

WASTE TREATMENT PLANT PROJECT REQUEST FOR INTEREST

Standing Seam Roof & Metal Panel Siding

Requisition Number: **24590-QL-MRA-ATPS-00003**
Submit Interest By: **ASAP**
Quality Level: **QL**
Award Type: **FIRM FIXED PRICE**

ESTIMATED SCHEDULE

Issue Request for Proposal: **October 2023**
Award and Notice to Proceed: **October 2023**

PROJECT DESCRIPTION AND LOCATION

HLW Vitrification Building (HLW) PHASE 1- The HLW is a mixed-use occupancy building with a gross floor area of approximately 453,227 ft² of process area (excluding area assigned to below-grade process area), and approximately 52,434 ft² associated with the HLW Annex. HLW has an approximate footprint of 240 ft wide by 438 ft long. HLW consists of main process areas, receiving and storage areas, and HLW Annex. The HLW Annex is directly adjacent to the main HLW process building, WEST of Column Grid "5". The HLW Annex exterior building envelope (metal wall system and roofing system) is not included in the Material Requisition work scope, unless noted otherwise.

The main HLW Process Building is a five-story windowless structure, which includes a below-grade basement process area. The building foundation, perimeter basement walls, interior cell areas, and process areas in the building's core are constructed of cast-in-place reinforced concrete. The primary superstructure is a structural steel frame. The majority of HLW Process Building and HLW Annex exterior walls consist of insulated metal "sandwich" wall panels on steel wall girts. The majority of HLW roof assembly consists of FM Global Class 1 standing-seam roof panels on rigid insulation, secured to metal deck over roof purlins. Designated roof areas, such as HLW Process Area stairway roofs, exhaust stack roof area, and HLW Annex roof, shall be constructed of thermoplastic membrane (TPO) roof system. Interior load-bearing walls are constructed of reinforced cast-in-place concrete.

SCOPE OF WORK

SELLER shall supply all necessary labor, technical and professional services, vendor engineering, Commercial Materials (CM) calculations with required Professional Engineering/Architectural stamps/seals, permanent materials and, testing, consumables and supplies, miscellaneous materials and incidentals, shipping, transportation and delivery, overhead and profit, and all other costs, whether direct or indirect, required to complete the HLW Manufactured Roofing and Siding work. On site installation of the roof and siding materials is not included as part of this Scope of Work

SELLER Work scope elements include, but are not limited to, the complete services required for development and delivery of procurement phase engineering and design documents (testing reports, detailed shop drawings, "CM" calculations, Engineering Judgments EJs, and Engineering Analyses EIs), fabrication, installation, and construction support services (Supplier Change Document Submittals - SCDs, Inspection, Quality Verification Record Packages - QVRPs, FINAL Submittals, and operations and maintenance manuals) in accordance with Material Requisition Documents, and CONTRACTOR furnished Detailed Design drawings, specifications, and calculations. "Work Included" is defined as all HLW exterior building envelope commodities, components, and accessories East of column grid "5" per plans and as defined below:

Equipment and Materials Required

- **Factory Insulated Metal Wall System**

Exterior metal wall panels fabricated from metal facing sheets and insulated core material with joints between panels and designed to form a weathertight seal. Include all accessories required to create a weather-tight installation. Provide insulated metal wall panels, designed to be installed sequential by mechanically attaching

panels to structural steel supports using concealed or exposed fasteners identical to SELLER tested assemblies. Fasteners shall be uniformly spaced across the width of the wall panels. Panel thickness and metal gauge shall be governed by the performance criteria and the girt spacing as identified in facility design documents.

A. **Panel Type A: Basis of Design: Centria Versawall or approved equal.**

- SELLER shall engage an ISO 17025 compliant testing laboratory to perform wind load and wind driven missile impact testing to verify compliance with project specification.
- Exterior Panels Profile: Flush profile, non-directional embossing, Striated.
- Exterior Facing Finish: High-Performance Organic Finish: Three-coat, thermocured system with fluoropolymer coats containing not less than 70% polyvinylidene fluoride resin by weight, complying with physical properties and coating performance requirements of AAMA 2605 and ASTM D 1654, except as modified below:
 - a. Total nominal thickness of manufacturer's coating system, 2.4 mils.
 - b. Color: Match CONTRACTOR's sample based on CENTRIA #1760 Limestone.
- Interior Panels: Non-directional embossing, lightly planked with manufacturer's standard primer with near white-light colored acrylic or polyester backer finish topcoat.
- Core: Isocyanurate Insulation or accepted equal.
- Panel Coverage Range: 36 inches to 42 inches wide.

B. **Panel Type C: Basis of Design: Centria Versawall or approved equal.**

- SELLER shall engage an ISO 17025 compliant testing laboratory to perform wind load testing to verify compliance with project specification.
- Exterior Panels Profile: Flush profile, non-directional embossing, Striated.
- Exterior Facing Finish: High-Performance Organic Finish: Three-coat, thermocured system with fluoropolymer coats containing not less than 70% polyvinylidene fluoride resin by weight, complying with physical properties and coating performance requirements of AAMA 2605 and ASTM D 1654, except as modified below:
 - a. Total nominal thickness of manufacturer's coating system, 2.4 mils.
 - b. Color: Match CONTRACTOR's sample based on CENTRIA #977 Moss.
- Interior Panels: Non-directional embossing, lightly planked with manufacturer's standard primer with near white-light colored acrylic or polyester backer finish topcoat.
- Core: Isocyanurate Insulation or accepted equal.
- Panel Coverage Range: 36 inches to 42 inches wide.

C. **Panel Type D: Basis of Design: Centria Versa panel or approved equal.**

- SELLER shall engage an ISO 17025 compliant testing laboratory to perform wind load testing to verify compliance with project specification.
- Exterior Panels Profile: Trapezoidal edge rib profile, non-directional embossing, with lightly planked flat panel between ribs.

- Exterior Facing Finish: High-Performance Organic Finish: Three-coat, thermocured system with fluoropolymer coats containing not less than 70% polyvinylidene fluoride resin by weight, complying with physical properties and coating performance requirements of AAMA 2605 and ASTM D 1654, except as modified below:
 - a. Total nominal thickness of manufacturer's coating system, 2.4 mils.
 - b. Color: Match CONTRACTOR's sample based on CENTRIA #1760 Limestone.
 - Interior Panels: Non-directional embossing, lightly planked with manufacturer's standard primer with near white-light colored acrylic or polyester backer finish topcoat.
 - Core: Isocyanurate Insulation or accepted equal.
 - Panel Coverage Range: 36 inches to 42 inches wide.
- D. **Panel Type E: Basis of Design: Metl-Span ThermalSafe 2-hour fire rated wall panels or approved equal.**
- SELLER shall engage an ISO 17025 compliant testing laboratory to perform wind load and wind driven missile impact testing to verify compliance with project specification.
 - Exterior Panels Profile: Light Mesa Wave profile with non-directional stucco embossing.
 - Exterior Facing Finish: High-Performance Organic Finish: Three-coat, thermocured system with fluoropolymer coats containing not less than 70% polyvinylidene fluoride resin by weight, complying with physical properties and coating performance requirements of AAMA 2605 and ASTM D 1654, except as modified below:
 - a. Total nominal thickness of manufacturer's coating system, 2.4 mils.
 - b. Color: Match CONTRACTOR's sample based on CENTRIA #1760 Limestone.
 - Interior Panels: Light Mesa Wave profile with non-directional stucco embossing with manufacturer's standard primer with near white-light colored acrylic or polyester backer finish topcoat.
 - Core: Mineral wool Insulation or accepted equal.
 - Panel Coverage Range: 30 inches to 42 inches wide.
 - Fire Rating: Panel system shall have a UL Fire Resistance Directory listed or other NRTL approved 2-hour fire endurance rating per ASTM E 119.
- E. **Panel Type F: Basis of Design: Metl-Span ThermalSafe 2-hour fire rated wall panels or approved equal.**
- SELLER shall engage an ISO 17025 compliant testing laboratory to perform wind load testing to verify compliance with project specifications.
 - Exterior Panels Profile: Light Mesa Wave profile with non-directional stucco embossing.
 - Exterior Facing Finish: High-Performance Organic Finish: Three-coat, thermocured system with fluoropolymer coats containing not less than 70% polyvinylidene fluoride resin by weight, complying with physical properties and coating performance requirements of AAMA 2605 and ASTM D 1654, except as modified below:
 - a. Total nominal thickness of manufacturer's coating system, 2.4 mils.
 - b. Color: Match CONTRACTOR's sample based on CENTRIA #977 Moss.
 - Interior Panels: Light Mesa Wave profile with non-directional stucco embossing with manufacturer's standard primer with near white-light colored acrylic or polyester backer finish topcoat.
 - Core: Mineral wool Insulation or accepted equal.

- Panel Coverage Range: 30 inches to 42 inches wide.
- Fire Rating: Panel system shall have a UL Fire Resistance Directory listed or other NRTL approved 2-hour fire endurance rating per ASTM E 119.

Item	Rev	QTY Unit	Description
METAL SIDING PANEL ASSEMBLY: NOTE: Building envelope materials shall provide a weather tight insulated enclosure that aligns with WTP Campus material selections and custom colors. Design and procurement of the building shall incorporate and provide standard materials and practices; including but not limited to R-21 insulation, all necessary fasteners and sheet metal trims per facility documents; appropriate for facilitating a 40-year design life of the buildings per specifications. Quantities Are Estimates Only			
1	0	54,000 SF	Type A - Impact Resistant Panel (Striated) 30 ft length - Limestone
2	0	38,000 SF	Type C - Wall Panel (Striated) Accent color - Moss
3	0	44,000 SF	Type D - Wall Panel (Planked) - Limestone
4	0	3,000 SF	Type E - Wall Panel (2Hr Rated) - Moss
5	0	1,860 SF	Type F - Wall Panel (2Hr Rated) - Limestone

- **Metal Roof Panels**

Provide a mechanically fastened standing seam metal roof system. Roof assemblies shall provide a complete weather proofing system and comply with all relevant requirements of this specification. Components may include pre-finished metal panels, rigid board insulation, thermal barrier, cover board, vapor barriers, clips, sealants, and flashing. Roofs for exterior non-building areas.

- A. **Standing-Seam Metal Roof Panels:** Provide factory-formed, designed to be field assembled by lapping and interconnecting raised side edges of adjacent panels with the joint type indicated and mechanically attaching the panels to supports using concealed clips in side laps. Include clips, cleats, pressure plates, and accessories required for weathertight installation.

- Steel Panel Systems: Comply with ASTM E1514

- **Roof Panel Accessories**

- A. **Roof Panel Accessories:** Provide components required for a complete metal roof panel assembly including trim, copings, fasciae, corner units, ridge closures, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of the

- Closures: Provide closures at eaves and ridges, fabricated of the same metal as the metal roof panels.
- Clips: Provide stainless steel panel clips designed to withstand the negative-load requirements, as recommended by roofing manufacturer. Secure clips to metal roofing decking.
- Cleats: Mechanically seamed cleats as recommended by roofing manufacturer.

- Closure Strips: (1) Closed-cell, expanded, cellular, rubber, or (2) cross-linked, polyolefin foam, or (3) closed-cell laminated polyethylene, minimum 1 inch (25 mm) thick, flexible closure strips, cut or pre-molded to match the metal roof panel profile, or as recommended by manufacturer. Provide closure strips where indicated, or where necessary, to ensure weathertight construction.

- **Flashing and Trim**

- A. Formed from 0.0276 inch (0.77 mm) thick, metallic-coated steel sheet unless recommended by roofing manufacturer to match thickness of panel material.
- B. Provide flashing and trim as required to seal against weather and to provide a finished appearance.
- C. Locations include eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers.
- D. Finish flashing and trim with the same finish system as the adjacent metal roof panels.

Item	Rev	QTY Unit	Description
STANDING SEAM METAL ROOF ASSEMBLY: NOTE: Provide a mechanically fastened standing seam metal roof system. Roof assemblies shall provide a complete weather proofing system, accessories and comply with all relevant requirements per specification. Quantities Are Estimates Only			
11	0	78,050 SF	Standing Seam metal roofing Panels (Main building)

QUALITY ASSURANCE (QA) REQUIREMENTS

Programmatic Quality Assurance (QA) requirements for subcontracts or purchase orders performed in the WTP Jobsite will be:

Note: Quality level for the roofing is CM but is Q for siding.

☐	Non-Permanent or Temporary Work - Generally no QA program required
☒	Commercial Quality - Based on DOE Order 414.1C
☒	Nuclear Level Quality - Based on ASME NQA-1 2000

Bechtel may require, as an element of bidder pre-qualification, submission of a representative sample QA Program or Table of Contents copy. For Nuclear Level Quality subcontracts, the successful bidder's QA Program must be approved prior to award of the subcontract or purchase order.

STANDARDS

- A. Unless noted otherwise, the latest applicable edition of the following standards in effect at the time of bid/award form a part of this specification.
- B. American Society for testing and Materials
 - ASTM C 1289. *Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.*
 - ASTM D 471. *Test Method for Rubber Property--Effect of Liquids.*
 - ASTM D 573 *Test Method for Rubber--Deterioration in an Air Oven.*
 - ASTM D 751. *Test Methods for Coated Fabrics.*
 - ASTM D 1149. *Test Method for Rubber Deterioration--Surface Ozone Cracking in a Chamber.*
 - ASTM D 1204. *Test Method f*
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 - *or Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature.*
 - ASTM D 6878. *Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing.*
 - ASTM E 96 *Standard Test Methods for Water Vapor Transmission of Materials*
 - ASTM E 108. *Test Methods for Fire Tests of Roof Coverings.*
- C. American Society of Civil Engineers

- ASCE 7-98. *Minimum Design Loads for Buildings and Other Structures*
- D. Underwriters Laboratories, Inc. (UL) Standards
 - NFPA 30-07 *Flammable and Combustible Liquids Code*
- E. National Fire Protection Association (NFPA)
 - NFPA 30-07 *Flammable and Combustible Liquids Code*

BIDDER REGISTRATION AND PRE-QUALIFICATION

The BNI Acquisition Services Subcontracts/Purchasing group is responsible for collection, evaluation, and internal publication of potential bidders' information for the purpose of pre-qualifying them to bid on any particular subcontract or purchase order.

As part of this process, BNI requires all potential offerors to register at the Supplier and Contractor Portal at: <https://www.Bechtel.com/supplier/>

If your company has registered previously, then only supplemental information should be sent to the Bechtel National, Inc. representative noted below.

Information to be provided by potential bidders must include:

- Dun and Bradstreet Number
- Company Name
- Company Address
- Contact Phone Number
- Contact Person
- Email Address
- Safety Data and Information
- Applicable Work Experience and Projects
- Size of Business (Small, Large)

WTP BACKGROUND

Information about the WTP Project can be found on <http://www.hanfordvitplant.com>

CONTACT

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