SCOPE OF WORK

SUMMARY

A. BACKGROUND:

The 2,700 square foot wood framed metal wild fish building at White Sulphur Springs National Fish Hatchery (WSS NFH) was constructed in 2007. The building contains 6 aquaculture laboratory spaces, an office, and a restroom. The current HVAC system with associated ducting was installed approximately 10 years ago after a flood damaged the original system, resulting in full replacement. The existing system consists of two outdoor Trane XR units with corresponding indoor units and system components. The systems have been in various modes of failure for much of their service life and the building is currently heated with by a series of space heaters. It is believed the current duct system was not properly installed and does not efficiently convey conditioned air to the desired locations.

B. OBJECTIVES:

The objective of this solicitation is to obtain and install a complete operational Variable Refrigerant Flow (VRF) heat pump system serving the wild fish building and completely remove the existing HVAC system.

The work shall consist of providing all labor, equipment, supplies and materials to:

1. Remove and replace the existing system with a Carrier Variable Refrigerant Flow (VRF) system with a new system at the WSS NFH wild fish building based on this scope of work. This includes all outdoor units, indoor units, branch selector boxes, refrigerant piping, wall controllers, and all ancillary equipment associated with the existing system shall be replaced with new equipment as defined by the scope requirements.
2. All components of the existing system shall be removed and disposed of. Electrical wiring may remain and be modified for reuse as required for integration with the new equipment installation. All openings and penetrations from the previous HVAC system shall be patched with like material. The existing HVAC system equipment pads and exterior building penetrations shall be reused for the new system.
3. Equipment installation shall be performed to Manufacturer's instruction and be compliant with all applicable federal, state, and local codes and regulations.
4. Provide shop drawings approved by the manufacturer to reflect the system prior to installation.
5. A manufacturer's representative shall review the installed system and verify the work has been completed per the approved shop drawings.

C. WORK LOCATION: The address of the work at White Sulphur Springs National Fish Hatchery, 1087 Main St E. White Sulphur Springs WV 24986.

D. WORKING HOURS: The Contractor is responsible for conducting business, between the hours of 7:30AM and 4:00PM, Monday thru Friday except Federal holidays or when the Government facility is closed due to local or national emergencies, administrative closings, or similar

Government directed facility closings.

Federal Holidays are as follows:

- New Year's Day
- Birthday of Martin Luther King Jr.
- Washington's Birthday
- Memorial Day
- Juneteenth National Independence Day
- Labor Day
- Columbus Day
- Veterans Day
- Thanksgiving Day
- Christmas Day

E. SITE VISIT: Contractors are strongly encouraged to visit project site and inspect existing conditions prior to submitting proposal.

F. PERIOD OF PERFORMANCE: The Government anticipates the work under this contract to be completed within 180 days from the Notice of Award.

G. AVAILABLE UTILITIES: Drinking water, sanitary services, electric and water will be made available at the project site for the Contractor's use as it relates to this project at no additional cost.

1.2 PROJECT SCOPE OF WORK

A. HVAC SYSTEM REPLACEMENT:

1. The new system(s) shall consist of (2) Carrier DLS R454B MULTI 36K 230V HP CDU (37MGHAQ36EA3) outdoor units (or approved equal) with a minimum of 8 corresponding Carrier (or approved equal) indoor units sized appropriately for the corresponding spaces. Locations of the indoor units shall be approved by project COR prior to installation and shall not interfere with hatchery operations. Shop drawings approved by the manufacturer shall be provided prior to installation.
2. Disconnect and remove all existing HVAC components not to be reused off WSS NFH property. Removed items shall be disposed at an approved recycling site that complies with West Virginia state statutes for HVAC disposal.
3. Install a new VRF heat pump system based on the requirements of this scope. Installation shall incorporate all Manufacture's installation instructions and recommendations. All new equipment shall meet current efficiency standards as defined in 10 CFR 431.97 and any other federal, state, or local requirements.
4. Outdoor units shall be raised at least four inches above the existing equipment pads to allow for ease in cleaning debris from under and around the units.
5. Full port isolation valves will be installed in the refrigerant lines at all multi-port branch selectors and at each outdoor condensing unit to enhance system serviceability. The valves will be appropriately rated for the installed system and the refrigerant and oil being used.
6. Refrigerant piping shall be all new and no existing refrigerant piping shall be reused with the new equipment without written approval from the Contracting Officer.
7. All refrigerant lines will be covered with one-inch Armaflex or similar closed-cell, expanded rubber flexible elastomeric insulation - ASTM C534. Insulation shall not absorb water and shall have resistance to mold, fungi, and bacteria growth. Appropriate

tape shall be used for all insulation joint and seams in accordance with industry standards.

8. New condensate pumps and traps shall be installed to Manufacturer requirements as required. Condensate will be discharged from the building per the existing configuration. No condensate drains shall allow condensate to drip on the building. Existing piping may be modified for use with new equipment if it meets all requirements of the contract.
9. Install new thermostat/controllers and master at each indoor unit location. No handheld remote controls are to be supplied. Controls shall be wall mounted, no handheld remote controls permitted.

B. ELECTRICAL MODIFICATIONS:

1. Lock out and tag out electrical service to all existing HVAC system components before and during work activities.
2. Contractor shall perform electrical modification to the existing electrical system to accommodate the new HVAC equipment.

1.3 SUBMITTALS

A submittal register will be provided by the Government. If a submittal is required by the specifications but is not listed the Contractor shall be responsible for adding that submittal to the register and providing the submittal to the Government.

Actions that require Government approved submittals shall not begin without Government approval. Should action be taken before Government approval is received the Contractor does so at their risk. If the action is found to be in question on non-compliance the Contractor shall be liable for all associated costs of removal and rework.

Submittals shall come directly from the Contractor with their stamp and signature of approval. Any submittals received from sub-contractors, suppliers, or other 3rd parties will not be reviewed nor any action taken.

There will be no approval of submittals prior to bid opening and award. Submittals will be evaluated based on the requirements of the specifications and drawings, during the submittal process after contract award.

1.4 QUALITY ASSURANCE:

A. Codes and Standards: The work shall comply with codes and standards applicable to each type of work and as listed in the specifications. This contract incorporates materials, applications, and tests by reference, with the same force and effect as if they were given in full text.

PART 2 - PRODUCTS

2.1 GENERAL:

A. (2) Carrier DLS R454B MULTI 36K 230V HP CDU (37MGHAQ36EA3) outdoor units (or approved equal) with a minimum of 8 corresponding Carrier (or approved equal) indoor units sized appropriately for the corresponding spaces.

B. Where specifications or drawings call out a specific product or Manufacturer, it is understood that an equal or better product or Manufacturer is acceptable so long as the technical requirements are met. It is the Contractor’s responsibility to provide to the Government the supporting information to show the requirements are met.

PART 3 - GENERAL PROJECT EXECUTION

3.1 SITE CONDITIONS:

A. Work areas shall be roped off to alert personnel and the public of work in progress.

B. Existing property not indicated for removal shall be protected. All damage by the Contractor's activities shall be repaired by the Contractor at no additional cost to the Government.

C. Protect all vegetation and soils inside the work area. All rutting caused by Contractor activities shall be filled and contoured to match adjacent areas.

D. Potable water and electric power for construction is available and will be furnished by the Government.

3.2 PROJECT MEETINGS:

A. Preconstruction Conference: Telephone/Microsoft teams conference call will be scheduled for a mutually discussed date and time between the Government and Contractor. The Government will distribute the meeting agenda and the Contractor is to maintain meeting minutes. Meeting minutes shall be submitted to the COR within three working days for concurrence before being distributed. If the Government has comments, the Contractor shall update the meeting minutes based on Government comments and resubmit to the COR within three working days for concurrence before being distributed.

B. Progress Meetings: To be held via Microsoft Teams on a two-week basis. The Contractor shall be responsible for the meeting agenda and meeting minutes. Meeting minutes shall be submitted to the COR within three working days of the meeting for concurrence before being distributed. If the Government has comments, the Contractor shall update the meeting minutes based on

Government comments and resubmit to the COR within three working days for concurrence before being distributed.

C. INSPECTIONS:

1. Contractor shall perform and maintain records of their construction inspection to ensure their own construction quality assurance and contract compliance.
2. The Government Construction Inspector (CI) and/or the COR will conduct routine inspections to monitor the contracts progress. Inspection of items of work by the CI will not relieve the Contractor of the requirement to meet project specifications. The CI shall be informed 24 hours in advance of work requiring his observation. After being informed in advance the CI's non-attendance shall not prohibit the Contractor from proceeding with work in the CI's absence.
3. For final inspection, notify the COR in writing at least 10 working days before the completion date so the Government can schedule final inspection. The Contractor's superintendent shall be present during the final inspection.
4. Notify COR and CI ten working days in advance of anticipated date for equipment start-up and operational tests.

3.3 SAFETY:

A. Safety Plan: Contractor shall submit for approval, before any work is conducted on site, a safety plan for the project. Plans shall be site specific for this project. The safety plan shall address all OSHA personnel protective equipment and clothing to be worn on the construction site. This project shall comply with all applicable Federal, state, and local regulations.

B. Superintendent Responsibility: Contractor's on-site superintendent shall ensure all personnel (including all sub contactors) comply with the approved safety plan.

C. Employee Identification: The Contractor's and all tiers of Sub-contractor's employees shall wear clothing or badges that readily identify them as employees of their company.

3.4 RECORD (AS-BUILT) DRAWINGS:

A. The Contractor shall submit as-built drawings reflecting the work completed under this contract.

B. These drawings do not require the stamp and signature from a licensed Professional Engineer and shall be clearly marked as "AS-BUILT DRAWINGS".

3.5 DELIVERY, STORAGE, AND HANDLING:

A. Delivery: Protect products incorporated into the work from damage while in transit to the site. Products must be delivered in original unopened containers with manufacturer's name, brand designation, and contents legibly indicated. The containers shall bear the referenced specification number, type, and class, as applicable.

B. Storage: No on-site storage of materials or equipment is allowed without approval of the Contracting Officer (CO).

C. Handling: Load and unload products in a manner which protects them from damage.

3.6 WARRANTY:

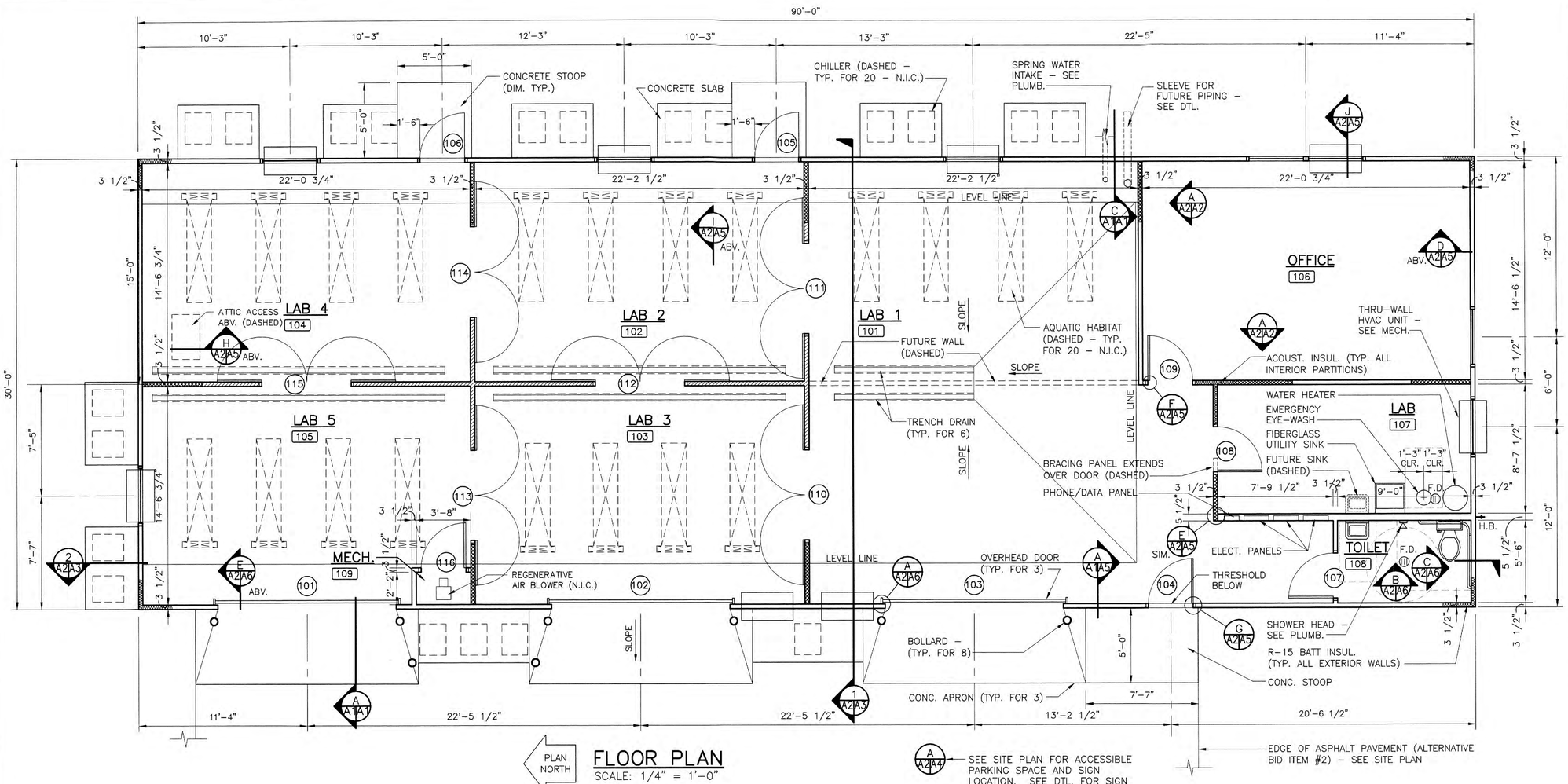
A. Contractor shall provide a full one-year warranty on all work and materials (labor, parts, accessories, and materials) from the date of final acceptance by the Government.

B. Contractor shall provide equipment with a minimum of 10-year parts warranty on all outdoor and indoor multi-port branch selectors, air handlers, and controllers from the date of final acceptance by the Government.

C. Contractor shall register all equipment for the manufacturer's warranty and provide proof of registration in the form of a submittal.

END OF STATEMENT OF WORK

ATTACHMENT: WILD FISH BUILDING CONSTRUCTION DRAWINGS



PLAN NORTH

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

A/A2A4 – SEE SITE PLAN FOR ACCESSIBLE PARKING SPACE AND SIGN LOCATION. SEE DTL. FOR SIGN LAYOUT.

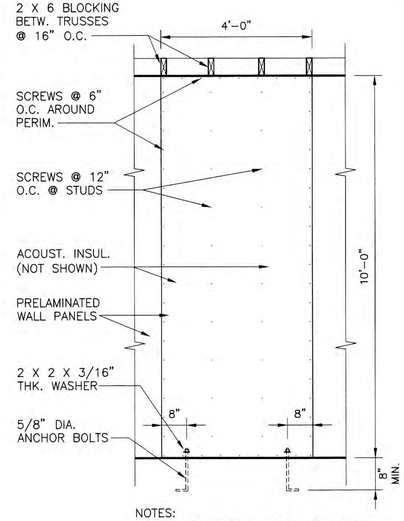
FLOOR PLAN LEGEND

- PARTITION INCLUDED IN BASE BID
- BRACING PANEL INCLUDED IN BASE BID – SEE DTL. A/A2/A2
- PARTITION INCLUDED IN ALTERNATIVE BID ITEM #1

NOTE: ALL EXTERIOR WALLS SHALL BE INSULATED W/ R–15 BATT INSUL. ALL INTERIOR PARTITIONS SHALL BE INSULATED W/ ACOUST. INSUL., INCLUDING PARTITIONS WHICH ARE PART OF ALTERNATIVE BID ITEM #1.

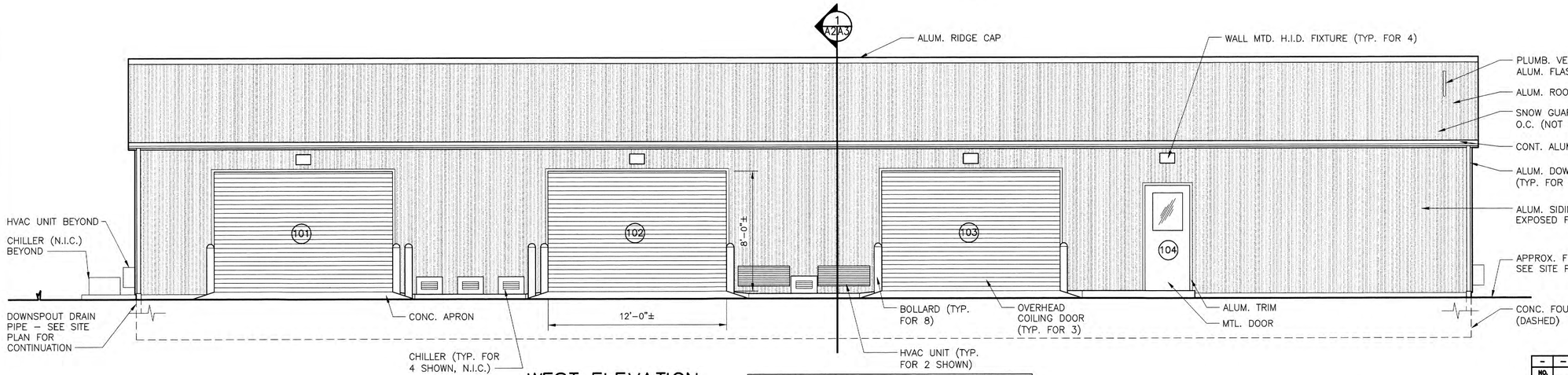
FLOOR PLAN NOTES:

1. ALL WALL DIMENSIONS ARE TO FACE OF WOOD FRAMING, UNLESS A CENTERLINE DIMENSION IS INDICATED.
2. ALL FLOORS TO BE BROOM–FINISH, EXPOSED CONCRETE SLAB.
3. SLOPE ENTIRE TOILET ROOM FLOOR TO FLOOR DRAIN.
4. AQUATIC HABITATS ARE APPROX. 92" TALL, 20" WIDE & 82" LONG, PLUS PIPING SPACE (SHOWN DASHED). AQUATIC HABITATS AND CHILLERS ARE NOT INCLUDED IN THE CONSTRUCTION CONTRACT.
5. INTERIOR PARTITIONS & DOORS INDICATED ON THE FLOOR PLAN LEGEND ARE TO BE INCLUDED IN ALTERNATIVE BID ITEM #1.
6. ALL MATERIALS AND WORK INCLUDED IN THE WORK OF THIS CONTRACT SHALL BE NEW, UNLESS SPECIFICALLY NOTED TO BE "N.I.C." OR "EXIST."
7. PROVIDE 2 X 4 CEILIING–MTD. PIPE SUPPORTS IN ALL LABS – SEE REFLECTED CEILIING PLAN FOR EXACT LOCATIONS.



NOTES:
1. WHERE BRACING PANEL ABUTS AN EXTERIOR WALL, ANCHOR BOLT ON THE EXTERIOR WALL SIDE MAY BE OMITTED.
2. SECURE 2 X 6 BLOCKING TO TRUSSES WITH 2 X 6 JOIST HANGERS.
3. WHERE TRUSS IS LOCATED DIRECTLY ABOVE BRACING PANEL, 2 X 6 BLOCKING MAY BE OMITTED.
4. EXPOSED PAN–HEAD SCREWS SHALL BE UTILIZED FOR PRELAMINATED BRACING PANELS ONLY.

A/A2/A2 BRACING PANEL
SCALE: 1/2" = 1'-0"



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

NOTE: IF ALTERNATIVE BID ITEM #3 IS ACCEPTED BY THE OWNER, SUBSTITUTE PAINTED STEEL SIDING, ROOFING, TRIMS, AND OTHER COMPONENTS FOR ALUM. COMPONENTS INDICATED ON THE ELEVATIONS. SEE SPEC. SECTION 07412.

0 5 10 20
1/4" = 1'-0"

COMMONWEALTH OF VIRGINIA
CLARK B. LENTZ
CERTIFICATE No. 4911
4/20/06
CERTIFIED ARCHITECT

NO.	REVISIONS:	DATE:	BY:
–	–	–	–

WHITE SULPHUR SPRINGS NFH — WILD FISH BUILDING
A2

DESIGNED: CBL
DRAWN: DAR,ACT
DRWG. NO: 5F–WV–22–66.0
SHEET 8 OF 17

JANUARY 30, 2006

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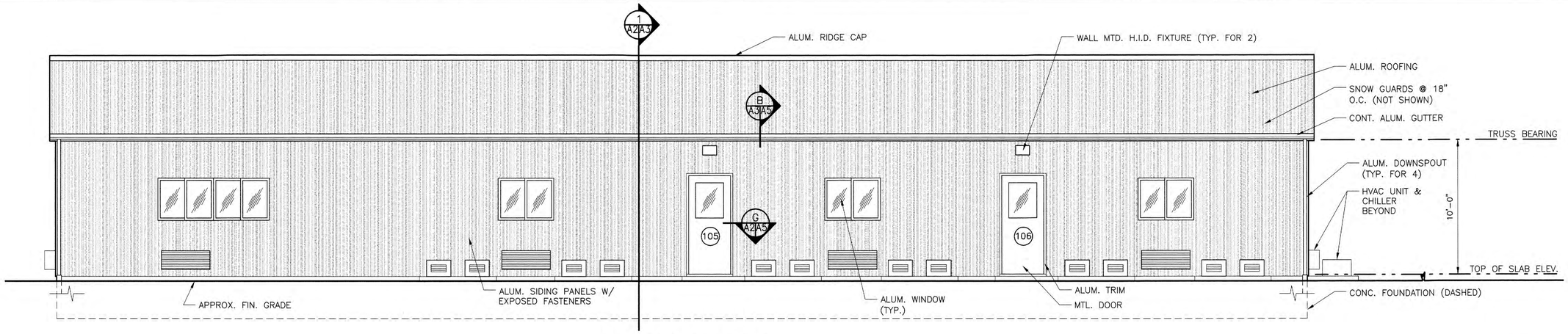
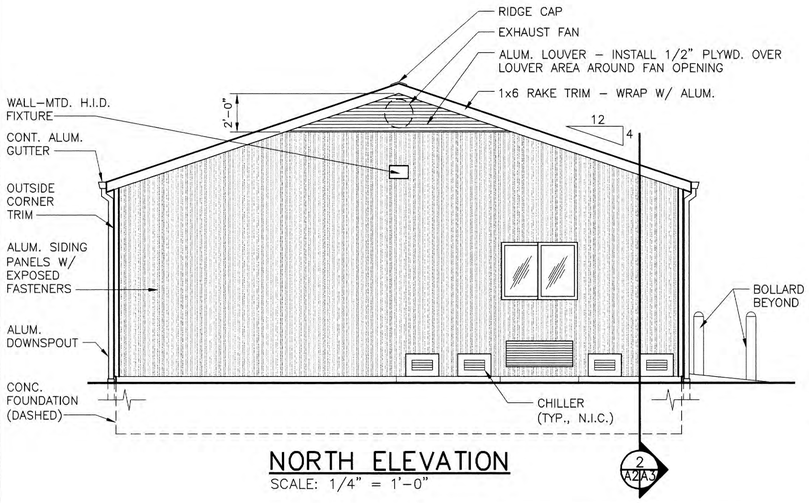
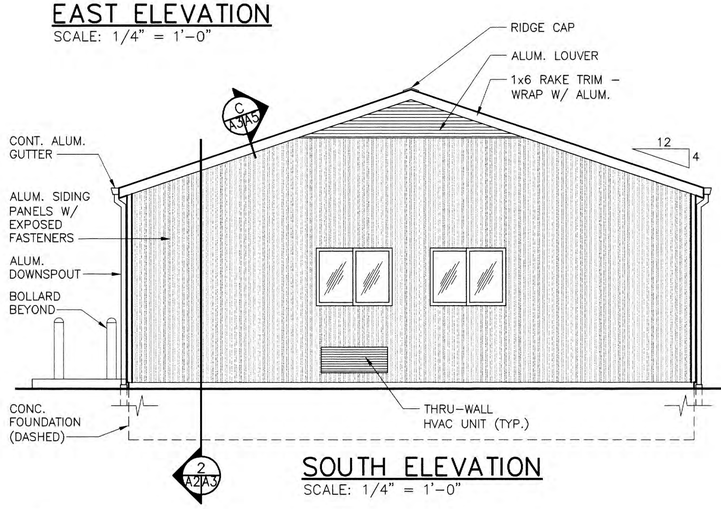


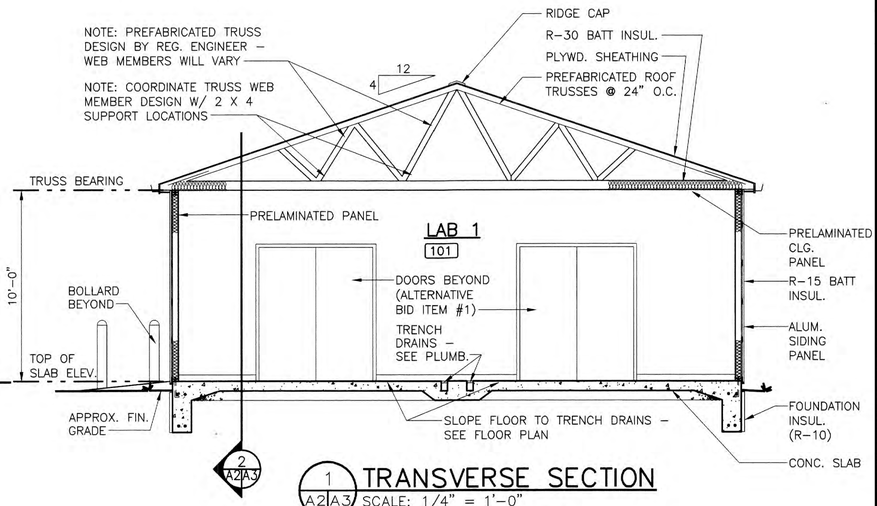
EAST ELEVATION
SCALE: 1/4" = 1'-0"



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

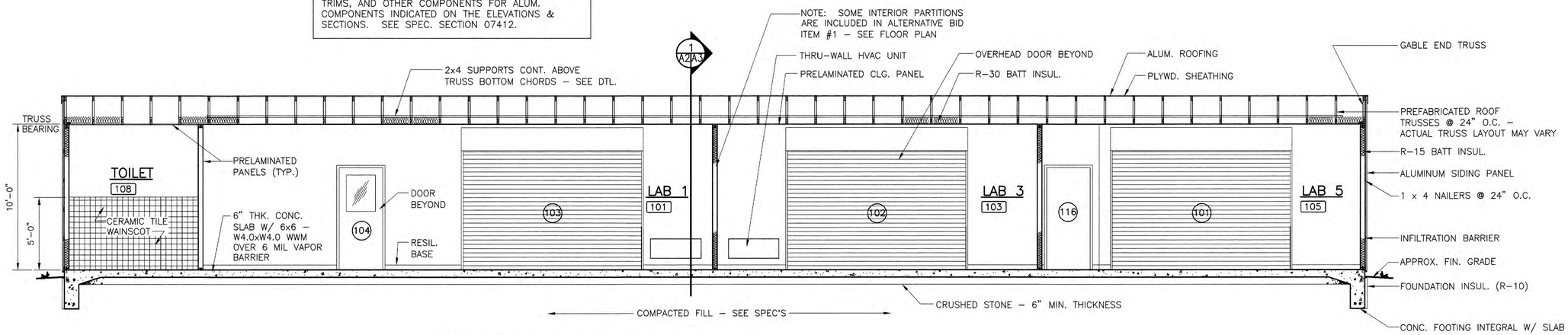


SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



TRANSVERSE SECTION
1 A2 A3 SCALE: 1/4" = 1'-0"

GENERAL ELEVATION & SECTION NOTE: IF ALTERNATIVE BID ITEM #3 IS ACCEPTED BY THE OWNER, SUBSTITUTE PAINTED STEEL SIDING, ROOFING, TRIMS, AND OTHER COMPONENTS FOR ALUM. COMPONENTS INDICATED ON THE ELEVATIONS & SECTIONS. SEE SPEC. SECTION 07412.



LONGITUDINAL SECTION
2 A2 A3 SCALE: 1/4" = 1'-0"

0 5 10 20
1/4" = 1'-0"

COMMONWEALTH OF VIRGINIA
CLARK B. LENTZ
CERTIFICATE NO. 4911
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NO.	REVISIONS:	DATE:	BY:
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WHITE SULPHUR SPRINGS NFH — WILD FISH BUILDING
A3

DESIGNED: CBL
DRAWN: DAR,ACT
DRWG. NO: 5F-WV-22-66.0
SHEET 9 OF 17

JANUARY 30, 2006

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