TerraClad™ General Specifications

PRODUCT NAMES:
Terra cotta Baguettes/Louvers and Related Work

MANUFACTURER:
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TECHNICAL SPECIFICATIONS:

TERRA COTTA BAGUETTE/LOUVER SYSTEM

PART 1 – GENERAL

[Items in brackets provide options or call for project specific information]

1.1 SUMMARY

A. The work of this section includes, but shall not be limited to, [unitized (panelized) or stick built] baguette/louver system, consisting of the following:
   1. Internal aluminum spline.
   2. Extruded hollow terra cotta baguettes/louvers.
   3. Gaskets.
   4. Anchors, fasteners, flashings, weather seals, cover plates and formed metal trim and other accessories required for a complete installation.
   5. Aluminum [vertical or horizontal] fin plates.
   6. Aluminum angle or clip attachments.

B. Related work:
   1. Division 3, Cast-in-place and precast concrete.
   2. Division 4, Unit masonry assemblies.
   3. Division 5, Cold-formed metal framing.
   4. Division 6, Exterior sheathing, Rough Carpentry.
   5. Division 7, Insulation, flashings, firestop systems, air and vapor barriers, and joint sealers.
   6. Division 8, Exterior aluminum curtain wall framing, windows, glass, and glazing.
   7. Division 10, Exterior sun control devices.

1.2 SYSTEM DESCRIPTION

A. Design Criteria: Terra cotta baguette/louver system shall be based on Construction Documents and Specifications which indicate sizes, profiles, finishes, and dimensional requirements and shall consist of:
   1. Hollow terra cotta baguettes/louvers hung [individually or unitized] with internal aluminum spline(s).
   2. Gaskets [standard black] between spline and baguette/louver to maintain position and prevent wind induced rattle.
   3. Aluminum fin plates carry the baguette/louver, spline and gasket assembly, and attach back to the structure with aluminum clip angle or other shape specified.
   4. Fin plates to be attached back to portions of the building structurally sufficient to carry the clay baguette/louver system and associated loads.
   5. System shall be engineered.
   6. [Vertically oriented baguette/louver assemblies shall utilize a bottom gasket with a weep condition.]

1.3 PERFORMANCE REQUIREMENTS

A. General: Design, fabricate and install components so that the completed baguette/louver system will withstand live loads, and those stipulated by the

Building Code in effect for this Project.

1. The system shall be attached to a structure whose deflections are limited to L/360 or 5/8", whichever is less.

B. Movement: Design, fabricate and install system to withstand building and thermal movements including deflections, temperature change without buckling, distortion, joint failure, or undue stress on baguette/louver system components, anchors or permanent deformation of any kind.
   1. Provide for thermal movement over an ambient temperature range of 120°F (49°C) and a surface temperature of 180°F (82°C).

C. Color/Finish: Terra cotta baguettes/louvers shall be fired clay materials that achieve their final through-body or glaze color and texture through a kiln firing process forming permanent bonds.

D. Testing:
   1. Absorption (ASTM C67): 4.0% to 7.0%.
   2. Modulus of Rupture (ASTM C99): 2,000 to 3,000 psi.
   3. Weight (ASTM C67): 130 to 135 lbs/cu.ft.
   4. Linear Coefficient of Thermal Expansion: 3.5 x 10^{-4} %.
   5. Freeze and Thaw (ASTM C67): 300 cycles.
   6. Hardness (Various Standard Colors): 7 to 9 Mohs scale.
   7. Efflorescence (ASTM C67): Not effloresced.
   8. Chemical Resistance (ASTM C126): No change in color or texture.

E. Fabrication Tolerances:
   1. Dimensional Tolerance: 0.039 inch for any cut length up to 60 inches.
   2. Height: Plus or minus 1/16 inch up to 10 inches; plus or minus 3/32 inch up to 15 inches.
   3. Thickness, Cross Section of baguette/louver: Plus or minus 1/16 inch.
   4. Straightness ("sweep"): plus or minus 0.25 percent of length.
   5. Diagonal Flatness: Plus or minus 0.25 percent of diagonal.
   6. Vertical Flatness: Plus or minus 1.0 percent of height.
   7. Torsion: Plus or minus 0.25 percent of diagonal.

F. Aluminum support: refer to Division 8 for requirements.

1.4 SUBMITTALS

A. Shop Drawings: Complete shop drawings shall be submitted for approval prior to fabrication including:
   1. Elevations for each condition indicating terra cotta baguette/louver type and location.
   2. Section details, to convey proper fabrication/installation for terra cotta baguette/louver types.
   3. Shop drawings for building structure to receive baguette/louver system to be coordinated with terra cotta baguette/louver system shop drawings.

B. Samples: 3 sets of the following samples in the selected finish and color.
   1. Initial color, if custom, will be submitted on a 6"h x 6"w tile. Standard colors may be selected from manufacturer's color box.
   2. Two 12-inch long by full size profile of each type of baguette/louver. Samples shall represent the full range of color and texture proposed for the Work.

C. Product Data: Manufacturer's latest published literature describing each product

selection.

D. [LEED Information:
    1. Manufacturer shall supply a document on company letterhead stating:
        a) Material & Resources requirement 1
        b) Material & Resources requirement 2. .]
E. [Project Specific Tests: If Project Specific Test are required:
    1. Manufacturer and fabricator to certify that performance tests specified have been performed and that products or systems, including finishes, comply with specified requirements.
    2. Submit 2 copies of test reports, prepared by the testing agency, for each specified test showing required performance criteria and test results. Include reports of failures and remedial actions taken in test reports. Arrange with the testing agency to prepare test reports in accordance with reporting procedures described in the Project Specified Test Standards.]

1.5 QUALITY ASSURANCE

A. Installer/Fabricator Qualifications: Engage an experienced Installer/Fabricator, who has specialized in the erection and installation of types of systems similar to that required for this Project, to erect the terra cotta baguette/louver system.
    1. Installer/Fabricator shall be trained by the manufacturer and has engaged in similar work for a period of no less than 5 years.
B. Manufacturer's qualifications: Engage a Manufacturer experienced in the manufacture of terra cotta baguette/louver systems similar to those indicated for this Project, and with a record of successful in-service performance.
C. Single responsibility:
    1. The baguette/louver system shall be provided by a single firm unless otherwise noted.
    2. The baguette/louver system shall have been used on at least 5 projects.
D. [Mockup: Provide one completely assembled baguette/louver area, as shown in the Construction Documents, installed with all related accessories, in composite configurations, and representative of the design as shown on the Drawings.
    1. Product used to assemble the mockup shall be the same as that to be installed onto the building.
    2. Extent of mockup shall be the same as that which will be provided in the final work.
    3. Mockup shall be installed simulating actual construction conditions, including actual structural supports and connections. Use means, methods and techniques proposed for final installation.
    4. Locate mockup in location as directed by the Architect.
    5. Personnel assembling mockup shall be the same personnel that will perform the actual work at the project site.]
E. [Pre-Construction Compatibility and Adhesion Testing: Submit to joint sealant manufacturer samples of material that will contact or affect joint sealants for compatibility and adhesion testing as indicated below:
    1. Use test methods standard with manufacturer to determine if priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.

a) Perform tests under normal environmental conditions that will exist during actual installation.]

F. Pre-Installation Inspection: Installer to contact manufacturer of terra cotta baguette/louver system, Owner and Architect, prior to installation of terra cotta baguette/louver system if site conditions adverse to proper installation of the system exist.

1.6 HANDLING

A. Protect components from adverse job conditions prior to installation.
B. Protect components from other trades after installation.
C. Storage:
   1. Store components on platforms or pallets, covered with tarpaulins or other suitable weather-tight ventilated covering. Store components so that water accumulations will drain freely.
   2. Do not store terra cotta baguettes/louvers in contact with other materials that might cause staining, surface damage, or other deleterious effect.
   3. Do not stack platforms or pallets one on top of another.

1.7 WARRANTY

A. Manufacturer shall warrant the material of this Section for a period of 5 years from date of Substantial Completion against possible material defects.
B. Installer shall warrant the workmanship of this Section for a period of 2 years from date of Substantial Completion against defects in Workmanship.
C. The installation warranty shall provide that the baguette/louver system will remain intact during the warranty period and that if any failures occur due to faulty installation practices, components of the system will be repaired or replaced as required to render the system like it existed at substantial completion, at no cost to the Owner.
D. The warranty shall cover labor and materials.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

A. Subject to compliance with requirements, manufacturer offering terra cotta baguette/louver system that may be incorporated in the work include the following:
   1. TerraClad™ by Boston Valley Terra Cotta USA (toll free 888.214.3655, tel. 716.649.7490 - www.bostonvalley.com)

2.2 MATERIALS

A. Hollow terra cotta baguettes/louvers complying with the following:
   1. Finish: [Standard]
   2. Size: [As indicated on the Drawings]
   3. Color: [To be selected]
B. Fasteners, clips, and fin plates: In accordance with manufacturer's recommendations to meet performance criteria specified.
C. Fin Plates/Framing:

1. Aluminum alloy 6063 T6, [finish]

D. Supporting system fastening method: Engineered aluminum fin plates, and clip, complying with the following.
   1. Baguettes/louvers with internal aluminum spline and gasket fastened to [vertical or horizontal] fin plates.
   2. The aluminum fin plate is fastened to the building structural system as shown on the Construction Documents or Installation Contractor's Shop Drawings.
   3. The replacement of damaged baguettes/louvers, particularly in the field, must be possible using simple methods and shall not require special tools nor damage the surrounding baguettes/louvers.
   4. Gaskets shall be colored black, unless specified by the Architect to match the baguette/louver color.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Terra cotta baguette/louver installer to examine conditions affecting the work of this Section at site. If any conditions exist that would be detrimental to proper installation of terra cotta baguette/louver system, installer is to notify Architect and General Contractor / Construction Manager in writing.
B. Correct conditions detrimental to the proper and timely completion of this work before proceeding with installation.

3.2 INSTALLATION

A. Do not install broken, chipped or cracked baguettes/louvers.
B. Apply coat of bituminous paint on concealed aluminum surfaces to be in contact with steel, cementitious, and dissimilar materials.
C. Install terra cotta baguettes/louvers to supporting system specified in accordance with the approved shop drawings and their manufacturer's instructions.
D. [Conceal fasteners.]
E. Ensure that assembly is plumb, level and free of warp or twist; maintain dimensional tolerances and alignment with adjacent work.
   1. Use caution to prevent damage to terra cotta baguettes/louvers.
   2. When field-cutting, use caution to ensure that cuttings do not remain on exposed surfaces. Cut edges shall be sharp, without spalling.
   3. Cutting shall be performed with a diamond tipped wet saw.
F. [Built-in work:
   1. As work progresses, build in accessories and other items.
   2. Where applicable, remove protective film from finished aluminum surfaces.]
G. Tolerances: Accurately align and locate components to column lines and floor levels; adjust work to conform to the following tolerances.
   1. Plumb: 1/8-inch in 10 feet; 1/4-inch in 40 feet; non-cumulative.
   2. Level: 1/8-inch in 20 feet; 1/4-inch in 40 feet; non-cumulative.
   3. Alignment: Limit offset to 1/16-inch where surfaces are flush or less than 1/2-inch out of flush, and separated by less than 2 inches (by reveal or protruding work); otherwise limit offsets to 1/8 inch.

4. Location: 3/8-inch maximum deviation from measured theoretical location (any member, and location).
5. Lipping between units: 1/16 inch maximum.
6. Finished work shall be viewed from a distance of 15 feet per ASTM C216-07a.

3.3 CLEANING

A. Clean soiled surfaces using materials which will not harm terra cotta baguettes/louvers or adjacent materials, as recommended by the terra cotta baguette/louver manufacturer (clean with mild detergent using a natural bristle brush, starting from top of building to the bottom). Use non-metallic tools in cleaning operations. Pressure washer not to exceed 1200 psi.
B. Upon completion of installation, remove protective coatings or coverings and clean aluminum surfaces, exercising care to avoid damage of finish.
C. Remove excess sealant compounds, dirt or other foreign substances.
D. Remove and replace terra cotta baguettes/louvers that are broken, chipped, cracked, abraded or damaged during construction period. Reinstall in accordance with their manufacturer's instructions.

END OF SECTION