

ALEX AVENUE PUBLIC SCHOOL

SSD RESPONSE TO SUBMISSION

AIMS & OBJECTIVES

This response to submissions report has been prepared by Modscape to support Richard Crookes Constructions response to the SSDA submissions received for Alex Avenue Public School.

SUMMARY OF QUERIES

Modular Design

- Additionally, the Applicant needs to demonstrate the merits of this system, beyond time and budget savings (if those are applicable), illustrate how the system will deliver design quality and individuality of architectural expression for this project. Technical details of the modular system (i.e. wall / roof / floor typical construction, panel types, finishes) are required which demonstrate that the design quality illustrated and proposed is achievable within the modular system.

Design Feedback

- We clarify that no agreement was reached between GANSW and SINSW on principles for design excellence for future modular construction at the meeting held on 23.05.19 (as claimed in the response to submissions report).

Modular System Feedback

- It is our understanding that this building will be delivered as part of a modular construction system. The applicant needs to demonstrate the merits of this system, beyond time and budget savings (if those are applicable), illustrate how the system will deliver design quality and individuality of architectural expression for this project. In addition, the applicant should address how the modular system is intended to be deployed across the school's portfolio and include an overall strategy for implementation of the modular building program.
- Provide technical details of the modular system (i.e. wall/roof/floor typical construction, panel types, finishes) to demonstrate that the design quality illustrated and proposed is achievable within the modular system.

DESIGN ABOUT MODSCAPE

Modscape design and manufacture innovative, sustainable, beautiful, modular architecture.

Each project is unique and designed for each specific site, taking into consideration client requirements while reflecting our values of design, innovation and sustainability. Design and finish options are limitless, but what is consistent is that every design is the result of genuine collaboration with our clients and consultants.

Modscape operates from its modular construction hub in Brooklyn, Victoria which includes an impressive factory used for manufacturing the modules for our projects.

The rapid construction forces a high level of documentation – which in turn means a higher degree of design resolution and greater control of the cost.

The factory environment ensures a high level of quality and eliminates the risk of weather and site delays, allowing for a fixed timeline for design, construction and delivery.



MODSCAPE.

DESIGN MODULAR DESIGN

Design Principles

- ✓ - EFSG
- ✓ - GANSW – Education SEPP Design Principles
- ✓ - BCA / Australian Standards

Design for Manufacture & Assembly (DFMA)

During the design phase of a project and the continued design development of the product, Modscape will seek to effectively optimise the systems and details they use in the manufacture and installation of projects to make the manufacturing process simpler and installation process more efficient in terms of safety, time and cost. Refer attached standard technical details.

Flexibility

Our modules are made from fully welded structural steel frames. This means a module has incredible flexibility in the way it can be used either by itself, or with other modules, to create almost any building type, size or shape. There is no 'standard' size module as all modules are customised to suit each design. Typically a module can range in size from 2m to 5m in width and from 2m to 16m in length. Most Modscape projects use a combination of module sizes to create a design. Modules can be placed side-by-side or end-to-end to create greater internal spaces. They can also be stacked on top of each other and cantilevered.



MODSCAPE.

DESIGN MODULAR DESIGN

Module Joints

Module joins both externally and internally are considered during the design phase and more particularly the detail design.

The focus is on designing-out the module joins either by concealing or expressing.

- External joints: Are covered by the module joint by utilising the cladding grid
- Internal joints: Either trowelled-out the joins, or pinboards/whiteboards are located over the joins.

Module Floor System

The floor structure is a composite system of three parts that effectively laminated together which creates a floor system that provides:

- Minimal deflection >4mm, as tested
- Superior thermal performance
- Fire-rated
- Minimal vibration
- Superior acoustic performance (construction method means that the floor structure of level one is separate to the ceiling structure of the ground floor - there is little or no acoustic impact noise transfer).



SUSTAINABILITY

Offsite prefabrication is the ultimate way to build sustainably.

Construction

A carbon-wise construction and installation process is incorporated in each Modscape project. By constructing off-site at our modular construction hub, we are able to reduce site waste and environmental impact.

Material & Waste Management

Our projects are designed to use standard building materials and sizes where any material wastage is recycled. The emphasis on environmental synergy influences our material selection process and ensures that only inputs of the highest quality are incorporated into our design.

Having the construction take place in a factory rather than on-site also minimises noise, rubbish, dust and debris and maximises the quality of the final product.

Waste recycling programme has a tighter control in a factory set up and is easier to control and manage.

Ongoing construction in the same location aids in use of surplus material and reduces waste. Modular construction facilities store unused materials in controlled environments and recycle them for use in other projects.



SUSTAINABILITY

ESD Principals

As manufacturers and designers, we have the ability and responsibility to provide solutions that minimise the climate impact of the structures we design and construct. The modular building process uses reduced energy when compared to traditional construction. Construction works taking place in a controlled factory location reduces delivery and travel to and from site. Construction principals are focused on the use of locally sourced material where possible which have a high recycled content. The systems we incorporate into our designs are all selected to complement the construction in conjunction with expert project ESD consulting team.

Energy Efficient Design & Systems

The systems we incorporate into our designs are all selected to complement the construction. Use of engineered steel structure fit-for-purpose with minimal load bearing elements (localised columns and bracing) allows for future flexibility and adaptability where modules can be refitted to suite new use. Minimising the need to demolish existing built modular facilities which reduces embodied carbon energy. The primary steel fabricated structure requires minimal maintenance reducing's on-going maintenance cost and energy. Module components are standardised as a typical where possible to reduce waste in material and promote the use of standard detailing.



QUALITY

The factory environment enables a rigorous level of quality control to be achieved, ensuring no detail is overlooked.

The combination of modularisation and prefabrication at our modular construction hub in Brooklyn, Melbourne creates a degree of automation that cannot be achieved with conventional, on-site construction.

Controlled environment

Being constructed within a controlled factory environment ensures a project is brought to life by our dedicated team with no weather, trade or supply issues.

One team

Modscape's end-to-end service managed by a dedicated project team – all with extensive experience in the design, development and construction industries. Modscape's in-house design team of project managers, architects and interior designers can undertake the entire design process or can work collaboratively with external architects, engineers and specialist consultants to develop a modular solution that falls within budget and to an agreed timeframe, ensuring clients are informed and consulted along the way.



MODSCAPE.

QUALITY

ITP Process

Stringent quality control helps to warrant consistency and quality through the entire project and building waste is significantly reduced.

Modscape have a design to build ITP process that ensures the quality in design carries on to the build, and an ITP process throughout the build to ensure quality control is maintained to meet details, BCA and EFSG requirements

Proven Processes

Modscape has installed modular buildings all over Australia and, with offices in Melbourne and Sydney, are equipped to work at a geographical distance from our clients. Modscape undertake complete project management plans with our highly-planned process ensuring all parties are clear on who does what and when.



SITE EFFICIENCY

Site Impacts

The off-site fabrication ensures that the time spent on site is minimised significantly

This reduces the impact on;

- Environmental factors including pollution, carbon footprint and site disturbance
- Site Wastage of materials as the building is built with all materials affixed to the building or delivered with the building
- Site OHS and Cleanliness in and around the site and streets
- Noise and General Disturbance to residents and the local community
- Traffic Management Controls to residents, local communities and transportation services as there are less deliveries and pick ups of general construction materials and supplies

Ease of Delivery and Installation

Modscape install fully built and waterproofing buildings within 1 day, reducing the risk of weather delays

Modscape have a dedicated project team to ensure the build, logistics and installation runs smooth and efficient

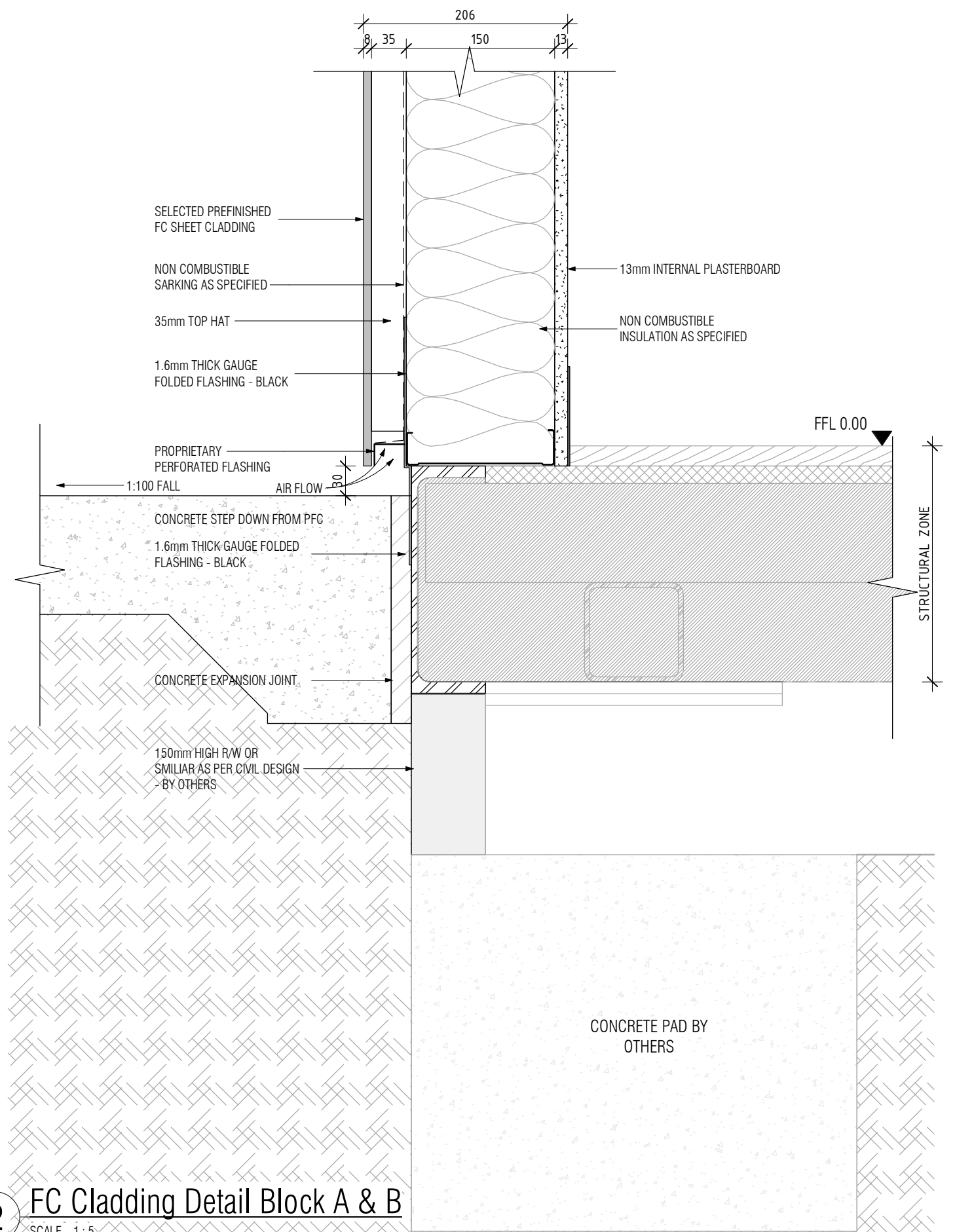
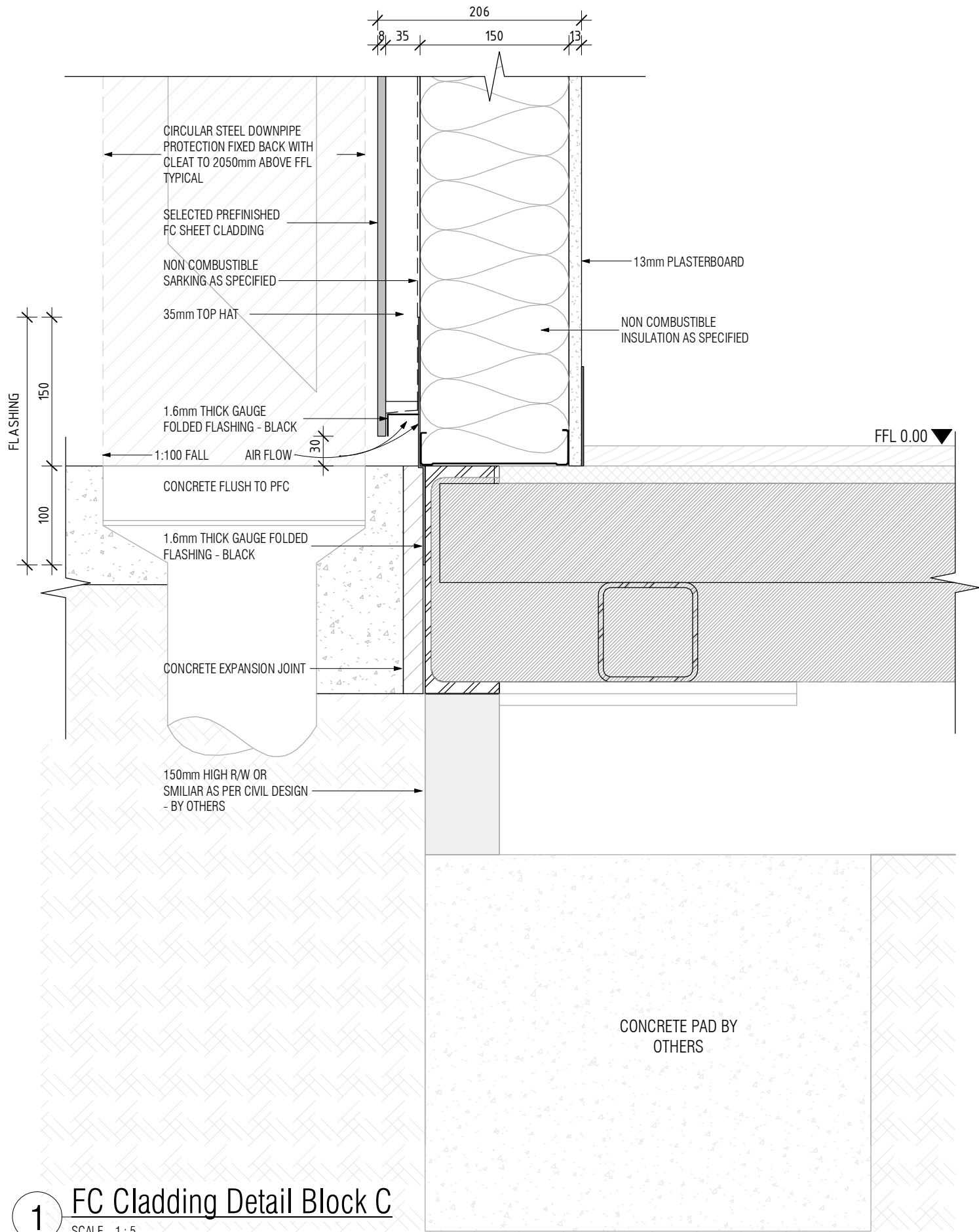
Modscape's in-house management team work collaboratively with councils, authorities and local communities to ensure programme deliverables, creating trust with the client and relevant stakeholders

TECHNICAL DETAILS

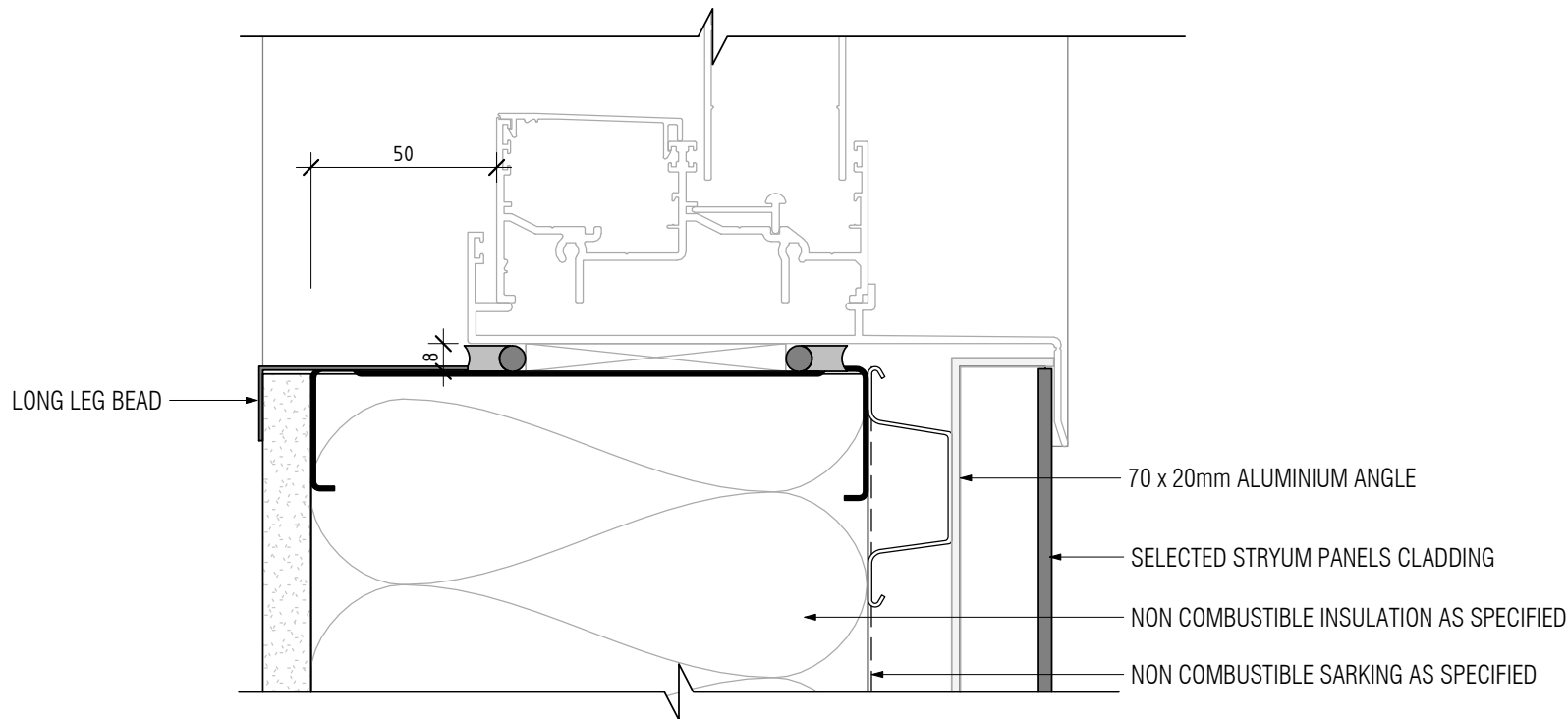
Examples of several standard details used in the Alex Avenue Public School design are noted below and attached;

All modular detailing is designed and constructed to comply with the Building Code of Australia and Australian Standards to achieve a high quality end result. Typical modular junction detail are standardised to achieve weathertightness.

- Module Floor Details
- Module Floor to Ceiling section – 2 storey
- Module connection details
- Module Façade cladding junction details
- Module Window details



A CONSTRUCTION DETAIL				27.05.19	HG	Design Manager: Design Manager: Technical: Design Intent:	THESE PLANS, DESIGN AND THE COPYRIGHT THEREIN ARE THE PROPERTY OF MODSCAPE HOLDINGS PTY LTD AND ITS SUBSIDIARIES AND MUST NOT BE REPRODUCED OR COPIED, WHOLLY OR IN THE PART WITHOUT THE WRITTEN PERMISSION OF MODSCAPE HOLDINGS PTY LTD DO NOT SCALE OFF DRAWINGS	MODSCAPE. 430 Francis Street, Brooklyn, VIC 3012 Ph 9314 7769	NSW Government Alex Ave & Jordan Springs Standard Details	SINSW Stnd Details Cladding Details HG Drawn MAY 2019 Date	Drawing No. SD-8-65 1 : 5 Scale	Revision A A3 Sheet Size 490-491 Job No.
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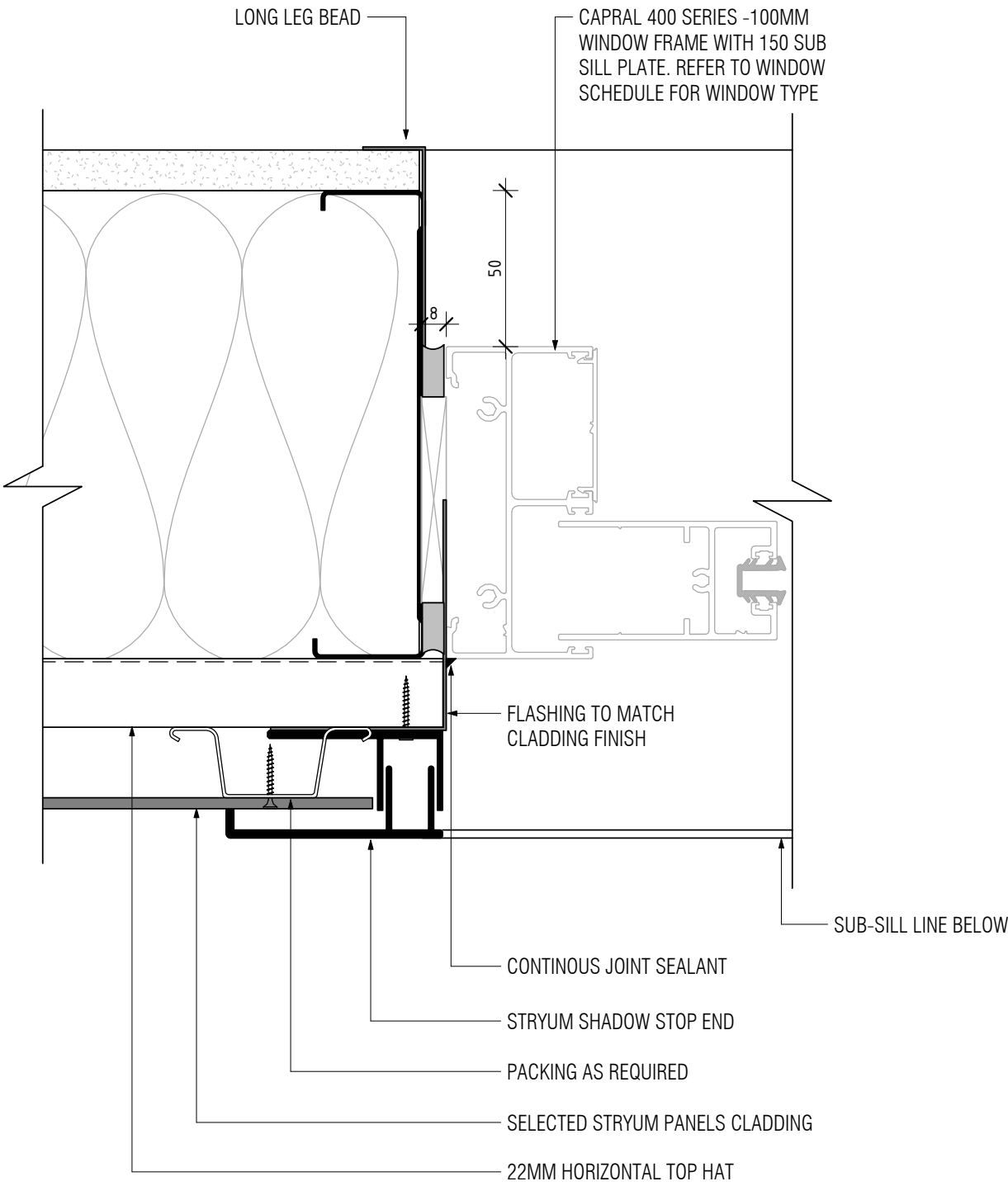
Window Sill - Stryum Sheet Cladding

SCALE 1 : 2

R-VALUES (INSULATION):	
CEILING/ROOF	- R4.0
EXTERNAL WALLS	- R2.8
INTERNAL WALLS	- R1.8
MID FLOOR	- R2.0

FC SHEET FLASHING	
COLOUR	- BASALT
DIVERSACLAD FLASHING	
COLOUR	- SHALE GREY

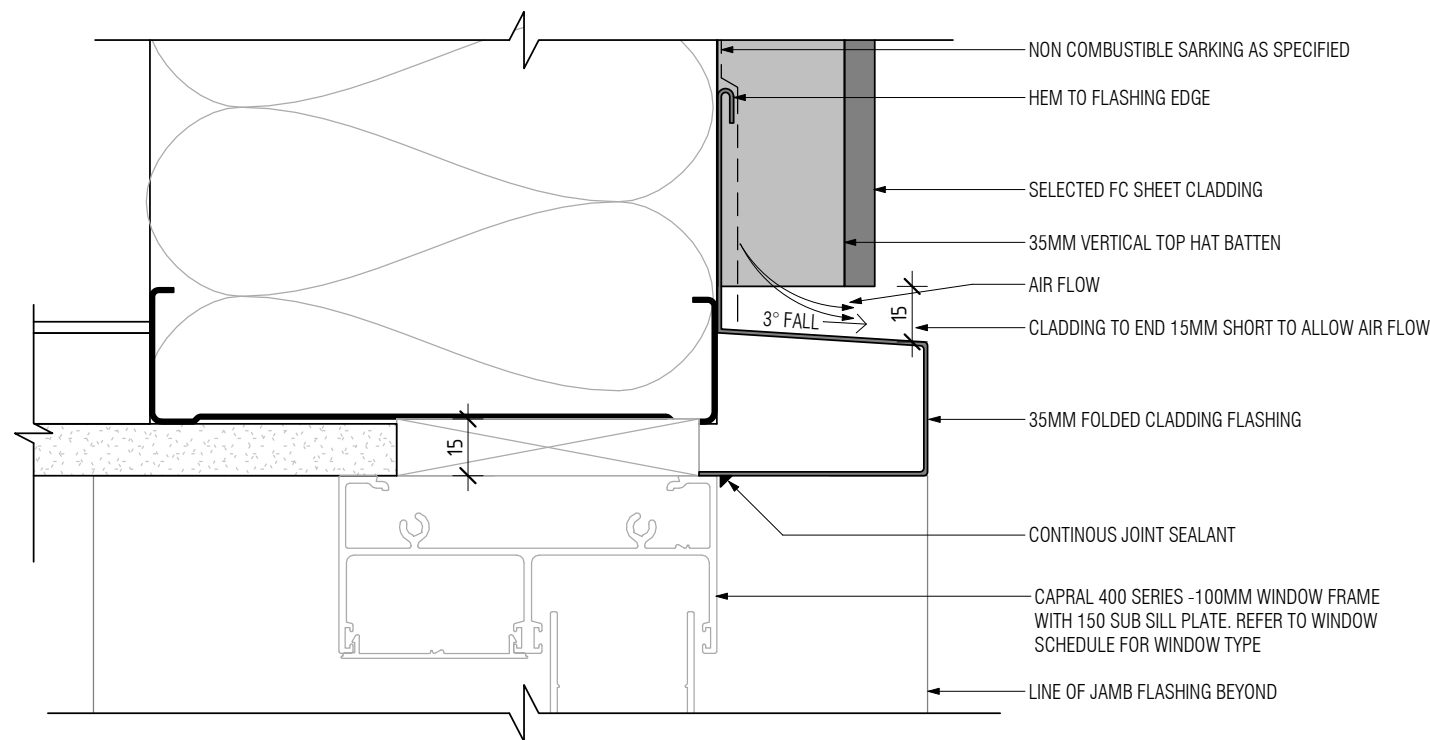
STRRYUM PANEL	
COLOUR	- FRESH GOLD



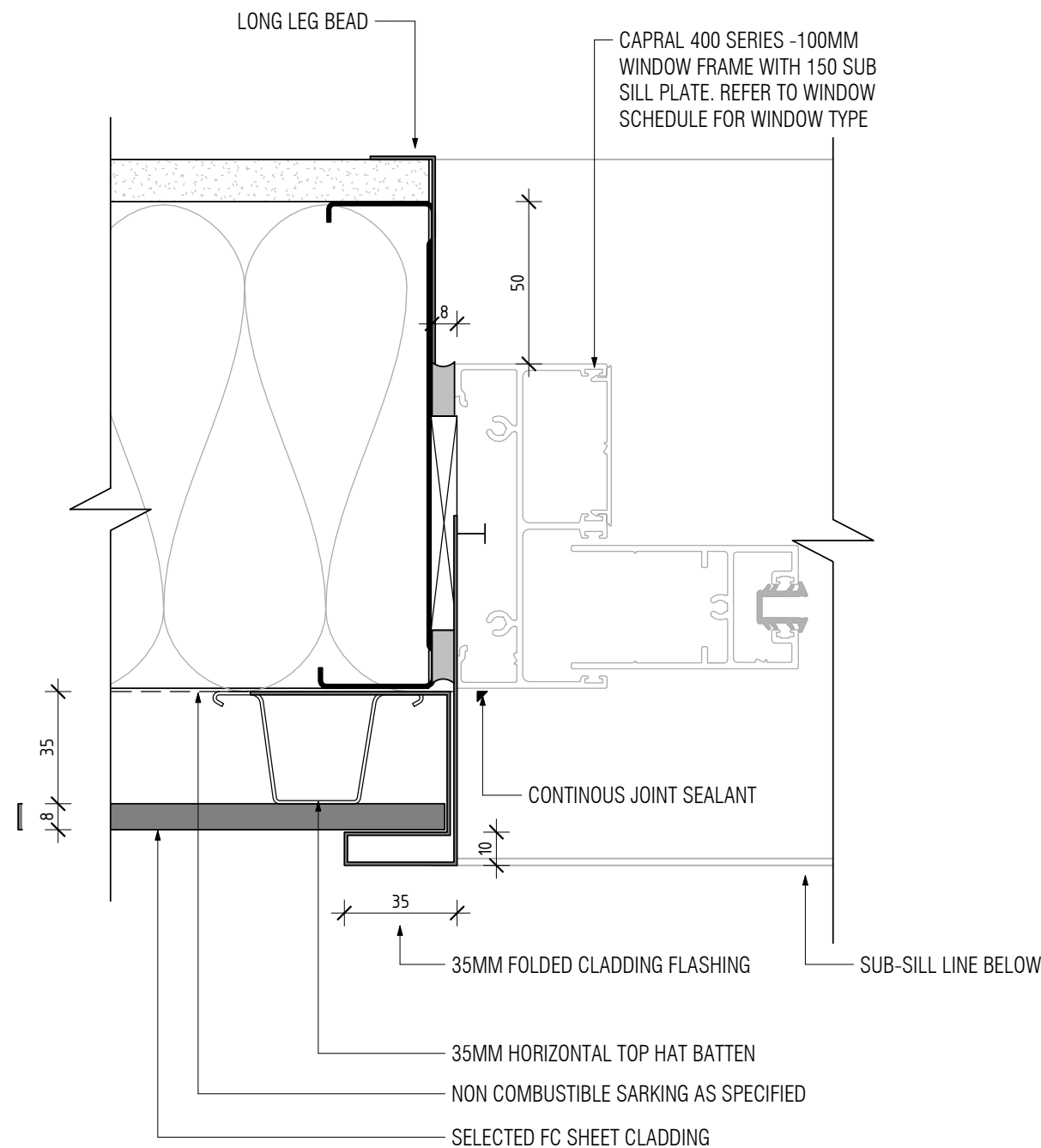
Window Jamb - Stryum Sheet Cladding

SCALE 1 : 2

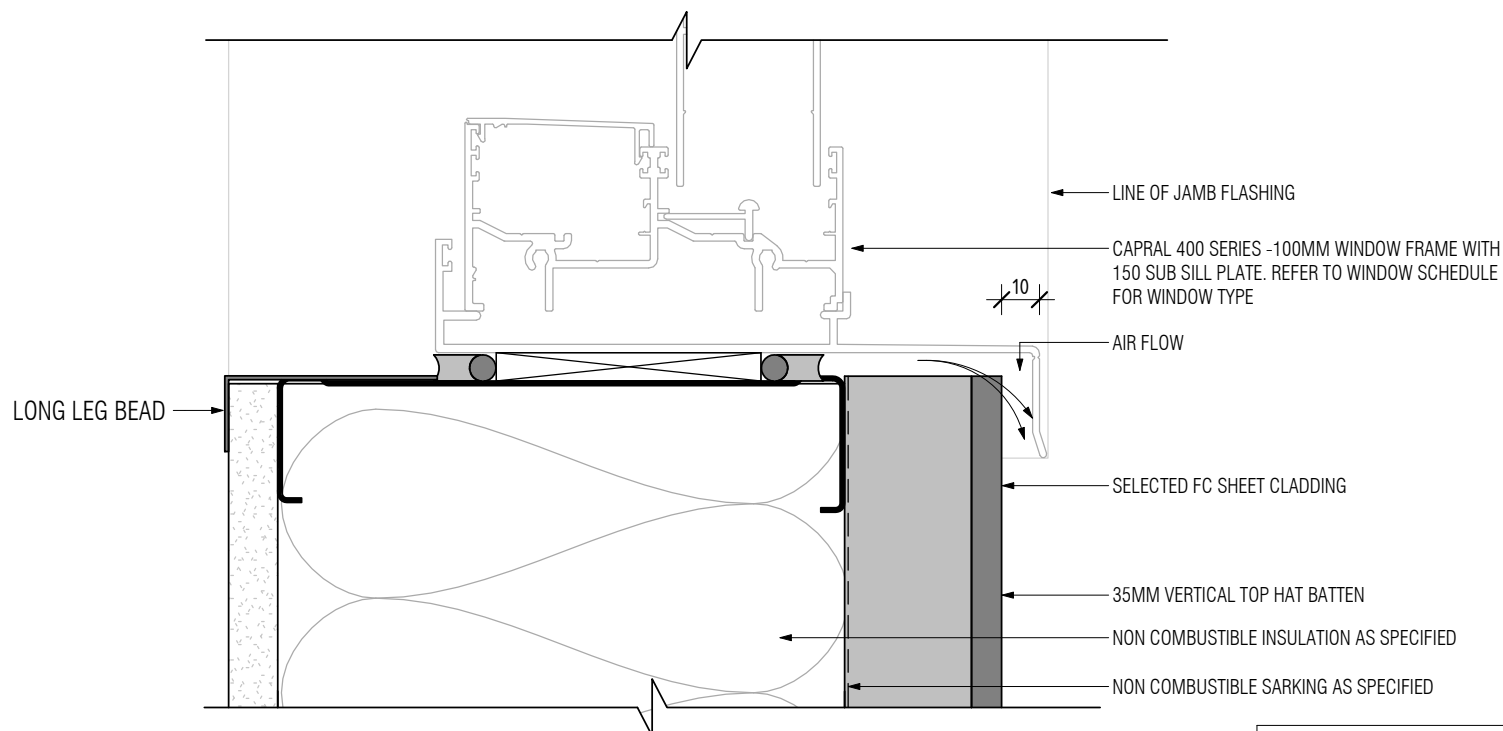
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STRUCTURAL STEEL DRAWING SET				Design Manager:						
20.06.19 KT				Technical:						
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1 Window Head - FC Sheet Cladding
SCALE 1:2



4 Window Jamb - FC Sheet Cladding
SCALE 1:2



2 Window Sill - FC Sheet Cladding
SCALE 1:2

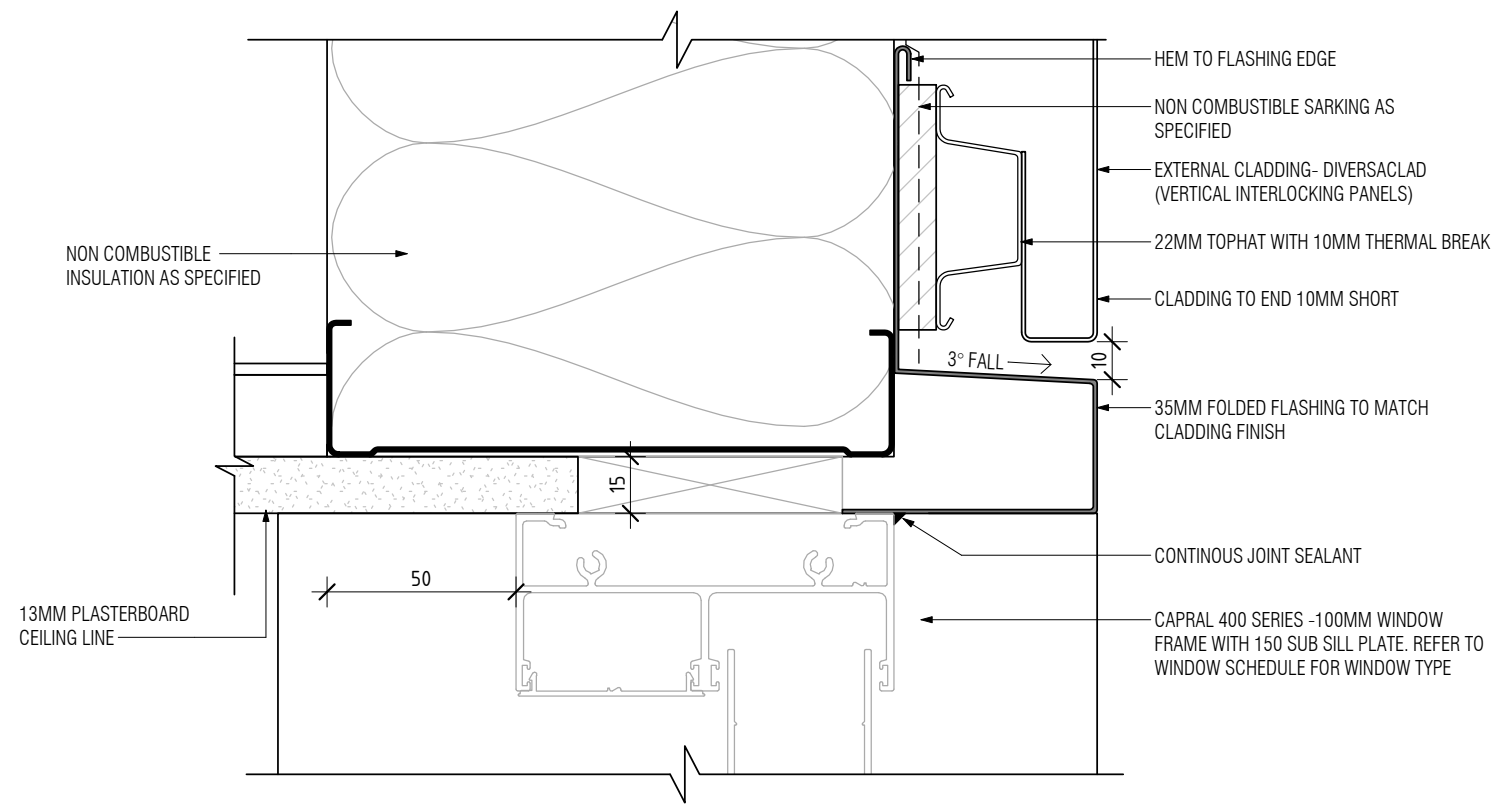
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EXTERNAL WALLS	- R2.8
INTERNAL WALLS	- R1.8
MID FLOOR	- R2.0

FC SHEET FLASHING	
COLOUR	- BASALT
DIVERSACLAD FLASHING	
COLOUR	- SHALE GREY

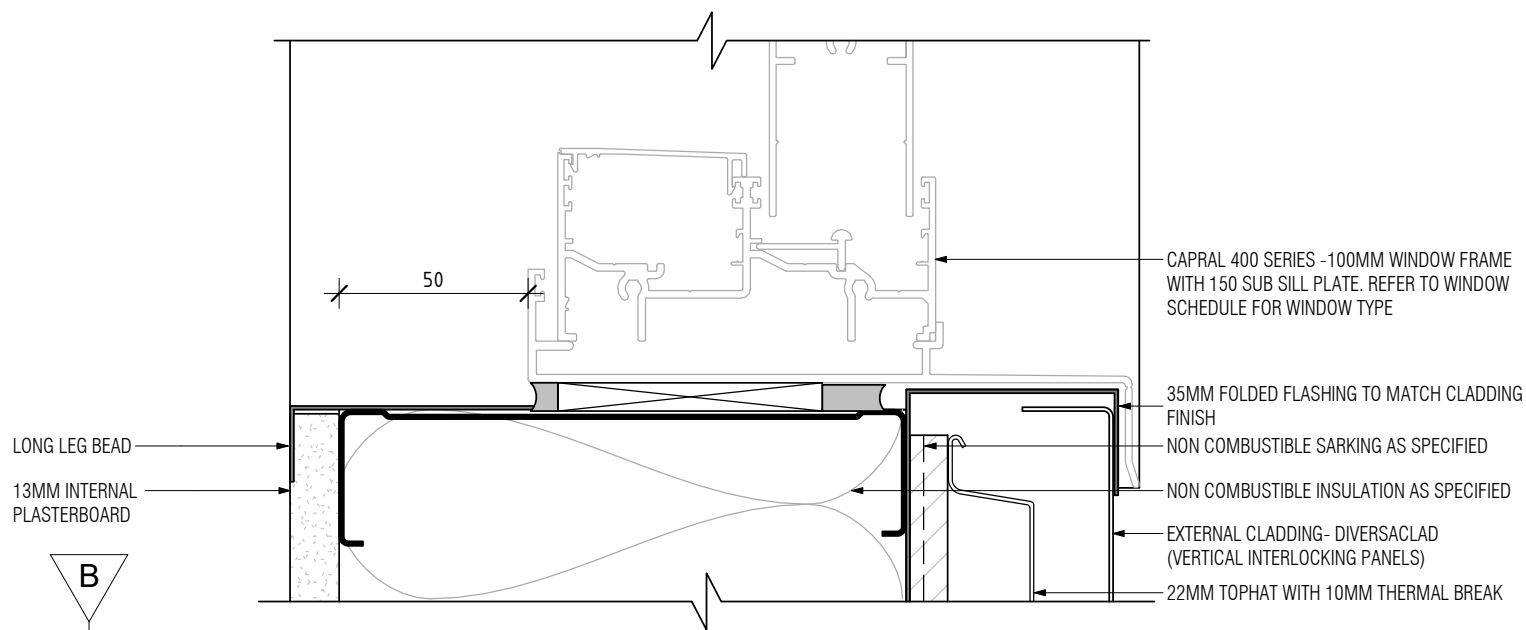
STRRYUM PANEL	
COLOUR	- FRESH GOLD

B
NOTE: SEAL AND JAMB
DETAIL UPDATED

<div> <div>B</div> <div>DETAIL UPDATES</div> <div>20.06.19</div> <div>HG</div> </div> <div> <div>A</div> <div>CONSTRUCTION DETAIL</div> <div>27.05.19</div> <div>HG</div> </div> <div> <div>issue</div> <div>description</div> <div>date</div> <div>initials</div> </div>	<div>Design Manager:</div> <div>Design Manager:</div> <div>Technical:</div> <div>Design Intent:</div>	THESE PLANS, DESIGN AND THE COPYRIGHT THEREIN ARE THE PROPERTY OF MODSCAPE HOLDINGS PTY LTD AND ITS SUBSIDIARIES AND MUST NOT BE REPRODUCED OR COPIED, WHOLLY OR IN THE PART WITHOUT THE WRITTEN PERMISSION OF MODSCAPE HOLDINGS PTY LTD DO NOT SCALE OFF DRAWINGS	<div>MODSCAPE.</div> <div>430 Francis Street, Brooklyn, VIC 3012 Ph 9314 7769</div>		NSW Government Alex Ave & Jordan Springs Standard Details	SINSW Std Details Window Details - FC Sheet Cladding KT JUNE 2019 Drawn Date	<div> <div>Drawing No.</div> <div>SD-8-22</div> </div> <div> <div>As indicated</div> <div>Scale</div> </div> <div> <div>A3</div> <div>Sheet Size</div> </div> <div> <div>490-491</div> <div>Job No.</div> </div>	<div> <div>Revision</div> <div>B</div> </div>
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1 Window Head - Diversaclad Cladding
SCALE 1:2

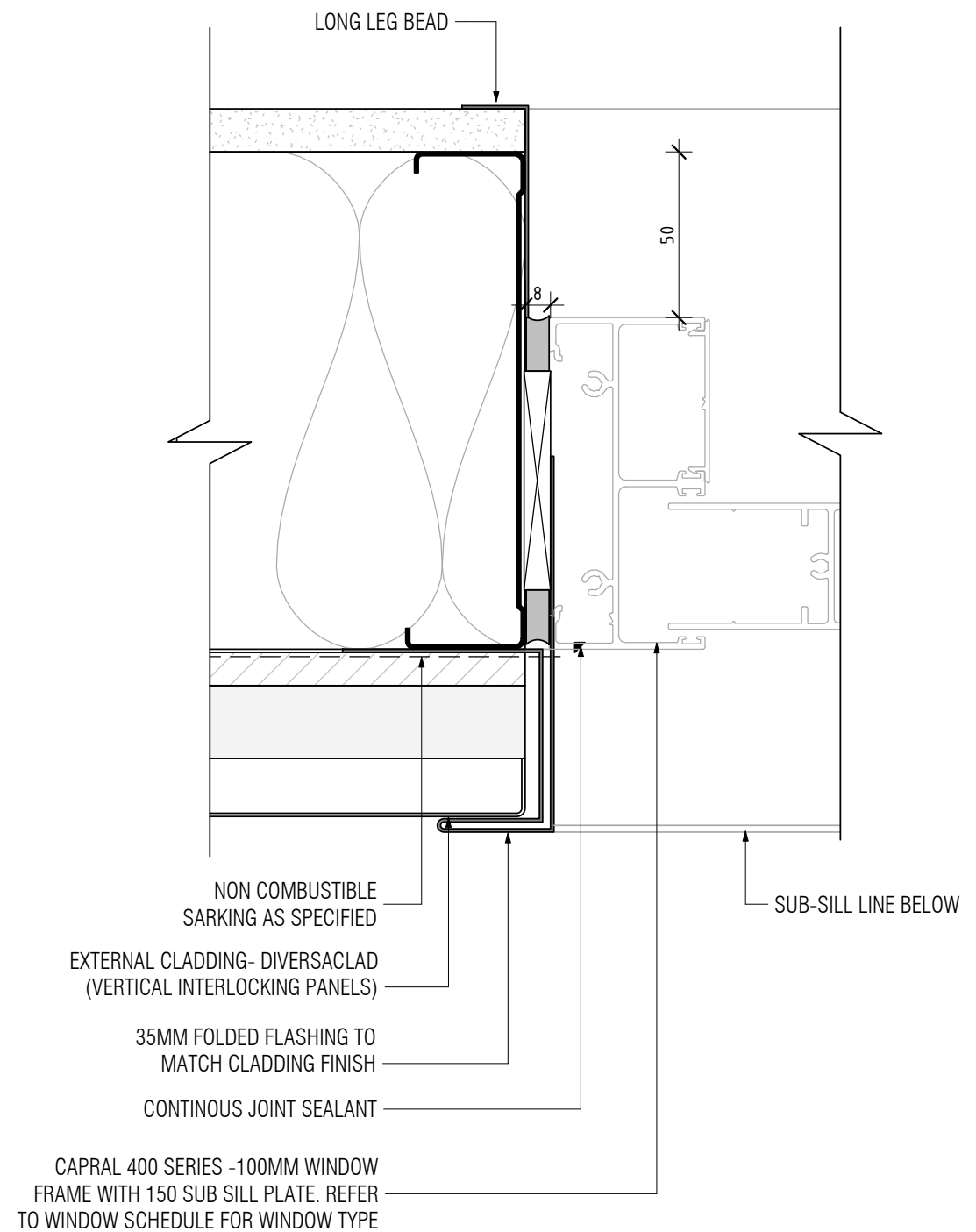


2 Window Sill - Diversaclad Cladding
SCALE 1:2

R-VALUES (INSULATION):	
CEILING/ROOF	- R4.0
EXTERNAL WALLS	- R2.8
INTERNAL WALLS	- R1.8
MID FLOOR	- R2.0

FC SHEET FLASHING	
COLOUR	- BASALT
DIVERSACLAD FLASHING	
COLOUR	- SHALE GREY

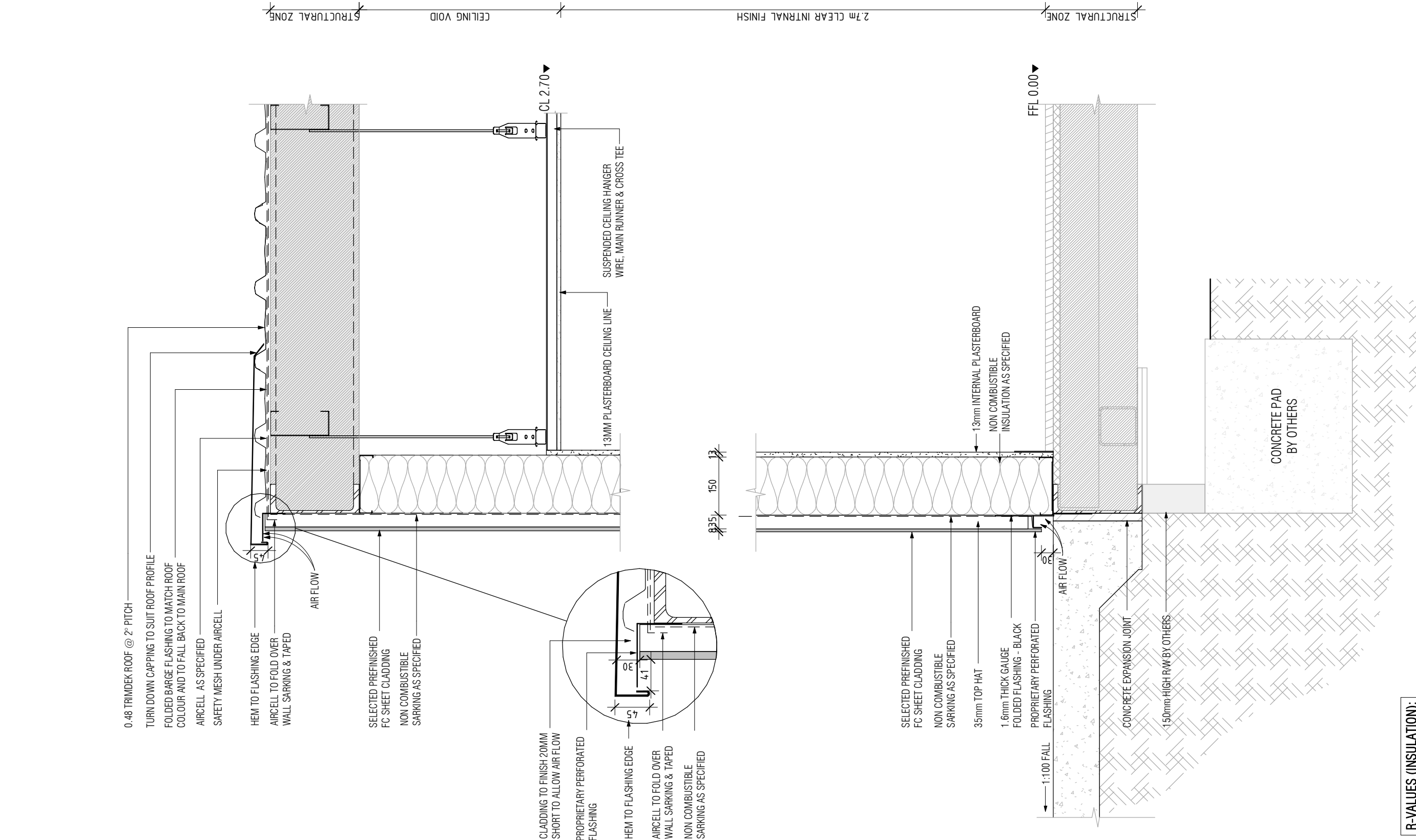
STRRYUM PANEL	
COLOUR	- FRESH GOLD



3 Window Jamb - Diversaclad Cladding
SCALE 1:2

B
NOTE: SEAL AND JAMB
DETAIL UPDATED

<div>B DETAIL UPDATES 20.06.19 HG</div> <div>A CONSTRUCTION DETAIL 27.05.19 HG</div> <div>issue description date initials</div>				<div>Design Manager:</div> <div>Design Manager:</div> <div>Technical:</div> <div>Design Intent:</div>	<div>THESE PLANS, DESIGN AND THE COPYRIGHT THEREIN ARE THE PROPERTY OF MODSCAPE HOLDINGS PTY LTD AND ITS SUBSIDIARIES AND MUST NOT BE REPRODUCED OR COPIED, WHOLLY OR IN THE PART WITHOUT THE WRITTEN PERMISSION OF MODSCAPE HOLDINGS PTY LTD DO NOT SCALE OFF DRAWINGS</div>	<div><div>MODSCAPE.</div><div>430 Francis Street, Brooklyn, VIC 3012 Ph 9314 7769</div></div>		<div>NSW Government</div> <div>Alex Ave & Jordan Springs</div> <div>Standard Details</div>	<div>SINSW Stnd Details</div> <div>Window Details -</div> <div>Diversaclad Cladding</div> <div>KT JUNE 2019</div> <div>Drawn Date</div>	<div>Drawing No. Revision</div> <div>SD-8-21 B</div> <div>As indicated A3 490-491</div> <div>Scale Sheet Size Job No.</div>		
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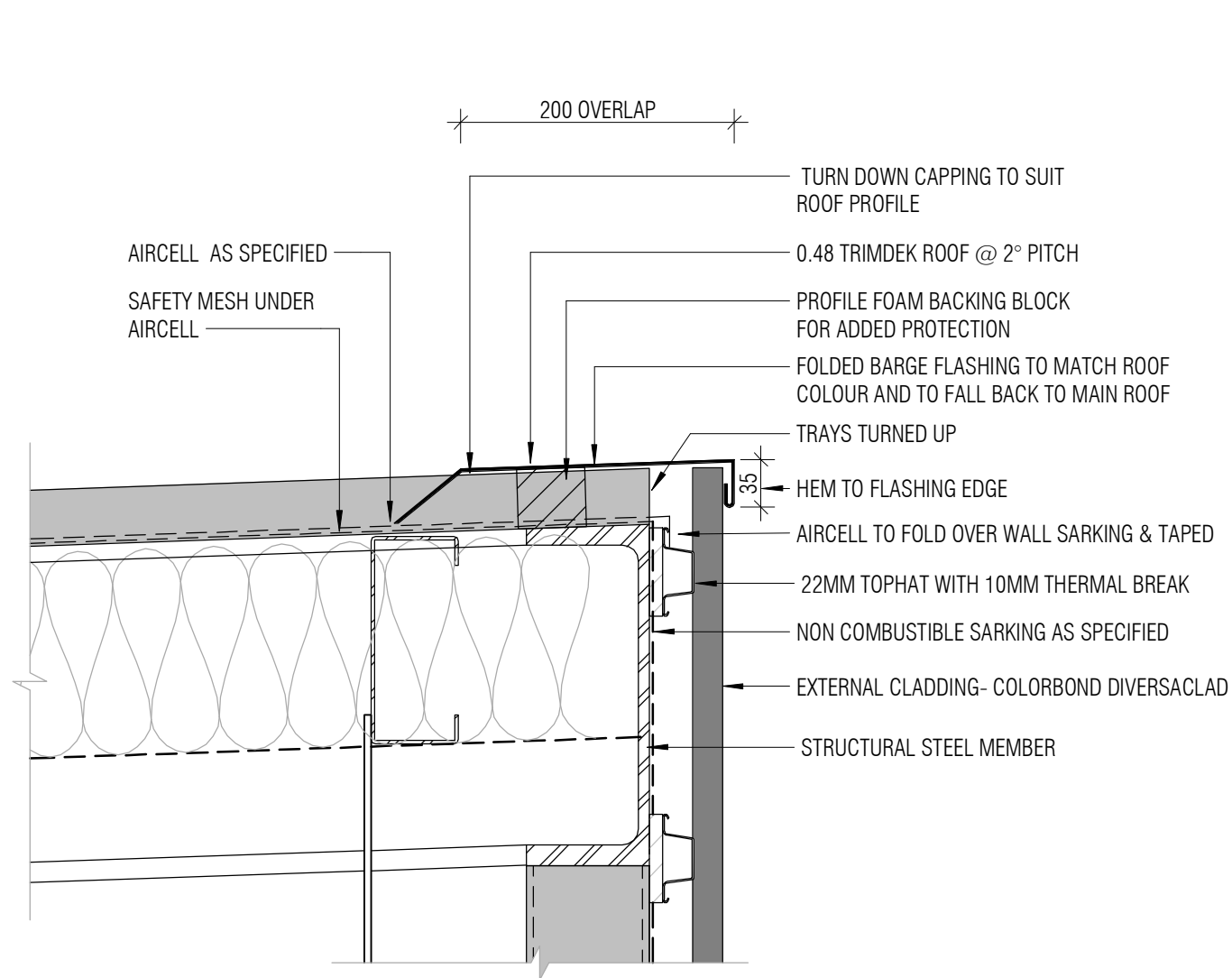


FC Sheet Top & Bottom Detail – Block C

SCALE 1 : 10

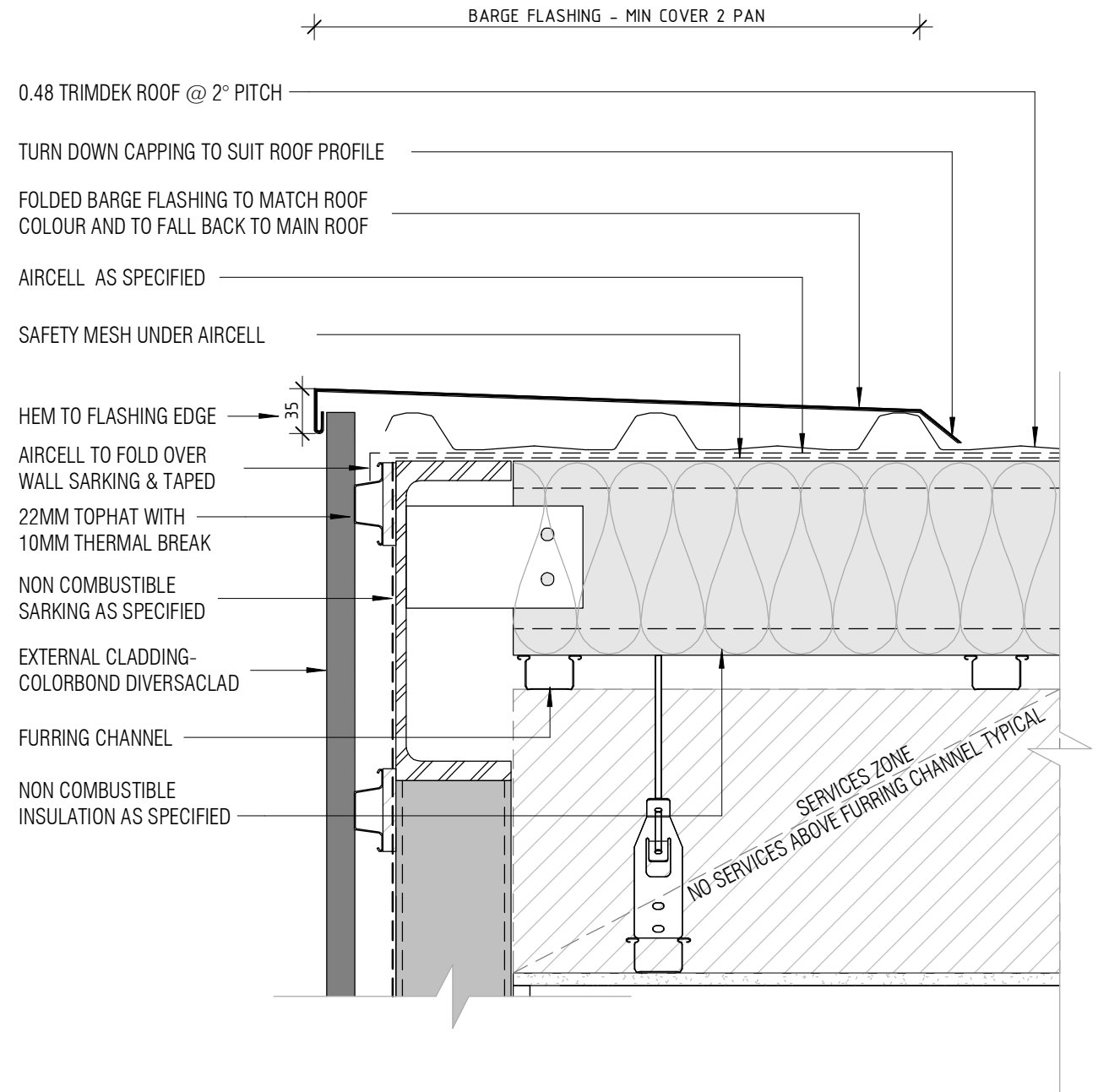
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EXTERNAL WALLS	- R2.8
INTERNAL WALLS	- R1.8
MID FLOOR	- R2.0

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Roof Top Barge Detail

SCALE 1:5



Roof Side Barge Detail

SCALE 1:5

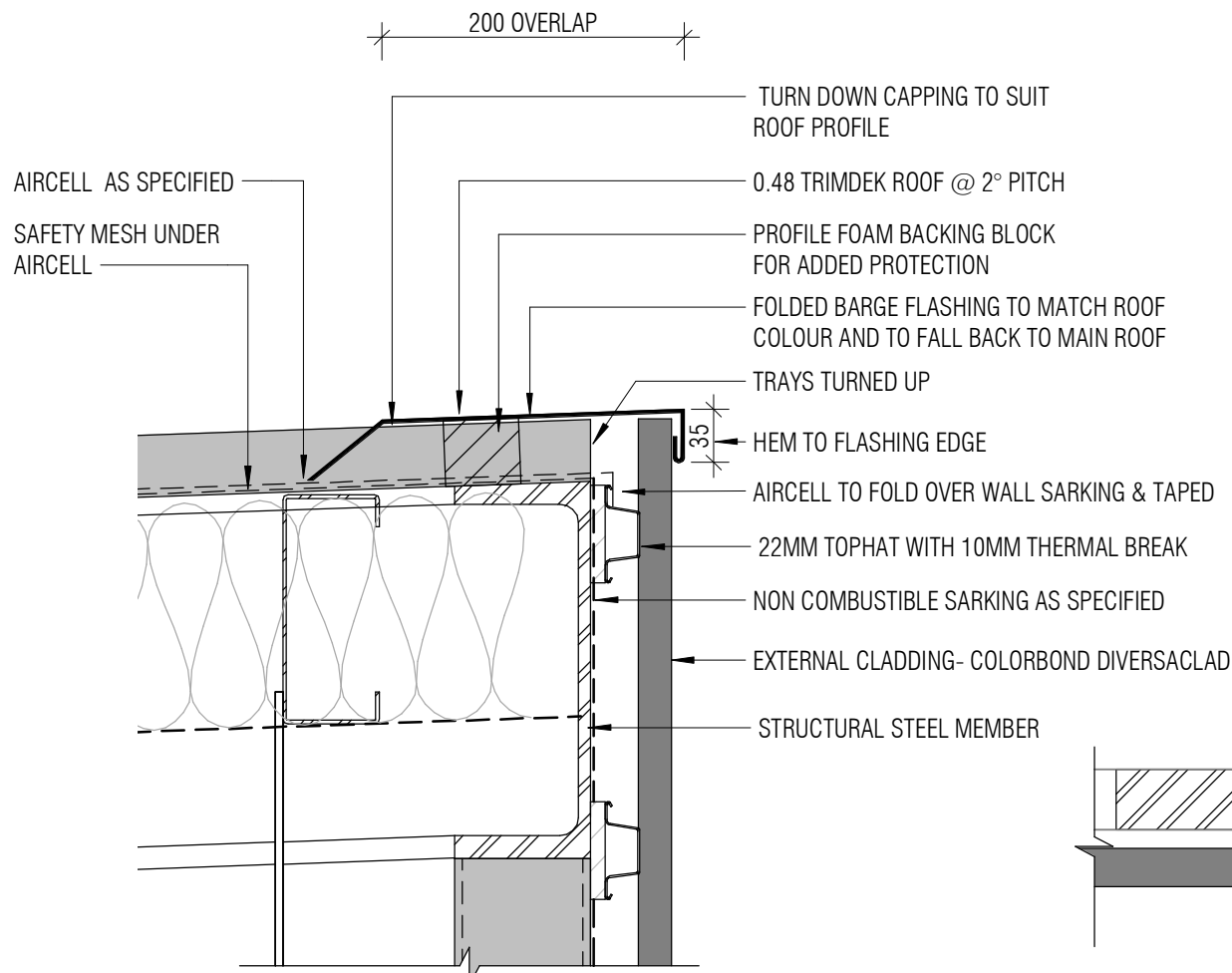
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MID FLOOR	- R2.0

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COLOUR	- BASALT
DIVERSACLAD FLASHING	
COLOUR	- SHALE GREY

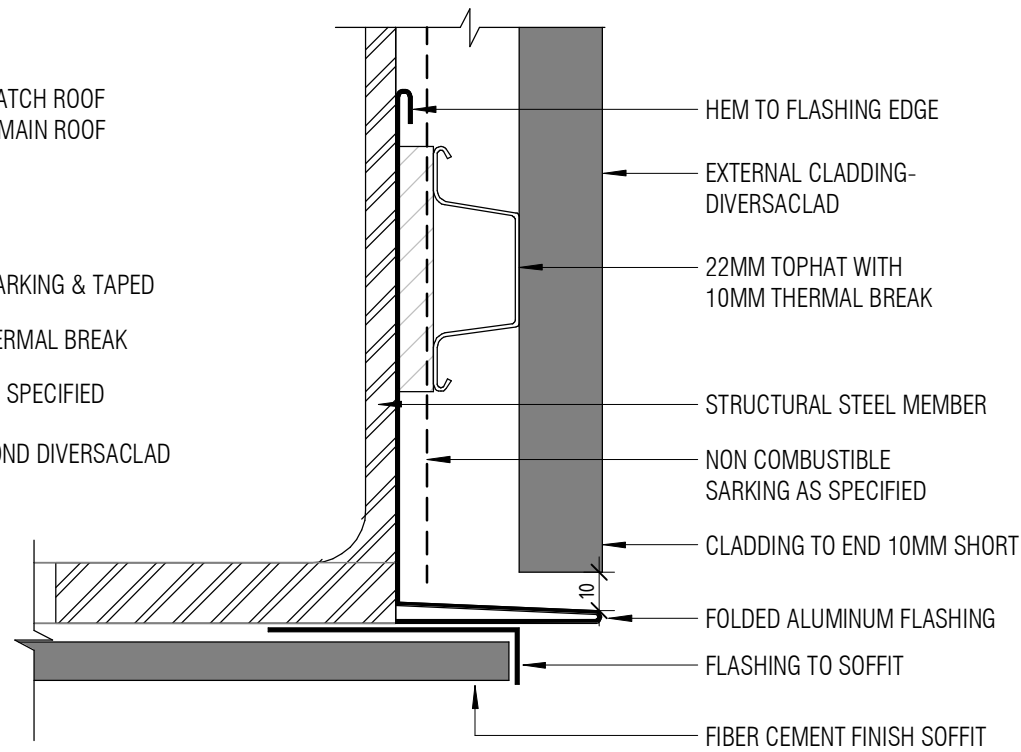
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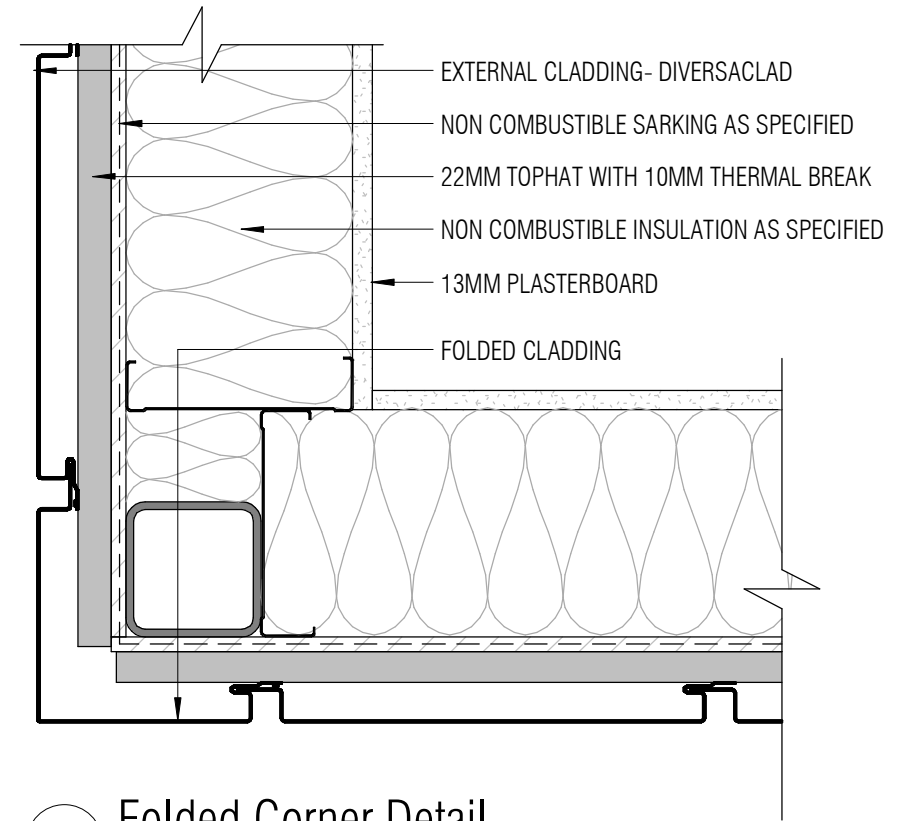
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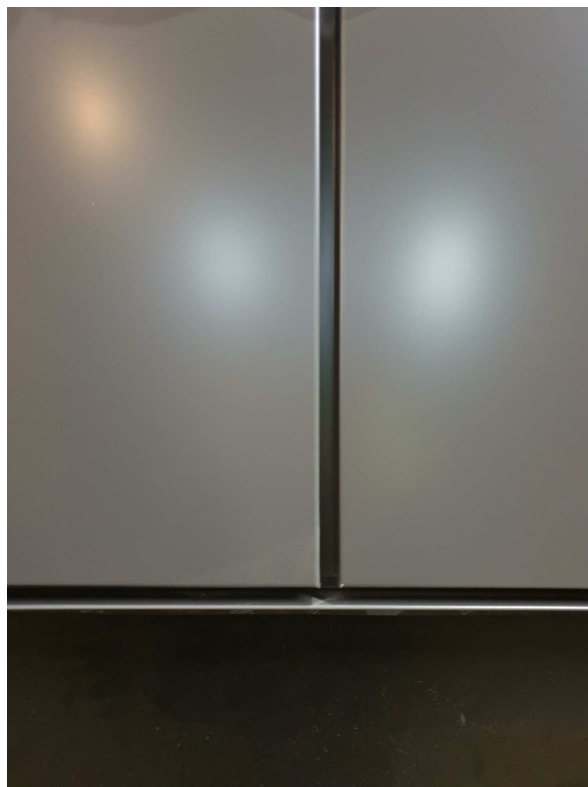
1 Roof Top Barge Detail - Dependent 1
SCALE 1:5




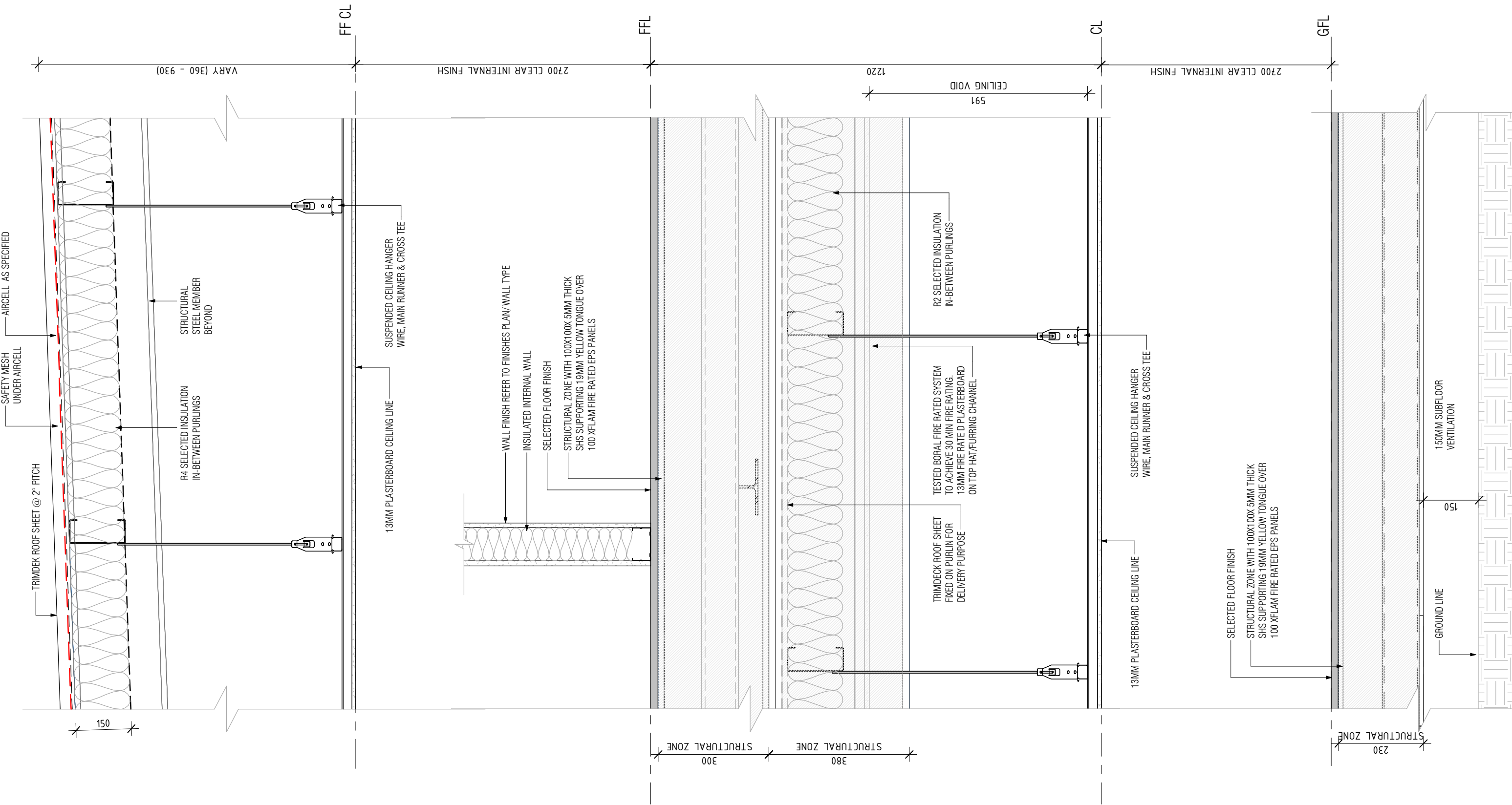
2 Soffit Detail
SCALE 1:2



3 Folded Corner Detail
SCALE 1:5



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