PRIEST & ASSOCIATES CONSULTING, LLC

October 3, 2025,

Maika Boila
QuickPanel Systems, Inc.
101, 4441 76 Ave SE
Calgary, Alberta T2C 2G8
Canada

Re: Engineering Evaluation Letter 11668
QuickPanel Systems Inc.'s QuickPanel® 2.0 system with Aluminum or Aluminum Composite Material (ACM) Cladding

Mr. Boila,

Priest & Associates Consulting (PAC) has prepared this engineering evaluation Letter (EEL) to show compliance with NFPA 285 utilizing QuickPanel Systems Inc.'s QuickPanel® 2.0 system with Aluminum or ACM cladding options.

This document provides an expert opinion on the properties of the materials, products, or assemblies identified in this report related to meeting a specific code or standard. Suitability to use is to be determined by the end-user.

BACKGROUND

Priest & Associates Consulting, LLC (PAC) has been engaged by BOCA Engineering Co. (SPAR) to evaluate modifications made to the QuickPanel (QP) cladding systems for potential equivalency to previously tested and certified configurations under NFPA 285. The request involves reviewing the NFPA 285 test report for QP1.0[1] and a CAN/ULC S134 test report for QP2.0[2].

The scope of this evaluation includes assessing whether the QuickPanel® 2.0 system can be declared equivalent and will perform as intended in assemblies per the current and previous editions of NFPA 285 with Aluminum or ACM Cladding.

Approval agencies commonly permit the extension of test data to system components that are expected to perform as well as or better than those evaluated in testing. To support this, "worst-case" test scenarios are often designed so that successful results can justify the use of alternative components within defined limits. While worst-case testing can provide valuable flexibility, it also carries an increased risk of failure, and manufacturers vary in their willingness to assume that risk. As a result, each case requiring an engineering judgment must be approached with due diligence, considering both the scope of the requested changes and the details of the completed testing.

The most recent edition of NFPA 285-25, on which PAC actively serves in the Standards Development process, includes a new Chapter and Appendix outlining specific rules for the extension of data. ASTM E2989-19a (2024) - Standard Guide for Assessment of Continued Applicability of Reaction to Fire Test Reports Used in Building Regulation also offers a formal method to assess if test data from older or slightly different assemblies remain valid for current editions of fire standards.

[1] Intertek Test Report No. G104467050SAT-001 R2
[2] Intertek Test Report No. G106027612SAT-001 R0

PAC's four partners collectively bring over 130 years of fire testing and product approval experience across a wide range of building materials. This depth of expertise, combined with prior approvals, completed testing, and sound engineering judgment, will be applied to the present analysis.

ANALYSIS

NFPA 285 Edition Review

Recent revisions to NFPA 285, beginning with the 2019 edition, introduced significant changes to joint detailing requirements in the test specimen. In prior editions, including NFPA 285-12, joints were permitted if used in field construction, but their placement within the test wall was not explicitly defined. The updated provisions now require vertical joints to extend the full height of the specimen and be located within ±12 inches of the vertical centerline of the window opening, and horizontal joints to extend across the full specimen width and be positioned between 1 and 3 feet above the top of the window opening. These changes ensure that the most vulnerable areas of the wall, where joints are typically located, are directly exposed to fire during testing, representing a worst-case condition. The 2019 update also added more stringent documentation requirements, mandating that test reports include detailed descriptions and drawings of the window head, jamb, and sill closures to improve the accuracy and reproducibility of field applications. Furthermore, recent editions, including those of 2023 and 2025, have incorporated Annex B and Chapter 12, which provide formal guidance on extending test data to similar assemblies through engineering analysis, referencing ASTM E2989 as a recognized methodology. These recent changes did not alter the technical criteria for conducting the test; therefore, the 2019 and later revisions are considered equivalent from a technical testing standpoint.

Due to the vertical and horizontal joint placement installed in the test assembly as a worst-case scenario, this justifies allowing smaller dimension cladding panel sizes than those tested.

QuickPanel® System Comparison

It is important to recognize that ACM manufacturers do not have a standard attachment system. Most ACM manufacturers sell their products to fabricators, who then create attachment systems. Most approvals do not specify attachment systems, as it is impractical to list every possible one that would qualify. Testing a system with an ACM is considered a worst-case scenario since ACMs can melt, ignite, open, and expose the attachment system.

Suppose the attachment system in the test is noncombustible and keeps the panels intact until the ACM melts and burns away. In that case, it is considered appropriate for use in NFPA 285-compliant systems. The QuickPanel® attachment system is made of parts constructed from noncombustible aluminum.

The QuickPanel® attachment system is an extruded, factory-finished aluminum substructure designed as a rainscreen for installing aluminum composite material (ACM) cladding. The system typically uses 4 mm ACM panels, usually with either a polyethylene or fire-resistant (FR) core, installed with a proprietary two-piece EZ-Lock™ attachment method that conceals fasteners and allows panels and trims to be cut and fabricated on site. The complete system includes panels, trims, flashings, fasteners, and accessories. It is engineered to meet AAMA 508 rainscreen performance, ASTM E330 structural wind load requirements, and NFPA 285 compliance when installed in appropriate wall assemblies.

The initial version of the QuickPanel® System, designated QP1.0, was submitted with corresponding die drawings for review. The subsequent version, designated QP2.0, was also accompanied by its respective die drawings for review.

PAC has reviewed both drawing sets and determined that the difference between these versions is only in the dimensions and the resulting air gaps created between the cladding and the continuous exterior insulation or sheathing. The material composition between QP1.0 and QP2.0 is the same, consisting of noncombustible aluminum extruded parts. For the QP2.0 system, the use of flat-profile ACM cladding will result in air gaps that are approximately ½ inch deeper than those present in the QP1.0 configuration.

Additional intermediate stiffeners will not impact the overall performance in an NFPA 285-compliant assembly. If anything, this will add further support to ensure a more rigid cladding system.

PAC reviewed the NFPA 285 test report provided and referenced previously. The vulnerable elements within the wall assembly that could potentially lead to failure in the NFPA 285 test are the combustible components in the assembly. Specifically, in this instance, it is the 2-inch Thermax™ polyisocyanurate (polyiso) foam insulation sheathing board and the ACM. For this assembly, they were tested with a nominal ½-inch air gap between them, and the QuickPanel® System performed as intended without failing and did not allow the cladding to fall prematurely or contribute to fire spread failures.

PAC also reviewed a test report for the QP2.0 system, which documented a large-scale evaluation in accordance with the CAN/ULC-S134 test standard. In this test, the assembly included an approximately 1¼-inch air cavity between the semi-rigid continuous insulation and the exterior cladding.

The QP2.0 system has been evaluated under CAN/ULC-S134, which in several respects represents a more severe exposure than NFPA 285. CAN/ULC-S134 applies a higher exterior heat flux profile, with acceptance criteria based on both visible flame spread and incident heat flux. Specifically, the test limits visible flaming to 5 m above the opening and requires the measured heat flux at 3.5 m above the opening to remain below 35 kW/m². This makes CAN/ULC-S134 particularly demanding on façade claddings and cavity performance, as the exposure creates higher sustained radiant and convective loads on the panel face than NFPA 285. In comparison, NFPA 285 calibrates its burners to approximately the same heat flux at 2 ft above the opening header in the last 5 minutes of the test. The CAN/ULC-S134 provides for a much larger insult to the cladding from the opening's header to 3.5 m above the opening, a much larger area of the wall assembly.

In the QP2.0 CAN/ULC-S134 test, the system successfully met the cladding flame spread and heat flux thresholds, even with an enlarged cavity of approximately 1¼ inches and the use of combustible ACM cladding. Because NFPA 285 typically governs compliance based on the behavior of combustible components in the system, such as the ACM core and continuous insulation, and because the QP2.0 aluminum extrusion system is noncombustible and has demonstrated stability under much larger fire exposure, the increase in air gap did not create any further risk of fire spread. Instead, the fact that QP2.0 satisfied the harsher CAN/ULC-S134 exterior heat flux and flame spread criteria provides strong evidence that the system would perform similarly under NFPA 285, where the thermal exposure is less severe on the exterior face.

Aluminum Cladding vs ACM Cladding

PAC understands that QuickPanel Systems, Inc. may, in certain applications, wish to substitute solid aluminum cladding for aluminum composite material (ACM) cladding.

As noted earlier, worst-case testing is often conducted to permit the use of alternative components that present a lower risk of flame spread. Substitution of aluminum panels for ACM represents such a case, as it further reduces the fire load of the wall assembly. The polyethylene-based core in ACM begins to soften around 120–130 °C (248–266 °F) and is capable of ignition between 330–410 °C (626–770 °F), whereas aluminum is noncombustible and does not begin to melt until approximately 660 °C (1220 °F). Eliminating the combustible ACM core removes a potential fuel source and ensures that the cladding itself cannot contribute to flame propagation. Therefore, in NFPA 285–compliant assemblies where ACM has already been proven, the use of solid aluminum cladding represents an equal or more conservative condition, with compliance continuing to be governed by the other combustible elements of the assembly, such as continuous insulation or the WRB.

CONCLUSION

Based on the review of test data and supporting analysis, Priest & Associates Consulting (PAC) concludes that the QuickPanel® 2.0 system is expected to perform in a manner consistent with the QuickPanel® 1.0 system when incorporated into an NFPA 285–approved wall assembly. The QP1.0

system has been directly demonstrated to comply with NFPA 285 and has been evaluated previously[3], while the QP2.0 system has been successfully tested under CAN/ULC-S134 with a larger cavity depth and higher exterior heat flux exposure, conditions that, in several respects, are more severe than those imposed by NFPA 285. The results of the CAN/ULC-S134 test confirm that QP2.0 maintains its integrity and does not promote flame spread even under harsher cladding exposures.

The primary factors that govern NFPA 285 compliance are the combustible elements of the wall assembly, such as the ACM cladding and continuous insulation, not the aluminum attachment framework. Both QP1.0 and QP2.0 utilize the same noncombustible aluminum extrusion system, which has consistently demonstrated the ability to remain in place during fire exposure without contributing fuel. The modest increase in air cavity depth in QP2.0 does not alter this performance and has already been shown to be acceptable under the more demanding CAN/ULC-S134 cladding exposure.

Furthermore, substitution of solid aluminum panels for ACM cladding represents an even more conservative condition. While polyethylene-based ACM cores are combustible and can ignite, aluminum is noncombustible and does not ignite. This substitution eliminates a combustible component from the wall assembly, ensuring that compliance under NFPA 285 remains governed solely by the combustible materials for which separate approvals are already in place.

Therefore, PAC's engineering evaluation is that the QuickPanel® 2.0 system will perform similarly to the QuickPanel® 1.0 system in NFPA 285–approved assemblies, provided that all combustible components, such as the ACM cladding, continuous insulation, or WRB, are used only within the limits of their respective listings and approvals.

The ACMs previously reviewed by PAC in EJ 11343, together with Alfrex® FR Composite Panels, which were recently tested[4] and shown to comply with NFPA 285-25 using Thermax™ insulation, support the conclusion that the following ACMs are permitted for use with either the QuickPanel® 1.0 or QuickPanel® 2.0 systems:

1. Larson® FR Aluminum Composite Panels by Alucoil
2. Alucobond® Plus Wall Panels
3. Alpolic®/fr Wall Panels
4. Reynobond® FR Metal Composite Material (MCM) Panels
5. Alfrex® FR Composite Panels

Installation of these ACMs shall be in accordance with the manufacturer's published instructions and certifications and must comply with the following conditions, where approvals or tested configurations exist for the specified air-gap dimensions:

- A maximum nominal air space of up to ½ in. when installed over polyisocyanurate Thermax™ Sheathing, or
- A maximum nominal air space of up to 1¼ in. when installed over mineral wool continuous insulation.

The scope of this Engineering Evaluation Letter is for flame spread per NFPA 285-25 or previous editions ONLY. It does not purport to make judgments on other criteria, such as the assembly's air, water, structural, or sound transmission performance.

[3] Priest & Associates Engineering Judgment 11343
[4] Intertek Test Report No. G105972513SAT-001

If you have any comments or questions, please let us know at your earliest convenience.

Submitted by,

Mike Luna
President
(830) 581-1455

October 3, 2025

Reviewed and approved,

Deg Priest
Chief Executive Officer

October 3, 2025

14439 NW Military Hwy
Suite 108, #430
San Antonio, Texas 78231

FPCG
Fire Protection Consulting Group, LLC

www.FIREpcg.com
TX PE Firm No. F-15865
Main Office +1 210.858.2389

October 14, 2025

Mr. Mike Luna
President/Partner
Priest & Associates
222 Siena Woods
Marion, Texas 78124

Via e-mail to: mike.luna@priestassociates.com

RE: **Engineering Evaluation Letter Review and Endorsement**
Priest & Associates (PAC) Engineering Evaluation Letter 11668 (Dated 10/3/2025)
QuickPanel Systems Inc's QuickPanel 2.0 System with Aluminum or Aluminum Composite Material (ACM) Cladding

Dear Mr. Luna:

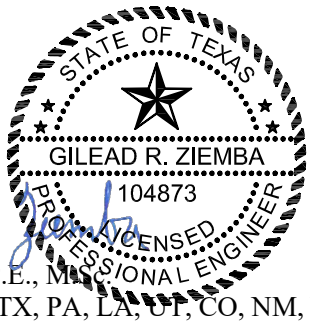
As requested, Fire Protection Consulting Group, LLC (FPCG) has reviewed the Engineering Evaluation letter (EEL) provided by PAC for material conformance to the 2025 edition of NFPA 285 Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components using an extension of data consistent with good engineering practice, ASTM E2989-19a (2024), and the principles identified in ASTM E2032.

I agree with the conclusion that the QuickPanel 1.0 (QP1.0) and QuickPanel 2.0 systems will perform similarly under NFPA 285 testing conditions. I also conclude that replacement of Aluminum Composite Cladding (ACM) with aluminum cladding would not reduce the performance of the assembly under NFPA 285 testing conditions.

This endorsement is subject to all conditions, limitations and exclusions cited within the referenced EEL.

If you have any questions, please do not hesitate to contact me by phone at (210) 858-2389 or by e-mail to gilead@firepcg.com.

Sincerely yours,



Gilead R. Ziemba, P.E., MSc.
Licensed Engineer: TX, PA, LA, UT, CO, NM, NC, SC, FL, NE, ID
Principal Fire Protection Engineer
Fire Protection Consulting Group, LLC