### **CERus-1001**

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# PRODUCT: SUPERFORM INSULATED CONCRETE FORMS (ICF)

**REPORT HOLDER:** Superform Products, Ltd.

CONTACT DETAILS: 1065 Willow Street Pincher Creek, Alberta Canada T0K 1W0 www.superformicf.ca

CSI DIVISION: 03 00 00 – Concrete 07 00 00 – Thermal and Moisture Protection

**CSI SECTION:** 03 11 19 - Insulating Concrete Forming 07 21 00 – Thermal Insulation

APPLICABLE CODES: 2021, 2018, 2015 International Building Code (IBC) 2021, 2018, 2015 International Residential Code (IRC) 2021, 2018, 2015 International Energy Code (IEC) 2023 Florida Building Code, Building 2023 Florida Building Code, Residential

 EVALUATED:
 Flat Walled Insulated Concrete Forms

 Foam Plastic, Surface Burning Characteristics

 Foam Plastics, Use in Exterior Walls in Types I-IV Construction

 Foam Plastics, Use in Attics and Crawlspaces

 Fastener Capacity

 Fire-Resistance Ratings



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#### 1.0 APPROVED FOR FOLLOWING:

APPROVED TYPES OF CONSTRUCTION:	Types I-VA/B
APPROVED USE:	Stay-in-place Concrete Forms
APPROVED INSTALLATIONS:	<ul> <li>Load Bearing and Non-load Bearing Exterior and Interior Walls</li> <li>Load Bearing and Non-load Bearing Fire-Resistance Rated Walls</li> <li>Foundation Walls</li> <li>Retaining Walls</li> <li>Attic and Crawlspace installations without Code Prescribed Ignition Barrier</li> </ul>

#### 2.0 DESCRIPTION:

#### 2.1 General:

Superform Insulated Concrete Forms (ICF) are modular concrete formworks comprised of Type II expanded polystyrene (EPS) foam plastic thermal insulation panels connected with high density plastic crossties. Superform ICF are placed onsite as stay-in-place forms for concrete placement.

Superform ICF meet *Flat Wall Insulated Concrete Form* specifications, as defined in Section 1903.4 of the 2021 / 2018 / 2015 IBC, and Sections R404.1.3.3.6.1 and R608.4.4 of the 2021 / 2018 / 2015 IRC conforming to ASTM E2634.

Superform ICF are available in the following products and sizes:

#### Table 1. Superform ICF Evaluated Products and Accessories<sup>1</sup>

Concrete Core Thickness		Len	gth	Heig	ght	Style
inches	mm	inches	mm	inches	mm	
4, 6, 6.5 <sup>2</sup> , 8	102, 152, 165 <sup>2</sup> , 203	48	1219	12	305	Standard Straight
6, 6.5 <sup>2</sup> , 8	102, 152, 165 <sup>2</sup> , 203	48	1219	12	305	Ledge Block
6, 6.5 <sup>2</sup> , 8	152, 165 <sup>2</sup> , 203	48	1219	12	305	Top Block
4, 6, 6.5 <sup>2</sup> , 8	102, 152, 165 <sup>2</sup> , 203	48	1219	12	305	90° Block
6, 6.5 <sup>2</sup> , 8	152, 165 <sup>2</sup> , 203	48	1219	12	305	45° Block

1: Additional Superform ICF accessories are available for use with Superform ICF products. See manufacturer's installation instructions.

Note 2: Where 6.5-inch (165 mm) Superform ICF is used under the prescriptive requirements of the IRC, the product is to be used in applications approved for 6-inch (152 mm) flat wall insulated concrete forms.

Examples of Superform ICF products can be found in Figure 2 of this report.

Superform ICF comply for use as Flat Wall ICF including use in High Velocity Hurricane Zones as defined by the 2023 Florida Building Code, Building and 2023 Florida Building Code, Residential. See Section 9 of this report for further details.



#### 2.2 PRODUCT COMPONENTS:

#### 2.2.1 EPS Foam Plastic Panels:

Superform ICF include expanded polystyrene (EPS) *foam plastic* thermal insulation panels of 2-1/2" - 2-3/4 inches (64-70 mm) thickness on each ICF face. The EPS *foam plastic* component has a flame spread index of 25 or less, and smoke developed index of 450 or less evaluated following UL 723. The EPS foam is listed by an *approved agency* and complies with Type II specifications per ASTM C578 for use as thermal insulation.

Superform ICF EPS foam plastic is labeled in accordance with 2021 / 2018 / 2015 IBC 2603.2 and 2021 / 2018 / 2015 IRC R316.2

Superform ICF EPS foam plastic has a flame spread index less than 25 and smoke density index less than 450 when tested to UL 723. Superform ICF EPS has spontaneous ignition temperatures > 650°F (343°C) when evaluated to ASTM D1929.

#### 2.2.2 Cross Ties:

Superform ICF include polypropylene cross ties spaced at 6 inches (152 mm) molded into the EPS panels to create the molded concrete form work. Cross ties allow concrete to flow through during concrete placement and are molded with receiving channels for ease of rebar placement. Additionally, the polypropylene cross ties include a flange molded into the EPS panels, providing an anchoring substrate for mechanical fasteners to connect interior finishes, exterior sheathing and claddings, and decorum. Fasteners evaluated for use with Superform ICF are outlined in Table 3 of this report including fastener capacities. Locations of web flanges are outlined in Superform ICF EPS panel faces to provide direction during fastener installation.

Superform ICF crossties have spontaneous ignition temperatures > 650°F (343°C) when tested to ASTM D1929, have a smoke density index less than 75 when tested to ASTM D2843, and are classified as CC2 when evaluated to ASTM D635.

#### 2.2.3 Concrete Core:

Concrete is placed at the jobsite. Concrete design, specifications and applications are to be in accordance with the project requirements per the applicable code(s) and are outside the scope of this report, except where specific concrete criteria are noted.

#### 2.2.4 Rebar (reinforcement):

Reinforcement is applied at the jobsite. Reinforcement design, specifications and installation are to be in accordance with the project requirements and applicable code(s) and are outside the scope of this report.

#### 3.0 DESIGN:

Superform ICF wall design including concrete and reinforcement is outside the scope of this report. See below for information regarding design criteria for use with Superform ICF.

**2021 / 2018 / 2015 IBC:** Superform ICF construction governed by the IBC are to have concrete walls designed in accordance with Chapters 16 and 19. Where used as footings, foundations or retaining walls, design shall be in accordance with Chapter 18.

**2021 / 2018 / 2015 IRC:** Superform ICF construction governed by the IRC are to have exterior concrete walls designed in accordance with Section R608. Superform ICF of 6.5-inch (165 mm) thickness are approved for use in 6-inch (152 mm) flat wall concrete wall applications. Where used as footings, foundations or retaining walls, design shall be in accordance with IRC Chapter 4.



#### 4.0 INSTALLATIONS:

#### 4.1 General:

Installation of Superform ICF must comply with the manufacturer's published installation instructions, this report, and the applicable code(s). Where differences exist, this report and the applicable building code shall govern.

Superform ICF construction designed in accordance with 2021 / 2018 / 2015 IBC and 2021 / 2018 / 2015 IRC require special inspections as defined by Section 1705 of the IBC.

Superform ICF construction conducted following IRC prescriptive methodology does not require special inspections. The authority having jurisdiction should be consulted in case of question.

#### 4.2 Interior:

#### 4.2.1 General:

Superform ICF components found on the interior of the building are to be separated from the interior space in accordance with section 4.2.2 and 4.2.3 of this report as appropriate. Connecting of interior decorum, furniture and cabinetry is approved where the necessary load resistance for objects secured to Superform ICF are provided by approved fastener used within the allowable fastener capacities outlined in Table 3 of this report.

#### 4.2.2 Occupied Space:

#### 4.2.2.1 Use with a Code Prescribed Thermal Barrier.

**2021 / 2018 / 2015 IBC:** Superform ICF EPS thermal insulation exposed to occupancies of the building interior shall be covered by a thermal barrier of minimum ½ inch (13 mm) thick gypsum board complying with ASTM C1396, or by a material complying with NFPA 275 compatible for use with the Type II EPS insulation at thicknesses of 2-¾ inches (70 mm) or greater. Gypsum shall be mechanically connected to the Superform ICF cross ties with fasteners outlined in Table 3 of this report, with the gypsum oriented either vertically or horizontally. The gypsum boards are to be secured with fasteners spaced at 12 inches (305 mm) on center horizontally, and 16 inches (405 mm) on center vertically, with fasteners penetrating the cross-tie flanges of the underlying Superform ICF. Taping and mudding of fastener heads and joints are optional where gypsum is used, except where Superform ICF are used in fire-resistance rated applications where installation shall conform to Sections 4.4 and 8.2 of this report.

**2021 / 2018 / 2015 IRC:** Superform ICF EPS thermal insulation exposed to occupancies of the building shall be protected by a thermal barrier of minimum of ½ inch (13 mm) gypsum wall board complying with ASTM C1396, 23/32 inch (18 mm) thick structural wood panel, or a material complying with NFPA 275 compatible for use with the Type II EPS insulation at thicknesses of 2-¾ inches (70 mm) or greater. Where gypsum or structural wood panels are used, they shall be mechanically connected to the Superform ICF cross ties with fasteners outlined in Table 3 of this report, with panels oriented either vertically or horizontally. The panels are to be secured with fasteners spaced at 12 inches (305 mm) on center horizontally, and 16 inches (405 mm) on center vertically, with fasteners penetrating the cross-tie flanges of the underlying Superform ICF. Taping and mudding of fastener heads and joints is optional where gypsum is used, except where Superform ICF are used in fire-resistance rated applications where installation shall conform to Sections 4.4 and 8.2 of this report.



#### 4.2.2.2 Use Without a Code Prescribed Thermal Barrier.

No alternative coverings for use as alternative thermal barrier are approved under this current report over Superform ICF.

#### 4.2.3 Attic and Crawlspace:

#### 4.2.3.1 Use with a Code Prescribed Ignition Barrier:

Superform ICF EPS thermal insulation exposed in attics and crawlspaces is to be protected with a code prescribed ignition barrier as defined in the Section 2603.4.1.6 of the 2021 / 2018 / 2015 IBC and Sections R316.5.3 and R316.5.4 of the 2021 / 2018 / 2015 IRC. The ignition barrier is to cover all exposed foam.

#### 4.2.3.2 Use Without a Code Prescribed Ignition Barrier:

Superform ICF EPS thermal insulation panels exposed in attics and crawlspaces can be installed without the prescribed ignition barrier as defined in the 2021 / 2018 / 2015 IBC and 2021 / 2018 / 2015 IRC, only when the following conditions are present:

- Entry to the attic or crawlspace is limited to service of utilities only. Storage or occupancy are not permitted.
- o No interconnected areas exist to the attic or crawlspace.
- $\circ$  Air from the attic or crawlspace is not circulated to other areas of the building.
- Ventilation is provided as required by 2021 / 2018 / 2015 IBC Chapter 12 or 2021 / 2018 / 2015 IRC Section R306.
- o Combustion air is provided in accordance with the IMC (International Mechanical Code) Section 701.
- Label at minimum 1 per location, or 1 label per 160 ft<sup>2</sup> exposed foam, which ever greater, is present outlining product as "Approved for Use in Attic and Crawlspace". See Figure 1 of this report for an example of approved Superform ICF label.

#### 4.3 Exterior:

#### 4.3.1. Above Grade:

**4.3.1.1 Wall Panels:** Exterior walls of Superform ICF shall comply with Sections 4.3.1.2 through 4.3.1.4 of this report. Where Superform ICF is used in fire-resistance rated construction, installation shall comply with Sections 4.4 and 8.2 of this report. Where Superform ICF is used in Types I-IV construction, installation shall be in accordance with Section 4.5 of this report.

**4.3.1.2 Weather Protection:** Superform ICF used as exterior walls require installation with a approved exterior cladding and flashings for providing weather protection in accordance with Section 1402.2 of the 2021 IBC, Section 1403.2 of the 2018 / 2015 IBC and water resistance in accordance with Section R703.1.1 of the 2021 / 2018 / 2015 IRC. Exterior cladding materials shall comply with Section 1403 of the 2021 IBC, Section 1404 of the 2018 / 2015 IBC, R703 of the 2021 / 2018 / 2015 IRC, or have means for showing compliance to the noted applicable code. Anchoring of the exterior cladding and trim shall be done with fasteners and spacing to ensure fastener capacities are within values outlined in Table 3 of this report. The water resistive barrier can be omitted in accordance with Section 1403.2 of the 2021 / 2018 / 2015 IBC and R703.1.1 of the 2021 / 2018 / 2015 IRC as applicable.

**4.3.1.3 Vapor Retarders**: Superform ICF EPS component is a Type II vapor retarder at thicknesses 5 inches (127 mm) or greater, so where a Class II vapor retarder is required, this can be omitted.

**4.3.1.4 Termite Protection:** Where Superform ICF are installed in areas defined as "very heavy" as indicated in Figure 2603.8 of the 2018 / 2015 IBC and Figure R301.2(6) of the 2018 / 2015 IRC, and where the EPS foam component is located within 6 in. (152 mm) above grade from exposed earth, construction is to follow Section 2603.8 of the 2018 / 2015 IBC and R318.4 of the 2018 / 2015 IRC. This construction requires all structural elements of walls, floors, ceilings and roofs to be of noncombustible materials or preservative-treated wood, unless an approved method of protecting the foam plastic from subterranean termite damage is provided to the authority having jurisdiction.

#### 4.3.2. Below Grade:

**4.3.2.1 Walls:** For foundation walls designed as freestanding, backfill is permitted prior to floor installation. For below grade walls relying on the floor for structural support, backfill is not permitted until the floor installation is complete.

Foundation walls and footings are to be designed and installed in accordance with 2018 / 2015 IBC Chapter 18 or 2018 / 2015 IRC Section R404, as applicable. Foundation walls are approved for supporting steel and wood framed constructions, where the steel or wood elements in contact with concrete are protected as required by code.

Retaining walls are to be designed and installed in accordance with 2018 / 2015 IBC Chapter 1807. Where used as retaining walls under the IRC, the authority having jurisdiction should be consulted.

**4.3.2.2 Dampproofing or waterproofing**: As required by site conditions, dampproofing or waterproofing shall be installed in accordance with 2018 / 2015 IBC Chapter 1805 or 2018 / 2015 IRC Section R406 as applicable. The dampproofing or waterproofing material must be compatible for use with EPS thermal insulation products.

**4.3.2.3 Termite Protection:** Where Superform ICF are used below grade in areas defined as "very heavy" termite infestation probability as indicated in Figure 2603.8 of the 2018 / 2015 IBC and Figure R301.2(6) of the 2018 / 2015 IRC, construction is to follow Section 2603.8 of the 2018 / 2015 IBC and R318.4 of the 2018 / 2015 IRC. This construction requires all structural elements to walls, floors, ceilings and roofs to be of noncombustible materials or preservative-treated wood unless an approved method of protecting the foam plastic from subterranean termite damage is provided to the authority having jurisdiction.

#### 4.4. Fire-Resistance-Rated Construction:

Superform ICF are approved for use in applications where a loadbearing fire-resistance-rating is required for up to 4 hours from interior or exterior orientation to fire.

See Section 8.2 of this report for details of installation for use in fire-resistance-rated applications.



#### 4.5 Type I-IV (Non-combustible) Construction:

#### 4.5.1 General:

Superform ICF are approved for use in exterior walls of Types I-IV (non-combustible) construction.

All exterior claddings systems require a thermal barrier applied on the occupancy (interior) face, in accordance with Section 4.2.2.1 of this report.

Fire blocking is required in interior areas at maximum each floor line, to limit the spread of flames and smoke from one compartment to another.

#### 4.5.2 Exterior Insulation Finishing Systems (EIFS):

When used with approved EIFS systems as outlined in Table 2 where no additional EPS is included in the EIFS assembly, backwrapping and installation of the EIFS lamina are to follow the EIFS manufacturer's published installation instructions.

Where additional EPS is applied over Superform ICF, the Superform ICF exterior foam plastic component must be considered in calculating an equivalent fuel load as nominal 1.5 lbs/ft<sup>3</sup> (24 kg/m<sup>3</sup>) density to the approved expanded polystyrene fuel load component of the approved EIFS.

EIFS PRODUCT	EIFS MANUFACTURER	MAXIMUM EIFS EPS THICKNESS* (TYPE I @ 1.0 lb/ft <sup>3</sup> )	SUPERFORM ICF EPS THICKNESS (TYPE II @ 1.5 lbs/ft <sup>3</sup> )	MAXIMUM APPLIED EPS THICKNESS FINISHED EIFS**
StoTherm	Sto Corporation	8 inches	2-3/4 inches	10-3/4 inches
Essence	-	(203 mm)	(70 mm)	(273 mm)
StoTherm	Sto Corporation	5 inches	2-3/4 inches	7-3/4 inches
NExT	-	(127 mm)	(70 mm)	(197 mm)
Dryvit	Dryvit Corporation	9 inches	2-3/4 inches	11.75 inches
Outsulation	Inc.	(229 mm)	(70 mm)	(298 mm)

#### Table 2. Details of EIFS systems approved for use with Superform ICF include:

\* Maximum thickness of EIFS (Type 1 @ 1.0 lb/ft<sup>3</sup>) when applied over Superform ICF.

\*\* Maximum total thickness of EIFS and Superform ICF EPS.

EPS thickness above is provided considering combined Superform ICF EPS component with EIFS EPS component providing equivalent fuel load to above-described Type I-IV approved EIFS assemblies. Manufacturer's installation instructions for application with EIFS including backwrap details are to be followed during installation, with backwrap anchoring and overlaps required, connected at competent anchor points. Anchoring of backwraps to the face of Superform ICF EPS component is not permitted.

#### 4.5.3 Exterior Brick Veneer:

Brick veneer is to be anchored to Superform ICF cross ties with fasteners required to penetrate the cross-tie flange. Anchoring schedules used shall be designed to resist the anticipated gravity and service loads based on fastener capacity values outlined in Table 3 of this report. Brick veneer used is to comply with 2018 / 2015 IBC and shall be installed with a minimum 1 inch (25 mm) air gap (recommended 2 inch (51 mm) air gap) between the exterior Superform ICF EPS panel face, and the brick veneer. Brick veneer is to be supported along floor lines in accordance with the applicable code.

#### 4.5.4 Exterior Plaster:

Exterior plaster including metal lath is to comply with the applicable code and shall be a minimum of 7/8 inch (22.2 mm) thickness. Fasteners connecting the metal lath to Superform ICF are required to penetrate the crosstie flanges. Anchoring schedules used shall be designed to resist the anticipated gravity and service loads based on fastener capacity values outlined in Table 3 of this report.

#### **5.0 LIMITATIONS**

- Superform ICF are to be protected from direct sunlight exposure to the plastic cross ties.
- Superform ICF are required to be separated from interior space by an approved thermal barrier when installed in accordance with Section 4.2.2 of this report and the applicable code.
- Superform ICF are approved for use in Attic and Crawlspace applications when installed in accordance with Section 4.2.3 of this report and the applicable code and where products bear a visible label outlining "Approved for Use in Attics and Crawlspaces".
- Superform ICF are required to be protected by a code-compliant exterior cladding when installed on the exterior of the building above grade for weather and UV protection, or code compliant dampproofing and waterproofing material when installed on the exterior below grade. Refer to section 4.3 of this report for details.
- Superform ICF when used in fire-resistance-rated construction are to be installed in accordance with Section 4.4 and Section 8.2 of this report.
- Superform ICF used in Types I-IV Construction are to be installed in accordance with Section 4.5 of this report.
- Superform ICF used in areas defined as "very heavy" termite infestation probability, require construction in accordance with Sections 4.3.1.4 and 4.3.2.3 of this report, and 2021 / 2018 / 2015 IBC Section 2603.8 or 2021 / 2018 / 2015 IRC R318.4, as applicable.
- Superform ICF have product labels visible at minimum every 160 ft<sup>2</sup>.
- Superform ICF are manufactured in Pincher Creek, Alberta and Cincinnati, OH with inspections by QAI Laboratories.

#### 6.0 SUPPORTING INFORMATION:

The following data has been evaluated for Superform ICF:

- Data outlining compliance for use as Flat Wall Insulated Concrete Forms, as detailed in ASTM E2634.
- o Data outlining details for use in load-bearing fire-resistance rated construction per ASTM E119.
- Data outlining details for use in exterior walls of Types I-IV construction as detailed in Chapter 26 of 2021 / 2018 / 2015 IBC.



#### 7.0 MARKING:

SUPERFORM ICF Core Size: 4", 6, 6 ½", 8" Manufactured By: Superform Products Ltd. Pincher Creek, AB Canada Leaders in Insulated Concrete Forming	c C C C C C C C C C C C C C C C C C C C
Approval Bodies: QAI Laboratories	Certified To: CAN/ULC S701: Type 2 ASTM C578: Type II ASTM E84: FSI ≤ 25, SDI ≤ 450 CAN/ULC S102.2: FSI ≤ 210, SDI ≤ 450 RSI: 1.76 minimum
	Refer to QAI Evaluation Report: CER <sub>us</sub> . – 1001
APPROVED FOR USE IN ATTICS AND CRAWL SPACES CAUTION: Material is combustible. A protective or thermal barrier is required per the applicable building code.	

Superform ICF finished products example label are outlined in Figure 1 below.

#### Figure 1. Example of Superform ICF Finished Product Label

#### 8.0 RESULTS / RATINGS:

#### 8.1 Allowable Fastener Capacities

#### Table 3. Superform ICF Approved Fasteners Including Capacities

	FASTENER CAPACITY		
FASTENER	Allowable Withdrawal Ibs (kg)	Allowable Lateral Shear Ibs (kg)	
#6 Coarse Thread Drywall Screw, minimum penetration <sup>3</sup> / <sub>4</sub> inch (19 mm) into Superform ICF Crossties.	52 (24)	115 (52)	
#10 Coarse Thread Wood Screw, minimum penetration <sup>3</sup> / <sub>4</sub> inch (19 mm) into Superform ICF Crossties.	48 (22)	126 (57)	
#14 Coarse Thread Wood Screw, minimum penetration <sup>3</sup> / <sub>4</sub> inch (19 mm) into Superform ICF Crossties.	57 (26)	135 (61)	
16 Gauge ½ inch Crown Staple, minimum penetration 1 inch (25 mm) into Superform ICF Crossties.	9 (4)	12 (6)	

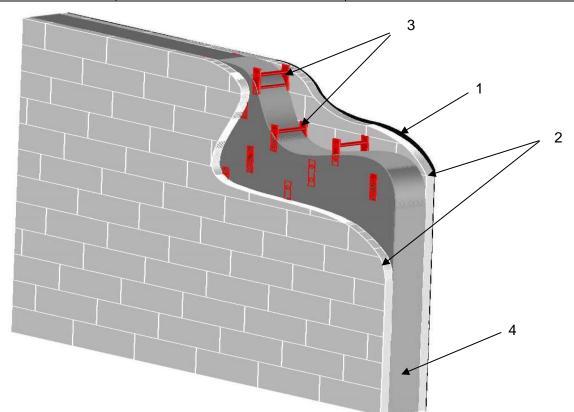
Note 1: Calculation of penetration into Superform ICF is taken as fastener length minus thickness of objects between Superform ICF face and fastener head. Fasteners must penetrate the crossties.



#### 8.2 Fire-Resistance-Rated Assembly Details

ASSEMLY RATING (Hours)	MINIMUM CONCRETE CORE (MM)	MINIMUM CONCRETE CORE (INCHES)
3	152	6 <sup>1</sup>
4	165	6.5 <sup>1</sup>

#### Table 4. Superform ICF Approved 4-hour Load Bearing Fire-Resistance-Rated Assemblies.



No.	COMPONENT	DESCRIPTION
1	Interior Sheathing	Any approved thermal barrier for the protection of foam plastic insulation, per the applicable building
I	(Not Shown)	code can be used.
	Expanded	Superform ICF component 70 mm (2 ¾) inch thickness Type 2 (CAN/ULC S701) / Type II (ASTM
2	Polystyrene	C578) QAI certified expanded polystyrene thermal insulation. Superform ICF EPS panels have
	(EPS) Insulation	interlocking teeth to allow stacking onsite to create the forming wall.
		Superform polypropylene web tie components spaced at 153 mm (6 inches) on center spacing
3	Web Ties	through Superform ICF. Web ties can be stacked or staggered vertically during installation
		(staggered web tie system shown).
		Minimum 21 MPa (3,000 psl) compressive strength at 28 days. Steel reinforcing, while not shown, is
4	Concrete Core	approved for use. Rebar addition is to be designed and approved by a registered design
		professional, or authority having jurisdiction in accordance with the applicable code requirements.
		Exterior claddings are approved for use with the Superform ICF fire-resistance rated load bearing f
5		wall assemblies without negatively impacting the fire rating. These exterior claddings include: brick
	Exterior Cladding	veneer, stucco, fire-resistance rated exterior insulating finish systems, cultured stone, aluminum and
	(Not Shown)	steel products.
		All exterior claddings are to be installed with the applicable building code, and the manufacturer's
		approved installation instructions.

**Note 1:** The allowable load for Superform ICF fire-resistance-rated assemblies are to be determined by a registered design professional, or authority having jurisdiction in accordance with the applicable codes.



## CODE EVALUATION REPORT

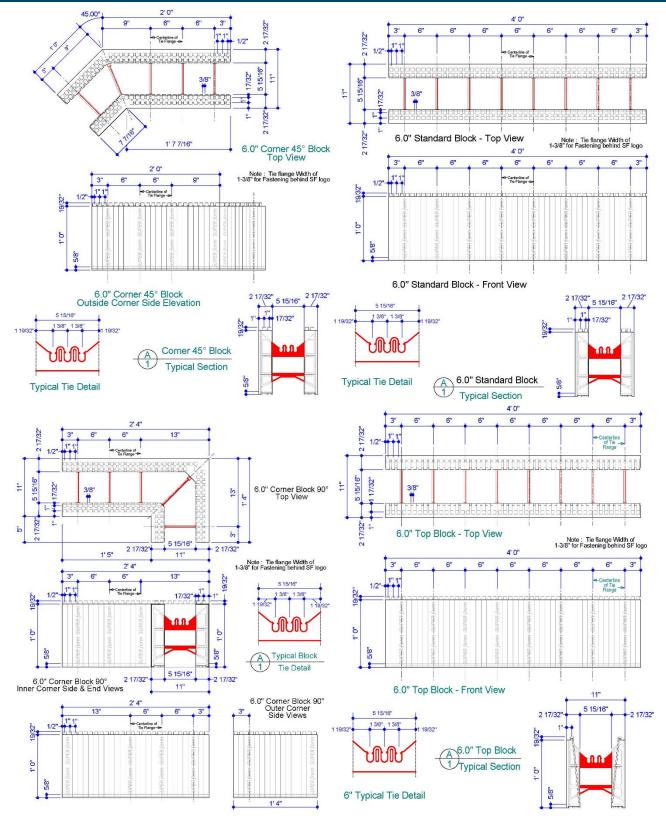


Figure 2. Example Superform ICF Product Details



#### 9.0 SUPPLEMENTAL CODES

#### 9.1 2023 Florida Building Code:

Superform ICF as detailed in Sections 2.0 through 8.0 of QAI CER<sub>US</sub>-1001 comply with *Flat Wall Insulated Concrete Form (ICF) Systems* specifications, as defined in Section 1903.4 of the 2023 FBC, Building, and Sections R404.1.3.3.6.1 and R608.4.4 of the 2023 FBC, Residential conforming to ASTM E2634.

Superform EPS Foam Plastic Panels comply with Section 2615 2023 Florida Building Code, Building.

Superform Cross Ties comply with Section 2615 2023 Florida Building Code, Building .



#### **10.0 ELIGIBILITY OF REPORT**

QAI's Code Evaluation Report complies with the 2021 / 2018 / 2015 IBC Section 104.11 Alternative materials, design and methods of construction and equipment subsection 104.11.1 Research Reports. Supporting data has been evaluated by QAI for compliance of the noted materials and assemblies to the applicable code by QAI, and approved source as detailed below.

The attached report has been reviewed by a QAI Registered Professional Engineer approved by the specific state Board of Professional Engineers noted on the specific P.E. seal(s).

Per section 1703 of the IBC, QAI is an independent third-party testing, inspection and certification agency accredited by the International Accreditation Service, Inc. (IAS) for this specific scope (see IAS PCA-118, PCA-119). QAI can confirm that based on its IAS accreditation it meets IBC Section 1703.1 on Independence, Section 1703.1.2 on Equipment and Section 1703.1 on Personnel.

This Evaluation report has been designed to meet the performance requirements of IBC Section 1703.4 and contains the required information to show the product, material or assembly meets the applicable code requirements.

The product is labeled per section IBC 1703 and subject to follow-up inspection per IBC 1703.6 using QAI IAS accredited ISO 17020 inspection program (see IAS AA-635, AA-723).

For more information regarding QAI Laboratories, please visit <u>www.qai.org</u>.



The above is an example of the QAI registered Listing mark. The Listing mark may only be used by the Report Holder per the QAI service agreement on products defined in this report. The 'us' indicator in the 8 o'clock position indicates the product complies with the properties evaluated with limitations outlined in this report for use in the US market. A 'c' indicator in the 4 o'clock position indicates the product has been evaluated for use in the Canadian market.



#### **11.0 REFERENCED STANDARDS**

ASTM E2634	Standard Specification for Flat Wall Insulating Concrete Form.
UL 723	Test for Surface Burning Characteristics of Building Materials.
ASTM E84	Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM C578	Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
ASTM D1929	Standard Test Method for Determining Ignition temperature of Plastics.
ASTM D2843	Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics
ASTM D635	Test Method for Rate of Burning and/or Extent and Time of Building of Plastics in a Horizontal
	Position.
ASTM C1396/0	C1396M Specification for Gypsum Board.
NFPA 275	Standard Method of Fire TSTS for the Evaluation of Thermal Barriers.
ASTM E119	Standard Test Methods for Fire Tests of Building Construction and Materials.
NFPA 285	Standard Fire Test Method for the Evaluation of Fire Propagation Characteristics of Exterior

Nonload-bearing Wall Assemblies Containing Combustible Compartments.