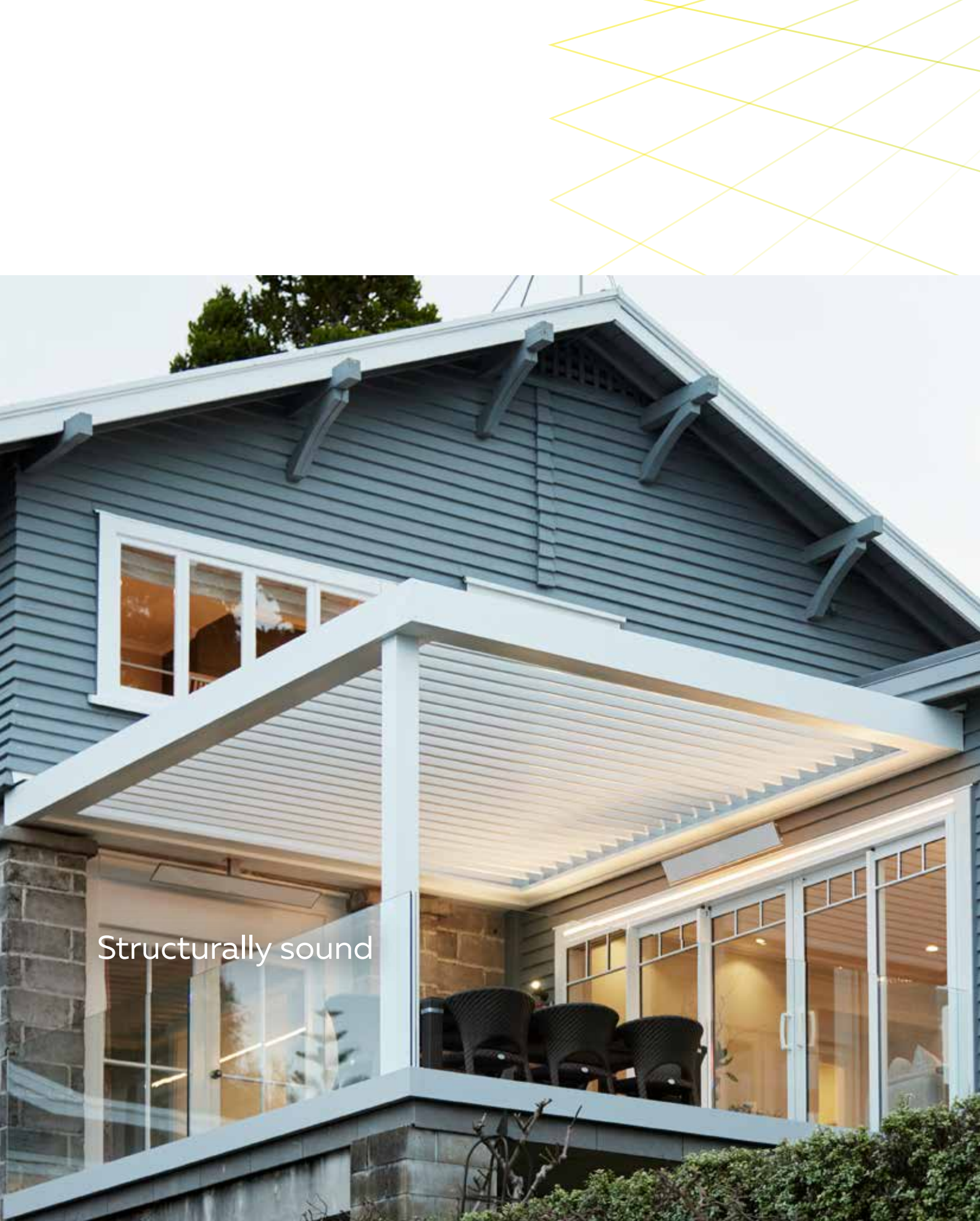


louvretec structural

Frames | Posts | Connections



Gallery & Overview	4.02 - 4.05
Structural Frames & Connection Options	4.06 - 4.08
Post Fixing Details	4.09 - 4.10
Gutter Outlets	4.11 - 4.13
Connecting to the Building	4.15 - 4.34

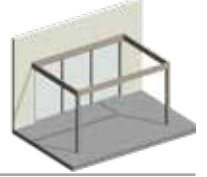


Structurally sound



1 - 4: LOUVRETEC OPENING ROOFS IN LOUVRETEC STRUCTURAL FRAMES





LOUVRETEC STRUCTURAL FRAMES | POSTS | CONNECTIONS

No substitution is permitted

REFER TO RELEVANT DESIGN INFORMATION

Engineering Section 13; ENGINEERING REPORTS

The following structural drawings and fixing details are for use with Louvretec Aluminium Louvre Systems and supporting structures.

No substitution is permitted – please read in conjunction with relevant design tables as applicable in Engineering Reports Section 13.

The Louvretec Structural Frame

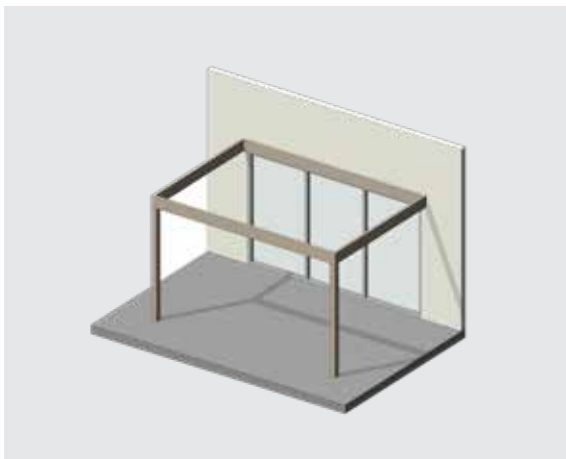
- As part of the Louvretec Opening Roof / Retract Roof package Louvretec offers a fully engineered structural aluminium frame system.
- This frame system has been designed to meet the structural requirements for a Louvretec Outdoor Room.
- Beams & posts are custom designed to be structurally compliant to the specific wind zone.
- Louvretec structural frames provide for clean, aesthetically pleasing lines and with regular cleaning are virtually maintenance free.
- They are also designed to include wall infills such as outdoor blinds, Slidetec Frameless Glass Sliders, Louvre panels – sliding or fixed.

Connections to building

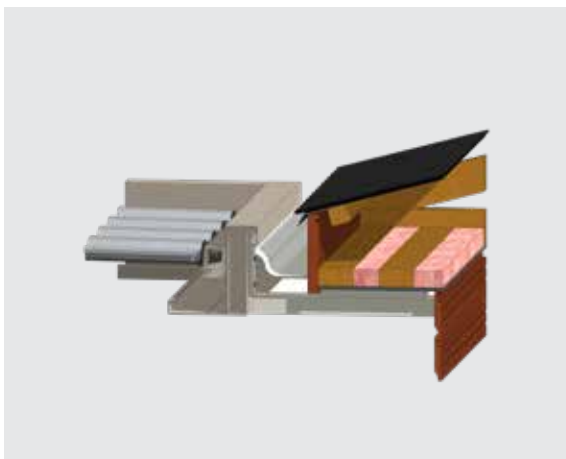
- This section also covers a comprehensive range of options for fixing structural beams to existing buildings.
- Options also include braced free-standing posts where fixing to house is not possible.



CHRISTCHURCH, NZ



SIMPLY SUPPORTED



CONNECTION OPTIONS TO BUILDING

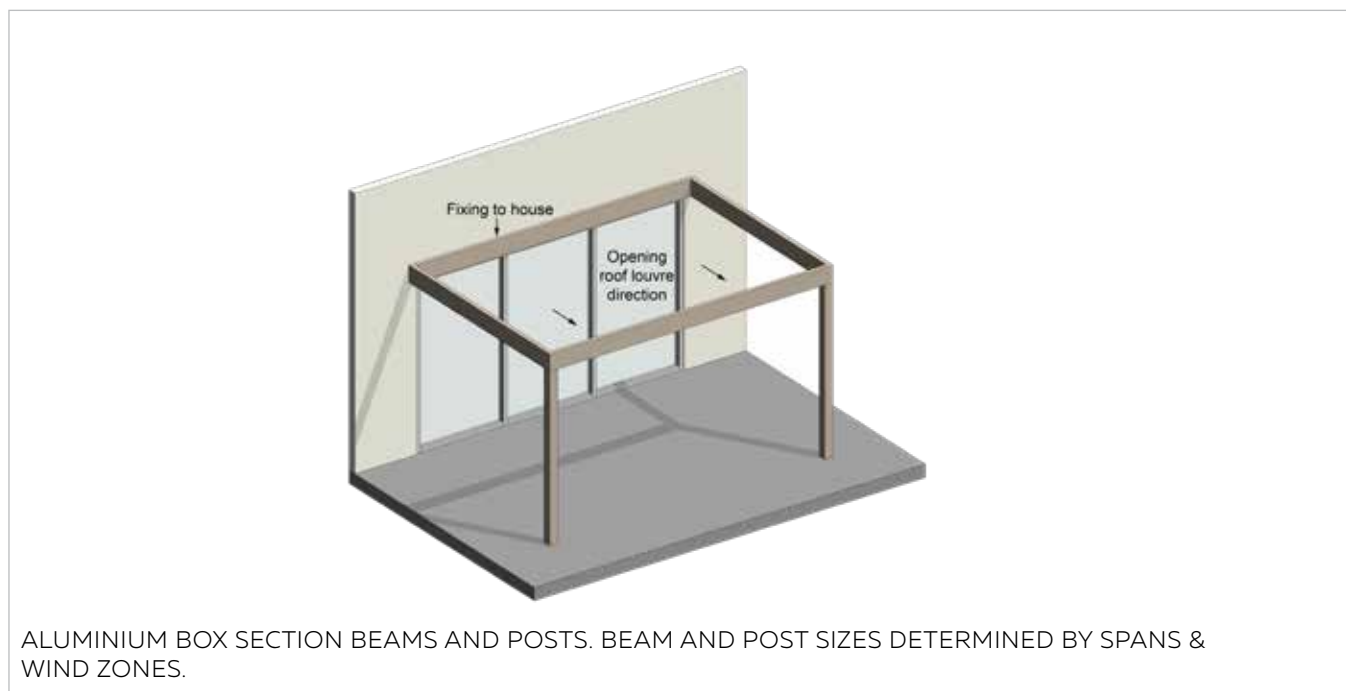
SURFACE FINISHING OPTIONS

A wide range of options are available.

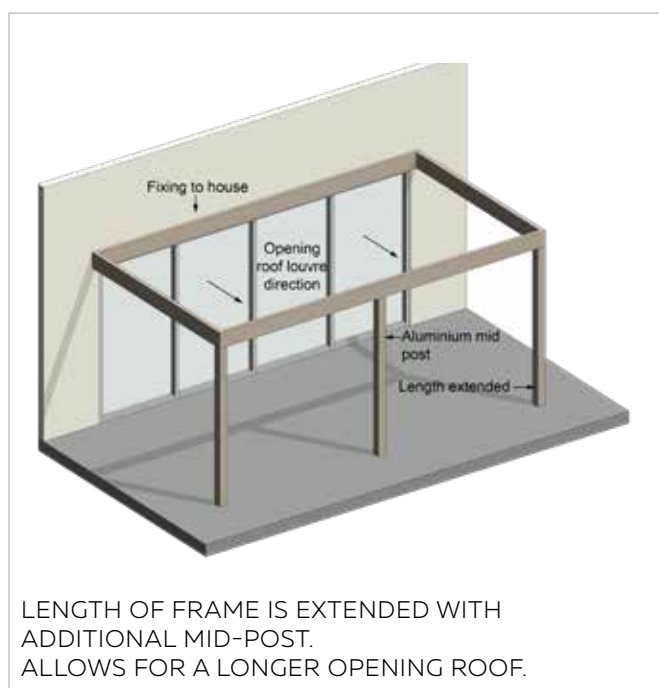


TYPICAL DETAIL FRAME OPTIONS

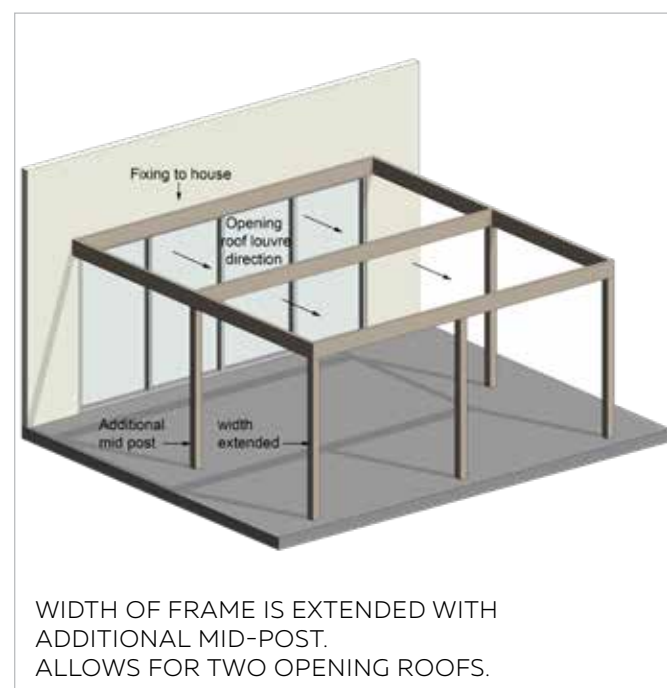
TYPICAL DETAIL SIMPLY SUPPORTED STRUCTURAL FRAME



TYPICAL DETAIL CONTINUOUS SPAN - LENGTH EXTENDED

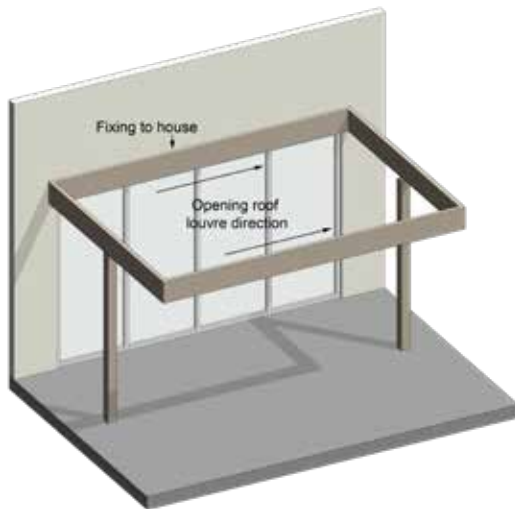


TYPICAL DETAIL CONTINUOUS SPAN - WIDTH EXTENDED



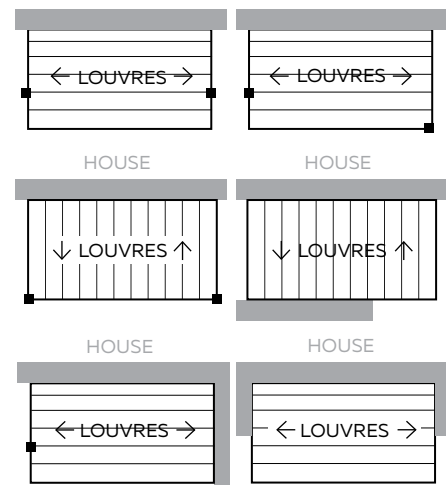
TYPICAL DETAIL FRAME OPTIONS

TYPICAL DETAIL CANTILEVERED STRUCTURAL FRAME



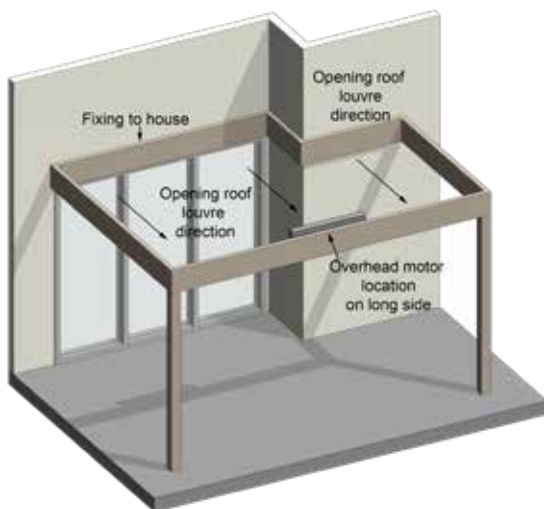
THERE ARE A NUMBER OF CANTILEVER CONFIGURATIONS AVAILABLE.
CONTACT LOUVRETEC FOR ENGINEERING ADVICE.

CANTILEVER CONFIGURATIONS



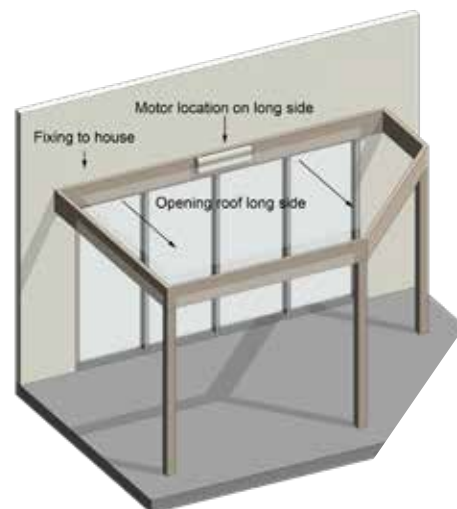
CONTACT LOUVRETEC RE
LOUVRES RUNNING PARALLEL TO
CANTILEVER.

TYPICAL DETAIL STEPPED FRAME



FRAME DESIGNED TO STEP AROUND THE
BUILDING OR FIREPLACE.
MOTOR MUST BE LOCATED ON LONG SIDE.

TYPICAL DETAIL RAKING FRAME



FRAME CAN FOLLOW THE SHAPE OF THE DECK.
MOTOR MUST BE LOCATED ON LONG SIDE.

THE LOUVRETEC STRUCTURAL FRAME

Post and Beam sizes determined by wind and loading

REFER TO RELEVANT DESIGN INFORMATION
Engineering Section 13/ENGINEERING REPORTS

- The post and beam sizes are calculated and determined by wind speeds with loading factors applied to allow for uplift, down pressure and deflection.
- Please refer Section 13 – Engineering for full engineering and design data.
- For any queries please contact your nearest Louvretec Dealer.



SINGLE BEAM



TWO SINGLE BEAMS, MITRED CORNER



DOUBLE BEAM



DOUBLE BEAM WITH SINGLE BEAM



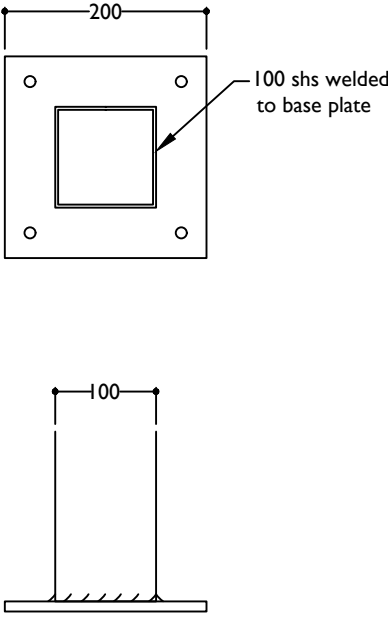
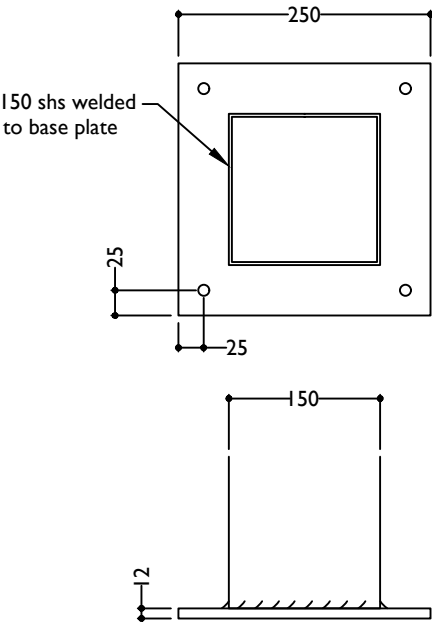
TWO DOUBLE BEAMS, MITRED CORNER



POST WITH BASE PLATE

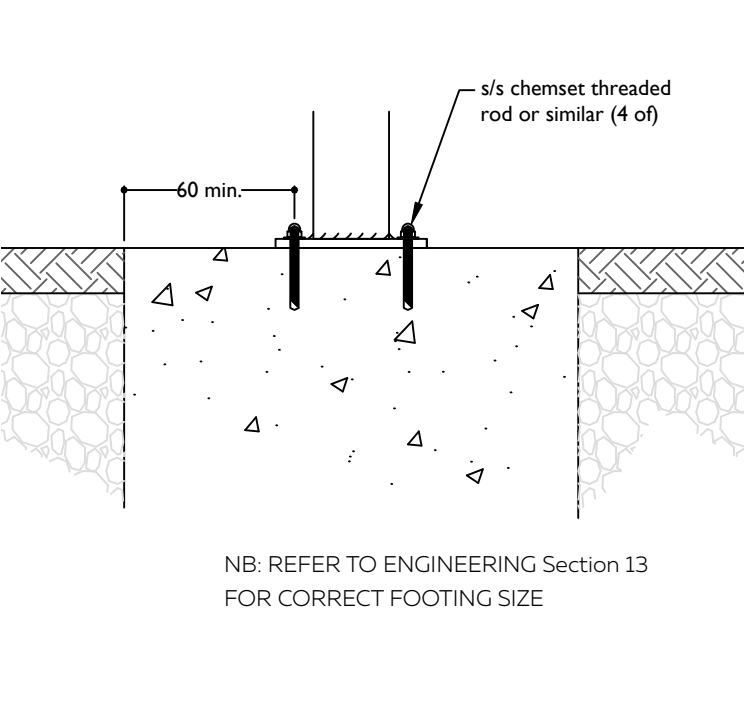


TYPICAL DETAIL: OPENING ROOFS STRUCTURAL FRAME POST FIXING DETAILS



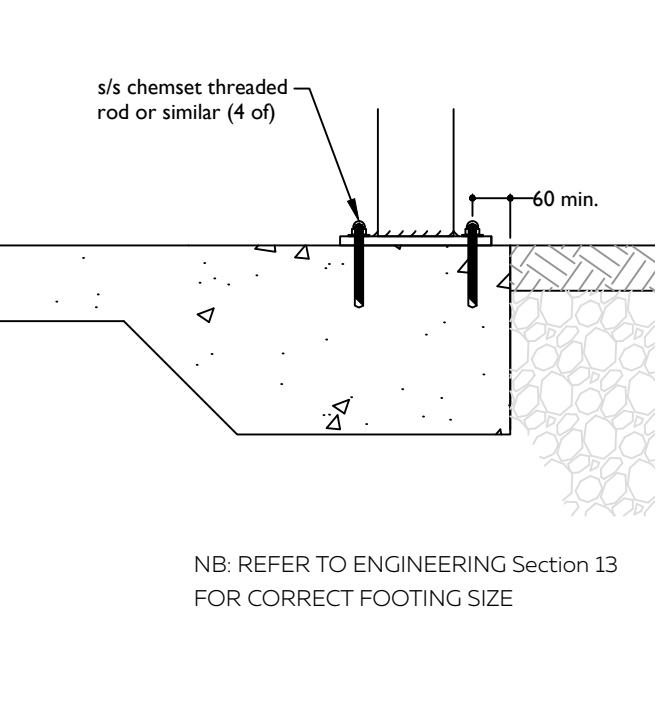
ALUMINIUM POST BASE PLATE - DIMENSIONS

NB: REFER TO ENGINEERING Section 13
FOR CORRECT POST SIZE



NB: REFER TO ENGINEERING Section 13
FOR CORRECT FOOTING SIZE

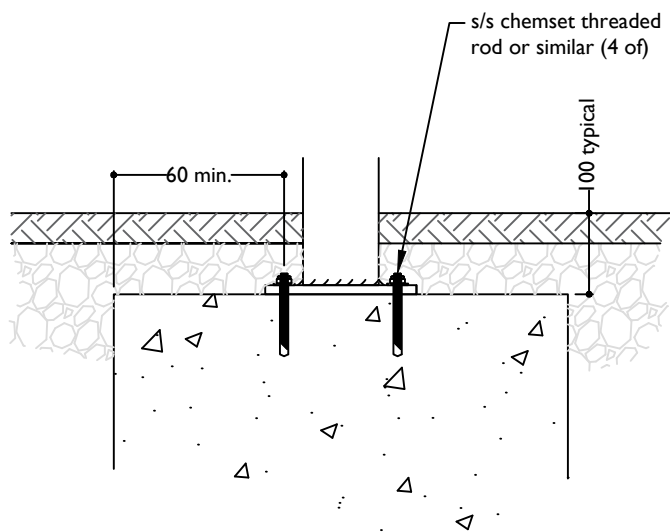
SECTION POST TO CONCRETE FOOTING



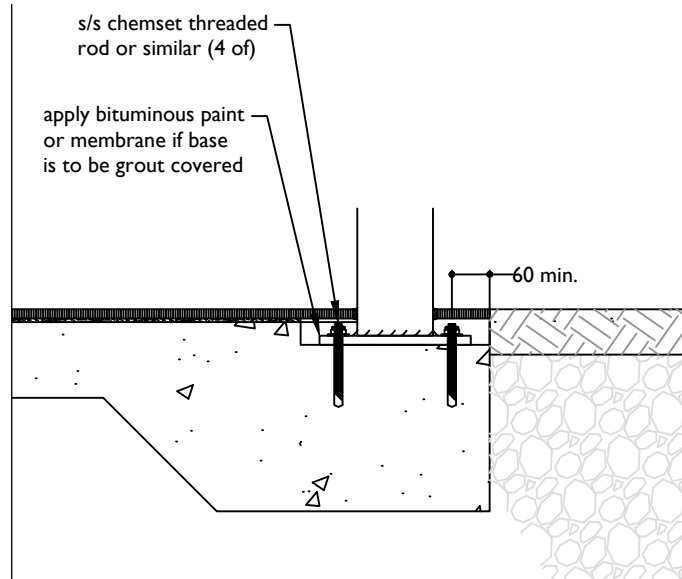
NB: REFER TO ENGINEERING Section 13
FOR CORRECT FOOTING SIZE

SECTION POST TO CONCRETE PAD

TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME
POST FIXING DETAILS

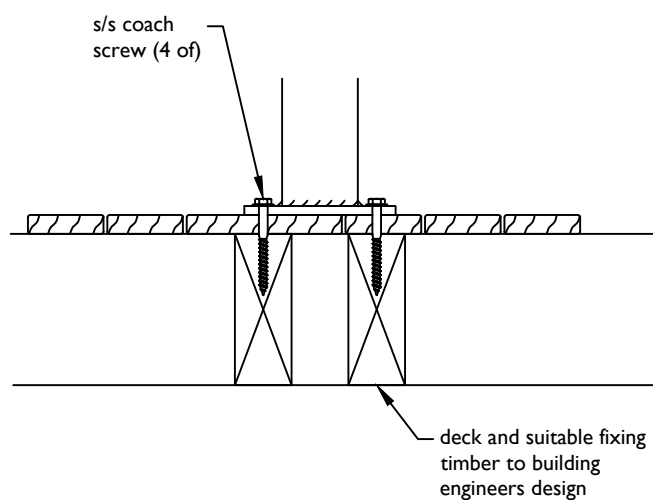


SECTION POST TO CONCRETE FOOTING - RECESSED



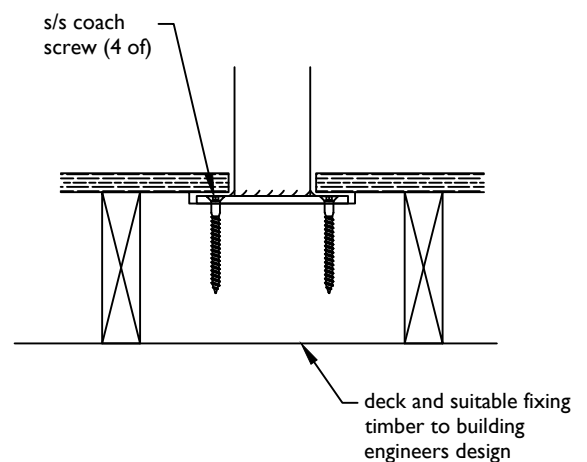
SECTION POST TO CONCRETE PAD - RECESSED

SCALE 1:10



SECTION POST TO TIMBER DECK

SCALE 1:10

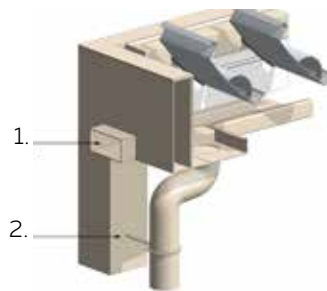


SECTION POST TO TIMBER DECK - RECESSED

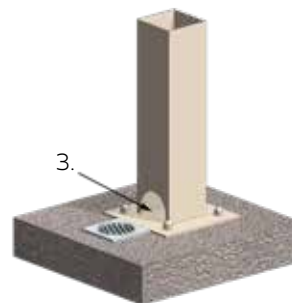
TYPICAL DETAIL GUTTER OUTLETS

TYPICAL DETAIL GUTTER OUTLETS

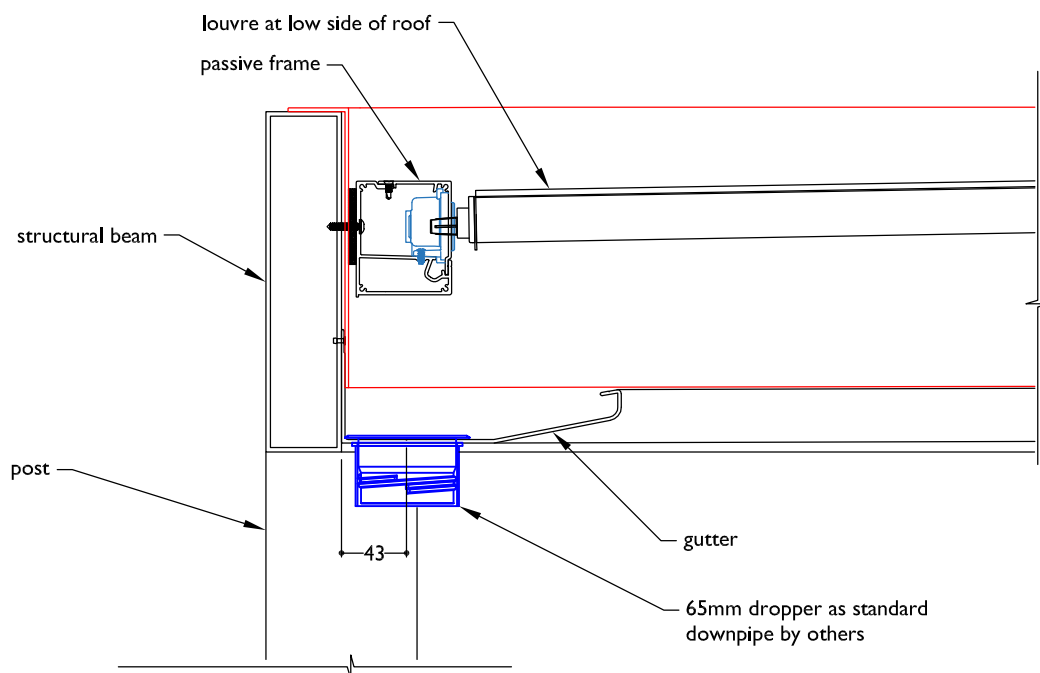
1.
REAR OUTLET THROUGH
ALUMINIUM BEAM
2.
CONVENTIONAL OUTLET AND
DOWNPIPE DROPPER



3.
OUTLET USING POST AS
DROPPER



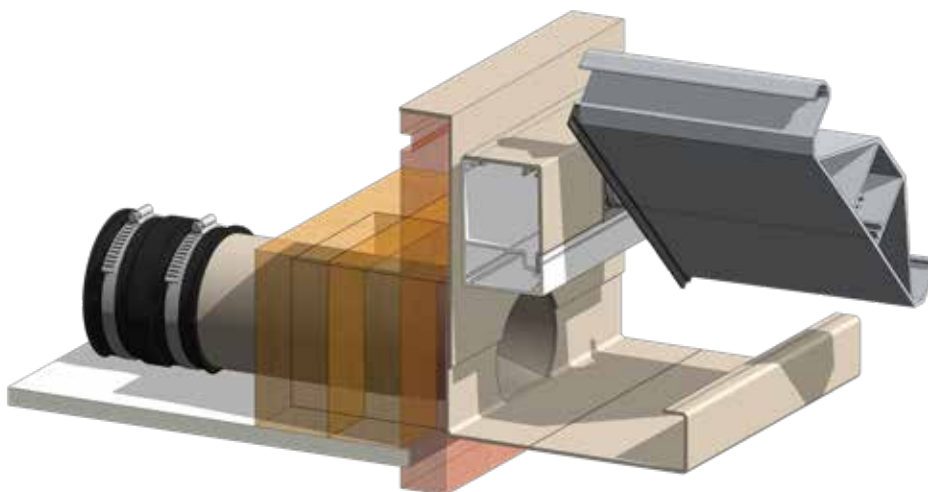
SECTION STANDARD 65MM DROPPER IN GUTTER



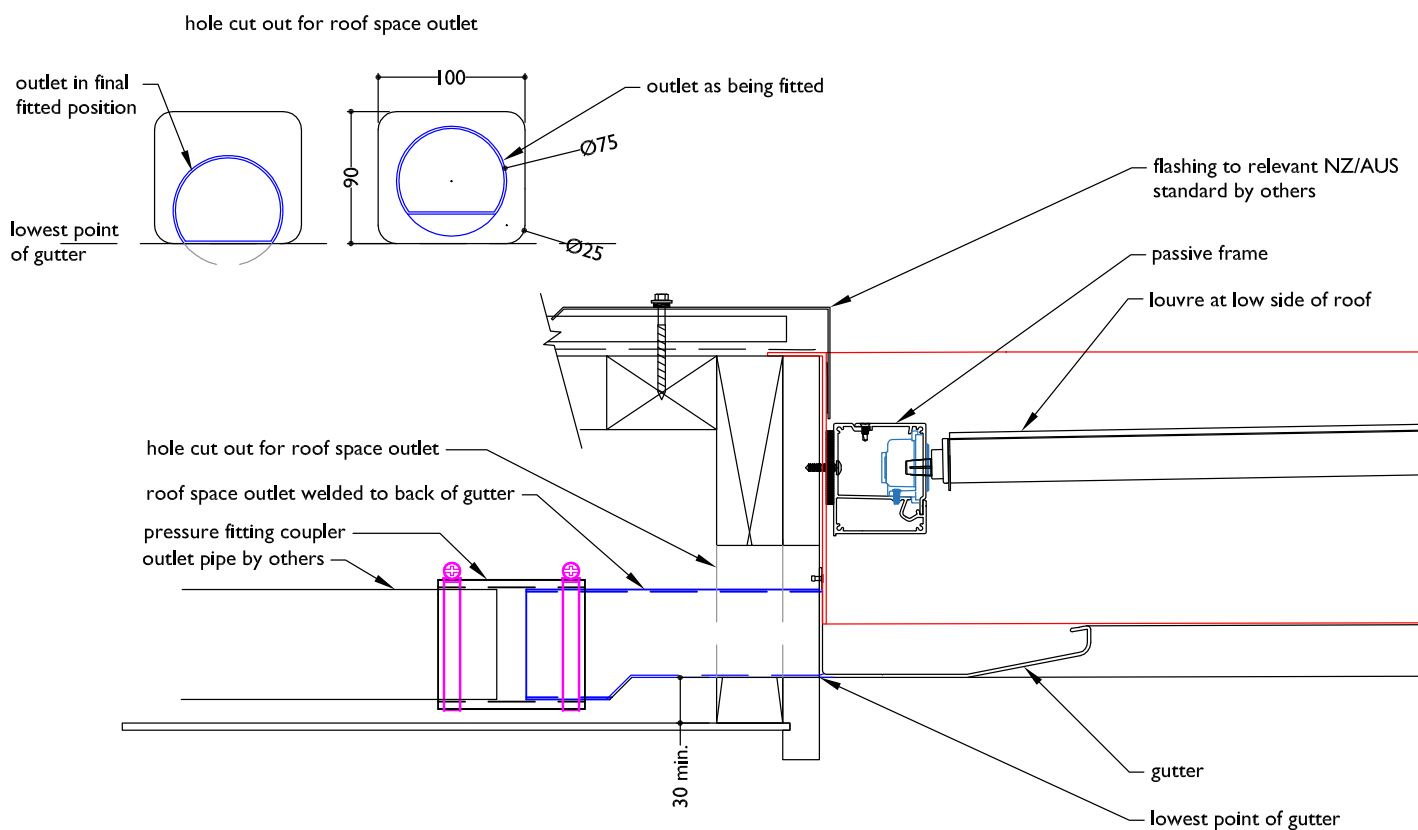
TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME CONNECTING TO THE BUILDING

TYPICAL DETAIL : REAR OUTLET GUTTER IN SOFFIT

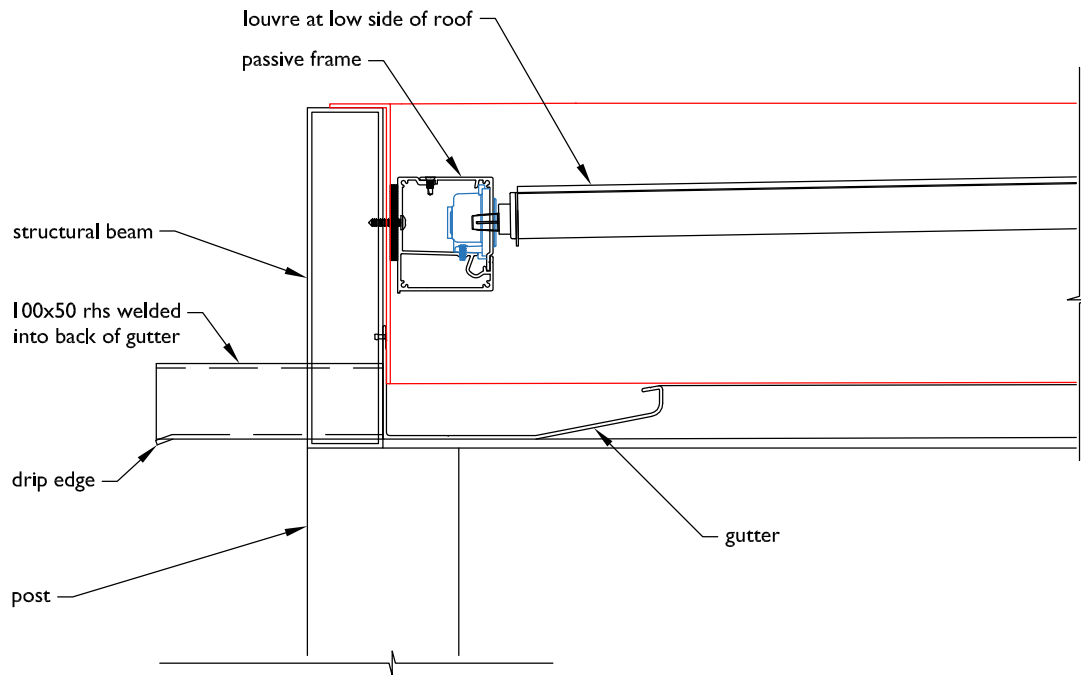
OUTLET THROUGH FASCIA ROOF SPACE



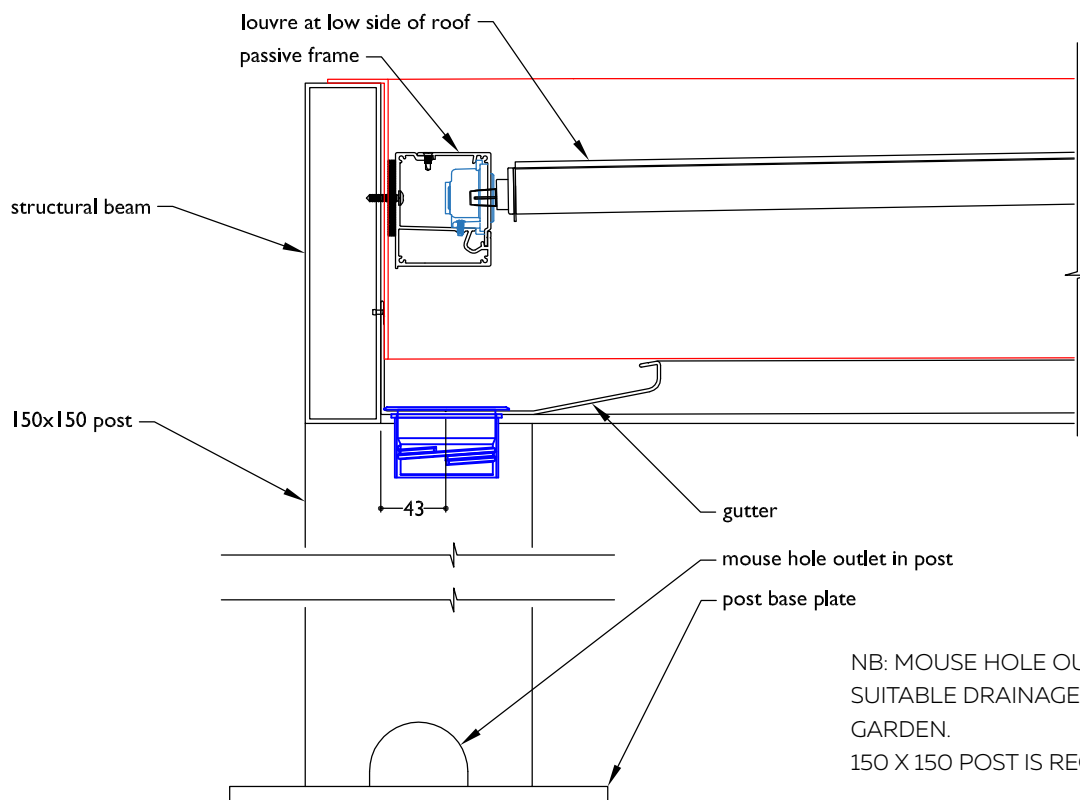
SECTION OUTLET THROUGH FASCIA ROOF SPACE



SECTION BACK OUTLET IN GUTTER



SECTION THROUGH LOUVRES



NB: MOUSE HOLE OUTLET USED WHEN
SUITABLE DRAINAGE IS AVAILABLE IN DECK/
GARDEN.
150 X 150 POST IS REQUIRED IN MOST CASES.

CONNECTING TO THE BUILDING

Three typical fixing locations

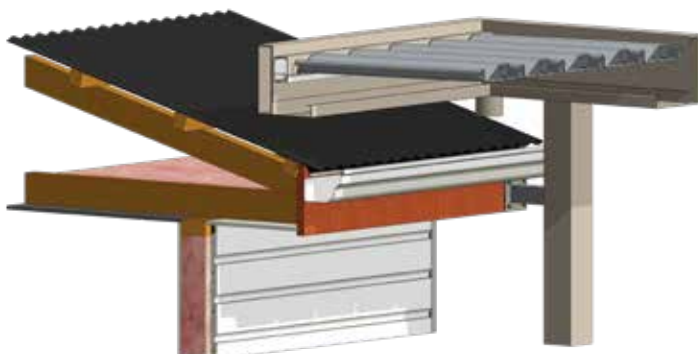
In most instances, the aluminium structural frame connects either directly to or directly alongside the existing building.

There are three typical fixing locations:

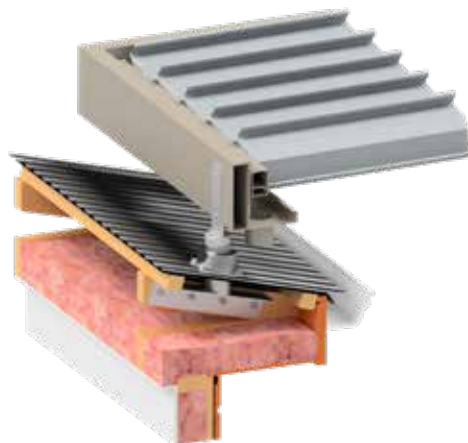
1. Fixing above the existing roof
2. Fixing flush with the existing gutter
3. Fixing directly to - or free standing next to the building



MT EDEN, NZ



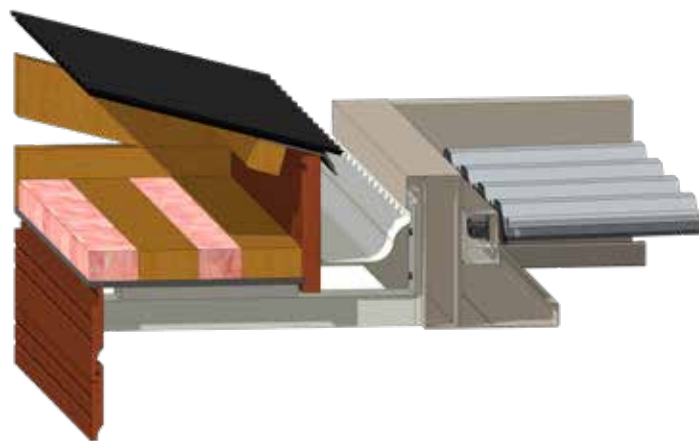
1A. OVER ROOF - BRACED OR FREE STANDING POST
Page 4.16



1B. OVER ROOF - RAFTER FIXING BRACKET
Page 4.17



2A. FLUSH TO GUTTER. BRACKET FIXED TO FASCIA
Page 4.18



2B. FLUSH TO GUTTER. BRACKET FIXED TO SOFFIT
Page 4.19

CONNECTING TO THE BUILDING

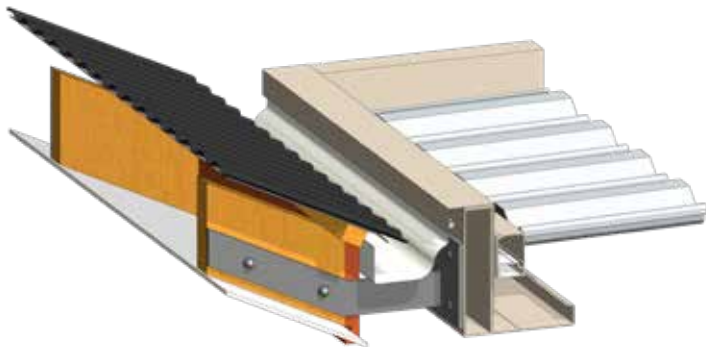
Fixing options

Location determines which suitable fixing options are available and are permissible.

Fixing options must take into consideration the structural integrity of the building – i.e, is there solid fixing available? Also ensuring the watertight integrity of the building is not compromised. .



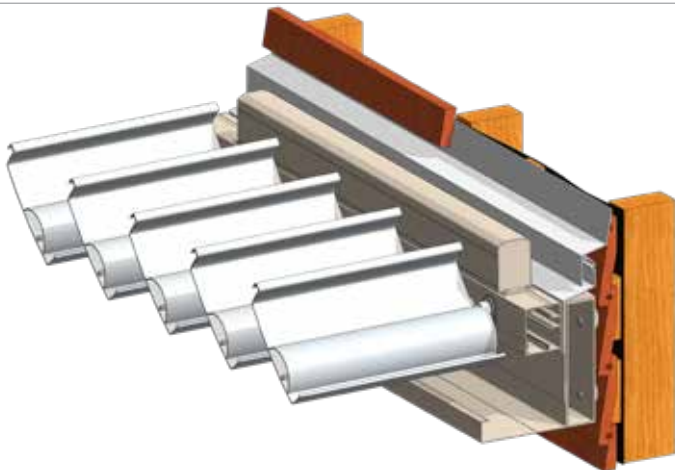
AUCKLAND, NZ



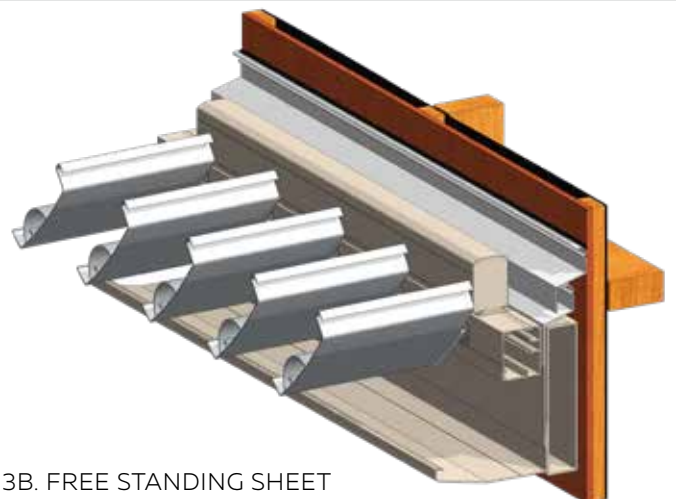
2C. FLUSH TO GUTTER. BRACKET FIXED TO RAFTER.
Page 4.20



2D. FLUSH TO GUTTER. FREE STANDING BRACED POST
Page 4.21



3A. FIXING DIRECTLY TO BUILDING. WEATHERBOARD ON
TIMBER FRAME WITH CAVITY. Page 4.22



3B. FREE STANDING SHEET
ON TIMBER FRAME. Pages 4.24 & 4.25

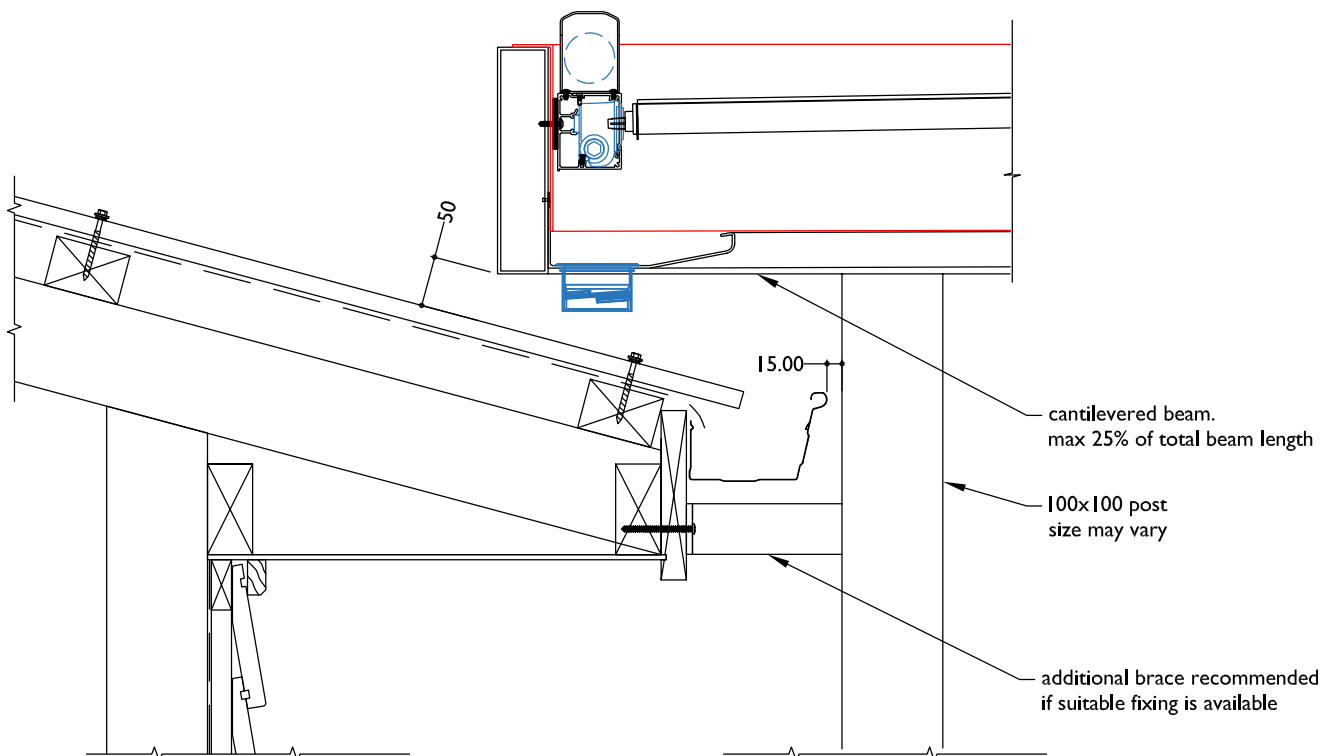
**TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME
CONNECTING TO THE BUILDING**

TYPICAL DETAIL : OPTION 1A. OPENING FRAME OVER EXISTING OPENING ROOF



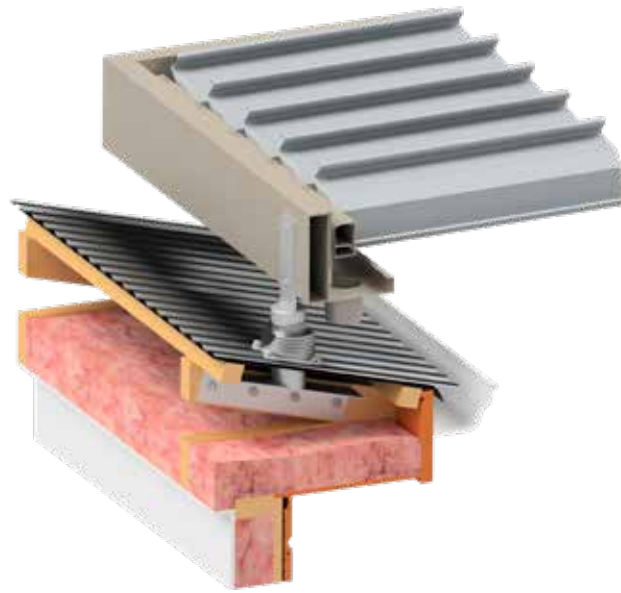
BRACED OR FREE STANDING POST PROJECTS OPENING ROOF OVER HOUSE ROOF.
ALLOWS STORM-WATER DISPOSAL ONTO EXISTING ROOF. IT IS NOT FLASHED BETWEEN OPENING ROOF
AND HOUSE ROOF.

SECTION OPTION 1A - BRACED OR FREE STANDING POST - OPENING ROOF FRAME IS OVER ROOF.



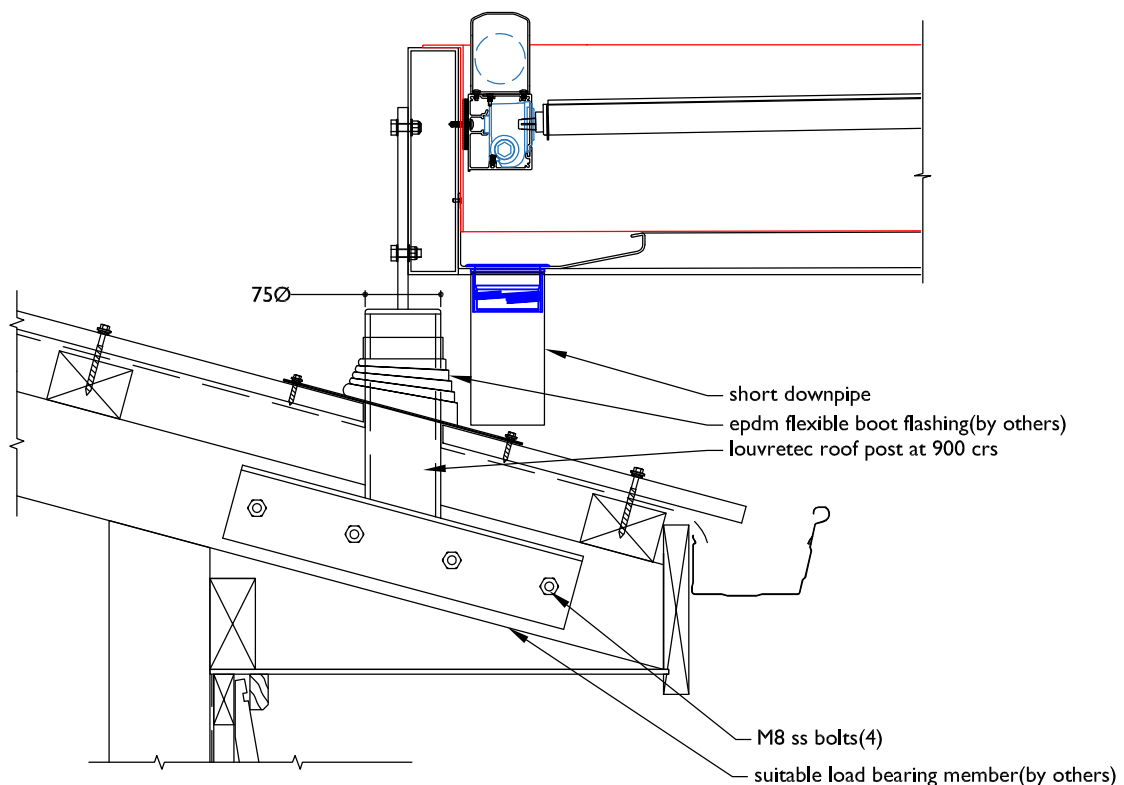
REFER RENDER ABOVE

TYPICAL DETAIL: OPTION 1B. OPENING ROOF FRAME OVER EXISTING ROOF



FIXING BRACKET CONNECTED TO RAFTERS AND FLASHED ACCORDINGLY.
ROOF IRON OR TILES NEED TO BE LIFTED FOR BRACKET INSTALLATION.

SECTION **OPTION 1B - ROOF BRACKET - OPENING ROOF FRAME FIXED OVER ROOF**



REFER RENDER ABOVE

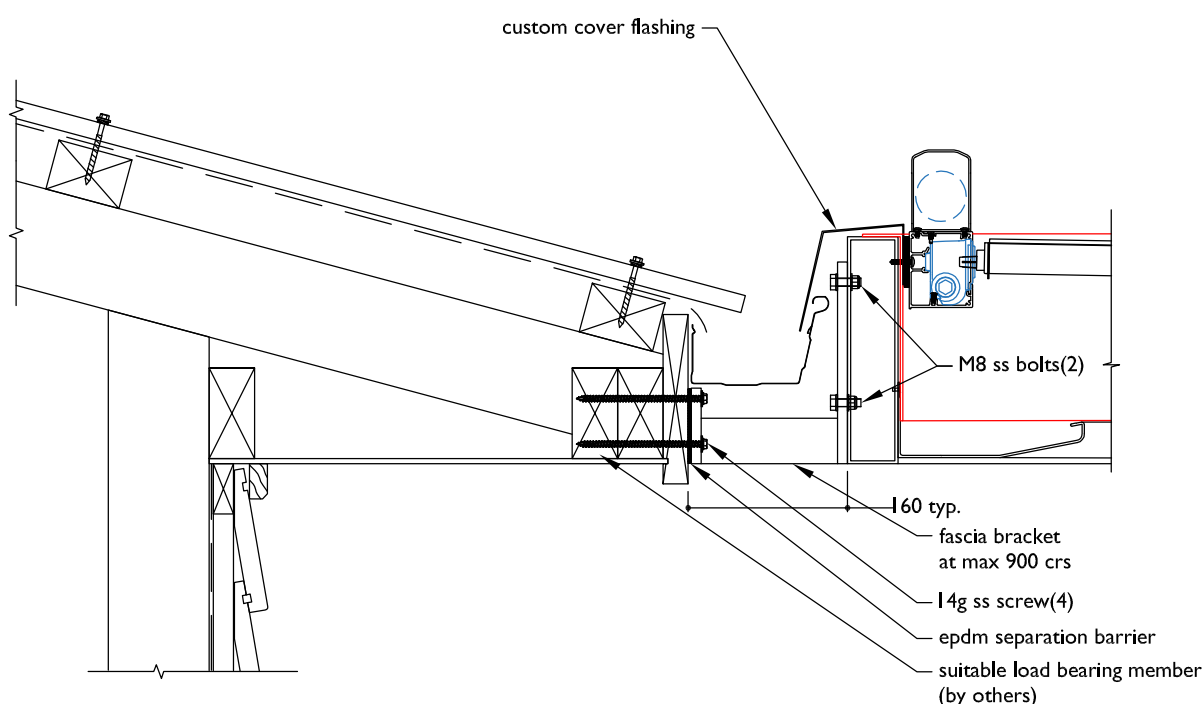
**TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME
CONNECTING TO THE BUILDING**

TYPICAL DETAIL : OPTION 2A. FLUSH TO GUTTER - FASCIA FIXED

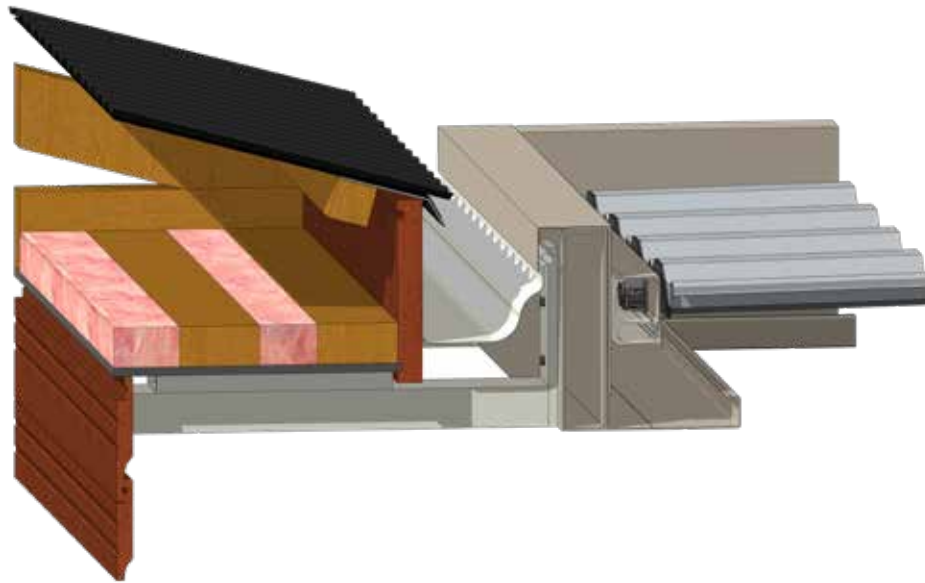


BRACKET FIXED TO FASCIA. BOX SECTION SITS ABOVE GUTTER WITH CAP FLASHING INTO GUTTER.

SECTION OPTION 2A - FRAME TO FASCIA - FASCIA BRACKET

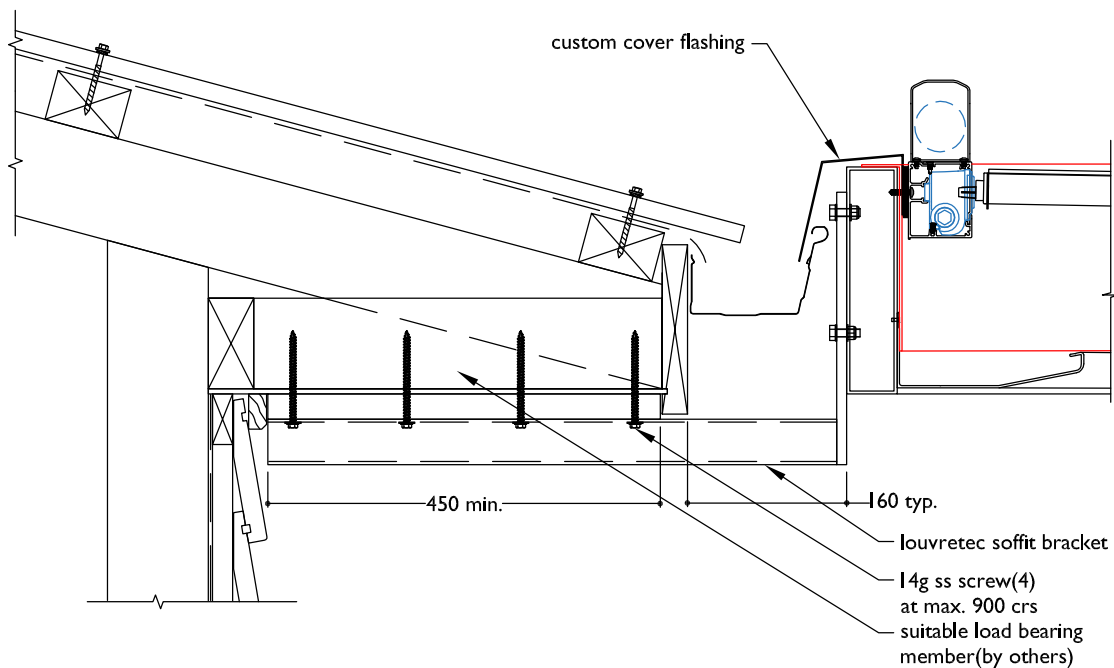


TYPICAL DETAIL: OPTION 2B. FLUSH TO GUTTER - SOFFIT FIXED



BRACKET FIXED TO UNDERSIDE OF SOFFIT. BOX SECTION SITS ABOVE GUTTER WITH FLASHING INTO GUTTER.

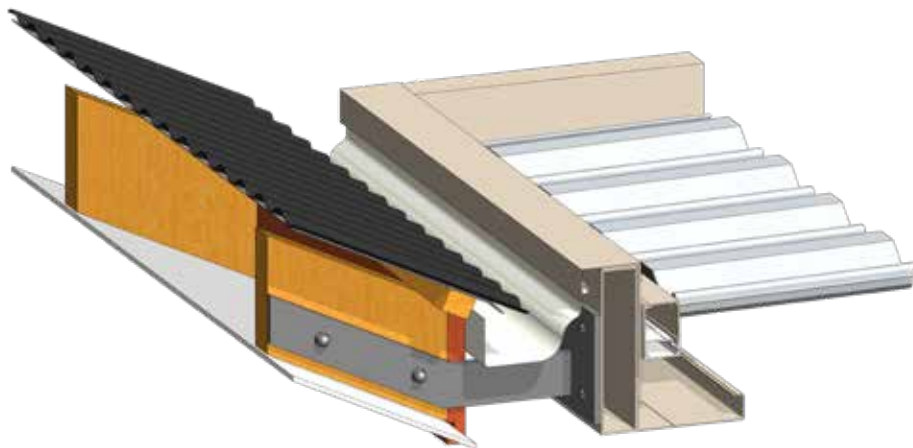
SECTION **OPTION 2B - FRAME TO FASCIA - SOFFIT BRACKET**



REFER RENDER ABOVE

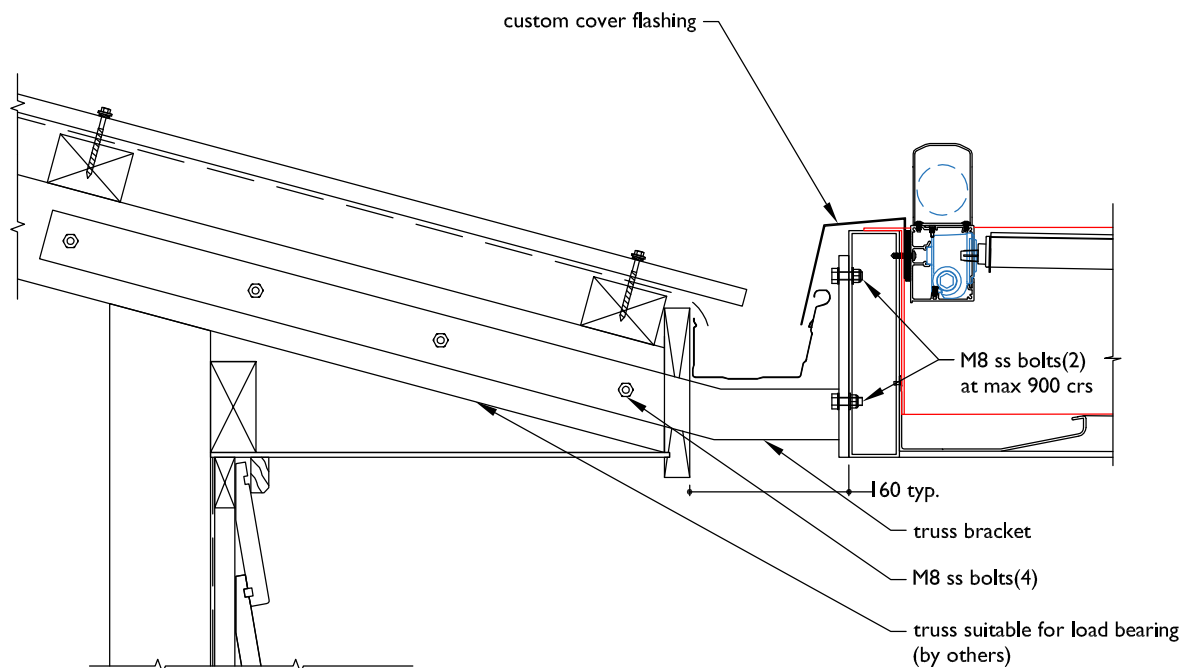
**TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME
CONNECTING TO THE BUILDING**

TYPICAL DETAIL : OPTION 2C. FLUSH TO GUTTER - RAFTER FIXED



BRACKET FIXED TO RAFTER. BOX SECTION SITS ABOVE GUTTER WITH CAP FLASHING INTO GUTTER.

SECTION OPTION 2C - FLUSH TO GUTTER - TRUSS OR RAFTER FIXING



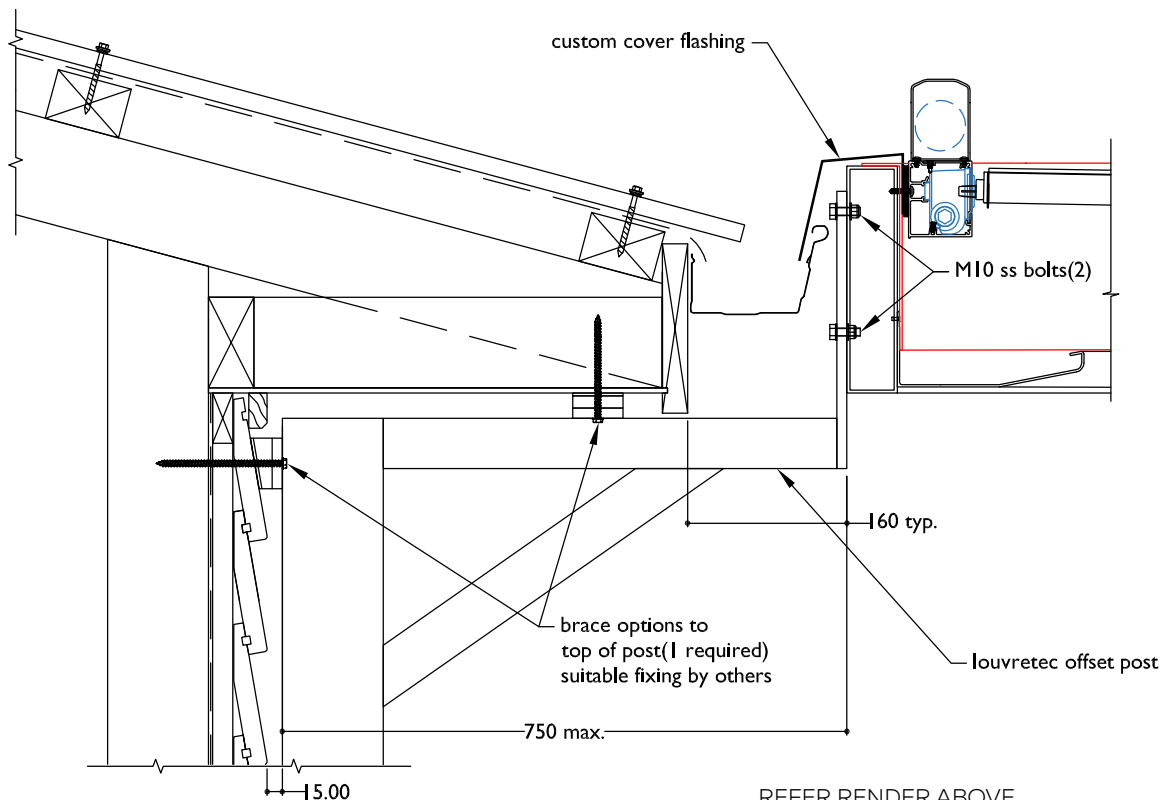
REFER RENDER ABOVE

TYPICAL DETAIL: 2D. FLUSH TO GUTTER - FREE STANDING



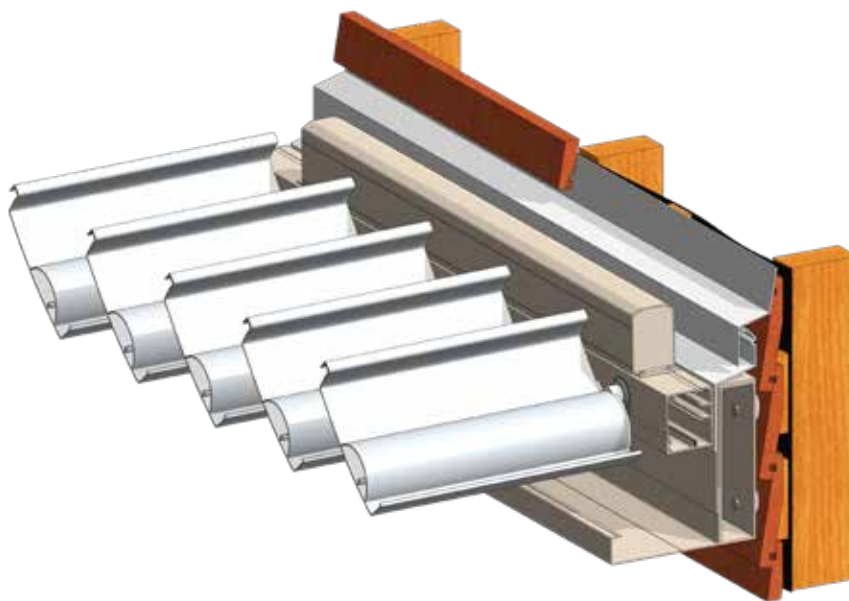
FREE STANDING POST SUPPORTS BOX SECTION ABOVE GUTTER, WITH CAP FLASHING INTO GUTTER.
USE THIS OPTION WHEN THERE ARE NO OTHER FIXING POINTS AND THE HOUSE CLADDING IS NOT
SUITABLE FOR STRUCTURAL FIXING.
IF FIXING CAN BE FOUND FOR THE POST THIS WILL HELP STABILITY OF FRAME.

SECTION OPTION 2D - FRAME TO FASCIA - FREE STANDING OR BRACED POST



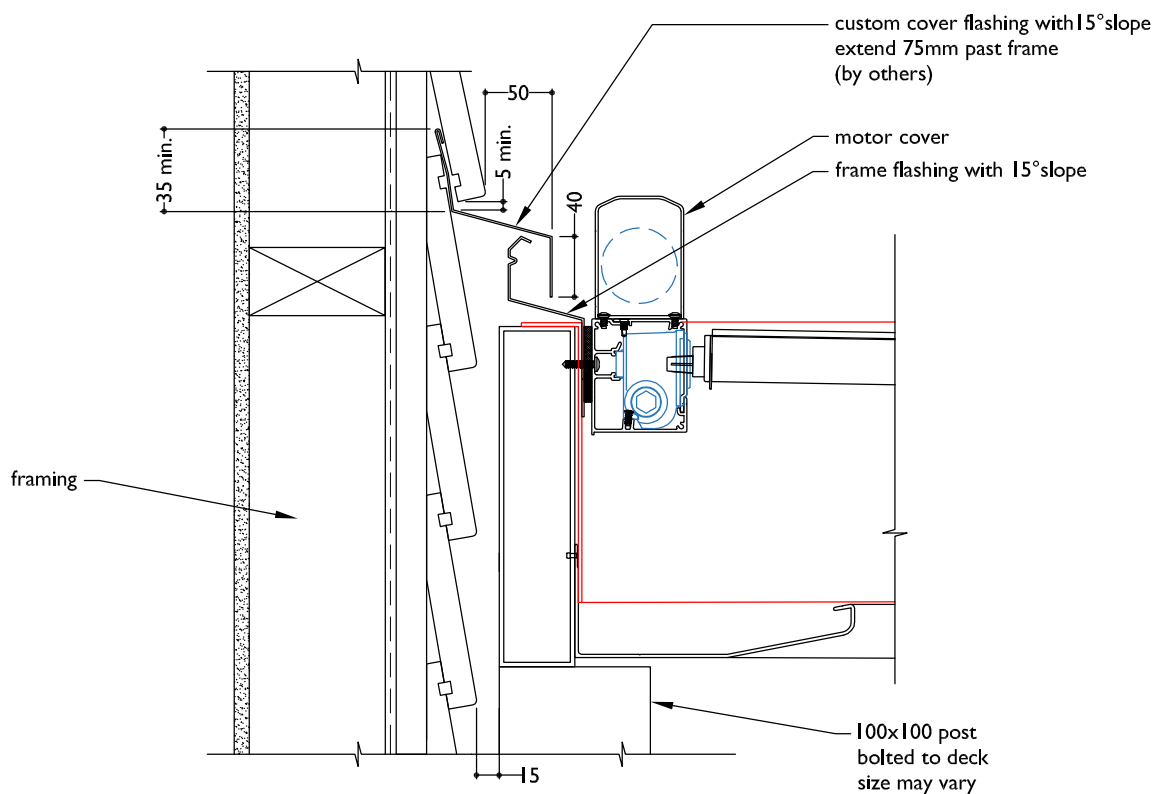
TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME CONNECTING TO THE BUILDING

TYPICAL DETAIL : OPTION 3A. FIXED DIRECTLY TO BUILDING



FIXED TO WEATHERBOARD CLADDING ON TIMBER FRAME WITH CAVITY.
SEE ALSO OPTION FIXED WITH NO CAVITY AND FREE STANDING.

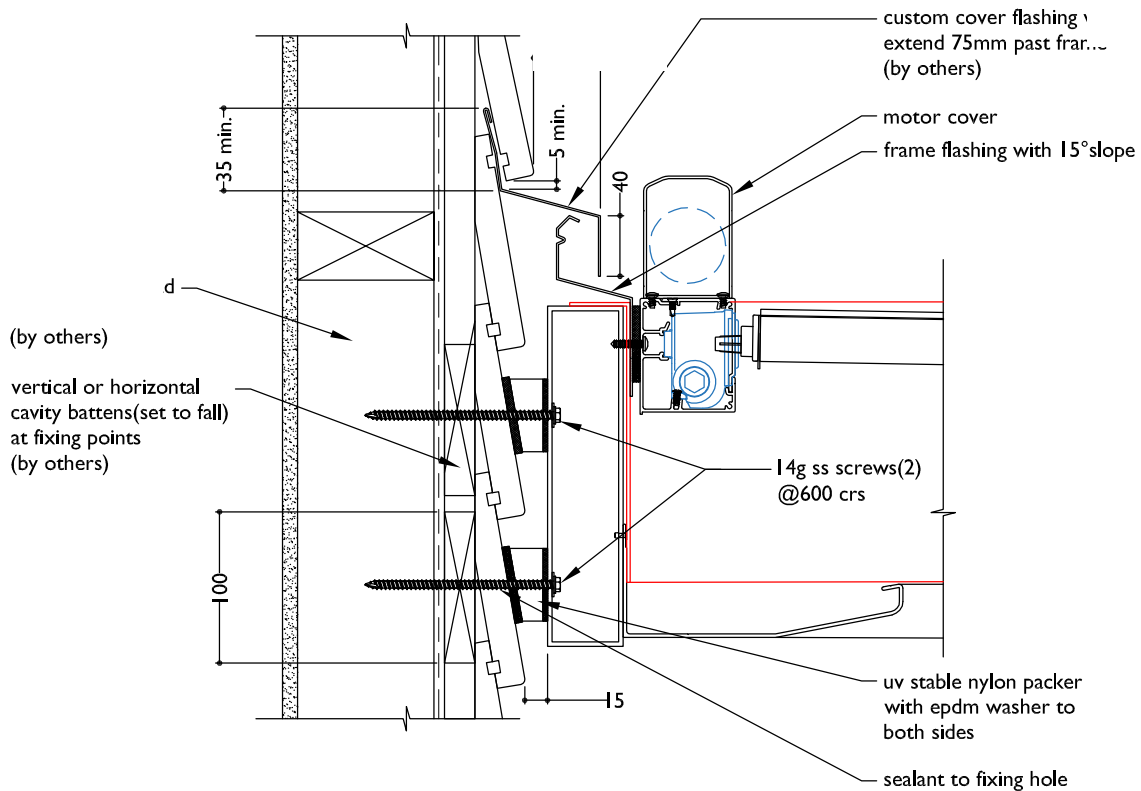
SECTION OPTION 3A - WEATHERBOARD ON TIMBER FRAME FREE STANDING



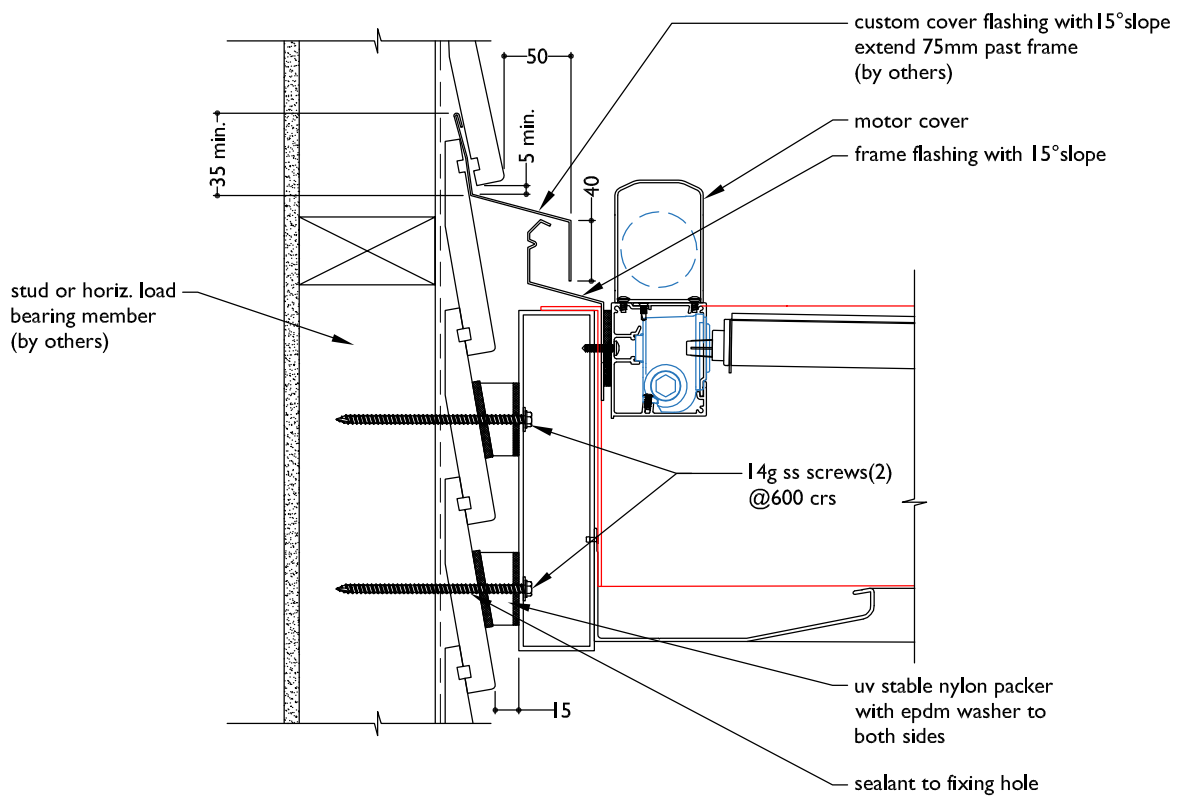
REFER RENDER ABOVE

TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME CONNECTING TO THE BUILDING

SECTION OPTION 3A - WEATHERBOARD ON TIMBER FRAME WITH CAVITY



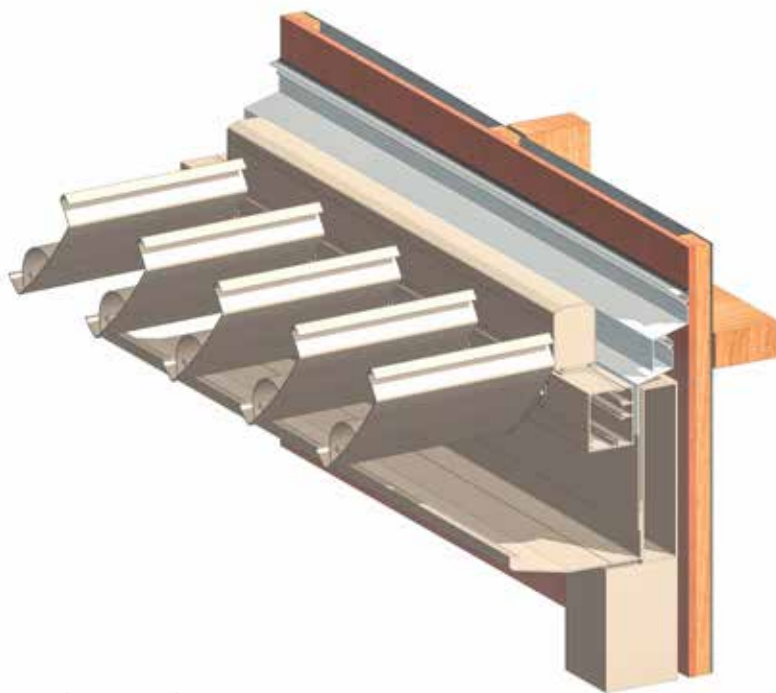
SECTION OPTION 3A - WEATHERBOARD ON TIMBER FRAME



REFER RENDER PREVIOUS PAGE

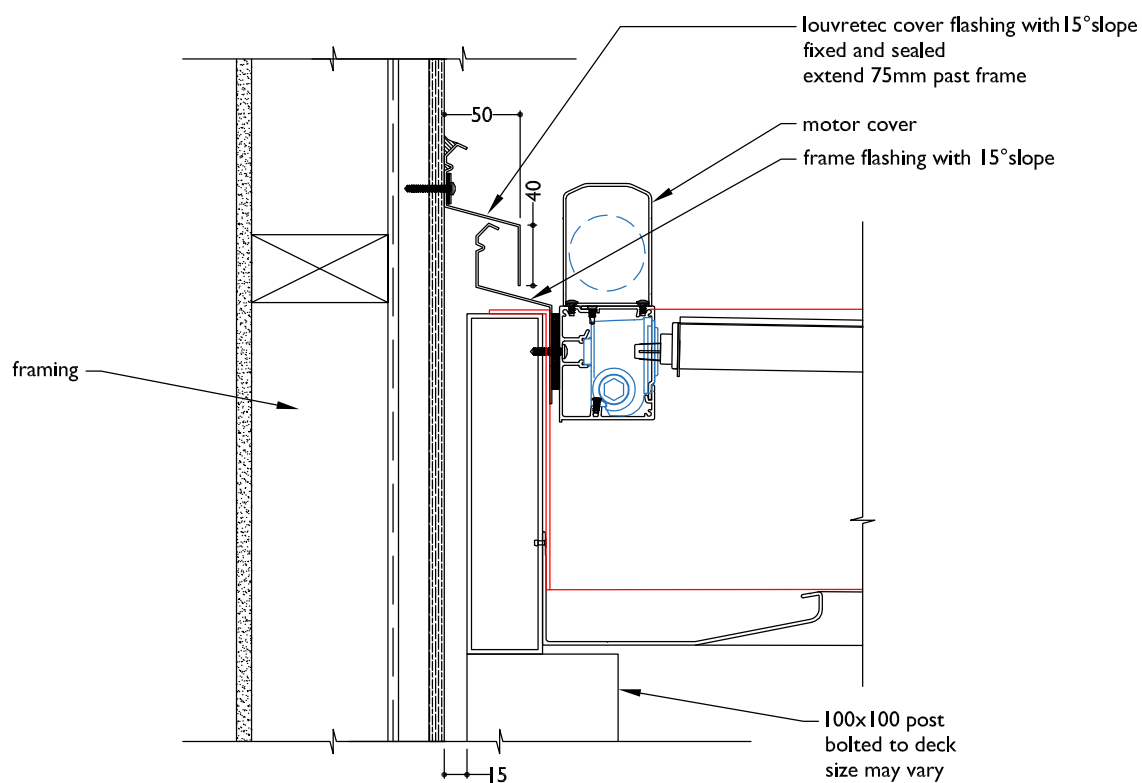
**TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME
CONNECTING TO THE BUILDING**

TYPICAL DETAIL : OPTION 3B. FREE STANDING

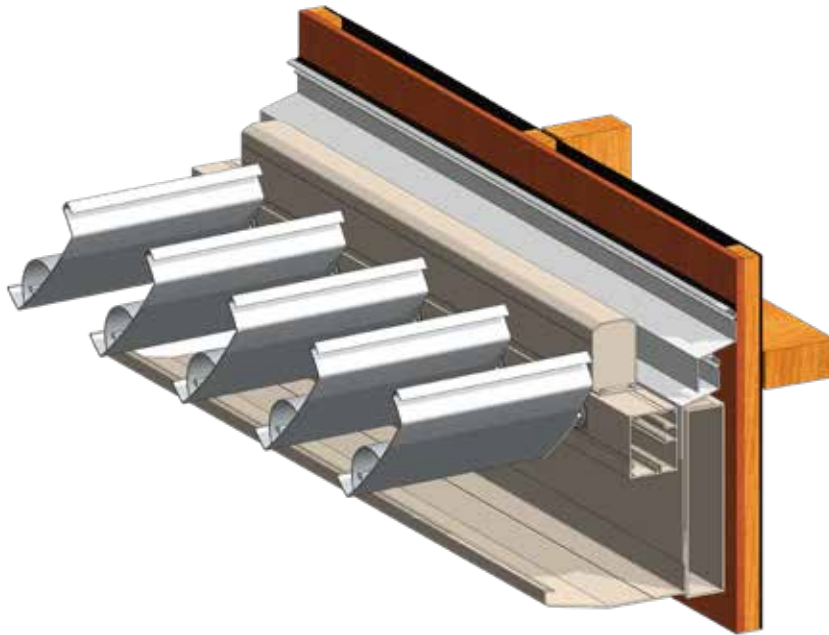


FREE STANDING

SECTION OPTION 3B SHEET ON TIMBER FRAME - FREE STANDING

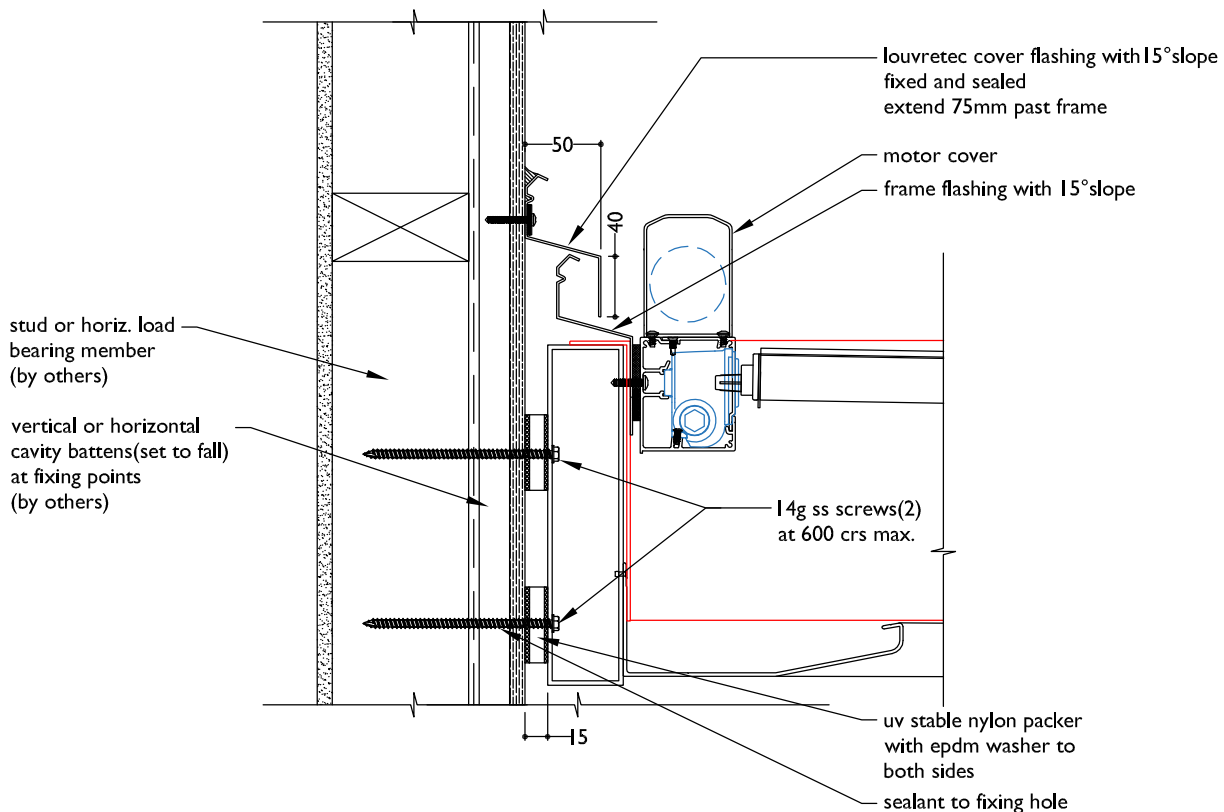


TYPICAL DETAIL : OPTION 3B. FIXED DIRECTLY TO BUILDING



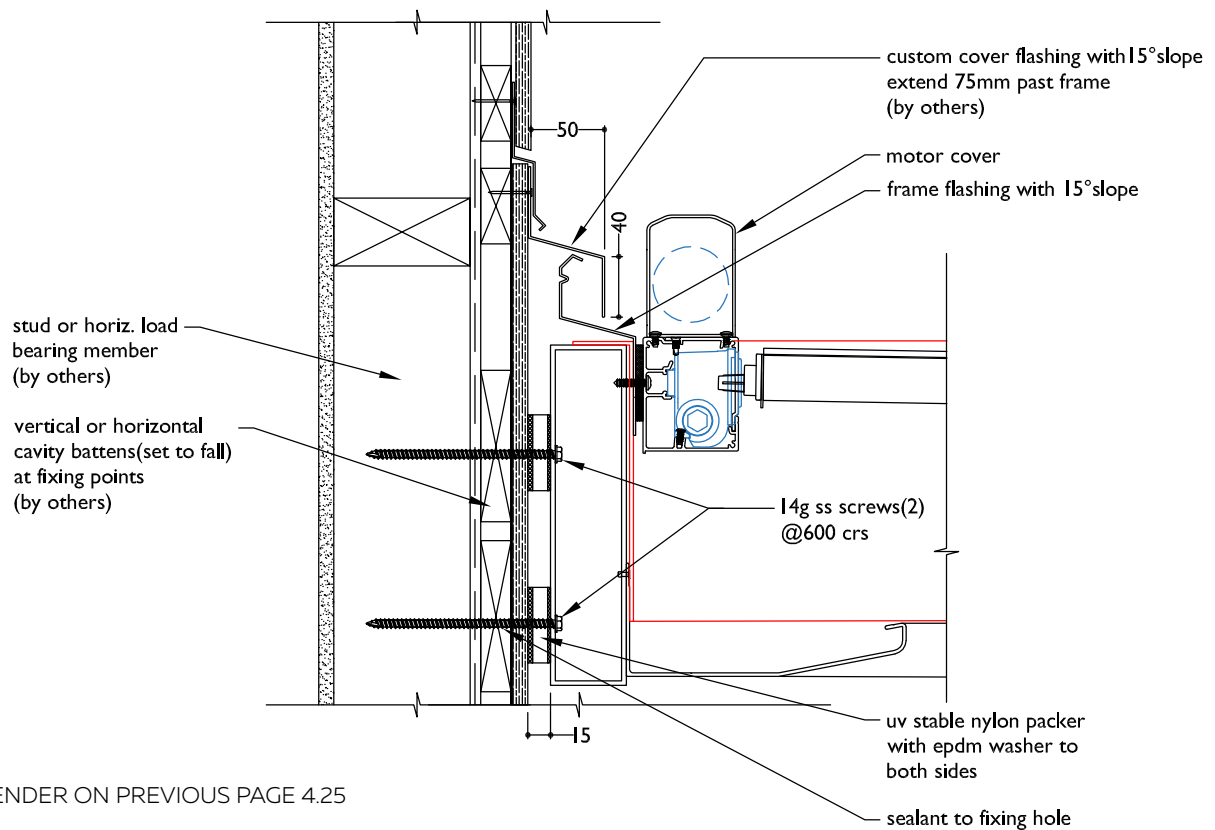
STRUCTURAL FRAME FIXED TO SHEET ON TIMBER FRAME.

SECTION OPTION 3B SHEET ON TIMBER FRAME. FIXED COVER FLASHING



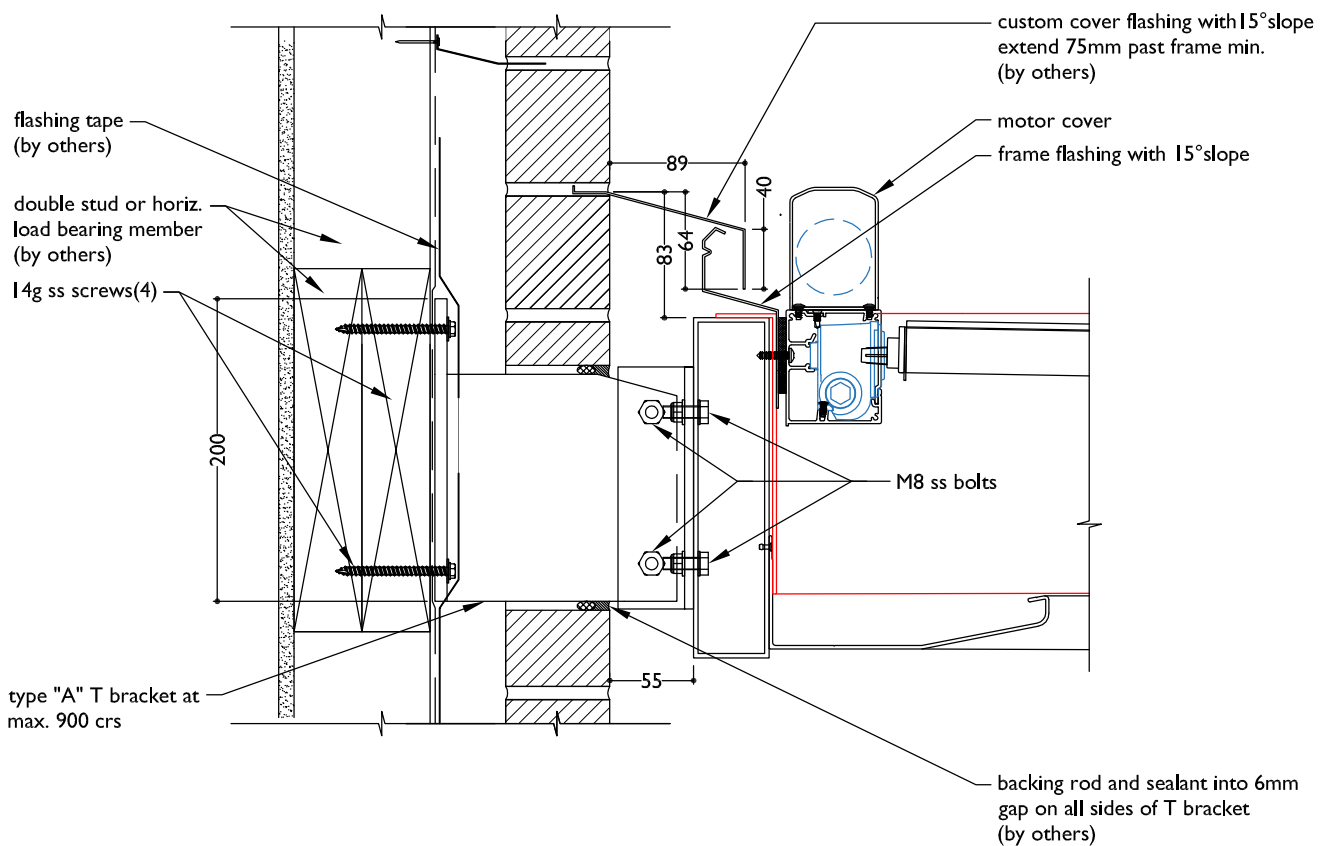
TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME CONNECTING TO THE BUILDING

SECTION **OPTION 3B SHEET ON TIMBER FRAME**



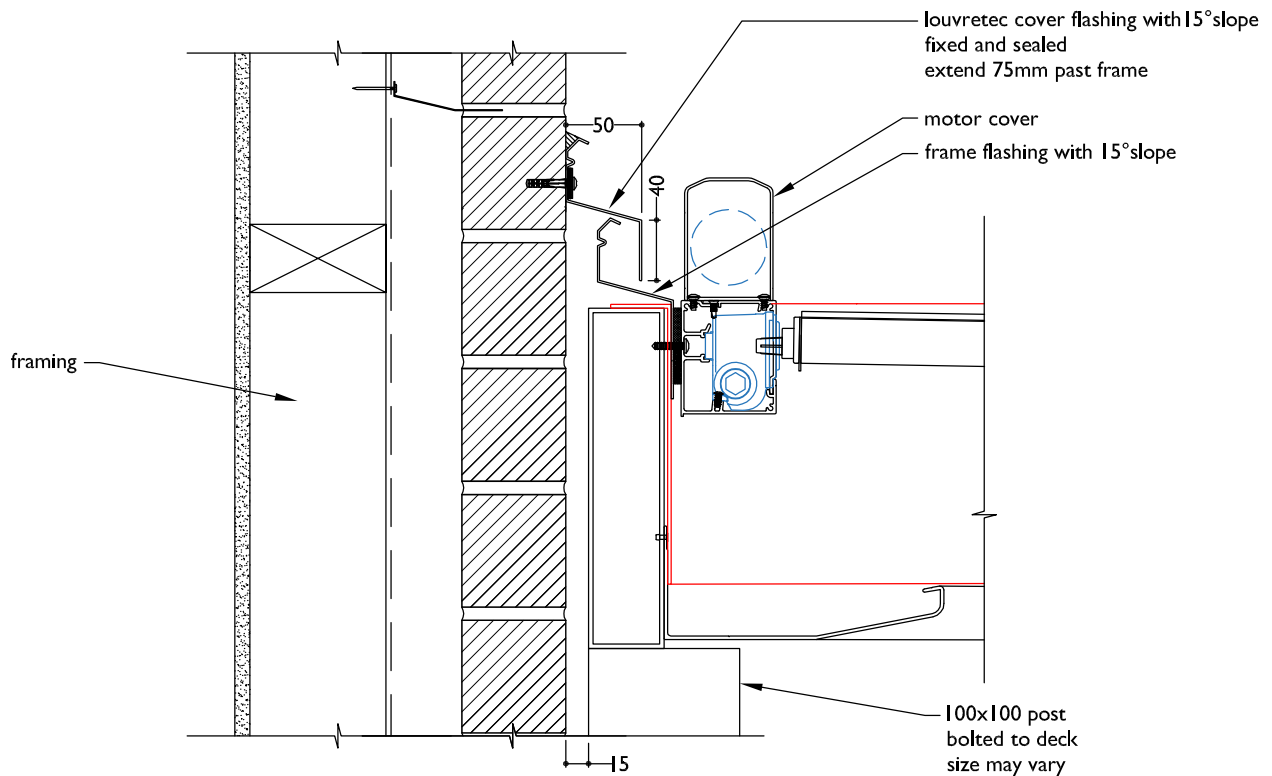
REFER RENDER ON PREVIOUS PAGE 4.25

SECTION **BRICK ON TIMBER FRAME**

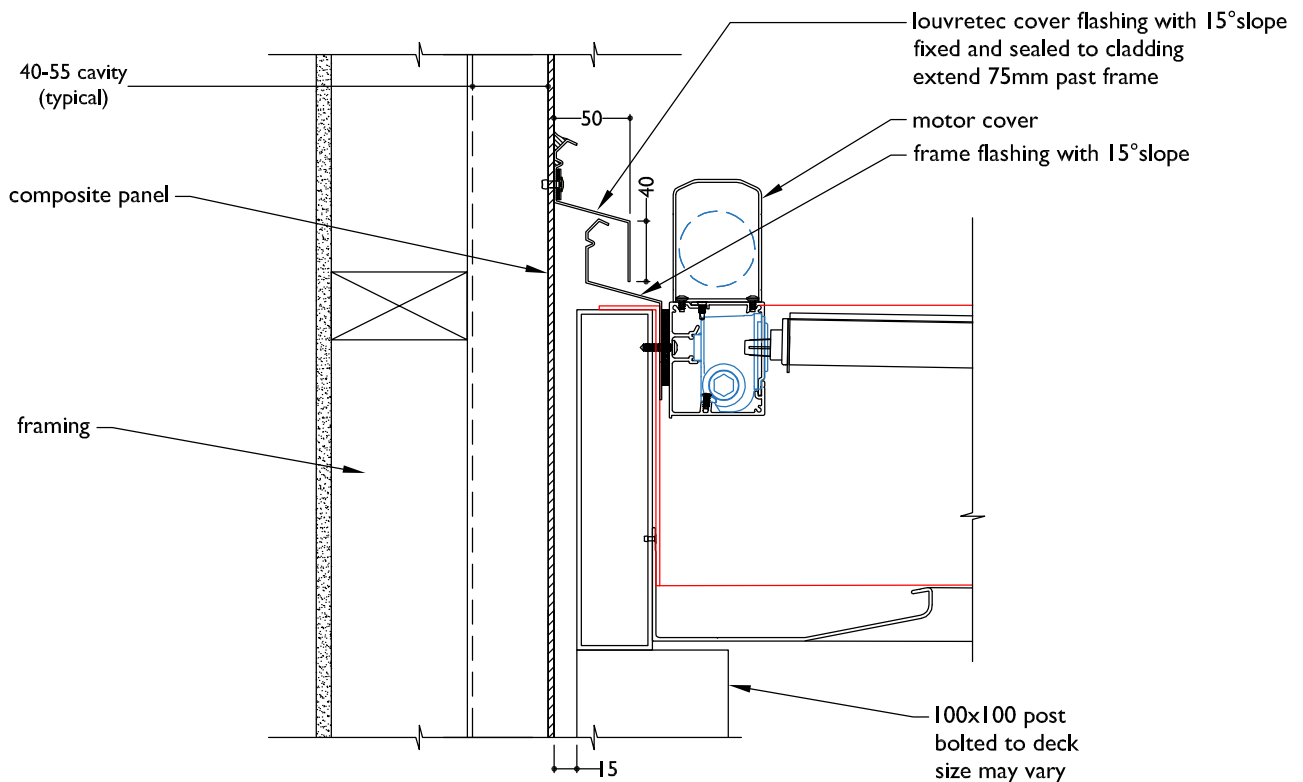


TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME CONNECTING TO THE BUILDING

SECTION BRICK ON TIMBER FRAME FREE STANDING FIXED COVER FLASHING



SECTION COMPOSITE PANEL ON TIMBER FRAME FREE STANDING FIXED COVER FLASHING



SCALE: DATE MODIFIED: 01/10/2024 FILE: STRUCTURAL 4.27

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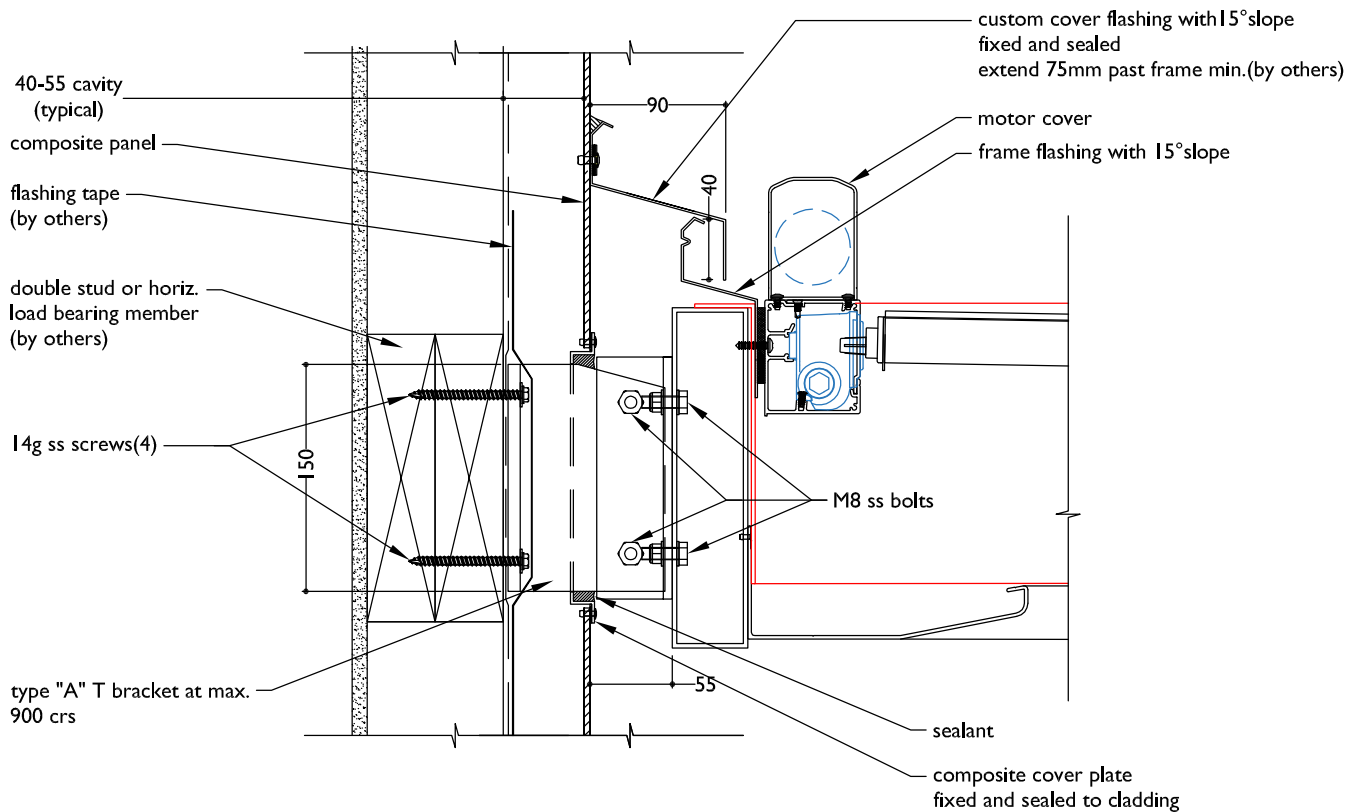
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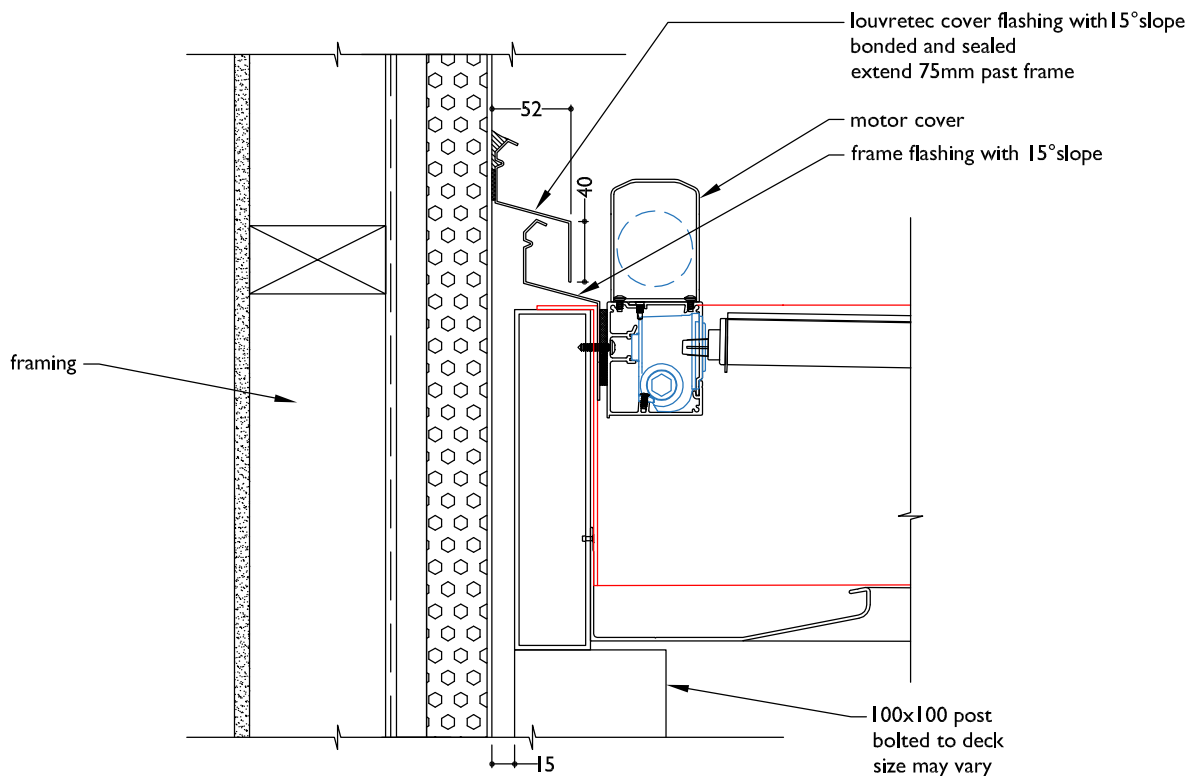
| 4.27

TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME CONNECTING TO THE BUILDING

SECTION COMPOSITE PANEL ON TIMBER FRAME

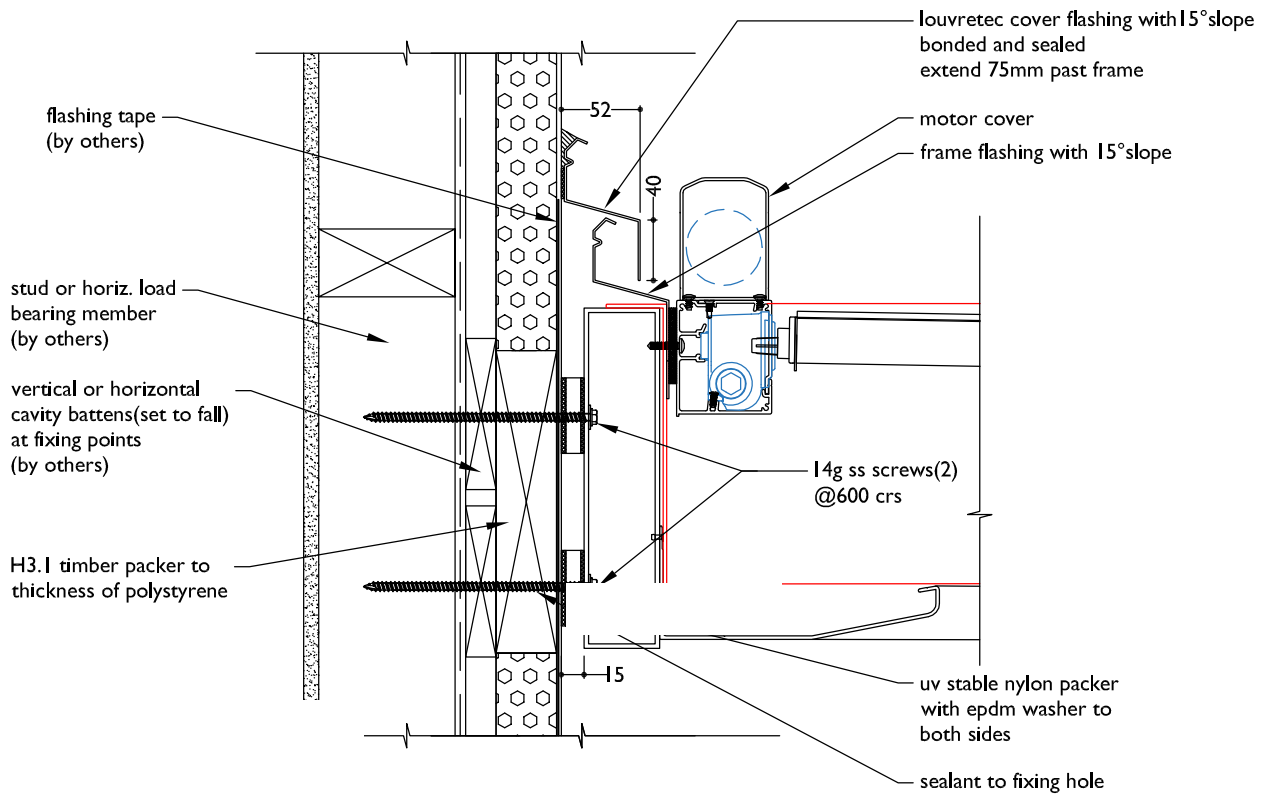


SECTION BRICK ON TIMBER FRAME - FREE STANDING BONDED COVER FLASHING

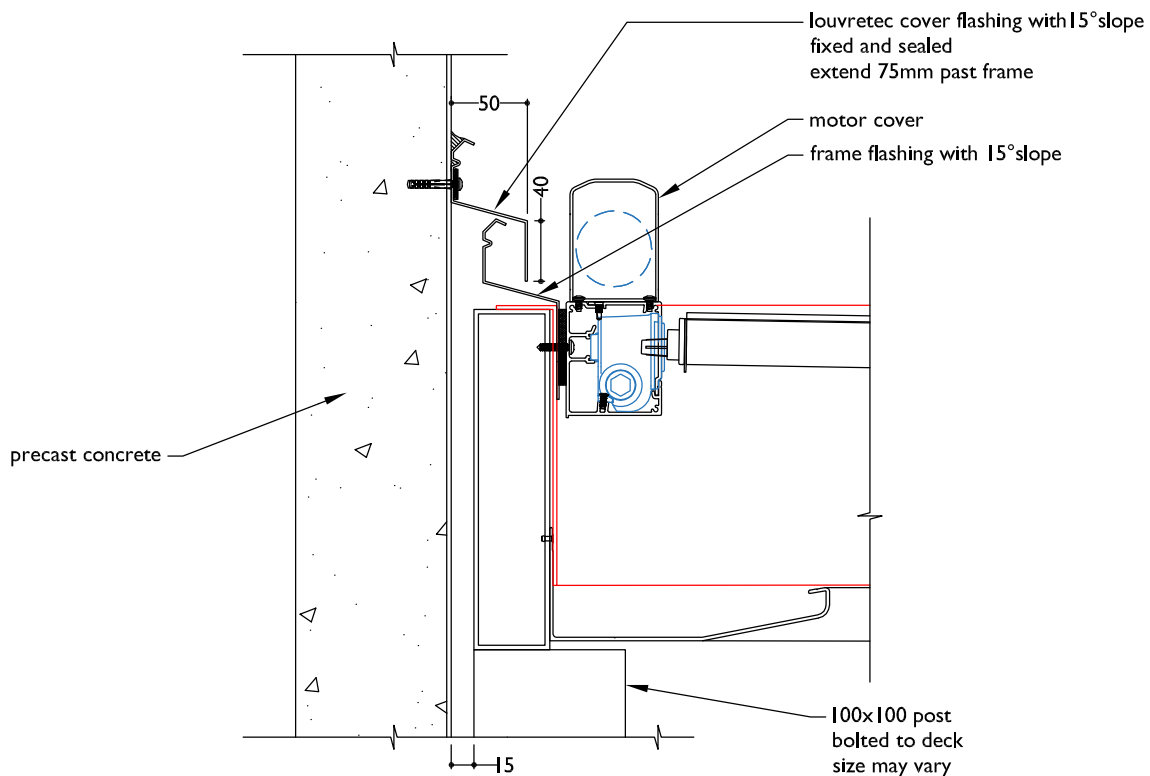


TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME CONNECTING TO THE BUILDING

SECTION POLYSTYRENE ON TIMBER FRAME - FIXED TO BUILDING BONDED COVER FLASHING



SECTION CONCRETE - FREE STANDING FIXED COVER FLASHING



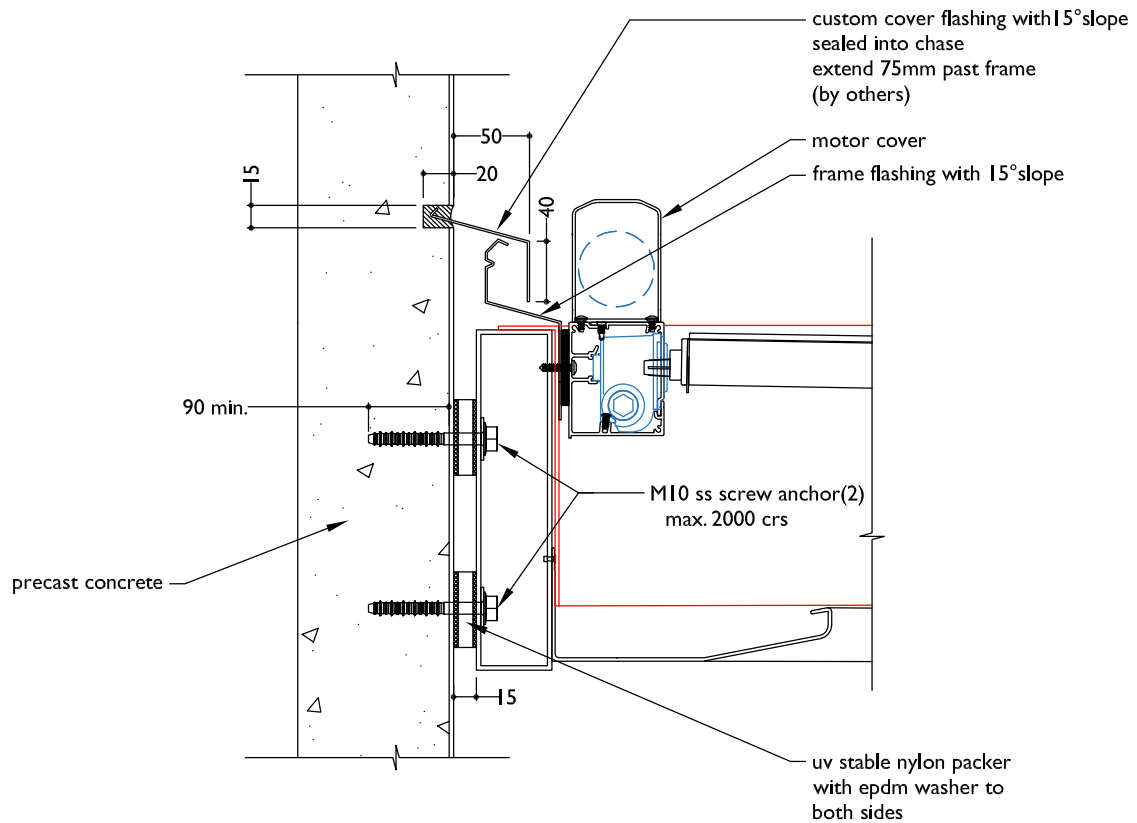
SCALE: DATE MODIFIED: 01/10/2024 FILE: STRUCTURAL 4.29

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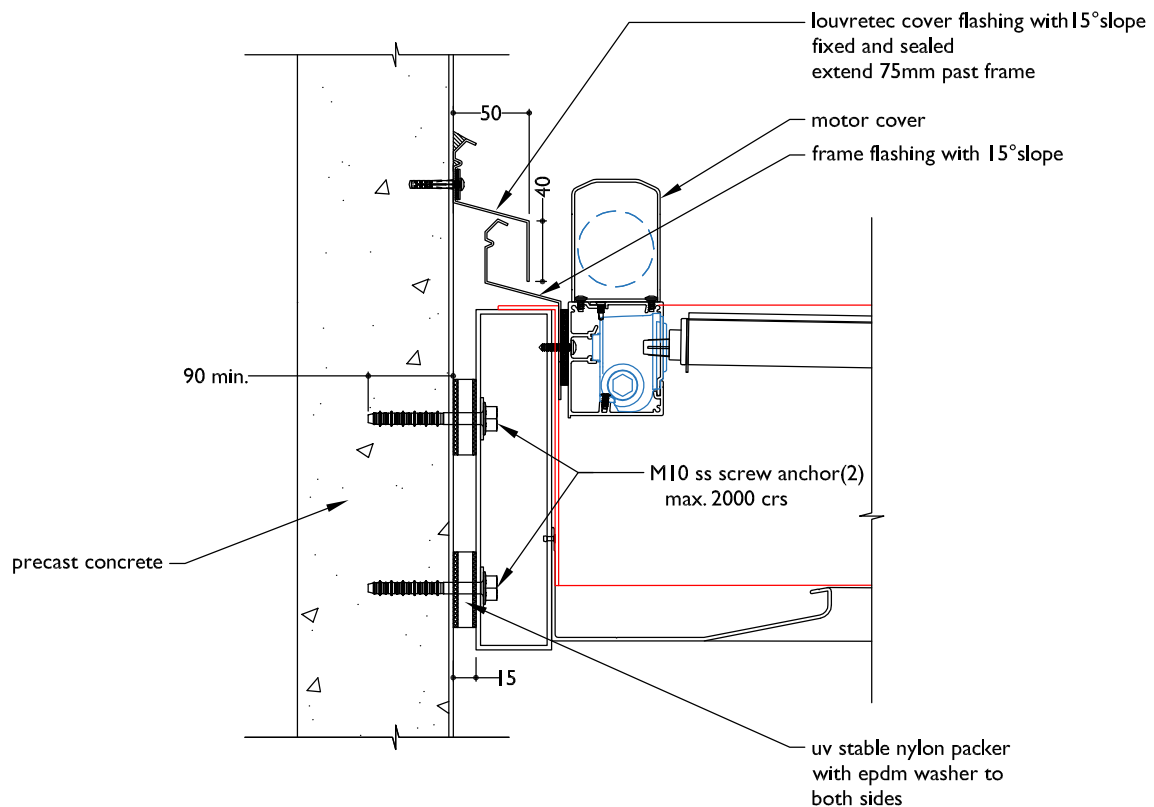
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TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME CONNECTING TO THE BUILDING

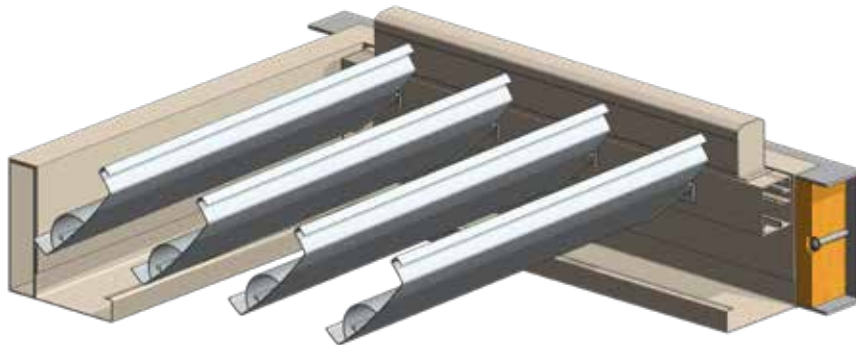
SECTION CONCRETE WITH CHASE



SECTION CONCRETE NO CHASE. FIXED COVER FLASHING

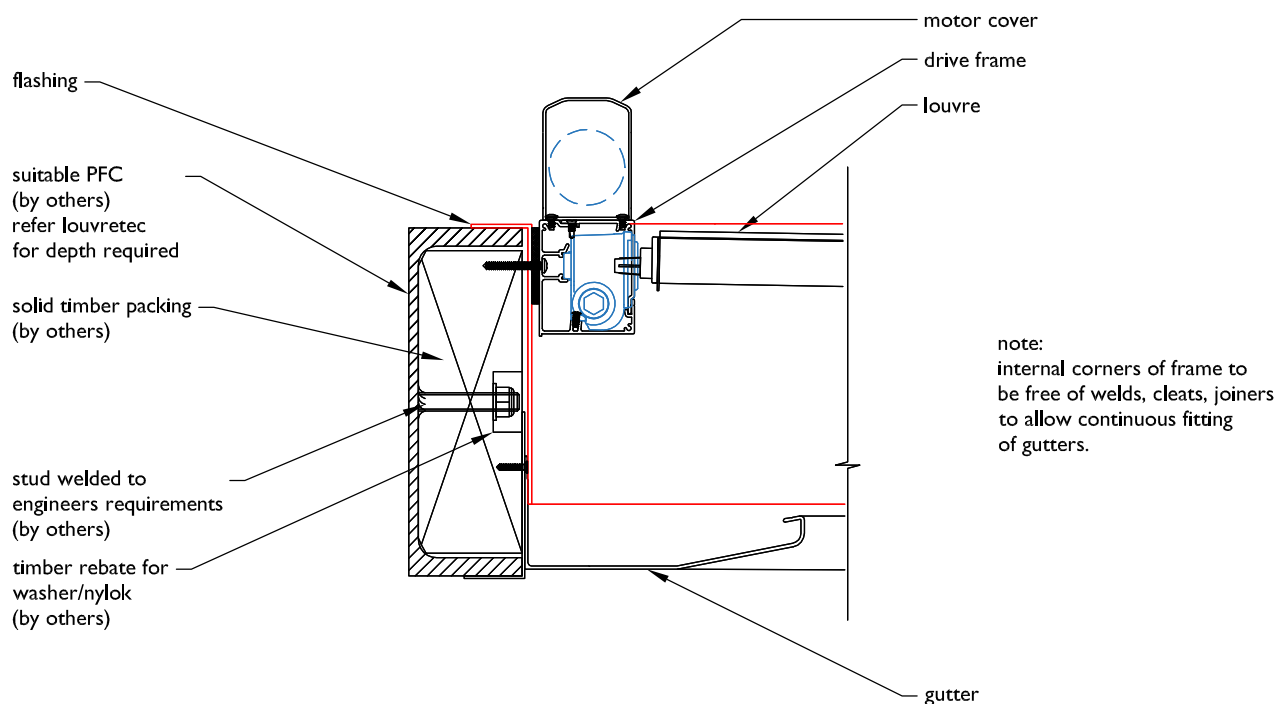


TYPICAL DETAIL: FIXING OPENING ROOF FIXING TO P.F.C



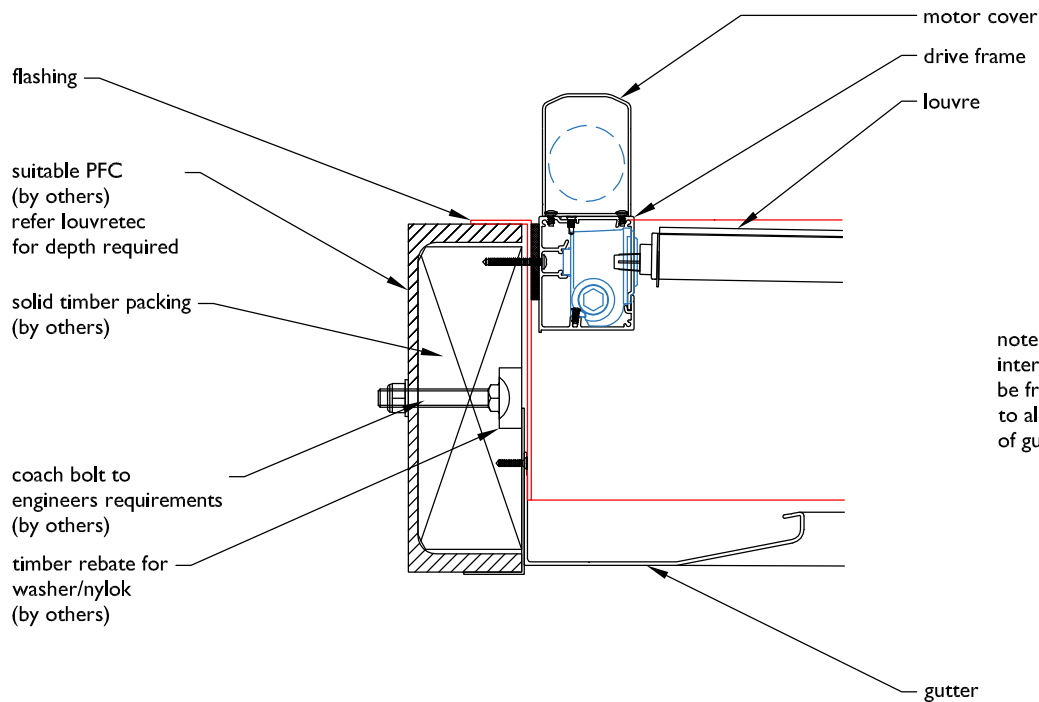
INSIDE FACE MUST BE FLUSH TO FIT THE OPENING ROOF GUTTER AND PIVOT SYSTEM ONTO.

SECTION PFC WITH WELDED STUDS FOR TIMBER INFILL



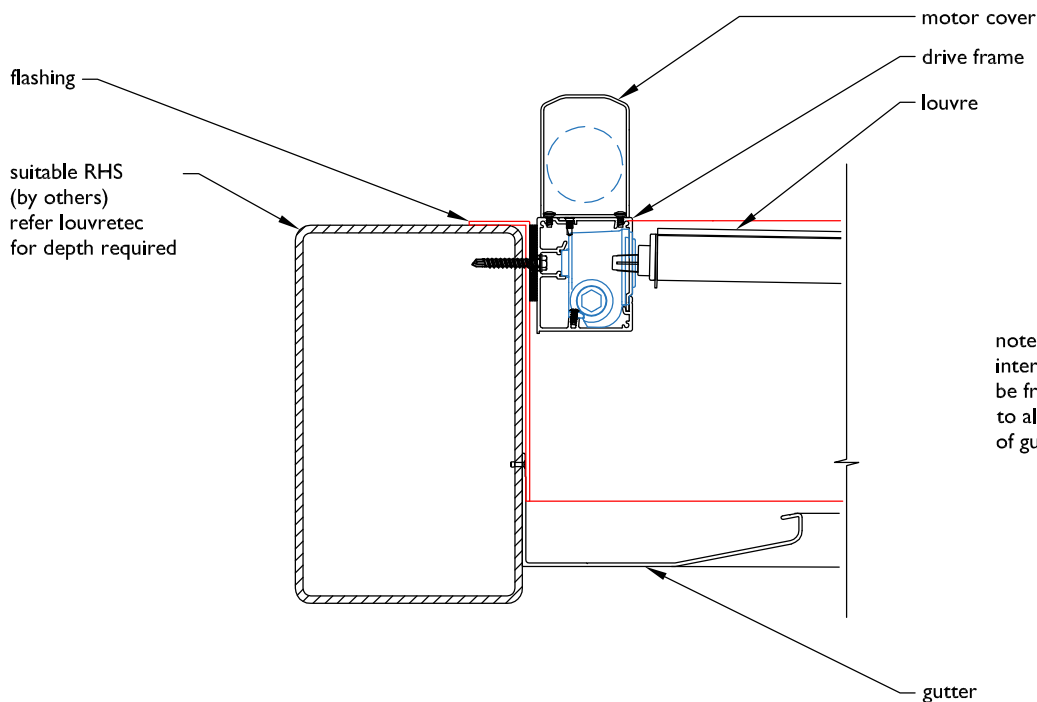
TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME CONNECTING TO THE BUILDING

SECTION PFC WITH BOLTED TIMBER INFILL



note:
internal corners of frame to
be free of welds, cleats, joiners
to allow continuous fitting
of gutters.

SECTION STEEL RHS



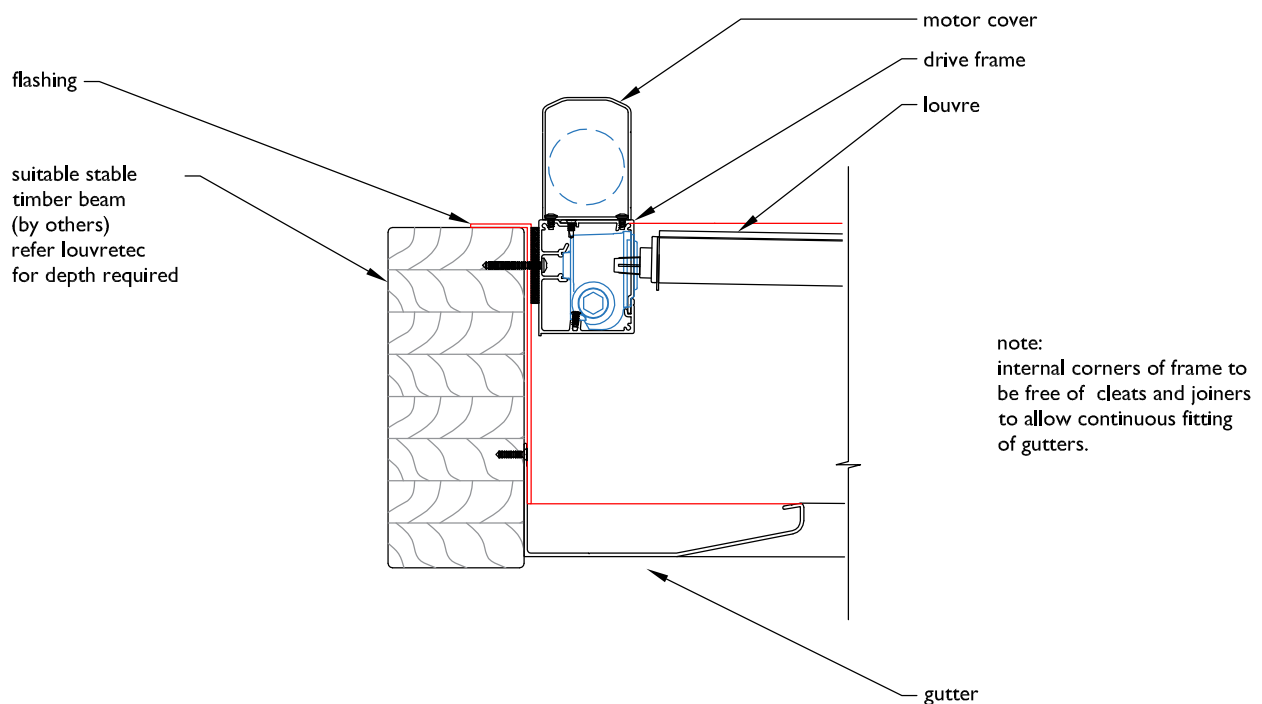
note:
internal corners of frame to
be free of welds, cleats, joiners
to allow continuous fitting
of gutters.

TYPICAL DETAIL: OPENING ROOF FIXING TO TIMBER BEAM



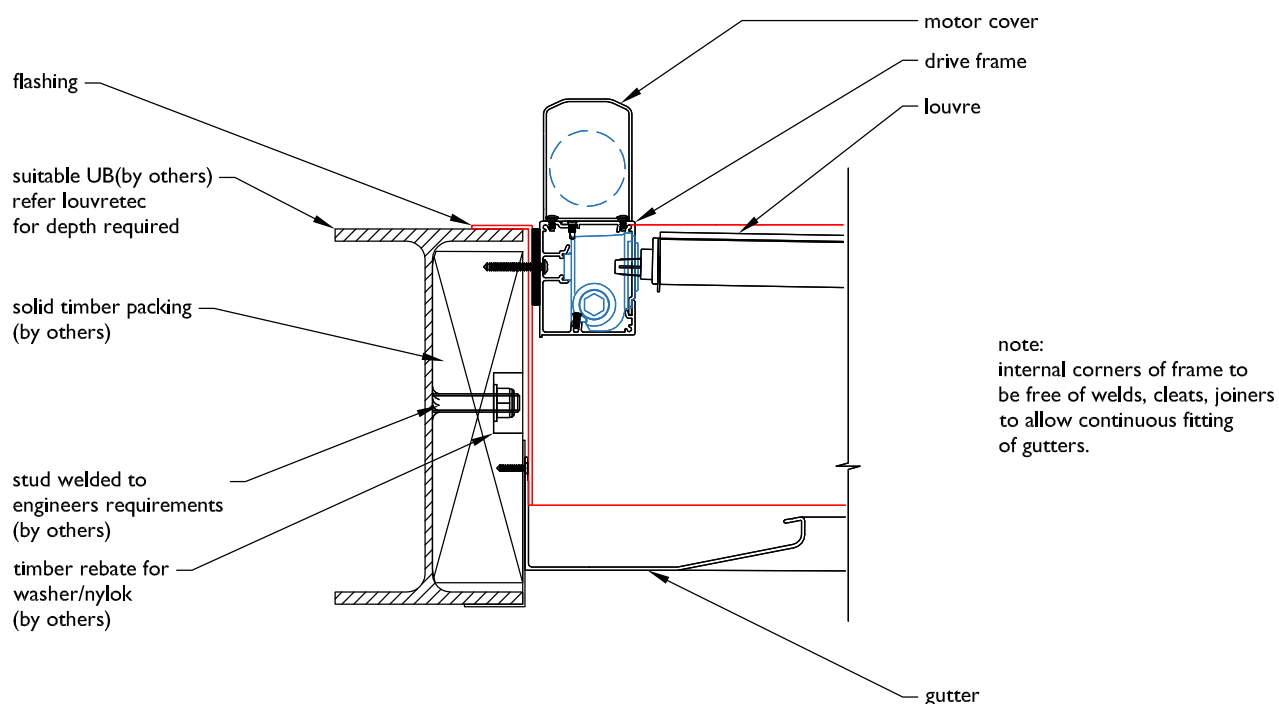
TO REDUCE TWISTING, WARPING OR MOVEMENT, GLULAM LAMINATED BEAMS (OR SIMILAR) ARE RECOMMENDED.

SECTION **TIMBER BEAM**



TYPICAL DETAIL : OPENING ROOFS STRUCTURAL FRAME CONNECTING TO THE BUILDING

SECTION STEEL UNIVERSAL BEAM



SECTION CONCRETE BEAM

