

StoVentec® Fiber Cement

Design Guide and Detail Booklet
Series 90.Fc.xx | December 2024

Facades



Interiors



Ventilated Rainscreen
cladding systems

StoVentec® Fiber Cement Rainscreen® Systems combine timeless, designer aesthetics with advanced energy efficiency, creating a superior building envelope solution. This fully engineered, multi-layered system integrates an air and water-resistive barrier, a robust sub-construction made from aluminum or steel brackets and profiles, mineral wool thermal insulation board, and durable high-density fiber cement. The fiber cement panels can be custom-fabricated into various shapes, offering unparalleled design versatility. Ideal for both modern and traditional architecture, StoVentec® ensures long-lasting performance, durability, and adaptability to any design vision.





Design Guide



Design Considerations	5
Fiber Cement Layouts	5
Ventilation Cavity	5
Visible Panel Fixing - Fixed and Sliding Points	6
System Depth	7
Standard Colors	8
System Information	9
Component Information	11
Testing and Listings	13
Guide Details	14

Table of Contents

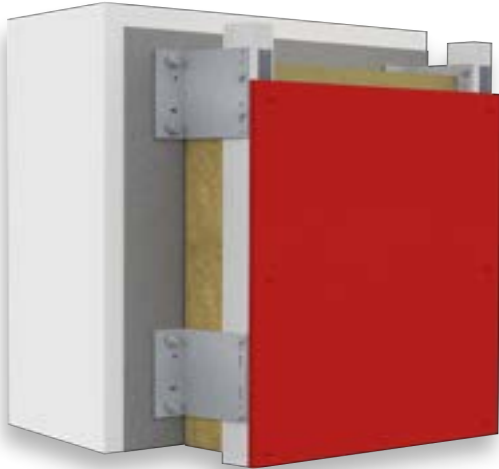
System Overview and Component	3
StoGuard® Air and Water-Resistive Barrier	3
StoVentro™ Sub-construction	3
Thermal Insulation	3
StoVentec® Fiber Cement	3
Glossary of Terms	4

ATTENTION

The final design of any project is the sole responsibility of the Design Professional, with considerations for compliance of local building and design codes and requirements. Sto Corp. accepts no liability for design, engineering, or workmanship of any project. The information provided herein is in addition to other technical data provided by Sto Corp. (System Bulletin, Specification, Guide Details, etc). For more information, please visit www.stocorp.com

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StoVentec Fiber Cement

A Complete Rainscreen System

StoVentec Fiber Cement is a drained and back-ventilated rainscreen wall system. The system consists of four principal components: an air and water-resistant barrier, an adjustable sub-construction, thermal insulation, and a pre-finished high-density fiber cement cladding. All Sto components are covered by a single-source warranty from Sto Corp.

StoVentec Fiber Cement is available in a variety of finish colors, with or without a pigmented body, and smooth or light sanded textures. StoVentec high-density fiber cement is a time-tested durable, code-complaint, noncombustible cladding material suitable for almost any location with outstanding wind load resistance. An open-jointed system, the StoVentec Fiber Cement system offers low maintenance along with timeless and versatile aesthetics, and all-around performance.



Air and Water-Resistive Barrier

The first component of the StoVentec Fiber Cement system is Sto AirSeal®. It is a fluid applied Air and Water-Resistive Barrier (AWRB) designed for use on most substrates, including glass mat gypsum sheathing, wood-based sheathing, concrete, and masonry. Sto AirSeal® protects walls against moisture damage from rain during construction and provides secondary moisture protection while the building is in service. It functions as the primary air barrier component in the wall assembly and comes with multiple transition components for maintaining AWRB continuity at joints, seams, wall penetrations, and across dissimilar materials. Sto AirSeal® features 500% tensile elongation, meets requirements of ASTM C1305 Low Temperature Crack Bridging and offers building code compliance confirmed by ICC-ESR 1233. Alternatively, Sto Gold Coat®, in a high-build application, may also be used with StoVentec systems, or Sto VaporSeal® can be used where a vapor impermeable air and water-resistant barrier is specified.



StoVentro™ sub-construction

Sub-construction plays a vital role in wall design and construction. In addition to forming the structural link between façade and base wall, it provides design flexibility to StoVentec Fiber Cement. Adjustable StoVentro wall brackets work with StoVentec Fiber Cement to level out uneven walls or to create plane changes or unique designs for the façade. They also accommodate substrate waviness and imperfections. Together with StoVentro T and L-profiles, StoVentro brackets create ventilation cavities that allow air circulation and drainage, the hallmarks of rainscreen systems.

Much more than an engineered system that transfers wind loads and dead loads to structural framing, StoVentro sub-construction is part of the architect's creative toolkit.



Thermal Insulation

StoVentec Fiber Cement uses Rockwool Cavityrock® continuous insulation. This ASTM C612 (CAN/ULC S-702, Type I) and E136 compliant mineral wool provides exceptional thermal performance, fire resistance, acoustical control and moisture resistance. StoVentec offers thermal efficiency modeling reports by Morrison Hershfield for each of our StoVentro bracket types in order to help projects meet certain energy code U-factor or R-value requirements.

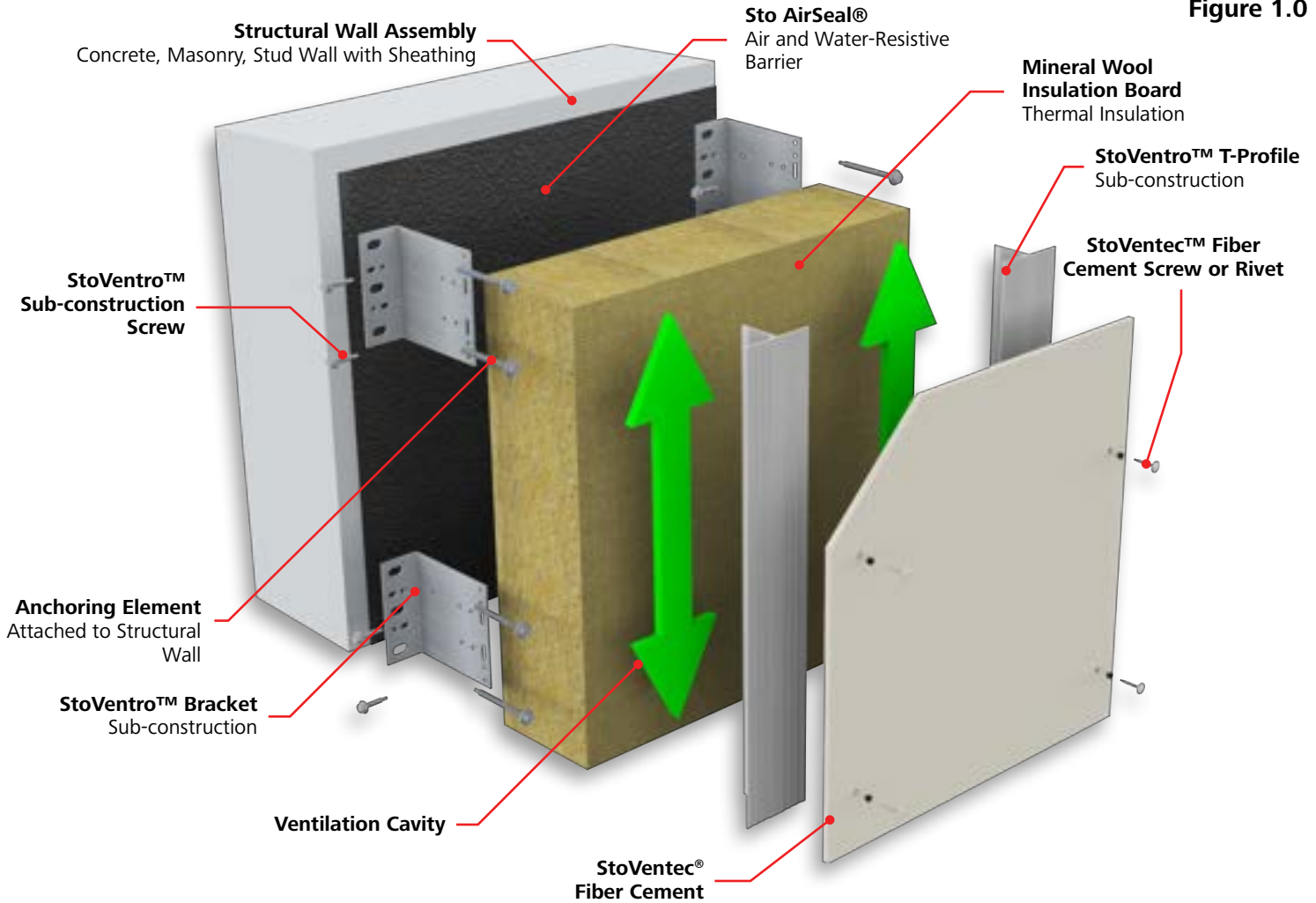


StoVentec Fiber Cement

Standard panels are 4 x 8 or 10 feet (1220 x 2440 or 3050mm) and may be installed horizontally or vertically. Custom fabrication enables unique shapes or patterned layouts. Panels may be installed with visible rivets or screws, or via concealed hangers anchored to the back surfaces.



Figure 1.0



Glossary of Terms

StoGuard® Air & Water-Resistive Barrier – a liquid applied AWRB available as a vapor-permeable or vapor-impermeable component.

Mineral Wool Insulation Board - Rockwool Cavityrock® or Cavityrock Black insulation provides thermal insulation, fire resistive characteristics, and acoustical control. (Not provided by Sto Corp.)

StoVentec Sub-construction – Aluminum or galvanized steel wall brackets with aluminum vertical support profiles.

StoVentec Bracket – Adjustable aluminum or galvanized steel support for vertical 'L' and 'T' profiles.

StoVentec T-Profile – Vertical aluminum profile, attached to the wall brackets, which supports StoVentec® Fiber Cement at vertical joints. L-Profiles (not shown) are typical in the field of each panel and/or at terminations. EPDM foam adhesive tape (not shown) is required on the vertical T/L Profiles to cushion the fiber cement when fastened against the profiles.

StoVentec Sub-construction Screw – Stainless steel fastener that provides wall bracket to vertical profile attachment.

StoVentec Fiber Cement Rivet or Screw – Stainless steel fastener that provides attachment of StoVentec® Fiber Cement to StoVentec™ L and T-Profiles.

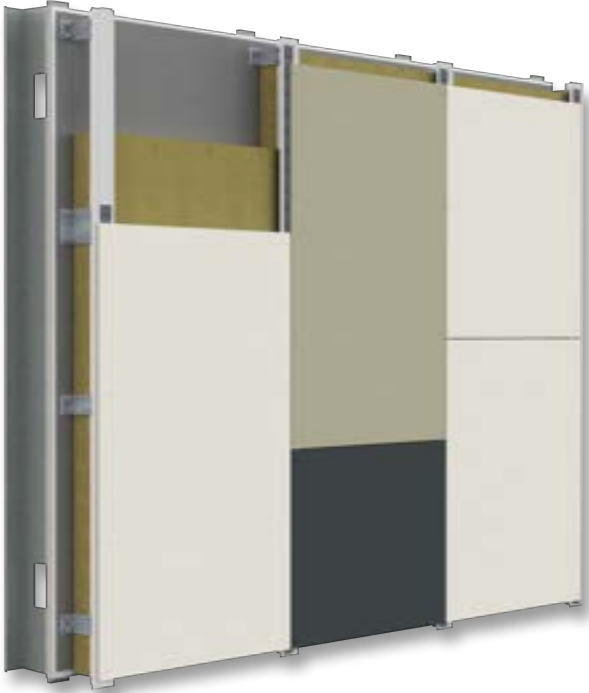
Ventilation Cavity – The circulating air layer between the Mineral Wool Insulation Board and StoVentec® Fiber Cement.

StoVentec Fiber Cement – Pre-finished, high-density 8 or 10mm fiber cement cladding panel.

Sto Ventilation Profile – Perforated profile for drainage and ventilation. (Not shown)

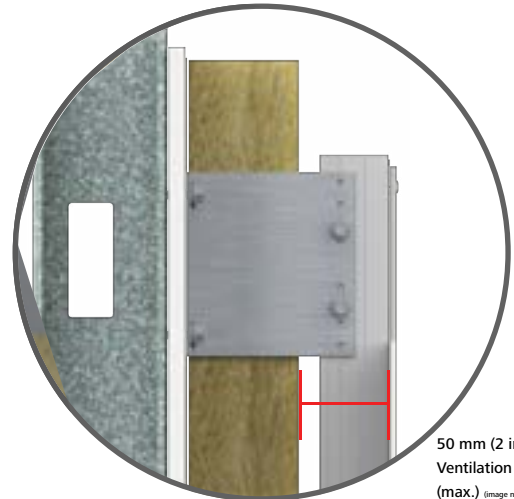
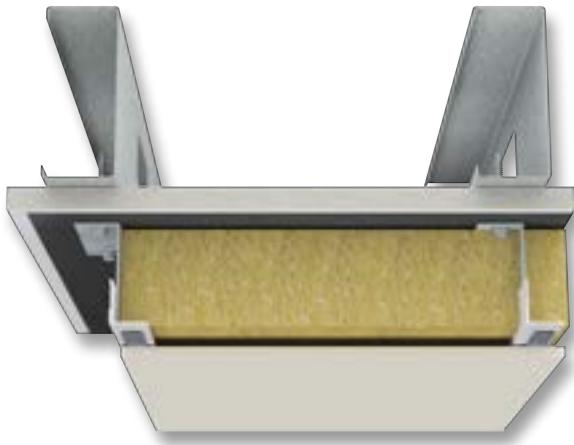
StoVentec L-Profile – Aluminum support member used within the field of the panels as well as at terminations for structural attachment. (Not shown)

Anchoring Element – Engineered and code compliant fastener for attachment of StoVentec™ Bracket to structural wall. (Concrete and wood framing anchors not provided by Sto Corp.)



Fiber Cement Panel Layouts

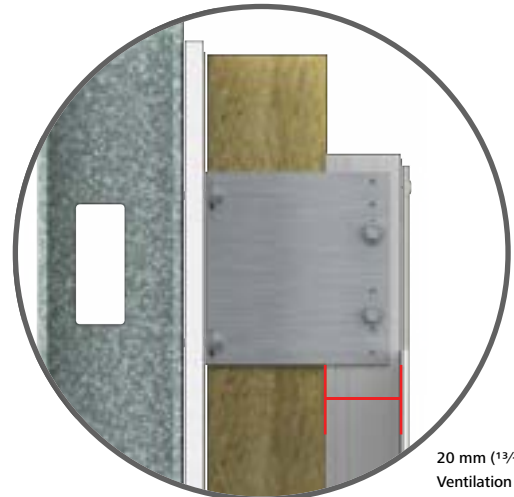
StoVentec Fiber Cement panels may be oriented horizontally or vertically and laid out in stacked or staggered patterns, or even further mixed aesthetically in a variety of customized dimensions made possible via fabrication. StoVentro brackets and profiles (L's and T's) must be spaced so that vertical edges of panels always align with a rail. L-Profiles are typical within the field of a panel. T-Profiles (120mm or Gullwings) are required at vertical joints between panels unless horizontal hat channels are also needed on top of StoVentro profiles to accommodate complex design layouts.



50 mm (2 in.)
 Ventilation Cavity
 (max.) (image not to scale)

StoVentro Ventilation

The vertical support T-Profiles feature a 30mm wide fastening zone (L-Profiles 20 or 30mm) and may be fastened to the StoVentro brackets anywhere within this range. This allows for up to 30mm of total adjustability for the system. Refer to Table 1.0 on page 6 for recommended StoVentro bracket sizing in accordance with the thickness of mineral wool continuous exterior insulation. The ventilation plane between the cladding panels and face of the mineral wool ranges from 20 to 50mm (1³/₁₆ to 2 inches).



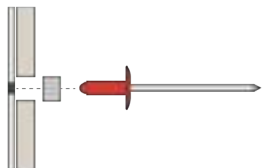
20 mm (1³/₁₆ in)
 Ventilation Cavity
 (min.) (image not to scale)



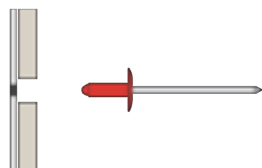
Fiber Cement Panel Visible Fixing

StoVentec Fiber Cement panels with visible fixing (face fasteners) require oversized fastener holes to be pre-drilled prior to installation. This allows the panels to float while the metal sub-construction they are anchored to undergoes thermal expansion and contraction in different (greater) amounts. As such, each panel receives two (2) fixed point fasteners near the middle and several sliding point fasteners everywhere else, with overall fastener count and spacing dependent on project design wind criteria, panel dimensions, and minimum edge distance requirements. The two fixed point fasteners must be located on separate T/L Profiles, and where panels joint on T-Profiles there must not be more than one fixed panel anchor.

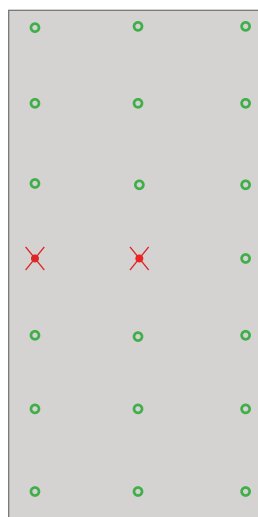
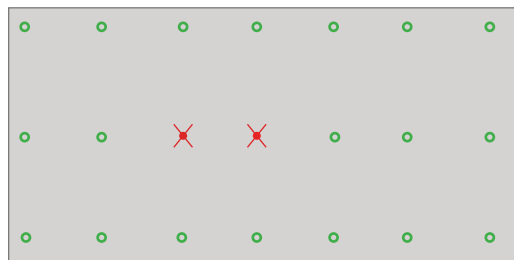
Fixed Point Rivet



Sliding Point Rivet

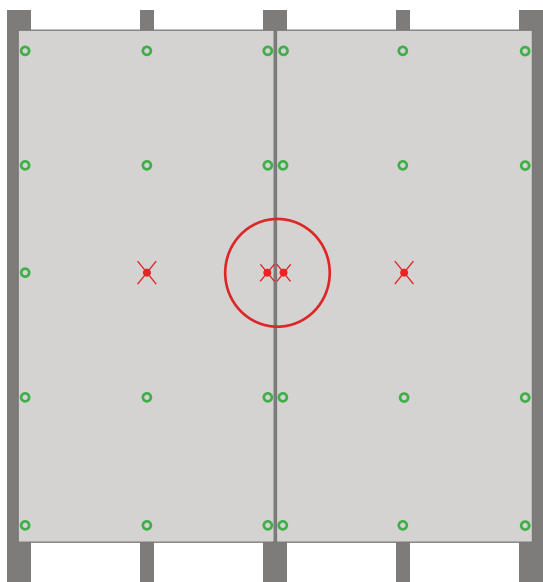


Fixed Point Sleeve for SVFC Rivets
 - fit 10mm (25/64 inch) pre-drilled holes in SVFC panels

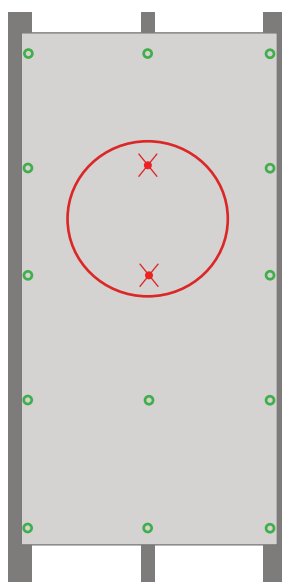


○ sliding point
 ✕ fixed point

Example fixed and sliding point fastener patterns. Fixed points must occur on different Profiles as close to the panel center as possible.



Do NOT position fixed points for two panels on the same Profile.



Do NOT position the two fixed points for one panel on the same Profile.



Table 1.0 - Bracket Size and System Depth as determined by Insulation Requirements

	Insulation ⁴ Size Required				Sto Wall Bracket Size Required (mm)	- Minimum - Distance from AWRB ³ to Front Face of Fiber Cement ⁵ (mm)	- Minimum - Distance from AWRB ³ to Front Face of Fiber Cement ⁵ (in)	- Maximum - Distance from AWRB ³ to Front Face of Fiber Cement ⁵ (mm)	- Maximum - Distance from AWRB ³ to Front Face of Fiber Cement ⁵ (in)
	Width (in)	Width (mm)	R-Value ¹	RSI-Value ²					
Standard	1"	25	4.3	0.74	40	50.7	2	80.7	3- ³ / ₁₆
	1.5"	38.1	6.45	1.14	60	70.7	2- ³ / ₄	100.7	4
	2"	50	8.6	1.48	80	90.7	3- ⁹ / ₁₆	120.7	4- ³ / ₄
	2.5"	63.5	10.7	1.85	100	110.7	4- ³ / ₈	140.7	5- ¹ / ₂
	3"	76.2	12.9	2.22	100	110.7	4- ³ / ₈	140.7	5- ¹ / ₂
	3.5"	88.9	15	2.59	120	130.7	5- ¹ / ₈	160.7	6- ³ / ₈
	4"	101.6	17.2	2.96	120	130.7	5- ¹ / ₈	160.7	6- ³ / ₈
	4.5"	114.3	19.3	3.33	140	150.7	5- ¹⁵ / ₁₆	180.7	7- ¹ / ₈
	5"	127	21.5	3.70	160	170.7	6- ³ / ₄	200.7	7- ⁷ / ₈
	5.5"	139.7	23.6	4.07	160	170.7	6- ³ / ₄	200.7	7- ⁷ / ₈
	6"	152.4	25.8	4.44	180	190.7	7- ¹ / ₂	220.7	8- ¹¹ / ₁₆
	6.5"	165.1	27.9	4.81	200	210.7	8- ⁵ / ₁₆	240.7	9- ¹ / ₂
	7"	177.8	30.1	5.18	200	210.7	8- ⁵ / ₁₆	240.7	9- ¹ / ₂
Special Design Considerations Required	8"	203.2	34.4	5.92	220	230.7	9- ¹ / ₁₆	280.7	11- ¹ / ₁₆
	8.5"	215.9	36.5	6.29	240	250.7	9- ⁷ / ₈	280.7	11- ¹ / ₁₆
	9"	228.6	38.7	6.66	260	270.7	10- ⁵ / ₈	300.7	11- ¹³ / ₁₆
	9.5"	241.3	40.8	7.03	260	270.7	10- ⁵ / ₈	300.7	11- ¹³ / ₁₆
	10"	254	43	7.40	280	290.7	11- ⁷ / ₁₆	320.7	12- ⁵ / ₈
	10.5"	266.7	45.1	7.77	300	310.7	12- ¹ / ₄	340.7	13- ⁷ / ₁₆
	11"	279.4	47.3	8.14	300	310.7	12- ¹ / ₄	340.7	13- ⁷ / ₁₆
	11.5"	292.1	49.4	8.51	320	330.7	13	360.7	14- ¹ / ₄
	12"	304.8	51.6	8.88	320	330.7	13	360.7	14- ¹ / ₄
	12.5"	317.5	53.7	9.25	340	350.7	13- ¹³ / ₁₆	380.7	15
	13"	330.2	55.9	9.62	360	370.7	14- ⁹ / ₁₆	400.7	15- ³ / ₄
13.5"	342.9	58	9.99	360	370.7	14- ⁹ / ₁₆	400.7	15- ³ / ₄	

¹ R = 4.3 per 1 inch

³ AWRB = Air and Water-Resistive Barrier Layer

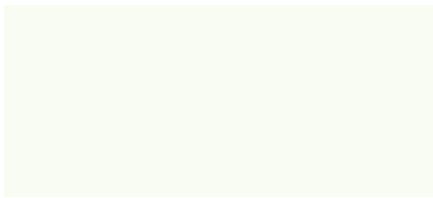
⁵ 8mm thick fiber-cement

² RSI = 0.74 per 25mm

⁴ Rockwool Cavityrock® or equivalent



Primara Line



Albion



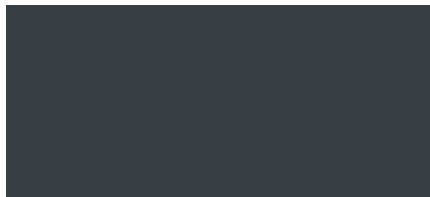
Ballston



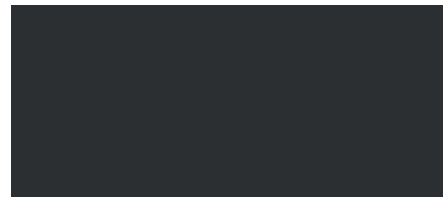
Kodiak



Plumbago



Orca



Obsidian

Primara Line (PL) panels are grey-bodied with an opaque surface finish. The finish texture is smooth with a light sanded grain.

Strata Line



Turmeric



Ginger



Imperial



Auberginial



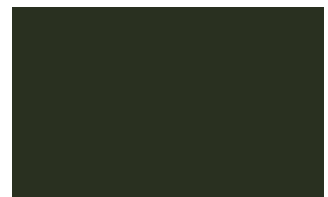
Bermuda



Superior



Nightshade



Brunswick

Strata Line (SL) panels have a pigmented body with an opaque surface finish. The finish texture is extra smooth with a subtle linear effect in the paint.



Table 1.1 - System Information

Feature	Description	Value
Application	Approved for vertical walls, ceilings, and soffits	Above grade only, exterior and interior. Commercial, Residential and Institutional construction.
Warranty	Limited Warranty	10 Year for full StoVentec system (AWRB, Sub-construction, and cladding)
System Component	Component 1 - Air and Water-Resistive Barrier (AWRB)	Sto AirSeal® fluid applied, vapor permeable AWRB (alternatives: Sto Gold Coat® or Vaporseal®)
System Component	Component 2 - Sub-construction	StoVentro
System Component	Component 3 - Insulation	Rockwool Cavityrock®, Cavityrock Black, or equivalent
System Component	Component 4 - Fiber Cement	StoVentec Fiber Cement
System Weight	Weight range of StoVentec Fiber Cement, StoVentro Sub-construction and Thermal Insulation	≈21.36 to ≈34.44 kg/m ² (≈4.36 to ≈7.04 lb./ft ²) variable based on cavity depth, insulation thickness (up to 7")
System Weight	Weight range of StoVentec Fiber Cement	8mm thickness 15.7 kg/m ² (3.2 lb./ft ²) 10mm thickness 19.6 kg/m ² (4 lb./ft ²)
System Weight	Weight of StoVentro Sub-construction	≈2.00 kg/m ² (0.41 lb./ft ²) Variable based on cavity depth
System Weight	Weight of Thermal Insulation	0.75 - 2.63 lb./ft ² (3.66 - 12.84 kg/m ²) at 2"-7" (51 - 178mm) thickness"
Substrates	Allowable wall substrates	Steel or wood frame with glass mat gypsum sheathing in compliance with ASTM C1177 or code compliant OSB or plywood sheathing, concrete or core-filled concrete masonry, existing structurally sound, uncoated brick or other masonry wall construction. For others, contact Sto Corp.
Substrates	Horizontal spacing (stud spacing) of vertically oriented StoVentro L and T-profiles mounted on StoVentro brackets	406mm (16") on center typical (24" (610mm) max.)
Substrates	Vertical spacing of StoVentro brackets	36" for prescriptive options. With engineering design, varies based on Wind Loads. See StoVentec load tables.
Ventilation	Ventilation is required at top and bottom of wall	Minimum 10mm (3/8") gap
Ventilation Cavity	Thickness of unobstructed air cavity between face of wall mounted insulation and rear surface of StoVentec Fiber Cement	20mm - 50mm (13/16" - 2")
Deflection Limit	Recommended allowable deflection limit	L/240
Structural	Structural Wall Assembly level tolerance	6mm in 3.0m (1/4" in 10 ft.)
System Layout	Gap between StoVentec Fiber Cement outside edge and all other physical building elements (if ventilation profile IS NOT used)	8mm - 10mm (5/16" - 3/8")
System Layout	Gap between StoVentec Fiber Cement outside edge and all other physical building elements (if ventilation profile IS used)	25mm (1")
System Layout	Clearance of fiber cement panel above ground level	150mm (5-7/8") (minimum)
System Layout	StoVentec Fiber Cement face setback distance from ground objects (structures/elements)	At ground level, recommended 914.4mm (3') minimum setback allowance for protection against inadvertent impact, snow accumulation, debris build-up, etc.
System Layout	StoVentec Fiber Cement installation	Panel ends shall be centered horizontally on the mounting surface of the 90 or 120 mm wide vertically oriented T-profiles.
System Layout	StoVentec Fiber Cement orientation	Install boards horizontally, vertically in a running bond or stacked patterns.
System Layout	Quantity of bracket fixed point (FP) connections to T/L profile	1 maximum



Table 1.1 - System Information (cont'd)

Feature	Description	Value
System Layout	Quantity of bracket sliding point (GP) connections to T/L profile	At least one sliding point is required. Actual quantity is defined by prescriptive/pre-engineered design or project-specific engineering calculations.
Joint Requirements	Between fiber cement panels	8-10mm (5/16"-3/8") gap around each panel
Joint Requirements	Joints are required in the system at these conditions	<ul style="list-style-type: none"> • Joints between StoVentro L and T Profiles • Existing movement joints in back-up wall construction • Through-wall joints in back-up wall construction • Dissimilar back-up wall construction (e.g., frame wall to masonry wall) • Floor line deflection joints in steel frame construction • Floor lines in multi-level wood-frame construction
Joint Requirements	At junctions or abutments to dissimilar building components	Windows, doors, alternative façade materials, pipe, scupper and similar through wall penetrations.
Fire Break	Horizontal fire break with Sto Lamella	Refer to StoVentec Details for material and configuration.
Flashing	Recommended	Refer to StoVentec Details for material and configuration.
AWRB	StoGuard® Air and Water-Resistive Barrier (AWRB), Sto AirSeal® or Sto VaporSeal® (Sto Gold Coat® is also an option - see SVFC Specification)	Vapor permeable or impermeable per project specific requirement, as manufactured by Sto Corp.
AWRB	Thickness	Substrate-driven (20-mils WFT - thickness varies), Medium-Build (40-mils WFT), or High-Build (65-mils WFT) specification options. Refer to the AirSeal webpage or Fiber Cement 3-part spec.
AWRB	Color: Sto AirSeal Sto VaporSeal	Charcoal Green



Table 1.2 - Component Information

Feature	Description	Value
Sub-Construction	Bracket material	6063 T66 aluminum or HSLAS-F Gr. 80 + ZM galvanized steel
Sub-Construction	Steel Bracket: Small StoVentro Bracket (GP) W x H x T Used for wind loading	50mm x 75mm x 2.0mm x variable depth (2" x 2-15/16" x 1/16")
Sub-Construction	Steel Bracket: Large StoVentro Bracket (FP) W x H x T Used for dead/fixed point loading and wind loading	50mm x 130mm x 2.0mm x variable depth (2" x 5-1/8" x 1/16")
Sub-Construction	Aluminum Bracket: Small StoVentro Bracket (GP) W x H x T Used for wind loading	50mm x 95.5mm x 3.2-4.2mm x variable depth (2" x 3-3/4" x 1/8 - 3/16")
Sub-Construction	Aluminum Bracket: Large StoVentro Bracket (FP) W x H x T360mm Used for dead/fixed point loading and wind loading	50mm x 135mm x 3.2-4.2mm x variable depth (2" x 5-5/16" x 1/8 - 3/16")
Sub-Construction	Depth Range	40mm - 360mm (1- 9/16" - 14-1/8") (aluminum max. 320mm)
Sub-Construction	Bracket: Adjustability Depth Range	0mm - 30mm (0" - 1-3/16")
Sub-Construction	Protrusion of top of bracket above face of insulation	≈20mm (13/16")
Sub-Construction	Bracket weight	Variable by size and metal type
Sub-Construction	Material (StoVentro L & T Profile)	6005A-T5 or 6063-T66 aluminum
Sub-Construction	Size: StoVentro T-profile (3m length)	120 or 90mm x 53mm x 2.7mm (4-3/4" or 3-9/16" x 2-1/16" X 1/8")
Sub-Construction	Size: StoVentro L-profile (3m length)	50mm x 40mm x 2.7mm (2" x 1- 9/16" X 1/8")
Sub-Construction	Weight/ft: StoVentro T-profile (approximate)	2.64 kg/m (0.54 lb./ft)
Sub-Construction	Weight/ft: StoVentro L-profile (approximate)	1.61 kg/m (0.33 lb./ft)
Sub-Construction	Fastener: Bracket to StoVentro T/L profile attachment	Hex Head, Self drilling screw, 5.5mm Dia. x 22mm L, with over torque feature, 304 SS. (3/16" X 7/8")
Sub-Construction	Fastener: Bracket to substrate attachment fastener (anchoring fastener) per code report prescription or calculations performed by qualified licensed engineer	Code report prescriptive design or project-specific based on wind load, and substrate materials, defined by structural calculations, material: 304 stainless steel typical for steel stud applications
Panel Fixing	Self-adhered EPDM foam tape - cushioned spacer between fiber cement panels and metal profiles - required (adhered to metal profiles prior to panel installation) for visible fixing options of f.c.	1" (25mm) min. width x 1/8" (3mm) thickness
Panel Fixing	Visible Fixing Option (Sto Recommended): SVFC Rivet StoVentec Fiber Cement to StoVentro T/L profile attachment	15mm Dome Head, Rivet, 5.0mm Dia. x 18 mm L (3/16" x 11/16") 316 SS, for attachment to aluminum or steel substrates
Panel Fixing	Fixed point sleeves for rivet fasteners	FP-A-9.9x7.7 for 5mm diameter rivets and 8mm thick f.c. panels
Panel Fixing	Visible Fixing Alternative: SVFC Screw StoVentec Fiber Cement to StoVentro T/L profile attachment	16mm Pan Head, Self-drilling façade screw, 5.5mm Dia. x 25mm long (3/16" X 15/16") 304 SS for attachment to aluminum or steel substrate
Panel Fixing	Centering sleeves/grommets with screw fasteners	Always paired with self-drilling facade screws Fixed point centering sleeve/grommet - 11/8 F Sliding/gliding point centering sleeve/grommet - 11/8 S
Panel Fixing	Concealed Fixing of StoVentec Fiber Cement (10mm) panels (Fabrication services required.)	SFS TUF-S-6x9 SS threaded rivet/blind fastener



Table 1.2 - Component Information (cont'd)

Feature	Description	Value
Panel Fixing	Concealed Hangers: StoVentro Carrier Profile Hangers	4" (102mm) long panel hangers - secured to 10mm StoVentec Fiber Cement rear surfaces with two SFS TUF-S-6x9 blind fasteners - Fabrication services required
Sub-Construction	Concealed Hangers: StoVentro Agraffe Profiles	Agraffe Profiles - 3m (118") mounted to vertical StoVentro Profiles to receive Carrier Profile Hangers pre-fixed to fiber cement (10mm thickness only)
Sub-Construction	Vertical gap between adjacent T/L profiles mounted in an end-to-end configuration	10 - 15mm (3/8" - 5/8")
Sub-Construction	Concealed installation: Horizontal gap between adjacent Agraffe profiles mounted in an end-to-end configuration	10 - 15mm (3/8" - 5/8")
Sub-Construction	Concealed installation: Attachment locations of horizontal StoVentro Agraffe profile to vertical T/L profile	5.5mm x 20mm (3/16" x 13/16") oblong slots are required to be punched through StoVentro Agraffe profiles for mounting to T/L profiles to compensate for linear thermal expansion of Agraffe rails.
Sub-Construction	Minimum fastening distance from top or bottom edge of T/L profile	≥ 10mm (3/8")
Panel Retention	Concealed installation: Elimination of lateral drift of fiber cement installed with concealed hangers on Agraffe profiles	Add cotter pin (better for ease of panel maintenance/removal) or self-drilling fastener at one of the top row hanger/agaffe engagements of each panel
Sub-Construction	Attachment locations of StoVentro single T/L profiles to StoVentro Wall Brackets - Small (GP)	To compensate for linear thermal expansion of T/L profiles, attach profiles to StoVentro Brackets through 5.5 x 20mm oblong slots in bracket. These are referred to as sliding point attachment.
Sub-Construction	Attachment locations of StoVentro single T/L profiles to StoVentro Wall Brackets - Large (FP)	Attach T/L profile through circular holes in StoVentro bracket. This is commonly referred to as fixed point attachment.
Insulation	Type: Mineral Wool Board	ASTM C612 (CAN/ULC S-702, Type I) compliant, non-combustible mineral fiber board classified into types and categories: Type IA, IB, IVA.
Insulation	Weight: 50mm - 178mm (2" - 7") Thickness	0.75 - 2.63 lb/ft ² (3.66 - 12.84 kg/m ²)
Insulation	Thickness Minimum	50mm (2") for NFPA 285 compliance with combustible AWRBs
Insulation	Density	72.1 kg/m ³ (4.5 lb/ft ³)
Insulation	Thermal Conductivity	0.033 W/cm · K (0.23 (BTU in)/(hr · ft ² · °F), @ 75°F)
Insulation	Thermal Resistance	R-Value = 4.3 per inch, RSI = 0.74 per 25mm of thickness
Insulation	Attachment to sub-construction or structural backup	Insulation Dowels by others. Refer to Rockwool Cavityrock installation literature. Insulation Struts - Side Mounted version - by Sto - threaded through T-Profiles and fastened with one hex head #14 self-drilling SS screw each.
Fiber Cement Panel	Size: Height x Width	1220mm (48") x 2440mm (96") or 3050mm (120")
Fiber Cement Panel	Thickness	8 or 10 mm (5/16" or 3/8")
Fiber Cement Panel	Density	Minimum 1600 kg/m ³ (~100 lb/ft ³)
Fiber Cement Panel	Flexural Strength classification	ASTM C1186 Grade IV compliant
Fiber Cement Panel	StoVentec Fiber Cement cantilever: vertical overhang of panel edge past vertically oriented StoVentro T/L profile.	38 mm nominal (1-1/2")



Table 1.2 - Component Information (cont'd)

Feature	Description	Value
Fiber Cement Panel	StoVentec Fiber Cement cantilever: horizontal overhang of unsupported panel edge past StoVentro vertical profile (reinforcing StoVentro L-profile behind panel end NOT required)	< 152mm (< 6") Reference detail 90.Fc.049
Fiber Cement Panel	StoVentec Fiber Cement cantilever: Use of reinforcing StoVentro L-profile behind panel end REQUIRED for horizontal overhang of panel edge past StoVentro vertical profile	152mm (6") < length ≤ 406mm (≈ 16") Reference detail 90.Fc.049
Fiber Cement Panel	StoVentec Fiber Cement cantilever: Use of reinforcing StoVentro L-profile required in outside corner condition of two adjacent panels	L-Profile required
Fiber Cement Panel	Pre-drilling diameters for panels prior to visible fastening: Pre-drilled fastener holes in panels enable gliding/sliding point and fixed point fastening of panels to allow for thermal movement of the sub-construction. Panels get two fixed point fasteners (on different support profiles near panel center) while the rest are gliding/sliding. Refer to details 001-009 for fastener layout examples.	10.0mm (25/64") or 10.3mm (13/32") for rivets 11.1mm (7/16") for screw fasteners paired with centering sleeves
Fiber Cement Panel	Pre-drilling diameters for panels prior to concealed fastening	6mm for concealed SFS TUF-S 6x9 fasteners with 7mm drill depth
Fiber Cement Panel	StoVentec Fiber Cement panel attachment at vertical edges	32 mm (1-1/4") fastener clearance from vertical edges (parallel to vertical T/L Profiles) For reference, see Details 90.Fc.001-006.
Fiber Cement Panel	StoVentec Fiber Cement panel attachment at horizontal edges	76mm (3") fastener clearance from horizontal edges (perpendicular to vertical T/L Profiles) For reference, see Details 90.Fc.001-006.
Fiber Cement Panel	Panel joints must occur at/near joints between StoVentro profiles. Do not fasten a panel on both sides of profile joints.	For reference, see Detail 90.Fc.035.
Fiber Cement Panel	StoVentec Fiber Cement visible fixing attachment in field of panel to vertically oriented StoVentro Profiles (16" o.c.)	Pre-engineered vertical fastener spacings for a 4x8 panel oriented horizontally: 21" (534mm), 14" (356mm), 10-1/2" (268mm). For reference, see Details 90.Fc.001-003.
Fiber Cement Panel	StoVentec Fiber Cement visible fixing attachment in field of panel to vertically oriented StoVentro Profiles (16" o.c.)	Pre-engineered vertical fastener spacings for a 4x8 panel oriented vertically: 22-1/2" (572mm), 15" (381mm), 10" (254mm). For reference, see Details 90.Fc.004-006.
Fiber Cement Panel	StoVentec Fiber Cement visible fixing attachment in field of panel to horizontally oriented StoVentro Profiles (22-1/2" o.c.)	Pre-engineered horizontal fastener spacings for a 4x8 panel oriented vertically: 21" (533mm), 10-1/2" (268mm). For reference, see Details 90.Fc.007 and 009.
Fiber Cement Panel	StoVentec Fiber Cement hidden fixing attachment in field of panel to horizontally oriented StoVentro Agraffes (22-1/2" o.c.)	Pre-engineered fastener/hanger spacing for a 4x8 panel oriented vertically: 22-1/2" (572mm). For reference, see Details 90.Fc.010.
Listing	ASTM C1186 Type A, Grade IV compliance	Intertek Listing and certifications
Listing	NFPA 285 Fire Propagation	Engineering Judgment by Jensen Hughes Fire Protection Consultant: noncombustible or NFPA 285 complying exterior veneer will not contribute to vertical or lateral fire propagation with assemblies containing Sto AWRBs and minimum 2 inch thick mineral wool insulation.
Test	Florida TAS 202, 203 for Hurricane Cycling	HVHZ maximum design pressure ratings +/- 105 lb/ft ² (5.03 kN/m ²), +/- 115 lb/ft ² (5.51 kN/m ²)
Test	ASTM E330 - Max. Wind Load Resistance (Ultimate wind load capacity)	ASTM E330, 196 lb/ft ² (-9.38 kN/m ²)
Test	ASTM E84 Surface Burning Characteristics	Flame Spread Index: 0, Smoke Developed Index: 0
Test	ASTM E136/2652 Noncombustibility	Pass



Table of Contents

Structure/Sub-Framing/Wind Loads	
Fiber Cement Attachment - StoVentro Bracket Spacing 36" o.c., -190psf Ultimate Wind Load Capacity	90.Fc.000
Fiber Cement Attachment - 16" o.c. T-Profiles, -190psf Ultimate Wind Load Capacity	90.Fc.001
Fiber Cement Attachment - 16" o.c. T-Profiles, -161psf Ultimate Wind Load Capacity	90.Fc.002
Fiber Cement Attachment - 16" o.c. T-Profiles, -133psf Ultimate Wind Load Capacity	90.Fc.003
Fiber Cement Attachment - Vertical - 16" o.c. T-Profiles, -190psf Ultimate Wind Load Capacity	90.Fc.004
Fiber Cement Attachment - Vertical - 16" o.c. T-Profiles, -161psf Ultimate Wind Load Capacity	90.Fc.005
Fiber Cement Attachment - Vertical - 16" o.c. T-Profiles, -133psf Ultimate Wind Load Capacity	90.Fc.006
Fiber Cement Attachment - 22" o.c. Horizontal Profiles, -196psf Ultimate Wind Load Capacity	90.Fc.007
Fiber Cement Attachment - 22" o.c. Horizontal Profiles, -95psf Ultimate Wind Load Capacity	90.Fc.009
Fiber Cement Hidden Attachment - 22-1/2" o.c. Horizontal Agraffe Profiles, -140psf Ultimate Wind Load Capacity	90.Fc.010
Buildups, Sub-Construction and Panel Joints	
StoVentro System Buildup with Fiber Cement - Section View	90.Fc.020
Fiber Cement Panel Installation - System Buildup - Section View	90.Fc.022
Fiber Cement Panel Installation - System Buildup - Plan View	90.Fc.031
Fiber Cement Panel Installation - Vertical Joint - Plan View	90.Fc.032
Fiber Cement Panel Installation - Horizontal Joint at StoVentro Profile Joint - Section View	90.Fc.035
Installation Components	
StoVentro™ Steel Brackets - Large (FP) and Small (GP) attachment locations - Section View	90.Sc.045
StoVentro™ Steel Brackets - Large (FP) and Small (GP) attachment locations - Elevation & Plan View	90.Sc.046
StoVentro™ Aluminum Brackets - Large (FP) and Small (GP) attachment locations - Section View	90.Sc.047
StoVentro™ Aluminum Brackets - Large (FP) and Small (GP) attachment locations - Elevation & Plan View	90.Sc.048
Fiber Cement Panel Installation - StoVentro™ Sub-construction Installation at outside corners, jambs, transitions	90.Fc.049
Installation at Grade, Roofs	
Installation at Grade - Exposed Substrate with Sto Ventilation Profile	90.Fc.055
Installation at Grade with Sto Ventilation Profile	90.Fc.065
Installation at Roofline	90.Fc.150
Installation at Windows	
Installation at Window Head with Metal Flashing	90.Fc.080
Installation at Window Head with Sto Lamella and Metal Flashing	90.Fc.082
Installation at Window Head with Fiber Cement and Sto Ventilation Profile	90.Fc.084
Window Jamb - Metal Return	90.Fc.086
Window Jamb - Fiber Cement Return	90.Fc.088
Window Sill	90.Fc.090
Installation at Soffit and Ceiling	
Termination under Soffit or Ceiling - Not Insulated (Unconditioned)	90.Fc.161
Vertical wall to Soffit or Ceiling Fiber Cement Panel Installation - Insulated (Conditioned)	90.Fc.162
Fiber Cement Soffit or Ceiling Installation - Insulated (Conditioned) - Panel Joint	90.Fc.165
Fiber Cement Soffit or Ceiling transition to Vertical Wall Installation - Insulated (Conditioned)	90.Fc.170



Table of Contents (cont'd)

Installation at Parapet	
Parapet with 10mm Ventilation	90.Fc.180
Installation at Wall Penetrations	
Scupper Penetration with Open Joints	90.Fc.300
Small Penetration within field of panel	90.Fc.330
Installation at Movement Joints	
Wall Structural Joint	90.Fc.390
Installation at Corners	
Inside Corner	90.Fc.400
Inside Corner at Alternative Facade	90.Fc.409
Outside Corners	90.Fc.410
Outside Corners for Segmented Radius Walls/Non-90-Degree Outside Corner	90.Fc.412
Curved Facade - Radius of 40 feet (12m) or greater	90.Fc.415
Fire Protection at Floorlines	
Horizontal Joint at StoVentro Profile Joint with Sto Lamella - Section View	90.Fc.550
Horizontal Joint at StoVentro Profile Joint with Metal Fire Break - Section View	90.Fc.555

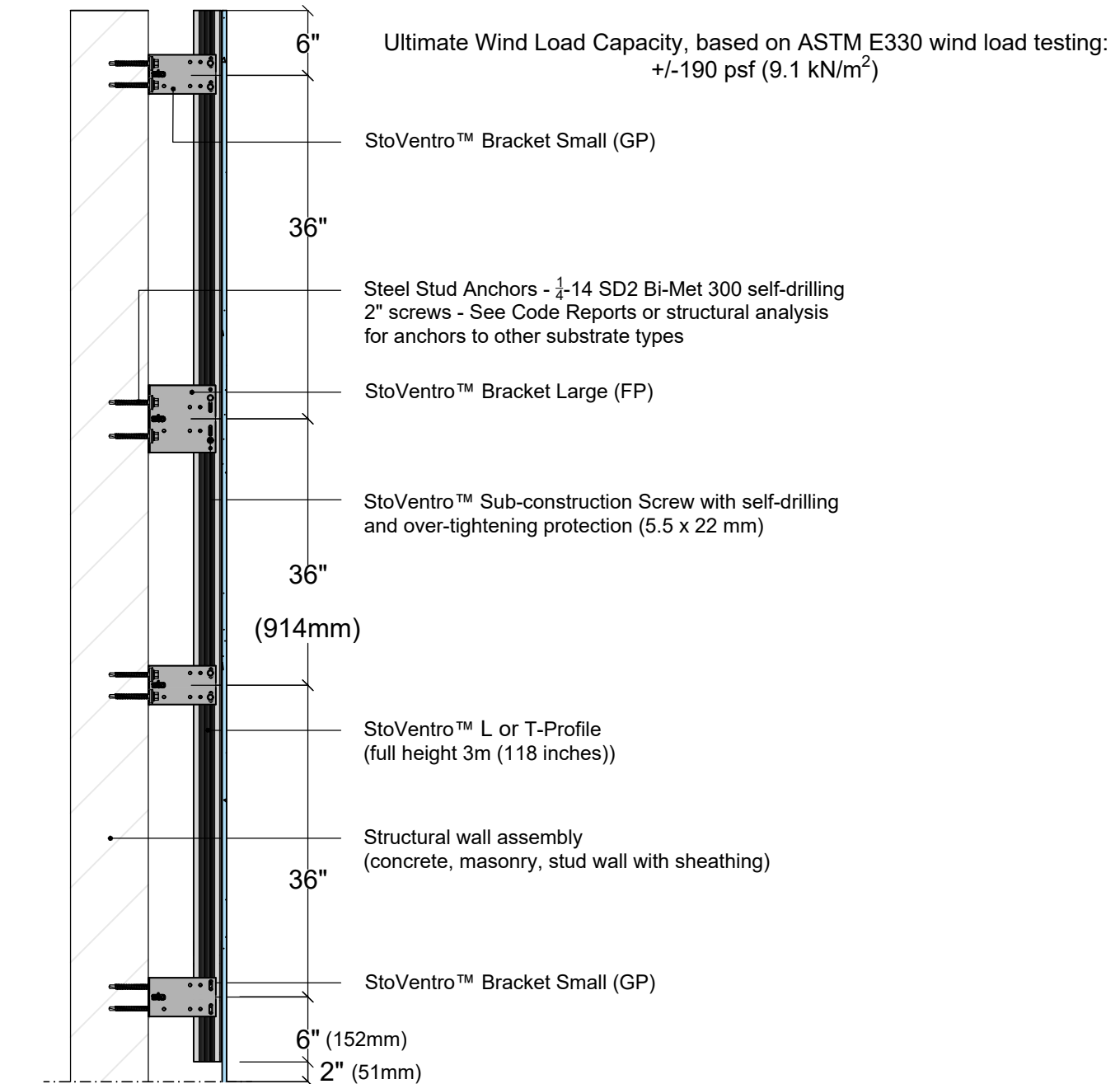
StoVentec[®] Fiber Cement

StoVentro[™] Bracket Installation, on 16" o.c. min. 18 Gauge Steel Framing,
spaced at 36" o.c. (914mm) max.

Section View - NTS

Date: August 2024

Detail No.: 90.Fc.000



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StoVentec[®] Fiber Cement

Horizontal Panel Example Layout

StoVentec F.C. (4 x 8 feet) Attachment (10-1/2 inch max. fastener spacing) to StoVentro™ L and T-Profiles, spaced at 16" o.c.(406mm), Field and Edge fastening of StoVentec F.C.

Elevation View

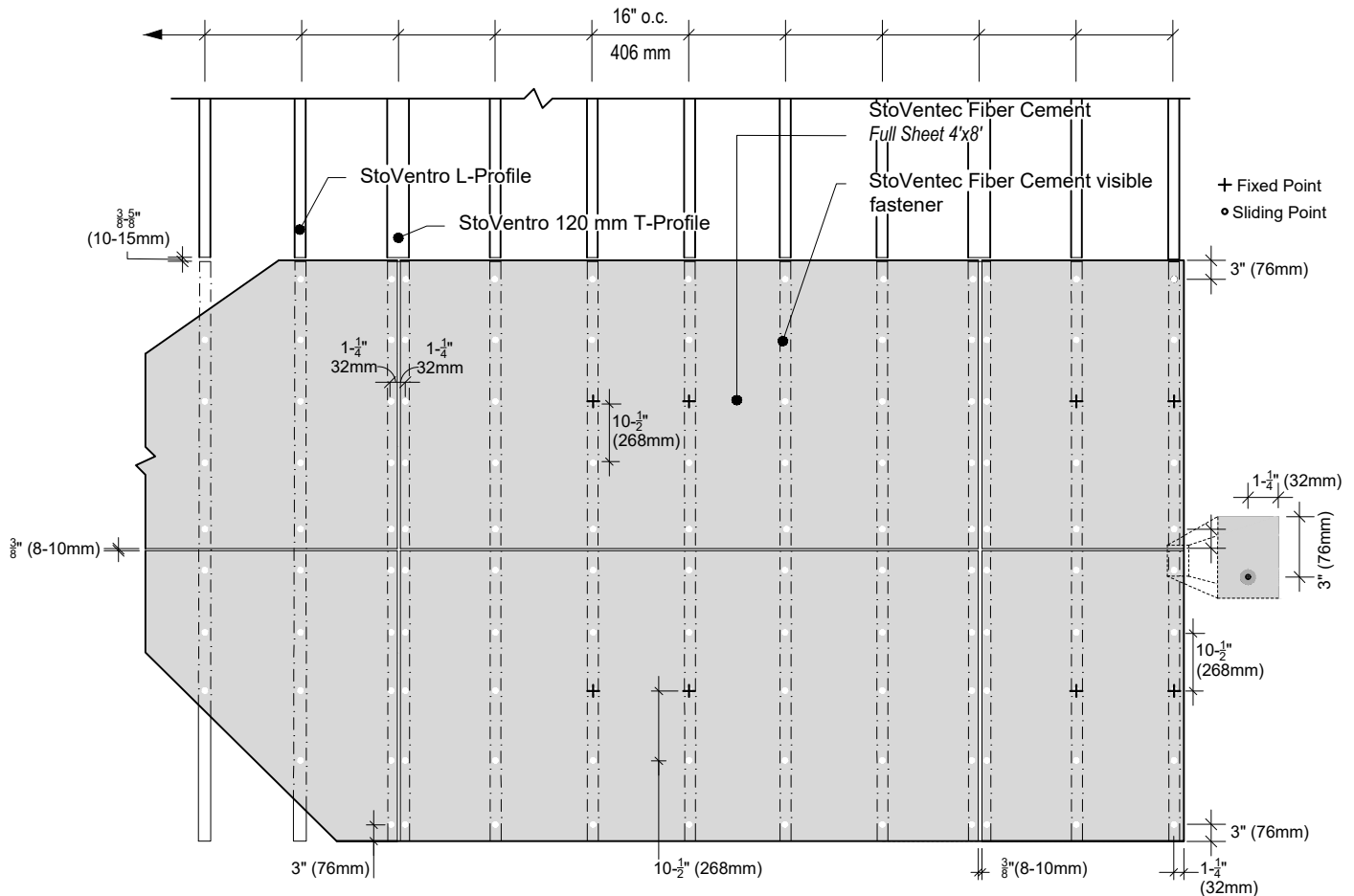
Date: August 2024

Detail No.: 90.Fc.001

Ultimate Wind Load Capacity, based on ASTM E330 wind load testing:
-190 psf (9.1 kN/m²)

Layout Notes:

1. For Staggered/running-bond layouts, exchange L-Profiles for T-Profiles (120mm) as necessary to ensure all vertical panel joints meet on T-Profiles.
2. Horizontal joints between vertical Ventro profiles - leave 10-15mm gap between metal ends, and do NOT span the gap with fiber cement (horizontal joints for panels must also occur at/near rail joints - see Detail 90.Fc.35).
3. Joints between panels are spaced 8-10mm (~ $\frac{3}{8}$ ").
4. Panel Fixed Point fasteners must occur on separate rails near the panel centers. Refer to the *StoVentec Fiber Cement Design Guide* or full *Install Guide* for more information on fixed points and fastening sequences.



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StoVentec® Fiber Cement

Horizontal Panel Example Layout

StoVentec F.C. (4 x 8 feet) Attachment (14 inch max. fastener spacing) to StoVentro™ L and T-Profiles, spaced at 16" o.c.(406mm), Field and Edge fastening of StoVentec F.C.

Elevation View

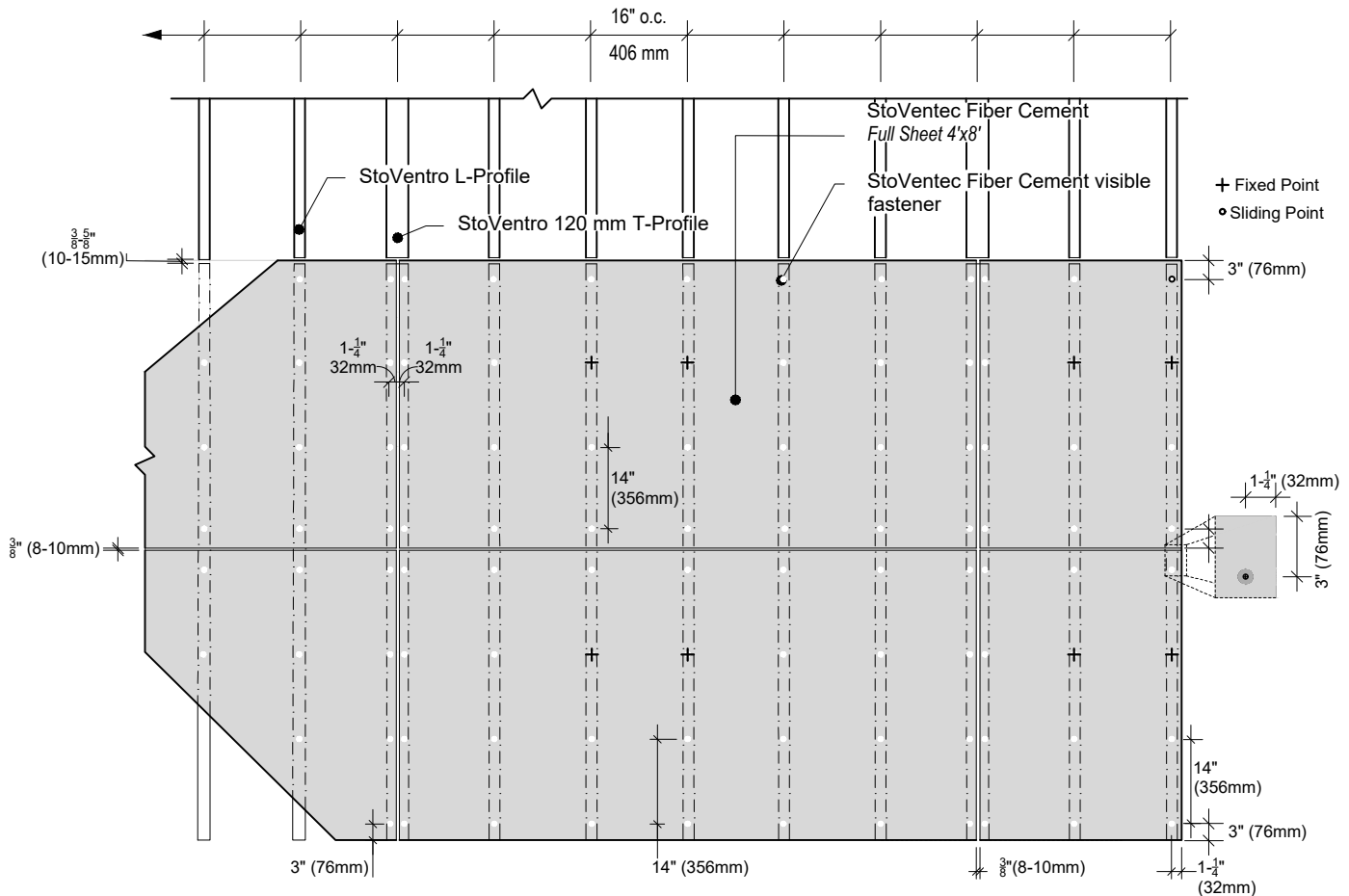
Date: August 2024

Detail No.: 90.Fc.002

Ultimate Wind Load Capacity, based on ASTM E330 wind load testing:
 -161 psf (7.71 kN/m²)

Layout Notes:

1. For Staggered/running-bond layouts, exchange L-Profiles for T-Profiles (120mm) as necessary to ensure all vertical panel joints meet on T-Profiles.
2. Horizontal joints between vertical profiles - leave 10-15mm gap between metal ends, and do NOT span the gap with fiber cement (horizontal joints for panels must also occur at/near rail joints - see Detail 90.Fc.35).
3. Joints between panels are spaced 8-10mm (~ $\frac{3}{8}$ ").
4. Panel Fixed Point fasteners must occur on separate rails near the panel centers. Refer to the *StoVentec Fiber Cement Design Guide* or full *Install Guide* for more information on fixed points and fastening sequences.



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StoVentec® Fiber Cement

Horizontal Panel Example Layout

StoVentec F.C. (4 x 8 feet) Attachment (21 inch max. fastener spacing) to StoVentro™ L and T-Profiles, spaced at 16" o.c.(406mm), Field and Edge fastening of StoVentec F.C.

Elevation View

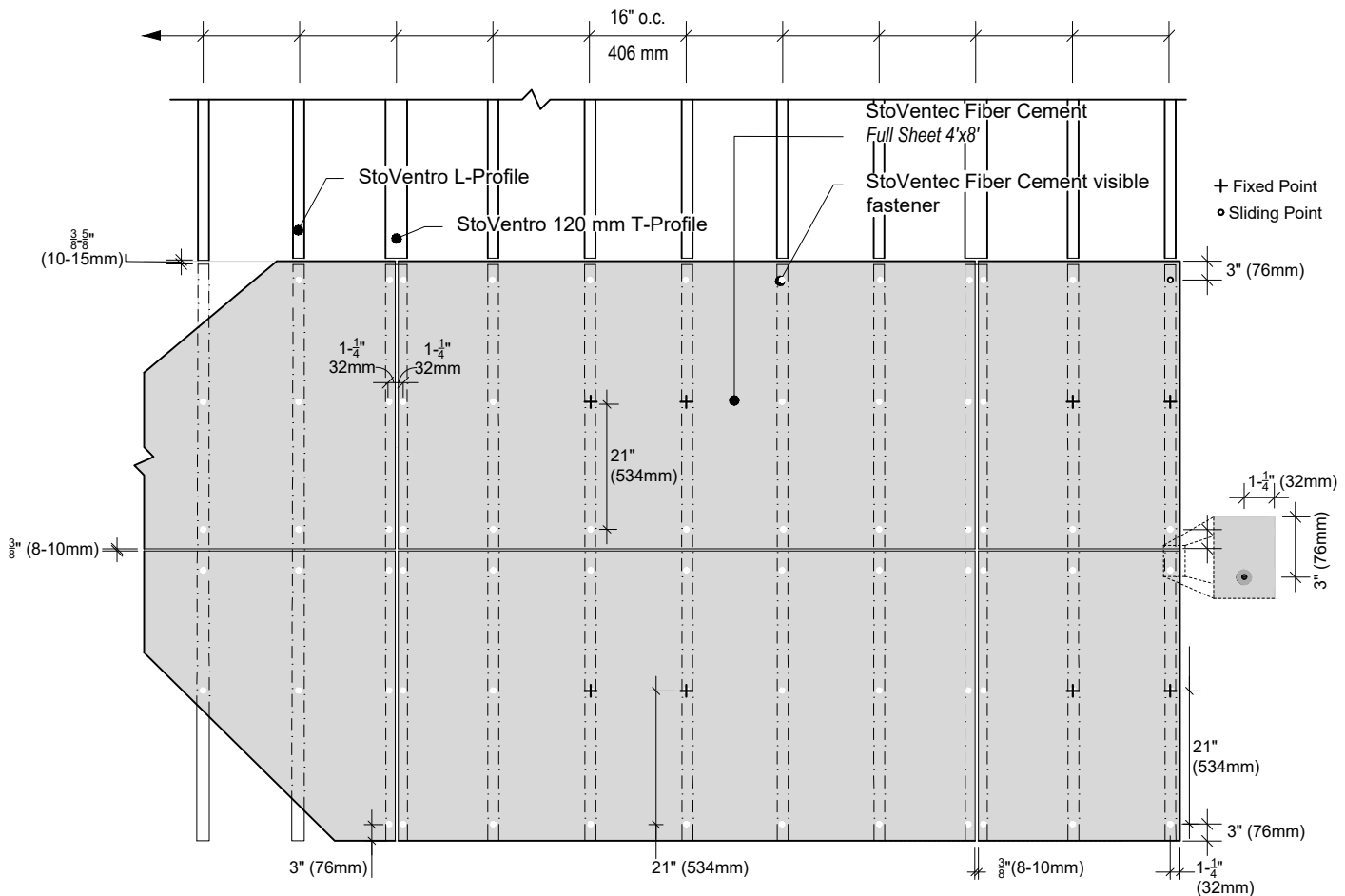
Date: August 2024

Detail No.: 90.Fc.003

Ultimate Wind Load Capacity, based on ASTM E330 wind load testing:
 -133 psf (6.38 kN/m²)

Layout Notes:

1. For Staggered/running-bond layouts, exchange L-Profiles for T-Profiles (120mm) as necessary to ensure all vertical panel joints meet on T-Profiles.
2. Horizontal joints between vertical profiles - leave 10-15mm gap between metal ends, and do NOT span the gap with fiber cement (horizontal joints for panels must also occur at/near rail joints - see Detail 90.Fc.35).
3. Joints between panels are spaced 8-10mm (~ $\frac{3}{8}$ ").
4. Panel Fixed Point fasteners must occur on separate rails near the panel centers. Refer to the *StoVentec Fiber Cement Design Guide* or full *Install Guide* for more information on fixed points and fastening sequences.



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StoVentec[®] Fiber Cement

Vertical Panel Example Layout

StoVentec F.C. (4 x 8 feet) Attachment (10 inch max. fastener spacing) to StoVentro[™] L and T-Profiles, spaced at 16" o.c.(406mm), Field and Edge fastening of StoVentec F.C.

Elevation View

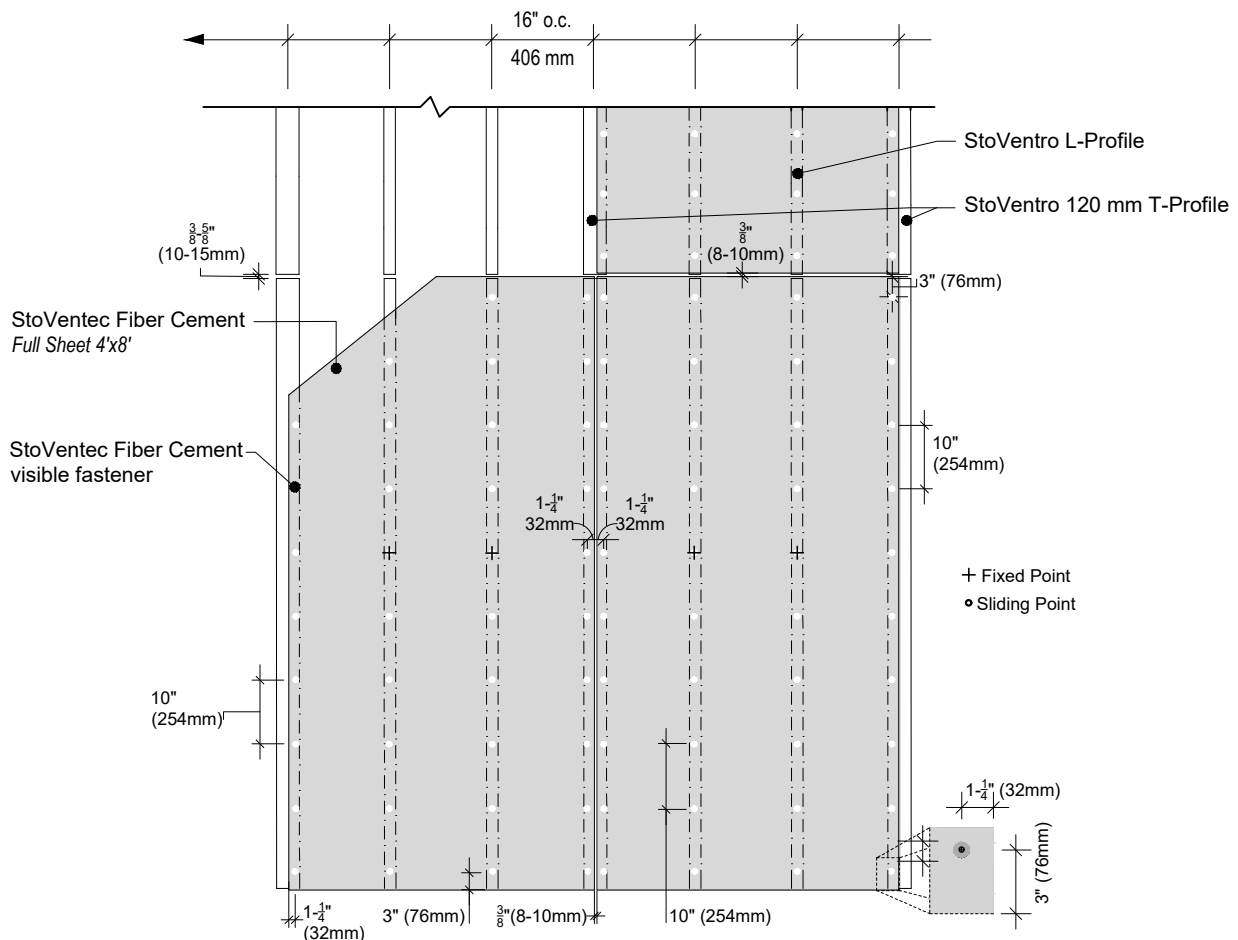
Date: August 2024

Detail No.: 90.Fc.004

Ultimate Wind Load Capacity, based on ASTM E330 wind load testing:
-190 psf (9.1 kN/m²)

Layout Notes:

1. Vertical joints and edges of panels must break on T-Profiles (120mm) except at terminations.
2. Horizontal joints between vertical StoVentro profiles - leave 10-15mm gap between metal ends, and do NOT span the gap with fiber cement (horizontal joints for panels must also occur at/near rail joints - see Detail 90.Fc.35).
3. Joints between panels are spaced 8-10mm ($\sim\frac{3}{8}$ ").
4. Panel Fixed Point fasteners must occur on separate rails near the panel centers. Refer to the *StoVentec Fiber Cement Design Guide* or full *Install Guide* for more information on fixed points and fastening sequences.

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StoVentec® Fiber Cement

Vertical Panel Example Layout

StoVentec F.C. (4 x 8 feet) Attachment (15 inch max. fastener spacing) to StoVentro™ L and T-Profiles, spaced at 16" o.c.(406mm), Field and Edge fastening of StoVentec F.C.

Elevation View

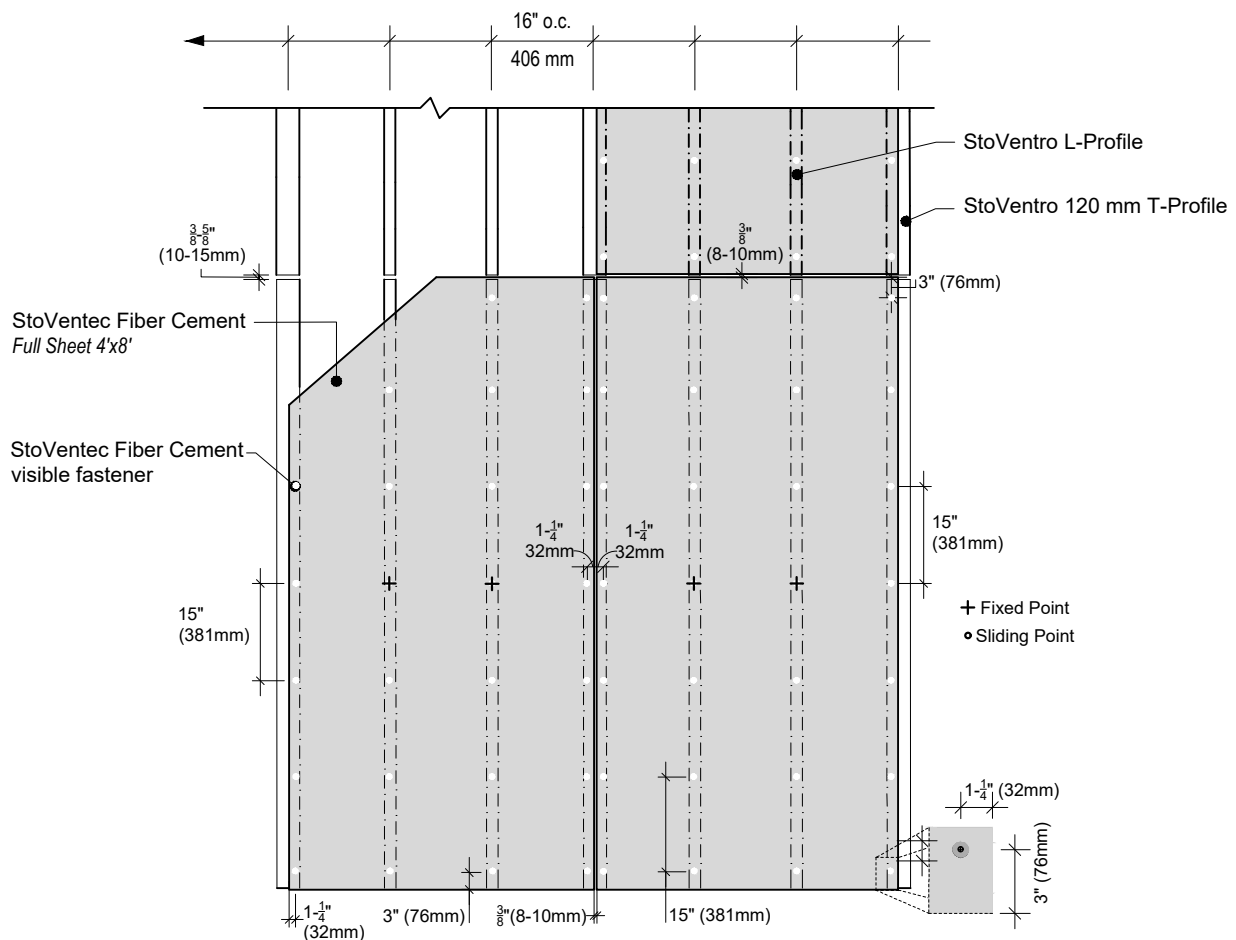
Date: August 2024

Detail No.: 90.Fc.005

Ultimate Wind Load Capacity, based on ASTM E330 wind load testing:
-161 psf (7.71 kN/m²)

Layout Notes:

1. Vertical joints and edges of panels must break on T-Profiles (120mm) except at terminations.
2. Horizontal joints between vertical profiles - leave 10-15mm gap between metal ends, and do NOT span the gap with fiber cement (horizontal joints for panels must also occur at/near rail joints - see Detail 90.Fc.35).
3. Joints between panels are spaced 8-10mm (~ $\frac{3}{8}$ ").
4. Panel Fixed Point fasteners must occur on separate rails near the panel centers. Refer to the *StoVentec Fiber Cement Design Guide* or full *Install Guide* for more information on fixed points and fastening sequences.

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StoVentec® Fiber Cement

Vertical Panel Example Layout

StoVentec F.C. (4 x 8 feet) Attachment (22-1/2 inch max. fastener spacing) to StoVentec™ L and T-Profiles, spaced at 16" o.c.(406mm), Field and Edge fastening of StoVentec F.C.

Elevation View

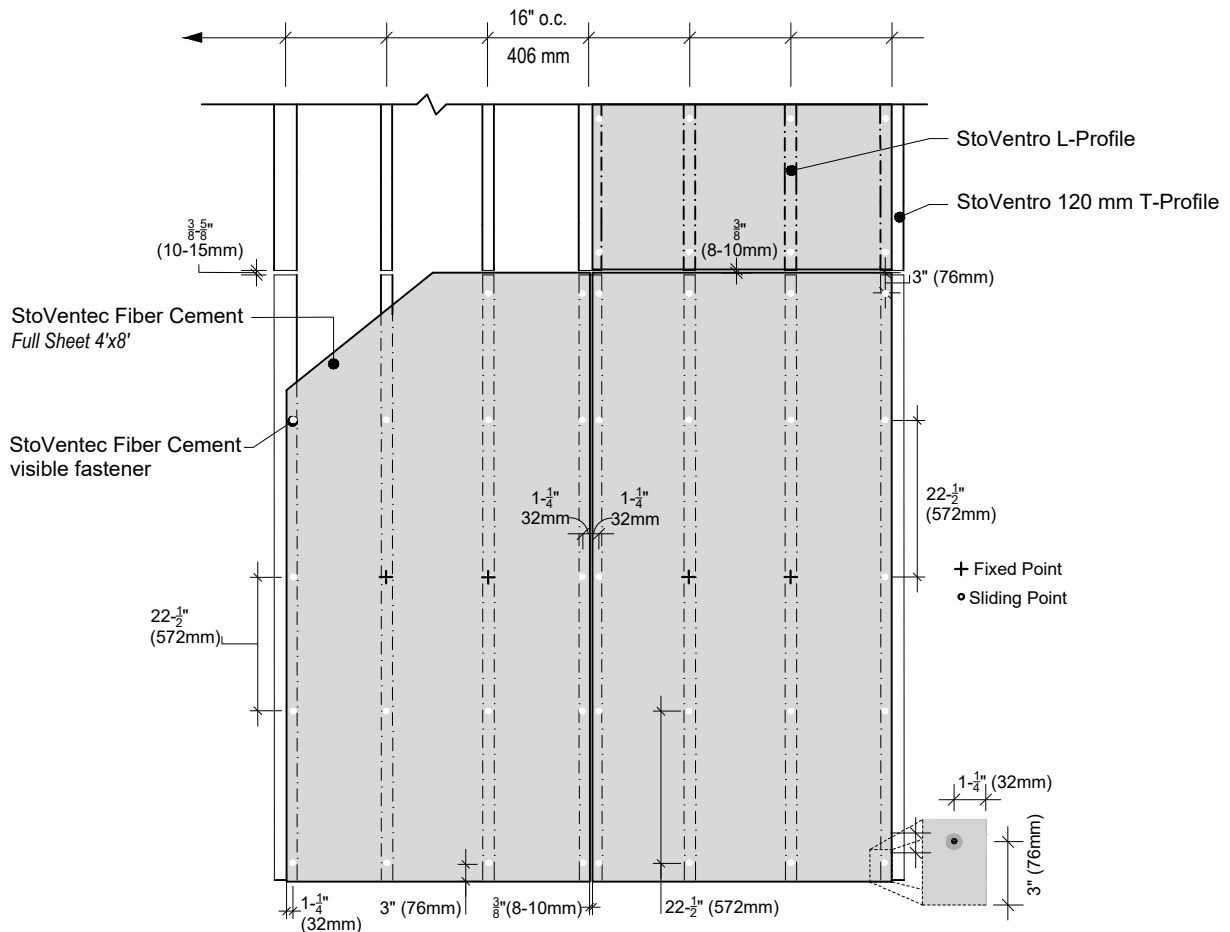
Date: August 2024

Detail No.: 90.Fc.006

Ultimate Wind Load Capacity, based on ASTM E330 wind load testing:
 -133 psf (6.38 kN/m²)

Layout Notes:

1. Vertical joints and edges of panels must break on T-Profiles (120mm) except at terminations.
2. Horizontal joints between vertical profiles - leave 10-15mm gap with fiber cement (horizontal joints for panels must also occur at/near rail joints - see Detail 90.Fc.35).
3. Joints between panels are spaced 8-10mm (~ $\frac{3}{8}$ ").
4. Panel Fixed Point fasteners must occur on separate rails near the panel centers. Refer to the *StoVentec Fiber Cement Design Guide* or full *Install Guide* for more information on fixed points and fastening sequences.



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StoVentec® Fiber Cement

Vertical Panel Example Layout - Horizontal Profiles

StoVentec F.C. (4 x 8 feet) Attachment (10-1/2 inch max. fastener spacing horizontally) to horizontal profiles, spaced at 22-1/2 o.c.(572mm), Field and Edge fastening of StoVentec F.C. Elevation View

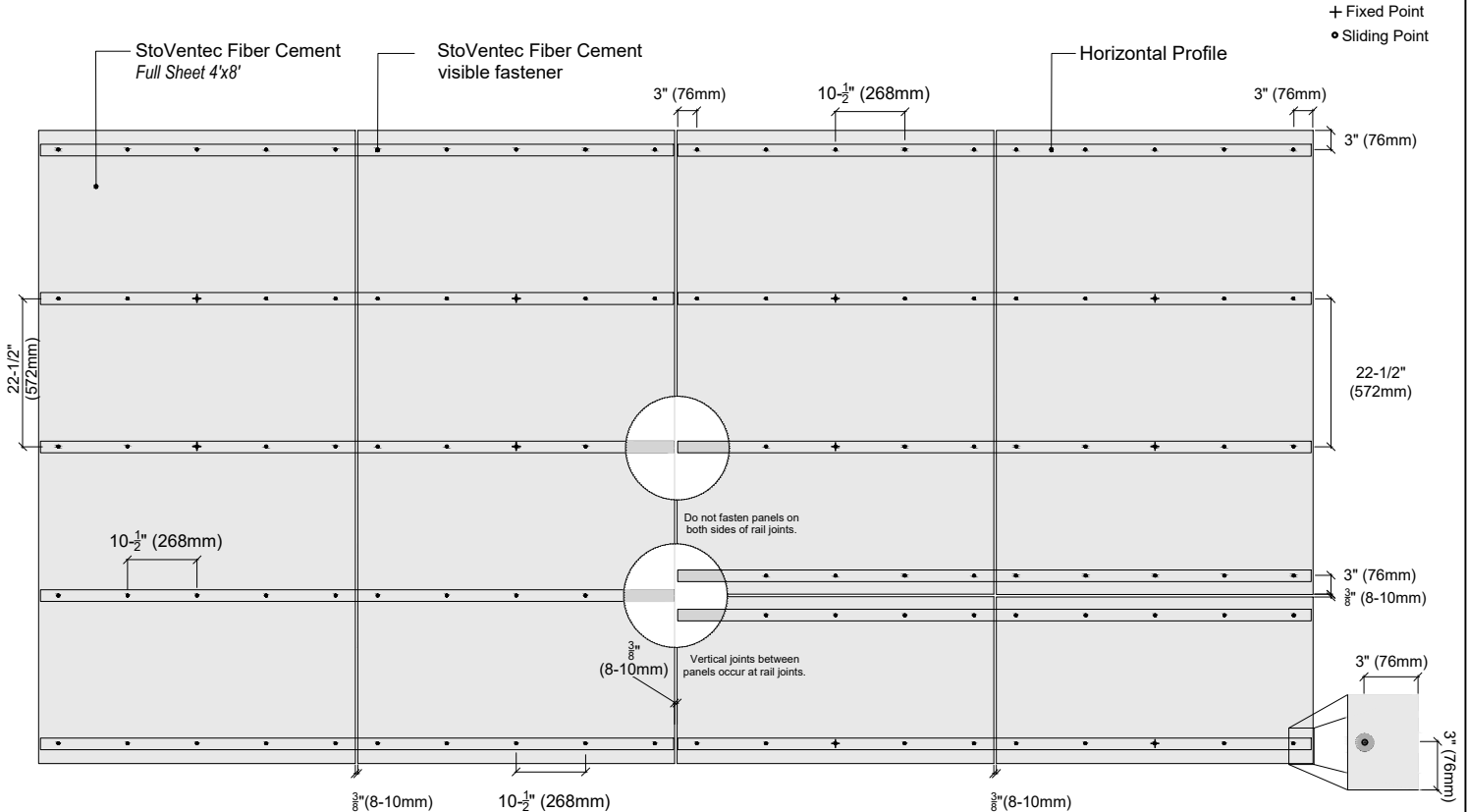
Date: August 2024

Detail No.: 90.Fc.007

Ultimate Wind Load Capacity, based on ASTM E330 wind load testing:
 -196 psf (9.38 kN/m²)

Layout Notes:

1. Joints between panels are spaced 8-10mm (~ $\frac{3}{8}$ ").
2. Vertical joints between horizontal profiles - leave 10-15mm gap between metal ends, and do NOT span the gap with fiber cement (vertical joints for panels must also occur at/near rail joints).
3. Horizontal joints between panels are supported by two horizontal rails in order to accommodate the minimum fastener distance from panel edge of 76mm (3 in.).
4. Panel Fixed Point fasteners must occur on separate rails near the panel centers. Refer to the *StoVentec Fiber Cement Design Guide* or full *Install Guide* for more information on fixed points and fastening sequences.



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StoVentec® Fiber Cement

Vertical Panel Example Layout - Horizontal Profiles

StoVentec F.C. (4 x 8 feet) Attachment (21 inch max. fastener spacing horizontally) to horizontal profiles, spaced at 22-1/2 o.c.(572mm), Field and Edge fastening of StoVentec F.C.

Elevation View

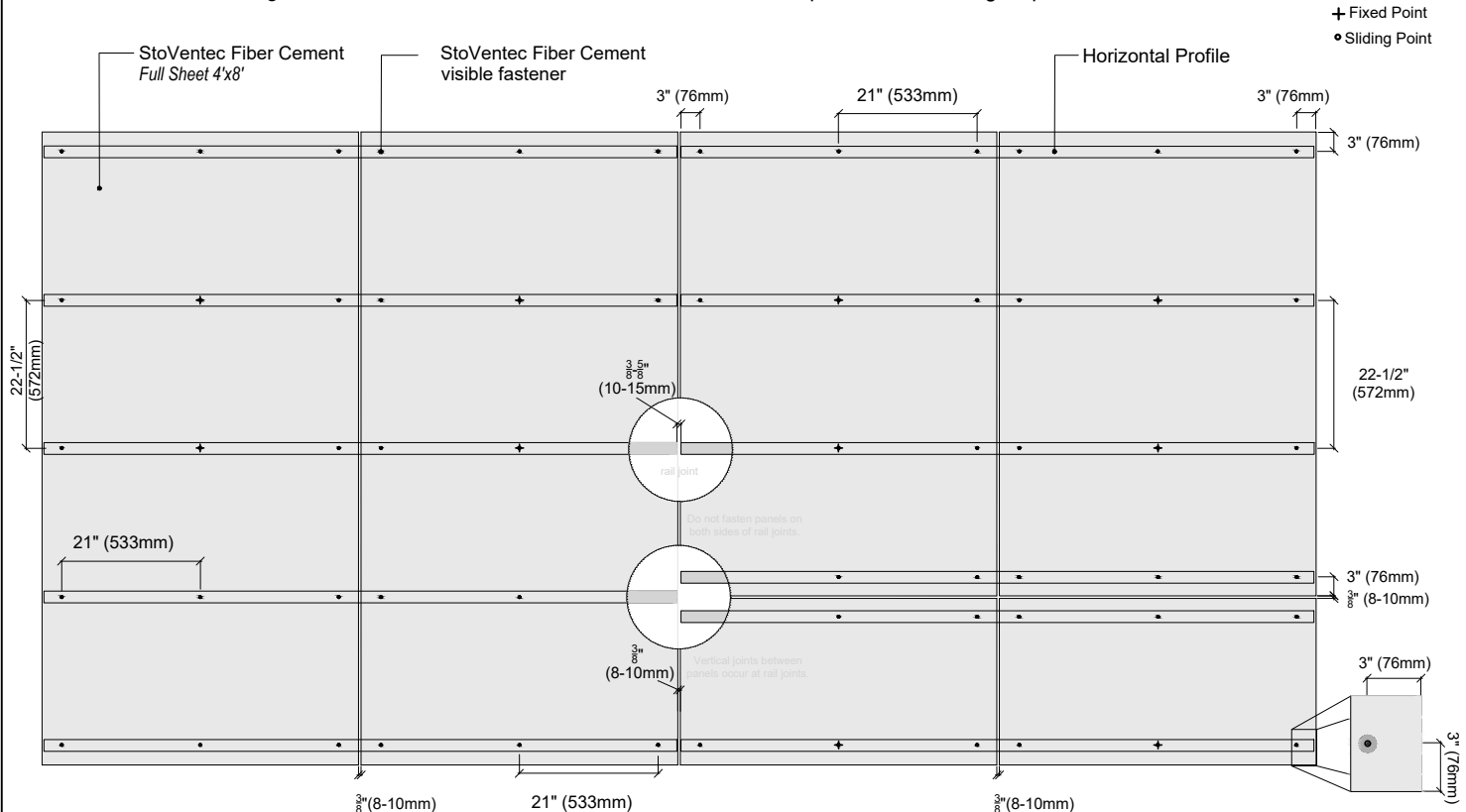
Date: August 2024

Detail No.: 90.Fc.009

Ultimate Wind Load Capacity, based on ASTM E330 wind load testing:
-95 psf (4.55 kN/m²)

Layout Notes:

1. Joints between panels are spaced 8-10mm (~ $\frac{3}{8}$ ").
2. Vertical joints between horizontal profiles - leave 10-15mm gap between metal ends, and do NOT span the gap with fiber cement (vertical joints for panels must also occur at/near rail joints).
3. Horizontal joints between panels are supported by two horizontal rails in order to accommodate the minimum fastener distance from panel edge of 76mm (3 in.).
4. Panel Fixed Point fasteners must occur on separate rails near the panel centers. Refer to the *StoVentec Fiber Cement Design Guide* or full *Install Guide* for more information on fixed points and fastening sequences.

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StoVentec® Fiber Cement

Hidden Fastening Example Layout - *Full System Engineering and Panel Fabrication Required*
 StoVentec F.C. (10mm x 4 x 8 feet) Hidden Attachment (16 inch max. fastener spacing) to
 StoVentro™ Carrier Profile Hangers and Agraffes (22-1/2" apart vertically)
 Elevation View

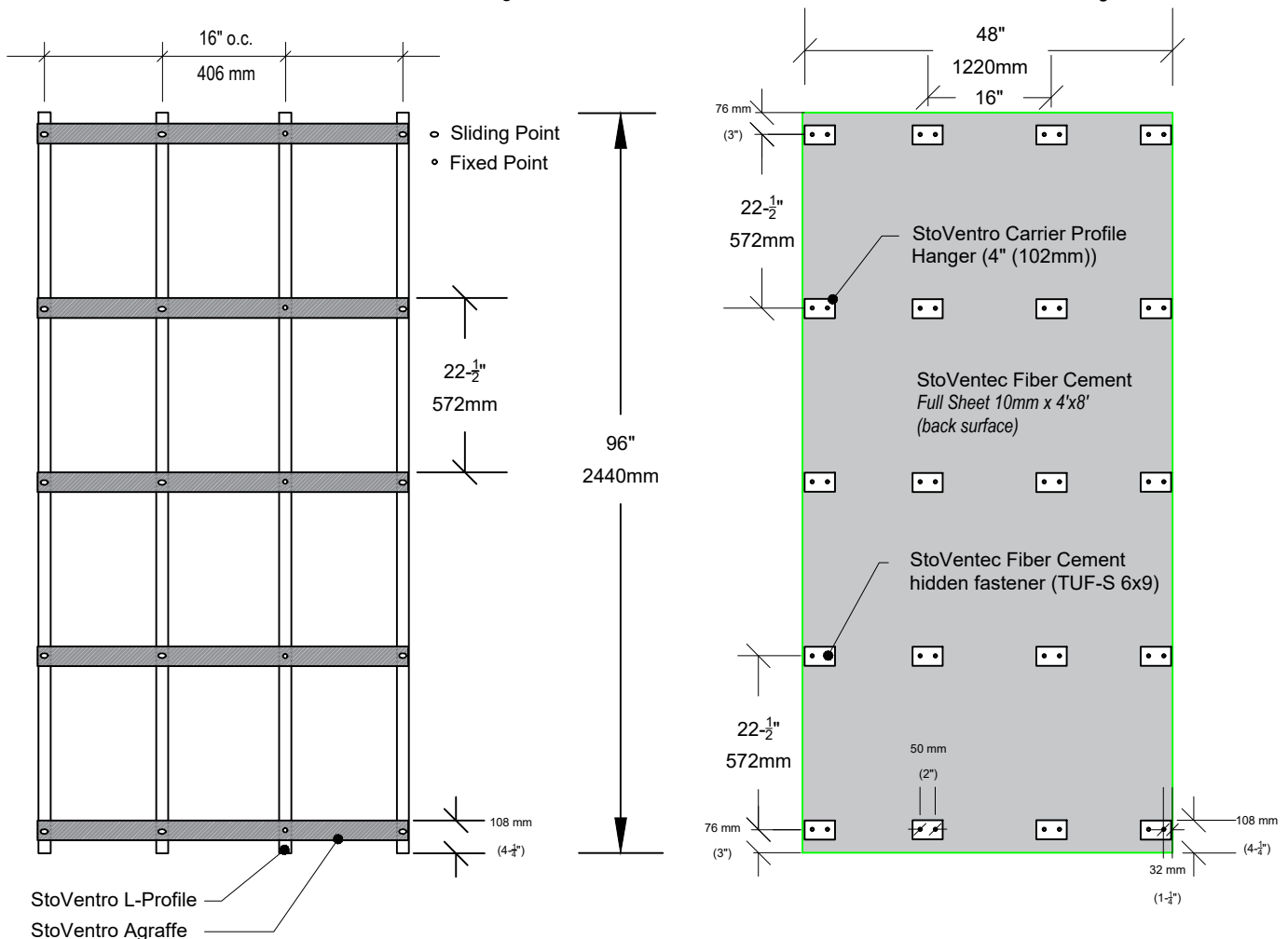
Date: August 2024

Detail No.: 90.Fc.010

Ultimate Wind Load Capacity, based on ASTM E330 wind load testing: -140 psf (6.7 kN/m²)

Layout Notes:

- 10mm thick StoVentec Fiber Cement panels required for hidden fastening installation.
- Horizontal and vertical joints between Ventro profiles - leave 10-15mm gap between metal ends.
- StoVentro Agraffe Rails must be spaced to match Carrier Profile Hangers affixed to the back surface of StoVentec Fiber Cement panels with SFS TUF-S 6x9 fasteners.
- Joints between panels are spaced 8-10mm (~ $\frac{3}{8}$ ").
- Refer to the *StoVentec Fiber Cement Design Guide* or full *Install Guide* for more information on hidden fastening.



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StoVentec Fiber Cement

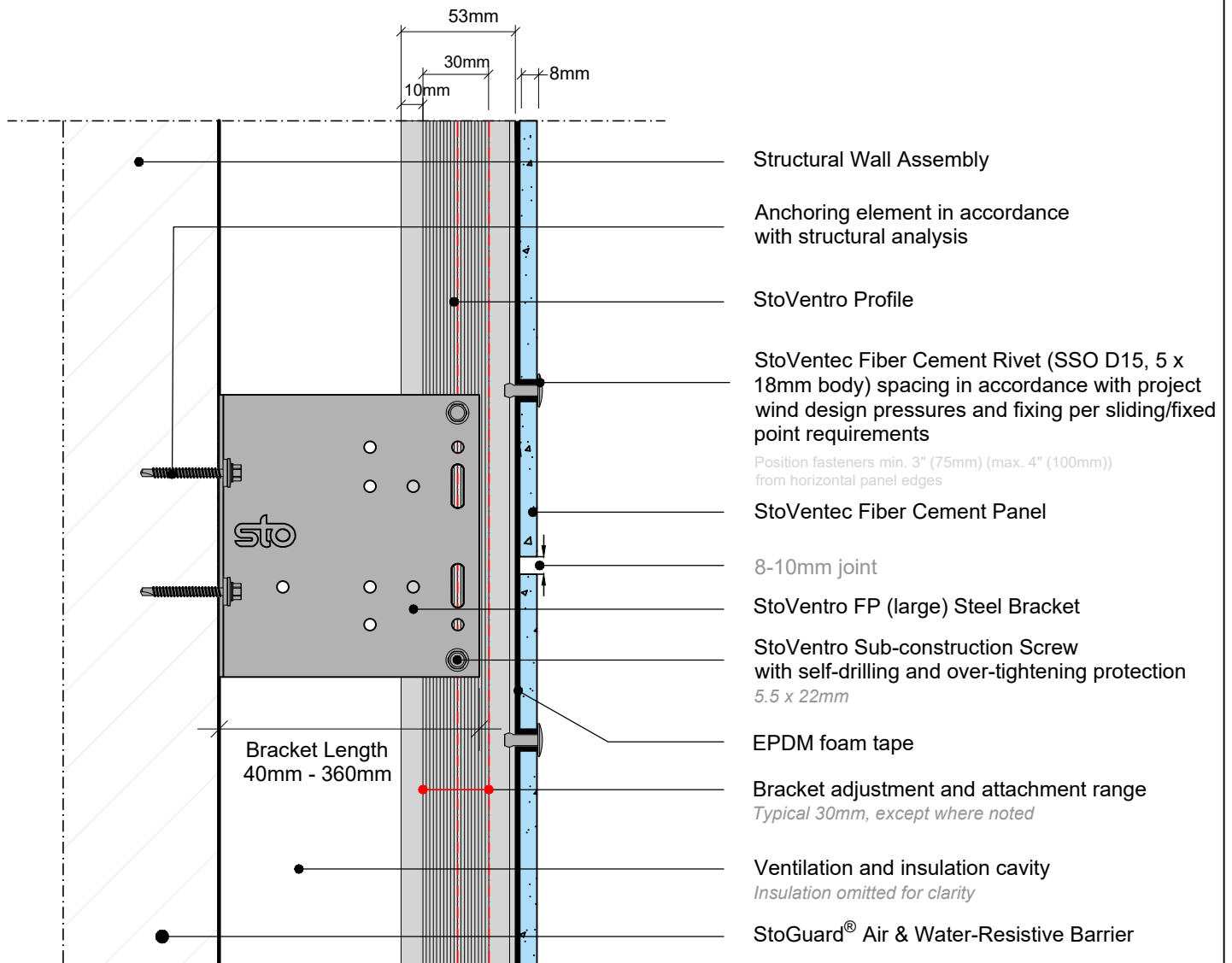
System buildup with StoVentro Sub-construction

Steel Brackets

Section View

Date: November 2024

Detail No.: 90.Fc.20



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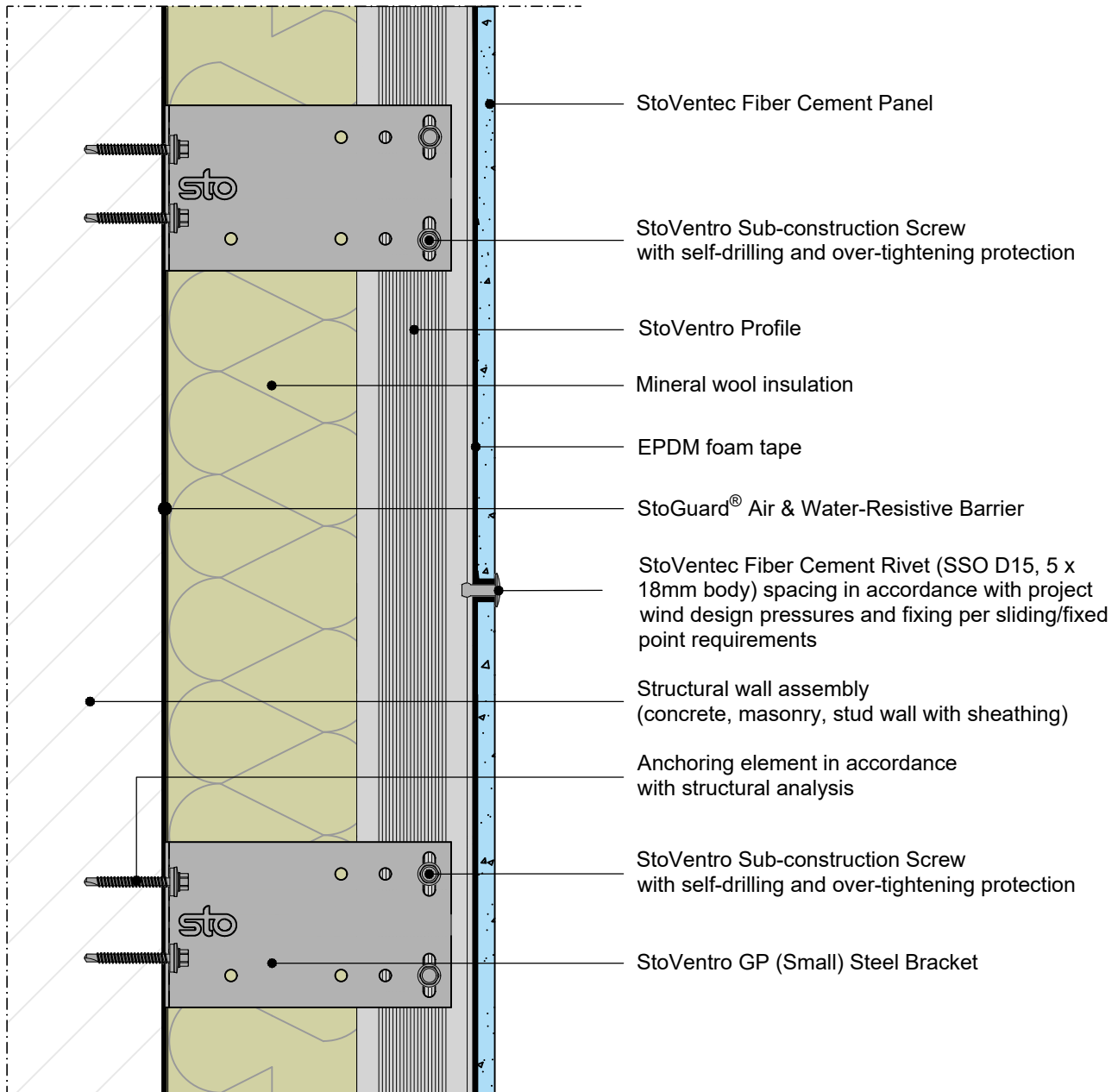
StoVentec Fiber Cement panel installation

StoVentro™ Sub-Construction System build up - visible F.C. fixing

Date: November 2024

Section View

Detail No.: 90.Fc.022



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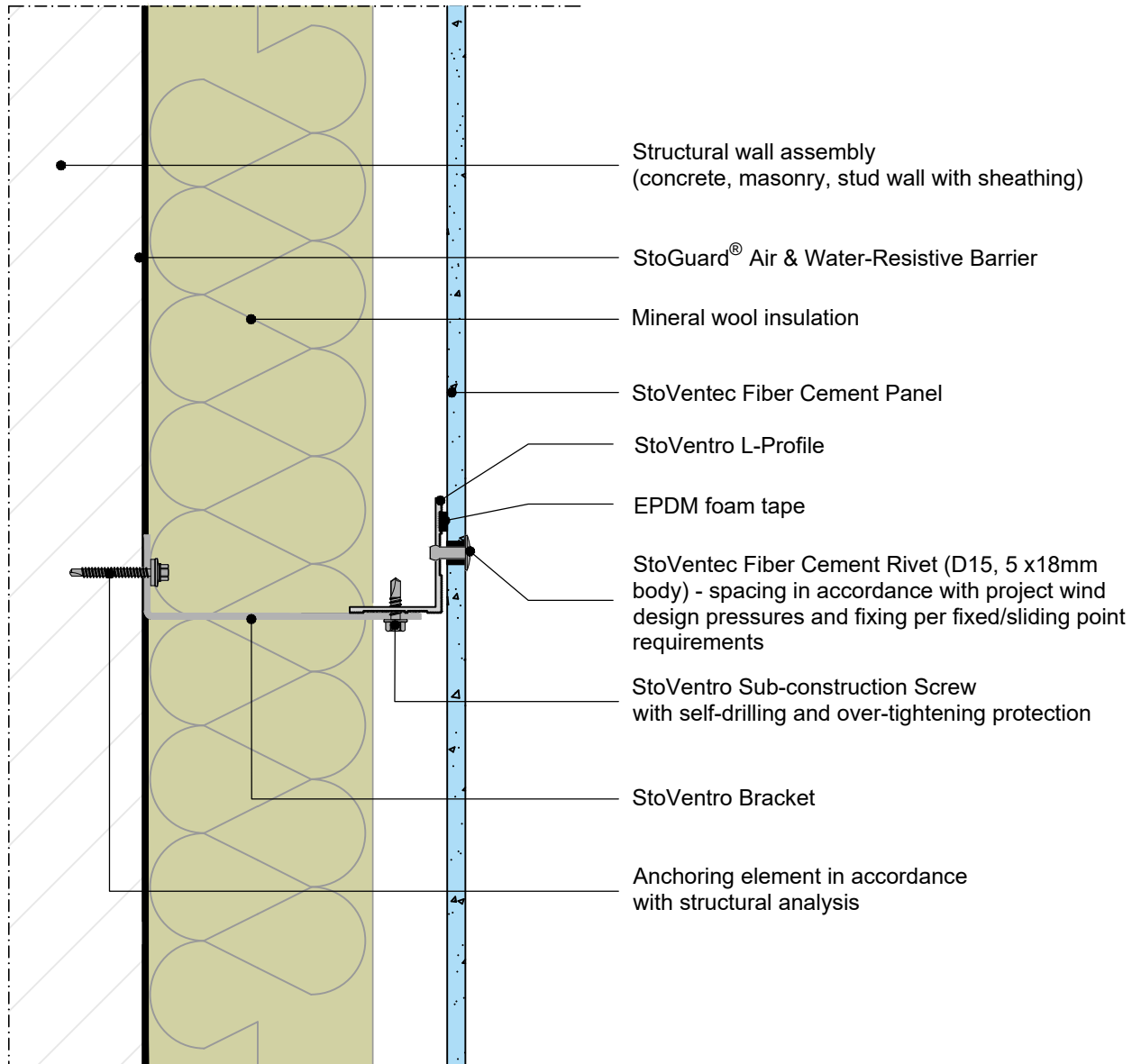
StoVentec Fiber Cement Panel Installation

StoVentro™ Sub-Construction System - L-Profile in Panel Field

Date: November 2024

Plan View

Detail No.: 90.Sc.031



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StoVentec Fiber Cement Panel Installation

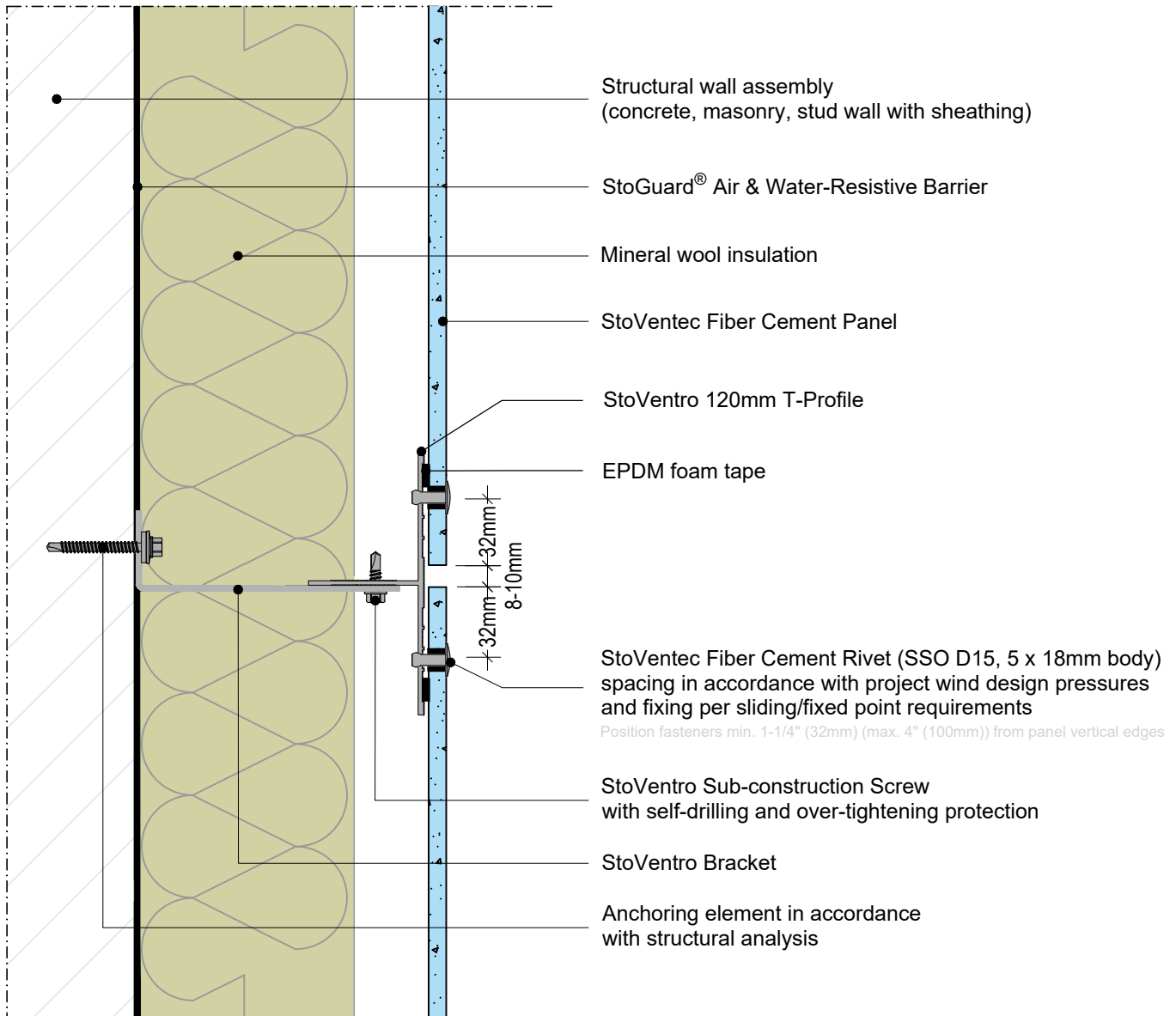
Vertical joint at T-Profile

StoVentro™ Sub-Construction System

Plan View

Date: November 2024

Detail No.: 90.Fc.032



ATTENTION

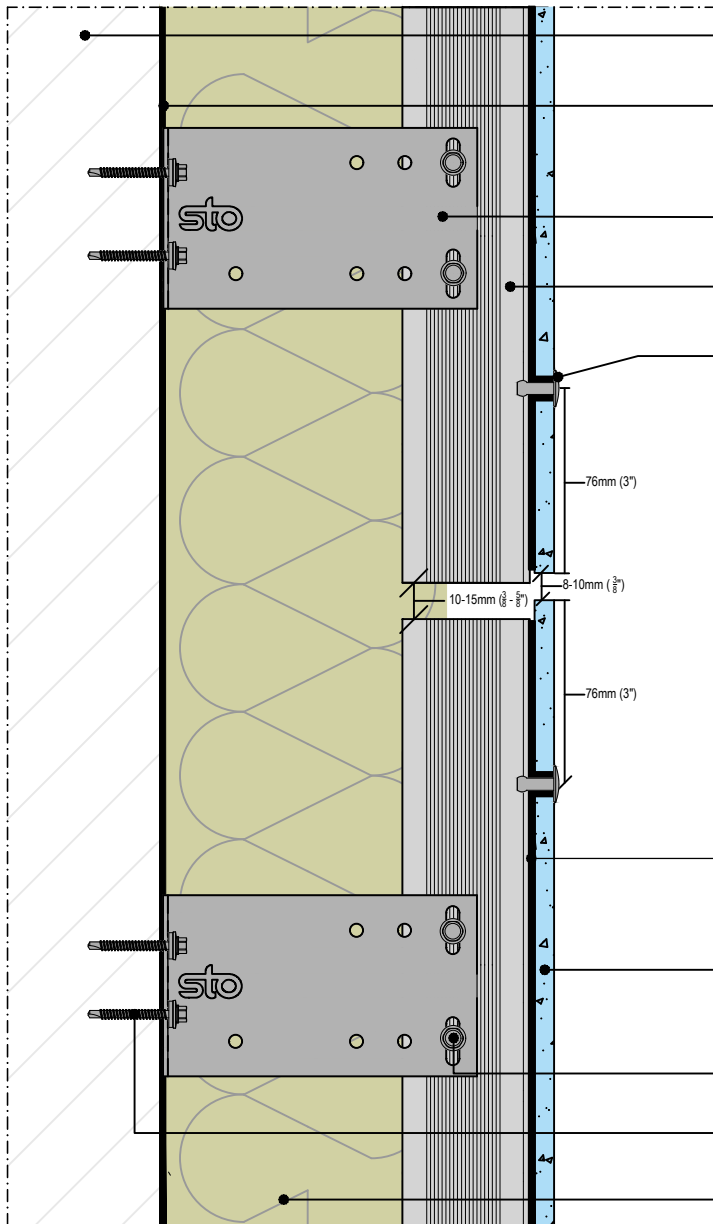
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StoVentec™ Fiber Cement
 StoVentro Sub-construction
 Horizontal Joint at Vertical Profile Joint
 Section View

Date: November 2024

Detail No.: 90.Fc.035



Structural wall assembly
 (concrete, masonry, stud wall with sheathing)

StoGuard® Air & Water-Resistive Barrier

StoVentro Bracket

StoVentro Profile

StoVentec Fiber Cement Rivet (D15, 5 x 18mm body)
 spacing in accordance with project wind design
 pressures and fixing per sliding/fixed joint
 requirements.

Position fasteners min. 3 inches (76mm) (max. 4 inches (100mm)) away from panel horizontal
 edges (those running perpendicular to StoVentro Profiles).

76mm (3")

10-15mm (3/8 - 5/8")

8-10mm (5/16 - 3/8")

76mm (3")

Note: Never fasten the same panel above
 and below a Profile joint. A horizontal
 panel joint must occur at/near a profile
 joint.

EPDM foam tape

StoVentec Fiber Cement Panel

StoVentro Sub-construction Screw
 with self-drilling and over-tightening protection

Anchoring element in accordance
 with structural analysis

Mineral wool insulation

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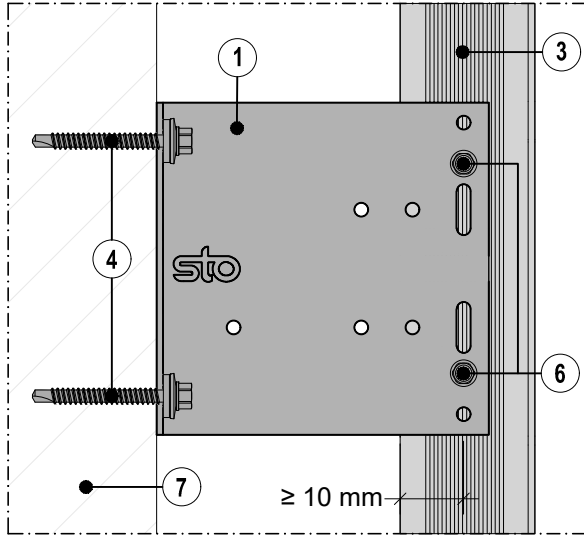
StoVentro™ Sub-Construction System

StoVentro™ Steel Brackets - Large (FP) and Small (GP), with attachment locations for fixed points and sliding points

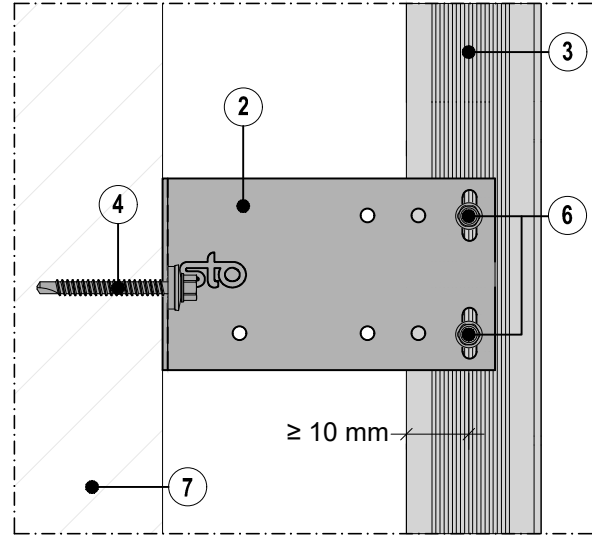
Section View

Date: January 2024

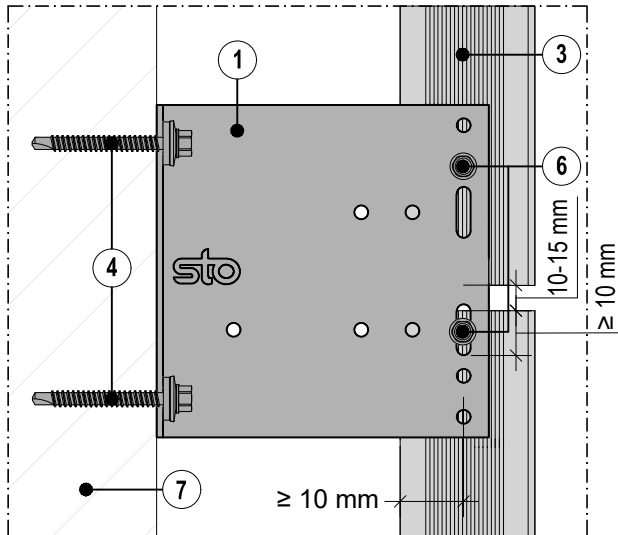
Detail No.: 90.Sc.045



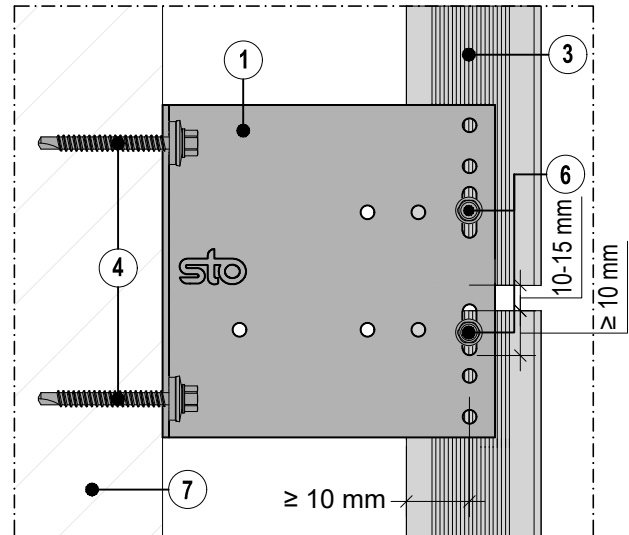
StoVentro™ Bracket - Large (FP) | Fixed point fastening



StoVentro™ Bracket - Small (GP) | Sliding point fastening



StoVentro™ Bracket - Large (FP) | Fixed & sliding point fastening



StoVentro™ Bracket - Large (FP) | Sliding point fastening

① StoVentro™ Steel Bracket Large (FP)

③ StoVentro™ T-Profile

⑥ StoVentro™ Sub-construction Screw with self-drilling and over-tightening protection (5.5 x 22 mm)

② StoVentro™ Steel Bracket Small (GP)

④ Anchoring element in accordance with structural analysis

⑦ Structural wall assembly (concrete, masonry, stud wall with sheathing)

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StoVentro™ Sub-Construction System

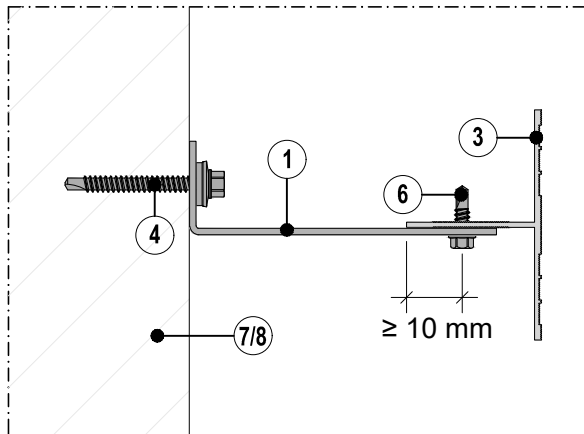
StoVentro™ Steel Brackets - Large (FP) and Small (GP) attachment locations

Elevation & Plan Views

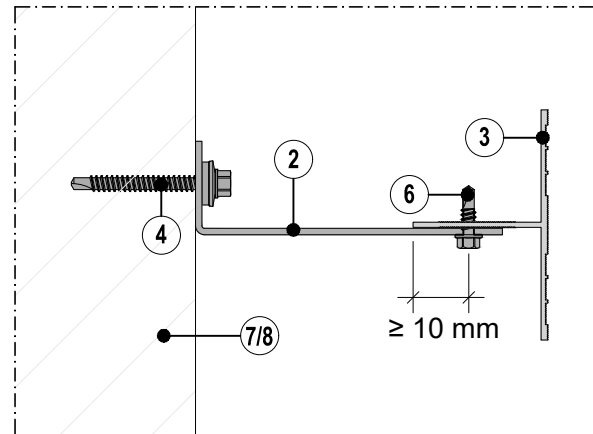
Date: January 2024

Detail No.: 90.Sc.046

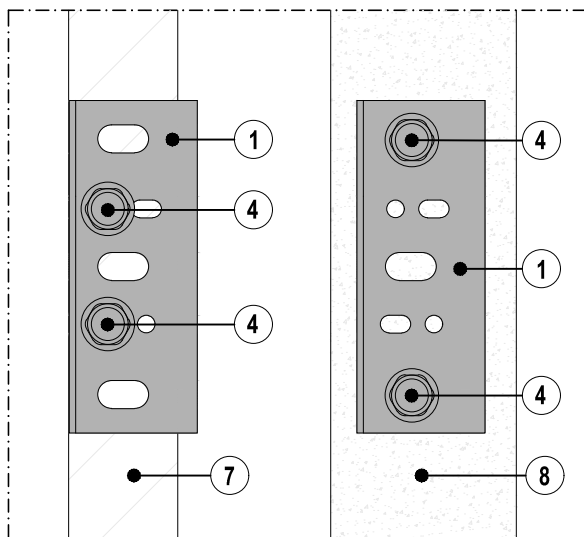
Note: All values are subject to structural analysis.



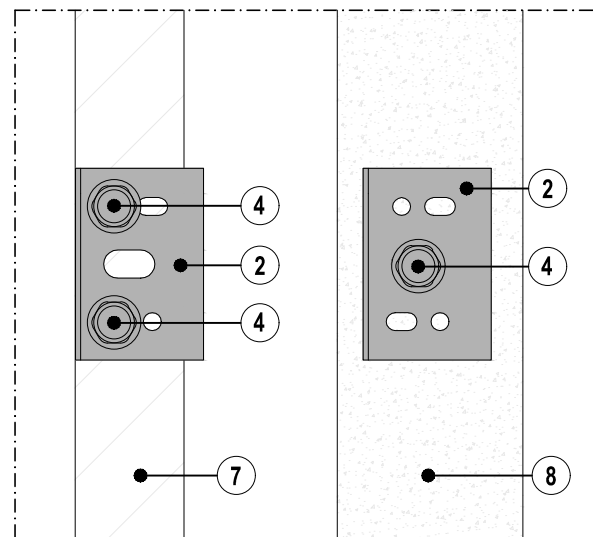
StoVentro™ Bracket - Large (FP)
Plan View Attachment



StoVentro™ Bracket - Small (GP)
Plan View Attachment



StoVentro™ Bracket - Large (FP)
Elevation View Attachment



StoVentro™ Bracket - Small (GP)
Elevation View Attachment

- | | | |
|---------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| ① StoVentro™ Steel Bracket Large (FP) | ③ StoVentro™ T-Profile | ⑥ StoVentro™ Sub-construction Screw with self-drilling and over-tightening protection (5.5 x 22 mm) |
| ② StoVentro™ Steel Bracket Small (GP) | ④ Anchoring element in accordance with structural analysis | ⑦ Structural wall assembly (stud wall with sheathing) |
| | | ⑧ Structural wall assembly (concrete and masonry) |

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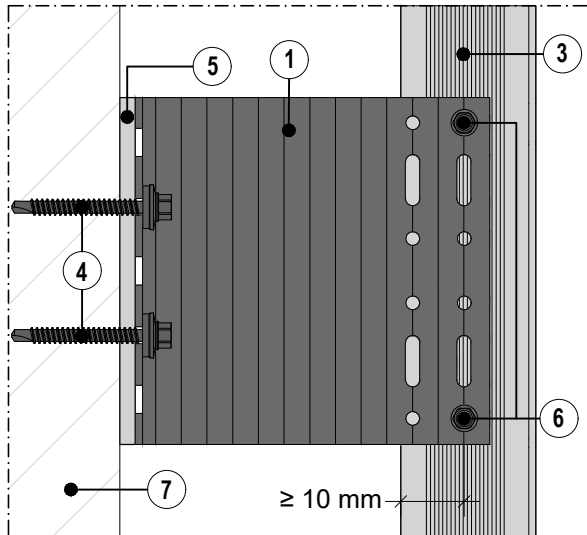
StoVentro™ Sub-Construction System

StoVentro™ Aluminum Brackets - Large (FP) and Small (GP), with attachment locations for fixed points and sliding points

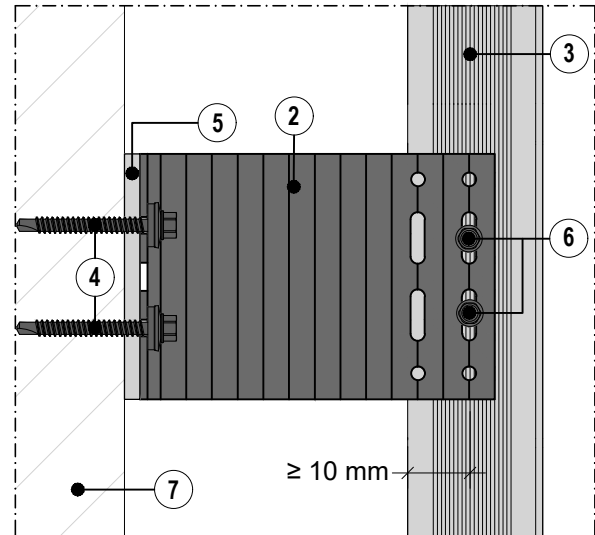
Section View

Date: May 2021

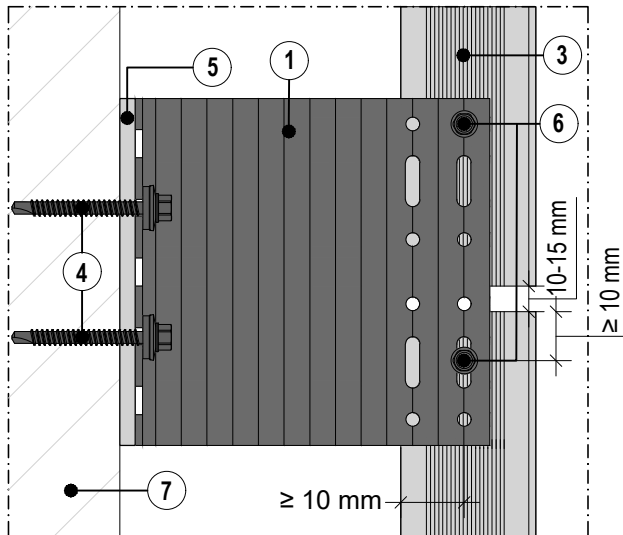
Detail No.: 90.Sc.047



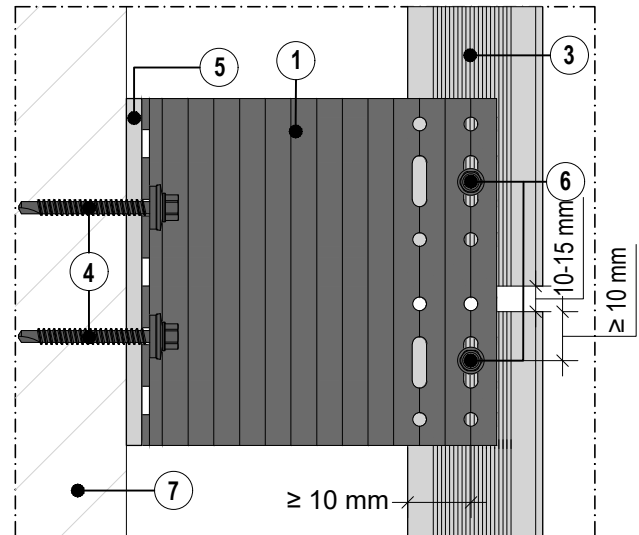
StoVentro™ ALUM Bracket - Large (FP) | Fixed point fastening



StoVentro™ ALUM Bracket - Small (GP) | Sliding point fastening



StoVentro™ ALUM Bracket - Large (FP) | Fixed & sliding point fastening



StoVentro™ ALUM Bracket - Large (FP) | Sliding point fastening

① StoVentro™ ALUM Bracket Large (FP)

② StoVentro™ ALUM Bracket Small (GP)

③ StoVentro™ T-Profile

④ Anchoring element in accordance with structural analysis

⑤ StoVentro™ Thermal Blocking Element

⑥ StoVentro™ Sub-construction Screw with self-drilling and over-tightening protection (5.5 x 22 mm)

⑦ Structural wall assembly (concrete, masonry, stud wall with sheathing)

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StoVentro™ Sub-Construction System

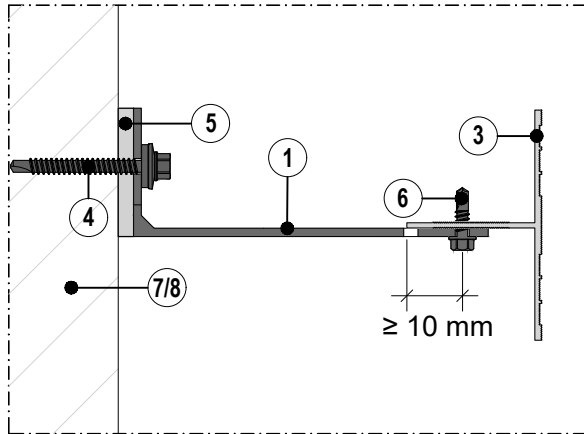
StoVentro™ Aluminum Brackets - Large (FP) and Small (GP) attachment locations

Elevation & Plan Views

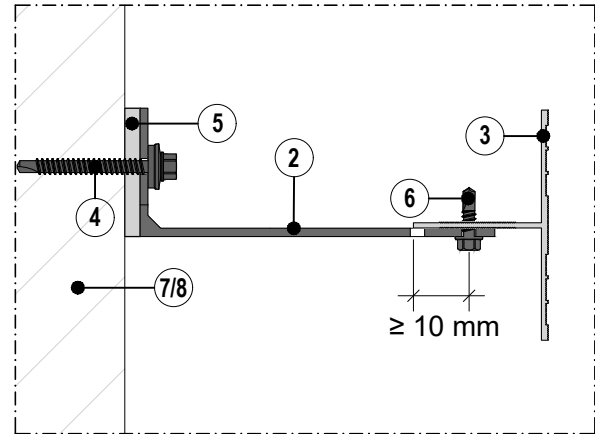
Date: May 2021

Detail No.: 90.Sc.048

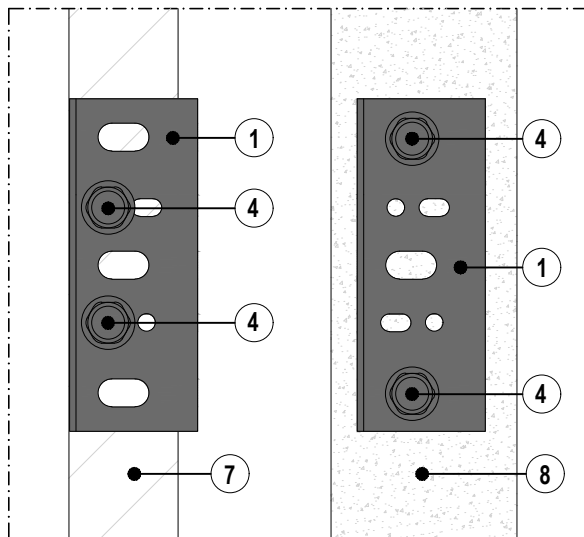
Note: All values are subject to structural analysis.



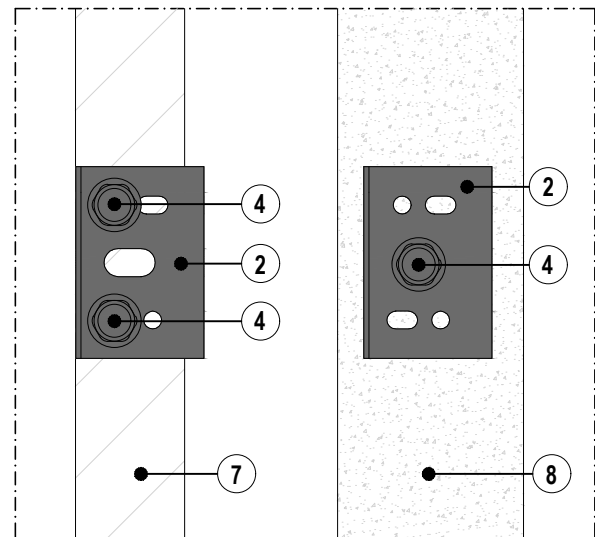
StoVentro™ ALUM Bracket - Large (FP)
Plan View Attachment



StoVentro™ ALUM Bracket - Small (GP)
Plan View Attachment



StoVentro™ ALUM Bracket - Large (FP)
Elevation View Attachment



StoVentro™ ALUM Bracket - Small (GP)
Elevation View Attachment

- | | | |
|---------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| ① StoVentro™ ALUM Bracket Large (FP) | ③ StoVentro™ T-Profile | ⑥ StoVentro™ Sub-construction Screw with self-drilling and over-tightening protection (5.5 x 22 mm) |
| ② StoVentro™ ALUM Bracket Small (GP) | ④ Anchoring element in accordance with structural analysis | ⑦ Structural wall assembly (stud wall with sheathing) |
| ⑤ StoVentro™ Thermal Blocking Element | ⑧ Structural wall assembly (concrete and masonry) | |

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StoVentec® Fiber Cement

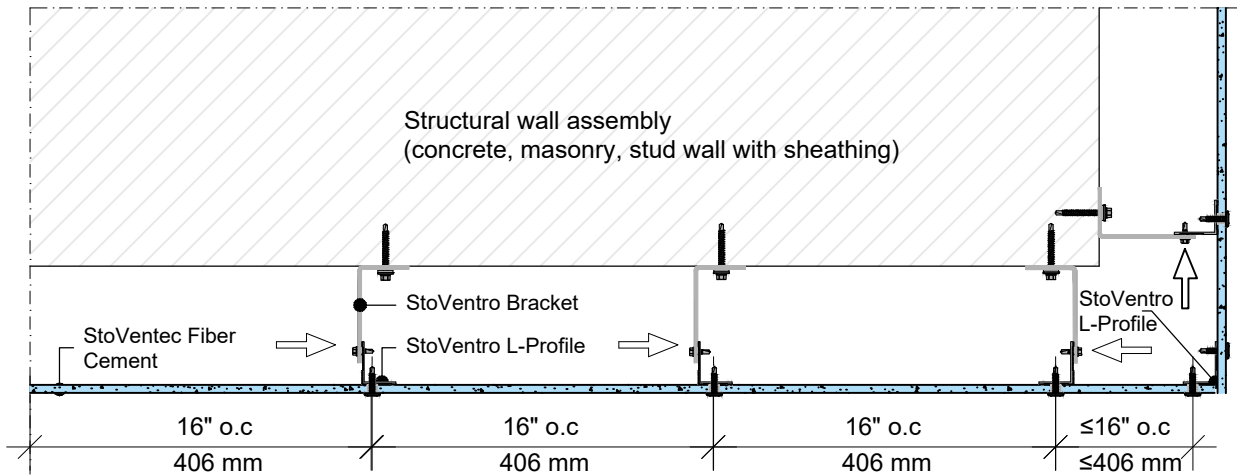
StoVentro™ Sub-construction Installation at outside corners, jambs, returning transitions, and transitions to alternative cladding

Plan View

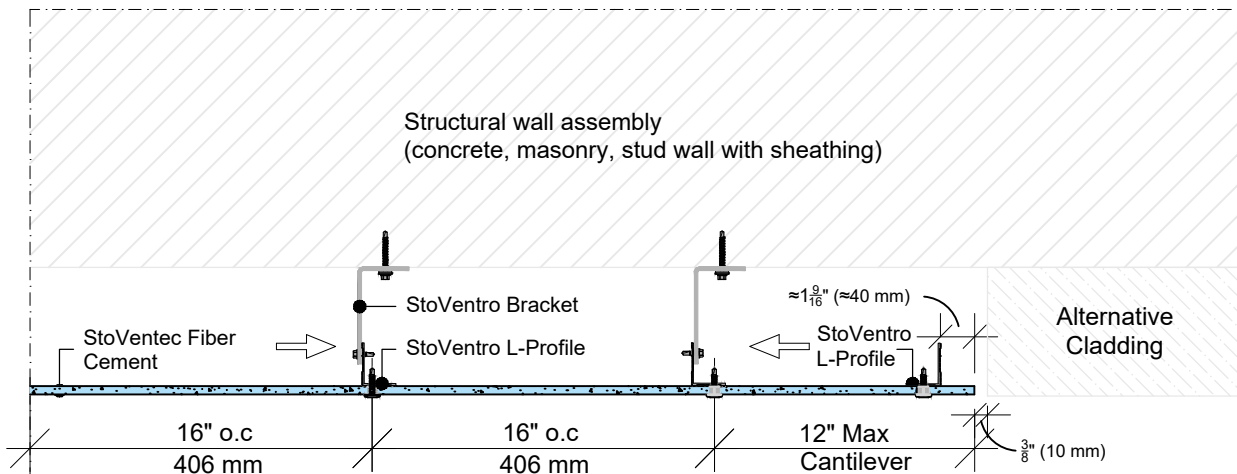
Date: August 2024

Detail No.: 90.Fc.049

⇒ Recommended fastening direction for connection of the StoVentro™ Wall Brackets to the vertical StoVentro™ Profile and alignment of the wall brackets



1 StoVentro™ Wall Brackets and Profile alignment and requirements at outside corners, jambs and returning transitions.



2 StoVentro™ Wall Brackets, Profile alignment and requirements at returning transitions and transitions to alternative cladding

Cantilever	L-Profile Required
6 in (154mm)	No
8 in (200mm)	Yes
12 in (300mm)	Yes

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StoVentec Fiber Cement panel installation

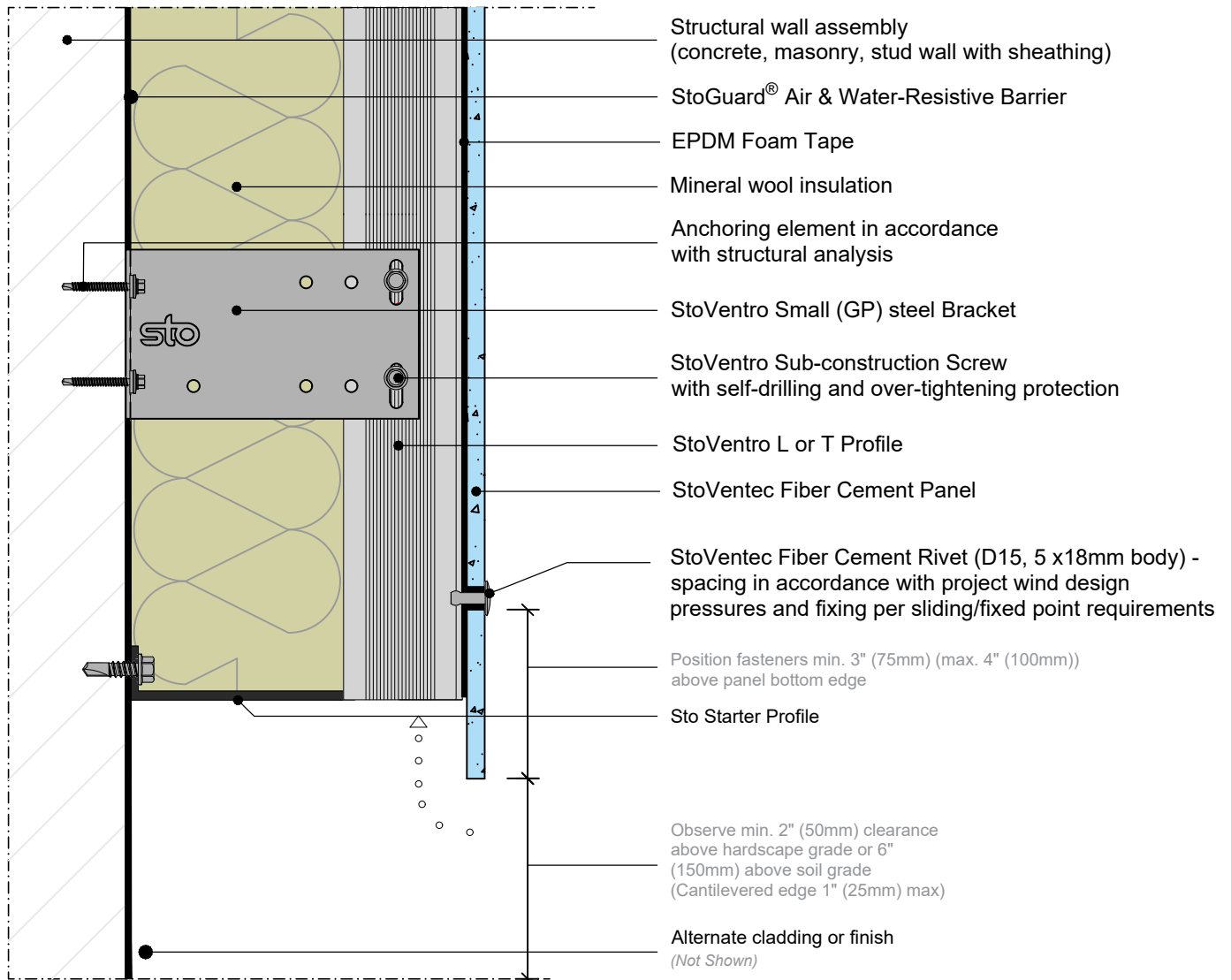
StoVentro™ Sub-Construction System

Installation at grade - visible f.c. fixing

Section View

Date: November 2024

Detail No.: 90.Fc.055



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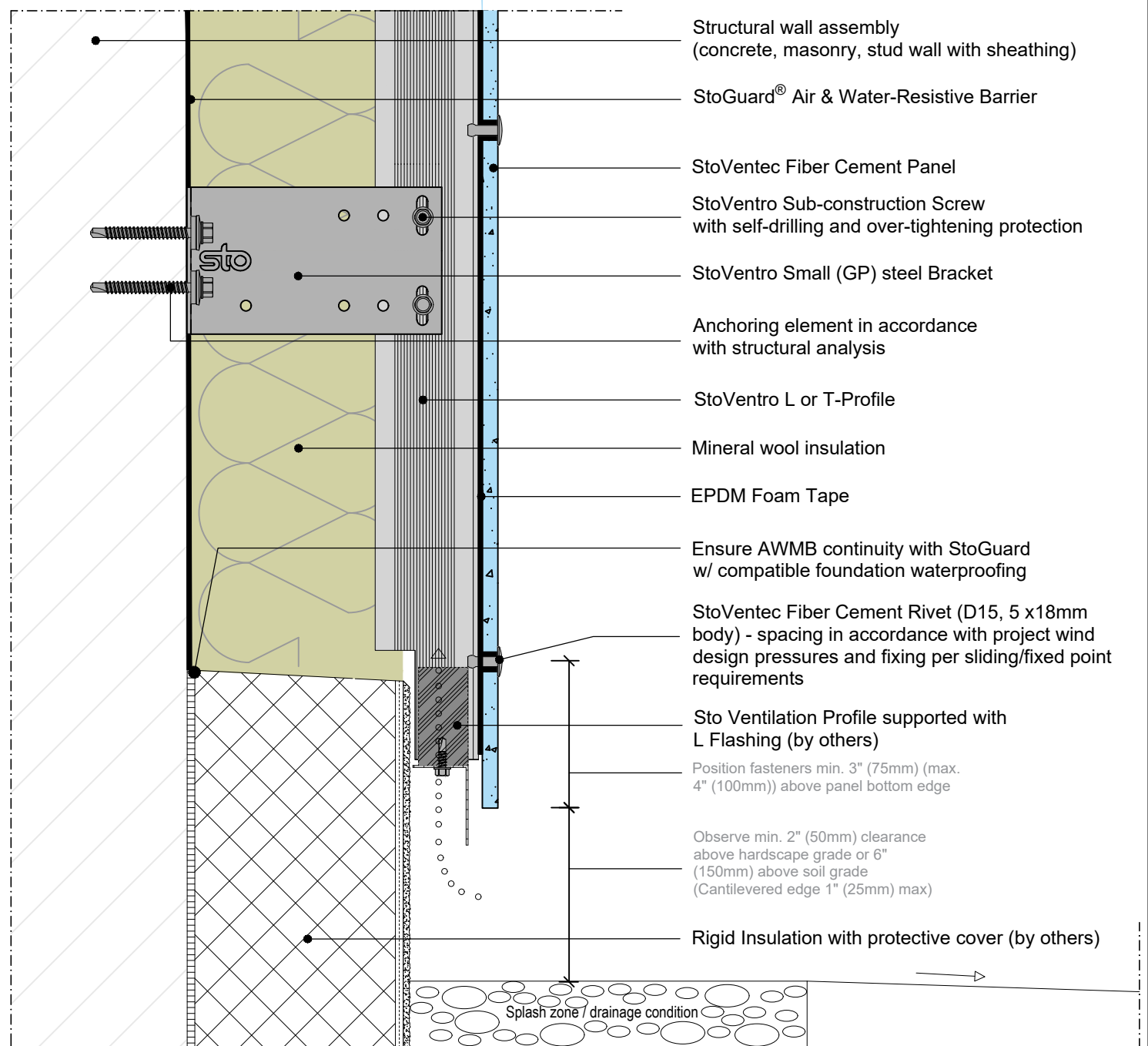
StoVentec Fiber Cement panel installation

StoVentro™ Sub-Construction System
 Installation at grade with Sto Ventilation Profile

Section View

Date: November 2024

Detail No.: 90.Sc.065



- Structural wall assembly (concrete, masonry, stud wall with sheathing)
- StoGuard® Air & Water-Resistive Barrier
- StoVentec Fiber Cement Panel
- StoVentro Sub-construction Screw with self-drilling and over-tightening protection
- StoVentro Small (GP) steel Bracket
- Anchoring element in accordance with structural analysis
- StoVentro L or T-Profile
- Mineral wool insulation
- EPDM Foam Tape
- Ensure AWMB continuity with StoGuard w/ compatible foundation waterproofing
- StoVentec Fiber Cement Rivet (D15, 5 x18mm body) - spacing in accordance with project wind design pressures and fixing per sliding/fixed point requirements
- Sto Ventilation Profile supported with L Flashing (by others)
- Position fasteners min. 3" (75mm) (max. 4" (100mm)) above panel bottom edge
- Observe min. 2" (50mm) clearance above hardscape grade or 6" (150mm) above soil grade (Cantilevered edge 1" (25mm) max)
- Rigid Insulation with protective cover (by others)

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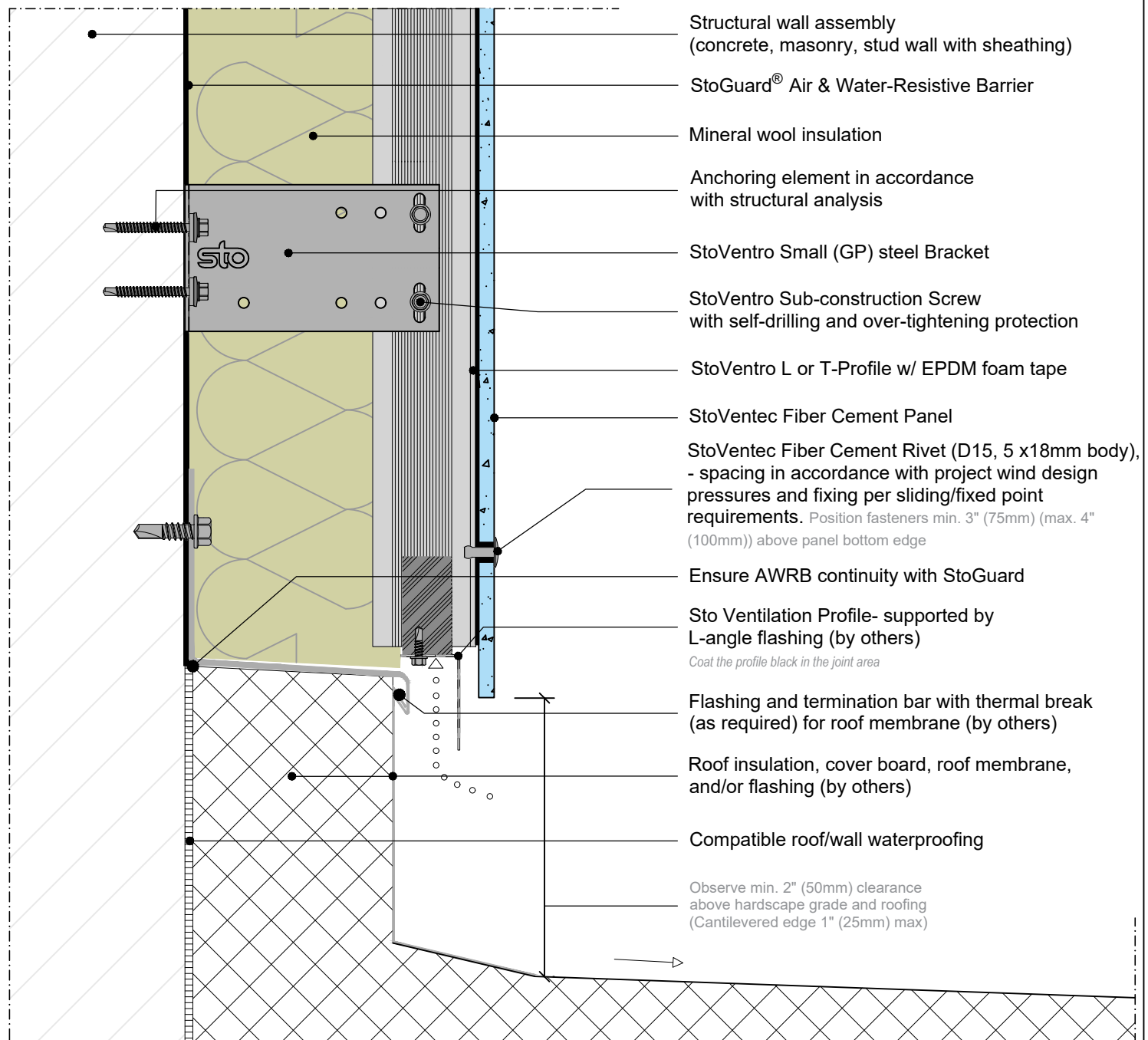
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StoVentec Fiber Cement
StoVentro™ Sub-Construction System
Installation at Roofline with Sto Ventilation Profile

Section View

Date: November 2024

Detail No.: 90.Fc.150



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StoVentec Fiber Cement

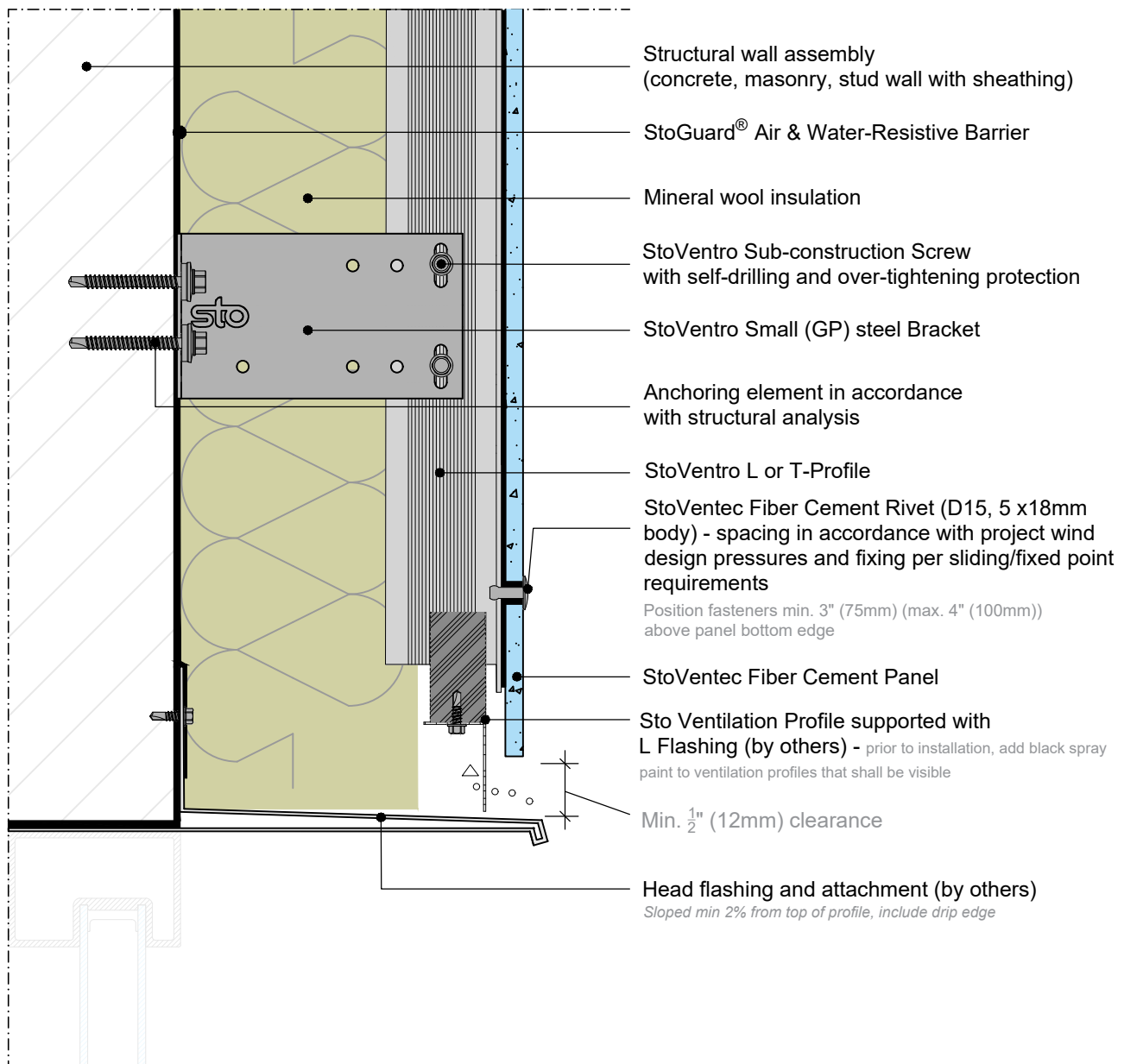
StoVentro™ Sub-Construction System

Installation at Window Head with head flashing and Ventilation Profile

Section View

Date: November 2024

Detail No.: 90.Fc.080

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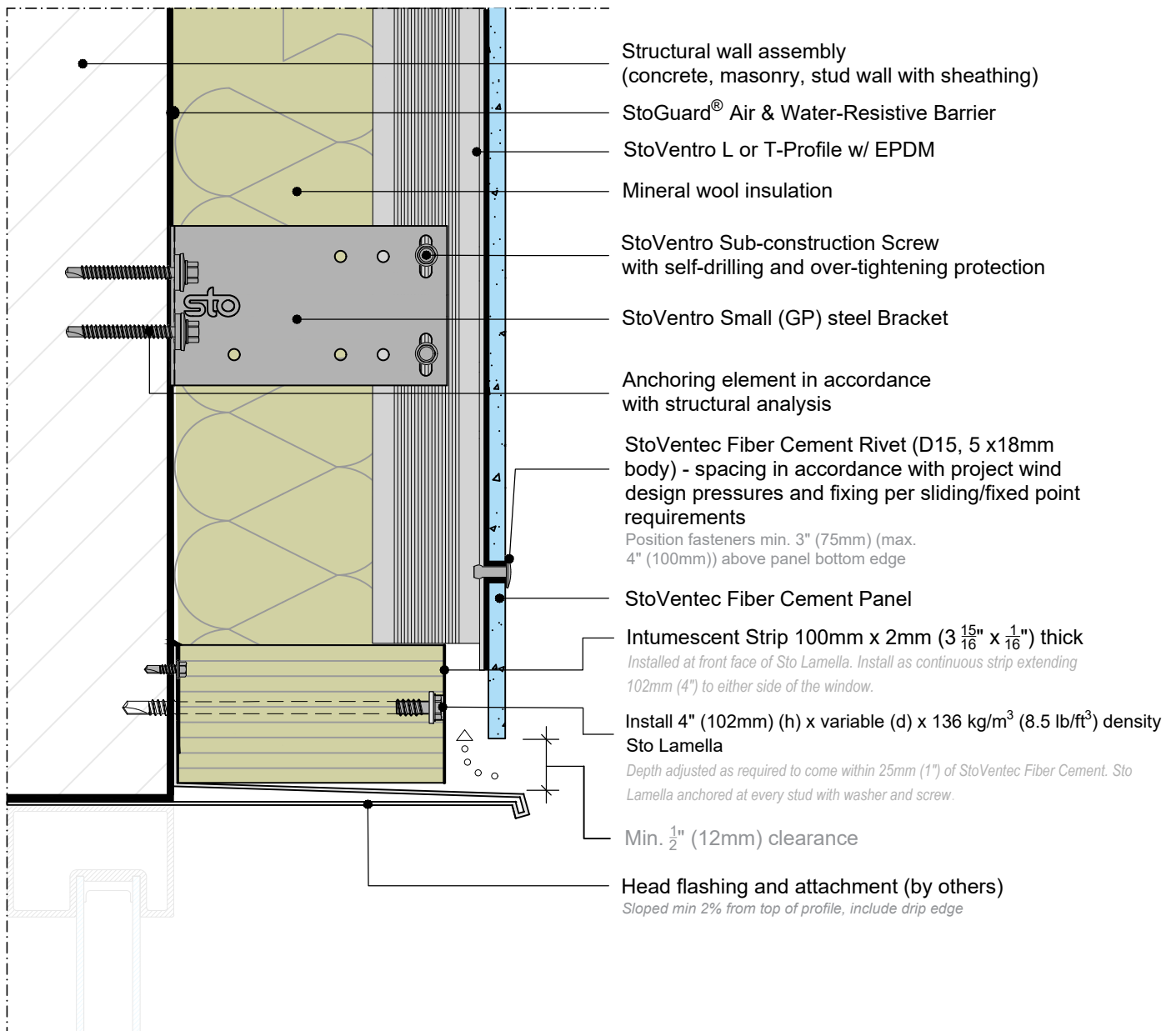
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StoVentec Fiber Cement**StoVentro™ Sub-Construction System****Fire protection at Window Head with Sto Lamella and Intumescent Tape**

Section View

Date: November 2024

Detail No.: 90.Fc.082

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StoVentec Fiber Cement

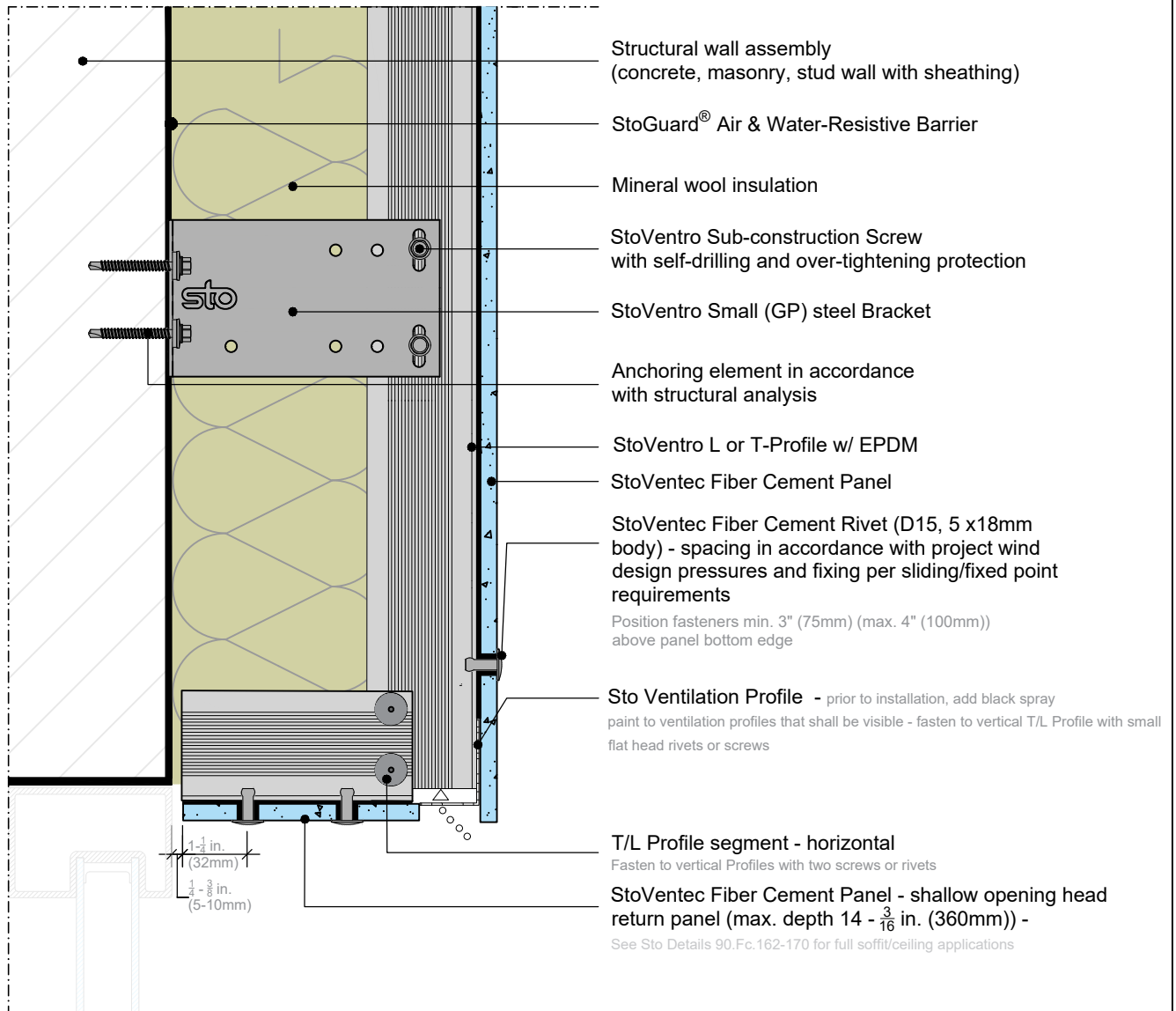
StoVentro™ Sub-Construction System

Installation at Shallow Window Head with Fiber Cement (maximum depth 14 - $\frac{3}{16}$ in. (360mm)) and Ventilation Profile

Section View

Date: December 2024

Detail No.: 90.Fc.084



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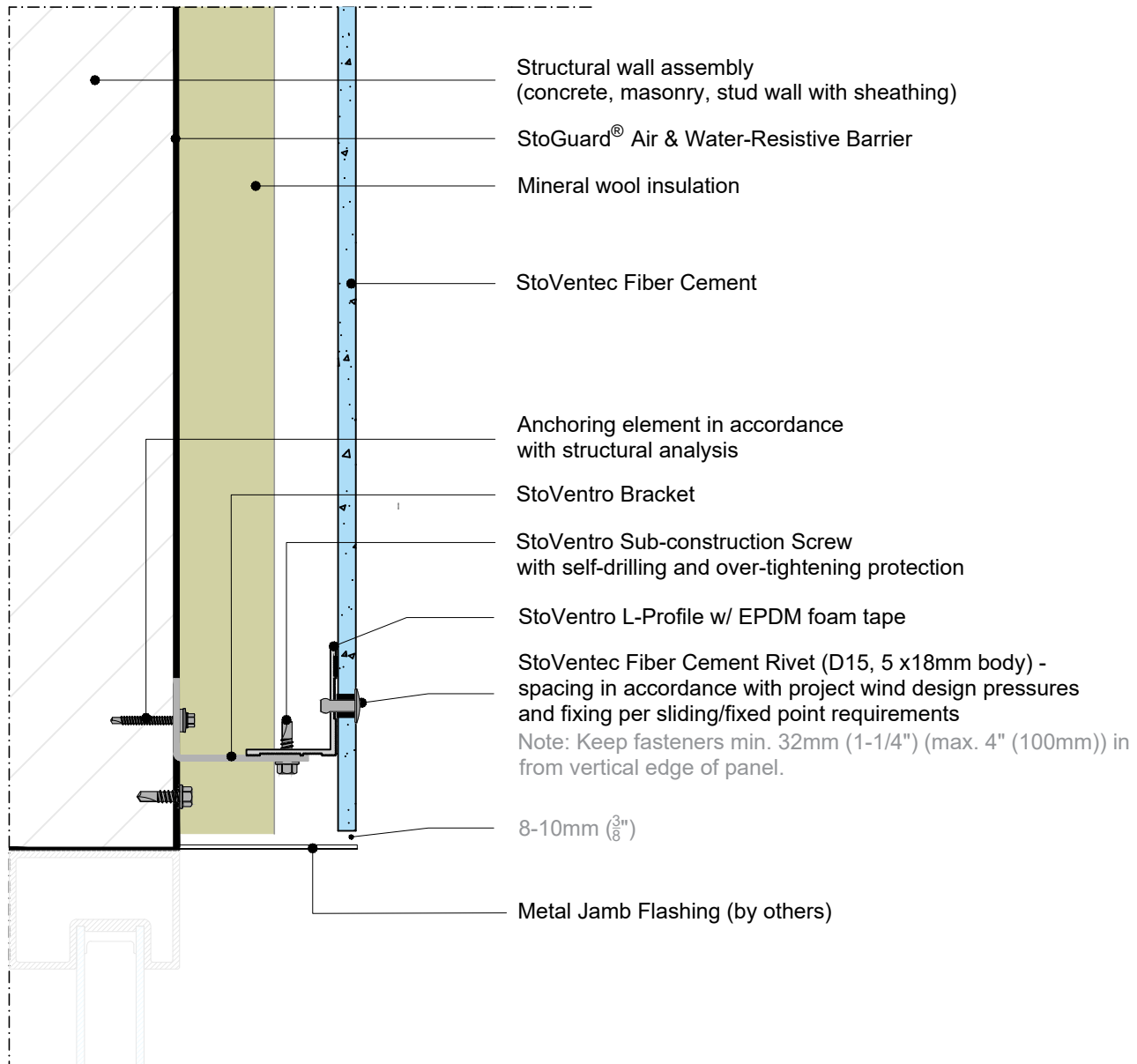
StoVentec® Fiber Cement StoVentro Sub-construction

Window Jamb - Metal Return

Plan View

Date: November 2024

Detail No.: 90.Fc.086



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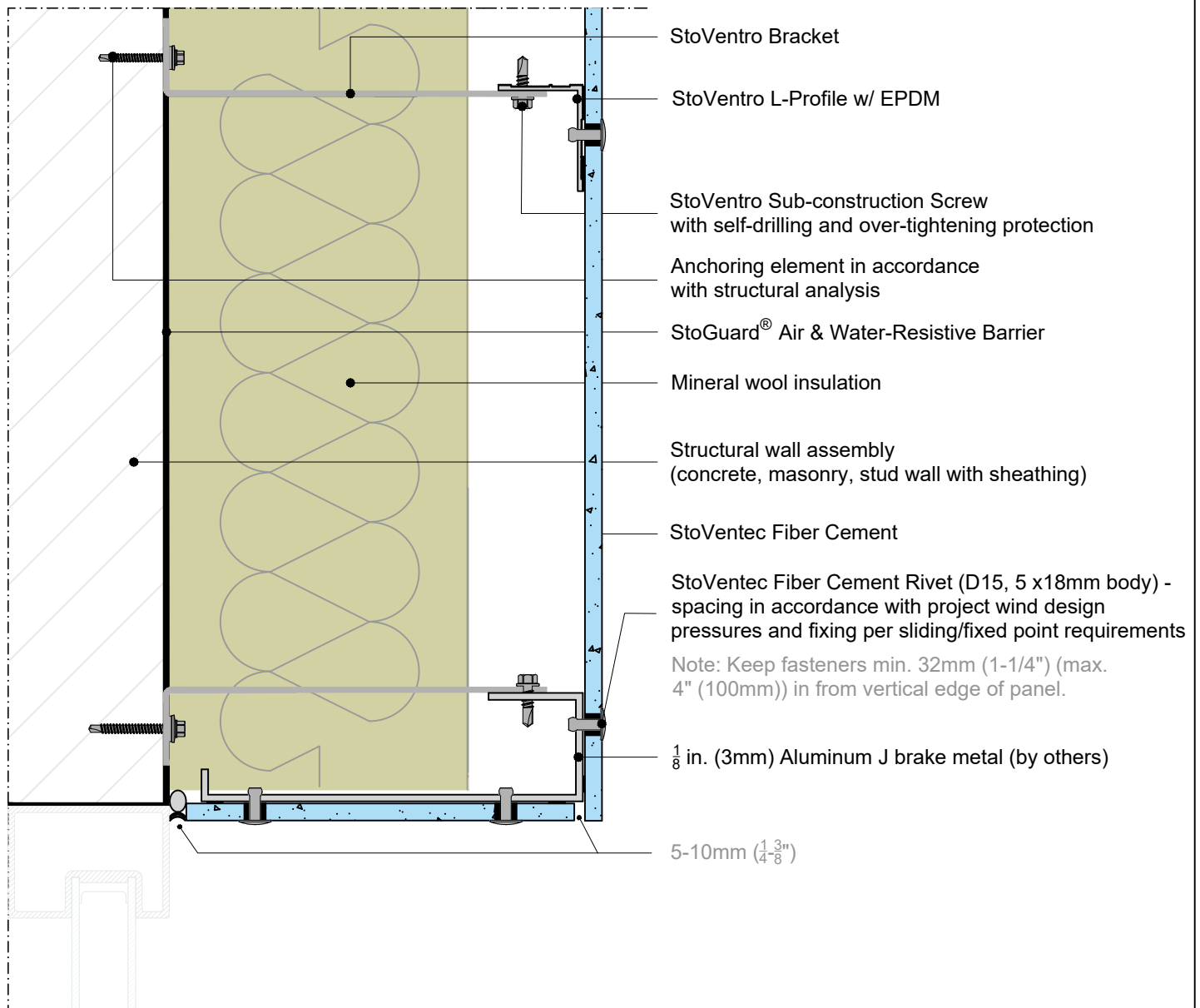
StoVentec® Fiber Cement StoVentro Sub-construction

Window Jamb - Deep F.C. Return >6 inches (152mm) with Brake Metal

Plan View

Date: November 2024

Detail No.: 90.Fc.088



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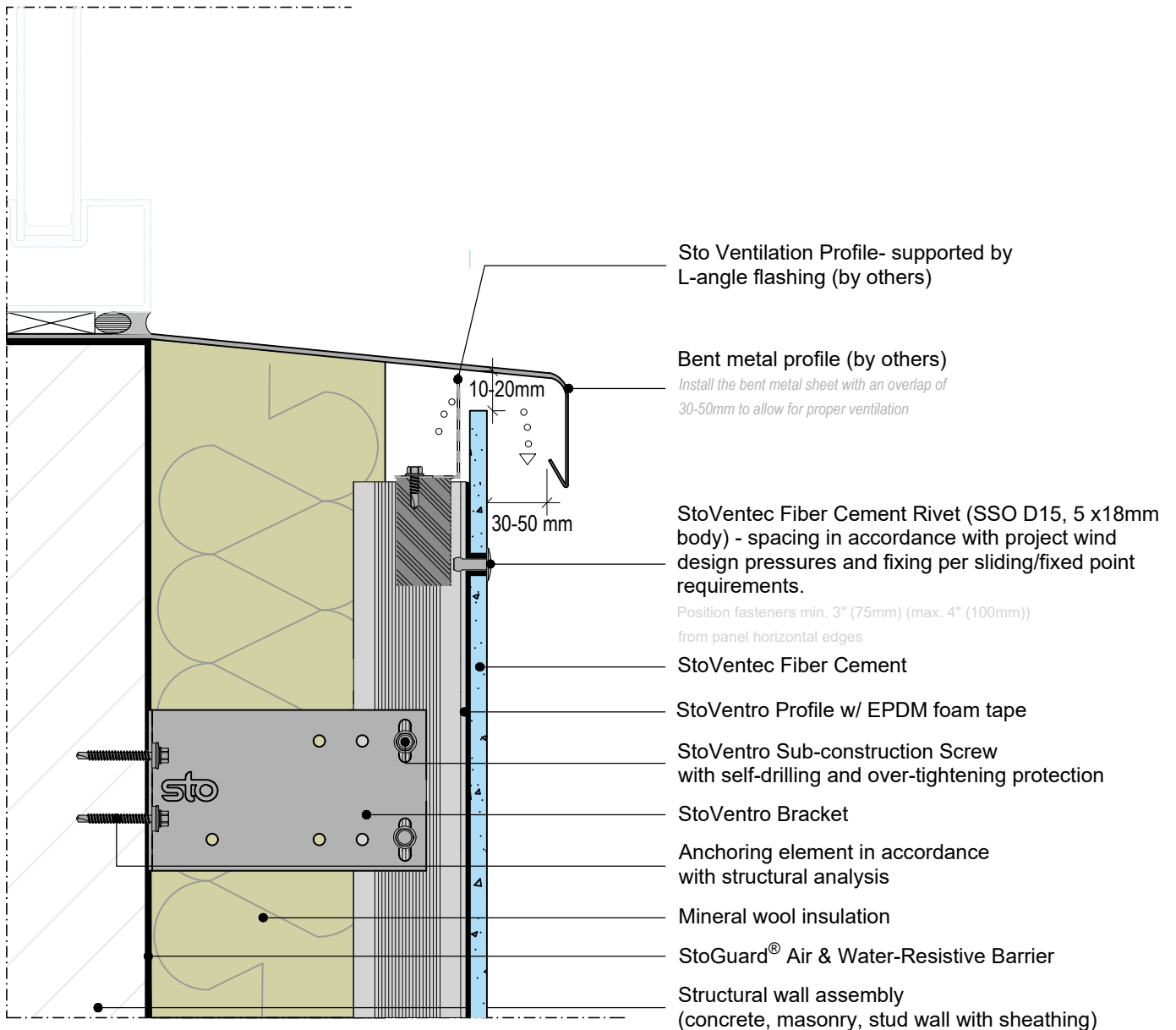
StoVentec® Fiber Cement

StoVentro Sub-construction

Window Sill with Sto Ventilation Profile
Section View

Date: November 2024

Detail No.: 90.Fc.090



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StoVentec Fiber Cement

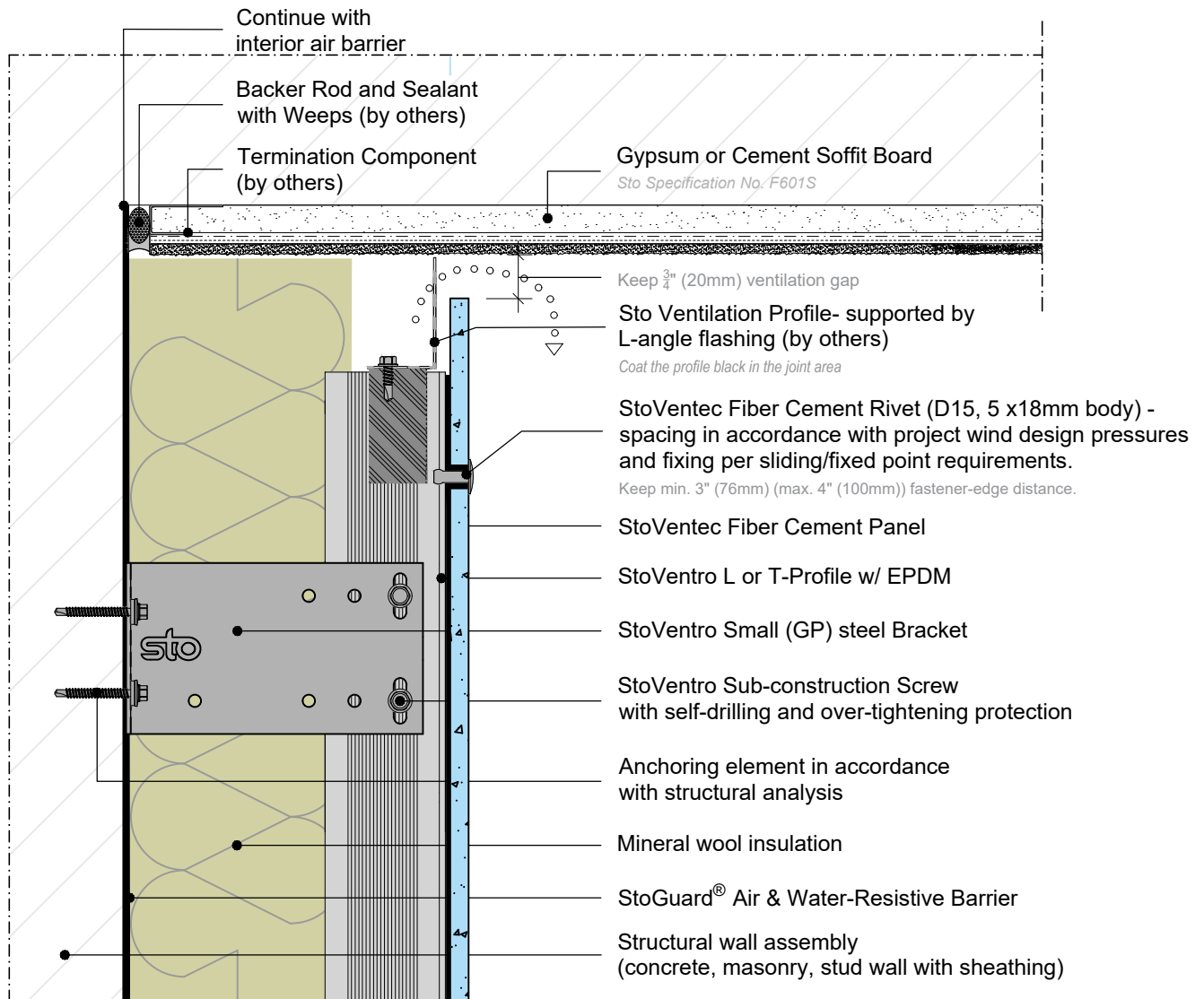
Termination under Soffit or Ceiling Installation - Not Insulated (Unconditioned)
StoVentro and Sto Direct-applied Finish System for Soffits and Ceilings

Section View

Date: November 2024

Detail No.: 90.Fc.161

Note: Direct-applied Exterior Finish System (DEFS) for use on weather protected walls and vented uninsulated exterior soffit and ceiling applications.



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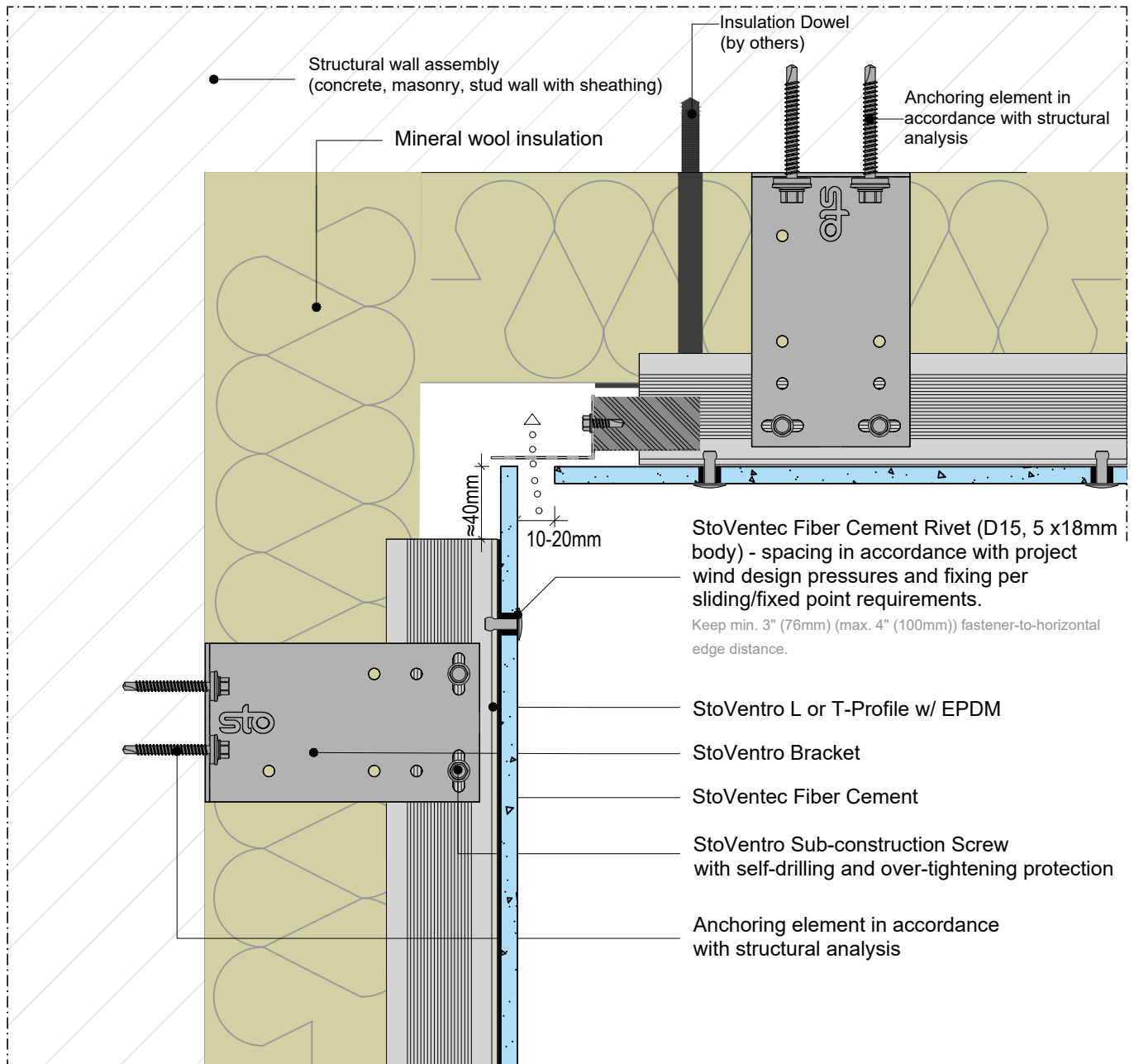
StoVentec® Fiber Cement

StoVentro Sub-Construction with Sto Ventilation Profile
Vertical wall to Soffit or Ceiling Installation - Insulated (Conditioned)

Section View

Date: November 2024

Detail No.: 90.Fc.162

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StoVentec™ Fiber Cement

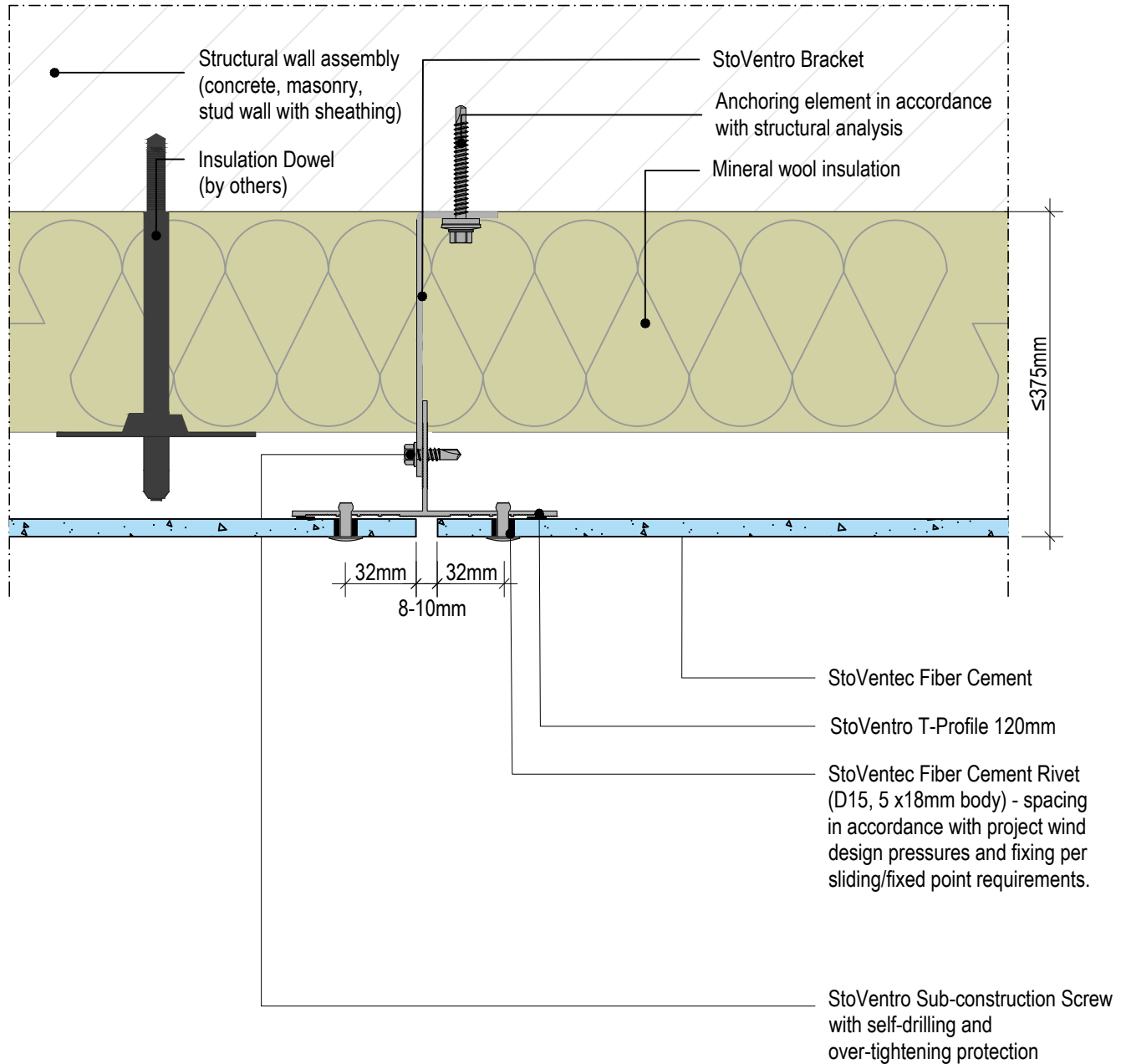
Soffit or Ceiling Installation - Insulated (Conditioned) - Panel Joint

Date: November 2024

Section View

Detail No.: 90.Fc.165

Note: This detail assumes the soffit panel long dimension runs parallel to the vertical wall. Keep typical minimum fastener-panel edge distances. Refer to the Fiber Cement Design Guide or Installation Guide.



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StoVentec® Fiber Cement

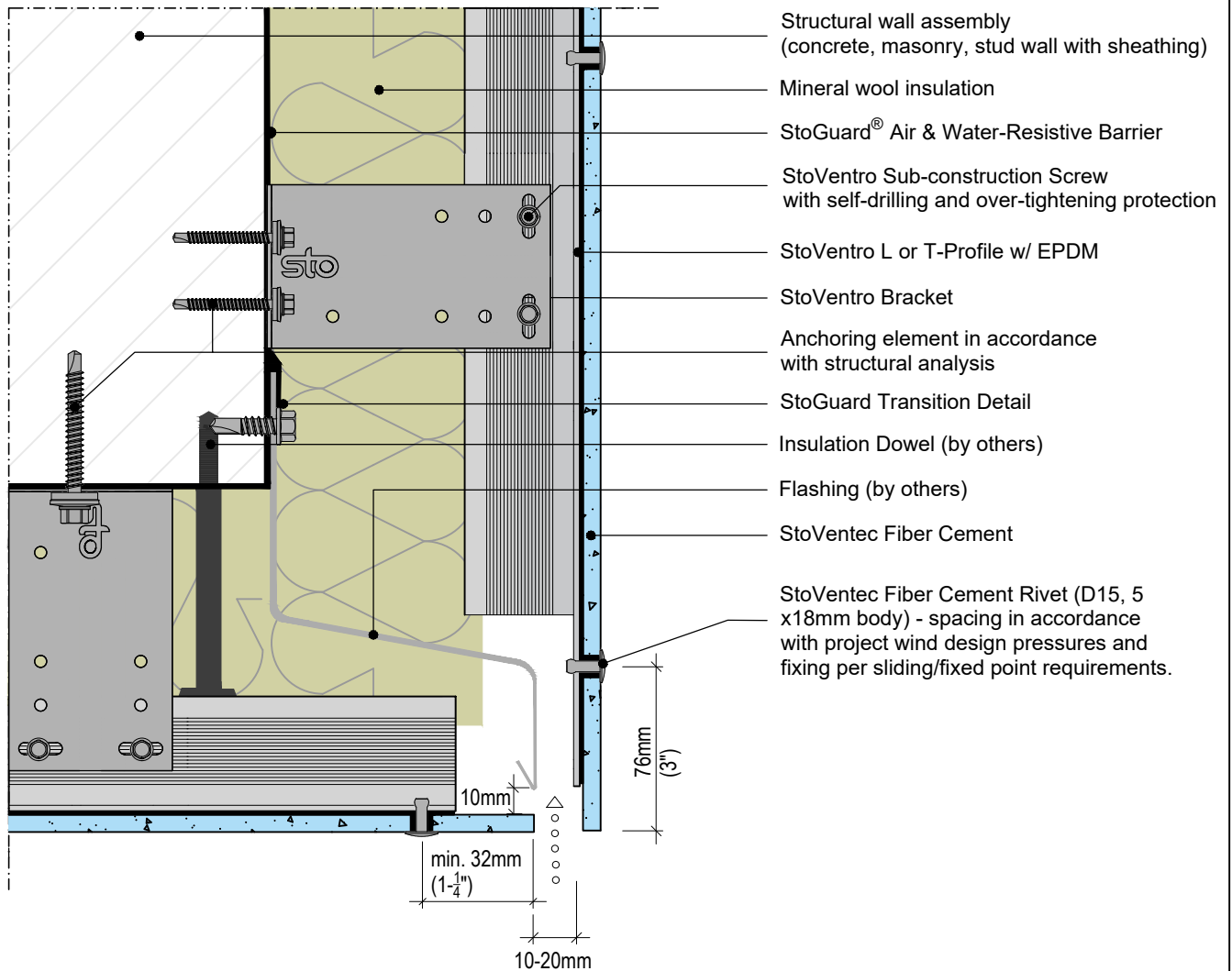
Soffit or Ceiling transition to Vertical Wall Installation - Insulated (Conditioned)

Date: November 2024

Section View

Detail No.: 90.Fc.170

Note: This detail assumes the soffit panel long dimension runs parallel to the vertical wall. Keep typical minimum fastener-panel edge distances. Refer to the Fiber Cement Design Guide or Installation Guide.



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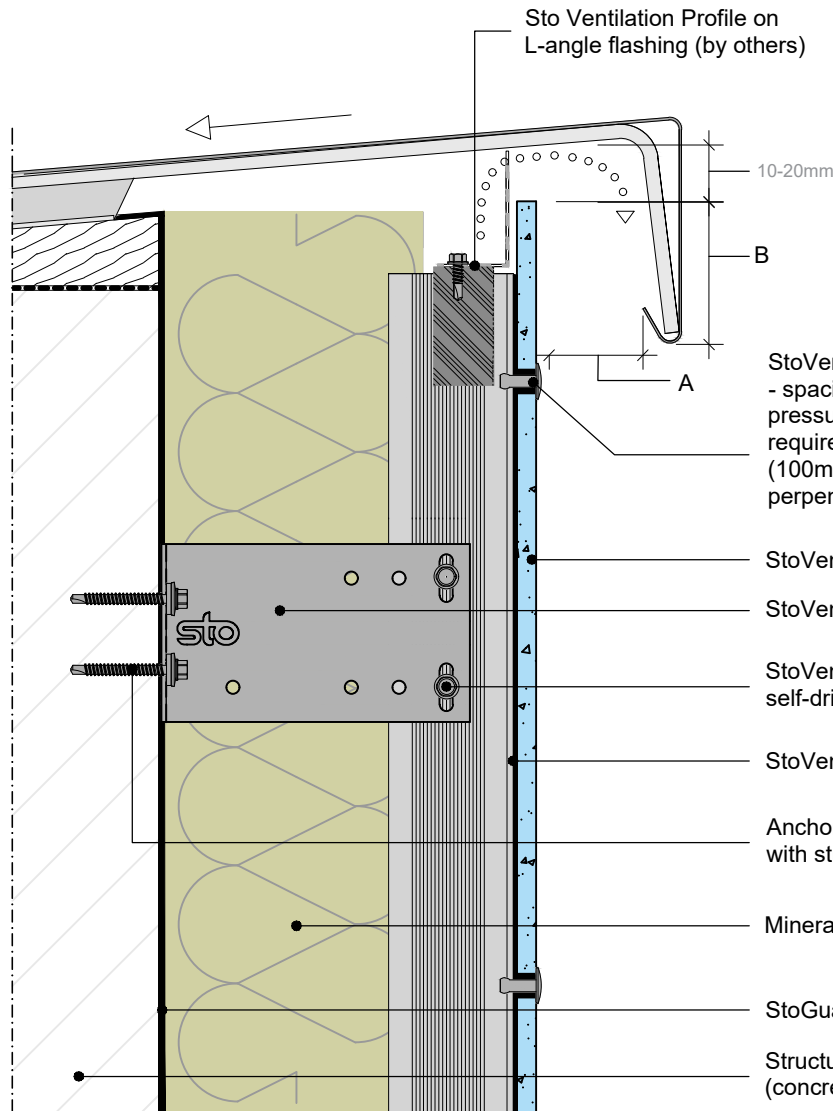
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StoVentec Fiber Cement
StoVentro™ Sub-Construction System
Installation under Parapet
 Section View

Date: November 2024

Detail No.: 90.Fc.180



Building height	A	B
≤ 8 m (26 ft)	≥ 20 mm	≥ 50 mm (2 in.)
8-20 m (66 ft)	≥ 30 mm	≥ 80 mm (3 in.)
≥ 20 m (66 ft +)	≥ 40 mm	≥ 100 mm (4 in.)

in accordance with regulations for metalwork in the roofing trade

StoVentec Fiber Cement Rivet (D15, 5 x18mm body)
 - spacing in accordance with project wind design pressures and fixing per sliding/fixed point requirements. Keep min. 3" (76mm) (max. 4" (100mm) fastener-edge distance for edges perpendicular to Profiles.

- StoVentec Fiber Cement Panel
- StoVentro Small (GP) steel Bracket
- StoVentro Sub-construction Screw with self-drilling and over-tightening protection
- StoVentro L or T-Profile w/ EPDM foam tape
- Anchoring element in accordance with structural analysis
- Mineral wool insulation
- StoGuard® Air & Water-Resistive Barrier
- Structural wall assembly (concrete, masonry, stud wall with sheathing)

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StoVentec Fiber Cement

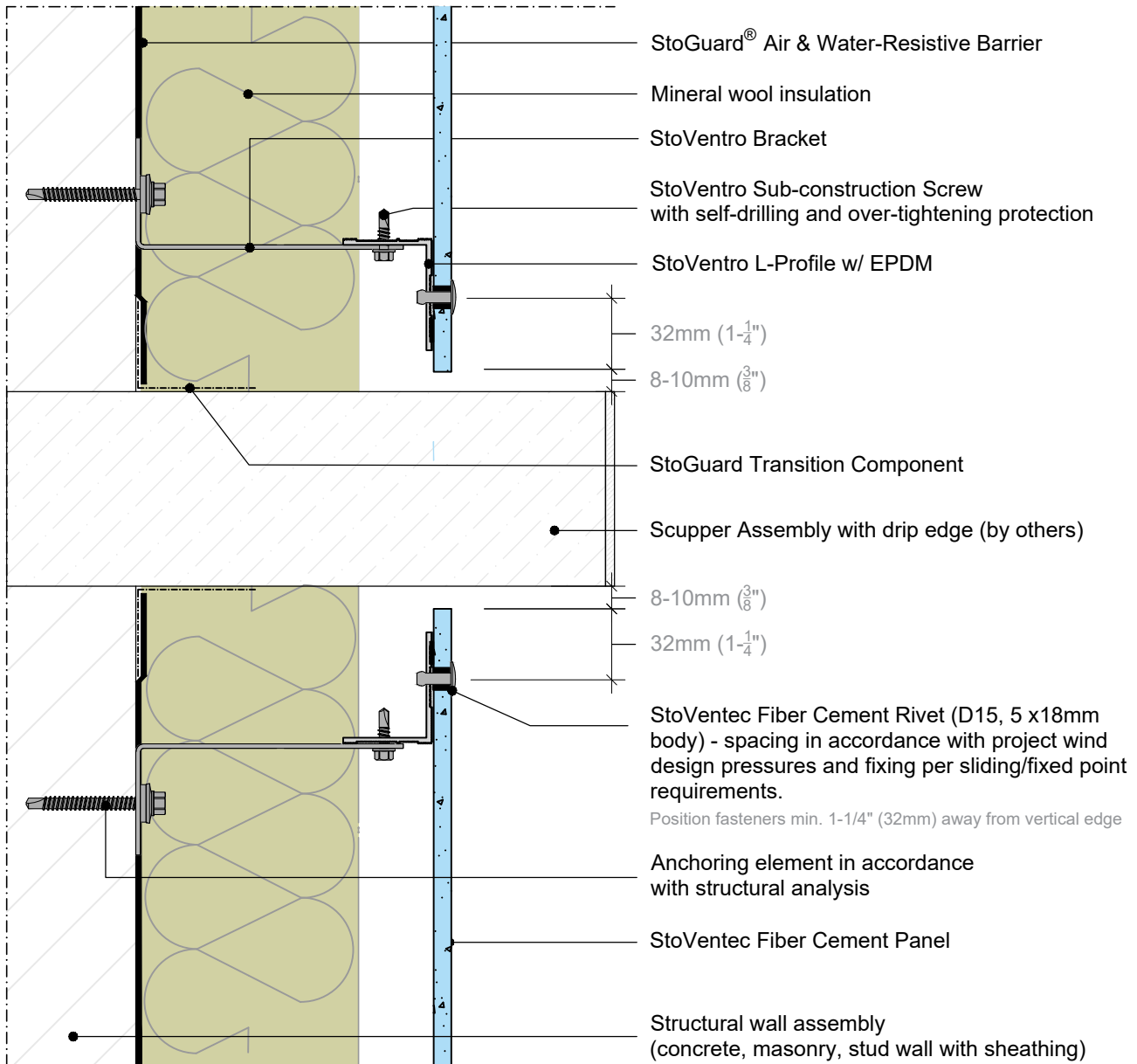
StoVentro™ Sub-Construction System

Scupper Penetration with open joints

Plan View

Date: November 2024

Detail No.: 90.Fc.300



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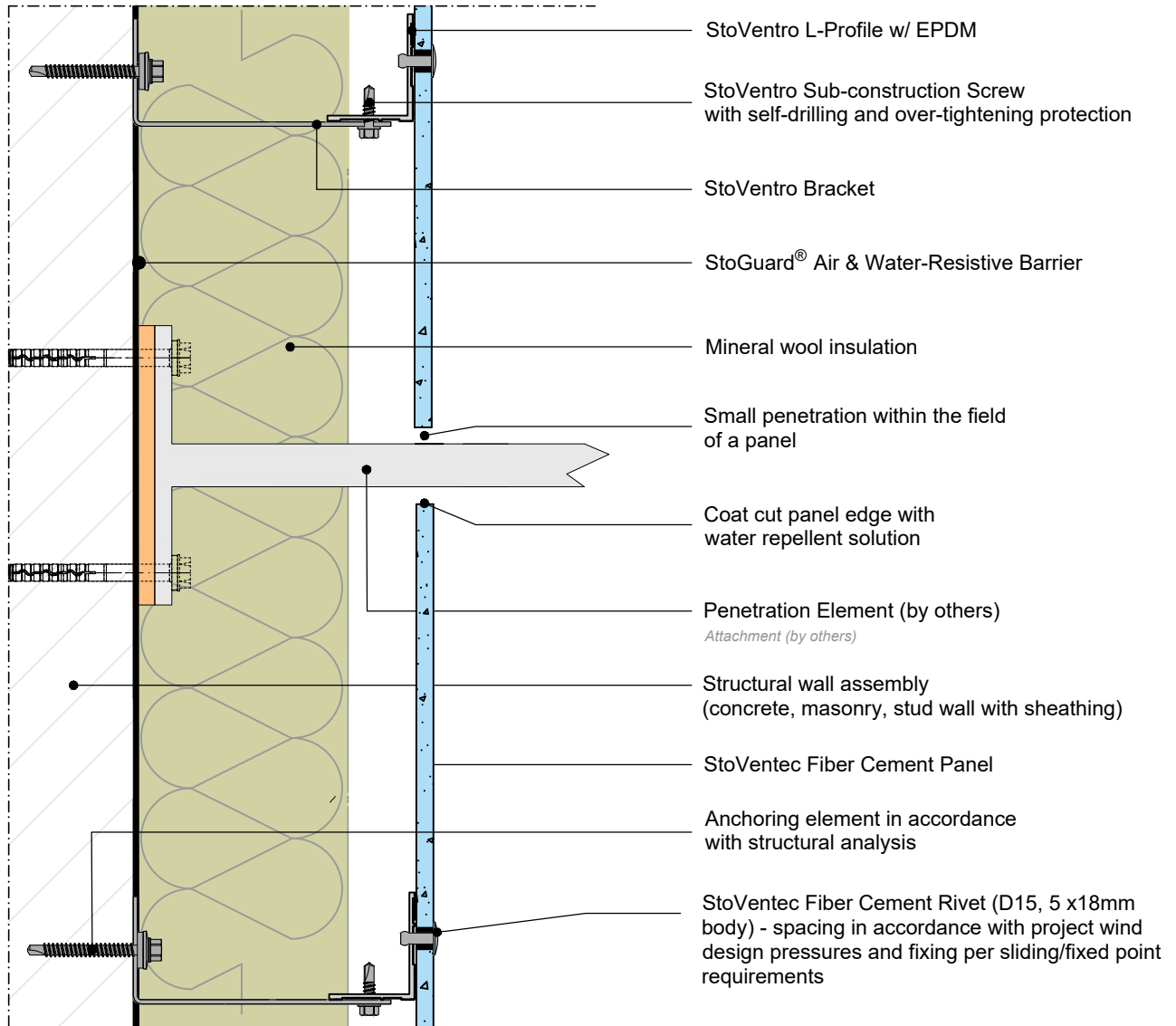
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StoVentec Fiber Cement
 StoVentro™ Sub-Construction System
 Small Penetration - within the field of a panel
 Plan View

Date: November 2024

Detail No.: 90.Fc.330



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StoVentec Fiber Cement

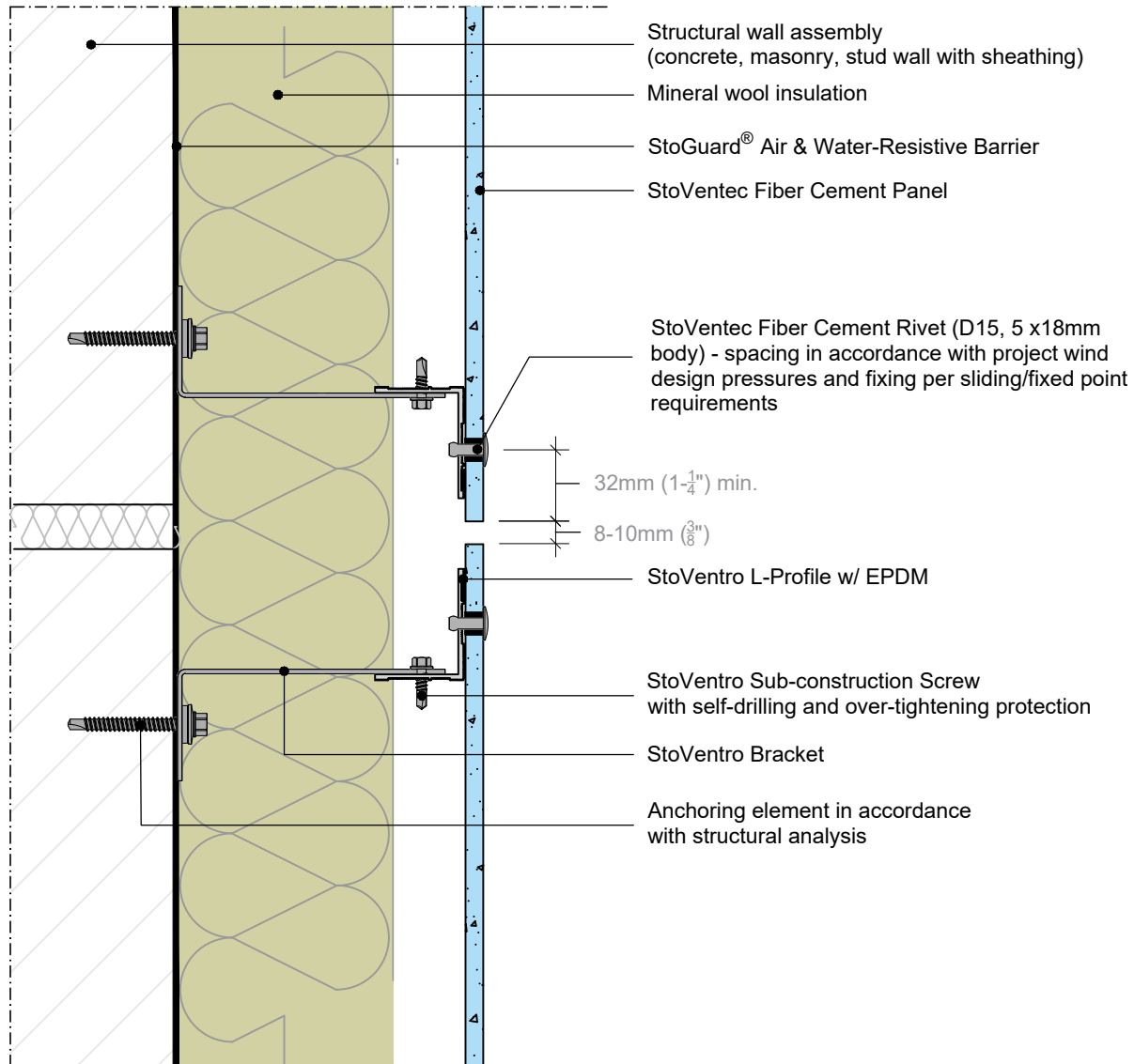
StoVentro™ Sub-Construction System

Back-up wall Structural Joint with Fiber Cement Joint

Plan View

Date: November 2024

Detail No.: 90.Fc.390

**ATTENTION**

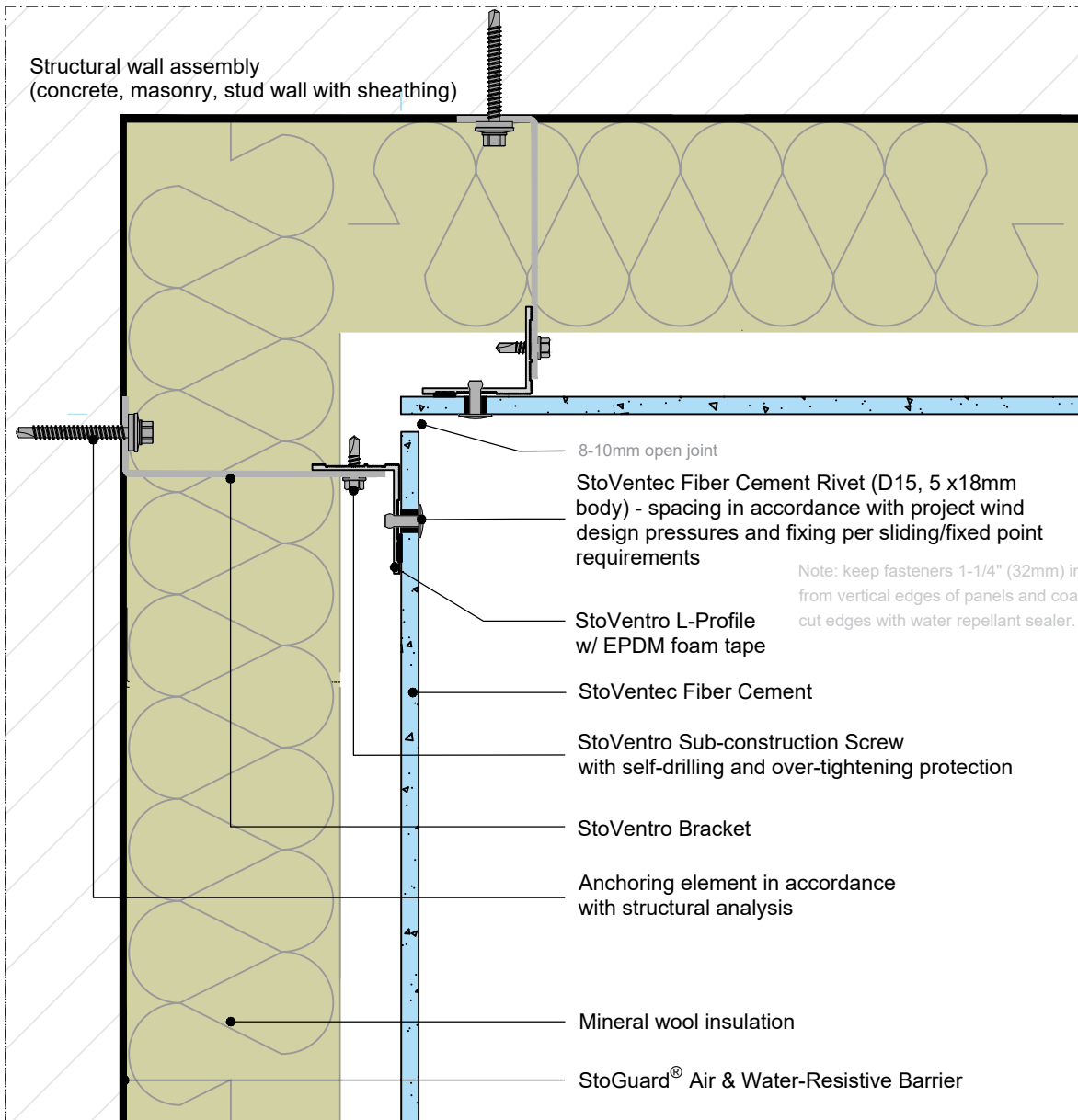
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StoVentec Fiber Cement
StoVentro™ Sub-Construction System
 Inside Corner - Open Joint
 Plan View

Date: November 2024

Detail No.: 90.Fc.400



ATTENTION

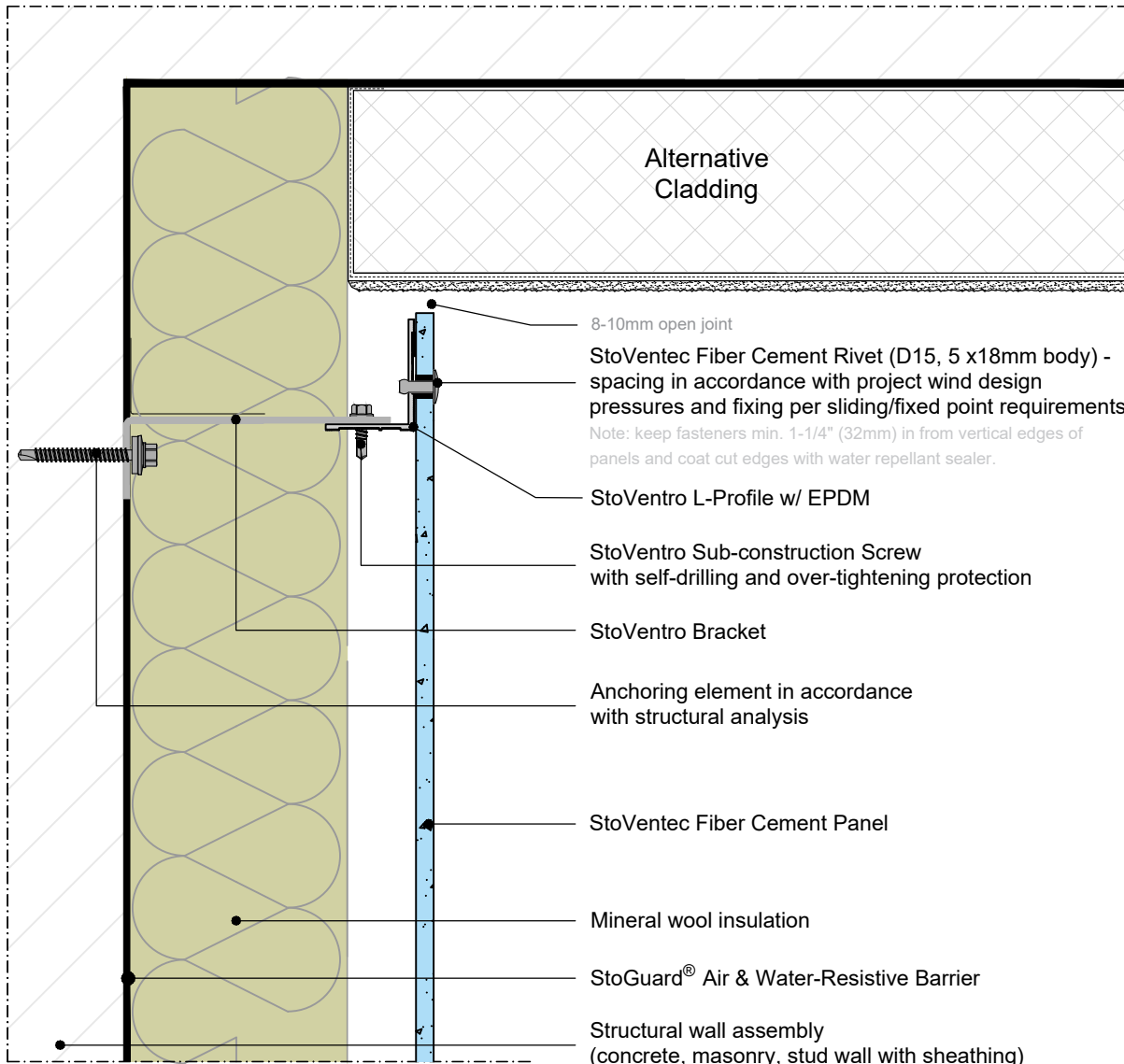
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StoVentec Fiber Cement
 StoVentro™ Sub-Construction System
 Installation at Inside Corner to alternative facade
 Plan View

Date: November 2024

Detail No.: 90.Fc.409



ATTENTION

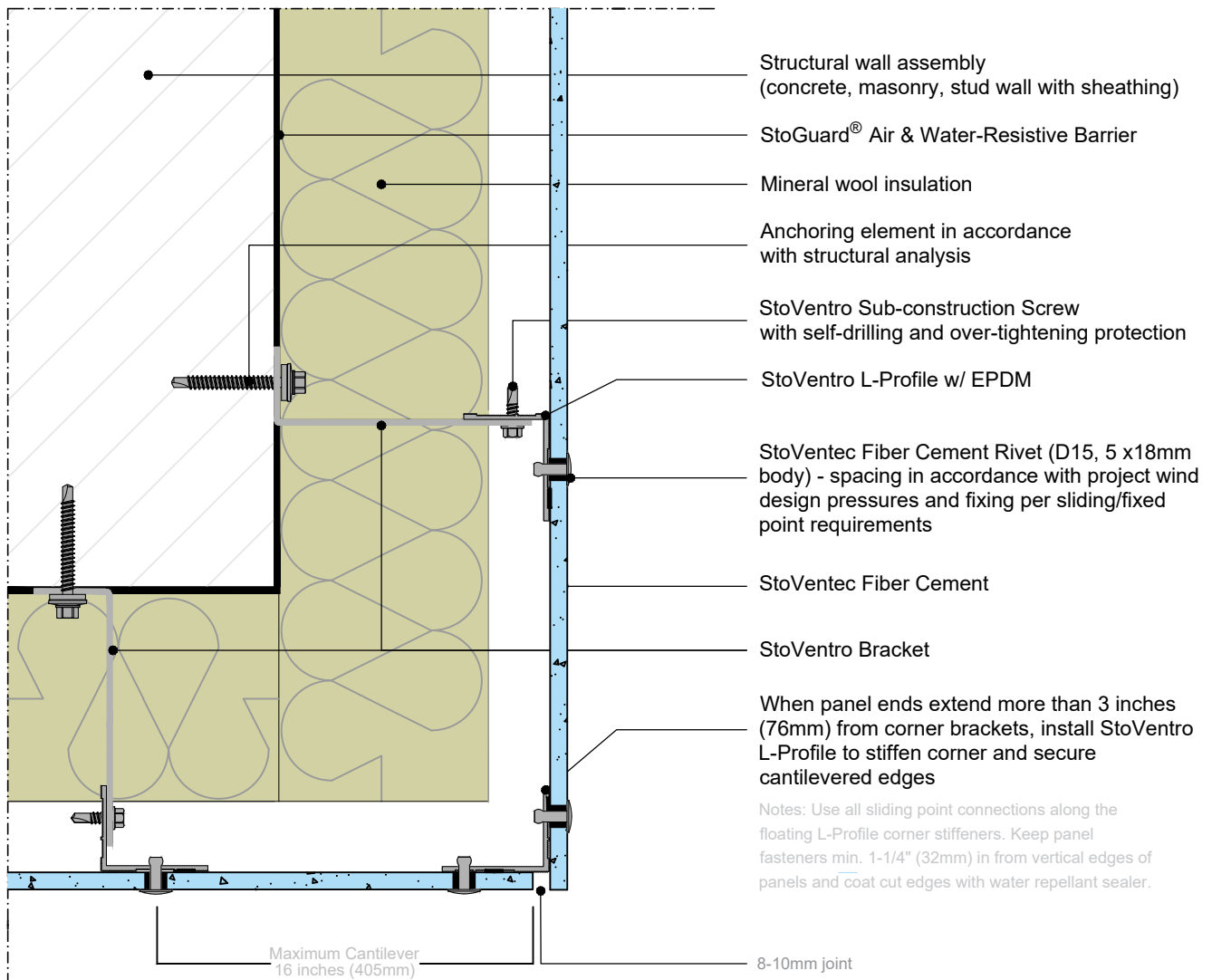
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StoVentec Fiber Cement
 StoVentro™ Sub-Construction System
 Outside Corner
 Plan View

Date: November 2024

Detail No.: 90.Fc.410



ATTENTION

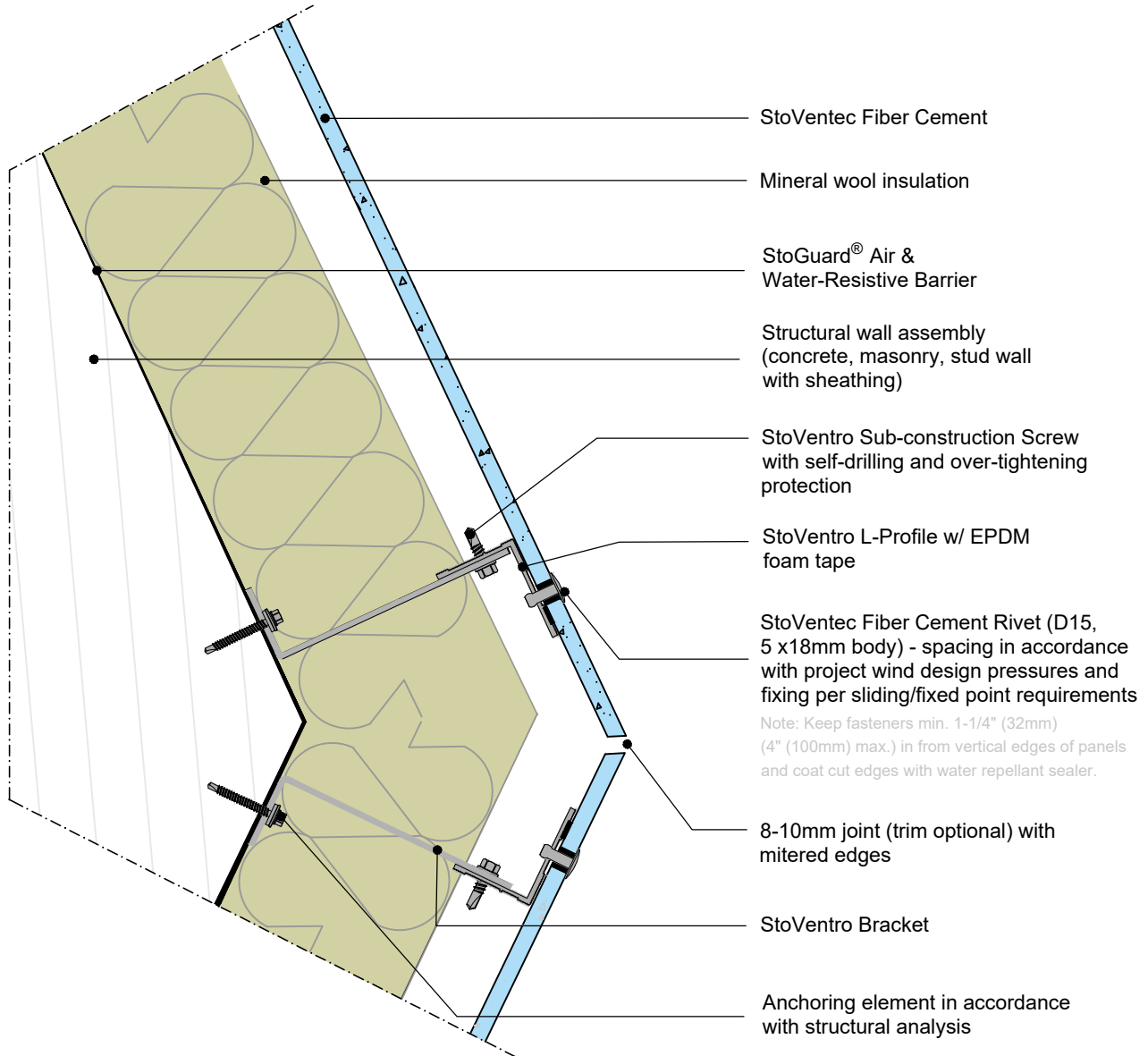
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StoVentec Fiber Cement
 StoVentro™ Sub-Construction System
 Segmented Radius/Non-90-Degree Outside Corner
 Plan View

Date: November 2024

Detail No.: 90.Fc.412



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StoVentec Fiber Cement Panel Installation

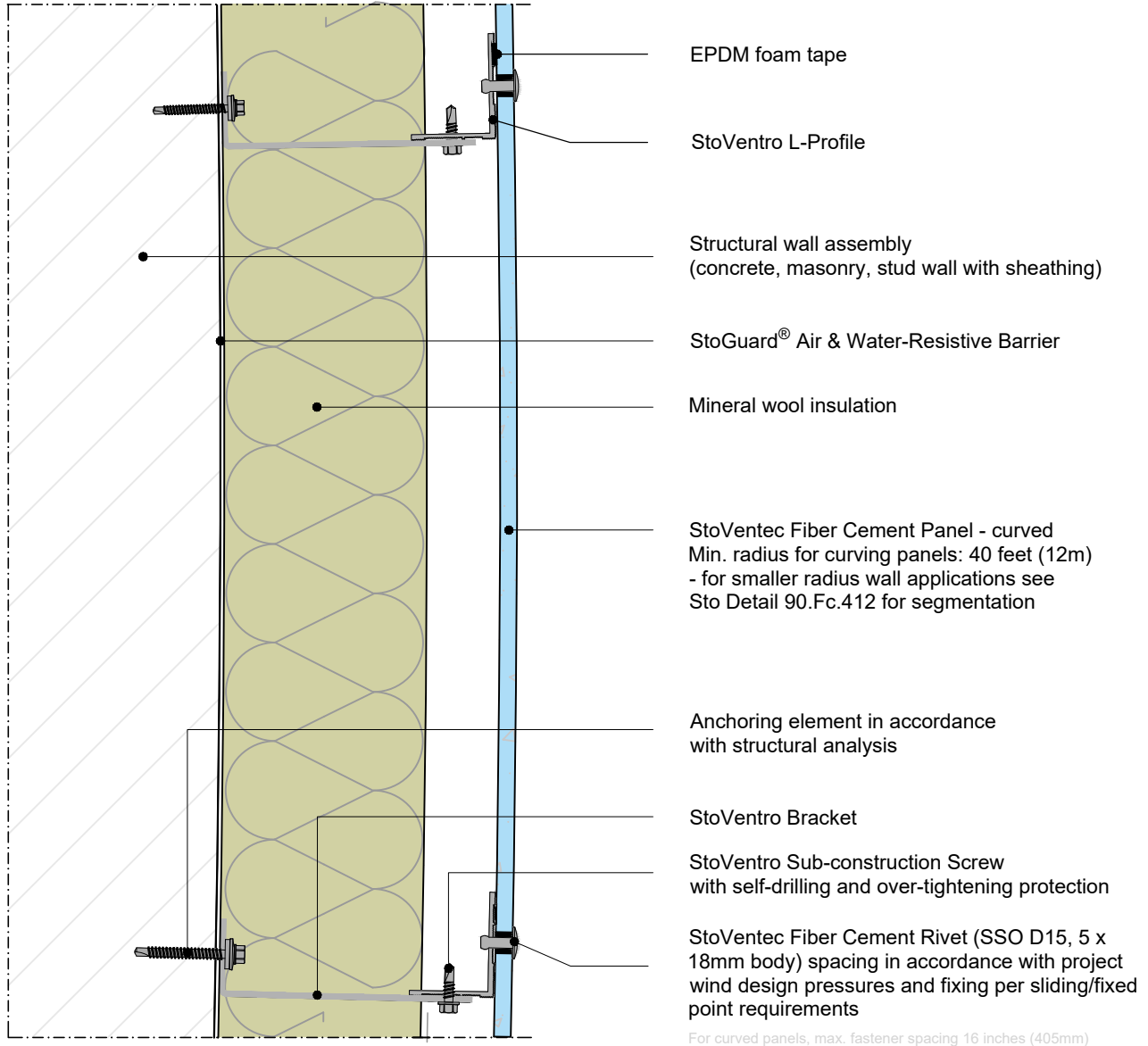
StoVentro™ Sub-Construction System

Curved Facade - Radius of 40 feet (12m) or greater

Plan View

Date: December 2024

Detail No.: 90.Fc.415



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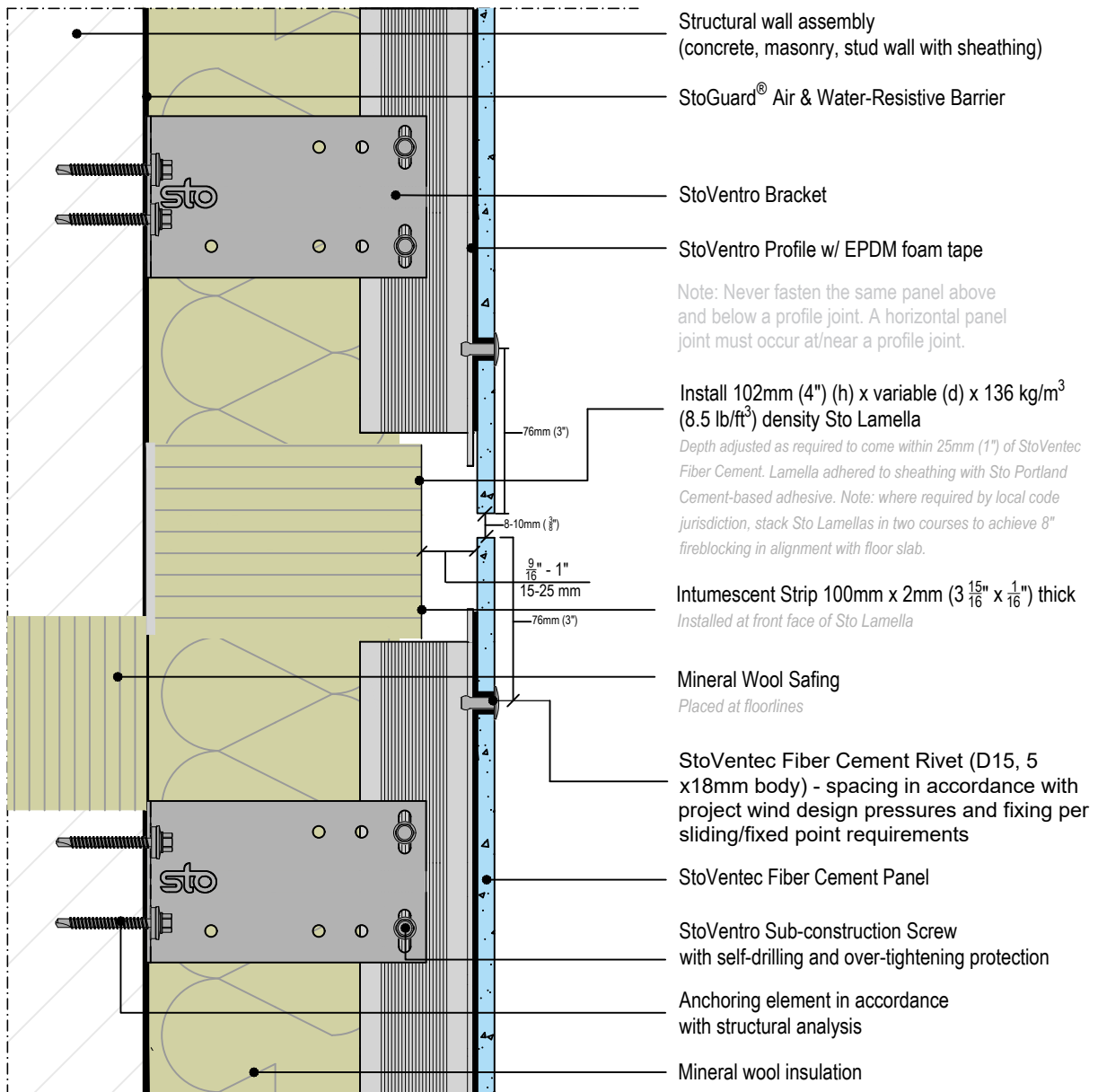
StoVentec™ Fiber Cement

StoVentro Sub-construction

Fire Protection at Floor Line - Horizontal Joint with Sto Lamella
Section View

Date: November 2024

Detail No.: 90.Fc.550



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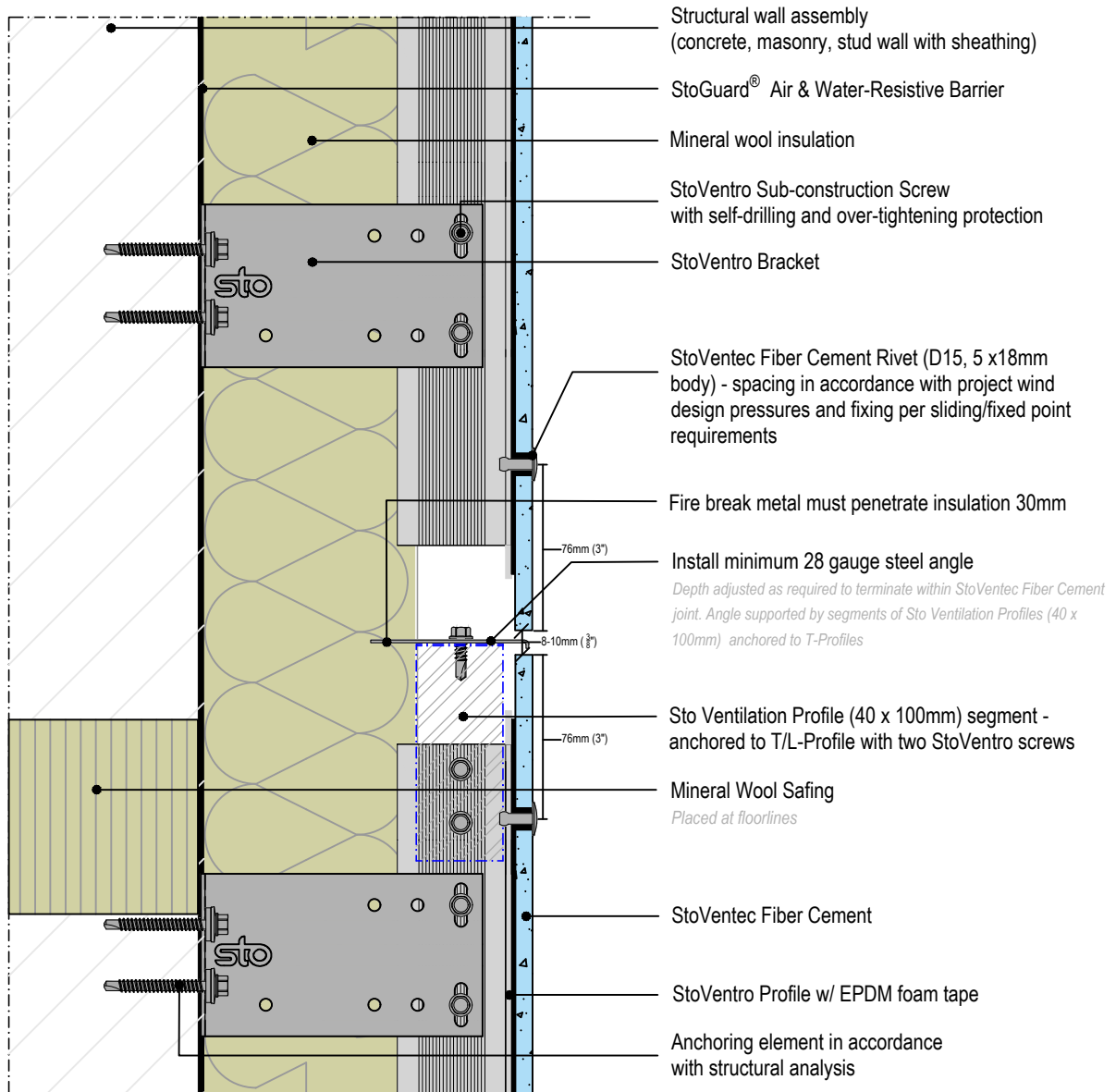
StoVentec™ Fiber Cement

Fire Protection at Floor Lines with Metal Fire Break w/ Ventilation Profiles

Date: November 2024

Section View

Detail No.: 90.Fc.555



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