



Lonsdale SpanGard Design Guide

Introduction

This Design Guide has been produced to assist specifiers and designers by illustrating typical installation details for skylights and lantern lights made from the company's ThermGard glazing bars. It is not exhaustive, but it does illustrate good practice for most applications and all details are in accordance with BS5516 for the design and installation of these glazed structures.

Users of this guide must exercise all reasonable care to ensure that the details and products of Lonsdale Metal Company Limited are suitable for the intended purpose. If in doubt, ask us. Having decided to specify Lonsdale products, to save you valuable drafting time, CAD drawings of typical installation details are available on disk or from our website: www.roofglazing.co.uk

If you require assistance please contact our Technical Department.

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9QU Telephone: 020 8801 4221 Facsimile: 020 8801 1287

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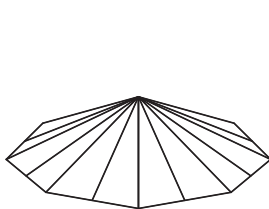
PRINT OUT THIS DESIGN GUIDE FOR REFERENCE IF YOU WISH.
CLICK THE **Pages** TAB TO SEE THUMBNAILS OF ALL THE PAGES IN THE PUBLICATION.
TO PRINT OUT INDIVIDUAL PAGES, CLICK **File, Print** THEN CHECK **Current page**
OR SELECT **Pages** RANGE AND CLICK **OK**. TO PRINT DRAWINGS TO THE SCALE INDICATED
YOUR PRINT DRIVER MUST BE CAPABLE OF BEING SET AT 100%. LOOK IN YOUR PRINTER'S
Properties FOR SETTINGS. CONTACT OUR TECHNICAL DEPARTMENT FOR FURTHER ADVICE.

SpanGard

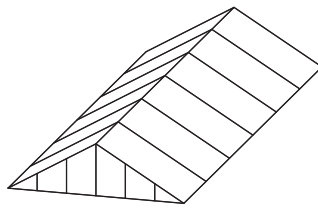
SpanGard, the self-supporting structure with a proven track record, allowing maximum light penetration and high performance weathering. Attention to detail and quality manufacturing ensures a neat slim-line appearance providing a strong, durable product giving many years good service. The sophisticated SpanGard remains unequalled in terms of value for money and performance.

- Each order individually "built" on computer software before manufacture to ensure accuracy.
- The widest range of shapes and sizes up to 6m wide with no length restrictions.
- Suitable for small domestic extensions through atria roofs.
- No additional structural supports or steel work required up to specified limits.
- Box-rafter construction provides invisible fixings, fast installation and ultimate strength.
- Thermally improved option available.

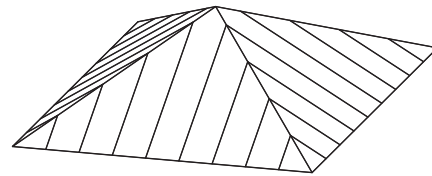
Skylights Some typical shapes



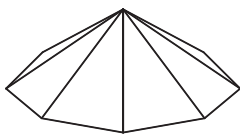
Multi Faceted



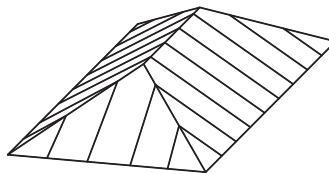
Gable ended



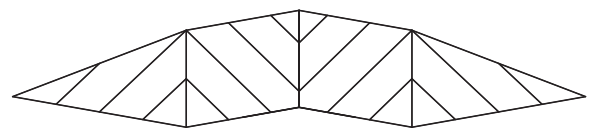
Pyramid



Hexagonal or Octagonal

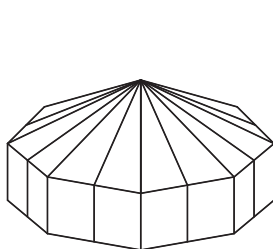


Hipped

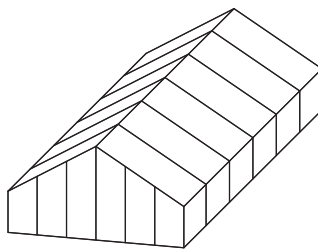


Special Shapes

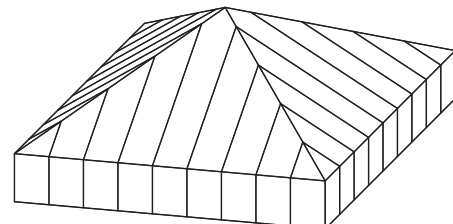
Lantern Lights Some typical shapes



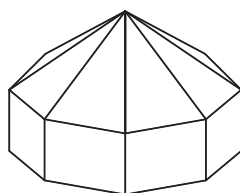
Multi Faceted



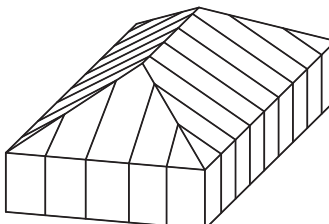
Gable ended



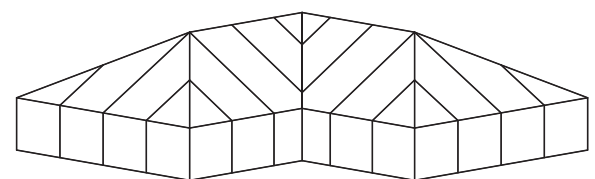
Pyramid



Hexagonal or Octagonal



Hipped



Special Shapes

Technical Summary

ThermGard Patent Glazing Bars used in SpanGard structures

Specification

Glazing Bars, Cappings, Beads and Fittings are extruded aluminium alloy 6063-T6 to BS1474. Fasteners provided are either stainless steel to BS304515 Grade A2 or mild steel bright zinc plated. Gaskets are extruded Thermo Plastic Rubber quality 98625 to BS4255:Part1:1986 Grade C.

Performance

All systems are designed to conform with the requirements of BS5516 when installed within the manufacturers recommendations. A guide to maximum spans is given on page 4 of the Design Guide and should be referred to prior to planning an installation.

Fixing

Fixing to timber is directly through the channels at the top of the glazing bars with two No. 10 x 1.5 inch bright zinc plated wood screws and a sliding shoe with wood screws at the bottom end. Fixing to metal is with M8 Single Hole Fixing Shoes positively fixed at the top and sliding at the bottom end. Dissimilar metals should be isolated to avoid bi-metallic corrosion

Appearance

Materials are supplied Mill Finished as standard. A range of architectural finishes is available including polyester powder coating to BS6496 in standard RAL or BS colour ranges.

Ventilation

May be achieved either through GlazaTherm, our top hung roof ventilator, or by casement vents in vertical applications. Various factory fitted opening mechanisms are available including manual, pole or cord operated, electrical, thermostatic or smoke activated controls.

Infill

All popular specifications can be accommodated including 6 / 7mm Single Glazing, 24mm and 28mm Double Glazed Sealed Units or 10mm,16mm or 25mm Polycarbonate Sheeting. Other infills should be discussed with our technical department. Double Glazed combinations should feature a suitable "step" to the bottom edge to avoid thermal breaking.

Typical Specification

Typical Specification for Lanterns and Skylights

NB: <i>Italics</i> show where you must insert the detail relevant to your project	
Patent Glazing:	<i>To central courtyard</i>
Drawing Reference:	<i>Drawing Numbers 123, 124, 125</i>
Supporting Structure:	Secured to Builders Curb with suitable fastener. Such Curb to be structural timber or steel capable of withstanding the relevant imposed loads, self- weight, wind & snow loads without spread or movement
Patent Glazing System:	To BS5516, and as specified in this section
Manufacture & Reference:	Lonsdale Metal Company Limited, London N17 9QU Telephone: 020 8801 4221 Facsimile : 020 8801 1287 Reference <i>SPANGARD</i>
Type:	<i>Self-supporting Pyramid Lantern-light with extruded aluminium Cill, Hips, Eaves, Ridge& Flashings. Up-stand height 500mm</i>
Glazing Bar: Material Finish Colour Minimum film thickness Spacing: Slop: Bottom overhang lap:	Aluminium alloy 6063-T6 to BS1474 <i>Polyester Powder Paint to BS6496</i> <i>RAL9910M</i> <i>40 microns</i> <i>Nominally 600mm glazing bar c/c</i> <i>45 degrees</i> <i>Standard 58mm</i>
Pane/infilling material(s):	<i>6mm Heat soaked clear toughened outer leaf, 16mm Argon cavity, 6-4mm clear low-e laminated inner leaf with stepped bottom edge</i>
Incorporated components:	<i>Top hung casement ventilators in the up-stand operated by electric actuators</i>

Please note : Whilst we are pleased to assist, the above example is given for guidance only. Responsibility remains with Specifiers to exercise all reasonable care ensuring our products are suitable for their requirements and correctly specified.

Drawings and CAD Code Index

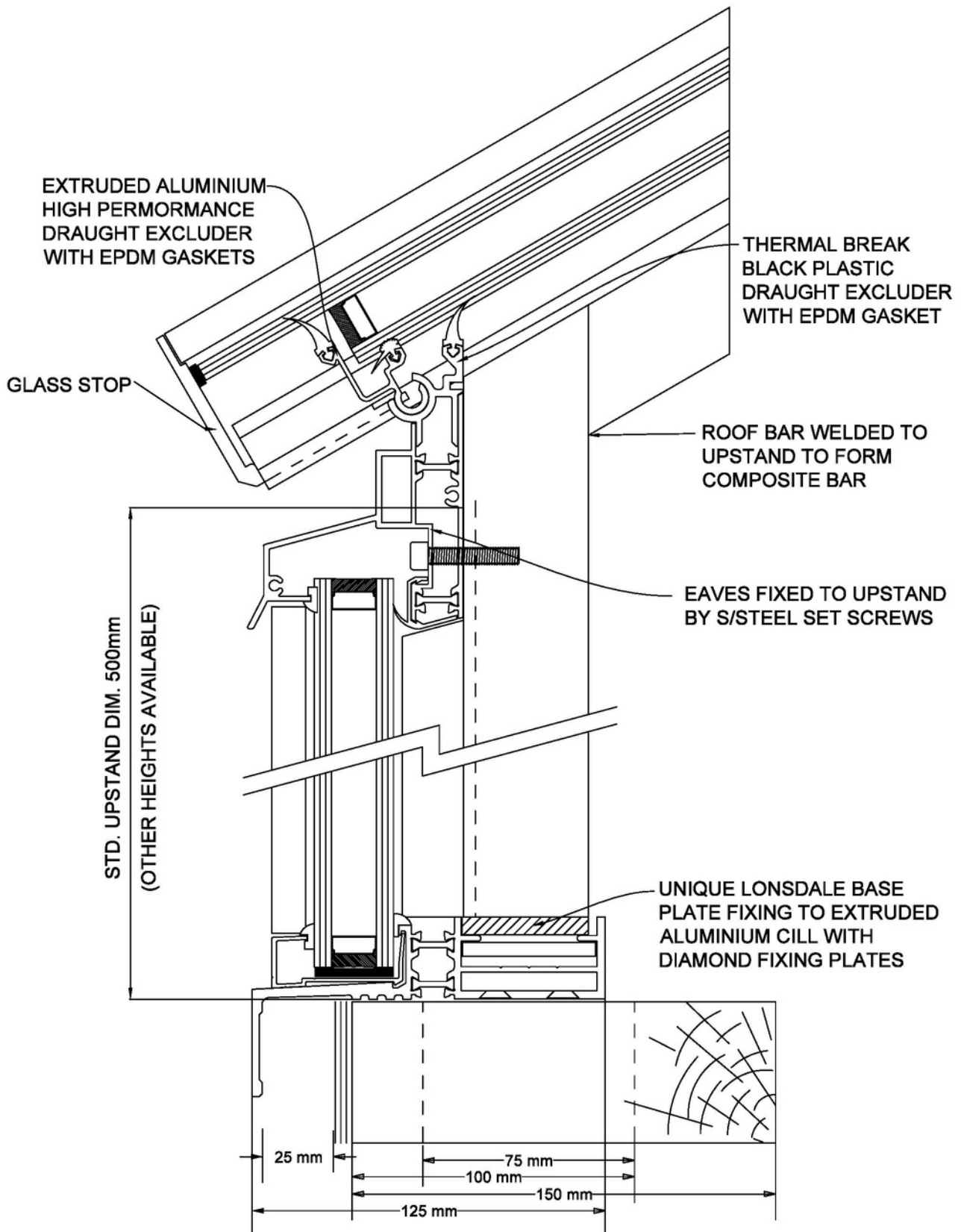
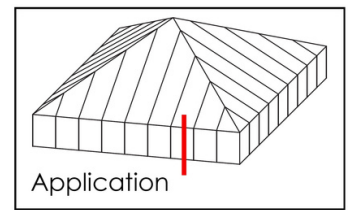
SpanGard

Drawing number CAD code	Description	Page
	Some typical shapes for Skylights & Lantern lights	2
SPA1Y	Lantern light up-stand	6
SPA1Y-2	Lantern light extended cill for wider curbs	7
SPA1Y-3	Lantern light upstand with cover caps	8
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SPA5Y	Isometric of typical skylight cill	9
SPA2Y	Skylight cill	10
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SPA8Y-2	Lantern light heavy-duty truss bar with cover caps to cill and eaves	18

SpanGard

Lantern light up-stand

CAD Code SPA1Y

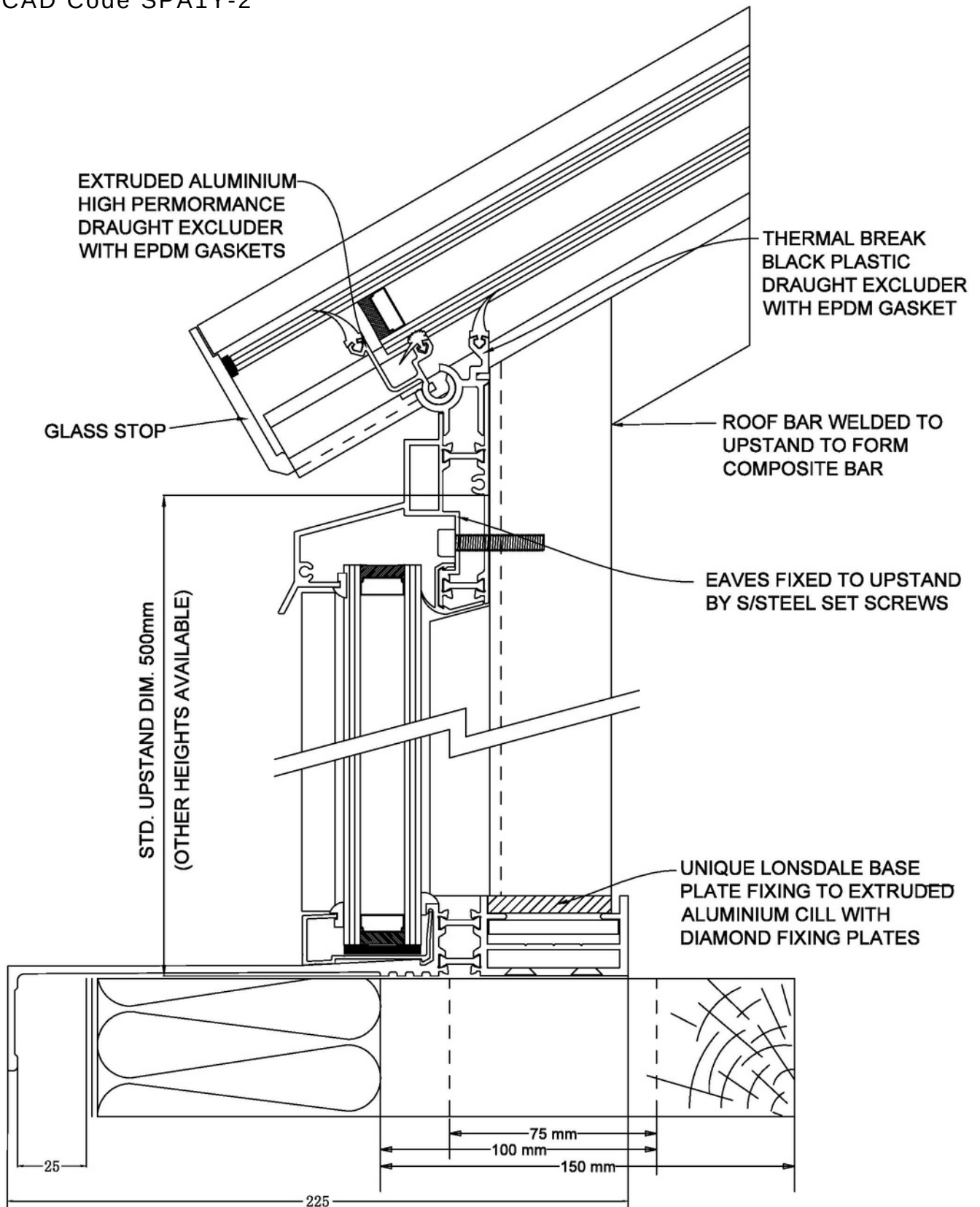
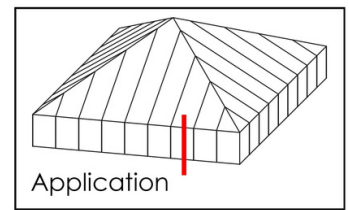


Scale of view 1:2

SpanGard

Lantern light extended cill for wider curbs

CAD Code SPA1Y-2

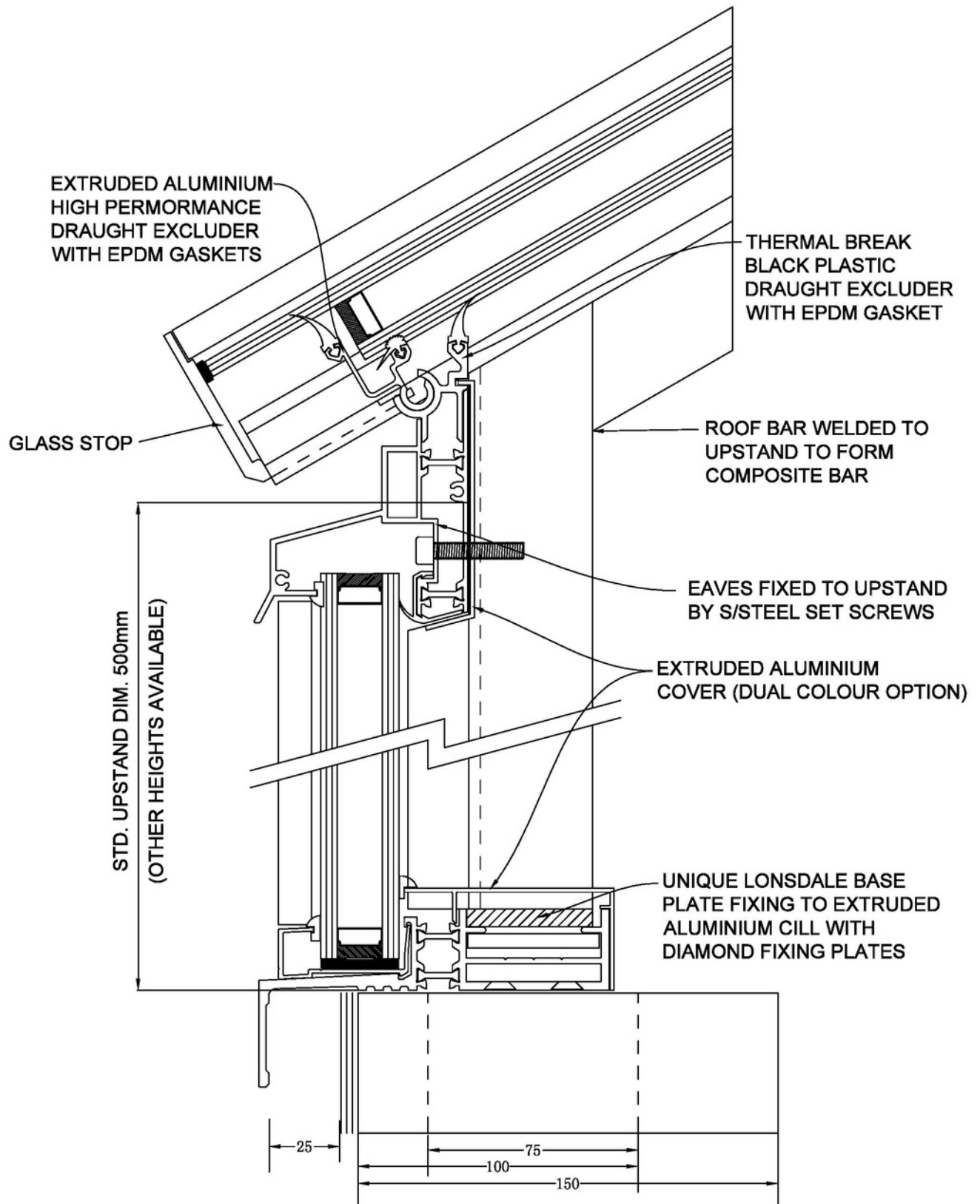
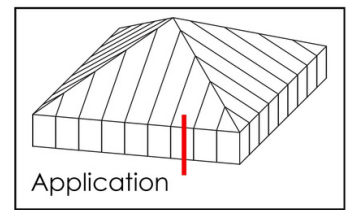


Scale of view 1:2

SpanGard

Lantern light upstand with cover caps

CAD Code SPA1Y-3

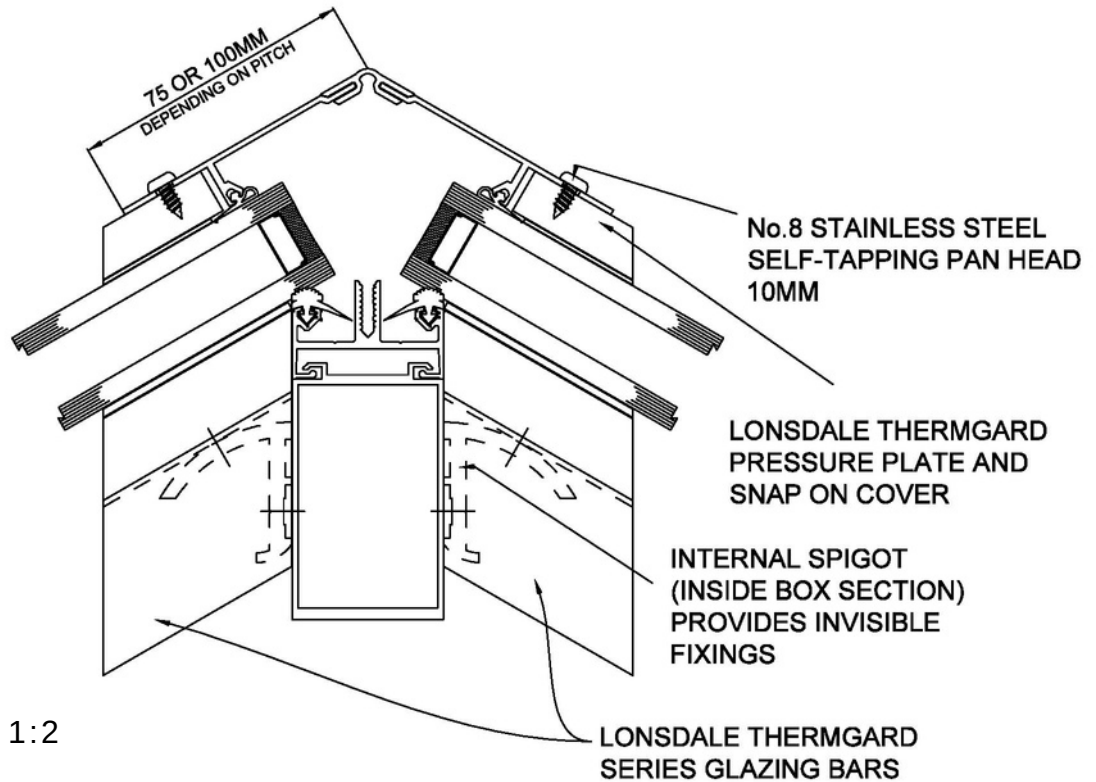


Scale of view 1:2

SpanGard

Lantern /Skylight typical ridge/hip

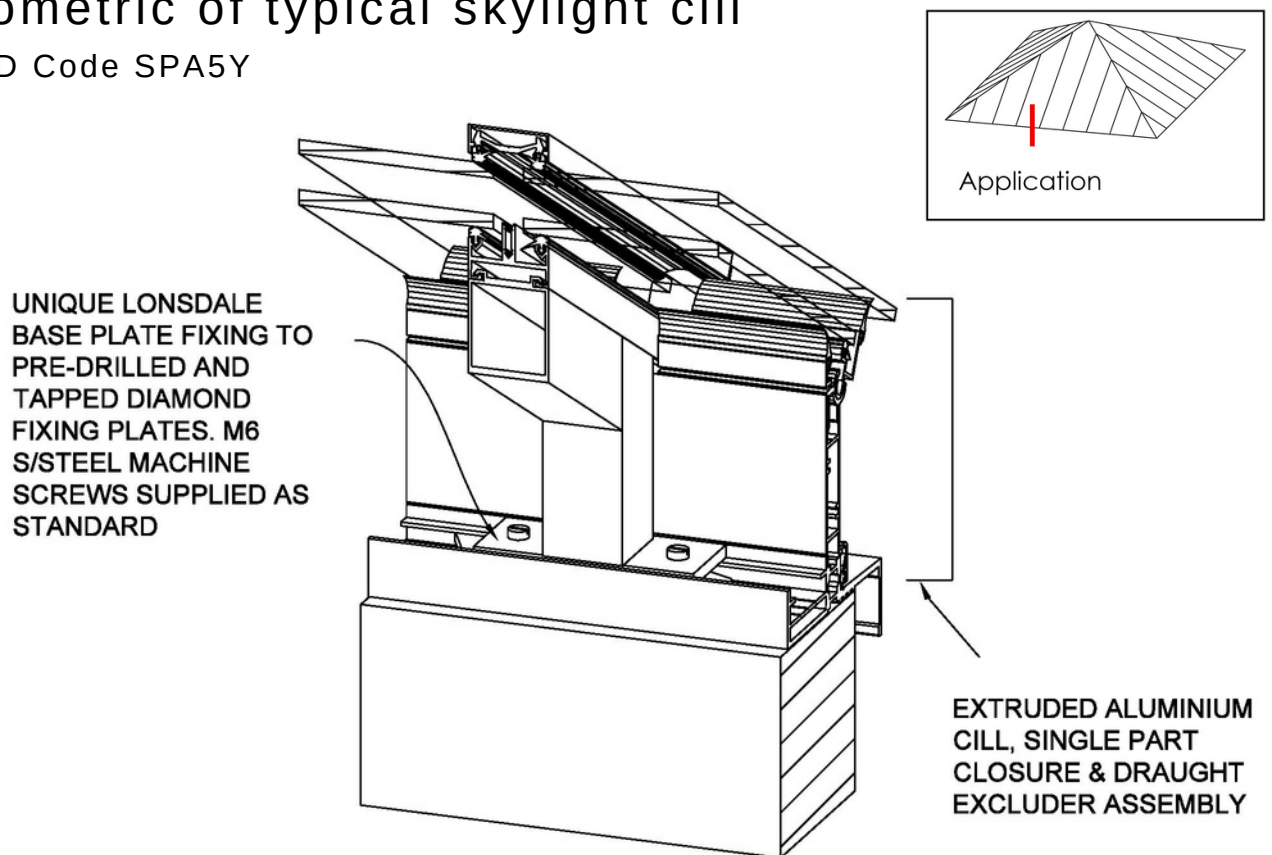
CAD Code SPA3Y



Scale of view 1:2

Isometric of typical skylight cill

CAD Code SPA5Y

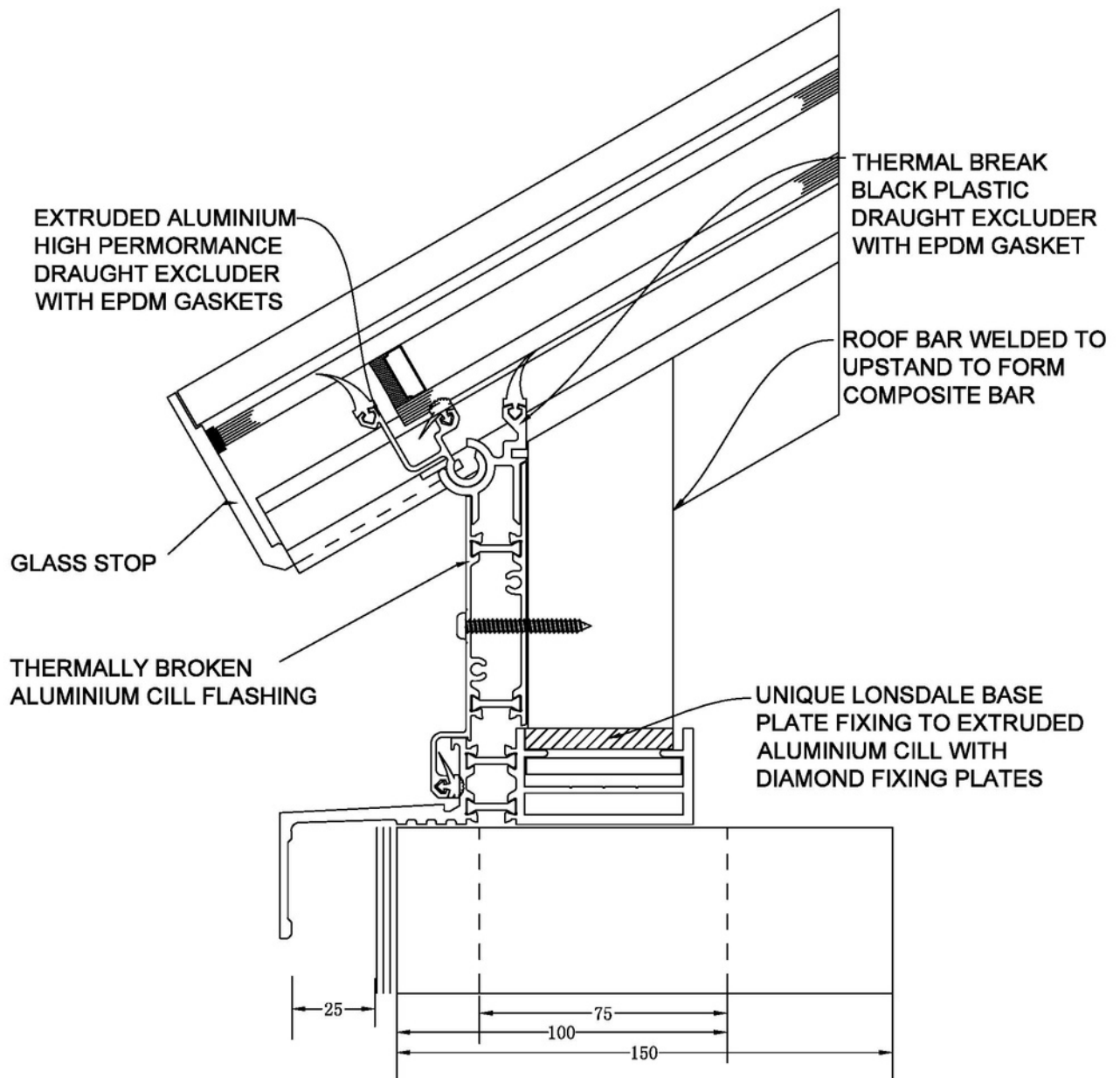
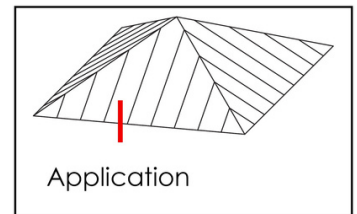


View not to scale

SpanGard

Skylight cill

CAD Code SPA2Y

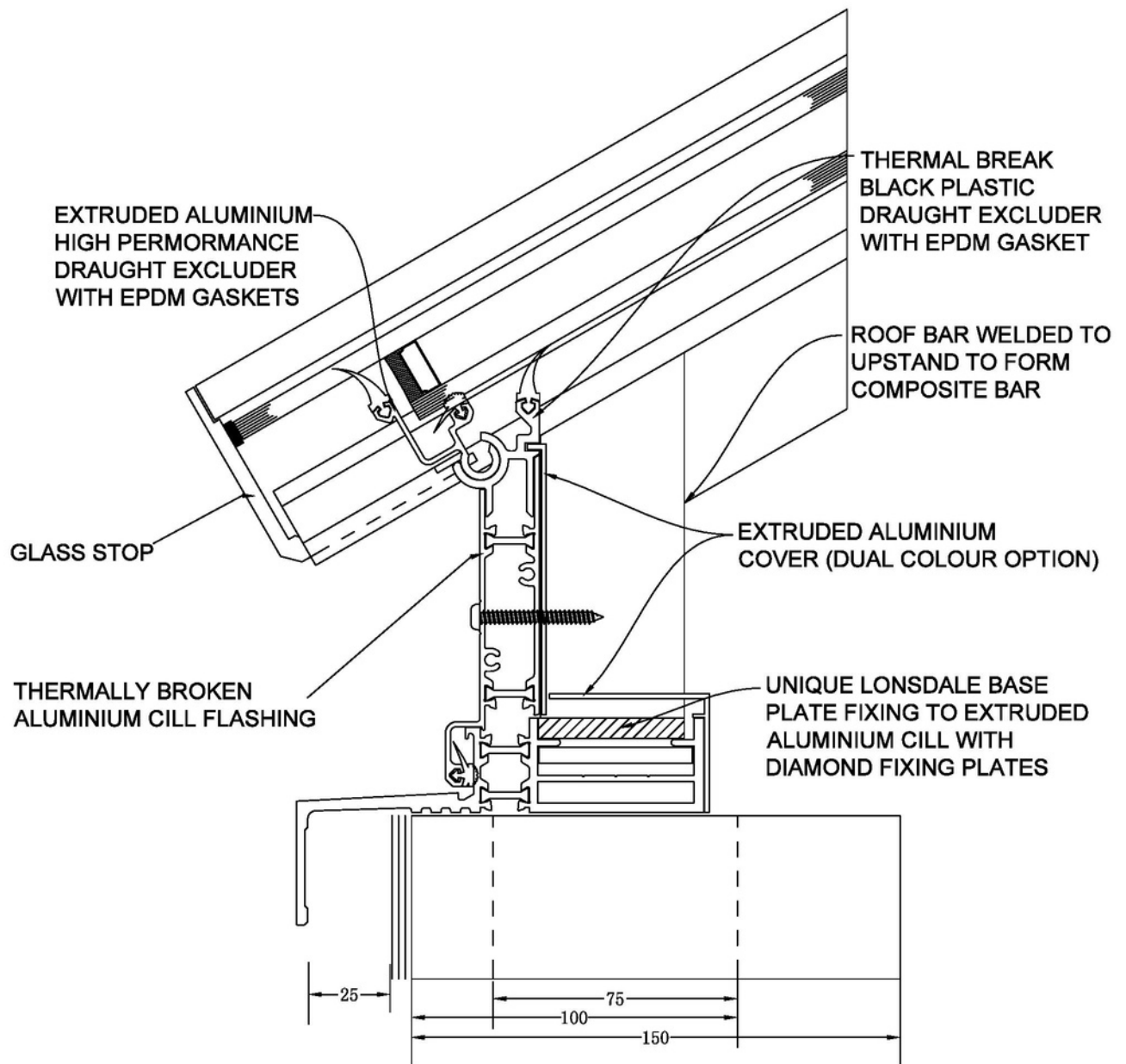
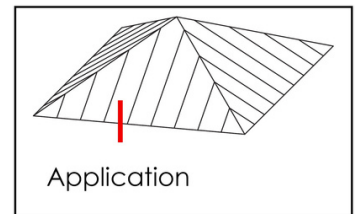


Scale of view 1:2

SpanGard

Skylight cill with cover caps

CAD Code SPA2Y-2

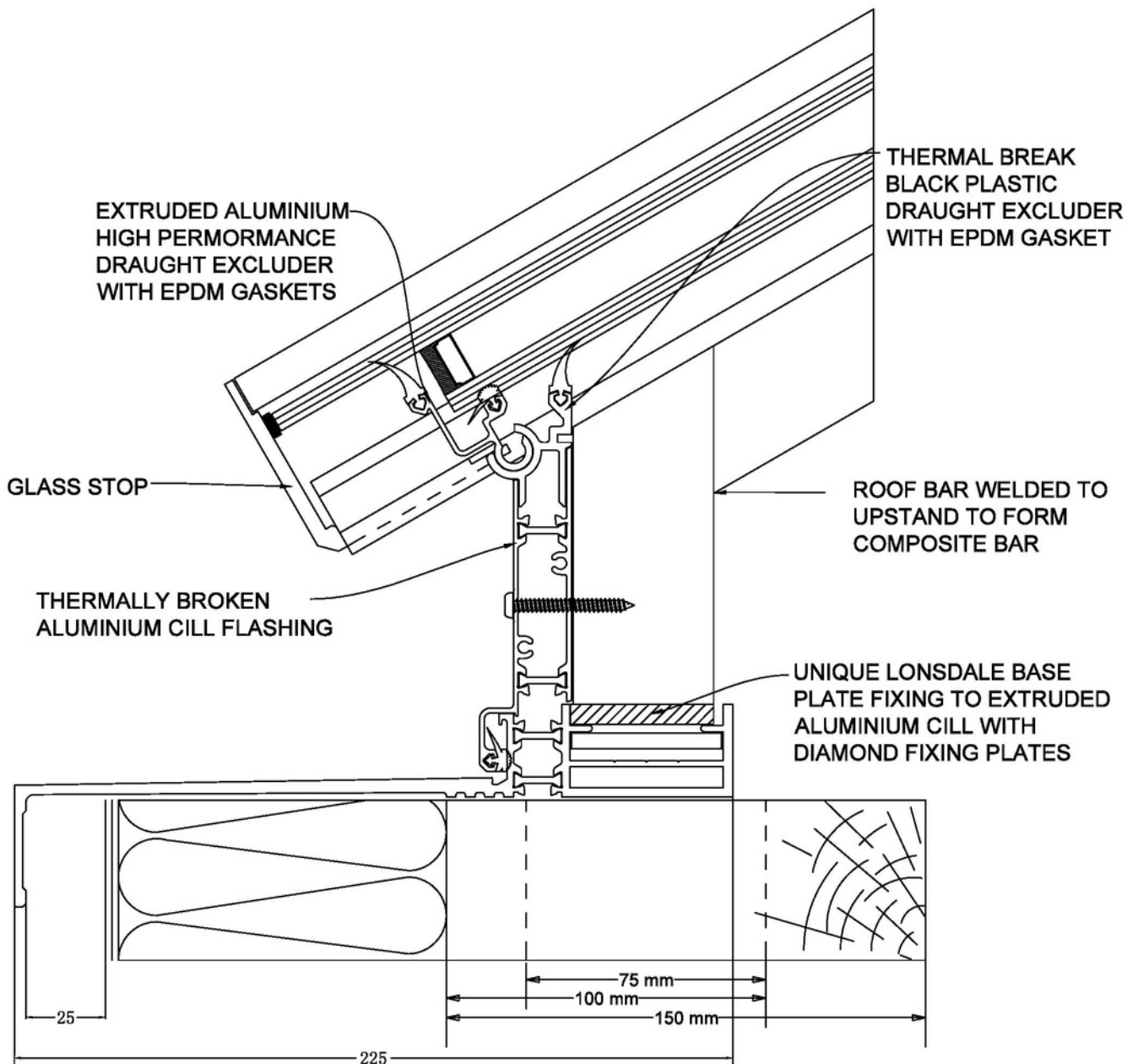
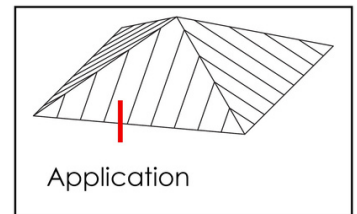


Scale of view 1:2

SpanGard

Skylight extended cill for wider curbs

CAD Code SPA2Y-3

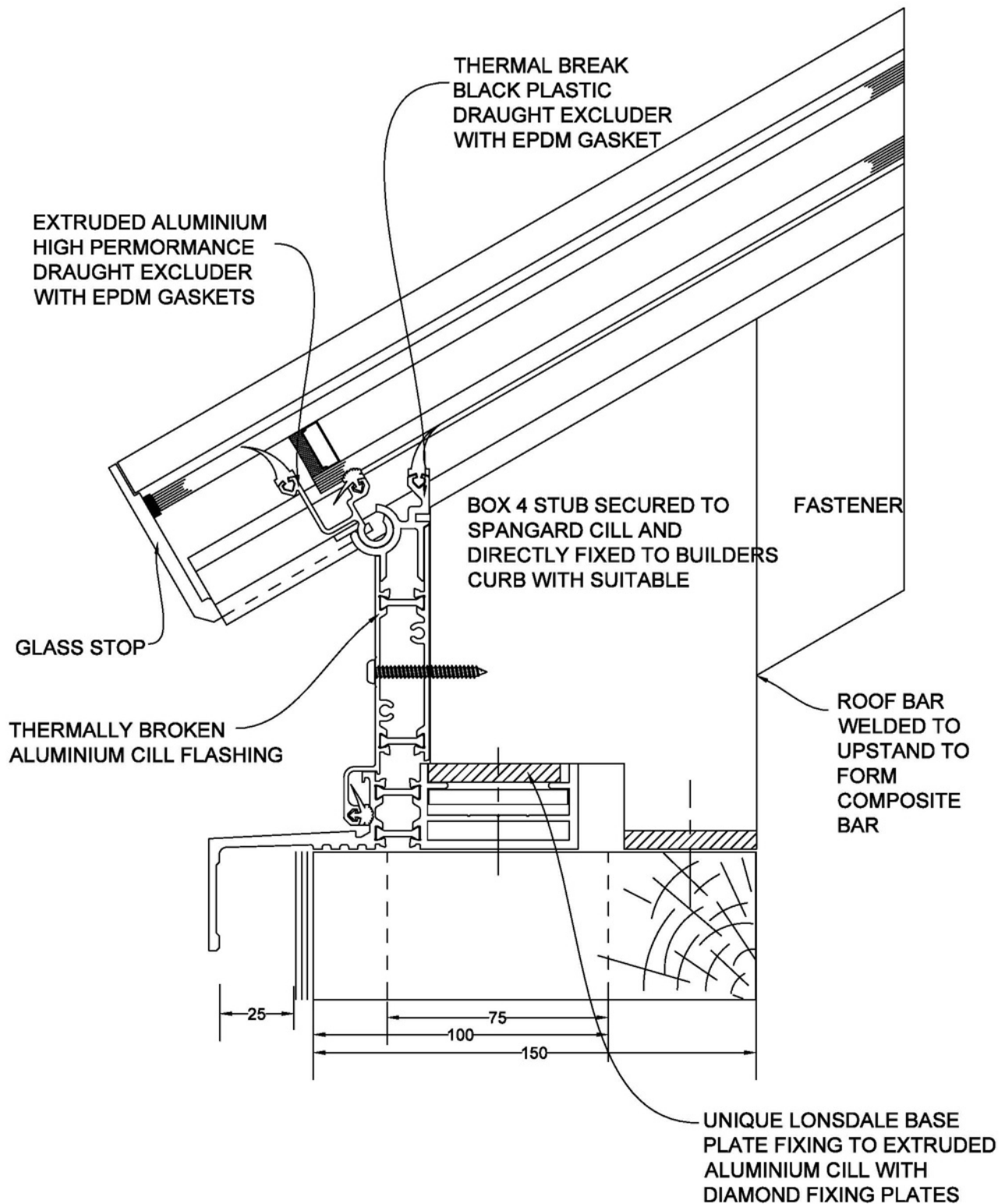
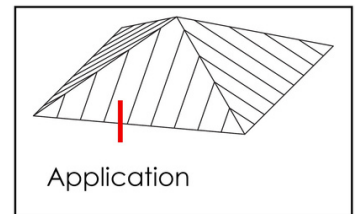


Scale of view 1:2

SpanGard

Heavy-duty truss bar

CAD Code SPA6Y

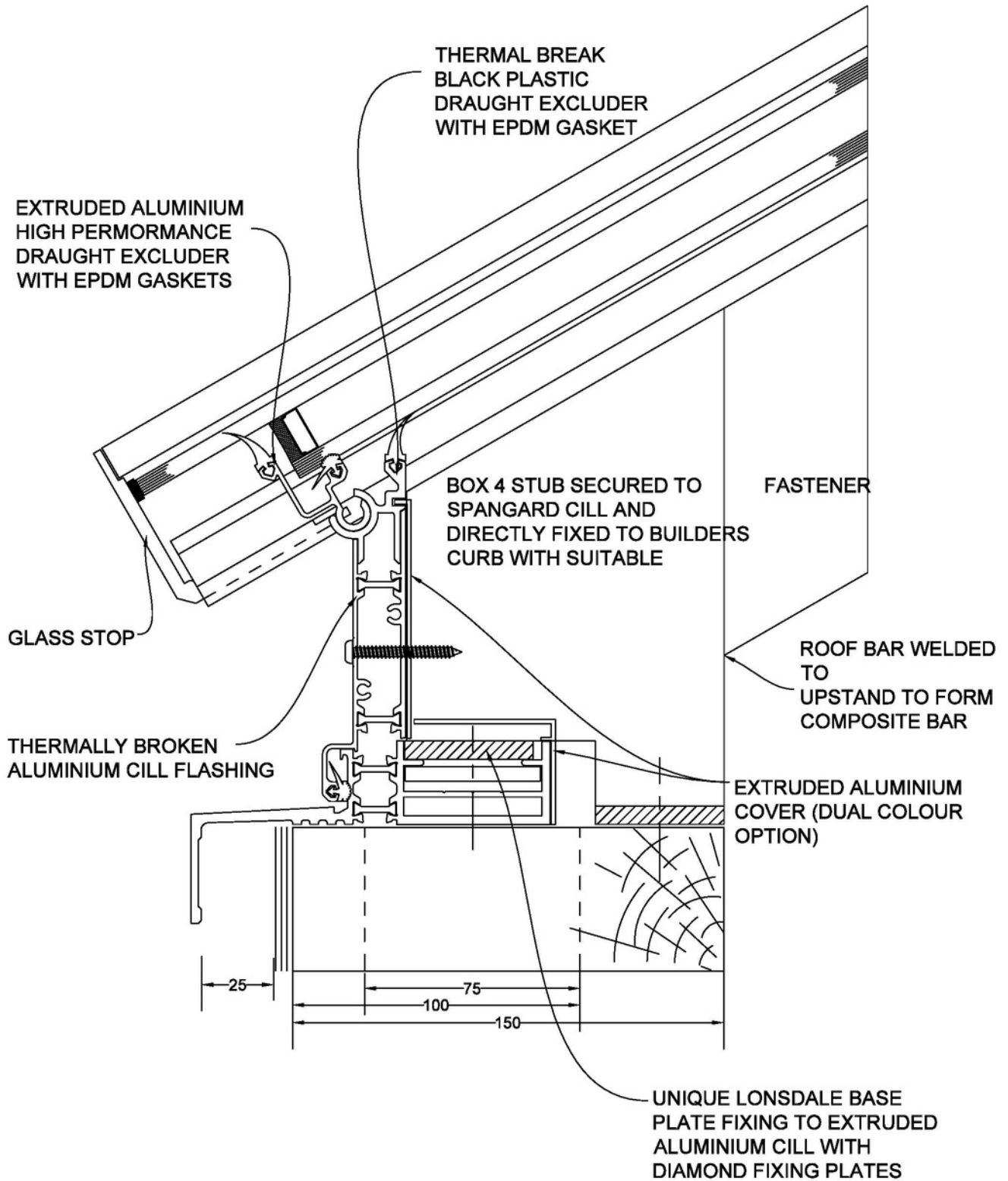
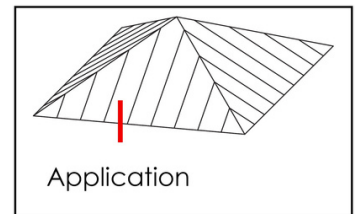


Scale of view 1:2

SpanGard

Heavy-duty truss bar with cover caps

CAD Code SPA6Y-2

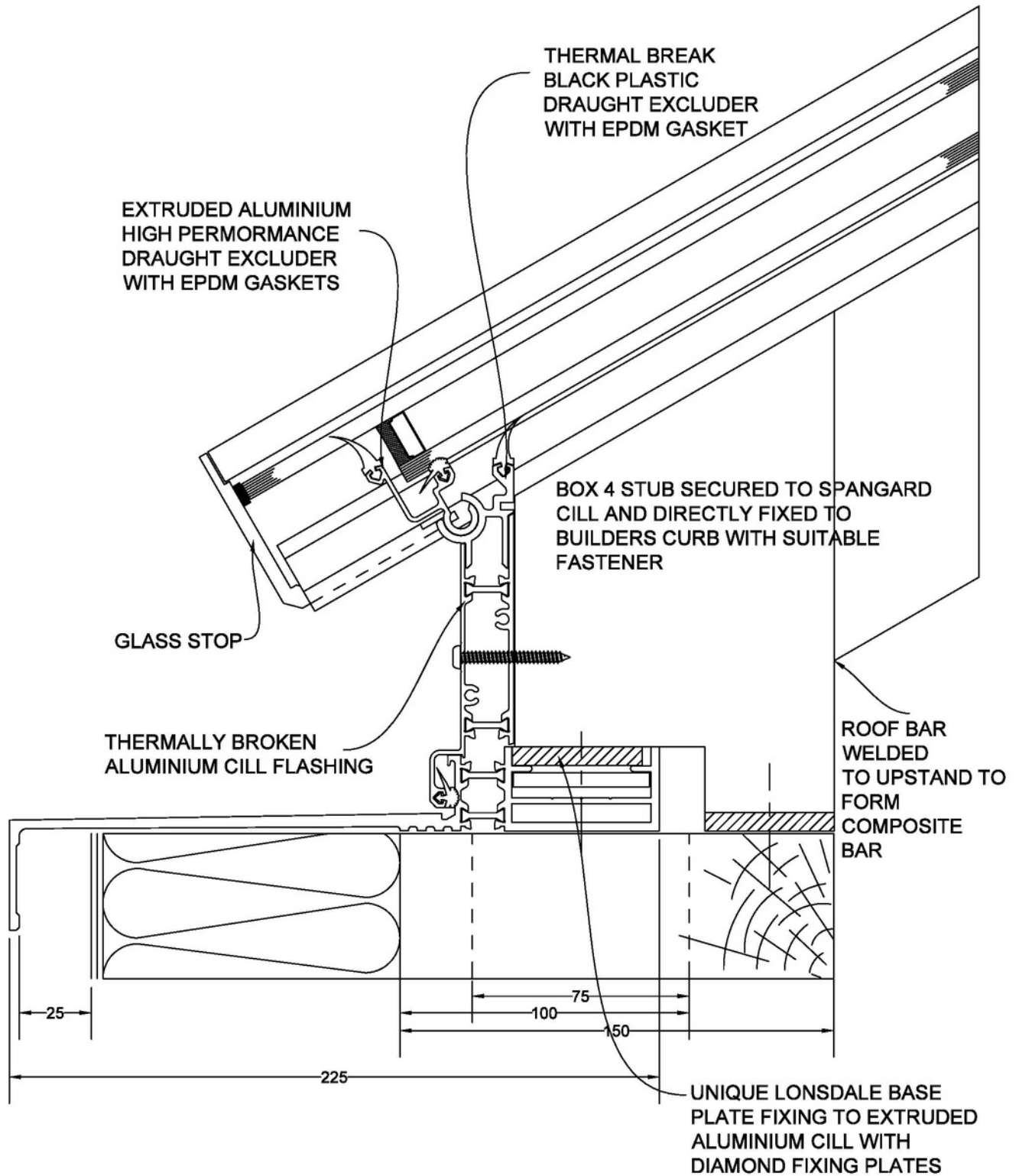
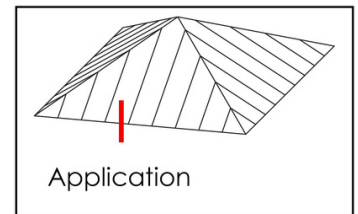


Scale of view 1:2

SpanGard

Heavy-duty truss bar with extended cill for wider curbs

CAD Code SPA6Y-3

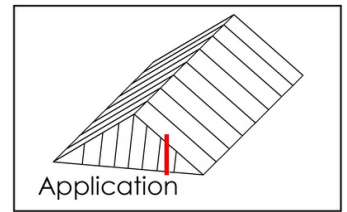


Scale of view 1:2

SpanGard

Gable end

CAD Code SPA7Y

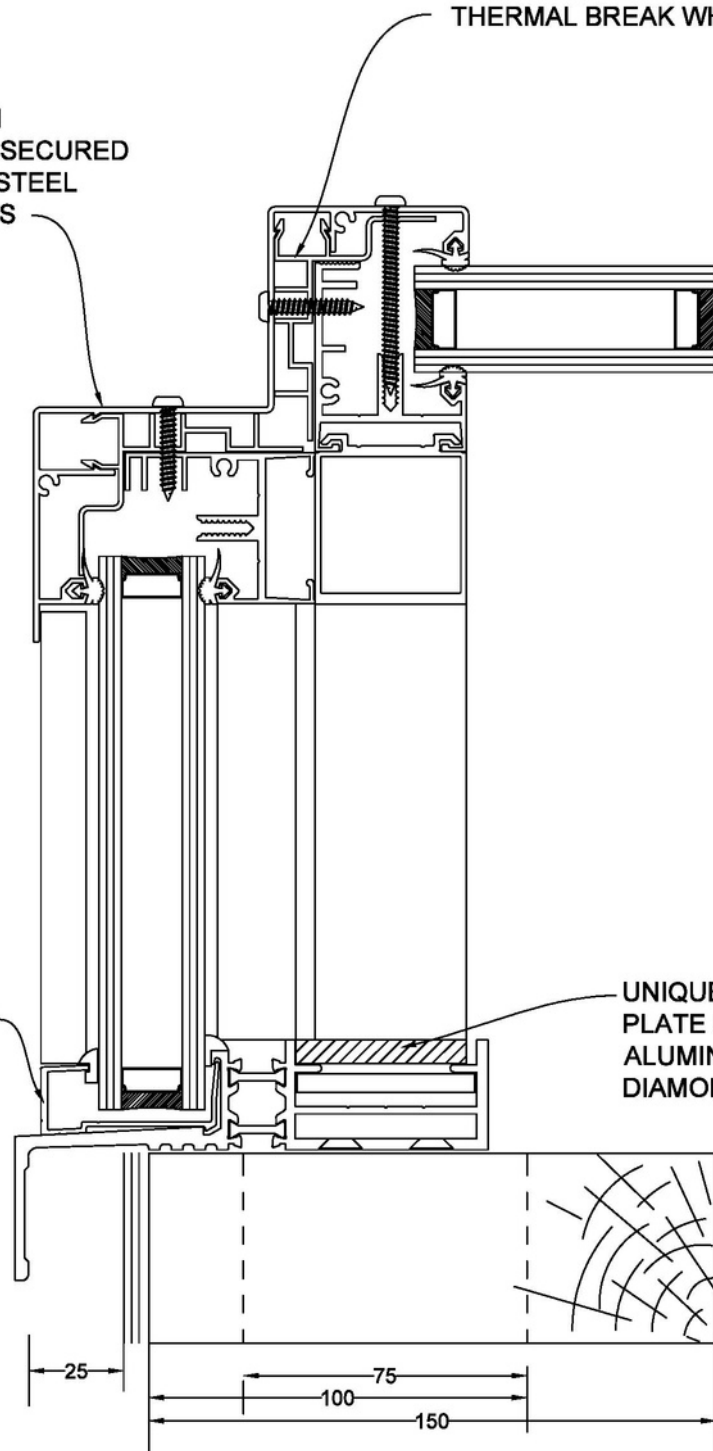


EXTRUDED ALUMINIUM
GABLE END FLASHING SECURED
WITH No.8 STAINLESS STEEL
SELF-TAPPING SCREWS

THERMAL BREAK WHITE PLASTIC

EXTRUDED ALUMINIUM
CILL GLASS CLOSURE

UNIQUE LONSDALE BASE
PLATE FIXING TO EXTRUDED
ALUMINIUM CILL WITH
DIAMOND FIXING PLATES

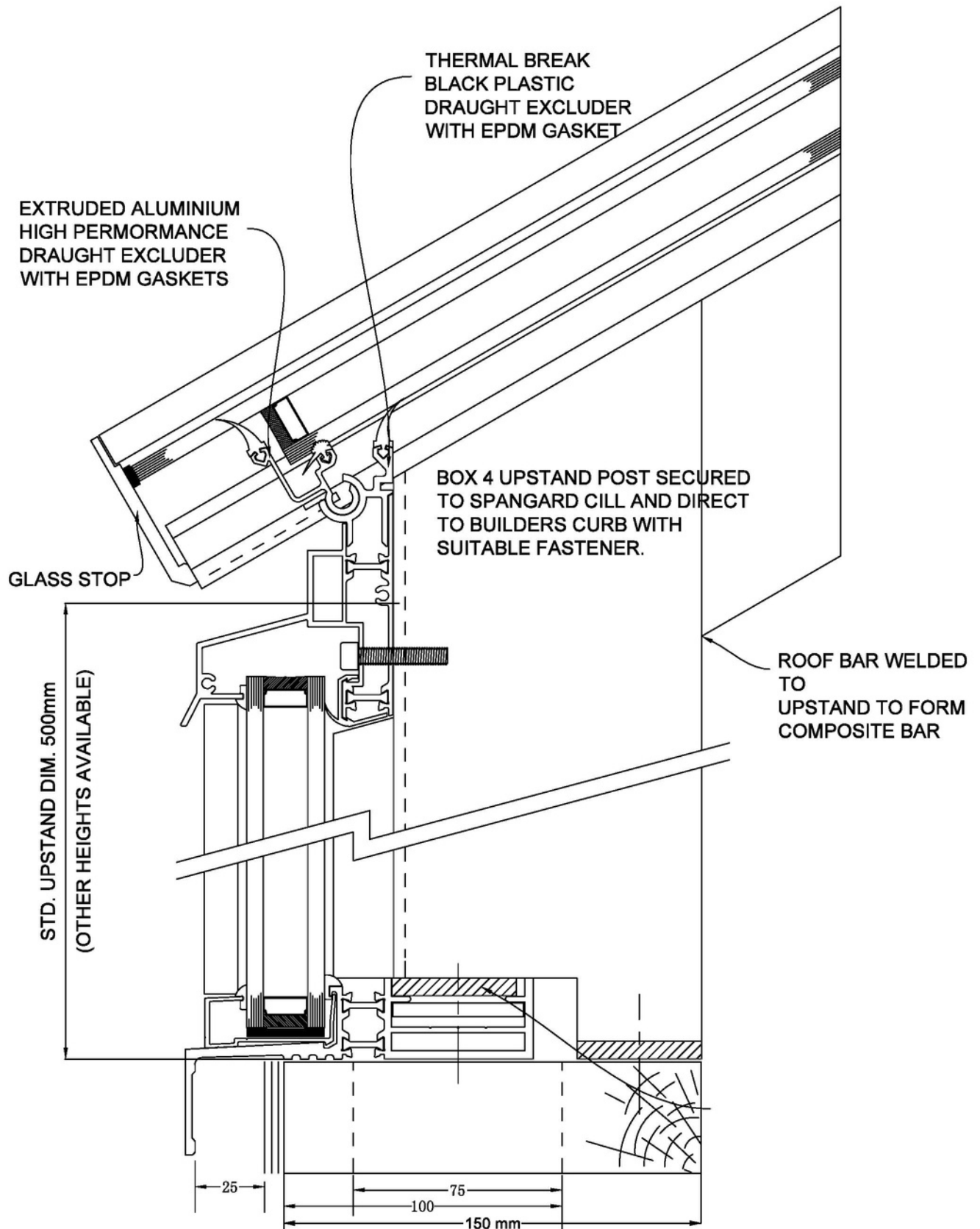
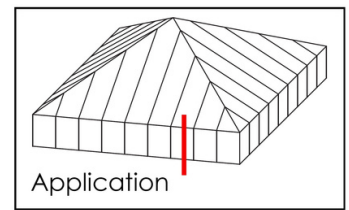


Scale of view 1:2

SpanGard

Lantern light heavy-duty truss bar

CAD Code SPA8Y

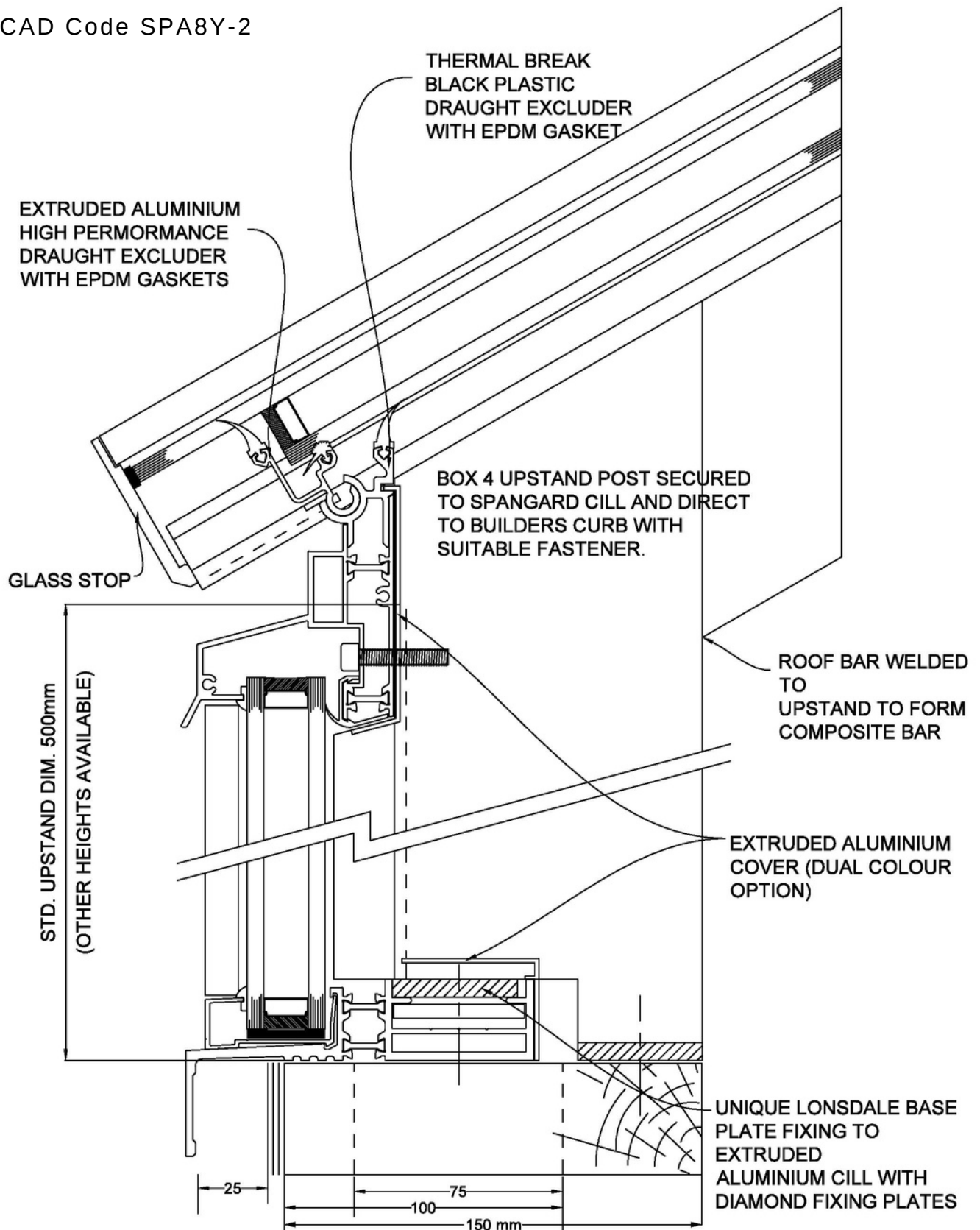
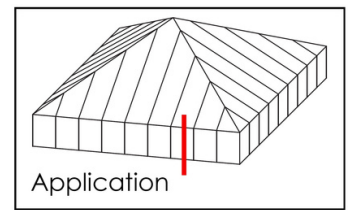


Scale of view 1:2

SpanGard

Lantern light heavy-duty truss bar with cover caps to cill and eaves

CAD Code SPA8Y-2



Scale of view 1:2



Research & Development

Lonsdale has made a very significant investment in research and development to bring you the products set out in this publication. Lonsdale's intention is to continue to invest to stay at the forefront of its Industry and bring its customers products with unrivalled technological advancements and standards. We reserve the right to make changes without prior notification to achieve these aims.

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