BENNETT SPRING STATE PARK
CAMPGROUND #4 SHOWER HOUSE
REPLACEMENT
Lebanon, Missouri

olsson®

550 East St. Louis Street
Springfield, MO 65806

olsson.com
TEL 417.890.8802
FAX 417.890.8805

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OWNER: STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

DEPARTMENT OF
NATURAL RESOURCES, STATE PARKS

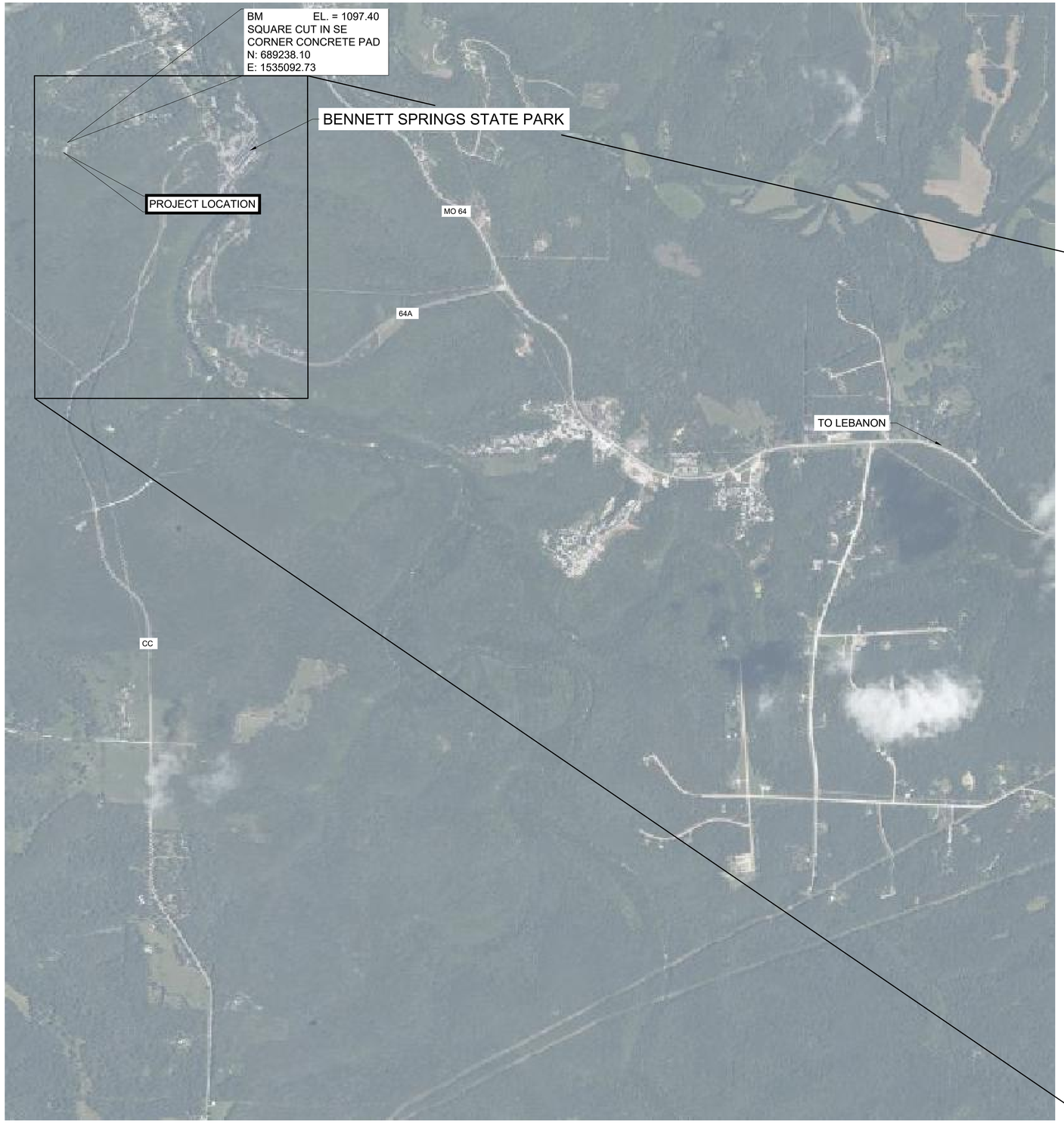
PROJECT MANAGEMENT: OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DESIGNER: OLSSON
550 E. St. Louis Street
Springfield, MO 65806

PROJECT NUMBER: X2528-01

SITE NUMBER: 5302
ASSET NUMBER: 7815302022

SHEET NUMBER:
G-001
1 OF 36 SHEETS
10/24/2025

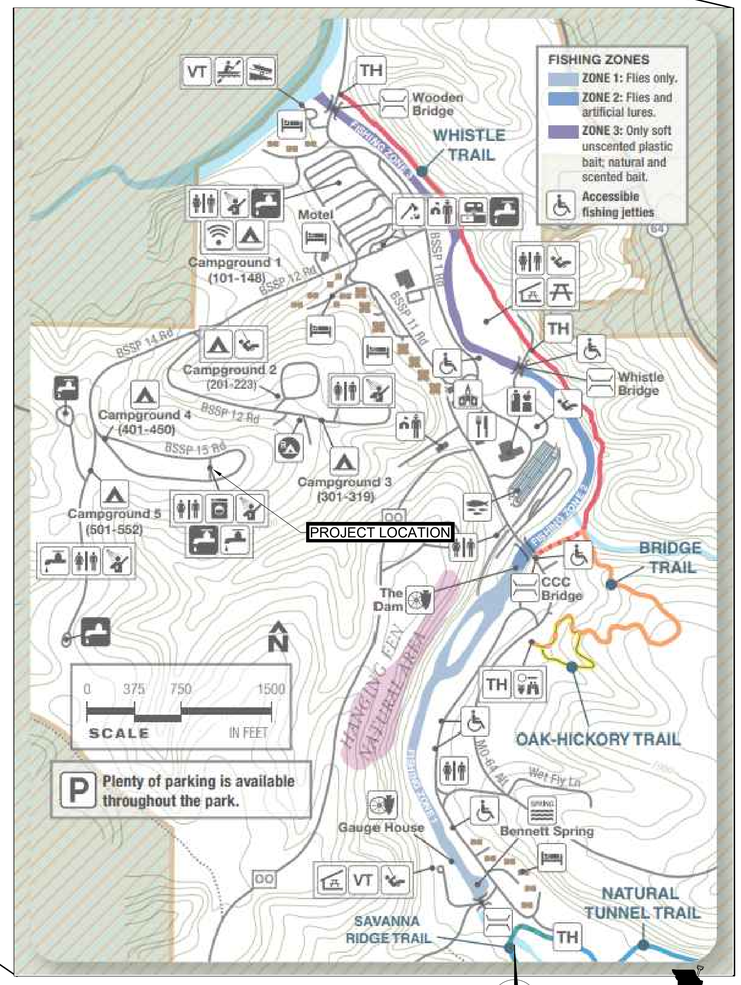


1 SHOWER HOUSE RESTROOM LOCATION MAP
SCALE: 1" = 10'

SCALE: 1" = 800'

LEGEND

CP#103	CONTROL POINT-BENCHMARK
EM	ELECTRIC METER
	GRATE
LTP	LIGHT POLE
	POWER POLE
	SIGN
	STEEL POST
	PROPOSED SANITARY SEWER CLEANOUT
	EXIST. SANITARY SEWER MANHOLE
	TRANSFORMER
	WOOD POST
YHT	YARD HYDRANT
M	METERING MANHOLE
715	EXISTING CONTOUR LINE
715	NEW CONTOUR LINE
	BARBED WIRE FENCE
X X	CHAIN LINK FENCE
	LIMITS OF CONTRUCTION
	TREE MASS
SS	PROPOSED GRAVITY SANITARY SEWER
FM	PROPOSED FORCE MAIN SANITARY SEWER
W	PROPOSED WATER
W	EXISTING WATER
SS	EXIST. SEWER PIPING
P-OH	OVERHEAD POWER



2 ENLARGED MAP
SCALE: NOT TO SCALE

NOT TO SCALE

MISSOURI ONE CALL SYSTEM
1-800-DIG-RITE or 811
www.mo1call.com

STATE OF MISSOURI
MIKE KEHOE, GOVERNOR

10-24-2025
STATE OF MISSOURI
KERRY GAIL SCOTT
NUMBER E-24567
REGISTERED PROFESSIONAL ENGINEER

560 East St. Louis Street
Springfield, MO 65806
olsson.com
TEL 417.890.8802
FAX 417.890.8805

olsson

Olsson - Engineering
Missouri COA #001592

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DEPARTMENT OF NATURAL RESOURCES, STATE PARKS

CAMPGROUND #4
SHOWER HOUSE
REPLACEMENT

BENNETT SPRING
STATE PARK
LEBANON, MO

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REVISION:
DATE:
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DATE:
ISSUE DATE: 10/24/2025

CAD DWG FILE: G-101.dwg
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SHEET TITLE:
LOCATION MAP

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G-101

2 OF 36 SHEETS
10/24/2025

ABBREVIATIONS

AE	AIR ENTRAINING
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
B/	BOTTOM OF
BLDG	BUILDING
BM	BEAM
BOT	BOTTOM
BRG	BEARING
C	COMPRESSION
CA	CAISSON
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUE(D)(OUS)
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION(S)
DL	DEAD LOAD
DP	DRILLED PIER
DWG	DRAWING
EA	EACH
ECC	ECCENTRICITY
EF	EACH FACE
EJ	EXPANSION JOINT
ELEV	ELEVATION
EOR	ENGINEER OF RECORD
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EWEF	EACH WAY EACH FACE
FF	FINISHED FLOOR
FFE	EXISTING FINISHED FLOOR
FND	FOUNDATION
FT	FEET (FOOT)
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GL	GLUE LAMINATE TIMBER
HORZ	HORIZONTAL
HS	HEADED STUD
ID	INSIDE DIAMETER
K	KIP (1000 POUNDS)
KLF	KIPS PER LINEAR FOOT
LB, #	POUNDS
LFRS	LATERAL FORCE RESISTING SYSTEM
LH	LEFT HAND
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
NA	NOT APPLICABLE
NO, #	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OH	OPPOSITE HAND
PEMB	PRE-ENGINEERED METAL BUILDING
PJF	PREMOLDED JOINT FILLER
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PSF	POUND PER SQUARE FOOT
PSI	POUND PER SQUARE INCH
PT	POST TENSION(ED)
QTY	QUANTITY
R	RADIUS
REINF	REINFORCE(D)
REV	REVISED/REVISION
RH	RIGHT HAND
RO	ROUGH OPENING
RTU	ROOF TOP UNIT
SF	SQUARE FOOT
SIM	SIMILAR
SLRS	SEISMIC LOAD RESISTING SYSTEM
SPEC	SPECIFICATION
SS	STAINLESS STEEL
STD	STANDARD
T	TENSION
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROVE
T/	TOP OF
TBD	TO BE DETERMINED
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	SHEAR
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WG	WORKABLE GAGE
WP	WORKING POINT
WWR	WELDED WIRE REINFORCEMENT

GENERAL NOTES

1. THE STRUCTURAL DRAWINGS ARE TO BE COORDINATED AND USED IN CONJUNCTION WITH THE CIVIL, ARCHITECTURAL, PROCESS, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL AND PROCESS DRAWINGS AND IMMEDIATELY NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES.
2. OLSSON SHALL NOT BE RESPONSIBLE FOR, NOR HAVE CHARGE OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES FOR THE SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THIS PROJECT AND SHALL NOT BE RESPONSIBLE FOR CONTRACTOR'S FAILURE TO CARRY OUT WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. OLSSON SHALL NOT BE RESPONSIBLE FOR, NOR HAVE CONTROL OVER, THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, ANY OF THEIR AGENTS OR EMPLOYEES, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
4. THE CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR ALL TEMPORARY SHORING AND BRACING REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT. ALL SHORING AND BRACING MEMBERS AND CONNECTIONS SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT THE IMPOSED LOADS. TEMPORARY MEMBERS AND CONNECTIONS SHALL NOT BE REMOVED UNTIL PERMANENT MEMBERS ARE IN PLACE AND FINAL CONNECTIONS ARE MADE.
5. THE CONTRACTOR SHALL VERIFY IN FIELD ALL DIMENSIONS, ELEVATIONS, AND MEMBER SIZES AS SHOWN ON THE CONTRACT DRAWINGS FOR THE EXISTING CONSTRUCTION PRIOR TO THE DETAILING OR FABRICATION OF ANY NEW STRUCTURAL ELEMENT. THE CONTRACTOR SHALL DOCUMENT ANY CONSTRUCTION-RELATED DISCREPANCIES. PRIOR TO THE SCHEDULED START OF ANY DETAILING OR FABRICATION, THE CONTRACTOR SHALL FURNISH THE ABOVE INFORMATION IN THE FORM OF DETAILED SKETCHES TO THE STRUCTURAL ENGINEER FOR REVIEW.
6. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE AND/OR SETTLEMENT OF EXISTING OR NEW CONSTRUCTION INSIDE OR OUTSIDE THE PROJECT LIMITS DURING CONSTRUCTION. ANY DAMAGE TO NEW OR EXISTING CONSTRUCTION INSIDE OR OUTSIDE OF THE PROJECT LIMITS CAUSED BY CONSTRUCTION TECHNIQUES IS THE RESPONSIBILITY OF THE CONTRACTOR.
7. NO FIELD MODIFICATIONS TO ANY STRUCTURAL COMPONENTS SHALL BE MADE WITHOUT PRIOR APPROVAL BY THE STRUCTURAL ENGINEER. THIS INCLUDES, BUT IS NOT LIMITED TO, REVISIONS DUE TO MIS-LOCATION, MISFIT, OR ANY OTHER CONSTRUCTION ERRORS.
8. NO OPENING SHALL BE PLACED IN ANY STRUCTURAL MEMBER (OTHER THAN AS INDICATED ON APPROVED SHOP DRAWINGS) UNTIL THE LOCATION HAS BEEN APPROVED BY THE STRUCTURAL ENGINEER.
9. PROVIDE SLEEVE LAYOUTS FOR ALL PENETRATIONS THROUGH STRUCTURAL MEMBERS FOR ALL TRADES. LAYOUTS ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
10. ALL ROOF MOUNTED EQUIPMENT OR EQUIPMENT SUSPENDED FROM FLOORS OR THE ROOF SHALL BE SUPPORTED BY BEAMS DESIGNATED FOR SUCH PURPOSE ONLY. IF NO SUPPORT HAS BEEN DESIGNATED, OR IF A QUESTION ARISES, NOTIFY STRUCTURAL ENGINEER PRIOR TO ERECTION OF EQUIPMENT.
11. ALL DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS ARE INTENDED TO BE TYPICAL FOR SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE NOTED. SEE THE ARCHITECTURAL DRAWINGS FOR DETAILS AND DIMENSIONS NOT INDICATED ON THE STRUCTURAL DRAWINGS.
12. MATERIALS AND EQUIPMENT SHALL BE STORED AND TRANSPORTED IN A MANNER SO AS NOT TO EXCEED THE ALLOWABLE CAPACITY OF THE CONSTRUCTION.
13. THE SPECS AND REQUIREMENTS INDICATED ON THIS SHEET ARE INTENDED AS A BASIC SUMMARY OF THE MATERIAL, CONSTRUCTION, AND INSPECTION REQUIREMENTS FOR THE PROJECT. ADDITIONAL, MORE STRINGENT REQUIREMENTS MAY BE GIVEN IN THE PROJECT SPECIFICATIONS. IN THE EVENT OF A CONFLICT BETWEEN THE REQUIREMENTS INDICATED ON THIS SHEET AND THOSE IN THE PROJECT SPECS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
14. FOR LOCATIONS AND DIMENSIONS OF SLEEVES, CURBS, OPENINGS, AND DEPRESSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS, SEE CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. CONTRACTOR SHALL VERIFY AND COORDINATE LOCATION OF ABOVE ITEMS WHETHER SHOWN ON THE STRUCTURAL DRAWINGS OR NOT.
15. EMBEDDED ITEMS, SUCH AS PIPE SLEEVES, CONDUITS, AND INSERTS, SHALL BE IN PLACE BEFORE CONCRETE IS POURED.
16. THE CONTRACTOR SHALL FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE DRAWINGS.
17. THE STEEL FRAMING COMPONENTS SHOWN RELY ON BUILDING COMPONENTS OTHER THAN STRUCTURAL STEEL FOR FINAL STRUCTURAL STABILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND PROVISION OF ANY AND ALL TEMPORARY BRACING AND SHORING AGAINST WIND, ERECTION AND ALL CONSTRUCTION LOADS UNTIL ALL ELEMENTS, MEMBERS, AND CONNECTIONS (FLOORS, ROOF, SHEAR WALLS, ETC), AS SHOWN ON THE CONTRACT DOCUMENTS ARE COMPLETELY INSTALLED. THE STRUCTURAL MEMBERS SHOWN ON THE CONTRACT DOCUMENTS ARE DESIGNED FOR THE ANTICIPATED LOADS THAT THE STRUCTURE WILL BE SUBJECTED TO ONLY AFTER ALL STRUCTURAL ELEMENTS ARE IN PLACE AND FINAL CONNECTIONS ARE COMPLETE.
18. THE ENGINEER HAS ASSUMED THAT THE EXISTING CONSTRUCTION WAS DESIGNED AND CONSTRUCTED IN CONFORMITY WITH GOOD PRACTICES. THE CONTRACTOR SHALL TAKE EXTRAORDINARY PRECAUTIONS CONCERNING PRESERVATION OF THE BUILDING DURING DEMOLITION AND NEW CONSTRUCTION WORK. FURTHERMORE, THEY SHALL AGREE TO ASSUME ALL RESPONSIBILITY FOR THE PRESERVATION OF THIS PROPERTY.

STRUCTURAL GENERAL CONSTRUCTION:

1. ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO SIMILAR CONDITIONS ELSEWHERE.
2. THE CONTRACTOR SHALL FIELD CHECK AND VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK.
3. NO OPENINGS SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
4. NO CHANGE IN SIZE OR DIMENSION OF ANY STRUCTURAL MEMBER SHALL BE MADE WITHOUT THE PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOADS IMPOSED ON THE STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE LESSER OF THE ALLOWABLE CONSTRUCTION LIVE LOAD AS INDICATED ON THE CONTRACT DRAWINGS, OR THE CAPACITY OF THE FRAMING.
6. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. AS A RESULT OF THE CONSTRUCTION MEANS, METHODS, AND/OR SEQUENCES CHOSEN BY THE CONTRACTOR, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING AND FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY DURING CONSTRUCTION.
7. DO NOT SCALE DRAWINGS, USE DIMENSIONS.
8. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BASED UPON THE REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS THE CONTRACTOR SPECIFICALLY INFORMED THE ENGINEER OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ENGINEER HAS GIVEN WRITTEN APPROVAL FOR THE SPECIFIC DEVIATION.

EARTHWORK

1. !!STOP!! CALL BEFORE YOU DIG! THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL "811" AND COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. NOTIFY THE STRUCTURAL ENGINEER WHENEVER CONFLICTS ARE ENCOUNTERED.
2. SHALLOW FOUNDATIONS: CONTINUOUS WALL FOOTINGS, ISOLATED SPREAD FOOTINGS, AND GROUND SUPPORTED MAT FOUNDATIONS HAVE BEEN DESIGNED TO BEAR ON FIRM NATIVE SOILS OR COMPACTED ENGINEERED FILL.
3. GENERAL CONTRACTOR SHALL COMPACT EXPOSED FOOTING BOTTOMS AND EXPOSED AGGREGATE PIER SURFACES WITH HAND-OPERATED, MECHANICAL COMPACTION EQUIPMENT AFTER EACH FOOTING EXCAVATIONS IS COMPLETED AND PRIOR TO PLACING STEEL OR CONCRETE.
4. REFER TO THE GEOTECHNICAL REPORT IN THE SPECIFICATIONS FOR THE FOLLOWING LATERAL EARTH PRESSURES:
   - A. ACTIVE DRAINED EARTH PRESSURES
   - B. UNDRAINED ACTIVE EARTH PRESSURES
   - C. AT-REST DRAINED EARTH PRESSURES
   - D. AT-REST UNDRAINED EARTH PRESSURES
   - E. PASSIVE EARTH PRESSURE
5. ALL UNSUITABLE SOILS SHALL BE REMOVED WITHIN THE EXCAVATION AREA OF THE FOUNDATIONS. ALL FOOTINGS SHALL BEAR ON VIRGIN SOIL OR PROPERLY PLACED AND COMPACTED ENGINEERED FILL.
6. FOUNDATIONS EXPOSED TO FROST SHALL BE PLACED SUCH THAT THE BOTTOM OF FOUNDATION IS AT LEAST 24"BELOW THE ADJACENT FINISHED GRADE.
7. SHOULD UNSUITABLE BEARING CONDITIONS BE ENCOUNTERED DURING EXCAVATION, NOTIFY THE OWNER, ARCHITECT, AND STRUCTURAL ENGINEER BEFORE CONTINUING WITH CONSTRUCTION.
8. THE CONTRACTOR MUST PROVIDE SURFACE DRAINAGE AND PUMPS TO PROTECT ALL EXCAVATION FROM FLOODING. FLOODING OF ANY EXCAVATION AFTER APPROVAL OF THE SUBGRADE WILL BE CAUSE FOR RE-PREPARATION AND RE-APPROVAL OF THE SUBGRADE.
9. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY WATER, FROST, OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER PLACING OF CONCRETE AND UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE.
10. RECORDS OF ANY EXISTING SUBGRADE INTERFERENCES, OTHER THAN THOSE INTERFERENCES SHOWN OR INDICATED ON THE CIVIL CONSTRUCTION DOCUMENTS, ARE NOT CURRENTLY AVAILABLE. DURING EXCAVATION WORK, INTERFERENCES MAY BE DISCOVERED. CONTRACTOR SHALL DOCUMENT CONSTRUCTION-RELATED DIMENSIONS OF ALL INTERFERENCES. CONTRACTOR SHALL FURNISH THE ABOVE INFORMATION IN THE FORM OF DETAILED SKETCHES TO THE STRUCTURAL ENGINEER FOR REVIEW.
11. THE CONTRACTOR SHALL REVIEW ALL EXISTING SITE CONDITIONS AND THE SUBSURFACE SOILS EXPLORATION REPORT AND ESTABLISH SPECIFIC "CONSTRUCTION PROCEDURES AND SEQUENCES" FOR THE EXCAVATION, COMPACTION, FILL, AND INSTALLATION OF THE NEW BUILDING FOUNDATION. SUBMIT THESE FOR REVIEW TO THE OWNER'S SOIL TESTING LABORATORY, OWNER'S REPRESENTATIVE, AND STRUCTURAL ENGINEER.
12. DO NOT BACKFILL AGAINST FOUNDATION WALLS UNTIL THE PERMANENT BELOW-GRADE LATERAL BRACING SYSTEM IS IN PLACE AND THE CONCRETE HAS ATTAINED FULL DESIGN STRENGTH.
13. ALL SLABS-ON-GRADE SHALL BE PLACED OVER A LOW PERMEANCE VAPOR BARRIER, 15 MIL MINIMUM THICKNESS, OVER A BASE/SUBBASE. EXISTING SUBBASE WILL BE COMPACTED IN PLACE OR WILL BE CUT OUT AND REPLACED WITH AN ENGINEERED FILL
14. FLOWABLE FILL FOR USE AS FOUNDATION SUPPORT IS DEFINED AS CONTROLLED LOW STRENGTH MATERIAL (CLSM)
   - A. FLOWABLE FILL IN NOT INTENDED TO BE EXCAVATABLE IN THE FUTURE.
   - B. PROVIDE CONCRETE CONTRACTOR'S STANDARD MIX FOR FLOWABLE FILL THAT MEETS THE FOLLOWING REQUIREMENTS:
     - a. CONFORM TO THE RECOMMENDATIONS OF ACI 229R-99.
     - b. 28 DAY MINIMUM COMPRESSIVE STRENGTHS OF 100PSI.
     - c. MIXTURE SHALL FLOW INTO PLACE AND CONSOLIDATE DUE TO ITS FLUIDITY WITHOUT VIBRATION OR PUDDLING ACTION.
     - d. LIMIT SUBSIDENCE OF FLOWABLE FILL TO 1/8" PER FOOT OF DEPTH
     - e. CURING PROCEDURES ARE NOT REQUIRED, BUT PROTECT FROM FREEZING UNTIL MIX HAS HARDENED.

REINFORCED MASONRY

1. PLACING CONCRETE MASONRY UNITS:
   - A. USE RUNNING BOND. FULLY BOND CORNERS BY OVERLAPPING OF UNITS.
   - B. PLACE CONTINUOUS HORIZONTAL JOINT REINFORCEMENT EVERY SECOND BED JOINT. PLACE REINFORCEMENT AT FIRST AND SECOND JOINTS ABOVE AND BELOW OPENINGS. LAP SPLICES 6" MINIMUM. PROVIDE PREFABRICATED 'T' AND 'L' SECTIONS AT INTERSECTIONS AND CORNERS.
   - C. MAINTAIN FLUSH FACE ON EXPOSED MASONRY SURFACES.
   - D. FACE SHELLS: FULLY MORTARED.
   - E. WEBS: FULLY MORTARED IN PIERS, PILASTERS, STARTING COURSE AT FOUNDATION OR FLOOR LEVEL AND WHERE ADJACENT CELLS OR CAVITIES ARE TO BE GROUTED.
   - F. HEAD SHELLS: MORTARED FROM EACH FACE EQUAL TO THE FACE SHELL THICKNESS.
   - G. KEEP VERTICAL CELLS THAT ARE TO BE GROUTED ALIGNED AND FREE FROM OBSTRUCTIONS AND MORTAR FINS.
   - H. DO NOT LAY DAMAGED UNITS.
   - I. PERFORM JOB SITE CUTTING WITH PROPER TOOLS TO PROVIDE STRAIGHT AND TRUE UNCHIPPED EDGES.
   - J. TOOL JOINTS WHEN MORTAR IS THUMB PRINT HARD TO FORM CONCAVE JOINTS.
   - K. COVER TOP OF UNFINISHED MASONRY WORK.
2. GROUTING:
   - A. VERIFY REINFORCEMENT IS PROPERLY PLACED AND SECURED IN POSITION PRIOR TO GROUTING.
   - B. ALL BOND BEAMS SHALL BE GROUTED SOLID.
   - C. FULLY GROUT CELLS AT EACH SIDE OF OPENINGS AND CONTROL JOINTS WITH (1) #5 BAR PLACED IN CENTER OF CELL, UNLESS OTHERWISE SHOWN ON DRAWINGS.
   - D. PLACE GROUT IN LIFTS NOT EXCEEDING 8'-0". CONSOLIDATE AT TIME OF PLACEMENT BY RODDING OR VIBRATING FOLLOWED BY RECONSOLIDATION LATER BEFORE PLASTICITY IS LOST.
   - E. IF TOTAL HEIGHT OF GROUT PLACEMENT IS TO EXCEED 8'-0", PLACE GROUT IN 4'-0" LIFTS. IF GROUTING IS STOPPED FOR MORE THAN ONE HOUR BETWEEN LIFTS, FORM A HORIZONTAL CONSTRUCTION JOINT BY STOPPING THE POUR 4" BELOW THE TOP OF THE CONCRETE MASONRY UNIT.
3. HOT AND COLD WEATHER CONDITIONS:
   - A COLD WEATHER: CONFORM TO THE REQUIREMENTS OF ACI/ASCE 530 WHEN THE AMBIENT TEMPERATURE FALLS BELOW 40°F.
   - B. HOT WEATHER: WHEN AIR TEMPERATURE EXCEEDS 90°F DO NOT SPREAD MORTAR BED MORE THAN 4'-0" AHEAD OF MASONRY. SET MASONRY UNITS WITHIN ONE MINUTE OF SPREADING MORTAR.
4. SEALANTS:
   - A. INTERIOR JOINTS: ONE COMPONENT POLYURETHANE APPLIED OVER BACKER ROD.
   - B. EXTERIOR JOINTS: MULTICOMPONENT POLYURETHANE OR TWO COMPONENT POLYSULFIDE SEALANT APPLIED OVER BACKER ROD IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
   - C. FIRE-STOP SEALANT: FYRE-SIL MFG BY TREMCO.
   - D. BACKER ROD: ROUND CLOSED CELL POLYETHYLENE.
   - E. MINERAL WOOL: 6 LBS PER CUBIC FOOT DENSITY COMPRESSED INTO PLACE. DO NOT USE FIBERGLASS BATTS.
5. CONSTRUCTION PRECAUTIONS:
   - A: ADEQUATELY BRACE ALL WALLS DURING CONSTRUCTION.
   - B. IF INTERIOR WALLS ARE CONSTRUCTED PRIOR TO ENCLOSURE OF STRUCTURE, PROVIDE ADEQUATE TEMPORARY BRACING. REMOVE BRACING AFTER STRUCTURE IS ENCLOSED.
   - A. DO NOT EMBED ALUMINUM CONDUIT, PIPE OR ACCESSORIES IN MASONRY.

SHOP DRAWINGS

1. ALL SHOP DRAWING SUBMITTALS SHALL BE AS DESCRIBED IN THE PROJECT SPECIFICATIONS OR IN THESE NOTES.
2. SHOP DRAWINGS AND RELATED MATERIALS PREPARED BY SUPPLIERS AND SUBCONTRACTORS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING TO THE STRUCTURAL ENGINEER.
3. THE GENERAL CONTRACTOR SHALL REVIEW ALL SUBMISSIONS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATION OF CONSTRUCTION, TECHNICAL CONTENT, COORDINATION OF TRADES, DIMENSIONAL ACCURACY, SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
4. THE GENERAL CONTRACTOR SHALL APPROVE AND SO STAMP EACH SUBMISSION.
5. SHOP SUBMITTALS SHALL BE SUBMITTED IN A DIGITAL FORMAT. MULTIPLE COPIES OF DRAWINGS WILL NOT BE MARKED-UP WITH REVIEW COMMENTS.
6. THE STRUCTURAL DRAWINGS SHALL NOT BE USED AS BACKGROUNDS FOR THE PRODUCTION OF ANY SHOP DRAWINGS THAT ARE SUBMITTED FOR REVIEW.
7. ANY DEVIATIONS FROM THE ORIGINAL DESIGN OR DESIGN CRITERIA AS SPECIFIED ON THE "FOR CONSTRUCTION" DESIGN DOCUMENTS OF THE PROJECT SHALL BE BOLDLY NOTED AND BUBBLED ON THE SHOP DRAWINGS THAT ARE SUBMITTED FOR APPROVAL TO BRING TO THE EOR'S ATTENTION.
8. ALL CHANGES TO RESUBMITTED SHOP DRAWINGS SHALL BE BUBBLED.

WOOD:

1. WOOD CONSTRUCTION, BOTH LOAD BEARING AND NON LOAD BEARING, THAT WILL BE IN PERMANENT CONTACT WITH CONCRETE OR MASONRY, SHALL BE PRESERVATIVE-TREATED WOOD CONFORMING TO THE REQUIREMENTS OF THE APPLICABLE AWPA STANDARD U1 AND M4 FOR THE SPECIES, PRODUCT, PRESERVATIVE, AND END USE.
2. WHERE PRESERVATIVE-TREATED WOOD IS USED IN ENCLOSED LOCATIONS WHERE DRYING IN SERVICE CANNOT READILY OCCUR, SUCH WOOD SHALL BE AT A MOISTURE CONTENT OF 19 PERCENT OR LESS BEFORE BEING COVERED WITH INSULATION, INTERIOR WALL FINISH, FLOORING COVERING OR OTHER MATERIALS.
3. LAMINATED VENEER LUMBER (LVL) SHALL CONFORM TO ASTM D5456 FOR STRUCTURAL COMPOSITE LUMBER.
4. CONSTRUCTION OR NO. 2 GRADE 2X LUMBER IS PERMITTED IN ALL LOAD BEARING, NON-LOAD BEARING, AND WOOD NAILER APPLICATIONS..

DESIGN CRITERIA:

BUILDING CODE INTERNATIONAL BUILDING CODE, 2024 EDITION (IBC 2024)

DESIGN LOADS:		
RISK CATEGORY	=	II
DEAD LOADS		
ROOF (GENERAL)	=	10 PSF
FLOOR (GENERAL)	=	75 PSF
LIVE LOADS		
ROOF (GENERAL)	=	20 PSF
FLOOR		
STAIRS	=	100 PSF
SLAB-ON-GRADE	=	125 PSF
SNOW LOADS		
GROUND SNOW LOAD, Pg	=	20 PSF
FLAT ROOF SNOW LOAD, Pf	=	14 PSF
SNOW EXPOSURE FACTOR, Ce	=	1.0
SNOW LOAD IMPORTANCE FACTOR, Is	=	1.0
THERMAL FACTOR, Ct	=	1.0
MINIMUM SNOW LOAD, Pm	=	20 PSF
WIND		
BASIC WIND SPEED (3 SECOND GUST)	=	115 PSF
WIND IMPORTANCE FACTOR	=	1.0
WIND EXPOSURE CATEGORY	=	B
EARTHQUAKE DATA - STRUCTURAL		
RISK CATERORY	=	II
SEISMIC IMPORTANCE FACTOR	=	1.0
SITE CLASS	=	D
SPECTRAL RESPONSE COEFFICIENTS		Ss = 0.56 g; S_{01} = 21 g
DESIGN SPECTRAL RESPONSE COEFF'S		S_{DS} = 0.42 g; S_{01} = 0.25 g
SEISMIC DESIGN CATEGORY		C
DESIGN BASE SHEAR		Vu = 5 KIPS
SEISMIC RESPONSE COEFFICIENT		Cs = 0.048
RESPONSE MODIFICATION COEFFICIENT		R = 5.5
OVERSTRENGTH FACTOR		Ω_0 = 2.5
DEFLECTION FACTOR		Cd = 1.75
NEW CONSTRUCTION		
SEISMIC FORCE-RESISTING SYSTEM		NEW CONSTRUCTION WILL BE DETAILED TO MEET SPECIAL REINFORCED MASONARY SHEAR WALLS
ANALYSIS PROCEDURE		EQUIVALENT LATERAL FORCE PROCEDURE

FOUNDATIONS:

1. EXCAVATIONS NEAR FOOTINGS OR FOUNDATIONS, FOR ANY PURPOSE, SHALL NOT REMOVE LATERAL SUPPORT FROM ANY FOOTING OR FOUNDATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF THE FOOTING AND PROTECTING AGAINST SETTLEMENT OR LATERAL TRANSLATION.
2. BACKFILL FOR FOUNDATIONS ELEMENTS SHALL BE MADE WITH SOIL THAT IS FREE OF ORGANIC MATERIAL, CONSTRUCTION DEBRIS, COBBLES, AND BOULDERS. IN LIEU OF SOIL, CONTROLLED LOW STRENGTH MATERIAL (CLSM) CAN BE USED IF A WRITTEN REQUEST IS SUBMITTED TO THE OWNER'S REPRESENTATIVE AND THAT REQUEST IS APPROVED BY THE ENGINEER AS WELL AS THE OWNER.
3. BACKFILL SHALL BE PLACED IN LIFTS NOT EXCEEDING 9 INCHES IN DEPTH. THE LIFTS SHALL BE COMPACTED WITH HAND-OPERATED TAMPERS OR OTHER PORTABLE COMPACTION EQUIPMENT. CARE SHALL BE TAKEN TO PREVENT ANY POSSIBLE DAMAGE TO WATERPROOFING OR DAMPPROOFING INSTALLATIONS AND TO AVOID OVERCOMPACTION WHICH CAUSES EXCESSIVE LATERAL EARTH PRESSURE AGAINST THE FOUNDATION ELEMENTS.
4. FOOTINGS, FOUNDATIONS, AND/OR GRADE BEAMS SHALL BE PLACED ON A PREPARED SUBGRADE OR UNDISTURBED SOIL STRATA HAVING A MINIMUM NET ALLOWABLE BEARING PRESSURE OF 2000 PSF.

SLABS ON GRADE:

1. CONCRETE SLABS ON GRADE SHALL BE CONSTRUCTED TO THE MINIMUM THICKNESS AND WITH THE REINFORCEMENT SHOWN ON THE FOUNDATION PLAN.
2. THE MAXIMUM TOTAL REDUCTION OF CONCRETE SLAB ON GRADE THICKNESS FROM EMBEDDED CONDUITS, PIPES, ETC. SHALL BE 1 INCH.
3. SUBGRADES AND SUBBASES SHALL BE GRADED WITHIN THE TOLERANCES SPECIFIED IN THE EARTHWORK OR EARTH MOVING SPECIFICATION.
4. THE SOIL SUBGRADE SHALL BE PROOF ROLLED ONCE ROUGH GRADING IS COMPLETED. THE PROOF ROLLING SHALL BE OBSERVED AND EVALUATED BY THE ENGINEER AND SHOULD BE ACCOMPLISHED BY A LOADED TANDEM AXLE DUMP TRUCK, A LOAD TRUCK MIXER, ROLLER, OR EQUIVALENT HAVING A MINIMUM WEIGHT OF 15 TONS. MULTIPLE PASSES SHOULD BE MADE USING A PRE-ESTABLISHED GRID PATTERN. ANY DEFLECTIVE AREAS IDENTIFIED BY THE ENGINEER SHALL BE CORRECTED AND TESTED AGAIN.
5. THE SOIL SUBGRADE SHALL BE COMPACTED TO A MINIMUM DRY DENSITY OF 95 PERCENT BASED ON A STANDARD PROCTOR ACCORDING TO ASTM D698. THE SUBGRADE SHOULD BE COMPACTED PRIOR TO FOOTING AND FOUNDATION INSTALLATION IF THE COMPACTION OF THE SUBGRADE WILL IMPOSE EXCESSIVE LATERAL PRESSURE ON THE FOUNDATION ELEMENTS.
6. A 5 INCH AGGREGATE DRAINAGE BASE COURSE SHALL BE PLACED BETWEEN THE SLAB ON GRADE AND THE PREPARED SUBGRADE. THE DRAINAGE BASE SHALL BE A NARROWLY GRADED MIXTURE OF WASHED CRUSHED STONE, OR CRUSHED OR UNCRUSHED GRAVEL MEETING AN ASTM D448 COARSE AGGREGATE GRADING 57 WITH 100 PERCENT PASSING A 1½ INCH SIEVE AND 0 TO 5 PERCENT PASSING A NO. 8 SIEVE.
7. A MINIMUM 6-mil THICK POLYETHYLENE VAPOR RETARDER SHALL BE PLACED BETWEEN THE DRAINAGE COURSE AND THE SLAB ON GRADE. THE JOINTS OF THE VAPOR BARRIER SHALL BE LAPPED A MINIMUM OF 6 INCHES. IF THE TOP SURFACE OF THE DRAINAGE COURSE IS RELATIVELY ROUGH AND PUNCTURING OF THE VAPOR RETARDER IS LIKELY, THEN IT SHALL BE TOPPED WITH A 1/2 INCH LAYER OF ASTM D448 NO. 10 FINE GRADED MATERIAL.

CONCRETE:

1. MINIMUM CONCRETE COMPRESSIVE STRENGTH (f'c) AT 28 DAYS SHALL BE:

FOOTINGS, FOUNDATIONS, AND GRADE BEAMS	4000 PSI
SLABS ON GRADE	4000 PSI

2. THE MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE VERIFIED BY FIELD QUALITY CONTROL ACCORDING TO THE SPECIFICATIONS. SEE CAST-IN-PLACE CONCRETE SPECIFICATION.
3. THE MINIMUM YIELD STRENGTH (fy) OF BOTH DEFORMED BAR REINFORCEMENT AND WELDED WIRE FABRIC SHALL BE 60,000 PSI.
4. UNLESS OTHERWISE NOTED OR SHOWN ON THE DRAWINGS, THE PROTECTION OF CONCRETE REINFORCEMENT SHALL ADHERE TO SECTION 7.7.1 OF ACI 318-05. THE FOLLOWING DOES NOT APPLY TO SLABS ON GRADE.

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"
CONCRETE EXPOSED TO EARTH OR WEATHER:	
NO. 6 THROUGH NO. 18 BARS	2"
NO. 5 BAR, W31 OR D31 WIRE AND SMALLER	1.5"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:	
SLABS, WALLS, JOISTS	
NO. 14 AND NO. 18 BARS	1.5"
NO. 11 BAR AND SMALLER	0.75"
BEAMS AND COLUMNS	
PRIMARY REINFORCEMENT, TIES, STIRRUPS, AND SPIRALS	1.5"

5. UNLESS OTHERWISE SHOWN OR NOTED, SPLICING OF CONCRETE REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-05, SECTIONS 12.14, 12.15, AND 12.16. DEFORMED BARS AND WIRE IN TENSION SHALL USE A CLASS B SPLICE.
6. ALL HORIZONTAL BARS IN WALLS, FOOTINGS, AND GRADE BEAMS SHALL BE BENT OR SPLICED AT CORNERS AND INTERSECTIONS IN SUCH A WAY THAT CONTINUITY IS PROVIDED THROUGH THE JOINT.

STATE OF MISSOURI
MIKE KEHOE, GOVERNOR

10-24-2025
STATE OF MISSOURI
KERRY GAIL SCOTT
NUMBER E-24567
REGISTERED PROFESSIONAL ENGINEER

550 East St. Louis Street
Springfield, MO 65806
olsson.com
TEL 417.890.8802
FAX 417.890.8805

olsson®

Olsson - Engineering
Missouri COA #001592

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF NATURAL RESOURCES STATE PARKS

CAMPGROUND #4
SHOWER HOUSE
REPLACEMENT

BENNETT SPRING
STATE PARK
LEBANON, MO

PROJECT # X2528-01
SITE # 5302
ASSET # 7815302022

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 10/24/2025

CAD DWG FILE: G-102.dwg
DRAWN BY: TMH
CHECKED BY: KGS
DESIGNED BY: KGS

SHEET TITLE:
GENERAL AND STRUCTURAL NOTES

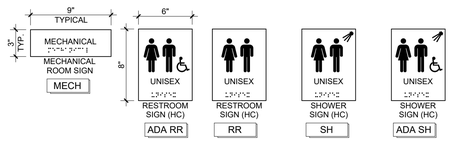
SHEET NUMBER:
G-102

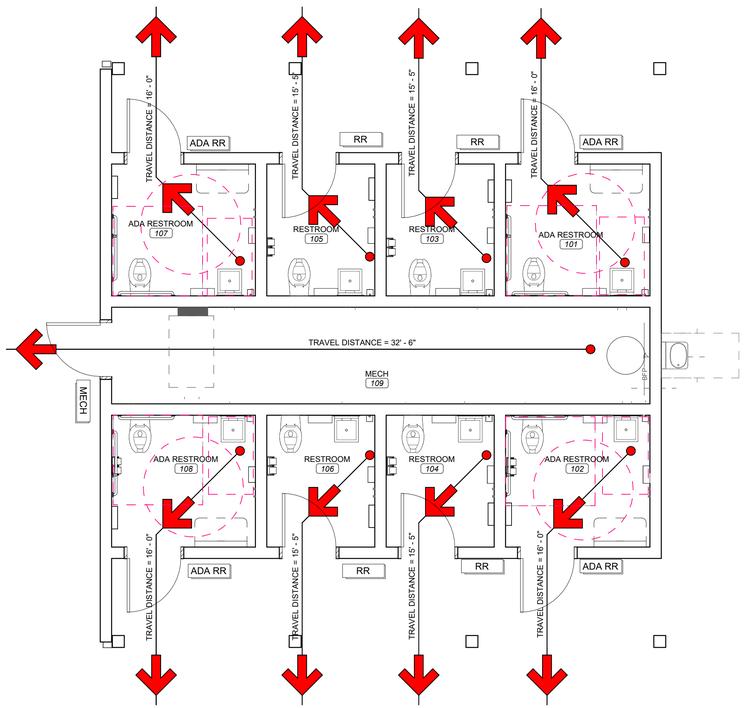
PANEL SIGNAGE LEGEND

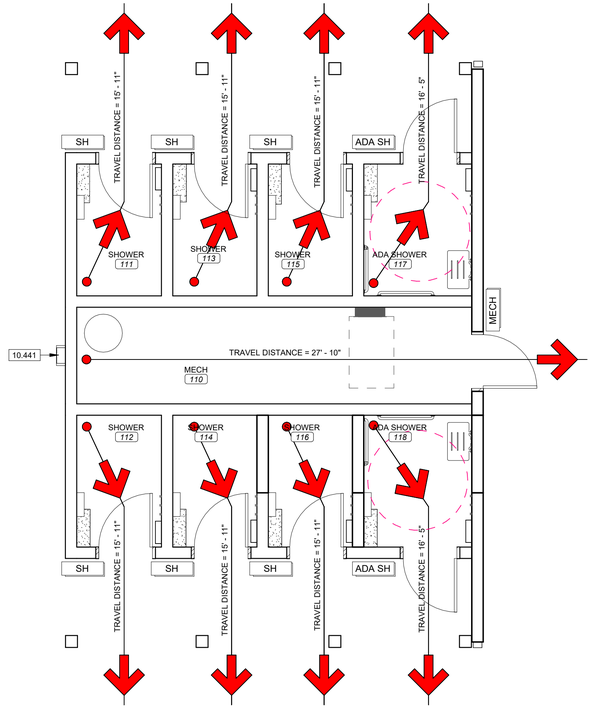
1. PROVIDE THE FOLLOWING PANEL SIGNS AS INDICATED ON THE CODE PLANS.
2. INSTALL SIGNS (HEIGHTS AND LOCATIONS) AS DIRECTED BY OWNER'S REPRESENTATIVE. SIGNS TO BE PLACED 48" ABOVE FINISH FLOOR AT MINIMUM AND PLACED 60" ABOVE FINISH FLOOR AT MAXIMUM.
3. PROVIDE TACTILE EXIT SIGNAGE AT EACH EXIT DOOR COMPLIANT WITH THE APPLICABLE IBC VERSION, ANSI 117.1, AND AS IDENTIFIED UNDER OTHER APPLICABLE CODES.
4. COLOR OF PANEL SIGNAGE TO BE SELECTED BY ARCHITECT PRIOR TO FABRICATION FROM MANUFACTURER STANDARD LINE OF COLORS.
5. SIGNS SHALL BE ONE PIECE CONSTRUCTION WITH THE EXCEPTION OF APPLIED VINYL LETTERS AND CHARACTERS.
6. ALL SIGNAGE TO BE ADA AND ANSI COMPLIANT.
7. ALL SIGNAGE TO BE 1/8" THICK COLORED ACRYLIC WITH COLORED MATTE FINISH.
8. ALL SIGNAGE EDGES TO BE POLISHED.
9. CHARACTERS TO BE CUT VINYL APPLIED. COLOR OF CHARACTERS TO BE SELECTED BY ARCHITECT FROM MANUFACTURER STANDARD LINE OF COLORS.
10. LETTERS TO BE 3/4" CUT VINYL APPLIED. LETTERS TO BE A FONT AND COLOR SELECTED BY ARCHITECT FROM MANUFACTURERS STANDARD LINE OF COLORS.
11. ALL ROOM DESIGNATIONS ARE TO BE PROVIDED BY OWNER.
12. PROVIDE RAISED BRAILLE CHARACTERS ON ALL PANEL SIGNS.
13. SEE SPECIFICATIONS FOR MORE INFORMATION.
14. SEE FINISH FLOOR PLANS FOR ANY ADDITIONAL NON-CODE RELATED SIGNAGE.

PANEL SIGNAGE TAGS

PROVIDE ONE (1) SIGN PER [--] COMPLYING WITH ADA LOCAL CODE. SIGN TO HAVE RAISED CHARACTERS AND PICTORIAL SYMBOL OF ACCESSIBILITY IN ACCORDANCE WITH ANSI AND ADA GUIDELINES. SIGN FINISHES TO BE SELECTED BY A.O.R.







OCCUPANT LOAD SCHEDULE

ROOM INFORMATION			IBC CHAPTER 10		
NO.	NAME	AREA	FUNCTION OF SPACE	OCCUPANT LOAD FACTOR	OCCUPANT COUNT
101	ADA RESTROOM	59 SF	(none)		
102	ADA RESTROOM	59 SF	(none)		
103	RESTROOM	44 SF	LOCKER ROOMS	50 SF	1
104	RESTROOM	44 SF	LOCKER ROOMS	50 SF	1
105	RESTROOM	44 SF	LOCKER ROOMS	50 SF	1
106	RESTROOM	44 SF	LOCKER ROOMS	50 SF	1
107	ADA RESTROOM	59 SF	LOCKER ROOMS	50 SF	2
108	ADA RESTROOM	59 SF	LOCKER ROOMS	50 SF	2
109	MECH	162 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF	1
110	MECH	119 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF	1
111	SHOWER	34 SF	LOCKER ROOMS	50 SF	1
112	SHOWER	33 SF	LOCKER ROOMS	50 SF	1
113	SHOWER	33 SF	LOCKER ROOMS	50 SF	1
114	SHOWER	33 SF	LOCKER ROOMS	50 SF	1
115	SHOWER	33 SF	LOCKER ROOMS	50 SF	1
116	SHOWER	33 SF	LOCKER ROOMS	50 SF	1
117	ADA SHOWER	43 SF	LOCKER ROOMS	50 SF	1
118	ADA SHOWER	43 SF	LOCKER ROOMS	50 SF	1
		982 SF			18

APPLICABLE CODES & STANDARDS

2018 ICC INTERNATIONAL CODE COUNCIL ALL REFERENCE STANDARDS
ICC INTERNATIONAL BUILDING CODE
ICC INTERNATIONAL PLUMBING CODE
ICC INTERNATIONAL MECHANICAL CODE
ICC INTERNATIONAL FIRE CODE
NATIONAL ELECTRIC CODE (NEC) 2017
2010 ADAAG AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES
2009 ANSI A117.1 GUIDELINES FOR ACCESSIBLE & USABLE BUILDING & FACILITIES

GENERAL PROJECT INFORMATION

USER GROUP: GROUP B (303.1.2 SMALL ASSEMBLY SPACE)
CONSTRUCTION TYPE: V-B
AUTOMATIC SPRINKLER SYSTEM: NO
GROSS BUILDING AREA: 1,240 SF

SPECIAL REQUIREMENTS (IBC CHAPTER 4)

SPECIAL REQUIREMENTS: NONE REQUIRED

GENERAL BUILDING HEIGHTS AND AREAS (IBC CHAPTER 5)

MAXIMUM 40FEET ABOVE GRADE PLANE ALLOWED, **17' 10" PROVIDED.**
MAXIMUM 2 STORIES ABOVE GRADE PLANE ALLOWED, **1 STORY PROVIDED.**
MAXIMUM 9,000 SQUARE FEET ALLOWED, REFER TO BUILDING SQUARE FOOTAGE LISTED ABOVE.

FIRE RESISTANCE RATINGS (IBC CHAPTER 6)

CONSTRUCTION TYPE: V-B

PRIMARY STRUCTURAL FRAME:	0 HOURS
BEARING WALLS (EXTERIOR AND INTERIOR):	0 HOURS
NON-BEARING WALLS AND PARTITIONS EXTERIOR:	0 HOURS
NON-BEARING WALLS AND PARTITIONS INTERIOR:	0 HOURS
FLOOR CONSTRUCTION:	0 HOURS
ROOF CONSTRUCTION:	0 HOURS

ALL COMPONENTS CANNOT BE LESS THAN THE FIRE RESISTANCE RATINGS REQUIRED BY OTHER SECTIONS OF CODE

INTERIOR FINISHES (IBC CHAPTER 8)

INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS:	A
CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS:	B
ROOMS AND ENCLOSED SPACES:	C

FIRE PROTECTION SYSTEMS (IBC CHAPTER 9)

PORTABLE FIRE EXTINGUISHERS

SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 10 AND INTERNATIONAL FIRE CODE. SEE PLAN FOR LOCATIONS AND TYPE.

FIRE ALARM AND DETECTION SYSTEM

MANUAL FIRE ALARM SYSTEM NOT REQUIRED

MEANS OF EGRESS INFORMATION (IBC CHAPTER 10)

OCCUPANT LOAD
CALCULATED OCCUPANT LOADING

ACCESSORY STORAGE AND MEP ROOMS	300 SQUARE FOOT PER OCCUPANT
LOCKER ROOMS	50 SQUARE FOOT PER OCCUPANT
INDUSTRIAL	100 SQUARE FOOT PER OCCUPANT

REFER TO OCCUPANT LOAD SCHEDULE FOR TOTAL CALCULATED OCCUPANT LOAD.

MEANS OF EGRESS SIZING
CORRIDORS AND EGRESS COMPONENTS: 0.2" / PERSON / OCCUPANT LOAD.
MINIMUM CLEAR WIDTHS:
DOORS: 32" CLEAR
CORRIDORS: 36" CLEAR

KEYNOTE LEGEND

10.441	SURFACE MOUNTED FIRE EXTINGUISHER. SEE SECTION 10.4400 FIRE PROTECTION SPECIALTIES.

DEFERRED SUBMITTAL LIST

THE FOLLOWING LIST OF SUBMITTALS ARE SUBMITTALS THAT THE DESIGN TEAM RECOGNIZES REQUIRE SUBMISSION TO THE AUTHORITY HAVING JURISDICTION FOR REVIEW THAT ARE NOT AVAILABLE BEFORE CONTRACTOR INVOLVEMENT AND/OR CREATION. THE FOLLOWING WILL BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION DURING CONSTRUCTION FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION OF THE ASSOCIATED BUILDING ELEMENTS.

- PRE-ENGINEERED WOOD TRUSSES

REQUIRED SPECIAL INSPECTIONS AND TESTING

THE FOLLOWING LIST OF SPECIAL INSPECTIONS AND TESTING ARE THOSE REQUIRED BY THE INTERNATIONAL BUILDING CODE SECTION 1700 AND RELEVANT TO THE PROJECT. ALL ITEMS ON THIS LIST SHALL BE TEST AND/OR INSPECTED BY A THIRD-PARTY INSPECTIONS FIRM. THE FOLLOWING SHALL BE INSPECTED BY SAID FIRM, WITH REPORTS AND OBSERVATIONS DELIVERED TO OWNER, ARCHITECT, AND CONTRACTOR, AND ALL DEVIATIONS FROM REQUIREMENTS NOTED AND ADDRESSED.

- CONCRETE CONSTRUCTION (SEE ADDITIONAL NOTES BY STRUCTURAL ENGINEER)
- MASONRY CONSTRUCTION (SEE ADDITIONAL NOTES BY STRUCTURAL ENGINEER)
- WOOD CONSTRUCTION (SEE ADDITIONAL NOTES BY STRUCTURAL ENGINEER)
- SOILS (SEE ADDITIONAL NOTES BY CIVIL AND STRUCTURAL ENGINEERS AND IN GEOTECHNICAL REPORT)

1 CODE PLAN
SCALE 1/4" = 1'-0"

NORTH

STATE OF MISSOURI

STATE OF MISSOURI
JARED A. YOUNGLOVE
NUMBER A-2017019282
ARCHITECT
10.24.25

JARED A. YOUNGLOVE, ARCHITECT
MO #: A-2017019282

PROFESSIONAL SEAL

PARAGON ARCHITECTURE
MISSOURI STATE CERTIFICATE OF AUTHORITY NUMBER A-2016000643
637 COLLEGE STREET
SPRINGFIELD, MO 65806
PH: 417.885.0002
www.paragonarchitecture.com

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Department of Natural Resources, State Parks

CAMPGROUND SHOWER HOUSE REPLACEMENT

Campground #4 Shower House Replacement
Bennet Spring State Park

PROJECT NUMBER: X2528-01
SITE NUMBER: 5302
ASSET NUMBER: 7815302022

REVISION SCHEDULE

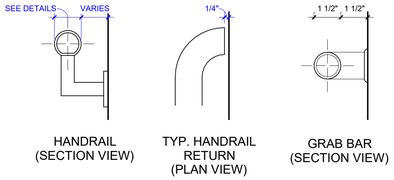
ISSUE DATE: 10/24/2025

PROJECT ARCHITECT: JY
DRAWN BY: AM, LY, LH, TW
CHECKED BY: JY, JS

SHEET TITLE:
CODE PLAN

SHEET NUMBER:
G-103

10/24/2025



HANDRAIL (SECTION VIEW) | TYP. HANDRAIL RETURN (PLAN VIEW) | GRAB BAR (SECTION VIEW)

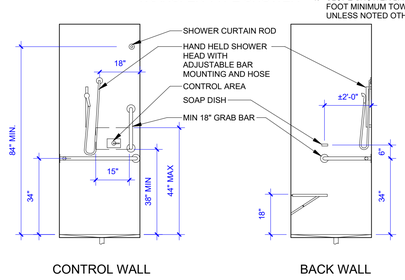
NOTE:
1. GRAB BAR SHALL BE DESIGNED TO WITHSTAND A 250LB. LOAD. COORDINATE NECESSARY BLOCKING IN WALL WITH FRAMING CONTRACTOR.
2. HANDRAILS SHALL BE SPACED 2 1/4" AWAY FROM WALL FOR STAIRS AND 1 1/2" FOR RAMPS. SEE HANDRAIL DETAIL FOR MOUNTING HEIGHT.

13 ACCESSIBLE GRAB BARS AND HANDRAILS

SCALE 3" = 1'-0"

TRANSFER TYPE SHOWER

NOTE:
1. SLOPE SHOWER BASIN 1/8" PER FOOT MINIMUM TOWARDS DRAIN UNLESS NOTED OTHERWISE

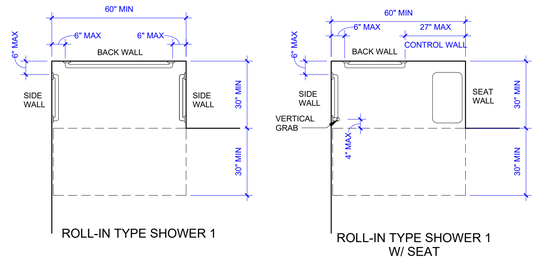


CONTROL WALL | BACK WALL

12 ACCESSIBLE SHOWER DETAIL

SCALE 3/8" = 1'-0"

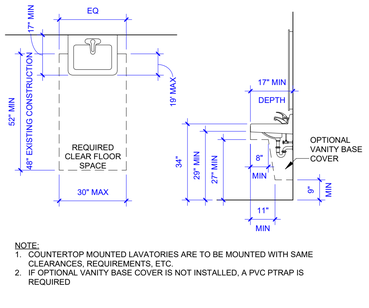
NOTE:
1. VERTICAL GRAB BAR 18" MIN IN LENGTH MOUNTED 3"-6" ABOVE HORIZONTAL GRAB BAR
2. HORIZONTAL GRAB BAR MOUNTED 2'-10" ABOVE FINISH FLOOR, SEE ACCESSIBLE SHOWER DETAIL FOR MORE INFORMATION



ROLL-IN TYPE SHOWER 1 | ROLL-IN TYPE SHOWER 1 W/ SEAT

11 TYPICAL ACCESSIBLE SHOWER LAYOUT

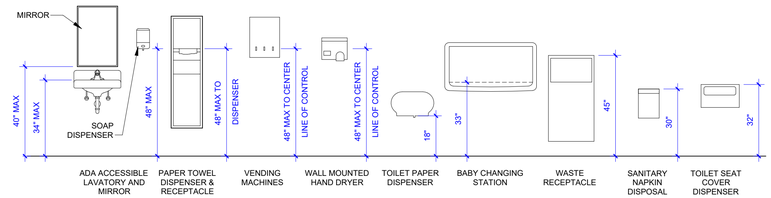
SCALE 3/8" = 1'-0"



NOTE:
1. COUNTERTOP MOUNTED LAVATORIES ARE TO BE MOUNTED WITH SAME CLEARANCES, REQUIREMENTS, ETC.
2. IF OPTIONAL VANITY BASE COVER IS NOT INSTALLED, A PVC PTRAP IS REQUIRED

10 ACCESSIBLE LAVATORY

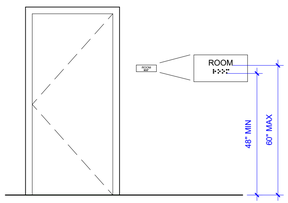
SCALE 3/8" = 1'-0"



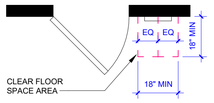
ADA ACCESSIBLE LAVATORY AND MIRROR | PAPER TOWEL DISPENSER & RECEPTACLE | VENDING MACHINES | WALL MOUNTED HAND DRYER | TOILET PAPER DISPENSER | BABY CHANGING STATION | WASTE RECEPTACLE | SANITARY NAPKIN DISPOSAL | TOILET SEAT COVER DISPENSER

7 ACCESSIBLE RESTROOM ACCESSORIES

SCALE 3/8" = 1'-0"



TYPICAL SINGLE DOOR SIGNAGE MOUNTING HEIGHT

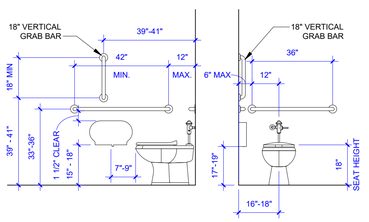


TYPICAL SINGLE DOOR SIGNAGE PLAN LOCATION

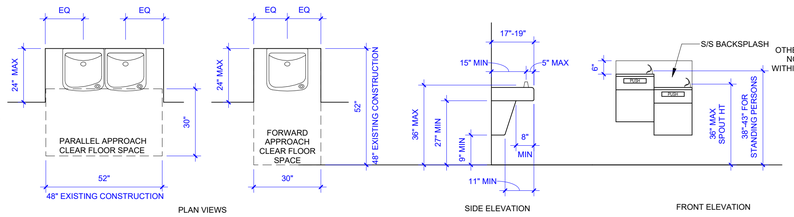
NOTE:
1. RAISED CHARACTERS MUST BE NO LESS THAT 48" FROM THE BASELINE OF THE LOWEST CHARACTER TO THE FINISH FLOOR AND NO MORE THAN 60" ABOVE THE BASELINE OF THE HIGHEST CHARACTER TO THE FINISH FLOOR.
2. ADA - COMPLIANT SIGNS ARE REQUIRED TO BE INSTALLED ON THE LATCH SIDE OF THE DOOR WHEN WALL SPACE IS PERMITED. WHERE SPACE IS NOT PERMITTED, SIGNS MUST BE LOCATED ON THE NEAREST ADJACENT WALL.
3. DOUBLE DOOR SIGNAGE SHOULD BE CENTERED ON THE INNACTIVE LEAF OF A DOUBLE DOOR. IF BOTH LEAFS ARE ACTIVE, THE SIGN SHOULD BE MOUNTED ON THE RIGHT SIDE WALL.
4. SIGNAGE FLOOR CLEARANCE MUST BE BEYOND THE SWING OF ANY DOOR UP TO A 45° OPEN POSITION

6 ACCESSIBLE TACTILE SIGNAGE MOUNTING AND LOCATION

SCALE 3/8" = 1'-0"



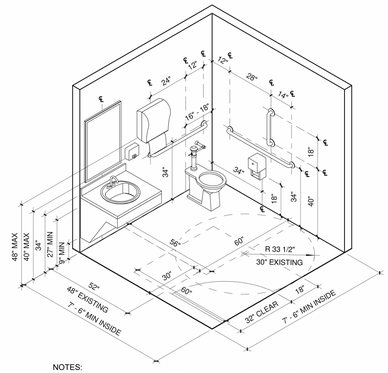
NOTES:
1. SEE FOR GRAB BAR DETAIL FOR MORE INFORMATION ON GRAB BARS.
2. WHEN VERTICAL WALL SURFACE CHANGES IN PLANE BEHIND GRAB BAR, PROVIDE TRIM BEHIND BAR MOUNTING SO THAT MOUNTING SURFACE IS WITHIN SAME PLANE AS THE FARTHEST PROTRUDING WALL FINISH MATERIAL.
3. MAINTAIN 1 1/2" CLEAR BELOW OR 12" CLEAR ABOVE THE GRAB BAR FOR TISSUE DISPENSER INSTALLATION
4. FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET CLEARANCE
5. DIMENSIONS/OFFSETS ARE TYPICAL FOR WALL MOUNTED, FLOOR MOUNTED, OR TANK TYPE WATER CLOSETS.
6. TOILET FLUSH CONTROL HEIGHT SHALL BE 44" MAX FOR ADULTS.



PLAN VIEWS | SIDE ELEVATION | FRONT ELEVATION

NOTE:
1. SPOUT HEIGHT INDICATED BELOW IS FOR ADULTS AND IS TYPICAL UNLESS NOTED OTHERWISE
2. SPOUT HEIGHT FOR CHILDREN'S USE SHALL BE 30" MAX WITH A PARALLEL APPROACH ONLY
3. DOUBLE HEIGHT DRINKING FOUNTAIN UNLESS OTHERWISE SPECIFIED, SINGLE UNIT SPOUT HEIGHT SHALL BE 36" A.F.F.
4. FOUNTAIN CANNOT BE PLACED IN EGRESS PATH, PROVIDE ALCOVE AND RECESS FOUNTAIN

SEE ACCESSIBLE WATER CLOSET DETAIL FOR FURTHER INFORMATION.



NOTES:
1. REFER TO GRAB BAR DETAILS FOR MOUNTING HRIGHTS AND SIZES
2. REFER TO PLAN FOR ADDITIONAL DOOR INFORMATION
3. REFER TO VANITY DETAIL FOR ADDITIONAL VANITY INFORMATION

4 ACCESSIBLE WATER CLOSET

SCALE 3/8" = 1'-0"

3 ACCESSIBLE DRINKING FOUNTAIN

SCALE 3/8" = 1'-0"

2 CLEARANCE FOR WATER CLOSET

SCALE 3/8" = 1'-0"

1 ACCESSIBLE RESTROOM - SINGLE

SCALE 12" = 1'-0"

STATE OF MISSOURI

JARED A. YOUNGLOVE
NUMBER A-2017019282
ARCHITECT
10.24.25

JARED A. YOUNGLOVE, ARCHITECT
MO #: A-2017019282

PROFESSIONAL SEAL

PARAGON ARCHITECTURE
MISSOURI STATE CERTIFICATE OF AUTHORITY NUMBER A-2020000422
637 COLLEGE STREET
SPRINGFIELD, MO 65806
PH: 417.885.0002
www.paragonarchitecture.com

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Department of Natural Resources, State Parks

CAMPGROUND SHOWER HOUSE REPLACEMENT

Campground #4 Shower House Replacement
Bennet Spring State Park

PROJECT NUMBER: X2528-01
SITE NUMBER: 5302
ASSET NUMBER: 7815302022

REVISION SCHEDULE

ISSUE DATE: 10/24/2025

PROJECT ARCHITECT: JV
DRAWN BY: AM, LY, LH, TW
CHECKED BY: JY, JS

SHEET TITLE:

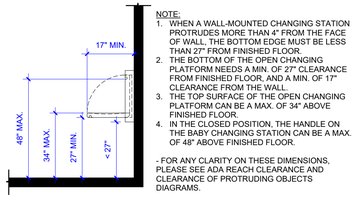
ACCESSIBILITY STANDARDS

SHEET NUMBER:

G-104

5 OF 36 SHEETS

10/24/2025

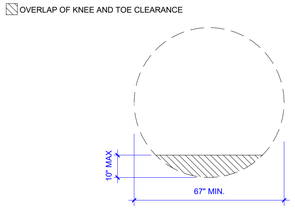


NOTE:
1. WHEN A WALL-MOUNTED CHANGING STATION PROTRUDES MORE THAN 4" FROM THE FACE OF WALL, THE BOTTOM EDGE MUST BE LESS THAN 27" FROM FINISHED FLOOR.
2. THE BOTTOM OF THE OPEN CHANGING PLATFORM NEEDS A MIN. OF 27" CLEARANCE FROM FINISHED FLOOR, AND A MIN. OF 17" CLEARANCE FROM THE WALL.
3. THE TOP SURFACE OF THE OPEN CHANGING PLATFORM CAN BE A MAX. OF 34" ABOVE FINISHED FLOOR.
4. IN THE CLOSED POSITION, THE HANDLE ON THE BABY CHANGING STATION CAN BE A MAX. OF 48" ABOVE FINISHED FLOOR.

- FOR ANY CLARITY ON THESE DIMENSIONS, PLEASE SEE ADA REACH CLEARANCE AND CLEARANCE OF PROTRUDING OBJECTS DIAGRAMS.

10 ACCESSIBLE BABY CHANGING STATION

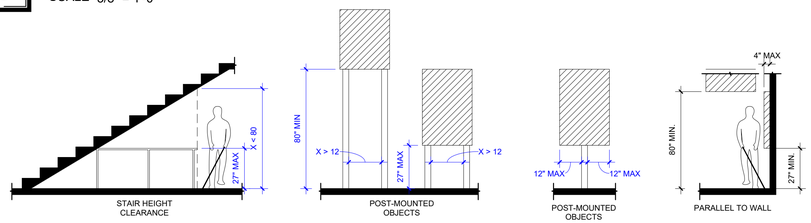
SCALE 3/8" = 1'-0"



NEW CONSTRUCTION

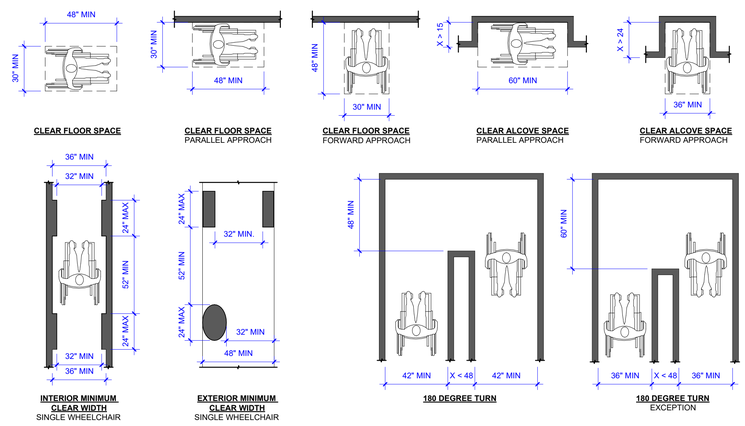
8 ACCESSIBLE TURN RADIUS

SCALE 3/8" = 1'-0"



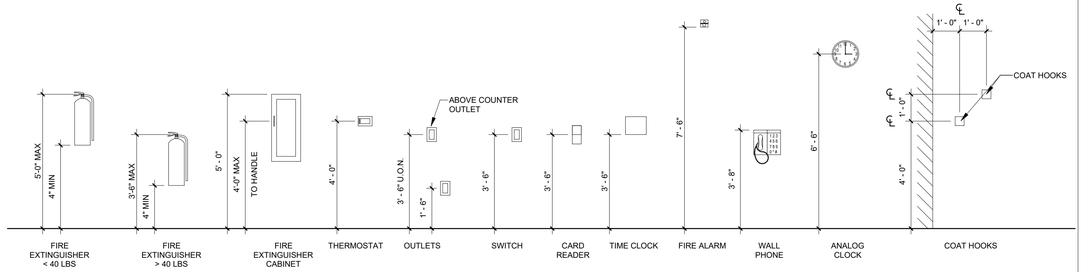
5 PROTRUDING OBJECT CLEARANCE

SCALE 1/4" = 1'-0"



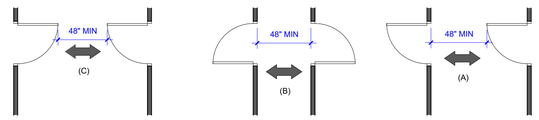
3 CLEAR FLOOR SPACE & MANEUVERING ACCESS

SCALE 1/4" = 1'-0"



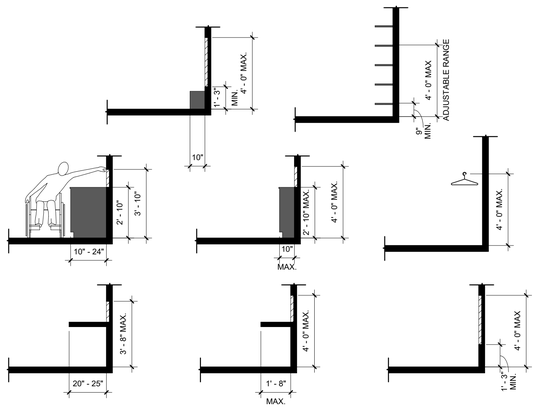
6 ACCESSIBLE ACCESSORIES TYPICAL

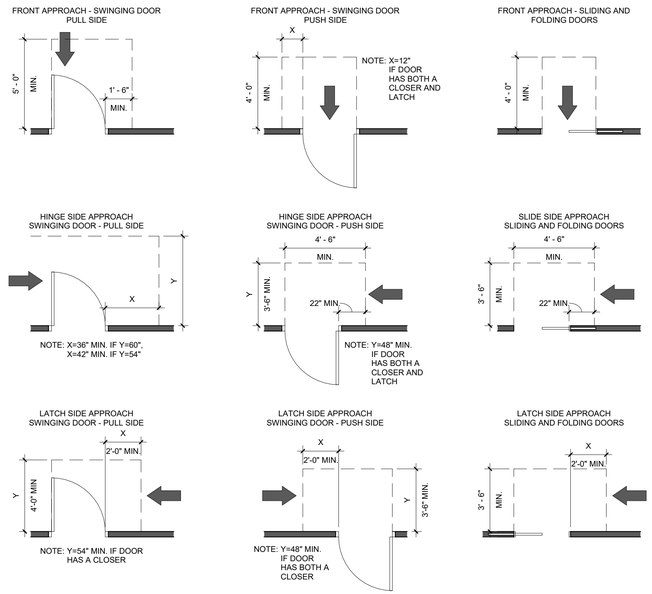
SCALE 3/8" = 1'-0"



4 CORRIDOR DOOR CLEARANCES

SCALE 3/16" = 1'-0"





2 ACCESSIBLE REACH CLEARANCE

SCALE 1/4" = 1'-0"

1 ACCESSIBLE APPROACH DIAGRAM

SCALE 1/4" = 1'-0"

STATE OF MISSOURI

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MO #: A-2017019282

PROFESSIONAL SEAL

PARAGON ARCHITECTURE
MISSOURI STATE CERTIFICATE OF AUTHORITY NUMBER A-2016000427
637 COLLEGE STREET
SPRINGFIELD, MO 65806

PH: 417.885.0002
www.paragonarchitecture.com

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Department of Natural Resources, State Parks

CAMPGROUND SHOWER HOUSE REPLACEMENT

Campground #4 Shower House Replacement
Bennet Spring State Park

PROJECT NUMBER: X2528-01
SITE NUMBER: 5302
ASSET NUMBER: 7815302022

REVISION SCHEDULE

ISSUE DATE: 10/24/2025

PROJECT ARCHITECT: JY
DRAWN BY: AM, LY, LH, TW
CHECKED BY: JY, JS

SHEET TITLE:

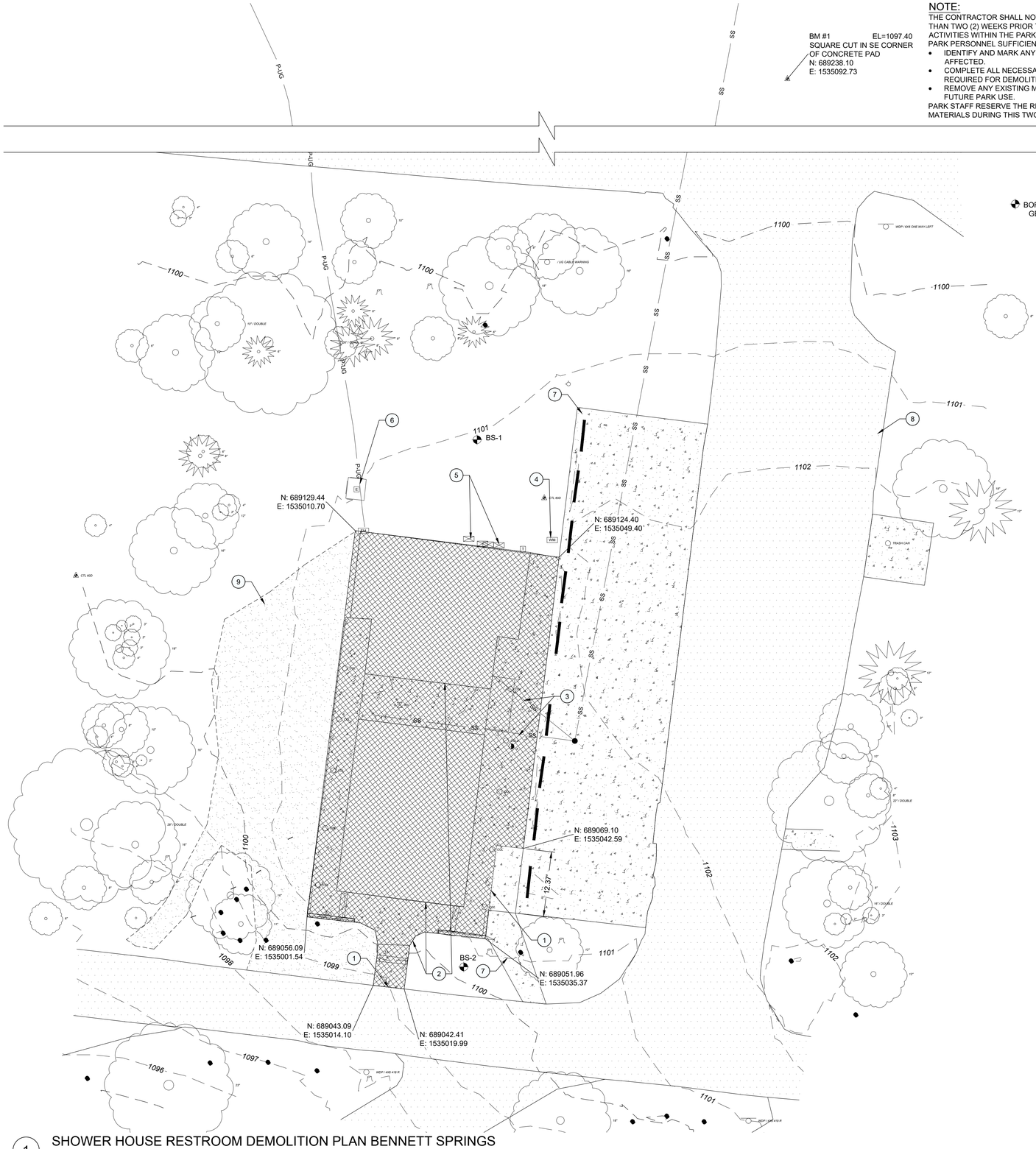
ACCESSIBILITY STANDARDS

SHEET NUMBER:

G-105

6 OF 36 SHEETS

10/24/2025



1 SHOWER HOUSE RESTROOM DEMOLITION PLAN BENNETT SPRINGS

SCALE: 1" = 10'

NOTE:

THE CONTRACTOR SHALL NOTIFY PARK SUPERINTENDENT NO LESS THAN TWO (2) WEEKS PRIOR TO COMMENCING ANY DEMOLITION ACTIVITIES WITHIN THE PARK. THIS ADVANCE NOTICE WILL ALLOW PARK PERSONNEL SUFFICIENT TIME TO:

- IDENTIFY AND MARK ANY INTERNAL UTILITIES THAT MAY BE AFFECTED.
- COMPLETE ALL NECESSARY DOCUMENTATION AND APPROVALS REQUIRED FOR DEMOLITION.
- REMOVE ANY EXISTING MATERIALS DEEMED VALUABLE FOR FUTURE PARK USE.

PARK STAFF RESERVE THE RIGHT TO SALVAGE AND REMOVE MATERIALS DURING THIS TWO WEEK PERIOD.

LEGEND

BORE HOLE - SEE SPECIFICATIONS FOR GEOTECH REPORT AND BORING LOG

(XX) DEMOLITION NOTES:

1. SAW CUT EXISTING CONCRETE TO ALLOW FOR DEMOLITION OF BUILDING SIDEWALK. REMOVE STAIRS AND SIDEWALK IN THIS AREA.
2. DEMO AND REMOVE EXISTING SHOWER HOUSE, RESTROOM, SIDEWALK, GRAVEL SURFACE, FOUNDATION, ASSOCIATED ELECTRICAL, PLUMBING, MECHANICAL EQUIPMENT WITHIN DESIGNATED AREA.
3. PRIOR TO DEMOLITION, LOCATE AND CUT EXISTING SEWER LINES FOR CONNECTION TO NEW BUILDING SEWER CONNECTION.
4. EXISTING WATER SERVICE METER. PROTECT FOR CONNECTION TO NEW SHOWER HOUSE/RESTROOMS.
5. DEMOLITION OF ELECTRICAL INCLUDES REMOVAL OF ELECTRICAL CABLES FROM EXISTING BUILDING TO EXISTING TRANSFORMER AND DISCONNECTED. IT IS THE CONTRACTORS RESPONSIBILITY TO REMOVE EXISTING MATERIALS FROM SITE AND DEPOSED OF PROPERLY. SEE ELECTRICAL SHEETS FOR NEW TRANSFORMER LOCATION.
6. EXISTING TRANSFORMER TO BE RELOCATED BY LOCAL UTILITY COMPANY.
7. EXISTING CONCRETE SURFACE TO REMAIN.
8. EXISTING ASPHALT SURFACE TO REMAIN
9. EXISTING GRAVEL SURFACE TO BE REMOVED.

GENERAL DEMOLITION NOTES

A. THESE DEMOLITION DRAWINGS DEFINE THE PROJECT BOUNDARY AND SCOPE OF DEMOLITION WORK. WHERE INDIVIDUAL ITEMS ARE SHOWN ON DEMOLITION PLANS AS DASHED, OR WHERE " LIMITS OF " ELECTRICAL DEMOLITION " BOUNDARY IS IDENTIFIED AND/OR SHOWN AS HATCHED AREA, ELECTRICAL EQUIPMENT, DEVICES, FIXTURES, WIRING, RACEWAY, AND DATA/COMMUNICATIONS SYSTEMS SHALL BE REMOVED IN THEIR ENTIRETY UNLESS OTHERWISE INDICATED. ITEMS WITHIN " LIMITS OF ELECTRICAL DEMOLITION " THAT SERVE ADJACENT AREAS SHALL REMAIN, RE-SUPPORT ALL RACEWAY AND CABLING ASSOCIATED WITH THESE EXISTING TO REMAIN ITEMS THAT PASS THROUGH THE DEMOLITION BOUNDARY.

B. THE CONTRACTOR SHALL VISIT THE PROJECT SITE, REVIEW EXISTING CONDITIONS AGAINST THESE CONTRACT DOCUMENTS, AND FAMILIARIZE THEMSELVES WITH THE WORK PRIOR TO BIDDING AND COMMENCING THE SCOPE OF WORK. THESE CONTRACT DOCUMENTS DO NOT ACCOUNT FOR ALL ITEMS, NOR DO THEY GUARANTEE THE ACCURACY OF EXISTING CONDITIONS. THESE DOCUMENTS ARE PROVIDED AS AN AID IN DEFINING THE DEMOLITION SCOPE OF WORK FOR THE PROJECT, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY EXISTING CONDITIONS AND INCLUDE IN THEIR BID ANY NECESSARY ADJUSTMENTS TO ACCOUNT FOR ACTUAL FIELD CONDITIONS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED AFTER BIDS ARE SUBMITTED FOR CHANGES WHICH OCCUR AS A RESULT OF EXISTING CONDITIONS.

C. THESE DEMOLITION DRAWINGS DO NOT IDENTIFY ALL ITEMS TO BE REMOVED, NOR ARE ALL COMPONENTS OF AN ELECTRICAL ITEM IDENTIFIED WHERE INDICATED AS REMOVED. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ITEMS WHICH MUST BE REMOVED TO FACILITATE THE EXECUTION OF NEW WORK UNDER THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL DOCUMENTS WITHIN THE PROJECT MANUAL (ARCHITECTURAL, MECHANICAL, ETC.) FOR ADDITIONAL ELECTRICAL DEMOLITION ITEMS. WHERE THE CONTRACTOR IS UNCLEAR ABOUT THE SCOPE OF DEMOLITION OF A SPECIFIC ELECTRICAL ITEM, REFER ALL QUESTIONS TO ARCHITECT/ENGINEER PRIOR TO BID FOR CLARIFICATION.

D. PHASING OF ELECTRICAL DEMOLITION SHALL FOLLOW THAT OF THE GENERAL CONTRACTOR. COORDINATE REMOVAL OF ELECTRICAL WORK WITH WORK OF OTHER TRADES, OTHER CONSTRUCTION ACTIVITIES, AND THE REQUIREMENTS OF THE OWNER. ELECTRICAL SYSTEMS SUPPORTING AREAS OF BUILDING NOT IN CURRENT PHASE OF CONSTRUCTION SHALL BE MAINTAINED FULLY OPERATIONAL. COORDINATE WITH WORK OF OTHER TRADES TO PROVIDE TEMPORARY POWER AND LIGHTING IN AREAS OF CURRENT AND FUTURE PHASES AS REQUIRED TO FACILITATE WORK.

E. WHERE DEMOLITION WORK WILL INTERRUPT OTHER AREAS OF THE FACILITY THAT ARE TO REMAIN IN OPERATION, PROVISIONS SHALL BE INSTALLED TO MAINTAIN THOSE AREAS IN COMPLETE OPERATION. PROVIDE TEMPORARY CONNECTIONS AS REQUIRED. PROVIDE ALL NECESSARY ACCOMMODATIONS AHEAD OF TIME TO LIMIT INTERRUPTION OF SYSTEM TO THE TIME NEEDED TO DISCONNECT AND IMMEDIATELY RECONNECT THE SYSTEM TO RESTORE TO FULL OPERATION. ESSENTIAL SERVICES DEEMED BY THE OWNER MAY REQUIRE PREMIUM TIME AND SHALL BE INCLUDED IN CONTRACTOR ' S BID. MAINTAIN CONTINUITY OF EXISTING CIRCUITS AS REQUIRED TO PROVIDE POWER TO EQUIPMENT, DEVICES, AND LUMINAIRES THAT SHALL NOT BE REMOVED BY THIS PROJECT. CONTRACTOR SHALL MARK AND IDENTIFY EXISTING ELECTRICAL SYSTEM COMPONENTS WHICH SHALL NOT BE REMOVED, OR ITEMS WHICH MUST BE MAINTAINED AND PROTECTED FOR ANY DURING OF CONSTRUCTION BEYOND EARLY DEMOTION EFFORTS TO REDUCE POSSIBILITY OF ACCIDENTAL INTERRUPTION ON SYSTEM. WHERE EXISTING DEVICE OR JUNCTION BOXES MUST REMAIN IN EXISTING WALLS OR CEILINGS (SUCH AS FOR CIRCUITS THAT MUST BE MAINTAINED TO OTHER AREAS), THEN THEY SHALL BE FITTED WITH BLANK COVER PLATES. WHERE EXISTING TO REMAIN ELECTRICAL ITEMS REQUIRE ACCESS, AND IF REQUIRED TO FACILITATE NEW WORK, CONTRACTOR SHALL RELOCATE ITEM TO AN ACCESSIBLE LOCATION.

F. WHERE DEMOLITION OF WALL IS INDICATED ON THESE DEMOLITION PLANS, OR ON ARCHITECTURAL DRAWINGS, ALL ELECTRICAL SYSTEM COMPONENTS WITHIN WALL SHALL BE REMOVED IN THEIR ENTIRETY WITH SUPPORTING RACEWAY AND CIRCUITS REMOVED BACK TO THEIR SOURCE. CONTRACTOR SHALL DISCONNECT ALL ELECTRICAL SYSTEM COMPONENTS TO ALLOW WALLS TO BE DEMOLISHED BY OTHERS. ALL ELECTRICAL SYSTEM COMPONENTS THAT ARE EXPOSED AND SURFACE MOUNTED, AND NO LONGER ACTIVE, SHALL BE REMOVED.

G. WHERE WORKING IN AND AROUND THE EXISTING BUILDING, EXTREME CARE SHALL BE EXERCISED WITH REGARD TO PROTECTION OF THE EXISTING SYSTEMS, STRUCTURE, AND ANY ITEMS WHICH ARE TO REMAIN. IF EXISTING TO REMAIN ELECTRICAL SYSTEM COMPONENTS ARE DAMAGED THROUGH THE COURSE OF WORK, CONTRACTOR IS RESPONSIBLE TO PROVIDE NEW PRODUCTS OF EQUAL TYPE, QUANTITY, CAPACITY, AND FUNCTIONALITY. IF HAZARDOUS MATERIAL (E.G. ASBESTOS, PCB ' s, ETC) ARE ENCOUNTERED AT ANY TIME DURING CONSTRUCTION IN THE SCOPE OF WORK, STOP WORK IMMEDIATELY AND CONTACT THE ARCHITECT, ENGINEER, OR OWNER.

H. WHERE ELECTRICAL SYSTEM ITEMS TO BE DEMOLISHED RESIDE ON A HOUSEKEEPING PAD, CONTRACTOR SHALL REMOVE PAD IN ITS ENTIRETY AND FLOOR SHALL BE PATCHED SO THAT FINISH MATCHES ADJACENCIES.

I. WHERE DISTRIBUTION OR BRANCH CIRCUIT EQUIPMENT (PANELBOARDS, SWITCHBOARDS, ETC.) IS TO BE REMOVED, THEN ALL CIRCUITS WHICH FEED ITEMS TO REMAIN SHALL BE RECONNECTED TO NEW DISTRIBUTION OR BRANCH CIRCUIT EQUIPMENT. REFER ALL QUESTIONS TO THE ARCHITECT/ENGINEER FOR CLARIFICATION.

J. EXISTING PANEL DIRECTORIES SHALL BE UPDATED TO ACCURATELY REFLECT CONDITIONS AFTER WORK IS COMPLETE. UNUSED CIRCUIT BREAKERS SHALL BE LABELED AS "SPARE."

K. WHERE OWNER ' S STANDARD INCLUDES LABELING OF ELECTRICAL DEVICE COVERPLATES, ALL UNLABELED ELECTRICAL DEVICES OR DEVICES WITH SOURCE BRANCH CIRCUIT MODIFIED DURING CONSTRUCTION SHALL BE CIRCUIT TRACED AS REQUIRED FOR NEW/UPDATED LABEL TO BE PROVIDED.

L. ELECTRICAL FIXTURES AND EQUIPMENT THAT ARE INDICATED TO BE RE-USED AND RE-INSTALLED SHALL BE CAREFULLY REMOVED AS NOT TO DAMAGE EQUIPMENT OR FIXTURE AND PROTECTED FROM DAMAGE UNTIL READY FOR RE-INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT COST OF ANY EQUIPMENT OR FIXTURES THAT BECOME DAMAGED PRIOR TO RE-INSTALLATION.

M. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL INFRASTRUCTURE THAT IS TO REMAIN. THIS INCLUDES BUT IS NOT LIMITED TO PARK ROADS, SIDEWALKS, RAILING AND UTILITY SYSTEMS.

N

0' 5' 10' 20'

SCALE IN FEET

MISSOURI ONE CALL SYSTEM
1-800-DIG-RITE or 811
www.mo1call.com

STATE OF MISSOURI
MIKE KEHOE, GOVERNOR

10-24-2025
STATE OF MISSOURI
KERRY GAIL SCOTT
NUMBER E-24567
REGISTERED PROFESSIONAL ENGINEER

550 East St. Louis Street
Springfield, MO 65806
olsson.com
TEL 417.890.8802
FAX 417.890.8805

olsson

Olsson - Engineering
Missouri COA #001592

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF NATURAL RESOURCES, STATE PARKS

CAMPGROUND #4
SHOWER HOUSE
REPLACEMENT

BENNETT SPRING
STATE PARK
LEBANON, MO

PROJECT # X2528-01
SITE # 5302
ASSET # 7815302022

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 10/24/2025

CAD DWG FILE: C-101.dwg
DRAWN BY: TMH
CHECKED BY: KGS
DESIGNED BY: KGS

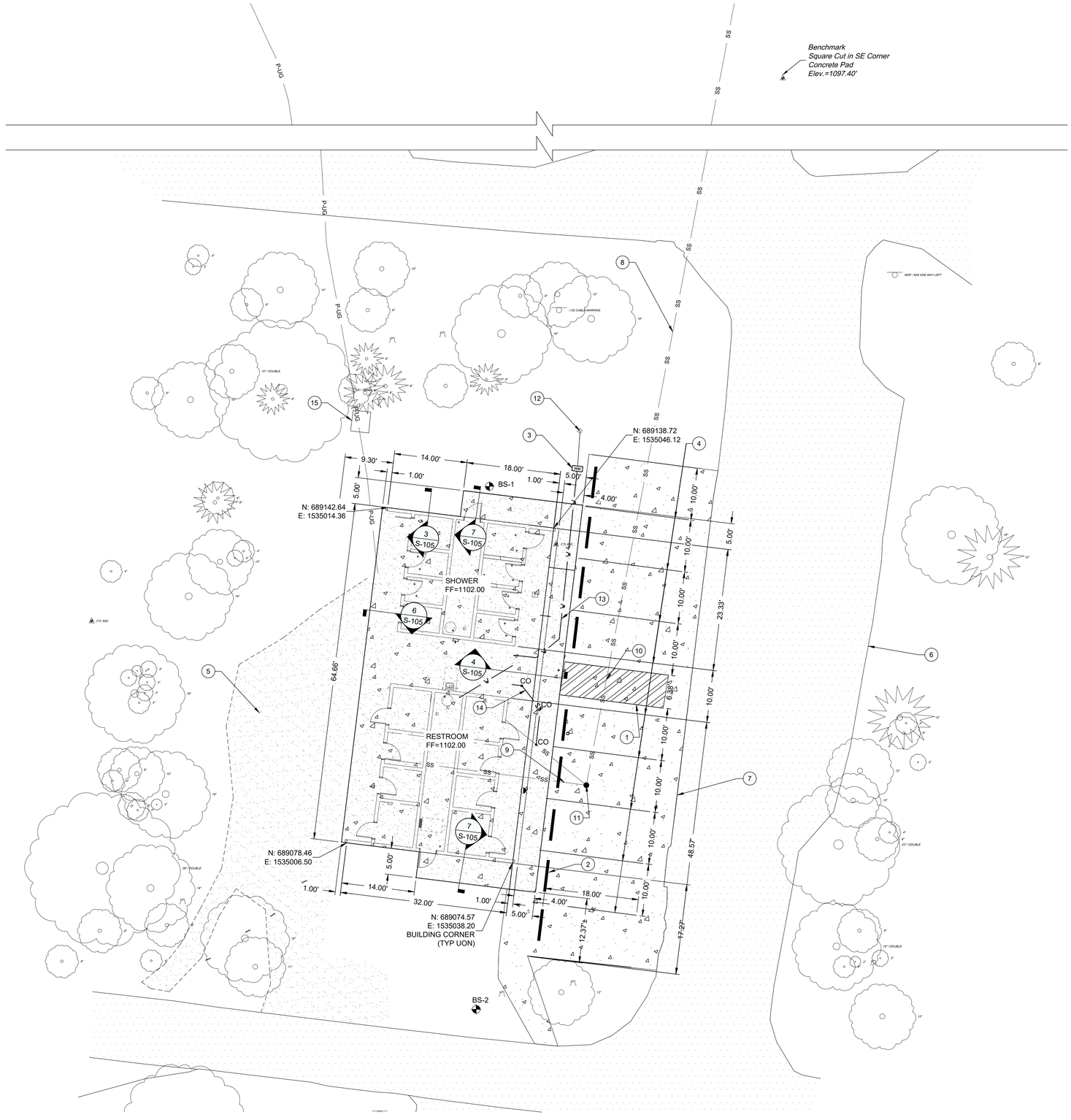
SHEET TITLE:

DEMOLITION PLAN

SHEET NUMBER:

C-101

7 OF 36 SHEETS
10/24/2025



1 SHOWER HOUSE RESTROOM SITE PLAN BENNETT SPRINGS

SCALE: 1" = 10'

(XX) NOTES:

1. STRIPE AREA AS HANDICAP.
2. RELOCATE EXISTING PARKING BUMPERS TO MATCH NEW PARKING STRIPES.
3. RELOCATE EXISTING WATER METER AND CONNECT NEW WATER SERVICE LINE WITH TEE AND BALL VALVE TO DRAIN NEW WATER LINE. SEE DETAIL SHEET C-105.
4. PAINT NEW STRIPES FOR PARKING AREA. MATCH EXISTING COLOR.
5. PLACE ROCK FREE SOIL FILL OVER EXISTING GRAVEL SURFACE.
6. EXISTING ASPHALT SURFACE.
7. EXISTING CONCRETE SURFACE.
8. EXISTING SANITARY SEWER LINE.
9. TERMINATE EXISTING SEWER LINE AND PLUG MANHOLE.
10. EXISTING SANITARY SEWER LINE
11. EXISTING MH
12. EXISTING YARD HYDRANT
13. EXTEND NEW WATER LINE FROM WATER METER TO NEW WATER LINE CONNECTION FROM SHOWER HOUSE/BATHROOMS.
14. EXTEND NEW SANITARY SEWER SERVICE LINE WITH CLEANOUTS TO CONNECT TO EXISTING SANITARY SEWER LATERAL SERVICING EXISTING SHOWER HOUSE/RESTROOM.
15. APPROXIMATE LOCATION OF NEW ELECTRICAL BOX RELOCATED BY ELECTRIC UTILITY COMPANY. EXTEND NEW ELECTRICAL CONDUIT AND WIRE TO RELOCATED ELECTRICAL BOX.

LEGEND

BORE HOLE - SEE SPECIFICATIONS FOR GEOTECH REPORT AND BORING LOG

N

0' 5' 10' 20'

SCALE IN FEET

MISSOURI ONE CALL SYSTEM
1-800-DIG-RITE or 811
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STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

10-24-2025
STATE OF MISSOURI
KERRY GAIL SCOTT
NUMBER E-24557
REGISTERED PROFESSIONAL ENGINEER

550 East St. Louis Street
Springfield, MO 65806
olsson.com
TEL 417.890.8802
FAX 417.890.8805

olsson

Olsson - Engineering
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DEPARTMENT OF NATURAL RESOURCES, STATE PARKS

CAMPGROUND #4
SHOWER HOUSE
REPLACEMENT

BENNETT SPRING
STATE PARK
LEBANON, MO

PROJECT # X2528-01
SITE # 5302
ASSET # 7815302022

REVISION:
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DATE:
REVISION:
DATE:
ISSUE DATE: 10/24/2025

CAD DWG FILE: C-102.dwg
DRAWN BY: TMH
CHECKED BY: KGS
DESIGNED BY: KGS

SHEET TITLE:

SITE PLAN

SHEET NUMBER:

C-102

8 OF 36 SHEETS
10/24/2025

1 SHOWER HOUSE RESTROOM GRADING PLAN BENNETT SPRINGS

SCALE: 1" = 10'

XX NOTES:

1. NEW CONCRETE SIDEWALK AND BUILDING PAD.
2. PLACE ROCK FREE SOIL FILL OVER EXISTING GRAVEL SURFACE.
3. EXISTING ASPHALT SURFACE.
4. EXISTING CONCRETE SURFACE.
5. SAWCUT EXISTING CONCRETE AND MATCH EXISTING GRADE WITH NEW CONCRETE.
6. LOCATE EXISTING WATER LINE. TAP AND INSTALL 2" SHUT-OFF VALVE WITH TEE AND BALL VALVE TO DRAIN NEW WATER LINE. SEE DETAIL SHEET C-105.
7. INSTALL 2" PVC WATER LINE. CONNECT TO SHOWER HOUSE WATER SERVICE LINE.
8. EXTEND NEW SANITARY SEWER SERVICE LINE WITH CLEANOUTS TO CONNECT TO EXISTING SANITARY SEWER LATERAL SERVING EXISTING SHOWER HOUSE/RESTROOM.
9. WARP NEW SIDEWALK MATCHING THE NEW BUILDING SLAB TO THE WEST AND THE PARKING LOT TO THE EAST TO ALLOW DRAINAGE AWAY FROM THE HANDICAP WALK WAY.
10. EXISTING CONCRETE SWALE
11. RE-GRADE TO SMOOTH FINISH GRADE AND SLOPE TO DRAIN. PLACE 4" SOIL AND SEED.
12. CONNECT NEW ELECTRICAL SERVICE TO RELOCATED ELECTRICAL TRANSFORMER. SEE ELECTRICAL DRAWINGS

GRADING NOTES:

1. ALL ELEVATIONS ARE TO NORTH AMERICAN VERTICAL DATUM (N.A.V.D. 1988).
2. STRIPPINGS ARE TO BE STOCKPILED ON-SITE AS DIRECTED BY THE ENGINEER. FOLLOWING THE COMPLETION OF THE GRADING, THIS TOPSOIL SHALL BE USED AS FILL MATERIAL ON ALL LANDSCAPED AREAS. IF STOCKPILE IS INACTIVE FOR MORE THAN 14 DAYS.
3. ALL HERBACEOUS VEGETATION SHALL BE REMOVED FROM WITHIN THE LIMITS OF THE GRADING AND REDISTRIBUTED WITH THE TOPSOIL AS OUTLINED IN NOTE #2.
4. CONTRACTOR SHALL USE CAUTION AROUND ANY EXISTING UTILITIES LOCATED ON-SITE. THEY SHALL BE RESPONSIBLE FOR THE REPAIRS OF SUCH STRUCTURES WHEN BROKEN OR OTHERWISE DAMAGED BY THE NEW CONSTRUCTION.
5. THE PROPOSED CONTOURS REPRESENT TOP OF SLAB IN PAVEMENT AREAS AND FINISHED GRADE IN ALL OTHER AREAS. QUANTITIES DO NOT TAKE INTO ACCOUNT CORE-OUT OR ANY OVER-EXCAVATION.
6. CONTRACTOR SHALL ADDRESS ANY GRADING RECOMMENDATIONS IDENTIFIED IN THE GEOTECHNICAL INVESTIGATION. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DO A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.
7. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES, PIPES AND STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS AND TO THE BEST OF OUR KNOWLEDGE CONSTITUTES ALL KNOWN FACILITIES. HOWEVER, THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY EXISTING UTILITIES OR STRUCTURES LOCATED AT THE WORK SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT AN UNDERGROUND LOCATE SERVICE IN ADVANCE OF ANY EXCAVATION FOR THE MARK-OUT OF THE LOCATION OF UTILITIES AND NOTIFICATION OF COMMENCEMENT OF WORK.
8. BEFORE EXCAVATING FOR THIS CONTRACT, THE CONTRACTOR SHALL FIELD VERIFY LOCATION OF UNDERGROUND UTILITIES. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.
9. CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER EXISTING LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE SEDIMENT CONTROL BARRIERS FOR A PERIOD OF 1 YEAR OR UNTIL THEY ARE RELEASED FROM THIS RESPONSIBILITY BY THE ENGINEER, WHICHEVER PERIOD IS SHORTER.
11. ALL ITEMS REMOVED SHALL BE DISPOSED OFF SITE BY THE CONTRACTOR AS PER PARK REQUIREMENTS.
12. IN ALL LOCATIONS WHERE NEW PAVEMENT ABUTS EXISTING, SAW CUT EXISTING PAVEMENT AS NECESSARY TO PROVIDE A SMOOTH TRANSITION AT THE JOINT. MATCH EXISTING GRADES AT THE JOINT IN ALL LOCATIONS.
13. ALL SIDEWALKS SHALL BE ADA ACCESSIBLE WITH RUNNING SLOPE BEING NO STEEPER THAN 5.00% AND CROSS SLOPES NO STEEPER THAN 2.00%. ALL LANDINGS OUTSIDE OF EXTERIOR ENTRANCES/EXITS SHALL BE NO STEEPER THAN 2.00% FOR THE FIRST 5'-0".
14. CONTRACTOR SHALL FINISH GRADE SLOPES AS SHOWN NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL.
15. ALL FINISH GRADES AROUND BUILDING SHALL BE 6" BELOW FINISH FLOOR UNLESS SPECIFIED OTHERWISE. CONTRACTOR SHALL FINISH GRADE TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING.

LEGEND

TC	TOP OF CONCRETE/SIDEWALK
TW	TOP OF RETAINING WALL/CURB

N

0' 5' 10' 20'

SCALE IN FEET

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STATE OF MISSOURI
MIKE KEHOE, GOVERNOR

10-24-2025
STATE OF MISSOURI
KERRY GAIL SCOTT
NUMBER E-24557
REGISTERED PROFESSIONAL ENGINEER

560 East St. Louis Street
Springfield, MO 65806
olsson.com
TEL 417.890.8802
FAX 417.890.8805

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OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF NATURAL RESOURCES, STATE PARKS

CAMPGROUND #4
SHOWER HOUSE
REPLACEMENT

BENNETT SPRING
STATE PARK
LEBANON, MO

PROJECT # X2528-01
SITE # 5302
ASSET # 7815302022

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 10/24/2025

CAD DWG FILE: C-103.dwg
DRAWN BY: TMH
CHECKED BY: KGS
DESIGNED BY: KGS

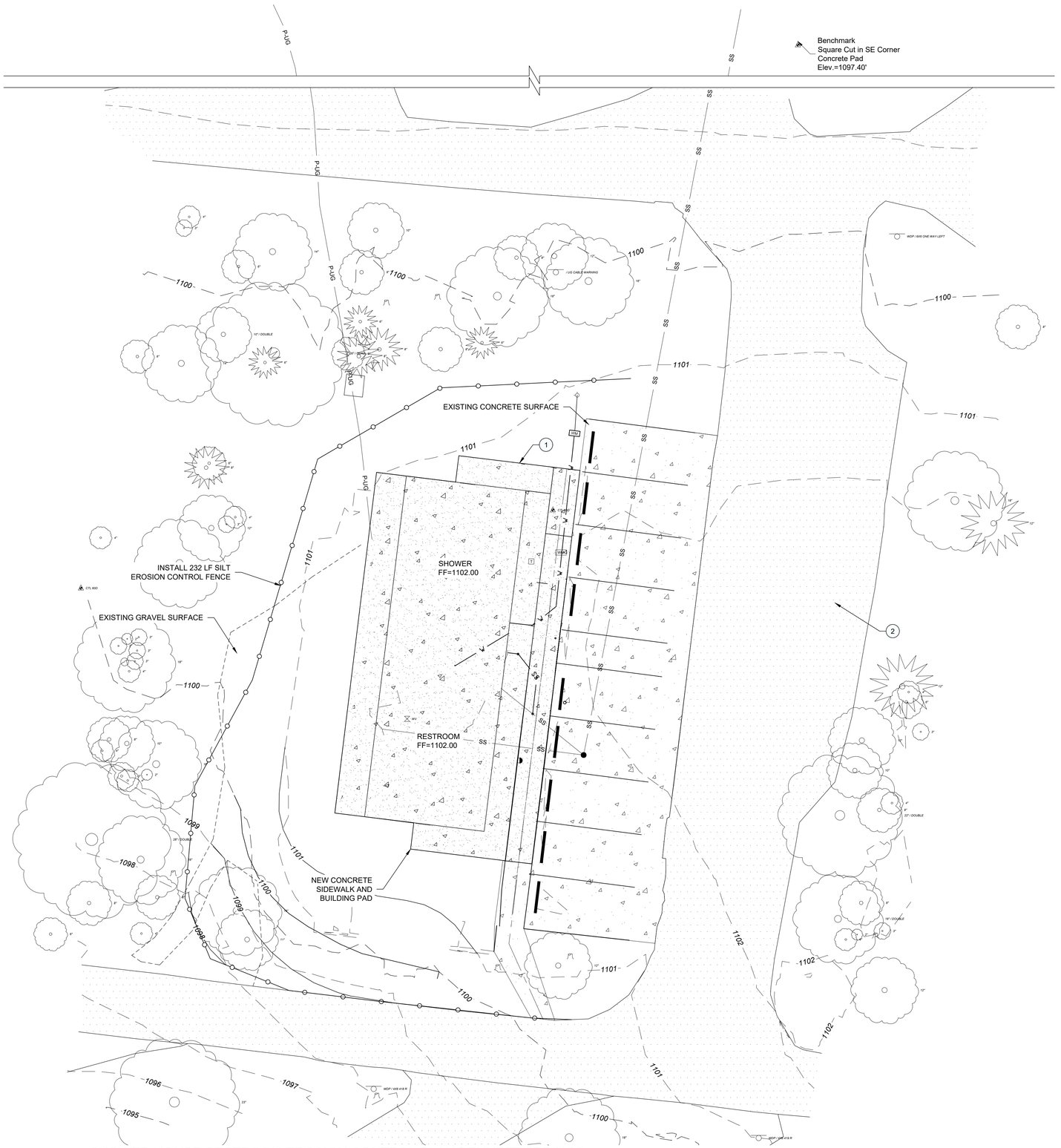
SHEET TITLE:

GRADING PLAN

SHEET NUMBER:

C-103

9 OF 36 SHEETS
10/24/2025



1 SHOWER HOUSE RESTROOM EROSION CONTROL PLAN BENNETT SPRINGS

SCALE: 1" = 10'

(XX) NOTES:

1. NEW CONCRETE SIDEWALK AND BUILDING PAD.
2. EXISTING ASPHALT SURFACE.

POLLUTION PREVENTION PROCEDURE NOTES:

1. HANDLING AND DISPOSAL OF HAZARDOUS MATERIALS:

DO:
- PREVENT SPILLS
- USE PRODUCTS UP
- FOLLOW LABEL DIRECTIONS FOR DISPOSAL
- REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING TRASH
- RECYCLE WASTES WHENEVER POSSIBLE

DON'T:
- DON'T POUR WASTE INTO SEWERS OR WATERWAYS ON THE GROUND
- DON'T POUR WASTE DOWN THE SINK, FLOOR DRAIN OR SEPTIC TANKS
- DON'T BURY CHEMICALS OR CONTAINERS, OR DISPOSE OF THEM WITH OTHER WASTE
- DON'T BURN OR MIX CHEMICALS OR CONTAINERS
- DON'T WASH SEDIMENT DOWN STORM SEWER INLETS

2. CONTAINERS SHALL BE PROVIDED FOR COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS TO BE USED ONSITE. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL.
3. NO WASTE MATERIALS SHALL BE BURIED ON-SITE.
4. MIXING, PUMPING, TRANSFERRING OR OTHERWISE HANDLING CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN.
5. EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED ONLY IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS.
6. CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW DIRECTLY TO STORM SEWERS, STREAMS, DITCHES, LAKES, ETC WITHOUT BEING TREATED. A CONCRETE WASHOUT AREA SHALL BE PROVIDED. SEE DETAIL ON SHEET C-105.
7. ALL PAINT, SOLVENTS, PETROLEUM PRODUCTS AND PETROLEUM WASTE PRODUCTS, AND STORAGE CONTAINERS (SUCH AS DRUMS, CANS, OR CARTONS) SHALL BE STORED ACCORDING TO BMPS. THE MATERIALS EXPOSED TO PRECIPITATION SHALL BE STORED IN WATERTIGHT, STRUCTURALLY SOUND, CLOSED CONTAINERS. ALL CONTAINERS SHALL BE INSPECTED FOR LEAKS OR SPILLAGE DURING THE ONCE PER WEEK INSPECTION OF BMPS. IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO SOIL, THE SOIL SHALL BE DUG UP AND PROPERLY DISPOSED OF. SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST, KITTY LITTER OR PRODUCT DESIGNED FOR THAT PURPOSED AND DISPOSED OF AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. THESE MATERIALS WILL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH MoDNR REQUIREMENTS.
8. STATE LAW REQUIRES THE PARTY RESPONSIBLE FOR A PETROLEUM PRODUCT SPILL IN EXCESS OF 50 GALLONS TO REPORT THE SPILL TO MoDNR (573-634-2436) AS SOON AS PRACTICAL AFTER DISCOVERY. FEDERAL LAW REQUIRES THE RESPONSIBLE PARTY TO REPORT ANY RELEASE OF OIL IF IT REACHES OR THREATENS A SEWER, LAKE, CREEK, STREAM, RIVER, GROUNDWATER, WETLAND, OR AREA, LIKE A ROAD DITCH, THAT DRAINS INTO ONE OF THE ABOVE.
9. SUFFICIENT TEMPORARY TOILET FACILITIES TO SERVE THE NUMBER OF WORKERS ON THE SITE SHALL BE PROVIDED. THE FACILITIES SHALL BE SERVICED FREQUENTLY TO MAINTAIN A SANITARY CONDITIONS.

EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION & SEDIMENT CONTROL MEASURES AND PRACTICES THROUGHOUT THE PROJECT. ANY AND ALL FINES ASSOCIATED WITH EROSION CONTROL VIOLATIONS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
2. EROSION CONTROL IS THE CONTRACTOR'S RESPONSIBILITY. THIS PLAN SHOULD BE USED AS A GUIDE AND REPRESENTS THE MINIMUM EROSION CONTROL DEVICES REQUIRED.
3. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION & SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.
4. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL EROSION & SEDIMENT CONTROL DEVICES AFTER EACH RAINFALL EVENT.
5. THE CONTRACTOR SHALL PROVIDE ANY FURTHER EROSION CONTROL MEASURES IN ADDITION TO THOSE LISTED TO ENSURE THAT SILT WILL NOT LEAVE THE PROJECT CONFINES.
6. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION & SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED WITH A HEALTHY STAND OF PERMANENT VEGETATION.
7. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AT COMPLETION OF CONSTRUCTION.
8. THE CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES, FLUMES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
9. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY STABILIZATION AS REQUIRED.
10. ALL EROSION CONTROL DEVICES SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS AND DESIGN CRITERIA OF THE ENGINEERING DIVISION, DEPARTMENT OF PUBLIC WORKS, CITY OF SPRINGFIELD, MISSOURI.
11. REFERENCE DETAILS ON SHEET C-105 FOR TYPICAL EROSION CONTROL DEVICE INSTALLATION.
12. THE CONTRACTOR WILL BE REQUIRED TO CLEAN THE STREETS OF DEPOSITED MUD AS FREQUENTLY AS NEEDED IN ORDER TO KEEP THEM USABLE AND TO CONTROL DUST.
13. CONTRACTOR IS RESPONSIBLE FOR PHASED INSTALLATION OF EROSION CONTROL BMP'S IN ORDER TO PREVENT SEDIMENT FROM BREACHING THE LIMITS OF DISTURBANCE.

EROSION CONTROL MATTING NOTE:

EROSION CONTROL MATTING MAY BE DELETED IF ALL OF THE FOLLOWING CONDITIONS ARE MET:
- SOD IS UTILIZED AS PERMANENT STABILIZATION (COORD. WITH THE PLANTING PLANS)
- LOCATIONS ARE NOT DORMANT FROM EARTHWORK ACTIVITIES FOR 14 OR MORE DAYS
- FINAL GRADING HAS NOT BEEN COMPLETED

N

0' 5' 10' 20'

SCALE IN FEET

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REVISION:
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ISSUE DATE: 10/24/2025

CAD DWG FILE: C-104.dwg
DRAWN BY: TMH
CHECKED BY: KGS
DESIGNED BY: KGS

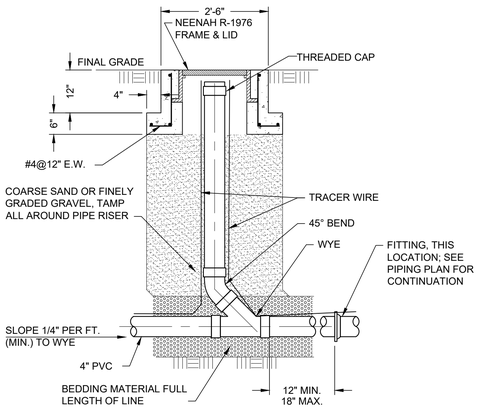
SHEET TITLE:

EROSION CONTROL PLAN

SHEET NUMBER:

C-104

10 OF 36 SHEETS
10/24/2025

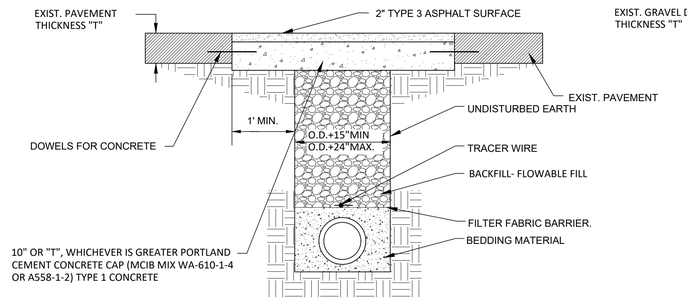


1 CLEANOUT DETAIL

SCALE: NOT TO SCALE

TRENCH UNDER PAVEMENT NOTES:

1. NEW SURFACING SHALL BE INSTALLED FLUSH WITH SURROUNDING SURFACE AND SHALL MATCH THE SLOPE AND CONTOURS OF THE SURROUNDING PAVEMENT.
2. DRIVEWAY PAVEMENT SHALL BE REMOVED TWELVE (12) INCHES BEYOND THE DISTURBED AREA. IF EXCAVATION IS WITHIN THREE (3) FEET OF AN EXIST. JOINT OR CUT, THE SURFACE SHALL BE EXTENDED TO THE JOINT.
3. EXIST. PAVING TO BE SAW CUT.
4. ROCK BACKFILL SHALL BE AB-3 OR TYPE-5. BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR ± 2% OPTIMUM MOISTURE CONTENT.

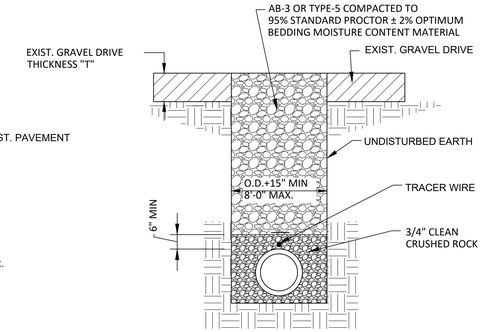


2 STREET CUT RESTORATION

SCALE: NOT TO SCALE

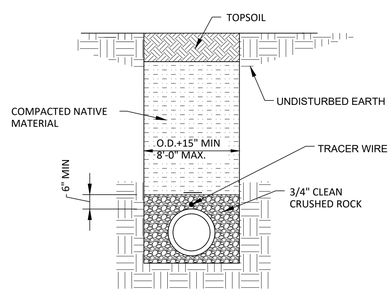
TRENCH UNDER GRAVEL DRIVE/SHOULDER NOTES:

1. NEW SURFACING SHALL BE INSTALLED FLUSH WITH SURROUNDING SURFACE AND SHALL MATCH THE SLOPE AND CONTOURS OF THE SURROUNDING PAVEMENT.
2. ROCK BACKFILL SHALL BE AB-3 OR TYPE-5. BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR ± 2% OPTIMUM MOISTURE CONTENT.
3. IN GRASS SHOULDER AREAS, 12" OF TOPSOIL SHALL BE PLACED.



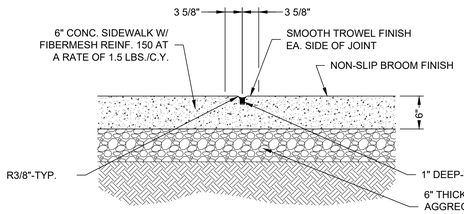
3 TRENCH UNDER GRAVEL DRIVE & SHOULDER DETAIL

SCALE: NOT TO SCALE

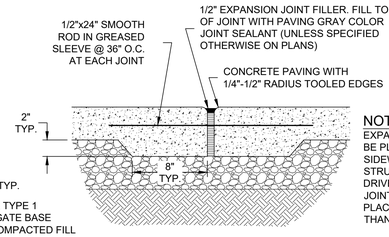


4 TRENCH UNDER GRASSY AREAS DETAIL

SCALE: NOT TO SCALE



SIDEWALK & TOOLED CONTROL JOINT DETAIL

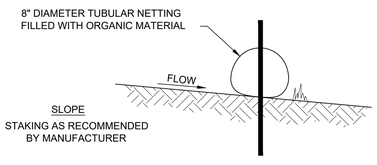


NOTE:
EXPANSION JOINTS SHALL BE PLACED BETWEEN THE SIDEWALK AND ALL STRUCTURES & DRIVEWAYS. EXPANSION JOINTS SHOULD ALSO BE PLACED AT NOT GREATER THAN 100 FOOT INTERVALS.

EXPANSION & CONSTRUCTION JOINT DETAIL

5 SIDEWALK DETAILS

SCALE: NOT TO SCALE

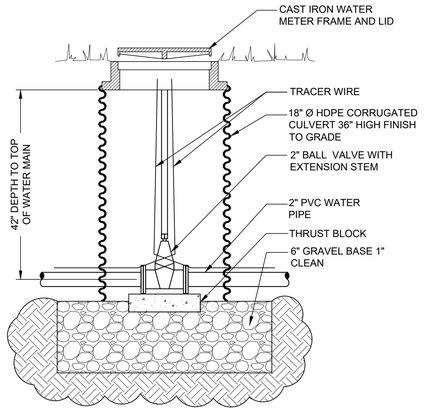


SEDIMENT BARRIER NOTES:

1. PLACE SEDIMENT BARRIER AT DOWNSLOPE LIMIT OF AREA TO BE GRADED AS NECESSARY.
2. FASTEN SEDIMENT BARRIER AS RECOMMENDED BY MANUFACTURER.
3. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
4. SEDIMENT BARRIER SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS, SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
5. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE DISPOSED OF IN AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH RECOMMENDED BY MANUFACTURER AND DISPOSED OF IN AN APPROVED SPOIL SITE OR AS IN NO. 5 ABOVE.
7. AT EACH END OF SEDIMENT BARRIER, TURN SOCK UPSLOPE AND EXTEND UNTIL GROUND SURFACE RISES 18".

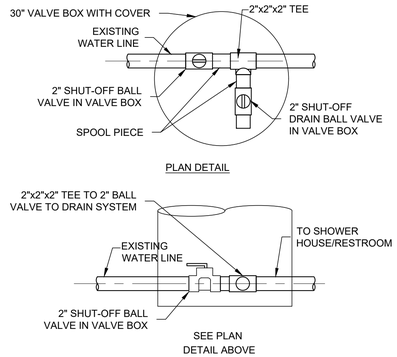
6 SEDIMENT BARRIER

SCALE: NOT TO SCALE
NOT TO SCALE



8 BALL VALVE INSTALLATION

SCALE: NOT TO SCALE

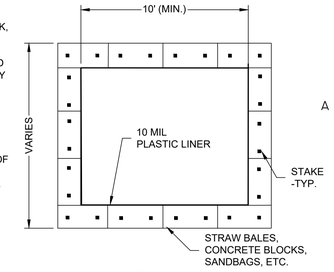


9 WATER SERVICE CONNECTION

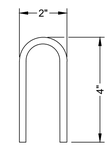
SCALE: NOT TO SCALE

NOTES:

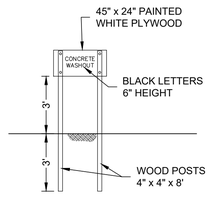
1. ACTUAL LAYOUT LOCATIONS & NUMBER OF WASH-OUTS TO BE DETERMINED BY CONTRACTOR IN FIELD.
2. THE CONCRETE WASH-OUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. WASH-OUTS SHALL BE LOCATED A MINIMUM OF 50 FT. FROM STORM DRAINS, OPEN DRAINAGE FACILITIES AND WATER COURSES. AVOID MIXING EXCESS AMOUNTS OF FRESH CONCRETE.
4. INSTALL BEFORE THE START OF ANY CONCRETE ACTIVITIES OR DELIVERIES.
5. INSPECT EVERY WEEK AND AFTER ½" STORM EVENT. REMOVE AND DISPOSE OF HARDENED CONCRETE AND RETURN THE FACILITY TO A FUNCTIONAL CONDITION. WASH-OUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASH-OUT IS 75% FULL.
6. WHEN TEMPORARY CONCRETE WASH-OUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASH-OUT FACILITIES SHALL BE REMOVED FROM THE SITE AND DISPOSED. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE WASH-OUT SHALL BE BACKFILLED AND REPAIRED.



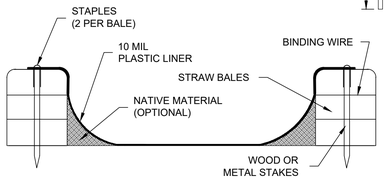
PLAN



STAPLE



WASHOUT SIGN

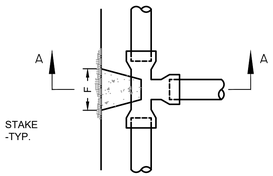


SECTION

7 CONCRETE WASHOUT DETAIL

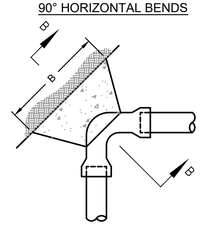
SCALE: NOT TO SCALE

TEES & PRESSURE SHC'S

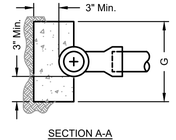


PLAN

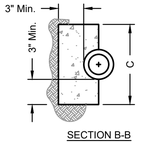
90° HORIZONTAL BENDS



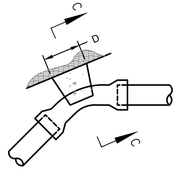
PLAN



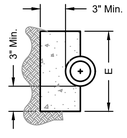
SECTION A-A



SECTION B-B



PLAN



SECTION C-C

11 1/4°, 22 1/2°, 45°
HORIZONTAL AND LOWER
VERTICAL BENDS

BLOCKING SCHEDULE						
PIPE SIZE	B	C	D	E	F	G
1" THRU 1 1/2"	8"	8"	10"	5"	6"	6"
2"	10"	10"	14"	7"	10"	10"
2 ½"	10"	10"	14"	7"	10"	10"
3"	12"	12"	18"	9"	12"	12"
4"	13"	12"	24"	12"	16"	16"

10 CONCRETE WASHOUT DETAIL

SCALE: NOT TO SCALE

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PROJECT # X2528-01
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REVISION:
DATE:
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ISSUE DATE: 10/24/2025

CAD DWG FILE: C-105.dwg
DRAWN BY: TH
CHECKED BY: KS
DESIGNED BY: KS

SHEET TITLE:

CIVIL DETAILS

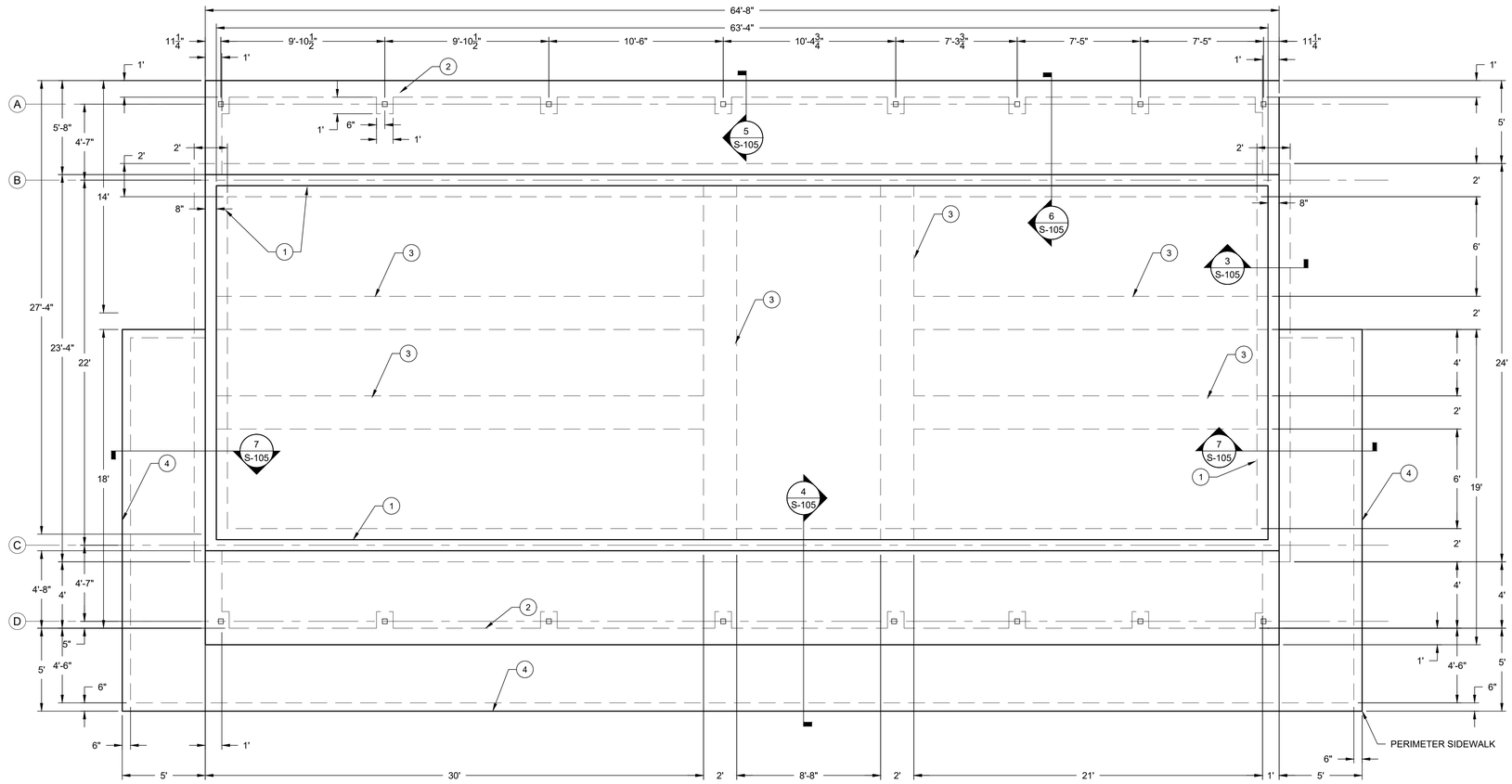
SHEET NUMBER:

C-105

11 OF 36 SHEETS
10/24/2025

(XX) NOTES:

1. CONTINUOUS 1'x2' SPREAD FOOTING WITH 8" POURED IN PLACE CONCRETE STEM WALL. SEE SECTION 3/S-105.
2. CONTINUOUS TURNED DOWN SLAB FOOTING. SEE SECTION 4/S-105.
3. THICKENED SLAB UNDER CMU WALL. SEE DETAIL 1/S-105.
4. PERIMETER SIDEWALK



1 SHOWER HOUSE/BATHROOM FOUNDATION PLAN

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

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

10-24-2025
STATE OF MISSOURI
KERRY GAIL SCOTT
NUMBER E-24557
REGISTERED PROFESSIONAL ENGINEER

560 East St. Louis Street
Springfield, MO 65806
olsson.com
TEL 417.890.8802
FAX 417.890.8805

olsson

Olsson - Engineering
Missouri COA #001592

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES,
STATE PARKS

COMPGROUND #4
SHOWER HOUSE
REPLACEMENT

BENNETT SPRING
STATE PARK
LEBANON, MO

PROJECT # X2528-01
SITE # 5302
ASSET # 7815302022

REVISION:
DATE:
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REVISION:
DATE:
ISSUE DATE: 10/24/2025

CAD DWG FILE: S-FP-01.dwg
DRAWN BY: TMH
CHECKED BY: KGS
DESIGNED BY: KGS

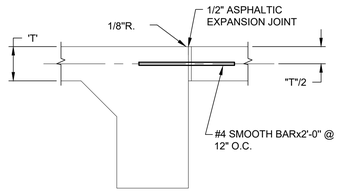
SHEET TITLE:

FOUNDATION PLAN

SHEET NUMBER:

S-101

12 OF 36 SHEETS
10/24/2025



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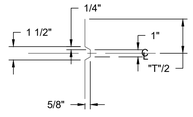
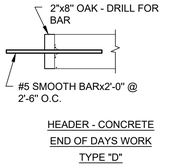
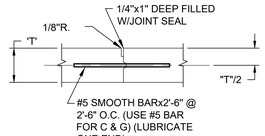


KEY DETAIL

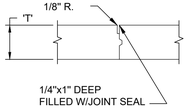
DEPTH OF SAW CUT
6" PAVEMENT = 1 1/2"



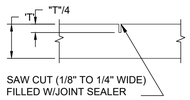
HEADER - CONCRETE
END OF DAYS WORK
TYPE "D"



KEYED JOINT
TYPE "A"



KEYED JOINT
WITHOUT BAR
TYPE "B"



SAWED
CONTRACTION JOINT
TYPE "C"

TYPICAL CONSTRUCTION JOINTS

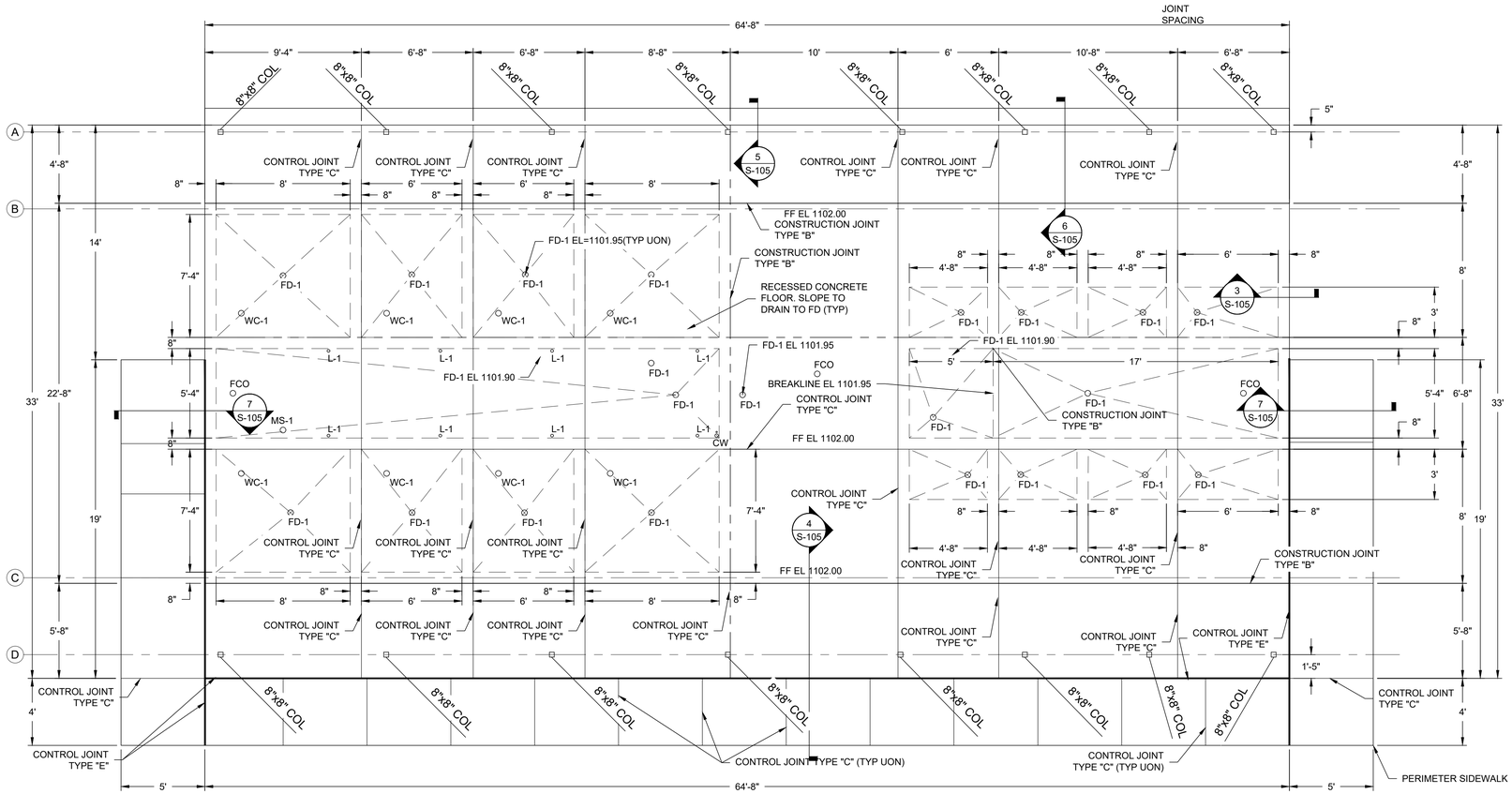
LEGEND

FD-1	FLOOR DRAIN
FCO	FLOOR CLEANOUT
CW	COLD WATER INTAKE
WC-1	WATER CLOSET
MS-1	MOP SINK
L-1	LAVATORY DRAIN

LIMITS TO RECESSED SLAB. SLOPE TO FD EL.1101.95 (TYP. UON)

PERIMETER SIDEWALK NOTES:
1. SIDEWALKS SHALL HAVE CRACK CONTROL JOINTS (TYPE C) @ 5'-0"± CENTERS
2. SIDEWALKS SHALL HAVE ASPHALTIC EXPANSION TYPE JOINTS @ 40' INTERVALS AND ABUTMENTS TO STRUCTURES.
3. SIDEWALKS TO HAVE LIGHT BROOM FINISH.

CONCRETE PENETRATION NOTES:
1. INSTALL 1" PVC CONDUIT THROUGH CONCRETE SLAB UP TO 6" ABOVE FINISH FLOOR ADJACENT TO COLD WATER LINE FOR FOR TRACER WIRE ACCESS. EXTEND TRACER WIRE THROUGH CONDUIT WITH 24"OF COIL WIRE ABOVE CONDUIT. RUN WIRE TO WATER METER BOX CONNECTING TO EXISTING WATER LINE. SEE WATER SEE DETAILS SHEET C-105.



1 SHOWER HOUSE/BATHROOM SLAB AND JOINT PLAN

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

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SHEET TITLE:

CONCRETE SLAB AND JOINT PLAN

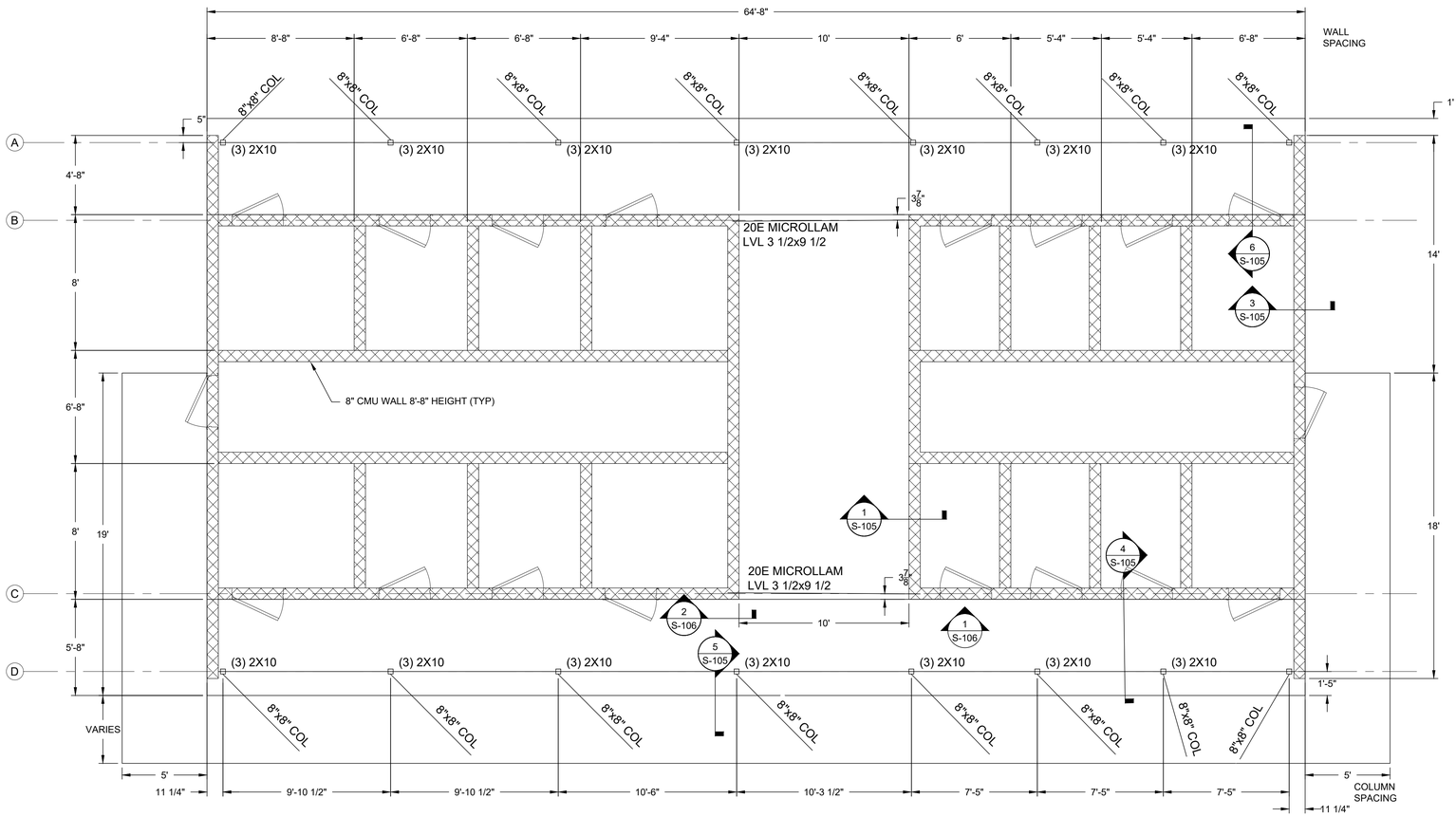
SHEET NUMBER:

S-102

13 OF 36 SHEETS
10/24/2025

WALL LEGEND

INDICATES CMU WALLS.



1 SHOWER HOUSE/BATHROOM FRAMING PLAN

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

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FRAMING PLAN

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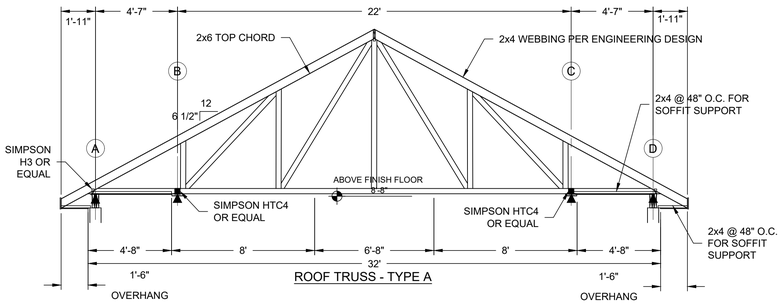
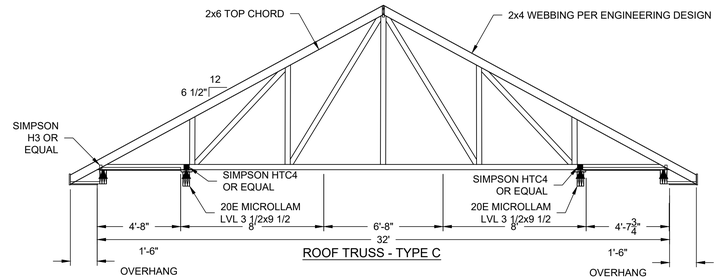
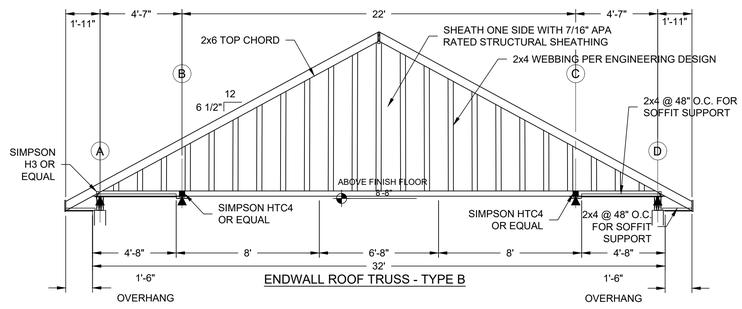
14 OF 36 SHEETS
10/24/2025



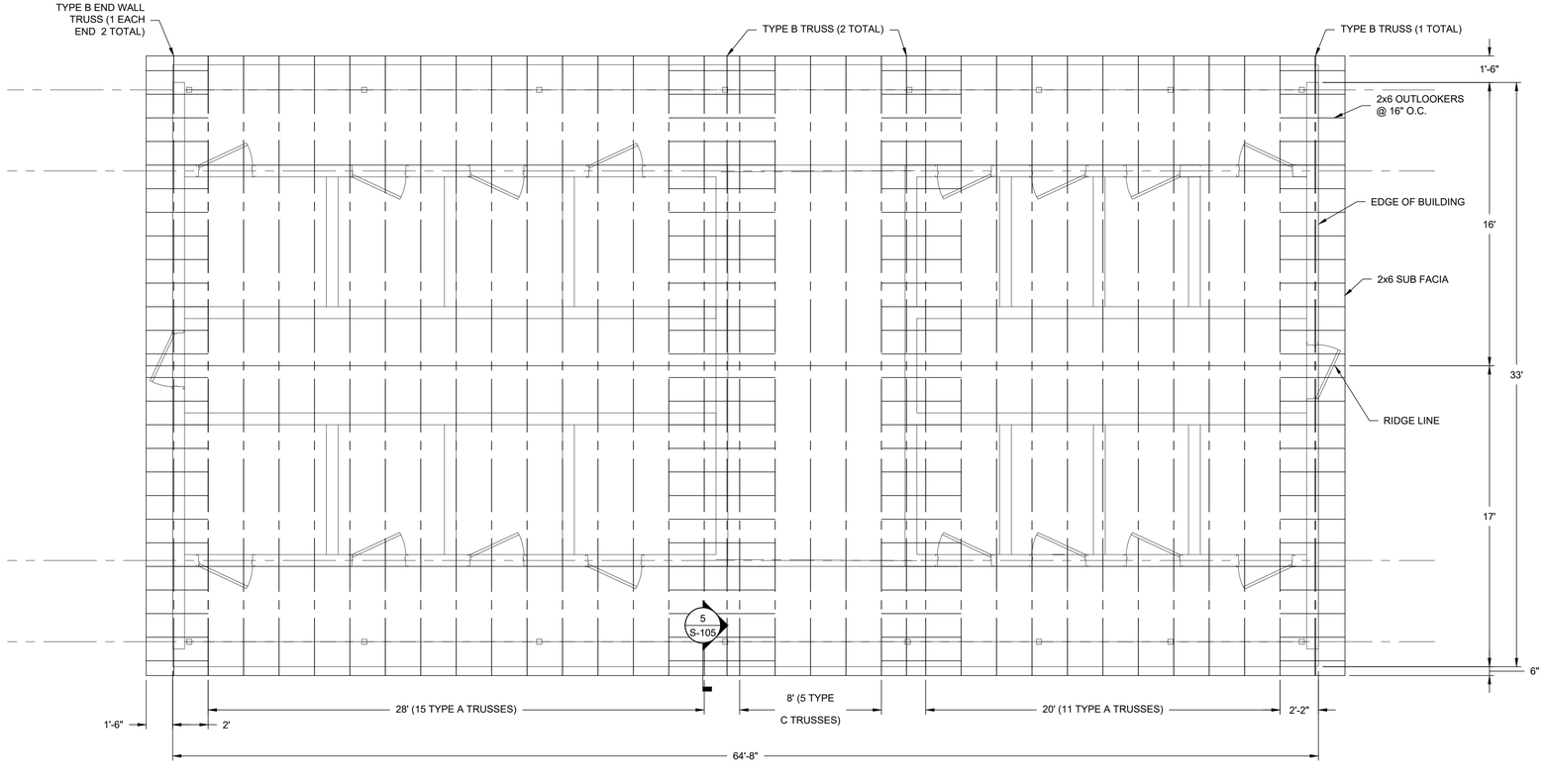
ROOF TRUSS - TYPE A



ROOF TRUSS - TYPE C



ENDWALL ROOF TRUSS - TYPE B



1 SHOWER HOUSE/BATHROOM FRAMING PLAN

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

TRUSS REQUIREMENTS:

TOP CHORD: LIVE LOAD 30 PSF
DEAD LOAD 10 PSF
BOTTOM CHORD: DEAD LOAD 10 PSF

WOOD TRUSSES SHALL BE FABRICATED BY A MANUFACTURER HAVING A MINIMUM OF TEN (10) YEARS EXPERIENCE IN ENGINEERING AND MANUFACTURING PRE-FABRICATED WOOD TRUSSES. TRUSS MANUFACTURER SHALL PROVIDE MANUFACTURER'S MATERIAL SPECIFICATIONS AND CERTIFY THEIR COMPLIANCE WITH THESE PROJECT REQUIREMENTS. ENGINEERING SHALL BE PERFORMED BY AN ENGINEER CURRENTLY LICENSED BY THE STATE OF MISSOURI. PRIOR TO MANUFACTURE, SUBMIT SHOP DRAWINGS AND ENGINEERING DATA SEALED BY THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS. TRUSSES SHALL BE CONSTRUCTED TO ALL ENGINEERING REQUIREMENTS. UPPER AND LOWER CHORD MEMBERS SHALL NOT BE LESS THAN 2x6, 2x2 WEB MEMBERS WILL NOT BE ALLOWED. 'W' STYLE CONFIGURATION SHOWN, OTHER CONFIGURATIONS MAY BE ACCEPTABLE.

LEGEND

▲ LOAD BEARING

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olsson.com
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SHEET TITLE:

TRUSS FRAMING PLAN

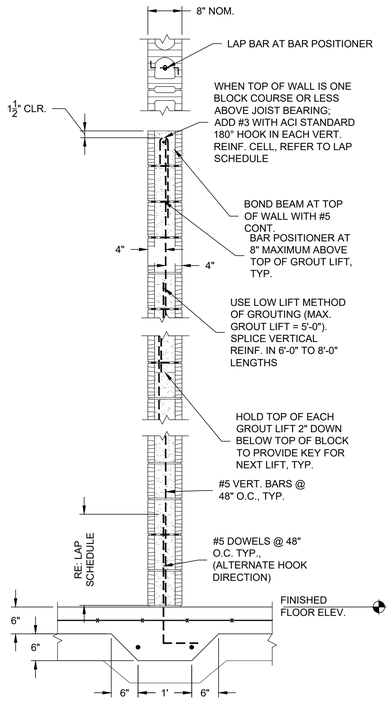
SHEET NUMBER:

S-104

15 OF 36 SHEETS
10/24/2025

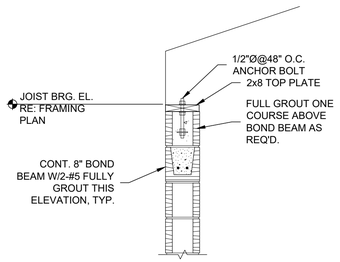
NOTES:

1. GROUT SOLID ALL CELLS WITH REINFORCING.
2. USE BOND BEAM BLOCKS WITH OPEN BOTTOMS ONLY AT BOND BEAM LOCATIONS. DO NOT USE THROUGH-TYPE BLOCKS AT BOND BEAMS.
3. DO NOT CONTINUE BOND BEAM REINFORCING THROUGH CONTROL JOINTS.
4. ALL MASONRY SHALL BE LAID IN RUNNING (COMMON) BOND.
5. REINFORCED BOND BEAMS WITH (2)-#5 CONTINUOUS (TYP.)
6. HORIZONTAL JOINT REINFORCING SHALL BE GALVANIZED LADDER TYPE SPACED AT 16" O.C. ABOVE GRADE AND 8" O.C. BELOW GRADE AND IN PARAPETS. SPLICE JOINT REINFORCING 12" MIN.. DO NOT CONTINUE JOINT REINFORCING THROUGH MASONRY CONTROL JOINTS.
7. REFER TO ARCHITECTURAL DRAWINGS FOR WALL LOCATIONS.

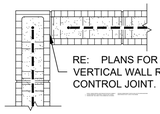


NOTE: GROUT SHALL BE CONSOLIDATED WITH MECHANICAL VIBRATORS.

1 CMU WALL WALL DETAILS
SCALE: SCALE: 3/4"=1'-0"



BOND BEAM AT ROOF LEVEL



CORNER DETAIL

CONVENTIONAL 2X FRAMING

1. LUMBER AND ITS FASTENINGS, SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATIONS OF STRESS-GRADE LUMBER AND ITS FASTENINGS, LATEST EDITION, AS RECOMMENDED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION.
2. EXTERIOR WALLS ARE 2X4 #2 SYP. STUDS AND PLATES. STUD IS 12" O.C. UNO
3. INTERIOR LOAD BEARING WALLS ON CMU ARE 2X4 SYP. STUD GRADE STUDS AND PLATES. SPACING IS 16" O.C. UNO
4. INTERIOR NON-LOAD BEARING WALLS ARE 2X4 STUD GRADE STUDS AT 24" O.C. UNO.
5. INDICATES LOAD BEARING WALLS.
6. INDICATES NON-LOAD BEARING WALLS.
7. INDICATES CMU WALLS.
8. MISC FRAMING MATERIAL (SILLS, CRIPPLES, ETC.) TO BE #2 SYP. UNO.
9. HEADER MATERIAL TO BE MINIMUM OF #2 SYP.
10. SHEATHING IS TO BE APA RATED STRUCTURAL SHEATHIING (ALL EDGES TO BE BLOCKED)
12. MATERIALS MUST BE GRADE MARKED.
13. BOLT HOLES THROUGH WOOD SHALL BE DRILLED 1/16" MAXIMUM LARGER THAN THE DIAMETER OF THE BOLTS TO BE INSTALLED.
14. BOLTS THROUGH WOOD SHALL BE FITTED WITH STANDARD WASHERS AT HEAD AND NUT ENDS.
15. EXPOSED WOOD (WHEN SHOWN ON PLANS) SHALL BE TREATED AS FOLLOWS:
    WOOD NOT IN CONTACT WITH GROUND ..... 0.25 PCF
    WOOD IN CONTACT WITH GROUND ..... 0.40 PCF
16. SHEATHING IS TO BE 7/16" APA RATED STRUCTURAL SHEATHING (ALL EDGES TO BE BLOCKED)
17. SHEATHING IS TO BE ATTACHED USING 8D COMMON NAILS @ 6' O.C. (EDGE) AND 12" O.C. (INTERMEDIATE).
18. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL HEIGHTS.
19. SHEATHING FOR ROOF TRUSSES TO BE 5/8" A-GRADE CDX PLYWOOD.

REINFORCING SPLICE, EMBEDMENT AND COVER REQUIREMENTS

BAR SIZE	LENGTH OF LAPPED SPLICES FOR REINFORCEMENT, IN INCHES		LENGTH OF EMBEDMENT FOR END ANCHORAGE OF REINFORCEMENT WITH STD. HOOKS, IN INCHES	
	*TOP BARS	OTHERS	*TOP BARS	OTHERS
3	20	20	8	8
4	28	20	8	8
5	36	26	10	8
6	46	33	13	10
7	63	45	17	13
8	83	59	22	17
9	104	74	28	22
10	133	95	40	31
11	163	116	55	41
14	NOT PERMITTED		90	67
18	NOT PERMITTED		138	103

* TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR. HORIZONTAL BARS IN WALLS ARE TO BE PROVIDED WITH LAPS AS REQUIRED FOR TOP BARS.

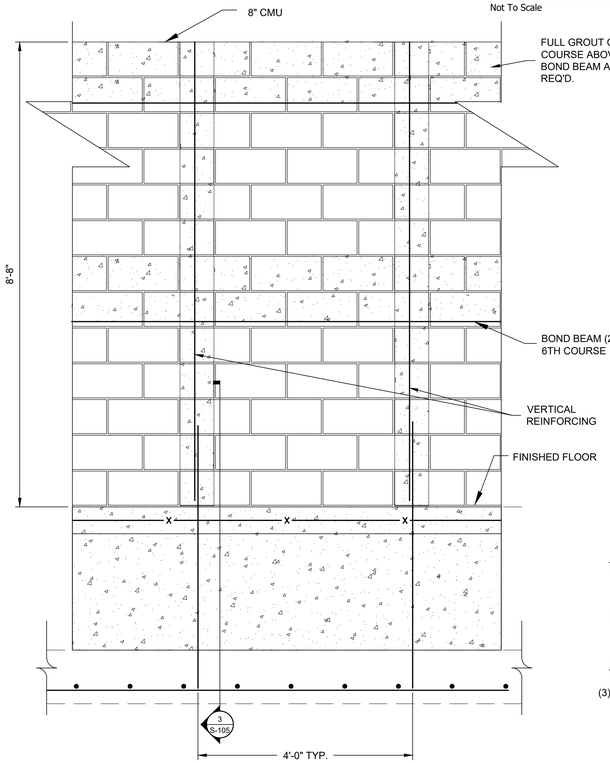
EXCEPT AS OTHERWISE INDICATED ON THE PLANS, EMBEDMENT LENGTHS FOR END ANCHORAGE AND LAPPED SPLICES SHALL NOT BE LESS THAN (NO MINUS TOLERANCE) SHOWN ABOVE.

LAPPED SPLICES SHALL NOT BE MADE AT POINTS OF MAXIMUM STRESS AS DETERMINED BY THE ENGINEER.

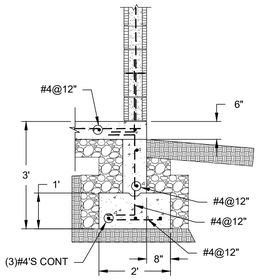
CONCRETE COVER FOR REINFORCING

LOCATION	MINIMUM COVER
UNFORMED SURFACES ADJACENT TO EXCAVATION	3"
FORMED OR TOP SURFACES EXPOSED TO WEATHER OR SATURATED AIR, SUBMERGED OR IN CONTACT WITH EARTH	
#6 OR LARGER BARS	2"
#5 OR SMALLER BARS	1-1/2"
OTHER LOCATIONS	
BARS IN BEAMS OR GIRDERS, INCLUDING STIRRUPS AND COLUMN SPIRALS OR TIES	1-1/2"
#14 AND #18	1-1/2"
#11 AND SMALLER	3/4"

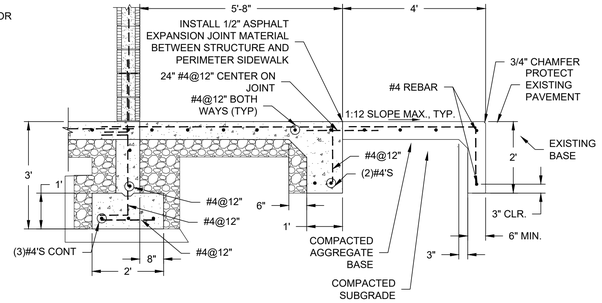
COVER FOR REINFORCING STEEL SHALL NOT BE LESS THAN THE MINIMUM GIVEN ABOVE (NO MINUS TOLERANCE), AND SHALL NOT EXCEED THE MINIMUM BY MORE THAN 1/4 INCH WHERE THE CONCRETE THICKNESS IS 24" OR LESS, OR MORE THAN 1/2 INCH WHERE THE CONCRETE THICKNESS IS MORE THAN 24 INCHES.



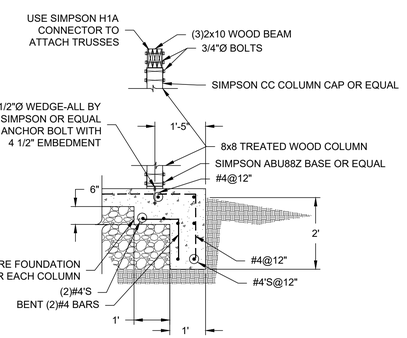
2 CMU WALL ELEVATION
SCALE: SCALE: 3/4"=1'-0"



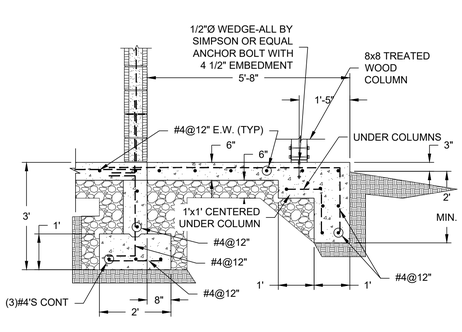
3 SECTION
SCALE: 1/2" = 1'-0"



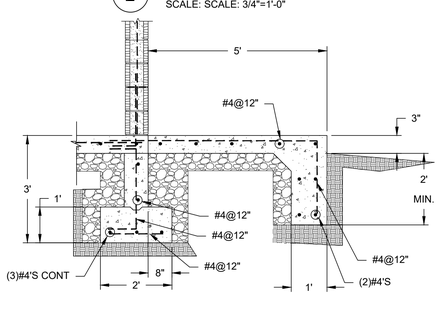
4 SECTION
SCALE: 1/2" = 1'-0"



5 SECTION
SCALE: 1/2" = 1'-0"



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



7 SECTION
SCALE: 1/2" = 1'-0"

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STRUCTURAL DETAILS

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16 OF 36 SHEETS
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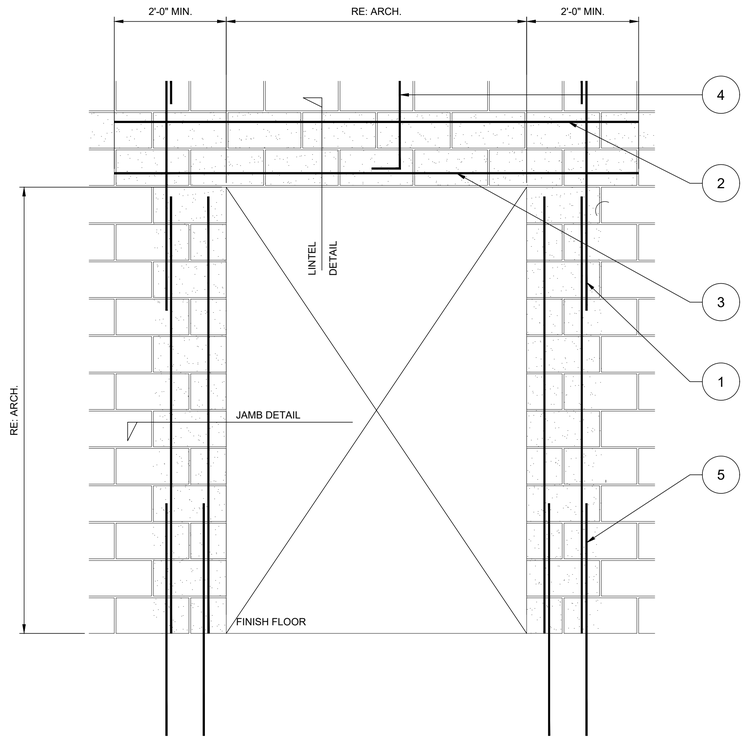
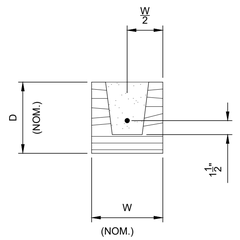


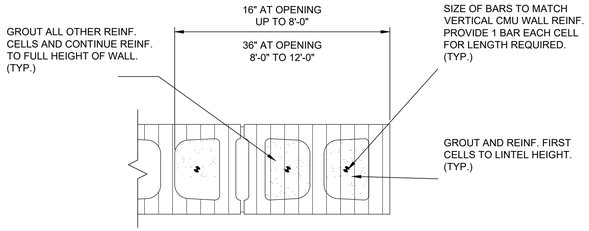
NOTES:
1. REFER TO CMU WALL REINFORCING DIAGRAM FOR SPLICES IN VERTICAL REINF.
2. EXTEND GROUTED LINTEL A MINIMUM OF 2'-0" (3'-0" FOR #7 BARS) BEYOND FACE OF OPENING EACH SIDE FOR STRAIGHT LINTEL REINFORCING AND 1'-4" FOR HOOKED LINTEL REINFORCEMENT WITH STANDARD ACI HOOK.
3. USE LINTEL BLOCKS ONLY FOR BOTTOM COURSE OF LINTEL BEAMS.
4. CONTINUE VERTICAL WALL REINFORCING OVER OPENING. ANCHOR VERTICAL REINFORCING INTO STANDARD ACI HOOK.
5. PROVIDE MATCHING DOWELS AT ALL VERTICAL REINFORCING LOCATIONS.

1 ADDITIONAL REINFORCING AT OPENINGS
SCALE: 3/4"=1'-0"

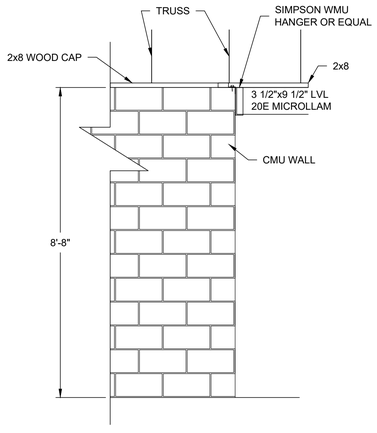


CMU LINTEL DETAIL

(ML) CMU LINTEL SCHEDULE					
WIDTH (W)	CLEAR SPAN	DEPTH (D)	BOTTOM REINF.	TOP REINF.	STIRRUPS AND SPACING
8"	UP TO 6'-0"	8"	#4	---	--------



JAMB DETAIL



2 LVL TO CMU SECTION
SCALE: 1/2" = 1'-0"

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STATE OF MISSOURI
KERRY GAIL SCOTT
NUMBER E-24567
REGISTERED PROFESSIONAL ENGINEER

560 East St. Louis Street
Springfield, MO 65806
olsson.com
TEL 417.890.8802
FAX 417.890.8805

olsson

Olsson - Engineering
Missouri COA #001592

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DEPARTMENT OF NATURAL RESOURCES, STATE PARKS

COMPGROUND #4
SHOWER HOUSE
REPLACEMENT

BENNETT SPRING
STATE PARK

LEBANON, MO

PROJECT # X2528-01
SITE # 5302
ASSET # 7815302022

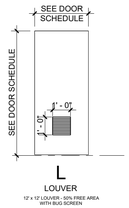
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 10/24/2025

CAD DWG FILE: S-FP-01.dwg
DRAWN BY: TMH
CHECKED BY: KGS
DESIGNED BY: KGS

SHEET TITLE:
STRUCTURAL DETAILS

SHEET NUMBER:
S-106

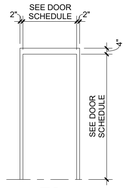
17 OF 36 SHEETS
10/24/2025



L

LOUVER

12" x 12" LOUVER - 50% FREE AREA WITH BUG SCREEN



F2

MASONRY HEADER

DOOR TYPE LEGEND

NTS

DOOR FRAME LEGEND

NTS

DOOR AND FRAME SCHEDULE

DOOR NO.	DOOR								FRAME			Hardware Set
	OPENING		PANEL									
	WIDTH	HEIGHT	CONFIG	PANEL WIDTH	THICK	TYPE	MATL	FINISH	TYPE	MATL	FINISH	
101-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
102-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
103-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
104-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
105-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
106-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
107-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
108-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
109-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	2
110-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	2
111-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
112-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
113-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
114-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
115-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
116-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
117-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1
118-1	3' - 0"	7' - 0"	SINGLE	3' - 0"	1 3/4"	L	HM	PNT	F2	HM	PNT	1

DOOR HARDWARE GROUPS

SET 1: RESTROOM/SHOWER

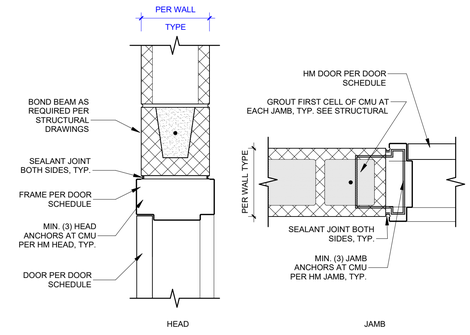
3 EA BUTT HINGES
1 EA DEADBOLT WITH OUTSIDE OCCUPANCY INDICATOR; KEYED EXTERIOR
1 EA DOOR PULL AND PUSH PLATE
1 EA CLOSER WITH HOLD OPEN
1 EA WALL STOP
1 EA ADA THRESHOLD
1 EA DOOR SWEEP WITH NEOPRENE SEAL
1 EA WEATHERSTRIPPING

SET 2: MECH ROOM

3 EA BUTT HINGES
1 EA KEYPAD ENTRY CYLINDRICAL LOCKESET- BATTERY POWERED
1 EA CLOSER WITH HOLD OPEN
1 EA WALL STOP
1 EA ADA THRESHOLD
1 EA DOOR SWEEP WITH NEOPRENE SEAL
1 EA WEATHERSTRIPPING

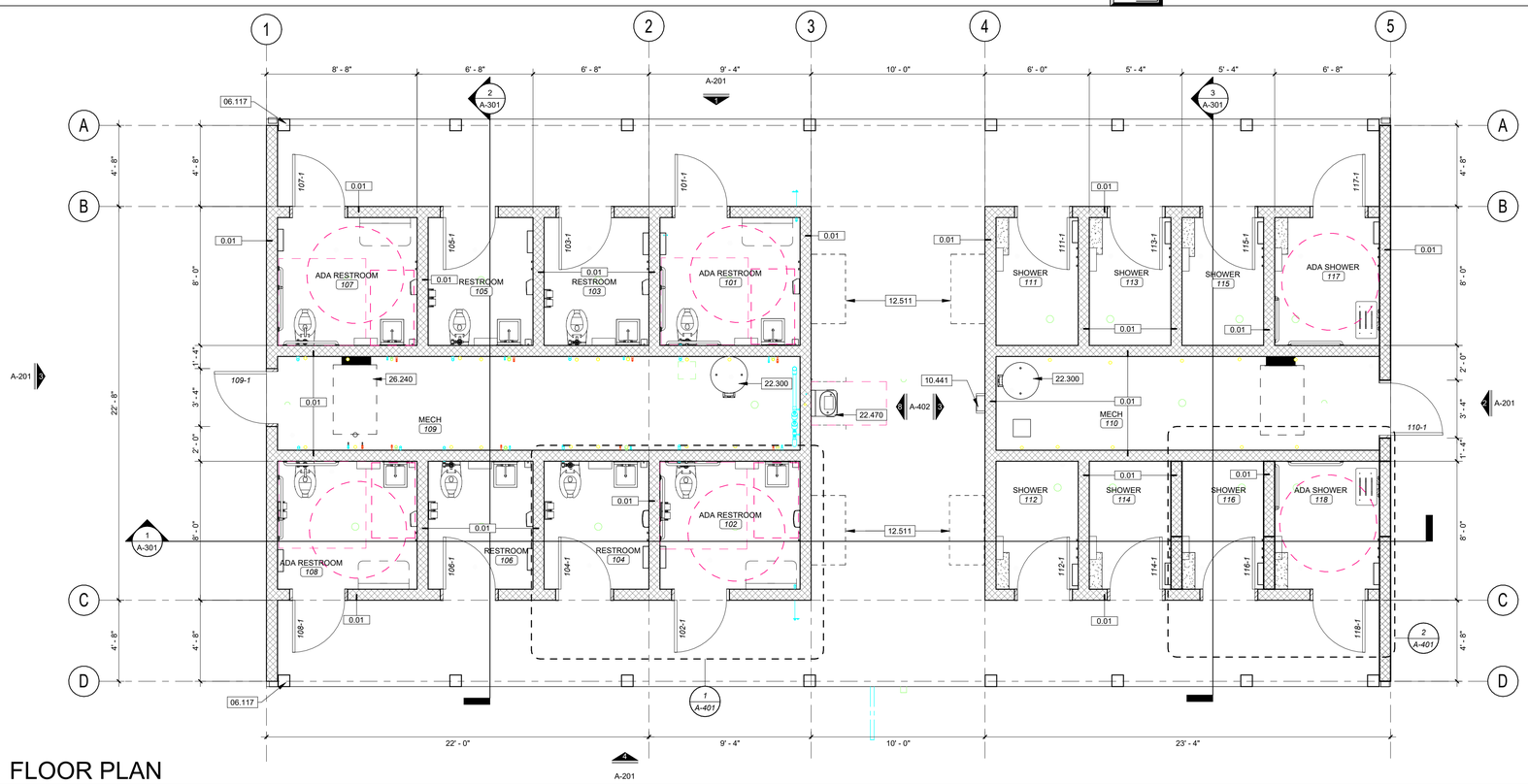
PARTITION TYPE GENERAL NOTES

1. EXTERIOR WALL CONSTRUCTION IS DESCRIBED IN WALL SECTIONS. INTERIOR WALL TYPES ARE DESCRIBED BY THEIR DENOTED WALL TYPE TAGS.
2. ANY WALL CONSTRUCTION NOT NOTED WITH A PARTITION TYPE WALL TAG SHALL BE CLARIFIED FOR INTERPRETATION BY THE ARCHITECT PRIOR TO BIDDING.
3. WALL TYPE INDICATES PRIMARY WALL ASSEMBLY ONLY. OVERLAID VENEERS, WAINSCOT, PILASTERS, PAINT, AND WALL COVERINGS ARE INDICATED ON FLOOR PLANS, FINISH PLANS, INTERIOR ELEVATIONS, SCHEDULES, SPECIFICATIONS OR OTHER DETAILS IN ADDITION TO PRIMARY WALL ASSEMBLY.
4. THE CONTRACTOR SHALL COORDINATE WALL FRAMING ABOVE FINISHED CEILINGS WITH FRAMING, PLUMBING, AND HVAC CONTRACTORS. THE FRAMING CONTRACTOR SHALL PROVIDE THE NECESSARY ROUGH OPENING FRAMING REQUIRED TO FACILITATE BUILDING SYSTEM PENETRATIONS. REFER TO MEP ENGINEERING DRAWINGS FOR LOCATIONS OF EXISTING AND NEW BUILDING SYSTEMS. SOME WALL FRAMING AND BRACING MAY REQUIRE ADJUSTMENT OR RE-LOCATION TO ALLOW FOR DUCT AND PIPE ROUTING.
5. SEE STRUCTURAL DRAWINGS, NOTES, AND DETAILS FOR ADDITIONAL STRUCTURAL CMU AND STRUCTURAL STUD WALL INFORMATION. THIS IS A TYPICAL CONDITION FOR ALL WALL TYPES.
6. ASSEMBLIES SHALL BE AIRTIGHT. SEAL ALL PENETRATIONS AND CRACKS WITH ACOUSTICAL SEALANT IN NON-RATED PARTITIONS. PROVIDE FIRE RATED SEALANT AT CRACKS IN FIRE RATED PARTITIONS. PROVIDE ACOUSTICAL SEALANT AT THE TOP AND BOTTOM OF PARTITIONS. PROVIDE FIRE RATED SEALANT AT THE TOP AND BOTTOM OF FIRE RATED PARTITIONS.
7. RECESSED FIXTURES SUCH AS OUTLETS SHALL NOT BE PLACED BACK TO BACK IN THE SAME STUD CAVITY.
8. PROVIDE WOOD BLOCKING FOR ALL ACCESSORIES, EQUIPMENT, AND CASEWORK. SEE PLANS FOR LOCATIONS.
9. FOR ALL RATED ASSEMBLIES - PARTITION DETAILS ON THIS SHEET ARE INTENDED TO ILLUSTRATE BASIC WALL ASSEMBLY. REFER TO UL LISTING DETAILS FOR SPECIFIC INSTRUCTION REGARDING ATTACHMENT, MATERIAL AND MANUFACTURER SELECTION, ETC.



2 HM DOOR FRAME @ CMU

SCALE 1 1/2" = 1'-0"



1 FLOOR PLAN

SCALE 1/4" = 1'-0"

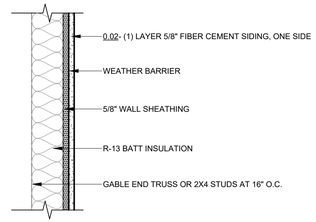
NORTH

KEYNOTE LEGEND

06.117	STRUCTURAL WOOD COLUMN. SEE STRUCTURAL.
10.441	SURFACE MOUNTED FIRE EXTINGUISHER. SEE SECTION 10.4400 FIRE PROTECTION SPECIALTIES.
12.511	BENCH, OFOI.
22.300	WATER HEATER. SEE MEP. SEE DIVISION 22.0000 SPECIFICATIONS.
22.470	DRINKING FOUNTAIN. SEE MEP. SEE DIVISION 22.0000 SPECIFICATIONS.
26.240	PANELBOARDS. SEE MEP. SEE DIVISION 26.0000 SPECIFICATIONS.

WALL SCHEDULE

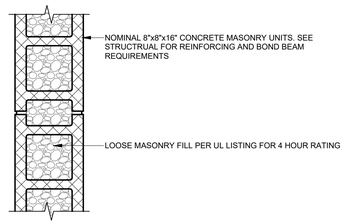
0.01	8" GROUND FACE CMU RUNNING BOND BASIS OF DESIGN TRENDSTONE BLOCK BATON ROUGE
0.02	FIBER CEMENT SIDING ONE SIDE OVER AIR BARRIER OVER WALL SHEATHING OVER GABLE END TRUSS



PTN. TYPE	RATING	WIDTH	NOTES
0.02	-	4 3/4"	-

INTERIOR PARTITION #.02

NTS



PTN. TYPE	RATING	WIDTH	NOTES
0.01	-	7 5/8"	-

INTERIOR PARTITION #.01

NTS

FLOOR PLAN GENERAL NOTES

1. ALL DIMENSIONS INDICATED IN CONTRACT DOCUMENTS ARE FROM FACE OF STUD TO FACE OF STUD FOR INTERIOR PARTITIONS, FACE OF EXISTING STRUCTURE OR FINISH, FACE OF CONCRETE OR BLOCK, OR TO STRUCTURAL LINE, EXCEPT AS NOTED OTHERWISE. DIMENSIONS OF EXISTING STRUCTURE ARE NOTED +/- AND SHOULD BE FIELD VERIFIED PRIOR TO COMMENCEMENT OF WORK AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES IN WRITING.
2. CONTRACTOR SHALL COORDINATE ALL MECHANICAL, ELECTRICAL, AND PLUMBING WORK. CONTRACTOR TO PROVIDE ALL NECESSARY CONSTRUCTION TO FACILITATE WORK INCLUDING BUT NOT LIMITED TO ROUGH OPENINGS, EQUIPMENT SUPPORTS, AND BACKING.
3. PROVIDE SOLID WOOD BLOCKING AS REQUIRED TO INSTALL EQUIPMENT AND CASEWORK. VERIFY WITH OWNER FOR ALL ADDITIONAL OWNER FURNISHED ITEMS THAT REQUIRE BLOCKING.
4. BUILDING IS TO BE STAKED OUT ON SITE BY A REGISTERED LAND SURVEYOR PRIOR TO COMMENCEMENT OF CONSTRUCTION TO VERIFY THAT NO CONFLICTS EXIST BETWEEN PROPOSED CONSTRUCTION AND PROPERTY SETBACKS, EASEMENTS, EXISTING STRUCTURES, OR OTHER PHYSICAL OBJECTS ON SITE. NOTIFY THE ARCHITECT IMMEDIATELY IN WRITING OF ANY CONFLICTS OR VARIATIONS FROM PLANS.
5. SEE STRUCTURAL DRAWINGS FOR ALL HEADER, BOND BEAM, LINTEL, COLUMN, AND OTHER STRUCTURAL REQUIREMENTS.
6. SEE CODE COMPLIANCE PLAN FOR FIRE EXTINGUISHER AND SIGNAGE REQUIREMENTS AND LOCATIONS.
7. FINISH FLOOR ELEVATION INDICATED ON ARCHITECTURAL DRAWINGS IS AT ELEVATION 100'-0". SEE CIVIL DRAWINGS FOR ACTUAL ELEVATION.

STATE OF MISSOURI

STATE OF MISSOURI
JARED A. YOUNGLOVE
NUMBER A-2017019282
ARCHITECT
10.24.25

JARED A. YOUNGLOVE, ARCHITECT
MO #: A-2017019282

PROFESSIONAL SEAL

PARAGON ARCHITECTURE

MISSOURI STATE CERTIFICATE OF AUTHORITY NUMBER A-2016000432
637 COLLEGE STREET
SPRINGFIELD, MO 65806

PH: 417.885.0002
www.paragonarchitecture.com

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Department of Natural Resources, State Parks

CAMPGROUND SHOWER HOUSE REPLACEMENT

Campground #4 Shower House Replacement
Bennet Spring State Park

PROJECT NUMBER: X2528-01
SITE NUMBER: 5302
ASSET NUMBER: 7815302022

REVISION SCHEDULE

ISSUE DATE: 10/24/2025

PROJECT ARCHITECT: JY
DRAWN BY: AM, LY, LH, TW
CHECKED BY: JY, JS

SHEET TITLE:

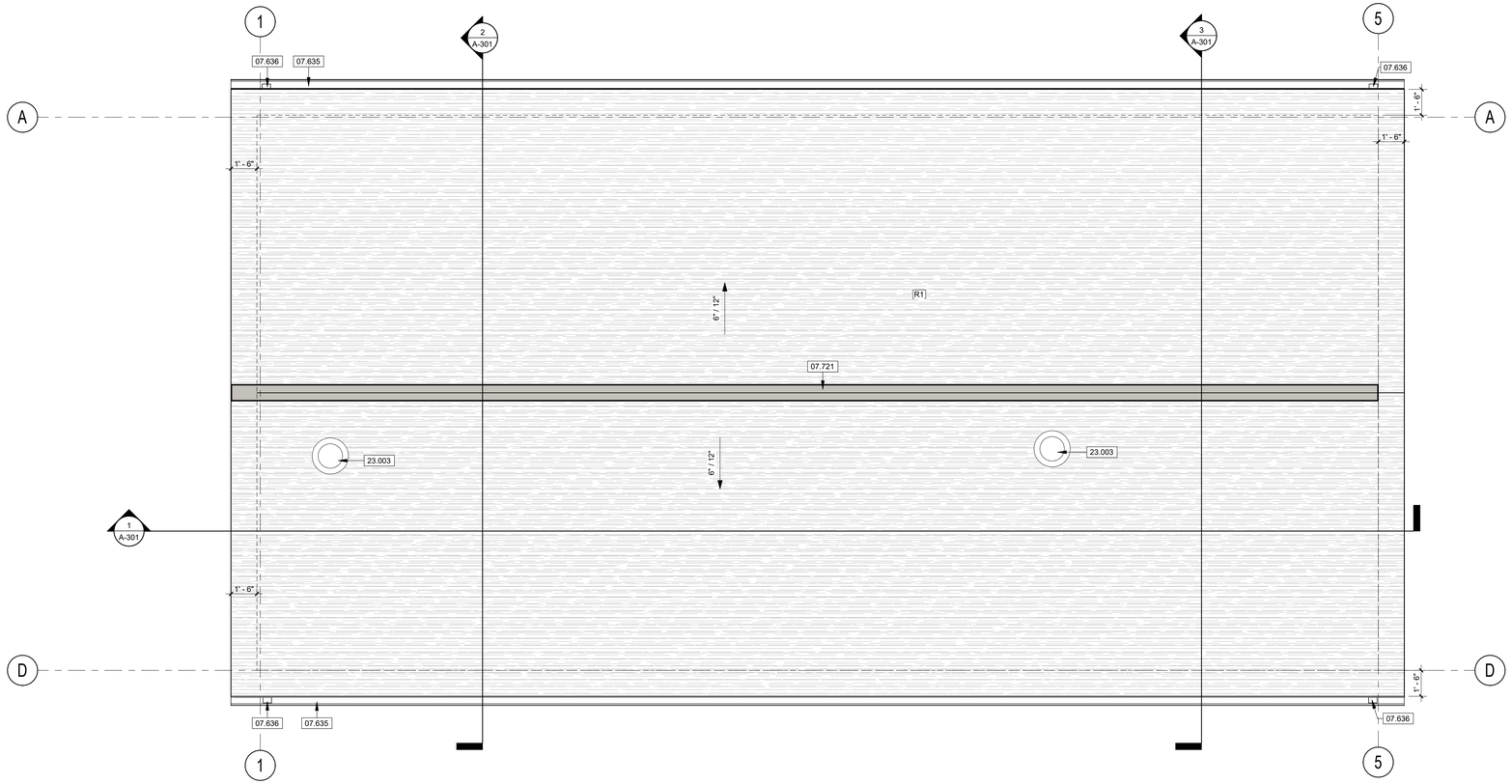
FLOOR PLAN

SHEET NUMBER:

A-101

18 OF 36 SHEETS

10/24/2025



KEYNOTE LEGEND

07.635	6" X 6" 'CLASSIC' GUTTER WITH SLOPED STRAPS AT 24" O.C. REFER TO ROOF PLAN FOR DOWNSPOUT LOCATIONS. SEE SECTION 07.6200 SHEET METAL FLASHING AND TRIM.
07.636	5" DIAMETER PREFINISHED DOWNSPOUT. PROVIDE CONCRETE SPLASH BLOCK AT GRADE. SEE SECTION 07.6200 SHEET METAL FLASHING AND TRIM.
07.721	RIDGE VENT. SEE SECTION 07.7200 ROOF ACCESSORIES.
23.003	HVAC. EXHAUST FAN. SEE DIVISION 23.0000 SPECIFICATIONS.

ROOF SCHEDULE

R1	#30 ASPHALT SHINGLE OVER FELT WITH 48" WIDE ICE AND WATER SHIELD AT ALL ROOF EDGES, RIDGES, VALLEYS, AND ALL VERTICAL WALL TO ROOF INTERSECTIONS OVER ROOF SHEATHING OVER TRUSSES

ROOF PLAN GENERAL NOTES

1. ALL ROOF MATERIALS TO BE COMPLIANT WITH MANUFACTURER'S ROOF WARRANTY.
2. ALL ROOF TERMINATIONS AND FLASHING CONDITIONS SHALL CONFORM WITH MANUFACTURERS RECOMMENDATIONS.
3. ALL PENETRATIONS OF VENTS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED DETAILS AND COMPLIANT WITH ROOF WARRANTY REQUIREMENTS.
4. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION AND ROOF PENETRATION REQUIREMENTS.

1 ROOF PLAN

SCALE 1/4" = 1'-0"

NORTH

STATE OF MISSOURI

JARED A. YOUNGLOVE
NUMBER A-2017019282
ARCHITECT
10.24.25

JARED A. YOUNGLOVE, ARCHITECT
MO #: A-2017019282

PROFESSIONAL SEAL

MISSOURI STATE CERTIFICATE OF AUTHORITY NUMBER A-2016000423
637 COLLEGE STREET
SPRINGFIELD, MO 65806

PH: 417.885.0002
www.paragonarchitecture.com

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Department of Natural Resources, State Parks

CAMPGROUND SHOWER HOUSE REPLACEMENT

Canpground #4 Shower House Replacement
Bennet Spring State Park

PROJECT NUMBER: X2528-01
SITE NUMBER: 5302
ASSET NUMBER: 7815302022

REVISION SCHEDULE

ISSUE DATE: 10/24/2025

PROJECT ARCHITECT: JY
DRAWN BY: AM, LY, LH, TW
CHECKED BY: JY, JS

SHEET TITLE:

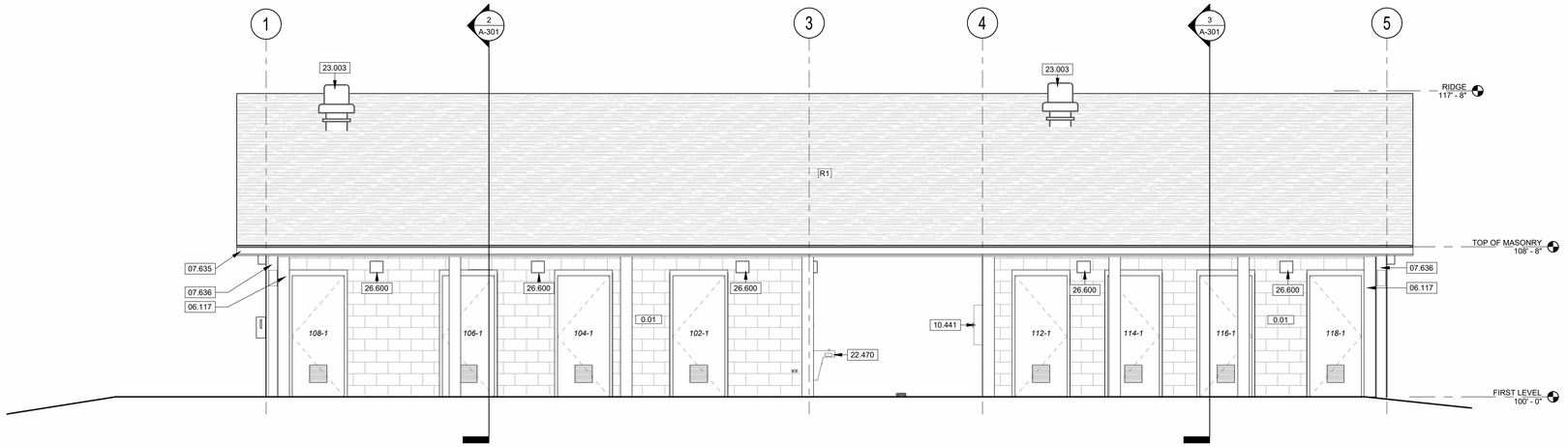
ROOF PLAN

SHEET NUMBER:

A-102

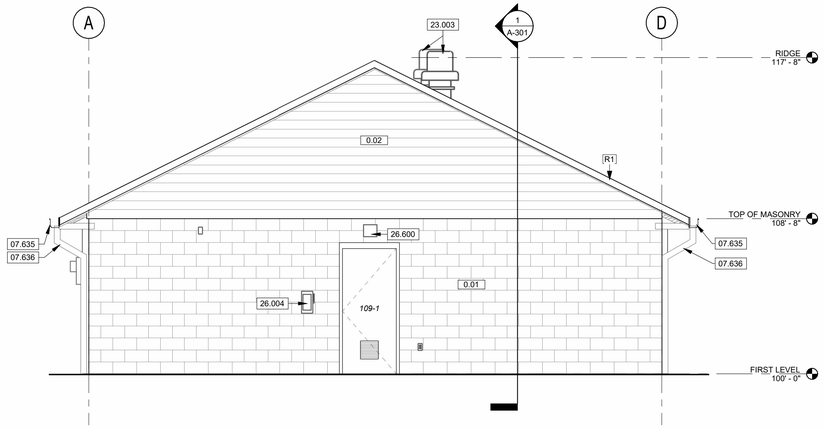
19 OF 36 SHEETS

10/24/2025



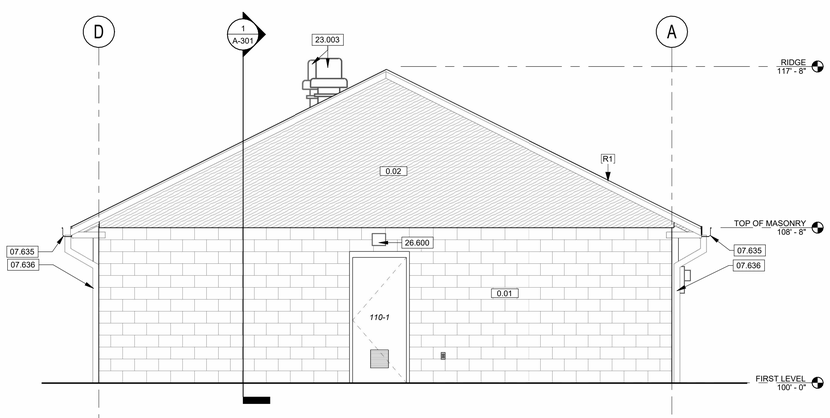
4 EAST EXTERIOR ELEVATION

SCALE 1/4" = 1'-0"



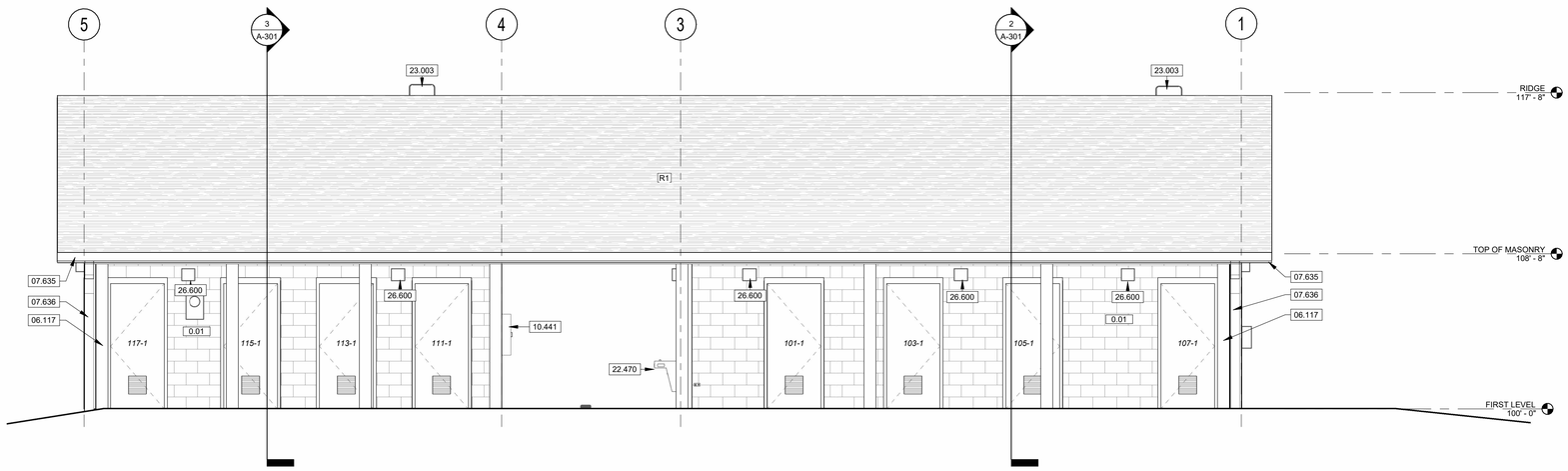
3 SOUTH EXTERIOR ELEVATION

SCALE 1/4" = 1'-0"



2 NORTH EXTRIOR ELEVATION

SCALE 1/4" = 1'-0"



1 WEST EXTERIOR ELEVATION

SCALE 1/4" = 1'-0"

KEYNOTE LEGEND

06.117	STRUCTURAL WOOD COLUMN. SEE STRUCTURAL.
07.635	6" X 6" 'CLASSIC' GUTTER WITH SLOPED STRAPS AT 24" O.C. REFER TO ROOF PLAN FOR DOWNSPOUT LOCATIONS. SEE SECTION 07.6200 SHEET METAL FLASHING AND TRIM.
07.636	5" DIAMETER PREFINISHED DOWNSPOUT. PROVIDE CONCRETE SPLASH BLOCK AT GRADE. SEE SECTION 07.6200 SHEET METAL FLASHING AND TRIM.
10.441	SURFACE MOUNTED FIRE EXTINGUISHER. SEE SECTION 10.4400 FIRE PROTECTION SPECIALTIES.
22.470	DRINKING FOUNTAIN. SEE MEP. SEE DIVISION 22.0000 SPECIFICATIONS.
23.003	HVAC. EXHAUST FAN. SEE DIVISION 23.0000 SPECIFICATIONS.
26.004	ELECTRICAL EQUIPMENT. SEE MEP
26.600	EXTERIOR LIGHTING. SEE MEP. SEE DIVISION 26.0000 SPECIFICATIONS.

ROOF SCHEDULE

R1	#30 ASPHALT SHINGLE OVER FELT WITH 48" WIDE ICE AND WATER SHIELD AT ALL ROOF EDGES, RIDGES, VALLEYS, AND ALL VERTICAL WALL TO ROOF INTERSECTIONS OVER ROOF SHEATHING OVER TRUSSES

WALL SCHEDULE

0.01	8" GROUND FACE CMU RUNNING BOND BASIS OF DESIGN TRENDSTONE BLOCK BATON ROUGE
0.02	FIBER CEMENT SIDING ONE SIDE OVER AIR BARRIER OVER WALL SHEATHING OVER GABLE END TRUSS

STATE OF MISSOURI

JARED A. YOUNGLOVE
NUMBER A-2017019282
ARCHITECT
10.24.25

JARED A. YOUNGLOVE, ARCHITECT
MO #: A-2017019282

PROFESSIONAL SEAL

MISSOURI STATE CERTIFICATE OF AUTHORITY NUMBER A-2016000425
637 COLLEGE STREET
SPRINGFIELD, MO 65806

PH: 417.885.0002
www.paragonarchitecture.com

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Department of Natural Resources, State Parks

CAMPGROUND SHOWER HOUSE REPLACEMENT

Campground #4 Shower House Replacement
Bennet Spring State Park

PROJECT NUMBER: X2528-01
SITE NUMBER: 5302
ASSET NUMBER: 7815302022

REVISION SCHEDULE

ISSUE DATE: 10/24/2025

PROJECT ARCHITECT: JY
DRAWN BY: AM, LY, LH, TW
CHECKED BY: JY, JS

SHEET TITLE:

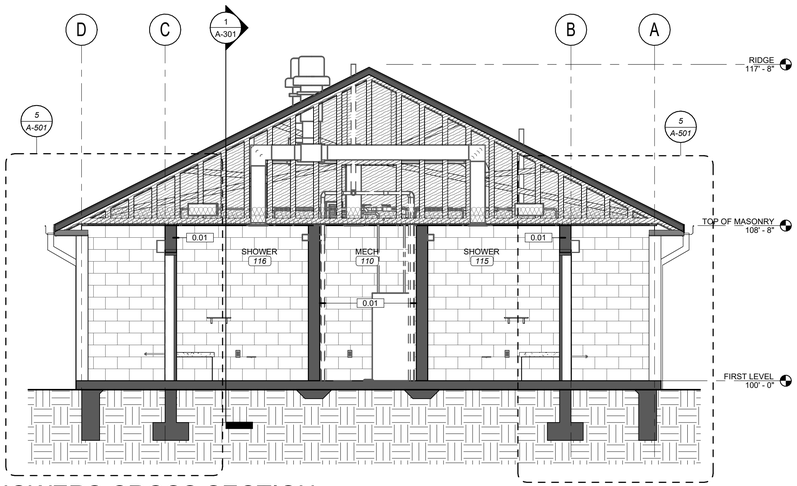
EXTERIOR ELEVATIONS

SHEET NUMBER:

A-201

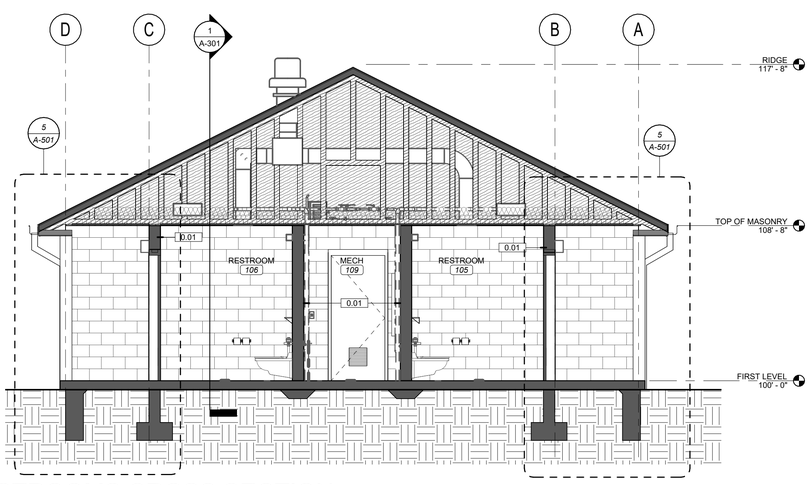
20 OF 36 SHEETS

10/24/2025



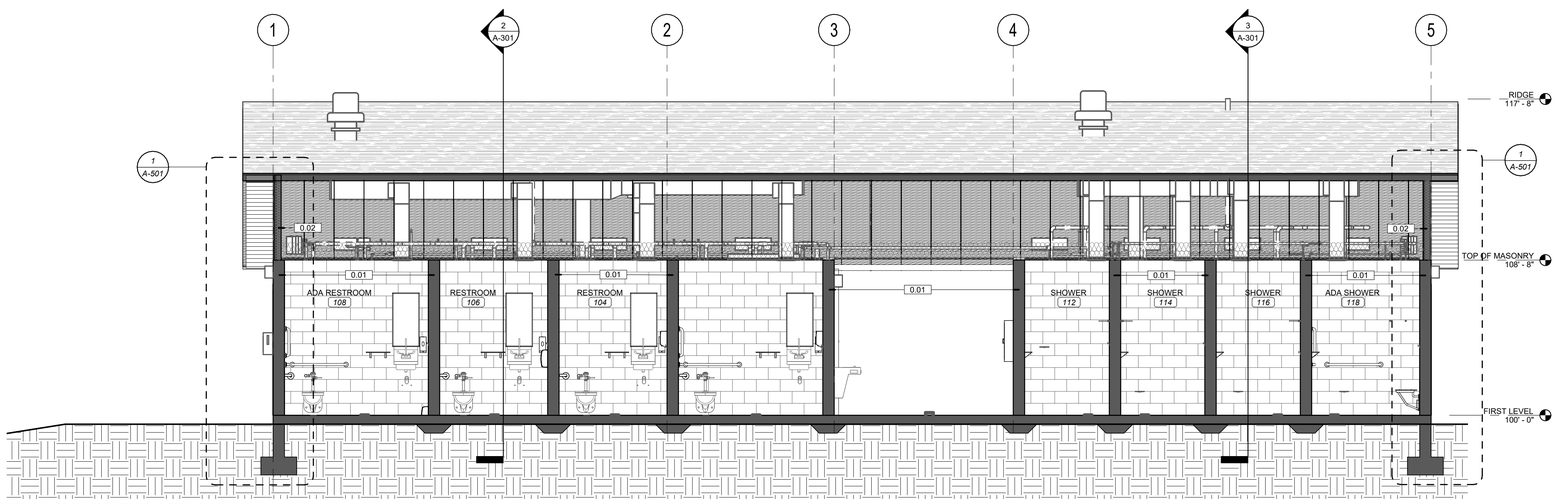
3 SHOWERS CROSS SECTION

SCALE 1/4" = 1'-0"



2 RESTROOMS CROSS SECTION

SCALE 1/4" = 1'-0"



1 LONGITUDINAL SECTION

SCALE 1/4" = 1'-0"

WALL SCHEDULE	
0.01	8" GROUND FACE CMU RUNNING BOND BASIS OF DESIGN TRENDSTONE BLOCK BATON ROUGE
0.02	FIBER CEMENT SIDING ONE SIDE OVER AIR BARRIER OVER WALL SHEATHING OVER GABLE END TRUSS

STATE OF MISSOURI
MIKE KEHOE
GOVENOR

STATE OF MISSOURI
JARED A. YOUNGLOVE
NUMBER A-2017019282
REGISTERED ARCHITECT
10.24.25

JARED A. YOUNGLOVE, ARCHITECT
MO #: A-2017019282

PROFESSIONAL SEAL

MISSOURI STATE CERTIFICATE OF AUTHORITY NUMBER A-2016000415

637 COLLEGE STREET
SPRINGFIELD, MO 65806

PH: 417.885.0002
www.paragonarchitecture.com

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Department of Natural Resources,
State Parks

CAMPGROUND SHOWER HOUSE REPLACEMENT

Campground #4 Shower House Replacement
Bennet Spring State Park

PROJECT NUMBER: X2528-01
SITE NUMBER: 5302
ASSET NUMBER: 7815302022

REVISION SCHEDULE

ISSUE DATE: 10/24/2025

PROJECT ARCHITECT: JY
DRAWN BY: AM, LY, LH, TW
CHECKED BY: JY, JS

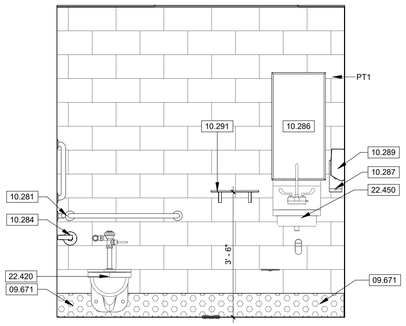
SHEET TITLE:

BUILDING SECTIONS

SHEET NUMBER:

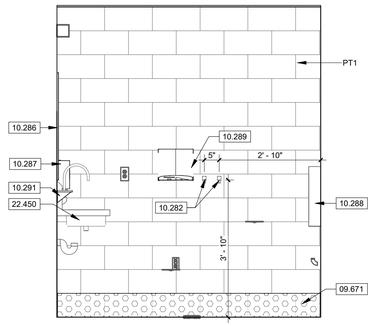
A-301

10/24/2025



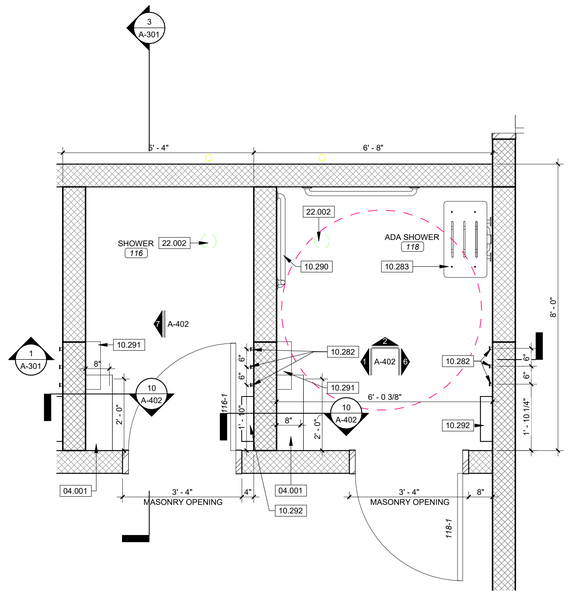
6 TYP. ADA RR WET WALL

SCALE 1/2" = 1'-0"



5 TYP. ADA RR HAND DRYER

SCALE 1/2" = 1'-0"



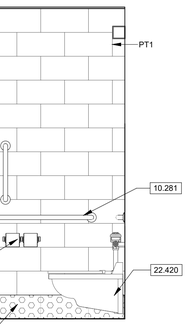
2 TYPICAL + ADA SHOWER ENLARGED PLAN

SCALE 1/2" = 1'-0"

NORTH

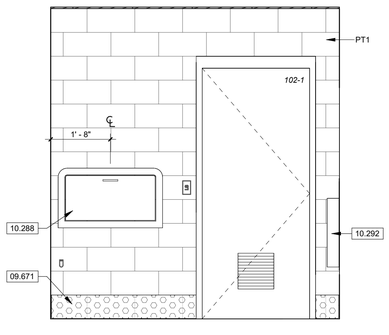
KEYNOTE LEGEND

04.001	CMU BLOCK BENCH WITH ARCHITECTURAL CAST STONE TOP.
09.671	6" INTEGRAL EPOXY BASE, SEE FINISH PLAN.
10.281	ADA GRAB BARS. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES. SEE SECTION 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES.
10.282	SURFACE MOUNTED HOOK. SEE SECTION 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES. MOUNTING HEIGHT TO BE 46" A.F.F. TO CENTER OF HOOK TYPICAL.
10.283	ADA SHOWER SEAT. SEE SECTION 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
10.284	OFCI WALL MOUNTED TOILET TISSUE DISPENSER. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
10.286	WALL MOUNTED MIRROR. SEE SECTION 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
10.287	OFCI WALL MOUNTED SOAP DISPENSER. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
10.288	BABY CHANGING STATION. SEE SECTION 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
10.289	HAND DRYER, SURFACE MOUNTED. SEE 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES. SEE MEP. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
10.290	ADA SHOWER GRAB BARS. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES. SEE SECTION 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES.
10.291	STAINLESS STEEL SHELF, SEE SECTION 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES. MOUNTING HEIGHT TO BE 46" A.F.F. TO CENTER OF HOOK TYPICAL.
10.292	OFCI WALL MOUNTED TRASH CAN. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
22.002	FLOOR DRAIN, SLOPE SLAB TOWARD FLOOR DRAIN. SEE MEP.
22.420	WATER CLOSET. SEE MEP. SEE DIVISION 22.0000 SPECIFICATIONS.
22.450	SINK. SEE MEP. SEE DIVISION 22.0000 SPECIFICATIONS.



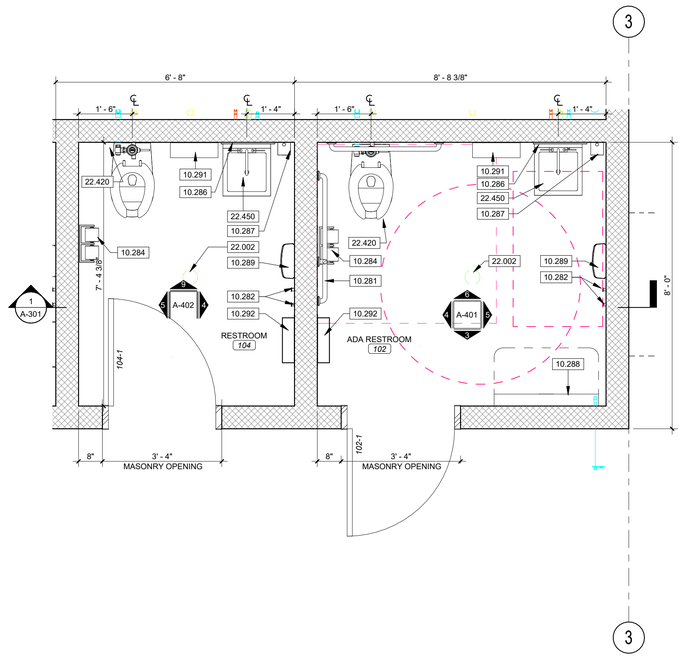
4 TYP. ADA RR GRAB BAR

SCALE 1/2" = 1'-0"



3 TYP. ADA RR ENTRY

SCALE 1/2" = 1'-0"



1 TYPICAL + ADA RESTROOM ENLARGED PLAN

SCALE 1/2" = 1'-0"

NORTH

INTERIOR ELEVATION GENERAL NOTES

1. REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS TO COORDINATE CONNECTIONS WITH EQUIPMENT.
2. ALL DIMENSIONS ON INTERIOR ELEVATIONS ARE TAKEN TO AND FROM THE FACES OF FINISHED MATERIAL.
3. INSTALL WOOD BLOCKING TO WALL STRUCTURE TO SUPPORT ALL WALL-MOUNTED CASEWORK, ACCESSORIES, AND EQUIPMENT AS REQUIRED BY OWNER AND AS RECOMMENDED BY MANUFACTURER.
4. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OF CASEWORK.
5. PROVIDE FILLER PANELS AT ALL LOCATIONS WHERE CABINETRY ABUTS A WALL.
6. PROVIDE A 4" HIGH BACK SPLASHES AND SIDE SPLASHES ON ALL COUNTERS WITH SINKS, UNLESS NOTED OTHERWISE.
7. COORDINATE ALL WALL OUTLETS TO AVOID CONFLICT WITH CASEWORK.
8. FIRE RATINGS OF WALLS ARE TO BE STENCIL PAINTED ONTO WALLS IN NON-VISIBLE LOCATIONS AND ABOVE CEILINGS. PROVIDE STENCILS NO LESS THAN 20'-0" ON CENTER AND NO MORE THAN 30'-0" ON CENTER.
9. CASEWORK SHOWN WITH AN "L" ON ELEVATIONS INDICATES LOCKABLE CABINETS. PROVIDE KEY LOCK FOR ALL DOORS AND DRAWERS AS SHOWN.
10. PROVIDE EXPANSION JOINTS AT GYPSUM WALLS EVERY 30' U.N.O.

STATE OF MISSOURI

STATE OF MISSOURI
JARED A. YOUNGLOVE
NUMBER A-2017019282
REGISTERED ARCHITECT
10.24.25

JARED A. YOUNGLOVE, ARCHITECT
MO #: A-2017019282

PROFESSIONAL SEAL

PARAGON ARCHITECTURE
MISSOURI STATE CERTIFICATE OF AUTHORITY NUMBER A-2010000423
637 COLLEGE STREET
SPRINGFIELD, MO 65806

PH: 417.885.0002
www.paragonarchitecture.com

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Department of Natural Resources, State Parks

CAMPGROUND SHOWER HOUSE REPLACEMENT

Canpground #4 Shower House Replacement
Bennet Spring State Park

PROJECT NUMBER: X2528-01
SITE NUMBER: 5302
ASSET NUMBER: 7815302022

REVISION SCHEDULE

ISSUE DATE: 10/24/2025

PROJECT ARCHITECT: JY
DRAWN BY: AM, LY, LH, TW
CHECKED BY: JY, JS

SHEET TITLE:

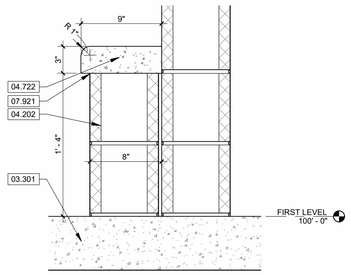
ENLARGED FLOOR PLANS & INT ELEVATIONS

SHEET NUMBER:

A-401

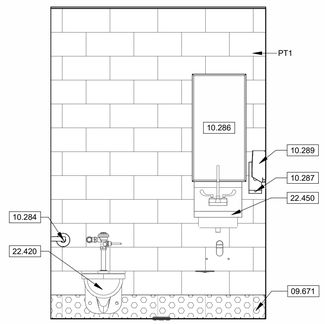
22 OF 36 SHEETS

10/24/2025



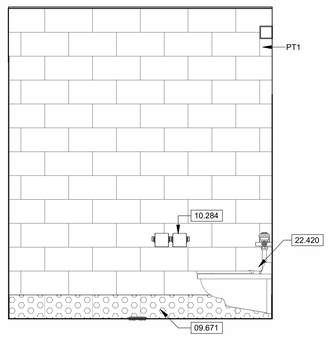
10 SHOWER SEAT

SCALE 1 1/2" = 1'-0"



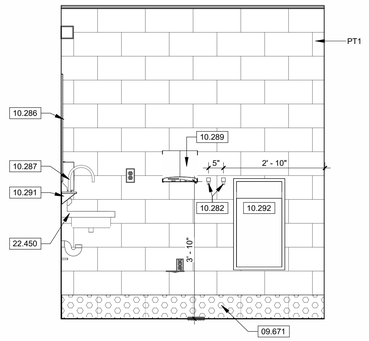
9 TYP. RR WET WALL

SCALE 1/2" = 1'-0"



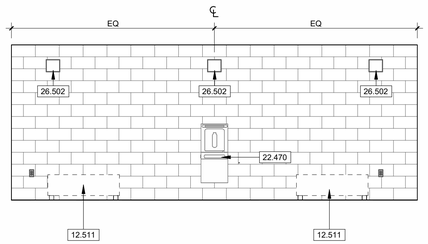
5 TYP. RR TOILET PAPER

SCALE 1/2" = 1'-0"



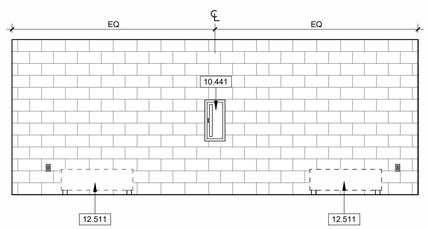
4 TYP. RR HAND DRYER

SCALE 1/2" = 1'-0"



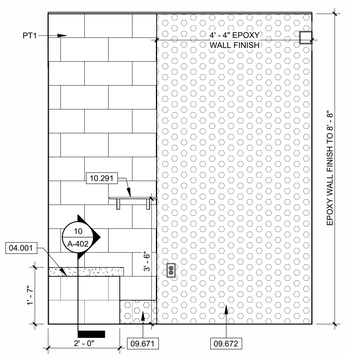
8 SOUTH BREEZEWAY ELEVATION

SCALE 1/4" = 1'-0"



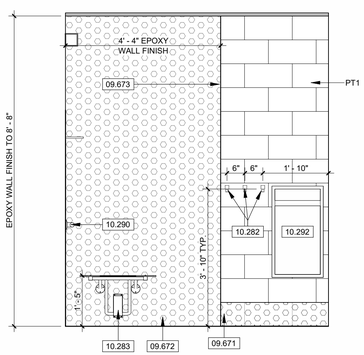
3 NORTH BREEZEWAY ELEVATION

SCALE 1/4" = 1'-0"



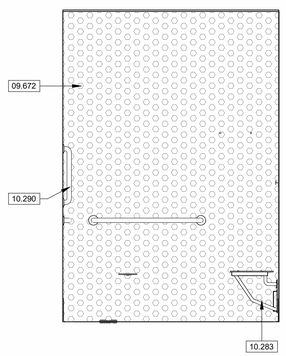
7 TYP SHOWER S ELEVATION

SCALE 1/2" = 1'-0"



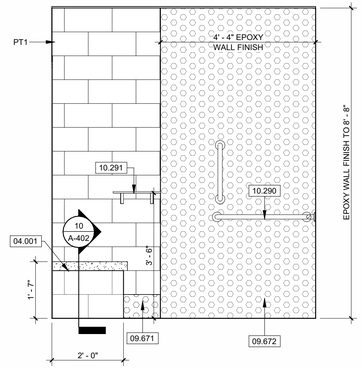
6 TYP ADA SHOWER N ELEVATION

SCALE 1/2" = 1'-0"



2 TYP ADA SHOWER W ELEVATION

SCALE 1/2" = 1'-0"



1 TYP ADA SHOWER S ELEVATION

SCALE 1/2" = 1'-0"

KEYNOTE LEGEND

03.301	REINFORCED CONCRETE SLAB. SEE STRUCTURAL. SEE SECTION 03.3000 CAST-IN-PLACE CONCRETE.
04.001	CMU BLOCK BENCH WITH ARCHITECTURAL CAST STONE TOP.
04.202	8" X 8" X 16" CONCRETE MASONRY UNIT. SEE STRUCTURAL FOR REINFORCING AND BOND BEAM REQUIREMENTS. SEE SECTION 04.2000 UNIT MASONRY.
04.722	3" ARCHITECTURAL CAST STONE BENCH WITH RADIUS AT TOP EXPOSED CORNERS. SEE SECTION 04.7200 CAST STONE MASONRY.
07.921	CONTINUOUS JOINT SEALANT. SEE SECTION 07.9200 JOINT SEALANTS.
09.671	6" INTEGRAL EPOXY BASE, SEE FINISH PLAN.
09.672	EPOXY WALL FINISH, SEE FINISH PLAN.
09.673	AT EDGE OF EPOXY WALL FINISH, HOLD MATTING BACK 1/4" FROM TERMINATION POINT AND TAPER EDGE USING MANUFACTURER RECOMMENDED SURFACING EPOXY TO PROVIDE SMOOTH TRANSITION. PROVIDE GROUT AND FINISH COAT OVER EDGE TO SEAL TRANSITION.
10.282	SURFACE MOUNTED HOOK. SEE SECTION 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES. MOUNTING HEIGHT TO BE 46" A.F.F. TO CENTER OF HOOK TYPICAL.
10.283	ADA SHOWER SEAT. SEE SECTION 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
10.284	OFCI WALL MOUNTED TOILET TISSUE DISPENSER. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
10.286	WALL MOUNTED MIRROR. SEE SECTION 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
10.287	OFCI WALL MOUNTED SOAP DISPENSER. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
10.289	HAND DRYER, SURFACE MOUNTED. SEE 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES. SEE MEP. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
10.290	ADA SHOWER GRAB BARS. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES. SEE SECTION 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES.
10.291	STAINLESS STEEL SHELF, SEE SECTION 10.2800 TOILET, BATH AND LAUNDRY ACCESSORIES. MOUNTING HEIGHT TO BE 46" A.F.F. TO CENTER OF HOOK TYPICAL.
10.292	OFCI WALL MOUNTED TRASH CAN. SEE G-104 FOR MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
10.441	SURFACE MOUNTED FIRE EXTINGUISHER. SEE SECTION 10.4400 FIRE PROTECTION SPECIALTIES.
12.511	BENCH, OFOI.
22.420	WATER CLOSET. SEE MEP. SEE DIVISION 22.0000 SPECIFICATIONS.
22.450	SINK, SEE MEP. SEE DIVISION 22.0000 SPECIFICATIONS.
22.470	DRINKING FOUNTAIN. SEE MEP. SEE DIVISION 22.0000 SPECIFICATIONS.
26.502	WALL LIGHTING, SEE MEP.

STATE OF MISSOURI

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10.24.25

JARED A. YOUNGLOVE, ARCHITECT
MO #: A-2017019282

PROFESSIONAL SEAL

PARAGON ARCHITECTURE

MISSOURI STATE CERTIFICATE OF AUTHORITY NUMBER A-2018000423
637 COLLEGE STREET
SPRINGFIELD, MO 65806

PH: 417.885.0002
www.paragonarchitecture.com

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Department of Natural Resources, State Parks

CAMPGROUND SHOWER HOUSE REPLACEMENT

Canpground #4 Shower House Replacement
Bennet Spring State Park

PROJECT NUMBER: X2528-01
SITE NUMBER: 5302
ASSET NUMBER: 7815302022

REVISION SCHEDULE

ISSUE DATE: 10/24/2025

PROJECT ARCHITECT: JY
DRAWN BY: AM, LY, LH, TW
CHECKED BY: JY, JS

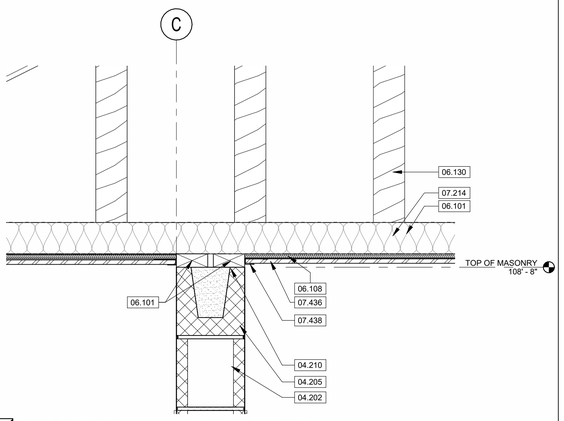
SHEET TITLE:

INTERIOR ELEVATIONS

SHEET NUMBER:

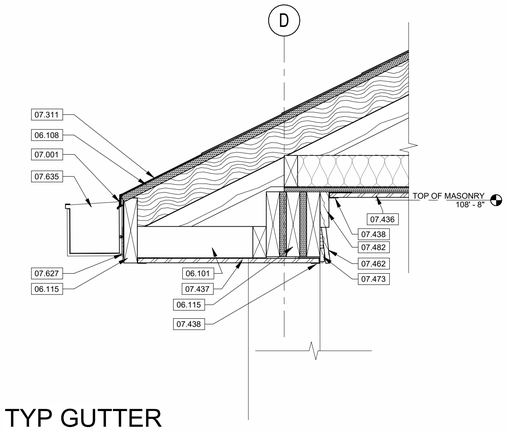
A-402

10/24/2025



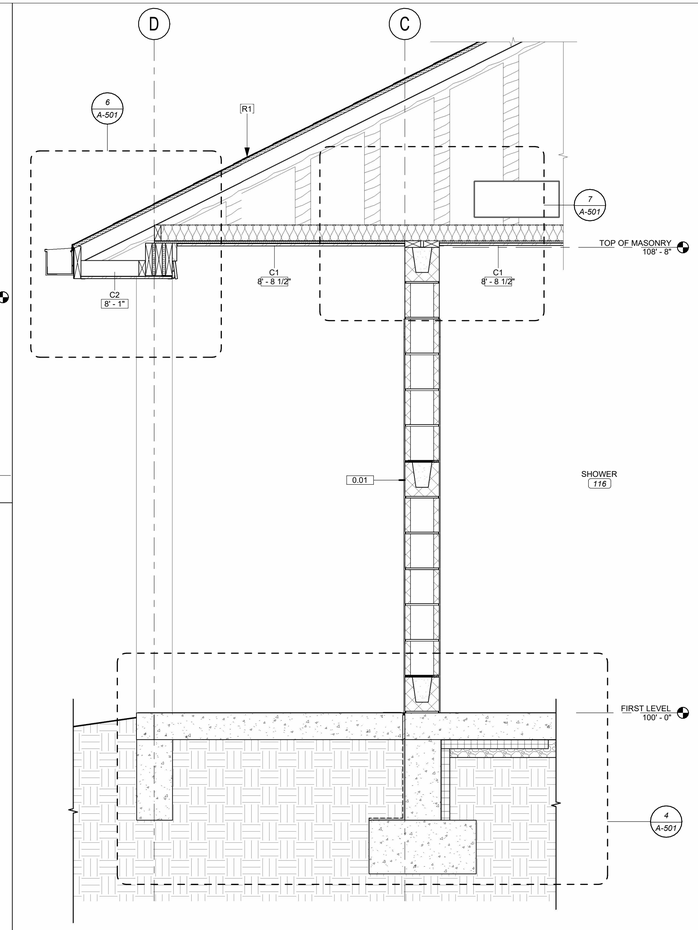
7 TOP OF WALL TYP DTL

SCALE 1 1/2" = 1'-0"



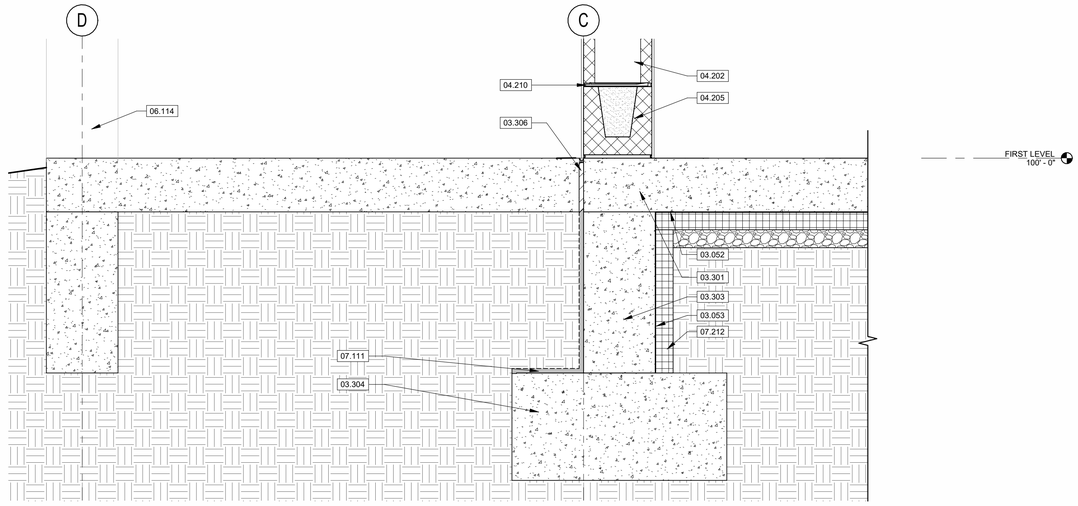
6 TYP GUTTER

SCALE 1 1/2" = 1'-0"



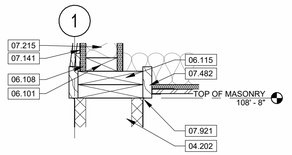
5 RAKE SECTION

SCALE 3/4" = 1'-0"



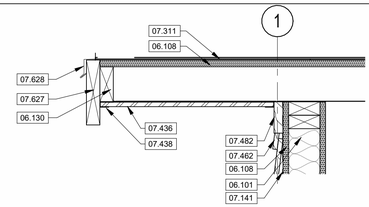
4 TYPICAL FOUNDATION

SCALE 1 1/2" = 1'-0"



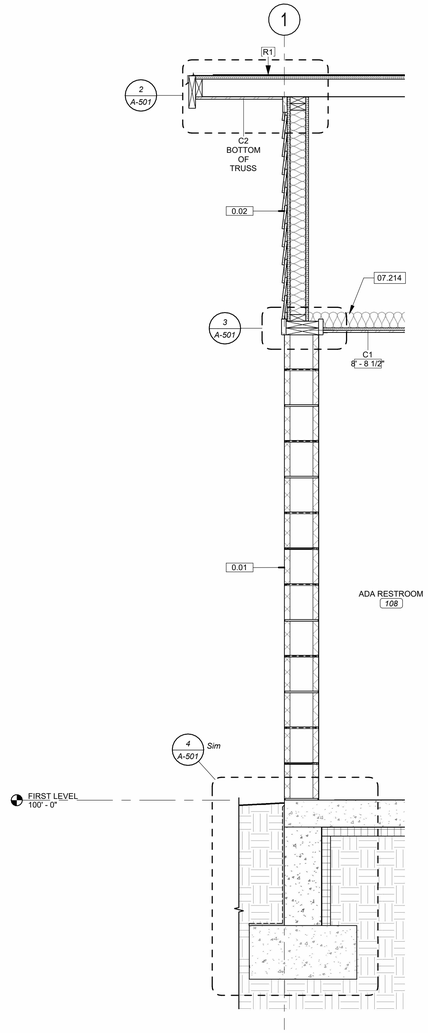
3 FIBER CEMENT TO CMU WALL

SCALE 1 1/2" = 1'-0"



2 EAVE OVERHANG

SCALE 1 1/2" = 1'-0"



1 EAVE SECTION

SCALE 3/4" = 1'-0"

KEYNOTE LEGEND	
03.052	15 MIL. VAPOR BARRIER. SEE SECTION 03.0516 UNDERSLAB VAPOR BARRIER.
03.053	EXTEND VAPOR BARRIER TO TOP OF FOOTING. SEE SECTION 03.0516 UNDERSLAB VAPOR BARRIER.
03.301	REINFORCED CONCRETE SLAB. SEE STRUCTURAL. SEE SECTION 03.3000 CAST-IN-PLACE CONCRETE.
03.303	CAST-IN-PLACE CONCRETE FOUNDATION WALL. SEE STRUCTURAL. SEE SECTION 03.3000 CAST-IN-PLACE CONCRETE.
03.304	CAST-IN-PLACE CONCRETE FOOTING. SEE STRUCTURAL. SEE SECTION 03.3000 CAST-IN-PLACE CONCRETE.
03.306	1/2" CONCRETE EXPANSION JOINT FILLER MATERIAL. SEE SECTION 03.3000 CAST-IN-PLACE CONCRETE.
04.202	8" X 8" X 16" CONCRETE MASONRY UNIT. SEE STRUCTURAL FOR REINFORCING AND BOND BEAM REQUIREMENTS. SEE SECTION 04.2000 UNIT MASONRY.
04.205	BOND BEAM. SEE STRUCTURAL. SEE SECTION 04.2000 UNIT MASONRY.
04.210	BLOCKFLASH BY MORTARNET; OR, APPROVED EQUAL. PROVIDE ABOVE ALL BOND BEAMS AND WALL OPENINGS; TYPICAL. SEE SECTION 04.2000 UNIT MASONRY.
06.101	2X4 WOOD STUD FRAMING AT MAXIMUM 16" O.C. SEE SECTION 06.1000 ROUGH CARPENTRY.
06.108	PLYWOOD SHEATHING. SEE STRUCTURAL. SEE SECTION 06.1000 ROUGH CARPENTRY.
06.114	COLUMN BEYOND.
06.115	BUILT UP WOOD BEAM. SEE STRUCTURAL.
06.130	WOOD TRUSS SYSTEM. SEE SETRUCTURAL.
07.001	CONTINUOUS METAL DRIP EDGE FLASHING.
07.111	BITUMINOUS DAMPPROOFING. SEE SECTION 07.1113 BITUMINOUS DAMPPROOFING.
07.141	FLUID-APPLIED AIR AND WATER BARRIER. SEE SECTION 07.1400 FLUID-APPLIED WATERPROOFING.
07.212	2" RIGID INSULATION AT BUILDING PERIMETER. RETURN MINIMUM 24" UNDER CONCRETE SLAB. SEE SECTION 07.2100 THERMAL INSULATION.
07.214	ATTIC BATT INSULATION TO BE R-38 MINIMUM. SEE SECTION 07.2100 THERMAL INSULATION.
07.215	FILL CAVITY WITH UNFACED R-21 BATT INSULATION. SEE SECTION 07.2100 THERMAL INSULATION.
07.311	ASPHALT SHINGLES OVER FELT. PROVIDE 48" WIDE ICE AND WATER SHIELD AT ALL ROOF EDGES. RIDGES, VALLEYS, AND ALL VERTICAL WALL TO ROOF INTERSECTIONS. SEE SPECIFICATION SECTION 07 3113 ASPHALT SHINGLES.
07.436	NON-VENTED ALUMINUM SOFFIT PANEL. SEE SECTION 07.4213 METAL WALL PANELS.
07.437	VENTED ALUMINUM SOFFIT PANEL. SEE SECTION 07.4213 METAL WALL PANELS.
07.438	SOFFIT PANEL CLIP. SEE SECTION 07.4213 METAL WALL PANELS.
07.462	HORIZONTAL FIBER CEMENT SIDING. SEE SECTION 07.4243 COMPOSITE WALL PANELS.
07.473	FIBER CEMENT PANEL STARTER TRACK. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE SECTION 07.4243 COMPOSITE WALL PANELS.
07.482	5/4" x 3-1/2" FIBER CEMENT TRIM BOARD. SEE SECTION 07.4243 COMPOSITE WALL PANELS.
07.627	METAL CLAD 2X8 FASCIA.
07.628	DRIP EDGE FLASHING.
07.635	6" X 6" 'CLASSIC' GUTTER WITH SLOPED STRAPS AT 24" O.C. REFER TO ROOF PLAN FOR DOWNSPOUT LOCATIONS. SEE SECTION 07.6200 SHEET METAL FLASHING AND TRIM.
07.921	CONTINUOUS JOINT SEALANT. SEE SECTION 07.9200 JOINT SEALANTS.

WALL SCHEDULE	
0.01	8" GROUND FACE CMU RUNNING BOND BASIS OF DESIGN TRENDSTONE BLOCK BATON ROUGE
0.02	FIBER CEMENT SIDING ONE SIDE OVER AIR BARRIER OVER WALL SHEATHING OVER GABLE END TRUSS

STATE OF MISSOURI

JARED A. YOUNGLOVE
NUMBER A-2017019282
ARCHITECT
10.24.25

JARED A. YOUNGLOVE, ARCHITECT
MO #: A-2017019282

PROFESSIONAL SEAL

PARAGON ARCHITECTURE

MISSOURI STATE CERTIFICATE OF AUTHORITY NUMBER A-2016000437
637 COLLEGE STREET
SPRINGFIELD, MO 65806

PH: 417.885.0002
www.paragonarchitecture.com

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Department of Natural Resources, State Parks

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DRAWN BY: AM, LY, LH, TW
CHECKED BY: JY, JS

SHEET TITLE:

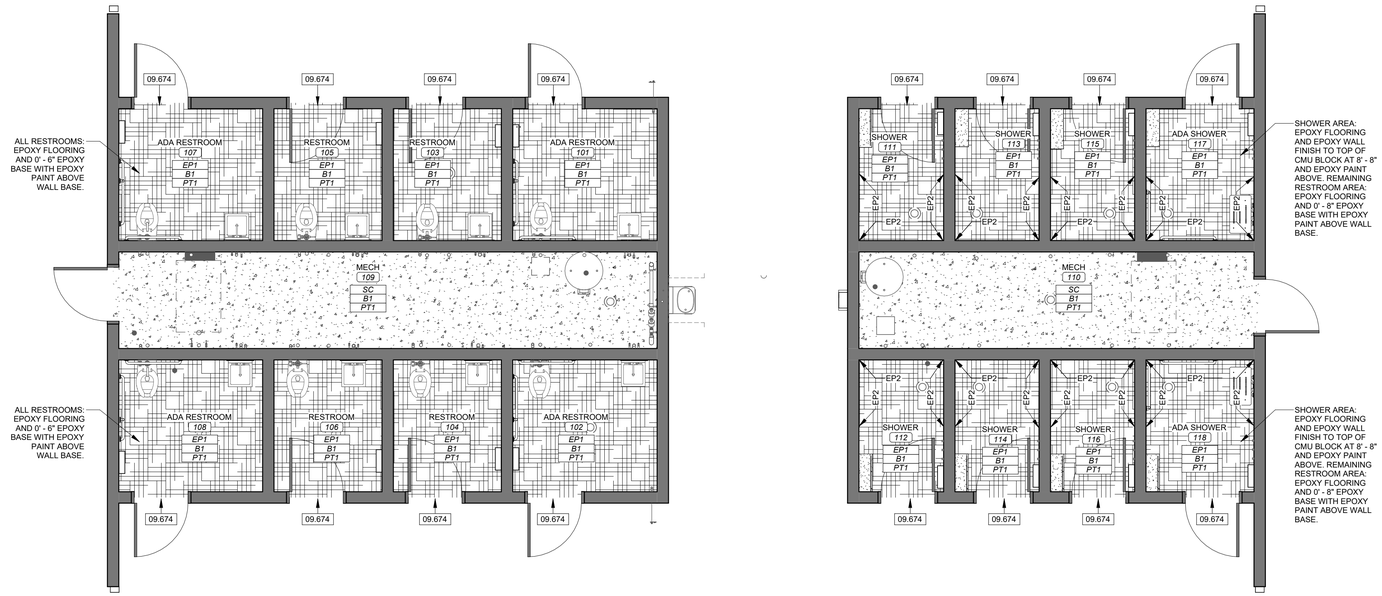
WALL DETAILS

SHEET NUMBER:

A-501

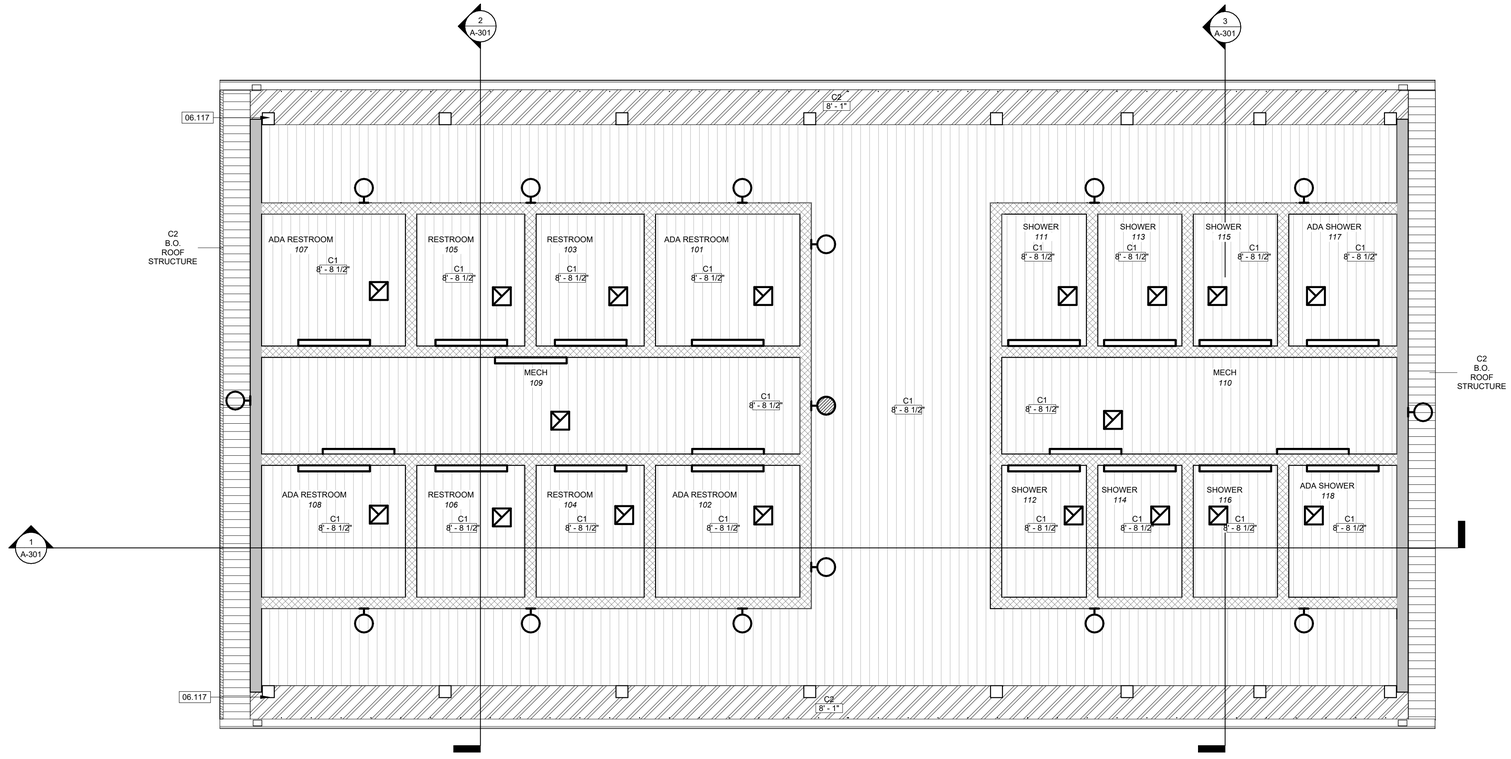
24 OF 36 SHEETS

10/24/2025



2 FINISH PLAN

SCALE 1/4" = 1'-0"



1 REFLECTED CEILING PLAN

SCALE 1/4" = 1'-0"

KEYNOTE LEGEND

06.117	STRUCTURAL WOOD COLUMN. SEE STRUCTURAL.
09.674	PROVIDE TAPERED EDGE OF EPOXY TO TRANSITION FROM EPOXY FLOORING TO CONCRETE. TRANSITION TO OCCUR IN CENTER OF OPENING.

CEILING SCHEDULE

C1	ALUMINUM SOFFIT NON VENTED ON 1/2" PLYWOOD ON BOTTOM OF TRUSS.
C2	VENTED ALUMINUM SOFFIT ON BOTTOM OF TRUSS

REFLECTED CEILING PLAN LEGEND

C1 — CEILING TYPE
9' - 0" — ELEVATION OF CEILING ABOVE FINISH FLOOR
PT1 — CEILING FINISH PAINT COLOR (IF INDICATED)

RCP PARTITION: TOP OF WALL CONDITIONS

FRAMING TO DECK: WALL FRAMING EXTENDS TO ROOF DECKING. REFER TO WALL PARTITION TAG AND PARTITION LEGEND FOR MORE INFORMATION.

UNATTACHED FRAMING: WALL FRAMING REMAINS UNATTACHED FROM ROOF DECKING. REFER TO WALL PARTITION TAG AND PARTITION LEGEND FOR MORE INFORMATION.

RCP GENERAL NOTES

1. ALL EXPOSED GYPSUM BOARD CEILINGS, SOFFITS, AND BULKHEADS ARE TO BE PAINTED. REFER TO FINISH LEGEND FOR MORE INFORMATION ON PAINT COLOR(S) IDENTIFIED BY CEILING TAGS.
2. ALL STRUCTURE, FRAMING, DUCTWORK, MECHANICAL, AND ELECTRICAL ITEMS EXPOSED TO VIEW ARE TO BE PAINTED WITH DRYFALL PAINT UNLESS NOTED OTHERWISE.
3. CEILING HEIGHT ELEVATIONS ARE NOTED FROM THE FINISH FLOOR OF THE CORRESPONDING LEVEL. COORDINATE REFLECTED CEILING PLAN WITH LIGHTING, MECHANICAL, AND PLUMBING PLANS. COORDINATE LIGHT FIXTURES AND DIFFUSER PLACEMENT. CONTACT ARCHITECT IF DISCREPANCIES ARE FOUND AND DOCUMENT IN WRITING.
4. LIGHTING AND EXPOSED MECHANICAL EQUIPMENT SHOWN FOR REFERENCE ONLY. REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING SERIES SHEETS FOR ADDITIONAL INFORMATION.
5. PROVIDE APPROPRIATE FINISH AND/OR TRIM AT ALL PENETRATIONS IN WALLS, FLOORS, AND AT EXPOSED FINISH CEILING LOCATIONS. CONTRACTOR SHALL PROVIDE SEALANT AND BACKER ROD AT ALL MINOR GAPS AND AT EXPOSED PENETRATIONS. WHERE LARGE GAPS OR ROUGH CUT PENETRATIONS OCCUR THE CONTRACTOR SHALL PROVIDE SHEET METAL TRIM AS NECESSARY FOR A FINISHED APPEARANCE. PAINT TRIM AND SEALANTS TO MATCH ADJACENT WALL FINISHES AND/OR CEILING FINISHES. COORDINATE PAINT COLOR WITH ARCHITECT.
6. PROVIDE EXPANSION JOINTS AT GYPSUM CEILINGS EVERY 30' U.N.O.

FINISH PLAN LEGEND

SC: SEALED CONCRETE

EP1: EPOXY FLOORING
MANUFACTURER: SHERWIN WILLIAMS, PRODUCT:1/4" DECO FLAKE RESUFLOR, COLOR: MOCHA.

WALL BASE

B1: 8" INTEGRAL EPOXY WALL BASE. BASIS-OF-DESIGN TO BE SHERWIN WILLIAMS 1/4" DECO FLAKE RESUWALL, COLOR: MOCHA.

PAINT & WALL FINISHES

PAINT COLOR, BASIS-OF-DESIGN TO BE SHERWIN-WILLIAMS EGGSHELL UNLESS NOTED OTHERWISE. **SEE REFLECTED CEILING PLAN FOR CEILING COLOR LOCATIONS.**

PT1: FIELD COLOR, EPOXY FINISH: KESTREL WHITE SW7516.
PT2: FIELD COLOR: "NOT USED.
PT3: HM DOOR & FRAME PAINT, EPOXY FINISH & SEMI-GLOSS: TURKISH COFFEE SW6076.
PT4: SIDING PAINT, SEMI-GLOSS: TURKISH COFFEE SW6076.

EP2: EPOXY WALL FINISH
BASIS-OF-DESIGN TO BE SHERWIN WILLIAMS 1/4" DECO FLAKE RESUWALL, COLOR: MOCHA. **NOTE**: SEE ELEVATIONS FOR HEIGHTS AND LOCATIONS.

GENERAL NOTES

1. TRANSITION BETWEEN FLOORING TYPES MUST INCLUDE A TRANSITION STRIP AND/OR NOSING IF TRANSITION IS GREATER THAN 1/4". TRANSITION STRIP AND/OR NOSING IN A COLOR MATCHING WALL BASE COLOR, OR METAL FOR TILE, UNLESS NOTED OTHERWISE.
2. REFER TO REFLECTED CEILING PLAN FOR ADDITIONAL FINISH INFORMATION.
3. FIELD FLOOR FINISH NOTATED WITHIN FINISH TAG. ACCENT FLOOR FINISHES ARE SHOWN WITH A HATCH PATTERN ON FINISH PLANS WHERE APPLICABLE.
4. FLOOR COVERINGS TO EXTEND THROUGHOUT ENTIRE FLOOR, AND UNDER FLOOR AND WALL MOUNTED MILLWORK, EQUIPMENT, AND FURNISHINGS.

SC — FIELD FLOOR FINISH
B1 — BASE FINISH
PT1 — FIELD PAINT FINISH

STATE OF MISSOURI

JARED A. YOUNGLOVE
NUMBER A-2017019282
ARCHITECT
10.24.25
JARED A. YOUNGLOVE, ARCHITECT
MO #: A-2017019282

PROFESSIONAL SEAL

PARAGON ARCHITECTURE
MISSOURI STATE CERTIFICATE OF AUTHORITY NUMBER A-2020000422
637 COLLEGE STREET
SPRINGFIELD, MO 65806
PH: 417.885.0002
www.paragonarchitecture.com

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Department of Natural Resources, State Parks

CAMPGROUND SHOWER HOUSE REPLACEMENT

Campground #4 Shower House Replacement
Bennet Spring State Park

PROJECT NUMBER: X2528-01
SITE NUMBER: 5302
ASSET NUMBER: 7815302022

REVISION SCHEDULE

ISSUE DATE: 10/24/2025

PROJECT ARCHITECT: JY
DRAWN BY: AM, LY, LH, TW
CHECKED BY: JY, JS

SHEET TITLE:

REFLECTED CEILING + FINISH PLAN

SHEET NUMBER:

A-701

25 OF 36 SHEETS

10/24/2025

MECHANICAL SYMBOL LEGEND

GENERAL

- EXISTING
- DEMOLITION
- NEW
- TAG — NEW SCHEDULED EQUIPMENT
- TAG — EXISTING EQUIPMENT
- NEW TO EXISTING
- (#) SHEET KEYNOTE
- (#) REVISION DELTA
- PIPE UP OR DUCT UP
- PIPE OR DUCT DOWN
- PIPE OR DUCT DOWN
- PIPE OR DUCT CAP
- PIPE ANCHOR
- PIPE GUIDE
- PIPE ROLLER SUPPORT
- FLOW DIRECTION ARROW
- PIPE EXPANSION JOINT
- FLEXIBLE CONNECTOR
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER

SANITARY & DOMESTIC

- SANITARY DRAIN BELOW GRADE (PLAN)
- SANITARY DRAIN ABOVE GRADE (PLAN)
- COLD WATER (CW)
- HOT WATER (HW)
- HOT WATER CIRCULATING (HWC)
- 140 HW — 140°F DOMESTIC HOT WATER
- 140 HWC — 140°F DOMESTIC HOT WATER CIRCULATING
- T — TEMPERED WATER
- TC — TEMPERED WATER CIRCULATING
- V — VENT
- VBF — VENT BELOW FLOOR
- AV — ACID VENT
- AW — ACID WASTE (ABOVE GRADE)
- AW — ACID WASTE (BELOW GRADE)
- CD — CONDENSATE DRAIN PIPING
- RD — ROOF DRAIN (ABOVE GRADE)
- RD — ROOF DRAIN (BELOW GRADE)
- OD — OVERFLOW DRAIN (ABOVE GRADE)
- OD — OVERFLOW DRAIN (BELOW GRADE)
- SCW — SOFT COLD WATER
- SHW — SOFT HOT WATER
- SS — SUB-SOIL DRAIN (DRAIN TILE)
- FM — FORCE MAIN (PUMP DISCHARGE)

FIXTURES

- WC-1 — WATER CLOSET AND TYPE
- U-1 — URINAL AND TYPE
- L-1/S-1 — LAVATORY OR SINK AND TYPE
- BT-1 — BATHTUB AND TYPE
- SH-1 — SHOWER AND TYPE
- MS-1/SS-1 — SERVICE SINK OR MOP SINK AND TYPE
- EWC-1 — ELECTRIC WATER COOLER AND TYPE
- (M) — METER (GAS, WATER, ETC)
- VTR — VENT THRU ROOF
- RD-1 — ROOF DRAIN
- OD-1 — OVERFLOW DRAIN
- ECO — EXTERIOR CLEAN OUT
- FCO — FLOOR CLEAN OUT
- WCO — WALL CLEAN OUT
- CO — HORIZ. CLEAN OUT
- FD-1/FS-1 — FLOOR DRAIN OR SINK AND TYPE
- HB-1 — HOSE BIBB
- WH-1 — WALL HYDRANT
- YH-1 — YARD HYDRANT
- DS-1 — DOWNSPOUT NOZZLE

HYDRONIC

- CHWR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- MU — MAKE-UP WATER
- HHWR — HEATING WATER RETURN
- HHWS — HEATING WATER SUPPLY
- HCWR — HOT/CHILLED WATER RETURN
- HCWS — HOT/CHILLED WATER SUPPLY
- HPR — HEAT PUMP RETURN
- HPS — HEAT PUMP SUPPLY
- CTS — COOLING TOWER SUPPLY
- CTR — COOLING TOWER RETURN
- CR — CONDENSER WATER RETURN
- CS — CONDENSER WATER SUPPLY
- ERR — ENERGY RECOVERY RETURN
- ERS — ENERGY RECOVERY SUPPLY
- AUTOMATIC AIR VENT
- MANUAL AIR VENT

STEAM

- BBD — BOILER BLOW DOWN
- CD — STEAM CONDENSATE DRAIN ABOVE GRADE
- CD — STEAM CONDENSATE DRAIN BELOW GRADE
- HPC — HIGH PRESSURE CONDENSATE
- HPS — HIGH PRESSURE STEAM
- LPC — LOW PRESSURE CONDENSATE
- LPS — LOW PRESSURE STEAM
- MPC — MEDIUM PRESSURE CONDENSATE
- MPS — MEDIUM PRESSURE STEAM
- STEAM TRAP

SITE

- W — WATER SERVICE
- CURB STOP VALVE
- SAN — SANITARY SEWER (SITE)
- POST INDICATOR VALVE
- POST INDICATOR VALVE W/ TAMPER SWITCH
- FM — BUILDING SPRINKLER FIRE MAIN
- SS — STORM SEWER (SITE)
- SD — STORM DRAIN (SITE)
- THRUST BLOCK
- LS — LAWN SPRINKLER
- W — WATER MAIN
- (W) — WELL
- YHT — YARD HYDRANT
- TREE
- X — X — WIRE FENCE
- GAR — GAS RISER
- GM — GAS METER
- ER — ELECTRICAL RISER
- SB — SWITCH BOX
- PRP — PROPERTY CORNER
- CONTROL POINT
- BENCHMARK
- MLB — MAIL BOXES
- WDP — WOODEN POST
- TIE DOWN
- CONCRETE
- GRAVEL

HVAC

- CD-1 8"ø 200 — CEILING DIFFUSER — DESIGNATION, NECK SIZE, CFM
- CD-1 8"ø 200 — CEILING DIFFUSER, HATCH INDICATES BLANK-OFF PANEL
- LD-1 4'-0" 300 — LINEAR DIFFUSER — DESIGNATION, DIFFUSER LENGTH, CFM
- R-1 10x8 250 — SUPPLY REGISTER — DESIGNATION, SIZE, CFM
- RA-1 12x12 250 — RETURN AIR GRILLE — DESIGNATION, SIZE, CFM (OPTIONAL)
- G-1 12x8 250 — RETURN AIR GRILLE — DESIGNATION, SIZE, CFM (OPTIONAL)
- E-1 12x8 300 — EXHAUST AIR GRILLE — DESIGNATION, SIZE, CFM
- T — THERMOSTAT
- H — HUMIDISTAT
- CO2 — CARBON DIOXIDE SENSOR
- 12x8 — RECTANGULAR DUCT (WxH)
- 12"ø — ROUND DUCT (DIA.)
- 12/8 — OVAL DUCT (W/H)
- SUPPLY AIR/OUTSIDE AIR UP AND DOWN
- RETURN AIR UP AND DOWN
- EXHAUST AIR UP AND DOWN
- MANUAL VOLUME DAMPER
- MOTORIZED DAMPER
- BACKDRAFT DAMPER
- FIRE DAMPER
- SMOKE DAMPER
- COMBINATION FIRE AND SMOKE DAMPER
- TURNING VANES
- HCG — HARDWARE CLOTH GRILLE
- VOLUME EXTRACTOR

VALVES

- T&P RELIEF VALVE
- ISOLATION VALVE
- ISOLATION VALVE IN VERTICAL POSITION
- CHECK VALVE
- BALANCING VALVE
- MOTORIZED 2-WAY VALVE
- MOTORIZED 3-WAY VALVE
- PRESSURE REDUCING & REGULATING VALVE
- PRESSURE REGULATING VALVE
- DIAPHRAGM VALVE
- ANGLE VALVE
- STRAINER
- UNION

FIRE

- F — FIRE PROTECTION PIPING
- FIRE DEPARTMENT CONNECTION
- DUCT — DUCT SMOKE DETECTOR AND RELAY
- TS — TAMPER SWITCH
- FS — FLOW SWITCH
- SPRINKLER HEAD, PENDANT
- SPRINKLER HEAD, SIDE WALL
- ALARM VALVE, WET
- ALARM VALVE, DRY
- FIRE PROTECTION RISER

SPECIALTY SYSTEMS

- RO — REVERSE OSMOSIS
- RD — REFRIGERANT DISCHARGE
- FOR — FUEL OIL RETURN
- FOS — FUEL OIL SUCTION
- FOV — FUEL OIL VENT
- G — NATURAL GAS
- LPG — LIQUID PETROLEUM GAS
- A — COMPRESSED AIR
- LR — LIQUID REFRIGERANT
- SR — SUCTION REFRIGERANT
- RL — PAIR REFRIGERANT LINES (SUCTION, LIQUID)
- P — PROPANE
- A — AIR OUTLET
- VAC — VACUUM (AIR)
- DI — DISTILLED WATER
- LV — LABORATORY VACUUM
- LOX — LIQUID OXYGEN
- LA — LABORATORY COMPRESSED AIR
- DE — DEIONIZED WATER

MEDICAL GAS

- MA — MEDICAL COMPRESSED AIR
- CO2 — CARBON DIOXIDE
- H — HELIUM
- N — NITROGEN
- MEDICAL AIR OUTLET
- CARBON DIOXIDE OUTLET
- HELIUM OUTLET
- NITROGEN OUTLET
- NITROUS OXIDE OUTLET
- N20 — NITROUS OXIDE
- OX — OXYGEN
- MV — MEDICAL VACUUM
- WAGD — WASTE ANESTHETIC GAS DISPOSAL
- OXYGEN OUTLET
- VACUUM OUTLET
- VACUUM SLIDE OUTLET
- WAGD OUTLET
- ZONE VALVE BOX, ARROW INDICATES VALVE ACCESS

ABBREVIATIONS

GENERAL		MECHANICAL	
&	AND	A/C	AIR CONDITIONING
A	AMPERES	AHRI	AIR CONDITIONING, HEATING, AND REFRIGERATION INSTITUTE
AD	ACCESS DOOR	APD	AIR PRESSURE DROP
ADA	AMERICANS WITH DISABILITIES ACT	ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS
ADJ	ADJUSTABLE	ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AFF	ABOVE FINISHED FLOOR	BAS	BUILDING AUTOMATION SYSTEM
AFG	ABOVE FINISHED GRADE	BFF	BELOW FINISHED FLOOR
ALT	ALTERNATE	BFP	BACK FLOW PREVENTER
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	BFV	BUTTERFLY VALVE
AP	ACCESS PANEL	BMS	BUILDING MANAGEMENT SYSTEM
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	BTUH	BRITISH THERMAL UNIT PER HOUR
AUTO	AUTOMATIC	BV	BALL VALVE
BFR	BELOW FLOOR	CFM	CUBIC FEET PER MINUTE
BHP	BREAK HORSE POWER	CO	CLEAN OUT
CAP	CAPACITY	DB	DRY BULB
CONT	CONTINUOUS	DBA	DECIBEL A-SOUND LEVELS
DEG	DEGREE	DDC	DIRECT DIGITAL CONTROLS
DIA	DIAMETER	DG	DOOR GRILLE
DN	DOWN	DPS	DIFFERENTIAL PRESSURE SWITCH
DTL	DETAIL	DTR	DUCT THROUGH ROOF
DWG	DRAWING	EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR	EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY	ESP	EXTERNAL STATIC PRESSURE
ELEC	ELECTRIC(AL)	EWT	ENTERING WATER TEMPERATURE
EQUIP	EQUIPMENT	EXH	EXHAUST
EXIST	EXISTING	FLEX	FLEXIBLE
FF	FINISHED FLOOR	FME	FLOW MEASURING EQUIPMENT
FS	FLOW SWITCH	FPI	FINS PER INCH
FT	FEET (FOOT)	FPM	FEET PER MINUTE
GYP	GYPSUM	G/E	GREASE EXHAUST AIR
HOA	HAND-OFF-AUTOMATIC	GAL	GALLON
HP	HORSEPOWER	GPH	GALLONS PER HOUR
HT	HEIGHT	GPM	GALLONS PER MINUTE
IN	INCHES	GV	GATE VALVE
KA	KILOAMPERE	HVAC	HEATING VENTILATING AND AIR CONDITIONING
KW	KILOWATT	IE	INVERT ELEVATION
LBS	POUNDS	IN WC	INCHES OF WATER COLUMN
LF	LINEAR FOOT (FEET)	L/E	LABORATORY EXHAUST AIR
MAX	MAXIMUM	LAT	LEAVING AIR TEMPERATURE
MC	MECHANICAL CONTRACTOR	LWT	LEAVING WATER TEMPERATURE
MCA	MINIMUM CIRCUIT AMPACITY	M/A	MIXED AIR
MECH	MECHANICAL	MAV	MANUAL AIR VENT
MFR	MANUFACTURER	MBH	THOUSAND BTU PER HOUR
MIN	MINIMUM	NC	NOISE CRITERIA
MISC	MISCELLANEOUS	NSF	NATIONAL SANITATION FOUNDATION
MOCP	MAXIMUM OVERCURRENT PROTECTION	OS&Y	OUTSIDE SCREW AND YOKE
N/A	NOT APPLICABLE	P/T	PRESSURE/TEMPERATURE TEST PORT
NC	NORMALLY CLOSED	PD	PRESSURE DROP
NEC	NATIONAL ELECTRIC CODE	PDI	PLUMBING AND DRAINAGE INSTITUTE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	PG	PRESSURE GAUGE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	PSI	POUNDS PER SQUARE INCH
NIC	NOT IN CONTRACT	RH	RELATIVE HUMIDITY
NO	NORMALLY OPEN	SD	SMOKE DETECTOR
NTS	NOT TO SCALE	SEER	SEASONAL ENERGY EFFICIENCY RATING
OC	ON CENTER	SENS	SENSIBLE
OFC	OWNER FURNISHED CONTRACTOR INSTALLED	SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
OFOI	OWNER FURNISHED OWNER INSTALLED	SP	STATIC PRESSURE
PEMB	PRE-ENGINEERED METAL BUILDING	T/A	TRANSFER AIR
PH	PHASE	TC	TEMPERATURE CONTROL
PLBG	PLUMBING	TDH	TOTAL DYNAMIC HEAD
RCP	REFLECTED CEILING PLAN	TS	TEMPERATURE SENSOR
REF	REFERENCE	TSP	TOTAL STATIC PRESSURE
REV	REVISION(S)	VAV	VARIABLE AIR VOLUME
RPM	REVOLUTIONS PER MINUTE	VENT	VENTILATION
SCCR	SHORT CIRCUIT CURRENT RATING	VTR	VENT THROUGH ROOF
SHT	SHEET	VTW	VENT THROUGH WALL
SPEC	SPECIFICATIONS	WB	WET BULB
SS	STAINLESS STEEL	WFMD	WATER FLOW MEASURING DEVICE
STR	STRUCTURAL (STRUCTURE)		
TC	TIME CLOCK		
TCP	TEMPERATURE CONTROL PANEL		
TEMP	TEMPERATURE		
TYP	TYPICAL		
UG	UNDERGROUND		
UL	UNDERWRITERS LABORATORIES		
UNO	UNLESS NOTED OTHERWISE		
V	VOLTAGE (VOLTS)		
VFC	VARIABLE FREQUENCY CONTROLLER		
VFD	VARIABLE FREQUENCY DRIVE		
W	WATT		
°F	DEGREES FAHRENHEIT		
Ø	DIAMETER		
Φ	PHASE		

GENERAL SHEET NOTES

A. DO NOT ROUTE ITEMS OVER ELECTRICAL PANELS. PROVIDE 3'-6" CLEARANCE IN FRONT OF ELECTRICAL PANELS AND DEVICES FROM FLOOR TO 6'-6" OR TOP OF PANEL AS PER CODE REQUIREMENTS.

B. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DO NOT NECESSARILY SHOW ALL OFFSETS REQUIRED FOR COMPLETE SYSTEM.

C. UNLESS NOTED/SHOWN OTHERWISE, ALL DUCTWORK AND PIPING SHALL BE RUN AS HIGH AS POSSIBLE, TIGHT TO STRUCTURE WHERE FEASIBLE. RUN DUCTS AND PIPING UP IN JOIST SPACE WHERE INDICATED AND AS REQUIRED. COORDINATE WITH ELECTRICAL CONTRACTORS PRIOR TO INSTALLATION. VALVES AND OTHER MAINTENANCE ITEMS SHALL NOT BE INSTALLED HIGHER THAN 2 FEET ABOVE CEILINGS.

D. LOCATE EQUIPMENT TO ALLOW ACCESS FOR ADJUSTMENT AND SERVICING. REFER TO INSTALLATION MANUALS UNLESS OTHERWISE SPECIFICALLY SHOWN ON THESE DRAWINGS. LOCATE HANGING EQUIPMENT WITHIN THE SPACE SO THAT MAINTENANCE ACCESS IS PROVIDED FROM BELOW, AND MAINTENANCE AREA AROUND AND ACCESS AREA BELOW IS FREE OF OBSTRUCTIONS INCLUDING PIPING, DUCTWORK, CONDUIT OR OTHER BUILDING ELEMENTS.

E. ROUTE ALL PIPING IN MECHANICAL ROOMS TO PROVIDE A MINIMUM OF 8'-0" CLEARANCE FROM BOTTOM OF DUCT, PIPE, INSULATION, OR HANGERS TO FINISHED FLOOR. DO NOT INSTALL PIPING IN THE SERVICE AREA FOR EQUIPMENT INSTALLED BY OTHERS.

F. DASHED LINES AROUND EQUIPMENT INDICATE MINIMUM REQUIRED SERVICE CLEARANCES. DO NOT INSTALL HVAC, PIPING, AND ELECTRICAL ITEMS IN THESE AREAS.

G. COORDINATE UNDERGROUND PIPING WITH STRUCTURAL FOOTINGS, SITE UTILITIES SERVICES, AND BUILDING SERVICES. FIELD VERIFY LOCATION OF ALL UTILITIES AND EXACT DIMENSIONS DURING BIDDING PORTION OF PROJECT. NOTIFY ANY DISCREPANCY OR INTERFERENCE TO ENGINEER.

H. ALL DUCT FITTINGS WHERE TURN IS GREATER THAN 30-DEGREES SHALL BE PROVIDED WITH TURNING VANES UNLESS NOTED OTHERWISE.

I. PROVIDE A MASONRY WALL LINTEL AT ALL BLOCK OR BRICK WALL PENETRATIONS WIDER THAN 12". COORDINATE MASONRY WALL LINTEL LOCATIONS WITH STRUCTURAL PLANS.

J. NEW THERMOSTATS AND SENSORS SHALL BE LOCATED ON WALL NEAR LOCATION SHOWN. LOCATE ON WALL WITH CENTER AT 3'-8" ABOVE FINISH FLOOR, MATCHING LIGHT FIXTURE SWITCH HEIGHT, UNLESS NOTED OTHERWISE.

K. ALL DUCT SEAMS SHALL BE SEALED.

L. KEEP ALL DUCT OPENINGS AND AIR DEVICES COVERED AIR-TIGHT UNTIL ALL DUST CREATING ACTIVITY HAS BEEN FINISHED AND EQUIPMENT IS READY FOR START-UP.

M. DUCTWORK TO DIFFUSER SHALL MATCH DIFFUSER NECK SIZE UNLESS NOTED OTHERWISE.

N. EQUIPMENT ON ROOF SHALL BE INSTALLED A MINIMUM OF 10'-0" AWAY FROM EDGE OF ROOF.

MECHANICAL SHEET LIST

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

CHARLES B. DARR III
NUMBER E-27400
REGISTERED PROFESSIONAL ENGINEER
STATE OF MISSOURI

10-24-2025

550 East St. Louis Street
Springfield, MO 65806

olsson.com
TEL 417.890.8802
FAX 417.890.8805

olsson

Olsson - Engineering
Missouri COA #001592

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF NATURAL RESOURCES,
STATE PARKS

CAMPGROUND #4
SHOWER HOUSE
REPLACEMENT

BENNETT SPRING
STATE PARK
LEBANON, MO

PROJECT #X2528-01
SITE # 5302
ASSET # 7815302022

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 10/24/2025

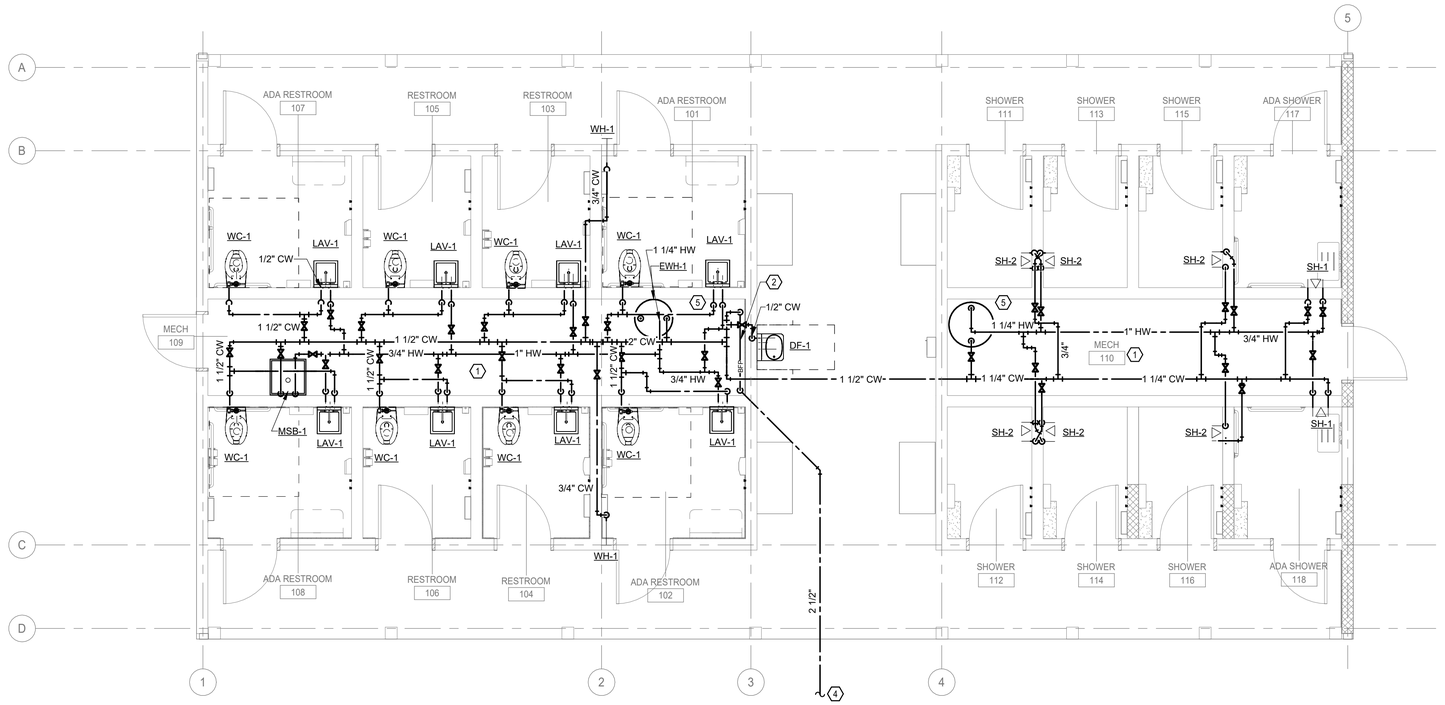
CAD DWG FILE:
DRAWN BY: OG
CHECKED BY: MP
DESIGNED BY: OG

SHEET TITLE:

GENERAL PLUMBING AND MECHANICAL INFORMATION

SHEET NUMBER:

P-001



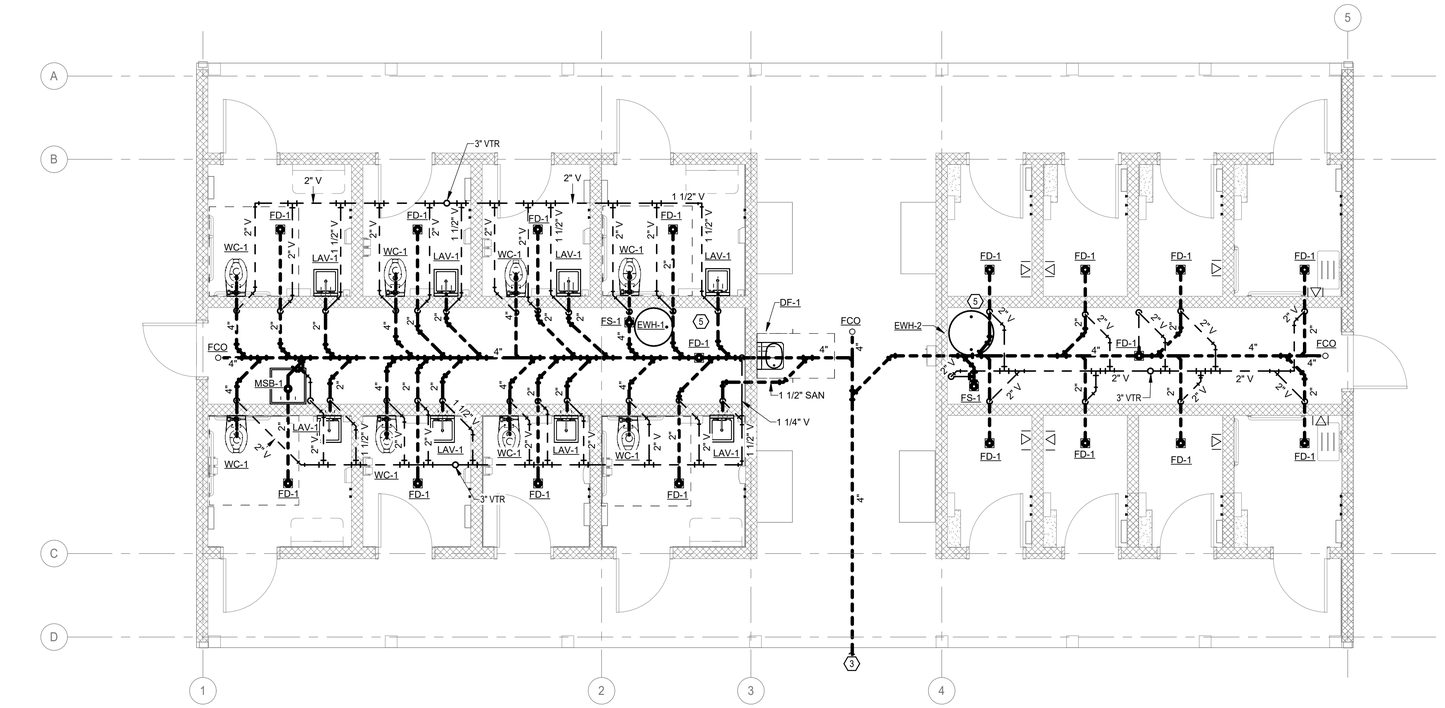
NORTH

1 DOMESTIC WATER PLUMBING PLAN

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

SHEET KEYNOTES

1. DOMESTIC WATER PIPING TO BE SLOPED TO ALLOW DRAIN DOWN FOR WINTERIZATION OF THE BUILDING. DRAINS TO BE ADDED AT LOW POINTS.
2. PROVIDE SHUT-OFF VALVE IN VERTICAL PIPE. SEE DETAIL 6/P-501.
3. SANITARY DRAIN PIPE BUILDING EXIT. REFER TO CIVIL SHEETS FOR DESIGN OF SANITARY PIPING BEYOND THE BUILDING.
4. DOMESTIC WATER PIPE BUILDING ENTRANCE. REFER TO CIVIL SHEETS FOR DESIGN OF DOMESTIC WATER PIPING BEYOND BUILDING.
5. WATER HEATER TO BE INSTALLED ON A WATER HEATER PLATFORM. SEE SCHEDULE FOR INFORMATION ON WATER HEATER PLATFORM.



NORTH

2 SANITARY AND VENT PLUMBING PLAN

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

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

STATE OF MISSOURI
CHARLES B. DARR III
NUMBER E-27400
REGISTERED PROFESSIONAL ENGINEER
10-24-2025

550 East St. Louis Street
Springfield, MO 65806
olsson.com
TEL 417.890.8802
FAX 417.890.8805

olsson

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DRAWN BY: OG
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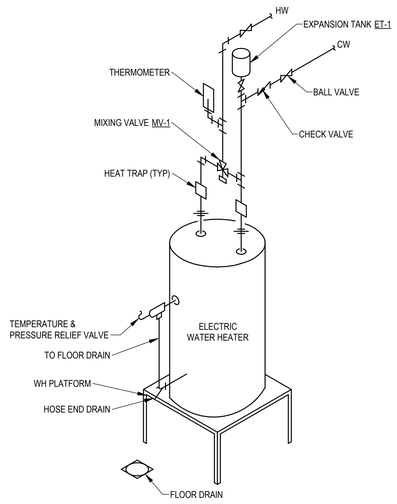
DESIGNED BY: OG

SHEET TITLE:
PLUMBING PLANS

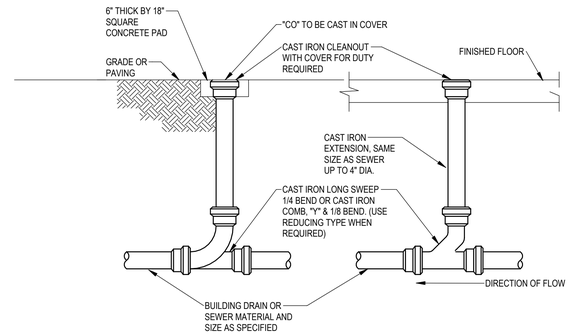
SHEET NUMBER:
P-101



NOTE:
1. SEE SCHEDULES FOR INFORMATION ON DOMESTIC WATER HEATER EWH-1, AND EWH-2 EXPANSION TANK ET-1, MIXING VALVE MV-1, AND WH PLATFORM.

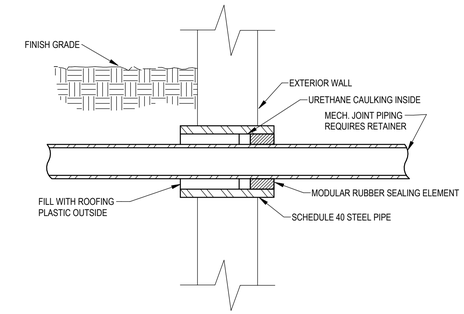
1 WATER HEATER PIPING DETAIL

SCALE: NOT TO SCALE



2 TYPICAL CLEANOUTS

SCALE: NOT TO SCALE



NOTES:
1. IF PIPING PASSES THROUGH WALL ABOVE GRADE, SLEEVE SHALL BE FLUSH WITH EXTERIOR SIDE OF WALL.
2. SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES

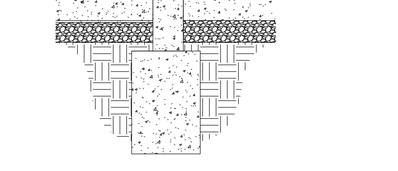
3 PIPE SLEEVE THRU EXTERIOR WALL

SCALE: NOT TO SCALE

NOTES:
1. SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES.

4 PIPE SLEEVE THRU FLOOR

SCALE: NOT TO SCALE



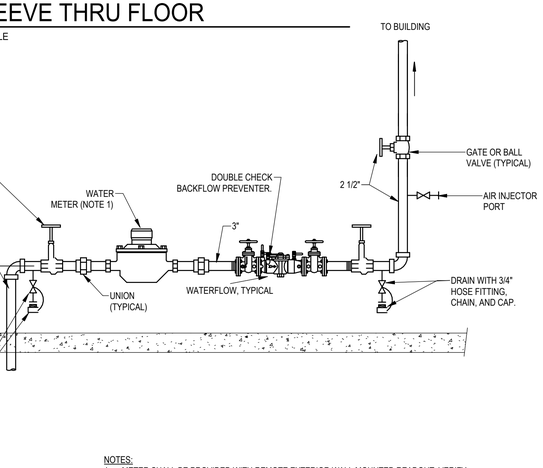
PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1-1/4"	61-113
E	1-1/2"	114-154
F	2"	155-330

FIXTURE UNIT VALUES		
FIXTURE	COLD	HOT
URINAL	4.0	-
WATER CLOSET	8.0	-
LAVATORY	1.5	1.5
SINK	3.0	3.0
SHOWER/TUB	2.0	3.0
WASHING MACHINE	3.0	3.0

NOTES:
1. PROVIDE WATER HAMMER ARRESTORS.
2. INSTALL IN HORIZONTAL OR VERTICAL POSITION.
3. SIZE THE UNITS AS SHOWN ON THE DRAWING AND/OR THE TABLES SHOWN ABOVE.
4. INSTALL PER PDI STANDARDS AND MANUFACTURES RECOMMENDATIONS.

5 WATER HAMMER ARRESTOR DETAIL

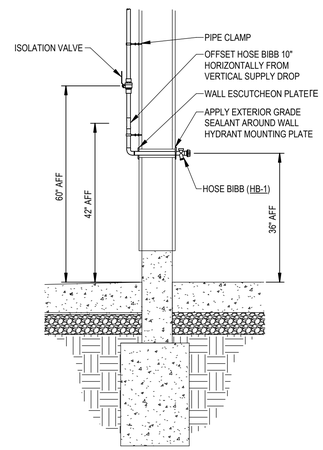
SCALE: NOT TO SCALE



NOTES:
1. METER SHALL BE PROVIDED WITH REMOTE EXTERIOR WALL MOUNTED READOUT. VERIFY METER TYPE AND UNIT OF MEASURE WITH UTILITY.

6 DOMESTIC WATER ENTRANCE

SCALE: NOT TO SCALE



7 WALL HYDRANT/HOSE BIBB DETAIL

SCALE: NOT TO SCALE

BUILDING WINTERIZATION CHECKLIST:

1. TURN OFF ELECTRIC WATER HEATERS EWH-1 AND EWH-2 AT THE BREAKER. DRAIN EWHS NEAR FLOOR SINK.
2. CLOSE DOMESTIC WATER ISOLATION VALVE AT METER AND OPEN DRAIN VALVE AFTER BACKFLOW PREVENTER.
3. DRAIN WATER HEATER AFTER IT COOLS DOWN.
4. FLUSH TOILETS AND OPEN SINK FAUCETS TO DRAIN WATER IN VERTICAL PIPE RISERS.
5. CLOSE DRAIN VALVE AND UTILIZE AIR INJECTION PORT TO BLOW OUT ALL PIPING BRANCHES.
6. POUR NON-TOXIC ANTI-FREEZE INTO THE DRINKING FOUNTAIN DRAIN TO PROTECT TRAP FROM FREEZING.
7. VERIFY UNIT HEATERS ARE OPERATIONAL. CLOSE ALL DOOR LOUVERS TO ALLOW THE SPACE TO CONDITION.
8. VERIFY EXHAUST FAN IS NOT RUNNING WHILE LOUVERS ARE CLOSED.

BUILDING DE-WINTERIZATION CHECKLIST:

1. CLOSE DRAIN VALVE AFTER WATER METER AND OPEN ISOLATION VALVE SLOWLY AT WATER METER TO FILL SYSTEM.
2. FLUSH TOILETS AND OPERATE SINK FAUCETS TO REMOVE AIR FROM THE SYSTEM PIPING.
3. TURN ELECTRIC WATER HEATERS EWH-1 AND EWH-2 ON AT THE BREAKER. DO NOT TURN THE WATER HEATERS ON BEFORE THE SYSTEM IS FILLED WITH WATER.

NOTE:
1. PROVIDE LAMINATED WINTERIZATION CHECKLIST SIGN AND PERMANENTLY ATTACH TO WALL ABOVE WATER METER IN HIGHLY VISIBLE LOCATION.
2. BUILDING HAS TO BE WINTERIZED BEFORE FREEZING TEMPERATURES START.

8 BUILDING WINTERIZATION CHECKLIST SIGN

SCALE: NOT TO SCALE

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

STATE OF MISSOURI
CHARLES B. DARR III
NUMBER E-27400
REGISTERED PROFESSIONAL ENGINEER
10-24-2025

550 East St. Louis Street
Springfield, MO 65806
olsson.com
TEL 417.890.8802
FAX 417.890.8805

olsson

Olsson - Engineering
Missouri COA #001592

OFFICE OF ADMINISTRATION
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DESIGN AND CONSTRUCTION

DEPARTMENT OF NATURAL RESOURCES, STATE PARKS

CAMPGROUND #4
SHOWER HOUSE
REPLACEMENT

BENNETT SPRING
STATE PARK
LEBANON, MO

PROJECT #X2519-01
SITE # 5307
ASSET # 7815307024

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DESIGNED BY: OG

SHEET TITLE:
PLUMBING DETAILS

SHEET NUMBER:
P-501

PLUMBING FIXTURE SCHEDULE

MARK	TYPE	MANUFACTURER	MODEL	DESCRIPTION	ACCESSORIES	CONNECTIONS (INCHES)			
						WASTE	VENT	CW	HW
DF-1	DRINKING FOUNTAIN	ELKAY	LVRCDMWSK	VANDAL-RESISTANT SINGLE STATION WALL MOUNT WATER FOUNTAIN WITH BOTTLE FILLER, NON-REFRIGERANT STAINLESS.	SELF CLOSING EASY TOUCH CONTROLS ON FRONT, LEFT AND RIGHT OF EACH UNIT.	1-1/2"	1-1/2"	1/2"	--
LAV-1	LAVATORY (WALL MOUNTED) ADA	SLOAN	SS-3017	18-1/4" x 12" x 120 1/4" WITH FRONT OVERFLOW. WHITE ENAMELLED CAST IRON.	DELTA B501FL SINGLE HANDLE, DECK MOUNTED FAUCET. CHROME FINISH, 0.5 GPM. DELTA R2910-MIXLF THERMOSTATIC MIXING VALVE. TRUEBRO LAV GAURD MODLED P-TRAP AND SUPPLY COVERS. 1-1/2" CHROME-PLATED CAST-BRASS OFFSET TRAP WITH GRID STRAINER, CLEAN-OUT AND WALL ESCUTCHEON. 1/2" CHROME-PLATED SUPPLIES WITH STOPS AND WALL ESCUTCHEONS.	2" UP TO 1-1/2" TRAP ARM	1-1/2"	1/2"	1/2"
MSB-1	MOP SINK BASIN	FIAT	MSBIDTG2424	24" x 24" x 10" MOLDED STONE BASIN WITH INTEGRAL DRAIN AND STAINLESS STEEL STRAINER.	FIAT MSG2424 STAINLESS STEEL WALL GUARD, CHICAGO FAUCET TOP SUPPLY DOUBLE HANDLE SERVICE SINK FAUCET: MODEL 835-RCF, 823AA HOSE & HOSE BRACKET, 899CC MOP HANGER BRACKET AND QIC3N QUICK DRAIN 3" CONNECTOR.	3"	2"	1/2"	1/2"
SH-1	SHOWER HARDWARE (ADA)	HIGH SIERRA	FCS-100-VRF1214-1.25	VANDAL RESISTANT STAINLESS STEEL SINGLE NON-CLOGGING NOZZLE. HAND-HELD SHOWER AND ADA SLIDE BAR , LEVER HANDLE TEMPERATURE CONTROL.	POLISHED CHROME PALTED FIXTURE, PRESSURE BALANCE CARTRIDGE FLOW RATE OF 1.25 GPM @ 60 PSI.	2"	1-1/2"	1/2"	1/2"
SH-2	SHOWER HARDWARE	HIGH SIERRA	FCS-100-VRF1214-1.25	PROVIDE KOHLER TRITON SHOWER TRIM K-T7744-2. SEPARATE HANDLES FOR HOT AND COLD WATER, 1.25 GPM FLOW RATE.	PROVIDE KOHLER TWO-HANDLE VALVE K-302-K 1.25 GPM FLOW CONTROL DEVICE.	2"	1-1/2"	1/2"	1/2"
WC-1	WATER CLOSET, ADA	SLOAN	ST-2029	VITREOUS CHINA, ELONGATED FLOOR-MOUNTED ADA WATER CLOSET, 1.28 GPM.	EXPOSED BATTERY POWERED WATER CLOSET FLUSHOMETER, 1.28 GPM, POLISHED CHROME, TOP SPUD. BEMIS 1955CT TOILET SEAT.	4"	2"	1-1/4"	--
FD-1	FLOOR DRAIN	ZURN	ZN415B	CAST IRON BODY, BOTTOM OUTLET, INVERTABLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR. SQUARE LEVELING STRAINER. POLISHED NICKEL BRONZE FINISH.	DIMENSIONS OF TOP STRAINER: 2" & 3" OUTLET WITH A 5" x 5" STRAINER. GASKETED TRAP SEALER IN NECK OF FLOOR DRAIN BY SURE-SEAL OR EQUAL.	2"	2"	--	--
FS-1	SQUARE FLOOR SINK	ZURN	Z1910-2	8 x 8 SANI-FLOR RECEPTOR, 6" SUMP DEPTH.	8X8X6 DEEP CAST IRON BODY AND SQUARE, MEDIUM GRATE WITH SLOTTED OPENINGS. WHITE ACID RESISTING PORCELAIN ENAMEL INTERIOR AND TOP WITH ANTI-SPLASH INTERIOR BOTTOM DOME STRAINER. 1/2 GRATE AND SECURITY SCREWS.	RE: PLANS	--	--	--
FPWH-2	FREEZE PROOF WALL HYDRANT	ZURN	Z1315-WC	EXPOSED, NON-FREEZE WALL HYDRANT WITH BRONZE CASING.	OPERATING KEY, 3/4" MALE HOSE CONNECTION, WALL CLAMP, VERIFY WALL THICKNESS. WALL CLAMP.	--	--	3/4"	--
WMB-1	WASHING MACHINE BOX	OATEY	38569	WASHING MACHINE OUTLET BOX WITH WATER HAMMER ARRESTERS	QUADTRO 2 IN. COOPER SWEAT CONNECTION. 1/4 TURN BRASS BALL VALVES, PVC TAILPIECE.	2"	1-1/2"	1/2"	1/2"
FCO	FLOOR CLEAN OUT	ZURN	ZN1400	CAST IRON BODY, HEAVY DUTY ADJUSTABLE FLOOR CLEANOUT. POLISHED NICKEL BRONZE FINISH.	NO-HUB OUTLET.	RE: PLANS	--	--	--

REMARKS:
1. VERIFY ALL CONNECTIONS & MOUNTING HEIGHTS WITH CODES, MANUFACTURERS, AND PLANS.
2. SIZES LISTED INDICATE MIN. SIZE ONLY, SEE FLOOR PLANS FOR LARGER SIZES.

WATER HEATERS (ELECTRIC)

MARK	LOCATION	TYPE	STORAGE (GAL.)	RECOVERY (GPH)	TEMP RISE (°F)	TEMP SETTING (°F)	ELECTRICAL DATA		INPUT (KW)	NUMBER OF ELEMENTS	MANUFACTURER & MODEL	REMARKS
							V	PH				
EWH-1	MECH 109	ELECTRIC	40	20	85	140	240	1	4.5	2	AO SMITH DEN-30	1,2,3,5,6,7
EWH-2	MECH 110	ELECTRIC	120	176	85	140	240	1	5	6	AO SMITH DVE-120-30	1-4,6,7

REMARKS:
1. FURNISHED WITH ANODE ROD, HIGH LIMIT RESET, DRAIN VALVE, AND T&P RELIEF.
2. INSULATED TANK WITH 160 MAX PSI WORKING PRESSURE.
3. INSTALL THERMOMETER ON OUTLET OF HEATER.
4. PROVIDE 6.4 GALLON EXPANSION TANK (ET-1), AMTROL MODEL ST-12.
5. PROVIDE 2.0 GALLON EXPANSION TANK (ET-2), AMTROL MODEL ST-5.
6. PROVIDE MIXING VALVE, MV-1 HYDROGUARD MODEL LFLM491-6
7. PROVIDE 30" QUICKSTAND PLATFORM, MODEL #40-S-30-A

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10-24-2025

550 East St. Louis Street
Springfield, MO 65806
olsson.com
TEL 417.890.8802
FAX 417.890.8805

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Olsson - Engineering
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LEBANON, MO

PROJECT #X2528-01
SITE # 5302
ASSET # 7815302022

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DESIGNED BY: OG

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PLUMBING SCHEDULES

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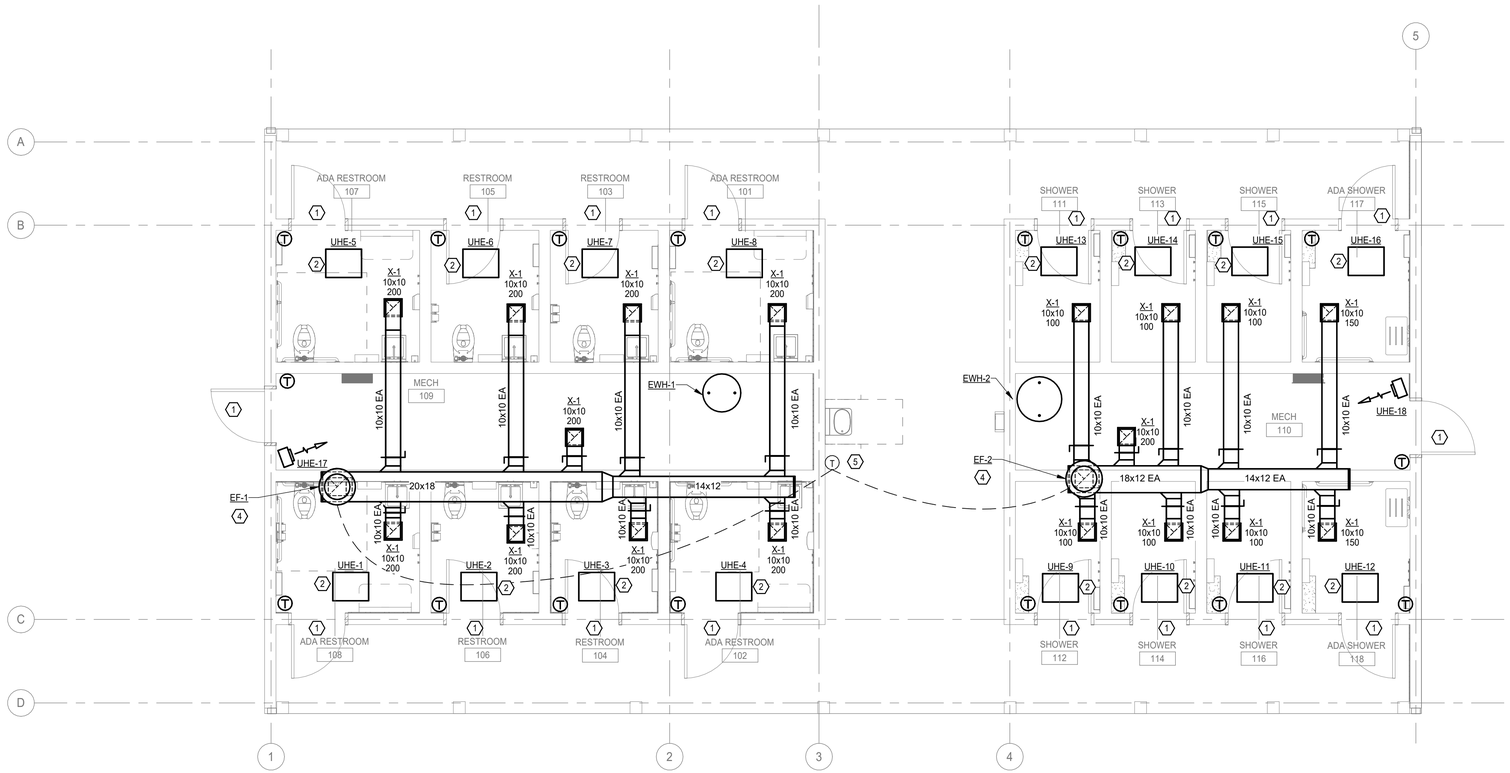

SHEET KEYNOTES

1. INSTALL TRANSFER GRILLE "TG-1" IN DOOR. REFER TO SCHEDULE. COORDINATE WITH ARCHITECTUREAL DESIGN.
2. UNIT HEATER SUSPENDED ON FACTORY TILT BRACKET ASSEMBLY FROM THE CEILING.
3. PROVIDE GOOSENECK NON-RESTRICTIVE DRYER VENT THROUGH ROOF. DRYER JACK MODEL 486U.
4. REFER TO 1/M-601 FOR EXHAUST FAN DETAIL.
5. PROVIDE EXTERIOR MOUNTED THERMOSTAT. DISABLE ALL EXHAUST FANS OPERATION BELOW 32F.

NORTH

1 MECHANICAL HVAC PLAN

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

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olsen.com
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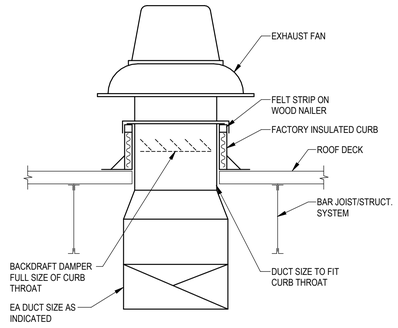

1 EXHAUST FAN DETAIL

SCALE: NOT TO SCALE

UNIT HEATERS (ELECTRIC)

MARK	LOCATION	ELECTRIC COIL DATA	ELECTRICAL DATA			MOUNTING HEIGHT	MANUFACTURER & MODEL	REMARKS
		KW	VOLT	PH	HZ			
UHE-1	ADA RR 108	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-2	RR 106	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-2	RR 104	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-4	ADA RR 102	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-5	ADA RR 107	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-6	RR 105	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-7	RR 103	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-8	ADA RR 101	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-9	SHOWER 112	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-10	SHOWER 114	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-11	SHOWER 116	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-12	ADA SHOWER 118	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-13	SHOWER 11	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-14	SHOWER 113	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-15	SHOWER 115	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-16	ADA SHOWER 117	1.5	240	1	60	CEILING	QMARK FRP26S32MS01721D-QT3WT	1, 3, 4, 5, 6, 7
UHE-17	MECH 109	2.2	240	1	60	9'	DAYTON 804T10	1, 2, 4, 5, 6, 7
UHE-18	MECH 110	2.2	240	1	60	9'	DAYTON 804T10	1, 2, 4, 5, 6, 7

REMARKS:
1. POWER DISCONNECT SWITCH BY ELECTRICAL CONTRACTOR.
2. WALL BRACKET SUPPORT KIT.
3. PROVIDE TILT BRACKET SUSPENSION KIT.
4. PROVIDE WITH EXTERNAL THERMOSTAT. WALL MOUNT WITH LOCKABLE USER INTERFACE.
5. WIRE GUARD FOR HEATERS.
6. MAINTAIN CLEARANCES PER MANUFACTURER'S INSTALLATION GUIDELINES.
7. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

EXHAUST FANS

MARK	SERVES	CFM	FRPM	ESP	HP	MAX SONES	ELECTRICAL DATA			TYPE	OPERATED BY	MANUFACTURER & MODEL	REMARKS
							VOLT	PH	HZ				
EF-1	RESTROOMS	1800	1124	0.25	0.5	12.1	120	1	60	DIRECT	CONTINUOUSLY	GREENHECK G-140-VG	ALL
EF-2	SHOWERS	1100	1124	0.25	0.5	12.1	120	1	60	DIRECT	CONTINUOUSLY	GREENHECK G-120-VG	ALL

REMARKS:
1. PROVIDE BACKDRAFT DAMPER, VIBRATION ISOLATION, SPEED CONTROLLER AND DISCONNECT SWITCH.
2. FAN SHALL OPERATE CONTINUOUSLY WHEN AMBIENT TEMPERATURE IS ABOVE 32 DEG. F. PROVIDE BI-METALLIC THERMOSTAT SWITCH SET TO 32 DEG. F AND NOT ADJUSTABLE.

AIR DISTRIBUTION DEVICES

MARK	SERVES	MOUNT	COLOR	FACE SIZE (INCH)	NECK SIZE (INCH)	PATTERN	MAX NC	MAX PD IN WC	MANUFACTURER & MODEL	REMARKS
X-1	EXHAUST	LAY-IN	WHITE	SEE PLANS	SEE PLANS	FIXED BLADES	25	0.1	GREENHECK SP-A50	1-3
TG-1	TRANSFER/ MAKE-UP	DOOR	NOTE 4	12X12	12 X 12	FIXED BLADES	25	0.06	RUSKIN ABD-SEA	4, 5

REMARKS:

1. PREMANUFACTURED INSULATED PLENUM.
2. CONCEALED FASTENING
3. PROVIDE BALANCING DAMPER
4. MATCH FINISH OF DOOR
5. NOISE CRITERIA AND PRESSURE DORP ARE FOR 300 CFM.

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MECHANICAL SCHEDULES AND DETAILS

SHEET NUMBER:
M-601

GENERAL ELECTRICAL NOTES

A. UNLESS OTHERWISE NOTED, ELECTRICAL DEVICES ARE TO BE FLUSH MOUNTED AND ALL WIRE AND CONDUITS ARE TO BE ROUTED CONCEALED. COORDINATE INSTALLATION WITH EXISTING CONDITIONS, INCLUDE PATCHING AND REFINISHING OF EXISTING SURFACES TO ACCOMMODATE THIS REQUIREMENT.

B. PRIOR TO ROUGH-IN, COORDINATE THE CONNECTIONS OF ALL EQUIPMENT PROVIDED BY OTHERS WITH THE RESPECTIVE CONTRACTOR FURNISHING THE EQUIPMENT. THIS INCLUDES, BUT IS NOT LIMITED TO: MECHANICAL EQUIPMENT, ETC. THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE APPROPRIATE DISCONNECTING MEANS FOR THE EQUIPMENT AND SHALL MAKE THE FINAL CONNECTION TO THE EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AN APPROPRIATE CORD AND PLUG FOR ANY EQUIPMENT THAT REQUIRES AN INTEGRAL CORD AND PLUG IF NOT PROVIDED WITH THE EQUIPMENT.

C. WHERE A MECHANICAL RETURN AIR PLENUM SYSTEM IS PRESENT, ALL EQUIPMENT AND MATERIALS PROVIDED WITHIN THE PLENUM CEILING RETURN MUST MEET THE FLAME SPREAD AND SMOKE DEVELOPED RATINGS OF 25/50 AND BE APPROVED FOR USE IN PLENUM RETURN CEILINGS. UNLESS OTHERWISE NOTED, METAL HOUSINGS ON LUMINAIRES ARE ACCEPTABLE WITHIN THE PLENUM AND SHALL NOT REQUIRE ENHANCED PLENUM RATINGS.

D. ALL EQUIPMENT, DEVICES, AND LUMINAIRES SHALL BE SUITABLE FOR THE ENVIRONMENT IN WHICH THEY ARE TO BE INSTALLED. EQUIPMENT MOUNTED OUTDOORS SHALL BE MINIMUM NEMA 3R. DEVICES MOUNTED IN DAMP OR WET LOCATIONS SHALL BE WEATHER RESISTANT. EXTERIOR RECEPTACLES OR RECEPTACLES IN DAMP OR WET LOCATIONS SHALL BE PROVIDED WITH WEATHERPROOF "WHILE-IN-USE" COVERS.

E. #12 AWG SHALL BE USED AS A STANDARD 120V CIRCUIT. WHERE A CIRCUIT EXCEEDS 75', #10 AWG SHALL BE USED. WHERE A CIRCUIT EXCEEDS 125', #8 AWG SHALL BE USED FOR FIRST 75' MINIMUM.

F. UNLESS OTHERWISE NOTED, MINIMUM CONDUIT SIZE FOR BRANCH CIRCUITS SHALL BE 3/4" EMT. REFER TO FLOOR PLANS, DETAILS, AND SPECIFICATIONS FOR ANY LOCATIONS WHERE LARGER CONDUIT SIZES ARE REQUIRED.

G. PROVIDE DEDICATED NEUTRAL CONDUCTOR FOR EACH 120V BRANCH CIRCUIT (LIGHTING, POWER, ETC.) SERVED BY A SINGLE POLE CIRCUIT BREAKER. SHARED NEUTRALS ARE NOT ALLOWED. PROVIDE NEUTRAL CONDUCTOR FOR MECHANICAL EQUIPMENT WHERE REQUIRED, REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE FOR REQUIREMENTS.

H. PROVIDE A GREEN INSULATED GROUND WIRE FOR EACH BRANCH CIRCUIT (LIGHTING, POWER, ETC.).

I. WHERE FLEXIBLE METALLIC CONDUIT (FMC) IS ALLOWED BY THESE CONTRACT DOCUMENTS AND LOCAL BUILDING CODES, LENGTH SHALL NOT EXCEED 6FT.

J. WHERE CONDUIT ROUTES EXPOSED IN OPEN CEILING AREA, CONDUIT SHALL BE PAINTED TO MATCH CEILING SURFACE. COORDINATE EXACT FINISH WITH ARCHITECT. LIMIT JUNCTION BOXES WITHIN OPEN CEILING AREA.

K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY EQUIPMENT OR FIXTURES THAT BECOME DAMAGED PRIOR TO RE-INSTALLATION, AT NO ADDITIONAL COST TO THE OWNER.

L. THE ELECTRICAL INSTALLATION SHALL CONFORM TO THE LOCALLY ADOPTED EDITION OF NFPA 70 (NEC) AND ALL APPLICABLE LOCALLY ADOPTED BUILDING AND ENERGY CODES.

M. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY SLEEVES THROUGH WALLS AND FLOORS TO ALLOW FOR THE ROUTING OF TELECOMMUNICATIONS AND LOW VOLTAGE SYSTEMS CABLING. REVIEW ROUTING WITH LOW VOLTAGE CONTRACTOR FOR SLEEVE LOCATIONS AND REQUIREMENTS.

N. MECHANICAL CONTROLS SHALL BE INSTALLED BY THE MECHANICAL CONTROLS CONTRACTOR. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL RACEWAYS AND BOXES ASSOCIATED WITH MECHANICAL CONTROLS. FOR EACH THERMOSTAT PROVIDE JUNCTION BOX WITH ONE (1) 3/4" CONDUIT STUBBED TO ABOVE NEAREST ACCESSIBLE CEILING. PROVIDE ADDITIONAL 3/4" CONDUIT FROM EACH TEMPERATURE CONTROL CABINET TO NEAREST CORRIDOR CABLE TRAY WHERE APPLICABLE, OR TO ABOVE NEAREST ACCESSIBLE CORRIDOR CEILING. REFER TO MECHANICAL FLOOR PLANS FOR ALL WALL CONTROL LOCATIONS AND QUANTITIES.

GENERAL LIGHTING NOTES

A. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS AND DIMENSIONS OF ALL CEILING MOUNTED DEVICES. COORDINATE INSTALLATION WITH ALL OTHER TRADES.

B. SUPPORT ALL RECESSED AND PENDANT MOUNTED FIXTURES FROM STRUCTURE IN ACCORDANCE WITH APPLICABLE BUILDING CODE REQUIREMENTS. SUSPENDED CEILING MOUNTING SYSTEMS SHALL NOT BE USED TO SUPPORT FIXTURES OR RACEWAYS.

C. PROVIDE ENCLOSURES AROUND RECESSED LIGHTING FIXTURES AS REQUIRED SO THAT ALL CODE REQUIRED CLEARANCES BETWEEN COMBUSTIBLE MATERIALS, THERMAL INSULATION, ETC. AND LIGHTING FIXTURES ARE MAINTAINED. FULLY COORDINATE ALL REQUIREMENTS WITH THE GENERAL CONTRACTOR.

D. PROVIDE POWER PACK AND/OR RELAYS AS NECESSARY FOR ALL OCCUPANCY SENSORS, LOW VOLTAGE WALL CONTROLLERS, OR OTHER SENORS/DEVICES WHERE REQUIRED BY MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE ALL LOW VOLTAGE CABLING AND ALL DEVICES/CONNECTIONS NECESSARY FOR A COMPLETE, WORKING INSTALLATION, AND PER MANUFACTURER'S REQUIREMENTS.

E. CONNECT BATTERY SENSING LEADS FOR EMERGENCY LIGHTING UNITS AND INTEGRAL EMERGENCY BATTERY BALLASTS/DRIVERS AHEAD OF LOCAL SWITCHING.

F. COORDINATE LOCATIONS OF LIGHT SWITCH HEIGHTS WITH CASEWORK, FURNITURE AND EQUIPMENT PLANS PRIOR TO ROUGH-IN TO AVOID ANY CONFLICTS.

G. LIGHT FIXTURES SHOWN WITH EMERGENCY HATCHING SHALL BE CONTROLLED WITH NORMAL SOURCE LIGHT FIXTURES AND ASSOCIATED CONTROLS WITHIN COMMON SPACE. PROVIDE BATTERY BACKUP FOR EMERGENCY LIGHTING OVERRIDE. PROVIDE PER MANUFACTURER'S WIRING DIAGRAMS.

H. COORDINATE FINAL FIXTURE LOCATIONS WITH MECHANICAL DUCTWORK AND STRUCTURAL COMPONENTS. DO NOT SUPPORT FIXTURES FROM DUCTWORK, SUPPORT FIXTURES ONLY FROM STRUCTURE.

I. PROVIDE #12 AWG MINIMUM CONDUCTORS FOR ALL EXTERIOR LIGHTING CIRCUITS.

J. PROVIDE BEAD OF SILICONE SEALANT AROUND RECESSED BACK BOX PERIMETER AT ALL BUILDING MOUNTED EXTERIOR LIGHT FIXTURE LOCATIONS.

K. IN ALL ELECTRICAL, COMMUNICATIONS, AND MECHANICAL UTILITY ROOMS COORDINATE LOCATION OF LIGHT FIXTURES WITH EQUIPMENT PRIOR TO INSTALLATION.

L. CEILING OCCUPANCY SENSORS: WHERE CEILING MOUNT SENSORS ARE MOUNTED IN LOCATIONS WITH DARK CEILING OR EXPOSED STRUCTURE FINISH, PROVIDE BLACK SENSOR COVER.

GENERAL POWER NOTES

A. FULLY COORDINATE THE INSTALLATION OF ALL ELECTRICAL DEVICES WITH THE WORK OF OTHER TRADES. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR DEVICE MOUNTING HEIGHT AND LOCATION WHERE DEVICE IS TO BE INSTALLED IN CASEWORK. BACK-TO-BACK MOUNTING OF DEVICES IS NOT ACCEPTABLE IN A STANDARD 3-5/8" STUD WALL.

B. UNLESS OTHERWISE NOTED, STANDARD ELECTRICAL RECEPTACLE DEVICES SHALL BE MOUNTED AT 18" A.F.F. REFER TO STANDARD MOUNTING HEIGHT DETAILS FOR OTHER DEVICE REQUIREMENTS.

C. ALL 120V THROUGH 250V RECEPTACLES SUPPLIED BY SINGLE-PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 50 AMPERES OR LESS, AND ALL RECEPTACLES SUPPLIED BY 3-PHSE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 100 AMPERES OR LESS, INSTALLED IN THE FOLLOWING LOCATIONS SHALL HAVE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL:
   a. BATHROOMS AND RESTROOMS
   b. ROOFTOPS
   c. OUTDOORS
   d. RECEPTACLES WITHIN 6FT OF A SINK
   e. INDOOR DAMP AND WET LOCATIONS
   f. LOCKER ROOMS WITH ASSOCIATED SHOWER FACILITIES
   g. LAUNDRY AREAS
   h. BATHTUBS AND SHOWER STALLS
   i. OTHER LOCATIONS AS REQUIRED BY NEC.210.8

D. PROVIDE 4" HIGH CONCRETE HOUSEKEEPING PAD FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT, EXTEND PAD ON ALL SIDES MINIMUM 4" FOOTPRINT OF EQUIPMENT. WHERE MULTIPLE FLOOR MOUNTED EQUIPMENT ARE LOCATED ADJACENT TO ONE-ANOTHER, PAD SHALL BE CONTINUOUS ALONG ENTIRE EQUIPMENT LINEUP.

ELECTRICAL SHEET LIST

ELECTRICAL SYMBOL LEGEND

POWER DEVICES AND LIGHTING FIXTURES

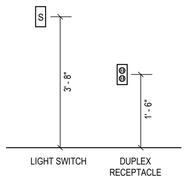
- DUPLEX RECEPTACLE; MOUNT AT 18" TO CENTER OF DEVICE AFF UNLESS OTHERWISE NOTED
- GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE
- WP — GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE WITH WHILE-IN-USE COVER
- SPECIAL-PURPOSE OUTLET, LETTER DESIGNATES TYPE
- J — WALL MOUNTED JUNCTION BOX
- SURFACE MOUNTED ELECTRICAL PANEL
- T — ELECTRICAL POWER TRANSFORMER
- NON-FUSED DISCONNECT SWITCH
- WALL-MOUNTED LIGHT FIXTURE; LABEL INDICATES FIXTURE TYPE
- STRIP LIGHT FIXTURE; LABEL INDICATES FIXTURE TYPE
- TYPICAL FIXTURE - ON EMERGENCY CIRCUIT
- BRANCH CIRCUIT. 2#12 AND 1#12 G IN 3/4" CONDUIT UNO
- FEEDER BELOW GRADE
- OS — CEILING OR WALL-MOUNTED OCCUPANCY SENSOR
- PC — PHOTOCELL, AS INDICATED ON PLANS
- $ — SINGLE-POLE SWITCH

ABBREVIATIONS/MODIFIERS

(X)	SHEET NOTE TAG, LABEL INDICATES NOTE NUMBER
XX	FEEDER TAG
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
EF	EXHAUST FAN
EWH	ELECTRIC WATER HEATER
GFI	GROUND FAULT INTERRUPTER
NF	NON-FUSED
UHE	UNIT HEATER ELECTRIC
WP	WEATHERPROOF
WR	WEATHER RESISITANT
XFMR	TRANSFORMER

NOTES:
TYPICAL MOUNTING HEIGHTS UNLESS OTHERWISE NOTED.

ADJUST MOUNTING HEIGHT TO BLOCK COURSING.



STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

STATE OF MISSOURI
KATLYN COLLIER
NUMBER
PE-2021046167
PROFESSIONAL ENGINEER
10/24/25

550 East St. Louis Street
Springfield, MO 65806

olsson.com
TEL 417.890.8802
FAX 417.890.8805

olsson

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MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES,
STATE PARKS

CAMPGROUND #4
SHOWER HOUSE
REPLACEMENT

BENNETT SPRING
STATE PARK
LEBANON, MO

PROJECT # X2528-01
SITE # 5302
ASSET # 7815302022

REVISION:
DATE:
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DATE:
ISSUE DATE: 10/24/2025

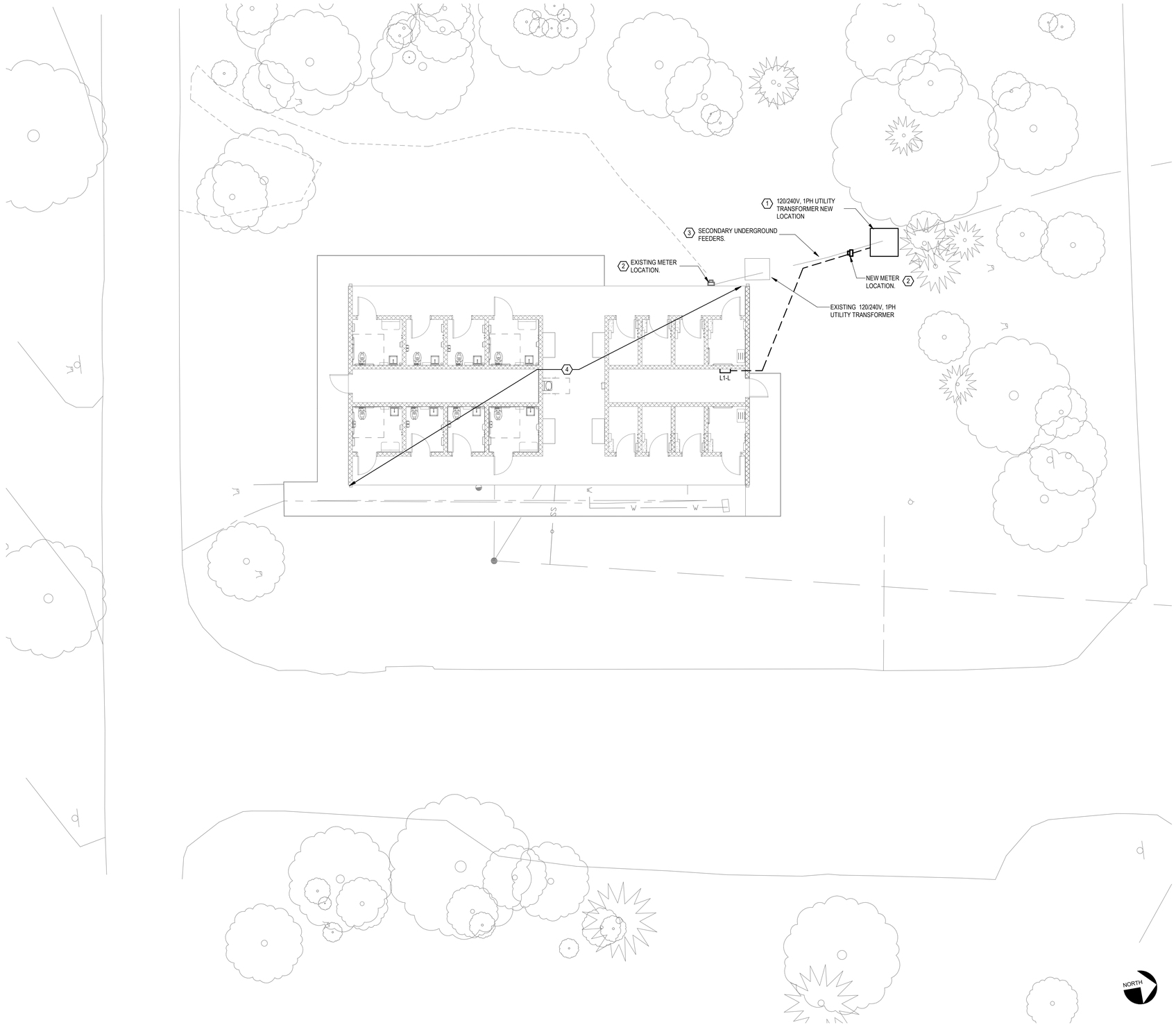
CAD DWG FILE:
DRAWN BY: ERR
CHECKED BY: KC
DESIGNED BY: ERR

SHEET TITLE:

GENERAL
ELECTRICAL
INFORMATION

SHEET NUMBER:

E-001



1 ELECTRICAL SITE PLAN - BENNETT SPRING
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

A. CONTRACTOR SHALL COORDINATE PLACEMENT AND ROUTING OF CONDUITS WITH UTILITY COMPANY PRIOR TO INSTALLATION. COORDINATE EXACT CONDUIT SIZES AND QUANTITIES WITH UTILITY COMPANY PRIOR TO INSTALLATION.

B. COORDINATE WITH ROUTING OF OTHER OTHER UNDERGOUND UTILITIES AND EXISTING SITE CONDITIONS PRIOR TO INSTALLATION.

C. UTILITY CONTACT INFORMATION:
LACLEDE ELECTRIC COOPERATIVE
1400 E. ROUTE 66 LEBANON, MO 65536
TRENT STARK
EMAIL: tdstark@lacledeelectric.com
PHONE: 1(417)-532-3164

(XX) SHEET KEYNOTES

1. EXISTING TRANSFORMER SHALL BE RELOCATED APPROXIMATELY 25' UP ALONG THE EXISTING LINE BY THE UTILITY TO ACCOMMODATE THE NEW BUILDING LOCATION. COORDINATE EXTENDING EXISTING PRIMARY FEEDER WITH UTILTY COMPANY TO NEW LOCATION.
2. A TEMPORARY METER SHALL BE USED DURING CONSTRUCTION. COORDINATE THE EXACT LOCATION OF THE NEW METER WITH UTILITY ON A PEDESTAL NEXT TO THE NEW TRANSFORMER LOCATION.
3. SECONDARY FEEDERS FROM EXISTING UTILITY TRANSFORMER TO SERVICE ENTRANCE DISCONNECT. REFER TO ONE-LINE DIAGRAM FOR WIRE AND CONDUIT SIZES.
4. EXISTING SHOWER HOUSE SHALL BE DEMOLISHED. SEE CIVIL SHEET C-101 FOR ADDITIONAL DETAILS. DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE POWER SHUT OFF WITH THE PARK AND UTILITY. SAFELY DISCONNECT AND DISPOSE OF ALL ELECTRICAL EQUIPMENT, FIXTURES, CONDUIT, AND WIRES.

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

STATE OF MISSOURI
KATLYN COLLIER
NUMBER PE-2021046167
PROFESSIONAL ENGINEER
10/31/25

550 East St. Louis Street
Springfield, MO 65806
olsson.com
TEL 417.890.8802
FAX 417.890.8805

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CAMPGROUND #4
SHOWER HOUSE
REPLACEMENT

BENNETT SPRING
STATE PARK
LEBANON, MO

PROJECT # X2528-01
SITE # 5302
ASSET # 7815302022

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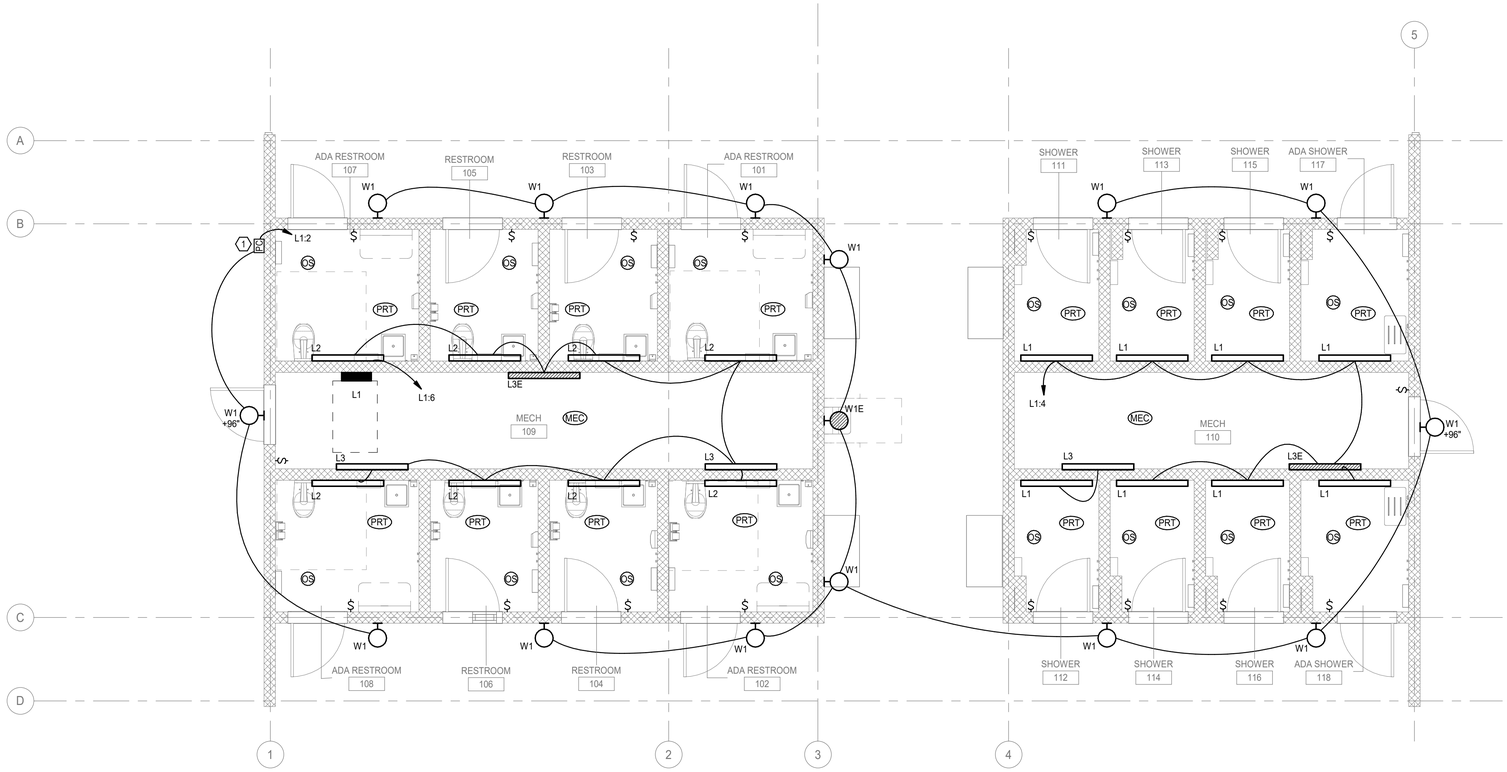
DESIGNED BY: ERR

SHEET TITLE:
ELECTRICAL SITE PLAN - BENNETT SPRING

SHEET NUMBER:
E-002



1 LIGHTING PLAN

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

SHEET KEYNOTES

1. MOUNT EXTERIOR PHOTOCELL ON NORTH SIDE OF BUILDING ROOF. ENSURE THERE ARE NO OBSTRUCTIONS TO THE SENSOR. LIGHTING PLAN IS A TYPICAL LAYOUT FOR EACH SITE. COORDINATE FINAL PLACEMENT OF PHOTOCELL BASED ON SITE ADAPTED LOCATIONS.

STATE OF MISSOURI
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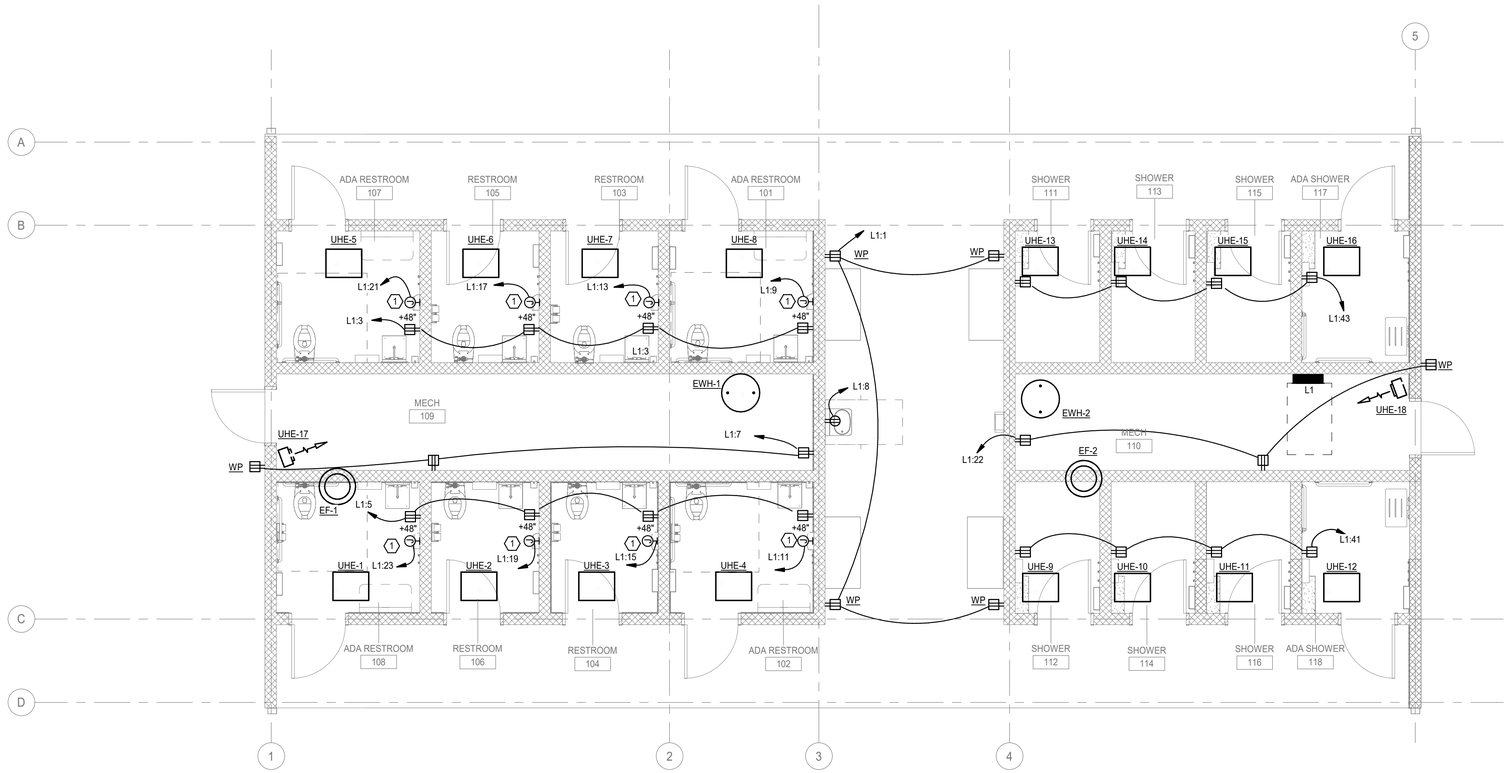
LIGHTING PLAN

SHEET NUMBER:
E-101



SHEET KEYNOTES

1. POWER FOR HAND DRYER. COORDINATE FINAL LOCATION WITH ARCHITECTURAL PLANS.

1 POWER PLAN

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

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POWER PLAN

SHEET NUMBER:

E-201

PANEL L1 | **VOLTAGE** 120/240V | **MCB OR MLO** MCB | **FED FROM** | **SERVICE RATED** Yes

PHASE BUS RATING 400 A | **AVAILABLE SHORT CKT** 42 kAIC | **INTEGRAL SPD** No

LOCATION MECH 109 | **MOUNTING** SURFACE | **NO. OF POLES** 54 | **PANEL SECTIONS** 1

NOTE	LOAD DESCRIPTION	AMP	P	CKT. NO.	A		B		CKT. NO.	P	AMP	LOAD DESCRIPTION	NOTE
	RCPT - CORRIDOR	20 A	1	1	720	225			2	1	20 A	LTG - EXTERIOR	
	RCPT - RR NORTH	20 A	1	3			720	336	4	1	20 A	LTG - SHOWER, EF	
	RCPT - RR SOUTH	20 A	1	5	720	288			6	1	20 A	LTG - RESTROOM, EF	
	RCPT - MECH 109, EXTERIOR	20 A	1	7			540	180	8	1	20 A	WATER FOUNTAIN	GFCI
HPL	HAND DRYER 101	20 A	1	9	1560	1500			10	2	20 A	UHE-5,6	
HPL	HAND DRYER 102	20 A	1	11			1560	1500	12	--	--	--	--
HPL	HAND DRYER 103	20 A	1	13	1560	1500			14	2	20 A	UHE-1,2	
HPL	HAND DRYER 104	20 A	1	15			1560	1500	16	--	--	--	--
HPL	HAND DRYER 105	20 A	1	17	1560	1500			18	2	20 A	UHE-9,10	
HPL	HAND DRYER 106	20 A	1	19			1560	1500	20	--	--	--	--
HPL	HAND DRYER 107	20 A	1	21	1560	540			22	1	20 A	RCPT-MECH 110, EXTERIOR	
	HAND DRYER 108	20 A	1	23			1560	1500	24	2	20 A	UHE-3,4	
	UHE-17	20 A	2	25	1100	1500			26	--	--	--	--
--	--	--	--	27			1100	1500	28	2	20 A	UHE-11	
	UHE-13,14	20 A	2	29	1500	1500			30	--	--	--	--
--	--	--	--	31			1500	1500	32	2	20 A	UHE-15,16	
	UHE-18	20 A	2	33	1100	1500			34	--	--	--	--
--	--	--	--	35			1100	1500	36	2	20 A	UHE-7,8	
	EF-1	20 A	1	37	800	1500			38	--	--	--	--
	EF-2	20 A	1	39			800	2250	40	2	25 A	EWH-1	
	RCPT - SHOWER NORTH	0 A	1	41	720	2250			42	--	--	--	--
	RCPT - SHOWER SOUTH	0 A	1	43			720	15000	44	2	175 A	EWH-2	
	SPARE	0 A	1	45	0	15000			46	--	--	--	--
	SPARE	0 A	1	47			0	0	48	1	20 A	SPARE	
	SPARE	20 A	1	49	0	0			50	1	20 A	SPARE	
	SPARE	20 A	1	51			0	0	52	1	20 A	SPARE	
	SPARE	20 A	1	53	0	0			54	1	20 A	SPARE	
					KVA	41.703	KVA	40.986					
					AMPS	348	AMPS	342					

LOAD CLASSIFICATIONS	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
HVAC	64500 VA	100.00%	64500 VA
Lighting	849 VA	100.00%	849 VA
Power	12480 VA	100.00%	12480 VA
Receptacle	4860 VA	100.00%	4860 VA

CONNECTED LOAD: 82.689 345
MAXIMUM DEMAND: 82.689 345

NOTES:
AFCI - ARC FAULT CIRCUIT INTERRUPTION TYPE CIRCUIT BREAKER
C/# - CONTROL ZONE NUMBER FOR REMOTE CONTROL
BMS# - ROUTE CIRCUIT THROUGH BUILDING MANAGEMENT SYSTEM
GFCI - GROUND FAULT CIRCUIT INTERRUPTING TYPE CIRCUIT...
GFPE - GROUND FAULT PROTECTION EQUIPMENT CIRCUIT BREAKER
HLO - HANDLE LOCK ON DEVICE FOR CIRCUIT BREAKER
HPL- PADLOCK ATTACHMENT TO LOCK C/B HANDLE IN OPEN POSITION

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	DESCRIPTION	MANUFACTURER	MODEL	TOTAL INPUT WATTS	LAMP			VOLTAGE	DIMMING	MOUNTING	NOTES
					LUMENS	CCT	CRI				
L1	WALL MOUNT RECESSED HORIZONTAL LINEAR -4'. WET RATED	COOPER	4VT3-LD5-4-G-UNV-L835K-CD1	32	4000	3500 K	80	120	0-10V	WALL	MOUNTING HEIGHT 8'-0" AFF TO CENTER OF FIXTURE. COORDINATE FINAL LOCATION WITH ARCHITECTURE.
L2	WALL MOUNT RECESSED HORIZONTAL LINEAR - 4'	COOPER	4SNX-33SL-LN-UNV-L835-CD-1	21	3443	3500 K	80	120	0-10V	WALL	MOUNTING HEIGHT 8'-0" AFF TO CENTER OF FIXTURE. COORDINATE FINAL LOCATION WITH ARCHITECTURE.
L3	WALL MOUNT RECESSED HORIZONTAL LINEAR - 4'	COOPER	4SNX-57SL-LN-UNV-L835-CD-1	40	5884	3500 K	80	120	0-10V	WALL	MOUNTING HEIGHT 8'-0" AFF TO CENTER OF FIXTURE. COORDINATE FINAL LOCATION WITH ARCHITECTURE.
L3E	WALL MOUNT RECESSED HORIZONTAL LINEAR - 4' WITH BATTERY BACKUP	COOPER	4SNX-57SL-LN-UNV-L835-CD-1-EL7W	40	5884	3500 K	80	120	0-10V	WALL	MOUNTING HEIGHT 8'-0" AFF TO CENTER OF FIXTURE. COORDINATE FINAL LOCATION WITH ARCHITECTURE.
W1	WALL SCONCE RECTANGULAR	LITHONIA	WDGE1-LED-P2-35K-80CRI-VW-MVOLT-DBLXD	15	1929	3500 K	80	120	-	WALL	MOUNTING HEIGHT 7'-6' AFF TO CENTER OF FIXTURE. UNLESS NOTED OTHERWISE. COORDINATE FINAL LOCATION WITH ARCHITECTURE.
W1E	WALL SCONCE RECTANGULAR WITH BATTERY BACKUP	LITHONIA	WDGE1-LED-P2-35K-80CRI-VW-MVOLT-E 4WH-DBLXD	15	1929	3500 K	80	120	-	WALL	MOUNTING HEIGHT 7'-6' AFF TO CENTER OF FIXTURE. UNLESS NOTED OTHERWISE. COORDINATE FINAL LOCATION WITH ARCHITECTURE.

LIGHTING CONTROL SCHEDULE

TAG	ROOM TYPE	SEQUENCE OF OPERATION
MEC	MECHANICAL	WALL DEVICE: PROVIDE ON/OFF CONTROL. NO AUTOMATIC CONTROLS WITHIN THIS SPACE.
PRT	PRIVATE RESTROOMS/ SHOWERS	AUTO ON: UPON OCCUPANCY DETECTION, LIGHTS TO 100%. WALL DEVICE: PROVIDE ON/OFF CONTROL. OCC DELAY: 15 MINUTE DELAY, LIGHTS TO 0%.

CONDUIT APPLICATION SCHEDULE

APPLICATION	MATERIAL	FITTING TYPE (IF APPLICABLE)	NOTES
SERVICE ENTRANCE CONDUIT ABOVE GRADE ONLY	RIGID STEEL	-	-
SERVICE ENTRANCE CONDUIT BELOW GRADE WHERE NOT BELOW PAVED AREA	SCH 40 PVC	-	2
FEEDERS ABOVE GRADE	EMT	COMPRESSION	-
ALL BRANCH CIRCUITS FOR LIGHTING AND POWER	EMT	COMPRESSION	-
ALL HVAC EQUIPMENT, SUPPLY/EXHAUST FANS AND MOTORS	EMT	COMPRESSION	-
BRANCH CIRCUITS BELOW GRADE	PVC	-	1
THERMOSTAT WIRING OR CONTROL WIRING IN WALLS	EMT	COMPRESSION	-

1. TRANSITION TO EMT SHALL BE MADE PRIOR TO COMING UP FROM BELOW GRADE.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN UTILITY COMPAY REQUIREMENTS FOR PRIMARY SERVICE

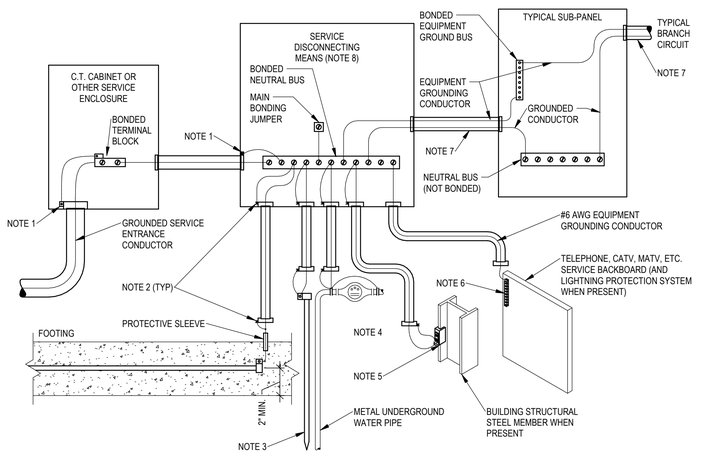
FEEDER SCHEDULE - COPPER

FEEDER	AMPACITY	NO. SETS	FEEDER WIRE AND CONDUIT
400-3S	400A	2	3-#3/0 CU - 2-1/2"C.

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

ITEM	DESCRIPTION	PANEL	CIRCUIT NO.	WIRE & CONDUIT SIZE	MOCP	VOLTS	PHASE	NUMBER OF POLES	DISC. BY	DISC. TYPE	DISC. SIZE
EF-1	EXHAUST FAN	L1	37	2 #12, #12 GND, IN 3/4" C	20	120	1	1	DIV. 23	-	-
EF-2	EXHAUST FAN	L1	39	2 #12, #12 GND, IN 3/4" C	20	120	1	1	DIV. 23	-	-
EWH-1	DOMESTIC WATER HEATER	L1	40,42	2 #10, #10 GND, IN 3/4" C	25	240	1	2	DIV. 26	TYPE 1	30
EWH-2	DOMESTIC WATER HEATER	L1	44,46	2 #2/0, #6 GND, IN 1-1/2" C	175	240	1	2	DIV. 26	TYPE 1	200
UHE-1	UNIT HEATER	L1	14,16	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-2	UNIT HEATER	L1	14,16	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-3	UNIT HEATER	L1	24,26	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-4	UNIT HEATER	L1	24,26	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-5	UNIT HEATER	L1	10,12	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-6	UNIT HEATER	L1	10,12	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-7	UNIT HEATER	L1	36,38	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-8	UNIT HEATER	L1	36,38	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-9	UNIT HEATER	L1	18,20	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-10	UNIT HEATER	L1	18,20	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-11	UNIT HEATER	L1	28,30	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-12	UNIT HEATER	L1	28,30	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-13	UNIT HEATER	L1	29,31	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-14	UNIT HEATER	L1	29,31	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-15	UNIT HEATER	L1	32,34	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-16	UNIT HEATER	L1	32,34	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 26	TYPE 1	30
UHE-17	UNIT HEATER	L1	25,27	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 23	-	-
UHE-18	UNIT HEATER	L1	33,35	2 #12, #12 GND, IN 3/4" C	20	240	1	2	DIV. 23	-	-

NOTES:
ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECT/RECEPTACLE AT EQUIPMENT LOCATION. LOCATE DISCONNECTS//RECEPTACLES/JUNCTION BOXES ADJACENT TO EQUIPMENT SERVED PER NFPA 70 REQUIREMENTS. COORDINATE EXACT MOUNTING LOCATIONS WITH ARCHITECT IF DISCONNECT IS NOT LOCATED WITHIN DEDICATED ELECTRICAL OR MECHANICAL SPACES. PROVIDE STRUT MOUNTING FOR DISCONNECTS IF REQUIRED. IF DISCONNECT IS TO BE LOCATED OUTDOORS, PROVIDE NEMA 3R RATING ON DISCONNECT. ALL DISCONNECTS SHALL BE PROVIDED WITH EQUIPMENT GROUND KIT.

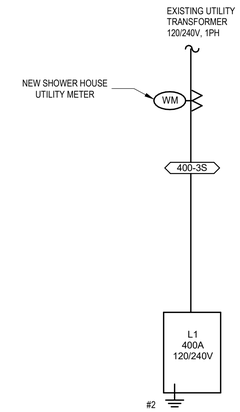


GENERAL NOTES APPLICABLE TO THIS DETAIL:
A. FOR CLARITY, PHASE CONDUCTORS ARE NOT SHOWN.

NOTES APPLICABLE TO THIS DETAIL:
1. ALL METAL CONDUITS ENCLOSING ANY SERVICE CONDUCTORS SHALL BE FITTED WITH A BONDING BUSHING. SIZE THE JUMPER PER NEC ARTICLE 250.
2. ALL METAL CONDUITS ENCLOSING ANY GROUNDING ELECTRODE CONDUCTOR SHALL BE FITTED WITH A BONDING BUSHING AT EACH END. SIZE THE JUMPER PER NEC ARTICLE 250.
3. PROVIDE AT LEAST ONE SUPPLEMENTAL GROUNDING ELECTRODE PER NEC IN THE FORM OF A 10'-0" x 3/4" COPPER CLAD GROUND ROD INSTALLED PER CURRENT NEC ARTICLE 250 REQUIREMENTS.
4. CONNECT TO THE BUILDING'S METAL UNDERGROUND WATER PIPE WITHIN 5' - 0" OF ITS ENTRANCE IN TO THE BUILDING AND JUMPER ANY WATER METER PER NEC REQUIREMENTS.
5. IF STRUCTURAL STEEL MEMBER IS AVAILABLE, BOND IT TO THE SERVICE USING A UL LISTED IRREVERSIBLE CLAMP OR WELDED LUG.
6. PROVIDE AN EQUIPMENT GROUND BAR AND ATTACH IT TO THE PHONE BOARD.
7. ALL BRANCH CIRCUIT AND FEEDER CONDUITS ARE TO HAVE AN INSULATED EQUIPMENT GROUNDING CONDUCTOR REGARDLESS OF THE CONDUIT MATERIAL.
8. PROVIDE A GROUNDING ELECTRODE ENCASED IN AT LEAST 2" OF CONCRETE AND LOCATED NEAR THE BOTTOM OF A CONCRETE FOUNDATION OR FOOTING THAT IS INDIRECT CONTACT WITH EARTH. GROUNDING ELECTRODE SHALL CONSIST OF AT LEAST 20' - 0" OF ONE OR MORE BARE OR ZINC GALVANIZED OR OTHER ELECTRICALLY CONDUCTIVE COATED STEEL REINFORCING BARS OR RODS OF NOT LESS THAN 1/2" IN DIAMETER OR AT LEAST 20' - 0" OF #4 AWG BARE COOPER CONDUCTOR. THIS CONCRETE ENCASED GROUNDING ELECTRODE IS ALSO KNOWN AS A "UFER" GROUND.

3 SERVICE ENTRANCE GROUND DETAIL

SCALE: NOT TO SCALE



1 SLD - BENNETT SPRINGS

SCALE: NOT TO SCALE

STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

STATE OF MISSOURI
KATLYN COLLIER
NUMBER
PE-2021046167
PROFESSIONAL ENGINEER
10/24/25

550 East St. Louis Street
Springfield, MO 65806
olsson.com
TEL 417.890.8802
FAX 417.890.8805

olsson

Olsson - Engineering
Missouri COA #001592

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF NATURAL RESOURCES,
STATE PARKS

CAMPGROUND #4
SHOWER HOUSE
REPLACEMENT

BENNETT SPRING
STATE PARK
LEBANON, MO

PROJECT # X2528-01
SITE # 5302
ASSET # 7815302022

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 10/24/2025

CAD DWG FILE:
DRAWN BY: ERR
CHECKED BY: KC
DESIGNED BY: ERR

SHEET TITLE:
ELECTRICAL SCHEDULES

SHEET NUMBER:
E-701