



Versetta Stone® Panelized Stone Veneer
in Post-Framed Applications

TER No. 1703-08

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Issue Date: June 19, 2019
Subject to Renewal: July 1, 2020

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION

Section: 07 44 53 – Glass Fiber Reinforced Cementitious Panels

Section: 07 44 63 – Fabricated Faced Panel Assemblies

1. Product Evaluated:

- 1.1. Versetta Stone® Panelized Stone Veneer
- 1.2. For the most recent version of this Technical Evaluation Report (TER), visit drjcertification.org. For more detailed state professional engineering and code compliance legal requirements and references, visit drjcertification.org/statelaw. DrJ is fully compliant with all state professional engineering and code compliance laws.
- 1.3. This TER can be used to obtain product approval in any country that is an IAF MLA Signatory (all countries found [here](#)) and covered by an [IAF MLA Evaluation](#) per the [Purpose of the MLA](#) (e.g., see [letter to ANSI](#) from the Standards Council of Canada). Manufacturers can go to jurisdictions in the U.S., Canada and other [IAF MLA Signatory Countries](#) and have their products readily approved by authorities having jurisdiction using [DrJ's ANSI accreditation](#).

DrJ is a Professional Engineering Approved Source

 [Learn more about DrJ's Accreditation](#)

- DrJ is an ISO/IEC 17065 accredited product certification body through ANSI Accreditation Services.
- DrJ provides certified evaluations that are signed and sealed by a P.E.
- DrJ's work is backed up by professional liability insurance.
- DrJ is fully compliant with *IBC* Section 1703.

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- 1.4. Building code regulations require that evaluation reports are provided by an approved agency meeting specific requirements, such as those found in [IBC Section 1703](#). Any agency accredited in accordance with ANSI ISO/IEC 17065 meets this requirement within ANSI's scope of accreditation. For a list of accredited agencies, visit ANSI's [website](#). For more information, see [drjcertification.org](#).
- 1.5. Requiring an evaluation report from a specific private company (i.e., ICC-ES, IAPMO, CCMC, DrJ, etc.) can be viewed as discriminatory and is a violation of international, federal, state, provincial and local anti-trust and free trade regulations.
- 1.6. DrJ's code compliance work:
 - 1.6.1. Conforms to code language adopted into law by individual states and any relevant consensus based standard such as an ANSI or ASTM standard.
 - 1.6.2. Complies with accepted engineering practice, all professional engineering laws and by providing an engineer's seal DrJ takes professional responsibility for its specified scope of work.

2. Applicable Codes and Standards:¹

- 2.1. 2012, 2015 and 2018 International Building Code (IBC)
- 2.2. 2012, 2015 and 2018 International Residential Code (IRC)
- 2.3. ASCE/SEI 7 – Minimum Design Loads for Buildings and Other Structures (ASCE 7)
- 2.4. AWC NDS – National Design Specification for Wood Construction (NDS)

3. Performance Evaluation:

- 3.1. Walls using Versetta Stone® as cladding in post-framed construction were evaluated for the purpose of defining the allowable spacing of the posts based on the following criteria:
 - 3.1.1. Deflection of the girts spanning between the posts is limited to $l/240$ and $l/360$
 - 3.1.2. Girts are one of the following materials:
 - 3.1.2.1. 2x4 SPF No.1/ No.2
 - 3.1.2.2. 2x4 SPF 2100 1.8E
 - 3.1.2.3. 2x6 SPF No.1/ No.2
 - 3.1.2.4. $5/4 \times 6$ SPF No.1/ No.2
 - 3.1.3. Wind speeds considered are as defined in ASCE 7-16, where V_{ult} is 115 mph, 130 mph, 150 mph, or 180 mph in accordance with [IBC Section 1609.3](#).
- 3.2. Structural analysis of the posts, connection of OSB to girts, girts to post and Versetta Stone® to girts is outside the scope of this TER.
- 3.3. Any code compliance issues not specifically addressed in this section are outside the scope of this TER.

4. Product Description and Materials:

- 4.1. Versetta Stone® is a non-structural, fiber-reinforced, cement-based masonry wall cladding that is mechanically attached to post-framed buildings.
- 4.2. The panels have a simulated stone veneer surface.
- 4.3. The panels measure 36.4" long x 9.5" tall and 1.8" thick and have tongue-and-groove edges that engage adjacent panels.
 - 4.3.1. The finished exposure of the panels is 8" x 36".

¹ Unless otherwise noted, all references in this code compliant technical evaluation report (TER) are from the 2018 version of the codes and the standards referenced therein, including, but not limited to, ASCE 7, SDPWS and WFCM. This product also complies with the 2000-2015 versions of the IBC and IRC and the standards referenced therein. As required by law, where this TER is not approved, the building official shall respond in writing, stating the reasons this TER was not approved. For variations in state and local codes, if any see [Section 8](#).

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- 4.4. A 0.0217"-thick painted G90 galvanized steel nailing flange is molded along the top edge of the panels for attachment to the substrate.
- 4.5. The bottom edge and the ends of the panels fit together using tongue-and-groove technology.
- 4.6. The panels have an installed weight of approximately 8.5 psf (17 lbs. per panel).
- 4.7. Additionally, the stone veneer panels are supplemented with various accessories (e.g., starter strips, bridging, corner pieces, etc.) to aid with installation.



Figure 1: Versetta Stone® Panel with Nailing Hem
(across top of panel)

5. Applications:

- 5.1. Versetta Stone® is used as an exterior wall covering in accordance with the applicable sections of [IBC Chapter 14](#) and [IRC Section R703](#) and is installed over post-framed buildings. As an option, Versetta Stone® may be installed over oriented strand board (OSB) sheathing attached directly to the posts. In both assemblies, walls must be capable of supporting the imposed loads in accordance with [IBC Section 1609](#) and [IRC Section R301.2.1](#), including all required transverse wind loads.
- 5.2. The general construction considered is as shown in [Figure 2](#).

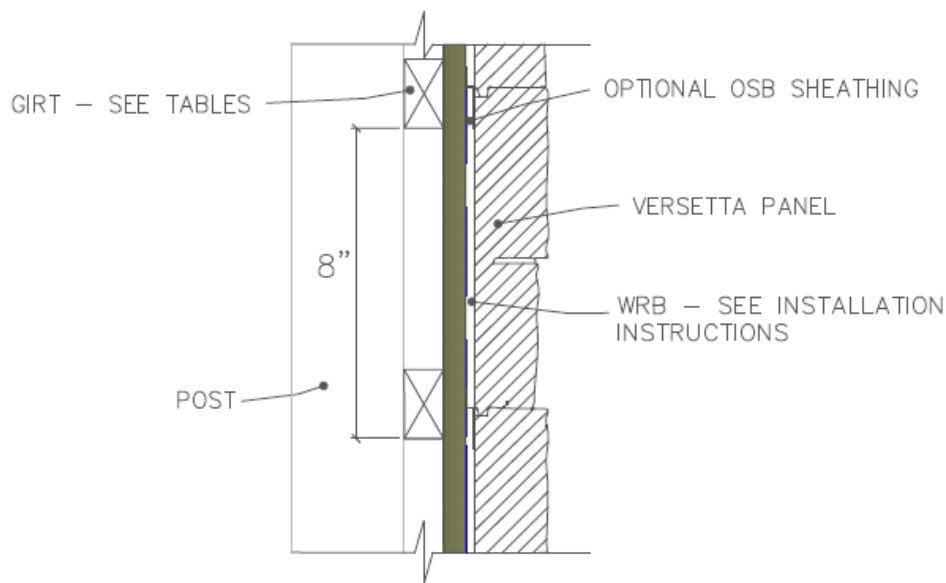


Figure 2: General Construction

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- 5.3. Analysis of girts installed between the posts was conducted to assess their ability to resist wind loads and remain within set deflection limits.
- 5.4. See [Table 1](#), [Table 2](#), and [Table 3](#) for maximum spacing of posts for the conditions evaluated.
- 5.5. For additional information or use in other applications, consult the manufacturer's installation instructions.

Table 1: Maximum Spacing Between Posts for 15 ft Tall Building

Maximum Spacing Between Posts (ft-in) [mm] for 15 ft Tall Building											
Girt	Species	Grade	Exposure	Basic Wind Speed, V_{ult} (mph)							
				115		130		150		180	
				L/240	L/360	L/240	L/360	L/240	L/360	L/240	L/360
2x4	SPF	No.1/No.2	B	(8' - 2") [2,486]	(7' - 1") [2,159]	(7' - 6") [2,283]	(6' - 6") [1,983]	(6' - 9") [2,066]	(5' - 11") [1,795]	(5' - 12") [1,821]	(5' - 2") [1,585]
			C	(7' - 1") [2,171]	(6' - 2") [1,885]	(6' - 6") [1,993]	(5' - 8") [1,731]	(5' - 11") [1,805]	(5' - 2") [1,572]	(5' - 3") [1,593]	(4' - 7") [1,392]
2x4	SPF (MSR)	2100f-1.8E	B	(8' - 11") [2,713]	(7' - 9") [2,356]	(8' - 2") [2,491]	(7' - 1") [2,164]	(7' - 5") [2,255]	(6' - 5") [1,959]	(6' - 6") [1,987]	(5' - 8") [1,726]
			C	(7' - 9") [2,369]	(6' - 9") [2,057]	(7' - 2") [2,175]	(6' - 2") [1,889]	(6' - 6") [1,969]	(5' - 7") [1,711]	(5' - 8") [1,735]	(4' - 12") [1,513]
2x6	SPF	No.1/No.2	B	(9' - 7") [2,909]	(8' - 3") [2,527]	(8' - 9") [2,671]	(7' - 7") [2,320]	(7' - 11") [2,418]	(6' - 11") [2,100]	(6' - 12") [2,130]	(6' - 1") [1,850]
			C	(8' - 4") [2,540]	(7' - 3") [2,206]	(7' - 8") [2,332]	(6' - 8") [2,026]	(6' - 11") [2,111]	(6' - 0") [1,834]	(6' - 1") [1,860]	(5' - 4") [1,618]
5/4x6	SPF	No.1/No.2	B	(6' - 3") [1,906]	(5' - 5") [1,656]	(5' - 9") [1,750]	(5' - 0") [1,526]	(5' - 3") [1,588]	(4' - 7") [1,387]	(4' - 7") [1,406]	(4' - 0") [1,228]
			C	(5' - 6") [1,665]	(4' - 9") [1,454]	(5' - 0") [1,534]	(4' - 5") [1,340]	(4' - 7") [1,394]	(3' - 12") [1,218]	(4' - 1") [1,235]	(3' - 6") [1,079]

1. 42% of Wind Load is used for determining deflection per [IBC Table 1604.3](#) footnote f, deflection criteria set by footnote a. (Based on ASCE 7-16 Loads)
2. Tabulated values based on the following assumptions: Importance Category II (I=1.0), Enclosed, Kzt=1.0, Kd=0.85, Cd=1.6.
3. Girts located at 8" o.c. maximum.
4. Girts analyzed as flatwise simple spanning member.
5. Sheathing capacity (OSB) is not taken into account.

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Table 2: Maximum Spacing Between Posts for 30 ft Tall Building

Maximum Spacing Between Posts (ft-in) [mm] for 30 ft Tall Building											
Girt	Species	Grade	Exposure	Basic Wind Speed, V_{ult} (mph)							
				115		130		150		180	
				L/240	L/360	L/240	L/360	L/240	L/360	L/240	L/360
2x4	SPF	No.1/No.2	B	(7' - 7") [2,320]	(6' - 7") [2,015]	(6' - 12") [2,131]	(6' - 1") [1,851]	(6' - 4") [1,929]	(5' - 6") [1,676]	(5' - 7") [1,700]	(4' - 10") [1,484]
			C	(6' - 9") [2,063]	(5' - 11") [1,792]	(6' - 3") [1,895]	(5' - 5") [1,647]	(5' - 8") [1,715]	(4' - 11") [1,497]	(4' - 12") [1,517]	(4' - 4") [1,326]
2x4	SPF (MSR)	2100f-1.8E	B	(8' - 4") [2,532]	(7' - 3") [2,199]	(7' - 8") [2,325]	(6' - 8") [2,020]	(6' - 11") [2,105]	(5' - 12") [1,828]	(6' - 1") [1,855]	(5' - 4") [1,613]
			C	(7' - 5") [2,252]	(6' - 5") [1,956]	(6' - 9") [2,068]	(5' - 11") [1,796]	(6' - 2") [1,872]	(5' - 4") [1,628]	(5' - 5") [1,650]	(4' - 9") [1,441]
2x6	SPF	No.1/No.2	B	(8' - 11") [2,716]	(7' - 9") [2,358]	(8' - 2") [2,494]	(7' - 1") [2,166]	(7' - 5") [2,257]	(6' - 5") [1,960]	(6' - 6") [1,989]	(5' - 8") [1,727]
			C	(7' - 11") [2,414]	(6' - 11") [2,097]	(7' - 3") [2,217]	(6' - 4") [1,926]	(6' - 7") [2,007]	(5' - 9") [1,743]	(5' - 10") [1,768]	(5' - 1") [1,541]
5/4x6	SPF	No.1/No.2	B	(5' - 10") [1,779]	(5' - 1") [1,550]	(5' - 4") [1,635]	(4' - 8") [1,429]	(4' - 11") [1,486]	(4' - 3") [1,299]	(4' - 4") [1,316]	(3' - 9") [1,150]
			C	(5' - 2") [1,585]	(4' - 7") [1,385]	(4' - 10") [1,461]	(4' - 2") [1,276]	(4' - 4") [1,328]	(3' - 10") [1,160]	(3' - 10") [1,176]	(3' - 4") [1,027]

1. 42% of Wind Load is used for determining deflection per [IBC Table 1604.3](#) footnote f, deflection criteria set by footnote a. (Based on ASCE 7-16 Loads)
 2. Tabulated values based on the following assumptions: Importance Category II (I=1.0), Enclosed, $K_z=1.0$, $K_d=0.85$, $C_d=1.6$.
 3. Girts located at 8" o.c. maximum.
 4. Girts analyzed as flatwise simple spanning member.
 5. Sheathing capacity (OSB) is not taken into account.

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Table 3: Maximum Spacing Between Posts for 45 ft Tall Building

Maximum Spacing Between Posts (ft-in) [mm] for 45 ft Tall Building											
Girt	Species	Grade	Exposure	Basic Wind Speed, V_{ult} (mph)							
				115		130		150		180	
				L/240	L/360	L/240	L/360	L/240	L/360	L/240	L/360
2x4	SPF	No.1/No.2	B	(7' - 4") [2,229]	(6' - 4") [1,936]	(6' - 9") [2,047]	(5' - 10") [1,778]	(6' - 1") [1,853]	(5' - 3") [1,612]	(5' - 4") [1,634]	(4' - 8") [1,427]
			C	(6' - 7") [2,003]	(5' - 8") [1,740]	(6' - 0") [1,839]	(5' - 3") [1,601]	(5' - 6") [1,665]	(4' - 9") [1,455]	(4' - 10") [1,475]	(4' - 3") [1,288]
2x4	SPF (MSR)	2100f-1.8E	B	(7' - 12") [2,432]	(6' - 11") [2,113]	(7' - 4") [2,234]	(6' - 4") [1,940]	(6' - 8") [2,022]	(5' - 9") [1,756]	(5' - 10") [1,781]	(5' - 1") [1,552]
			C	(7' - 2") [2,186]	(6' - 3") [1,898]	(6' - 7") [2,007]	(5' - 9") [1,743]	(5' - 12") [1,817]	(5' - 2") [1,582]	(5' - 3") [1,604]	(4' - 7") [1,401]
2x6	SPF	No.1/No.2	B	(8' - 7") [2,608]	(7' - 5") [2,265]	(7' - 10") [2,395]	(6' - 10") [2,080]	(7' - 1") [2,168]	(6' - 2") [1,883]	(6' - 3") [1,910]	(5' - 5") [1,660]
			C	(7' - 8") [2,344]	(6' - 8") [2,036]	(7' - 1") [2,152]	(6' - 2") [1,869]	(6' - 5") [1,948]	(5' - 7") [1,692]	(5' - 8") [1,717]	(4' - 11") [1,498]
5/4x6	SPF	No.1/No.2	B	(5' - 7") [1,709]	(4' - 11") [1,491]	(5' - 2") [1,573]	(4' - 6") [1,374]	(4' - 8") [1,430]	(4' - 1") [1,249]	(4' - 2") [1,266]	(3' - 8") [1,106]
			C	(5' - 1") [1,541]	(4' - 5") [1,346]	(4' - 8") [1,420]	(4' - 1") [1,241]	(4' - 3") [1,291]	(3' - 8") [1,128]	(3' - 9") [1,143]	(3' - 3") [999]

1. 42% of Wind Load is used for determining deflection per [IBC Table 1604.3](#) footnote f, deflection criteria set by footnote a. (Based on ASCE 7-16 Loads)
 2. Tabulated values based on the following assumptions: Importance Category II (I=1.0), Enclosed, Kz=1.0, Kd=0.85, Cd=1.6.
 3. Girts located at 8" o.c. maximum.
 4. Girts analyzed as flatwise simple spanning member.
 5. Sheathing capacity (OSB) is not taken into account.

6. Installation:

6.1. General

- 6.1.1.** Versetta Stone® shall be installed in accordance with the manufacturer's installation instructions and this TER. In the event of a conflict between the manufacturer's installation instructions and this TER, the more restrictive shall govern.
- 6.1.2.** Installation is subject to the conditions of use set forth in [Section 9](#).
- 6.1.3.** Versetta Stone® shall be installed over walls capable of resisting 100% of the design wind loads.
- 6.1.4.** A water-resistive barrier (WRB) is required behind Versetta Stone® in assemblies with or without OSB in accordance with [IBC Section 1404.2](#). The WRB may be comprised of a liquid-applied, sheet material or a continuous insulation product evaluated for use as a WRB with all joints taped per the manufacturer's installation instructions.
- 6.1.5.** All other installation and flashing details germane to the project shall be in accordance with the applicable building code, the building designer's details and the manufacturer's installation instructions.

7. Test and Engineering Substantiating Data:

- 7.1.** Analysis of Girts for Loading and Deflection Limitations by DrJ Engineering, LLC
- 7.2.** The product(s) evaluated by this TER fall within the scope of one or more of the model, state or local building codes for building construction. The testing and/or substantiating data used in this TER is limited to buildings, structures, building elements, construction materials and civil engineering related specifically to buildings.

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- 7.3. The provisions of model, state or local building codes for building construction do not intend to prevent the installation of any material or to prohibit any design or method of construction. Alternatives shall use consensus standards, performance-based design methods or other engineering mechanics based means of compliance. This TER assesses compliance with defined standards, accepted engineering analysis, performance-based design methods, etc. in the context of the pertinent building code requirements.
- 7.4. Some information contained herein is the result of testing and/or data analysis by other sources, which DrJ relies on to be accurate, as it undertakes its engineering analysis.
- 7.5. DrJ has reviewed and found the data provided by other professional sources are credible. The information in this TER conforms to DrJ's procedure for acceptance of data from approved sources.
- 7.6. DrJ's responsibility for data provided by approved sources conforms to [IBC Section 1703](#) and any relevant professional engineering law.
- 7.7. Where appropriate, DrJ's analysis is based on design values that have been codified into law through codes and standards (e.g., *IRC*, *WFCM*, *IBC*, *SDPWS*, *NDS*, *ACI*, *AISI*, *PS-20*, *PS-2*, etc.). This includes review of code provisions and any related test data that aids in comparative analysis or provides support for equivalency to an intended end-use application. Where the accuracy of design values provided herein is reliant upon the published properties of commodity materials (e.g., lumber, steel, concrete, etc.), DrJ relies upon grade/properties provided by the raw material supplier to be accurate and conforming to the mechanical properties defined in the relevant material standard.

8. Findings:

- 8.1. When Versetta Stone® is used as an exterior wall covering installed over post-framed walls separately capable of resisting 100% of the design wind pressures, the spacing of the posts shall not exceed that described in [Table 1](#), [Table 2](#), or [Table 3](#) for the application specified.
- 8.2. [IBC Section 104.11](#) and [IRC Section R104.11](#) ([IFC Section 104.9](#) is similar) state:

104.11 **Alternative materials, design and methods of construction and equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *building official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code. ... Where the alternative material, design or method of construction is not *approved*, the *building official* shall respond in writing, stating the reasons the alternative was not *approved*.
- 8.3. This product has been evaluated with the codes listed in [Section 2](#), and is compliant with all known state and local building codes. Where there are known variations in state or local codes that are applicable to this evaluation, they are listed here:
 - 8.3.1. No known variations
- 8.4. This TER uses professional engineering law, the building code, ANSI/ASTM consensus standards and generally accepted engineering practice as its criteria for all testing and engineering analysis. DrJ's professional engineering work falls under the jurisdiction of each state Board of Professional Engineers, when signed and sealed.

9. Conditions of Use:

- 9.1. Where required by the authority having jurisdiction (AHJ) in which the project is to be constructed, this TER and the installation instructions shall be submitted at the time of permit application.
- 9.2. Any generally accepted engineering calculations needed to show compliance with this TER shall be submitted to the code official for review and approval.
- 9.3. Design loads shall be determined in accordance with the building code adopted by the jurisdiction in which the project is to be constructed.
- 9.4. Versetta Stone® panels described in this TER comply with, or are a code compliant alternative material to, codes described in [Section 2](#), subject to the following conditions.

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- 9.4.1. Installation shall comply with the manufacturer's installation instructions and this TER. In the event of a conflict between the manufacturer's installation instructions and this TER, this TER governs.
 - 9.4.2. Installation shall be on post-framed walls constructed with girts 8" o.c. and shall be capable of supporting the imposed loads.
 - 9.4.2.1. As an option, Versetta Stone® may be installed over OSB sheathing attached directly to the posts. Walls shall be capable of supporting the imposed loads.
 - 9.4.3. Where the seismic provisions of [IRC Section R301.2.2](#) apply, the Versetta Stone® wall assembly shall not exceed the weight limits of [Section R301.2.2.1](#), unless an engineered design is provided in accordance with [Section R301.1.3](#).
 - 9.4.4. Walls shall be braced to resist shear (racking) load by other means in accordance with the applicable code.
 - 9.4.5. Versetta Stone® panels shall be manufactured under the direction of a third-party quality assurance program to ensure continued compliance with this TER and the applicable building code.
 - 9.4.6. Use of Versetta Stone® panels in installations exceeding 45' in height are outside the scope of this TER.
 - 9.4.7. Use of Versetta Stone® panels in the high velocity hurricane zone of southern Florida is outside the scope of this TER.
- 9.5. Design
- 9.5.1. Building Designer Responsibility
 - 9.5.1.1. Unless the AHJ allows otherwise, the Construction Documents shall be prepared by a Building Designer for the Building and shall be in accordance with [IRC Section R106](#) and [IBC Section 107](#).
 - 9.5.1.2. The Construction Documents shall be accurate and reliable and shall provide the location, direction and magnitude of all applied loads and shall be in accordance with [IRC Section R301](#) and [IBC Section 1603](#).
 - 9.5.2. Construction Documents
 - 9.5.2.1. Construction Documents shall be submitted to the Building Official for approval and shall contain the plans, specifications and details needed for the Building Official to approve such documents.
- 9.6. Responsibilities
- 9.6.1. The information contained herein is a product, material, detail, design and/or application TER evaluated in accordance with the referenced building codes, testing and/or analysis through the use of accepted engineering practice, experience and technical judgment.
 - 9.6.2. DrJ TERs provide an assessment of only those attributes specifically addressed in the Products Evaluated or Code Compliance Process Evaluated sections.
 - 9.6.3. The engineering evaluation was performed on the dates provided in this TER, within DrJ's professional scope of work.
 - 9.6.4. This product is manufactured under a third-party quality control program in accordance with [IRC Section R104.4](#) and [R109.2](#) and [IBC Section 104.4](#) and [110.4](#).
 - 9.6.5. The actual design, suitability and use of this TER, for any particular building, is the responsibility of the Owner or the Owner's authorized agent, and the TER shall be reviewed for code compliance by the Building Official.

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- 9.6.6.** The use of this TER is dependent on the manufacturer's in-plant QC, the ISO/IEC 17020 third-party quality assurance program and procedures, proper installation per the manufacturer's instructions, the Building Official's inspection and any other code requirements that may apply to demonstrate and verify compliance with the applicable building code.

10. Identification:

- 10.1.** Versetta Stone® described in this TER is identified by a label on the board or packaging material bearing the manufacturer's name, product name, product evaluation report number, and other information to confirm code compliance.
- 10.2.** Additional technical information can be found at versettastone.com.

11. Review Schedule:

- 11.1.** This TER is subject to periodic review and revision. For the most recent version of this TER, visit drjcertification.org.
- 11.2.** For information on the current status of this TER, contact [DrJ Certification](#).



- [Mission, Belief and Independence](#)
- [Product Evaluation Policies](#)
- [Product Approval – Building Code, Administrative Law and P.E. Law](#)