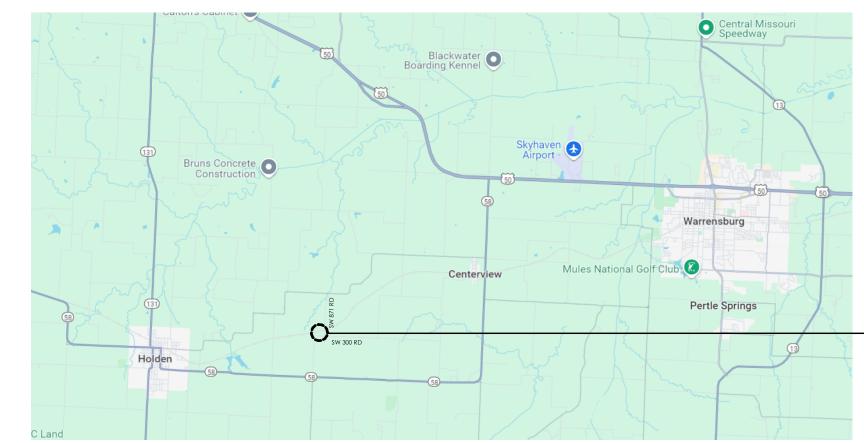
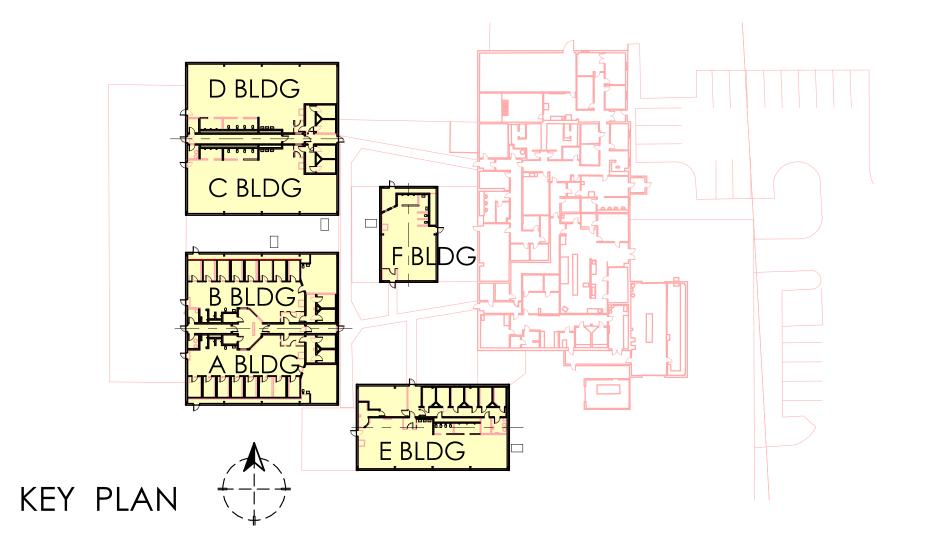
# JOHNSON COUNTY DETENTION CENTER -ROOF INSULATION REPLACEMENT

GONSTRUCTION DOCUMENTS



PROJECT LOCATION: 278 SW 871 CENTERVIEW, MO 64019

LOCATION MAP



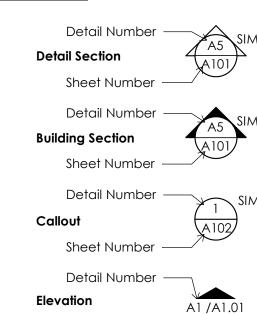
## DRAWING LIST

A0.00 COVER SHEET





#### **SYMBOLS**



## Room name

•	101
Room Number ——7	
Door Number	(10
Wall Type	S3A
Window Designation	Á
<b>Keynote Designation</b>	1
Spot Elevation	•
Pavisian Symbol	$\bigwedge_{1}$

## **BIDDING SCOPES:**

ALTERNATE A - Remove and replace metal roofing. ALTERNATE B - Foam insulation system

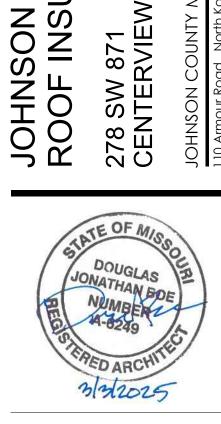
LITERNATE 1 - WORK SCOPE BUILDING C+D ALTERNATE 1A - Remove and replace metal roofing. ALTERNATE 1B - Foam insulation system

ALTERNATE 2 - WORK SCOPE BUILDING F ALTERNATE 2A - Remove and replace metal roofing. ALTERNATE 2B - Foam insulation system

LITERNATE 3 - WORK SCOPE BUILDING E ALTERNATE 3A - Remove and replace metal roofing. ALTERNATE 3B - Foam insulation system

BASE BID + ALTERNATES 1,2 & 3 - ALL BUILDINGS ALTERNATE A - Remove and replace metal roofing. ALTERNATE B - Foam insulation system

JOB NUMBER



**ISSUE DATE** 3/3/2025 No Description

WSKF, Inc. © 2024

COVER

A0.00

Vapor-Retarder Facing: For metal building, the facing should comply with ASTM C 1136, with permeance not greater than 0.02 perm (1.14 ng/N x s) when tested according to ASTM E 96/E 96M, Procedure A...

continuity of the facing throughout the roof and walls.

Basis-of-Design Product: Subject to compliance with requirements, provide Lamtec Corporation; **Lamtec WMP-50** or a comparable product by one of the following:

a. Raven Industries b. Reef Industries. Facing: Lamtec WMP-50.

Composition: 0.0005 inch (12.7 micron) white metallized polypropylene film laminated to a fiberglass/polyester blend fabric with a fire resistant adhesive. 1. Performance:

- a. Water Vapor Permeance: 0.02 perm (1.15 ng/N ·s) per ASTM E 96, Procedure A. b. Mullen Burst: 120 psi (8.4 kg/cm<sup>2</sup>).
- c. Tensile Strength: 65 lbs/inch (11.4 kN/m) in the machine direction and 60 lbs/inch (10.5 kN/m) in the cross-machine direction. d. Compliance: ASTM C 1136; ASTM C 991; ASTM E
- 84; ASTM E 96; ASTM C 1258; ASTM C 1338; Factory Mutual (FM) 4880; and UL 723. 2. Vapor Retarder Tape: Pressure-sensitive tape of type
- recommended by the vapor retarder or tape manufacturer for small repairs and sealing around penetrations in vapor retarder. Should match the vapor retarder selected above.
- FILLED CAVITY METAL BUILDING INSULATION SYSTEMS Filled Cavity / Liner System Banded Metal Building Roof Insulation Systems. 1. Description: High Performance Single Layer Filled Cavity roof insulation systems.

U-Factor: 0.047. 1) Faced Bottom Layer: R-21. 2) Purlin Depth: 8 inch (203 mm).

Components: a. Fiberglass Insulation: Complying with NAIMA 202-96 specification.

Insulation: Metal Building Insulation with a Vapor Retarder Facing.

1) Installed parallel to, and between

Facing: Lamtec Corporation: WMP-50 covering interior face of insulation.

Faced Bottom Layer Composite Surface Burning Characteristics: Flame spread index of 10 or less and a smoke developed index of 30 or less per ASTM E 84 or UL

Metal Banding:

- 1. Minimum 3/4 inch (19 mm) wide, installed under and perpendicular to purlins, 30 inches (762 mm) o.c. (nominal spacing) on the interior side.
- 2. Banding Screws: Minimum 1/2 inch (13 mm) hex-head

#### ALTERNATE 'A' SPECIFICATION:

Remove and replace the existing metal roof system as indicated on drawings and by provisions of this section and is defined to include metal roof panels, roof insulation, eave and gable trim, gutters and downspouts, roof mounted equipment curbs, plumbing vent flashings, sealants, fasteners, and miscellaneous flashings, closures and accessories directly related to the metal roof system.

Manufacturer's standard components shall be used provided components, accessories, and complete structure conform to design appearance shown and to specified requirements.

#### **QUALITY ASSURANCE**

- A. Design Criteria: 1. Minimum Design Standard: Design structural members, roofs and walls for applicable loads and combination of loads in accordance with Metal Building Manufacturer's Association (MBMA) "Recommended Design Practices Manual".
- 2. Design: The roof system shall be designed to sustain the specific loads in accordance with the IBC, which shall meet, or exceed, the County Climatic Data, as published in the MBMA Low Rise Building Systems Manual. The basic design gravity loads are indicated on the drawings, and wind uplift loadings shall be calculated from a basic wind speed of miles per hour in accordance with ASCE 7. Components of the roof system shall meet the design loads as described above, and applied in load combinations as specified in the IBC, without exceeding the allowable working stresses.
- Wind Uplift: . Metal roof system shall be a system that has been tested and approved by Underwriter's Laboratory
- as Class 90. 2. Metal roof system shall be tested in accordance with ASTM E-1592 "Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference"
- . Fire Classification: Roof system with fiberglass blanket insulation shall be certified by Underwriters Laboratories as a Class A roof covering assembly when tested in accordance with UL 790 (ASTM E-108 / NFPA 256) for exterior fire exposure. Roof system shall be approved and listed in the Factory Mutual Global Approval Guide as Class I Panel Roof (FMRC Standard A. A qualified technical representative of the
- ). Installer: Metal roof system installer shall be a firm that has been regularly engaged in the installation of preengineered metal roofing systems for a minimum period of five (5) year continuously prior to the bid date. The contractor shall be an authorized and franchised dealer of the metal roofing system manufacturer capable of showing successful
- installation similar to work required for this project. Fabrication Criteria: Clearly and legibly mark each piece and part of assembly to correspond with previously prepared erection drawings, diagrams, and instruction manuals.
- Manufacturing: Roof panels must be manufactured on a roll-forming mill that is in a fixed plant location. Field roll-forming of roof panels is not permitted.

#### SUBMITTALS

- A. Production Data: The Manufacturer shall submit product information, specifications, and installation instructions for building components, accessories, and
- 3. Shop Drawings: The Manufacturer shall submit complete erection drawings showing roof framing, transverse cross sections, covering and trim details, and accessory installation details to clearly indicate proper assembly of building components.
- . Structural Certification: The Manufacturer shall submit written certification prepared and sealed by a Professional Engineer, registered to practice in the state of Missouri, verifying that the metal roof system design meets indicated loading requirements and codes of authorities having jurisdiction.
- . The Manufacturer shall submit certification verifying that metal roofing system has been tested and approved by Underwriter's Laboratory as Class 90. Dealer Certification: The Manufacturer shall submit
- certification one week prior to bid date that the preengineered metal roof system contractor is a manufacturer's authorized and franchised dealer of the system to be furnished. Certification shall state date on which authorization was granted.
- Installer Certification: The Contractor shall submit documentation one week prior to bid date that the metal roof systems installer has been regularly engaged in the installation of metal roofing systems of same or equal construction to system specified for a minimum of five years. . Submittal Samples: For a non-listed, non-pre-approved
- roof system, the Contractor shall submit two (2) samples each of the following for the Specifiers review. Samples will be used as basis for evaluating quality of finished roofing system.
- 1. Twelve inch long by actual width of roofing with required finishes. 2. Fasteners and panel clips used for the application
- of roofing. 3. Sealants and closures. 4. Twelve inch long min. x 12 inch wide min. of actual standing seam side lap seams for both sides of a
- typical panel. 5. Length and width as required for actual standing seam roof panel and lap seam including stiffeners and fasteners and side lap seams both sides of typical panel.

#### DELIVERY, STORAGE, AND HANDLING

Deliver and store prefabricated components, panels, and other manufactured items so they will not be damaged or deformed. Stack materials on platforms or pallets, covered with tarpaulins or other suitable weathertight, ventilated covering. Store metal roof panels so that water accumulations will drain freely. Do not store panels in contact with other materials, which might cause staining

#### WARRANTIES

- A. Provide manufacturer's written weathertightness warranty for a minimum of ten (10) years against leaks in roof panels arising out of or caused by ordinary wear and tear under normal weather and atmospheric conditions. The warranty shall be signed by both the metal roof system manufacturer and the metal roof system contractor.
- a. To qualify, the secondary structural members must be pre-drilled and the roof panels must attach to the roof secondary structural members with Scubolt fasteners or Lock-Rivet fasteners and the panel-topanel attachment must use Lock-Rivet fasteners.
- B. Provide manufacturer's standard written paint film warranty for twenty-five (25) years on finish film integrity and color retention. The finish will not crack, check, peel, flake, or blister, or chalk in excess of ASTM D659 number 8 rating, or fade in excess of 5 units per ASTM D2244, under normal atmospheric conditions. The warranty shall be signed by the metal roof system manufacturer.
- C. Provide manufacturer's standard written warranty for twenty-five (25) years on the Galvalume coated steel material. The Galvalume coated steel will not perforate under normal atmospheric conditions. The warranty shall be signed by the metal roof system manufacturer.

#### JOB CONDITIONS

- 1. Provide special protection on newly completed roofing to avoid unusual wear and tear during installation.
- 2. Protect building walls, rooftop units, windows and other vulnerable components during installation.
- B. Environmental Requirements:
- 1. Comply with roof manufacturer recommendations as to allowable weather condition during installation. Also, take into account the effect of high winds during installation of the roof system.
- 2. Comply with local EPA and OSHA requirements as published by Local, State and Federal authorities.

#### INSPECTIONS AND JOB CONTROL

- manufacturer shall be available to make recommendations necessary to insure compliance with the specifications and to make recommendations where unforeseen conditions become apparent to the Specifier.
- B. As soon as all construction under this Section, as well as any construction which could in any way affect construction under this Section, has been completed, a final inspection of the roof system shall be made by a qualified representative of the roof system

#### MAINTENANCE INSTRUCTIONS

At the time of issuance of the warranty, a full set of instructions shall be included detailing preventative maintenance and noting a list of harmful substances, vnich may damage me rooi system.

#### PRODUCTS: GENERAL PRODUCT INFORMATION

Manufacturer: Provide metal roof system by Butler Manufacturing or pre-approved equal subject to conformance to all requirements indicated on drawings and specified herein.

#### Butler Rib II Roof System **Butler Manufacturin** Kansas City, Missouri

#### MATERIALS

A. Hot-Rolled Structural Shapes: ASTM A36 or A529.

B. Tubing or Pipe: ASTM A500, Grade B; ASTM A501; or

C. Members Fabricated from Plate or Bar Stock: 50,000 psi minimum yield strength; ASTM A529, A570, or A572 or A607. D. Members Fabricated by Cold Forming: ASTM A653 G-30,

Grade 50 with clear acrylic finish. E. Galvanized Steel Sheet: ASTM A446 with G90 coating;

"Class" to suit building manufacturer's standards.

#### ROOFING AND SIDING

- A. General: Provide roofing sheets roll formed to profile indicated and specified. Provide flashings, closures, metal expansion joints, ridge covers, roof panel mounting clips, thermal blocks, gable and eave trim, gutters, and other sheet metal accessories factory formed and finished. Material and finish shall be as
- . Allowances for thermal expansion: Pre-engineered F. Sealing Tape: 99% solids, pressure sensitive grey metal roof system shall be designed, fabricated, and installed to allow relative movement between roof panels and purlins, gables and ridges due to thermal expansion and contraction without causing damage to the system or permanent deformation to any of the system components. Roof panel end laps shall allow panels to expand and contract without damage to end lap splices. Roof panels are prepunched to provide minimal thru-panel fastener locations. Roof panel endlaps must be staggered to insure a continued unbroken panel through each endlap seam.

- B. Roof Panels: 26 gage x 3'-0" nominal width, factory roll formed, steel (42,000 PSI min. yield) sheet. Panels shall have three (3) major corrugations 1-1/2" high, 2-7/8" wide at the base tapering to 1-9/32" wide at the top, 12" on center. Minor corrugations 1" wide and 1/8" high shall be spaced a nominal 3" o.c. between and parallel
- 1. Roof Panel Finish: Provide manufacturer's standard coil applied full strength 70% fluoropolymer (Kynar 500/Hylar 5000) finish to roof panels

the appearance of 'oil-canning').

to major corrugations (minor corrugations help reduce

- a. Clean aluminum-zinc alloy coated steel with an alkaline compound and seal with a chromic acid b. Apply to exterior surfaces of pretreated aluminum-
- mils minimum. Color shall be as selected by Specifier from manufacturer's standards. c. Interior finish of roof panels shall be same as exterior finish or may be polyester color coat at manufacturer's option.

zinc alloy coated steel a fluoropolymer coating

system to provide a total dry film thickness of 0.90

- 2. Roof Panel Side Laps: Panels shall be designed to provide overlapping corrugations with a sealant groove roll-formed into the lower corrugation. The sealant groove shall provide a precise location and space for the field-installed high quality butyl rubber sealant. Butyl rubber sealant shall contain hard nylon spacer beads to insure the required amount of sealant is retained in the panel side lap joint.
- 3. Roof Panel End Laps: Panel end laps, when required, shall be at least 6", sealed with high quality butyl rubber sealant between the panels. Butyl rubber sealant shall contain hard nylon spacer beads to insure the required amount of sealant is retained in the panel end lap joint. Roof panels shall be prepunched or predrilled where end lap splices occur. The panel punching shall be a 5/16" diameter hole in the upper panel and a 5/16" by 3/4" slot in the lower panel. The "hole over slot" connection will allow for roof panel expansion and contraction movement at the endlap splice. Pre-punching or pre-drilling may be performed in the field provided hole locations are carefully controlled to assure accurate modular
- spacing of roof panels side laps and accurate alignment of holes at endlaps seams and at panel to **GENERAL** eave strut connections. Endlaps shall occur directly over a supporting secondary structural member in order to fully support the panel end laps under roof loading and to prevent endlaps failure caused by cantilevering of end laps off of the supporting structural member.
- 4. Ridge panel, when required, shall be made from the same material as the roof panels. The ridge panel shall be one piece, factory curved with a profile to match the roof panels. Factory curving shall match the roof slope across the ridge. The ridge panel shall be supported by and fastened to the roof secondary structural member located on either side of the building center.
- 5. Sheet Panel Fasteners: Manufacturer's standard system of self-tapping screws, self-drilling screws, bolts **ROOFING** and nuts, self-locking rivets, self-locking bolts, and
- a. Provide metal-backed EPDM gasketed washers under heads of fasteners bearing on weathering side of panels. b. Use stainless steel fasteners or galvanized steel with a dichromate dipped treatment for exterior application and galvanized or cadmium-plated
- fasteners for interior applications. Lockrivets where required shall be aluminum or stainless steel. c. Locate and space fasteners for true vertical and horizontal alignment. Use proper type fastening tools to obtain controlled uniform compression for positive seal without rupture of the EPDM sealing
- d. Fastener location and quantity shall be identified on the manufacturer supplied installation drawings. Fastener options: 1. The standard panel-to-structural member fastener shall be a 3/8" diameter, 3/8" hex
- head galvanized steel, dichromate coated, Scrubolt self-tapping screw with a 5/8" o.d. EPDM backed sealing washer. 2. The panel-to-panel fastener shall be a self-
- clinching aluminum Lock-Rivet fastener, 3/4" diameter low profile head with a EPDM sealing gasket under the head.
- E. Flexible Closure Strips: Closed-cell, expanded cellular rubber, self-extinguishing, cut or pre-molded to match corrugation configuration of roofing sheets. Provide where indicated and necessary to ensure weathertight construction. Foam closures of any kind are not acceptable.
- polyisobutylene compound tape with release paper backing. Not less than 1/2" wide and 1/8" thick, non-sag, non-toxic, non-staining and permanently elastic. Tape sealant shall have integral hard nylon spacer beads to insure the correct thickness of sealant is retained in
- E. Joint Sealant: One-part elastomeric polyurethane or polysulfide as recommended by building manufacturer.

#### SHEET METAL ACCESSORIES

- A. General: Unless otherwise indicated, provide coated steel accessories with coated steel roofing (same material), provide painted steel accessories with painted roof panels.
- B. Gutters: Formed in sections not less than twenty (20) feet in length, complete with end pieces, outlet tubes, and special pieces that may be required. Join sections with riveted and sealed joints. Unless otherwise indicated, provide expansion joint with cover plate where indicated. Furnish gutter supports spaced at maximum 48" o.c., constructed of same metal as gutters. Provide stainless steel or aluminum wire ball strainers at each outlet. Gutters shall be minimum 26gage roll formed steel, with Flouropolymer paint finish. Gutter outlet tubes shall be fabricated as indicated on drawings. Gutter size and configuration shall be as indicated on drawings.
- C. Downspouts: Formed in sections not less than ten (10) feet in length complete with any special pieces that may be required. Join sections with riveted and sealed joints. Downspouts shall be minimum 26-gage roll formed steel. Finish shall match gutter or wall panels. Gutter straps shall be spaced 8' o.c. maximum and be same material as gutter. All strap edges shall be rolled or smooth.
- D. Roof Curbs: Provide manufacturer's standard roof curb units for roof mounted equipment as indicated or is not indicated as required to adequately support equipment. Roof curbs shall be aluminum, thickness as design loads will allow and shall provide for a weathertight seal with standing seam roof system. Crickets shall be provided on high side of curbs for proper drainage as an integral part of roof curb design. All curbs shall be made from welded minimum 0.080" thick aluminum and have an internal flange design (three sides of the curb will have no exposed fasteners). Curbs shall be supported by and clamped to galvanized steel support channels that rest on, but are not fastened to, the supporting secondary structural members.

#### **EXECUTION**

- A. Metal roofing system shall be installed in strict conformance with manufacturer's instructions. System shall comply with Underwriter's Laboratory U.L. Class 90 wind uplift rating and/or FMG rating. Roof panels shall be installed to allow for relative movement between roof panels and ridge, gables, fascias, and other components of the roof system.
- B. At no time shall the roof panel be considered a safe work platform until completely seamed and secured to the structural system. Therefore, walk boards or other safety equipment, as required by safety standards, shall be provided by the installing contractor to provide for worker safety during

- other suitable fasteners designed to withstand design A. Roof Sheets: Secure roof panels to structural members by means of the sliding-tab panel clip fastened to the structural members and securely locked into the roof panel seam. Sliding tab shall be centered in mounting roof panel clip.
  - B. Panel seams shall be a full (Pittsburgh) double-lock, field formed using manufacturer's standard four-stand minimum forming machine. Cracking or splitting of metal or cracking, peeling, blistering or other damage to panel coating shall not be acceptable. Panels shall be securely fastened to eave structural member and sealed watertight.
  - C. Panel end lap splices shall consist of pre-punched and pre-notched roof panels bolted together with backup plate, top strap and sealed weathertight. A top aluminum stiffener strap shall be incorporated as part of the end lap splice assembly. End lap splices shall be staggered across the field of the roof so that in no event shall end lap seams occur together in adjacent panels. End lap seams shall be tight and flat. Fish mouthing of panels between fasteners is not
  - D. Thermal Insulation: Install in accordance with manufacturer's published directions, performed concurrently with installation of roof panels. Install blankets straight, true and uniformly.
  - E. Provide weatherseal under ridge cap/flash and seal roof panels at eave and rake with rubber or EPDM molded closures to exclude weather.
  - F. Sheet Metal Accessories: Install gutters, roof curbs, ventilators, louvers, and other sheet metal accessories in accordance with manufacturer's recommendations for positive anchorage to building and weathertight mounting.
  - G. Dissimilar Materials: Where aluminum or zinc surfaces come in contact with ferrous metal or other incompatible materials, keep aluminum or zinc surfaces from direct contact by applications to the other material as follows
    - 1. One coat of zinc chromate primer, FS TT-P-645, followed by two coats of aluminum paint, SSPC-Paint 101. In lieu of two coats of aluminum paint, apply one coat of high build bituminous paint, SSPC-Paint applied to a thickness of 1/16" over zinc chromate primer. Back-paint aluminum surface where impractical to paint other surface.

### **ALTERNATE 'B' SPECIFICATION:**

- .. SECTION INCLUDES 1. Spray polyurethane foam insulation.
- 2. Thermal barrier (fire resistive) coating.
- 1. American Society for Testing and Materials (ASTM): a. ASTM C 518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of
- the Heat Flow Meter Apparatus.
- Absorption of Rigid Cellular Plastics. of Building Construction Materials.
- Burning Characteristics of Building Materials. e. ASTM E 96 - Standard Test Method for Water
- f. ASTM E 283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the
- Specimen 2. National Fire Protection Association (NFPA): a. NFPA 275, Standard Method of Fire Tests for the

Evaluation of Thermal Barriers.

- 3. Underwriters Laboratories (UL): Burning Characteristics of Building Materials. b. UL 1715 - Fire Test of Interior Finish Material.
- 1. Product Data: Manufacturer's data on products to be installed including: a. Technical Data Sheets

b. Safety Data Sheets

- b. Intertek CCRR (Code Compliance Research
- specification requirements, provide letter of certification that all products comply with the specification requirements; include primers (if required), foam, vapor retarder and thermal barriers.
- 1. Installer Qualifications: A firm with experience installing insulation systems of the type specified. a. Approved by the foam manufacturer as qualified to install the specified system or be certified by the Spray Polyurethane Foam Alliance (SPFA)
- nature to the one proposed including location and person to be contacted. 2. Mock-up: Provide a mock-up for evaluation of
- surface preparation techniques and application workmanship. a. Finish areas designated by Architect.
- acceptable work DELIVERY, STORAGE, AND HANDLING 1. Provide materials packaged in the manufacturer's original, tightly sealed containers or unopened packages, clearly labeled with the manufacturer's name, product identification, safety information, and batch or lot numbers where appropriate.
- specification, the labels shall bear the specification number, type and class, as applicable. 2. Comply with the manufacturer's written instructions for the storage, handling, and protection of
- sunlight in locations where the temperatures are within the limits specified by the manufacturer. PROJECT CONDITIONS . Comply with the manufacturer's instructions and
- 1. Provide manufacturers standard 3-year Limited

#### PART 2 PRODUCTS

- . MANUFACTURERS 1. Provide products by BASF Corporation, 1703 Crosspoint Avenue, Houston, TX 77054. Tel: (800)706-0712. Fax: (713) 383-4592. <u>www.spf.basf.com/</u>, <u>spfinfo@basf.com</u>
- provisions of Section 01600 . MATERIALS polyurethane foam system utilizing an EPAapproved, zero ozone depleting blowing agent. WALLTITE® foam products are made by combining
  - b. Density in Place: 2.0 to 2.3lb/cu ft, when tested in accordance with ASTM D 1622.
    - accordance with ASTM D 6226. e. R-Value: 6.9 @ 1", 25 @ 3.5", when tested in accordance with ASTM C518.
  - ASTM E-96. g. Flame Spread Index: Less than or equal to 25, when tested in accordance with ASTM E 84.
  - tested in accordance with ASTM E 283 See product specific technical data sheets for additional physical data http://www.spf.basf.com/technical\_data.php

#### OAMED IN PLACE INSULATION

#### PART 1 GENERAL

- . REFERENCES
- b. ASTM D 2842 Standard Test Method for Water
- c. ASTM E 119 Standard Test Methods for Fire Test d. ASTM E 84 - Standard Test Method for Surface
- Vapor Transmission of Materials.

b. NFPA 286, Standard Methods of Fire Tests for

- Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth. a. UL 263, UL 723 - Standard for Test for Surface
- SUBMITTALS
- c. Application or installation instructions. 2. Code Research Reports including: a. ICC-ES (International Code Council Evaluation Service) http://www.spf.basf.com/evaluation\_reports.p
- 3. Certifications: If manufacturer's published data sheets do not indicate compliance with all
- . QUALITY ASSURANCE Professional Certification Program (PCP).
- b. Provide information concerning projects similar in
- b. Do not proceed with remaining work until installation is approved by Architect. c. Rework mock-up as required to produce
- Where materials are covered by a referenced
- products, both prior to and during installation. 3. Store materials out of the weather and out of direct
- industry recommendations as to handling and safety procedures. . WARRANTY

- 2. Submit requests for substitutions in accordance with 1. Foam: BASF Corporation WALLTITE® branded Low -GWP sprayed-in-place two-component closed-cell

an isocyanate (A) component with a polyol (B)

- component, with the following physical characteristics: a. ASTM C 1029 – Type II Compliant
- c. Compressive Strength: 26 psi, when tested in accordance with ASTM D 1621. d. Closed Cell Content: >90%, when tested in
- f. Vapor Permeance (perms): 1.09 1.28 @ 1" thickness, when tested in accordance with
- h. Smoke Developed Index: Less than or equal to 450, when tested in accordance with ASTM E i. Air Leakage: <0.005 L/s\*m² @ 75 Pa when

place cementitious materials or Sprayed-in-place cellulose fiber, applied to achieve fire resistance rating of 15 minutes over spray polyurethane foam in accordance with NFPA 275 or NFPA 286 or UL 1715. 3. Primers: (if required): —The primer to be applied must be specifically selected for the given substrate to be primed and must be compatible with the spray polyurethane foam.

2. Thermal Barrier: Intumescent Coating or Sprayed-in-

a. Wood: chlorinated rubber, modified alkyds,

d. Concrete/masonry: chlorinated rubber, vinyl

- b. Steel: modified alkyds, epoxy, acrylics, others
- (typically including rust inhibitors). c. Galvanized: vinyl copolymer acrylic, "vinyl wash primer", modified alkyds, others.
- copolymer acrylic, asphaltic, other. 4. Fire Resistant assemblies available, tested in accordance with UL 263.

#### PART 3 EXECUTION

B. PREPARATION

- A. GENERAL 1. Comply with the instructions and recommendations of the foam and other material manufacturers.

2. Familiarize all installers with correct and safe

application and handling procedures: 3. Workbook for High Pressure application of Spray Polyurethane Foam, June 2016. See www.spraypolyurethane.org for industry guidelines. 4. Refer to appropriate Safety Data Sheets (SDS) and

Technical Product Data Sheets for additional

safety information http://www.spf.basf.com/technical\_data.php. 5. Installer(s) must be able to provide documentation that they have completed the Spray Polyurethane Foam Chemical Health & Safety Training from the Center for Polyurethanes Industry, which can be found on the following website:

<u>www.spraypolyurethane.org</u>.

- 1. Primed Steel: If the surface is free of loose scale, rust, weathered or chalking paint, it can be cleaned using vacuum equipment and hand or power tools to remove loose dirt. Remove oil, grease, form release agents, laitance, and other contaminants using proper cleaning solutions.
- 2. Previously Painted Steel: Clean using hand or power tools to remove loose scale and dirt. Remove oil, grease, form release agents, laitance, and other contaminants using proper cleaning solutions.
- 3. Galvanized Steel and Unpainted Steel: Clean as recommended by primer manufacturer. 4. Ferrous Metal: Sandblast iron and steel surfaces, which are not primed, shop painted, or otherwise protected in accordance with SSPC SP-6. Remove

5. Non-Ferrous Metal: Clean galvanized metal,

aluminum, and stainless-steel surfaces as recommended by the manufacturer of materials to 6. If metal surface is free of loose scale, rust, weathered or chalking paint, clean using compressed air jet, vacuum equipment, and hand

loose rust and unsound primer from shop-primed iron

and steel surfaces by scraping or wire brushing.

- or power broom to remove loose dirt. Remove grease, oil and other contaminants using proper cleaning solutions. 7. Previously Painted Surfaces: Remove all loose paint. 8. Remove loose dirt, dust and debris by using compressed air, vacuum equipment or brooming. Remove oil, grease, form release agents, laitance,
- solutions. Do not wash wood or porous materials with water. 9. Grout, tape, or calk all joint openings that exceed
- 1/4 inch (6 mm) in width. C. FOAM APPLICATION 1. Do not begin application of foam until all

preparation requirements have been completed.

and other contaminants using proper cleaning

- 2. Do not apply foam when the temperature is below the minimum specified in the technical data sheet for the specific material selected.
- 3. Apply foam in accordance with the BASF specifications and processing guidelines. 4. Apply foam to a 2 inch thickness, with pass thickness of 1/2 inch (13 mm) to 4 inches (50 mm). If specifying WALLTITE® LWP, thickness, will be 1/2 inch (12.7 mm) maximum thickness 2 inches (102 mm) per
- pass. Allow cooling time of 10 minutes per inch applied between passes. D. THERMAL BARRIER APPLICATION 1. The interior surface of the spray polyurethane foam must be covered with a 15-minute rated thermal barrier (fire protection) as required by building codes, insurance and industry standards. Certain areas such as sill plate/rim joists and attics/crawlspaces have specific exceptions per the building code. See Foam Plastics in your local building code for guidance. When required, apply thermal barrier in accordance with building code requirements and the manufacturer's specifications
- meets this thermal barrier requirement for residential and commercial construction. See above for alternative materials. 2. Apply thermal barrier over entire surface of foam in

and instructions. As a standard, gypsum board

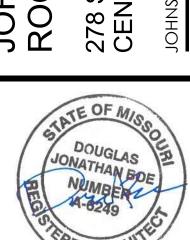
- accordance with manufacturer guidelines. 3. Allow thermal barrier to cure. Inspect for defects and repair defects prior to subsequent coats. E. FIELD QUALITY CONTROL
- 1. The installer shall complete the installation certificate documenting the foam type, manufacturer, product name, lot/batch number, as well as any fire protective products that have been used. The installation card shall be signed by the Insulation Contractor representative and delivered to the general contractor or building owner.



#2003011262

JOB NUMBER

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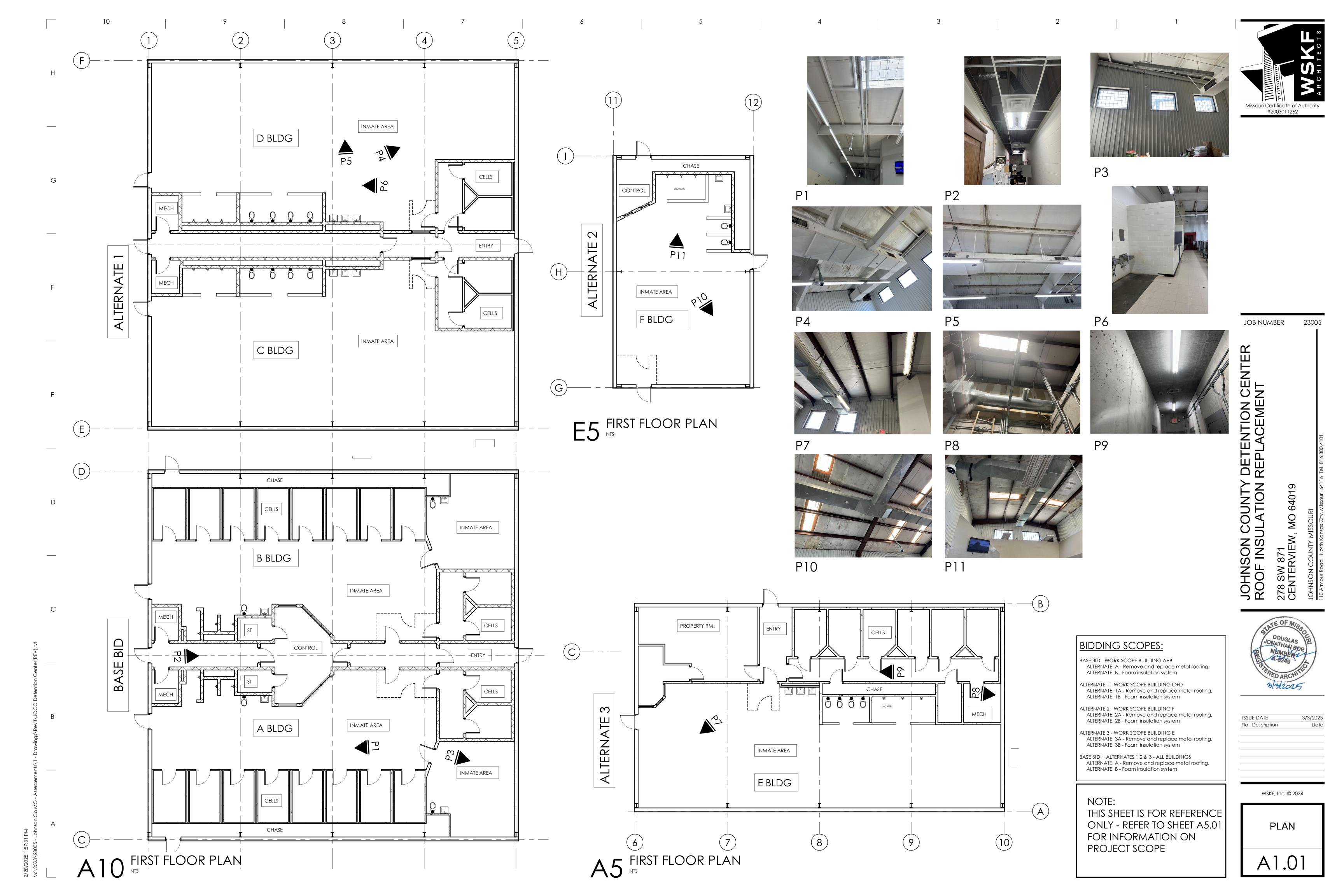
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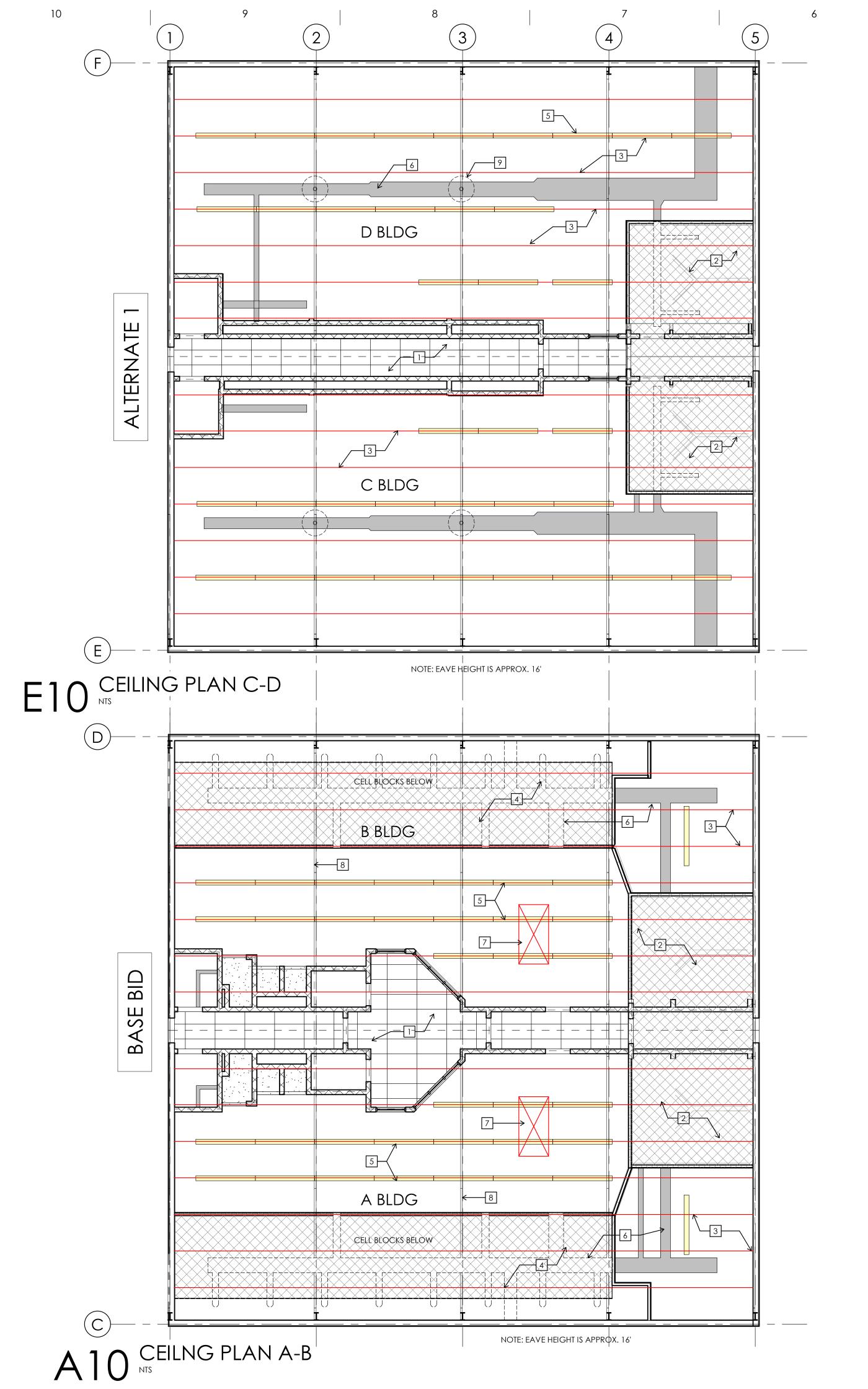
3/3/2025

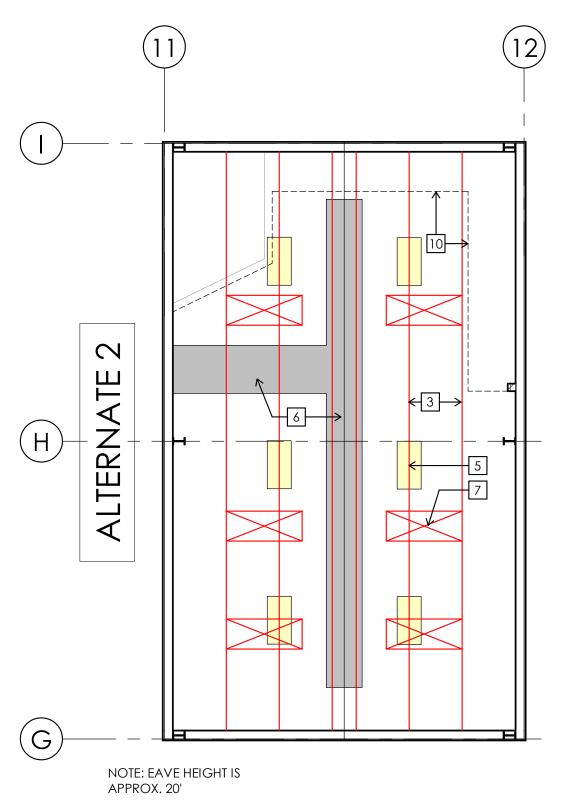
**ISSUE DATE** 

No Description

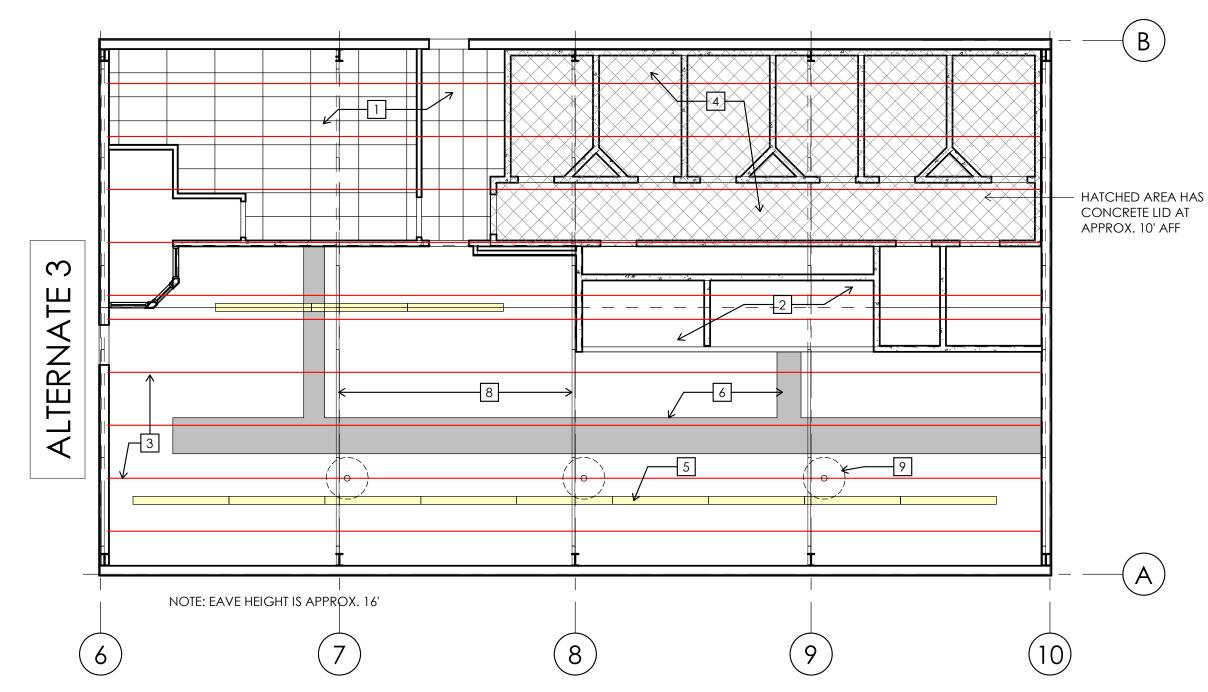
SPECIFICATIONS







E5 CEILING PLAN BDG F



A5 CEILING PLAN BLDG E

#### **GENERAL NOTES:**

. CONTRACTORS TO VERIFY EXISTING CONDITIONS PRIOR

- . DRAWING DO NOT SHOW ALL CEILING MOUNTED EQUIPMENT/ITEMS AND CONTRACTORS SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL EXISTING
- CONDITIONS PRIOR TO BIDDING . REFER TO COVER SHEET FOR ADDITIONAL PRODUCT INFORMATION
- . CONTRACTORS TO COORDINATE ALL WORK WITH
- DETENTION CENTER STAFF
- . PROJECT WILL BE PHASED PER BUILDING AND SHALL BE COORDINATED WITH SHERIFF'S STAFF 6. TOTAL BUILDING AREA IS APPROX. 17,800 S.F.
- . ALL ROOF INSULATION TO BE REMOVED AND REPLACED WITH NEW BANDED/LINER INSULATION SYSTEM. FULL PURLIN DEPTH BATT INSULATION WITH BANDED LAMTEC WMP-50 REINFORCE VINYL FACING MEMBRANE PER BASE BID AND ALTERNATES. REFER TO ADDITIONAL ALTERNATES FOR OTHER CONSTRUCTION OPTION AND MATERIALS.
- . CONTRACTORS SHALL REMOVE AND REINSTALL ALL MECHANICAL, ELECTRICAL & PLUMBING ITEMS AS REQUIRED FOR INSTALLATION OF INSULATION SYSTEM
- . CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND EXISTING CONDITIONS. ANY DISCREPANCIES WHICH WILL PREVENT THE
- ACCOMPLISHMENT OF INTENT SHOWN ON DRAWINGS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT
- 10. THE CONTRACTOR SHALL PATCH TO MATCH ADJACENT SURFACES OF EXISTING WALLS AND FLOORS IN ALL AREAS THAT REQUIRE THE REMOVAL OF EXISTING
- 1. DAMAGE TO ANY SURFACE OR BUILDING COMPONENT NOT MARKED FOR DEMOLITION SHALL BE REPAIRED LIKE NEW. PROTECT EXISTING-TO-REMAIN ITEMS AND AREAS DURING CONSTRUCTION.
- 2. COORDINATE ALL WORK WITH OWNER WORK THAT WILL IMPACT EXISTING BUILDING SYSTEMS SHALL BE REVIEWED WITH THE OWNER AT LEAST 48 HOURS IN ADVANCE OF
- 3. PROTECT EXISTING CONSTRUCTION WORK WHICH IS NOT SCHEDULED TO BE REMOVED.

## PLAN NOTES:

CONSTRUCTION

1 SUSPENDED LAY-IN CEILING

2 HARD FRAMED CEILING - OPEN ABOVE

3 APPROX. LOCATION OF ROOF PURLINS

HOLDING CELLS BELOW W/ STEEL OR C.I.P CONC CEILING AND OPEN ABOVE

5 EXISTING LIGHTS TO REMAIN, FIELD VERIFY

6 EXISTING SUSPENDED DUCTS, TO REMAIN, FIELD VERIFY

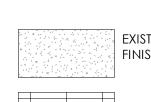
7 EXISTING SKYLIGHT UNIT, TO REMAIN

8 PEMB FRAME LOCATIONS

9 CEILING FANS

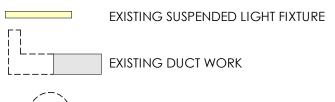
[10] LINE OF SLOPED GYP. BD. ENCLOSURE BELOW

## **LEGEND:**



EXISTING PAINTED GYP. BD CEILING PER FINISH LEGEND

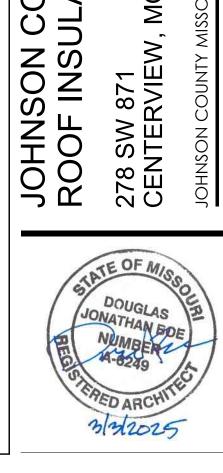
EXISTING ACOUSTIC CEILING GRID &



EXISTING DUCT WORK



EXISTING CEILING FANS



3/3/2025

**ISSUE DATE** 

No Description

Missouri Certificate of Authority

#2003011262

JOB NUMBER

ENTION

**BIDDING SCOPES:** 

BASE BID - WORK SCOPE BUILDING A+B ALTERNATE A - Remove and replace metal roofing.
ALTERNATE B - Foam insulation system

ALTERNATE 1 - WORK SCOPE BUILDING C+D ALTERNATE 1A - Remove and replace metal roofing. ALTERNATE 1B - Foam insulation system

ALTERNATE 2 - WORK SCOPE BUILDING F ALTERNATE 2A - Remove and replace metal roofing.

ALTERNATE 2B - Foam insulation system ALTERNATE 3 - WORK SCOPE BUILDING E

ALTERNATE 3B - Foam insulation system BASE BID + ALTERNATES 1,2 & 3 - ALL BUILDINGS

ALTERNATE A - Remove and replace metal roofing. ALTERNATE B - Foam insulation system

ALTERNATE 3A - Remove and replace metal roofing.

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REFLECTED **CEILING PLAN**