND COLOR "B" (AT COLUMNS) ABOVE SILL.
4.5	6" (NOM.) CMU. PROVIDE FOAM-IN-PLACE INSULATION OR INSULATION INSERTS IN CORES. SEE STRUCTURAL DRAWINGS FOR WALL REINFORCEMENT.
4.6	INSTALL MANUFACTURED STONE VENEER PER MANUFACTURER'S STANDARDS AND RECOMMENDATIONS.
4.7	CONTINUOUS BOND BEAM, GROUT SOLID. SEE STRUCTURAL DRAWINGS FOR REINFORCEMENT.
4.8	MASONRY LINTEL. SEE STRUCTURAL DRAWINGS.
4.11	8" (NOM.) CMU COLUMN. SEE STRUCTURAL DRAWINGS FOR REINFORCEMENT.
4.12	CMU POCKET AROUND WOOD BEAM. SEE STRUCTURAL DRAWINGS.
5.1	TRUSS CONNECTOR PLATE, PAINTED. SEE STRUCTURAL DRAWINGS.
6.1	EXPOSED WOOD BEAM - STAINED. SEE STRUCTURAL DRAWINGS.
6.2	EXPOSED HEAVY TIMBER TRUSS AND ROOF DECK BOARDS - STAINED. SEE STRUCTURAL DRAWINGS.
6.3	PRE-ENGINEERED 2X WOOD TRUSSES 2'-0" O.C. MAX. MEMBERS SHOWN SCHEMATICALLY. LAYOUT AT FABRICATORS DISCRETION.
6.4	5/8" MINIMUM EXTERIOR GRADE ROOF SHEATHING WITH APPROPRIATE SPAN RATING REQUIRED FOR TRUSS SPACING.
6.5	1/2" PLYWOOD SHEATHING.
6.6	1/2"x2" WOOD FURRING STRIPS AT 16" O.C. VERTICALLY.
6.7	2x PRESSURE-TREATED WOOD BLOCKING WITH ANCHOR BOLTS. GROUT SOLID INTO CMU CORE AT 24" O.C. MAX.
6.8	2X OUTRIGGERS.
6.9	2x PRESSURE-TREATED WOOD BLOCKING. STAIN WHERE EXPOSED.
6.10	SOLID WOOD ROOF DECK. STAIN.
6.12	4"x12" HEAVY TIMBER "FAUX" TRUSS ATTACHED TO SHEATHING AND GABLE END PRE-ENGINEERED ROOF TRUSS.
7.2	SNOW GUARD.
7.3	STANDING-SEAM METAL ROOF.
7.5	2" THICK x 24" HIGH MIN., EXTRUDED-POLYSTYRENE PERIMETER INSULATION.
7.6	EXPANSION JOINT FILLER MATERIAL AND/OR JOINT SEALANT.
7.7	WEATHER BARRIER PER MANUFACTURER'S RECOMMENDATIONS.
7.8	METAL EDGE TRIM.
7.9	INSULATE (FIBERGLASS BATT R-19) ABOVE CEILINGS.
7.10	PERIMETER BACKER ROD AND SEALANT (BOTH SIDES).
7.11	FIBER-CEMENT SOFFIT PANELING.
7.12	FIBER-CEMENT LAP SIDING.
7.14	1x4 FIBER-CEMENT TRIM.
7.15	1x8 FIBER-CEMENT FASCIA TRIM.
7.21	DRIP TRIM.
8.1	DOOR AND FRAME. PAINT.
9.1	GYPSUM BOARD CEILING ATTACHED TO UNDERSIDE OF STRUCTURE.
9.2	PLYWOOD CEILING ATTACHED TO UNDERSIDE OF STRUCTURE.
9.4	7/8" FURRING CHANNELS.

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WALL SECTIONS

SUNBURY OHIO
JR SMITH PARK PAVILLION
STANDARD SIGNAGE

DRAWN BY	ARUW
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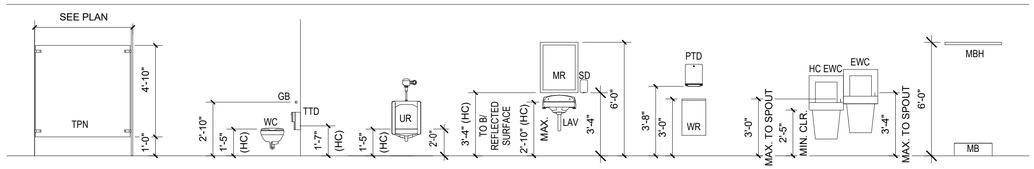
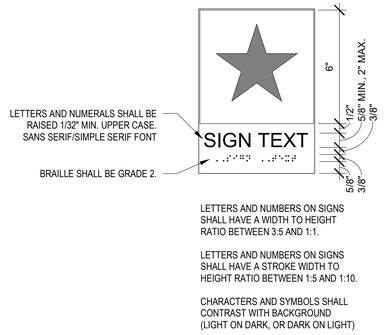
DATE	11/21/2025
PROJECT NO.	41545
PROJECT STATUS	
DRAWING NO.	A301



TYP. FIXTURE MOUNTING HEIGHTS

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



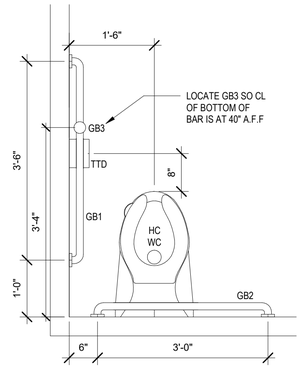
LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH TO HEIGHT RATIO BETWEEN 3:5 AND 1:1.

LETTERS AND NUMBERS ON SIGNS SHALL HAVE A STROKE WIDTH TO HEIGHT RATIO BETWEEN 1:5 AND 1:10.

CHARACTERS AND SYMBOLS SHALL CONTRAST WITH BACKGROUND (LIGHT ON DARK, OR DARK ON LIGHT)

TYPICAL ADA COMPLIANT SIGNAGE

SCALE: 3" = 1'-0"



TYP. WATER CLOSET LAYOUT

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

ACCESSORIES SCHEDULE

ALL FIXTURES TO BE HANDICAPPED ACCESSIBLE (HC) SHALL BE INSTALLED AT HEIGHTS AND LOCATIONS THAT ARE ACCESSIBLE PER ADA GUIDELINES.
ALL OTHER ACCESSORIES SHALL BE INSTALLED AT HEIGHTS RECOMMENDED BY MFR.

SEE PLANS FOR QUANTITY AND LOCATION OF ACCESSORIES, AND SEE SPECIFICATIONS FOR ADDITIONAL DESCRIPTIONS.
PROVIDE BLOCKING FOR SURFACE MOUNTED ACCESSORIES (GRAB BARS, DISPENSERS, ETC.) AS REQUIRED.

ABBREV.	ITEM	MFG. NO. / DESCRIPTION (BOD)
BCS	BABY CHANGING STATION	KOALA KARE KB310-SSWM
FND	FEMININE NAPKIN DISPOSAL	BOBRICK MODEL B-270
GB1	GRAB BAR - 42"	BOBRICK MODEL B-6806x42
GB2	GRAB BAR - 36"	BOBRICK MODEL B-6806x36
GB3	GRAB BAR - 18"	BOBRICK MODEL B-6806x18
MBH	UTILITY SHELF WITH MOP & BROOM HOLDERS	BOBRICK MODEL B-224x36
MR	MIRROR	BOBRICK MODEL B-165 2436
PTD	PAPER TOWEL DISPENSER (AUTOMATIC)	BOBRICK MODEL B-2974
SD	SOAP DISPENSER (AUTOMATIC)	BOBRICK MODEL B-2012
TPN	TOILET PARTITION (INCL. COAT HOOK)	SEE SPECIFICATIONS
TTD	TOILET TISSUE DISPENSER	BOBRICK MODEL B-4288
WR	WASTE RECEPTACLE	BOBRICK MODEL B-275

PLUMBING FIXTURES

ABBREV.	ITEM (SEE PLUMBING DRAWINGS FOR BOD)
EWC	ELECTRIC WATER COOLER (WITH BOTTLE FILLER) HIGH/LOW
LAV	WALL HUNG LAVATORY
MB	MOP BASIN
UR	URINAL (STANDARD HC ACCESSIBLE HEIGHT)
WC	WATER CLOSET
WC HC	WATER CLOSET (STANDARD HC ACCESSIBLE HEIGHT)

ROOM FINISH SCHEDULE

ABBREVIATIONS

CONC	SEALED CONCRETE
EXP	EXPOSED CONSTRUCTION
P-GB	PAINTED GYPSUM BOARD
P-MAS	PAINTED MASONRY
P-WD	PAINTED PLYWOOD
RB	RUBBER BASE

REMARKS

ROOM NO.	ROOM NAME	FLOOR	WALLS ALL	CEILING MAT.	CEILING HGT.	REMARKS
100	PAVILLION	CONC	EXP	EXP.	9'-5"	- -
101	MEN'S	CONC	P-MAS	P-GB	9'-5"	
102	WOMEN'S	CONC	P-MAS	P-GB	9'-5"	
103	RESTROOM	CONC	P-MAS	P-GB	9'-5"	
104	STORAGE	CONC	P-MAS	P-WD	9'-5"	

DOOR SCHEDULE

ABBREVIATIONS

EXT EXTERIOR FP FIELD PAINTED HM HOLLOW METAL

REMARKS

MARK	DOOR NO. OF LEAFS	DOOR SIZE W	DOOR SIZE H	DOOR SIZE T	DOOR RATING (MIN)	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	DOOR GLAZING	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FRAME DEPTH (IN)	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS SILL	HARDWARE SET	HARDWARE KEYSIDE ROOM #	REMARKS
101	1	3'-0"	7'-0"	1 3/4"	--	F	HM	FP	--	1	HM	FP	5 3/4"				1	EXT.	
102	1	3'-0"	7'-0"	1 3/4"	--	F	HM	FP	--	1	HM	FP	5 3/4"				1	EXT.	
103	1	3'-0"	7'-0"	1 3/4"	--	F	HM	FP	--	1	HM	FP	5 3/4"				2	EXT.	
104	2	3'-0"	7'-0"	1 3/4"	--	F	HM	FP	--	1	HM	FP	5 3/4"				3	EXT.	

HARDWARE SET 1:

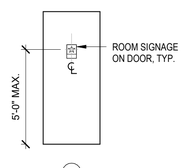
STAINLESS STEEL ANTI-FRICTION BEARING HINGES
DEADBOLT WITH KEYED CYLINDER
PUSH PLATE/DOOR PULL
DOOR CLOSER WITH DEAD STOP
KICK PLATE
THRESHOLD
DOOR SWEEP
PERIMETER GASKETING (WEATHER-STRIPPING)

HARDWARE SET 2:

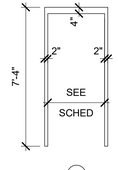
STAINLESS STEEL ANTI-FRICTION BEARING HINGES
PRIVACY LOCKSET WITH INDICATOR
DOOR CLOSER WITH DEAD STOP
KICK PLATE
THRESHOLD
DOOR SWEEP
PERIMETER GASKETING (WEATHER-STRIPPING)

HARDWARE SET 3:

STAINLESS STEEL ANTI-FRICTION BEARING HINGES
STOREROOM LOCKSET ON ACTIVE LEAF
DUMMY TRIM AND FLUSH BOLTS TOP AND BOTTOM OF INACTIVE LEAF
ASTRAGAL
DOOR CLOSERS AND COORDINATOR
THRESHOLD
DOOR SWEEP
PERIMETER GASKETING (WEATHER-STRIPPING)



DOOR TYPE



DOOR FRAME

verdantas
4420 COOPER RD, SUITE 200
CINCINNATI, OH 45242

SEALS

STATE OF OHIO
JOHN H DEGRAAF
12414
REGISTERED ARCHITECT
11.21.25 EXP. 12.31.25

REVISIONS

No.	REVISION	DATE	BY
0	ISSUED FOR BIDDING AND PERMIT	11/21/2025	BSAB

DRAWING TITLE & PROJECT NAME

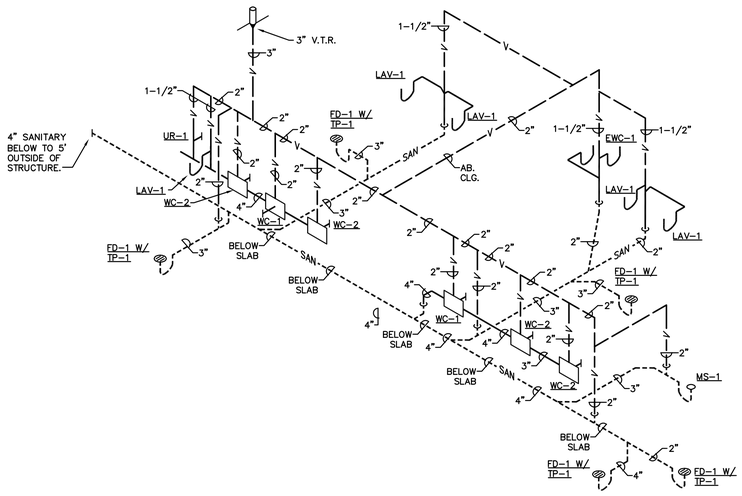
SCHEDULES AND DETAILS

SUNBURY OHIO
JR SMITH PARK PAVILLION
STANDARD SIGNAGE

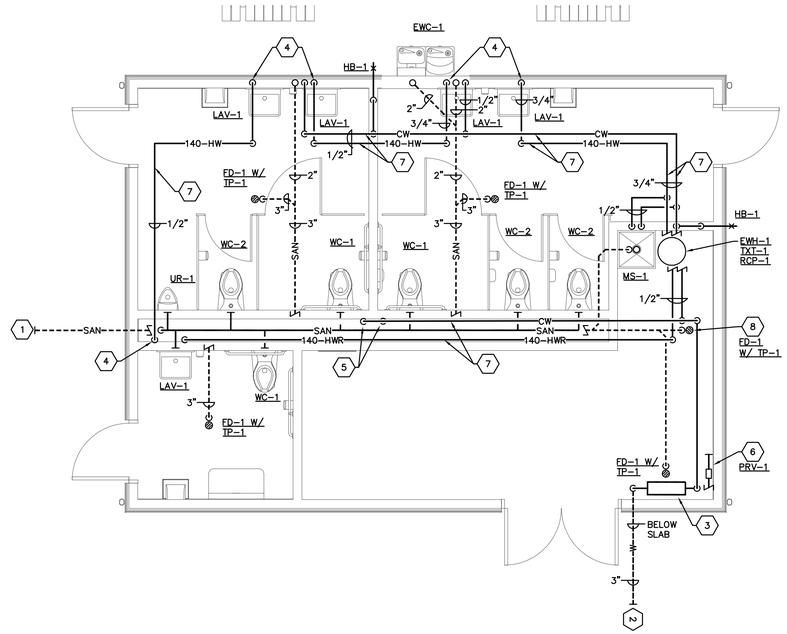
DRAWN BY	ARUW
CHECKED BY	BSAB
DATE	11/21/2025
PROJECT NO.	41545
PROJECT STATUS	

DRAWING NO.

A401



SANITARY ISOMETRIC DIAGRAM



PLUMBING PLAN
SCALE: 1/4"=1'-0"

PLUMBING FIXTURE SCHEDULE

PLUMBING FIXTURE NOTES:

1. UNLESS INDICATED OTHERWISE, THE ARCHITECT SHALL SELECT THE FIXTURE COLOR/FINISH FROM THE MANUFACTURER'S FULL RANGE OF STANDARD OPTIONS.
2. UNLESS INDICATED OTHERWISE, ALL EXPOSED METALLIC COMPONENTS TO BE FURNISHED WITH POLISHED CHROME FINISH, INCLUDING FAUCETS, TRAPS, STOPS, PIPING, ETC.
3. UNLESS INDICATED OTHERWISE, ALL EXPOSED PIPING SHALL BE FURNISHED WITH POLISHED CHROME FINISH BRASS ESCUTCHEONS AT ALL WALL/CABINET PENETRATIONS AND FIXTURE CONNECTIONS.
4. UNLESS INDICATED OTHERWISE, ALL HARD-WIRED FIXTURES THAT ARE 120V POWER WIRING TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR. ALL LOW-VOLTAGE WIRING FROM TRANSFORMER TO SOLENOID VALVE TO BE PROVIDED BY THE PLUMBING CONTRACTOR.

FIXTURE	MANUFACTURER	REMARKS	PIPE SIZE CW	PIPE SIZE HW
WC-1 (HANDICAP ACCESS-IBLE)	AMERICAN STAN-DARD/SLOAN/ BEMIS/ZURN	FIXTURE; AMERICAN STD. NO. 3351.101 AFWALL MILLENNIUM FLOWISE ELONGATED FLUSHOMETER WALL HUNG TOP SPUD TOILET PROVIDE WITH EVERCLEAN COATING. OPERATING RANGE OF 1.1 GPF TO 1.6 GPF. CONTROLS; SLOAN ROYAL 111-1.28-CO; MANUAL FLUSH VALVE (1.28 GPF), TOP SPUD CONNECTION, SINGLE FLUSH, POLISHED CHROME SEAT; BEMIS MODEL NO. 1655SSCT OPEN FRONT LESS COVER, ELONGATED, EXTRA HEAVY-DUTY, INJECTION MOLDED SOLID PLASTIC TOILET SEAT. WITH SELF-SUSTAINING CHECK HINGES. CARRIER; ZURN SERIES Z1200 FIXTURE ASSEMBLY TO COMPLY WITH HANDICAP ACCESS REQUIREMENTS.	1"	---
LAV-1 (HANDICAP ACCESS-IBLE)	AMERICAN STD./ SLOAN/ LEONARD/ McGUIRE	FIXTURE; AMERICAN STANDARD DECORUM NO. 9024.001EC WALL HUNG SINK. VITREOUS CHINA W/ OVERFLOW & GRID DRAIN. CONTROLS; SLOAN NO. ETF-610 (WIRED 120V POWER) SENSOR FAUCET WITH 0.5 GPM LAMINAR FLOW SPOUT, PLUG-IN TRANSFORMER. TW MIXER; SIMILAR. TO LEONARD NO. 170 THERM. MIXER FOR SGL. FAUCET; NO. 270 FOR MULTIPLE FAUCETS (MAX. 6 SIDE BY SIDE IN A SINGLE RM.). PROVIDE W/ INLET CHECK/STOPS & ASSE 1070 LISTING. INSTALL MIXER BELOW FIXTURE OUT OF HANDICAP ACCESS CLEARANCE SPACE. MIXERS IN PUBLIC TOILET RM'S. TO BE WITHIN ACCESSIBLE CASEWORK OUT OF SIGHT. SET FOR 105 DEGREES F. TW SUPPLY TO FAUCET. TRAP; McGUIRE MODEL 8902 1 1/4"x1 1/2" 17 GA. P-TRAP, CHROME PLATED STOP(S); McGUIRE MODEL 2165LK 1/2" LAVATORY SUPPLIES W/ LOOSE KEY BRASS ANGLE STOPS & COPPER FLEX TUBE RISERS. ALL CHROME PLATED COVER; McGUIRE PRO-WRAP SERIES FOR EXPOSED SUPPLY AND DRAIN COVER; ZURN Z1231 CONCEALED ARM WALL LAVATORY CARRIER. FIXTURE ASSEMBLY TO COMPLY WITH HANDICAP ACCESS REQUIREMENTS.	1/2"	1/2"
MS-1	FIAT/CHRONOMITE	FIXTURE; FIAT MODEL NO. MSB2424 (MOLDED STONE) WITH INTEGRAL DRAIN CONTROLS; FIAT MODEL NO. 830-AA WITH INTEGRAL STOPS & VAC. BRKR. TRAP; CAST IRON OR COPPER 3" P-TRAP OTHER; FIAT MODEL NO. E77AA24 VINYL BUMPER GUARDS; FIAT MODEL NO. MSG2424 STAINLESS STEEL WALL GUARDS	1/2"	1/2"
EWC-1 (HANDICAP ACCESS-IBLE)	ELKAY/ZURN/ McGUIRE	FIXTURE; ELKAY MODEL NO. LK4408BF, OUTDOOR EZH2O BOTTLE FILLING STATION WALL MOUNT WITH SINGLE FOUNTAIN NON-FILTERED NON-REFRIGERATED. FEATURES SHALL INCLUDE HEAVY DUTY VANDAL RESISTANT, LAMINAR FLOW, 300 SERIES STAINLESS. FURNISHED WITH VANDAL RESISTANT BUBBLER. MECHANICAL BUTTON ACTIVATION. PRODUCT SHALL BE WALL MOUNT (ON WALL), FOR OUTDOOR APPLICATIONS, SERVING 2 STATION(S). FINISH TO BE BLACK (BK) CARRIER; ZURN SERIES Z1225 TRAPS; McGUIRE MODEL 8902 1 1/4"x1 1/2" 17 GA. P-TRAP, CHROME PLATED STOP(S); McGUIRE MODEL 2166 1/2" CLOSET SUPPLY W/ WHEEL HANDLE BRASS ANGLE STOP AND COPPER FLEX TUBE RISER. ALL CHROME PLATED FIXTURE ASSEMBLY TO COMPLY WITH HANDICAP ACCESS REQUIREMENTS.	1/2"	---

PLUMBING EQUIPMENT

TP: TRAP PRIMER VALVE ASSEMBLY

SIMILAR TO SIOUX CHIEF PRIME PERFECT SERIES 695 WITH A MAXIMUM WORKING PRESSURE OF 250 PSIG, PRESSURE ACTIVATED AT A MINIMUM OF 10 PSIG DIFFERENTIAL, 1/2" FEMALE INLET, 1/2" MALE OUTLET, INTEGRAL SEDIMENT SCREEN, DIAPHRAGM ADJUSTMENT NUT, VACUUM BREAKER, FIELD ADJUSTABLE WATER DISCHARGE RATE, CERTIFIED BY THE AMERICAN SOCIETY OF SANITARY ENGINEERING TO ASSE 1018-2001 SPECIFICATIONS, AND LISTED BY THE UPC/IAPMO. INSTALLATION TO BE PER MANUFACTURER'S RECOMMENDATIONS.

EWH-1: ELECTRIC WATER HEATER

THE WATER HEATERS(S) SHALL BE DURA-POWER ™MODEL(S) NO. DEL-20 AS MANUFACTURED BY A. O. SMITH OR AN APPROVED EQUAL. HEATER(S) SHALL BE RATED AT 6 KW, 240 VOLTS, SINGLE-PHASE, 60 CYCLE AC, 1 GALLONS PER HOUR AT 90° F TEMPERATURE RISE, AND LISTED BY UNDERWRITERS `LABORATORIES. MODELS SHALL MEET THE STANDBY LOSS REQUIREMENTS OF THE U.S. DEPARTMENT OF ENERGY AND CURRENT EDITION OF ASHRAE/IES 90.1. TANK(S) SHALL BE 20 GALLON CAPACITY. HEATER(S) SHALL HAVE 150 PSI WORKING PRESSURE AND BE EQUIPPED WITH EXTRUDED HIGH DENSITY ANODE ROD. ALL INTERNAL SURFACES OF THE HEATER(S) EXPOSED TO WATER SHALL BE GLASS LINED COMPOSITION THAT HAS BEEN FUSED-TO-STEEL. ELECTRIC HEATING ELEMENTS SHALL BE MEDIUM WATT DENSITY WITH ZINC PLATED COPPER SHEATH. EACH ELEMENT SHALL BE CONTROLLED BY AN INDIVIDUALLY MOUNTED THERMOSTAT AND HIGH TEMPERATURE CUTOFF SWITCH. THE OUTER JACKET SHALL BE OF BACKED ENAMEL FINISH AND SHALL ENCLOSE THE TANK WITH FOAM INSULATION. ELECTRICAL JUNCTION BOX WITH HEAVY DUTY TERMINAL BLOCK SHALL BE PROVIDED (EXCEPT ON 120V & 277V)NO JUNCTION BOX ON DEL-6 THRU 20]). THE DRAIN VALVE SHALL BE LOCATED IN THE FRONT FOR EASE OF SERVICING. HEATER TANK SHALL HAVE A THREE YEAR LIMITED WARRANTY AS OUTLINED IN THE WRITTEN WARRANTY. FULLY ILLUSTRATED INSTRUCTION MANUAL TO BE INCLUDED.

RCP-1: HOT WATER RETURN RECIRCULATING PUMP

EQUIVALENT TO B & G MODEL #PL-30 IN-LINE CENTRIFUGAL TYPE PUMP WITH CLOSE COUPLED DRIVE MOTOR, ALL BRONZE CONSTRUCTION, LISTING FOR POTABLE WATER SERVICE AND 150 PSIG WORKING PRESSURE RATING. SEE DOMESTIC WATER HEATER DIAGRAMS ON SHEET P102 FOR RATINGS AND CAPACITIES. PROVIDE RECIRCULATING PUMP INTERFACED WITH WATER HEATER CONTROLS. COORDINATE WITH WATER HEATER MANUFACTURER REQUIREMENTS.

TXT-1: THERMAL EXPANSION TANK (ASME LISTED)

AMTROL ST-5-C WITH STEEL SHELL, RIGID POLYPROPYLENE LINER AND HEAVY DUTY RUBBER DIAPHRAGM. LINER AND DIAPHRAGM MECHANICALLY BONDED TO SHELL TO FORM A SEPARATE AIR CHAMBER AND NON-CORRISIVE WATER RESERVIOR. AIR CHAMBER PRE-CHARGED TO 10-12 PSIG, CONTRACTOR TO ADJUST THE MANUFACTURERS PRE-CHARGE AIR PRESSURE TO THE ACUTAL SYSTEM WORKING PRESSURE IN ACCORDANCE WITH MANUFACTURER INSTALLATION GUIDELINES, AND PROVIDED WITH A STANDARD AIR VALVE FITTING. SEE PLANS FOR RATING AND CAPACITIES.PROVIDE ASME RATED AND 175 PSIG WORKING PRESSURE.

PRV-1: PRESSURE REDUCING VALVE

SIMILAR TO ZURN WILKINS MODEL 600XL3. PRESSURE REDUCING VALVE SHALL BE CERTIFIED TO NSF/ANSI/CAN 61 & 372, CONSISTING OF A LOW LEAD CAST BRONZE BODY, BRONZE BELL HOUSING, AND A BOLT TO ADJUST THE DOWNSTREAM PRESSURE. THE BRONZE BELL HOUSING SHALL BE THREADED TO THE BODY. THE ASSEMBLY SHALL BE A BALANCED PISTON DESIGN AND SHALL REDUCE PRESSURE IN BOTH FLOW AND NO-FLOW CONDITIONS AND MAINTAIN LESS THAN 10 PSI DROP FROM SET PRESSURE UP TO A FLOW RATE OF 8 ft/s. THE ASSEMBLY SHALL BE ACCESSIBLE FOR MAINTENANCE WITHOUT HAVING TO REMOVE THE BODY FROM THE LINE. THE ASSEMBLE SHALL INCLUDE A REMOVABLE CARTRIDGE AND STAINLESS STEEL CORROSION RESISTANT HARDWARE AND STEM.

PLUMBING NOTES

1. REFER TO ARCHITECTURAL DOCUMENTATION FOR ADDITIONAL SCOPE/INFORMATION REGARDING DEMOLITION/REMODELING WORK, INCLUDING IDENTIFICATION OF AREAS AND ITEMS/ELEMENTS INVOLVED, AS WELL AS INFORMATION OF BOTH A GENERAL AND SPECIFIC NATURE.
2. UNLESS DIRECTED OTHERWISE, WHERE CONCEALING/FINISH STRUCTURE IS PROVIDED UNDER SEPARATE CONTRACT, ALL WORK IN THE PLUMBING CONTRACT NOT SPECIFICALLY INTENDED OR IDENTIFIED FOR EXPOSED/VISIBLE INSTALLATION SHALL BE IN- STALLED WITHIN THE CONCEALING STRUCTURE.
3. ALL PIPING SHOWN IS ABOVE CEILING IN AREAS WITH DROPPED CEILINGS, OR AT BOTTOM OF OVERHEAD SUPPORT STRUCTURE IN EXPOSED STRUCTURE AREAS, UNLESS INDICATED OTHERWISE.
4. THE PLUMBING CONTRACTOR IS TO SECURE AND VERIFY ALL MEASUREMENTS AND CONDITIONS AT THE PROJECT IN ADVANCE OF WORK (INCLUDING FABRICATION).
5. THE PLUMBING CONTRACTOR IS TO PROVIDE ALL ADDITIONAL STEEL, HANGERS, RODS, CLAMPS, ETC., AS REQUIRED FOR PROPER INSTALLATION, SUPPORT, AND COORDINATION WITH WORK PROVIDED UNDER SEPARATE CONTRACT. UNLESS INDICATED OTHERWISE IN PROJECT SPECIFICATIONS OR BY THE PIPE MATERIAL MANUFACTURER, SUPPORT PIPING AS FOLLOWS:
   A. CAST IRON PIPING (NOT IN EARTH); 5 FT. CENTERS
   B. STEEL PIPING: 10 FT. CENTERS
   C. COPPER PIPING; 8 FT. CENTERS
   D. PLASTIC PIPING; 4 FT. CENTERS
6. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR FIRESTOPPING AT ALL PLUMBING RELATED PENETRATIONS OF FIRE, SMOKE AND OTHER RATED STRUCTURES, INCLUDING FLOORS, WALLS, PARTITIONS, ETC. REFER TO ARCHITECTURAL DOCUMENTATION FOR LOCATIONS OF ALL RATED STRUCTURES, AND SPECIFIC INFORMATION AND REQUIREMENTS PERTAINING TO SAME.
7. LAYOUT AND INSTALLATION OF PLUMBING CONTRACT PIPING, EQUIPMENT, ITEMS AND ELEMENTS INDICATED ON PLAN IS SCHEMATIC IN NATURE. EXACT LOCATION, ROUTING AND INSTALLATION TO BE COORDINATED WITH BUILDING STRUCTURE AND ALL OTHER WORK PROVIDED UNDER SEPARATE CONTRACT.
8. COORDINATE EXACT LOCATION AND INSTALLATION OF ALL PLUMBING UTILITIES REQUIRED AND PROVIDED FOR WORK UNDER SEPARATE CONTRACT WITH THE APPROPRIATE CONTRACTOR(S) IN ADVANCE OF WORK. THIS INCLUDES SUPPLY AND DRAIN ELEMENTS, FOR DIRECT (PIPED) AND/OR INDIRECT (FLOOR/HUB DRAIN, AIR GAP, ETC.) CONNECTION/SERVICE.
9. RUN ALL WATER LINES LEVEL.
10. ROUGH IN ALL PIPING (SUPPLY, RETURN, WASTE, DRAIN, ETC.) FOR FIXTURES/EQUIPMENT INSTALLATION THRU OR ON FACE OF WALL (AS APPLICABLE), AND TERMINATE WITH SHORT PIPE NIPPLE AND CAP.
11. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH BUCHTEL OHIO BUILDING CODE, INCLUDING APPLICABLE PLUMBING, MECHANICAL AND HANDICAP ACCESSIBILITY PROVISIONS.
12. PROVIDE CLEANOUTS AS FOLLOWS:
   A. IN ALL HORIZONTAL SANITARY PIPING AT INTERVALS NOT TO EXCEED 100 L.F. IN LENGTH.
   B. AT EACH CHANGE OF DIRECTION BY SANITARY PIPING BELOW GRADE OR AT THE LOWEST POINT OF THE HORIZONTAL DRAINAGE SYSTEM GREATER THAN 45 DEGREES, UNLESS ANOTHER CLEANOUT IS WITHIN 40 FT. DEVELOPED LENGTH.
   C. AT ALL SANITARY PIPING BUILDING EXIT POINTS, AND/OR BUILDING SEWER CONNECTIONS FOR SITE UTILITY TIE-IN.
13. UNLESS INDICATED OTHERWISE, ALL FIXTURES AND EQUIPMENT PROVIDED WITH PLUMB- ING SUPPLY PIPING TO BE FURNISHED WITH APPROVED/LISTED STOPS IN ACCESSIBLE LOCATIONS.
14. SEE ARCHITECTURAL DRAWINGS FOR DETAILS OF CASEWORK, EQUIPMENT AND OTHER ITEMS/ELEMENTS PROVIDED UNDER SEPARATE CONTRACT, INCLUDING EXACT LOCATIONS AND UTILITY CONNECTION REQUIREMENTS. COORDINATE PLUMBING UTILITY WORK AS REQUIRED IN ADVANCE, INCLUDING PLACEMENT OF FITTINGS, ACCESSORIES, APPURTENANCES, DRAINS, ETC.
15. VERIFY THE EXACT LOCATION AND INSTALLATION REQUIREMENTS FOR ALL DRAINS WITH THE ARCHITECTURAL AND STRUCTURAL DOCUMENTATION FOR PROPER PLACEMENT IN RESPECT TO SLOPES AND STRUCTURE AT EACH DRAIN. COORDINATE INSTALLATION WITH THE APPROPRIATE CONTRACTOR. FINAL INSTALLATION AND LOCATION SUBJECT TO APPROVAL.
17. UNLESS INDICATED OTHERWISE, BUILDING DRAIN (STORM, SANITARY) TIE-INS ARE PROVIDED AT 5 FT. BEYOND FACE OF EXTERIOR PERIMETER STRUCTURE AND CONTINUED TO SITE UTILITY ELEMENTS UNDER SEPARATE CONTRACT. COORDINATE/CONFIRM LOCATIONS (INCLUDING INVERT ELEVATION) WITH THE SITE UTILITY CONTRACTOR IN ADVANCE.
18. NO PLUMBING PIPING IS TO BE RUN THRU OR ABOVE THE FOLLOWING AREAS, ELECTRICAL SWITCHGEAR ROOMS, ELECTRICAL UTILITY ROOMS/CLOSETS, ELEVATOR SHAFTS, ELEVATOR MACHINE ROOMS, TELEPHONE/COMMUNICATION ROOMS/CLOSETS, UPS EQUIPMENT ROOMS, BATTERY STORAGE AND/OR CHARGING ROOMS, DATA PROCESSING AND/OR STORAGE ROOMS; OR ANY SIMILAR TYPE AREAS SENSITIVE TO POTENTIAL WATER LEAKAGE OR DISCHARGE AS A RESULT OF ACCIDENTAL DAMAGE TO, OR DETERIORATION OF, PIPING.
19. PLUMBING PIPING IS NOT PERMITTED TO RUN ABOVE ANY ELECTRICAL SWITCHGEAR, MOTOR CONTROL CENTERS OR PANELS (INCLUDING ACCESS/CLEARANCE SPACE 42" IN FRONT OF THESE ITEMS, AND MIN. 30" WIDE), UNDER ANY CIRCUMSTANCES.
   A. LOCATION OF NEW ITEMS OF THESE TYPES TO BE DETERMINED AND CONFIRMED FROM INDICATION BY THE PROJECT ELECTRICAL DOCUMENTATION, AND ACTUAL INSTALLATION CONFIRMED WITH THE ELECTRICAL CONTRACTOR PRIOR TO START OF WORK.

CODED NOTES

1. CONNECT NEW 4" TO NEW 6" SAN PIPING FROM SITE WORK CONTRACTOR AT THIS APPROXIMATE LOCATION. INVERT ELEVATION AT CONNECTION POINT TO BE COORDINATED IN ADVANCE OF WORK.
2. CONNECT NEW 3" CW TO NEW 3" CW PIPING FROM SITE WORK CONTRACTOR AT THIS APPROXIMATE LOCATION AND EXTEND BELOW SLAB AS SHOWN. EXACT LOCATION OF CONNECTION POINT, INCLUDING INVERT ELEVATION, TO BE FIELD COORDINATED IN ADVANCE OF WORK.
3. NEW 3" WATER METER AND ASSE 1013 BACKFLOW PREVENTER AT THIS APPROXIMATE LOCATION. PROVIDE 3" TEE AND ASSE 1013 BACKFLOW PREVENTER FOR WATER CONNECTION TO SPLASH PAD. SEE SHEET P201 FOR FURTHER DETAIL. WATER METER TO BE PROVIDED BY LOCAL WATER AUTHORITY, INSTALLED BY THIS CONTRACTOR. PROVIDE (IN ORDER) BALL VALVE, BLOW OUT TEE FITTING, AND BALL VALVE WITH HOSE END CONNECTION POINTS UPSTREAM OF WATER METER FOR WINTERIZATION EFFORTS.
4. LOOP HW PIPING IN WALL SO THAT NO MORE THAN 2 L.F. OF NON-RECIRCULATED PIPING IS WITHIN ROUGH-IN TO LAVATORIES.
5. DROP 1-1/2" CW DOWN IN WALL TO SERVE NEARBY PLUMBING FIXTURES. SEE PLUMBING FIXTURE SCHEDULE FOR ROUGH-IN SIZING. PROVIDE WATER HAMMER ARRESTOR.
6. PROVIDE 3" CW TAP TO SPLASH PAD PROVIDE PRV-1 SET TO 35 PSI. CONTINUATION BY OTHERS.
7. ALL COLD AND HOT WATER PIPING TO BE SLOPED BACK TO DROPS AT WALL STRUCTURE AND PROVIDED WITH BALL VALVES WITH HOSE-END CONNECTION POINTS FOR WINTERIZATION EFFORTS.
8. DRAIN PIT IN THIS LOCATION BY OTHERS. PROVIDE 2" FLOOR DRAIN AT BOTTOM OF DRAIN PIT. PROVIDE WINTERIZATION DRAIN VALVES ON WATER FEATURE MANIFOLD BY OTHERS. SEE DETAIL ON SPLASH PAD DRAWINGS FOR FURTHER DETAIL. COORDINATE DRAIN PLACEMENT WITH STRUCTURAL CONTRACTOR.

P101-25106.DWG

PRATER
Engineering Associates, Inc.
6130 Wilcox Road
Dublin, Ohio 43016
(614) 766 4896
praterengineering.com

DESIGNED BY	DRAWN BY	CHECKED BY	JOB NUM.
R. MILLER	R. MILLER	C. ANDERSON	25106

verdantas
4420 COOPER RD. SUITE 200
CINCINNATI, ON 45242

SEALS

STATE OF OHIO
TIM PRATER E-51932
REGISTERED PROFESSIONAL ENGINEER
11/10/2025

REVISIONS

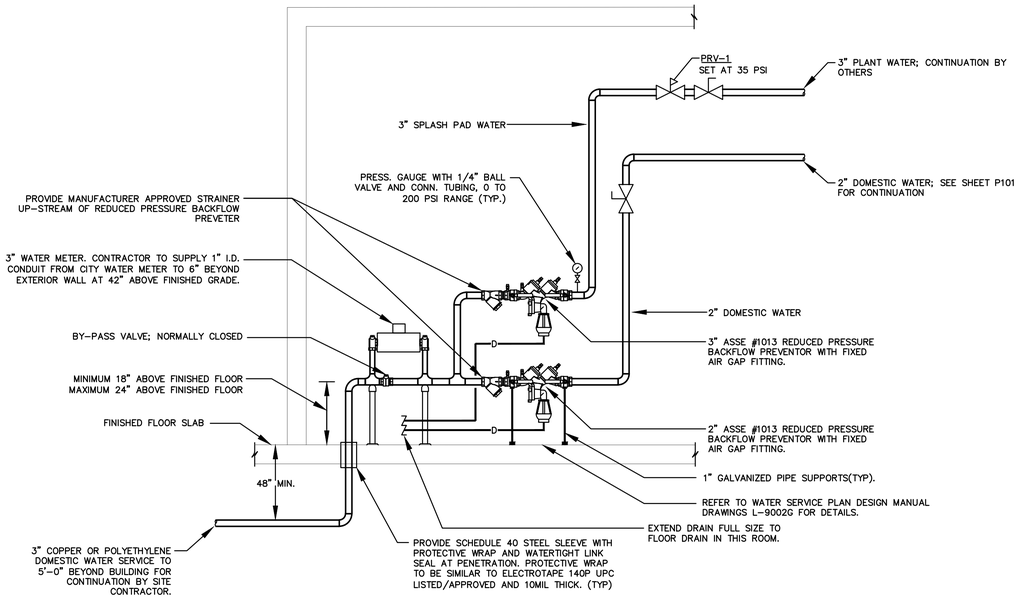
No.	REVISION	DATE	BY
0	PROGRESS SET	10-23-2025	
	100% REVIEW SET	10-31-2025	
	BID/PERMIT SET	11-21-2025	

DRAWING TITLE & PROJECT NAME

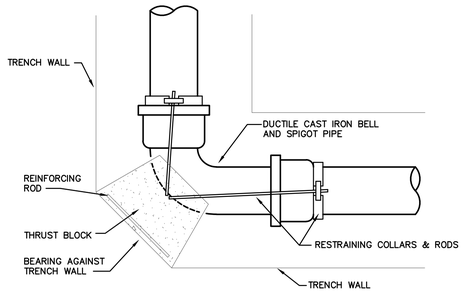
PLUMBING PLAN

SUNBURY OHIO
JR SMITH PARK PAVILLION
JR SMITH PARK PAVILLION

DRAWN BY	PEA
CHECKED BY	PEA
DATE	07/30/2025
PROJECT NO.	41545
PROJECT STATUS	TBD
DRAWING NO.	P101



DOMESTIC WATER SERVICE DETAIL



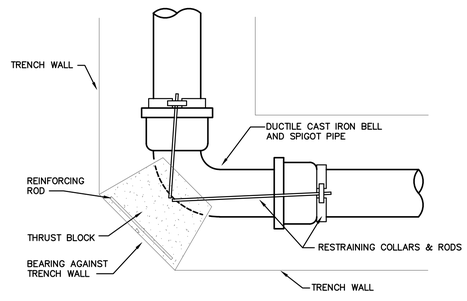
TYPICAL 90° THRUST BLOCK DETAIL
NOT TO SCALE

PLUMBING LEGEND
NOTE: NOT ALL SYMBOLS MAY BE USED

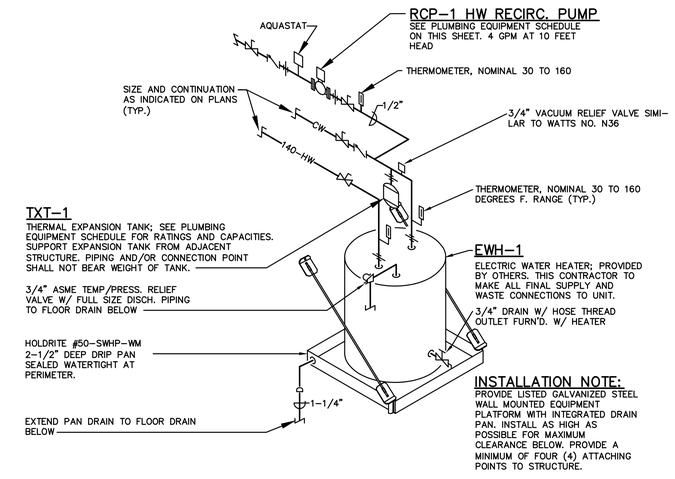
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
SAN	SANITARY (ABV. FLR.)		DIRECTION OF FLOW
SAN	SANITARY (BEL. FLR.)		PIPE DOWN
V	SANITARY VENT		PIPE UP
W	WATER SERVICE LINE		PIPE BRANCH TOP CONN.
CW	DOMESTIC COLD WATER		PIPE BRANCH BOTTOM CONN.
HW	DOMESTIC HOT WATER (110°F. & ABOVE)		P-TRAP (PLAN VIEW)
HWR	DOMESTIC HOT WATER RETURN	CO	WALL OR EXPOSED CLEANOUT
	BALL VALVE	CO	FLOOR OR GRADE CLEANOUT
	COMB. BALANCE/SHUTOFF VALVE	VTR	VENT-THRU-ROOF
	CHECK VALVE	FD	FLOOR DRAIN
	PIPE UNION		CONNECT TO EXISTING

PLUMBING ABBREVIATIONS

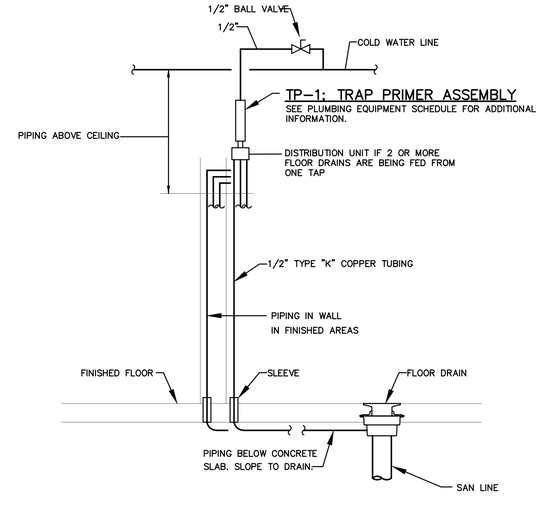
ABV.	ABOVE	GEN.	GENERAL
A.F.F.	ABOVE FINISHED FLOOR	H.B.	HOSE BIBB
APPROX.	APPROXIMATELY	LAV.	LAVATORY
BEL.	BELOW	MFR.	MANUFACTURER
CLG.	CEILING	MECH.	MECHANICAL
CONC.	CONCRETE	PLBG.	PLUMBING
CO.	CLEAN OUT	REQD.	REQUIRED
CONN.	CONNECT	RM.	ROOM
CONTR.	CONTRACTOR	THERM.	THERMOMETER
DTL.	DETAIL	T.P.	TRAP PRIMER
DN.	DOWN	TYP.	TYPICAL
ELEC.	ELECTRICAL	UR.	URINAL
EX.	EXISTING	VAC.	VACUUM
FLR.	FLOOR	V.T.R.	VENT THRU ROOF
F.D.	FLOOR DRAIN	W/	WITH
FURN.	FURNISH	WC	WATER CLOSET
F.V.	FLUSH VALVE		



TYPICAL 90° THRUST BLOCK DETAIL
NOT TO SCALE



EWH-1; ELECTRIC WATER HEATER PIPING DIAGRAM
NOT TO SCALE



TP-1; TRAP PRIMER PIPING DIAGRAM
NOT TO SCALE
(TYPICAL AT ALL FLOOR DRAIN LOCATIONS)

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CINCINNATI, ON 45242

SEALS

STATE OF OHIO
TIM PRATER
E-51932
REGISTERED PROFESSIONAL ENGINEER
11/10/2025

REVISIONS

No.	REVISION	DATE	BY
0	PROGRESS SET	10-23-2025	
	100% REVIEW SET	10-31-2025	
	BID/PERMIT SET	11-21-2025	

DRAWING TITLE & PROJECT NAME

PLUMBING DETAILS

SUNBURY OHIO
JR SMITH PARK PAVILLION
JR SMITH PARK PAVILLION

DRAWN BY	PEA
CHECKED BY	PEA
DATE	07/30/2025
PROJECT NO.	41545
PROJECT STATUS	TBD
DRAWING NO.	P201

P201-25106.DWG

PRATER
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DESIGNED BY	DRAWN BY	CHECKED BY	JOB NUM.
R. MILLER	R. MILLER	C. ANDERSON	25106

GENERAL

1. EXCEPT AS SPECIFIED TO THE CONTRARY, THIS CONTRACTOR SHALL INCLUDE FURNISHING, INSTALLING, CONNECTING AND OPERATION OF ALL EQUIPMENT WHICH IS PART OF MECHANICAL SYSTEMS.
2. GENERAL AND SPECIAL CONDITIONS OF AIA (AMERICAN INSTITUTE OF ARCHITECTS) AND OWNER'S GENERAL REQUIREMENTS SHALL APPLY UNLESS NOTED OTHERWISE.
3. THE REQUIREMENTS SET FORTH UNDER "GENERAL CONDITIONS". "MODIFICATIONS TO GENERAL CONDITIONS" AND "SPECIAL CONDITIONS" ARE PART OF THIS CONTRACT.
4. THIS CONTRACT SHALL INCLUDE A VISIT TO THE JOB SITE AND TAKE INTO CONSIDERATION MECHANICAL, ELECTRICAL AND GENERAL TRADE WORK IN PLACE AND WORK TO BE PUT INTO PLACE PRIOR TO BIDDING. REROUTING OF DUCTWORK, PIPING, AND EQUIPMENT, AS REQUIRED TO MISS THIS WORK SHALL BE ACCOMPLISHED AT NO ADDITIONAL COST TO THE OWNER.
5. ALL MOTORS FOR SUCH EQUIPMENT (IF AND WHERE SPECIFIED ON THE DRAWINGS) SHALL BE FURNISHED AND INSTALLED AS PART OF THIS CONTRACT. CONTROLS FOR SUCH MOTORS SHALL BE FURNISHED UNDER THIS CONTRACT AND INSTALLATION OF CONTROLS AND ALL ELECTRICAL WIRING NOT SHOWN ON ELECTRICAL DRAWINGS, SHALL BE PERFORMED UNDER THIS CONTRACT.

ORDINANCES, PERMIT CERTIFICATES AND OWNER REQUIREMENTS

1. ALL WORK UNDER THIS CONTRACT SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE OWNER'S REQUIREMENTS, ALL LAWS, ORDINANCES AND ALL REGULATIONS OF THE STATE, COUNTY, AND MUNICIPALITY WHICH IN ANY WAY AFFECTS THIS WORK. THE ARCHITECT WILL OBTAIN THE GENERAL BUILDING PERMITS. THE PLUMBING AND ANY OTHER PERMITS AND CERTIFICATES OF INSPECTION REQUIRED FOR THE PROJECT WILL BE OBTAINED BY THE PLUMBING CONTRACTOR PERFORMING THE WORK. FEES WILL BE INCLUDED IN THE BID PRICE. ALL WORK SHALL ALSO BE INSTALLED IN ACCORDANCE WITH REGULATIONS OF THE FIRE UNDERWRITERS HAVING JURISDICTION AND LOCAL UTILITIES. CONTRACTOR SHALL ALSO SECURE ANY PERMITS OR PAY ANY FEES TO THE LOCAL UTILITY COMPANIES FOR THE WORK REQUIRED.

DRAWINGS

1. MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW THE APPROXIMATE LOCATION OF OUTLETS, EQUIPMENT AND PIPING.
2. THE EXACT LOCATION OF OUTLETS, EQUIPMENT AND PIPING MAY BE CHANGED FROM TIME TO TIME AS WORK PROGRESSES. UNDER THIS CONTRACT ALL LOCATIONS SHALL BE VERIFIED WITH ALL TRADES AND THAT THEY ARE ACCORDING TO THE LATEST INFORMATION AVAILABLE. SHOULD THIS NOT BE DONE THE WORK WILL BE CHANGED AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. THE OWNER RESERVES THE RIGHT TO MAKE MINOR CHANGES IN LOCATION OF EQUIPMENT OF PIPING ARRANGEMENTS UP TO THE TIME OF ROUGH-IN WITHOUT ADDITIONAL COSTS TO THE OWNER.
4. THE DRAWINGS AND SPECIFICATION ARE INTENDED TO SUPPLEMENT EACH OTHER AND ANY MATERIALS OR LABOR CALLED FOR IN ONE SHALL BE FURNISHED EVEN THOUGH NO MENTIONED IN BOTH. ANY MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK AND WHICH IS USUALLY INCLUDED IN WORK OF A SIMILAR CHARACTER SHALL BE FURNISHED UNDER THIS CONTRACT.

SHOP DRAWINGS

1. AS PART OF THIS WORK INCLUDING UNDER EACH MECHANICAL SECTION, WITHOUT CAUSING ANY DELAY IN WORK, ELECTRONIC SHOP DRAWINGS OF ALL EQUIPMENT AND MATERIAL SHALL BE SUBMITTED FOR ENGINEER'S REVIEW.
2. SUBMITTAL SHALL INCLUDE WIRING DIAGRAMS, PERFORMANCE CURVES AND DATA SPECIFIC TO THIS PROJECT AND BEAR CONTRACTOR'S APPROVAL STAMP CERTIFYING THAT THIS CONTRACTOR HAS VERIFIED CONFORMANCE TO THE CONTRACTUAL DOCUMENTS.
3. IN THE ENGINEER'S REVIEW IF SHOP DRAWINGS, REVIEW IS FOR CONFORMANCE WITH THE GENERAL DESIGN CONCEPT AND ARRANGEMENT ONLY. COMMENTS, CORRECTIONS OR MARKING SO NOT CONSTITUTE WAIVER OF THE CONTRACT DOCUMENTS REQUIREMENTS. DIMENSIONS, QUANTITIES AND COORDINATION ARE THE RESPONSIBILITY OF THE CONTRACTOR.

CLEANING UP

1. UNLESS OTHERWISE NOTED, ALL EXCESS MATERIALS AND DEBRIS CAUSED BY THIS WORK SHALL BE COME THE PROPERTY OF THE CONTRACTOR AND PROMPTLY BE REMOVED FROM THE SITE. ALL FIXTURES AND EQUIPMENT INSTALLED SHALL BE THOROUGHLY CLEANED WEEKLY. ALL MOTORS AND EQUIPMENT SHALL BE COVERED OR OTHERWISE PROTECTED FORM CONSTRUCTION DUST AND DEBRIS. NO EQUIPMENT OTHER THAN THOSE DESIGNED TO ARE TO BE EXPOSED TO INCLEMENT WEATHER. TOUCH UP ALL SCRATCHES AND REPAIR ANY DENTS IN EQUIPMENT.
2. THE PLUMBING CONTRACTOR SHALL PROVIDE COORDINATION DRAWINGS SHOWING ALL OF HIS WORK WITH OTHER TRADES. THIS CONTRACTOR SHALL AGREE WITH OTHER TRADES ON SCALE OF DRAWINGS PRIOR TO ANY WORK.

OPERATING AND MAINTENANCE INSTRUCTIONS

1. THIS CONTRACTOR SHALL THOROUGHLY INSTRUCT AND SUPERVISE OWNER'S MAINTENANCE PERSONNEL IN THE PROPER OPERATION AND MAINTENANCE OF THE MECHANICAL SYSTEM EQUIPMENT. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING FOR THE INSTRUCTION AND SUPERVISION AT A TIME CONVENIENT TO THE OWNER AND NOTIFYING THE ASSOCIATE OF THE TIME AT LEAST 48 HOURS IN ADVANCE.

INSTRUCTIONS TO OWNER

1. LOCATION OF EQUIPMENT AND EXPLANATION OF WHAT IT DOES.
2. REFERENCE TO "OPERATING INSTRUCTION MANUALS" FOR RECORD AND CLARITY.
3. COORDINATION OF WRITTEN AND VERBAL INSTRUCTION SO THAT EACH IS UNDERSTOOD BY ALL PERSONNEL.
4. SPECIFIC MAINTENANCE TO BE PERFORMED BY OWNER.
5. OPERATION AND MAINTENANCE MANUALS SHALL BE SUBMITTED ELECTRONICALLY FOR REVIEW BY THE ENGINEER. ONE FINAL BOUND PHYSICAL COPY SHALL BE PROVIDED TO THE OWNER, IF REQUIRED. FINAL PHYSICAL COPY SHALL CONSIST OF THE FOLLOWING ITEMS:
   A. TITLE PAGE: TITLE OF PROJECT, ADDRESS, DATE OF SUBMITTAL, NAME AND ADDRESS OF CONTRACTOR, NAME OF ASSOCIATE.
   B. SECOND PAGE: INDEX OF MANUAL CONTENTS.
   C. FIRST SECTION: A COPY OF EACH APPROVED SHOP DRAWING AND SUBMITTAL WITH AN INDEX AT THE BEGINNING OF THE SECTION.
   D. SECOND SECTION: A LIST OF ALL EQUIPMENT USED ON THE PROJECT, TOGETHER WITH SUPPLIER'S NAME AND ADDRESS.
   E. MANUFACTURER'S MAINTENANCE MANUALS FOR EACH ITEM OF EQUIPMENT FURNISHED UNDER THIS CONTRACT. MANUALS SHALL INCLUDE SUCH ITEMS AS PARTS LIST, DETAILED LUBRICATION INSTRUCTIONS, PROCEDURES FOR PERFORMING NORMAL MAINTENANCE FUNCTIONS, PRELIMINARY TROUBLE SHOOTING PROCEDURES AND WIRING DIAGRAMS.
   F. COMPLETE WIRING DIAGRAMS FOR THE MECHANICAL SYSTEMS AS ACTUALLY WIRED INCLUDING CONTROL AND INTERLOCK WIRING.
   G. BRIEF BUT COMPLETE INSTRUCTIONS FOR START-UP, SHUT- DOWN AND ROUTINE MAINTENANCE OF EACH SYSTEM.
   H. ROUTINE AND 24-HOUR EMERGENCY INFORMATION:
   I. NAME, ADDRESS AND TELEPHONE NUMBER OF SERVICING AGENCY.
   J. INCLUDE NAMES OF PERSONNEL TO BE CONTACTED FOR SERVICE ARRANGEMENTS.
6. FRAME ONE (1) COPY OF BRIEF START-UP, SHUT-DOWN AND ROUTINE MAINTENANCE INSTRUCTIONS AND COMPLETE SYSTEM WIRING DIAGRAMS UNDER GLASS AND MOUNT ON THE EQUIPMENT ROOM WALL. TEMPERATURE CONTROL SCHEMATICS MAY BE LAMINATED WITH PLASTIC AT THE CONTRACTOR'S OPTION.

GUARANTEE

1. ALL LABOR AND MATERIALS FURNISHED UNDER THIS CONTRACT SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FORM THE DATE OF FINAL ACCEPTANCE BY THE OWNER WHICH WILL COMMENCE UPON THE FINAL INSPECTION BY THE ENGINEER. DURING THIS TIME, ALL LEAKS, CORRECTION OF ALL THE FAILURES TO SUCH MATERIAL AND THE CORRECTION OF ALL DISCREPANCIES WITH THE PLUMBING CODE, THE CONTRACT DRAWINGS, AND THE PROJECT SPECIFICATIONS SHALL BE DONE UNDER THIS CONTRACT AT NO ADDITIONAL EXPENSE TO THE OWNER.

RECORD DRAWINGS

1. THIS CONTRACTOR SHALL KEEP AN ACCURATE RECORD OF ALL DEVIATIONS FROM CONTRACT DRAWINGS AND SPECIFICATIONS. THIS CONTRACTOR SHALL NEATLY AND CORRECTLY RECORD ALL DEVIATIONS IN A COLOR CODED LEGIBLE ELECTRONIC FORMAT.

PLUMBING REFERENCES

1. APPLICABLE CONSTRUCTION CODES, STANDARDS AND GUIDELINES FOR ALL PLUMBING CONTRACT ELEMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   A. STATE OF OHIO, OHIO BUILDING CODE, O, INCLUDING THE STATE OF OHIO PLUMBING CODE AND ALL APPLICABLE REFERENCED STANDARDS INCLUDED THEREIN.
   B. CITY OF O BUILDING CODE, INCLUDING PLUMBING, FUEL GAS MECHANICAL, HANDICAP ACCESSIBILITY, AND ENERGY CONSERVATION PORTIONS THEREOF.
   C. LOCAL SEWER, DRAINS, AND WATER AUTHORITY.
   D. LOCAL BOARD OF HEALTH.
   E. STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY (E.P.A.).
   F. LOCAL GAS UTILITY PROVIDER.
   G. AMERICAN GAS ASSOCIATION (AGA) STANDARDS FOR MATERIALS AND CONSTRUCTION.
   H. AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) STANDARDS FOR MATERIALS AND CONSTRUCTION.
   I. AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS FOR PERFORMANCE AND TESTING.
   J. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS FOR MATERIALS, CONSTRUCTION AND TESTING.
   K. NATIONAL SANITATION FOUNDATION (NSF) STANDARDS FOR MATERIALS AND CONSTRUCTION.
   L. CAST IRON SOIL PIPE INSTITUTE (CISPI) STANDARDS FOR MATERIAL AND CONSTRUCTION.
   M. UNDERWRITER'S LABORATORIES (UL) STANDARDS FOR MATERIALS AND CONSTRUCTION.
   N. THE MANUFACTURER'S INSTALLATION GUIDELINES AND RECOMMENDATIONS FOR INDIVIDUAL ITEMS, ELEMENTS AND/OR SYSTEM INDICATED HEREIN.

SCOPE OF WORK

1. THIS CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, INCIDENTALS, DETAILS, ETC. NECESSARY TO PROVIDE A COMPLETE, OPERATIONAL AND APPROVED PLUMBING SYSTEM, INCLUDING BUT NOT LIMITED TO ALL ITEMS AND ELEMENTS DESCRIBED IN THE PLUMBING SPECIFICATION AND SHOWN ON THE PLUMBING DRAWINGS, AND AS REQUIRED FOR COORDINATION AND/OR INTERFACE WITH WORK UNDER SEPARATE CONTRACT AS INDICATED BY COMPLETE CONSTRICTION DOCUMENTATION PACKAGE.
2. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR SATISFACTORILY ADDRESSING ALL REVIEW AND INSPECTION AUTHORITIES REQUIREMENTS AND DIRECTIVES IN REGARD TO METHODS OF INSTALLATION NECESSARY FOR FINAL APPROVAL.

PERMITS AND FEES

1. UNLESS DIRECTED OTHERWISE BY THE GENERAL CONDITIONS PORTION OF PROJECT DOCUMENTATION, THE PLUMBING CONTRACTOR SHALL APPLY FOR AND PAY ANY REVIEW INSPECTION, PERMIT, LICENSE, TESTING AND/OR OTHER SERVICE FEES REQUIRED BY ALL REVIEW/INSPECTION/APPROVAL AUTHORITIES IN CONNECTION WITH THE WORK UNDER THIS CONTRACT.

SLEEVES

1. SLEEVE MATERIAL: SCHEDULE 40 ASTM A53 OR ASTM A120 BLACK STEEL PIPE, MACHINE CUT, LARGE ENOUGH TO ALLOW 1/4" CLEARANCE ALL AROUND PIPE AND PIPE COVERING. USE MACHINE CUT COPPER SLEEVES FOR UN-INSULATED COPPER PIPE.
2. SLEEVES IN PARTITIONS TO HAVE LENGTH EQUAL TO THE THICKNESS OF FINISHED PARTITIONS. SLEEVES IN FLOORS OF FINISHED AREAS TO PROJECT 2" ABOVE THE FINISHED FLOOR. SLEEVES IN FLOORS OF NON-FINISHED AREAS TO PROJECT 2" ABOVE THE FINISHED FLOOR. FILL SPACE BETWEEN PIPE AND SLEEVES INTO EXPOSED AREAS WITH SEALING COMPOUND. REAM ALL SLEEVES BEFORE INSTALLING.
3. WHERE PIPES PASS THROUGH FIRE RATED WALLS OF FLOORS, THE SPACE BETWEEN THE PIPE AND SLEEVE SHALL BE FILLED WITH THE PROPER FIRE RATED SEALANT OR PACKING.

FIRESTOPPING

1. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR FIRESTOPPING AROUND ALL OPENINGS FOR PIPES, DUCTS, CONDUITS ETC. INSTALLED BY HIM AT ALL FIRE WALLS. FIRESTOPPING SHALL BE PERFORMED BY AN INSTALLER WHO HAS BEEN TRAINED BY THE MANUFACTURER, OR MANUFACTURER'S REPRESENTATIVE, IN THE INSTALLATION PROCEDURES BASED ON PUBLISHED UL TESTED FIRE STOP SYSTEMS.
2. FIRESTOPPING SHALL MEET THE REQUIREMENTS OF ASTM E-814 OR UL 1479 FIRE TESTS BY A RECOGNIZED TESTING AGENCY. FIRESTOPPING SHALL ALSO CONFORM TO THE FOLLOWING GOVERNING CODES; OHIO BUILDING CODE, NFPA 101 LIFE SAFETY CODE AND NFPA 70 – NATIONAL ELECTRIC CODE.
3. PENETRATION
   A. CLEAN PENETRATION HOLE OF DIRT, LOOSE MATERIALS AND FOREIGN MATTER WHICH MAY AFFECT BOND OR INSTALLATION.
   B. REMOVE COATINGS SUCH AS PAINT, CURING COMPOUNDS, WATER REPELLENT AND SEALERS AS REQUIRED.
   C. INSTALL BACKING MATERIALS TO PREVENT LIQUID MATERIAL LEAKAGE.
4. APPLICATION
   A. PREPARE AND APPLY PENETRATION SEALING SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.
   B. EMPLOY INSTALLATION TECHNIQUES WHICH WILL ENSURE THAT FIRESTOPPING IS DEPOSITED TO FILL AND SEAL HOLES AND OPENINGS.
   C. TOOL EXPOSED SURFACES OF APPLIED SEALANT TO SMOOTH FINISH.
   D. PROTECT MATERIALS FROM DAMAGE ON SURFACES SUBJECTED TO TRAFFIC.
5. PROVIDE INTUMESCENT SEALANT AND COLLARS AT OPENINGS INVOLVING PLASTIC OR INSULATED PIPE SIMILAR TO THE METACAULK SERIES 880 AND 950.
6. FIRESTOPPING BY HILTI, DOW CORNING, 3M, OR METACAULK MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

PIPE ANCHORS, HANGERS AND SUPPORTS

1. ALL PIPING SHALL BE SEPARATELY HUNG AND SUPPORTED FROM APPROVED STRUCTURAL MEMBERS OR CONCRETE OVERHEAD STRUCTURE ONLY. NO PIPE SHALL BE HUNG FROM ROOF DECK, PIPE DUCTS, OR OTHER COMPONENTS OR EQUIPMENT OF OTHER TRADES.
2. PROVIDE LISTED/APPROVED ADJUSTABLE HANGERS, INSERTS, BRACKETS, CLAMPS, SUPPLEMENTAL STEEL AND OTHER DEVICES REQUIRED FOR PROPER SUPPORT OF ALL PIPE LINES.
3. HANGERS SHALL BE DESIGNED TO ALLOW FOR EXPANSION AND CONTRACTION AND TO ALLOW INSULATION (WHERE APPLICABLE) TO RUN CONTINUOUSLY THROUGH HANGERS.
4. WIRE OR STRAP HANGERS ARE NOT PERMITTED. ADJUST HANGERS SO AS TO DISTRIBUTE WEIGHT LOAD EQUALLY ON ATTACHMENTS.
5. USE OF TRAPEZE HANGERS DO NOT PERMIT THE ELIMINATION OF THE PIPING INSULATION TO NOT BE CONTINUOUS THRU THE HANGER.
6. PIPING TO BE SUPPORTED ACCORDING TO THE APPLICABLE ADOPTED PLUMBING CODE OR MANUFACTURER'S RECOMMENDATIONS, WHICHEVER IS MOST STRINGENT. SUPPORT AT INTERVALS NOT TO EXCEED SPACING LISTED OR ELSEWHERE AS REQUIRED IN ACCORDANCE WITH GOOD WORKMANSHIP. NO PIPE SHALL BE SUPPORTED FROM ANOTHER PIPE. ALL HANGERS SHALL BE PLUMBED BEFORE INSULATION IS APPLIED AND ALL HANGERS SHALL BE DOUBLE NUTTED. ALL HANGERS SHALL MEET THE OHIO PLUMBING CODE REQUIREMENTS.

VALVES

1. GENERAL
   A. SCOPE
      1. FURNISH AND INSTALL ALL NECESSARY VALVES FOR PIPING SYSTEMS AND EQUIPMENT IN THE BUILDING REQUIRED TO PROVIDE PROPER SHUT OFF AND BALANCING OF SYSTEMS INCLUDED UNDER THIS CONTRACT.
2. PRODUCTS
   A. CHECK VALVES SHALL BE CRANE, HAMMOND, JENKINS, MILWAUKEE, NIBCO, POWELL OR STOCKHAM AND SHALL ALL BE BY THE SAME MANUFACTURER.
   B. BALL VALVES SHALL BE AS MANUFACTURED BY GRINNELL, APOLLO, MILWAUKEE, WATTS, OR ANY OF THE MANUFACTURER'S LISTED HEREIN FOR GATE, GLOBE AND CHECK VALVES. ALL BALL VALVES TO BE BY THE SAME MANUFACTURER.
   C. BALL VALVES
      1. 2-1/2" SIZE AND SMALLER MAY BE TWO-PIECE BRONZE BODY BALL VALVE, SCREWED PIPING CONNECTIONS, UNION CONNECTION BODY, TEFLON SEATS, CONVENTIONAL PORT, BLOWOUT PROOF STAINLESS STEEL STEM, ADJUSTABLE PACKING GLAND, STAINLESS STEEL BALL, AND LEVER HANDLE LABELED FOR SERVICE CONTROLLED. RATED FOR 150 S.W.P. AND 400 WOG. EQUAL TO APOLLO 70-300 SERIES.
      2. 3" SIZE MAY BE TWO-PIECE BRONZE BODY BALL VALVE, SOLDER PIPING CONNECTIONS, FORGED DZR COPPER ALLOY BODY, FULL PORT, PTFE SEATS, BLOWOUT PROOF STAINLESS STEEL STEM, BRASS PACKING NUT, STAINLESS STEEL BALL, AND LEVER HANDLE LABELED FOR SERVICE CONTROLLED. RATED FOR 400 PSI NON-SHOCK COLD WORKING PRESSURE. EQUAL TO NIBCO S-FP-600A-LF. NSF/ANSI 61-8.

VALVE TAGGING AND CODING, AND PIPING IDENTIFICATION

1. PROVIDE BRASS TAGS ON ALL VALVES. TAGS SHALL STATE TYPE OF LINE IN WHICH THE VALVE IS INSTALLED (HOT WATER SUPPLY, STEAM, ETC.) AND NUMBER OF VALVE. FURNISH A SCHEDULE OR SCHEDULES OF ALL VALVES TAGGED WITH NUMBER, LOCATION AND PURPOSE OF EACH VALVE AND MOUNT SCHEDULES UNDER GLASS ON EQUIPMENT ROOM WALL, OR ELSEWHERE AS REQUIRED. SCHEDULES SHALL BE LOCATED NEAR AND CONVENIENT TO THE VALVES ON THE SCHEDULE.
2. PIPE VALVE TAG SCHEDULE:

SERVICE	STENCIL DESIGNATION
DOMESTIC COLD WATER	D.C.W.
DOMESTIC HOT WATER (BY DIST. TEMP.)	D.H.W.
DOMESTIC HOT WATER RETURN (BY DIST. TEMP.)	D.H.W.R.
NATURAL GAS (BY DIST. PRES.)	GAS
COMPRESSED AIR (BY DIST. PRES.)	AIR
VACUUM	VAC

3. IN THE CASE OF REMODELING WORK WHEN A VALVE IDENTIFICATION SYSTEM ALREADY EXISTS, NUMBERING SHALL START WITH THE NEXT NUMBER AFTER THE HIGHEST EXISTING NUMBER.
4. VALVE TAGS SHALL BE BRASS, MINIMUM 2" DIAMETER, 16 GAUGE.
5. ALL MARKERS SHALL MEET ANSI/ASME A13.1 PIPE MARKING GUIDELINES. ALL PIPE MARKERS SHALL BE INSTALLED UTILIZING SNAP-AROUND PIPE MARKER APPLICATION KITS FROM SAME MANUFACTURER. MARKERS SHALL INCLUDE FLOW DIRECTIONAL ARROWS. MARKER THICKNESS SHALL BE A MINIMUM OF .02" WITH A MINIMUM LENGTH OF 8" FOR PIPE SIZES UP TO 2" AND 12" FOR PIPE SIZES UP TO 6". ALL MARKERS SHALL PROVIDE 360 DEGREES OF VISIBILITY. MARKERS SHALL BE BASED ON SETON. APPROVED EQUALS PROVIDED ALL SPECIFICATIONS ARE MET. UNLESS OTHERWISE REQUIRED BY THE OWNER'S REPRESENTATIVE, AS VERIFIED IN ADVANCE, PIPE LABELS/COLORS SHALL BE BASED ON THE PIPE CONTENTS AS SPECIFIED BELOW.
6. AFTER PIPING IS INSTALLED (AND PAINTED OR PROVIDED WITH INSULATION COVER AS APPLICABLE); THIS CONTRACTOR SHALL THEN INSTALL PIPING IDENTIFICATION MARKERS. FLOW DIRECTION ARROWS OF THE SAME COLORS ARE TO BE LOCATED ADJACENT TO THE IDENTIFICATION LEGENDS. PIPE IDENTIFICATION SPACING SHALL BE PROVIDED AT MAXIMUM 20 FEET ON CENTER, AT EACH BRANCH CONNECTION, AT EACH RISER, AND AT LEAST ONCE IN EACH ROOM. DO NOT USE ADHESIVE MARKERS. COLORS AS FOLLOWS:

PIPE CONTENTS	COLOR CODE
FIRE QUENCHING	WHITE TEXT ON RED
TOXIC OR CORROSIVE	BLACK TEXT ON ORANGE
FLAMMABLE OR OXIDIZING	BLACK TEXT ON YELLOW
COMBUSTIBLE	WHITE TEXT ON BROWN
WATER	WHITE TEXT ON GREEN
SANITARY AND STORM DRAINAGE	WHITE TEXT ON PURPLE
COMPRESSED GAS	WHITE TEXT ON BLUE
ABANDONED PIPING	BLACK TEXT ON WHITE

EXCAVATION AND BACKFILL

1. THIS CONTRACTOR SHALL EXCAVATE AND BACKFILL ALL TRENCHES AND OTHER EXCAVATIONS REQUIRED FOR LAYING DRAINS, SEWERS, APPURTENANCES AND OTHER EXCAVATIONS REQUIRED FOR HIS WORK.
2. EARTH FILL: SOIL AS APPROVED BY THE OWNER'S REPRESENTATIVE, FREE OF ORGANIC SOIL, SOD, ROOTS, WOOD, METAL, RUBBISH, DEBRIS, LUMPS OR EXCESSIVE AMOUNTS OF CLAY AND ROCKS GREATER THAN 2" IN DIAMETER; CAPABLE OF BEING COMPACTED INTO DENSE AND STABLE CONDITIONS AS SPECIFIED.
3. ALL UNDERGROUND PIPING SHALL BE INSTALLED ON A MINIMUM OF A 3" BED OF COMPACTED SAND. ALL UNDERGROUND PIPING SHALL BE BACKFILLED BY HAND TO A LEVEL OF 12" ABOVE THE CROWN OF THE PIPE. BACKFILL SHALL BE MECHANICALLY COMPACTED IN 6" LAYERS UP TO 12" ABOVE THE CROWN OF THE PIPE AT WHICH NON-COMPACTED LOOSE EARTH FILL MAY BE USED. EACH LAYER SHALL BE MECHANICALLY COMPACTED TO A MINIMUM OF 92% MODIFIED PROCTOR.
4. PROTECT ALL UTILITIES SHOWN ON DRAWINGS OR ENCOUNTERED IN THE CONSTRUCTION WORK. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED BY THIS CONTRACTOR TO OWNER'S SATISFACTION, WITHOUT COST TO THE OWNER.
5. THIS CONTRACTOR SHALL REMOVE ANY UNUSABLE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE.

FLUSHING AND STERILIZATION

1. FLUSH OUT ALL DOMESTIC WATER PIPING SYSTEMS TO REMOVE ALL DIRT AND GREASE FROM PIPING AND EQUIPMENT BEFORE SYSTEMS ARE PLACED INTO OPERATION. CLEAN STRAINERS AFTER EACH FLUSHING UNTIL THE STRAINER REMAINS CLEAN.
2. FURNISH A CERTIFICATE OF STERILIZATION AND APPROVAL FOR HUMAN CONSUMPTION SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OHIO REGULARLY IN THE EMPLOY OF THE TESTING LABORATORY. CERTIFICATION SHALL BE FURNISHED TO THE ARCHITECT/ENGINEER PRIOR TO ANY PAYMENT IS MADE.
3. STERILIZATION: CHLORINATING MATERIAL AND CONCENTRATIONS TO BE PER APPLICABLE PLUMBING CODE.

SUBSTITUTIONS AND MISCELLANEOUS EQUIPMENT

1. THE BIDDING OF THIS WORK WILL CONTEMPLATE THE USE OF EQUIPMENT AND MATERIALS EXACTLY AS SPECIFIED HEREIN. WHERE ONE OR MORE NAMES OF MANUFACTURERS ARE MENTIONED ANY ONE MAY BE UTILIZED.
2. ALTERNATE MANUFACTURER'S NOT LISTED HEREIN ARE PROHIBITED FROM INSTALLATION UNLESS FIRST APPROVED BY THE OWNER/ARCHITECT/ENGINEER IN ADVANCE.
3. MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THE PIPING SYSTEMS SUCH AS FITTING, HANGERS, ETC., CAN BE OF ANY RECOGNIZED MANUFACTURER PROVIDED THESE ITEMS MEET MINIMUM STANDARDS AS SET BY THE ENGINEER.

PLUMBING INSULATION

1. PROVIDE LISTED INSULATION COVER FOR ALL ITEMS/ELEMENTS AS SPECIFIED HEREIN, AS SHOWN ON DRAWINGS, AND FOR ANY OTHER ITEMS/ELEMENTS REQUIRING SAME.
2. INSULATE PIPING AND ASSOCIATED ACCESSORIES AND APPURTENANCES INCLUDING IN THE FOLLOWING SYSTEMS:
   A. DOMESTIC HOT AND COLD WATER AND HOT WATER RETURN.
   B. BUILDING SOIL WASTE AND VENT SYSTEM.
   C. BUILDING HORIZONTAL PRIMARY AND SECONDARY STORM PIPING.
3. PROVIDE A PRE-MANUFACTURED INSULATION COVERS ON ALL EXPOSED LAVATORY WASTE PIPING AND LAVATORY SUPPLY PIPING. PRODUCT TO BE SIMILAR TO HANDIWRAP, PRO-WRAP, AND TRUBRO MANUFACTURES.
4. PRODUCTS
   A. ALL INSULATING MATERIALS, INCLUDING JACKETS, CEMENTS, ADHESIVES, VAPOR BARRIERS, ETC., SHALL BE U.L. LISTED, WITH A FLAME SPREAD RATING NOT TO EXCEED 25, AND A SMOKE DEVELOPMENT RATING NOT TO EXCEED 50. ALL EXTERIOR FINISHES SHALL HAVE A MINIMUM SERVICE TEMPERATURE LIMIT (FSTM 70) OF MINUS 50 TO 220 DEGREES F.
   B. MOLDED PLASTIC FITTING COVERS SHALL BE U.L. LISTED WITH A FLAME SPREAD RATING NOT TO EXCEED 25, AND A SMOKE DEVELOPMENT RATING NOT TO EXCEED 50.
   C. INSULATED THICKNESS' ARE BASED ON INSULATION HAVING THERMAL RESISTANCE IN THE RANGE OF 4.0 HR F. FT2/BTU TO 4.6 HR F. FT2/BTU PER INCH OF THICKNESS ON A FLAT SURFACE AT A MEAN TEMPERATURE OF 75 DEGREES F. MINIMUM INSULATION THICKNESS SHALL BE INCREASED FOR MATERIALS HAVING R VALUES LESS THAN 4.0 OR MAY BE REDUCED FOR MATERIALS HAVING R VALUES GREATER THAN 4.6 TO GIVE EQUIVALENT "R" VALUES.
   D. PIPE COVERS SHALL BE SIMILAR TO JOHNS MANVILLE "MICRO-LOK" GLASS FIBER INSULATION, RATED FOR 850 DEGREES F. WITH A FACTORY APPLIED AP-T ALL-PURPOSE SELF-SEALING VAPOR BARRIER JACKET. BUTT STRIPS SHALL BE MINIMUM 3" WIDE, AND OF SAME MATERIAL AS JACKET. EQUAL MATERIALS, INCLUDING THICKNESS AND CONDUCTIVITY RATINGS/LISTINGS, AS MANUFACTURED BY OWENS CORNING, KNAUF OR MANSON MAY BE FURNISHED, AT THE CONTRACTOR'S OPTION. WHERE INSULATION THICKNESS IS INDICATED FOR COVER HEREIN. IT IS NOMINAL THICKNESS REQUIRED THICKNESS.
   E. ALL CEMENTS, ADHESIVES, FINISHES, AND ASSOCIATED MATERIALS SHALL BE SIMILAR TO THAT PROVIDED BY FOSTER. EQUAL MATERIALS AS PROVIDED BY CHILDERS OR VIMASCO MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.
   F. LONGITUDINAL LAP JOINTS AND BUTT STRIPS FOR GLASS FIBER PIPING INSULATION SHALL BE SECURED WITH STAPLES ON THREE (3) INCH CENTERS, AND SEALED WITH AN APPROVED VAPOR BARRIER ADHESIVE WHERE APPLICABLE. STAPLES ARE NOT REQUIRED WHEN INSULATION UTILIZES A "DOUBLE" ADHESIVE SELF-SEALING SYSTEM.
5. EXECUTION
   A. COVER DOMESTIC COLD WATER, HOT WATER, TEMPERED WATER (FULL TEMPERATURE RANGE), HOT WATER RETURN, AND HORIZONTAL STORM PIPING AS FOLLOWS:
   B. COVER HOT WATER, TEMPERED WATER (FULL TEMPERATURE RANGE), AND HOT WATER RETURN PIPING WITH 1" THICKNESS GLASS FIBER PIPE INSULATION.
   C. COVER COLD WATER AND HORIZONTAL STORM PIPING WITH 1/2" THICKNESS GLASS FIBER PIPE INSULATION.
   D. PROVIDE INSULATION ON THE BOTTOM OF ALL ROOF DRAIN ASSEMBLIES.
   E. ALL APPURTENANCES AND ACCESSORIES SUCH AS VALVES, FLANGES, UNIONS, ETC. INSTALLED IN REFERENCED PIPING (WITH THE EXCEPTION OF BACKFLOW PREVENTION ASSEMBLIES LISTED AT THE END OF THIS PARAGRAPH) SHALL BE WRAPPED WITH FULL THICKNESS INSULATION AND COVERED WITH A LISTED MOLDED PLASTIC FITTING COVER, OR AN OPEN MESH GLASS CLOTH SHALL BE FIRE RESISTANT MASTIC. BACKFLOW PREVENTION ASSEMBLIES WHICH REQUIRE PERIODIC INSPECTION/TESTING/MAINTENANCE SHALL NO BE PROVIDED WITH INSULATION COVER, UNLESS THESE ASSEMBLIES ARE IN WATER SENSITIVE LOCATIONS. SUCH AS ABOVE LAY-IN CEILINGS. IF LISTED BACKFLOW PREVENTION ASSEMBLIES ARE IN WATER SENSITIVE LOCATIONS, FURNISH COVER COMPLYING WITH THIS SPECIFICATION THAT ALLOWS REMOVAL AND REPLACEMENT AS NECESSARY FOR REQUIRED ACCESS.
   F. USE 12" LONG SECTIONS OF CALCIUM SILICATE RIGID INSULATION, WITH JACKET SAME AS ADJACENT PIPE COVERING FOR TRANSFER OF SUPPORT TO PIPING AT EACH HANGER, WITHOUT STRESS TO THE PIPE COVERING ASSEMBLY. AT THE CONTRACTOR'S OPTION, AN APPROVED WOOD OR HIGH-DENSITY (20 LB./CU. FT.) FIBERGLASS BLOCK MAY BE SUBSTITUTED FOR THE RIGID INSULATION SECTION. VAPOR BARRIER TO BE MAINTAINED THROUGHOUT.
   G. ALL APPLICATIONS SHALL BE MADE ON CLEAN, DRY SURFACES WITH ALL JOINTS BUTTED FIRMLY TOGETHER.
   H. INSULATION MUST RUN CONTINUOUS THROUGH HANGERS, SLEEVES AND WALL FOR ALL COLD WATER, HOT WATER, HOT WATER RETURN, VACUUM PUMP EXHAUST AND AIR COM

PLUMBING UTILITY CONNECTIONS

1. PROVIDE PLUMBING SUPPLY, WASTE, DRAIN, VENT, AND ANY OTHER PIPED UTILITIES INCLUDED FOR THE PROJECT AS REQUIRED, AS LISTED HEREIN, AND/OR AS SHOWN ON THE PLUMBING DRAWINGS FOR ITEMS FURNISHED AND/OR INSTALLED UNDER SEPARATE CONTRACT REQUIRING SAME. THESE ITEMS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING.

   A. HVAC EQUIPMENT; FINAL CONNECTION (WHERE APPLICABLE) BY THE HVAC CONTRACTOR.

   B. EQUIPMENT FINAL CONNECTION (WHERE APPLICABLE) AS INDICATED BY PLAN NOTES.

   C. OWNER PROVIDED ITEMS; FINAL CONNECTION (WHERE APPLICABLE) BY THE PLUMBING CONTRACTOR.

2. ROUGH-IN PLUMBING SUPPLY, WASTE, DRAIN, VENT, AND ANY OTHER PIPED UTILITIES INCLUDED FOR THE PROJECT AS REQUIRED, AS LISTED HEREIN, AND/OR AS SHOWN ON THE PLUMBING DRAWINGS FOR ALL FUTURE ITEMS REQUIRING SAME.

DOMESTIC WATER PIPING SYSTEMS

1. PROVIDE A COMPLETE DOMESTIC WATER SUPPLY PIPING SYSTEM AS SHOWN ON THE DRAWINGS, AND AS NECESSARY TO SERVE ALL ITEMS REQUIRING SAME.

2. THE DOMESTIC WATER PIPING SYSTEM SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

   A. COLD WATER SUPPLY, HOT WATER SUPPLY, AND HOT WATER RETURN.

   B. TEMPERED WATER SUPPLY (FULL TEMPERATURE RANGE).

   C. TRAP PRIMER SUPPLY.

   D. DOMESTIC WATER MAKE-UP SUPPLY TO ELEMENTS PROVIDED UNDER SEPARATE CONTRACT, SUCH AS HVAC EQUIPMENT/SYSTEMS, KITCHEN EQUIPMENT, ETC.

3. PRODUCTS

   A. UNDER GROUND PIPING: UP TO AND INCLUDING 2" SIZE TO BE TYPE K SOFT COPPER TUBING IN A SINGLE LENGTH WITH NO IN-LINE COUPLINGS OR JOINTS, AND MINIMUM NUMBER OF FITTINGS UNLESS INDICATED OTHERWISE. FITTINGS IF REQUIRED TO BE WROT COPPER WITH SOCKET SOLDER BRAZED CONNECTIONS. COMPLETE INSTALLATION TO BE RATED FOR 175 PSIG WORKING PRESSURE. UNLESS INDICATED OTHERWISE, HORIZONTAL PIPING AND CONDUIT BELOW SLAB TO RUN IN A STRAIGHT LINE DIRECT FROM ENTRY TO EXIST JOINTS.

   B. UNDER GROUND PIPING: UP TO AND INCLUDING 1-1/2" SIZE, SDR-9, ASTM D 2737, CSA B 137.1 POLYETHYLENE (PE) PLASTIC TUBING. TUBING SHALL BE RATED FOR 200 PSI WORKING PRESSURE. TUBING SHALL BE PURCHASED IN ROLL FORM IN A SINGLE LENGTH WITH MINIMAL IN-LINE COUPLINGS OR JOINTS, AND MINIMUM NUMBER OF FITTINGS UNLESS INDICATED OTHERWISE. FITTINGS IF REQUIRED TO BE COMPATIBLE WITH THE PIPING.

   C. ABOVE GROUND PIPING: UP TO AND INCLUDING 6" SIZE TO BE TYPE L, ASTM B-75, ASTM B88, ASTM B251, ASTM B447, HARD DRAWN COPPER TUBE WITH WROT COPPER FITTINGS AND SOCKET SOLDER JOINTS AND CONNECTIONS. TEE DRILL MECHANICAL SADDLE CONNECTIONS MAY BE UTILIZED. COMPLETED INSTALLATION TO BE RATED FOR 100 PSIG WORKING PRESSURE AT 180 DEGREE F.

   D. PIPE FITTINGS SHALL BE APPROVED FOR INSTALLATION WITH THE PIPING MATERIAL INSTALLED AND SHALL CONFORM TO THE RESPECTIVE PIPE STANDARDS OR ONE OF THE STANDARDS LISTED IN THE PLUMBING CODE.

   E. PLASTIC PIPING WHICH CONFORMS TO ASTM D 2737 SHALL BE FURNISHED WITH #12 COPPER TRACE ALONG ENTIRE LENGTH OF UNDERGROUND INSTALLATION. PLASTIC PIPING SHALL BE USED FOR UNDERGROUND INSTALLATION ONLY. JOINTS TO BE KEPT TO MINIMUM QUANTITY POSSIBLE.

   F. PIPING BELOW SLAB TO BE TYPE K SOFT COPPER TUBING IN A SINGLE LENGTH WITH NO IN-LINE COUPLINGS OR JOINTS, AND MINIMUM NUMBER OF FITTINGS UNLESS INDICATED OTHERWISE. FITTINGS IF REQUIRED TO BE WROT COPPER WITH SOCKET SOLDER BRAZED CONNECTIONS. COMPLETE INSTALLATION TO BE RATED FOR 175 PSIG WORKING PRESSURE. UNLESS INDICATED OTHERWISE, HORIZONTAL PIPING AND CONDUIT BELOW SLAB TO RUN IN A STRAIGHT LINE DIRECT FROM ENTRY TO EXIST JOINTS.

   G. VALVES 2-1/2" SIZE AND SMALLER MAY BE TWO-PIECE BRONZE BODY BALL VALVE, SCREWED CONNECTIONS, UNION CONNECTION BODY, TEFLON SEATS, CONVENTIONAL PORT BLOWOUT PROOF STEM, ADJUSTABLE PACKING GLAND, STAINLESS STEEL BALL AND LEVER HANDLE LABELED FOR THE SERVICE CONTROLLED. DESIGN FOR 150 S.W.P. AND 400 WOG. EQUAL TO APOLLO 70-300 SERIES.

   H. CHECK VALVES; TO BE ALL BRONZE HORIZONTAL SWING WITH BRONZE DISC RATED FOR 125 S.W.P. 3" AND LARGER TO BE FLANGED.

   I. PRESSURE REDUCING VALVE; WATTS MODEL LF223S, AUTOMATIC REDUCING VALVE, BRONZE BODY, STAINLESS STEEL INTEGRAL STRAINER, STAINLESS STEEL SEAT, ADJUSTABLE PRESSURE RANGE FROM 25 TO 75 PSIG. BUILT IN THERMAL EXPANSION BYPASS FEATURE, UNIT SHALL BE SERVICEABLE WHEN IN-LINE. EQUAL MANUFACTURE: CASH ACME VALVES.

   J. VALVES BY NIBCO, APOLLO, WATTS, ZURN, OR VICTAULIC MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

   K. ALL VALVES USED ON DOMESTIC WATER SYSTEMS LOCATED AT THE WATER METER AND BACKFLOW PREVENTER MUST MEET THE REQUIREMENTS OF THE LOCAL WATER AUTHORITY.

4. EXECUTION

   A. ALL DOMESTIC WATER PIPING SHALL BE CLEAN, FLUSHED AND TESTED PER STATE AND LOCAL HEALTH DEPARTMENT REQUIREMENTS.

   B. ALL DOMESTIC WATER PIPING SHALL BE CERTIFIED SAFE FOR HUMAN CONSUMPTION BY A CERTIFIED PROFESSIONAL BY THE STATE OF OHIO (BACTERIAL CERTIFICATION NUMBER) EMPLOYED BY A TESTING LABORATORY THAT STATES THE SYSTEM MEETS THE DEPARTMENT OF HEALTH REQUIREMENTS AND IS APPROVED FOR HUMAN CONSUMPTION.

   C. SOLDER AND FLUX MATERIAL SHALL BE CERTIFIED "LEAD FREE" AND NSF LISTED FOR USE WITH POTABLE WATER SYSTEMS.

   D. ALL PIPING THAT SUPPLIES A FLUSH VALVE, SOLENOID VALVE (OTHER THAN SLOW-CLOSING TYPE) FOOT PEDAL OPERATOR, SPRING RETURN OPERATOR OR OTHER QUICK CLOSING TYPE DEVICE SHALL HAVE A SHOCK ABSORBER INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. UNLESS INDICATED OTHERWISE, WHERE MULTIPLE FIXTURES OR EQUIPMENT IN ADJACENT LOCATIONS (SUCH AS WITHIN A CHASE OR OTHER ENCLOSURE) ARE SUPPLIED BY COMMON PIPING MANIFOLD, A PROPERLY SIZED AND INSTALLED SHOCK ABSORBER MAY BE UTILIZED.

   E. RUN ALL WATER PIPING LEVEL AND CONCEAL WHENEVER POSSIBLE. PIPING TO BE INSTALLED TO ALLOW COMPLETE DRAIN DOWN OF SYSTEM BACK TO MAIN RISER AT BASE OF SYSTEM WHENEVER POSSIBLE. PROVIDE 3/4" DRAINS AT BASE OF RISER, AND ANY OTHER TRAPPED OR LOW POINTS WHEN SUCH ARE UNAVOIDABLE DUE TO PROJECT CONDITIONS. 3/4" DRAINS TO CONSIST OF BALL VALVE WITH OUTLET CONNECTION VACUUM BREAKER.

   F. BALANCE RECIRCULATION BRANCH LINE FLOW AS REQUIRED FOR PROPER OPERATION OF SYSTEMS. PROVIDE COMBINATION BALANCE/SHUTOFF VALVE, CHECK VALVE, THERMOMETER/PRESSURE GAUGE FOR EACH BRANCH RECIRCULATING LINE.

   G. HORIZONTAL SUPPLY PIPING BELOW SLABS ON GRADE TO BE INSTALLED ENTIRELY BELOW THE SLAB STRUCTURE, INCLUDING CONDUIT SLEEVE WHEN PROVIDED. UNDER SLAB PIPING AND/OR CONDUIT SHALL NOT BE EMBEDDED OR SUPPORT SLAB STRUCTURES.

   H. COORDINATE INSTALLATION WITH STRUCTURE, SITE CONDITIONS AND WORK OF OTHER TRADES AT AND ADJACENT TO DOMESTIC WATER SERVICE PIPING INSTALLATIONS.

   I. MAINTAIN NECESSARY CLEARANCE FORM STRUCTURAL SUPPORT ELEMENTS AS REQUIRED FOR INSTALLATION OF DOMESTIC WATER SERVICE PIPING OUTSIDE OF SUPPORT/BEARING ZONES.

   J. WITH ALL OUTLETS CLOSED, FILL SYSTEM TO WORKING PRESSURE AND CLOSE VALVE AT SUPPLY MAIN.

SHOCK ABSORBERS

1. SIMILAR TO ZURN SHOCKTROL SERIES Z-1700, SIZED AND INSTALLED AS RECOMMENDED BY THE MANUFACTURER FOR SPECIFIC CONDITIONS AT EACH LOCATION.

2. EQUAL SHOCK ABSORBERS AS MANUFACTURED BY J.R. SMITH, JOSAM, SIOUX CHIEF OR PRECISION PLUMBING PRODUCTS MAY BE PROVIDED AT THE CONTRACTOR'S OPTION.

BACKFLOW PREVENTORS

1. NON-CARBONATED BEVERAGE DISPENSERS: 1/2" THRU 1" DUAL CHECK TYPE BACKFLOW PREVENTOR ASSEMBLIES SHALL BE SIMILAR TO WATTS MODEL NO. 7 WITH UNION CONNECTION BODY, BRONZE CONSTRUCTION, TWO (2) PLASTIC CHECK MODULES, BUNA-N-SEALS, STAINLESS STEEL SPRING AND "O" RING CHECK MODULE AND UNION SEALS. UNIT TO BE LISTED AS ASSE STANDARD 1024. SIZE AS INDICATED BY PIPING SIZE WHERE INSTALLED ON PLANS. ASSEMBLY TO BE RATED FOR 125 PSIG WORKING PRESSURE.

2. HIGH HAZARD/CONTAMINATION: REDUCED PRESSURE TYPE 2" AND SMALLER: WATTS LF009 REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER ASSEMBLY. UNIT TO BE NON-CORROSIVE 300 SERIES STAINLESS STEEL CONSTRUCTION, UNIT TO BE FULLY SERVICEABLE WHILE IN-LINE. UNIT SHALL HAVE A 175 PSI WORKING PRESSURE, STRAIGHT THROUGH FLOW DESIGN, ASSE 1013 APPROVED AND LABELED, AIR GAP FITTING, AND STRAINER UPSTREAM WITH ISOLATION QUARTER TURN BALL VALVES FOR ISOLATION. PIPE AIR GAP DRAIN TO FLOOR DRAIN WITH COPPER PIPING.

3. HIGH HAZARD/CONTAMINATION: REDUCED PRESSURE TYPE 2-1/2" AND LARGER; AMES MODEL 4000ss REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER ASSEMBLY. UNIT TO BE NON-CORROSIVE 300 SERIES STAINLESS STEEL CONSTRUCTION, UNIT TO BE FULLY SERVICEABLE WHILE IN-LINE. UNIT SHALL HAVE A 175 PSI WORKING PRESSURE, STRAIGHT THROUGH FLOW DESIGN, ASSE 1013 APPROVED AND LABELED, AIR GAP FITTING, AND STRAINER UPSTREAM WITH ISOLATION QUARTER TURN BALL VALVES FOR ISOLATION. PIPE AIR GAP DRAIN TO FLOOR DRAIN WITH COPPER PIPING.

4. AT ALL HOSE THREAD OUTLET CONNECTIONS TO THE DOMESTIC WATER SUPPLY SYSTEM NOT FURNISHED WITH AN INTEGRAL BACKFLOW PREVENTION DEVICE: PROVIDE ASSE 1011, 1019, 1035, OR 1052 LISTED HOSE CONNECTION VACUUM BREAKER, SELECTION DEPENDING ON APPLICATION, PERMANENTLY AFFIXED, WITH A 3/4" HOSE THREAD CONNECTION AT OUTLET.

5. UNLESS INDICATED OTHERWISE, BACKFLOW PREVENTION ASSEMBLY SIZE AS INDICATED BY THE PIPING SIZE WHERE INSTALLED ON DRAWINGS. EQUAL ASSEMBLIES AS MANUFACTURED BY ZURN, WILKINS, FEBCO, CONBRACO, HERSEY, AMES, OR LAWLER MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

6. PROVIDE BACKFLOW PREVENTORS FOR KITCHEN EQUIPMENT WHEN NOT PROVIDED BY THE KITCHEN EQUIPMENT SUPPLIER. PROVIDE THE FOLLOWING MODEL(S) UNLESS DIRECTED DIFFERENTLY BY THE DEPARTMENT OF HEALTH OR THE KITCHEN EQUIPMENT SUPPLIER:

   A. PROVIDE AN ASSE 1022 (SIMILAR TO WATTS REGULATOR MODEL SD-3) FOR THE FOLLOWING ITEMS; SODA MACHINE OR COKE MACHINE WITH WATER OUTLET.

TRAP PRIMER ASSEMBLIES

1. SIMILAR TO SIOUX CHIEF PRODUCTS PRIME PERFECT SERIES 695 WITH BRASS BODY AND WORKING PRESSURE OF 250 PSIG. PROVIDE WITH DISTRIBUTION UNIT AS REQUIRED FOR MULTIPLE SUPPLIES TO FLOOR DRAIN. PROVIDE COPPER PIPING FROM TRAP PRIMER UNIT TO FLOOR DRAIN TRAP PRIMER INLET.

2. EQUAL TRAP PRIMER ASSEMBLIES AS MANUFACTURED BY ZURN, J.R. SMITH, JOSAM, PRECISION PLUMBING PRODUCTS, WADE, SLOAN, MIFAB OR SIOUX CHIEF MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

HOSE BIBBS

1. INSTALL HOSE BIBBS PER MANUFACTURER RECOMMENDATIONS.

2. EXTERIOR HOSE BIBBS SHALL BE FROST PROOF TYPE. FURNISH WITH PERMANENTLY AFFIXED VACUUM BREAKER AND 3/4" HOSE BIBB CONNECTION AT OUTLET.

3. INTERIOR HOSE BIBBS TO HAVE A PERMANENTLY ATTACHED ASSE 1011 VACUUM BREAKER.

4. ROOF HYDRANTS TO BE ASSE 1052 LISTED/APPROVED AND MUST BE DRAINLESS.

5. EQUAL HOSE BIBBS AS MANUFACTURED BY WOODFORD, WATTS, WADE, JOSAM, J.R.SMITH, OR ZURN MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

BUILDING SOIL, WASTE AND VENT SYSTEM

1. APPLICATIONS FOR SANITARY AND VENT SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

   A. SANITARY AND VENT PIPING FROM DESIGNATED POINTS WITH ALL CONNECTIONS.

   B. DRAINAGE AND VENT PIPING FOR ALL OTHER MISCELLANEOUS SYSTEMS OR EQUIPMENT AS INDICATED ON DOCUMENTS AND AS REQUIRED.

   C. DIRECT AND INDIRECT DRAINAGE AND VENT PIPING FOR ALL OTHER MISCELLANEOUS SYSTEMS OR EQUIPMENT AS INDICATED ON DOCUMENTS AND AS REQUIRED.

   D. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SANITARY PIPING FINAL CONNECTIONS AND ALL INDIRECT PIPING FROM EQUIPMENT TO DRAIN TO COMPLETE THE SANITARY WASTE AND VENT PIPING SYSTEM AND TO COMPLETE THE INDIRECT DRAINAGE PIPING SYSTEM TO OPERATE ALL EQUIPMENT AND FIXTURES PROPERLY.

   E. FURNISH A COMPLETE SYSTEM OF INTERIOR SOIL WASTE DRAINAGE (INCLUDES SANITARY AND VENT PIPING) FROM BUILDING FIXTURES, EQUIPMENT, AND ANY OTHER ELEMENTS REQUIRING THE SAME.

2. PIPING TO BE AS FOLLOWS:

   A. STANDARD WEIGHT CAST IRON ASTM A-74/ASTM A-88/CISPI 301 LISTED/STAMPED DWV PIPE AND FITTINGS WITH NEOPRENE GASKET HUB AND SPIGOT. GASKETED NO-HUB MECHANICAL JOINTS AND CONNECTIONS MAY BE PROVIDED IN EXPOSED/ACCESSIBLE LOCATIONS WHERE IN FULL-COMPLIANCE WITH MANUFACTURER'S INSTALLATION GUIDELINES AND THE APPLICABLE PLUMBING CODE. INSTALLATION OF ALL CAST IRON PIPING AND FITTINGS SHALL BE IN FULL ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND CISPI.

   B. SCHEDULE 40 TYPE 1, GRADE 1, ASTM LISTED/STAMPED SOLID CORE TYPE PVC DWV PIPE AND FITTINGS WITH SOCKET SOLVENT SOLDER JOINTS AND CONNECTIONS MAY BE PROVIDED FOR ALL AREAS AND LOCATIONS NOT SUBJECT TO A RETURN AIR PLENUM. ALL PLENUM LOCATIONS TO BE CONFIRMED WITH THE HVAC CONTRACTOR IN ADVANCE. CAST IRON TO BE USED FOR ALL DRAINS AND FIXTURES RECEIVING DISCHARGE THAT EXCEEDS 120 DEGREES F FOR THE ENTIRE LENGTH OF WASTE CONVEYANCE.

   C. ABOVE FLOOR, ACCESSIBLE LOCATIONS ONLY: STANDARD WEIGHT CAST IRON DWV PIPE AND DWV FITTINGS WITH NO-HUB MECHANICAL COUPLING JOINTS AND CONNECTIONS.

   D. ABOVE FLOOR ONLY: ALL EXPOSED FIXTURE DRAINS AND DIRECT WASTE LINES SHALL BE CHROME PLATED BRASS PIPING.

   E. EXPOSED LOCATIONS ONLY: STANDARD WEIGHT COPPER DWV PIPE AND DWV FITTINGS WITH SOCKET SOLDER JOINTS AND CONNECTIONS.

   F. DRAIN-PUMP DISCHARGE ONLY: SCHEDULE 40 ASTM A53 GALVANIZED STEEL PIPE AND GALVANIZED CAST IRON DWV FITTINGS WITH THREADED JOINTS AND CONNECTIONS. OPTIONAL JOINTS AND CONNECTIONS MAY BE GROOVED PIPE SIMILAR TO VICTAULLIC STYLES 75 AND 77 FOR USE ABOVE GRADE ONLY.

3. EXECUTION

   A. FURNISH AND INSTALL A CLEANOUT AT THE BASE OF EACH STACK AND ELSEWHERE AS REQUIRED BY APPLICABLE THE PLUMBING CODE.

   B. ALL CAST IRON SOIL PIPE SHALL BE BITUMASTIC COATED INSIDE AND OUTSIDE. ALL CAST IRON PIPING (INCLUDING JOINTS AND CONNECTIONS) SHALL BE INSTALLED IN ACCORDANCE WITH STANDARDS AS SET FORTH BY THE CAST IRON SOIL PIPE INSTITUTE (CISPI).

   C. AT THE CONTRACTOR'S OPTION, HUBLESS CAST IRON SOIL PIPE MAY BE JOINED BY USING HEAVY DUTY "CLAMP ALL" COUPLINGS IN LIEU OF "NO-HUB" COUPLINGS. COUPLINGS ARE TO BE MADE OF 24 GAUGE TYPE 304 STAINLESS STEEL WITH HI-TORQUE CLAMPS AND NEOPRENE GASKETS. COUPLINGS SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS.

   D. PIPING SHALL BE INSTALLED ACCORDING TO THE PIPE MANUFACTURER'S SPECIFICATIONS & RECOMMENDATIONS INCLUDING PREPARATION, JOINING METHODS, ALLOWANCES FOR EXPANSION/CONTRACTION, BEDDING, BACKFILL, SUPPORT & RESTRAINT. CAST IRON PIPING 6" SIZE & LARGER SUSPENDED FROM OVERHEAD STRUCTURE WITH THE TOP OF PIPE MORE THAN 18" BELOW SHALL HAVE LISTED SWAY BRACING PROVIDED AT EACH 6" SIZE AND LARGER BRANCH CONNECTION GREATER THAN 45 DEGREES, AND AT EACH CHANGE OF DIRECTION GREATER THAN 45 DEGREES. IN ADDITION ALL PIPING 6" SIZE & LARGER SHALL HAVE ROD & CLAMP RESTRAINTS PROVIDED FOR FITTINGS AT EACH BRANCH CONNECTION & CHANGE OF DIRECTION (HORIZONTAL & VERTICAL). A TEE-WYE FITTING AND/OR A WYE FITTING WITH A DIRECT ATTACHED 1/8 BEND ELBOW IS CONSIDERED A BRANCH CONNECTION GREATER THAN 45 DEGREES. CAST IRON NO-HUB PIPING 12" SIZE & LARGER IN TEN FOOT LENGTHS SHALL HAVE HANGERS PROVIDED ON BOTH SIDES OF EACH COUPLING.

   E. PLASTIC PIPING SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS, WITH PARTICULAR ATTENTION TO REQUIREMENTS FOR JOINING METHODS, SUPPORT, AND ALLOWANCES FOR EXPANSION AND CONTRACTION. PROVIDE LISTED EXPANSION JOINT FITTINGS IN ALL PLASTIC PIPING DOWNSPOUT MAINS EXTENDING THROUGH TWO OR MORE FLOOR LEVELS IN ACCORDANCE WITH THE PIPING MANUFACTURER'S RECOMMENDATIONS. PLASTIC PIPING SHALL NOT BE INSTALLED IN ANY RETURN AIR PLENUM OR CHASE THAT IS USED FOR RETURN AIR.

   F. COORDINATE INSTALLATION WITH STRUCTURE, EXISTING CONDITIONS AND WORK OF OTHER TRADES AT AND ADJACENT TO SOIL, WASTE AND VENT SERVICE PIPING INSTALLATION.

DRAINS, CLEANOUTS, AND DRAINAGE SPECIALTIES

1. FURNISH AND INSTALL DRAINS, CLEANOUTS AND DRAINAGE SPECIALTIES AS INDICTED ON THE DRAWINGS, AND ELSEWHERE AS REQUIRED FOR COMPLETE DRAINAGE, ACCESS AND SPECIAL FUNCTION/OPERATION AT ALL ITEMS/ELEMENTS AND AREAS REQUIRING SAME AND FOR PROPER INTEGRATION WITH THE BUILDING DRAINAGE SYSTEM.

2. UNLESS INDICATED OTHERWISE, ALL ITEMS/ELEMENTS AND THEIR COMPONENT PARTS DESCRIBED HEREIN TO BE OF METALLIC CONSTRUCTION WHEN SUCH IS AVAILABLE FOR THE BASE SPECIFIED ITEM/ELEMENT. USE OF PLASTIC, COMPOSITE, OR OTHER NON-METALLIC COMPONENTS AND/OR MATERIALS BY LISTED ALTERNATE ITEMS/ELEMENTS IS PROHIBITED.

3. PRODUCTS

   A. HUB DRAINS TO CONSIST OF STRAIGHT SECTION OF HUB OR SOCKET TYPE CONNECTION WASTE PIPE INSTALLED IN THE VERTICAL POSITION, WITH THE HUB OR SOCKET PORTION EXPOSED ABOVE THE FLOOR. THE HUB INLET SHALL BE A MINIMUM OF 1" ABOVE THE FLOOR SURFACE. HUB OR SOCKET WASTE PIPE MATERIAL TO MATCH THAT OF THE SYSTEM IT IS CONNECTED TO.

   B. FURNISH AND INSTALL A P-TRAP FOR EACH SANITARY DRAIN INLET TERMINAL (FLOOR DRAIN, HUB DRAIN, FLOOR SINK, ETC.,) OF THE SAME MATERIAL AND CONNECTION TYPE AS THE PIPING SYSTEM CONNECTED TO, UNLESS INDICATED OTHERWISE.

   C. THIS CONTRACTOR TO USE BRONZE PLUGS ONLY.

   D. ALL CLEANOUTS INSTALLED IN CARPETED AREAS TO BE PROVIDED WITH APPROVED VANDALPROOF CARPET MARKERS. CARPETED AREAS TO BE AS INDICATED BY ARCHITECTURAL DOCUMENTATION, AND CONFIRMED WITH THE GENERAL CONTRACTOR.

   E. CLEANOUTS IN TILE, MARBLE, TERRAZZO, PARQUET OR OTHER "SPECIAL" FLOOR TREATMENT AREAS TO BE PROVIDED WITH RECESSED TOPS TO ALLOW THE INTEGRATION WITH THE FLOOR TREATMENT. "SPECIAL" FLOOR TREATMENT AREAS TO BE AS INDICATED BY ARCHITECTURAL DOCUMENTATION, AND CONFIRMED WITH THE ARCHITECT/PRIME.

   F. EQUAL DRAINS, DRAINAGE SPECIALTIES AND CLEANOUTS AS MANUFACTURED BY ZURN, JOSAM, MIFAB, SIOUX CHIEF, WATTS OR J.R. SMITH MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

4. EXECUTION

   A. WHEN TRAP PRIMER WATER SUPPLY IS INDICATED ON PLANS FOR DRAIN ASSEMBLIES, THE CONTRACTOR HAS THE OPTION TO CONNECT TO A FITTING ON EITHER THE DRAIN ASSEMBLY OR THE P-TRAP INLET ABOVE THE WATER SEAL, IN ACCORDANCE WITH INSPECTION/APPROVAL AUTHORITIES. PROVIDE A DIELECTRIC UNION AT TRAP PRIMER SUPPLY CONNECTION POINTS. WHEN DRAIN BODY PRIMER CONNECTIONS OCCUR WITHIN THE SLAB/FLOOR STRUCTURE, PROVIDE AN OFFSET IMMEDIATELY ADJACENT TO THE DRAIN LOCATION TO ALLOW INSTALLATION OF SUPPLY PIPING ENTIRELY BELOW THE SLAB/FLOOR STRUCTURE, INCLUDING THE CONDUIT SLEEVE REQUIRED FOR TRAP PRIMER SUPPLY PIPING UNDER SLAB ON GRADE.

   B. PROVIDE A COMPATIBLE FASTENING ASSEMBLY WITH INTERNAL SECONDARY DRAINAGE FLANGE AND WEEPHOLES FOR ALL ITEMS SPECIFIED HEREIN BEING INSTALLED IN STRUCTURES HAVING A WATER PROOF MEMBRANE, FLASHING, VAPOR BARRIER, OR SIMILAR ELEMENT PROVIDED UNDER SEPARATE CONTRACT. INSTALLATION CONDITIONS TO BE VERIFIED FROM ARCHITECTURAL DOCUMENTATION AND COORDINATED WITH THE APPROPRIATE CONTRACTOR.

   C. COUNTER FLASHING (WHEN REQUIRED) FOR ITEMS SPECIFIED HEREIN IS TO BE COMPATIBLE WITH WATERPROOF MEMBRANE, VAPOR BARRIER, FLASHING, OR SIMILAR ELEMENTS PROVIDED UNDER SEPARATE CONTRACT AT THE INTERFACE POINT. COUNTER FLASHING TO BE PROVIDED AND SET IN PLACE BY THE PLUMBING CONTRACTOR. BUT WILL BE MADE WATERTIGHT BY THE CONTRACTOR INSTALLING THE MEMBRANE, VAPOR BARRIER, FLASHING OR SIMILAR ELEMENTS PROVIDED UNDER SEPARATE CONTRACT. INSTALLATION CONDITIONS TO BE VERIFIED FROM ARCHITECTURAL DOCUMENTATION AND COORDINATED WITH THE APPROPRIATE CONTRACTOR.

   D. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING ALL DRAINS, CLEANOUTS AND OTHER ITEMS SO NOTED INSTALLED FLUSH AND LEVEL WITH FINISH WALL, FLOOR OR OTHER STRUCTURE AS APPLIES. COORDINATE INSTALLATION WITH CONTRACTOR'S PROVIDING ASSOCIATED STRUCTURE, INCLUDING REQUIRED ELEVATIONS AND DIMENSIONAL LOCATIONS. ITEMS NOT PROPERLY INSTALLED SHALL BE REMOVED AND REPLACED TO THE SATISFACTION OF THE OWNERS' ON-SITE REPRESENTATIVE.

   E. ALL ITEMS AND ACCESSORIES SPECIFIED HEREIN ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND IN ACCORDANCE THE REQUIREMENTS OF THE INSPECTION/APPROVAL AUTHORITIES.

   F. COORDINATE LOCATION OF ALL DRAINS AS REQUIRED FOR PROPER OPERATION WHEN ASSOCIATED WITH SLOPED FLOORS, DECKS OR OTHER STRUCTURES PROVIDED UNDER SEPARATE CONTRACT.

   G. VERIFY EXACT LOCATIONS OF DRAINS FURNISHED FOR ITEMS UNDER SEPARATE CONTRACT WITH THE EQUIPMENT AS ACTUALLY PROVIDED AND INSTALLED BY THE APPROPRIATE CONTRACTOR. COORDINATE INSTALLATION IN ADVANCE OF WORK.

   H. WITH THE EXCEPTION OF CLEANOUTS, ALL ITEMS SPECIFIED ARE TO HAVE CONNECTION SIZE SAME AS CONNECTED PIPING SIZE SHOWN ON THE DRAWINGS, UNLESS DIRECTED OTHERWISE.

   I. CLEANOUTS ARE TO HAVE OUTLET SIZE, CONNECTION PIPE AND FITTINGS OF SAME SIZE AS SHOWN ON PLANS FOR WASTE/DRAIN PIPING BEING SERVED, UP TO AND INCLUDING 3" SIZE. CLEANOUTS ARE TO HAVE OUTLET SIZE, CONNECTING PIPE AND FITTINGS OF 4" SIZE WHEN SHOWN ON THE DRAWINGS SERVING WASTE/DRAIN PIPING 4" SIZE AND LARGER.

   J. WHERE INDIVIDUAL SINK SOLIDS INTERCEPTORS ARE INDICATED ON THE DRAWINGS, THEY ARE TO BE PROVIDED IN LIEU OF P-TRAP FOR SINK IF SO SPECIFIED. INSTALL INTERCEPTOR TO ALLOW PROPER ACCESS FOR CLEANING AND SERVICE, INTERCEPTOR TO BE SUPPORTED FROM FLOOR BELOW SO AS NOT TO BEAR ON SINK, PIPING OR ASSOCIATED CASEWORK SUPERSTRUCTURE. PROVIDE ADDITIONAL APPROVED BLOCKING/BASE/STAND AS REQUIRED FOR SUPPORT FROM BASE OF CASEWORK OR FLOOR BELOW AS APPLICABLE.

   K. COORDINATE LOCATIONS OF ITEMS SPECIFIED HEREIN, AND INSTALLED IN OR AT STRUCTURE PROVIDED UNDER SEPARATE CONTRACT, RELATIVE TO FOUNDATIONS, BEAMS AND OTHER STRUCTURE ELEMENTS TO AVOID CONFLICTS. MAKE MINOR ADJUSTMENTS AS REQUIRED FOR PROPER INSTALLATION, CLEARANCE AND ACCESSIBILITY. REFER TO ARCHITECTURAL/STRUCTURAL DOCUMENTATION IN ADVANCE OF WORK AND COORDINATE INSTALLATION WITH THE APPROPRIATE CONTRACTOR.

   L. ALL ITEMS/ELEMENTS SPECIFIED THAT ARE TO BE INTEGRATED INTO ABOVE GRADE STRUCTURE SHALL BE FURNISHED WITH AN ANCHOR FLANGE. WHEN SUCH IS AVAILABLE. SECONDARY DRAINAGE FLANGE AT DRAIN ASSEMBLIES MAY ALSO SERVE AS AN ANCHORING FLANGE, SUBJECT TO APPROVAL.

STORAGE TANK ELECTRIC WATER HEATER

1. FURNISH AND INSTALL ELECTRIC WATER HEATER(S), ACCESSORIES, AND APPURTENANCES AS REQUIRED TO PROVIDE DOMESTIC HOT WATER SUPPLY TO ALL ITEMS/ELEMENTS INDICATED ON PLANS, AND TO ANY AND ALL OTHER POINTS REQUIRING SAME. THE ASSEMBLY SHALL INCLUDE ALL COMPONENTS NECESSARY FOR AUTOMATICALLY MAINTAINING CONSTANT WATER TEMPERATURE SUPPLY.

2. HOT WATER HEATERS MUST COMPLY WITH ALL REQUIREMENTS OF THE APPLICABLE ENERGY CONSERVATION CODE.

3. PRODUCTS

   A. GLASS LINED TANK SHALL BE INSULATED WITH VERMIN-PROOF GLASS FIBER INSULATION AND THE OUTER STEEL JACKET SHALL HAVE A BAKED ENAMEL FINISH OVER A BONDERIZED UNDER COATING.

   B. HEATER SHALL HAVE A WORKING PRESSURE OF 150 PSIG.

   C. WATER HEATER SHALL HAVE AN EXTRUDED MAGNESIUM ANODE ROD RIGIDLY SUPPORTED FOR CATHODIC PROTECTION.

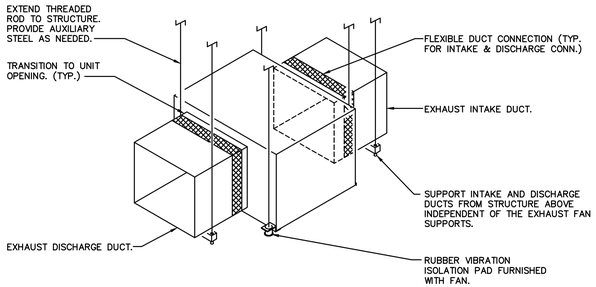
   D. HEATER SHALL HAVE A THREE YEAR LIMITED WARRANTY AGAINST CORROSION.

   E. HEATER SHALL BY A.O.SMITH, RHEEM/RUUD, BRADFORD WHITE, BOCK, NATIONAL, STATE, OR LOCHINVAR OF THE SAME TYPE AND CAPACITY MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

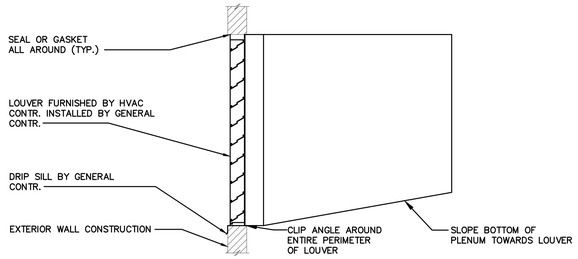
   F. THERMAL EXPANSION TANKS SHALL BE SIMILAR TO AMTROL INC. ST-C EXTROL SERIES CAPACITIES AS INDICATED ON PLANS. FURNISH WITH STEEL SHELL, RIGID POLYPROPYLENE LINER AND HEAVY DUTY FIBBER DIAPHRAGM. LINER AND DIAPHRAGM MECHANICALLY BONDED TO SHELL TO FORM A SEPARATE AIR CHAMBER AND NON-CORROSIVE WATER RESERVOIR. THIS CONTRACTOR TO FIELD ADJUST THE MANUFACTURER'S PRE-CHARGED AIR PRESSURE TO ACTUAL PROJECT SPECIFIC SYSTEM WORKING PRESSURE PARAMETERS PER MANUFACTURER'S RECOMMENDATIONS. EXPANSION TANKS SHALL BE INDEPENDENTLY SUPPORTED FROM ADJACENT STRUCTURE AND SHALL NOT BEAR WEIGHT ON CONNECTION FITTING. TANKS TO BE ASME AND NSF LISTED.

   G. ALL WATER HEATERS THAT DO NOT INCLUDE AS AN INTEGRAL LISTED/APPROVED ANTI-SIPHON DEVICE IN ACCORDANCE WITH ANSI STANDARDS SHALL HAVE A VACUUM RELIEF VALVE INSTALLED IN COLD WATER SUPPLY PIPING TO THE HEATER PER INSPECTION/APPROVAL AUTHORITIES REQUIREMENTS. RELIEF VALVE TO BE SIMILAR TO WATTS MODEL NO. N36.

4. EXECUTION



EXHAUST FAN INSTALLATION DETAIL
SCALE: NO SCALE



LOUVER DETAIL
SCALE: N.T.S.

FAN SCHEDULE

MANUFACTURER'S MODEL NUMBER BASED ON GREENHECK UNLESS OTHERWISE NOTED.
KEY: CENT.–CENTRIFUGAL; PROP.–PROPELLER; F.C.–FORWARD CURVED; B.I.–BACKWARD INCLINE; A.F.–AIR FOIL; A.T.L.–ACROSS THE LINE; VFD–VARIABLE FREQUENCY DRIVE

FAN NO.	LOCATION	FUNCTION	MFGR. MODEL NUMBER	FAN TYPE	WHEEL TYPE & SIZE	CFM	EXT. S.P. "W.G.	R.P.M.	TIP SPEED F.P.M.	OUTLET VELOCITY F.P.M	MAX. SOUND RATING	MOTOR H.P.	BHP REQ'D	VOLT / PHASE	TYPE MOTOR STARTING	DAMPER DRIVE: GRAVITY	DAMPER DRIVE: MOTOR OPERATED	DAMPER DRIVE: ADJUST. V-BELT	DAMPER DRIVE: DIRECT	REMARKS
EF–1	STORAGE ROOM	RESTROOM EXHAUST	GREENHECK SQ–95–VG	INLINE	B.I. 10.875"	600	0.50"	1703	4850	600	9.4 SONES	1/4	0.13	115 / 1	A.T.L.		●		●	1 2 3 4

1 EC MOTOR W/ DIAL FOR BALANCING. 2 SUPPORT FAN FROM STRUCTURE ABOVE WITH RODS, VIBRATION ISOLATORS, AND AUXILIARY STEEL. 3 FAN SHALL BE CONTROLLED BY TIME CLOCK. 4 FAN TO BE FURNISHED W/ FACTORY MOUNTED VARIABLE SPEED SWITCH FOR BALANCING.

UNIT HEATER SCHEDULE

MANUFACTURER'S MODEL NUMBER BASED ON QMARK UNLESS OTHERWISE NOTED.

UNIT NO.	ROOM	MFGR. MODEL NUMBER	KW	MBH	AMPS	HP	RPM	CFM	VOLT / PHASE	REMARKS
UH–1	STORAGE	MUH–03–81	3.0	10.2	14.5	1/100	1600	350	208 / 1	1 2

1 FURNISH WITH INTEGRAL THERMOSTAT. 2 FURNISH WITH CEILING MOUNTING BRACKET

CABINET UNIT HEATER SCHEDULE

MANUFACTURER'S MODEL NUMBER BASED ON QMARK UNLESS OTHERWISE NOTED.

UNIT NO.	LOCATION	FRAME TYPE	MFGR. MODEL NUMBER	KW	MBH	AMPS	VOLT / PHASE	REMARKS
CUH–1	WOMEN'S RESTROOM	SURFACE MOUNT	AWH4508F	4.8	16.4	23.1	208 / 1	1 2
CUH–2	MEN'S RESTROOM	SURFACE MOUNT	AWH4508F	4.8	16.4	23.1	208 / 1	1 2
CUH–3	UNISEX RESTROOM	SURFACE MOUNT	AWH4404F	3.0	10.2	14.4	208 / 1	1 2

1 FURNISH WITH INTEGRAL THERMOSTAT. 2 FURNISH WITH CIRCUIT BREAKER.

LOUVER SCHEDULE

MANUFACTURER'S MODEL NUMBER BASED ON GREENHECK UNLESS OTHERWISE NOTED.

UNIT NO.	MODEL NUMBER	LOCATION	WIDTH (INCHES)	HEIGHT (INCHES)	DEPTH (INCHES)	FREE AREA (SF)	REMARKS
L–1	ESD–635	STORAGE ROOM	24	16	6	0.9	1 2
L–2	ESD–635	RESTROOMS	20	12	6	0.4	1 2

1 OPENING IN WALL BY G.C. 2 PROVIDE WITH KYNAR 500 FINISH. COLOR SELECTION BY ARCHITECT.

AIR TERMINAL SCHEDULE

ROUND AND SQUARE DIFFUSERS: TYPE OF OUTLET – SIZE OF OUTLET (NECK SIZE DIAMETER FOR DIFFUSERS) – AIR QUANTITY IN C.F.M. (DIFF. & REG. ONLY). Example: A – 8 – 300

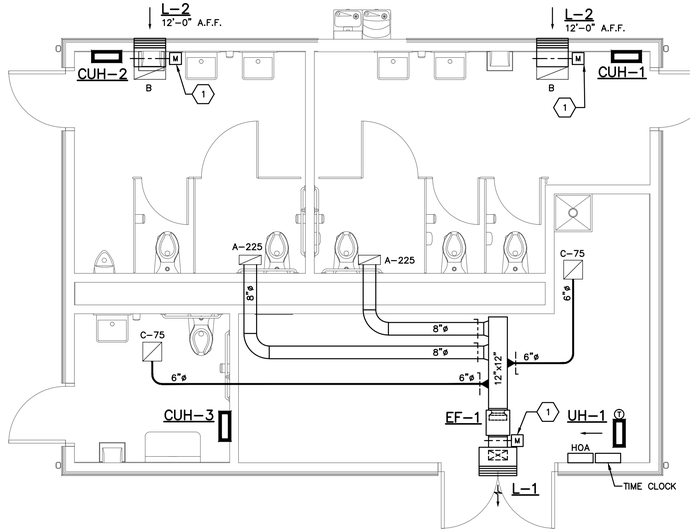
LINEAR DIFFUSERS: TYPE OF OUTLET – NUMBER OF SLOTS – AIR QUANTITY IN C.F.M. (DIFF. & REG. ONLY). Example: C4 – 300

TYPE	DESCRIPTION
A	RETURN/EXHAUST AIR GRILLE, SURFACE MOUNTED, PRICE MODEL 530: 14"x6" UNLESS OTHERWISE NOTED. FURNISH WITH BLADES PARALLEL TO "LONG" DIMENSION.
B	RETURN/EXHAUST AIR GRILLE, SURFACE MOUNTED, PRICE MODEL 530: 20"x8" UNLESS OTHERWISE NOTED. FURNISH WITH BLADES PARALLEL TO "LONG" DIMENSION.
C	RETURN/EXHAUST AIR GRILLE, SURFACE MOUNTED, PRICE MODEL 530: 8"x4" UNLESS OTHERWISE NOTED. FURNISH WITH BLADES PARALLEL TO "LONG" DIMENSION.

NOTES: 1. PROVIDE A SHEET METAL PLENUM ABOVE/BEHIND EACH DUCTED GRILLE OR REGISTER FOR MAKING A CONNECTION TO THE BRANCH DUCT. PAINT THE INSIDE OF ALL UNLINED PLENUMS FLAT BLACK.

CODED NOTES ⬡

1. MOTOR OPERATED DAMPER INTERLOCKED W/ EF–1.



HVAC PLAN
SCALE: 1/4"=1'–0"

verdantas
4420 COOPER RD, SUITE 200
CINCINNATI, ON 45242

SEALS

STATE OF OHIO · TIM PRATER E–51932 · REGISTERED PROFESSIONAL ENGINEER
11/10/2025

REVISIONS

No.	REVISION	DATE	BY
0	PROGRESS SET	10-23-2025	
	100% REVIEW SET	10-31-2025	
	BID/PERMIT SET	11-21-2025	

DRAWING TITLE & PROJECT NAME

HVAC PLAN

SUNBURY OHIO
JR SMITH PARK PAVILLION
JR SMITH PARK PAVILLION

H101–25106.DWG

PRATER
Engineering Associates, Inc.
6130 Wilcox Road
Dublin, Ohio 43016
(614) 766 4896
praterengineering.com

DESIGNED BY	DRAWN BY	CHECKED BY	JOB NUM.
B. MCFERRIN	B. MCFERRIN	J. LOCKARD, P.E.	25106

DRAWN BY	PEA
CHECKED BY	PEA
DATE	07/30/2025
PROJECT NO.	41545
PROJECT STATUS	TBD
DRAWING NO.	H101

MECHANICAL SPECIFICATIONS

1.

I. GENERAL CONDITIONS

1.

GENERAL

1. EXCEPT AS SPECIFIED TO THE CONTRARY, THIS CONTRACTOR SHALL INCLUDE FURNISHING, INSTALLING, CONNECTING AND OPERATION OF ALL EQUIPMENT WHICH IS PART OF MECHANICAL SYSTEMS.
2. GENERAL AND SPECIAL CONDITIONS OF AIA (AMERICAN INSTITUTE OF ARCHITECTS) AND OWNER'S GENERAL REQUIREMENTS SHALL APPLY UNLESS NOTED OTHERWISE.
3. THE REQUIREMENTS SET FORTH UNDER "GENERAL CONDITIONS". "MODIFICATIONS TO GENERAL CONDITIONS" AND "SPECIAL CONDITIONS" ARE PART OF THIS CONTRACT.
4. THIS CONTRACT SHALL INCLUDE A VISIT TO THE JOB SITE AND TAKE INTO CONSIDERATION MECHANICAL, ELECTRICAL AND GENERAL TRADE WORK IN PLACE AND WORK TO BE PUT INTO PLACE PRIOR TO BIDDING. REROUTING OF DUCTWORK, PIPING, AND EQUIPMENT, AS REQUIRED TO MISS THIS WORK SHALL BE ACCOMPLISHED AT NO ADDITIONAL COST TO THE OWNER.
5. ALL MOTORS FOR SUCH EQUIPMENT (IF AND WHERE SPECIFIED ON THE DRAWINGS) SHALL BE FURNISHED AND INSTALLED AS PART OF THIS CONTRACT. CONTROLS FOR SUCH MOTORS SHALL BE FURNISHED UNDER THIS CONTRACT AND INSTALLATION OF CONTROLS AND ALL ELECTRICAL WIRING NOT SHOWN ON ELECTRICAL DRAWINGS, SHALL BE PERFORMED UNDER THIS CONTRACT.

SUBSTITUTIONS AND MISCELLANEOUS EQUIPMENT

1. THE BIDDING OF THIS WORK WILL CONTEMPLATE THE USE OF EQUIPMENT AND MATERIALS EXACTLY AS SPECIFIED HEREIN. WHERE ONE OR MORE NAMES OF MANUFACTURERS ARE MENTIONED ANY ONE MAY BE UTILIZED.
2. ALTERNATE EQUIPMENT MAY BE BID AS A SUBSTITUTION TO THAT SPECIFIED WITH THE APPROPRIATE DEDUCT NOTED. HOWEVER; THE EQUIPMENT SUBSTITUTED SHALL MEET ALL SPECIFICATIONS IN DESIGN AND BE SUBJECT TO OWNER AND/OR ENGINEER APPROVAL. ANY ADDITIONAL COST INCURRED DUE TO SUBSTITUTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
3. MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THE PIPING SYSTEMS SUCH AS FITTING, HANGERS, ETC., CAN BE OF ANY RECOGNIZED MANUFACTURER PROVIDED THESE ITEMS MEET MINIMUM STANDARDS AS SET BY THE ENGINEER.

ORDINANCES, PERMIT CERTIFICATES AND OWNER REQUIREMENTS

1. ALL WORK UNDER THIS CONTRACT SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE OWNER'S REQUIREMENTS, ALL LAWS, ORDINANCES AND ALL REGULATIONS OF THE STATE, COUNTY, AND MUNICIPALITY WHICH IN ANY WAY AFFECTS THIS WORK. THE ARCHITECT WILL OBTAIN THE GENERAL BUILDING, MECHANICAL, ELECTRICAL, AND PLUMBING PERMITS. ANY OTHER PERMITS AND CERTIFICATES OF INSPECTION REQUIRED FOR THE PROJECT WILL BE OBTAINED BY THE CONTRACTOR PERFORMING THE WORK. FEES WILL BE INCLUDED IN THE BID PRICE. ALL WORK SHALL ALSO BE INSTALLED IN ACCORDANCE WITH REGULATIONS OF THE FIRE UNDERWRITERS HAVING JURISDICTION AND LOCAL UTILITIES. CONTRACTOR SHALL ALSO SECURE ANY PERMITS OR PAY ANY FEES TO THE LOCAL UTILITY COMPANIES FOR THE WORK REQUIRED.

DRAWINGS

1. MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW THE APPROXIMATE LOCATION OF OUTLETS, EQUIPMENT AND PIPING.
2. THE EXACT LOCATION OF OUTLETS, EQUIPMENT AND PIPING MAY BE CHANGED FROM TIME TO TIME AS WORK PROGRESSES. UNDER THIS CONTRACT ALL LOCATIONS SHALL BE VERIFIED WITH ALL TRADES AND THAT THEY ARE ACCORDING TO THE LATEST INFORMATION AVAILABLE. SHOULD THIS NOT BE DONE THE WORK WILL BE CHANGED AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. THE OWNER RESERVES THE RIGHT TO MAKE MINOR CHANGES IN LOCATION OF EQUIPMENT OF PIPING ARRANGEMENTS UP TO THE TIME OF ROUGH-IN WITHOUT ADDITIONAL COSTS TO THE OWNER.
4. THE DRAWINGS AND SPECIFICATION ARE INTENDED TO SUPPLEMENT EACH OTHER AND ANY MATERIALS OR LABOR CALLED FOR IN ONE SHALL BE FURNISHED EVEN THOUGH NOT MENTIONED IN BOTH. ANY MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK AND WHICH IS USUALLY INCLUDED IN WORK OF A SIMILAR CHARACTER SHALL BE FURNISHED UNDER THIS CONTRACT.
5. AS PART OF THIS WORK THE CONTRACTOR SHALL SUBMIT ONE (1) ELECTRONIC SET OF AS BUILT DRAWINGS INDICATING THE EXACT LOCATION OF ALL WORK INSTALLED. ACCEPTANCE SHALL NOT OCCUR UNTIL RECEIPT OF THESE DRAWINGS IS OBTAINED BY THE OWNER.

SHOP DRAWINGS

1. AS PART OF THIS WORK INCLUDED UNDER EACH MECHANICAL SECTION, WITHOUT CAUSING ANY DELAY IN WORK, SHOP DRAWINGS OF ALL EQUIPMENT AND MATERIAL SHALL BE SUBMITTED FOR ENGINEER'S REVIEW.
2. SUBMITTAL SHALL INCLUDE WIRING DIAGRAMS, PERFORMANCE CURVES AND DATA SPECIFIC TO THIS PROJECT AND BEAR CONTRACTOR'S APPROVAL STAMP CERTIFYING THAT THEY HAVE VERIFIED CONFORMANCE TO THE CONTRACTUAL DOCUMENTS.
3. IN THE ENGINEER'S REVIEW OF SHOP DRAWINGS, REVIEW IS FOR CONFORMANCE WITH THE GENERAL DESIGN CONCEPT AND ARRANGEMENT ONLY. COMMENTS, CORRECTIONS, OR MARKINGS DO NOT CONSTITUTE WAIVER OF THE CONTRACT DOCUMENTS REQUIREMENTS. DIMENSIONS, QUANTITIES, AND COORDINATION ARE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THIS CONTRACTOR IS TO PROVIDE 1/4" SCALE REPRODUCIBLE DRAWINGS (CONSTRUCTION SET) OF SHEET METAL DRAWINGS FOR USE IN COORDINATING WORK OF PLUMBING, FIRE PROTECTION AND ELECTRICAL WITH LAYOUT OF AIR DISTRIBUTIONS SYSTEM AND RELATED WORK. LIGHTING, CEILING GRID AND CEILING ACCESS DOORS WILL BE SHOWN LIGHTLY TO VERIFY COORDINATION. HVAC CONTRACTOR TO PROVIDE INITIAL DRAWINGS WITHIN 60 DAYS OF AWARD OF CONTRACT. EACH PRIME CONTRACTOR IS RESPONSIBLE FOR OVERLAYING THEIR WORK ONTO THESE DRAWINGS; FOR PROVIDING INFORMATION AS TO SIZE, ELEVATION AND LOCATION PROPOSED FOR ALL COMPONENTS; AND FOR COORDINATION OF THEIR WORK WITH THAT OF OTHER CONTRACTORS. FINAL RESOLUTION OF ALL ITEMS TO BE DETERMINED AT PROJECT MEETINGS HELD BY ARCHITECT OR OWNER.

CLEANING UP

1. UNLESS OTHERWISE NOTED, ALL EXCESS MATERIALS AND DEBRIS CAUSED BY THIS WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND PROMPTLY BE REMOVED FROM THE SITE. ALL FIXTURES AND EQUIPMENT INSTALLED SHALL BE THOROUGHLY CLEANED WEEKLY. ALL MOTORS AND EQUIPMENT SHALL BE COVERED OR OTHERWISE PROTECTED FROM CONSTRUCTION DUST AND DEBRIS. NO EQUIPMENT OTHER THAN THOSE DESIGNED TO ARE TO BE EXPOSED TO INCLEMENT WEATHER. TOUCH UP ALL SCRATCHES AND REPAIR ANY DENTS IN EQUIPMENT.

CUTTING AND PATCHING

1. CUTTING FOR OPENINGS, WHEN NECESSARY, SHALL BE DONE BY THIS CONTRACTOR WITH SUCH TOOLS AND METHODS AS TO PREVENT UNNECESSARY DAMAGE TO SURROUNDING AREAS OR EQUIPMENT.
2. FILL SPACE IN ALL AREAS WHERE PACKING IS REQUIRED TO MAINTAIN FIRE RATING. OPENINGS SHALL BE TEMPORARILY FIRE STOPPED UNTIL PERMANENT FIRE STOPPING IS DONE. THIS INCLUDES HOLES LEFT DUE TO REMOVAL OF PIPING.
3. PATCHING SHALL MATCH EXISTING SURFACES IN KIND AND FINISH, AND SHALL BE DONE BY THE GENERAL CONTRACTOR.
4. NO STRUCTURAL MEMBER WILL BE CUT INTO WITHOUT THE EXPRESSED PERMISSION THE OWNER'S REPRESENTATIVE.

GUARANTEE

1. ALL LABOR AND MATERIALS FURNISHED UNDER THIS CONTRACT SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER WHICH WILL COMMENCE UPON THE FINAL INSPECTION BY THE ENGINEER. DURING THIS TIME, ALL LEAKS, CORRECTION OF ALL THE FAILURES TO SUCH MATERIAL AND THE CORRECTION OF ALL DISCREPANCIES WITH DRAWING CODE, AND THE PROJECT SPECIFICATIONS SHALL BE DONE UNDER THIS CONTRACT AT NO ADDITIONAL EXPENSE TO THE OWNER.

RECORD DRAWINGS

1. THIS CONTRACTOR SHALL KEEP AN ACCURATE RECORD OF ALL DEVIATIONS FROM CONTRACT DRAWINGS AND SPECIFICATIONS. THEY SHALL NEATLY AND CORRECTLY ENTER IN COLORED PENCIL ANY DEVIATIONS ON THE BLUEPRINTS OR BLUELINE DRAWINGS. AT COMPLETION OF THE PROJECT DELIVER DRAWINGS TO OWNER'S REPRESENTATIVE.

II. HVAC

1.

HVAC INSULATION

1. INSULATION THICKNESSES ARE BASED ON INSULATION HAVING THERMAL RESISTANCE IN THE RANGE OF 4.0 HR F FT2/BTU TO 4.6 HR F FT2/BTU PER INCH OF THICKNESS ON A FLAT SURFACE AT A MEAN TEMPERATURE OF 75'F. MINIMUM INSULATION THICKNESS SHALL BE INCREASED FOR MATERIALS HAVING R VALUES LESS THAN 4.0 OR MAY BE REDUCED FOR MATERIALS HAVING R VALUES GREATER THAN 4.6 TO GIVE EQUIVALENT "R" VALUES. ALL INSULATING MATERIALS, INCLUDING JACKETS, CEMENTS, ADHESIVES, VAPOR BARRIERS, ETC., SHALL BE U.L. LISTED WITH A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DEVELOPED RATING NOT TO EXCEED 50. MOLDED PLASTIC FITTING COVERS SHALL BE U.L. APPROVED WITH A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DEVELOPED RATING NOT TO EXCEED 50. PIPE INSULATION SHALL BE SCHUELLER "MICRO-LOK" GLASS FIBER INSULATION RATED FOR 850'F. WITH FACTORY APPLIED AP-1 ALL PURPOSE, SELF-SEALING VAPOR BARRIER JACKET. BUTT STRIPS SHALL BE MINIMUM 3" WIDE OF SAME MATERIAL AS JACKET. DUCT INSULATION SHALL BE SCHUELLER RIGID TYPE AS NOTED WITH FSK GLASS FIBER REINFORCED FOIL FACED FLAME RESISTANT KRAFT PAPER VAPOR BARRIER FACING. ALL COVER ABOVE SHALL BE BY SCHUELLER. EQUIVALENT TYPE THICKNESS AND CONDUCTIVITY INSULATION BY OWENS CORNING, KNAUF, OR CERTAINTEED MEETING ALL REQUIREMENTS MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.
2. COVER ALL DUCTWORK AS FOLLOWS:
   A. ALL ROUND DUCTWORK IN THE CEILING SPACE SHALL BE INSULATED W/ 1 1/2" THICK, 1 LB. DENSITY BLANKET FLEXIBLE DUCT INSULATION.
   B. ALL ROUND DUCTWORK THAT IS EXPOSED SHALL BE LINED WITH JOHNS MANVILLE SPIRACOUSTIC PLUS DUCT LINER.
   C. ALL RECTANGULAR MEDIUM AND LOW PRESSURE DUCTWORK IS TO BE LINED.
   D. LINED DUCTS WITHIN THE CEILING PLENUM SPACE DO NOT REQUIRE WRAPPING. SEE DUCT LINER SECTION FOR REQUIREMENTS. ALL OUTSIDE AIR DUCTS SHALL BE INSULATED W/ 3" THICK, 1 LB. DENSITY BLANKET FLEXIBLE DUCT INSULATION. ADHERE INSULATION TO DUCT SURFACE WITH FOSTER NO. D. 85-20 ADHESIVE APPLIED IN 6" WIDE STRIPS ON 12" CENTERS. BUTT ALL EDGES OF INSULATION AND SEAL ALL JOINTS WITH A FOIL-SKRIM-KRAFT TAPE OR FLANGE ADHERED OVER THE JOINT.
   E. SECURE INSULATION WITH FLARE DOOR STAPLES UNTIL THE ADHESIVE SETS. SEAL ALL BREAKS AND JOINTS IN VAPOR BARRIER WITH 2-1/2" WIDE PRESSURE SENSITIVE TAPE TO MATCH VAPOR BARRIER FACING. ADHERE WITH FOSTER 85-20 ADHESIVE WHERE NECESSARY.
3. COVER CONDENSATION DRAIN PIPING AS FOLLOWS:
   A. COVER ALL PIPING WITH 1/2" THICKNESS GLASS FIBER PIPE INSULATION.
   B. SEAL ALL LAPS AND BUTT STRIPS WITH WHITE VAPOR BARRIER CEMENT OR FACTORY SELF-SEALING LAPS.
   C. FITTINGS SHALL BE WRAPPED WITH COMPRESSED FIBERGLASS TO SAME THICKNESS AND DENSITY AS ADJACENT PIPE INSULATION AND COVERED WITH A MOLDED PLASTIC FITTING.

GRILLES, REGISTERS AND DIFFUSERS

1. REFER TO DRAWINGS FOR BASIS OF DESIGN.
2. AIR DEVICES BY ANEMOSTAT, KRUEGER OR PRICE, MEETING ALL SPECIFIED REQUIREMENTS MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.
3. ALL LINEAR DIFFUSER PLENUM BOXES ARE TO BE SUPPORTED FROM THE STRUCTURE ABOVE.

MANUAL BALANCE DAMPERS

1. BASED ON RUSKIN MD-35/0B OPPOSED BLADE WITH MOLDED SYNTHETIC BEARINGS, 6" WIDE 16 GAUGE GALVANIZED STEEL BLADES, EXTENDED SHAFT AND LINKAGE.
   A. BALANCING DAMPERS FOR ROUND DUCTS SHALL BE RUSKIN MDRS-25 SINGLE BLADE, 20 GAUGE GALVANIZED STEEL.
   B. ALL DAMPERS SHALL BE EQUIPPED WITH LOCKING QUADRANTS.
2. AT THE CONTRACTOR'S OPTION, MANUAL BALANCING DAMPERS SHALL BE MANUFACTURED BY THE CONTRACTOR PER SMACNA STANDARDS. DAMPERS SHALL HAVE LOCKING QUADRANTS ON BOTH SIDES OF THE DUCT.
3. DAMPERS BY AIR BALANCE, GREENHECK OR VENT PRODUCTS OF THE SAME TYPE AND MEETING SPECIFIED REQUIREMENTS, MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

CONTROLS (GENERAL)

1. THIS CONTRACT SHALL INCLUDE ALL LINE, LOW VOLTAGE CONTROL WIRING AND INTERLOCK WIRING TO OPERATE HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT INSTALLED UNDER THIS CONTRACT. ALL WIRING TO COMPLY WITH ELECTRICAL SPECIFICATIONS, THE NATIONAL ELECTRIC CODE, AND ALL STATE AND LOCAL CODES.

AIR SYSTEM BALANCING

1. CONTRACTOR SHALL ARRANGE AND PAY FOR A CERTIFIED TEST AND AIR BALANCE FOR THE PROJECT, WITHIN TWO WEEKS AFTER COMPLETION OF THE CONSTRUCTION. A CERTIFIED AIR BALANCE REPORT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
2. AIR QUANTITIES AT INDIVIDUAL REGISTERS OR DIFFUSERS SHALL BE ADJUSTED TO WITHIN 10% OF QUANTITIES SHOWN ON THE DRAWINGS AND TOTAL AIR QUANTITY HANDLED BY EACH SYSTEM TO WITHIN 5% OF THE QUANTITY SHOWN OR SPECIFIED.
3. THE PRELIMINARY RESULTS OF BALANCING WORK SHALL BE SUBMITTED TO THE ENGINEER BEFORE THE FINAL BALANCE REPORT IS PREPARED. THIS REPORT SHALL INCLUDE ANY PROBLEMS ENCOUNTERED DURING BALANCING OR MAJOR DEVIATIONS FROM SPECIFIED CONDITIONS.
4. IF REQUIRED, A MEETING SHALL BE ARRANGED BETWEEN THIS CONTRACTOR, THE BALANCE SUBCONTRACTOR AND THE ENGINEER TO RESOLVE ANY PROBLEMS OR DEVIATIONS FROM THE CONTRACT DRAWINGS AND SPECIFICATIONS BEFORE THE FINAL BALANCE WORK

INLINE CABINET EXHAUST FANS

1. FURNISH AND INSTALL DUCT MOUNTED INLINE EXHAUST FANS AND APPURTENANCES WITH SIZES AND CAPACITIES AS SHOWN ON THE DRAWINGS.
2. INLINE CABINET FANS BASED ON GREENHECK SP SERIES WITH DYNAMICALLY BALANCED BACKWARD INCLINED CENTRIFUGAL WHEEL, DIRECT DRIVE TYPE MOTOR, IN EMBOSSED GALVANIZED STEEL CASING. FANS SHALL HAVE A FACTORY INSTALLED INTERNAL PLUG IN TYPE DISCONNECT. THE HOUSING INTERIOR SHALL BE LINED WITH 0.5" ACOUSTICAL INSULATION.
3. FAN RATINGS SHALL BE AMCA CERTIFIED AND FAN SHALL BEAR AMCA SEALS AND SHALL BE U.L. LISTED.
4. MOTOR SHALL BE 115/60/1 WITH BUILT IN THERMAL OVERLOAD PROTECTION. THE MOTOR SHALL BE MOUNTED ON VIBRATION ISOLATORS.
5. FURNISH FANS WITH A FACTORY MOUNTED VARIABLE SPEED SWITCH FOR BALANCING THE FAN SYSTEM AIRFLOW.
6. INLINE EXHAUST FANS BY COOK, CARNES OR TWIN CITY OF THE SAME TYPE, SIZE AND MEETING CAPACITY REQUIREMENTS, MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.
7. PROVIDE FLEXIBLE CONNECTIONS AT INLET AND DISCHARGE DUCTS.
8. MOUNT UNIT FROM VIBRATION ISOLATORS FURNISHED WITH THE UNIT MINIMUM 90% EFFICIENT.
9. AUXILIARY STEEL FOR SUPPORTING UNITS TO BE FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR.
10. HVAC CONTRACTOR SHALL PROVIDE LINE VOLTAGE THERMOSTATS FOR FAN CONTROL WHERE SPECIFIED ON THE DRAWINGS.
11. WIRING OF FANS AND LINE VOLTAGE THERMOSTATS AND BY THE ELECTRICAL CONTRACTOR.
12. ALL DUCTWORK FOR FANS THAT DISCHARGE INTO THE CEILING PLENUM SPACE SHALL BE LINED.

GRAVITY BACKDRAFT DAMPERS

1. BASED ON RUSKIN MANUFACTURING CO. TYPE CBD-6 HEAVY DUTY GRAVITY TYPE SHUTTERS WITH 1/8" WALL THICKNESS 606315 EXTRUDED ALUMINUM FRAME WITH 12 GAGE STEEL STRUCTURAL BRACES AT EACH CORNER. BLADES SHALL BE .070" (1.8) WALL THICKNESS 606315 EXTRUDED ALUMINUM WITH EXTRUDED VINYL BLADE EDGE SEALS MECHANICALLY LOCKED INTO BLADE EDGE. ADHESIVE OR CLIP ON TYPE SEALS ARE UNACCEPTABLE. BEARINGS SHALL BE CORROSION RESISTANT, LONG LIFE SYNTHETIC TYPE FOR QUIET OPERATION. LINKAGE SHALL BE 1/2" (1.3) ALUMINUM BAR CONNECTED TO STAINLESS STEEL PIVOT PINS. DAMPERS SHALL BE DESIGNED FOR MAXIMUM 3500 FPM SPOT VELOCITIES AND MINIMUM 4 INCHES W.G. BACK PRESSURE DEPENDING ON DAMPER SIZE.
2. COUNTERBALANCE DEVICES SHALL BE ZINC PLATED BARS MOUNTED ON THE BLADES (EXCEPT TOP BLADE), ADJUSTABLE FOR FINAL SETTING.
3. SIZES AS NOTED ON THE DRAWINGS.
4. USE ALUMINUM FASTENERS FOR MOUNTING.
5. COUNTERBALANCE AS REQUIRED FOR PROPER OPERATION.

ELECTRIC CABINET UNIT HEATERS

1. FURNISH AND INSTALL ELECTRIC CABINET UNIT HEATERS AND APPURTENANCES WITH SIZE AND CAPACITIES AS SHOWN ON THE DRAWINGS.
2. UNITS TO HAVE ELECTRIC HEATING ELEMENTS WITH BUILT-IN AUTOMATIC RESET OVERHEAT PROTECTION. UNITS SHALL MEET ALL UL AND NEC REQUIREMENTS AND BEAR UL LABEL. HORIZONTAL CONCEALED UNITS SHALL BE FURNISHED WITH 1" THICK THROWAWAY FILTERS.
   A. MANUFACTURER - TRANE
   B. WALL MOUNTED UNITS SHALL BE FURNISHED WITH SURFACE MOUNTING OR SEMI-RECESSED MOUNTING FRAMES AS INDICATED ON THE DRAWINGS.
   C. CEILING MOUNTED UNITS SHALL BE FURNISHED WITH RECESS OR SURFACE MOUNTING FRAMES AS INDICATED ON THE DRAWINGS.
3. MOTORS - FRACTIONAL HP, VOLTAGE, PHASE AND HERTZ AS SHOWN ON THE DRAWINGS SHALL BE FURNISHED WITH CONTACTOR.
4. HEATER SHALL HAVE SHEATHED FINNED TUBULAR ELEMENTS.
5. PROVIDE BUILT-IN OR REMOTE THERMOSTAT AS INDICATED ON THE DRAWINGS FOR CONTROL AND A FAN DELAY SWITCH.
6. UNITS SHALL BE CONSTRUCTED WITH FRONT OF 16 GAUGE, TOP AND SIDES OF 18 GAUGE STEEL. PRIME COAT CONCEALED UNITS AT THE FACTORY. BAKED ENAMEL FINISH ON WALL AND EXPOSED CEILING UNITS; COLOR SELECTION BY ARCHITECT.
7. HORIZONTAL CONCEALED UNIT SHALL BE FURNISHED WITH TRACER ZN SERIES CONTROLLER. UNIT SHALL BE MONITORED AND CONTROLLED BY THE EXISTING BAS.
8. CABINET UNIT HEATERS BY QMARK, INDEECO, MARKEL OR RAYWALL, MEETING ALL REQUIREMENTS MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.
9. ALL ELECTRICAL WIRING BY THE ELECTRICAL CONTRACTOR.
10. PROVIDE AUXILIARY SUPPORT STEEL TO SUPPORT UNITS WHEN REQUIRED.

ELECTRIC UNIT HEATERS

1. FURNISH AND INSTALL ELECTRIC UNIT HEATERS AND APPURTENANCES WITH SIZE AND CAPACITIES AS SHOWN ON THE DRAWINGS.
2. UNITS TO HAVE ELECTRIC HEATING ELEMENTS WITH BUILT-IN AUTOMATIC RESET OVERHEAT PROTECTION. UNITS SHALL MEET ALL UL AND NEC REQUIREMENTS AND BEAR UL LABEL. HORIZONTAL CONCEALED UNITS SHALL BE FURNISHED WITH 1" THICK THROWAWAY FILTERS.
   A. MANUFACTURER - TRANE
   B. UNIT HEATERS SHALL BE FURNISHED WITH SURFACE MOUNTING BRACKETS AS INDICATED ON THE DRAWINGS.
3. MOTORS - FRACTIONAL HP, VOLTAGE, PHASE AND HERTZ AS SHOWN ON THE DRAWINGS SHALL BE FURNISHED WITH CONTACTOR.
4. HEATER SHALL HAVE SHEATHED FINNED TUBULAR ELEMENTS.
5. PROVIDE BUILT-IN OR REMOTE THERMOSTAT AS INDICATED ON THE DRAWINGS FOR CONTROL AND A FAN DELAY SWITCH.
6. UNITS SHALL BE CONSTRUCTED WITH CABINET OF 16 GAUGE. PRIME COAT CONCEALED UNITS AT THE FACTORY. BAKED ENAMEL FINISH ON WALL AND EXPOSED CEILING UNITS; COLOR SELECTION BY ARCHITECT.
7. CABINET UNIT HEATERS BY QMARK, INDEECO, MARKEL OR RAYWALL, MEETING ALL REQUIREMENTS MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.
8. ALL ELECTRICAL WIRING BY THE ELECTRICAL CONTRACTOR.
9. PROVIDE AUXILIARY SUPPORT STEEL TO SUPPORT UNITS WHEN REQUIRED.

STATIONARY LOUVERS

1. HEAVY DUTY, DRAINABLE BLADE TYPE STATIONARY LOUVERS SHALL BE CONSTRUCTED OF 12 GAUGE (.081") EXTRUDED ALUMINUM WITH 1/2" ALUMINUM MESH BIRDSCREEN INSIDE. MAXIMUM BLADE SPACING SHALL BE 3-1/2". LOUVERS SHALL BE CERTIFIED TO BE WEATHERTIGHT WHEN HANDLING CFM'S INDICATED ON DRAWINGS. FOR COMPARISON PURPOSES, A 4'-0" X 4'-0" LOUVER MUST HAVE A MINIMUM FREE AREA OF 8.43 SQ. FT. AND A MAXIMUM PRESSURE DROP OF 0.20" AT 1100 FPM THROUGH FREE AREA (INTAKE). WATER PENETRATION SHALL BE NO MORE THAN 0.01 OUNCES OF WATER PER SQUARE FOOT OF FREE AREA WHEN TESTED FOR 15 MINUTES AT 1100 FPM PER AMCA STANDARD 500. LOUVERS SHALL HAVE AMCA CERTIFIED RATING SEAL. PROVIDE DATA WITH SUBMITTALS. LOUVERS TO HAVE CONTINUOUS BLADE APPEARANCE.
RELIEF/ EXHAUST LOUVERS

H201-25106.DWG

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DESIGNED BY	DRAWN BY	CHECKED BY	JOB NUM.
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SEALS

STATE OF OHIO
TIM PRATER
E-51932
REGISTERED PROFESSIONAL ENGINEER
11/10/2025

REVISIONS

No.	REVISION	DATE	BY
	PROGRESS SET	10-23-2025	
	100% REVIEW SET	10-31-2025	
0	BID/PERMIT SET	11-21-2025	

DRAWING TITLE & PROJECT NAME

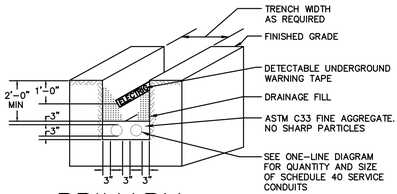
HVAC SPECIFICATIONS

SUNBURY OHIO
JR SMITH PARK PAVILLION
JR SMITH PARK PAVILLION

DRAWN BY	PEA
CHECKED BY	PEA
DATE	07/30/2025
PROJECT NO.	41545
PROJECT STATUS	TBD

DRAWING NO.

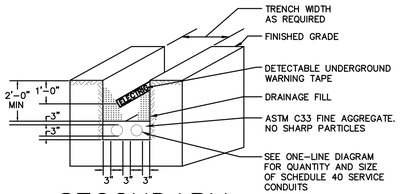
H201



PRIMARY

A E100 DUCT BANK DETAIL

SCALE: NONE



SECONDARY

B E100 DUCT BANK DETAIL

SCALE: NONE

CODED NOTES ⬡

1. EXISTING UTILITY POLE. PROVIDE DIRECTIONAL BORING ACROSS E CHERRY ST FOR UTILITY PRIMARY CONDUITS.
2. COORDINATE EXACT LOCATION OF PAD-MOUNTED TRANSFORMER WITH OWNER AND UTILITY COMPANY. PROVIDE TRANSFORMER PAD APPROVED BY UTILITY COMPANY.

GENERAL NOTES

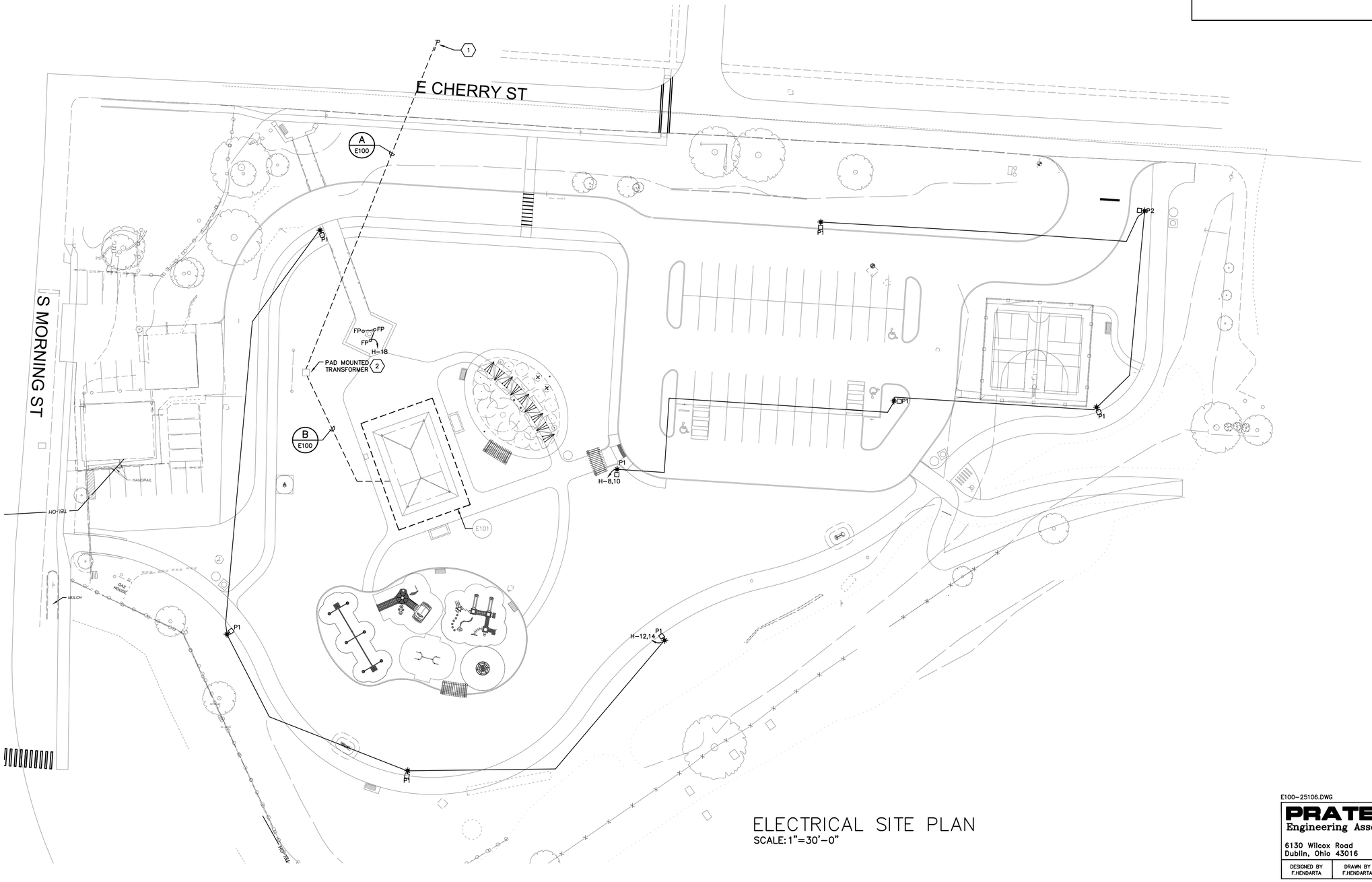
A. COORDINATE WITH THE SITE CIVIL ENGINEERING DRAWINGS AND ALL UTILITY COMPANIES PRIOR TO BIDDING. THE ELECTRICAL SITE PLAN IS DIAGRAMMATIC ONLY AND REPRESENTS GENERAL LOCATIONS OF EQUIPMENT AND UTILITY SPECIFICATIONS. THE SEPARATE UTILITY COMPANIES SHALL PROVIDE DETAILED SPECIFICATIONS AND EQUIPMENT SIZES UPON REQUEST.

B. THE SITE ELECTRICAL PLAN DOES NOT SHOW ALL EXISTING UTILITIES, OR EXISTING UNDERGROUND EQUIPMENT, OR NEW UNDERGROUND SERVICES. THIS CONTRACTOR SHALL COORDINATE WITH ALL TRADES AND EXISTING CONDITIONS PRIOR TO THE START OF WORK. PRIOR TO EXCAVATING, LOCATE ALL UNDERGROUND SERVICES AND CLEARLY INDICATE LOCATIONS.

C. REFER TO STRUCTURAL DRAWINGS AND FIELD COORDINATE FINAL ROUTING OF ALL CONDUITS UNDER BUILDING WITH BUILDING FOOTINGS, CANOPY/SCREENWALL FOOTINGS AND FOUNDATIONS, ETC. FIELD COORDINATE TRENCHES, CONDUIT ROUTES, AND SWEEPS TO CONDUIT RISERS WITH STRUCTURAL CONTRACTOR PRIOR TO WORK.

D. PROVIDE GRADE-LEVEL PULL BOXES AS REQUIRED PER THE SPECIFICATIONS AND IN-GROUND BOX DETAIL ON THIS SHEET. MAXIMUM DISTANCE OF 200' BETWEEN BOXES, NO MORE THAN 2 – 90 DEGREE BENDS BETWEEN BOXES THIS CONTRACTOR SHALL SIZE BOX AS REQUIRED PER NEC 314.28.

E. OUTDOOR LIGHTING BRANCH CIRCUIT SHALL BE CONTROLLED THRU LIGHTING RELAY PANEL. REFER TO SHEET E201 FOR RELAY PANEL CONTROL DIAGRAM.



ELECTRICAL SITE PLAN

SCALE: 1"=30'-0"

E100-25106.DWG

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SEALS

STATE OF OHIO
DOUGLAS L. POWELL
E-57325
REGISTERED PROFESSIONAL ENGINEER
11/10/2025

REVISIONS

No.	REVISION	DATE	BY
0	PROGRESS SET	10-23-2025	
	100% REVIEW SET	10-31-2025	
	BID/PERMIT SET	11-21-2025	

DRAWING TITLE & PROJECT NAME

ELECTRICAL SITE PLAN

SUNBURY OHIO
JR SMITH PARK PAVILLION
JR SMITH PARK PAVILLION

DRAWN BY	PEA
CHECKED BY	PEA
DATE	07/30/2025
PROJECT NO.	41545
PROJECT STATUS	TBD
DRAWING NO.	E100

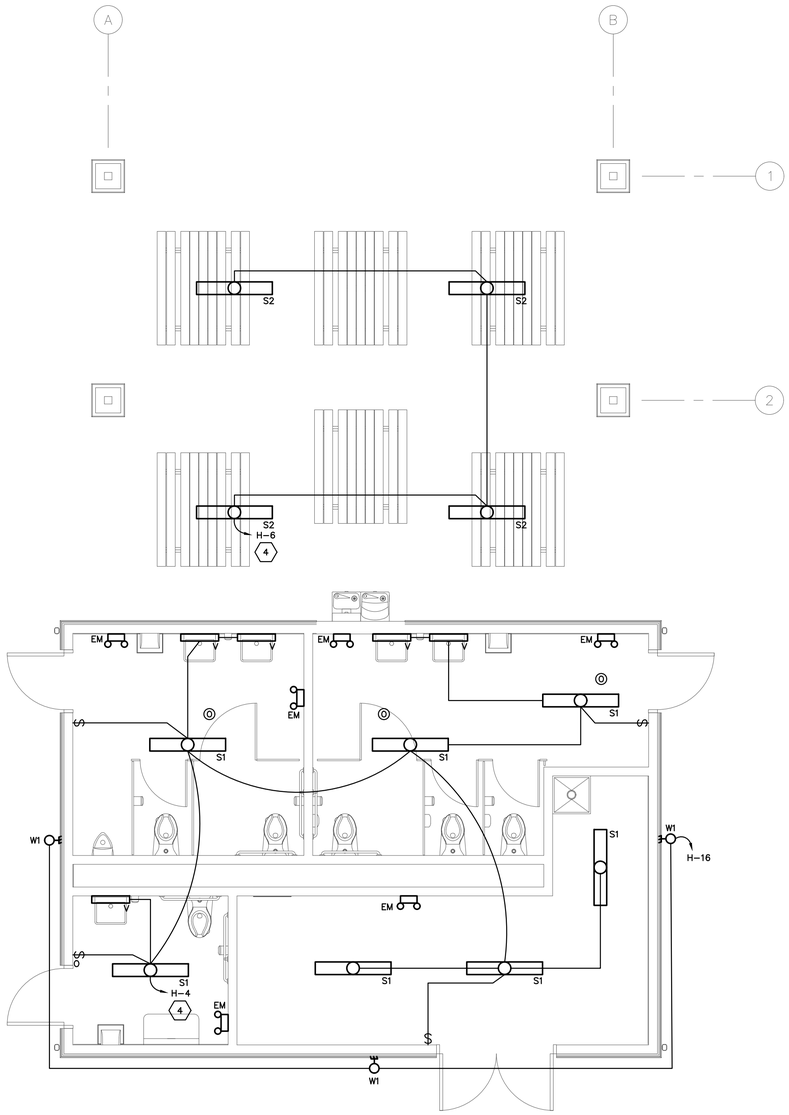
GENERAL NOTES

A. UNLESS OTHERWISE NOTED, ALL EMERGENCY FIXTURES SHALL BE WIRED AHEAD OF THE ROOM SWITCHING TO MONITOR THE LOCAL LIGHTING CIRCUIT. EMERGENCY FIXTURES SHALL AUTOMATICALLY ILLUMINATE UPON THE LOSS OF UTILITY POWER.

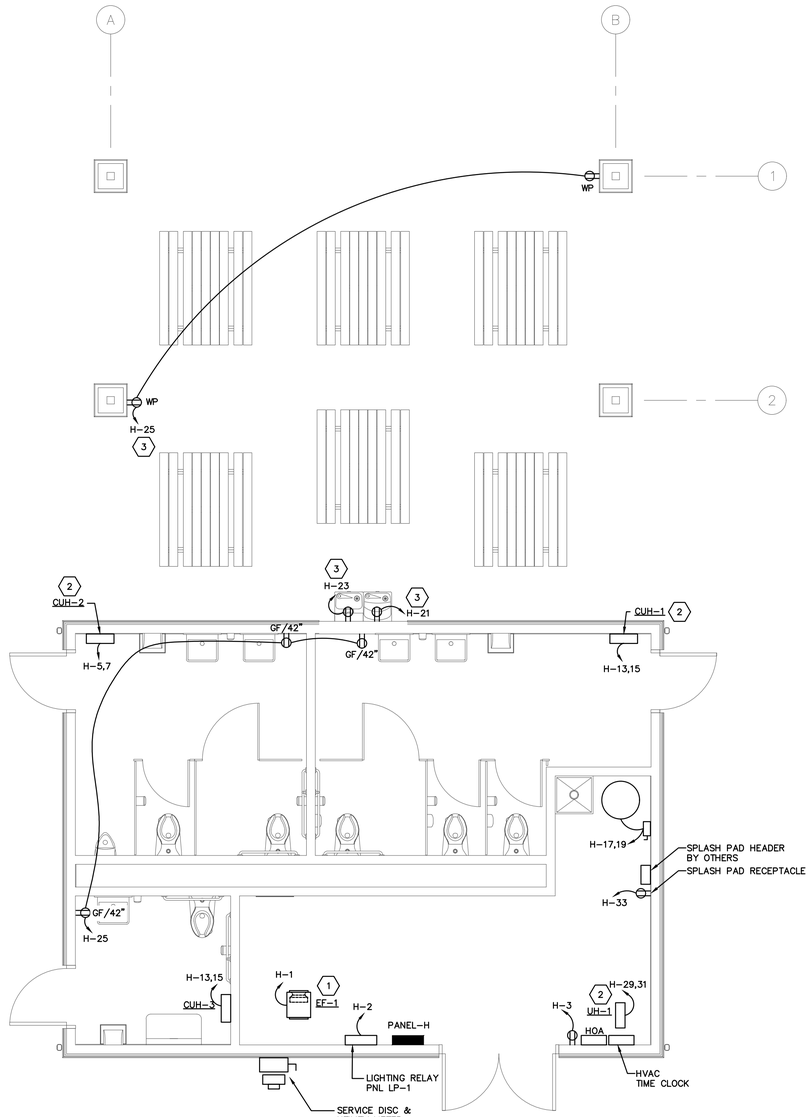
B. OUTDOOR LIGHTING BRANCH CIRCUIT SHALL BE CONTROLLED THRU LIGHTING RELAY PANEL. REFER TO SHEET E201 FOR RELAY PANEL CONTROL DIAGRAM.

CODED NOTES ⬡

1. EXHAUST FAN IS FURNISHED WITH INTEGRAL DISCONNECT.
2. CABINET UNIT HEATER IS FURNISHED WITH INTEGRAL DISCONNECT.
3. CIRCUIT IS PROTECTED WITH GROUND FAULT CIRCUIT BREAKER.
4. LIGHTING BRANCH CIRCUIT SHALL BE WIRED THRU THRU LIGHTING RELAY PANEL. REFER TO SHEET E201 FOR RELAY PANEL CONTROL DIAGRAM.



LIGHTING PLAN
SCALE: 1/4"=1'-0"



POWER PLAN
SCALE: 1/4"=1'-0"

E101-25106.DWG

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SEALS

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11/10/2025

REVISIONS

No.	REVISION	DATE	BY
	PROGRESS SET	10-23-2025	
	100% REVIEW SET	10-31-2025	
	BID/PERMIT SET	11-10-2025	

DRAWING TITLE & PROJECT NAME

ELECTRICAL PLANS

SUNBURY OHIO
JR SMITH PARK PAVILLION
JR SMITH PARK PAVILLION

DRAWN BY	PEA
CHECKED BY	PEA
DATE	07/30/2025
PROJECT NO.	41545
PROJECT STATUS	TBD
DRAWING NO.	E101

FIXTURE SCHEDULE

NOTE : FIXTURE NUMBER, LETTER PREFIX INDICATES TYPE OF MOUNTING AS FOLLOWS:
C–CEILING MOUNTED; S–STEM SUSPENDED; W–WALL MOUNTED; R–CEILING RECESSED;
WR–WALL RECESSED; CV–COVE MOUNTED; UC–UNDER CABINET; RF–ROOF MOUNTED;
P–POST; GR–GROUND; H–MOUNTED IN HOOD; CH–CHAIN MOUNTED.

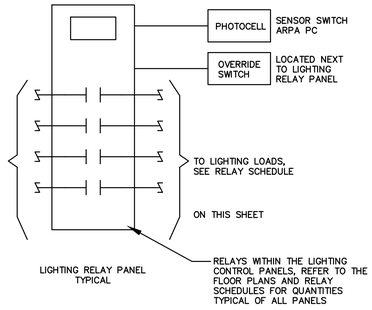
FIXTURE NUMBER	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMPS	REMARKS
S1	4' LINEAR LED STRIPLIGHT WITH LENS	METALUX OR EQUAL	4SNX–48SL–SLW–UNV–L835–CD1	LED 4500 LUMENS 3500K, 32W	
S1E	SIMILAR TO FIXTURE 'S1' WITH EMERGENCY OPTIONS				
S2	4' LINEAR LED STRIPLIGHT WITH LENS, END CAP AND WIRE GUARD	METALUX OR EQUAL	4SNX–48SL–SLW–UNV–L835–CD1 WG–SNX/SN–4FT–B DECOEND–SLW PK	LED 4500 LUMENS 3500K, 32W	
V	24" WALL MOUNTED LED VANITY	METALUX OR EQUAL	2BCLED–LD4–16SL–F–UNV–L835–CD1–U	LED 1600 LUMENS 4000K, 19W	
W1	LOW–PROFILE LED WALL MOUNTED	LUMARK OR EQUAL	XTOR2B–W	LED 1500 LUMENS 4000K, 18W	
EM	LED EMERGENCY LIGHT	METALUX OR EQUAL	SEL17	LED (INCLUDED)	90 MINUTE EMERGENCY BATTERY NOMINAL. 120/277 VOLT
P1	(1)LED SITE LIGHTING WITH POLE AND BRACKET – TYPE IV DISTRIBUTION	MAIN STREET LIGHTING	L200 LUMINAIRE–LUMECORN AOW LED –3000K –240V–BLACK FINISH	LED 3000K, 40W	POLE–MAIN STREET LIGHTING AA1414 LANCASTER II SERIES –14' HEIGHT OPTION WITH CAST ALUMINUM LANCASTER SERIES BASE –SMOOTH TAPERED ALUMINUM SHAFT WITH GROUND LUG PROVISION –BLACK
P2	(1)LED SITE LIGHTING WITH POLE AND BRACKET – TYPE IV DISTRIBUTION WITH HOUSE SIDE SHIELD	MAIN STREET LIGHTING	L200 LUMINAIRE–LUMECORN AOW LED –3000K –240V–BLACK FINISH WITH HOUSE SIDE SHIELD	LED 3000K, 40W	
FP	FLAG POLE LIGHT 5.5" DIAMETER DIE–CAST ALUMINUM ADJUSTABLE	WE–EF	FLC131 LED RAL9004	LED 3000 LUMENS 4000K, 27W	

1. ALL COLORS AND FINISHES SHALL BE SELECTED/VERIFIED BY ARCHITECT/OWNER DURING SUBMITTAL REVIEW AND PRIOR TO ORDERING.
2. ALL COLOR TEMPERATURES OF INTERIOR AND EXTERIOR FIXTURES SHALL BE 3500K. WHERE 3500K IS NOT AVAILABLE AS STANDARD OR SPECIAL ORDER, CONSULT A/E FOR ALTERNATE COLOR TEMPERATURE APPROVAL.
3. LIGHT FIXTURES LISTED ARE BASIS OF DESIGN. EQUIVALENT FIXTURES MAY BE SUBMITTED FOR OWNER AND A/E APPROVAL UNLESS NOTED OTHERWISE. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL EQUIVALENT FIXTURES MATCH THE BASIS OF DESIGN IN APPEARANCE, PERFORMANCE, MOUNTING TYPE, DIMENSIONS, ETC.

LIGHTING CONTROL PANEL LP–1

RELAY	DESCRIPTION	CIRCUIT	REMARKS
1,2	SITE LIGHTING–1	H–8,10	(1)(2)(3)
3,4	SITE LIGHTING–2	H–12,14	(1)(2)(3)
3	BUILDING LIGHT	H–16	(1)(2)
4	PAVILION	H–6	(1)(2)
5	INTERIOR LIGHTING	H–4	(1)(2)
6	FLAG POLE	–	
7	SPACE	–	
8	SPACE	–	

(#) RELAY SCHEDULE NOTES:
1. TIME SCHEDULE
2. OVERRIDE SWITCH
3. 2–POLE RELAY



TYPICAL LIGHTING CONTROL SYSTEM DIAGRAM

SCALE: NONE

COORDINATE WITH OWNER FOR LIGHTING CONTROL SCHEDULE AND FINAL PROGRAMMING OF THE SYSTEM. PROVIDE A COMPLETE LIGHTING CONTROL SYSTEM INCLUDING, BUT NOT LIMITED TO, CONTROL RELAYS/CONTACTORS, OVERRIDE SWITCH, RELAY PANELS, INSTALLATION, CONTROL WIRING, AND ACCESSORIES. SYSTEM SHALL BE NLIGHT NRP RELAY PANEL OR APPROVED EQUAL.

LOCATE PHOTOCELL FACING NORTH AND INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

CIRCUIT IDENTIFICATION

CIRCUIT IDENTIFICATION REQUIREMENTS

A. ALL DISCONNECTING MEANS SHALL BE MARKED TO INDICATE ITS SPECIFIC PURPOSE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.

B. PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES FOR ALL LIGHTING AND APPLIANCE PANELBOARDS. PROVIDE CIRCUIT IDENTIFICATION LABELS AT EACH SWITCH AND/OR CIRCUIT BREAKER IN SWITCHBOARDS. DIRECTORIES AND IDENTIFICATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE. EVERY NEW CIRCUIT OR ALTERED CIRCUIT SHALL BE IDENTIFIED AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE AND USE. THE IDENTIFICATION SHALL INCLUDE SUFFICIENT DETAIL TO ALLOW EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHER CIRCUITS. DO NOT COPY THESE SCHEDULES AS FINAL PANELBOARD INDEX INFORMATION.

CONDUIT & WIRE SCHEDULE BRANCH CIRCUITS

	WIRE SIZE	2 WIRE+GROUND	3 WIRE+GROUND	4 WIRE+GROUND
15A	#12 WIRE, #12 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
20A	#12 WIRE, #12 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
25A	#10 WIRE, #10 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
30A	#10 WIRE, #10 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
35A	#8 WIRE, #10 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
40A	#8 WIRE, #10 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
45A	#6 WIRE, #10 GROUND	3/4" CONDUIT	3/4" CONDUIT	3/4" CONDUIT
50A	#6 WIRE, #10 GROUND	3/4" CONDUIT	3/4" CONDUIT	1" CONDUIT
60A	#4 WIRE, #10 GROUND	1" CONDUIT	1" CONDUIT	1–1/4" CONDUIT
70A	#4 WIRE, #8 GROUND	1" CONDUIT	1" CONDUIT	1–1/4" CONDUIT
80A	#3 WIRE, #8 GROUND	1–1/4" CONDUIT	1–1/4" CONDUIT	1–1/4" CONDUIT
90A	#2 WIRE, #8 GROUND	1–1/4" CONDUIT	1–1/4" CONDUIT	1–1/4" CONDUIT

NOTES:
WIRE SIZE BASED UPON THWN COPPER WIRING, EMT CONDUIT.
PROVIDE WIRE FOR EACH PHASE, NEUTRAL, AND GROUND AS NOTED.
BRANCH CIRCUIT WIRING SHALL MATCH CIRCUIT BREAKER/FUSE SIZE.

VOLTAGE DROP:
20A BRANCH CIRCUITS (3% VD) – USE #12 FOR UP TO 60 FT, #10 FROM 61 FT TO 100 FT, #8 FROM 101 FT TO 150 FT.

Panel ID: H — Voltage: 240 / 120 — Panel Type: NQ
Location: ELEC. ROOM — Phase: 1 — Enclosure: NEMA–1
Mounting: SURFACE — Wire: 3
Main Type: M.L.O. — Main Size: 200 Amps

** = Refer to one line diagram for wire sizes.

GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CKT BKR SIZE	CKT BKR OPTION	CONN. LOAD (KVA)	CKT NO.	PHASE	CKT NO.	CONN. LOAD (KVA)	CKT BKR OPTION	CKT BKR SIZE	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE
12	12	EF–1	20/1	--	0.600	1	A	2	0.250	--	20/1	LTG.RELAY.PNL	12	12
12	12	REC.RESTRM.MECH.RM	20/1	--	0.180	3	B	4	0.300	--	20/1	LTG.RESTRM	12	12
12	12	CUH–1	20/2	--	1.500	5	A	6	0.124	--	20/1	LTG.PAVILION	12	12
	12	–	–	--	1.500	7	B	8	0.100	--	20/2	LTG.PARKING.LOT	10	10
12	12	CUH–2	20/2	--	1.500	9	A	10	0.100	--	–		10	
	12	–	–	--	1.500	11	B	12	0.080	--	20/1	LTG.SIDEWALK	10	10
12	12	CUH–3	20/2	--	1.500	13	A	14	0.080	--	20/1	–	10	
	12	–	–	--	1.500	15	B	16	0.054	--	20/1	LTG.BUILDING	12	12
10	8	EWH–1	35/2	--	3.000	17	A	18	0.081	--	20/1	LTG.FLAG.POLE	10	10
	8	–	–	--	3.000	19	B	20	0.000	--	20/1	SPARE		
12	12	EWC–1	20/1	GF	0.800	21	A	22	0.000	--	20/1	SPARE		
12	12	EWC–2	20/1	GF	0.800	23	B	24	0.000	--	20/1	SPARE		
12	12	REC.PAVILION	20/1	GF	0.360	25	A	26	0.000	--	20/1	SPARE		
12	12	REC.RESTROOM	20/1	--	0.540	27	B	28	0.000	--	20/0	SPARE		
12	12	UH–1	15/2	--	0.100	29	A	30	0.000	--	20/1	SPARE		
	12	–	–	--	0.100	31	B	32	0.000	--	20/1	SPARE		
12	12	REC.SPLASH.PAD	20/1	--	0.500	33	A	34	0.000	--	20/1	SPARE		
		SPARE	20/1	--	0.000	35	B	36	0.000	--	20/1	SPARE		
		SPARE	20/1	--	0.000	37	A	38	0.000	--	20/1	SPACE		
10	10	SPD	30/2	--	0.000	39	B	40	0.000	--	20/1	SPACE		
	10	–	–	--	0.000	41	A	42	0.000	--	20/1	SPACE		

Connected Load Panel Summa — Breaker Options (If Used):

Phase A:	10.5 KVA	87.5 AMPS	TC - Time Clock Control
Phase B:	9.7 KVA	80.5 AMPS	LO - Lock-On Device
Total:	20.1 KVA	84.0 AMPS	GF - GND Fault CKT Interrupter
			IG - Isolated ground
Note: Minimum breaker AIC to be 10,000 amps symmetrica			SH - Shunt Trip Breaker

PANEL SCHEDULE

SCALE: NONE

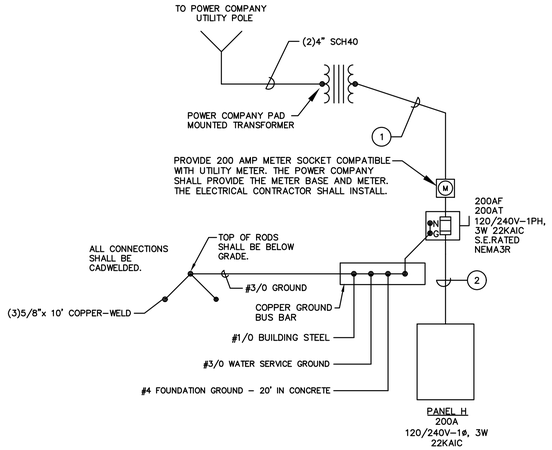
FEEDER SCHEDULE

DESIG.	C.B. OR FUSE SIZE	FEEDER SIZE
(1)	200 AMP	3 – 250 – 4" 3 – 350 – 4"
(2)	200 AMP	3 – 250 + 1 Cu – 2.5" 3 – 350 + 1/0 Al – 3"

WIRING LEGEND

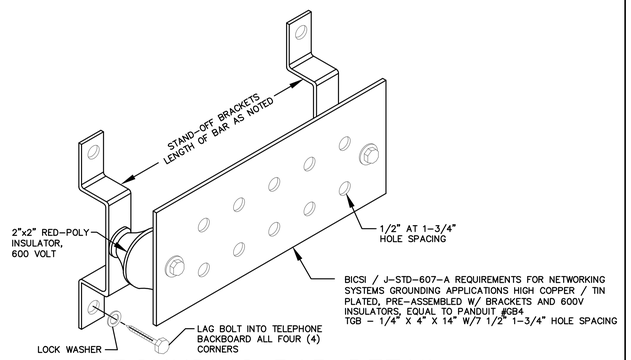
4 – 350 + 350 GRD– 3"

NO. OF CONDUCTORS — SIZE OF CONDUCTORS — SIZE OF GROUND CONDUCTOR — SIZE OF CONDUIT



ELECTRICAL ONE–LINE DIAGRAM

SCALE: NONE



GROUNDING BAR DETAIL

SCALE: NONE

E201–25106.DWG

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SEALS

PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS

No.	REVISION	DATE	BY
0	PROGRESS SET	10-23-2025	
	100% REVIEW SET	10-31-2025	
	BID/PERMIT SET	11-21-2025	

DRAWING TITLE & PROJECT NAME

ELECTRICAL DIAGRAM, DETAILS AND NOTES

SUNBURY OHIO
JR SMITH PARK PAVILLION
JR SMITH PARK PAVILLION

DRAWN BY	PEA
CHECKED BY	PEA
DATE	07/30/2025
PROJECT NO.	41545
PROJECT STATUS	TBD
DRAWING NO.	E201

GENERAL PROVISIONS

A. GENERAL

1. THE PARTY PERFORMING THE WORK UNDER THIS SECTION HEREINAFTER REFERRED TO AS THE CONTRACTOR, SHALL FURNISH ALL LABOR MATERIAL, TOOLS, EQUIPMENT, SERVICES, AND RELATED ACCESSORIES FOR A COMPLETE INSTALLATION OF ALL ELECTRICAL WORK AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS. THIS INCLUDES BUT IS NOT LIMITED TO ALL NECESSARY ANCHORS, SUPPORTS, STRAPS, BOXES, FITTINGS AND OTHER SIMILAR APPURTENANCES NOT INDICATED ON THE DRAWINGS BUT ARE REQUIRED FOR A COMPLETE AND PROPERLY INSTALLED SYSTEM. ITEMS OMITTED FROM EITHER THE SPECIFICATIONS OR THE DRAWINGS, BUT SHOWN OR DESCRIBED IN THE OTHER, AND ALL NECESSARY TO MAKE THE ELECTRICAL SYSTEM COMPLETE AND WORKABLE SHALL FORM A PART OF THE WORK.

2. RACEWAY, WIRING, CABLING, PULL BOXES, JUNCTION BOXES, ETC. SHOWN IN THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC IN NATURE TO SHOW INTENT ONLY, AS THE RESULT OF DIFFERENCES BETWEEN VARIOUS MANUFACTURERS' REQUIREMENTS, ALL RACEWAY, WIRING, AND CABLING MAY NOT BE SHOWN ON THE DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INCLUDE IN HIS/HER BID ANY ADDITIONAL RACEWAYS, WIRING, AND CABLING REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE SYSTEMS BEING PROPOSED FOR USE ON THIS PROJECT.

3. ANY DISCREPANCIES WITHIN DRAWINGS AND SPECIFICATIONS SHALL BE PROMPTLY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DURING THE BIDDING PERIOD. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY REASON OF HIS FAILURE TO HAVE BROUGHT SAID DISCREPANCIES TO THE ATTENTION OF THE ENGINEER DURING THE BIDDING PERIOD OR OF ANY ERROR ON THE CONTRACTOR'S PART.

4. THE CONTRACTOR SHALL CHECK ALL EXISTING FIELD CONDITIONS (OR CIVIL, STRUCTURAL, ARCHITECTURAL AND MECHANICAL TRADES WORK) FOR POSSIBLE INTERFERENCE CAUSED BY CONDITIONS IN THE FIELD BEFORE BID IS MADE. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY REASON OF HIS FAILURE TO HAVE MADE SUCH EXAMINATIONS OR OF ANY ERROR ON HIS PART.

5. THE CONTRACTOR SHALL BE HELD TO HAVE EXAMINED THE PREMISES AND SITE SO AS TO COMPARE THEM WITH THE CONTRACT DOCUMENTS AND TO BE SATISFIED AS THE CONDITIONS OF THE PREMISES, THE SITE, ANY OBSTRUCTIONS, THE ACTUAL LEVELS, ACCESS PANELS, AND ALL OTHER EXISTING CONDITIONS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD, SHALL CHECK LOCATION OF AND CONNECTIONS TO EXISTING FACILITIES, AND SHALL ASSUME ALL RESPONSIBILITY FOR SAME.

6. SHOULD ANY CHANGES IN THE DRAWINGS AND SPECIFICATIONS BE REQUIRED TO CONFORM TO THE ABOVE REGULATIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE AT THE TIME OF SUBMITTING HIS BID. AFTER ENTERING INTO THE OWNER-CONTRACTOR AGREEMENT, THE CONTRACTOR SHALL BE HELD TO COMPLETE ALL WORK NECESSARY TO MEET THESE REQUIREMENTS WITHOUT ADDITIONAL EXPENSE TO THE OWNER.

7. THE CONTRACTOR SHALL RECEIVE, STORE, UNCRATE, PROTECT, AND INSTALL OWNER FURNISHED EQUIPMENT WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT WHEN RECEIVED, AS IF EQUIPMENT WAS PURCHASED BY THE CONTRACTOR.

8. THE CONTRACTOR SHALL NOT ALLOW OR CAUSE ANY OF THE WORK TO BE COVERED UP OR ENCLOSED UNTIL IT HAS BEEN INSPECTED. ANY WORK THAT IS ENCLOSED OR COVERED UP BEFORE SUCH INSPECTION AND TEST SHALL BE UNCOVERED AT THE CONTRACTOR'S EXPENSE; AFTER IT HAS BEEN INSPECTED, THE CONTRACTOR SHALL RESTORE THE WORK TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

9. ALL GENERAL TRADES AND MECHANICAL DRAWINGS SHALL BE CHECKED BEFORE INSTALLING ANY OUTLETS, POWER WIRING, ETC.

10. ALL WORK SHALL BE DONE IN ACCORDANCE WITH CONTRACT DOCUMENTS, IN A NEAT AND WORKMANLIKE MANNER CONSISTENT WITH RECOGNIZED GOOD PRACTICE, AND SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE.

11. THE ARCHITECT OR OWNER RESERVE THE RIGHT TO DIRECT THE REMOVAL OR REPLACEMENT OF ANY ITEM WHICH, DOES NOT PRESENT AN ORDERLY, NEAT, OR WORKMANLIKE APPERANCE PROVIDED THAT SUCH AN ITEM CAN BE INSTALLED IN AN ORDERLY WAY BY METHODS USUAL IN SUCH WORK.

12. IF THE CONTRACTOR FAILS TO DO ANY REQUIRED PATCHING OR REPAIR ANY DAMAGE RESULTING FROM THE INSTALLATION OF THE ELECTRICAL WORK, SUCH PATCHING OR REPAIRING SHALL BE DONE BY THE OWNER AND THE COST SHALL BE PAID BY THE CONTRACTOR.

13. ALL EQUIPMENT FURNISHED WITH FINISHED SURFACES FROM MANUFACTURER ARE NOT TO BE DEFACED IN ANY WAY AND SHALL BE CLEANED TO ORIGINAL FINISH AT TIME OF COMPLETION OF WORK EXCEPT WHERE OTHERWISE NOTED.

14. THE CONTRACTOR SHALL CONDUCT SUCH TESTS AND ADJUSTMENTS OF EQUIPMENT AS REQUIRED TO VERIFY EQUIPMENT PERFORMANCE. SUCH TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER AND OWNER'S REPRESENTATIVE.

15. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES IN NEAT AND ORDERLY CONDITION AND REMOVE ALL DEBRIS RESULTING FROM THE WORK, AS WELL AS ALL TOOLS, EQUIPMENT, ETC., FROM THE SITE UPON COMPLETION OF THIS CONTRACT. ALL EQUIPMENT INCLUDING LIGHTING FIXTURES AND LENSES SHALL BE CLEAN AND FREE FROM DIRT, GREASE, FINGER MARKS, ETC., BEFORE FINAL ACCEPTANCE.

B. JOB-SITE COPY OF DOCUMENTS

1. MAINTAIN AT THE SITE, ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA APPROVED SHOP DRAWINGS, CHANGE ORDERS AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION. THESE SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE AT ALL TIMES. THE DRAWINGS MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE UPON COMPLETION OF THE WORK.

C. SUBMITTALS

1. THE CONTRACTOR SHALL TURN OVER ALL CERTIFICATES OF APPROVAL FOR INSPECTIONS OF ELECTRICAL WORK TO THE OWNER PROMPTLY WHEN RECEIVED. THESE CERTIFICATES MUST BE RECEIVED BEFORE PAYMENT WILL BE MADE FOR THE WORK INVOLVED.

2. THE OWNER OR OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH ARE NOT IN COMPLIANCE WITH THESE SPECIFICATIONS, OR THE APPROVED SHOP DRAWINGS, EITHER BEFORE OR AFTER INSTALLATION AT NO EXPENSE TO THE OWNER AND EQUIPMENT SHALL BE REPLACED WITH APPROVED EQUIPMENT BY THE CONTRACTOR AT NO COST TO THE OWNER.

3. PROVIDE SHOP DRAWINGS FOR ALL MATERIALS LISTED IN THIS SPECIFICATION.

4. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW, DIGITAL FILES IN PDF FORMAT OF MANUFACTURER'S DRAWINGS AND WIRING DIAGRAMS. THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETE, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL SYSTEM DESIGNED BY THE ENGINEER. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR; APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER SHALL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION UNLESS CONTRACTOR ADVISES ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY ENGINEER IN WRITING. THE ITEMS, TYPES OF SUBMITTALS AND RELATED MATERIAL (IF ANY) CALLED FOR ARE INDICATED BELOW:

ITEMS	TYPE SUBMITTALS REQUIRED
CONDUIT	CATALOG CUTS
WIRE	CATALOG CUTS
CIRCUIT BREAKERS/ FUSES	CATALOG CUTS
WIRING DEVICES	CATALOG CUTS
DISCONNECT SWITCHES	CATALOG CUTS
LIGHTING FIXTURES	CATALOG CUTS
PANELBOARD	CATALOG CUTS
LIGHTING CONTROL PANEL/DEVICES	CATALOG CUTS

D. GUARANTEES

1. ALL EQUIPMENT FURNISHED AND WORK PERFORMED UNDER THE CONTRACT DOCUMENTS SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIALS OR WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE. ANY FAILURE OF EQUIPMENT OR WORK DUE TO DEFECTS IN MATERIALS OR WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR AT NO COST TO THE OWNER.

CODES AND FEES

A. CODES:

1. ALL WORK, MATERIAL, AND EQUIPMENT PERFORMED UNDER THIS SPECIFICATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION AND INTERIM AMENDMENTS OF THE NATIONAL ELECTRICAL CODE, NATIONAL ELECTRICAL SAFETY CODE, NATIONAL FIRE PROTECTIONS ASSOCIATION, OHSHA, AMERICANS WITH DISABILITIES ACT (ADA) AND ANY APPLICABLE FEDERAL, STATE, OR LOCAL LAWS AND ORDINANCES. ALL ELECTRICAL EQUIPMENT SHALL BE NEW (UNLESS NOTED OTHERWISE) AND SHALL COMPLY WITH THE REQUIREMENTS OF (UL) AND BEAR THE UL LABEL.

B. FEES:

1. OBTAIN AND PAY FOR ANY AND ALL PERMITS & INSPECTIONS REQUIRED BY ALL LAWS, REGULATIONS AND PUBLIC AUTHORITY HAVING SUCH JURISDICTION.

BUILDING CODES:
- OHIO BUILDING CODE, 2024
- ASHRAE 90.1–2019 / IECC 2021

NATIONAL FIRE PROTECTION (NFPA) STANDARDS:
- NFPA 70, 2023 EDITION, NATIONAL ELECTRICAL CODE®.
- NFPA 101, 2012, LIFE SAFETY CODE®.

WORK INCLUDED

A. GENERAL

1. FURNISH ALL MATERIALS, LABOR, TOOLS, TRANSPORTATION, INCIDENTALS AND APPURTENANCES TO COMPLETE IN EVERY DETAIL AND LEAVE IN WORKING ORDER ALL ITEMS OF WORK CALLED FOR HEREIN AND SHOWN ON THE ACCOMPANYING DRAWINGS.

2. IT IS THE INTENT THAT THE ENSUING WORK SHALL BE COMPLETE IN EVERY RESPECT AND THAT ANY MATERIAL OR WORK NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, BUT NECESSARY TO FULLY COMPLETE THE WORK, SHALL BE FURNISHED.

B. COORDINATION OF PLANS AND SPECIFICATIONS

1. CONTACT THE ARCHITECT IMMEDIATELY IF THERE IS ANY QUESTION REGARDING THE MEANING OR INTENT OF EITHER THE PLANS OR SPECIFICATIONS, OR UPON NOTICING ANY DISCREPANCIES OR OMISSIONS IN EITHER THE PLANS OR SPECIFICATIONS.

C. SITE VISITATION

1. THE BIDDER IS REQUIRED TO VISIT THE SITE AND FULLY INFORM HIMSELF CONCERNING ALL CONDITIONS AFFECTING THE SCOPE OF THE WORK. FAILURE TO VISIT THE SITE SHALL NOT RELIEVE THEM FROM ANY RESPONSIBILITY IN THE PERFORMANCE OF THIS CONTRACT.

D. SUPERVISION OF WORK

1. THE CONTRACTOR SHALL HAVE IN CHARGE OF THE WORK, AT ALL TIMES DURING CONSTRUCTION, A COMPETENT SUPERINTENDENT WITH A LARGE EXPERIENCE IN THE WORK TO BE DONE UNDER THIS SPECIFICATION.

2. REFER TO THE SPECIFICATIONS COVERING ALL BRANCHES OF THE WORK AND KEEP FULLY INFORMED OF THE PROGRESS OF GENERAL CONSTRUCTION. INSTALL ALL WORK THAT IS CONCEALED AND BUILT INTO THE BUILDING IN SUFFICIENT TIME TO INSURE PROPER LOCATION WITHOUT DELAYS TO THE WORK OF THE OTHER TRADES. PROPERLY ATTEND TO THE WORK DURING THE PROCESS OF BUILDING-IN TO PREVENT MISALIGNMENT AND DAMAGE.

E. CUTTING AND PATCHING

1. THE CONTRACTOR SHALL GIVE THE LOCATIONS AND SIZES OF ALL OPENINGS REQUIRED FOR THE INSTALLATION OF ELECTRICAL EQUIPMENT BEFORE WALLS, SLAB, ETC., ARE STARTED. IF IT BECOMES NECESSARY TO CUT INTO NEW WORK BECAUSE OF ANY COORDINATION FAILURE ALL CONTRACTORS SHALL COORDINATE ANY NECESSARY CUTTING. PATCHING SHALL BE AT THIS CONTRACTOR'S EXPENSE.

2. NO CUTTING SHALL BE DONE WHICH WILL IN ANY WAY REDUCE THE STRUCTURAL STRENGTH OF THE BUILDING. SHOULD SUCH CUTTING BE FOUND NECESSARY, THE ARCHITECT MUST FIRST BE FULLY INFORMED OF, AND CONSENT TO, THE PROPOSED OPERATION.

3. ALL CUTTING THROUGH POURED CONCRETE SLABS AND WALLS SHALL BE DONE WITH CORE DRILLS OR SAWS. NO JACKHAMMERS WILL BE ALLOWED.

4. REPAIR OF DAMAGES, BY THE ELECTRICAL CONTRACTOR TO NEWLY PAINTED OR REFINISHED AREAS IN TYPE AND FINISH TO MATCH EXISTING.

5. ALL CONDUITS, EQUIPMENT, ETC. THAT PENETRATES WALLS OR FLOORS SHALL HAVE OPENINGS, SLEEVES, ETC. FILLED AND CLOSED OFF TO PREVENT THE POSSIBLE SPREAD OF FIRE OR PRODUCTS OF COMBUSTION THROUGH THE WALL OR FLOOR.

F. CLEANING AND PAINTING

1. ALL ELECTRICAL EQUIPMENT SHALL BE KEPT DRY AND CLEAN DURING THE CONSTRUCTION PERIOD. INTERIOR OF ALL ENCLOSURES SHALL BE CLEANED OF DIRT AND DEBRIS BEFORE INSTALLING TRIM OR COVERS.

2. ALL FINISHED SURFACES OF EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE THOROUGHLY CLEANED OF DIRT AND ALL SCRATCHED OR DAMAGED SURFACES SHALL BE TOUCHED UP WITH MATCHING MATERIALS BEFORE FINAL ACCEPTANCE OF THE WORK.

3. WHEN ALL WORK IS COMPLETED AND ALL WORK HAS BEEN SATISFACTORILY TESTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE, ALL CONDUIT AND OTHER EXPOSED SURFACES SHALL BE THOROUGHLY CLEANED. NO EXPOSED FERROUS METAL SURFACES SHALL BE LEFT UNPAINTED. TOUCH-UP ALL GALVANIZED SURFACES, IF SCRATCHED, WITH TWO COATS OF ALUMINUM PAINT.

4. PRIME AND PAINT ALL STEEL HANGERS, BOXES, STRAPS, RODS, ETC. WHICH ARE NOT PROVIDED WITH RUST-PROTECTIVE FINISH OR IF THE PROTECTIVE FINISH IS DAMAGED DURING INSTALLATION. PAINT IS TO BE ZINC CHROMATE PRIMER WITH ALUMINUM BRONZE FINISH. THIS INCLUDES UNFINISHED, MECHANICAL AND "EXPOSED TO VIEW" LOCATIONS.

TESTS AND INSPECTIONS

A. OBTAIN ALL INSPECTIONS REQUIRED BY ALL LAWS, ORDINANCES, RULES, REGULATIONS OR PUBLIC AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO THE OWNER'S REPRESENTATIVE. PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREIN. OBTAIN OCCUPANCY PERMIT AS REQUIRED BY OWNER. FINAL PAYMENT SHALL NOT BE MADE UNTIL OCCUPANCY PERMIT IS OBTAINED.

B. WORK SHALL BE UNACCEPTABLE WHEN FOUND TO BE DEFECTIVE OR CONTRARY TO THE PLANS SPECIFICATIONS, CODES SPECIFIED OR ACCEPTED STANDARDS OF GOOD WORKMANSHIP.

C. THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK FOUND UNACCEPTABLE BY THE OWNER'S REPRESENTATIVE WHETHER OBSERVED BEFORE OR AFTER SUBSTANTIAL COMPLETION AND WHETHER OR NOT FABRICATED, INSTALLED OR COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS OF CORRECTING SUCH UNACCEPTABLE WORK, INCLUDING COMPENSATION FOR THE OWNERS REPRESENTATIVE ADDITIONAL SERVICES MADE NECESSARY THEREBY.

D. THE ELECTRICAL CONTRACTOR SHALL TEST AND OBTAIN ACCEPTANCE FOR THE FOLLOWING SYSTEMS:

EMERGENCY LIGHTING EQUIPMENT
FIRE ALARM SYSTEM
LIGHTING CONTROL SYSTEM

E. DURING THE CONSTRUCTION OPERATION THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN ELECTRICAL UTILITIES OF THE BUILDING WITHOUT INTERRUPTION. SHOULD IT BE NECESSARY TO INTERRUPT ANY ELECTRICAL SERVICE OR UTILITY, THE CONTRACTOR SHALL SECURE PERMISSION IN WRITING FROM THE OWNER FOR SUCH INTERRUPTION AT LEAST 72 HOURS IN ADVANCE. ANY INTERRUPTION SHALL BE MADE WITH MINIMUM AMOUNT OF INCONVENIENCE TO THE OWNER AND ANY SHUT-DOWN TIME SHALL HAVE TO BE ON AN OVERTIME BASIS AND SUCH TIME WILL BE INCLUDED IN ELECTRICAL BID.

OPERATIONS AND MAINTENANCE MANUALS

A. SUBMIT OPERATIONS AND MAINTENANCE MANUALS WITHIN 30-DAYS OF PROJECT COMPLETION.

B. O & M MANUALS TO INCLUDE THE FOLLOWING SYSTEMS:

PERMITS FILED
INSPECTIONS OBTAINED
WARRANTIES
INSTALLATION MANUALS
FIELD INSPECTION REPORTS
LIGHTING AND POWER PANELS
LIGHTING FIXTURES
LIGHTING CONTROL DEVICES
WIRING DEVICES
DISCONNECT SWITCH
ALL APPROVED SHOP DRAWINGS
AS-BUILT DRAWINGS

CONDUIT

A. ALL CONDUIT SHALL BE SUBSTANTIALLY SUPPORTED BY PIPE STRAPS OR SUITABLE CLAMPS OR HANGERS ATTACHED TO THE ELEMENTS OF THE BUILDING STRUCTURE TO PROVIDE RIGID INSTALLATION; IN NO CASE SHALL CONDUIT BE ATTACHED OR SUPPORTED FROM ADJOINING PIPE OR INSTALLED IN SUCH A MANNER AS TO PREVENT THE READY REMOVAL OF OTHER PIPE FOR REPAIRS.

B. ALL WIRING SHALL BE RUN IN EMT CONDUIT UNLESS OTHERWISE NOTED.

C. ALL WIRING IN BUILDING INTERIOR, INCLUDING FEEDERS, BRANCH CIRCUITS AND AUXILIARY WIRING SHALL BE RUN IN THIN WALL (EMT) CONDUIT. MINIMUM 3/4" TRADE SIZE.

D. ALL STEEL CONDUIT SHALL BE GALVANIZED AND ALL CONDUIT SHALL HAVE THE MANUFACTURER'S NAME AND U.L. LABEL ATTACHED TO OR STAMPED ON EACH PIECE.

E. ALL CONDUIT ON BUILDING EXTERIOR, IN EXTERIOR PARTITIONS, IN POURED CONCRETE, OR BURIED BENEATH CONCRETE SLABS, SHALL BE RIGID OR INTERMEDIATE (IMC) STEEL.

F. FLEXIBLE NEOPRENE-CLAD GALVANIZED STEEL CONDUIT SHALL BE USED FOR "MAKEUP" CONNECTIONS TO ROTATING MACHINERY AND HEATING ELEMENTS. LIGHTING FIXTURES MAY BE SUPPLIED WITH SHORT LENGTHS (MAX. 6'-0") OF FLEXIBLE CONDUIT WITH GREEN GROUND WIRE. FLEXIBLE CONDUIT MAY BE USED IN DRYWALL PARTITIONS.

G. ALL THINWALL CONNECTORS SHALL BE OF THE INSULATED THROAT TYPE, SIMILAR TO THOMAS AND BETTS NO. 5123-1/2". ALL FITTINGS SHALL BE STEEL. NO DIE CAST FITTINGS WILL BE ALLOWED. CONTRACTOR MAY USE THOMAS AND BETTS, RACO STEEL CITY OR MIDWEST FITTINGS.

H. UNLESS OTHERWISE NOTED, ALL CONDUIT SHALL BE RUN CONCEALED WITHIN THE BUILDING CONSTRUCTION WHEN INSTALLED IN FINISHED INTERIOR OR EXTERIOR AREAS. CONDUIT IN EQUIPMENT ROOMS AND ON ROOF MAY BE RUN EXPOSED.

I. CONDUIT THRU ROOF SHALL BE FLASHED WITH 6" HIGH PITCH POCKETS, OR EQUALLY EFFECTIVE MEANS APPROVED BY ARCHITECT.

J. SEAL WATER AND MOISTURE TIGHT ALL CONDUITS ENTERING FROM OUTSIDE THE BUILDING.

WIRE AND CABLE

A. ALL CONDUCTORS SHALL BE STRANDED AND OF THE AWG SIZE AND TYPE SHOWN ON THE DRAWINGS. WHERE NO SIZE OR TYPE IS SHOWN, CONDUCTORS SHALL NOT BE LESS THAN #12 TYPE XHHW, THHN, OR THWN. ALL CONDUCTORS SHALL BE COPPER AND HAVE 600 VOLT INSULATION; BE UL LABELED AND OF AMERICAN MANUFACTURER.

B. NOT USED.

C. ALL CONNECTIONS ARE TO BE MADE USING PRESSURE TYPE TERMINALS.

D. THE FOLLOWING COLOR CODE SHALL BE USED:

	120/240 VOLT
PHASE A	BLACK
PHASE B	RED
NEUTRAL	WHITE
EQUIPMENT GROUND	GREEN

E. CONDUCTORS SHALL HAVE INSULATION COLORED AS NOTED ABOVE.

F. EACH BRANCH CIRCUIT REQUIRING A NEUTRAL SHALL BE FURNISHED WITH A SEPARATE INDIVIDUAL NEUTRAL CONDUCTOR. UNLESS NOTED OTHERWISE.

G. ALL SPLICES SHALL BE MADE WITH APPROVED PRESSURE TYPE CONNECTORS WITH FIELD APPLIED INSULATION, EQUAL OR EXCEEDS WIRING MANUFACTURER INSULATION.

BOXES AND PLATES

A. PROVIDE ALL OUTLET, JUNCTION, FLOOR BOXES AND PULLBOXES AS INDICATED ON THE DRAWINGS AND AS NECESSARY TO INSTALL THE REQUIRED CONDUIT AND WIRING IN A NEAT AND WORKMANLIKE MANNER.

B. PULLBOXES AND JUNCTION BOXES SHALL BE GALVANIZED AND OF THE CORRECT SIZE AND GAUGE, IN ACCORDANCE WITH CODE REQUIREMENTS AND SHALL BE U.L. LABELED.

C. FLUSH OUTLET, JUNCTION AND PULLBOXES SHALL BE PRESSED STEEL GALVANIZED OR SHERARDIZED AND SHALL BE A MINIMUM OF 4" SQUARE OR OCTAGONAL SIMILAR TO APPLETON #40. STEEL BOXES CAST IN CONCRETE SHALL BE DESIGNED FOR CONCRETE INSTALLATION.

D. ALL BOXES SHALL BE RIGIDLY SUPPORTED FROM BUILDING STRUCTURE INDEPENDENT OF THE CONDUIT SYSTEM. BOXES CAST INTO MASONRY OR CONCRETE ARE CONSIDERED TO BE RIGIDLY SUPPORTED.

WIRING DEVICES

A. WIRING DEVICES SHALL BE FURNISHED IN STRICT ACCORDANCE WITH THE CATALOG NUMBERS AND MANUFACTURERS LISTED IN THE SCHEDULE WHICH FOLLOWS. OTHER SPECIAL PURPOSE DEVICES SHALL BE AS SPECIFIED ON THE DRAWINGS.

B. DUPLEX GROUNDING TYPE RECEPTACLE SHALL BE HEAVY DUTY – 20 AMP, 125 VOLT – NEMA 5-20R
COLOR TO BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE.

C. GROUND ALL RECEPTACLES IN ACCORDANCE WITH ARTICLE 250-146 OF NEC AND AS INDICATED IN THE GROUNDING SECTION OF THIS SPECIFICATION.

IDENTIFICATION

A. ALL POWER AND LIGHTING PANELS, PULL BOXES, JUNCTION BOXES, FIRE ALARM, EMERGENCY LIGHT ETC., SHALL BE IDENTIFIED ON THE FRONT COVER OR TRIM WITH ITS NAME AND/OR DESIGNATION NUMBER OR LETTER AS SHOWN ON THE DRAWINGS AND WITH THE VOLTAGE AVAILABLE WITHIN THE PANEL.

B. IDENTIFICATION SHALL BE IN THE FORM OF LAMINATED PLASTIC NAMEPLATES, AS DETAILED ON DRAWINGS.

C. FIRE ALARM AND EMERGENCY SYSTEMS BOXES AND ENCLOSURES INCLUDING TERMINAL & JUNCTION BOXES SHALL BE PAINTED RED AND HAVE SYSTEM IDENTIFICATION NAMEPLATE.

D. PANELBOARD DIRECTORY: A TYPED CIRCUIT DIRECTORY SHALL BE PROVIDED INDICATING LOCAL AREA SERVED AND LOCATION FOR EACH BRANCH CIRCUIT. FINAL PAYMENT SHALL NOT BE MADE UNTIL THIS IS COMPLETED.

E. BRANCH-CIRCUIT PANELBOARDS: PER NEC 210.5, A PHASE COLOR-CODE NAMEPLATE SHALL BE MOUNTED ON THE INSIDE TRIM ADJACENT TO THE MANUFACTURER'S NAMEPLATE. REFER TO WIRE & CABLE SECTION FOR PROPER COLOR CODE FOR VOLTAGE UTILIZED.

F. WHERE CIRCUIT BREAKERS OR FUSES ARE APPLIED IN COMPLIANCE WITH THE SERIES COMBINATION RATINGS MARKED ON THE EQUIPMENT BY THE MANUFACTURER, THE EQUIPMENT ENCLOSURE(S) SHALL BE LEGIBLY MARKED IN THE FIELD TO INDICATE THE EQUIPMENT HAS BEEN APPLIED WITH A SERIES COMBINATION RATING. THE MARKING SHALL BE READILY VISIBLE AND STATE "CAUTION – SERIES RATED SYSTEM."

G. FIRE ALARM PANEL AND TRANSPONDER CIRCUITS: CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING, SHALL BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL, AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL". THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.

H. ALL RECEPTACLES, OUTLETS & JUNCTION BOXES SHALL BE LABELED INDICATING, PANEL & CIRCUIT NUMBERS.

GROUNDING

A. ALL BRANCH CIRCUITS OVER 100 VOLTS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250-122, EXCEPT NOT BE SMALLER THAN #12 FOR POWER AND LIGHTING CIRCUITS. ALL GROUND CONDUCTORS SHALL BE GREEN.

B. ALL GROUND CLAMPS SHALL BE PENN-UNION "GPL" TYPE OR SIMILAR BY O.Z. OR BURNDY.

C. THE GROUND CONDUCTOR SHALL BE CONNECTED TO THE NEUTRAL IN ONLY TWO LOCATIONS – ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT MEANS PER NEC-250-24 AND ON SEPARATELY DERIVED SYSTEMS PER NEC 250-30.

D. AT EACH RECEPTACLE BOX, THE GROUND CONDUCTOR SHALL ENTER AND CONNECT, WITH NORMAL WIRING CONNECTOR, TO: 1) THE GROUND PIGTAIL TO RECEPTACLE; 2) THE GROUND PIGTAIL TO BOX GROUND SCREW; AND 3) THE OUTGOING GROUND CONDUCTOR TO NEXT DEVICE, IF NOT AT END OF RUN. METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BONDING FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES.

E. MOTOR TERMINAL BOXES SHALL BE GROUNDED BY THE USE OF MANUFACTURER SUPPLIED GROUND LUG OR BY DRILLING AND TAPPING A HOLE FOR A GROUND SCREW. REMOVE PAINT PRIOR TO MAKING THE CONNECTION.

F. LIGHTING FIXTURES SHALL BE GROUNDED BY THE USE OF A MANUFACTURER SUPPLIED GROUND LUG OR PIGTAIL OR BY THE USE OF GROUND CLIPS FASTENED ON BARE METAL THAT IS FREE OF PAINT.

G. CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS SHALL CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. WHERE REDUCING WASHERS ARE USED AND WHERE CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE NOT COMPLETELY REMOVED BONDING BUSHINGS SHALL BE REQUIRED.

MOTOR AND EQUIPMENT WIRING

A. PROVIDE POWER AND CONNECT ALL MOTORS AND MOTOR DRIVEN EQUIPMENT SHOWN ON THE PLANS.

B. FURNISH, INSTALL AND CONNECT ALL OVER CURRENT AND DISCONNECT MEANS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

C. INSTALL AND WIRE ALL MOTOR CONTROL EQUIPMENT PER WIRING DIAGRAMS AND INSTRUCTIONS FURNISHED TO HIM, INCLUDING INTERLOCK WIRING BETWEEN EQUIPMENT.

D. REFER TO THE HEATING AND AIR CONDITIONING SPECIFICATIONS FOR DESCRIPTION OF ELECTRICAL EQUIPMENT AND CONTROLS FURNISHED BY THEM.

LIGHTING FIXTURES AND CONTROLS

A. CLEARANCES FOR RECESSED PORTIONS OF FIXTURES FROM COMBUSTIBLE MATERIAL AND THERMAL INSULATION, SHALL BE IN ACCORDANCE WITH NEC ARTICLE 410-116 (A) AND (B).

B. FLUSH FIXTURES THAT HAVE LIGHT LEAKS BETWEEN THE FRAME AND CEILING SHALL HAVE A GASKET INSTALLED BY THIS CONTRACTOR BETWEEN THE TRIM AND THE CEILING.

C. ANY FIXTURES SCRATCHED, BENT, CRACKED OR IN ANY WAY DAMAGED BEFORE ACCEPTANCE BY OWNER SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE.

D. ALL LAMPS SHALL BE IN WORKING ORDER AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER/ LANDLORD.

E. ALL LIGHTING FIXTURES ARE TO BE GROUNDED ON THE INTERIOR OF THE FIXTURE HOUSING, ON CLEAN BARE METAL (FREE OF PAINT), BY USE OF A PIGTAIL AND FASTENED BY A SCREW USED FOR NO OTHER PURPOSE.

F. WHEREVER LIGHTING SYSTEMS ARE SUPPORTED AND FASTENED TO A CEILING SUSPENSION SYSTEM OF THE GRID TYPE, EACH FIXTURE SHALL HAVE A SUPPORT WIRE FROM DECK ABOVE TO ALL 4 CORNERS OF EACH RECESSED FIXTURE. EACH FIXTURE SHALL BE FASTENED TO THE GRID SYSTEM IN ACCORDANCE WITH NEC ARTICLE 300.11(A)(2) USING SUITABLE CLIPS. THE T-BAR SHALL NOT BE CUT OUT TO PROVIDE ROOM FOR THE JUNCTION BOX.

G. PROVIDE FACTORY-AUTHORIZED REPRESENTATIVE FOR PRE-FUNCTIONAL AND FUNCTIONAL COMMISSIONING OF THE COMPLETE SYSTEM PRIOR TO FINAL COMPLET