

U.S. DEPARTMENT OF VETERANS AFFAIRS

REQUEST FOR INFORMATION

SOLICITATION NO. VA245-17-R-0149

AMBULATORY CARE / PHYSICAL SECURITY IMPROVEMENTS, PROJECT 540-325

LOCATED AT CLARKSBURG, WV

Date Submitted: 07/26/17

RFI # 1

Reference/Subject: High Performance Concrete Panel Rain Screen System

Spec. Section No. / Title _____

Page / Art. / Para. _____

Drawing No.: A4-1

Plan/Detail/Schedule: _____

Request (Explain your request in detail here):

Please provide a specification on the high performance concrete panel rain screen system depicted on the drawings.

Submitted by (Company Name): Mare Solutions, Inc. (Person Name): Dan Hallewell

VA Response: _____

Date Received by VA: _____

Response by: _____ Date: _____

Attachments: _____

A/E Firm Response: Please see attached specification

A/E Firm Response Date: 8/7/17

SUBMIT ALL QUESTIONS TO THE CONTRACTING OFFICER BY E-MAIL, [ALISON KLEIN@VA.GOV](mailto:ALISON.KLEIN@VA.GOV)
OR BY FAX TO 304-623-7637

PLEASE NOTE DEADLINE FOR RECEIPT OF ALL QUESTIONS IS JULY 26, 2017 BY 12:00 NOON
EST.

SECTION 07 42 47
ULTRA HIGH PERFORMANCE CONCRETE (UHPC) PANELS

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies factory-molded, ultra high performance concrete solid exterior wall panels and pre-engineered support system.

1.2 RELATED WORK

- A. Section 05 40 00 COLD-FORMED METAL FRAMING
- B. Section 06 10 00 SHEATHING
- C. Section 07 21 13 THERMAL INSULATION
- D. Section 07 27 26 FLUID APPLIED AIR BARRIERS
- E. Section 09 06 00 SCHEDULE FOR FINISHES

1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Provide wall panels and support system regularly engaged for not less than five (5) years in the fabrication of the type and design indicated.
- B. Installer: A firm with five (5) years of successful experience with installation of panels of type and scope equivalent to work of this Section. Submit installer qualifications.
- C. Approval by Contracting Officer Representative (COR) is required of products of proposed manufacturer.
- D. Source: For each material type required for work of this section, provide primary materials, which are products of one manufacturer. Provide secondary or accessory materials, which are acceptable to manufacturers of primary materials.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Samples: Representative of finished exposed face of solid exterior UHPC panel. For each color and pattern specified, submit a minimum of two samples, each not less than 6 by 6 inches (152 by 152 mm), and of actual thickness.
- C. Shop Drawings: Submit shop drawings showing anchor placement, joint locations, and complete pattern layout plan.
 - 1. Shop Drawings for Mockups: Include plans, elevations, sections, full-size details, and attachments to other work.
- D. Manufacturer's Literature and Data.
- E. Manufacturer's Certificates: Indicating manufacturer's qualifications specified.
- F. Installer qualifications.

- G. Manufacturer warranty.
- H. Delegated Design Submittals.

- 1. For exterior solid UHPC wall panel, rain screen support system as indicted herein, fasteners and anchors to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 WARRANTY

- A. Construction Warranty: Comply with FAR clause 52.246-21 "Warranty of Construction."
- B. Manufacturer Warranty: Manufacturer shall warranty wall panels for a minimum of ten (10) years from the date of installation and final acceptance by the Government. Submit manufacturer warranty.
- C. Warranty on Panel Finishes: Manufacturer's shall warrant wall panel finish and provide standard agreement to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
- D. Finish Warranty Period: Five (5) years from date of installation and final acceptance by the COR.

1.6 QUALITY ASSURANCE

- A. Mockups:
 - 1. Build mockup indicated on Drawings to verify selections made under sample submittals, and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
 - 2. Build mockup indicated on Drawings to verify selections made under sample submittals, and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
 - 3. Approval of mockup does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
- B. Pre-Installation Meetings:
 - 1. Conduct pre-installation meeting to verify project requirements, substrate conditions, and manufacturers' installation instructions.
- C. Surface Preparation:
 - 1. Specify applicable product preparation requirements.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Deliver exterior solid UHPC wall panels and support system components packaged to comply with manufacturers' requirements and adequately protected from damage during shipment.
- B. Protect components from adverse job conditions prior to installation.

- C. Protect components from other trades after installation.
- D. Panels are to be stored and handled vertically until installed.
- E. Store exterior solid UHPC wall panels and support system components on platforms or pallets, covered with tarpaulins or other suitable weather-tight ventilated covering. Store components so that water accumulations will drain freely.
- F. Do not store exterior solid UHPC wall panels and support system components in contact with other materials that might cause staining, denting, surface damage or other deleterious effects.

1.9 PROJECT CONDITIONS

- A. Field Measurements:
 - 1. Verify actual measurements/openings by field measurements before material fabrication, and show recorded measurements on shop drawings, as required.
 - 2. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design Product/Manufacturer: TAKTL Solid Exterior Patterned Wall and Façade Panels, factory-formulated with TAKTL ultra high performance concrete and reinforced with alkali-resistant (AR) glass mesh, factory-mixed and manufactured: complying with ASTM C1186. Type A, Grade IV or approved equal.

2.2 PERFORMANCE REQUIREMENT - GENERAL

- A. Comply with ASTM C1186, Type A, Grade IV.
- B. Panel Performance Characteristics:
 - 1. Thermal Expansion (ASTM C531-00): 6.41E-06 in/in/degree F (0.01 inches per meter at 40 degree temperature change)
 - 2. Material Behavior in Vertical Tube Furnace @ 750 degrees C (ASTM E136-09): Pass
 - 3. Density - Thin Panel (ASTM C1185-08): 137 lbs./ft³ (2,194 kg/m³).
 - 4. Flexural Strength (Thin Panel) - Dry (ASTM C1185-08): Pass, Mean length direction not less than 3,800 lbs./in² and width direction 3,600 lbs./in².
 - 5. Flexural Strength (Thin Panel) - Wet (ASTM C1185-08): Pass, Mean length direction not less than 3,800 lbs./in² and width direction 3,400 lbs./in².
 - 6. Freeze/Thaw (Cladding) (ASTM C1185-08): Pass. No visible cracks and not less than 90% post-exposure strength retention.

7. Moisture Content - Thin Panel (ASTM C1185-08): less than 1.0%
8. Moisture Movement - Thin Panel (ASTM C1185-08): 0.00%
9. Warm Water (ASTM C1185-08): Pass. No visible cracks or structural alteration. Not less than 90.0% ratio of retained post-exposure strength.
10. Water Absorption - Thin Panel (ASTM C1185-08): less than 4.0%
11. Water Tightness (ASTM C1185-08): Pass. No water droplet formation.
12. Anchor Pullout Strength (ASTM E488-96): 8.5 mm embed in 13mm thick panel
 - a. Tension (Min. Mean) Peak Load - 386 lbf or greater
 - b. Shear (Min. Mean) Peak Load - 650 lbf or greater
13. Surface Burning Characteristics (ASTM E84-09):
 - a. Flame Spread - Pass
 - b. Smoke Developed - Pass
 - c. Class A.
14. Colorfastness & Weathering (500 hours) (ASTM G155-05a & D2244-09a):
 - a. 2.07 delta E. without coating (standard, varies with pigment type, texture and coating [consult with manufacturer for color information])
15. Compressive Strength (ASTM C873): $\geq 18,332 \text{ lbs./in}^2$ (126 MPa).
16. Tensile (splitting matrix prism) Strength (ASTM C496): 1,319 lbs./in^2 (9 MPa).

C. Panel Finishes:

1. Finish exposed, front-facing surface of UHPC as follows, to match approved design reference sample. Panel faces shall be free of joint marks, grain, or other obvious defects.
 - a. Pattern direction as indicated.

D. Panel Sizes: Vary and as indicated on approved panel/part layout.

E. Panel Texture: Rough 1.

F. Panel Color: Dune.

G. Panel Thickness: $\frac{1}{2}$ -inch (13-mm), thickness variation ± 0.05 -inch (1.3 mm).

H. Panel Edges: Square cut.

I. Panel Weight: 5.7 lbs/ft^2 , at $\frac{1}{2}$ -inch thickness.

2.3 SUPPORT STRUCTURE

A. Aluminum Support Structure:

1. Complete sub-frame assembly shall support and anchor solid exterior solid UHPC wall panels. Aluminum support structure shall be anchored to building structure.

2. Attachment assembly manufacturer: Rain Screen Principal System CI by Knight Wall Systems or approved equal.

B. Components:

1. Horizontally-oriented concealed fastener attachment system support bracket/angle bracket anchored directly to building structure.
2. Vertical girt profile, shelf shimming extrusions or cold formed channels that fasten into support brackets and supports.
3. Horizontal support rails: Extruded aluminum rails with mated clips attached to girt profile which provides means to suspend UHPC wall panels. Fasteners: corrosion-resistant stainless steel fasteners and anchors of type, size and spacing required for type of substrate and project conditions.

C. Minimum 0.8 mm (0.31 inch) thick for wall and roof panels.

D. Steel, Sheet, Glavanized: ASTM A653/A653M and AISI SG03-3, Structural.

1. Grade 40, galvanized coating conforming to ASTM A924/A924M, Class Z 275 G-90.

E. Steel, Sheet, Commercial: ASTM A1008, Type C.

F. Steel, Sheet, Aluminized: ASTM A463/A463M and AISI SG03-3. Steel to be coated on both sides with 0.15 Kg/sq. m (0.5 ounce of aluminum per square foot).

G. Recycled Content of Steel Products: Postconsumer recycled content not less than 30 percent.

2.4 AUXILIARY MATERIALS

A. Panel Anchors: Concealed, undercut type, for attaching UHPC panels to panel-mounted extruded aluminum "C" clips and substructure support system. Panel anchor holes to be factory pre-drilled by UHPC panel manufacturer.

B. Adhesives: As recommended in UHPC panel manufacturer's written instructions for application required.

C. Stainless Steel Drill Screws: Of sufficient lengths and sizes to securely fasten support structure to building wall framing members, and as follows:

1. Screws complying with ASTM C 1002 for fastening to steel members less than 0.033 inches (0.84 mm) thick.
2. Screws complying with ASTM C 954 for fastening to steel members from 0.033 to 0.112 inches (0.84 to 2.84 mm) thick.

2.5 FABRICATION

A. Fabricate wall panels and accessory items in accordance with manufacturers' recommendations and approved submittals.

B. Panels shall be fabricated to size with all concealed/undercut OR face fastened anchor holes factory-drilled by the UHPC panel manufacturer.

- C. Field-cut panels and drill face-fastening anchor holes in accordance with the UHPC panel manufacturer's written directions.
- D. Do not field-modify factory-drilled concealed/undercut panel anchor holes.
- E. Fabricate all panels to profiles, colors and textures per samples and approval selected by the Architect.
- F. Fabricate panels in accordance with manufacturers' Quality Management System Tolerances and Acceptance Criteria.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Install panels in accordance with the manufacturer's approved erection instructions and diagrams, except as specified otherwise.

3.2 EXAMINATION

- A. Examine structure and conditions for compliance with requirements for installation tolerances, true and level bearing surfaces, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.3 ERECTION/INSTALLATION - DELEGATED DESIGN

- A. Install wall reinforcements, channel cleats, clips, hangers, and other accessories required for connecting UHPC wall panels to supporting members and backup materials in accordance with project/façade engineer's approved design.
- B. Provide miscellaneous reinforcement of adhered panel parts and unitized panel parts per manufacturer and installation contractor's engineer.
- C. Lift UHPC wall panels and install without damage.
- D. Install UHPC panels level, plumb, square, and in alignment.
- E. Provide temporary supports and bracing as required to maintain position, stability, and alignment of panels until permanent connections are completed.
 - 1. Maintain horizontal and vertical joint alignment and uniform joint width.
 - 2. Remove temporary projecting hoisting devices.

3.4 PROTECTION AND CLEANING

- A. Protect panels and other components from damage during and after erection, and until project is accepted by the COR.

V.A. PROJECT NO. 540-325
CBLH PROJECT NO. 19200.01

B. After completion of work, all exposed finished surfaces of panels are to be cleaned of soil, discoloration and disfiguration in accordance with UHPC panel manufacturer's written instructions.

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AMBULATORY CARE / PHYSICAL SECURITY IMPROVEMENTS, PROJECT 540-325

LOCATED AT CLARKSBURG, WV

Date Submitted: 07/26/17

RFI # 2

Reference/Subject: Civil Work

Spec. Section No. / Title _____

Page / Art. / Para. _____

Drawing No.: C1-1 and C11-2

Plan/Detail/Schedule: _____

Request (Explain your request in detail here):

Please provide a scope for the civil work. It is not clear from the civil drawings how things go from the existing site plan to the proposed site plan. Items like what gets removed, extent of new paving, extent of new curbs, etc.

Submitted by (Company Name): Mare Solutions, Inc. (Person Name): Dan Hallewell

VA Response: _____

Date Received by VA: _____

Response by: _____ Date: _____

Attachments: _____

A/E Firm Response: Please see attached C1-2 drawing

A/E Firm Response Date: 8/7/17

SUBMIT ALL QUESTIONS TO THE CONTRACTING OFFICER BY E-MAIL, ALISON.KLEIN@VA.GOV OR BY FAX TO 304-623-7637

PLEASE NOTE DEADLINE FOR RECEIPT OF ALL QUESTIONS IS JULY 26, 2017 BY 12:00 NOON EST.

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REQUEST FOR INFORMATION

SOLICITATION NO. VA245-17-R-0149

AMBULATORY CARE / PHYSICAL SECURITY IMPROVEMENTS, PROJECT 540-325

LOCATED AT CLARKSBURG, WV

Date Submitted: 08/02/17

RFI # 3

Reference/Subject: New Wood – Look Ceiling

Spec. Section No. / Title _____

Page / Art. / Para. _____

Drawing No.: A9-2

Plan/Detail/Schedule: _____

Request (Explain your request in detail here):

The Reflected Ceiling Plan (A9-2) indicates a New Wood – Look Ceiling in sections of 1301 and 1303. The finish schedule indicates AT-2 and AT-3 in those areas with a note to refer to the reflected ceiling plan. What material is required?

Submitted by (Company Name): Mare Solutions, Inc. (Person Name): Dan Hallewell

VA Response: _____

Date Received by VA: _____

Response by: _____ Date: _____

Attachments: _____

A/E Firm Response: Please see attached specification.

A/E Firm Response Date: 8/7/17

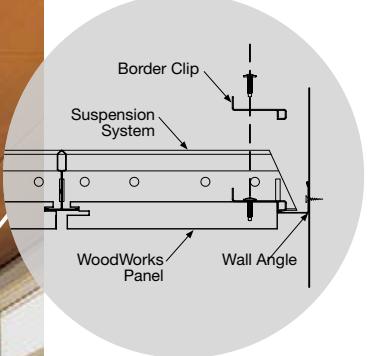
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OR BY FAX TO 304-623-7637

PLEASE NOTE DEADLINE FOR RECEIPT OF ALL QUESTIONS IS JULY 26, 2017 BY 12:00 NOON
EST.

WOODWORKS®

Tegular and Vector®

CAD/Revit® drawings at:
armstrong.com/details



WoodWorks® Vector® panels – Rg 5008 Perforation in Custom White Oak Rift with Prelude® XL® 15/16" suspension system (Pgs. 279-280)

Fully accessible wood panels are available in multiple options for acoustical and aesthetic needs.

KEY SELECTION ATTRIBUTES

- Vector edge detail provides safe and secure downward accessibility without tools and narrow reveal visual (1/4")
- Create upturns for continuous visuals and clouds with WoodWorks Trim (see pages 135-136 for trim options)
- Coordinating WoodWorks walls available (see pages 341-342 for wall offering)
- 18" x 18" Tegular infill panels now available for Metaphors® Coffers; for details, visit armstrong.com/metaphors
- Installation with minimum plenum clearance (Vector)
- Shorter lead times and lower cost than custom millwork

VENEERS Due to printing limitations, shade may vary from actual product.

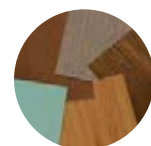
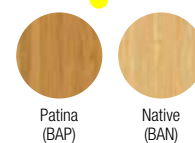
Natural Veneers (Real Wood Veneers)



Constants™ (Real Wood Veneers)



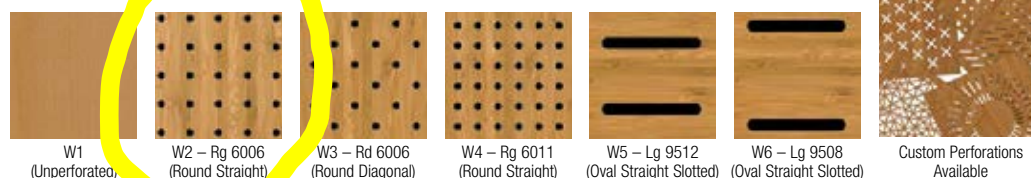
Bamboo**



Custom Veneers Available

** Veneer is rapidly renewable. Bamboo is a grass that only requires 3-7 years for maturity and does not have to be replanted after each harvest.

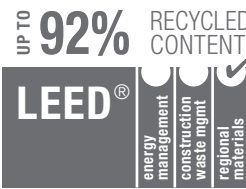
PERFORATION OPTIONS (Actual scale shown)



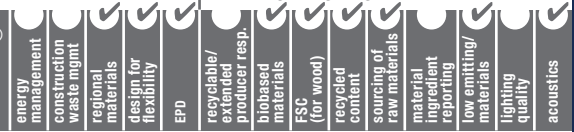
NOTE: Slotted perforations run parallel to the length of the panel. To view more perforation information and build swatches in real time, visit armstrong.com/swatchit

WOODWORKS®

Tegular and Vector®



Calculate LEED contribution at
armstrong.com/greengenie



VISUAL SELECTION

Edge Profile	Item Number*	Dimensions Nominal W x L x H (Inches) Custom Sizes Available	Perforations
WOODWORKS® Tegular			
	9/16" Square Tegular 5404 _____	24 x 24 x 3/4"	□ W1, W2, W3, W4, W5, W6
FSC®-certified WOODWORKS Tegular			
	9/16" Square Tegular 5406 _____	24 x 24 x 3/4"	□ W1, W2, W3, W4, W5, W6
	6484 _____	12 x 48 x 3/4"	□ W1, W2, W3, W4, W5, W6
	6485 _____	12 x 72 x 3/4"	□ W1, W2, W3, W4, W5, W6
	6486 _____♦♦	24 x 48 x 3/4"	□ W1, W2, W3, W4, W5, W6
	6487 _____♦♦	24 x 72 x 3/4"	□ W1, W2, W3, W4, W5, W6
	6510 _____	24 x 42 x 3/4"	□ W1, W2, W3, W4, W5, W6
	6511 _____	30 x 30 x 3/4"	□ W1, W2, W3, W4, W5, W6
	6512 _____	27 x 30 x 3/4"	□ W1, W2, W3, W4, W5, W6

WOODWORKS® Vector®†

15/16" Vector – 1/4" Reveal	5401 _____	24 x 24 x 3/4"	□ W1, W2, W3, W4, W5, W6
FSC-certified WOODWORKS Vector†			
15/16" Vector – 1/4" Reveal	5403 _____	24 x 24 x 3/4"	□ W1, W2, W3, W4, W5, W6
	6480 _____	12 x 48 x 3/4"	□ W1, W2, W3, W4, W5, W6
	6482 _____	24 x 48 x 3/4"	□ W1, W2, W3, W4, W5, W6

† U.S. Patents 5,417,025; 5,253,463; 5,355,646

♦ When specifying or ordering, include the appropriate 2-digit perforation and 3-letter color suffixes.

For veneers, sizes, and perforation patterns available as special order, call TechLine at 1 877 ARMSTRONG.

♦♦ 24" x 48" and 24" x 72" Tegular panels are available standard with fleece attached. Fleece on other panels must be specified.

NOTE: Cartons for items 6485 and 6487 (12" x 72" and 24" x 72" series) include suspension system stabilizer hooks. Items 6510, 6511, and 6512 are available in limited standard finishes and perforation options.

See TechZone® ceiling systems (pages 251-257) for more details.

PERFORMANCE

Fire Rating
Class A
Class A
Class A
Class A
Class A
Class A
Class A
Class A

ACOUSTICAL INFORMATION

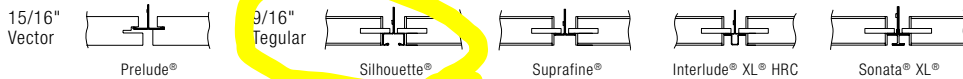
Dots represent high level of performance.

Perforation	NRC** (24" x 48" and 24" x 72" sizes)	NRC** (all other sizes)	CAC**
W1	N/A	N/A	38
W2	0.50	0.40	28
W3	0.50	0.40	28
W4	0.70	0.65	28
W5	0.55	0.55	28
W6	0.45	0.40	28

** Maximum NRC achieved with acoustical infill (item 8200100 or 5479). When infill is used, CAC is 28. For additional infill options, refer to the Acoustical Infill Panels data page (BPCS-4172).



SUSPENSION SYSTEMS



Prelude and Suprafine are available in many standard colors. All other suspension systems are available in standard White only. Other colors available as special order.

ACCESSORIES

Accessories, trim, and acoustical infill panels are available. See pages 135-136 in this catalog or visit armstrong.com/woodworks

PHYSICAL DATA

Material

Fire-retardant particle board with face-cut veneers; FSC certified fire-retardant particle board with face-cut veneers (SW-COC-003601). For more information about FSC certified fire-retardant products, or to view our FSC certification letter, visit armstrong.com/woodworksfsc

Surface Finish

Clear or tinted semigloss coating

Fire Performance

ASTM E84 surface burning characteristics, HPVA Certified with audit program per ASTM E84. Flame Spread Index 25 or less. Smoke Developed Index 50 or less.

CAN/ULC S102 surface burning characteristics. Flame Spread Rating 25 or less. Smoke Developed Classification 50 or less.

ASTM E1264 Classification

Composite – Fire Class A

Primary (Embodied) Energy

See all LCA information on our EPD's.

Application Considerations

Variation among panels may occur due to the natural characteristics of the wood and grain.

It is very important that WoodWorks panels are climatized prior to installation. Relative humidity between 25% and 55%, and temperatures between 50°F and 86°F, must be maintained throughout the life of the product.

Design Considerations

Different panel sizes should not be installed together. Perforated panel borders will vary (length and width) based on perforation selection and panel size. Do not mix perforations on the same installation.

Vector safety clips included with panels may be visible through panel perforations.

Specification Consideration

Attention: For FSC-certified wood products to maintain their CoC certification, products must be sold to a CoC-certified distributor or directly to the installing contractor. Failure to do so breaks the CoC.

Installation Consideration for Tegular Panels

Due to panel weight, 24" x 48" and 24" x 72" panels require that the suspension system be attached to the back with safety cables attached. 12" x 72" and 24" x 72" panels require the use of suspension system stabilizer clips (which are included in the cartons).

Seismic Restraint

WoodWorks Tegular and Vector Solid Wood Panels have been engineered, tested, and approved for application in all seismic areas when installed per Armstrong installation instructions.

Warranty

Details at armstrong.com/warranty

Weight; Square Feet/Cariton

Panels – 2.75 lbs/SF
64 SF minimum order quantity;

TechLine™ / 1 877 ARMSTRONG
armstrong.com/woodworks
(search: woodworks tegular -or- woodworks vector)
BPCS-5103-815

LEED® is a registered trademark of the US Green Building Council
Revit® is a registered trademark of Autodesk, Inc.
FSC® is a registered trademark of FSC Forest Stewardship Council,
A.C., license code FSC-C007626. All other trademarks used herein are the property of AWI Licensing Company and/or its affiliates
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RFI received thru email:

According to Attachment 1 as included within the Solicitation listed on FBO.gov, the following statement is made:

“Contractor shall obtain *within 60 days* of notice of award a current WV Contractor’s License *as required by the State of West Virginia*”

The actual WV Contractors Licensing law says the following:

[§21-11-6. Necessity for license; exemptions.](#)

(a) **No person may engage in this state in any act as a contractor, or submit a bid to perform work as a contractor**, as defined in this article, **unless such person holds a license issued** under the provisions of this article. No firm, partnership, corporation, association or other entity shall engage in contracting in this state unless an officer thereof holds a license issued pursuant to this article.

The actual law for the state of WV says it is **illegal** to even bid (solicit) work within the state without a valid contractor’s license. Nowhere does it say you have 60 days to obtain a license.

Response:

The Federal Government cannot bar or prevent any Service Disabled Veteran Owned Small Business that is CVE and registered in SAM from proposing or offering on this project based on the licensing requirement from the State of WV or enforce the licensing requirement. The State requirement for contractor licensing is acknowledged and contractors are notified of this requirement.