

Sponsor name	AAC Building Products T/A Nasahi	Document no	50509000.1 SOA2.1
Sponsor address	1331 Stud Road, Rowville, Victoria 3178, Australia		
Issue date	25 May 2023	Expiry date	31 May 2028

Description of assessed systems

The assessed systems consist of Nasahi non-load bearing Intertenancy Wall systems and Shaft Wall systems, which incorporate Nasahi AAC panels with various combinations of plasterboard, steel frame and insulation with multiple fixing details. The wall systems that are assessed in the referenced assessment report are summarised below.

Nasahi Intertenancy Wall systems

- Nasahi Intertenancy Wall system 1
- Nasahi Intertenancy Wall system 2
- Nasahi Intertenancy Wall system 3
- Nasahi Intertenancy Wall system 4

Nasahi Shaft Wall systems

- Nasahi Shaft Wall system 1
- Nasahi Shaft Wall system 2

The scope of the assessment includes the fire resistance performance of the assessed systems in accordance with AS 1530.4:2014¹ and where applicable AS 4072.1:2005².

Assessed system performance

The elements of construction described above were assessed by this laboratory on behalf of the report sponsor in accordance with the stated test standard in Table 1 and achieved the results outlined in Table 2. A complete description of the assessed construction can be found within the referenced assessment report.

Table 1 Test standard and assessment report details

Referenced report	Test standard	Referenced report issue date	Referenced report expiry date
50509000.1 R2.1	AS 1530.4:2014	25 May 2023	31 May 2028

¹ Standards Australia, 2014, Methods for fire tests on building materials, components and structures – Part 4: Fire-resistance tests for elements of construction, AS 1530.4:2014, Standards Australia, NSW.

² Standards Australia, 2005, Components for the protection of openings in fire-resistant separating elements: Service penetrations and control joints, AS 4072.1:2005, Standards Australia, NSW.

Table 2 Formal assessment summary

Item	Reference test	Description	Variations	System FRL
Wall system	EWFA 50098100.1	The tested system in EWFA 50098100.1 consisted of a nominal 3000 mm wide × 3000 mm high × 143 mm thick non-load bearing wall system comprising 600 mm wide × 3000 mm high × 62 mm thick Nasahi autoclaved aerated concrete (AAC) panels on the exposed side and 10 mm USG Boral Sheetrock Plasterboard screw fixed to a steel frame infilled with Bradford™ Acoustigard™ insulation. A 20 mm gap separated the Nasahi AAC panels and the steel framing.	Nasahi Intertenancy Wall systems - Nasahi Intertenancy Wall system 1: Minimum 62 mm thick Nasahi panel wall is directly lined with minimum 1 × 10 mm thick standard grade plasterboard. A steel framed wall lined with minimum 1 × 10 mm thick standard grade plasterboard is located at a 20 mm clearance to the Nasahi panel wall as shown in Figure 5. Framed wall cavity is filled with cavity insulation. - Nasahi Intertenancy Wall system 2: Similar to Intertenancy Wall system 1 except that the 10 mm plasterboard is mounted off the Nasahi panel surface using J channels, angles and furring channels. The cavity created by the channels is then filled with insulation batts. Refer to Figure 6. - The Nasahi Intertenancy Wall system 3: As per the tested specimen in EWFA 50098100.1 except for an addition of a metal stud frame section separated by a minimum 20 mm air gap with insulation in the stud cavity making the wall symmetrical. Refer to Figure 7. - The Nasahi Intertenancy Wall system 4: Consists of two identical Nasahi panel walls separated by a minimum 20 mm gap in between. Both panels are cladded with minimum 1 × 10 mm thick standard grade plasterboard on the outer surface and the air gap is filled with cavity insulation. Refer to Figure 8. Nasahi Shaft Wall systems - Nasahi Shaft Wall system 1: Non-load bearing Nasahi panels are directly lined on one side with minimum 1 × 10 mm thick standard grade plasterboard. Refer to Figure 9. - Nasahi Shaft Wall system 2: Similar to Shaft Wall system 1 but minimum 1 × 10 mm thick standard grade plasterboard is mounted off the Nasahi panel surface using J channels, angles and furring channels. The cavity created by the channels is then filled with insulation batts. Refer to Figure 10.	-/120/120 for Nasahi Intertenancy Wall systems 1 to 4 -/90/90 for Nasahi Shaft Wall systems 1 and 2 - Fire exposure may be from each side.
Wall height	EWFA 50098100.1	The tested system consisted of a 3.0 m high Nasahi panel wall.	For the Nasahi Shaft Wall system 1, the wall height may be increased to 3.3 m as shown in Figure 9. The wall height for all other systems is limited to 3.0 m.	
Metal stud frame and insulation	EWFA 50098100.1	The tested system in EWFA 50098100.1 incorporated a 51 mm metal stud frame on the	It is proposed to allow for deeper stud frames including 64 mm, 76 mm or 92 mm instead of 51 mm as tested. It is also proposed to use alternative insulation batts provided that they are equal or better than the insulation batts used in the test. Ie minimum	

Item	Reference test	Description	Variations	System FRL
		plasterboard side of the wall. The insulation used in the tested system was Bradford™ Acoustigard™ insulation with a nominal thickness of 50 mm, a density of 14 kg/m³ and a rating of R1.3.	50 mm thick with a density not less than 14 kg/m ³ and a thermal resistance not less than R1.3.	
Fire rated sealant	EWFA 50098100.1	The tested system in EWFA 50098100.1 incorporated a fire and acoustic sealant supplied by Swirl Engineering.	It is proposed to use alternative fire and acoustic rated sealants provided they have been tested and certified for the type of application and that the controlled minimum depths in relation to the gap widths are strictly in accordance with the relevant sealant manufacturer's application data.	
Junction and connection details	EWFA 50098100.1, EWFA 28666700.1 and EWFA 37448701.1	The tested system in EWFA 28666700.1 incorporated various control joints in a 150 mm thick AAC block wall. The tested system in EWFA 37448701.1 incorporated 50 mm thick Nasahi Super 50 panels separated by I-studs, which were protected with 16 mm thick strips of CSR Fyrchek plasterboard.	Is it proposed to allow for variations in the junction and connection details as summarised below: - Nasahi panel head details as shown in Figure 11 to Figure 14. - Nasahi panel base detail as shown in Figure 15. - Nasahi panel to rigid wall/column direct fix detail as shown in Figure 16. - Nasahi panel to panel direct fix corner baseline detail as shown in Figure 17. - Nasahi panel to panel direct fix splay corner baseline detail as shown in Figure 18. - Nasahi panel to panel direct fix planar and corner system details as shown in Figure 19 to Figure 21. - Nasahi panel to rigid wall/column control joint as shown in Figure 22. - Nasahi panel to panel planar control joint as shown in Figure 23. - Nasahi Intertenancy System 1 internal T-junction as shown in Figure 24. - Nasahi Intertenancy System 1 Façade to wall junction as shown in Figure 25 and Figure 26. - Power switch penetration details as shown in Figure 27 to Figure 28. - Chasing details as shown in Figure 29. - Nasahi Intertenancy Wall system details for wet areas as shown in Figure 30 and Figure 31.	

Figure 1 to Figure 4 were extracted from the fire test report EWFA 50098100.1 as detailed in the referenced assessment report. They are included to provide context to the overall construction. The test frame shown in Figure 1 to Figure 4 is for illustration only and does not form part of the system when installed on site.

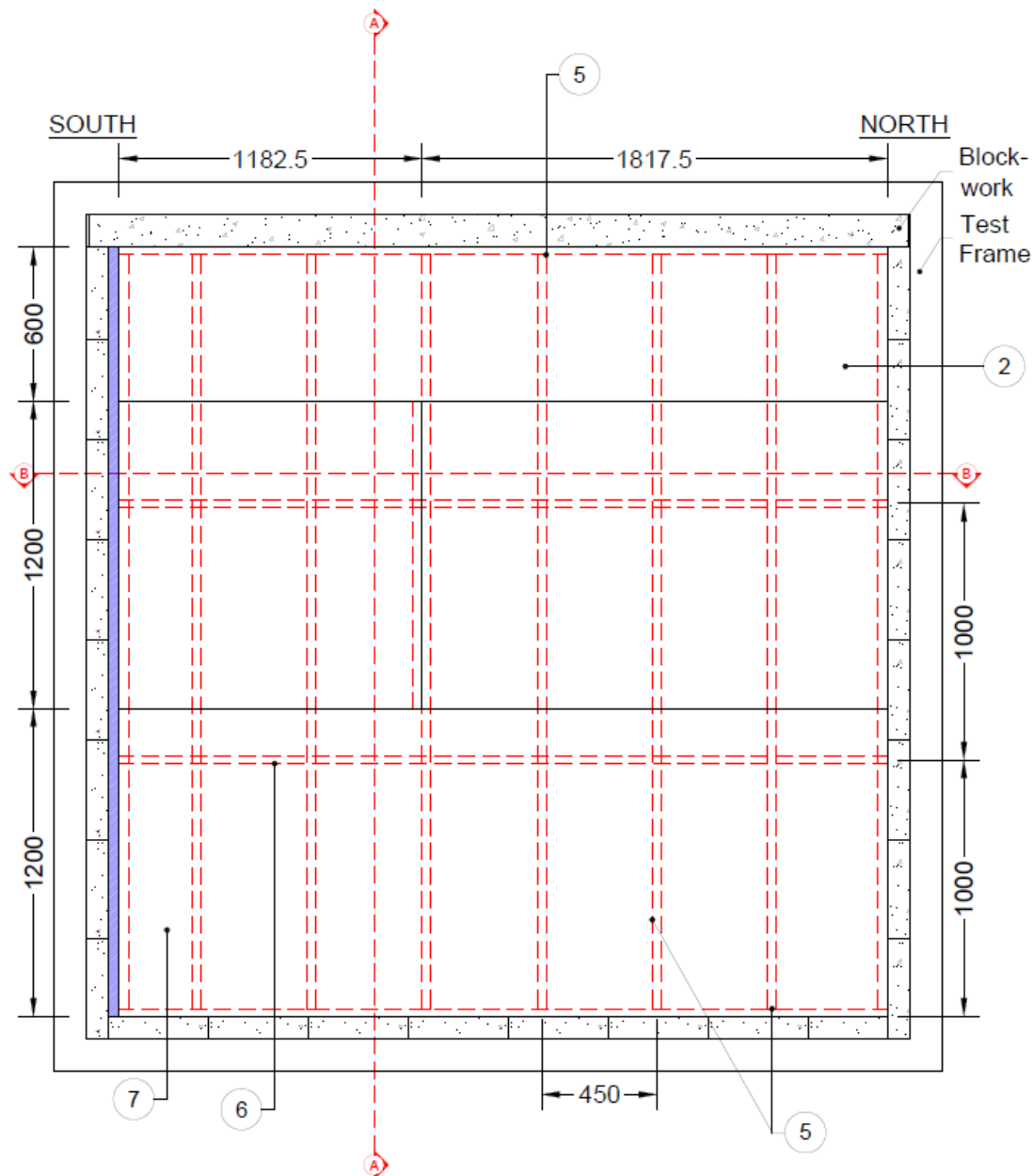


Figure 1 Elevation of Test Specimen on unexposed side

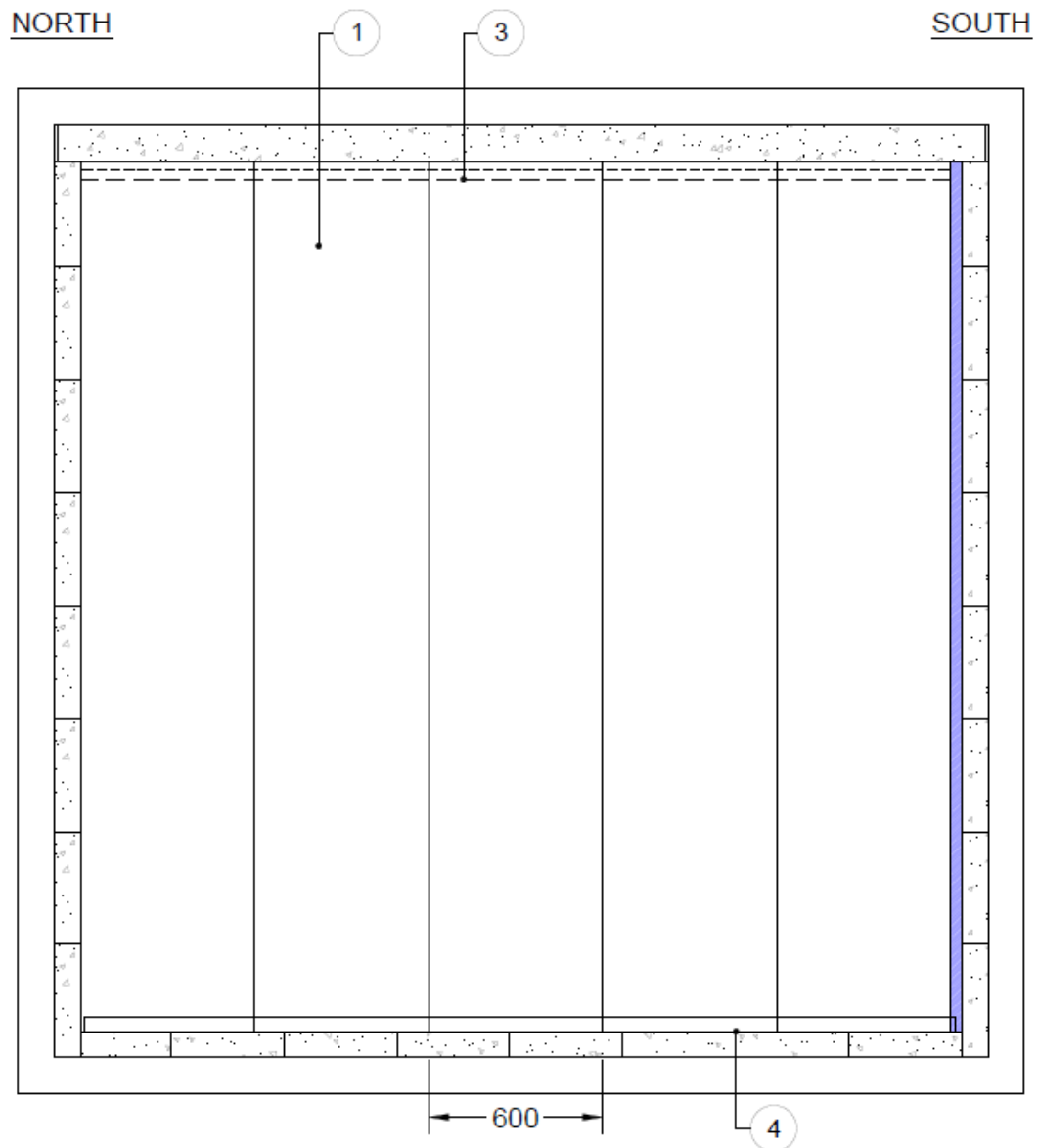


Figure 2 Elevation of Test Specimen on exposed side

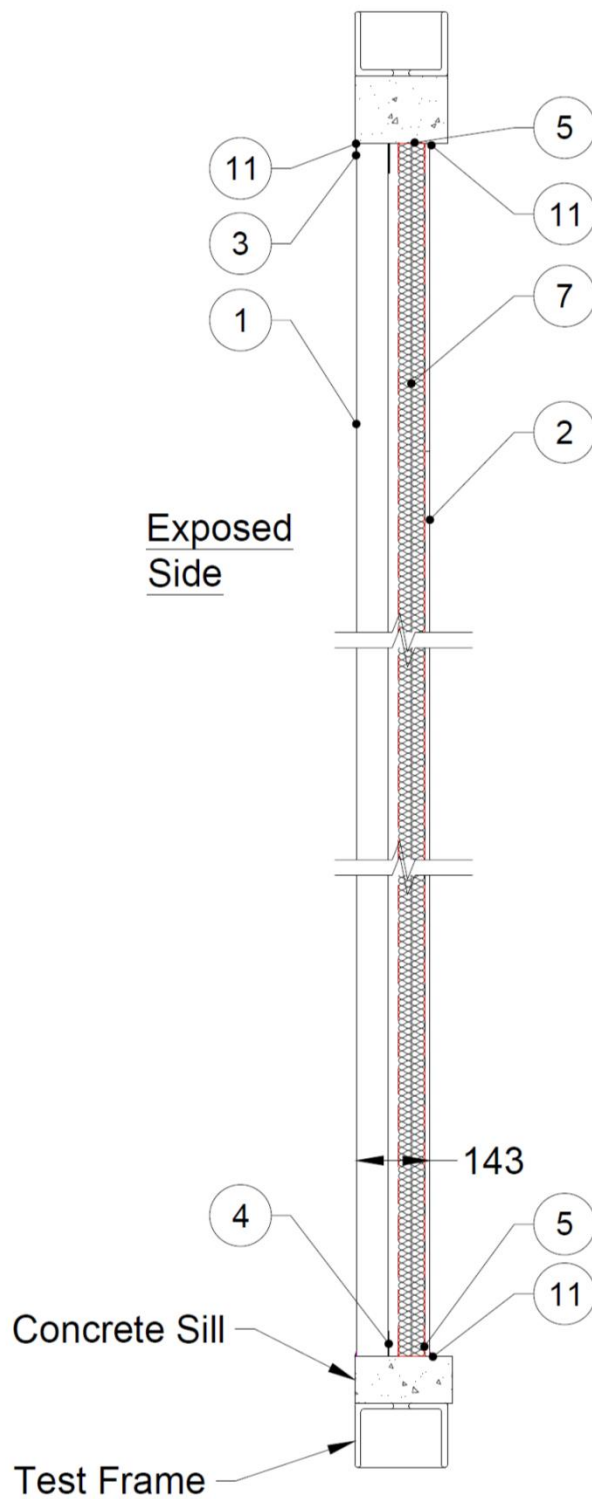


Figure 3 Vertical Cross Section A-A in Figure 1

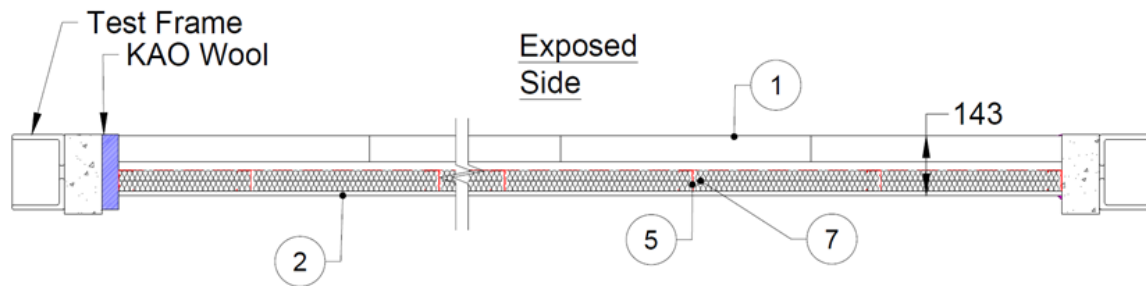


Figure 4 Vertical Cross Section B-B in Figure 1

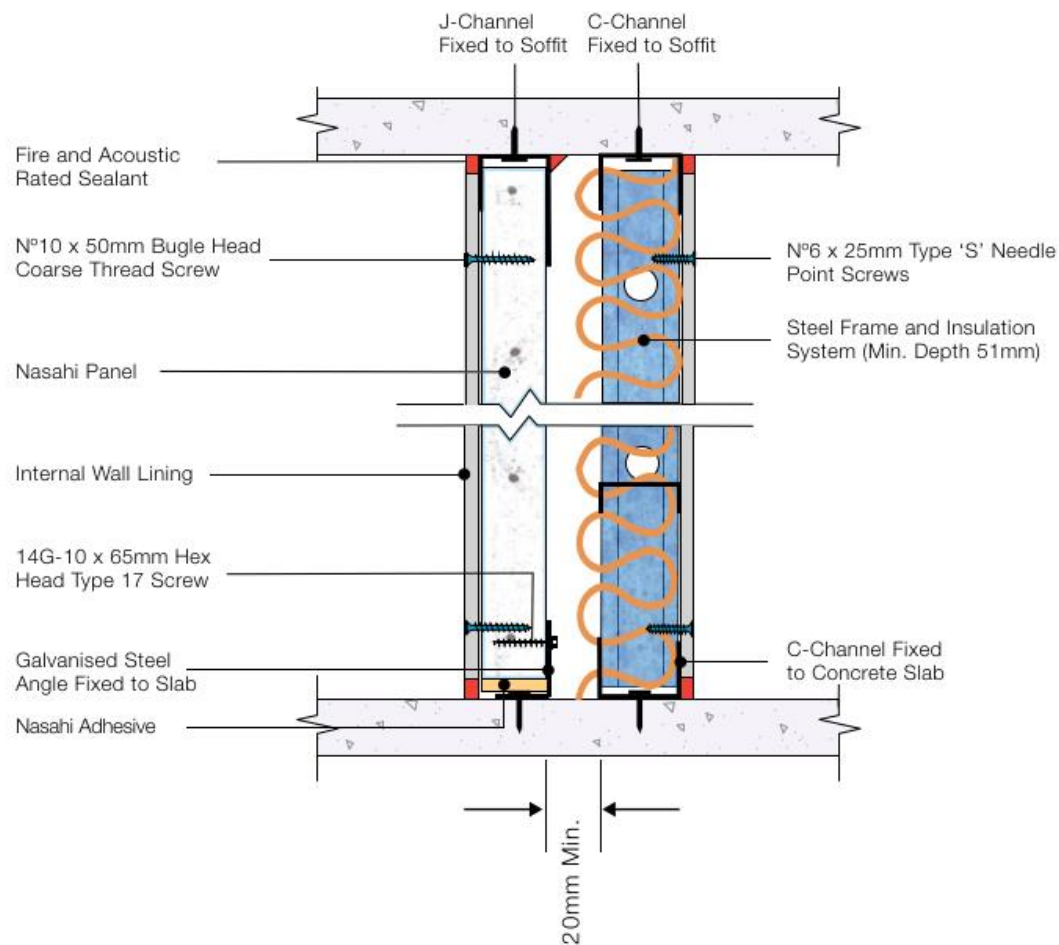


Figure 5 Nasahi Intertency Wall system 1

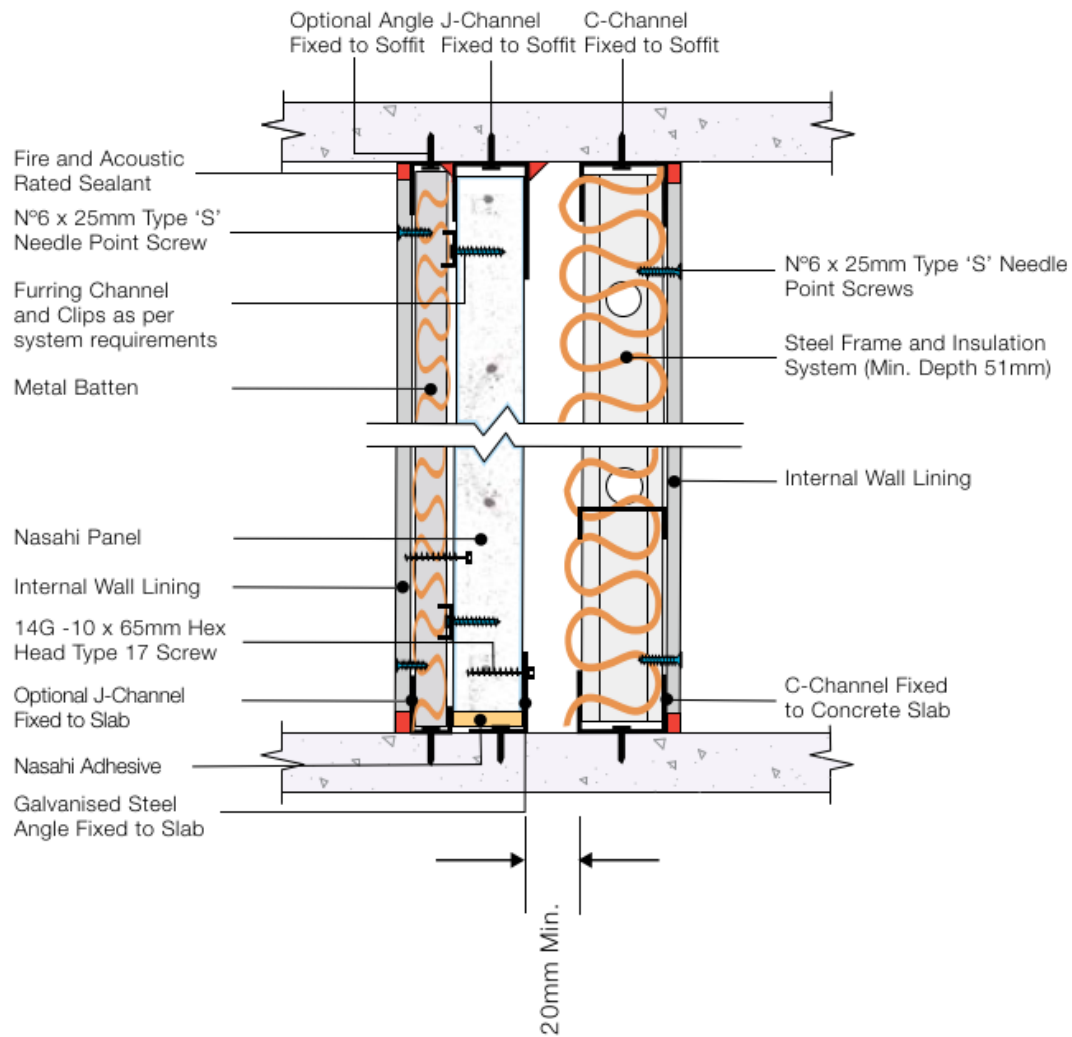


Figure 6 Nasahi Intertency Wall system 2

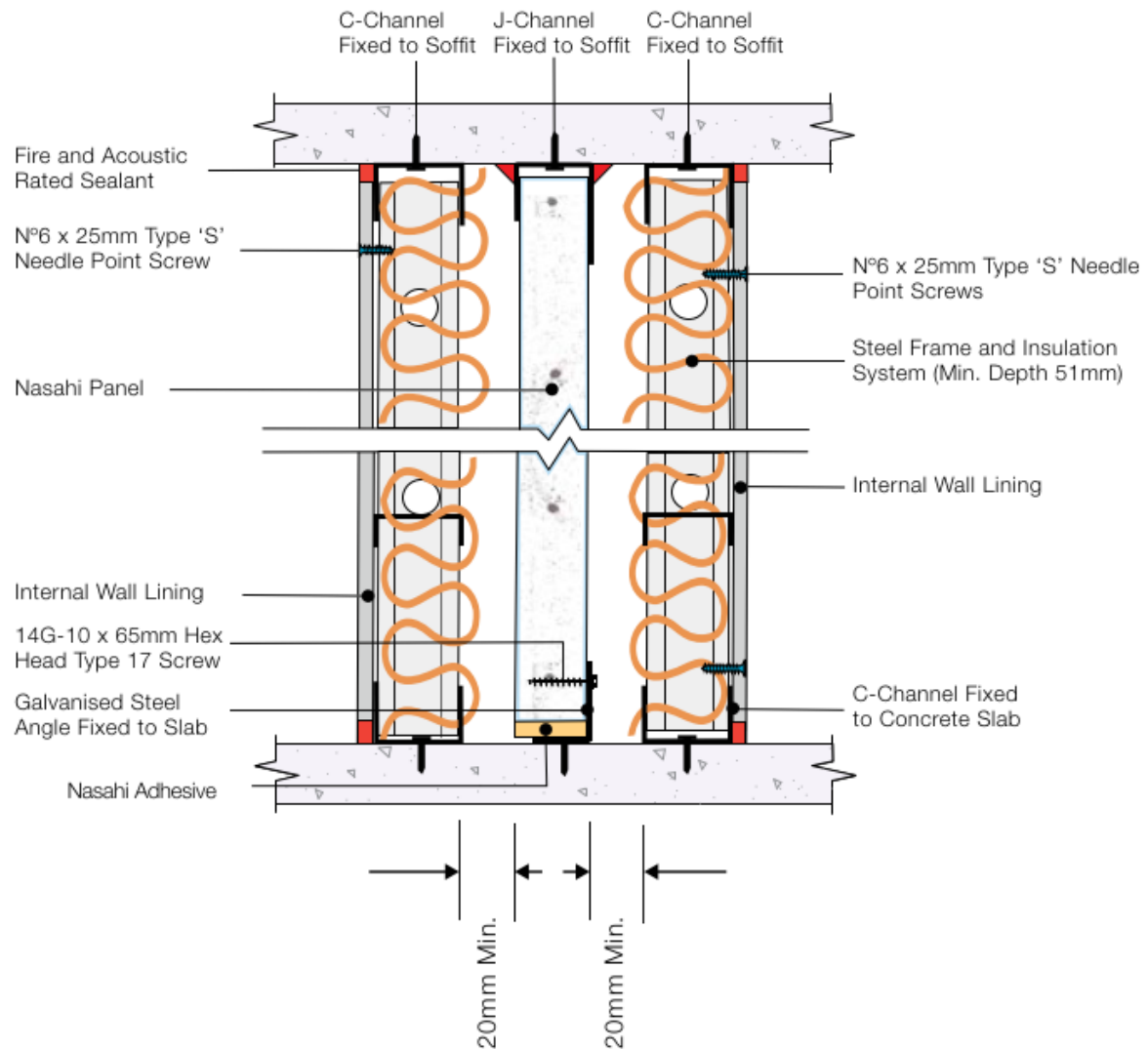


Figure 7 Nasahi Intertency Wall system 3

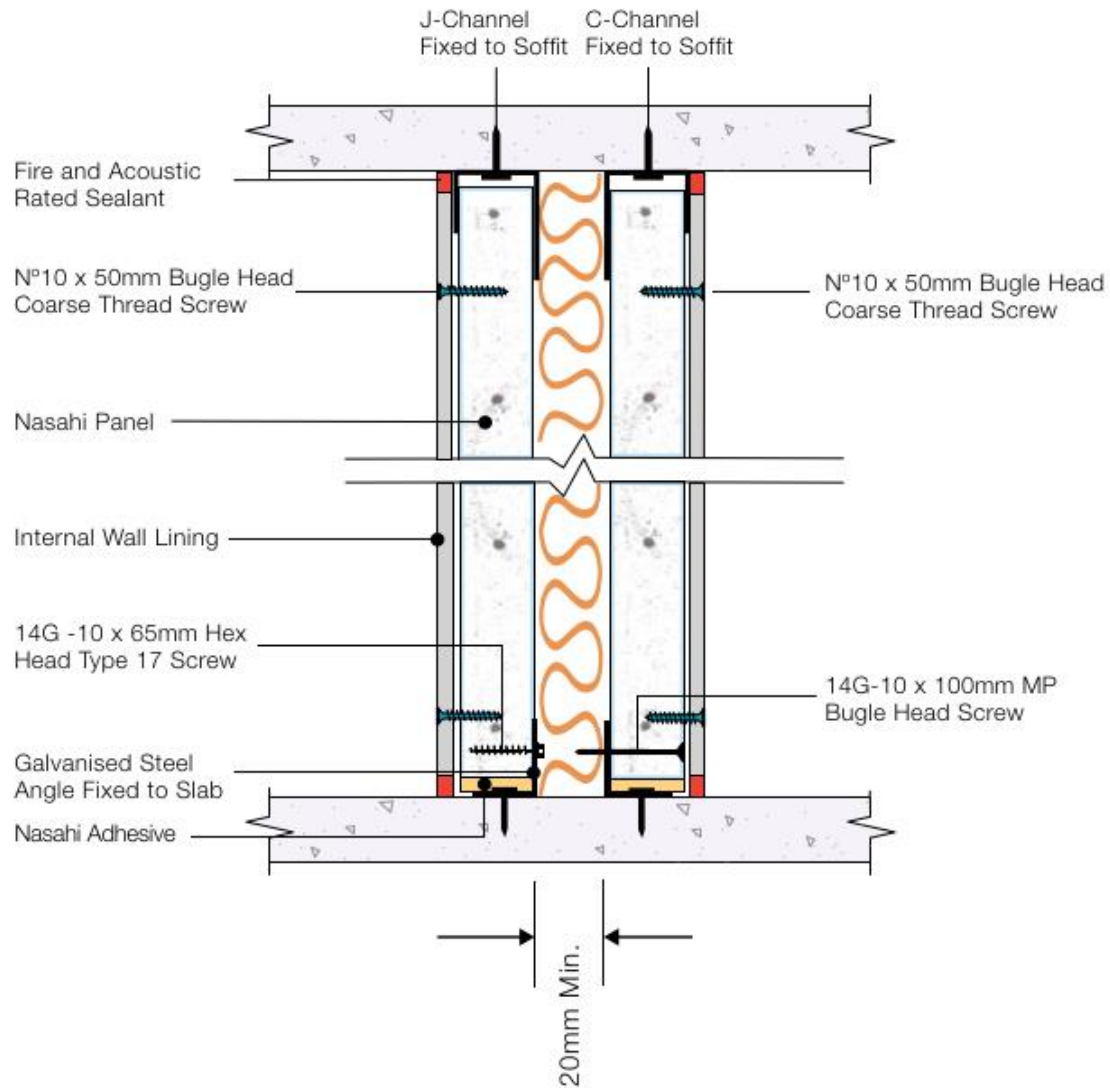


Figure 8 Nasahi Intertency Wall system 4

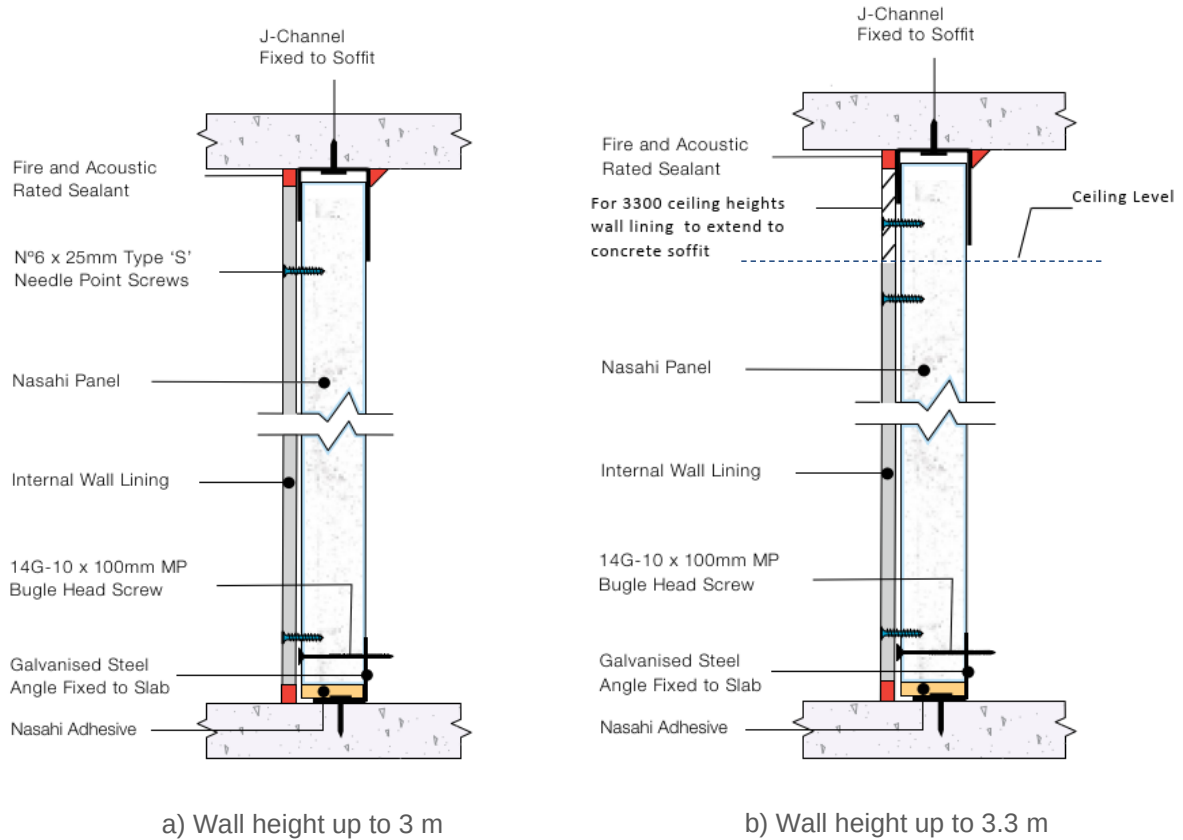


Figure 9 Nasahi Shaft Wall system 1

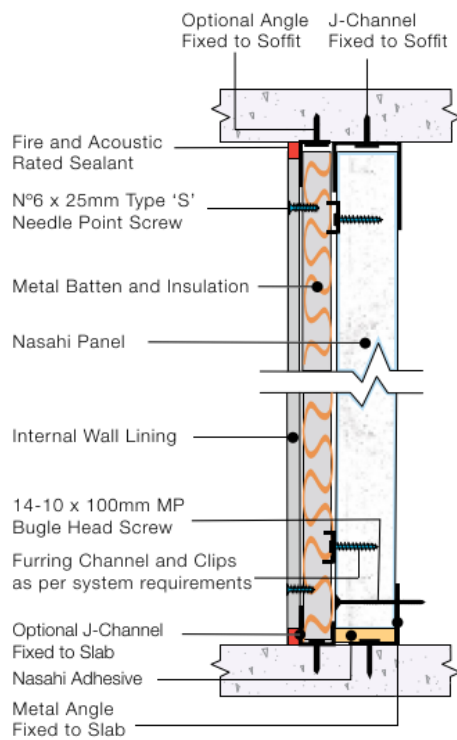


Figure 10 Nasahi Shaft Wall system 2

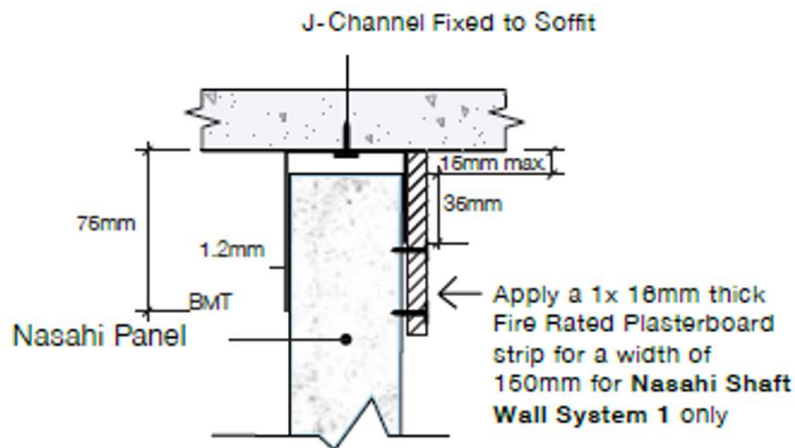


Figure 11 Nasahi panel head detail 1 – J channel fixing option

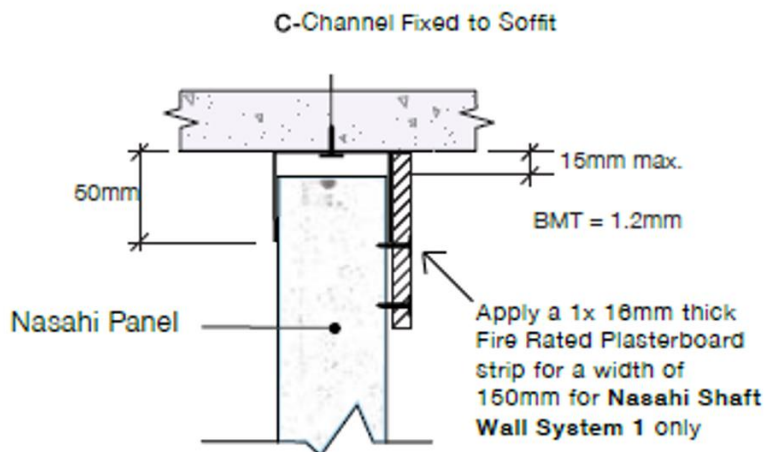


Figure 12 Nasahi panel head detail 2 – C channel fixing option

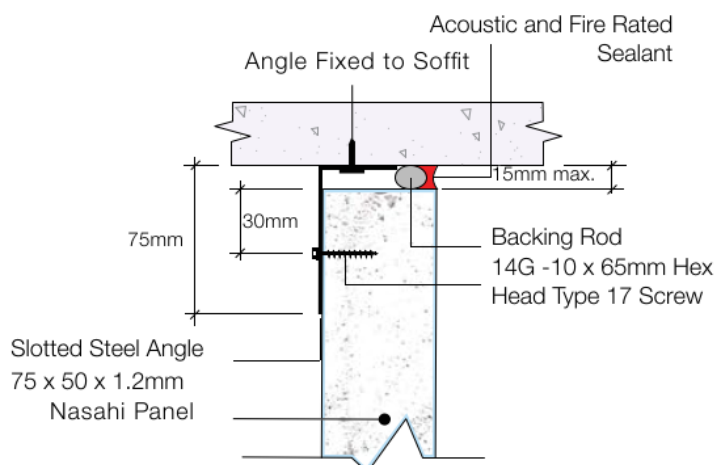


Figure 13 Nasahi panel head detail 3 – Angle top track option

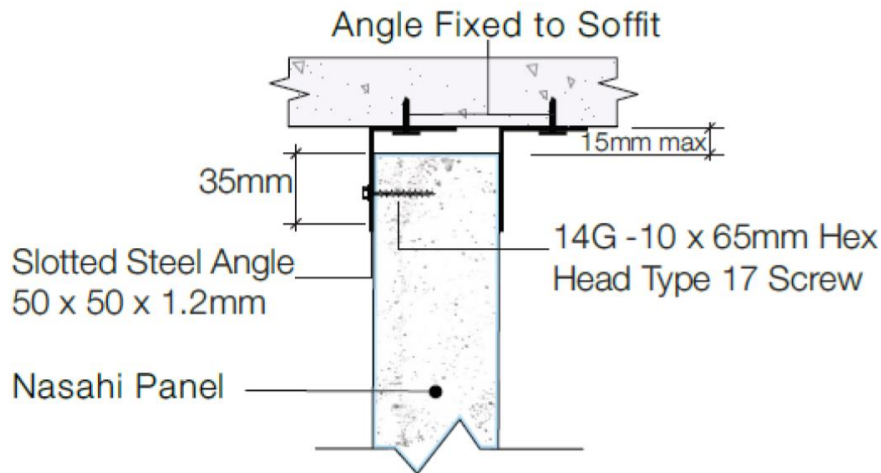


Figure 14 Nasahi panel head detail 4 – Heavy duty top track

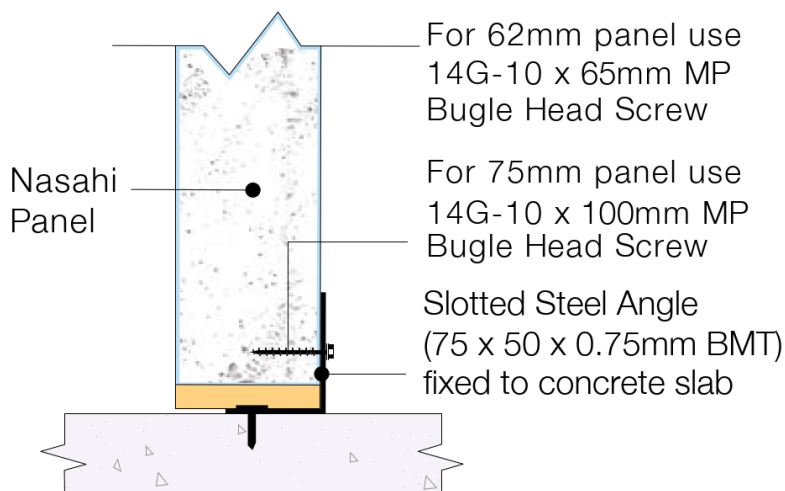


Figure 15 Nasahi panel base detail

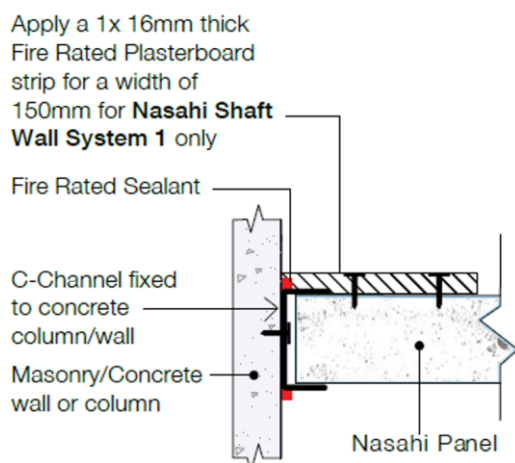
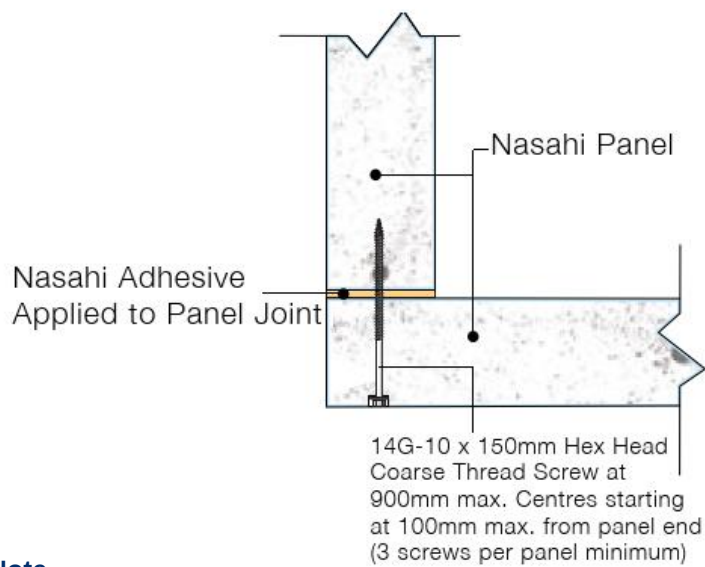


Figure 16 Nasahi panel edge to concrete wall / column direct fix detail



Note

Nasahi Adhesive must be used on all panel to panel joints.

Figure 17 Nasahi panel to panel direct fix corner baseline detail

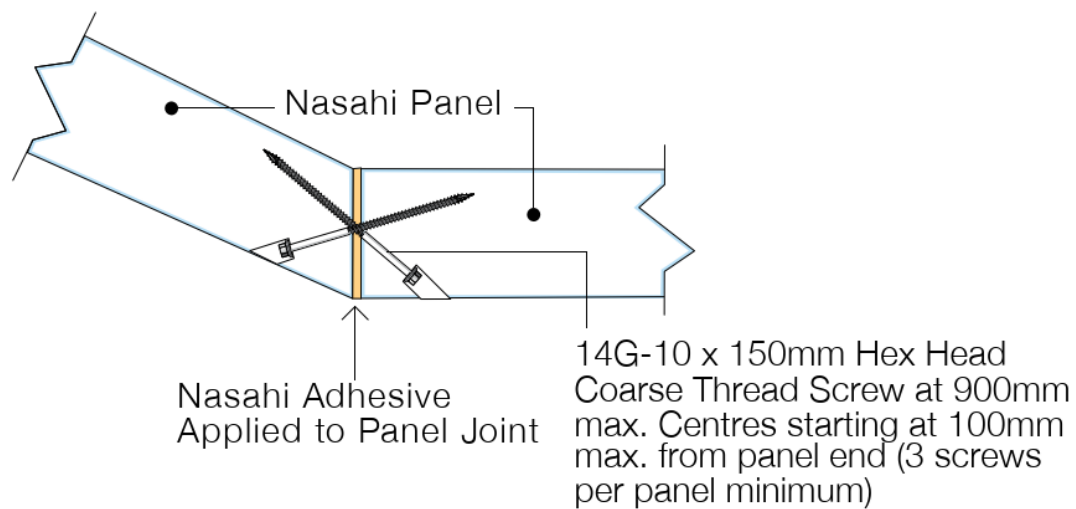


Figure 18 Nasahi panel to panel splay corner detail

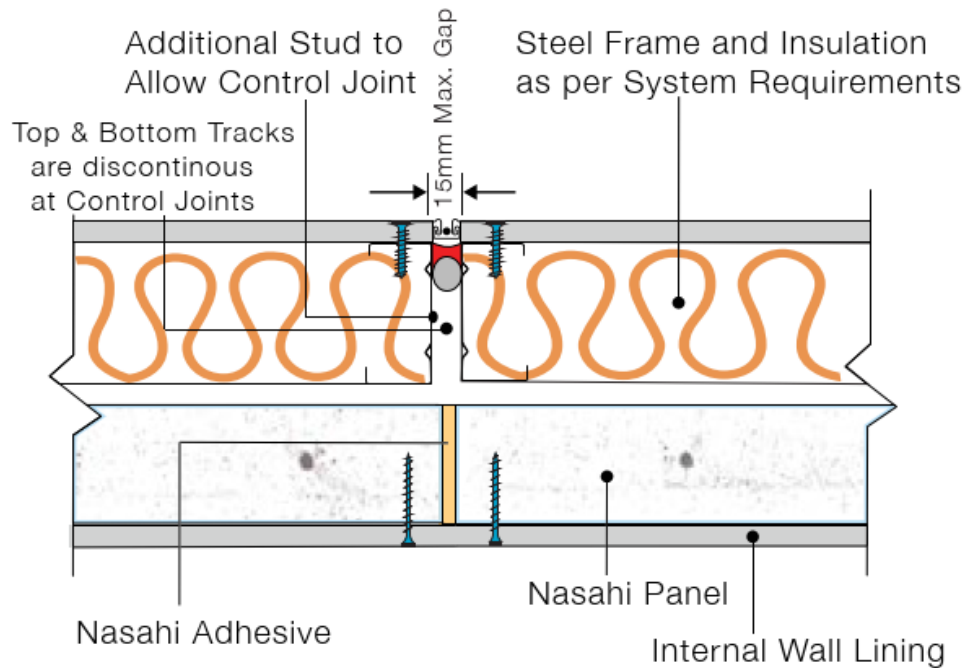


Figure 19 Nasahi panel to panel direct fix planar system detail

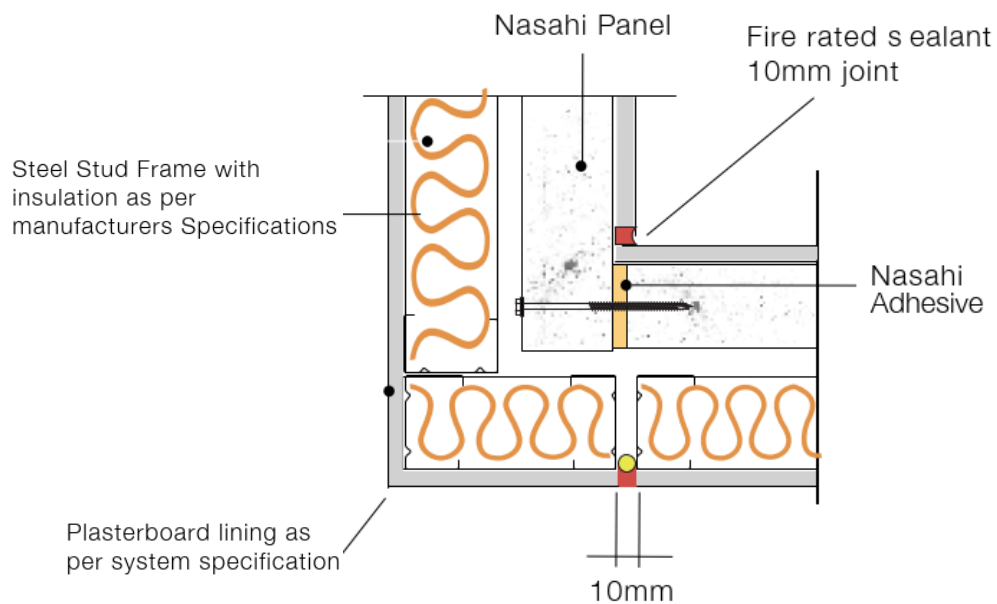


Figure 20 Nasahi panel to panel direct fix corner system detail – 1

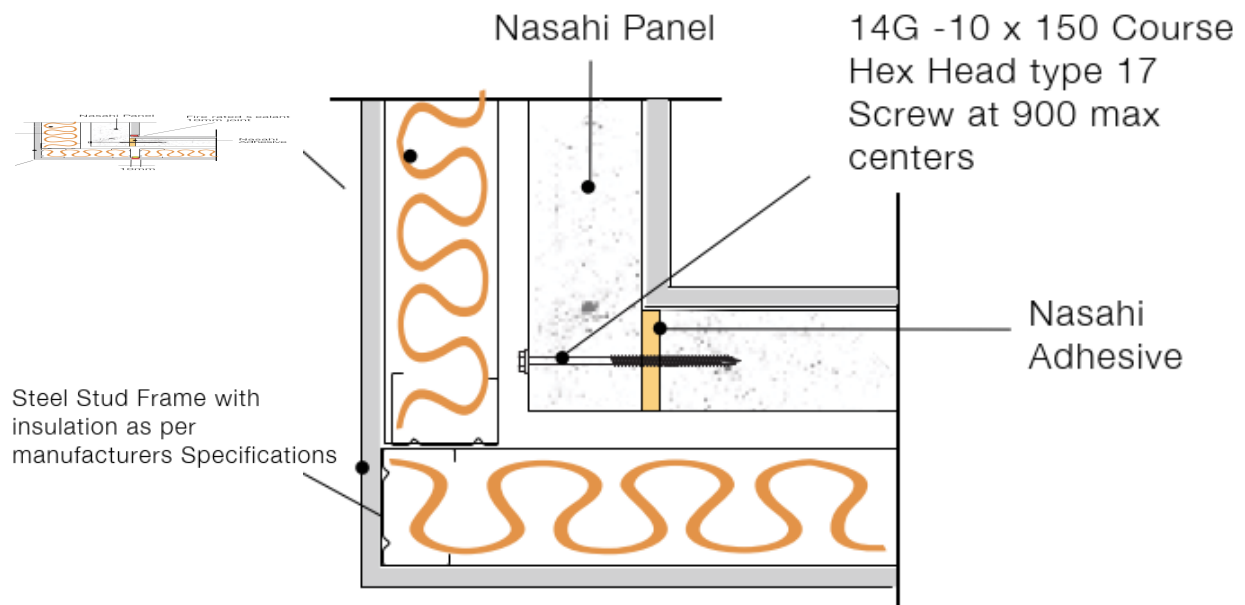
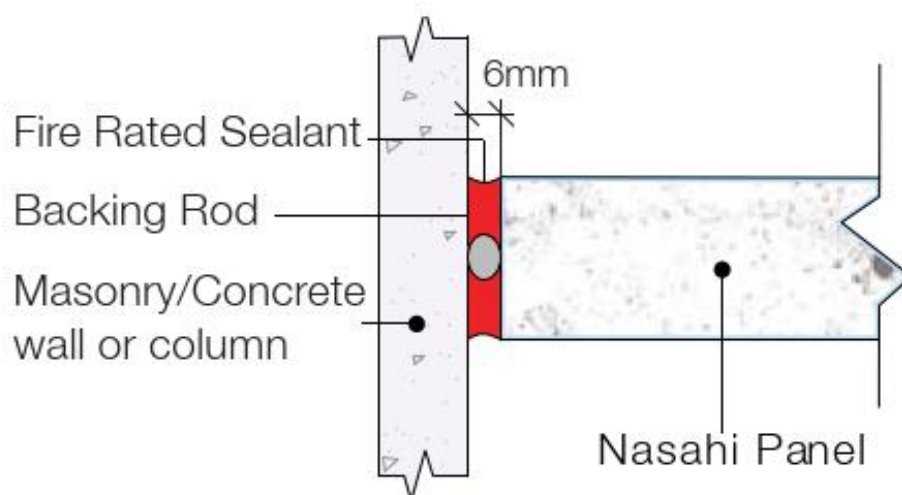


Figure 21 Nasahi panel to panel direct fix corner system detail – 2



Note

For panel > 3100 mm high and/or < 300 mm wide and adjacent to column, a J or C-channel needs to be used to secure the panel laterally. Refer to Figure 16.

Figure 22 Nasahi panel to rigid wall/column control joint

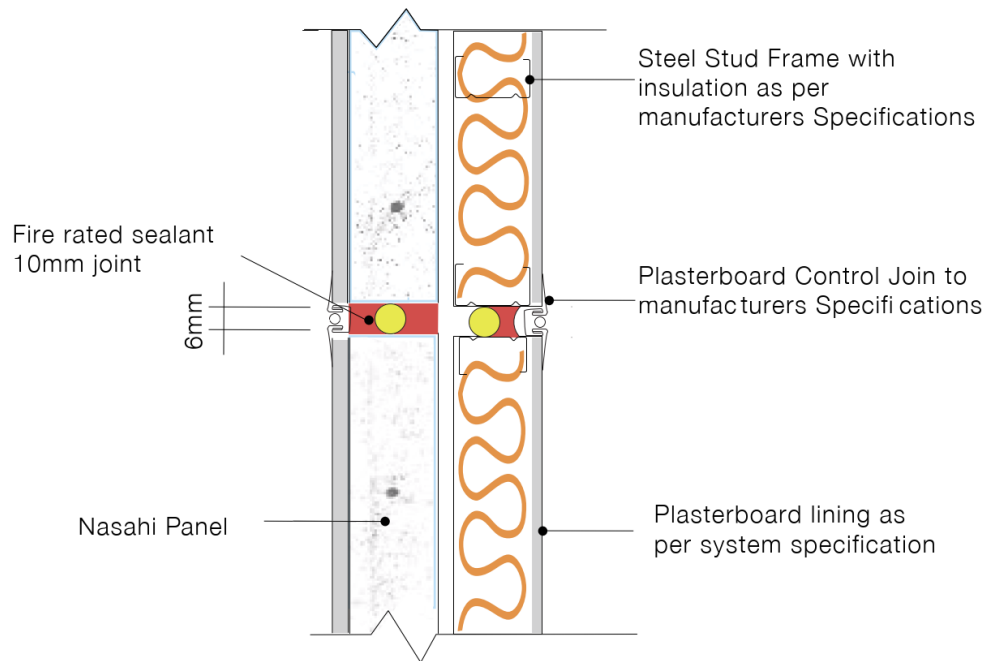


Figure 23 Nasahi panel to panel planar control joint

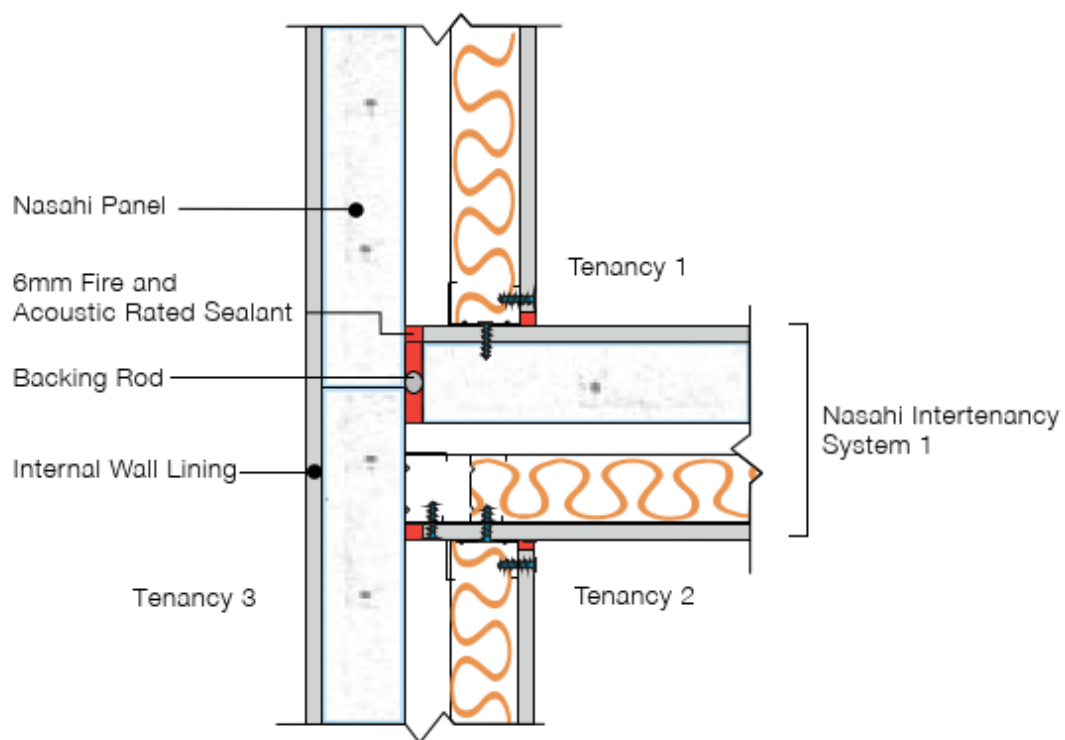


Figure 24 Nasahi Intertency Wall system 1 internal T-junction

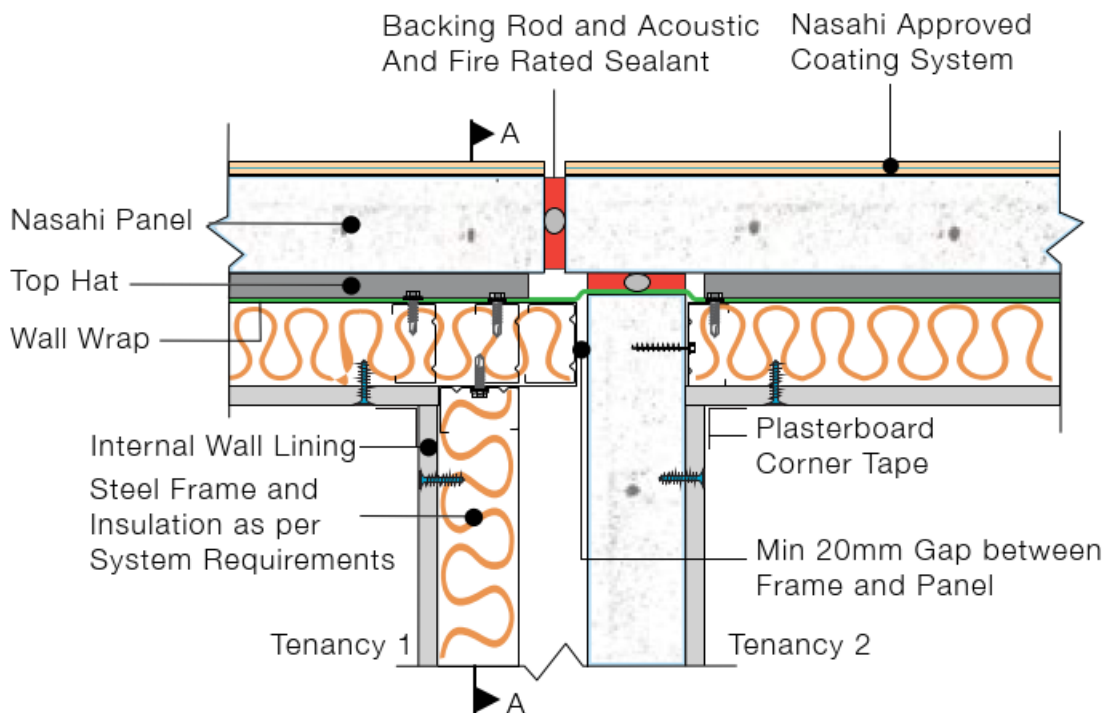


Figure 25 Nasahi Intertenancy Wall system 1 to Façade wall junction

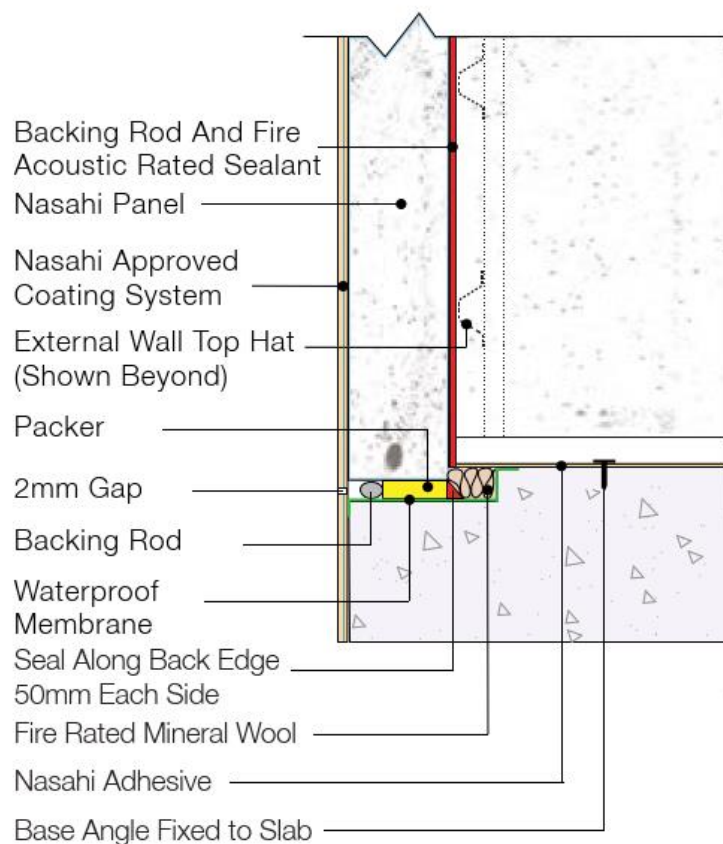


Figure 26 Nasahi Intertenancy System 1 to façade wall junction – Section A-A

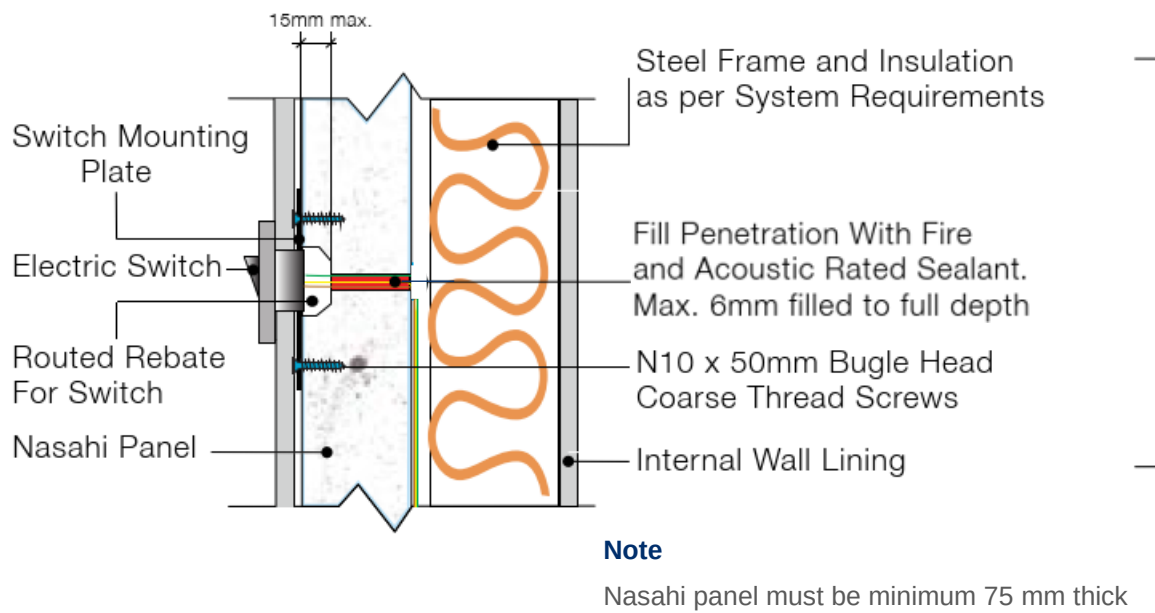


Figure 27 Power switch penetration detail 1 – Power switch on panel side

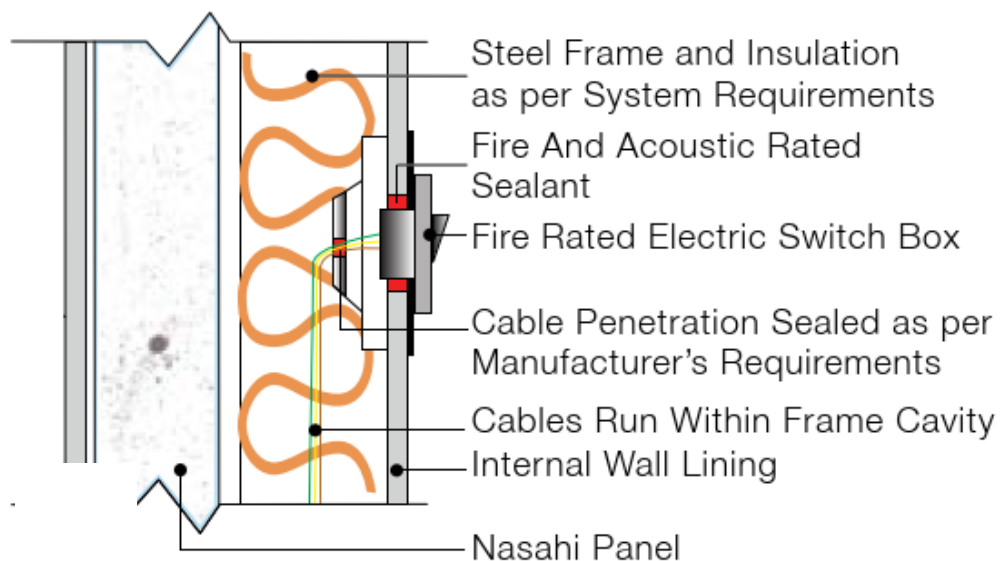
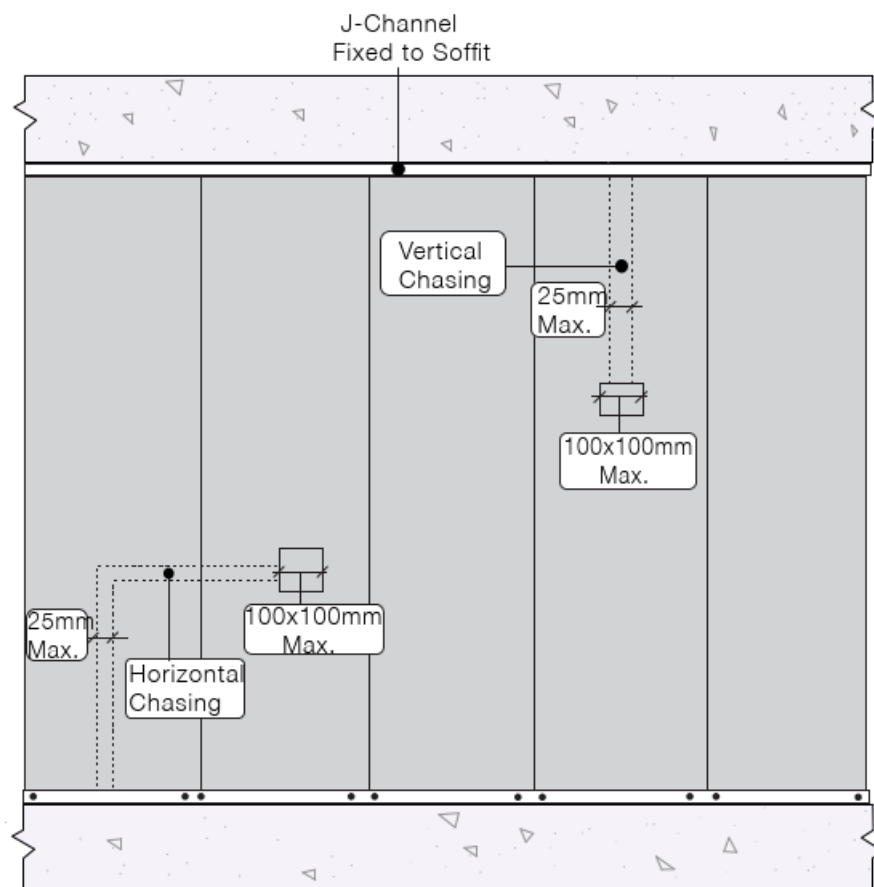
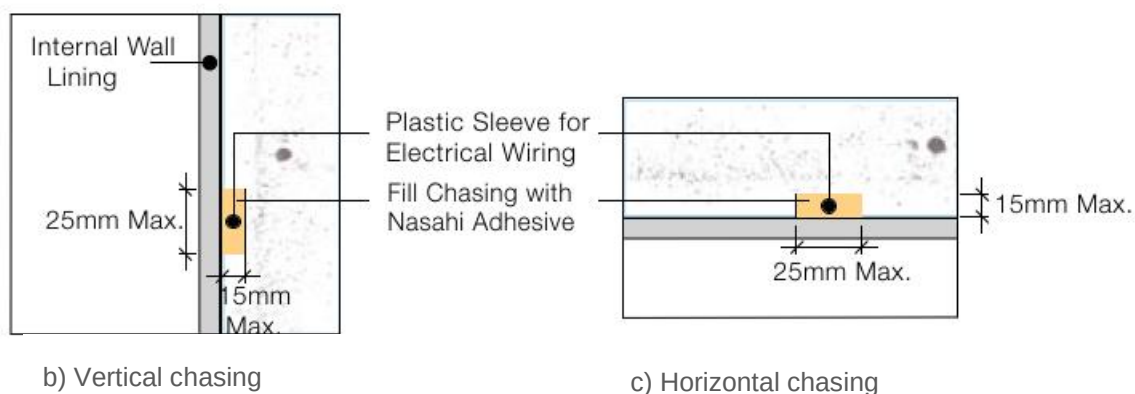


Figure 28 Power switch penetration detail 2 – Power switch frame side



NOTE: Chasing affects the acoustic performance of the panels, as a result no chasing is permitted on acoustic rated walls as per BCA V.1, Specification F5.2 Water services should not be chased into the panels. Ensure the recess is placed at the middle of the panel.

a) Permitted chasing dimensions



Note

These details are applicable to 75 mm thick Nasahi panels only.

Figure 29 Chasing details

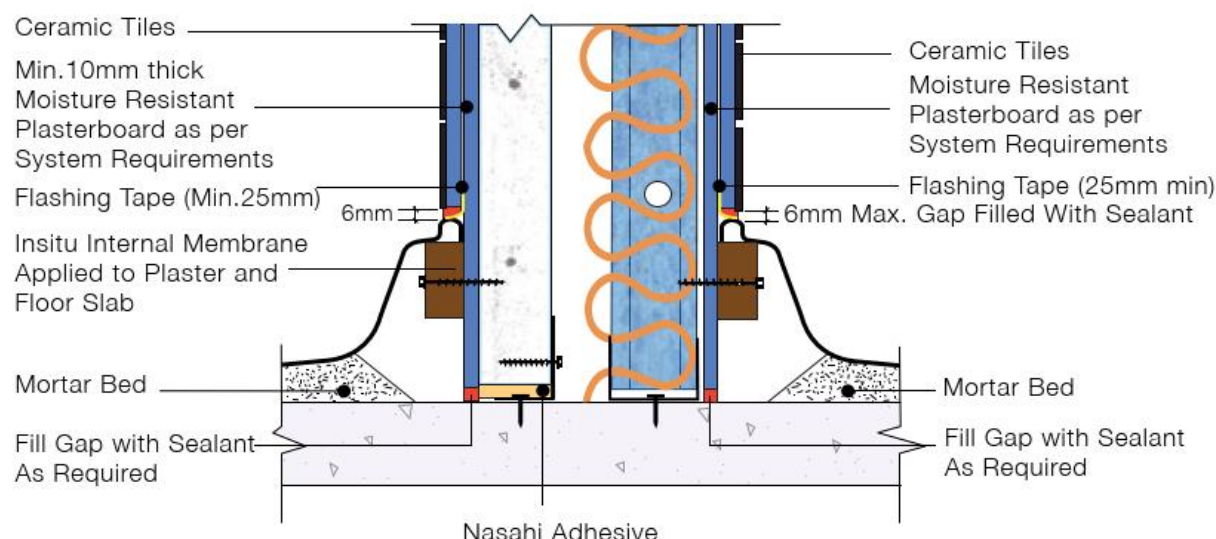


Figure 30 Bath / shower area detail

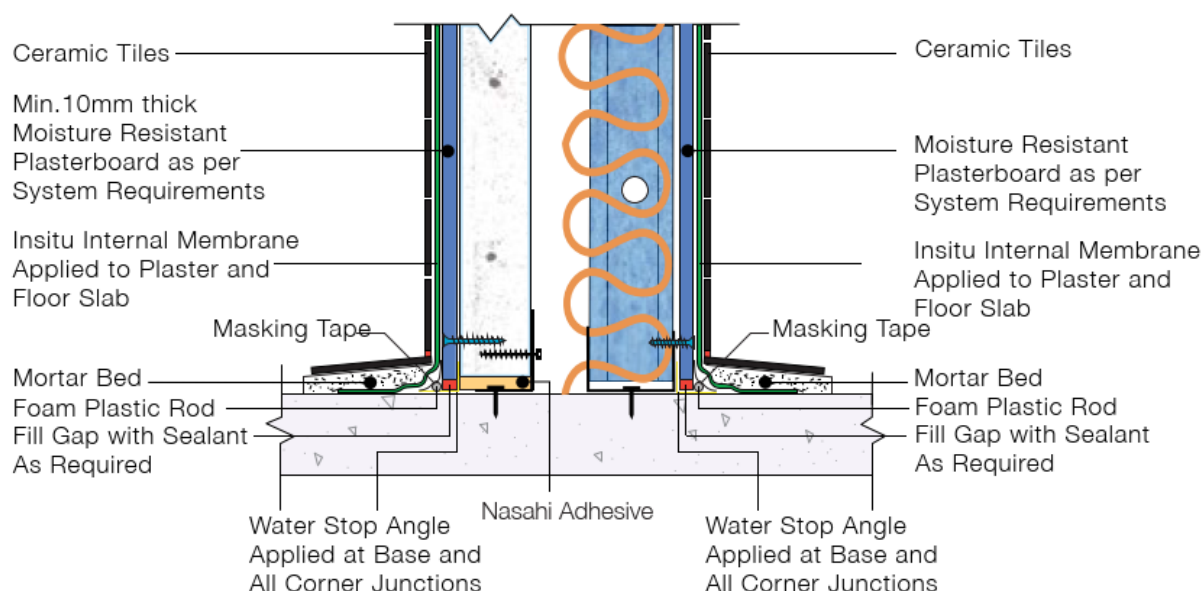


Figure 31 General wet area detail

Conditions / validity

- This document is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.
- The main assessment report must be provided for regulatory requirements and evidence of compliance.
- Reference should be made to the relevant assessment report to determine the applicability of the test result to a proposed installation. Full details of the constructions and justification for the conclusions given, along with the validity statements, are given in the assessment reports.
- The results of the assessment report may be used to assess fire resistance, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions.

- All work and services carried out by Warringtonfire Australia are subject to and conducted in accordance with our standard terms and conditions. These are available on request or at <https://www.element.com/terms/terms-and-conditions>.

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