POST-BID ADDENDUM NO. 1 - Issued 04-03-2025
to the Project Manual and Drawings for

MAINTENANCE SHOP ADDITION
CRAIGHEAD ELECTRIC COOPERATIVE
JONESBORO, ARKANSAS
WDD JOB NO. 24-096

WITTENBERG, DELONY & DAVIDSON, INC.
5050 NORTHSHORE LANE
NORTH LITTLE ROCK, ARKANSAS 72118
(501)376-6681

This addendum forms a part of the contract documents and modifies or interprets the Project Manual and/or Drawings as noted herein.

GENERAL INFORMATION:

1. Refer to Narrative (8 Sheets) titled Craighead Electric, Maintenance Shop Addition, Project No. 24-096, Post Bid Addendum #1, dated 04-03-2025, which is attached to this addendum and is made a part of the Bid Documents.

REFER TO THE PROJECT MANUAL:

Section 00 11 16:

1. See Part 1.01 where the contractor has the option to submit electronic submission via email, but signed paper document forms shall be delivered to architect by stated date, prior to issuance of certified Bid Tabulation form.

Section 00 41 13:

1. Contractor shall fill in all requisite blank lines as if this were a new Bid Form and not assume that any previously submitted bid information will be carried forward. This includes number of construction days, addenda (1 & 2), Unit Prices (1 & 2), and List of Subcontractors. In addition to revised Base Bid price, Contractor may fill in revised Unit Prices (if any), and different subcontractors not previously listed.

Section 06 61 16:

1. DELETE Solid Surfacing Fabrications Section in its entirety.

Section 07 41 13:

1. DELETE Metal Roof Panels Section in its entirety. Refer to Section 13 34 19 - Metal Building Systems.

Section 07 42 13:

1. DELETE Metal Wall Panels Section in its entirety. Refer to Section 13 34 19 - Metal Building Systems.

Section 09 31 00:

1. DELETE Thin-Set Tile Section in its entirety.

Section 09 65 19:

1. DELETE Resilient Tile Flooring Section in its entirety.

Section 09 67 00:

1. DELETE Fluid-Applied Flooring Section in its entirety.

Section 10 51 29:

1. DELETE Phenolic Lockers Section in its entirety.

Section 26 32 13:

1. DELETE Diesel Engine-Drive Generator Sets Section in its entirety.

ADDENDUM SPECIFICATION SECTIONS:

Section 00 11 16 - Invitation To Bid, Section 00 41 13 - Bid Form-Stipulated Sum (Single Prime Contract), Section 13 34 19 - Metal Building Systems, and section 23 09 93 - Controls Sequences dated 04-03-2025 are attached to this addendum and are made a part of the Bid Documents.

REVISED DRAWINGS:

Sheets T110, T120, A110, A120, A150, A201, A310, A320, A321, A322, A330, A410, A420, A460, A610, A611, A620, S100, S101, S102, S201, S103, M001, M101, M102, M201, M301, M401, M501, P101, P201, P401, E001, E201, E301, E302, E401, E501, E601, and F101 of original issue date 02-14-2024 and revised 04-03-2025 are attached to this addendum and are made a part of the Bid Documents.

ISSUE DRAWINGS:

Sheet M402 of original issue date 02-14-2024 is attached to this addendum and is made a part of the Bid Documents.

END OF POST-BID ADDENDUM NO. 1

Craighead Electric	04/03/25
Maintenance Shop Addition	Post Bid ADD#1
PROJECT NO. 24-096	

The scope of this Addendum is to revise the originally issued construction documents for the Craighead Electric Maintenance Shop Addition dated 02/14/25, and all the subsequent contract modifications to reflect the following:

Summary of Changes

- VE updates
- Revise exterior finish update
- Revise flooring
- MEP updates

SPECIFICATIONS

Section 23 09 93 – CONTROL SEQUENCES

1. Revised specification section.

Section 26 32 13 – DIESEL ENGINE-DRIVEN GENERATOR SETS

1. Delete specification section in its entirety from project. Generator will be owner-furnished, owner-installed.

Section 26 28 16 – ENCLOSED SWITCHES AND CIRCUIT BREAKERS

1. Refer to Paragraph 2.01(C). Add Type GD General-Duty fusible disconnects as acceptable equipment.
2. Refer to Paragraph 2.02(D). Add Type GD General-Duty non-fusible disconnects as acceptable equipment.

GENERAL

SHEET T110 – SHEET INDEX AND GENERAL INFORMATION

SHEET INDEX

1. Added sheet M402

SHEET T120 – LIFE SAFETY PLAN AND CODE INFORMATION

CODE NOTES

1. Revised note
2. Revised “OCCUPANCY CLASSIFICATION” information
3. Revised “ACTUAL AREA” and “SEPARATION” information

LIFE SAFETY SYMBOL LEGEND

1. Add “1 HR FIRE WALL”, removed “2 HR FIRE WALL”

Detail 1 - LIFE SAFETY PLAN

1. Revised walls at Breakroom
2. Sprinkler information added

Detail 2 - LIFE SAFETY PLAN - MEZZANINE

1. Sprinkler information added
2. Show fire wall

ARCHITECTURAL

SHEET A110 – DIMENSIONED FLOOR PLAN

Detail 1 - DIMENSIONED FLOOR PLAN

1. Add note
2. Removed Dimension

SHEET A120 – NOTED FLOOR PLAN
Detail 1 - NOTED FLOOR PLAN
1. Revised wall, remove cased opening
2. Revised wall and removed section marker

Detail 5 - COLUMN WRAP
1. Revised note

SHEET A150 – ROOF PLAN
KEYNOTE LEGEND
1. Revised KN 7.03

Detail 3 - TYPICAL EXTERIOR ROOF ASSEMBLY - RIDGE DETAIL
1. Detail revised

SHEET A201 – EXTERIOR ELEVATIONS
KEYNOTE LEGEND
1. Revised KN 7.03

Detail 1 - WEST ELEVATION
1. Add Keynote
2. Add Keynote

Detail 2 - EAST ELEVATION
1. Add Keynote
2. Add Keynote

Detail 4 - SOUTH ELEVATION
1. Add Keynote

SHEET A310 – BUILDING SECTIONS
Detail 3 – BUILDING SECTION
1. Revised Keynote

Detail 4 – BUILDING SECTION
1. Revised Keynote

Detail 5 – BUILDING SECTION
1. Revised Keynote

SHEET A320 – WALL SECTIONS
Detail 1 – BUILDING SECTION
1. Revised note
2. Revised note

Detail 2 – BUILDING SECTION
1. Revised note
2. Revised note

Detail 3 – BUILDING SECTION
1. Detail revised

Detail 4 – BUILDING SECTION
1. Detail revised

SHEET A321 – WALL SECTIONS

Detail 1 – BUILDING SECTION
1. Revised note
2. Revised note

Detail 2 – BUILDING SECTION
1. Revised note
2. Revised note

Detail 3 – BUILDING SECTION
1. Revised note
2. Revised note

Detail 4 – BUILDING SECTION
1. Revised note
2. Revised note
3. Note added

Detail 5 – BUILDING SECTION
1. Add note
2. Revised note

SHEET A322 – EXTERIOR DETAILS

Detail 1 - FOUNDATION DETAIL
1. Revised note

Detail 2 - FOUNDATION DETAIL
1. Detail removed

Detail 3 - FOUNDATION DETAIL
1. Revised note

Detail 4 - METAL CANOPY CONNECTION
1. Revised note

Detail 5 - TYPICAL EXTERIOR WALL ASSEMBLY
1. Revised note
2. Revised note
3. Revised note
4. Removed note

Detail 6 – CORNER DETAIL
1. Revised note
2. Revised note

Detail 8 - CONNECTION DETAIL
1. Revised note
2. Add notes
3. Removed CMU
4. Add notes

Detail 11 - CMU TO METAL PANEL TRANSITION
1. Revised note
2. Removed note
3. Add plywood Sheathing

SHEET A330 – PARTITION TYPES, DETAILS AND INTERIOR DETAILS

PARTITION LEGEND

1. Add note
2. Add wall type

SHEET A410 – ENLARGED PLANS

Detail 1 - ENLARGED OFFICE PLAN

1. Revised door
2. Removed height and revised wall tag
3. Removed height and revised wall tag
4. Removed height and revised wall tag
5. Removed height and revised wall tag
6. Removed height and revised wall tag
7. Revised wall tag
8. Revised wall tag
9. Revised wall tag
10. Revised door

SHEET A420 – ENLARGED TOILET PLANS AND ELEVATIONS

1. Entire sheet revised

SHEET A460 – INTERIOR ELEVATIONS AND MILLWORK DETAILS

Detail 1 - BREAKROOM ELEVATION

1. Revised finish
2. Revised countertop

Detail 3 - PRINT AREA ELEVATION

1. Revised countertop

Detail 16 - MILLWORK DETAIL - COUNTERTOP, NOSING & EDGE PROFILES

1. Removed “SOLID SURFACE TOP & NOSING DETAIL”

SHEET A610 – FINISH SCHEDULE, PLAN, AND DETAILS

PRODUCT LEGEND

1. Revised SN #6
2. Revised SN #9

PRODUCT LEGEND

1. EP-1, SS-1, WT-1, WT-2
2. Add GYP-1, SC-1, PL-3, CG-1, EP-1,

Detail 1 - ENLARGED OFFICE PLAN

1. Removed LVT-1 and LVT-2

Detail 1 - FLOOR PLAN

1. Revised flooring
2. Revised flooring
3. Revised flooring
4. Revised flooring
5. Revised flooring
6. Revised flooring
7. Revised flooring
8. Revised flooring
9. Revised flooring

SHEET A611 – FURNITURE, FIXTURES, AND EQUIPMENT PLAN AND SCHEDULES
EQUIPMENT SCHEDULE
1. Revised responsibility information

SHEET A620 – WINDOW LEGEND, DOOR SCHEDULE & DETAILS
DOOR SCHEDULE
1. Revised door 101A, 104B, 105A, 106A, 108A ,114A, 114B, 116A
2. Removed 105C, 116C

STRUCTURAL

SHEET S101 – FOUNDATION PLAN
Detail 1 – FOUNDATION PLAN
1. Removed CMU walls adjacent to existing structure, updating section callouts and dimensions as necessary

SHEET S102 – FOUNDATION DETAILS
Detail 1 – SECTION “K”
1. Clouded strike-out/Exclusion of section “k” no longer to be used

MECHANICAL

SHEET M001 – MECHANICAL NOTES, LEGEND, & INDEX
1. Revised Mechanical Drawing Index.

SHEET M101 – HVAC FLOOR PLAN
Detail 1 – HVAC FLOOR PLAN
1. Deleted outdoor unit HRU-D3.
2. Revised location of outdoor units HRU-1, HRU-D1 and DHP-1.
3. Revised exhaust air ductwork sizes, air devices and airflows serving Shop Bays 100 from EF-4.
4. Added keyed note #20.

SHEET M102 – MEZZANINE MECHANICAL PLANS
Detail 1 – MEZZANINE HVAC PLAN
1. Deleted exhaust fan EF-5.
2. Revised exhaust air ductwork sizes serving Shop Bays 100.
3. Deleted smoke detector serving deleted DOAS-3.
4. Revised outside supply air ductwork, air devices and airflows serving Shop Bays 100 from DOAS-2.
5. Revised outside air intake louvers L-2, L-6 & L-7.
6. Revised exhaust air louver L-3.

Detail 2 – MEZZANINE MECHANICAL PIPING PLAN
1. Deleted Dedicated Outdoor Air Unit DOAS-3 all associated refrigerant piping and condensate drain piping.
2. Deleted branch selectors BS-11 thru BS-15.
3. Revised keyed note #12.
4. Added keyed note #17.

SHEET M201 – MECHANICAL PIPING FLOOR PLAN
Detail 1 – MECHANICAL PIPING FLOOR PLAN
1. Deleted outdoor unit HRU-D3 and all associated refrigerant piping.
2. Revised location of outdoor units HRU-1, HRU-D1 and DHP-1.
3. Deleted condensate drain piping from deleted DOAS-3 above Office 119.
4. Revised refrigerant piping and condensate drain piping in Elec Room 105.

5. Revised keyed note #1.
6. Added keyed note #15.

SHEET M301 – MECHANICAL SECTIONS
1. Revised Office Area Ductwork Section.
2. Revised Shop Area Ductwork Section.

SHEET M401 – MECHANICAL DETAILS
Detail 20 – DOAS-2
1. Revised name for detail 20/M401.

SHEET M402 – MECHANICAL DETAILS

1. Added sheet M402 depicting Variable Refrigerant Volume (VRV) piping.

SHEET M501 – MECHANICAL SCHEDULES
1. Revised Variable Refrigerant Volume – Air-Cooled Condensing Unit Schedule.
2. Revised Dedicated Outdoor Air Unit Schedule.
3. Revised Variable Refrigerant Volume – Branch Selector Schedule.
4. Revised Air Device Schedule.
5. Revised Exhaust Fan Schedule.
6. Revised Louver Schedule.

PLUMBING

SHEET P101 – SANITARY SEWER PLAN
Detail 1 – SANITARY SEWER PLAN
1. Sheet being issued to reflect architectural changes.

SHEET P201 – DOMESTIC WATER PLAN
Detail 1 – DOMESTIC WATER PLAN
1. Sheet being issued to reflect architectural changes.

SHEET P401 – PLUMBING SCHEDULES AND RISERS
PLUMBING FIXTURE SCHEDULE
1. Changed faucet specification for lavatories P-2 and P-2A.
2. Changed ADA shower specification for P-10.

ELECTRICAL

SHEET E001 – ELECTRICAL NOTES, LEGEND, & INDEX
LIGHTING FIXTURE SCHEDULE
1. Revised model number of the following Lighting Fixture types: A, B, B1, J, J1, J2, J3, X, AA, BB, BBE.
2. Deleted Lighting Fixture types BE & B2 from project.

SHEET E201 – ELECTRICAL LIGHTING PLAN
Detail 1 – ELECTRICAL LIGHTING PLAN
1. Updated floor plan to reflect architectural plan changes.
2. Removed and replaced recessed linear fixtures with 2x2 lay-in fixtures in the following areas: Construction Office, Private Offices, Break Room, Corridor, Entry/Lockers.

SHEET E301 – ELECTRICAL POWER & SYSTEMS PLAN
Detail 1 – ELECTRICAL POWER & SYSTEMS PLAN
1. Updated floor plan to reflect architectural plan changes.

2. Deleted generator from contractor's scope of work. Generator will be owner-furnished, owner-installed.
3. Deleted Generator EPO.
4. Deleted Generator Annunciator Panel.
5. Deleted Generator Battery Charger and Block Heater circuits. Modified keyed notes to provide conduit stub-ups only.
6. Deleted controls wiring between Automatic Transfer Switch and Generator. Modified keyed note to provide and install conduit between generator pad and transfer switch only.
7. Deleted keyed note for relocation of existing fiber optic conduit stub-up.
8. Revised circuits to reflect panel name change from "MP2" to "MP1" for the following circuits: Air Dryer, Air Compressors 1 & 2, Overhead Crane, 4-Post Lift, 2-Post Lift.
9. Revised keyed note to reflect panel name change from "MP2" to "MP1" for grinder station.

SHEET E302 – ELECTRICAL MEZZANINE AND ENLARGED PLANS

Detail 1 – ENLARGED ELECTRICAL ROOM

1. Deleted Panel "MP1".
2. Renamed Panel "MP2" to "MP1".
3. Moved location of Fire Alarm Control Panel.
4. Moved location of Panel "EQ1".

Detail 5 – MEZZANINE POWER PLAN

1. Deleted duct smoke detector for DOAS-3.

Detail 6 – MEZZANINE HVAC EQUIPMENT POWER PLAN

1. Deleted circuiting for DOAS-3.
2. Showed location of BS-10.
3. Deleted circuiting for BS-11 thru BS-15.
4. Modified keyed notes to clarify mechanical circuiting and interlocking of equipment.

SHEET E401 – HVAC EQUIPMENT POWER PLAN

Detail 1 – HVAC EQUIPMENT POWER PLAN

1. Updated floor plan to reflect architectural plan changes.
2. Deleted circuiting for HRU-D3.
3. Relocated circuiting for HRU-D1, HRU-1, and DHP-1.
4. Modified keyed notes to delete references to EF-5.
5. Modified keyed note to reflect "MP2" to "MP1" name change.

HVAC EQUIPMENT CIRCUIT SCHEDULE

1. Revised circuit number for DOAS-2.
2. Revised circuit numbers for HRU-D2.
3. Deleted circuit for DOAS-3.
4. Deleted circuits for HRU-D3.
5. Deleted circuit for EF-5.
6. Deleted circuits for BS-11 thru BS-15.
7. Revised circuits to reflect panel "MP2" to "MP1" name change.

SHEET E501 – ELECTRICAL ONE-LINE DIAGRAM

Detail 1 – ELECTRICAL ONE-LINE DIAGRAM

1. Deleted "MP1" panel feeder and breaker from "MDP".
2. Renamed panel "MP2" to "MP1".
3. Added note that generator is now Owner-Furnished, Owner-Installed.
4. Moved DOAS-2 & HRU-D2 circuits from original "MP1" to "MDP".
5. Revised generator feeder tag to indicate conduit stub-ups only.
6. Added feeder tags #12, #13 & #14.

SHEET E501 – ELECTRICAL PANEL SCHEDULES

PANEL SCHEDULE "MDP"

1. Deleted breaker for "MP1".
2. Added DOAS-2, HRU-D2 circuits #1, #2, & #3 to "MDP" from "MP1".

PANEL SCHEDULE "EDP"

1. Revised circuit #5 to reflect panel name change from "MP2" to "MP1".

PANEL SCHEDULE "EQ1"

1. Deleted generator block heater and battery charger circuits.

PANEL SCHEDULE "MP1"

1. Deleted panelboard from project.

PANEL SCHEDULE "MP2"

1. Renamed panel to "MP1".
2. Deleted circuits for BS-11 thru BS-15.
3. Deleted circuit for EF-5.

FIRE PROTECTION

SHEET F101 – FIRE PROTECTION FLOOR PLAN

Detail 1 – FIRE PROTECTION FLOOR PLAN

1. Revised outline of dry pipe sprinkler system to include Wash Bay 125.
2. Revised keyed note #8.
3. Revised keyed note #10.

End of Post Bid ADD #1

1.01 Sealed bids for construction of a New Maintenance Shop Addition will be received until 2:00 PM, Local Time on Thursday, April 17, 2025, at the office of the architect, WDD Architects, 5050 Northshore Lane, North Little Rock, AR 72118. Electronic submissions will be allowed.

A. Bids will be received and reviewed by the architect and the owner privately. They will not be opened publicly and read aloud.

B. Email to Gordon Duckworth by 2:00 PM, duck@wddarchitects.com

1. If electronic submission made, please deliver signed paper forms in a sealed envelope to the attention of Gordon Duckworth, to be received no later than end of business, Tuesday, April 22, 2025, or (3) three business days after the bid date.

1.02 There will be no pre-bid conference but contractors may schedule a site visit by contacting Jason Gazaway at Gazaway & White Commercial Real Estate, (870) 236-1115. **The Owner reserves the right to schedule any meetings.**

1.03 The work includes Site Preparation and Improvements, General Construction, Mechanical Work, Plumbing Work and Electrical Work, all to be let under one prime contract.

1.04 **Bid Security:** A cashier's check or acceptable bidder's bond payable to the Owner in an amount not less than 5% of the base bid submitted must accompany each bid as a guarantee that, if awarded the contract, the bidder will promptly enter into a contract and execute such bonds as may be required. If a Bid Bond is provided, the Bond must be signed by an authorized agent of the Bonding Company and the agent's power of attorney must be submitted with the Bid Bond.

1.05 Copies of drawings, specification and other proposed contract documents are on file and are open to inspection at the following places.

Wittenberg, Delony & Davidson, Inc.
Southern Reprographics Plan Room

1.06 Prime Bidders may obtain up to one (1) full-sized set of Bidding Documents from Southern Reprographics, Inc., 901 West 7th, Little Rock, Arkansas 72201, Tel: 501-372-4011, upon deposit by means of a credit/debit card, on account, or check in the amount of **$100** per set, payable to Wittenberg, Delony & Davidson, Inc. Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return paper Bidding Documents in good condition within ten (10) days after receipt of Bids. A Bidder receiving a Contract award may retain paper Bidding Documents, and the Bidder’s deposit will be refunded. Additional sets or partial sets of Bidding Documents, including addenda, may be obtained for the actual cost of printing, shipping and handling, and will be non-refundable. Prime Bidders may also obtain Bidding Documents in electronic format through Southern Reprographics at www.sriplanroom.com for a non-refundable fee as pre-determined by level of access.

1.07 Bidders, sub-bidders, material suppliers and other interested parties are encouraged to obtain complete sets of Bid Documents from the Architect. Complete sets of Bid Documents should always be used in preparing bids. Neither the Owner nor Architect assumes responsibility for errors in bidding or misinterpretations of Bid Documents resulting from the use of incomplete sets of Bid Documents. The documents obtained through the Architect are considered the official version and take precedence if any discrepancies occur. The use of incomplete or inaccurate Bid Documents does not relieve the bidder of the obligation to perform all work related to his bid as detailed in a complete set of Bid Documents.

1.10 All bidders shall conform to the requirements of Arkansas Code Annotated 17-25-101, Arkansas State Licensing Law for Contractors.

1.11 The Owner reserves the right to waive any formalities in, or to reject any or all bids.

1.12 No bidder may withdraw his bid within 60 days after the date of the opening thereof.

1.13 Each bid must be submitted in a sealed envelope bearing, on the outside, the name of the bidder, their Arkansas Contractor License number, their address and the project name.

END OF DOCUMENT 00 11 16

CRAIGHEAD ELECTRIC COOPERATIVE CORPORATION
NEW MAINTENANCE SHOP ADDITION
Bid Date: April 17, 2025
Bid Time: 2:00 PM
Jonesboro, Arkansas
WDD Project No.: 24-096

Proposal of _____
(Hereinafter called "Bidder"): (Strike Out Following Inapplicable Items)

1. An _____ Corporation,
   (State)
2. A Partnership, or

3. An Individual doing business as _____

To: **Craighead Electric Cooperative Corporation**

Gentlemen: Bidder, in compliance with bid solicitation for a **New Maintenance Shop Addition, Jonesboro, Arkansas**, having examined plans and specifications with related documents and site of the proposed Work, and being familiar with all conditions surrounding proposed project, including availability of materials and labor, hereby proposes to furnish labor, materials, and supplies, and construct project in accordance with Contract Documents, within time set forth therein, and at prices stated below. Prices are to cover all expenses incurred in performing Work required under Contract Documents, of which this proposal is a part.

Bidder hereby agrees to commence work under this contract on date specified in written "Notice to Proceed" and fully complete project within _____ consecutive calendar days.

Bidder acknowledges receipt of the following addenda:

No._____ Date:_____ No._____ Date:_____ No._____ Date:_____

No._____ Date:_____ No._____ Date:_____ No._____ Date:_____

BASE BID: Bidder agrees to perform all Work described in the Project Manual and shown on the

Drawings for the sum of _____

_____Dollars ($_____).

LIST OF UNIT PRICES

The Bidder shall **include in the Base Bid** the following lump sum allowances computed based upon the quantities listed and unit costs indicated. Unit prices include all Contractor cost including labor, material, General Conditions and overhead and profit. Bidder understands that the Owner reserves the right to review and or negotiate Unit Prices that are deemed to be not in accordance with current market value of proposed services.

In the event the actual quantities are greater or less than the given volumes, the unit prices stated will be used to adjust the contract accordingly.

1. **Unit Price No. 1:** Undercut and related replacement fill.

   Unit Price per Cubic Yard: $ _____ per CY

2. **Unit Price No. 2:** For importing, placing and compacting select fill material at undercut areas only. This is in addition to the fill material required to establish grades shown on the drawings which is to be included in the Base Bid.

   Unit Price per Cubic Yard: $ _____ per CY

LIST OF SUBCONTRACTORS

I, the undersigned General Contractor, certify that proposals from the following subcontractors were used in the preparation of my proposal. I agree that if I am the successful bidder, and if following subcontractors are approved, I will not enter into contracts with others for these divisions of the Work without written approval from Architect and Owner.

NAME: LICENSE NO.

MECHANICAL: _____

PLUMBING: _____

ELECTRICAL: _____

ROOFING AND SHEET METAL: _____

PRE-ENGINEERED STRUCTURE: _____

Bidder understands that Owner reserves right to reject any or all bids and to waive any formalities in the bidding. Bidder agrees bid shall be good and may not be withdrawn for period of sixty (60) days after scheduled closing time for receiving bids.

Upon receipt of written notice of acceptance of bid, Bidder will execute formal contract within ten (10) days and deliver Surety Bond or Bonds as required by Document 00 61 13.

Bid security attached in amount of 5% of base bid is to become property of Owner in event above contract and bond are not executed within time set forth above as liquidated damages and additional expenses to Owner.

By:_____ Date:_____

(Typed Name)

_____ Contractor License No._____

(Signature)

_____

(Title)

_____

(Business Address)

_____

(Seal - If bid is by a Corporation)

END OF DOCUMENT 00 41 13

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PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included: Furnish, deliver, and erect pre-engineered metal building components shown on drawings and conforming to these specifications.

B. Furnish building design of manufacturer regularly engaged in fabrication of pre-engineered structures.

1.02 RELATED DOCUMENTS

A. Applicable portions of the Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, and Addenda issued prior to the execution of the Contract, other documents listed in the Agreement and Modifications issued after the execution of the Contract shall apply to this Section. The general requirements for this work are in Division 1 of the Specifications.

1.03 SUBMITTALS AND SUBSTITUTIONS

A. In accordance with Section 01 33 00.
   1. Furnish Shop Drawings, for review by Architect showing necessary fabrication details, fittings, fastenings, foundation reactions for all load cases, anchorage and erection details. In addition to provisions of the General Conditions, prepare Shop Drawings by or under the supervision of a registered professional engineer. Do not use reproductions, in any form, of the Contract Drawings for Shop Drawings. Furnish two prints and one sepia reproducible of Shop Drawings submitted to Architect for review. Submit related shop drawings together; partial submittals will not be accepted. Furnish mill certificates on foreign steel proposed for use and not produced within the continental USA. Include with mill certificates certified copies of mill test reports giving names and locations of mills and shops, and chemical analysis and physical properties of steel required for this project.
   2. All drawings and calculations shall bear the stamp of a structural engineer licensed in the state of Arkansas.

B. Substitutions will not be considered prior to the award of the General Contract.

C. Submit roofing manufacturer's inspection report after each of the three (3) required warranty inspections. Report must contain the following:
   1. A detailed description of all non-conforming work.
   2. Manufacturer's recommended method of correction.
   3. Color photographic documentation of non-conforming work.
   4. Color photographic documentation of subsequent accepted work.
   5. Drawings, Diagrams or Detail furnished by the inspector at the jobsite visit.

6. Instructions and conditions for re-inspection and/or issuance of warranty.

1.04 REFERENCE STANDARDS

A. Conform to latest edition of the following standards where applicable to structural design of building:
   1. "Recommended Design Practices Manual", Latest Edition - Metal Building Manufacturer's Association.
   2. "Manual of Steel Construction", Latest Edition - American Institute of Steel Construction
   3. "Cold Formed Steel Design Manual", Latest Edition - American Iron and Steel Institute.
   4. "Aluminum Construction Manual", Latest Edition - The Aluminum Association.
   5. "Code for Welding in Building Construction", Latest Edition - American Welding Society.

1.05 DESIGN LOADS

A. General: Basic design loads include live, wind, and dead loads. Other loads, whether of static, dynamic, or kinetic nature, are considered auxiliary loads.

B. Refer to Pre-Engineered metal building notes on Structural Drawings for Roof Live Load, Roof Dead Load, Superimposed Roof Dead Load, Roof Deflections, Perimeter Wall Deflections, Drift Under Wind Loading and other loading requirements.

C. Certification:
   1. Submit letter from metal building manufacturer certifying that the building proposed will be furnished to meet or exceed all the above design load criteria and that all structural design will be in strict conformance with that prescribed in the MBMA "Design Practices Manual".
   2. After awarding of Contract, submit complete structural analysis prepared by metal building manufacturer to Architect upon request for same.

1.06 GUARANTEES

A. Provide manufacturer's guarantee for exterior color finish for a period of 20 years against blistering, peeling, cracking, flaking, checking, chipping and excessive color change and chalking. Color change not to exceed 5 NBS. units (per ASTM D-2244.64T) and chalking not less than rating of 8 per ASTM D-659.

B. Roofing Materials Manufacturer: Provide twenty (20) Year, Weathertightness System Warranty. Warranty is to be equivalent to the Single Source warranty offered by MBCI and is to cover costs up to two (2) times the original invoice price for the roofing system.
   1. Single Source Warranty: Single Source Warranties require a certified installer to be on site at all times.

2. For a period of twenty (20) years from the date of substantial completion, the roofing manufacturer WARRANTS to the Building Owner ("Owner"): that the roofing manufacturer's furnished roof panels, flashing, and related items used to fasten the roof panels and flashing to the roof structure ("Roof System") will not allow intrusion of water from the exterior of the roofing manufacturer's Roof System into the building envelope, when exposed to ordinary weather conditions and ordinary wear and usage. The date of substantial completion is the date that is certified by the Architect, Owner, or Owner's Representative, when the roofing manufacturer's Roofing System is completed and accepted by or on behalf of the Owner.
3. Manufacturer's Field Service:
   a. During installation, provide for two on-site inspections of roof application by qualified technical representative of the manufacturer.
   b. Upon completion of installation, provide final inspection by a technical representative of roofing manufacturer to confirm that roofing system has been installed in accordance with manufacturer's requirements.
4. The roofing manufacturer shall have the **SOLE AND EXCLUSIVE** obligation for all warranty work commencing on the date of substantial completion and under all circumstances terminates on the TWENTY (20) year anniversary of the date certified as Substantial Completion of the roofing manufacturer's Roof System. During the period in which the roofing manufacturer has any warranty obligation, the roofing manufacturer shall take appropriate actions necessary to cause the non-performing portions of the Roof System to perform their proper functions.
5. Roofing Manufacturer's Liability: The total liability of the roofing manufacturer is limited to two (2) times the cost of the roofing manufacturer's Roof System as invoiced to the roofing manufacturer's customer.

C. Roofing Materials Installer: Provide two-year guarantee covering labor, materials, leaks, and defects.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Provide pre-engineered structural system by or one of the following manufacturers or approved equal.
   1. Alliance Steel
   2. American Buildings Company
   3. Architectural Integrated Metals
   4. Butler Manufacturing Company
   5. Pinnacle Structures
   6. Varco Pruden
   7. Ludwig Buildings Enterprises, LLC

2.02 PRE-ENGINEERED STRUCTURAL SYSTEM

A. Primary Structural: Frames will consist of welded up plate section columns and roof beams or trusses complete with necessary splice plates for bolted field assembly. All bolts for field assembly of primary framing will be high strength bolts as indicated on erection drawings.

B. Beam and post end-wall frames will consist of end-wall corner posts, end-wall roof beams, and end-wall posts as required by design criteria.

C. Exterior columns will be welded-up "H" sections or cold-formed "C" sections; interior columns will be "H" sections or tube columns.

D. Connection of all major structural members will be made with A 325 high-tensile bolts through pre-punched or pre-drilled holes for exact alignment.

E. **Delegated Design:** Contractor is to assume responsibility for designing specific project components guided by performance criteria set by the design professional. The contractor takes ownership of designing certain elements, like structural components or specialized systems, and ensures compliance with codes and standards. Components to consider include, but are not limited to the following:

1. Metal stud work per Section 09 22 16 - Non-Structural Metal Framing, to include furr-downs and other suspended building elements attached to PEMB components.
2. Metal stud work per Section 05 40 00 - Cold Formed Structural Steel Framing, to include attached wall infill designed to resist exterior wind loads.

2.03 ROOF COVERING, SUPPORTS AND ACCESSORIES

A. Trapezoidal Metal Standing Seam Roof System: Provide MBCI® Double-Lok™ 3-inch high x 24-inch wide structural panel or approved equal with UL Class 90 rating and comply with ASTM E1592 Structural performance of sheet metal roof and siding by uniform static air pressure difference. Roof panels to be 24 gauge (minimum) AZ50 "Galvalume" (ASTM A792) steel substrate in size shown. Profile to be selected by Architect from manufacturer's standard shapes. Configuration to provide specified load carrying capabilities and deflection requirements of this specification. Provide roof panels of "standing-seam interlocking" design secured to purlins with concealed structural fastening system. Provide concealed system allowing roof covering to move independently of any differential thermal movement by the structural framing system. No thermal contact allowed between roof panels and supporting purlin. Furnish standing seams with factory-applied, nonhardening sealant. Continuously lock or crimp seams together by mechanical means during erection. Roof panels with lap-type side (longitudinal) joints and exposed structural fasteners are not acceptable.

B. Fasten roof panels to purlins with concealed steel clip or steel backing device having a protective metallic coating. Through penetration of roofing surface by exposed fasteners is not allowed. Ridge assembly to be manufacturer's standard for system used with concealed attachment.

C. Roof Panel Deflection: Maximum L/180 of its span when supporting applicable vertical live loads.

D. Purlins Configuration, Thickness, and Spacing: Use building manufacturer's standard, provided design criteria, including deflection, is met or exceeded.

E. Roof Jacks and Curbs:
1. Openings 8 inches or smaller may be flashed and sealed to roof panel by jacks provided complete structural support and weathertightness is maintained. Furnish jack material either of metal with protective metallic coating or of plastic alloy with an acrylic film laminated to the exterior surface.
2. Frame openings larger than 8 inches, round or square, with a welded metal base fabricated from factory-enameled, 16 gauge (minimum) galvanized steel. Support base and its appurtenance by the roof purlins and header framing. Provide base minimum projection of 8 inches above the roof weather surface and with the configuration of the flanges matching roof panel. Seal flange-to-panel joint with non-harding sealant and fasten in manner to provide complete support and weathertightness.
3. Provide curbs or jacks as integral component of roofing system designed and supplied by roofing manufacturer.

F. Snow Retention System:
1. Provide "ColorGard" system by LMCurbs, (1-800-284-1412) with the S-5 clamp attachment and "Sno-Clips" spaced as recommended by manufacturer. Provide clamp style to coordinate with roof seam profile being proposed. Provide installation details to Architect for review prior to installation.
2. Finish: Insert pre-finished metal strips into the ColorGard snow bar. Metal strips are to be .050" maximum thickness and 2-1/16" maximum width. Metal strips are to be obtained from metal roof panel manufacturer and are to have the same Kynar 500 finish as the metal roof panels.

G. Finish for roof panels to be Kynar 500 based polyvinylidene fluoride (PVDF) coating, 70% resin formulation in color to be selected by Architect.
1. Primer is applied to 0.20 - 0.30 mils DFT (Dry Film Thickness) and the topcoat at 1.0 - 1.2 mils DFT.

2.04 WALL COVERING AND SUPPORTS

A. Wall panels to be 36" wide by 1-1/4" rib height, 26 gauge (minimum) AZ50 "Galvalume" (ASTM A792) steel substrate with exposed fasteners as manufactured by McElroy Metals or approved equal. Color shall be selected from complete line.
1. R-Panel metal panel with 12 inch on center rib spacing, smooth finish.

B. Furnish wall panels with side seams of interlocking type. Lap seams are not acceptable.

C. Fasten wall panels to supports with concealed clips, screws, or bolts to eliminate all exposed fasteners. Exposed screws, bolts, or rivets will not be allowed for securing trim, fascias, gutters, and miscellaneous flashing to either wall or roof panels. All fasteners will be concealed type.

D. Provide top, bottom, and intermediate panel closures, flashing, fascias, gutters, and trim using building manufacturer's standard components compatible with material furnished as wall panels.

E. Girt Configuration and Thickness: Building manufacturer's standard provided design criteria, including deflection and girt spacing, is met.

F. Finish for wall panels to be Kynar 500 based polyvinylidene fluoride (PVDF) coating, 70% resin formulation in color to be selected by Architect.
   1. Primer is applied to 0.20 - 0.30 mils DFT (Dry Film Thickness) and the topcoat at 1.0 - 1.2 mils DFT.

2.05 INSULATION SYSTEM

A. Refer to Section 07 21 16 - Blanket Insulation For Metal Buildings.

2.06 STRUCTURAL STEEL PRIMER

A. Give all uncoated structural steel 1 shop coat rust inhibitive (primer) paint which meets or exceeds Federal Specifications TT-P-664, or submit certification that it conforms to a recognized authoritative specification, such as a Federal or Military authority or the Structural Steel Painting Council.

2.07 FLASHING AND TRIM

A. Flashing at the rake and high eave shall not compromise the integrity of the roof system by constricting movement due to thermal expansion and contraction.

B. Panel manufacturer to supply flexible membranes if applicable.

C. Manufacture all trim and flashing from G-90 Galvanized or Galvalume sheet steel to profiles shown.

D. Finish for flashing and trim to be Kynar 500 based polyvinylidene fluoride (PVDF) coating, 70% resin formulation in color to be selected by Architect.
   1. Primer is applied to 0.20 - 0.30 mils DFT (Dry Film Thickness) and the topcoat at 1.0 - 1.2 mils DFT.

2.08 LINER PANELS

A. Interior wall paneling to be VP LPR-36, 36 inch wide 28 gauge with 1-1/4" high ribs screwed to framing with self-drilling fasteners. Provide partial-height liners attached to 7'-4" high girt, extending 2" above girt. Attach bottom of panel to base girt or channel as a component of the metal building system or as required. Liner panel to be ASTM A653 Grade 33 steel with a zinc coating. The panel is painted with a white polyester finish on one side and a gray primer coating on the second side. Approved equal product will be considered.

PART 3 - EXECUTION

3.01 GENERAL

A. Deliver and erect the pre-engineered components accessories specified and complying with manufacturer's erection drawings and specifications.

B. Perform assembly and erection by the manufacturer's own crew or by an erector trained and authorized by the manufacturer with the erectors work being inspected and certified by the manufacturer.

3.02 ERECTION

A. Bolt settings and other dimensions shall be held to a tolerance of 1/8-inch±. Use templates or other gaging devices to assure accurate spacing of anchor bolts. Bolt field connections unless otherwise required.

1. Set bases or sill members to obtain uniform bearing. Anchors and anchor bolts for securing members to concrete curb or structural steel sub-frame shall be of black steel, set accurately to templates and of proper size to adequately resist applicable design loads at the base.

B. Wall Panels: Panels shall be applied with configurations shown. Supply panels in single lengths from base to eave with no horizontal joints except at the junction of door units, louver panels, and similar openings. End laps for panels shall be not less than four inches. Walls shall be closed at base and eave, and around doors, frames, louvers, and other similar openings by all related flashing and/or formed closures to assure adequate weathertightness. Flashing or stops will not be required where weather-closed or approved self-flashing panels are used.

C. Roof Panels: Roof panels shall be applied with configurations running in direction of roof slope. Supply panels with no transverse joints except at junctions for roof openings and at roof ridge. Seal end-laps with roof joint sealant. Roof shall be flashed and/or sealed at ridge, eaves, rakes, projections through roof, and elsewhere as necessary to make roof weather tight. Flashing and/or caulking shall be accomplished in a manner that will assure complete weather-tightness.

D. Fasteners for Securing Roof and Wall Panels: Fastening method, size and spacing shall be as specified. Fasteners shall be non-corrosive and of design that will produce a weathertight connection. Clearly show fasteners and fastening method on shop and erection drawings. Exposed fasteners will not be allowed at roof panels.

E. Weatherproofing: Joints between exterior pre-engineered metal building components and other adjacent components and materials shall be designed for and shall receive sealing tapes, gaskets, sealant materials, metal flashing and other methods of sealing as required to provide weathertight joints. Color of sealing materials shall match adjacent metal building components.

END OF SECTION 13 34 19

CONTROL SEQUENCES

1.01 VRV FAN COIL UNITS (FC-01 THROUGH 09, AND HRU-1)

A. Mode of operation:

1. The unit shall be set and locked in auto mode at the thermostat so that both heating and cooling operation can occur as required to maintain the space temperature at setpoint. The system mode shall be either occupied or unoccupied based on a building automation system (BASs) schedule, an operator override command from the BAS, or a temporary occupancy override signal from the space temperature sensor. Commands or overrides from the BAS shall take priority over any local changes made at the space sensor.

B. Occupied mode:

1. The system shall allow for either local control (setpoint input at thermostat) or BAS control (setpoint input at BAS) of the setpoint. The space temperature sensor shall be set for a single occupied space cooling temperature setpoint. The occupied space temperature heating setpoint shall be calculated using an offset differential value of 3°F (adj). The initial occupied space temperature cooling setpoint shall be 72°F (adj). The initial occupied space heating setpoint is automatically set to 69°F based on the 3°F differential value. The occupied space temperature setpoint range shall be limited to within +/-2°F of the unoccupied space temperature setpoints.

2. The unit fan shall be on continuously during occupied operation.

3. On an increase in space temperature above the occupied space temperature setpoint, the unit electronic expansion valve shall modulate as required to maintain the space temperature at the unoccupied space temperature setpoint. Internal PID loop control of the electronic expansion valve should be utilized to minimize over/undershooting of the space temperature from setpoint.

4. Once cooling operation has been engaged, the unit shall not be allowed to enter into heating operation until the space temperature has fallen 1°F below the occupied space temperature setpoint for at least 15 min. If the space temperature falls more than 2°F below the occupied space

temperature setpoint, the 15 min guard timer delay shall be bypassed and the system shall switch from cooling operation to heating operation.

5. On a decrease in space temperature below the occupied space temperature setpoint, the unit electronic expansion valve shall modulate as required to maintain the space temperature at the unoccupied space temperature setpoint. Internal PID loop control of the electronic expansion valve should be utilized to minimize over/undershooting of the space temperature from setpoint. If the space temperature remains below heating setpoint with the vrv operating in full heating, the auxiliary heat shall be commanded on to meet the space temperature setpoint.

6. Once heating operation has been engaged, the unit shall not be allowed to enter into cooling operation until the space temperature has risen 1°F below the occupied space temperature setpoint for at least 15 min. If the space temperature rises more than 2°F above the occupied space temperature setpoint, the 15 min guard timer delay shall be bypassed and the system shall switch from heating operation to cooling operation.

C. Unoccupied mode:
   1. During unoccupied operation, the system shall be subject to the unoccupied mode heating and cooling setpoints. The initial unoccupied heating setpoint shall be 65°F (adj). The initial unoccupied cooling setpoint shall be 80°F (adj).

   2. The space temperature sensor shall be equipped with a temporary occupancy override feature that shall override the system into occupied mode for a period of 2 hours (adj).

D. Emergency power mode:
   1. During emergency power mode, the BAS shall delay the start of HRU-1 by 30 seconds from the initiation of emergency power.

1.02 DOAS (DOAS-1 AND HRU-D1)

A. Airflow control: constant air volume
   1. Supply air fan maintains constant speed to provide setpoint airflow rates for low and high-speed during operation time. Fan speeds will automatically adjust to compensate for changes in air density due to temperature fluctuations and to overcome filter loading.

B. Temperature and humidity control

1. Unit controller sends delta dew point value to Daikin's control box to adjust DX coil and HGRH coil valves to maintain set point for discharge air temperature and humidity control.

1.03 SHOP BAY VENTILATION

A. Occupied mode
   1. During the occupied mode, exhaust fan EF-4, along with DOAS-2 , and HRU-D2 shall be energized. The dampers for associated intake louver L-2 and exhaust louver L-3 shall be opened. The damper for auxiliary intake louvers L-6 and 7 shall be closed.

B. Unoccupied mode
   1. During the unoccupied mode, exhaust fans EF-4, along with DOAS-2, and HRU-D23 shall be de-energize. The dampers for associated intake louver L-2, auxiliary intake louvers L-6 and 7 and exhaust louver L-3 shall be closed.

C. Emergency power mode
   1. During the emergency power mode, exhaust fans EF-4 shall be energized. The dampers for associated intake louver L-2, auxiliary intake louvers L-6 and 7, and exhaust louver L-3 shall be opened. DOAS-2, and HRU-D2 shall be de-energized.

1.04 FAB SHOP 102 WELDING HOOD

A. During welding or plasma cutting operations, exhaust fan EF-3 shall be manually energized using a wall mounted timer switch. The dampers for associated intake louver l-4 and exhaust louver l-5 shall be opened. When timer switch is off, exhaust fan EF-3 shall be de-energized and the dampers for louvers l-4 and 5 shall be closed.

1.05 STORAGE (IT) CLOSET 115

A. Exhaust fan EF-2 shall be thermostatically controlled with a wall mounted thermostat to 80°F(adjustable).

B. Space temperature shall be sensed by the BAS. If space temperature rises to 90°F, the BAS shall alarm.

1.06 RESTROOM EXHAUST FAN (EF-1)

A. OCCUPIED MODE

1. During the occupied mode, exhaust fan EF-1 shall be energized.

B. Unoccupied mode
1. During the unoccupied mode, exhaust fan EF-1 shall be de-energized.

1.07 ELECTRICAL ROOM 105

A. Mini-split heat pump (DSS/DHP-1) shall be thermostatically controlled to 80°F(adjustable).

1.08 FIRE RISER ROOM 106

A. Electric unit heater, EH-1, shall control space temperature to 80°F(adjustable) using a unit integral thermostat.

B. Space temperature shall be sensed by the BAS. If space temperature drops to 40°F, the BAS shall alarm.

1.09 WASH BAY 125

A. Electric unit heaters, EH-2, 3 and 4 shall control space temperature to 50°F(adjustable) using unit integral thermostats.

B. Space temperature shall be sensed by the BAS. If space temperature drops to 40°F, the BAS shall alarm.

END OF SECTION 23 09 93