18mm Fireless Party Wall System

PROBOARD.

Advanced Cladding Systems Pty Ltd

Member No. 1332198

CodeMark Australia Certificate CM40372

CMI Certification

18mm Fireless Party Wall System

Installation Manual

NCC Volume 1 & 2 – Class 1 to 10
BCA 2022 Amdt 2

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Building Code of Australia 2022 Amdt 2

Building Code of Australia

ProBoard panels have been vigorously tested and deemed to satisfy provisions of the National Construction Code (NCC) and the BCA 2022 Amdt 2 - Volume 1 & Volume 2 Class 1 to 10. ProBoard panels comply with the following performance requirements:

AS1530.4:2014 - Fire-resistance tests for elements of construction (18mm ProBoard Panels)

TIMBER FRAME: ProBoard's Fireless Party Wall System has been tested in a full-scale fire test (as per AS 1530.4:2014) and satisfied the Fire Performance Requirement by achieving a Fire Resistance Level (FRL) of 60/60/60 (Structural Adequacy for 60 minutes, Integrity for 60 minutes and Insulation for 60 minutes).

AS1530.4:2014 - Fire-resistance tests for elements of construction (18mm ProBoard Panels)

STEEL FRAME: ProBoard's Fireless Party Wall System has been tested in a full-scale fire test (as per AS 1530.4:2014) and satisfied the Fire Performance Requirement by achieving a Fire Resistance Level (FRL) of 60/60/60 (Structural Adequacy for 60 minutes, Integrity for 60 minutes and Insulation for 60 minutes).

AS1530.1 - Non-combustibility

ProBoard panels have been tested for **non-combustibility** by an NATA approved testing laboratory and are deemed NOT combustible.

AS/NZS 1530.3 – Determination of Ignitability

In accordance with AS/NZS1530.3 - Methods for fire tests on building materials components and structures - Part 3: simultaneous determination of Ignitability 0, flame propagation 0, heat 0 and smoke release 0-1.

Acoustic Performance

Assessments completed by DDEG Acoustics. The Fireless party wall system will be installed with a cavity on each side between 20mm min - 40mm max to meet the requirements of Rw + Ctr of no less than 50dB. Please refer to the systems selections section where ProBoard have made available multiple systems to achieve different acoustic ratings.

As per Maximum wall height table (page 4) for a maximum wall height of 12m bracket fixings are only required to the periphery (top and bottom plate max 450mm cc). No intermediate brackets are required if the max vertical span is 3m or below. For 12m- 14m high walls, brackets to the top and bottom plate on both sides are only required if the max vertical span is 2.7m or below. Where additional brackets may be required for a max vertical span higher than 3m (12m high building) or 2.7m (12-14m high building) (excluding periphery brackets) please see a ProBoard representative for further information.

Thermal Transmission

10mm, 14mm and 18mm nominally achieves R0.02 m2 K/W.

Why Use ProBoard Panels

Advanced Cladding Systems was established to provide the Australian residential and commercial building sectors with a fire rated panel that is cost effective and is fully compliant with Australian Standards. With the building industry becoming increasingly compliance focused, we are committed to providing one of the safest and compliant fire rated panels in the Australian construction industry. We have called this panel ProBoard.

ProBoard panels are water resistant which allows you to install the Fireless Party Wall System all year round.

Non-combustible – Tested to Australian Standard 1530.1 Non-combustibility – PASSED.

Building costs – Only standard carpentry tools are required to install ProBoard Fireless Party Wall System and that, combined with a quick installation system and minimal fixing ensures that our system is a price competitive party wall solution.

Durability - High Impact.

Mould/mildew – ProBoard panels do not support the growth of mildew or mould saving time and money in rectification.

ProBoard's Fireless party wall system achieves an acoustic rating of no less than Rw+Ctr50.

Termite and pest resistant

No delamination

Environmentally friendly – Many environmental benefits come with ProBoard panels, one being the mining of the main element, magnesium. Magnesium is found on the earth's surface and requires no chemicals or energy sapping processes when mined.

The curing process of ProBoard panels captures carbon dioxide and is conducted at room temperature which makes the curing of our ProBoard panels an extremely green process. Our panels contain no asbestos or harmful chemicals. Off cuts can be reground and recycled because ProBoard panels are considered "nutritional waste", meaning they can be placed back into the soil as a nutrient.

18mm Fireless Party Wall System

60/60/60 FRL

Our Fireless Party Wall System is a low cost, easy to install system that gives you an FRL of 60/60/60 using ProBoards 18 mm ship lapped panels. This system has been designed for use in a Party Wall System.

TIMBER FRAMED: The Fireless Party Wall System has been tested by way of a full-scale fire test conducted by BRANZ.

STEEL FRAMED: The Fireless Party Wall System has been tested by way of a full-scale fire test conducted by Warrington fire.

1.

10mm Plaster Board

2.

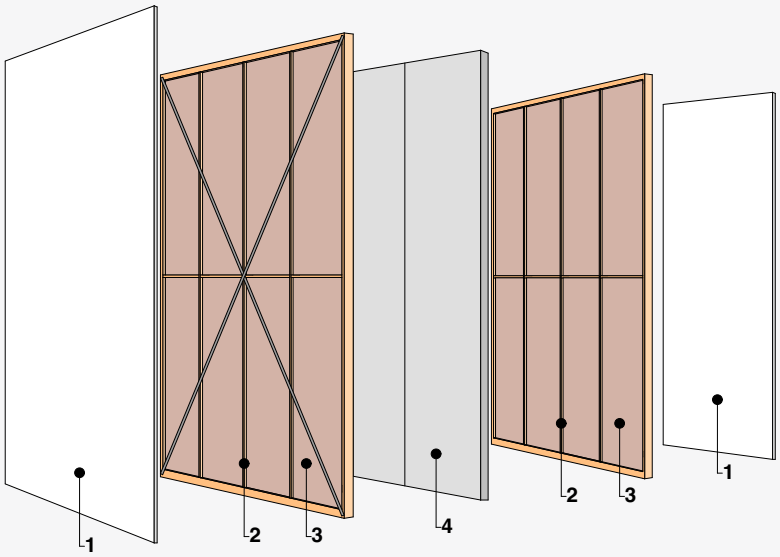
Timber frame to AS1684.2 or AS1720.1 / Residential and Low-Rise Steel Framing, Part 1 & 2: Design Criteria as per AS/NZS4600 2018.

3.

Glass wool insulation batts at minimum 14kg per m3.

4.

ProBoard 18mm shiplap panel. 60/60/60



PROBOARD FIRELESS SYSTEM DETAILS

FRL	Frame Thickness	Cavity (min/max)	System Thickness	Plaster Type	Insulation	Rw/Rw+Ctr	System
60/60/60	90/89	20mm	258	10mm Plaster (watershield) 7.6kg / m2	R2.5/20kg/m3	50dB	PB001
		40mm	298	10mm Plaster (watershield) 7.6kg / m2	R2.0/14kg/m3	51dB	PB001A
60/60/60	90/89	20mm	264	13mm Plaster (Soundchek) 13.0kg/m2	R2.0/14kg/m3	53dB	PB002
		40mm	304	13mm Plaster (Soundchek) 13.0kg/m2	R2.0/14kg/m3	55dB	PB002A
60/60/60	90/89	20mm	258	10mm Plaster (HD) 8.5kg/m2	R2.0/14kg/m3	51dB	PB003
		40mm	298	10mm Plaster (HD) 8.5kg/m2	R2.0/14kg/m3	54dB	PB003A
60/60/60	90/89	20mm	258	10mm Plaster (Sound stop) 9.0kg/m2	R2.0/14kg/m3	53dB	PB004
		40mm	298	10mm Plaster (Sound stop) 9.0kg/m2	R2.0/14kg/m3	55dB	PB004A
60/60/60	90/89	30mm	278	10mm Plaster (Aqua Check) 7.1g/m2	R2.0/14kg/m3	50dB	PB005
		40mm	298	10mm Plaster (Aqua Check) 7.1kg/m2	R2.0/14kg/m3	51dB	PB005A
60/60/60	70	20mm	224	13mm Plaster (Soundchek) 13.0kg/m2	R2.0/14kg/m3	51dB	PB006
		40mm	264	13mm Plaster (Soundchek) 13.0kg/m2	R2.0/14kg/m3	54dB	PB006A

PROBOARD 18 MM PANEL SIZES

Board Name	Thickness	Width	Length	Weight	Edge Finish
ProBoard Panels	18mm	600mm	2700 mm	30kg Approx	Ship Lapped
	18mm	600mm	3000 mm	34kg Approx	Ship Lapped

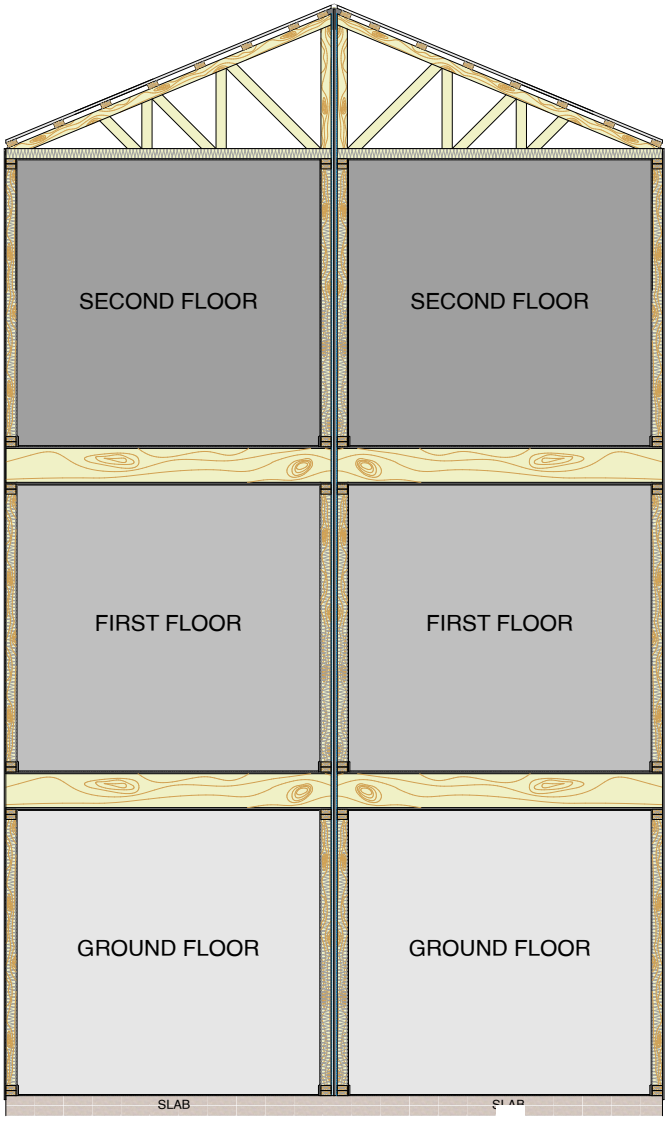
PROBOARD FIRELESS PARTY WALL BRACKET SPAN AND LAYOUT

Bottom Plate: Brackets are to be attached to the bottom plate (both sides of the wall at max 450mm centres).

Top Plate: Brackets are to be attached to the top plate (both sides of the wall at max 450mm centres).

Roof Termination: Brackets attached to the frame/truss at max 600 centres.

Bracket Height Table Diagram B



Total Fireless Wall Height	Max Vertical Span
12m - 14m	2.7m
Up to 12m	3.0m

FRAMING REQUIREMENTS

TIMBER FRAME

Timber framing to be designed and constructed in accordance with AS 1684.2 or AS 1720.1 to BCA requirements. Only seasoned MGP 10 is to be used with a minimum timber dimension of 90 mm x 45 mm at 600mm maximum stud spacing or 90 mm x 35mm and 70 x 35mm at 450mm maximum stud spacing.

Timber frame is to assume no axial strength contribution from wall linings. Some timber wall systems will have their axial load capabilities reduced due to the loss of section as the timber chars.

STEEL FRAME

The steel framing must be constructed and designed in accordance with AS/NZS 4600 or NASH standard – Residential and Low-Rise Steel Framing Part 1 or Part 2 The building designer must ensure that load bearing walls have been designed:

To resist all applied loads and assume no axial strength contribution form wall linings. Some wall systems will have their axial load capacities reduced. For steel, this is due to the steel weakening at temperature.

STORAGE AND HANDLING

When manually moving ProBoard panels carry horizontally. Care should be taken when handling the panels as not to damage the edges and surfaces. Persons moving the panels should have the appropriate Occupational Health & Safety training. All materials must be kept dry, preferably stored inside the building. If being stored outside, ProBoard panels are to be off the ground and protected from the weather. Store on a flat surface or on levelled supports ensuring the support covers the full width of the panel and spaced at the centre point with no more than a 600mm gap.

SAFETY INSTRUCTIONS

The following safety precautions are recommended when cutting Proboard. Minimise the effects of dust by:

a) Providing adequate ventilation.

b) Use mechanical cutting tools fitted with dust extractor and storage bag.

c) Wear eye protection.

d) Always wear a P2 mask

In addition to the above, observer all Occupational Health and Safety regulations and Safe Work Method Statements.

ACCESSORIES

Screws, fire rated sealants, “L” brackets and "H" channels are all available from Advanced Cladding Systems. If not using accessories supplied by Advanced Cladding Systems, the below mentioned accessories must be of an equivalent quality or better.

Mechanical Fixing

When fixing ship lap use 25 mm x 8-gauge Stainless steel 304 needle point self-tapping at 200 mm maximum spacing’s. (Available from Advanced Cladding Systems)

Fire Rated Sealants

Sealants must have a 4-hour fire rating when tested in accordance with AS1530.4 supplemented by AS4072.1 as well as BS476: part 20. Bostik polyurethane 600 ml sausage is our recommended fire rated sealant for this system (Available from Advanced Cladding Systems).

PROBOARD.

18mm Fireless Party Wall

Installation Instructions

Important Construction Notes

Notes must be read before installation commences.

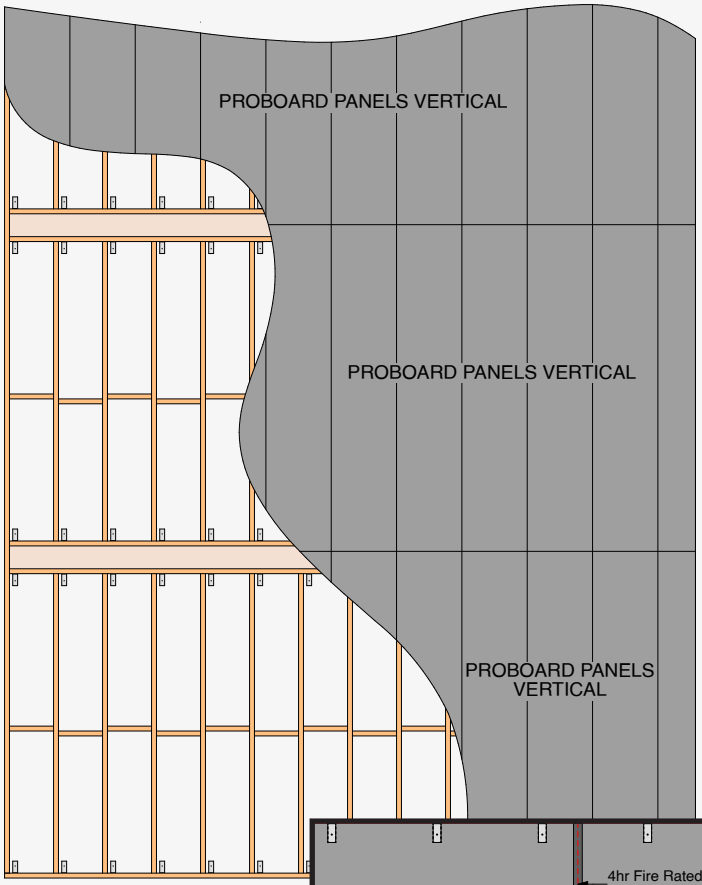
- ✓ Plan the job before commencing.
- ✓ Remove the ship lap on the outside of the commencement panel and the termination panel on each floor.
- ✓ When planning out the installation of the ProBoard panels be sure to allow for any overhang at the commencement of the wall and the end of the wall. See Technical Drawings
- ✓ All warranties will be voided if the system, important notes, or the installation instructions are deviated from in any way.
- ✓ It is recommended that ProBoards Fireless panels be supported during construction when wind loads may occur until the building is enclosed.
- ✓ Fireless Party Wall System should not have any penetrations or electrical cables, data cables or saddles etc attached to the ProBoard panel.
- ✓ Fireless Party Wall System must have a cavity of 20 mm minimum and 40 mm maximum between the ProBoard panel and the timber / steel frame on both sides of the system.
- ✓ Aluminum brackets are to be installed on both frames, either side of the ProBoard panel.

Fireless – Party Wall Installation

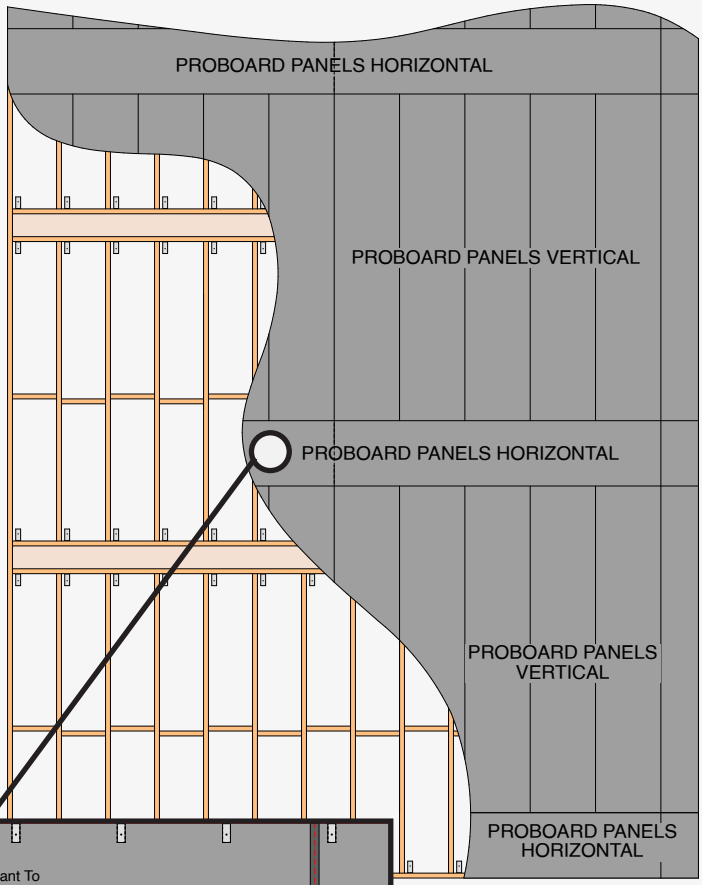
18 mm ProBoard Panel

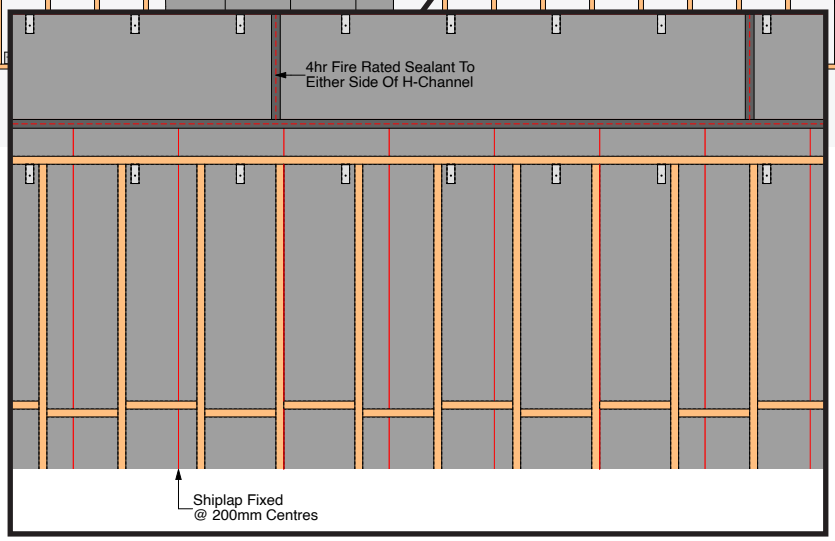
FRL 60/60/60

ProBoard Vertical Layout



ProBoard Horizontal and Vertical Layout



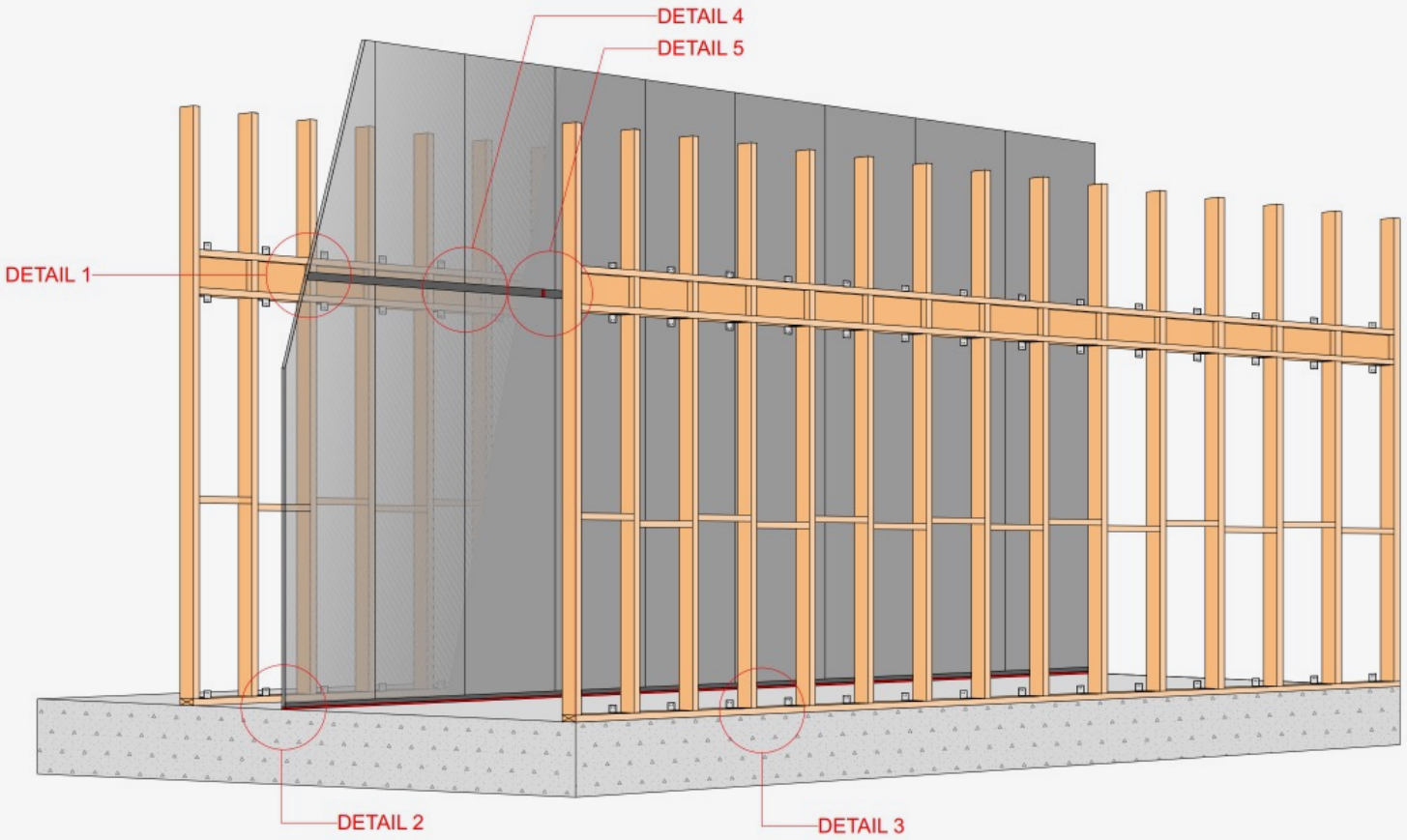


Fireless – Party Wall Installation

18 mm ProBoard Panel

FRL 60/60/60

Details



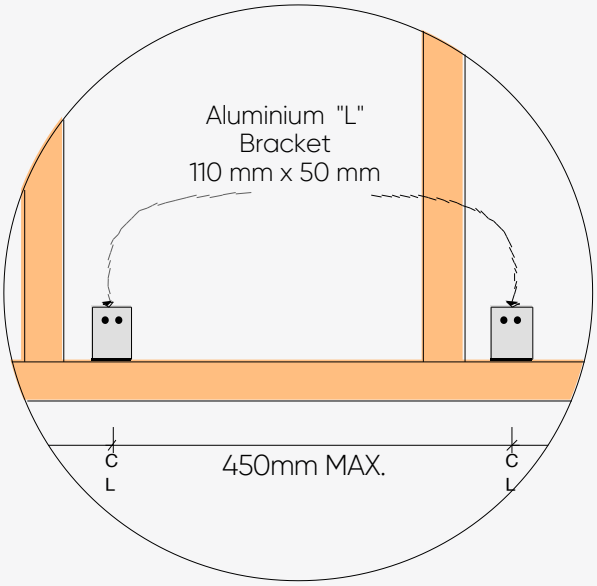
Fireless – Party Wall Installation

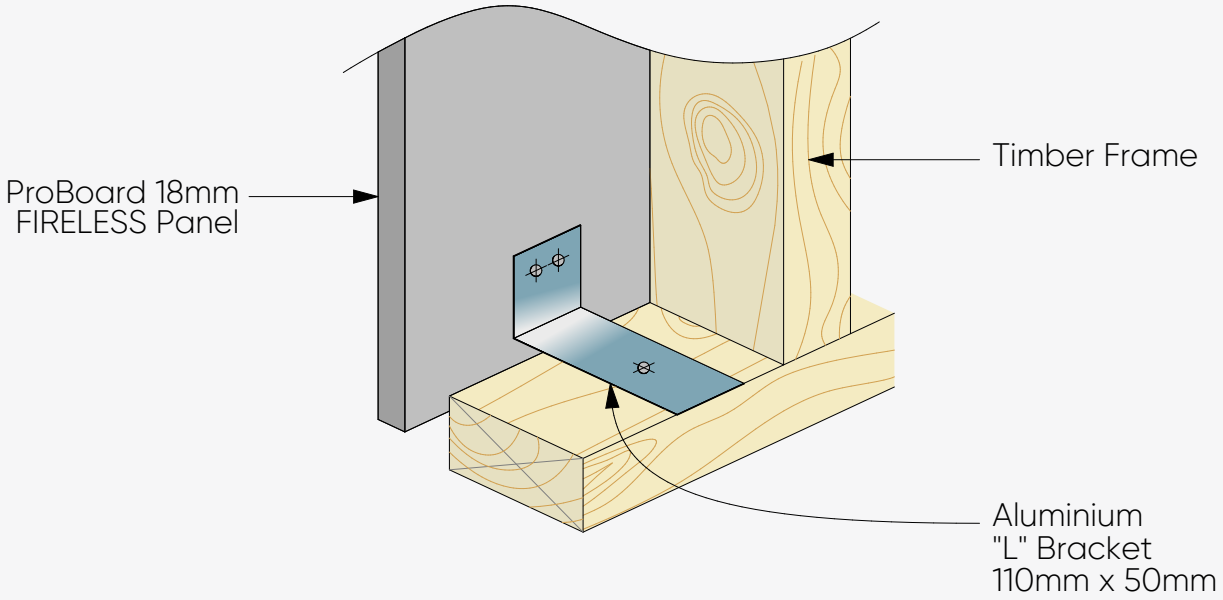
18 mm ProBoard Panel

FRL 60/60/60

Bracket Installation

DETAIL 1



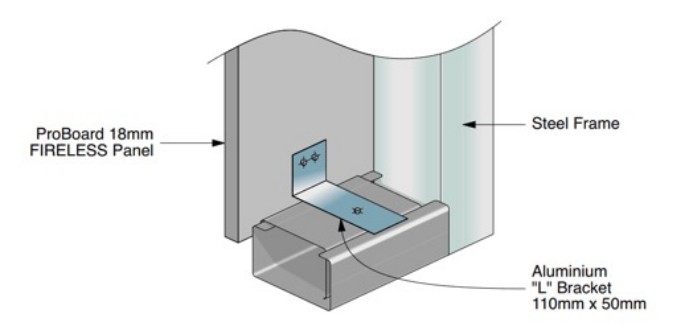


Fireless – Party Wall Installation

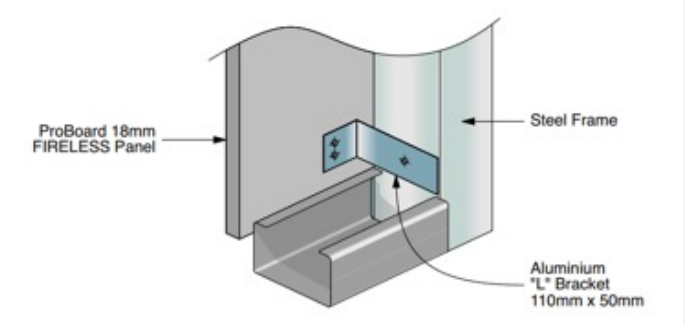
18 mm ProBoard Panel

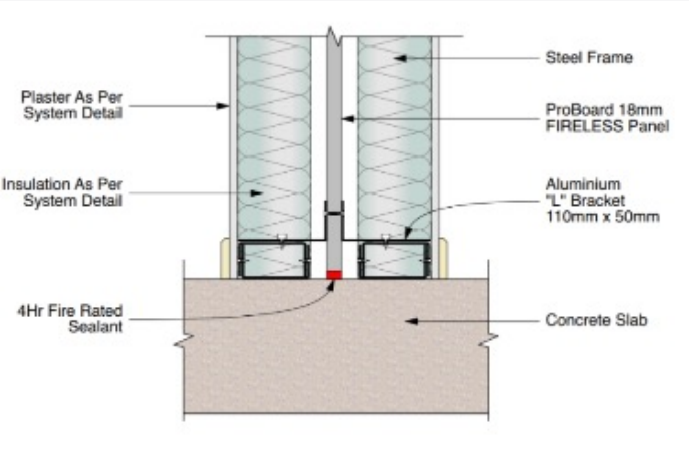
FRL 60/60/60

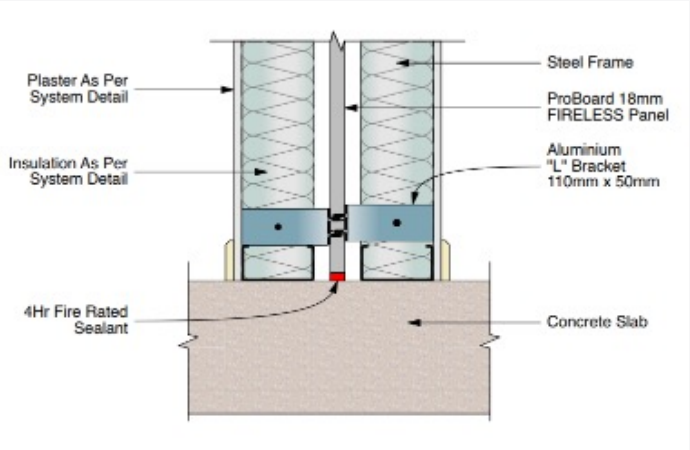
Bracket Fixed to Bottom Plate / Steel Frame



Bracket Fixed to Stud / Steel Frame







Bracket Installation on Installed Frame (Detail 1)

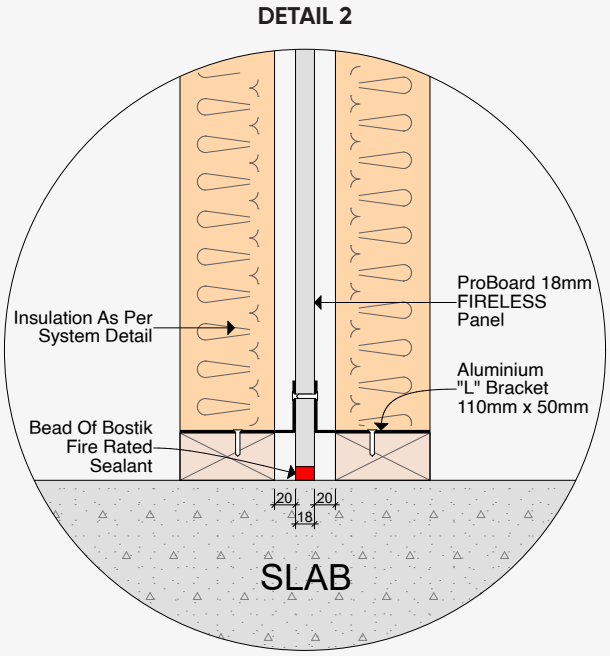
After the first frame has been installed, fix the brackets at 450 at centers maximum along the length of the frame. Try to place the brackets as close as possible to the center of where the panels are going to sit (approximately 600 mm) Fix the long length of the bracket (110 mm length) onto the bottom plate and the underside of the top plate. These brackets are to be fixed with 25 mm x 8-gauge Class 304 stainless steel self-tappers for timber frame and 25 mm x 8-gauge galvanized self-tappers for steel frame.

The end of the bracket should finish on the inside of the frame. This will leave a 20 mm cavity between the frame and the ProBoard Fireless panel when installed.

Fireless – Party Wall Installation

18 mm ProBoard Panel

FRL 60/60/60



Installation of First Panel (see Diagram 2)

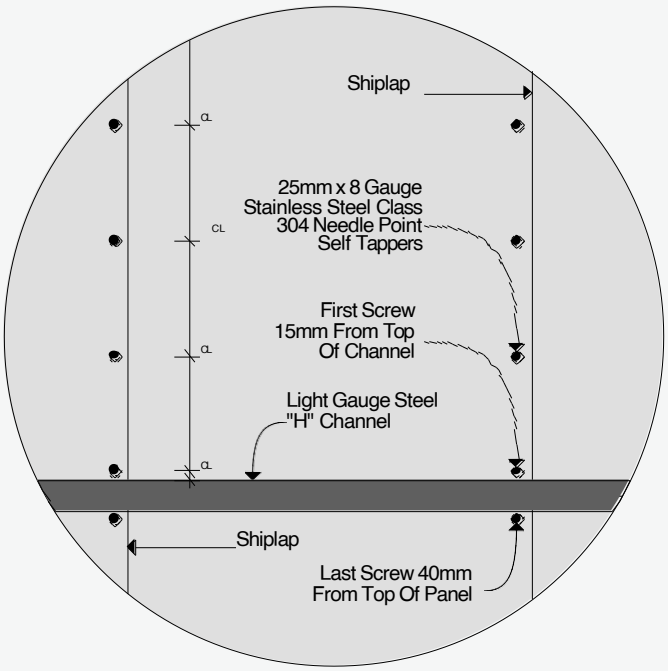
Ensure the slab, is swept and is free of any dust or dirt. Run a thick bead of sealant 20 mm from the edge of the installed frame. Run the sealant approximately 2500 mm along the length of the wall. Sit the first ProBoard panel on the slab, in the middle of the fire-rated sealant. Fix the top and bottom brackets to the panel using 25 mm x 8-gauge Class 304 stainless steel self-tappers.

Fireless – Party Wall Installation

18 mm ProBoard Panel

FRL 60/60/60

DETAIL 3



Installation of Second Panel (Detail 3)

Once the first panel has been installed to the brackets, run a bead of sealant down the middle of the ship lap on the installed panel. Position the second board in the middle of the bead of sealant on the slab. Push the ship laps together and fix the brackets top and bottom on the second ProBoard panel. Fix the full length of the ship lap with 25 mm x 8 -gauge Class 304 stainless steel self-tappers at 200 mm spacings maximum. Ensure you fix the screw at the top of the panels 40 mm from the top to allow for the sides of the "H" channel.

Install all the remaining panels, as per the first two, until you have completed the full length of the wall.

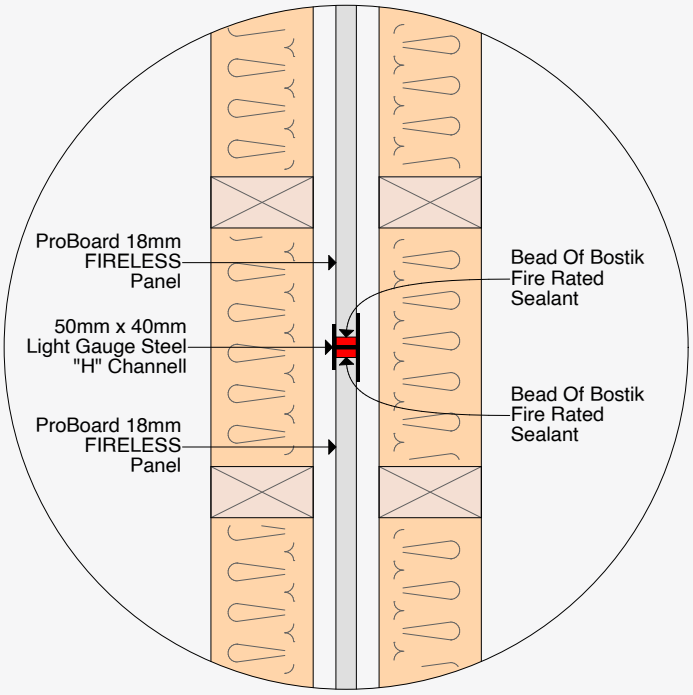
Once the installation of the ground floor Proboard panels has been completed install the intermediate brackets. (see Intermediate Bracket Layout page 9)

Fireless – Party Wall Installation

18 mm ProBoard Panel

FRL 60/60/60

DETAIL 4



Installation of "H" Channel (Detail 4)

Once ground floor Intermediate brackets have been installed continue onto the first floor. Run a bead of fire-rated sealant down the length of the "H" channel. Sealant facing down, place the "H" channel on the top of the first row of panels. Complete this process until all the channels are installed along the bottom row of ProBoard panels. Where the channel joins with the next channel, run a bead of fire-rated sealant around the outside of the join. Run a bead of sealant in the exposed side of the channel.

Place the first panel in the channel and fix as per the first ProBoard panel on the bottom row. Complete the process as per the bottom row.

Continue until all the rows of panels have been installed.

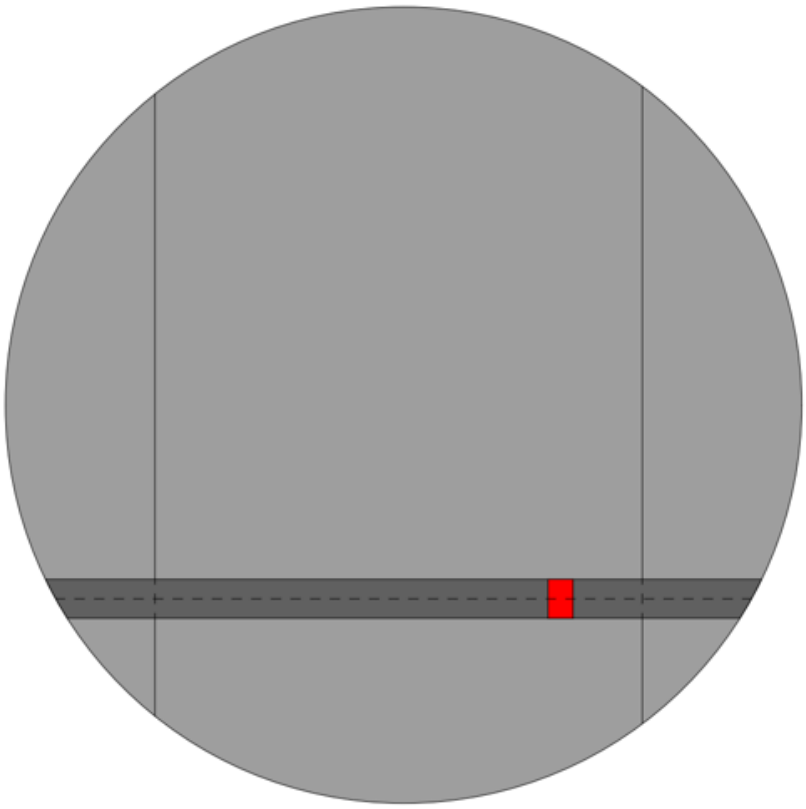
Fireless – Party Wall Installation

18 mm ProBoard Panel

FRL 60/60/60

Joining of "H" Channel (Detail 5)

When two H Channels meet, ensure that they are tight up against each other with ZERO CLEARANCE & fire rated sealant is placed between the seam.



"H" Channel With Fire Rated Sealant @ Channel Joint

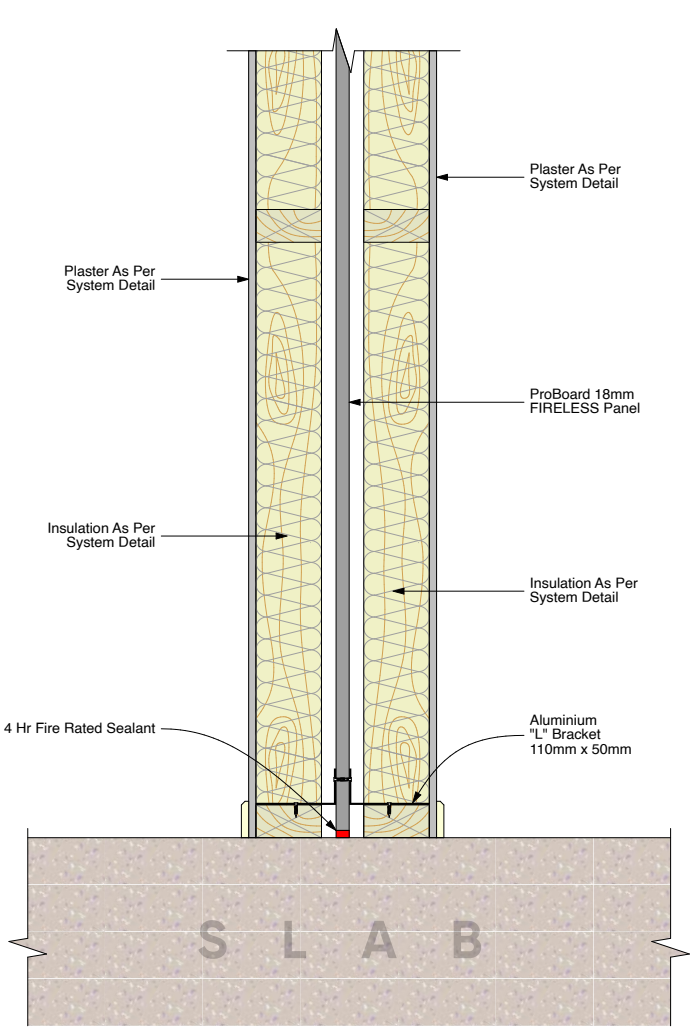
PROBOARD.

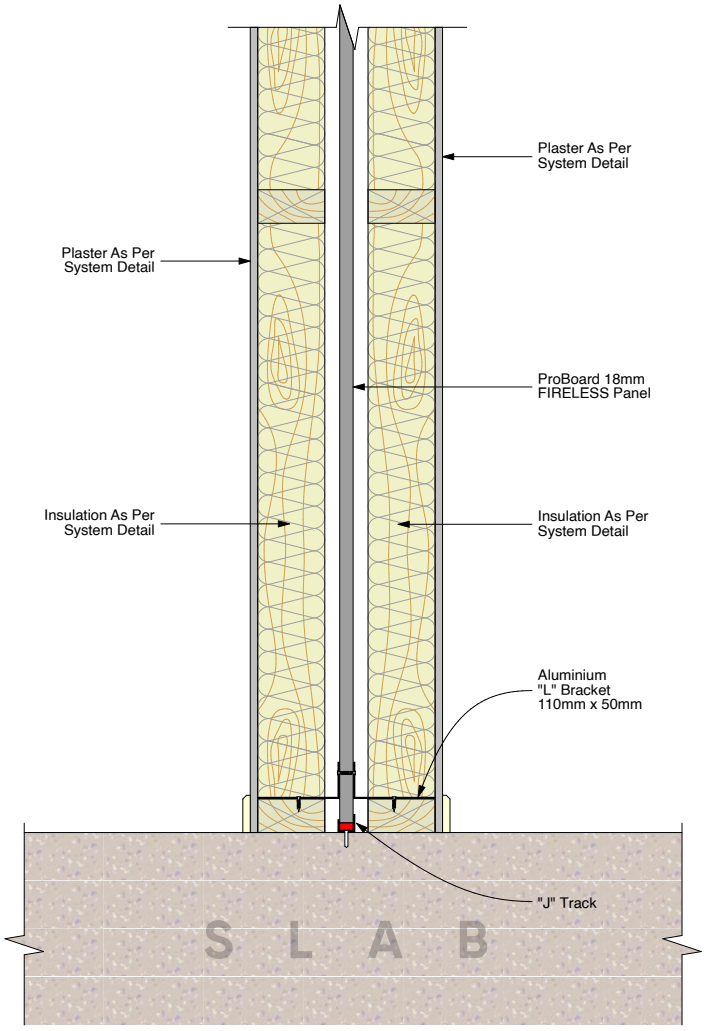
18mm Fireless Party Wall

Technical Drawings

Typical Technical Drawings

Base Junction





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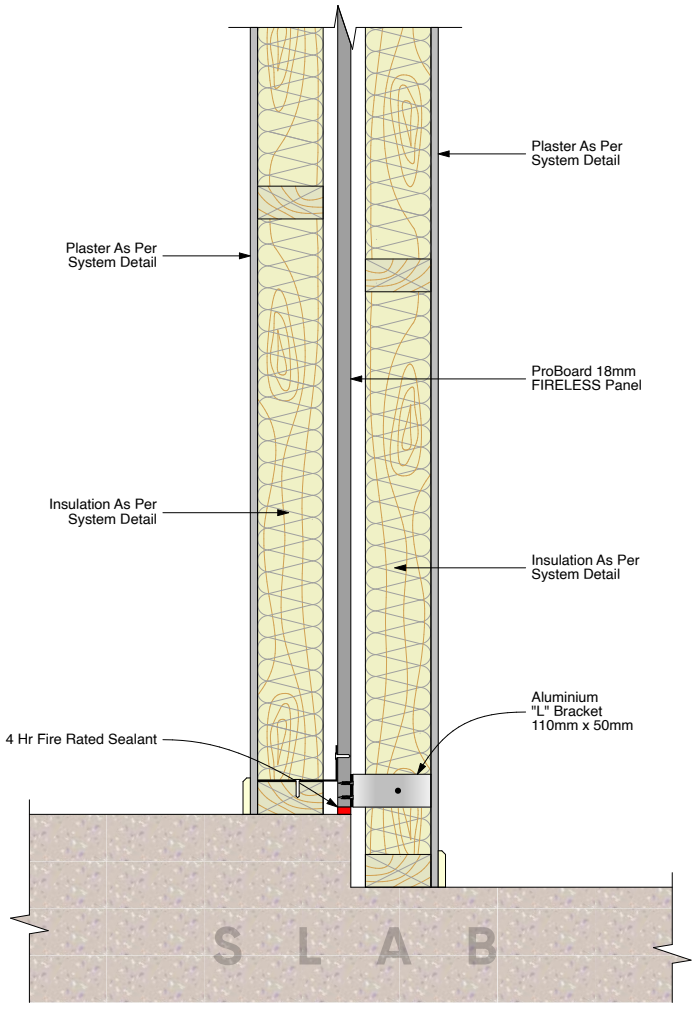
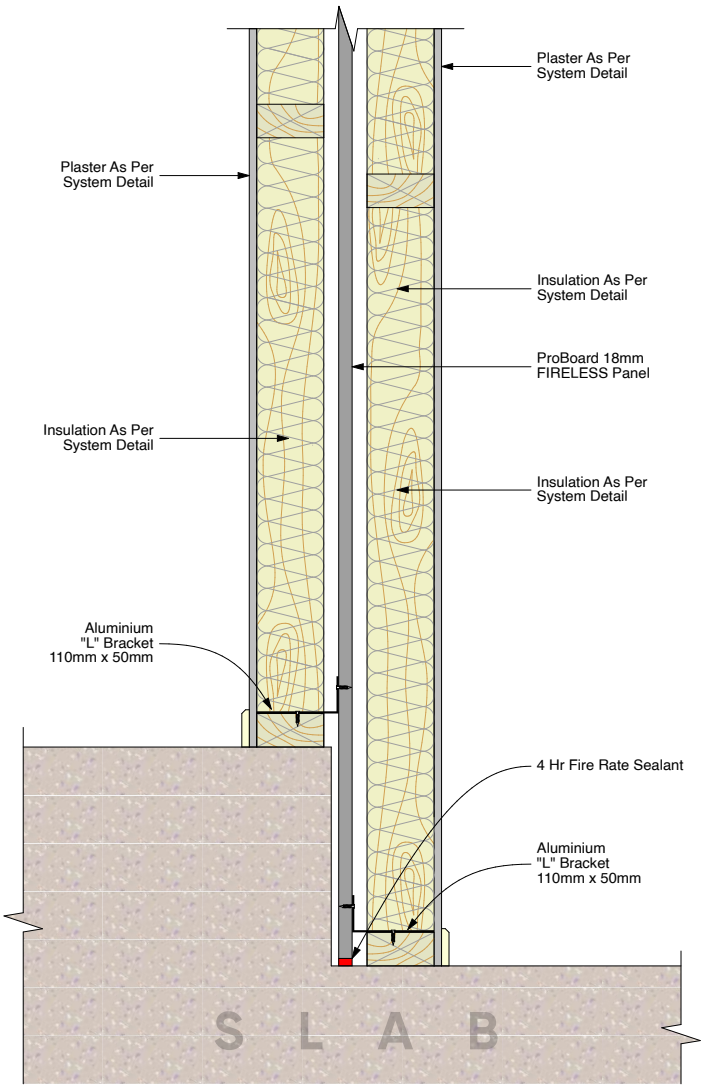
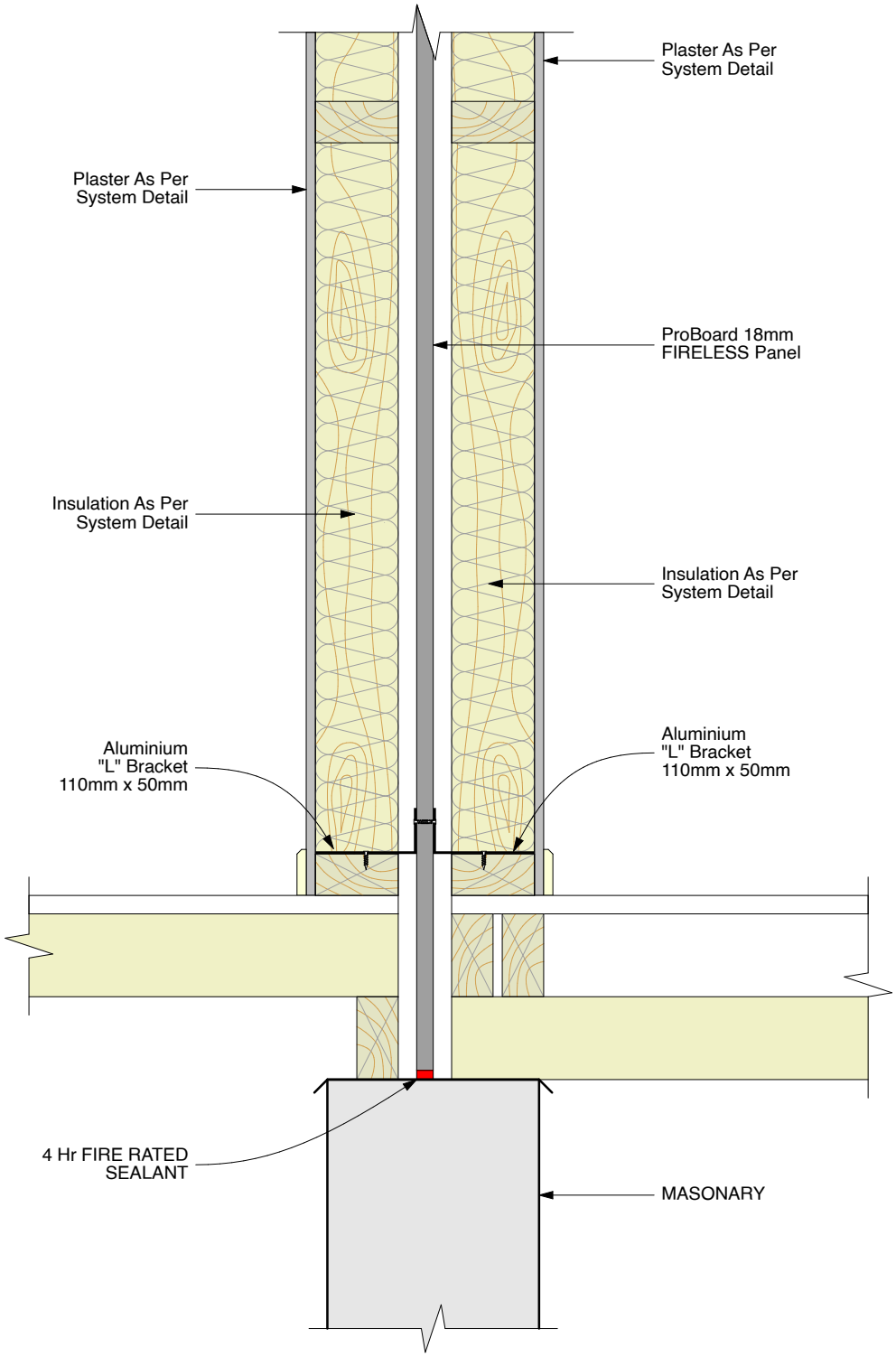
Base Junction





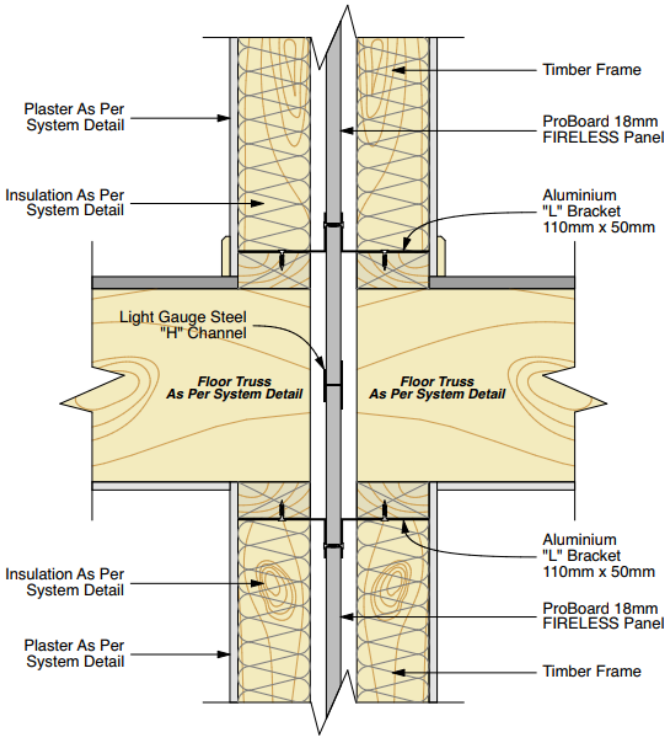
Typical Technical Drawings

Base Junction

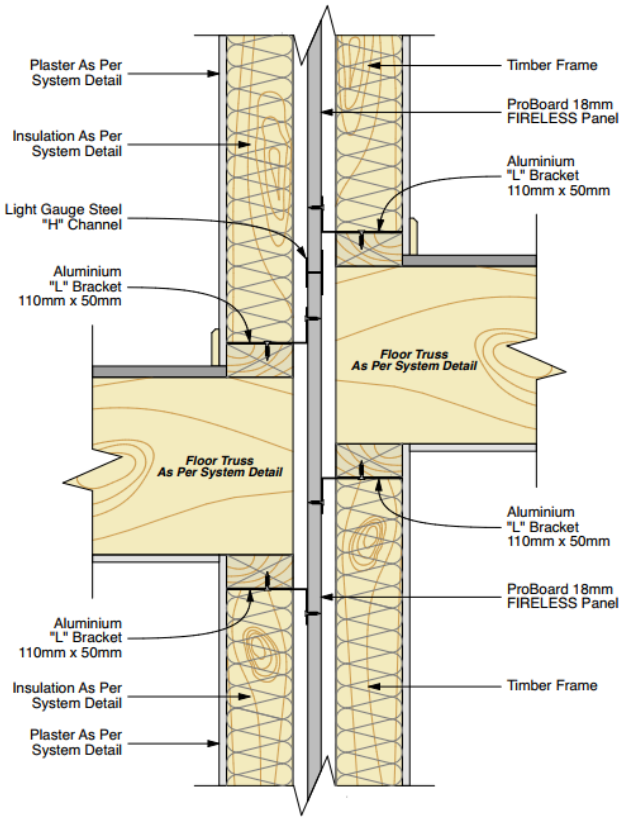


Typical Technical Drawings

Floor Junction

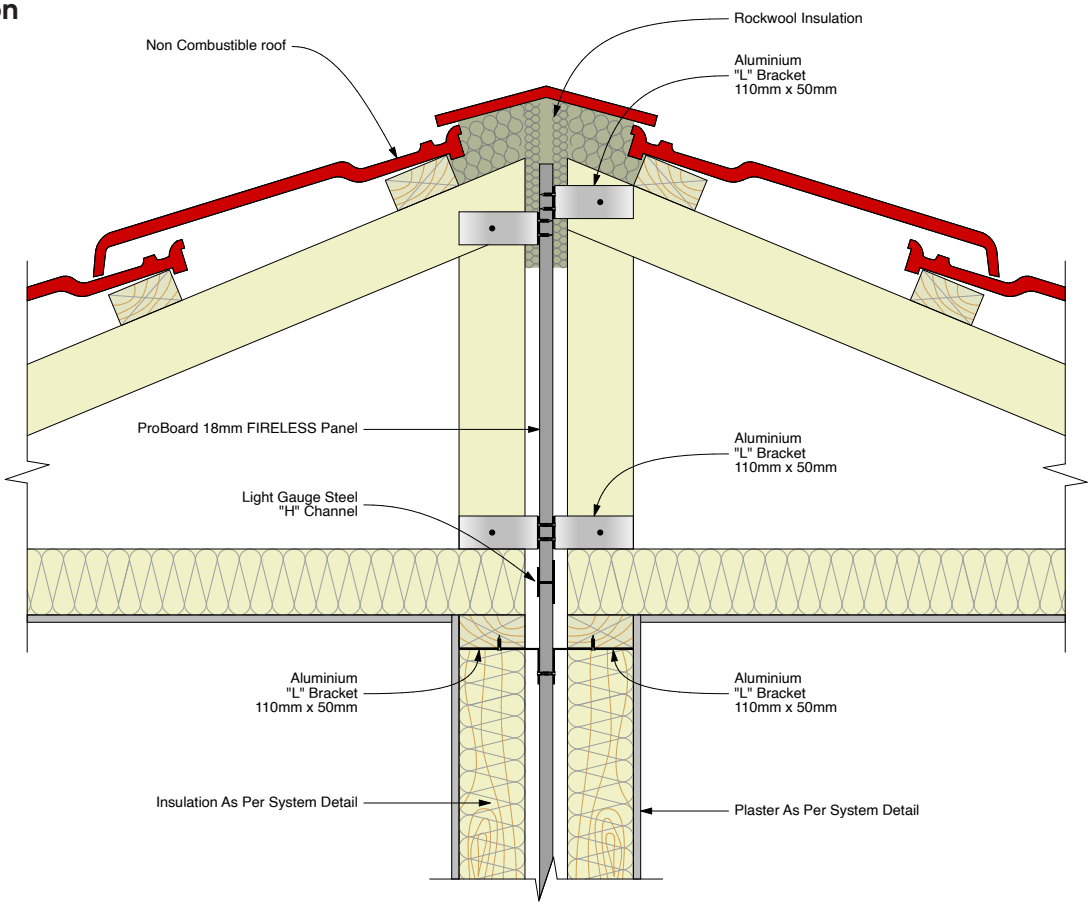


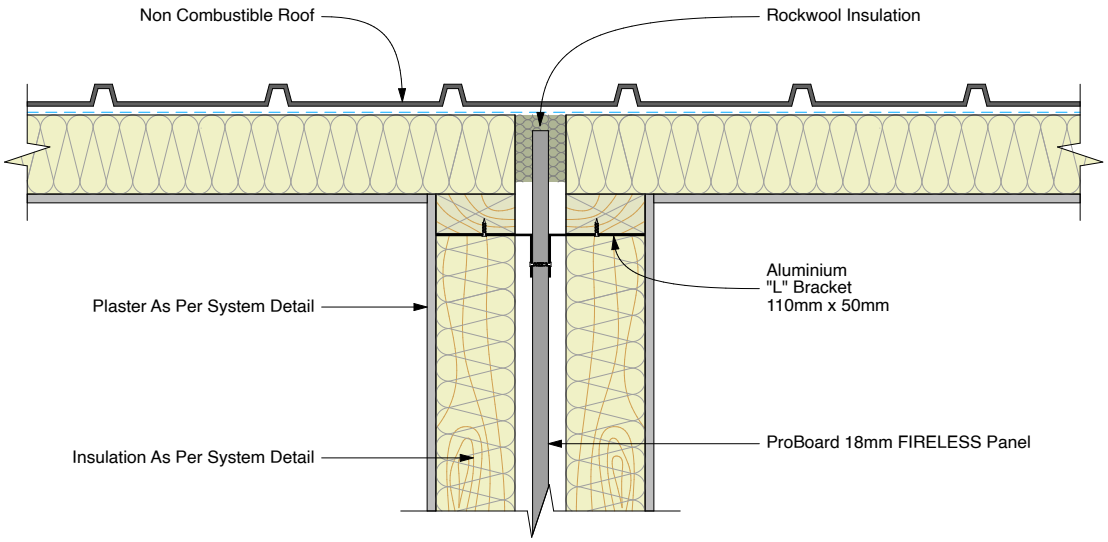
Floor Junction



Typical Technical Drawings

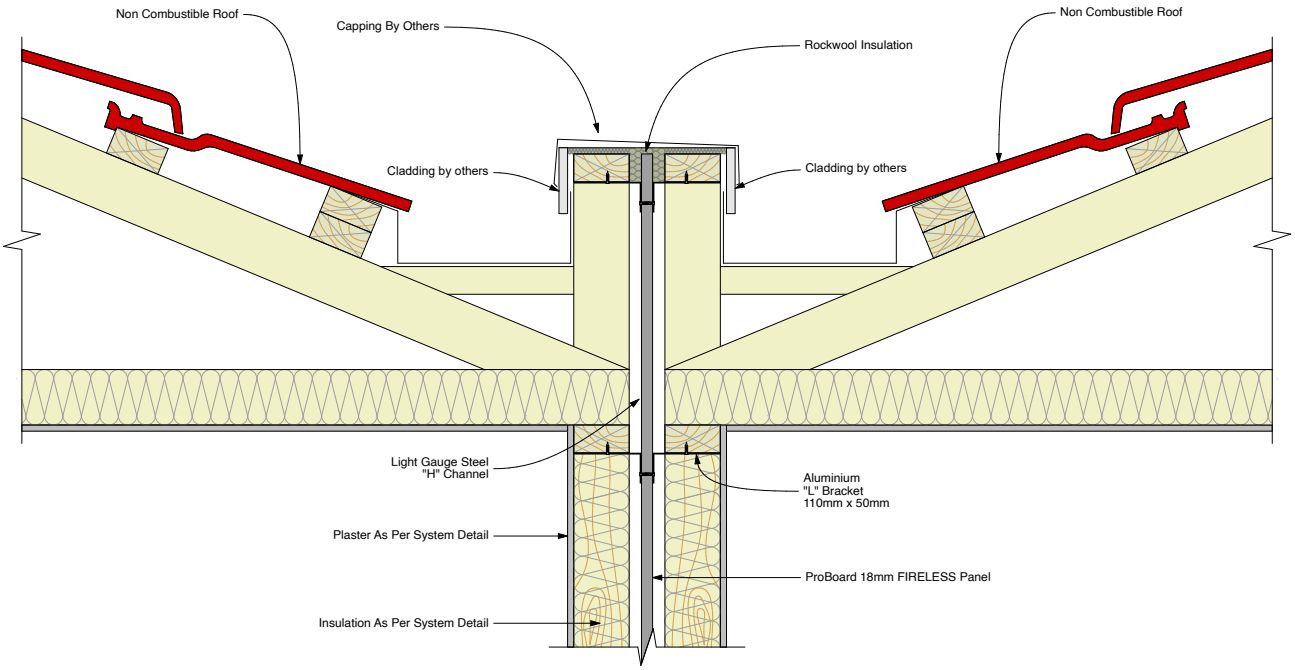
Roof Junction

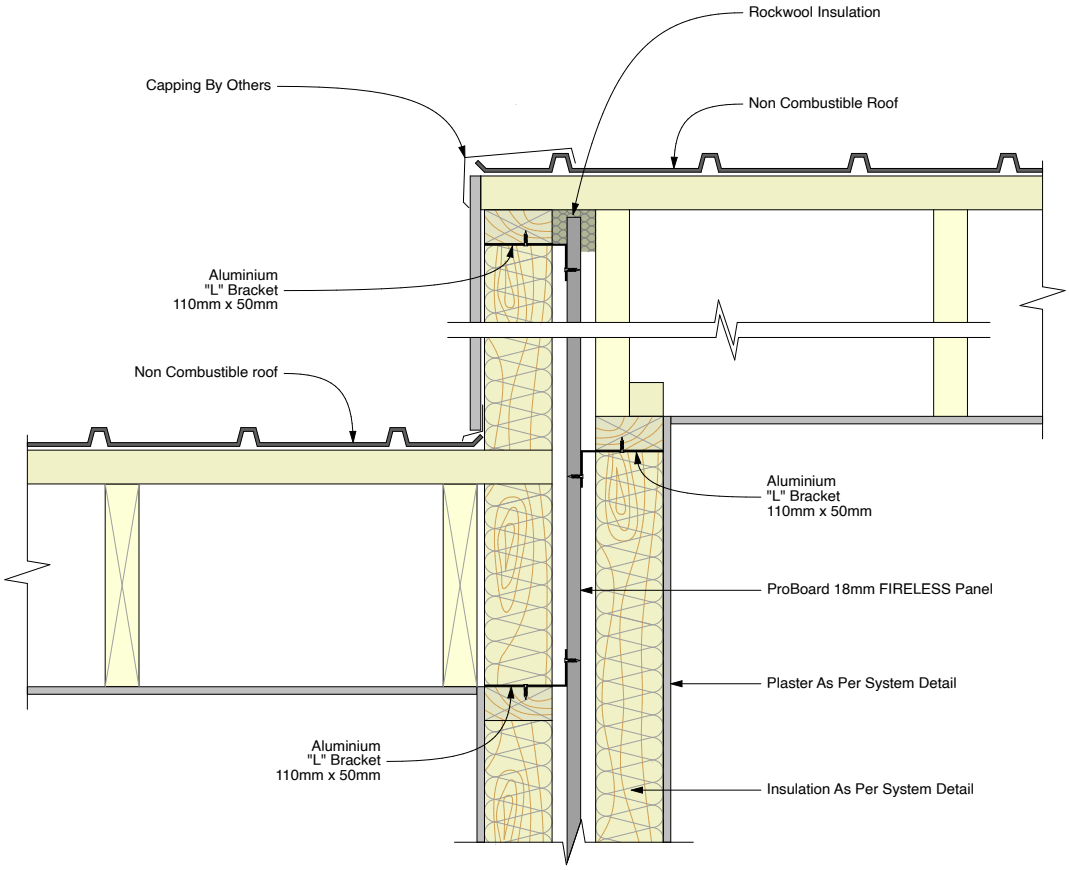




Typical Technical Drawings

Roof Junction





Typical Technical Drawings

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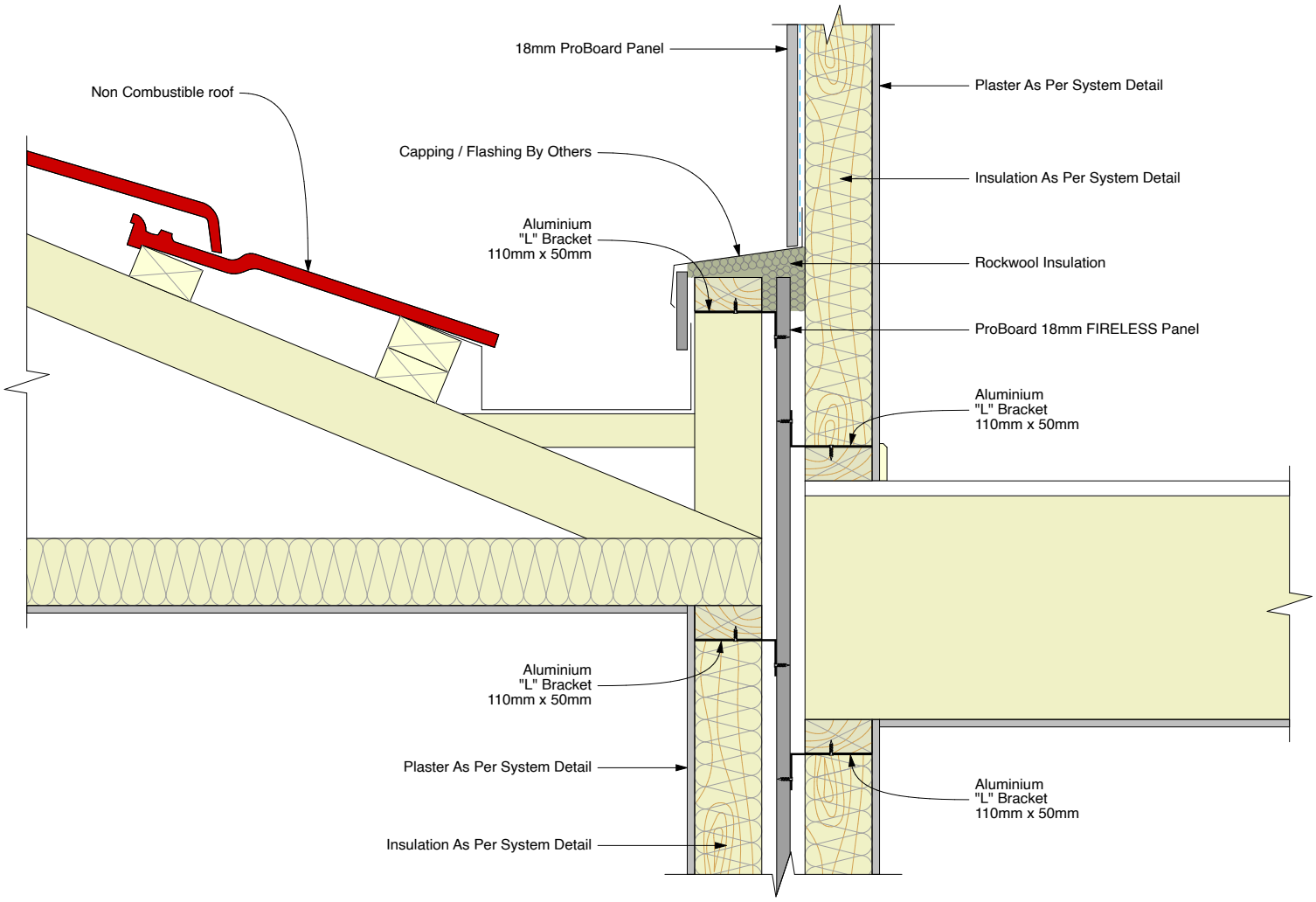
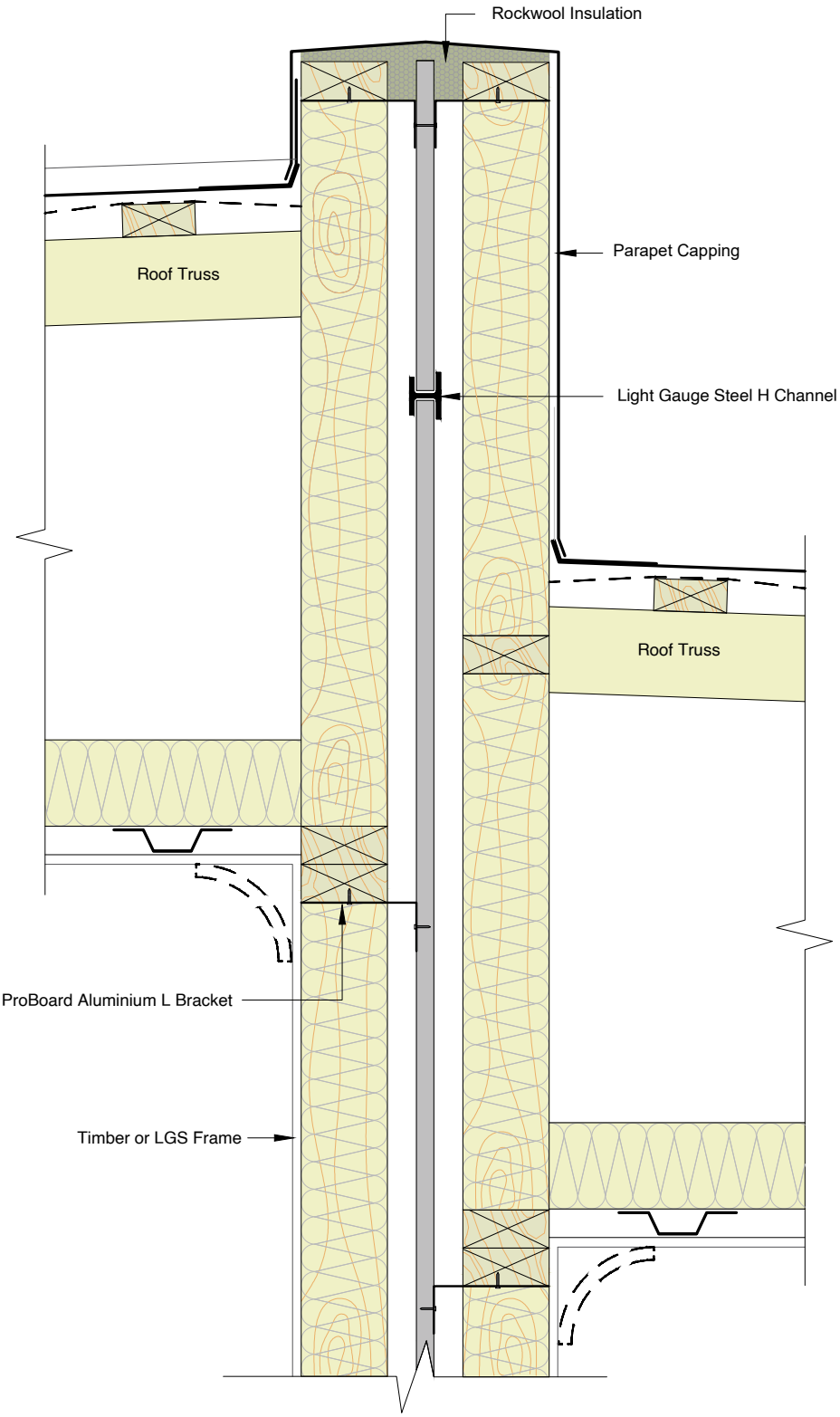


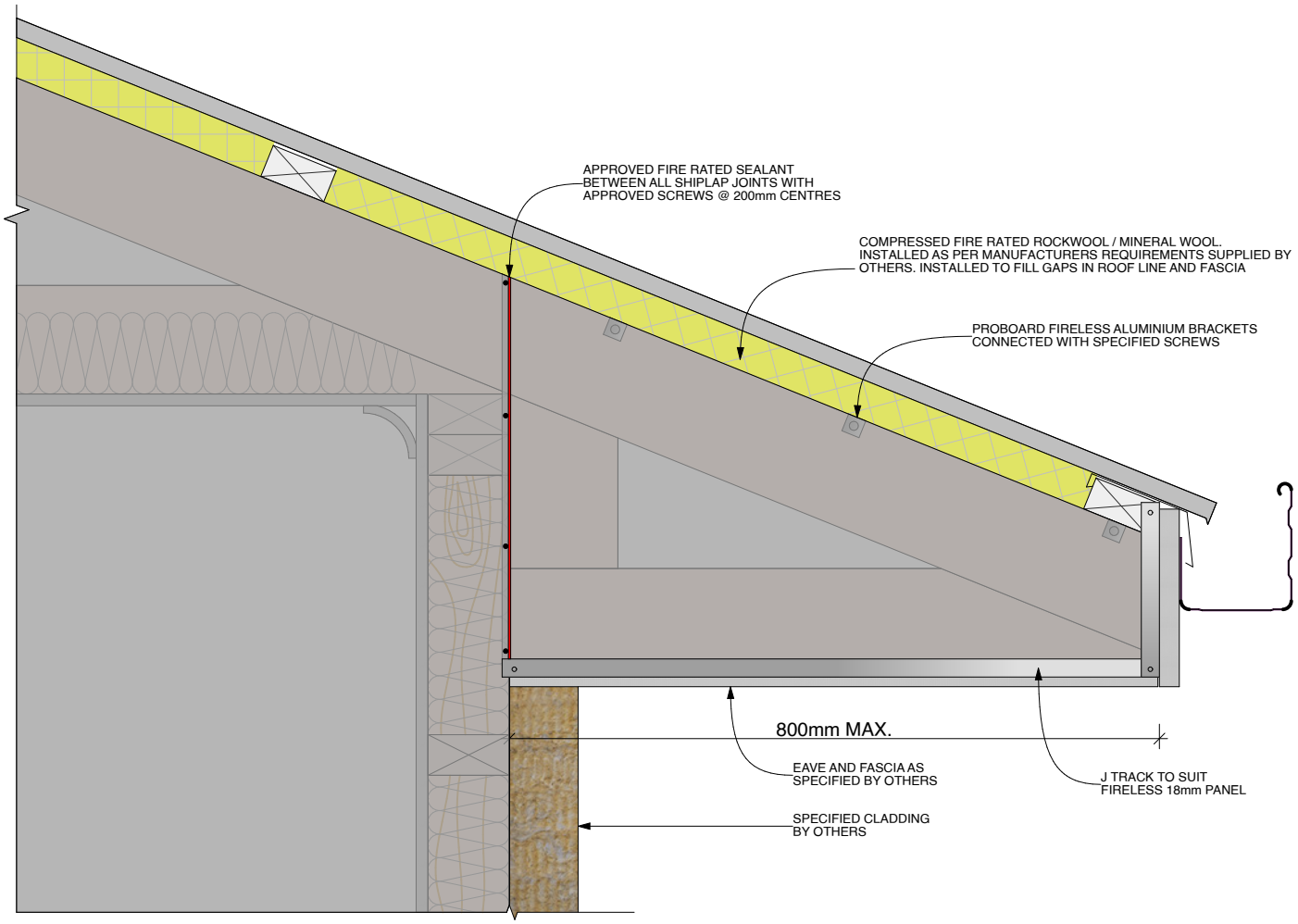
Typical Technical Drawings

Roof Junction



Typical Technical Drawings

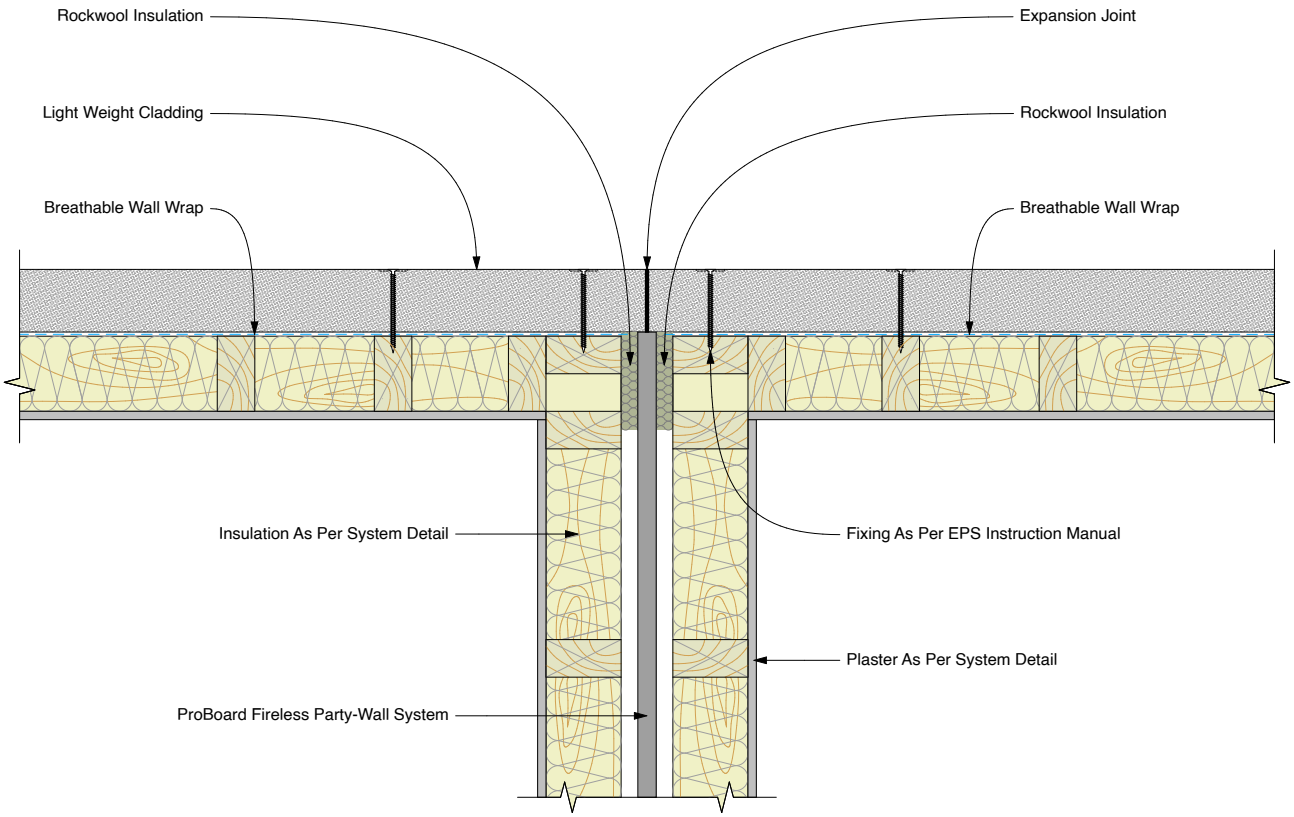
Eave Detail

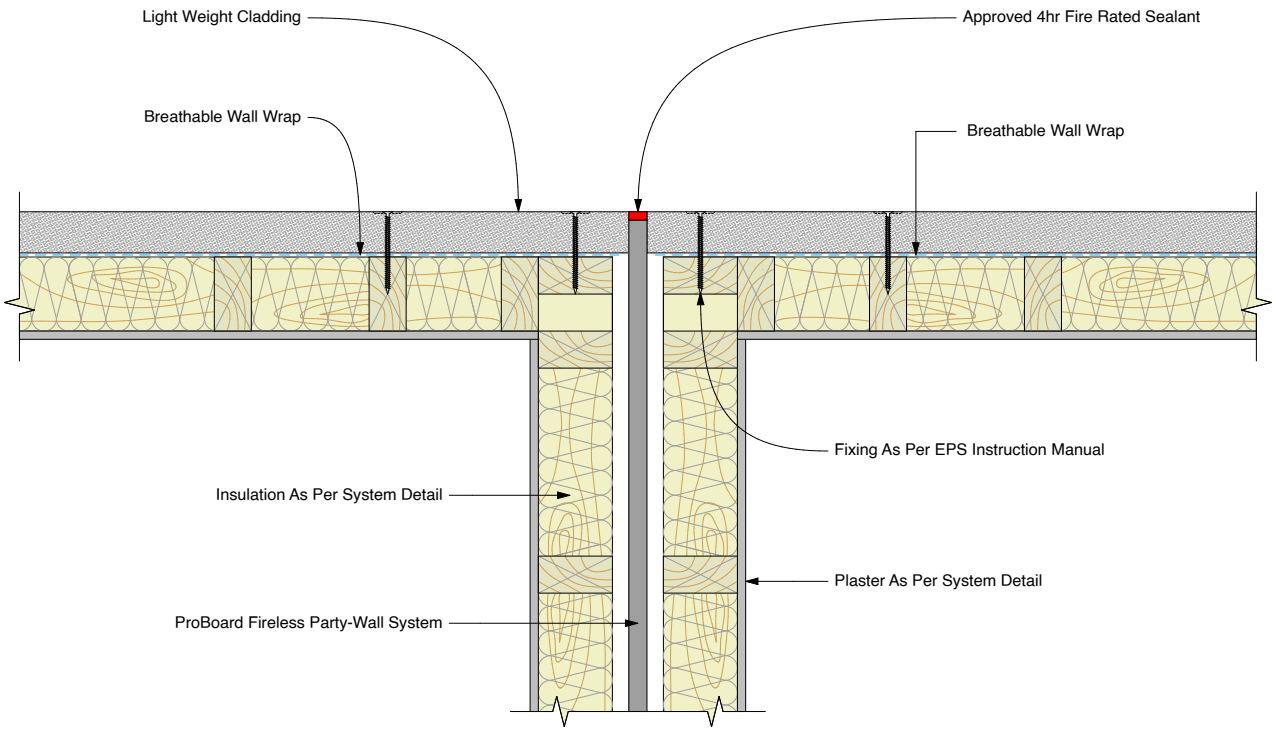


IMPORTANT: SHIPLAP MUST BE REMOVED AT TERMINATION POINTS.
TIP: WHERE POSSIBLE, LEAVE EXCESS PANEL PAST THE FINISHING POINT AND CUT BACK WITH A CIRCULAR SAW TO SUIT CLADDING REQUIREMENTS

Typical Technical Drawings

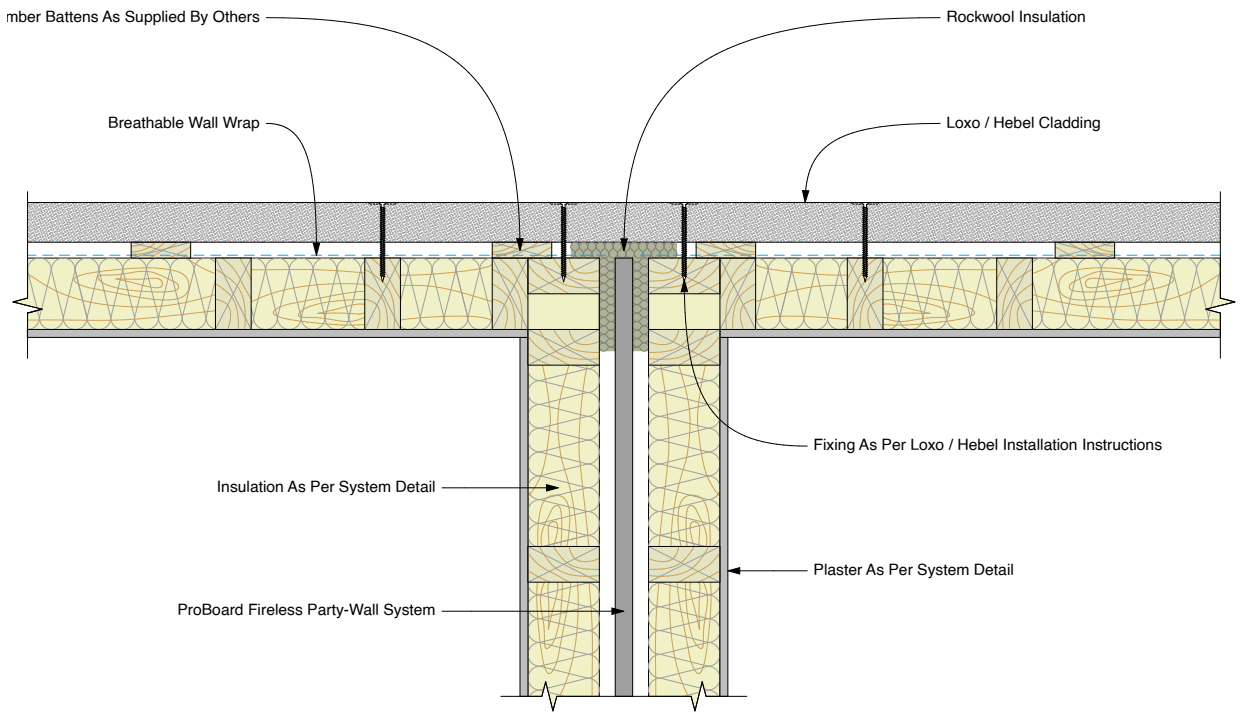
T-Intersection

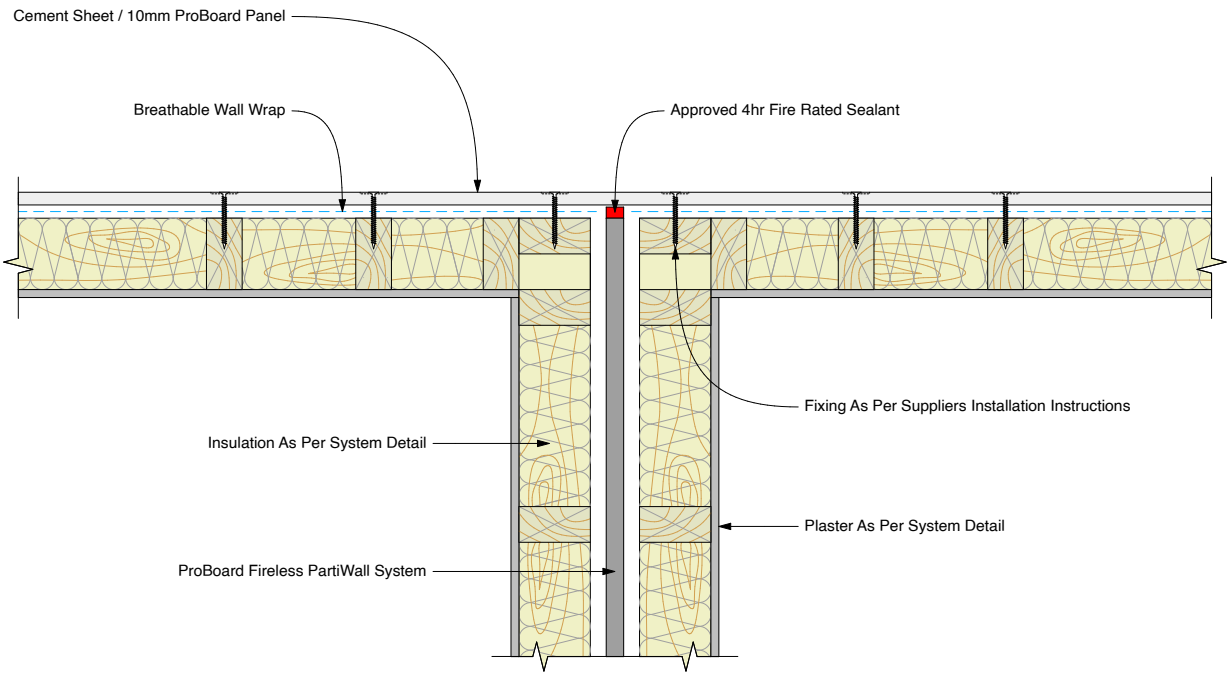




Typical Technical Drawings

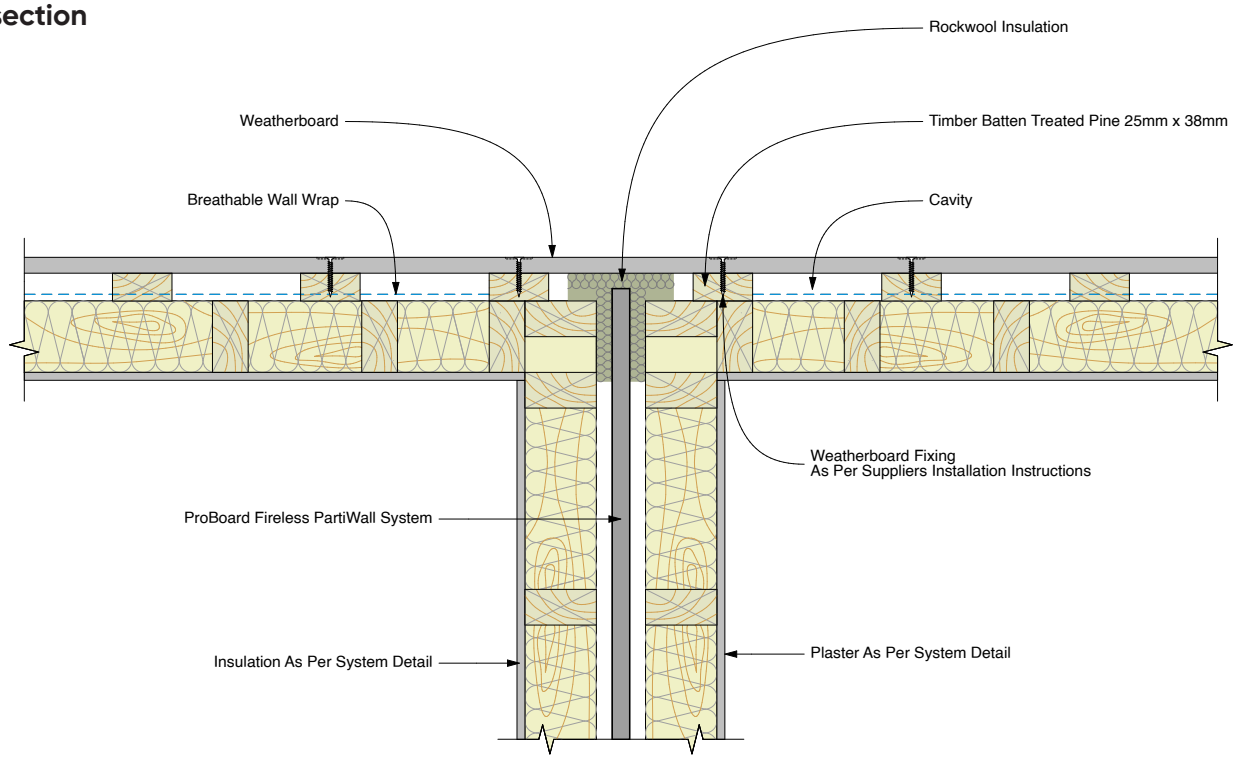
T-Intersection

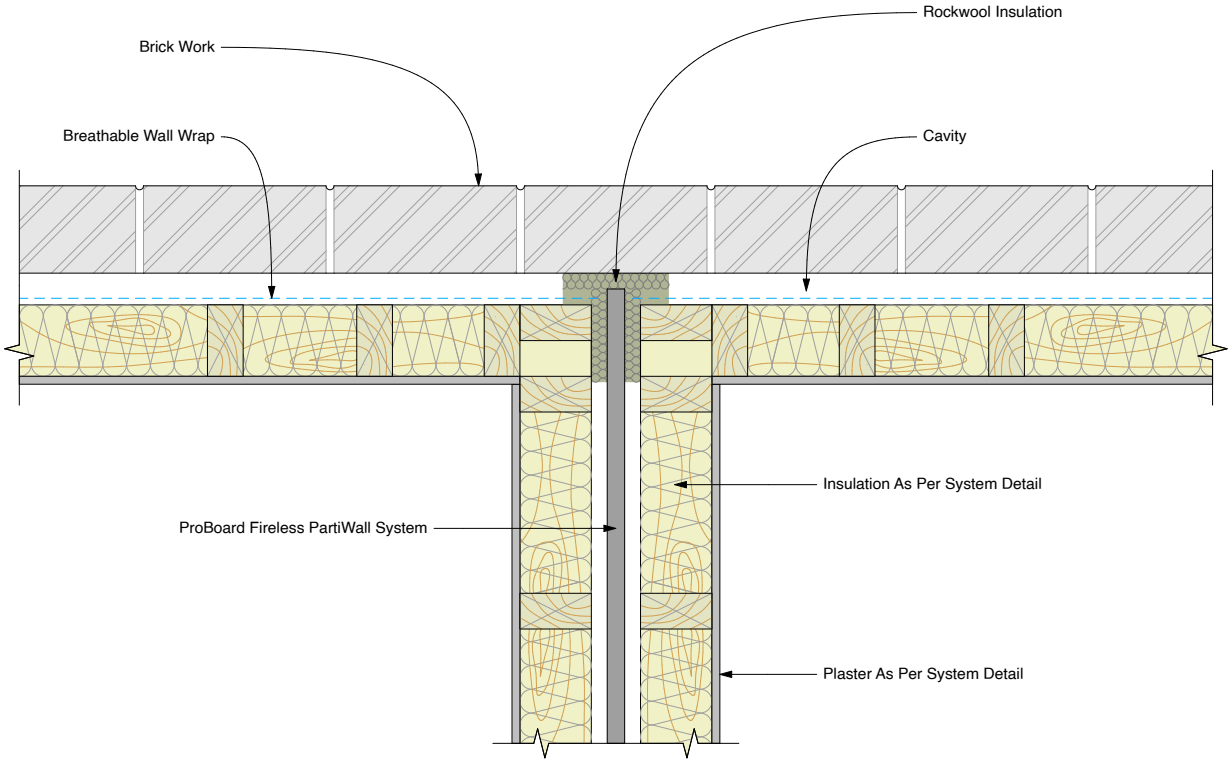




Typical Technical Drawings

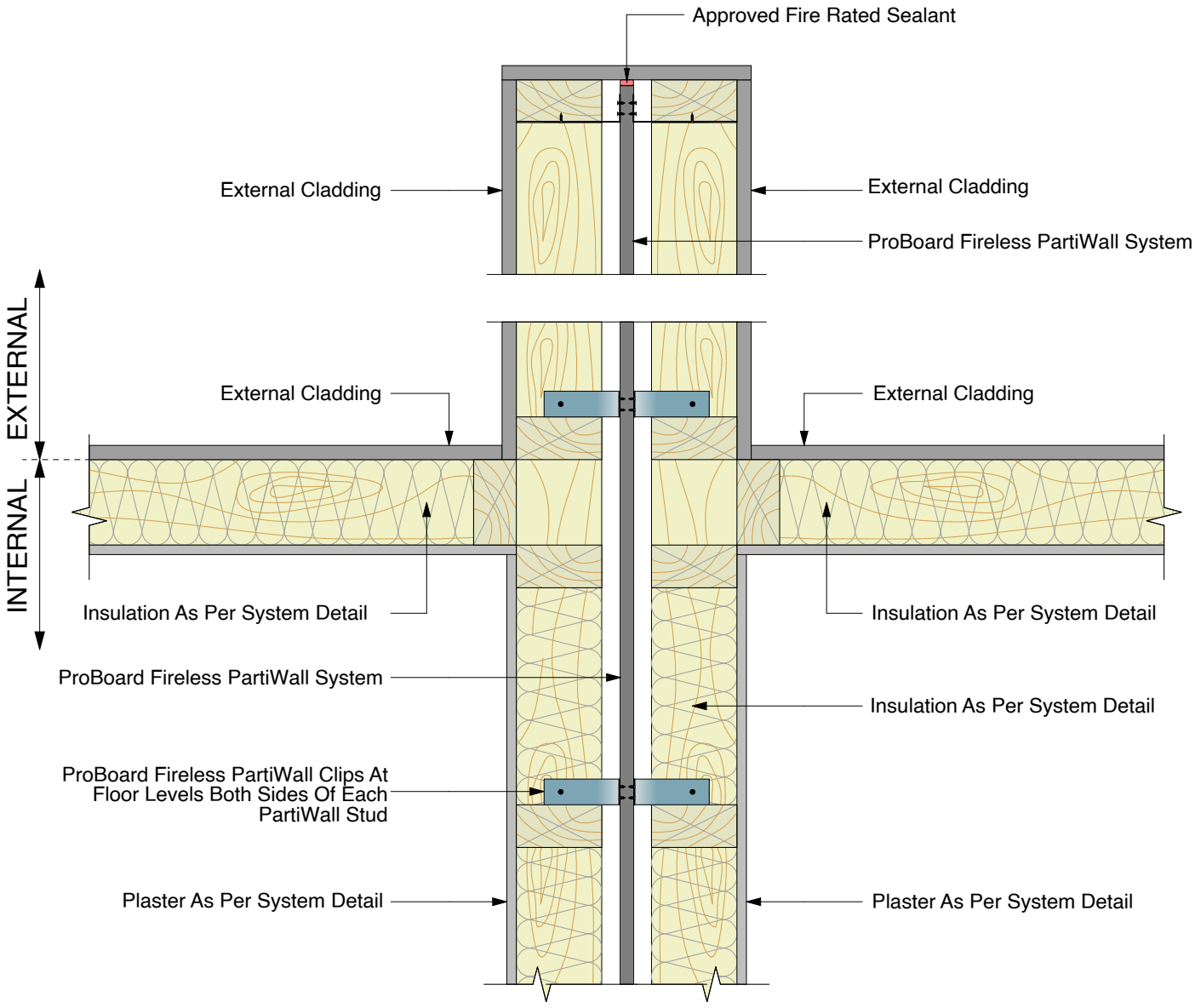
T-Intersection





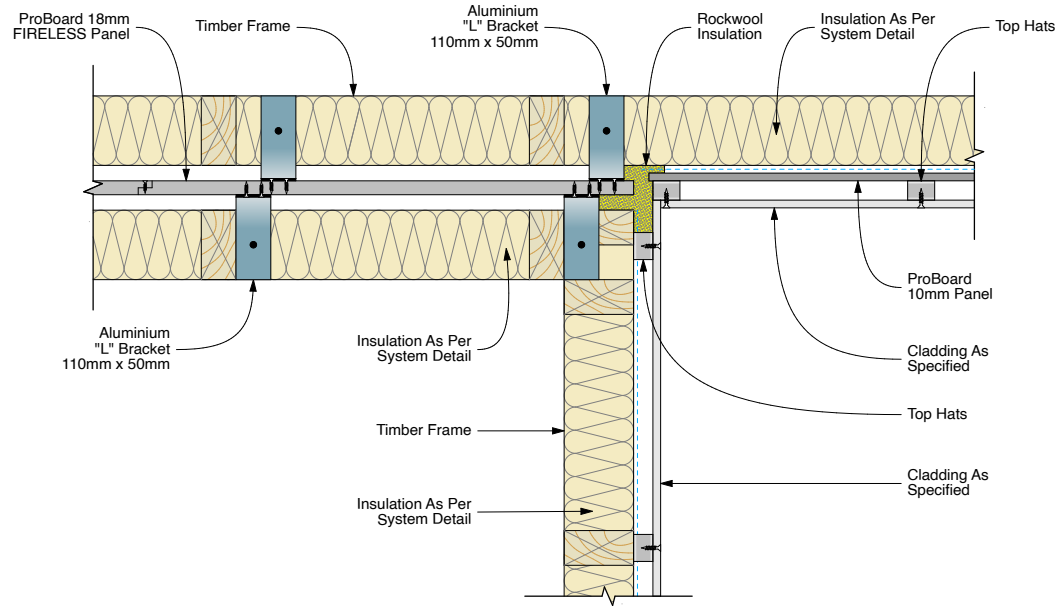
Typical Technical Drawings

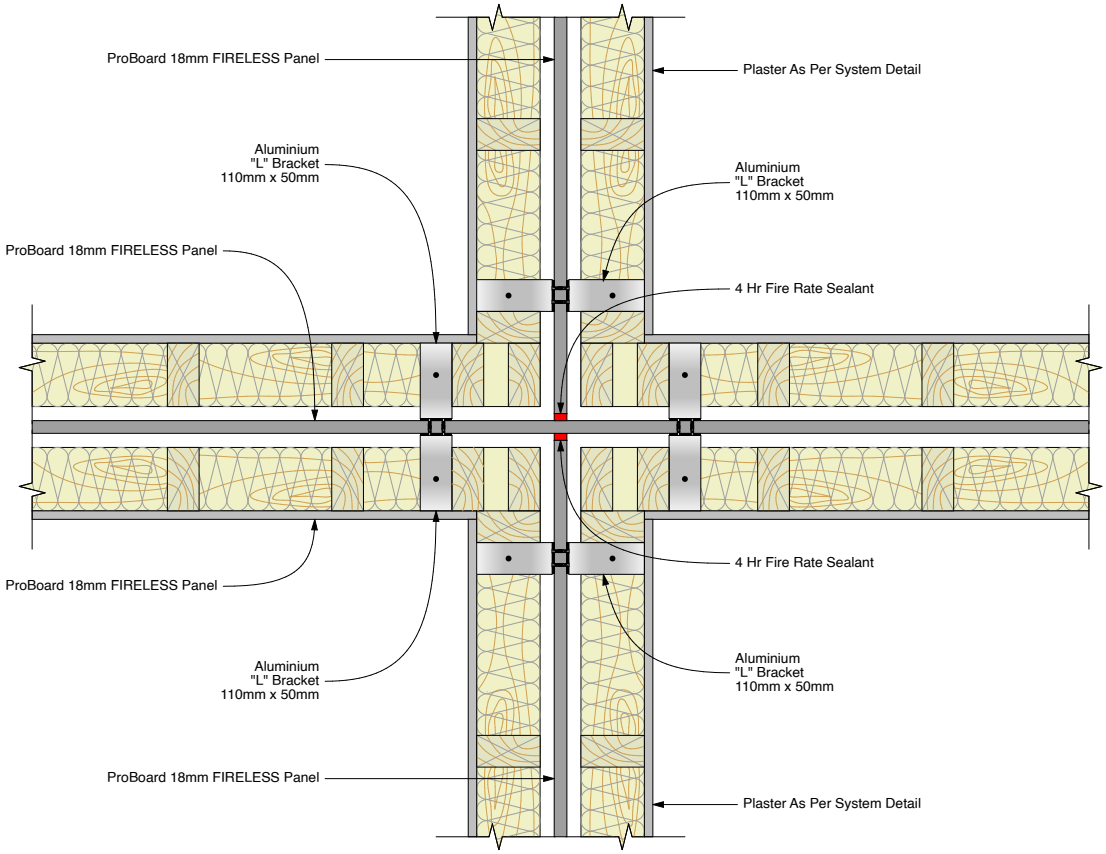
Intersection



Typical Technical Drawings

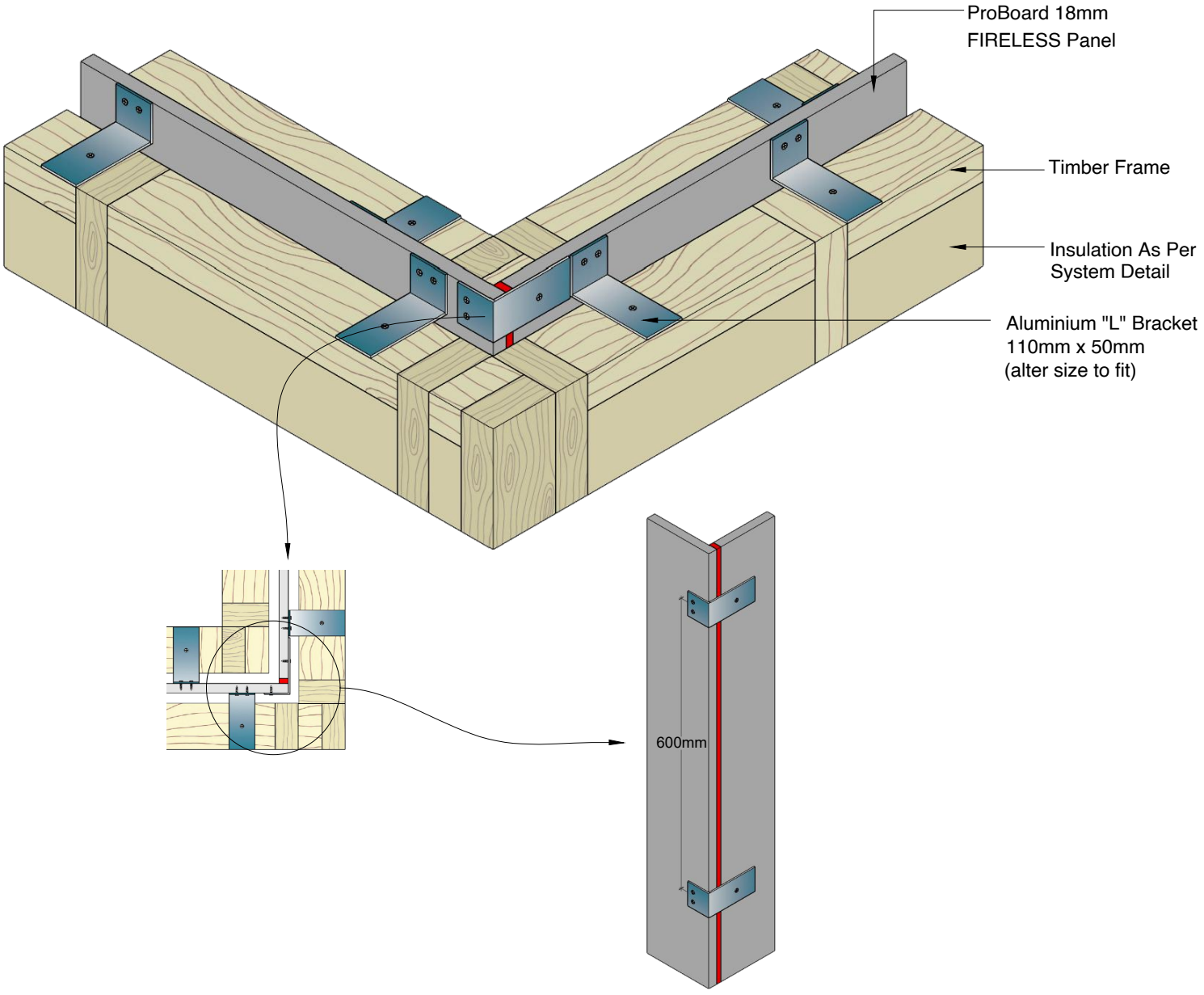
Intersection





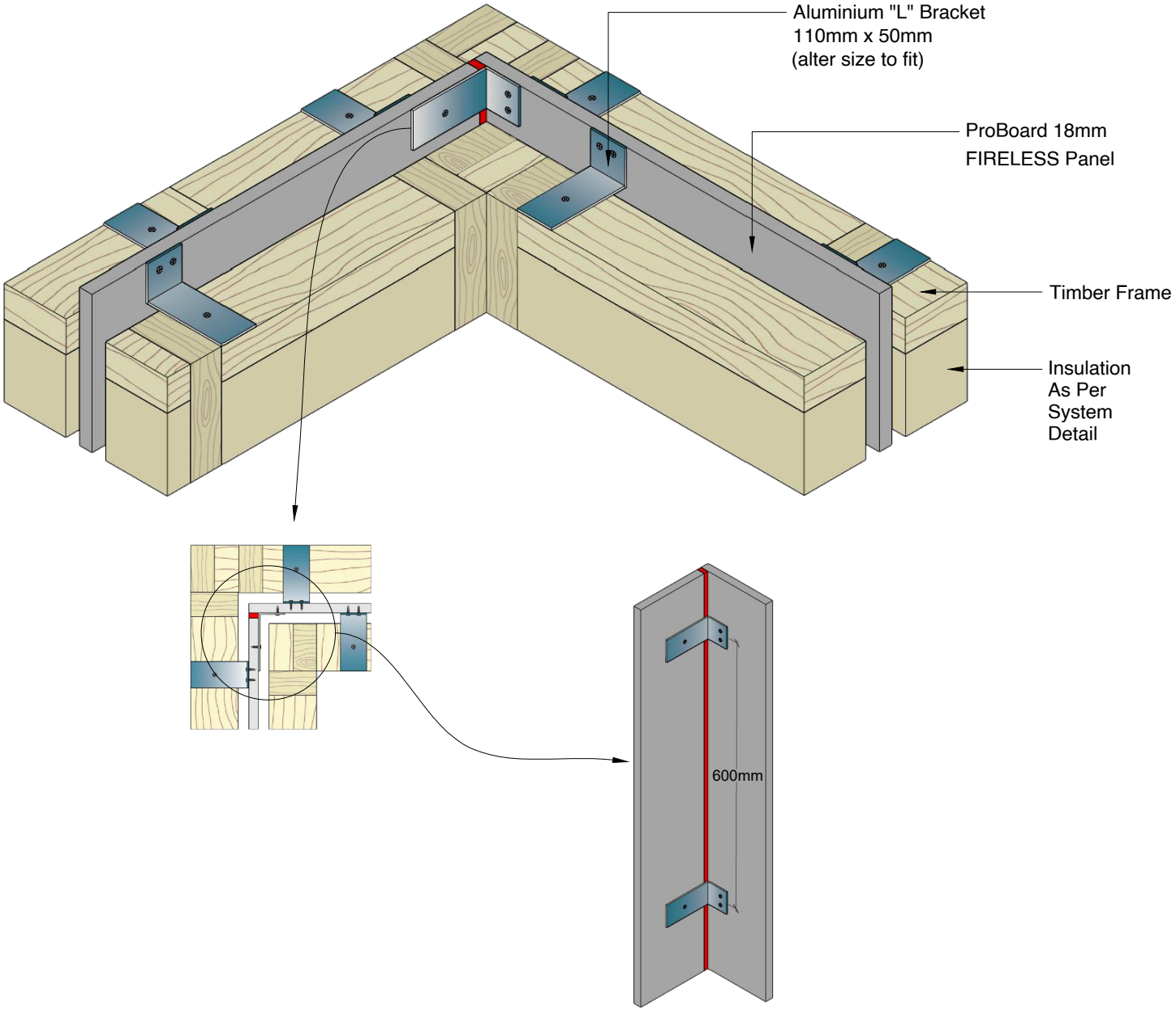
Typical Technical Drawings

Intersection



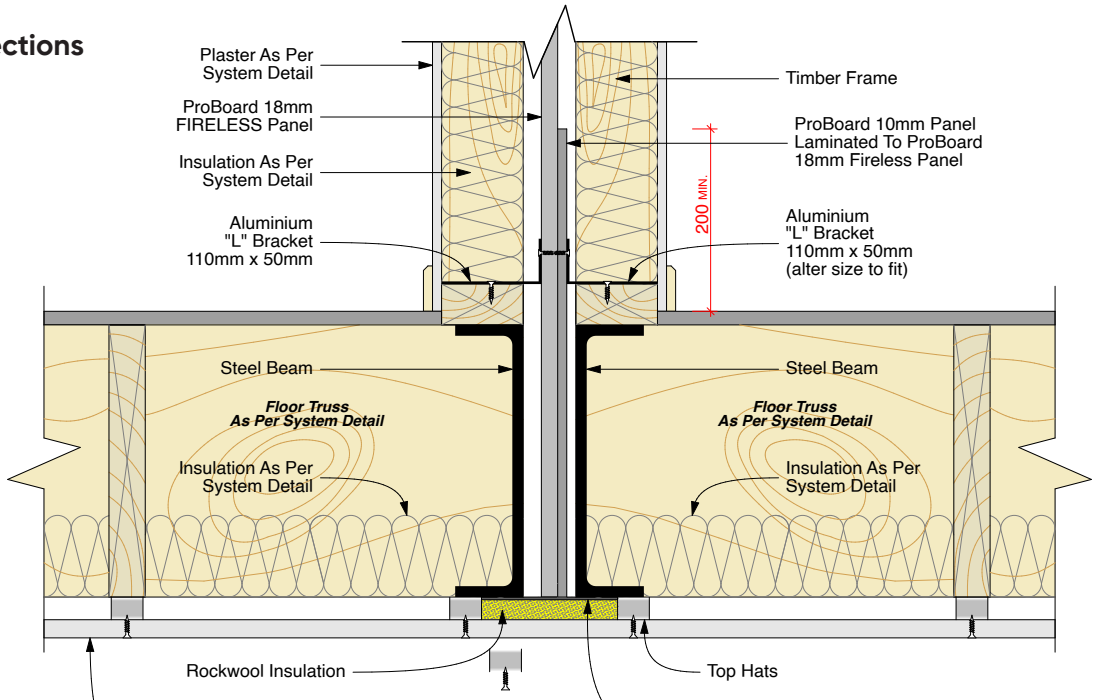
Typical Technical Drawings

Intersection

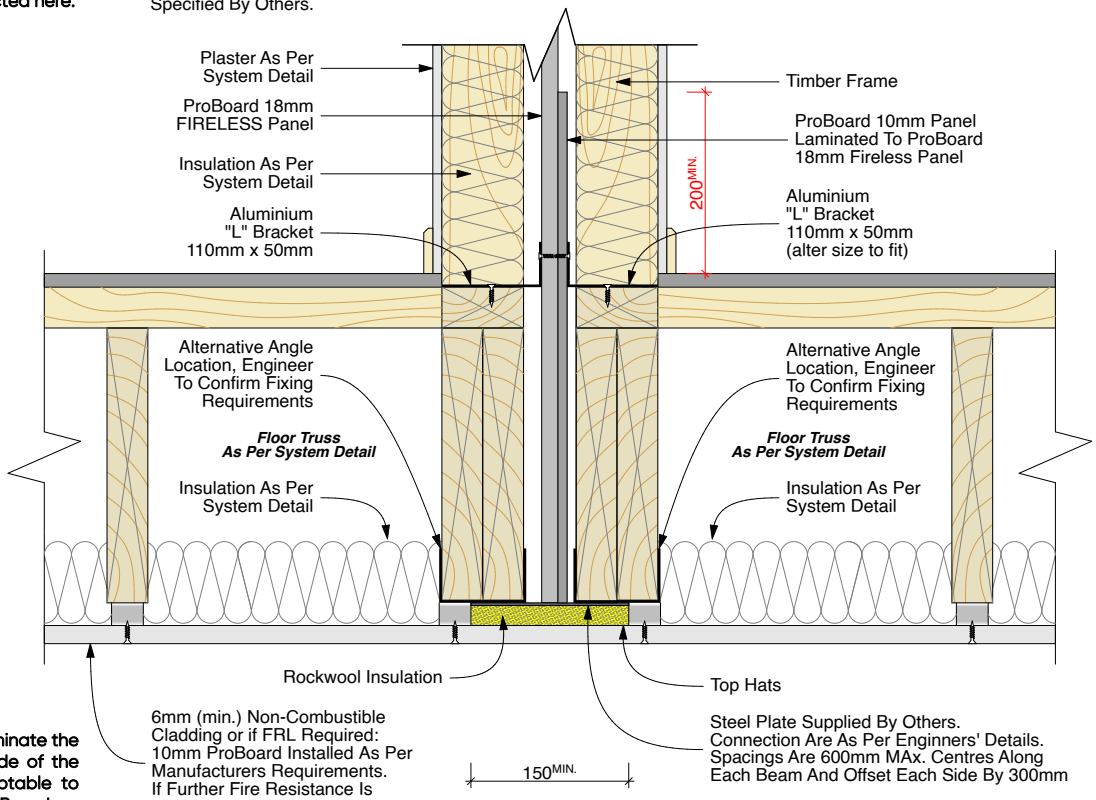


Typical Technical Drawings

Cantilever Sections



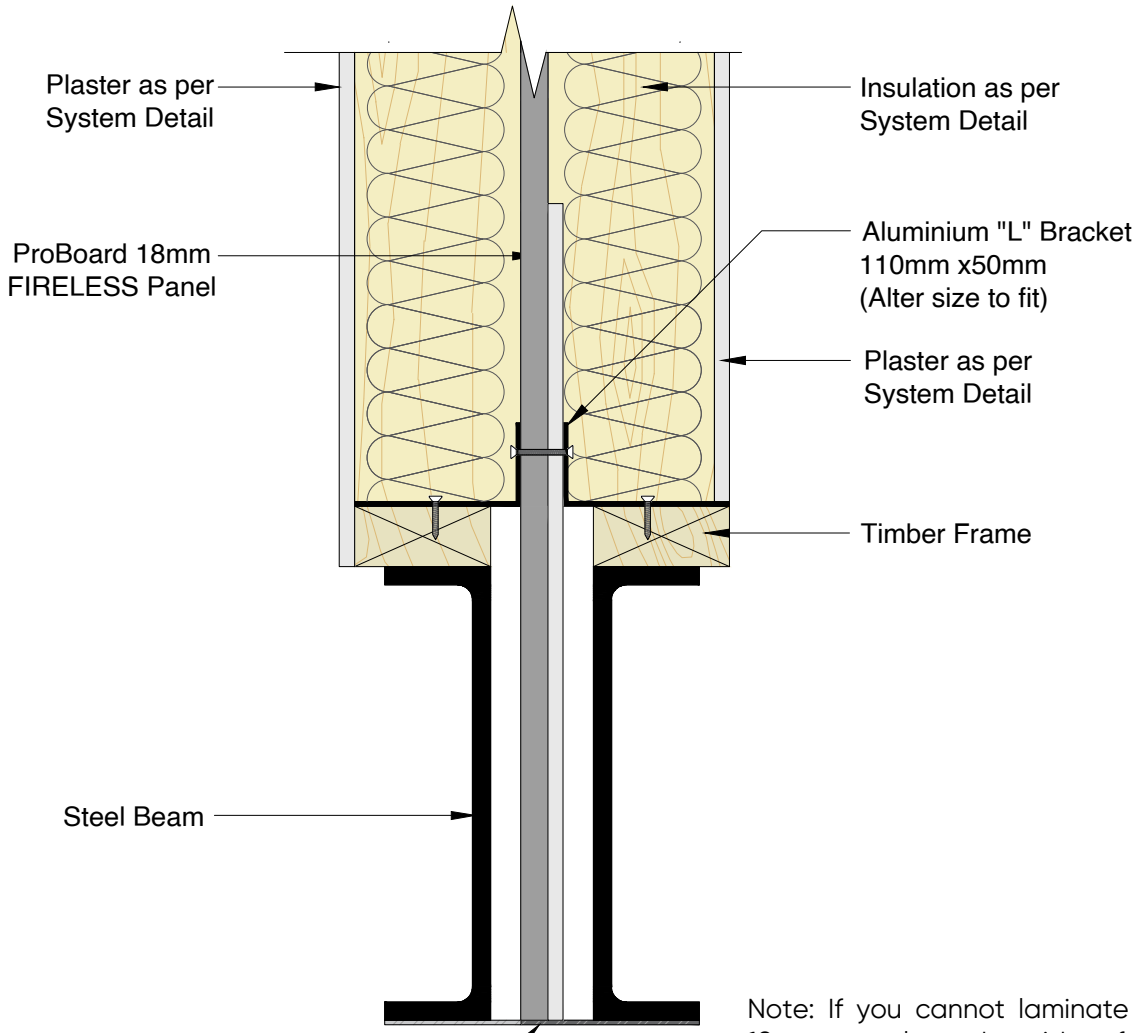
Note: If you cannot laminate the 10mm panel to the side of the party wall. it is acceptable to install the 10mm proboard or 13mm fyrecheck plaster under the soffit section depicted here.



Note: If you cannot laminate the 10mm panel to the side of the party wall. it is acceptable to install the 10mm ProBoard or 13mm fyrecheck plaster under the soffit section depicted here.

Typical Technical Drawings

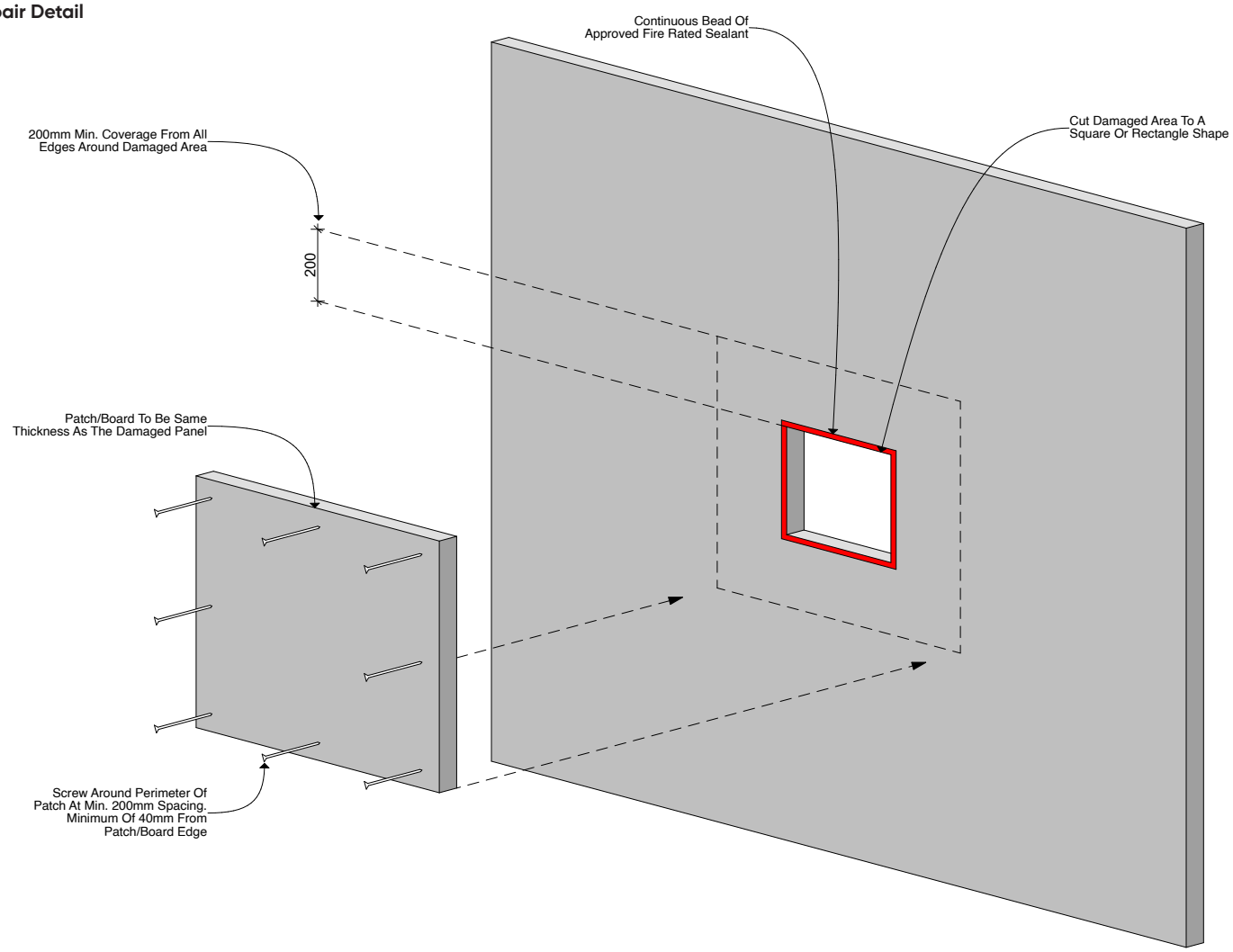
Cantilever Details



Note: If you cannot laminate the 10mm panel to the side of the party wall, it is acceptable to install the 10mm ProBoard or 13mm Fyrecheck plaster under the soffit section depicted above.

Typical Technical Drawings

Repair Detail



Notes

Notes

Notes

CodeMark Australia
Certificate CM40372
CMI CERTIFICATION

PROBOARD.

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