Raine&Horne®

Style Guide Office Signage

Current as at 15, October

Contents

1.0

House-keeping

It is natural for a business to grow and evolve over time, and therefore crucial that our internal and external audiences keep up with these changes. This house-keeping is included to ensure all branding relfects the business as a whole, by sharing the upkeep and maintenance requirements to do so.

Maintenance

1. Regular Cleaning

Vinyl Signage: Clean vinyl signage regularly with a mild detergent and water solution. Avoid using abrasive cleaners or rough materials that could scratch the surface. Illuminated Signs: Dust and dirt can accumulate on illuminated signs, impacting visibility. Use a soft cloth or sponge with a gentle cleaning solution to wipe down the surface. Ensure the power supply is turned off before cleaning.

2. Inspection & Repair

Vinyl Signage: Periodically inspect vinyl signs for any signs of wear, tear, or fading. Replace damaged sections promptly to maintain a professional appearance and ensure readability. Illuminated Signs: Check the wiring, bulbs, and connections of illuminated signs regularly. Rplace any faulty components immediately to avoid disruptions in visibility.

3. Pest Control

Prevent Pest Infestations: Inspect signage regularly for signs of pest infestation, such as insect nests or rodent damage. Take appropriate measures to deter pests and protect signage from damage.

4. Professional Maintenance

Annual Inspections: Schedule annual inspections by a professional signage maintenance service provider. They can identify potential issues early and perform any necessary repairs or maintenance tasks. Signage Upgrades: Consider periodic upgrades or refurbishments to keep signage looking fresh and appealing to customers. This may involve updating graphics, replacing outdated technology in illuminated signs, or refreshing materials.

5. Safety Considerations

Electrical Safety: Regularly check wiring and connections for any signs of wear or damage. Heightened Awareness: In areas prone to extreme weather events, such as cyclones or bushfires, take extra precautions to secure signage and minimise potential hazards during adverse conditions.

6. Documentation

Maintenance Records: Keep detailed records of all maintenance activities, inspections, repairs, and upgrades performed on signage. This documentation can be valuable for tracking performance over time and planning future maintenance efforts. By following these maintenance guidelines, you can ensure that your signage remains attractive, functional, and compliant with regulations, enhancing your brand visibility and making a positive impression on customers in Australia.

2.0

Brand Finishes

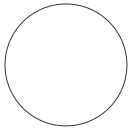
The brand finishes are composed of a distinct colour palette chosen to represent the brand.

Colour Palette

Primary Palette

RGB	43 43 43
CMYK	10 3 3 90
PANTONE	Black 7 C
PAINT	**2 PACK PAINT** To match Patone Black 7 C **ACRYLIC PAINT** NZ - Dulux, the Kuiti, NZ10H1 AU - Dulux, Black Caviar EB, SN4H9 **VINYL** Avery 921 Black Matte **CLADDING** Alupanel, FR (Group 2) – Matte Anthracite Grey

RGB	255 179 0
CMYK	0 30 100 0
PANTONE	1235 C
PAINT	**2 PACK PAINT** To match Patone 1235 C **ACRYLIC PAINT** Dulux 'Gold Rush A 169' **VINYL** 3M, Golden Yellow 3630-125 **ACRYLIC** Custom Yellow Translucent Acrylic (stocked by The Blueprint)



RGB	255 255 255
CMYK	0 0 0 0
PAINT	**2 PACK PAINT** To match Alupanel FR Matte White **ACRYLIC PAINT** Dulux 'Vivid White SW1G1' **VINYL** Avery 730 Matte White **CLADDING** Alupanel, FR (Group 2) – 3mm Matte White

Secondary Palette

RGB	197 199 201
CMYK	0 0 0 25
PAINT	**ACRYLIC PAINT** Dulux 'Endless Dusk'

RGB	241 241 242
CMYK	0 0 0 5
PAINT	**ACRYLIC PAINT** Dulux 'Terrace White' **VINYL** Metamark M7

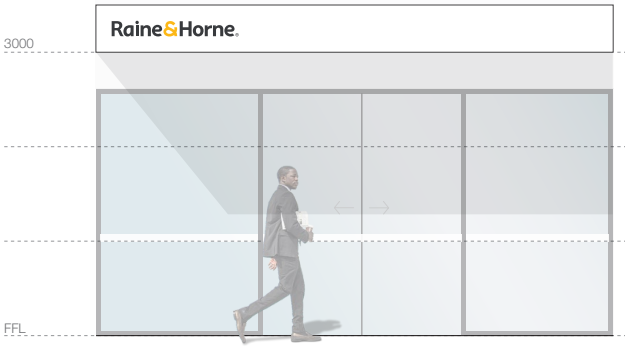
3.0

Signage Suite Overview

This section provides a comprehensive look into the various external signage features available to display for our offices.

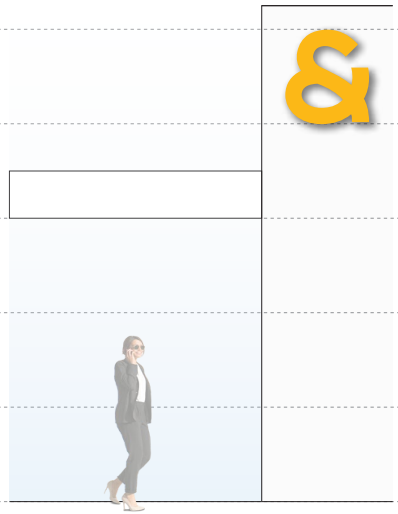
Signage Suite Overview

Code Legend
Signage Type = Beginning of Code. EG. Ampersand – Low Level = A/LL
Size = After Signage Code. EG. Ampersand – Low Level = A/LL-800
Non-Illuminated = End of code, N = Non-illuminated, EG. Ampersand – Low Level = A/LL-800-N



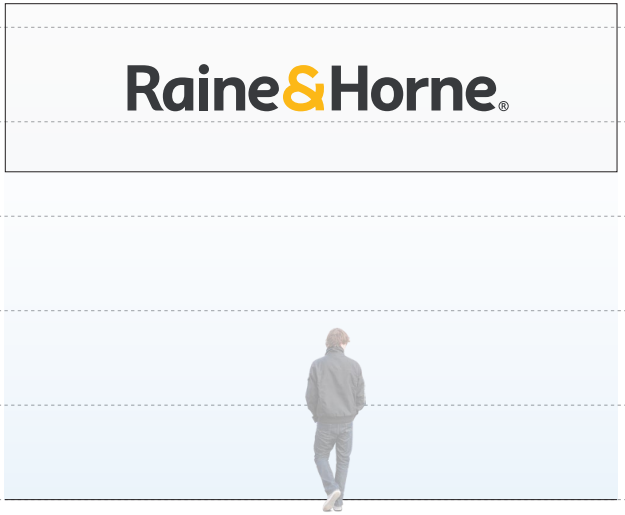
FA-150/-N - Fascia Lettering + **FASCIA-350-(AorB)** - Fascia Cladding
FA-175/-N - Fascia Lettering + **FASCIA-500-(AorB)** - Fascia Cladding
FA-225/-N - Fascia Lettering + **FASCIA-600-(AorB)** - Fascia Cladding

Fascia Sign
Fabricated background to suit site condition.
Illuminated or non-illuminated wordmark logo.



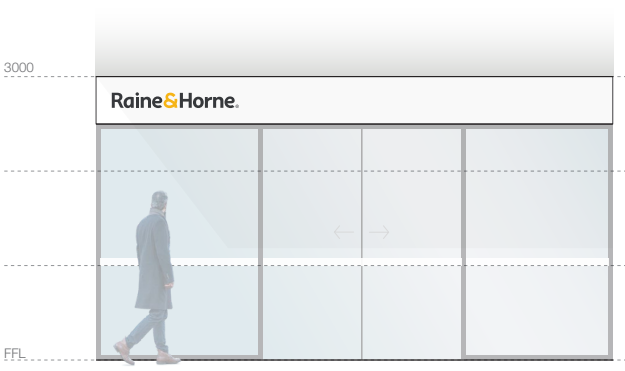
A/HL–800 - 800mmH Ampersand
A/HL–1100 - 1100mmH Ampersand
A/HL–1350 - 1350mmH Ampersand

Ampersand - High Level
Fabricated brand mark.
Illuminated or Non-illuminated.



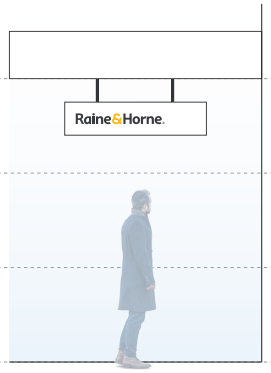
WM/HL-300 - 300mmH Wordmark
WM/HL-500 - 500mmH Wordmark

Wordmark Logo - High Level
Fabricated wordmark.
Illuminated or Non-illuminated.



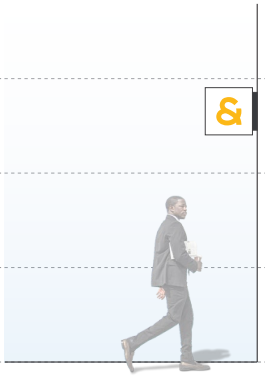
TR-150/-N - Transom Lettering + **TRANSOM-350-(AorB)** - Transom Cladding
TR-175/-N - Transom Lettering + **TRANSOM-500-(AorB)** - Transom Cladding
TR-225/-N - Transom Lettering + **TRANSOM-600-(AorB)** - Transom Cladding

Transom Sign
Fabricated background to suit site condition.
Illuminated or non-illuminated wordmark logo.



UA-1500 - 1500mmW Lightbox
UA-1800 - 1800mmW Lightbox

Under Awning Sign
Under Awning Lightbox, double sided.
Illuminated or Non-illuminated.



CA-500 - 500mmW Lightbox
CA-750 - 750mmW Lightbox

Cantilevered Sign
Cantilevered Lightbox, double sided.
Illuminated or Non-illuminated.

Signage Suite Overview

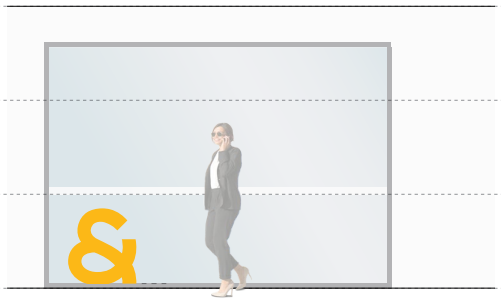
Code Legend
Signage Type = Beginning of Code. EG. Ampersand – Low Level = A/LL
Size = After Signage Code. EG. Ampersand – Low Level = A/LL-800
Non-Illuminated = End of code, N = Non-illuminated, EG. Ampersand – Low Level = A/LL-800-N

3000

FFL

GG-L - Glazing Graphics - Large 500mmH
GG-S - Glazing Graphics - Small 375mmH

Glazing Graphics
Ampersand brand mark applied to front door glazing.



A/LL-800 - 800mmH Ampersand

Ampersand - Low Level
Fabricated brand mark mounted behind shopfront glazing. Illuminated or Non-illuminated. Should not be displayed on offices that have a high level ampersand (ID2).

TD-1 - Trading Details

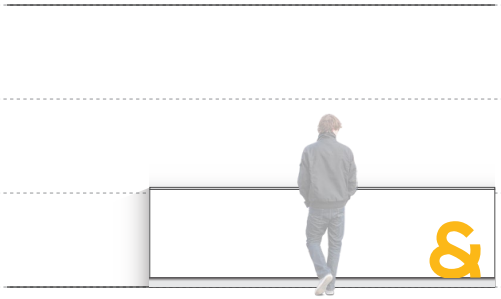
Trading Details
Trading hours and licensee details applied to shopfront entry glazing. White vinyl graphics.

3000

FFL

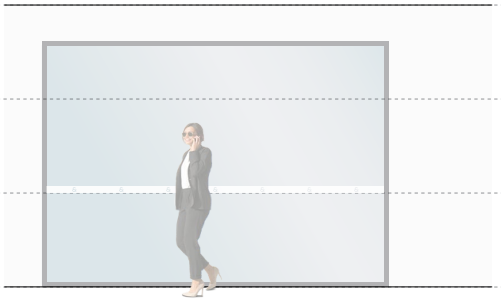
RW-200 - 200mmH Reception Logo
RW-300 - 300mmH Reception Logo

Reception Wall
Fabricated wordmark logo to wall behind reception desk. Illuminated or Non-illuminated.



RD-1 - Reception Desk Logo

Reception Desk
Profile cut acrylic or vinyl to face of reception desk where reception wall is unavailable. Exemption can be granted where front of desk is on a different angle to reception desk (e.g. Bondi).



SS-1 - Safety Strip

Safety Strip
Computer cut frosted vinyl reverse applied to glazing. Logo is cut out.

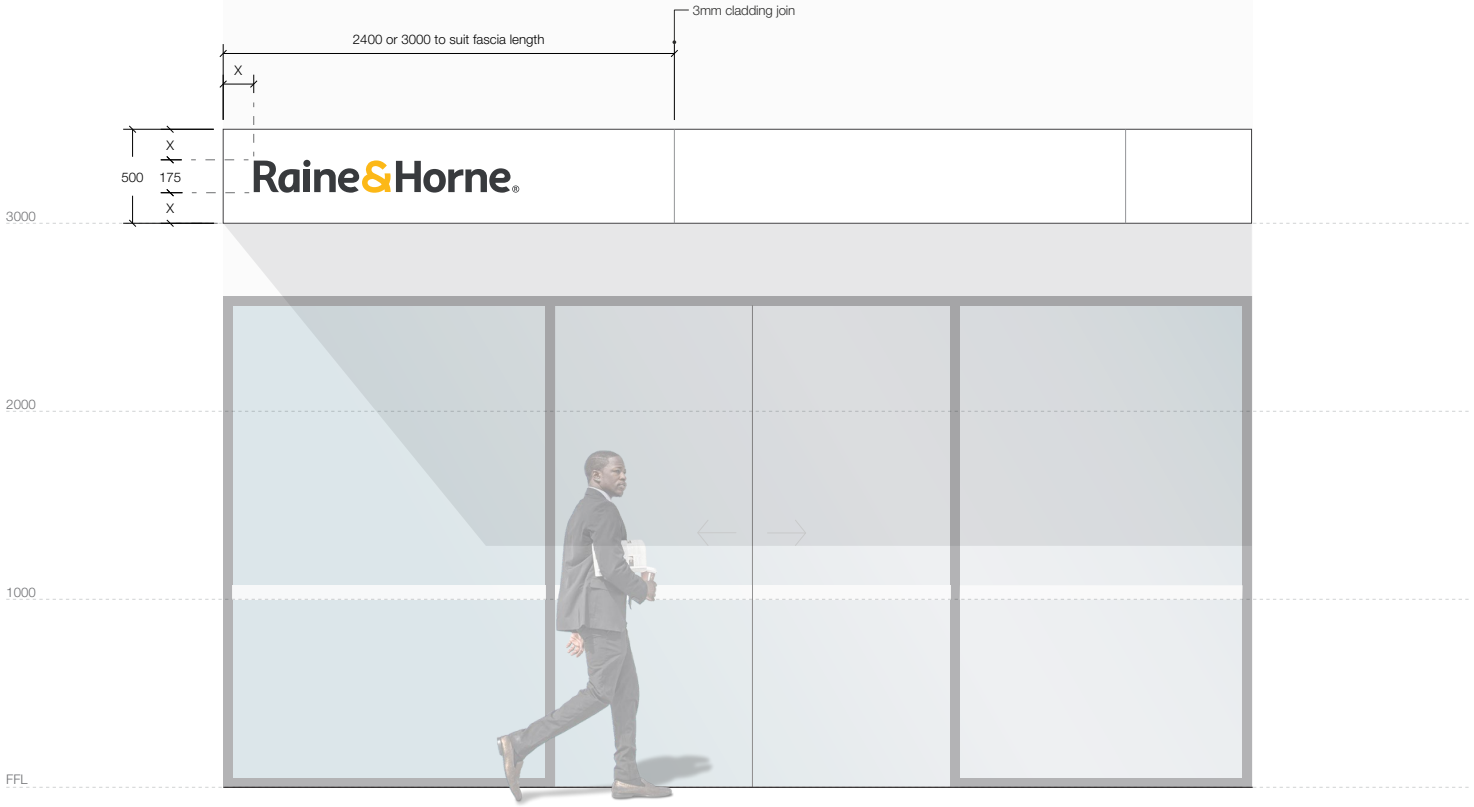
4.0

Sign Types

This section provides a comprehensive look into the various external signage features available to display for our offices.

FA-xxx-N Fascia Logo FASCIA-xxx-(A,BorC) Fascia Cladding

FA-150-N - Fascia Lettering + **FASCIA-350-(A,BorC)** - Fascia Cladding
FA-175-N - Fascia Lettering + **FASCIA-500-(A,BorC)** - Fascia Cladding
FA-225-N - Fascia Lettering + **FASCIA-600-(A,BorC)** - Fascia Cladding
FA-325-N - Fascia Lettering + **FASCIA-1000-(A,BorC)** - Fascia Cladding
FA-350-N - Fascia Lettering + **FASCIA-1200-(A,BorC)** - Fascia Cladding
FA-375-N - Fascia Lettering + **FASCIA-1400-(A,BorC)** - Fascia Cladding
FA-400-N - Fascia Lettering + **FASCIA-1600-(A,BorC)** - Fascia Cladding



Typical Fascia Elevation
Scale 1:25

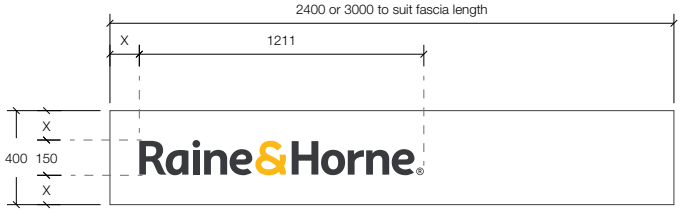
FASCIA SIGN
Non-illuminated wordmark logo.
Refer to following page for details.

APPLICATION NOTES
A. Logo Size
Standard logo sizes:
150mmH - Fascias 350 to 499mmH
175mmH - Fascias 500 to 599mmH
225mmH - Fascias 600 to 800mmH
325mmH - Fascias 801 to 1000mmH
350mmH - Fascias 1001 to 1200mmH
375mmH - Fascias 1201 to 1400mmH
400mmH - Fascias 1401 to 1600mmH

B. Clear Space
X = clear space top, bottom, & left of logo.
Logo is centred vertically on the fascia panel & clear space to the left is equal to the space top & bottom.

C. Logo Placement
Logo to be preferably left aligned, but may be right aligned if the location has better visability.

FA-xxx-N Fascia Logo FASCIA-xxx-(A,BorC) Fascia Cladding



FA-150-N - Fascia Lettering + **FASCIA-400-(A,BorC)** - Fascia Cladding
**150mmH logo to applied to fascias between 350-499mmH*

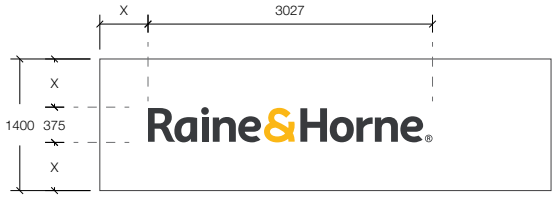
FA-175-N - Fascia Lettering + **FASCIA-500-(A,BorC)** - Fascia Cladding
**175mmH logo to applied to fascias between 500-599mmH*

FA-225-N - Fascia Lettering + **FASCIA-650-(A,BorC)** - Fascia Cladding
**225mmH logo to applied to fascias between 600-800mmH*

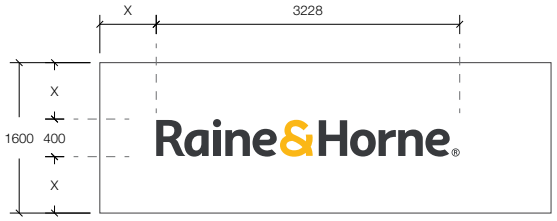
Typical Fascia Logo Sizes
Scale 1:20

FA-325-N - Fascia Lettering + **FASCIA-1000-(A,BorC)** - Fascia Cladding
**325mmH logo to applied to fascias between 801-1000mmH*

FA-350-N - Fascia Lettering + **FASCIA-1200-(A,BorC)** - Fascia Cladding
**350mmH logo to applied to fascias between 1001-1200mmH*



FA-375-N - Fascia Lettering + **FASCIA-1400-(A,BorC)** - Fascia Cladding
**375mmH logo to applied to fascias between 1201-1400mmH*



FA-400-N - Fascia Lettering + **FASCIA-1600-(A,BorC)** - Fascia Cladding
**400mmH logo to applied to fascias between 1401-1600mmH*

Typical Large Fascia Logo Sizes
Scale 1:50

FASCIA SIGN
Non-illuminated wordmark logo.
Refer to following page for details.

APPLICATION NOTES

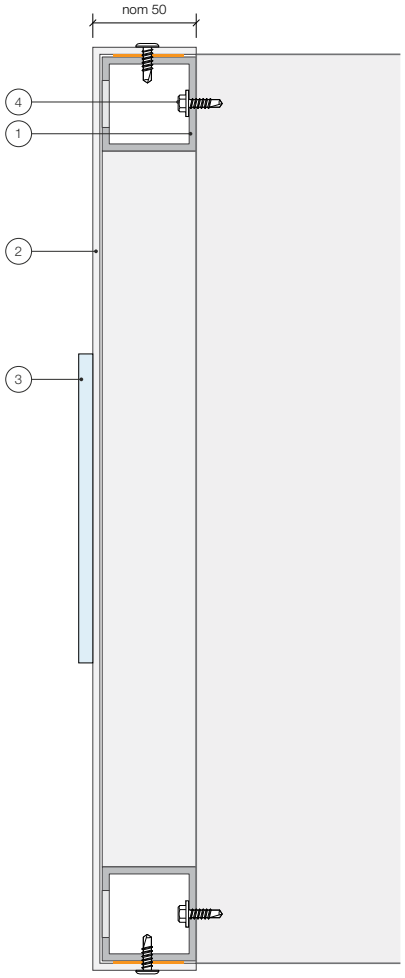
A. Logo Size
Standard logo sizes:
150mmH - Fascias 350 to 499mmH
175mmH - Fascias 500 to 599mmH
225mmH - Fascias 600 to 800mmH
325mmH - Fascias 801 to 1000mmH
350mmH - Fascias 1001 to 1200mmH
375mmH - Fascias 1201 to 1400mmH
400mmH - Fascias 1401 to 1600mmH

B. Clear Space
X = clear space top, bottom, & left of logo.
Logo is centred vertically on the fascia panel & clear space to the left is equal to the space top & bottom.

C. Logo Placement
Logo to be preferably left aligned, but may be right aligned if the location has better visability.

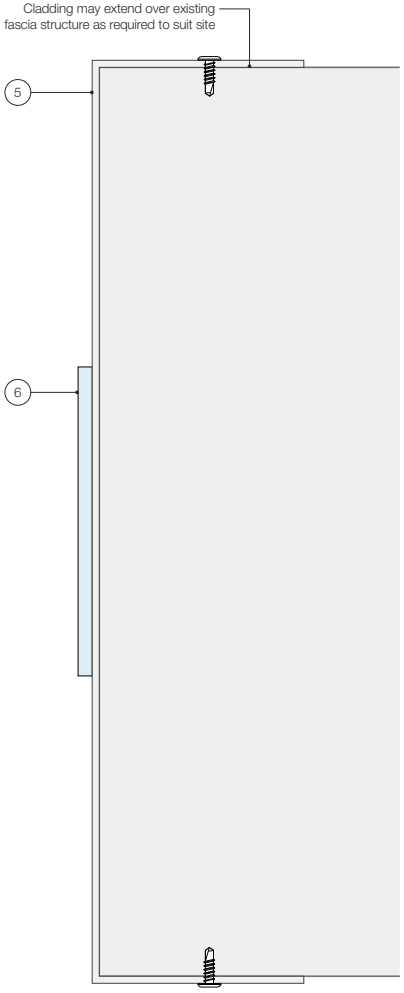
FA-xxx-N Fascia Logo

FASCIA-xxx-(A,BorC) Fascia Cladding



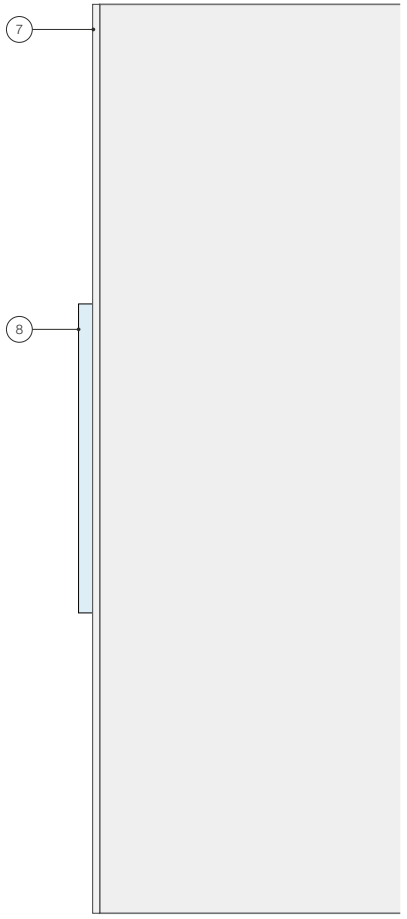
Construction A
Fascia Sign - Non-illuminated with frame
Typical Section
Scale 1:2

FASCIA-350-A - Fascia Cladding with Frame
FASCIA-500-A - Fascia Cladding with Frame
FASCIA-600-A - Fascia Cladding with Frame



Construction B
Fascia Sign - Non-illuminated no frame
Typical Section
Scale 1:2

FASCIA-350-B - Fascia Cladding No Frame
FASCIA-500-B - Fascia Cladding No Frame
FASCIA-600-B - Fascia Cladding No Frame



Construction C
Fascia Sign - Non-illuminated flat panels
Typical Section
Scale 1:2

FASCIA-350-C - Fascia Flat Panels
FASCIA-500-C - Fascia Flat Panels
FASCIA-600-C - Fascia Flat Panels

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION A INTENT

1. Frame
40x3mm aluminium SHS perimeter frame. Fishplate frame joins to ensure level connections between panels.

2. Cladding
Fabricated 3mm Alupanel FR (Group2) matte white cladding at 2400mm or 3000mm lengths. SS wafer head screw fixings along top and bottom edge @ approx. 500mm centres to frame. Fishplates behind panel joins.

3. Non-illuminated logo
Profile cut 6mm acrylic adhesive fixed to face of cladding. 2 pack painted to brand colours.

4. Fixings
4a. Metal Wall - Minimum of 10xM10 bolts to either Girt or stud + ST 5.8 (#12) screws @500 c/c to metal façade 0.48 BMT (uniformly distributed).

4b. Timber - Minimum of 10xM8 coach screws to either Girt or stud + ST 5.8 (#12) screws @500 c/c to metal façade.

4c. Concrete - 10xM10 (4.6/S) Chemset Bolts. Embedment depth = 90mm.

4d. Strucutral Tube Sections - Steel SHS or RHS with minimum wall thickness of 3mm. Minimum 8 x M12x75mm Hollow bolts + ST 5.8 (#12) screws @500c/c to metal facade (uniformly distributed).

***Refer to engineering certification on pages 71-76 for full details.**

CONSTRUCTION B INTENT

5. Cladding
Fabricated 3mm Alupanel FR (Group2) matte white cladding at 2400mm or 3000mm lengths. SS wafer head screw fixings along top and bottom edge @ approx. 500mm centres to site structure. Fishplates behind panel joins.

6. Non-illuminated logo
Profile cut 6mm acrylic adhesive fixed to face of cladding. 2 pack painted to brand colours.

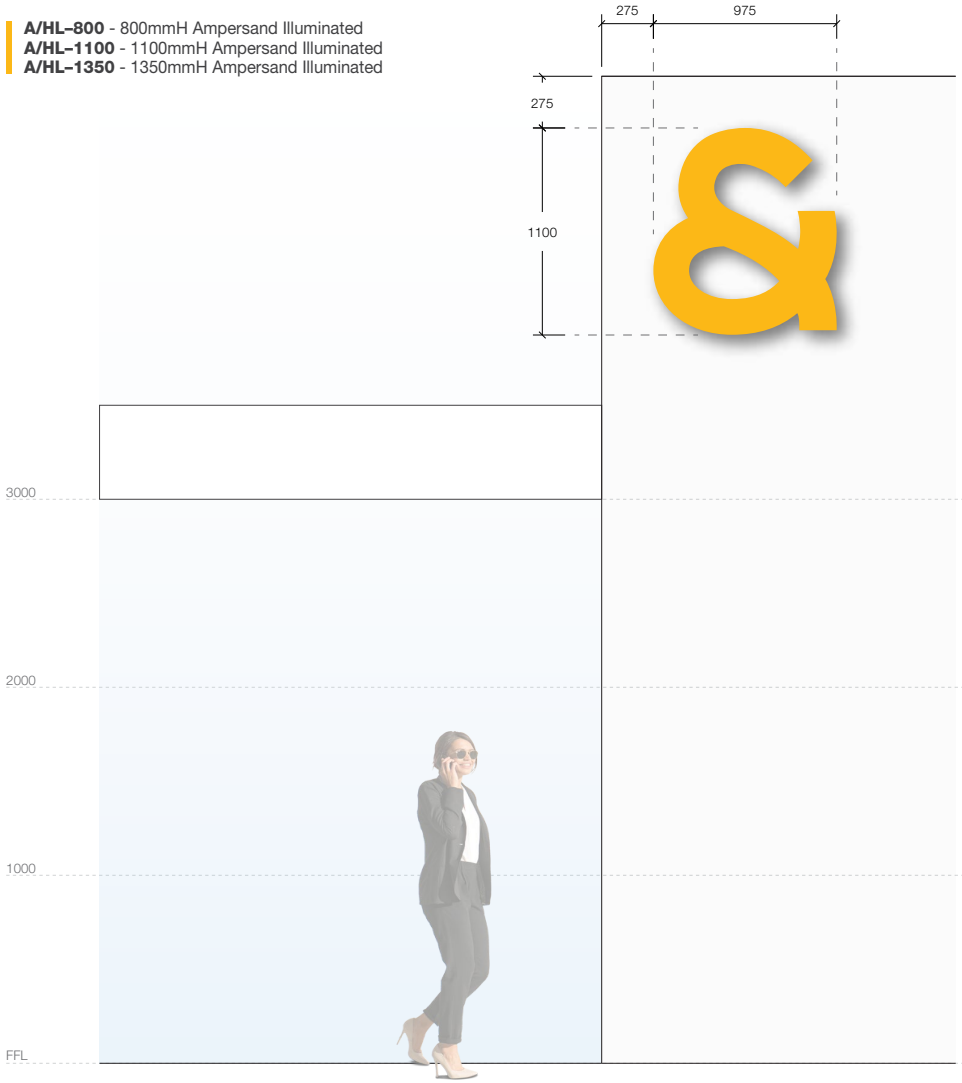
CONSTRUCTION C INTENT

7. Cladding
Flat 3mm Alupanel FR (Group2) matte white panels at 2400mm or 3000mm lengths. Adhesive fixed to fascia surface to suit site conditions.

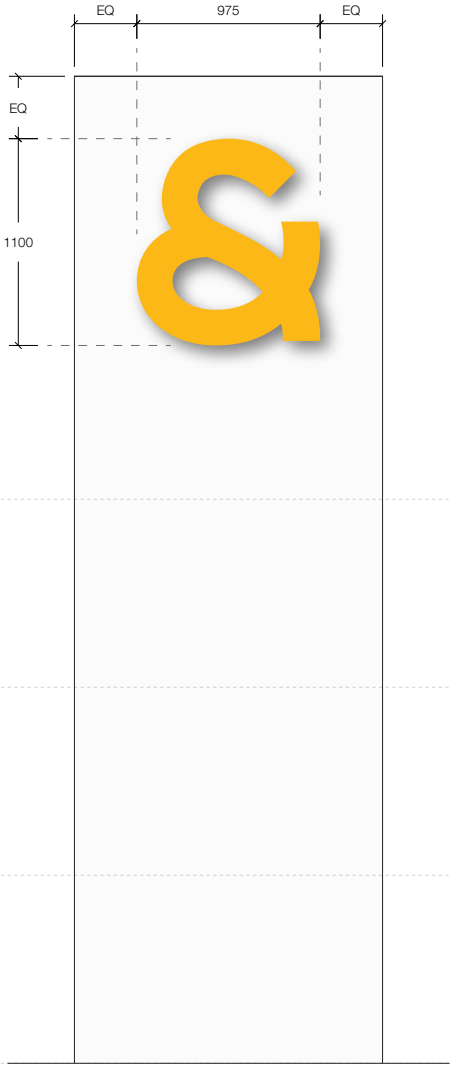
8. Non-illuminated logo
Profile cut 6mm acrylic adhesive fixed to face of cladding. 2 pack painted to brand colours.

A/HL-xxx Ampersand - High Level

A/HL–800 - 800mmH Ampersand Illuminated
A/HL–1100 - 1100mmH Ampersand Illuminated
A/HL–1350 - 1350mmH Ampersand Illuminated



Typical Elevation - Ampersand - High Level
Scale 1:25



Typical Elevation - Ampersand - High Level - Small Wall
Scale 1:25

AMPERSAND - HIGH LEVEL
Fabricated brand mark.
Illuminated or non-illuminated depending on Council regulations and approval.

APPLICATION NOTES

A. Logo Size
Consistent sizes across all sites:
- Small 709mmW x 800mmH
- Medium 975mmW x 1100mmH
- Large 1197mmW x 1350mmH.

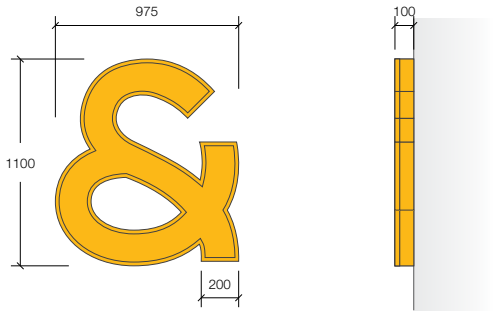
B. Clear Space
25% logo height.

C. Logo Placement
Logo to be aligned to the most prominent top corner of the building.

For smaller walls the logo may be centred on the wall.

A/HL-xxx Ampersand - High Level

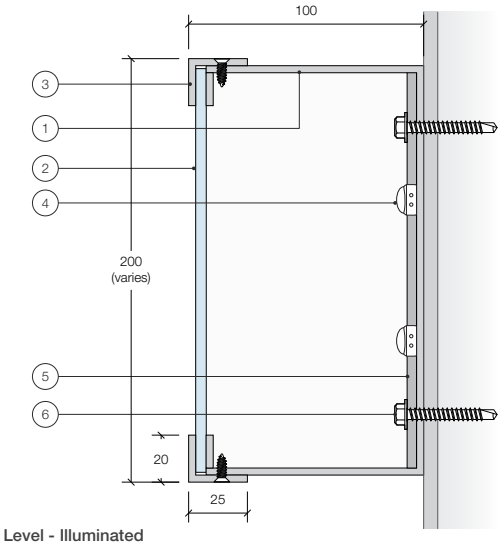
A/HL–800 - 800mmH Ampersand Illuminated
A/HL–1100 - 1100mmH Ampersand Illuminated
A/HL–1350 - 1350mmH Ampersand Illuminated



Front View

Side View

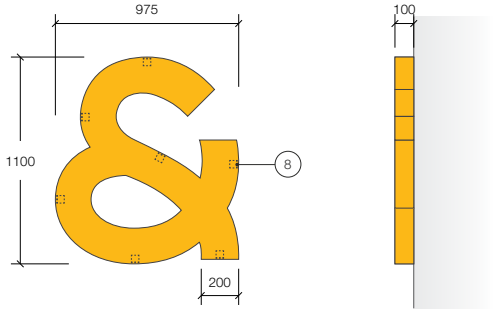
Construction A
Ampersand - High Level - Illuminated
Scale 1:25



Typical Section Detail

Construction A
Ampersand - High Level - Illuminated
Scale 1:2

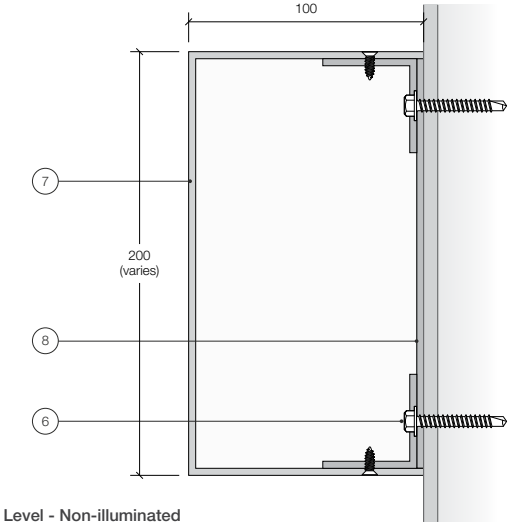
A/HL–800-N - 800mmH Ampersand Non-illuminated
A/HL–1100-N - 1100mmH Ampersand Non-illuminated
A/HL–1350-N - 1350mmH Ampersand Non-illuminated



Front View

Side View

Construction B
Ampersand - High Level - Non-illuminated
Scale 1:25



Typical Section Detail

Construction B
Ampersand - High Level - Non-illuminated
Scale 1:2

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION A INTENT

1. Letter Body
Fabricated 2mm / 3mm aluminium ampersand with 100mm(D) returns. All welds to be polished smooth. 2 pac painted to match R&H Gold.

2. Illuminated Faces
Profile cut 4.5mm opal polycarbonate sign face (certified to group 1 or 2 fire rating) held in place with fabricated aluminium face trims. Face applied translucent vinyl. Any Ampersand over the size of 1200mm, will have a vinyl join on the face.

3. Face Trims
20x25x3mm aluminium angle trims, 2 pac painted to match R&H Gold, fixed to fabricated letters using SS 316 grade CSK fixings. Paint heads to match returns.

4. Lighting
6500K LEDs (IP67) cool white fitted to backs, type & layout to suppliers specifications, ensure no shadowing & hot spotting.

5. Mounting Plates
50x4mm aluminium flat bar welded to letter backs at fixing locations.

6. Wall Fixings
6a. Metal Wall - Minimum 3xM10 bolts to either Girt or stud + Minimum of 7-ST 5.8 (#12) screws to metal façade 0.48 BMT (uniformly distributed).

6b. Timber - Minimum 3xM8 coach screws to either Gurt or stud + Minimum of 7-ST 5.8 (#12) screws to metal façade.

6c. Concrete - 7xM10(4.6/S) Chemset bolts. Embedment depth= 90mm.

6d. Structural Tube Sections - Steel SHS or RHS minimum thickness of 3mm. Minimum 3 x M16x75mm Hollow bolts + Minimum of 7-ST 5.8 (#12) screws to metal facade (uniformly distributed).

***Refer to engineering certification on pages 61-65 for full details.**

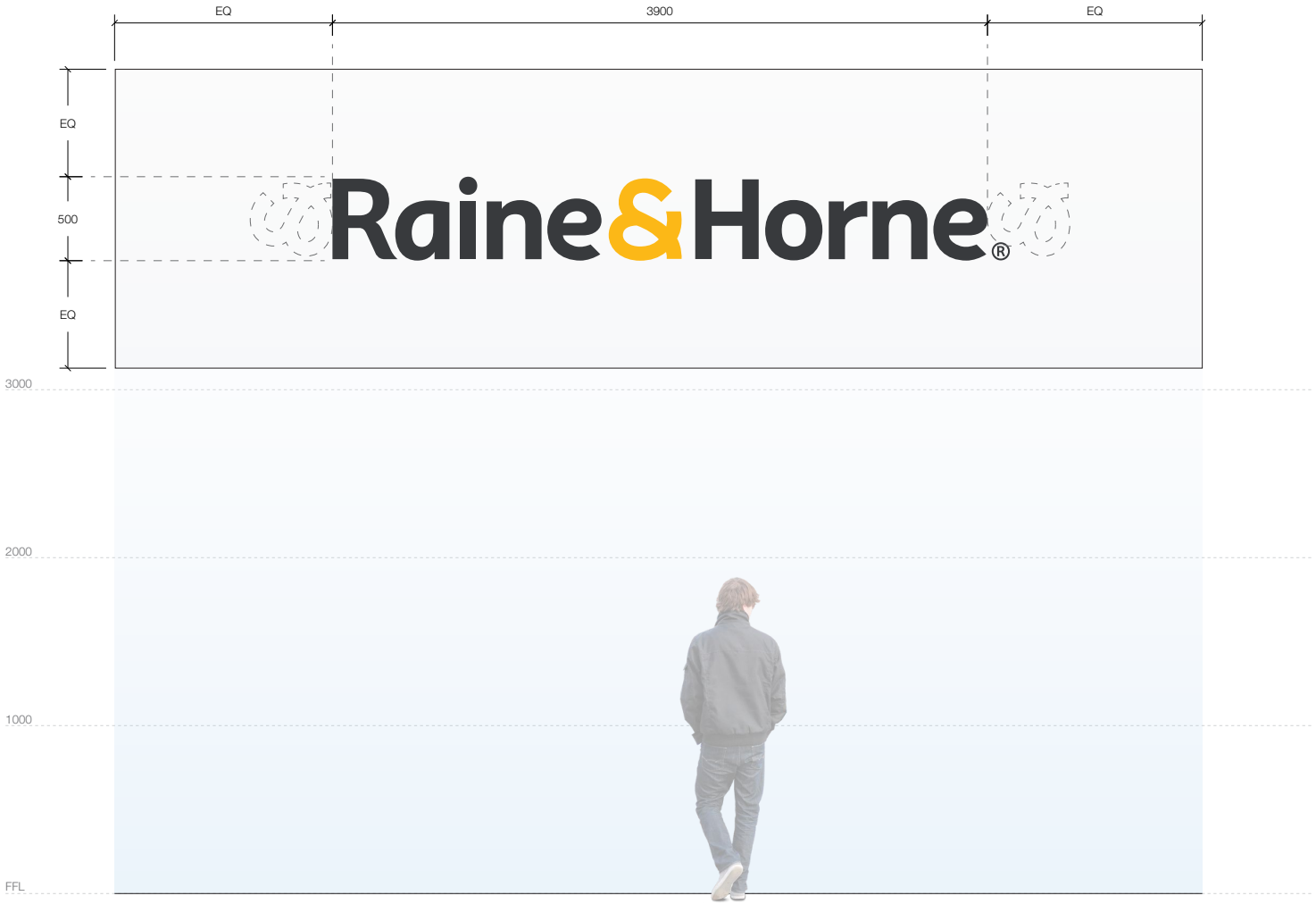
CONSTRUCTION B INTENT

7. Letter Body
Fabricated 2mm / 3mm aluminium ampersand with 100mm(D) returns. All welds to be polished smooth. 2 pac painted to match R&H Gold.

8. Non-illuminated Letter Backs
Profile cut 3mm aluminium with 40x3mm aluminium angle tabs welded to face. Fabricated letters fixed to backs using SS 316 grade CSK fixings. Paint heads to match returns.

WM/HL-xxx Wordmark Logo - High Level

WM/HL-300 - 300mmH Wordmark Illuminated
WM/HL-500 - 500mmH Wordmark Illuminated



ID3 **Wordmark Logo - High Level**
Scale 1:25

WORDMARK LOGO - HIGH LEVEL
Fabricated wordmark.
Illuminated or non-illuminated depending on Council regulations and approval.
Refer to following pages for details.

APPLICATION NOTES

A. Logo Size
Consistent sizes across all sites:
- Small 2341mmW x 300mmH
- Large 3900mmW x 500mmH.

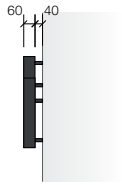
B. Clear Space
Minimum clear space is the logo Ampersand height.

C. Logo Placement
Logo to be centred aligned on the most prominent high level building wall.

WM/HL-xxx Wordmark Logo - High Level

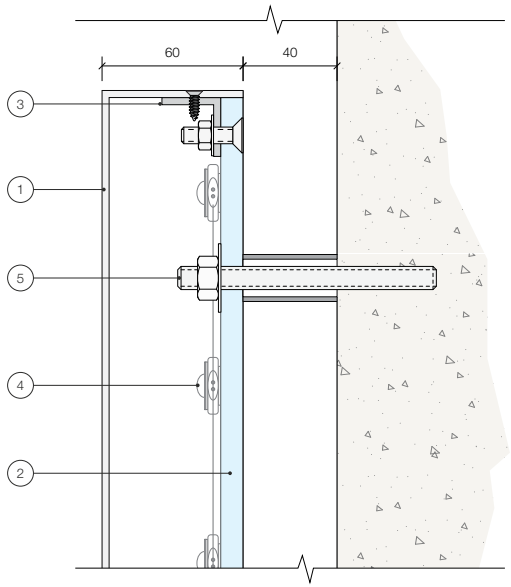
WM/HL-300 - 300mmH Wordmark Illuminated
WM/HL-500 - 500mmH Wordmark Illuminated

Front View



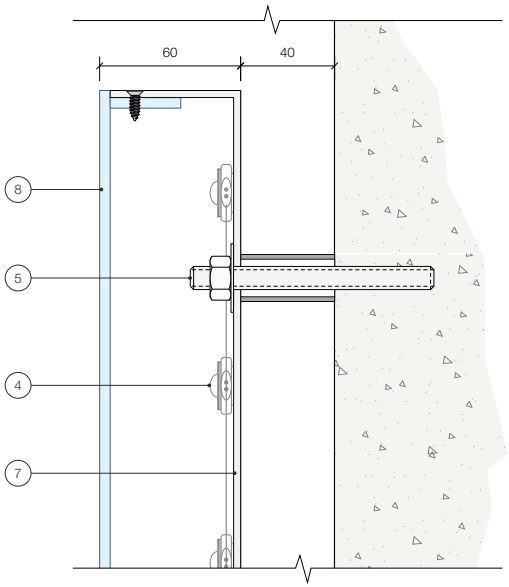
Side View

Wordmark Logo - High Level - Illuminated
Scale 1:25



Typical Section Detail

Wordmark Logo Letters - High Level - Illuminated
Scale 1:2



Typical Section Detail

Wordmark Logo Ampersand - High Level - Illuminated
Scale 1:2

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT

1. Letter Body
Halo illuminated letters fabricated 3mm aluminium with returns 60mm deep. 2 pac painted to match R&H Charcoal. S/S countersunk screw fix faces to angle brackets & paint heads to match returns.

2. Illuminated Backs
Profile cut 9.5mm Zenolex clear polycarbonate (group 1 or 2 fire rated) letter backs or similar.

3. Back Brackets
Nominal 25x25x3mm aluminium angle brackets. M6 S/S CSK bolts angle bracket to polycarbonate backs.

4. Lighting
6500K LEDs (IP67) cool white fitted to backs, type & layout to suppliers specifications, ensure no shadowing & hot spotting.

5. Wall Fixings
5a. Metal Wall - Minimum of 2xM10 bolts to either Grit or stud + ST 5.8 (#12) screws to 0.48 BMT metal façade as per page 86.

5b. Timber - Minimum of 2xM8 coach screws to either Gurt or stud + ST 5.8 (#12) screws as per page 86.

5c. Concrete - M10 (4.6/S) Chemset bolts. Embedment depth = 90 mm. See page 86 for fixing positions.

5d. Structural Tube Sections - Steel SHS or RHS with minimum wall thickness of 3 mm. Minimum 2 x 16x75mm Hollow bolts + ST 5.8 (#12) screws to metal facade as per page 86.

***Refer to engineering certification on pages 83-88 for full details.**

6. Trademark Symbol
Profile cut 6mm opal polycarbonate (group 1 or 2 fire rated) adhesive fixed direct to wall. 2 pack painted Charcoal.

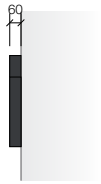
7. Ampersand Body
Face illuminated ampersand fabricated 3mm aluminium with returns 60mm deep. 2 pac painted to match R&H Gold.

8. Illuminated Faces
Fabricated 4.5mm Zenolex opal polycarbonate (group 1 or 2 fire rated) face or similar, with returns for fixing to Ampersand body. Face applied translucent yellow vinyl. 2 pack paint returns of faces to match R&H Gold, opaque. S/S countersunk screw fix faces to body & paint heads to match returns.

ID3 Wordmark Logo - High Level - Non-illuminated

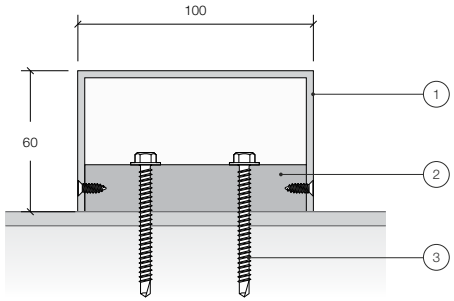
WM/HL-300-N - 300mmH Wordmark Non-illuminated
WM/HL-500-N - 500mmH Wordmark Non-illuminated

Front View



Side View

Wordmark Logo - High Level - Non-illuminated
Scale 1:25



Typical Section Detail

Wordmark Logo Letters - High Level - Non-illuminated
Scale 1:2

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT

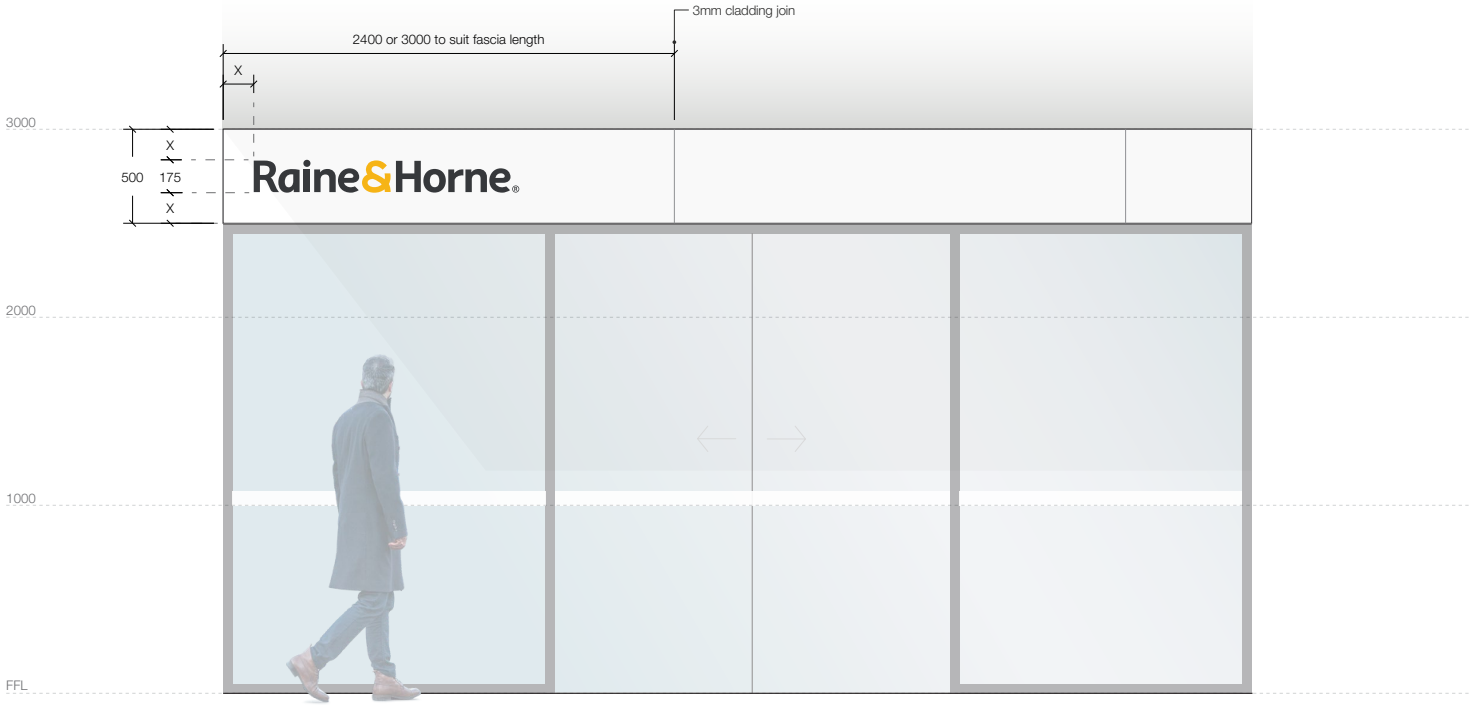
1. Letter Body
Fabricated 2mm / 3mm aluminium letters & ampersand with 100mm(D) returns. All welds to be polished smooth. 2 pac painted to match R&H Charcoal & Gold.

2. Non-illuminated Letter Backs
Profile cut 20mm thick external grade PVC. Fabricated letters fixed to backs using SS 316 grade CSK fixings. Paint heads to match returns.

3. Wall Fixings
Logo fixed directly to facade to engineers specification to suit structure at each location.

TR-xxx-N Transom Logo TRANSOM-xxx-(AorB) Transom Cladding

TR-150-N - Transom Lettering + **TRANSOM-350-(AorB)** - Transom Cladding
TR-175-N - Transom Lettering + **TRANSOM-500-(AorB)** - Transom Cladding
TR-225-N - Transom Lettering + **TRANSOM-600-(AorB)** - Transom Cladding
TR-325-N - Transom Lettering + **TRANSOM-1000-(AorB)** - Transom Cladding
TR-350-N - Transom Lettering + **TRANSOM-1200-(AorB)** - Transom Cladding
TR-375-N - Transom Lettering + **TRANSOM-1400-(AorB)** - Transom Cladding
TR-400-N - Transom Lettering + **TRANSOM-1600-(AorB)** - Transom Cladding



Typical Transom Elevation
Scale 1:25

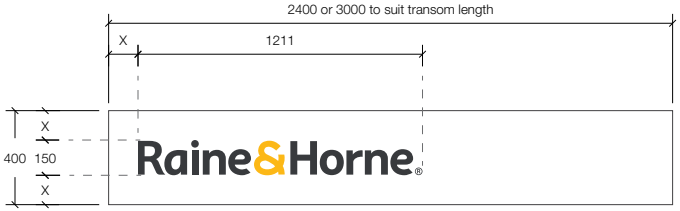
TRANSOM SIGN
Non-illuminated wordmark logo.
Refer to following page for details.

APPLICATION NOTES
A. Logo Size
Standard logo sizes:
150mmH - Transoms 350 to 499mmH
175mmH - Transoms 500 to 599mmH
225mmH - Transoms 600 to 800mmH
325mmH - Transoms 801 to 1000mmH
350mmH - Transoms 1001 to 1200mmH
375mmH - Transoms 1201 to 1400mmH
400mmH - Transoms 1401 to 1600mmH

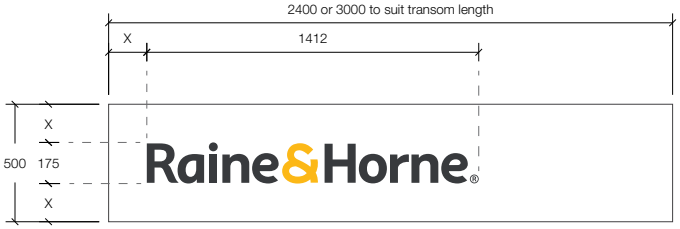
B. Clear Space
X = clear space top, bottom, & left of logo.
Logo is centred vertically on the fascia panel & clear space to the left is equal to the space top & bottom.

C. Logo Placement
Logo to be preferably left aligned, but may be right or centre aligned if the location has better visability.

TR-xxx-N Transom Logo



TR-150-N - Transom Lettering + **TRANSOM-400-(A**or**B)** - Transom Cladding
**150mmH logo to applied to transoms between 350-499mmH*



TR-175-N - Transom Lettering + **TRANSOM-500-(A**or**B)** - Transom Cladding
**175mmH logo to applied to transoms between 500-599mmH*

TR-225-N - Transom Lettering + **TRANSOM-650-(A**or**B)** - Transom Cladding
**225mmH logo to applied to transoms between 600-800mmH*

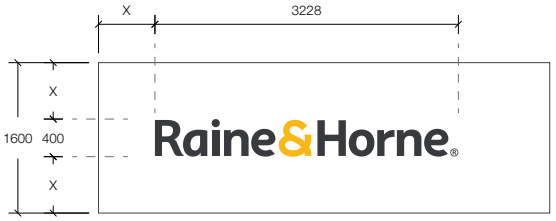
Typical Transom Logo Sizes
Scale 1:20

TRANSOM-xxx-(AorB) Transom Cladding

TR-325-N - Transom Lettering + **TRANSOM-1000-(A**or**B)** - Transom Cladding
**325mmH logo to applied to transoms between 801-1000mmH*

TR-350-N - Transom Lettering + **TRANSOM-1200-(A**or**B)** - Transom Cladding
**350mmH logo to applied to transoms between 1001-1200mmH*

TR-375-N - Transom Lettering + **TRANSOM-1400-(A**or**B)** - Transom Cladding
**375mmH logo to applied to transoms between 1201-1400mmH*



TR-400-N - Transom Lettering + **TRANSOM-1600-(A**or**B)** - Transom Cladding
**400mmH logo to applied to transoms between 1401-1600mmH*

Typical Large Transom Logo Sizes
Scale 1:50

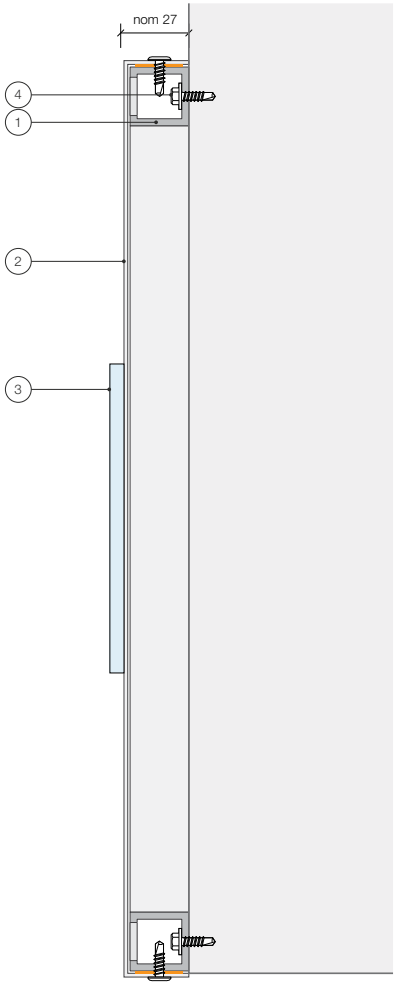
TRANSOM SIGN
Non-illuminated wordmark logo.
Refer to following page for details.

APPLICATION NOTES
A. Logo Size
Standard logo sizes:
150mmH - Transoms 350 to 499mmH
175mmH - Transoms 500 to 599mmH
225mmH - Transoms 600 to 800mmH
325mmH - Transoms 801 to 1000mmH
350mmH - Transoms 1001 to 1200mmH
375mmH - Transoms 1201 to 1400mmH
400mmH - Transoms 1401 to 1600mmH

B. Clear Space
X = clear space top, bottom, & left of logo.
Logo is centred vertically on the fascia panel & clear space to the left is equal to the space top & bottom.

C. Logo Placement
Logo to be preferably left aligned, but may be right or centre aligned if the location has better visability.

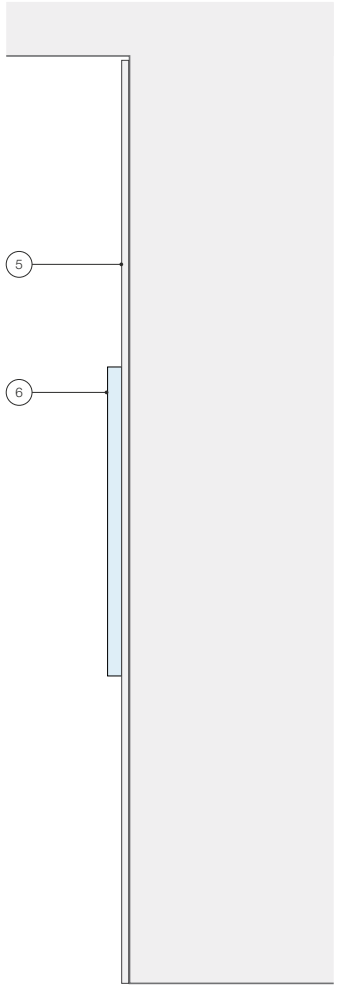
TR-xxx-N Transom Logo



Construction A
Transom Sign - Non-illuminated with frame - Typical Section
Scale 1:2

TRANSOM-350-A - Transom Cladding with Frame
TRANSOM-500-A - Transom Cladding with Frame
TRANSOM-600-A - Transom Cladding with Frame

TRANSOM-xxx-(AorB) Transom Cladding



Construction B
Transom Sign - Non-illuminated no frame - Typical Section
Scale 1:2

TRANSOM-350-B - Transom Cladding No Frame
TRANSOM-500-B - Transom Cladding No Frame
TRANSOM-600-B - Transom Cladding No Frame

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION A INTENT

1. Frame
25x3mm aluminium SHS perimeter frame. Fishplate frame joins to ensure level connections between panels.

2. Cladding - Folded
Fabricated 3mm Alupanel FR (Group2) matte white cladding at 2400mm or 3000mm lengths. SS wafer head screw fixings along top and bottom edge @ approx. 500mm centres to frame. Fishplates behind panel joins.

3. Non-illuminated logo
Profile cut 6mm acrylic adhesive fixed to face of cladding. 2 pack painted to brand colours.

4. Fixings
4a. Metal Wall - Minimum of 10xM10 bolts to either Girt or stud + ST 5.8 (#12) screws @500 c/c to metal façade 0.48 BMT (uniformly distributed).

4b. Timber - Minimum of 10xM8 coach screws to either Girt or stud + ST 5.8 (#12) screws @500 c/c to metal façade.

4c. Concrete - 10xM10 (4.6/S) Chemset Bolts. Embedment depth = 90mm.

4d. Strucutral Tube Sections - Steel SHS or RHS with minimum wall thickness of 3mm. Minimum 8 x M12x75mm Hollow bolts + ST 5.8 (#12) screws @500c/c to metal facade (uniformly distributed).

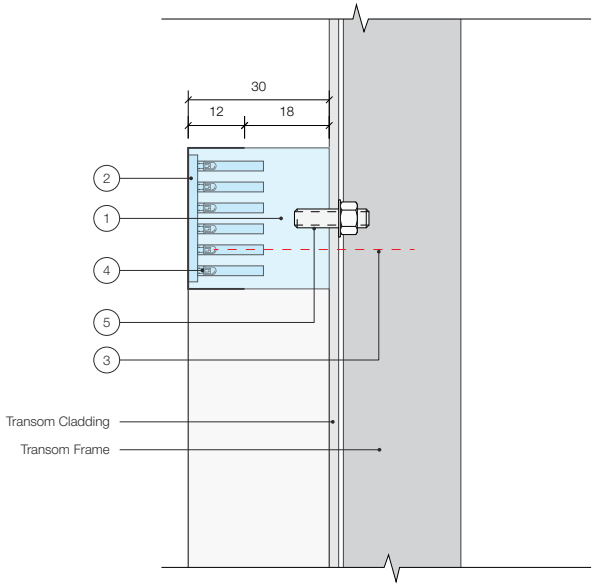
***Refer to engineering certification on pages 71-76 for full details.**

CONSTRUCTION B INTENT

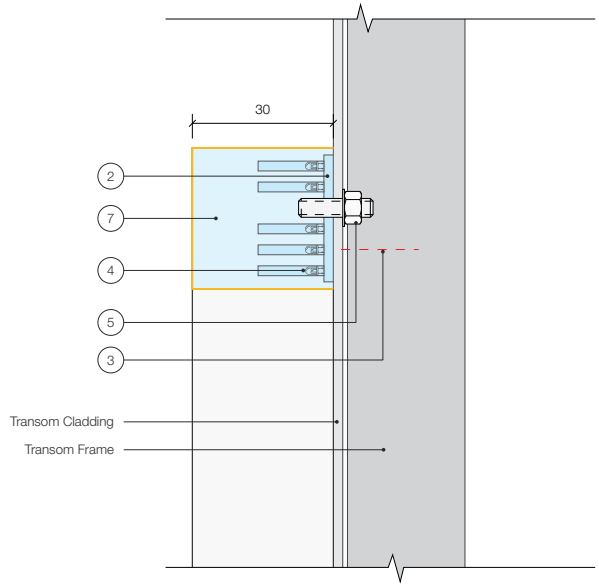
5. Cladding - Flat
Flat 3mm Alupanel FR (Group2) matte white panels at 2400mm or 3000mm lengths. Adhesive fixed to transom surface to suit site conditions.

6. Non-illuminated logo
Profile cut 6mm acrylic adhesive fixed to face of cladding. 2 pack painted to brand colours.

TR-xxx- Transom Logo - Illuminated



Typical Section - Illuminated Letters
Transom Sign - Illuminated with frame - Typical Section
Scale 1:2



Typical Section - Illuminated Ampersand
Transom Sign - Illuminated with frame - Typical Section
Scale 1:2

TR-150 - Transom Lettering + **TRANSOM-350-A** - Transom Cladding
TR-175 - Transom Lettering + **TRANSOM-500-A** - Transom Cladding
TR-225 - Transom Lettering + **TRANSOM-600-A** - Transom Cladding
TR-325 - Transom Lettering + **TRANSOM-1000-A** - Transom Cladding
TR-350 - Transom Lettering + **TRANSOM-1200-A** - Transom Cladding
TR-375 - Transom Lettering + **TRANSOM-1400-A** - Transom Cladding
TR-400 - Transom Lettering + **TRANSOM-1600-A** - Transom Cladding

GENERAL CONSTRUCTION NOTES
• All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.

• Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT
1. Letter Body
Profile cut 30mm opal acrylic. Faces & 12mm of returns 2 pac painted to match R&H Charcoal. Rear 18mm of letter return to remain opal for halo illumination.

2. Letter Cover
2 to 3mm opal acrylic diffuser.

3. Power Feeds
Input DC12V .

4. Lighting
8mm Diode Leds, resin set Inside letter body.

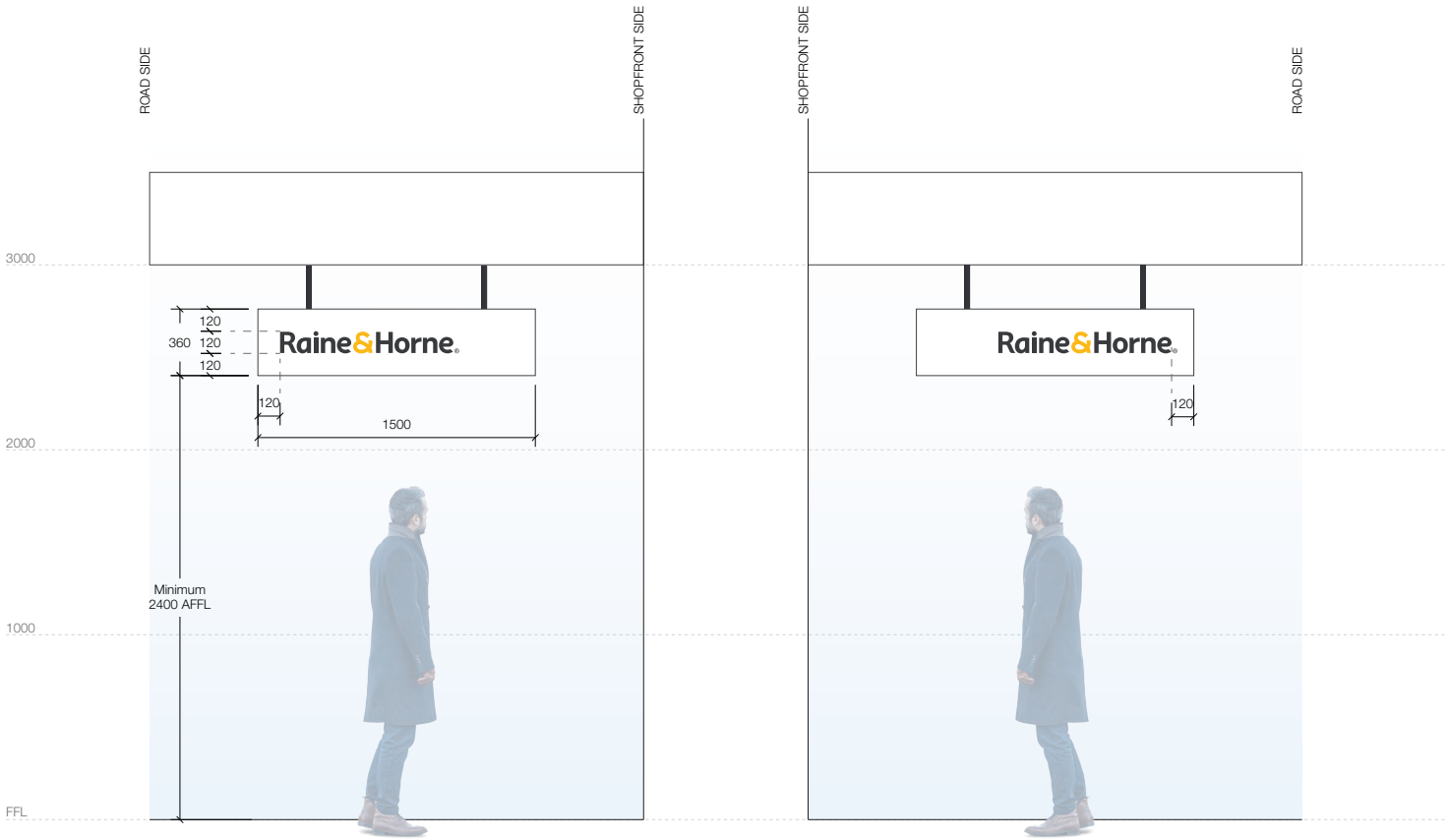
5. Cladding Fixings
M4 Pins with nylon nuts to the rear fix to cladding.

6. Trademark Symbol
Profile cut 4.5mm acrylic adhesive fixed to cladding. 2 pack painted Charcoal.

7. Ampersand Body
Profile cut 30mm opal acrylic. Translucent gold vinyl to face and returns 2 pac painted to match R&H Gold.

UA-1500 Under Awning Sign - 1500mmW

UA-1500 - 1500mmW Lightbox Illuminated
UA-1500-N - 1500mmW Lightbox Non-illuminated



UA-1500 - Under Awning Sign - Right Side
Scale 1:25

UA-1500 - Under Awning Sign - Left Side
Scale 1:25

UNDER AWNING SIGN
Under Awning Lightbox, double sided.
Illuminated or Non-illuminated.
Refer to following page for details.

APPLICATION NOTES

A. Logo Size
1/3 lightbox height.

B. Clear Space
1/3 lightbox height.

C. Logo Placement
Logo to be aligned to the "road side" of the shop front.

D. Lightbox Size
Consistent sizes across all sites:
- Small 1500mmW x 360mmH
- Large 1800mmW x 420mmH.

E. Height Above Ground
Install lightbox 2400mm AFFL from ground to bottom of lightbox. Adjust droppers accordingly.

UA-1800 Under Awning Sign - 1800mmW

UA-1800 - 1800mmW Lightbox Illuminated
UA-1800-N - 1800mmW Lightbox Non-illuminated

UA-1800 - Under Awning Sign - Right Side
Scale 1:25

UA-1800 - Under Awning Sign - Left Side
Scale 1:25

UNDER AWNING SIGN
Under Awning Lightbox, double sided.
Illuminated or Non-illuminated.
Refer to following page for details.

APPLICATION NOTES

A. Logo Size
1/3 lightbox height.

B. Clear Space
1/3 lightbox height.

C. Logo Placement
Logo to be aligned to the “road side” of the shop front.

D. Lightbox Size
Consistent sizes across all sites:
- Small 1500mmW x 360mmH
- Large 1800mmW x 420mmH.

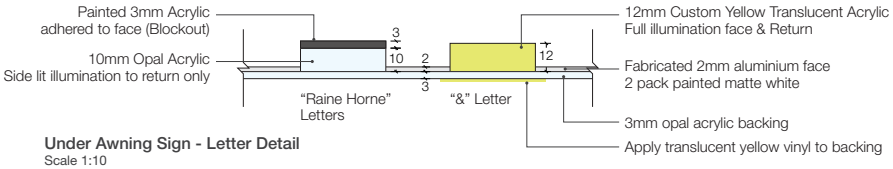
E. Height Above Ground
Install lightbox 2400mm AFFL from ground to bottom of lightbox. Adjust droppers accordingly.

UA-1500 Under Awning Sign

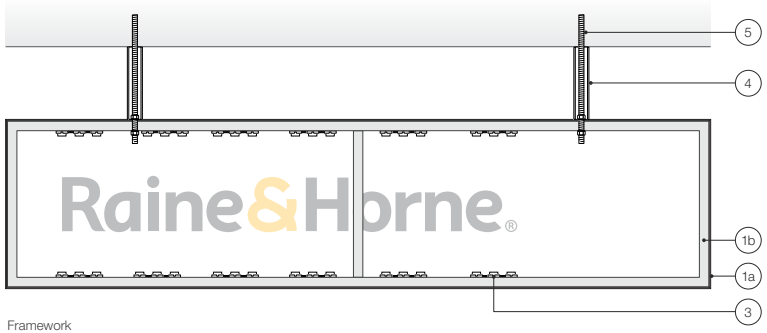
Front View

Side View

Under Awning Sign - Illuminated
Scale 1:10

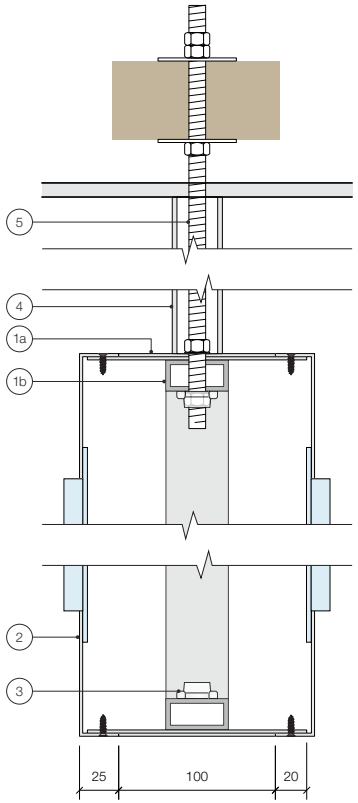


Under Awning Sign - Letter Detail
Scale 1:10



Framework

Under Awning Sign - Illuminated
Scale 1:10



Typical Section Detail

Under Awning Sign - Illuminated
Scale 1:3

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT

1. Lightbox Case
1a. Fabricated 2mm aluminium perimeter layers.
2 pac painted white.
1b. 40x25x3mm aluminium RHS perimeter frame & vertical member.

2. Lightbox Faces
Fabricated 2mm aluminium faces with 25mm returns with equally spaced SS 316 grade CSK fixings. Paint heads to match returns

Faces intracut with profile cut acrylic logos - 10mm opal acrylic & 12mm Custom Yellow Translucent Acrylic protruding from signfaces with 3mm opal acrylic backing. Refer to letter detail.

Trademark Symbol profile cut 3mm acrylic adhesive fixed to face. 2 pack painted Charcoal.

3. Lighting
6500K side illuminating LEDs cool white and LED driver inside lightbox. Contractor to ensure even and adequate illumination of logo. Include 240V power cable & 3-pin plug.

4. Droppers
32x3mm aluminium SHS dropper sleeves, 2 pack painted R&H charcoal.

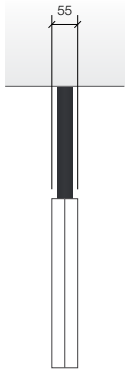
5. Ceiling Fixings
Nominal galvanised M10 threaded rod bolted to top of lightbox and anchored or bolted to ceiling structure to suit site requirements and engineers specifications.

Indicative ceiling structure shown in typical section detail.

***Refer to engineering certification on pages 77-82 for full details.**

UA-1500-N Under Awning Sign (FOR NZ ONLY)

Front View

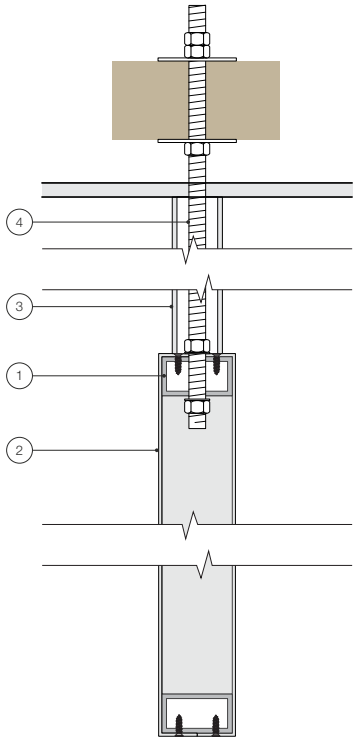


Side View

Under Awning Sign - Non-illuminated
Scale 1:10

Framework

Under Awning Sign - Non-illuminated
Scale 1:10



Typical Section Detail

Under Awning Sign - Non-illuminated
Scale 1:3

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT

1. Lightbox Subframe
50x25x3mm aluminium RHS perimeter frame & vertical member.

2. Lightbox Faces
Fabricated 2mm aluminium faces with 27.5mm returns with equally spaced SS 316 grade CSK fixings. Paint heads to match returns

Computer cut vinyl graphics applied to faces.

3. Droppers
32x3mm aluminium SHS dropper sleeves, 2 pack painted R&H charcoal.

4. Ceiling Fixings
Nominal galvanised M10 threaded rod bolted to top of lightbox and anchored or bolted to ceiling structure to suit site requirements and engineers specifications.

Indicative ceiling structure shown in typical section detail.

CA-500 Cantilevered Sign

CA-500 - 500mmW Lightbox Illuminated
CA-500-N - 500mmW Lightbox Non-illuminated
CA-750 - 750mmW Lightbox Illuminated
CA-750-N - 750mmW Lightbox Non-illuminated

ID6 **Cantilevered Sign - Right Side**
Scale 1:25

ID6 **Cantilevered Sign - Left Side**
Scale 1:25

CANTILEVERED SIGN
Cantilevered Lightbox, double sided.
Illuminated or Non-illuminated.
Refer to following page for details.

APPLICATION NOTES

A. Logo Size
2/3 lightbox height.

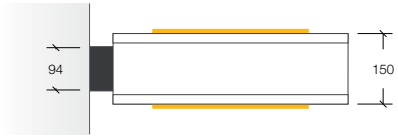
B. Clear Space
1/6 lightbox height.

C. Lightbox Size
Consistent sizes across all sites:
- Small 500mmW x 500mmH
- Large 750mmW x 750mmH.

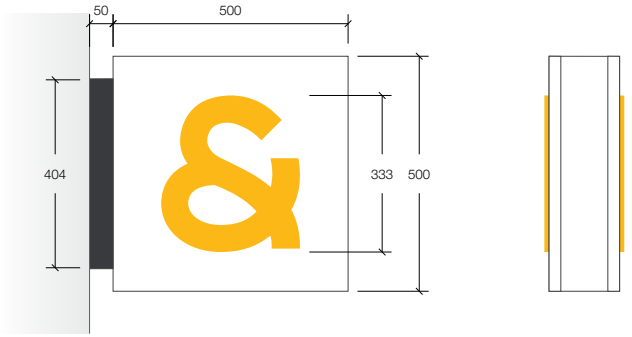
D. Usage
Only to be used where under-awning signage (ID5) is not possible.

E. Height Above Ground
Install lightbox 2400mm AFFL from ground to bottom of lightbox.

CA-500 Cantilevered Sign



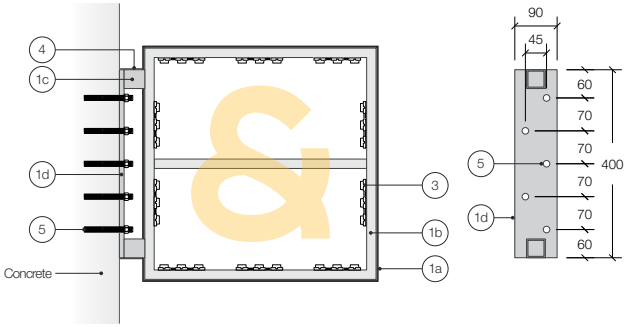
Top View



Front View

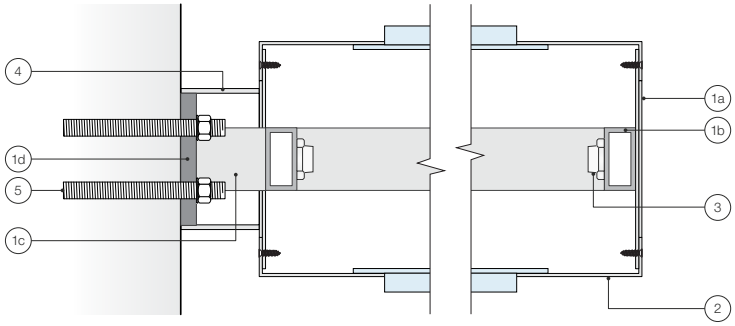
Side View

Cantilevered Sign - Illuminated
Scale 1:10



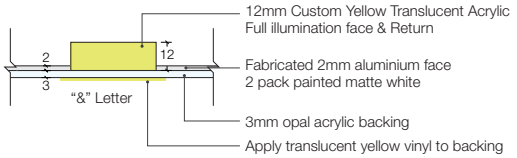
Framework

Mounting Plate



Typical Section Detail

Cantilevered Sign - Illuminated
Scale 1:3



Cantilevered Sign - Ampersand Detail
Scale 1:10

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT

1. Lightbox Case
1a. Fabricated 2mm aluminium perimeter layers.
2 pac painted white.
1b. 40x20x3mm aluminium RHS perimeter frame & vertical member.
1c. 40x40x3mm aluminium SHS standoffs welded between plates.
1d. 10mm aluminium mounting plate.

2. Lightbox Faces - Illuminated
Fabricated 2mm aluminium faces with 25mm returns with equally spaced SS 316 grade CSK fixings. Paint heads to match returns

Faces intracut with profile cut acrylic logos - 10mm opal acrylic & 12mm Custom Yellow Translucent Acrylic protruding from signfaces with 3mm opal acrylic backing. Refer to letter detail.

3. Lighting
6500K side illuminating LEDs cool white and LED driver inside lightbox. Contractor to ensure even and adequate illumination of logo. Include 240V power cable & 3-pin plug.

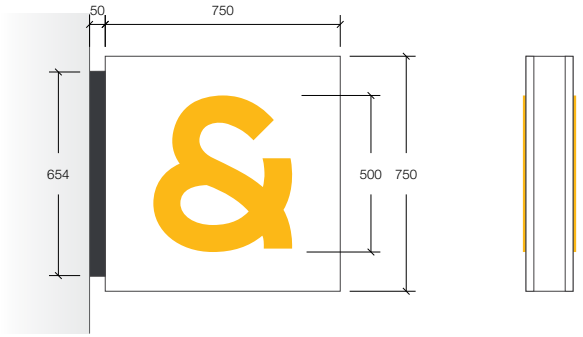
4. Mounting Plate Cover
Fabricated 2mm aluminium covers, 2 pack painted R&H charcoal. Fixed to top and bottom of standoffs with SS 316 grade CSK fixings. Paint heads to match returns.

5. Wall Fixings
Galvanised ChemSet 5xM12 (5.8/S) Emb= 110mm.

***Refer to engineering certification on pages 66-70 for full details.**

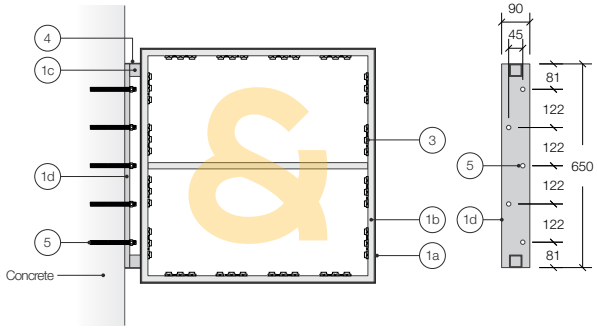
CA-750 Cantilevered Sign

Top View



Front View

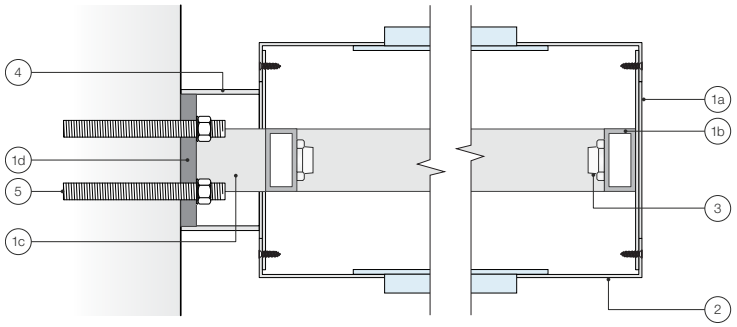
Side View



Framework

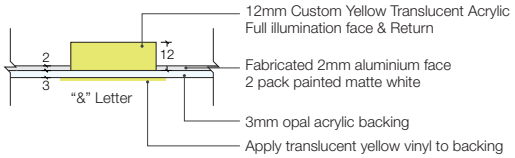
Mounting Plate

Cantilevered Sign - Illuminated
Scale 1:15



Typical Section Detail

Cantilevered Sign - Illuminated
Scale 1:3



Cantilevered Sign - Ampersand Detail
Scale 1:10

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT

1. Lightbox Case
1a. Fabricated 2mm aluminium perimeter layers.
2 pac painted white.
1b. 40x20x3mm aluminium RHS perimeter frame & vertical member.
1c. 40x40x3mm aluminium SHS standoffs welded between plates.
1d. 16mm aluminium mounting plate.

2. Lightbox Faces - Illuminated
Fabricated 2mm aluminium faces with 25mm returns with equally spaced SS 316 grade CSK fixings. Paint heads to match returns

Faces intracut with profile cut acrylic logos - 10mm opal acrylic & 12mm Custom Yellow Translucent Acrylic protruding from signfaces with 3mm opal acrylic backing. Refer to letter detail.

3. Lighting
6500K side illuminating LEDs cool white and LED driver inside lightbox. Contractor to ensure even and adequate illumination of logo. Include 240V power cable & 3-pin plug.

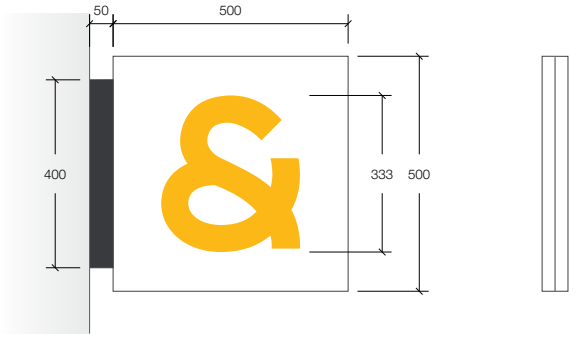
4. Mounting Plate Cover
Fabricated 2mm aluminium covers, 2 pack painted R&H charcoal. Fixed to top and bottom of standoffs with SS 316 grade CSK fixings. Paint heads to match returns.

5. Wall Fixings
Galvanised ChemSet 5xM12 (5.8/S) Emb= 110mm.

***Refer to engineering certification on pages 66-70 for full details.**

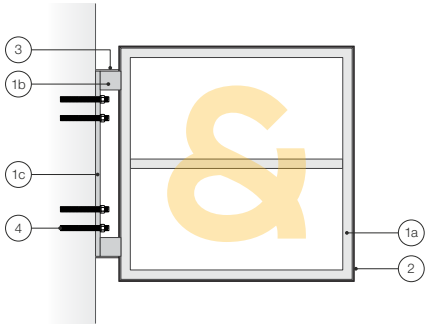
CA-500-N Cantilevered Sign (FOR NZ ONLY)

Top View



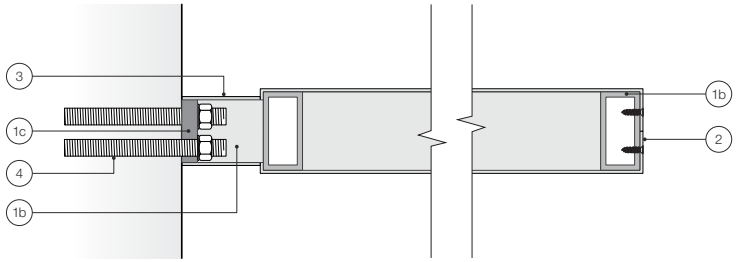
Front View

Side View



Framework

Cantilevered Sign - Non-illuminated
Scale 1:10



Typical Section Detail

Cantilevered Sign - Non-illuminated
Scale 1:3

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT

1. Lightbox Subframe
1a. 50x25x3mm aluminium RHS perimeter frame & vertical member.
1b. 40x40x3mm aluminium SHS standoffs welded between plates.
1c. 10mm aluminium mounting plate.

2. Lightbox Faces - Illuminated
Fabricated 2mm aluminium faces with 27.5mm returns with equally spaced SS 316 grade CSK fixings. Paint heads to match returns

Computer cut vinyl graphics applied to faces.

3. Mounting Plate Cover
Fabricated 2mm aluminium covers, 2 pack painted R&H charcoal. Fixed to top and bottom of standoffs with SS 316 grade CSK fixings. Paint heads to match returns.

4. Wall Fixings
Nominal galvanised M10 anchors to wall structure to suit site requirements and engineers specifications. Stagger fixings on mounting plate.

GG-L Glazing Graphics

GG-L - Glazing Graphics - Large 500mmH
GG-S - Glazing Graphics - Small 375mmH

CONSTRUCTION INTENT
1. Glazing Graphics
Profile cut vinyl Ampersand brand mark reverse applied to front door glazing.

If the door is tinted - face apply vinyl graphics to the door glazing.

APPLICATION NOTES
A. Logo Size
Consistent sizes across all sites:
Large 500mmH
Small 375mmH.

B. Clear Space
None.

C. Logo Placement
Logo to be aligned to bottom right corner of glazing.

Typical Glazing Graphics Elevations
Scale 1:25

Typical Small Glazing Panel
Scale 1:25

A/LL-800 Ampersand - Low Level

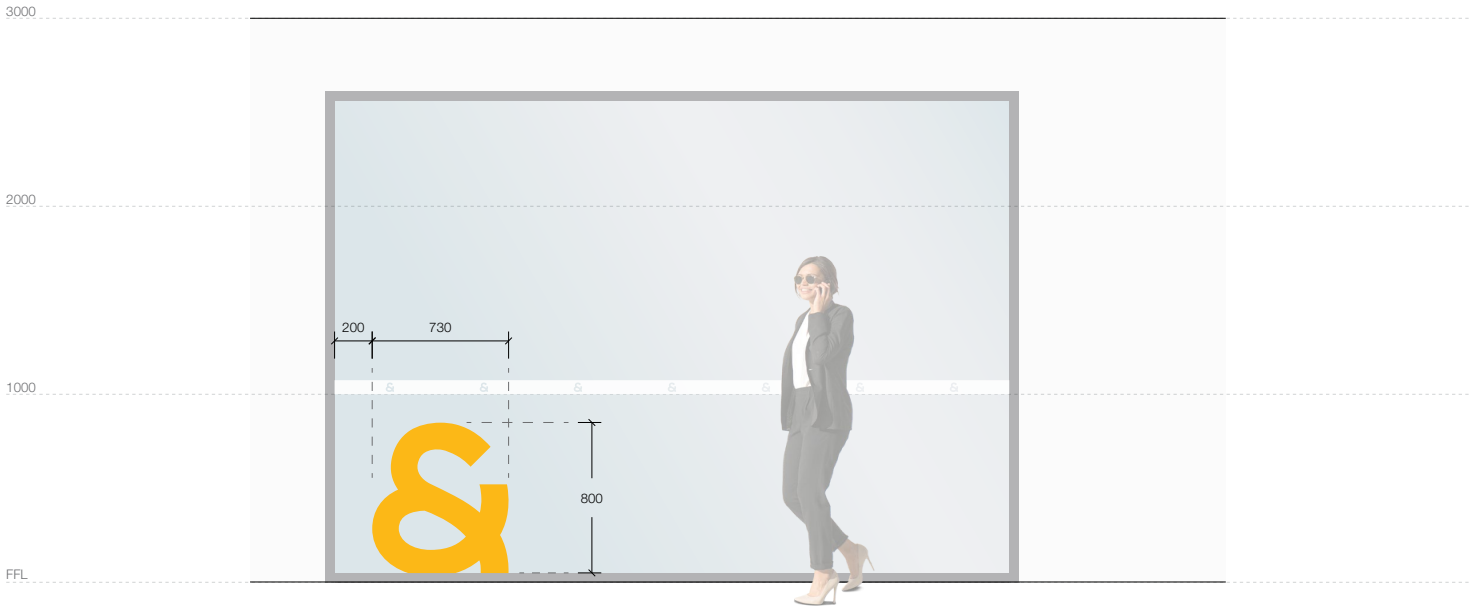
AMPERSAND - LOW LEVEL
Fabricated brand mark mounted to floor behind shopfront glazing. Illuminated or Non-illuminated. Refer to following page for details.

A. Logo Size
Consistent sizes across all sites 800mmH.

B. Clear Space
25% logo height.

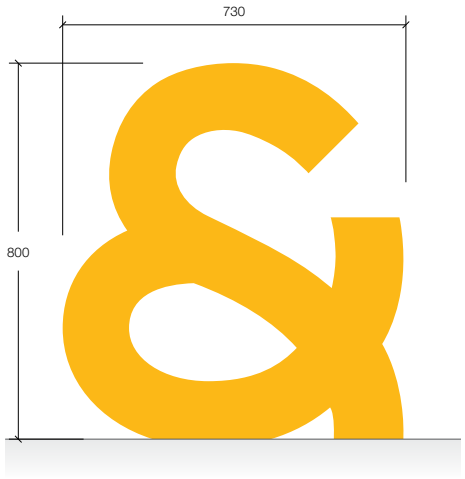
C. Logo Placement
Logo to be aligned to bottom left or right corner of glazing to suit shopfront.

D. Usage
Should not be displayed on offices that have a high level ampersand (ID2).

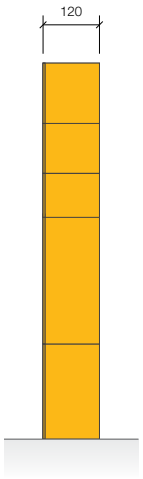


Typical Elevation - Ampersand - Low Level
Scale 1:25

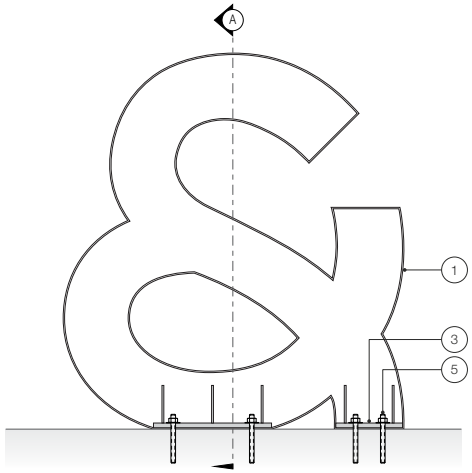
A/LL-800 Ampersand - Low Level



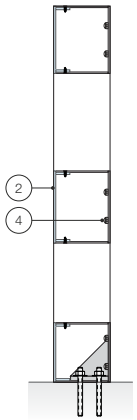
Front View



Side View



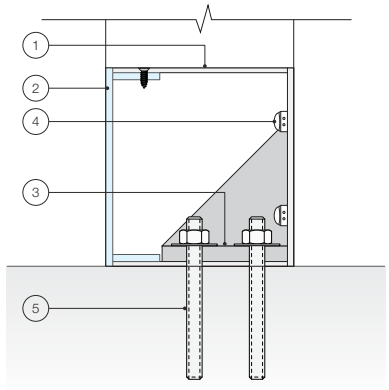
Framework



Side Section A

Mounting Plates - Top View

Ampersand - Low Level - Illuminated
Scale 1:10



Side Section A Detail

Ampersand - Low Level - Illuminated
Scale 1:3

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT

1. Ampersand Body
Profile cut 4mm aluminium back with fabricated 3mm aluminium returns 120mm deep. 2 pac painted to match R&H Gold.

2. Illuminated Face
Profile cut 4.5mm opal acrylic with fabricated returns. Face applied translucent vinyl. 2 pac paint returns of faces to match R&H Gold, opaque. S/S countersunk screw fix faces to body returns & paint heads to match returns.

3. Mounting Plates
10mm thick aluminium base plates with 4mm thick aluminium gussets fully welded to inside of letters.

4. Lighting
Internally illuminated with 6500K cool white LED modules to suppliers specification & layout, fitted to backs. Ensure no shadowing & hot spotting.

5. Floor Fixings
Nominal M10 S/S anchors to engineers specification to suit structure at each location.

TD-1 Trading Details

CONSTRUCTION INTENT
1. Trading Details
Trading hours and licensee details applied to shopfront entry glazing.

Profile cut white vinyl graphics reverse applied to front door glazing.

If the door is tinted - face apply vinyl graphics to the door glazing.

APPLICATION NOTES
A. Text Size
Opening hours 25mm Cap H.
Trading Details 15mm Cap H.

B. Placement
Text centred on door glazing.

If licensee trading details cannot be centered on entry door it should be placed on nearest window to the right.

Typical Trading Details Elevation
Scale 1:25

RW-xxx Reception Wall

RW-200 - 200mmH Reception Logo Illuminated
RW-200-N - 200mmH Reception Logo Non-Illuminated
RW-300 - 300mmH Reception Logo Illuminated
RW-300-N - 300mmH Reception Logo Non-Illuminated

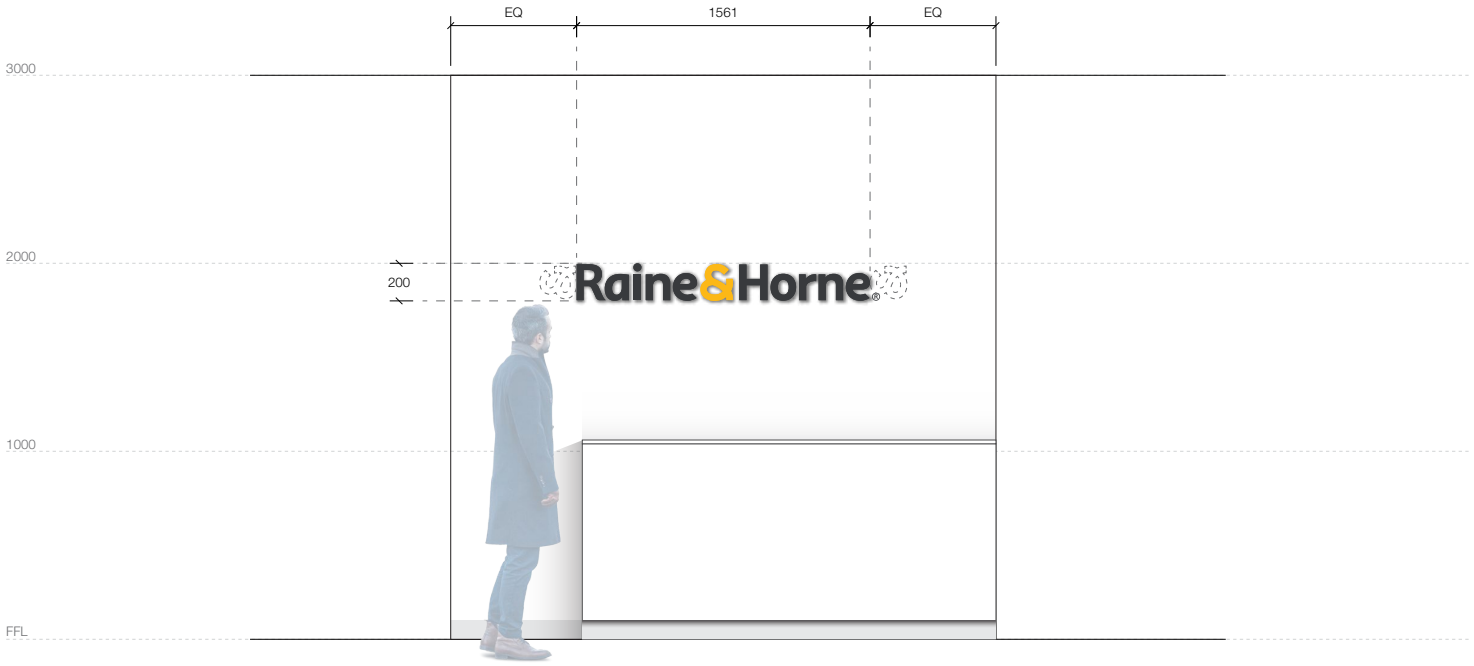
RECEPTION WALL
Fabricated wordmark logo to wall behind reception desk. Illuminated or Non-illuminated.
Refer to following page for details.

APPLICATION NOTES

A. Logo Size
Consistent sizes across all sites:
- Small 200mmH
- Large 300mmH.

B. Clear Space
Minimum clear space is the logo Ampersand height.

C. Logo Placement
Logo to be centred horizontally on reception wall.
2000mm AFFL to top of logo.

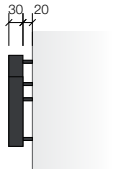


Typical Reception Wall Elevation
Scale 1:25

RW-xxx Reception Wall - Illuminated - Type 1

RW-200 - 200mmH Reception Logo Illuminated
RW-300 - 300mmH Reception Logo Illuminated

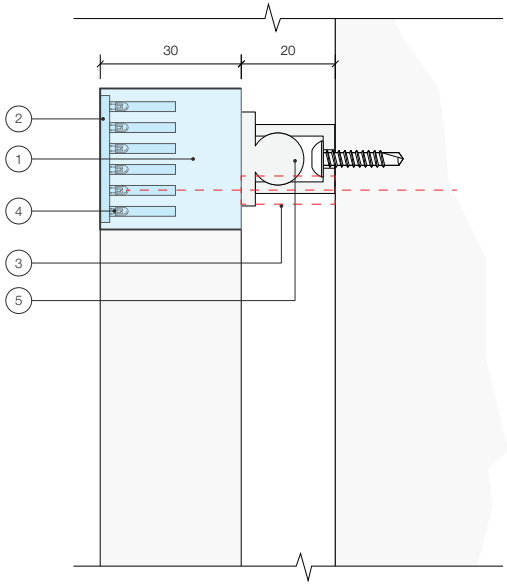
Front View



Side View
Letters

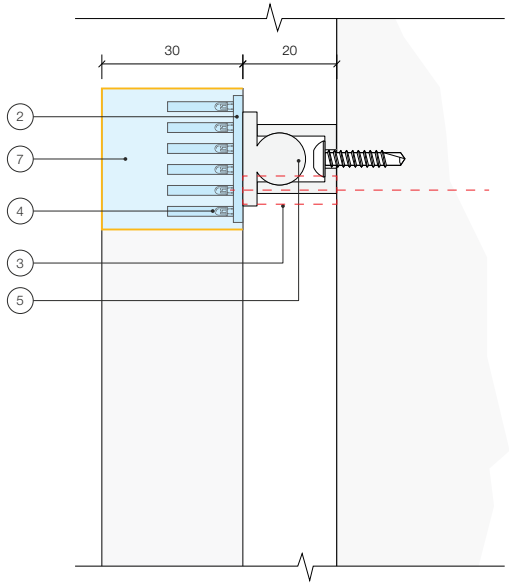
Side View
Ampersand

Reception Wall - Illuminated
Scale 1:10



Typical Section Detail

Reception Wall - Illuminated Letters
Scale 1:1



Typical Section Detail

Reception Wall - Illuminated Ampersand
Scale 1:1

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT

1. Letter Body
Profile cut 30mm opal acrylic. Faces & returns 2 pac painted to match R&H Charcoal.

2. Letter Cover
2 to 3mm opal acrylic diffuser.

3. Power Feeds
Aluminium sleeves for power feeds.

4. Lighting
8mm Diode Leds, resin set Inside letter body.

5. Wall Fixings
20mm Snap Fixings glued to back of lettering and mechanically fixed to wall.

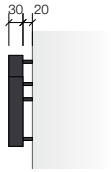
6. Trademark Symbol
Profile cut 6mm acrylic adhesive fixed to wall. 2 pack painted Charcoal.

7. Ampersand Body
Profile cut 30mm opal acrylic. Translucent gold vinyl to face and returns 2 pac painted to match R&H Gold.

RW-xxx Reception Wall - Illuminated - Type 2

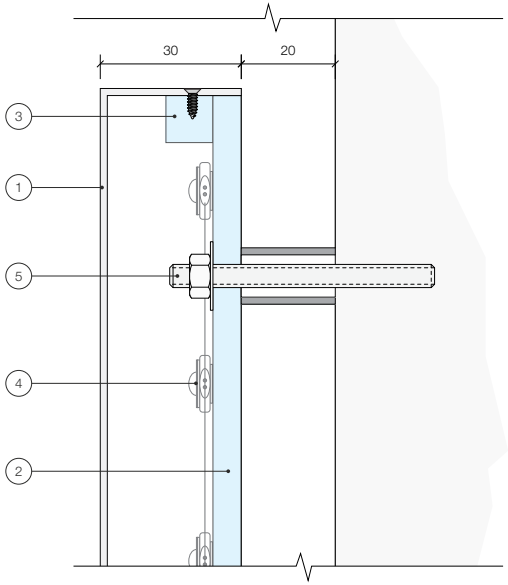
RW-200 - 200mmH Reception Logo Illuminated
RW-300 - 300mmH Reception Logo Illuminated

Front View



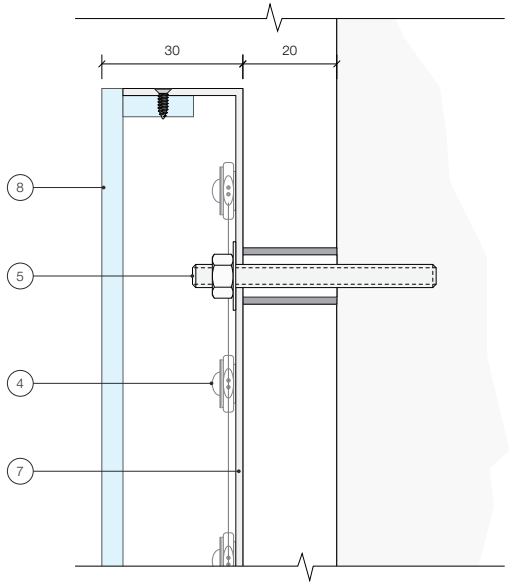
Side View
Illuminated

Reception Wall - Illuminated
Scale 1:10



Typical Section Detail

Reception Wall - Illuminated Letters
Scale 1:1



Typical Section Detail

Reception Wall - Illuminated Ampersand
Scale 1:1

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT

1. Letter Body
Halo illuminated letters fabricated stainless steel with returns 30mm deep. 2 pac painted to match R&H Charcoal. S/S countersunk screw fix faces to acrylic mounting blocks & paint heads to match returns.

2. Illuminated Backs
Profile cut 6mm clear acrylic letter backs.

3. Mounting Blocks
10mm clear acrylic mounting blocks adhered to backs.

4. Lighting
6500K LEDs cool white fitted to backs, type & layout to suppliers specification, ensure no shadowing & hot spotting.

5. Wall Fixings
Nominal M6 S/S anchors or screws to suit site conditions with Ø12mm CHS sleeves to match wall colour.

6. Trademark Symbol
Profile cut 6mm acrylic adhesive fixed to wall. 2 pack painted Charcoal.

7. Ampersand Body
Face illuminated ampersand fabricated stainless steel with returns 30mm deep. 2 pac painted to match R&H Gold.

8. Illuminated Faces
Fabricated 4.5mm opal acrylic face, with returns for fixing to Ampersand body. Face applied translucent vinyl. 2 pac paint returns of faces to match R&H Gold, opaque. S/S countersunk screw fix faces to body & paint heads to match returns.

RW-xxx-N Reception Wall - Non-illuminated

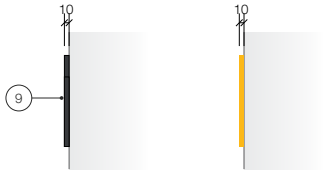
RW-200-N - 200mmH Reception Logo Non-illuminated
RW-300-N - 300mmH Reception Logo Non-illuminated

GENERAL CONSTRUCTION NOTES
- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT
9. Non-illuminated Letters
Profile cut 10mm acrylic. 2 pac painted R&H Charcoal & Gold, opaque. Adhesive fixed to wall. Use additional pins if required to suit site conditions.

Front View

RW-200-N - 200mmH Reception Logo Non-illuminated

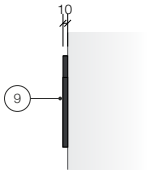


Side View Letters

Side View Ampersand

Front View

RW-200-N - 200mmH Reception Logo Non-illuminated



Side View

Reception Wall - Non-illuminated
Scale 1:10

RD-1 Reception Desk

CONSTRUCTION INTENT

1. Reception Desk
Profile cut 3mm acrylic, 2 pack painted to match R&H Gold, adhesive fixed to face of reception desk.

APPLICATION NOTES

A. Logo Size
Consistent sizes across all sites 600mmH.

B. Clear Space
25% logo height

C. Logo Placement
Logo to be preferably right aligned, but may be left aligned if the location has better visability.

D. Usage
To be used where a reception wall is unavailable.

Exemption can be granted where front of desk is on a different angle to reception desk (e.g. Bondi).

Typical Reception Desk Elevation
Scale 1:25

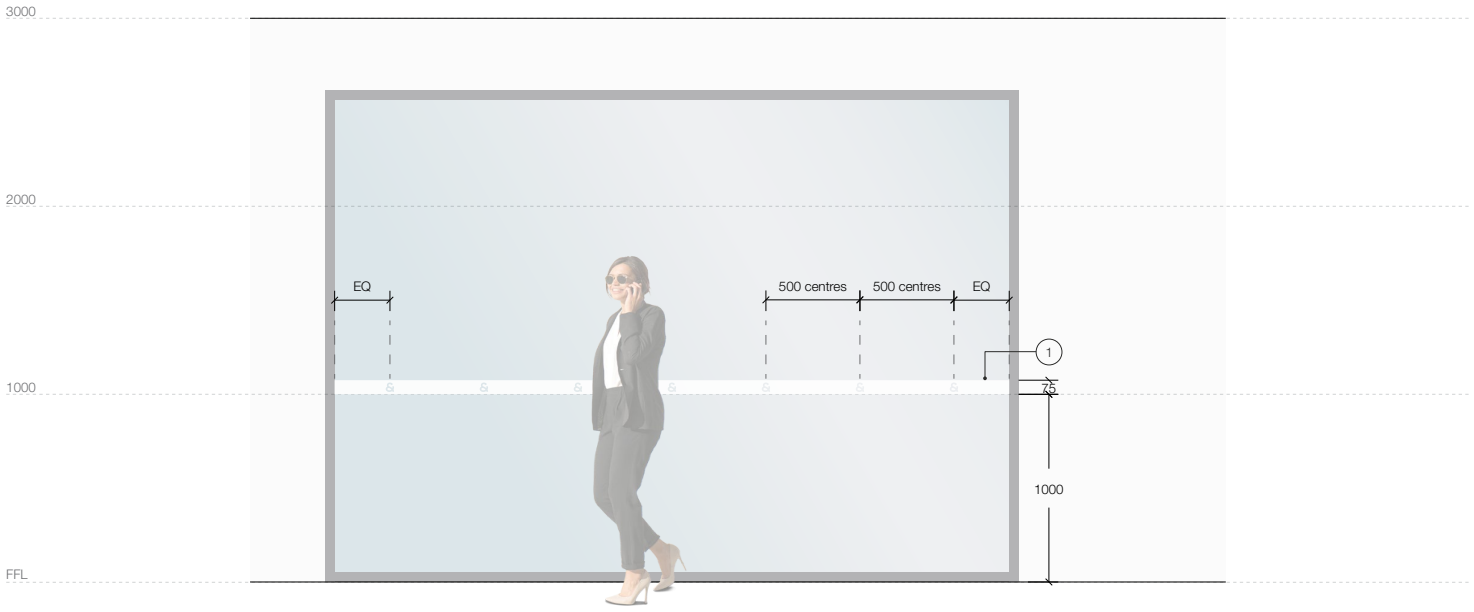
SS-1 Safety Strip

CONSTRUCTION INTENT
1. Safety Strip
Computer cut Metamark M7 frosted vinyl with cut out Ampersand logos reverse applied to shopfront glazing.

APPLICATION NOTES
A. Logo Size
2/3 safety strip height.

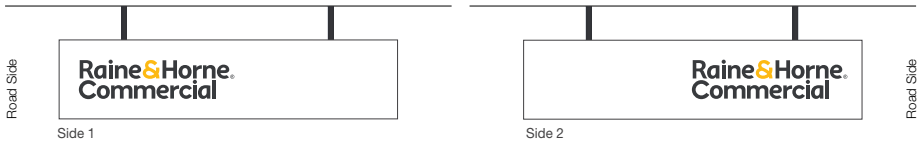
B. Clear Space
1/6 safety strip height.

C. Logo Placement
1000mm AFFL to bottom of safety strip.



Typical Safety Strip Elevation
Scale 1:25

R&H Commercial Fascia & Underawning Sign



UA-1800 - 1800mmW Lightbox Illuminated
1800mmW x 420mmH
Scale 1:25

Typical Fascia Elevation
Scale 1:25

FASCIA SIGN
Non-illuminated wordmark logo.
Refer to following page for details.

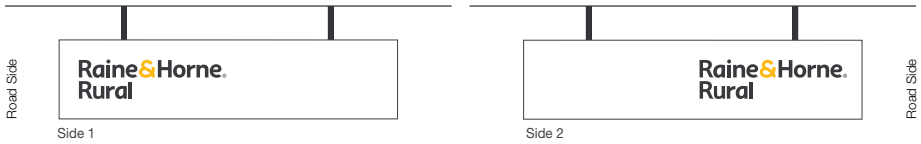
APPLICATION NOTES

A. Logo Size
3 standard logo sizes:
150mmH - Fascias 350 to 490mmH
175mmH - Fascias 500 to 590mmH
225mmH - Fascias 600 to 800mmH

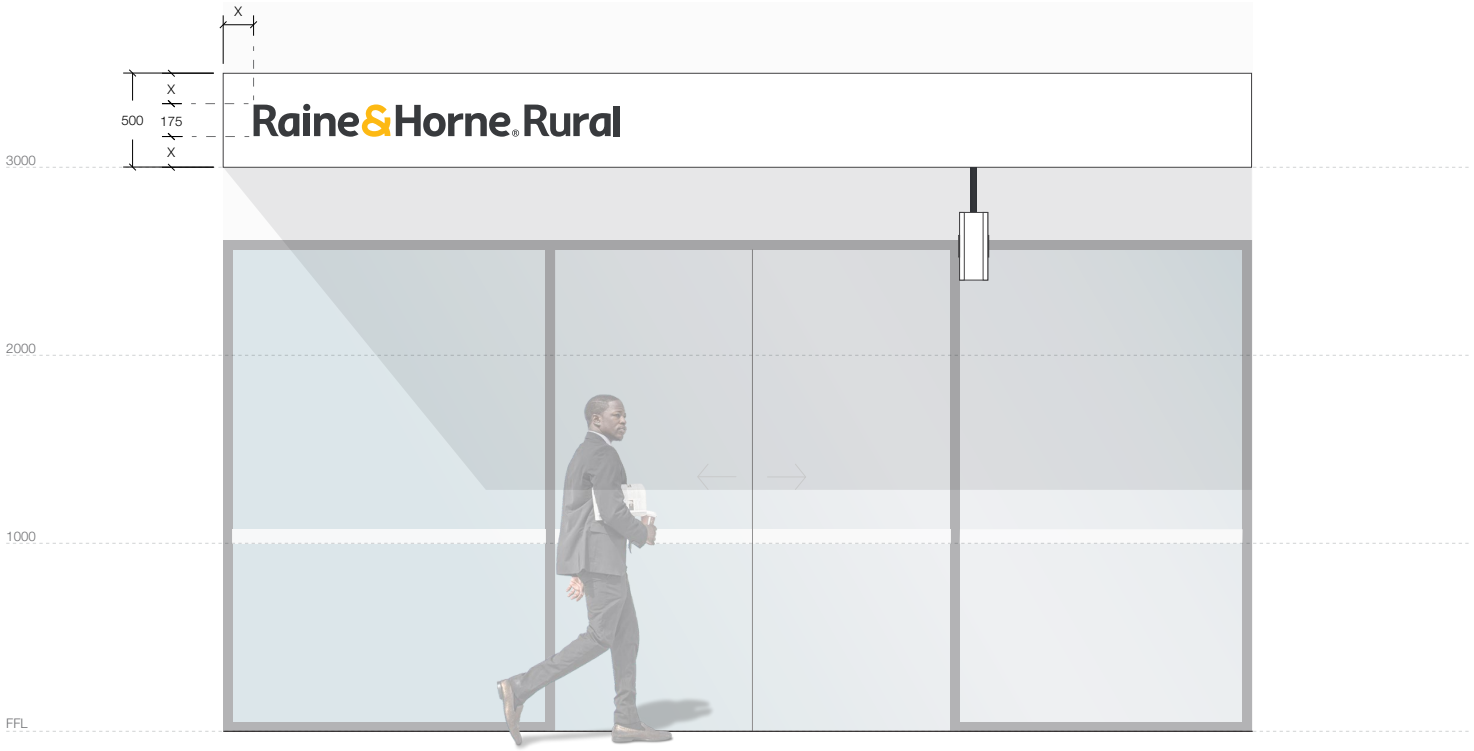
B. Clear Space
X = clear space top, bottom, & left of logo.
Logo is centred vertically on the fascia panel & clear space to the left is equal to the space top & bottom.

C. Logo Placement
Logo to be preferably left aligned, but may be right aligned if the location has better visability.

R&H Rural Fascia & Underawning Sign



UA-1800 - 1800mmW Lightbox Illuminated
1800mmW x 420mmH
Scale 1:25



Typical Fascia Elevation
Scale 1:25

FASCIA SIGN
Non-illuminated wordmark logo.
Refer to following page for details.

APPLICATION NOTES

A. Logo Size
3 standard logo sizes:
150mmH - Fascias 350 to 490mmH
175mmH - Fascias 500 to 590mmH
225mmH - Fascias 600 to 800mmH

B. Clear Space
X = clear space top, bottom, & left of logo.
Logo is centred vertically on the fascia panel & clear space to the left is equal to the space top & bottom.

C. Logo Placement
Logo to be preferably left aligned, but may be right aligned if the location has better visability.

Shopfront Finishes

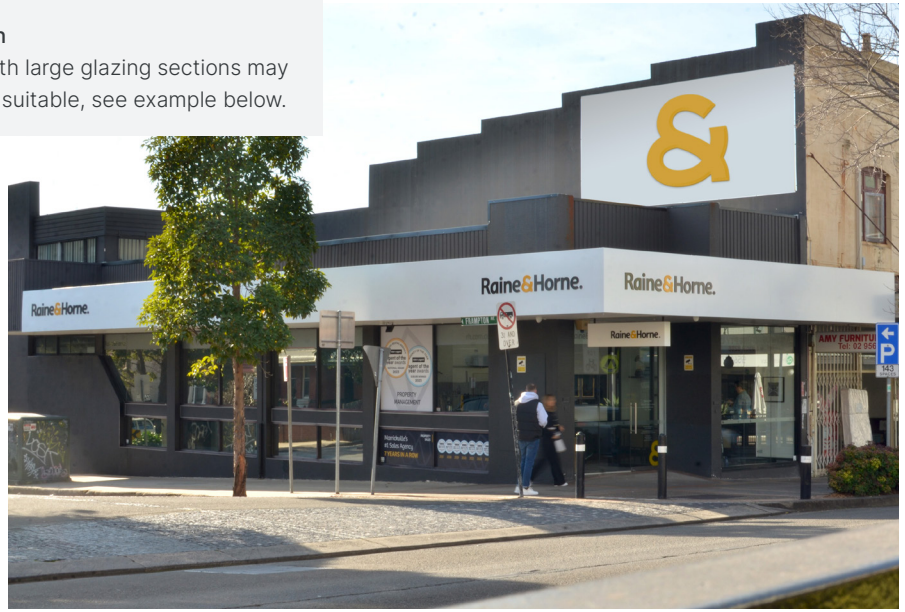
General Construction Notes

1. Standard Shopfront Finish

Raine & Horne brand charcoal is the primary shopfront finish where possible.

2. Alternate Shopfront Finish

Contemporary shopfronts with large glazing sections may have white surrounds where suitable, see example below.



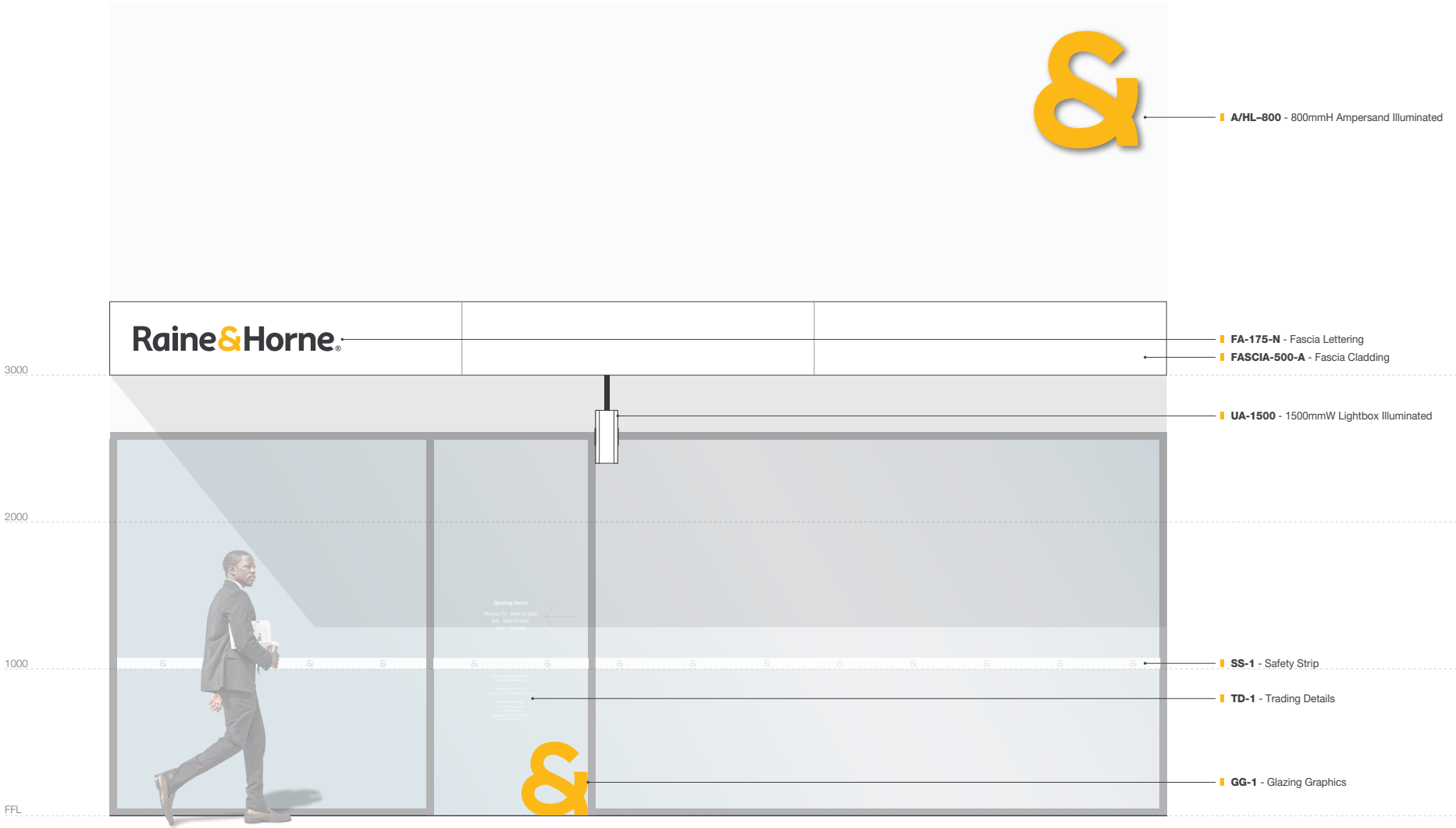
SF-2 Shopfront Cladding

GENERAL CONSTRUCTION NOTES
1. Shopfront Cladding
Charcoal cladding - "Matt Anthracite Grey Alupanel, FR (Group 2)". Sizes & fixing details to suit each shopfront.

1. Existing Shopfront

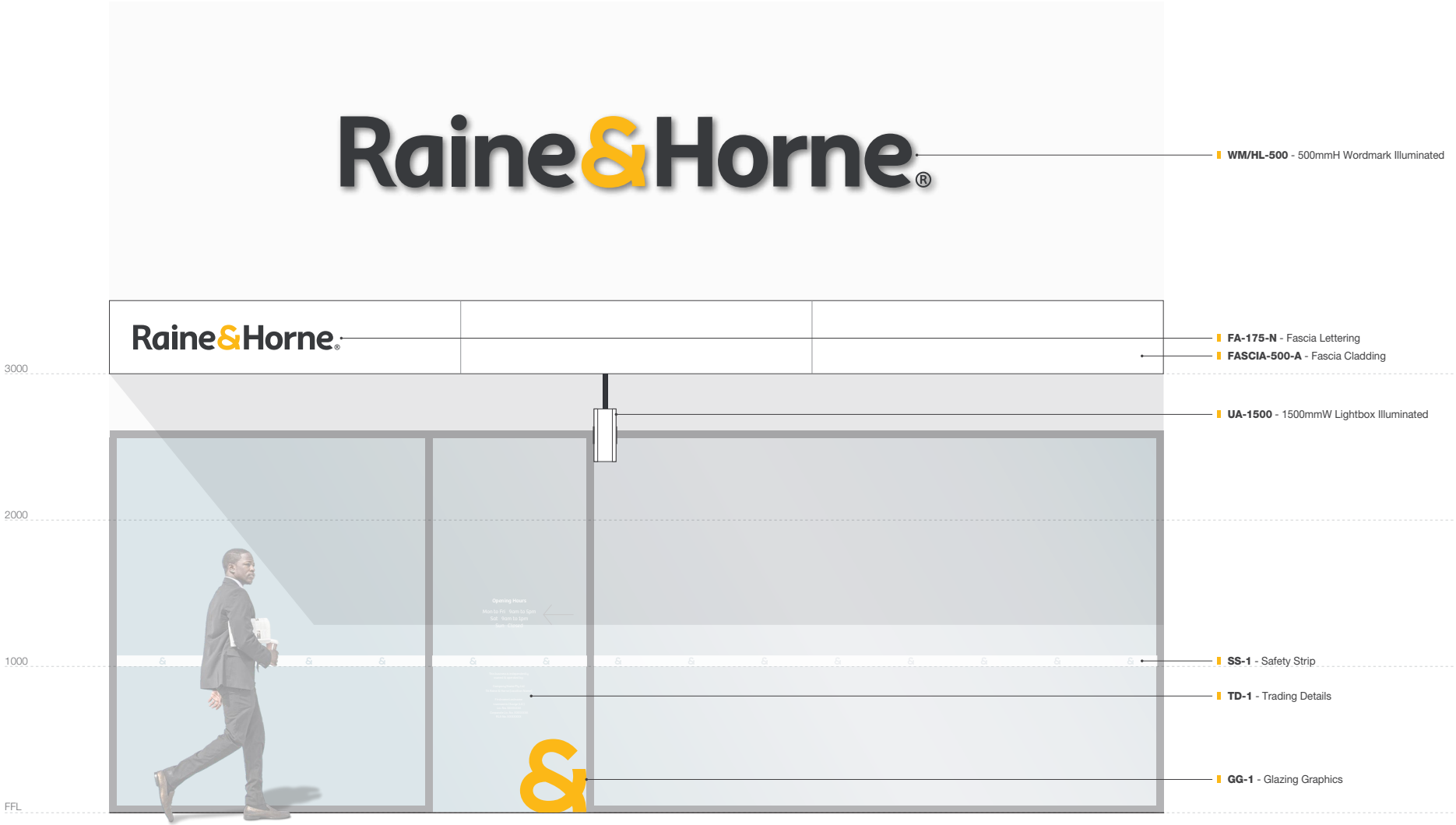
2. Example of charcoal cladding

Typical Elevation Shopfront Signage Application 1



Typical Shopfront Elevation 1
Scale 1:25

Typical Elevation Shopfront Signage Application 2



Typical Shopfront Elevation 2
Scale 1:25

5.0

Internal Applications

Internal applications extend into the specifics of the logo and ampersand placements within the office space.

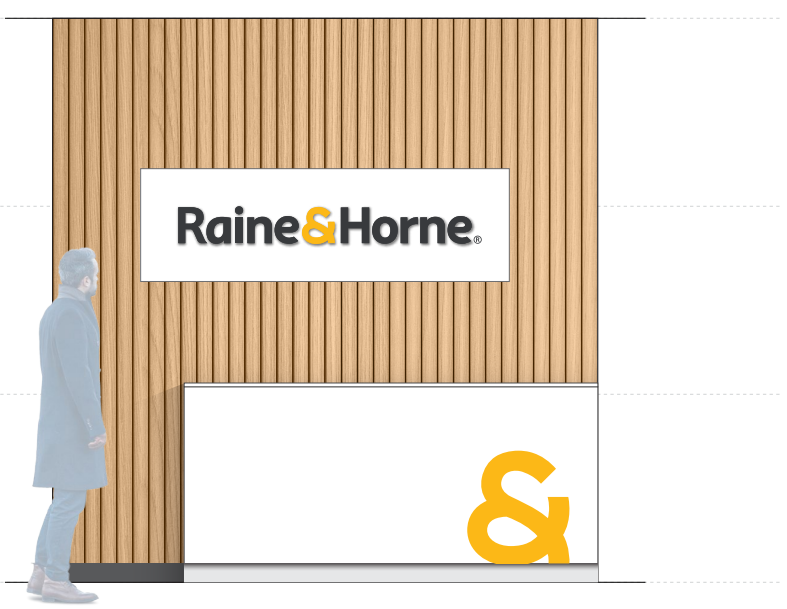
Reception Wall Application

RECEPTION WALL
How to use the internal reception wall logo.

1. Preferred option
Installed to a white wall behind reception.

2. Secondary option
If the wall behind reception area is timber etc the sign should be mounted on white panel, or alternatively be placed on secondary wall in near vicinity to the reception desk.

Typical Reception Wall - Preferred Option
Scale 1:25



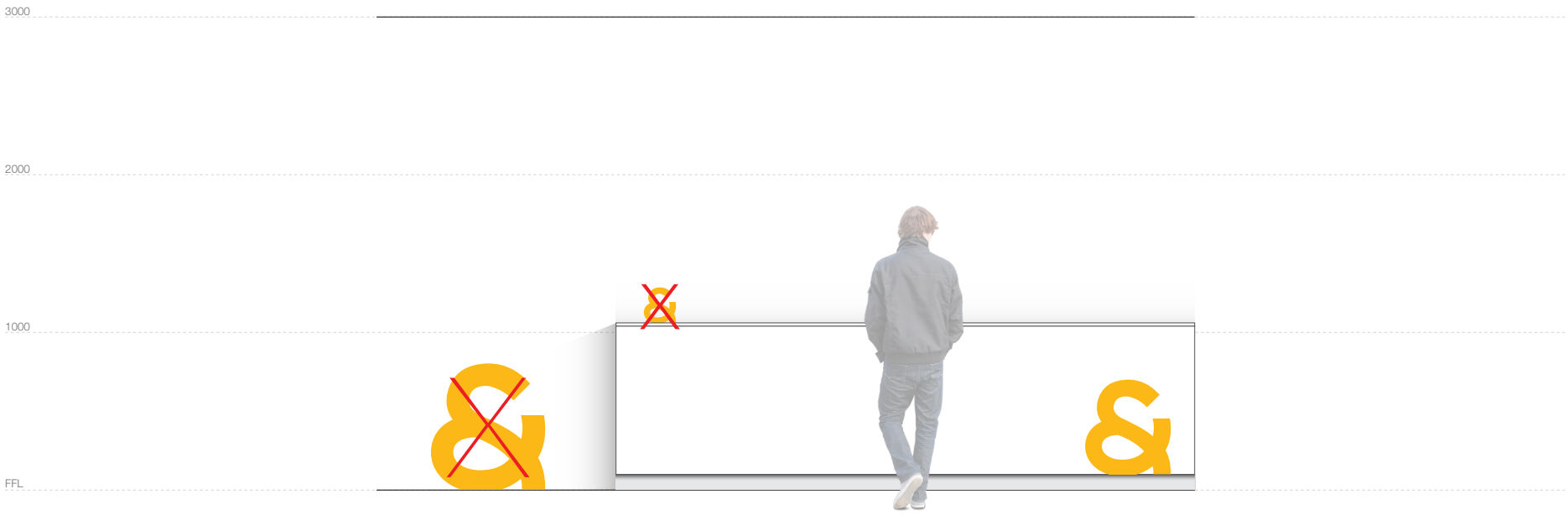
Typical Reception Wall - Secondary Option
Scale 1:25

Reception Desk Ampersand

RECEPTION DESK
A small fabricated ampersand is not to be installed on top of reception desk, unless the 600mm ampersand cannot be installed to face of reception desk.

A large fabricated ampersand is not to be installed next to the reception desk logo.

No elevation/wall should have more than one logo/ampersand.



Typical Reception Desk
Scale 1:25

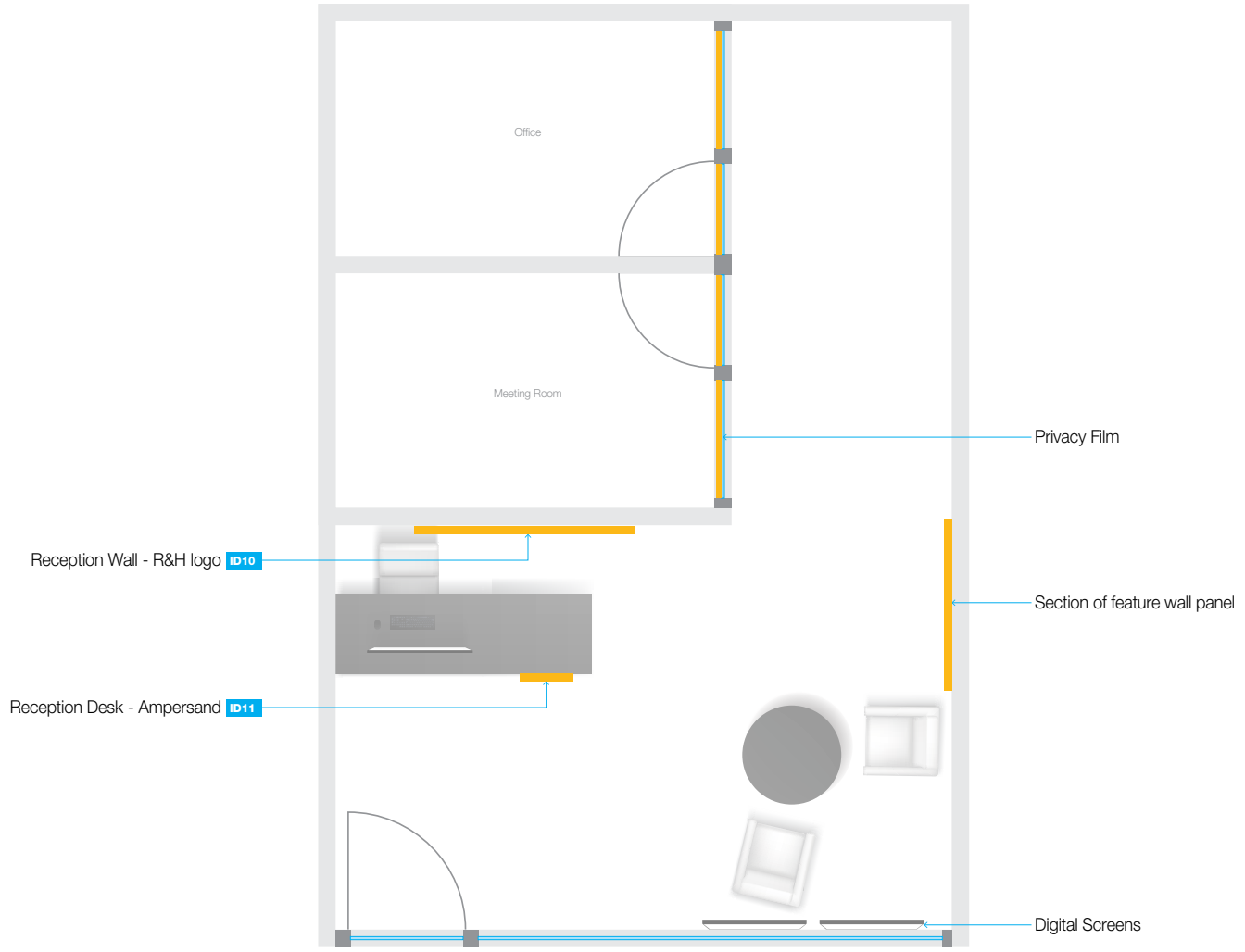
Freestanding Ampersand Application

FREESTANDING AMPERSAND - LOW LEVEL
Only 1 x fabricated freestanding ampersand per office.

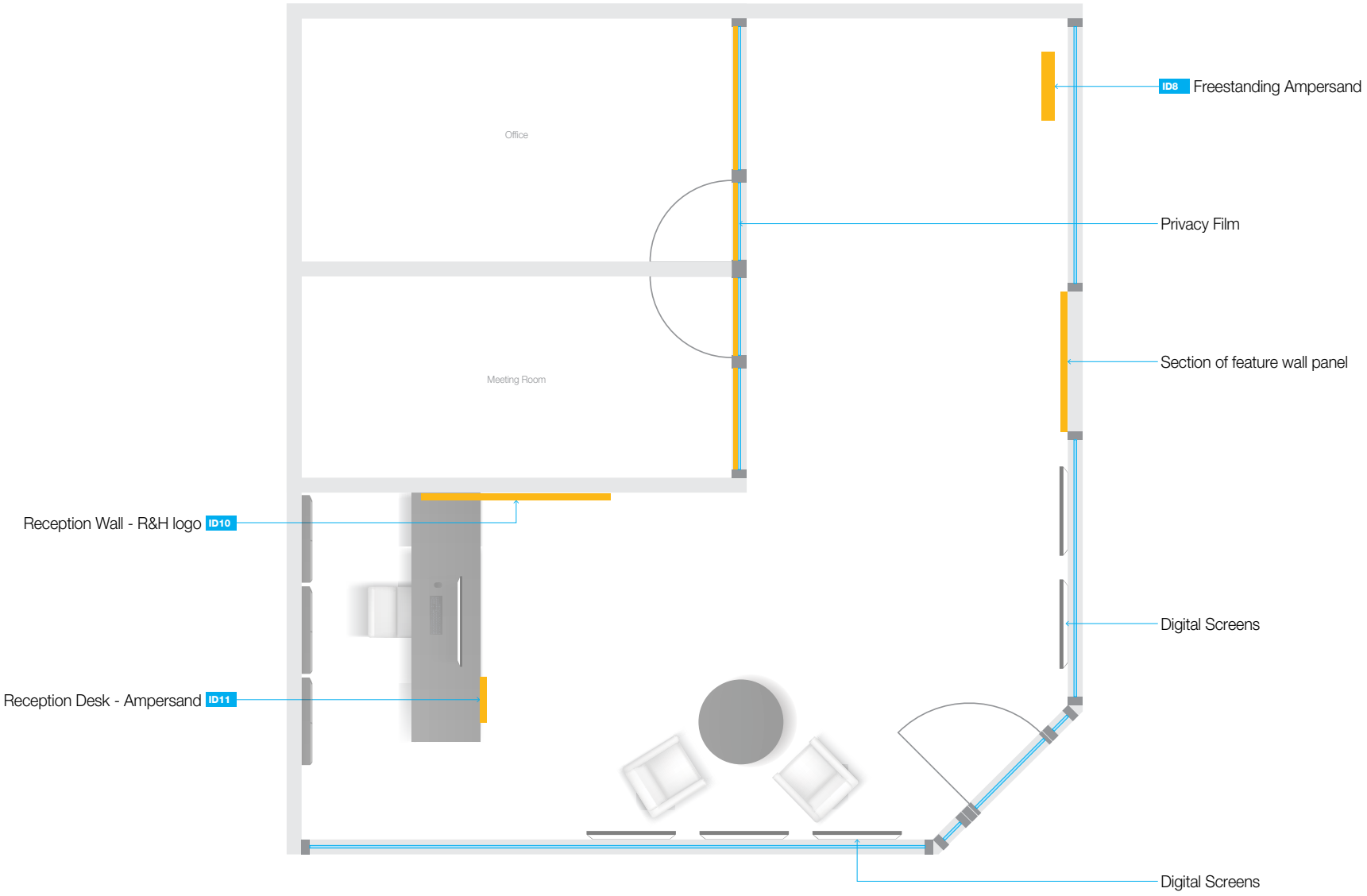
The ampersand should be located away from the reception desk.

Typical Shopfront
Scale 1:25

Typical Floor Plan Small Office - Signage Application



Typical Floor Plan Large Corner Office - Signage Application



6.0

Optional Applications

The optional applications sector provides a detailed look into all of the elective design features. The intention behind these additional attributes is to elevate the identity of an individual office and create a strong sense of character and presence in the area.

Feature Wall Wall Panels

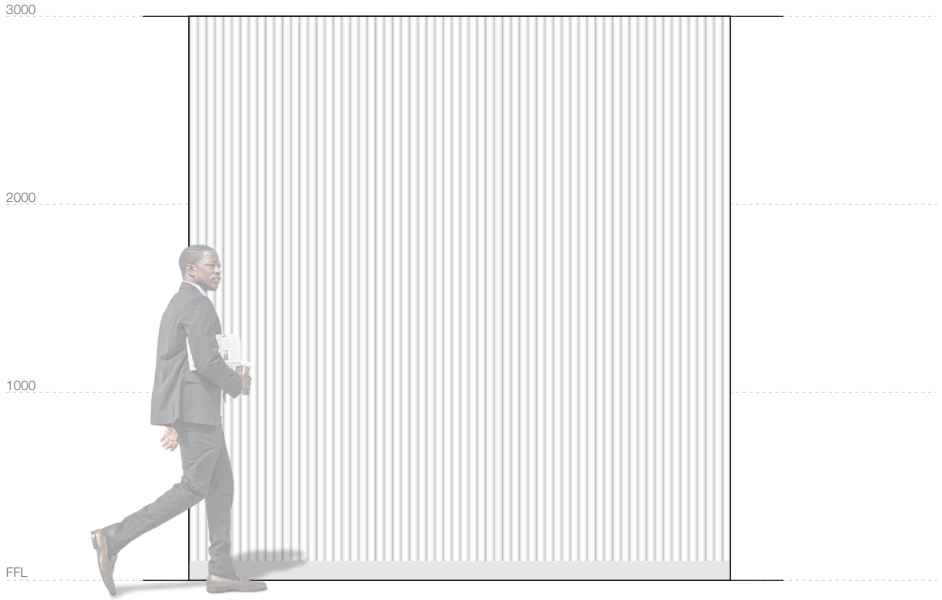
FEATURE WALL
1 x wall in the reception/lobby area may be used for a branded wall paper application.

This should be a smaller/secondary wall, and no logo is to be installed on top of the feature wall.

The width of the feature wall should not exceed the height of the wall.

1. Wall Panels
Surround by Laminex - 1200mmW x 12mm thick Lining Panel MDF Primed Scallop 45mm.

Panels are ready primed to be painted in the desired brand colour to suit the interior.



Typical Feature Wall - Wall Panels
Scale 1:25

Reference Images - Feature Wall Panels

Internal Wall Finishes

Internal Wall Finishes

Offices can be painted in white or light grey, or a combination of the two colours.

However, the wall behind the reception desk/or where the main logo is installed should be white.

Primary Palette

CMYK 0 0 0 0

PAINT **ACRYLIC PAINT**
Dulux 'Vivid White SW1G1'

CMYK 0 0 0 5

ACRYLIC PAINT
Dulux 'Terrace white'

CMYK 10 3 3 90

ACRYLIC PAINT
Dulux 'Night Sky C25'

Privacy Film PF1 & PF2

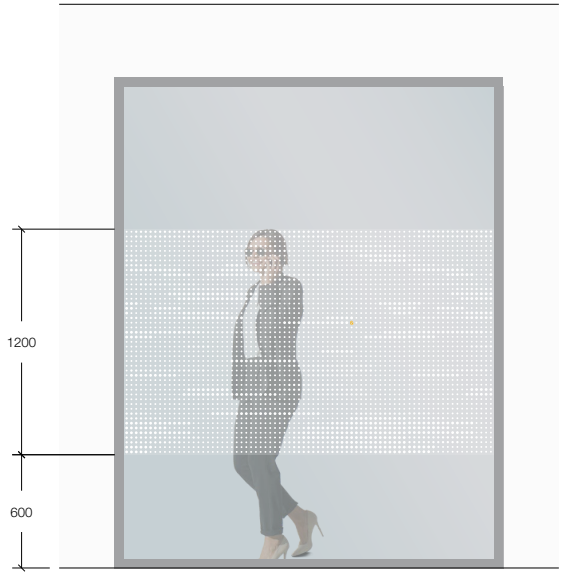
PRIVACY FILM
Privacy film is only to be used where needed – encourage an open transparent work place.

PF1
Digitally printed pattern on optically clear vinyl reverse applied to glazing.

PF2
Digitally printed pattern on frosted etch vinyl reverse applied to glazing.

1200mm high privacy film to be installed 600 AFFL.

Not to be used on any external facing windows.



Typical Elevation - Privacy Film - PF1
Scale 1:25

Typical Elevation - Privacy Film - PF2
Scale 1:25

Privacy Film PF1 & PF2

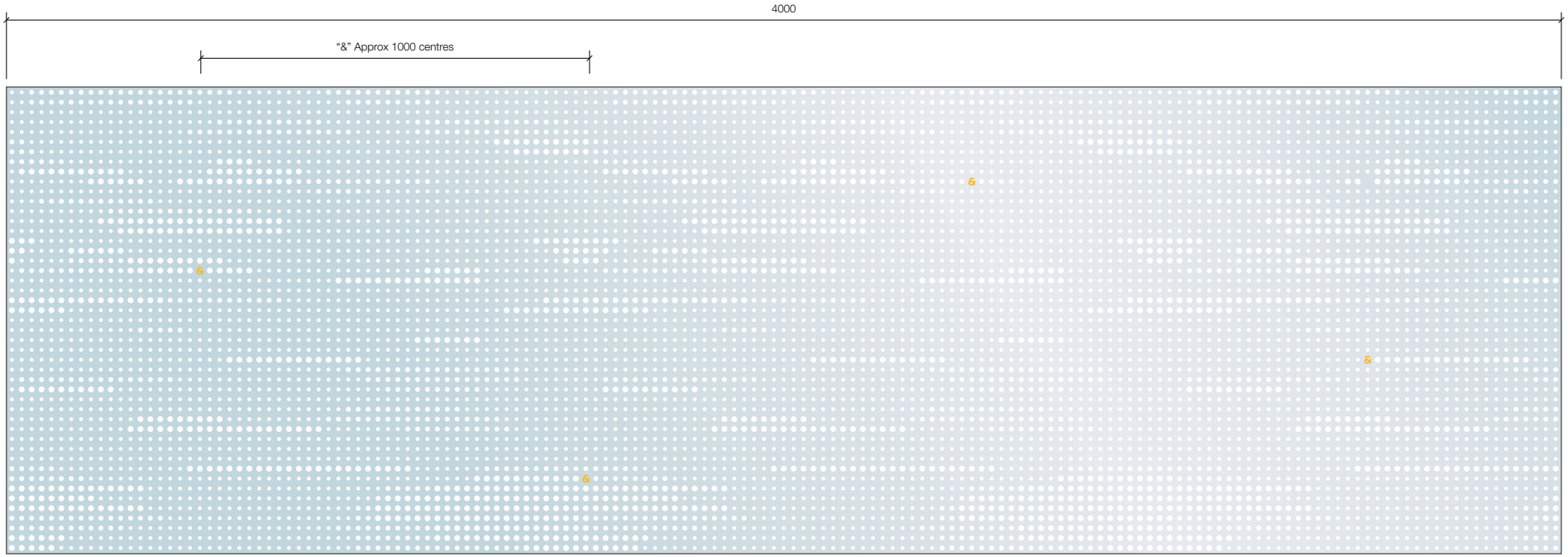
PRIVACY FILM
Privacy film is only to be used where needed – encourage an open transparent work place.

PF1
Digitally printed pattern (Colour/White/Colour) and applied internally of glazing.

PF2
Digitally printed pattern onto dusted etch. (Colour/White/Colour) and applied internally of glazing.

1200mm high privacy film to be installed 600 AFFL.

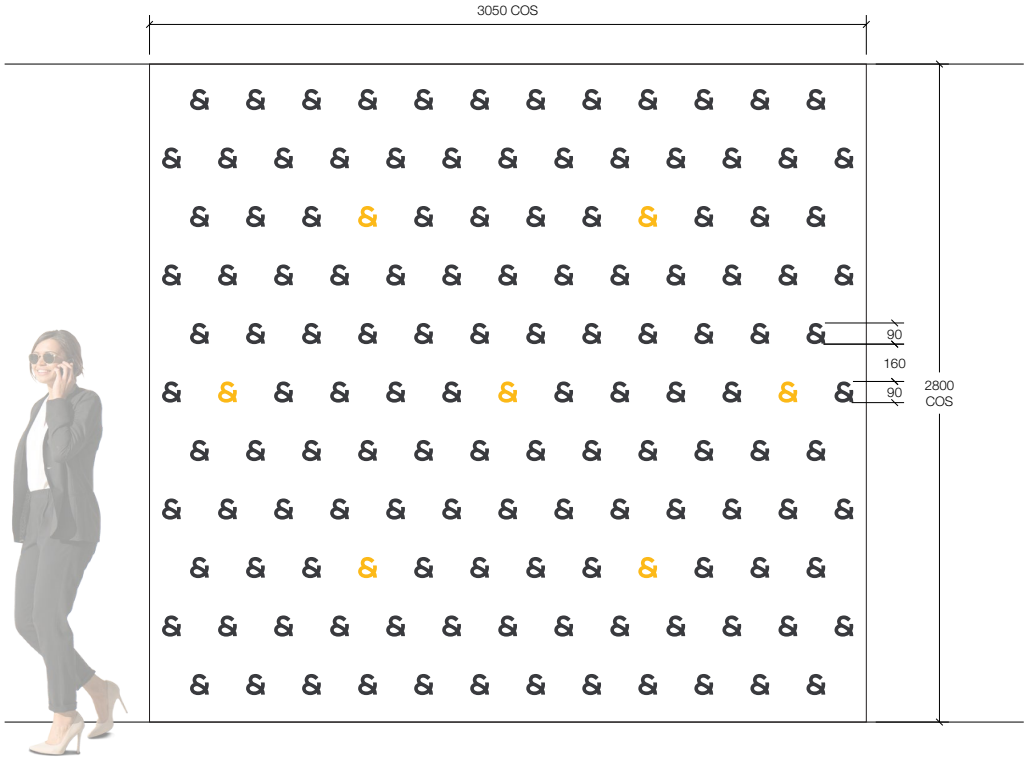
Not to be used on any external facing windows.



Privacy Film - 4000mmW Sample
Scale 1:10

Wall Paper

WALL PAPER
Digitally printed wallpaper.
90mmH Ampersands, with pattern centred on wall.
No Ampersands to be “cut off” on edges.



Wall Paper
Scale 1:25

Wall Paper

WALL PAPER
Digitally printed wallpaper.

Graphic 1 - Raine & Horne Poster Wallpaper

Graphic 2 - Raine & Horne, 1900

Graphic 3 - Raine & Horne Staff 1920

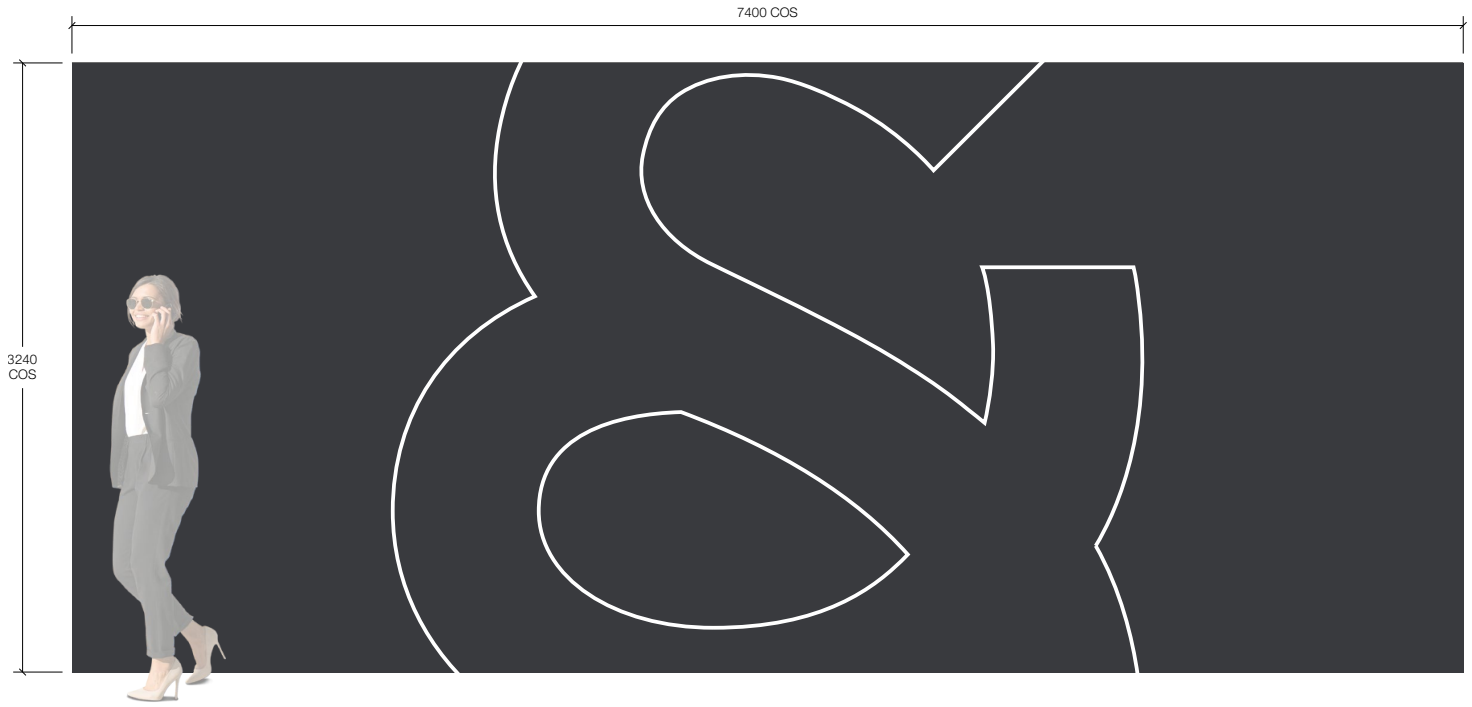
Graphic 4 - Property Management Department 1920

Graphic 5 - Raine Chambers, Pitt Street Sydney

Wall Graphic

WALL GRAPHIC
Wall painted R&H Charcoal. Stencil paint/mask and spray oversized white ampersand direct to wall, 20mm stroke width.

Only to be applied to a charcoal wall.



Wall Graphic
Scale 1:25

7.0

Engineering Certificates

The optional applications sector provides a detailed look into all of the elective design features. The intention behind these additional attributes is to elevate the identity of an individual office and create a strong sense of character and presence in the area.

Engineering A/HL-1350

ROBUST Consulting Engineers Pty Ltd
Civil & Structural, ABN 14 626 910 750

Suite 7, 750 Blackburn Rd, Clayton, Vic 3168
0418133012, (+613) 85102535
www.robustengineers.com.au
suresh@robustengineers.com.au

STRUCTURAL ENGINEERING COMPUTATIONS

PROJECT:	Raine & Horne A/HL-1350 Letter Signage (1.35x1.197)	CLIENT:	TBP
ADDRESS:	Generic Computation for Australia (Wind Region A-C) (To be used in conjuction with Design Compliance Certificate)	REVISION:	0
PROJECT CODE:	TBP126	PREPARED BY:	BB

CERTIFIED BY

ENGINEERS AUSTRALIA
Suresh Hada
FIEAust, CPEng, NER, IPENZ
Chartered Professional Engineer
Membership No. 2621329

Vic: Registered Professional Engineer, Civil Engineer – PE0002632
NSW: Registered Certifier- Structural Engineer Reg No. BPB 2816
Qld: Registered Professional Engineer of Qld, Div: Structural RPEQ 15255
Tas: Accredited Certifier, Div: Civil (Building Act 2000, Tas) CC6537
NT: Certifying Engineer (Structural) Reg No. 227617ES

Date: 27/June/2024

Raine & Horne A/HL-1350	***Project Code: TBP126***

Scope:

Provide engineering design and details for wall mounted sign as per drawing/sketch in this computation sheet

1. Design loads to be considered
   - DL Sign dead load [self weight]
   - WL Wind load
   - EL Earthquake load as applicable
2. Design and detail letter structural arrangement
3. Design and detail support frame structure
4. Design and detail fixings to existing wall structure

Assumptions: Compuation is based on the drawing submitted by the client

Materials:		fy (Mpa)	fu (MPa)
Hot Rolled	UB, UC, PFC: Grade 300 (AS/NZS 3679.1 - 2010)	300	440
	Plate: Grade 250 (AS/NZS 3678 - 2011)	250	410
Cold Formed	SHS: Grade C450 (AS1163 - 2009)	450	500
	RHS: Grade C450 (AS 1163 - 2009)	450	500
	CHS: Grade C350 (AS 1163 - 2009)	350	430
	CA: Cold-formed angle (Duragal)	350	400
	CC: Cold formed channels (Duragal)	400	450
	CF: Cold-formed flats (Duragal)	350	400
Bolts	Bolts (4.6/S) - [Commercial]	240	400
	Bolts (8.8/S) - [High Strength Structural]	660	830
Welds	Welding - Category: General Purpose	GP	410
	Welding - Category: Structural Purpose	SP	410
Concrete:	Grade N25 [f'c @ 28 days]	25	MPa

Regulation & Codes:

BCA - 2024: Building Code of Australia - 2024
AS/NZS 1170.0 - 2002: Structural design actions Part 0: General principles.
AS/NZS 1170.1 - 2002: Structural design actions Part 1: Permanent, imposed & other actions.
AS/NZS 1170.2 - 2011: Structural design actions Part 2: Wind actions.
AS 1170.4 - 2007: Structural design actions Part 4: Earthquake actions in Australia.
AS 3600 - 2018: Concrete structures.
AS 4100 - 2020: Steel structures.
AS/NZS 4600 - 2018: Cold-formed steel structures.

Engineering A/HL-1350

Raine & Horne A/HL-1350	*Project Code: TBP126*

Client's Drawing 1

GENERAL CONSTRUCTION NOTES

- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION A INTENT

1. Letter Body
Fabricated 2mm / 3mm aluminium ampersand with 100mm(D) returns. All welds to be polished smooth. 2 pac painted to match R&H Gold.

2. Illuminated Faces
Profile cut 4.5mm opal polycarbonate sign face (certified to group 1 or 2 fire rating) held in place with fabricated aluminium face trims.

3. Face Trims
20x25x3mm aluminium angle trims, 2 pac painted to match R&H Gold, fixed to fabricated letters using SS 316 grade CSK fixings. Paint heads to match returns.

4. Lighting
6500K LEDs (IP67) cool white fitted to backs, type & layout to suppliers specifications, ensure no shadowing & hot spotting.

5. Mounting Plates
50x4mm aluminium flat bar welded to letter backs at fixing locations.

6. Wall Fixings
Logo fixed directly to facade to engineers specification to suit structure at each location.

CONSTRUCTION B INTENT

7. Letter Body
Fabricated 2mm / 3mm aluminium ampersand with 100mm(D) returns. All welds to be polished smooth. 2 pac painted to match R&H Gold.

8. Non-illuminated Letter Backs
Profile cut 3mm aluminium with 40x3mm aluminium angle tabs welded to face. Fabricated letters fixed to backs using SS 316 grade CSK fixings. Paint heads to match returns.

9. Wall Fixings
Logo fixed directly to facade to engineers specification to suit structure at each location.

Page: 3

Raine & Horne A/HL-1350		*Project Code: TBP126*	
Sign Dimension & Wind Pressure			
Description	Parameter	Value	Unit
Signage face height	h_s	1.35	m
Signage total height	h	1.35	m
Signage average width	b	1.20	m
Proportion of cladded area	A_c	1.00	-
Signage total area	A_s	1.62	m^2
Height of datum above NGL (z = 0)	h_d	3.90	m
Height above NGL (rounded up)	z	6	m
Select sign location		Windward wall	
Wind region	WR	C	-
Importance Level	IL	2	-
Terrain Category	TC	3	-
Average Recurrence Interval	R	500	-
Regional wind speed	V_R	69.0	m/s
Dynamic response factor	C_{dyn}	1.00	-
Area reduction factor	k_a	1.00	-
Combination factor	k_c	1.00	-
Local pressure factor	k_l x C_{pe}	0.80	-
Porous cladding factor	k_p	1.00	-
Aerodynamic Factor (Cfig=Cpe.ka.kc.kl.k	C_{fig}	0.80	-
Terrain & height multiplier	M_z	0.83	-
Pressure at ht z	p_z	1.97	kPa
Strength design pressure	p_d	1.57	kPa
Serviceability design pressure	p_s	1.05	kPa
Total wind load on entire signage	**W_s**	**2.6**	**kN**
Signage self weight	**G**	**0.4**	**kN**

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Engineering A/HL-1350

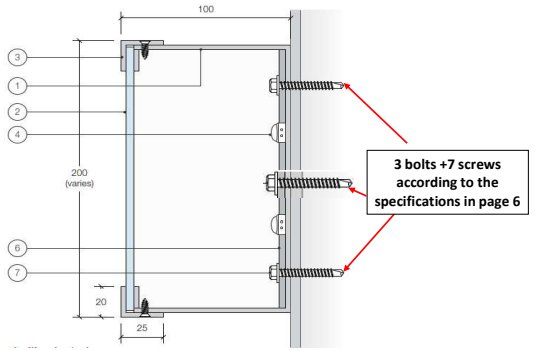
Raine & Horne A/HL-1350		*Project Code: TBP126*	
Bolt letter fixing			
Description	Parameter	Value	Unit
Assume calculation is per letter, and shape rectangular			
Letter Height	h	1.35	m
Letter Width	b	1.20	m
Letter Area	A	1.62	m^2
Ultimate wind load on whole sign	WL_{uls}	2.55	kN
Deadload per letter (factor of 1.3)	DL	3.32	kN
Average number of bolt connection	n	3	
Tension per bolt	N_t	0.85	kN
Shear per bolt	V_b	1.11	kN
Using, M10 (SS Class 50)			
Bolt tensile strength	ϕN_{uc}	18.56	kN
Bolt shear strength	ϕV_{us}	10.38	kN
N / ϕNuc	**η_t**	**0.05**	**≤ 1 OK**
V / ϕV	**η_v**	**0.11**	**≤ 1 OK**
Check unity	**c_u**	**0.15**	**≤ 1.2 OK**
2xM10 (SS Class 50) bolts for each letter fixing to metal façade (0.48BMT) as shown in page 7. along with additional 7 screws .			
M8 Coach screw's to timber for Emb depth 30mm. Pull-out capacity = 16.21kN. OK			
M10 bolt's to concrete for Emb depth 90mm. Pull-out capacity = 13.6kN. OK			
See recommended fixings in the next page (6).			

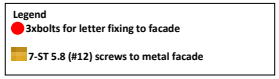
Raine & Horne A/HL-1350	*Project Code: TBP126*
Connection Specifications to various Strata:	
Strata	**Fixing requirement for Region A,B & C**
1) Metal wall	Minimum 3xM10 bolts to either Girt or stud + Minimum of 7-ST 5.8 (#12) screws to metal façade 0.48 BMT (uniformly distributed).
2) Timber	Minimum 3xM8 coach screws to either Gurt or stud + Minimum of 7-ST 5.8 (#12) screws to metal façade.
3) Concrete	7xM10(4.6/S) Chemset bolts. Embedment depth= 90mm.
4) Structural tube sections	Steel SHS or RHS minimum thickness of 3mm. Minimum 3 x M16x75mm Hollow bolts + Minimum of 7-ST 5.8 (#12) screws to metal facade (uniformly distributed).

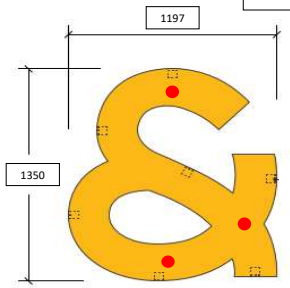
Engineering A/HL-1350

Raine & Horne A/HL-1350	*Project Code: TBP126*

Robust's letter fixing diagram







Front View

Page: 7

Building Act 1993
Section 238(1)(a)
Building Regulations 2018
Regulation 126

CERTIFICATE OF COMPLIANCE FOR PROPOSED BUILDING WORK

This certificate is issued to Relevant building surveyor

Postal address (if applicable)

Email

This certificate is issued in relation to the proposed building work at:

Address of Generic Computation for
State Australia (Wind Region A-C)

Nature of proposed building work

Construction of: a new signage
Height:
Type of Construction: Steel,Concrete or Timber Strata

Version of BCA applicable to certificate

Building classification
Part of building: Signage BCA Classification: Class 10b

Prescribed class of building work for which this certificate is issued:
Design or part of the design of building work relating to Signage

Documents setting out the design that is certified by this certificate

Document no.	Document date	Type of document (e.g. drawings. Computations, specifications, calculations etc.)	No. of pages	Prepared by
TBP126	6/27/2024	Structural Engineering Computations	7	BB

Approved by the Victorian Building Authority Page **1** of 2

Engineering A/HL-1350

The design certified by this certificate complies with the following provisions of Building Act 1993, Building Regulations 2018 or National Construction Code

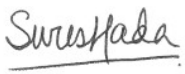
Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or other provision
NCC	National Construction Code 2022
Australian Standard	AS/NZS 1170.0 - 2002: Structural design actions Part 0: General principles.
Australian Standard	AS/NZS 1170.1 - 2002: Structural design actions Part 1: Permanent, imposed & other actions.
Australian Standard	AS/NZS 1170.2 - 2021: Structural design actions Part 2: Wind actions.
Australian Standard	AS 3600 - 2018: Concrete structures
Australian Standard	AS 4100 - 2020: Steel structures.
Australian Standard	AS/NZS 4600 - 2018: Cold-formed steel structures.
Australian Standard	AS/NZS 5131 - 2016: Structural steelwork-Fabrication and erections. -CC2

I prepared the design, or part of the design, set out in the documents listed above.

I certify that the design set out in the documents listed above complies with the provisions set out above.

I believe that I hold the required skills, experience and knowledge to issue this certificate and can demonstrate this if requested to do so.

Engineer
Name: **Suresh Hada**
Address **Suite 7, 750 Blackburn Rd, Clayton 3168**
Category and class: **Engineer Civil**
Registration No: **PE0002632**
Date of Issue of certificate: **27/Jun/2024**
Signature:



ENGINEERS AUSTRALIA
Suresh Hada
FIEAust, CPEng, NER, IPENZ
Chartered Professional Engineer
Membership No. 2621329

Vic: Registered Professional Engineer, Civil Engineer – PE0002632
NSW: Registered Certifier- Structural Engineer Reg No. BPB 2816
Qld: Registered Professional Engineer of Qld, Div: Structural RPEQ 15255
Tas: Accredited Certifier, Div: Civil (Building Act 2000, Tas) CC6537
NT: Certifying Engineer (Structural) Reg No. 227617ES

Approved by the Victorian Building Authority Page **2** of 2

Engineering CA-750 & CA-500

ROBUST Consulting Engineers Pty Ltd
Civil & Structural, ABN 14 626 910 750

Suite 7, 750 Blackburn Rd, Clayton, Vic 3168
0418133012, (+613) 85102535
www.robustengineers.com.au
suresh@robustengineers.com.au

STRUCTURAL ENGINEERING COMPUTATIONS

PROJECT:	Raine & Horne_CA750 Cantilevered Sign (0.75x0.75)	CLIENT:	Theblueprint
ADDRESS:	Generic Computation for Australia (Wind Region A) (To be used in conjuction with Design Compliance Certificate)	REVISION:	1
PROJECT CODE:	TBP126	PREPARED BY:	A.R

CERTIFIED BY

Suresh Hada

ENGINEERS AUSTRALIA

Suresh Hada
FIEAust, CPEng, NER, IPENZ
Chartered Professional Engineer
Membership No. 2621329

Vic: Registered Professional Engineer, Civil Engineer – PE0002632
NSW: Registered Certifier- Structural Engineer Reg No. BPB 2816
Qld: Registered Professional Engineer of Qld, Div: Structural RPEQ 15255
Tas: Accredited Certifier, Div: Civil (Building Act 2000, Tas) CC6537
NT: Certifying Engineer (Structural) Reg No. 227617ES

Date: 02/July/2024

Raine & Horne A/HL-1350	***Project Code: TBP126***

Scope:

Provide engineering design and details for wall mounted sign as per drawing/sketch in this computation sheet

1. Design loads to be considered
   - DL Sign dead load [self weight]
   - WL Wind load
   - EL Earthquake load as applicable
2. Design and detail letter structural arrangement
3. Design and detail support frame structure
4. Design and detail fixings to existing wall structure

Assumptions: Compuation is based on the drawing submitted by the client

Materials:		fy (Mpa)	fu (MPa)
Hot Rolled	UB, UC, PFC: Grade 300 (AS/NZS 3679.1 - 2010)	300	440
	Plate: Grade 250 (AS/NZS 3678 - 2011)	250	410
Cold Formed	SHS: Grade C450 (AS1163 - 2009)	450	500
	RHS: Grade C450 (AS 1163 - 2009)	450	500
	CHS: Grade C350 (AS 1163 - 2009)	350	430
	CA: Cold-formed angle (Duragal)	350	400
	CC: Cold formed channels (Duragal)	400	450
	CF: Cold-formed flats (Duragal)	350	400
Bolts	Bolts (4.6/S) - [Commercial]	240	400
	Bolts (8.8/S) - [High Strength Structural]	660	830
Welds	Welding - Category: General Purpose	GP	410
	Welding - Category: Structural Purpose	SP	410
Concrete:	Grade N25 [f'c @ 28 days]	25	MPa

Regulation & Codes:

BCA - 2024: Building Code of Australia - 2024
AS/NZS 1170.0 - 2002: Structural design actions Part 0: General principles.
AS/NZS 1170.1 - 2002: Structural design actions Part 1: Permanent, imposed & other actions.
AS/NZS 1170.2 - 2011: Structural design actions Part 2: Wind actions.
AS 1170.4 - 2007: Structural design actions Part 4: Earthquake actions in Australia.
AS 3600 - 2018: Concrete structures.
AS 4100 - 2020: Steel structures.
AS/NZS 4600 - 2018: Cold-formed steel structures.

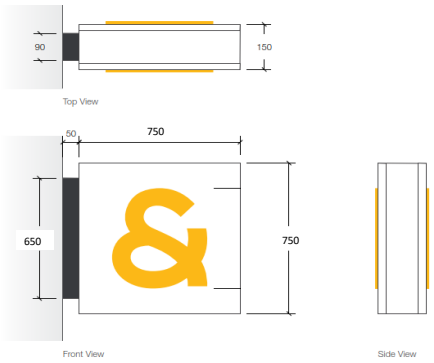
Page: 2

Engineering CA-750 & CA-500

Raine & Horne_CA750	*Project Code: TBP126*

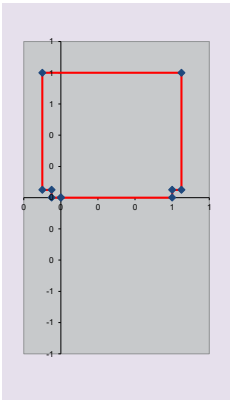
Client's Diagram 1

For final structural drawing refer 'Designed drawing' sections in the following pages



Cantilevered Sign - Illuminated
Scale 1:10

Nodes Coordinates		
	X	Y
1	0.000	0.000
2	-0.050	0.000
3	-0.050	0.050
4	-0.100	0.050
5	-0.100	0.800
6	0.650	0.800
7	0.650	0.050
8	0.600	0.050
9	0.600	0.000
10	0.000	0.000



Area	A	0.595
Centroid (x-axis)	Xcg	0.275
Centroid (y-axis)	Ycg	0.403

Page: 3

Raine & Horne_CA750	*Project Code: TBP126*		
Sign Dimensions & Wind Pressure			
Description	Parameter	Value	Unit
Region	REG	A	***
Terrain Category	TC	3	***
Average Recurrence Interval	R	100	***
Regional wind speed for R	V_R	41	m/s
Area of sign face	A_s	0.60	m
CoA from CL of LH support	x_c	0.28	m
CoA above datum	y_c	0.40	m
Width of sign face	B	0.75	m
Height of sign face	c	0.80	m
Total height of sign above datum	h	3.00	m
Height of datum above NGL (z = 0)	h_d	0.00	m
Height above NGL (rounded up)	z	3	m
Width / Height	b/c	0.94	***
Sign height ratio	c/h	0.27	***
Wind pressure coefficient	C_p	1.44	***
Terrain & height multiplier	M_z	0.83	***
Pressure at ht z	p_z	0.69	kPa
Strength design pressure	p_d	1.00	kPa
Serviceability design pressure	p_s	0.82	kPa
Total wind load on sign face	**W_s**	**0.60**	**kN**
Total wind moment	**M_s**	**0.16**	**kNm**
Number of support members	n_s	2	
Max SF in support	**V_{max}**	**0.30**	**kN**
Max Mnt in support	**M_{max}**	**0.08**	**kNm**
Self weight of sign (assumed 15 KG)	**G**	**0.2**	**kN**

Page: 4

Engineering CA-750 & CA-500

Raine & Horne_CA750		*Project Code: TBP126*	
Vertical Member (SHS), Base Plate & Chemset Anchor			
Description	Parameter	Value	Unit
Modulus of elasticity	E	70.0E+3	MPa
Total height of sign	h	0.80	m
Height to centre of area	$\bar{y}$	0.40	m
Max design SF in one vertical support	***V****	**0.30**	**kN**
Max design Moment in one vertical support	***M****	**0.08**	**kNm**
SF in one vertical support - Serviceability	V_{ser} *	**3.98**	**kN**
Moment in one vertical support - Serviceability	M_{ser} *	**13.76**	**kNm**
Designed Vertical Member: 40x20x3mm	**Grade:**	**6060T5**	

ChemSet REO 502 Plus	Bolt Spec	M12(5.8)	
Bolt lever arm	j	45.00	mm
Design tensile load per bolt	N*	0.91	kN
Design shear load per bolt	V*	0.06	kN

ChemSet REO 502 Plus
Cracked Concrete Design Check

Output Description (Strength Limit State Design)		Output Data (per anchor)	
DESIGN O.K.		MIN. CRITERIA for a,e & h - O.K.	
Des.Pullout & CONC.Tensile Capacity	ϕN_{uc} =	12.3	kN
Design STEEL Tensile Capacity	ϕN_{us} =	18.9	kN
Design CONC. Edge Shear Capacity	ϕV_{uc} =	69.4	kN
Design STEEL Shear Capacity	ϕV_{us} =	11.8	kN
Design Pryout Failure	ϕV_{usp} =	22.2	kN
Drill hole diameter	d_h =	12	mm
TENSION O.K.			
Design Tensile Capacity	ϕN_{ut} =	**12.3**	**kN**
Tension Design Check	$N^*/\phi N_{ut}$ =	**0.08**	**< 1**
SHEAR O.K.			
Design Shear Capacity	ϕV_{ut} =	**11.8**	**kN**
Shear Design Check	$V^*/\phi V_{ut}$ =	**0.08**	**< 1**
COMBINED TENSION SHEAR O.K.			
Combined Check - $N^*/\phi N_{ut} + V^*/\phi V_{ut}$ =		**0.17**	**< 1.2**

Ramset Design Calculator
v. 2019-AS5216 Edition

Depth of vertical section	d	40	mm
Width of vertical section	b	40	mm
Base plate length	L_p	90	mm
Base plate width	B_p	650	mm
Base plate thickness	t_p	16	mm
Yield Stress for base plate	f_y	100	MPa
Reduced yield stress value	$0.9*f_y$	90	MPa
Plastic moment on base plate	m_p	0.00	kNm
Base plate mininum thickness	$t_{p,min}$	0	mm
Ratio plate plastic moment design	$t_p/t_{p,min}$	**0.03**	**≤ 1 OK**

Designed Bolts: Adopt 5x ChemSet REO 502 Plus M12(5.8) Emb = 110 (galvanised)
Designed Plate: Adopt 16PL x 90 x 650 Grade 100

Page: 5

Raine & Horne_CA750		*Project Code: TBP126*	
Horizontal Sign Frame Rail Check (SHS)			
Description	Parameter	Value	Unit
Modulus of elasticity	E	70.0E+3	MPa
Height of the Sign	H	0.75	m
Effective width of the rail member	LW	0.38	m
Ultimate wind load on the member	WL	0.38	kN/m
Take horizontal member as one piece			
Length of the rail member	L	0.75	m
Moment on the rail member	M*	0.026	kNm
Shear on the rail member	V*	0.14	kN
Section Chosen: 40 x 20 x 3mm	**Grade: 6060T5**		
Shear Capacity of section	ϕV_{vx}	14.100	kN
Moment capacity of section	ϕM_{sx}	0.483	kNm
Moment of Inertia	I_x	0.102	$x10^6$ mm^4
Shear Ratio V* / ϕV_{vx}	r_v	**0.01**	**≤ 1 OK**
Moment Ratio M* / ϕM_{sx}	r_m	**0.05**	**≤ 1 OK**
Check unity	c_u	**0.04**	**≤ 1 OK**
Deflection at the top of sign	**Δ**	**0.1**	**mm**
Height to deflection ratio	**h/Δ**	**6526**	**≥ 50 OK**

Therefore 40 x 20 x 3mm use as horizontal sign frame is OKAY

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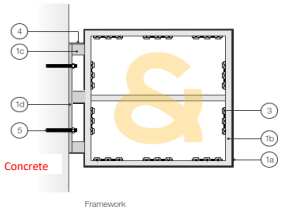
Engineering CA-750 & CA-500

Raine & Horne_CA750	*Project Code: TBP126*

Robust's Frame Diagram 1 (CA750)



GENERAL CONSTRUCTION NOTES
- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT

1. Lightbox Case
1a. Fabricated 2mm aluminium perimeter layers. 2 pac painted white.
1b. 40x20x3mm aluminium RHS perimeter frame & vertical member.
1c. 40x40x3mm aluminium SHS standoffs welded between plates.
1d. 16mm aluminium mounting plate.

2. Lightbox Faces - Illuminated
Fabricated 2mm aluminium faces with 25mm returns with equally spaced SS 316 grade CSK fixings. Paint heads to match returns

Faces intracut with profile cut opal acrylic logos protruding from signfaces with 3mm opal acrylic backing. Refer to letter detail.

3. Lighting
6500K side illuminating LEDs cool white and LED driver inside lightbox. Contractor to ensure even and adequate illumination of logo. Include 240V power cable & 3-pin plug.

4. Mounting Plate Cover
Fabricated 2mm aluminium covers, 2 pack painted R&H charcoal. Fixed to top and bottom of standoffs with SS 316 grade CSK fixings. Paint heads to match returns.

5. Wall Fixings
Nominal galvanised M10 anchors to wall structure to suit site requirements and engineers specifications.

Adopt, Galvanised ChemSet 5xM12 (5.8/S) Emb= 110mm

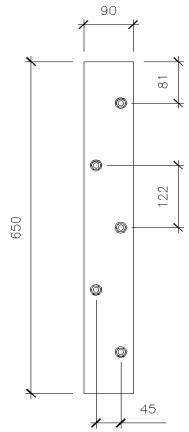


Figure: Base plate and M12 bolt location

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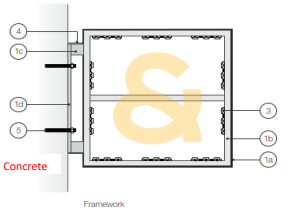
Raine & Horne_CA750	*Project Code: TBP126*

Robust's Frame Diagram 2 (CA500)



GENERAL CONSTRUCTION NOTES
- All structural members, connections and fixings to structure to be engineered and certified by a structural engineer to suit site conditions.
- Ensure materials have been certified prior to construction in accordance with NCC Part C1 fire resistance and stability to achieve a group 1 or 2 rating.

CONSTRUCTION INTENT

1. Lightbox Case
1a. Fabricated 2mm aluminium perimeter layers. 2 pac painted white.
1b. 40x20x3mm aluminium RHS perimeter frame & vertical member.
1c. 40x40x3mm aluminium SHS standoffs welded between plates.
1d. 10mm aluminium mounting plate.

2. Lightbox Faces - Illuminated
Fabricated 2mm aluminium faces with 25mm returns with equally spaced SS 316 grade CSK fixings. Paint heads to match returns

Faces intracut with profile cut opal acrylic logos protruding from signfaces with 3mm opal acrylic backing. Refer to letter detail.

3. Lighting
6500K side illuminating LEDs cool white and LED driver inside lightbox. Contractor to ensure even and adequate illumination of logo. Include 240V power cable & 3-pin plug.

4. Mounting Plate Cover
Fabricated 2mm aluminium covers, 2 pack painted R&H charcoal. Fixed to top and bottom of standoffs with SS 316 grade CSK fixings. Paint heads to match returns.

5. Wall Fixings
Nominal galvanised M10 anchors to wall structure to suit site requirements and engineers specifications.

Adopt, Galvanised ChemSet 5xM12 (5.8/S) Emb= 110mm

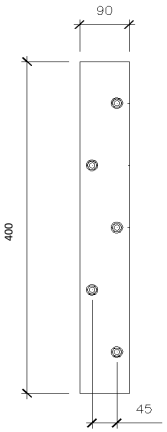


Figure: Base plate and M12 bolt location

Page: 8

Engineering CA-750 & CA-500

Building Act 1993
Section 238(1)(a)
Building Regulations 2018
Regulation 126

CERTIFICATE OF COMPLIANCE FOR PROPOSED BUILDING WORK

This certificate is issued to Relevant building surveyor

Postal address (if applicable)

Email

This certificate is issued in relation to the proposed building work at:

Address of Generic Computation for
State Australia (Wind Region A)

Nature of proposed building work

Construction of: a new signage
Height:
Type of Construction: Bolts and frame

Version of BCA applicable to certificate: NCC 2022

Building classification
Part of building: Signage NCC Classification: Class 10b

Prescribed class of building work for which this certificate is issued:
Design or part of the design of building work relating to Signage

Documents setting out the design that is certified by this certificate

Document no.	Document date	Type of document (e.g. drawings. Computations, specifications, calculations etc.)	No. of pages	Prepared by
TBP126	2/07/2024	Structural Engineering Computations	8	A.R

The design certified by this certificate complies with the following provisions of Building Act 1993, Building Regulations 2018 or National Construction Code

Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or other provision
NCC	National Construction Code 2022
Australian Standard	AS/NZS 1170.0 - 2002: Structural design actions Part 0: General principles.
Australian Standard	AS/NZS 1170.1 - 2002: Structural design actions Part 1: Permanent, imposed & other actions.
Australian Standard	AS/NZS 1170.2 - 2021: Structural design actions Part 2: Wind actions.
Australian Standard	AS 3600 - 2018: Concrete structures
Australian Standard	AS 4100 - 2020: Steel structures.
Australian Standard	AS/NZS 4600 - 2018: Cold-formed steel structures.
Australian Standard	AS/NZS 5131 - 2016: Structural steelwork-Fabrication and erections. -CC2

I prepared the design, or part of the design, set out in the documents listed above.

I certify that the design set out in the documents listed above complies with the provisions set out above.

I believe that I hold the required skills, experience and knowledge to issue this certificate and can demonstrate this if requested to do so.

Engineer
Name: **Suresh Hada**
Address **Suite 7, 750 Blackburn Rd, Clayton 3168**
Category and class: **Engineer Civil**
Registration No: **PE0002632**
Date of Issue of certificate: **2/Jul/2024**
Signature:

Sureshada

ENGINEERS AUSTRALIA
Suresh Hada
FIEAust, CPEng, NER, IPENZ
Chartered Professional Engineer
Membership No. 2621329

Vic: Registered Professional Engineer, Civil Engineer – PE0002632
NSW: Registered Certifier- Structural Engineer Reg No. BPB 2816
Qld: Registered Professional Engineer of Qld, Div: Structural RPEQ 15255
Tas: Accredited Certifier, Div: Civil (Building Act 2000, Tas) CC6537
NT: Certifying Engineer (Structural) Reg No. 227617ES

Engineering Fascia & Transom

ROBUST Consulting Engineers Pty Ltd
Civil & Structural, ABN 14 626 910 750

Suite 7, 750 Blackburn Rd, Clayton, Vic 3168
0418133012, (+613) 85102535
www.robustengineers.com.au
suresh@robustengineers.com.au

STRUCTURAL ENGINEERING COMPUTATIONS

PROJECT:	Raine & Horne FA-225-N & TR-225-N Fascia Signage (2.4mx0.65m)	CLIENT:	TBP
ADDRESS:	Generic computation for Australia (Wind Region A-C) (To be used in conjunction with Design Compliance Certificate)	REVISION:	0
PROJECT CODE:	TBP126	PREPARED BY:	BB

CERTIFIED BY

Suresh Hada
FIEAust, CPEng, NER, IPENZ
Chartered Professional Engineer
Membership No. 2621329
ENGINEERS AUSTRALIA

Vic: Registered Professional Engineer, Civil Engineer – PE0002632
NSW: Registered Certifier- Structural Engineer Reg No. BPB 2816
Qld: Registered Professional Engineer of Qld, Div: Structural RPEQ 15255
Tas: Accredited Certifier, Div: Civil (Building Act 2000, Tas) CC6537
NT: Certifying Engineer (Structural) Reg No. 227617ES

Date: 28/June/2024

Raine & Horne FA-225-N & TR-225-N	***Project Code: TBP126***

Scope:

Provide engineering design and details for wall mounted sign as per drawing/sketch in this computation sheet

1. Design loads to be considered
   - DL Sign dead load [self weight]
   - WL Wind load
   - EL Earthquake load as applicable
2. Design and detail letter structural arrangement
3. Design and detail support frame structure
4. Design and detail fixings to existing wall structure

Assumptions: Compuation is based on the drawing submitted by the client

Materials:		fy (Mpa)	fu (MPa)
Hot Rolled	UB, UC, PFC: Grade 300 (AS/NZS 3679.1 - 2010)	300	440
	Plate: Grade 250 (AS/NZS 3678 - 2011)	250	410
	SHS: Grade C450 (AS1163 - 2009)	450	500
	RHS: Grade C450 (AS 1163 - 2009)	450	500
	CHS: Grade C350 (AS 1163 - 2009)	350	430
	CA: Cold-formed angle (Duragal)	350	400
	CC: Cold formed channels (Duragal)	400	450
	CF: Cold-formed flats (Duragal)	350	400
Bolts	Bolts (4.6/S) - [Commercial]	240	400
	Bolts (8.8/S) - [High Strength Structural]	660	830
Welds	Welding - Category: General Purpose	GP	410
	Welding - Category: Structural Purpose	SP	410
Concrete:	Grade N25 [f'c @ 28 days]	25	MPa

Regulation & Codes:

BCA - 2024: Building Code of Australia - 2024
AS/NZS 1170.0 - 2002: Structural design actions Part 0: General principles.
AS/NZS 1170.1 - 2002: Structural design actions Part 1: Permanent, imposed & other actions.
AS/NZS 1170.2 - 2011: Structural design actions Part 2: Wind actions.
AS 1170.4 - 2007: Structural design actions Part 4: Earthquake actions in Australia.
AS 3600 - 2018: Concrete structures.
AS 4100 - 2020: Steel structures.
AS/NZS 4600 - 2018: Cold-formed steel structures.

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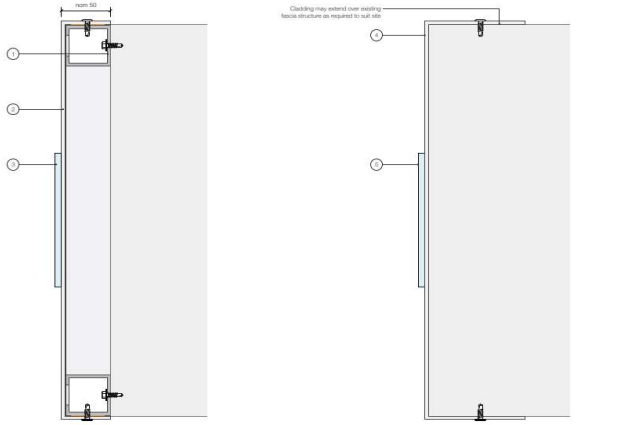
Engineering Fascia & Transom

Raine & Horne FA-225-N & TR-225-N	*Project Code: TBP126*

Client's Drawing 1: FA-225-N

FA-225-N - Fascia Lettering + **FASCIA-650-(A**or**B)** - Fascia Cladding
**225mmH logo to applied to fascias between 600-800mmH*



Construction A
Fascia Sign - Non-illuminated with frame - Typical Section
Scale 1:2

FASCIA-350-A - Fascia Cladding with Frame
FASCIA-500-A - Fascia Cladding with Frame
FASCIA-600-A - Fascia Cladding with Frame

Construction B
Fascia Sign - Non-illuminated no frame - Typical Section
Scale 1:2

FASCIA-350-B - Fascia Cladding No Frame
FASCIA-500-B - Fascia Cladding No Frame
FASCIA-600-B - Fascia Cladding No Frame

Please refer to the structural drawings for construction intents

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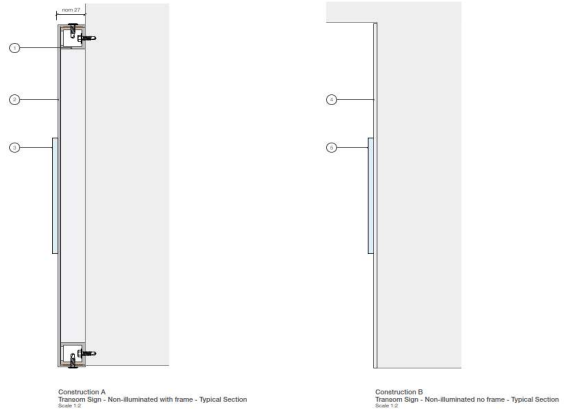
Raine & Horne FA-225-N & TR-225-N	*Project Code: TBP126*

Client's Drawing 2: TR-225-N

TR-225-N - Transom Lettering + **TRANSOM-650-(A**or**B)** - Transom Cladding
**225mmH logo to applied to transoms between 600-800mmH*



Construction A
Transom Sign - Non-illuminated with frame - Typical Section
Scale 1:2

Construction B
Transom Sign - Non-illuminated no frame - Typical Section
Scale 1:2

Page: 4

Engineering Fascia & Transom

Raine & Horne FA-225-N & TR-225-N		*Project Code: TBP126*	
Sign Dimension & Wind Pressure			
Description	Parameter	Value	Unit
Signage face height	h_s	0.23	m
Signage total hieght	h	0.65	m
Signage average width	b	2.40	m
Proportion of cladded area	A_c	1.00	-
Signage total area	A_s	0.54	m^2
Height of datum above NGL (z = 0)	h_d	3.00	m
Height above NGL (rounded up)	z	4	m
Select sign location		Windward wall	
Wind region	WR	C	-
Importance Level	IL	2	-
Terrain Category	TC	3	-
Average Recurrence Interval	R	500	-
Regional wind speed	V_R	69.0	m/s
Dynamic response factor	C_{dyn}	1.00	-
Area reduction factor	k_a	1.00	-
Combination factor	k_c	1.00	-
Local pressure factor	k_l x C_{pe}	0.80	-
Porous cladding factor	k_p	1.00	-
Aerodynamic Factor (Cfig=Cpe.ka.kc.kl.k	C_{fig}	0.80	-
Terrain & height multiplier	M_z	0.83	-
Pressure at ht z	p_z	1.97	kPa
Strength design pressure	p_d	1.57	kPa
Serviceability design pressure	p_s	1.05	kPa
Total wind load on entire signage	**W_s**	**0.9**	**kN**
Signage self weight	**G**	**0.1**	**kN**

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Raine & Horne FA-225-N & TR-225-N	*Project Code: TBP126*		
Horizontal Sign Frame Rail Check (SHS)			
Description	Parameter	Value	Unit
Modulus of elasticity	E	70.0E+3	MPa
Height of the Sign	H	0.65	m
Effective width of the rail member	LW	0.325	m
Ultimate wind load on the member	WL	0.33	kN/m
Take horizontal member as one piece			
Length of the rail member	L	1.20	m
Moment on the rail member	M*	0.059	kNm
Shear on the rail member	V*	0.20	kN
Section Chosen: 40x40x3 SHS Aluminium	**6060 T5**		
Shear Capacity of section	ϕV_{vx}	14.140	kN
Moment capacity of section	ϕM_{sx}	0.470	kNm
Moment of Inertia	I_x	0.102	$x10^6 mm^4$
Shear Ratio V* / ϕV_{vx}	**r_v**	**0.01**	**≤ 1 OK**
Moment Ratio M* / ϕM_{sx}	**r_m**	**0.12**	**≤ 1 OK**
Check unity	**c_u**	**0.10**	**≤ 1 OK**
Deflection at the top of sign	**Δ**	**0.7**	**mm**
Height to deflection ratio	**h/Δ**	**1843**	**≥ 50 OK**

Therefore 40x40x3 SHS used as horizontal sign frame is OKAY

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Engineering Fascia & Transom

Raine & Horne FA-225-N & TR-225-N		*Project Code: TBP126*	
Bolt fixing for concrete strata			
Description	Parameter	Value	Unit
Assume calculation is per rectangular frame			
Fascia Height	h	0.65	m
Fascia Width	b	2.40	m
Fascia Area	A	1.56	m^2
Ultimate wind load on whole sign	WL_{uls}	2.46	kN
Deadload per letter (factor of 1.3)	DL	1.60	kN
Average number of screw connection	n	8	
Tension per bolt	N_t	0.31	kN
Shear per bolt	V_b	0.20	kN
Using, M10 (SS/Class 50) Bolt			
Screw tensile strength	ϕN_{uc}	18.56	kN
Screw shear strength	ϕV_{us}	10.38	kN
N / ϕNuc	**η_t**	**0.02**	**≤ 1 OK**
V / ϕV	**η_v**	**0.02**	**≤ 1 OK**
Check unity	**c_u**	**0.04**	**≤ 1.2 OK**
Minimum of 10xM10 bolts to either Girt or stud + ST 5.8 (#12) screws @500 c/c to metal façade (0.48BMT) (uniformly distributed)			
M8 Coach screws to timber Emb depth 30mm. Pull-out capacity = 16.21 kN. OK [Timber Fixing]			
M10 bolts to concrete for Emb depth 90mm. Pull-out capacity = 13.6 kN. OK [Concrete Fixing]			
See recommended fixings in the next page			

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Raine & Horne FA-225-N & TR-225-N	*Project Code: TBP126*
Connection Specifications to various Strata	
Strata	**Fixing requirement for Region A, B & C**
1) Metal Wall	Minimum of 10xM10 bolts to either Girt or stud + ST 5.8 (#12) screws @500 c/c to metal façade 0.48 BMT (uniformly distributed)
2) Timber	Minimum of 10xM8 coach screws to either Girt or stud + ST 5.8 (#12) screws @500 c/c to metal façade
3) Concrete	10xM10 (4.6/S) Chemset Bolts. Embedment depth = 90mm.
4) Structural tube sections	Steel SHS or RHS with minimum wall thickness of 3mm. Minimum 8 x M12x75mm Hollow bolts + ST 5.8 (#12) screws @500c/c to metal facade (uniformly distributed).

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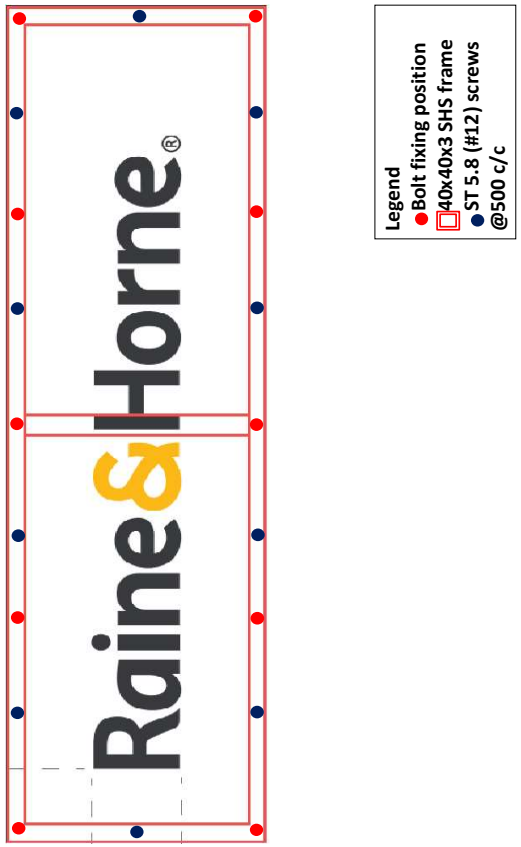
Engineering Fascia & Transom

Raine & Horne FA-225-N & TR-225-N	*Project Code: TBP126*
Robust's Frame Diagram	



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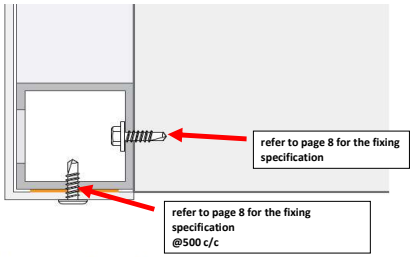
Raine & Horne FA-225-N & TR-225-N	*Project Code: TBP126*
Robust's letter fixing diagram	



Construction A
Fascia Sign - Non-illuminated with frame - Typical Section
Scale 1:2

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Engineering Fascia & Transom

Building Act 1993
Section 238(1)(a)
Building Regulations 2018
Regulation 126

CERTIFICATE OF COMPLIANCE FOR PROPOSED BUILDING WORK

This certificate is issued to Relevant building surveyor

Postal address (if applicable)

Email

This certificate is issued in relation to the proposed building work at:

Address of Generic computation for
State Australia (Wind Region A-C)

Nature of proposed building work

Construction of: a new signage
Height:
Type of Construction: Steel, Timber, and Concrete Strata

Version of BCA applicable to certificate

Building classification
Part of building: Signage BCA Classification: Class 10b

Prescribed class of building work for which this certificate is issued:
Design or part of the design of building work relating to Signage

Documents setting out the design that is certified by this certificate

Document no.	Document date	Type of document (e.g. drawings. Computations, specifications, calculations etc.)	No. of pages	Prepared by
TBP126	6/28/2024	Structural Engineering Computations	10	BB

Approved by the Victorian Building Authority Page **1** of 2

The design certified by this certificate complies with the following provisions of Building Act 1993, Building Regulations 2018 or National Construction Code

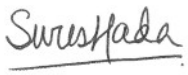
Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or other provision
NCC	National Construction Code 2022
Australian Standard	AS/NZS 1170.0 - 2002: Structural design actions Part 0: General principles.
Australian Standard	AS/NZS 1170.1 - 2002: Structural design actions Part 1: Permanent, imposed & other actions.
Australian Standard	AS/NZS 1170.2 - 2021: Structural design actions Part 2: Wind actions.
Australian Standard	AS 3600 - 2018: Concrete structures
Australian Standard	AS 4100 - 2020: Steel structures.
Australian Standard	AS/NZS 4600 - 2018: Cold-formed steel structures.
Australian Standard	AS/NZS 5131 - 2016: Structural steelwork-Fabrication and erections. -CC2

I prepared the design, or part of the design, set out in the documents listed above.

I certify that the design set out in the documents listed above complies with the provisions set out above.

I believe that I hold the required skills, experience and knowledge to issue this certificate and can demonstrate this if requested to do so.

Engineer
Name: **Suresh Hada**
Address **Suite 7, 750 Blackburn Rd, Clayton 3168**
Category and class: **Engineer Civil**
Registration No: **PE0002632**
Date of Issue of certificate: **28/Jun/2024**
Signature:



ENGINEERS AUSTRALIA
Suresh Hada
FIEAust, CPEng, NER, IPENZ
Chartered Professional Engineer
Membership No. 2621329

Vic: Registered Professional Engineer, Civil Engineer – PE0002632
NSW: Registered Certifier- Structural Engineer Reg No. BPB 2816
Qld: Registered Professional Engineer of Qld, Div: Structural RPEQ 15255
Tas: Accredited Certifier, Div: Civil (Building Act 2000, Tas) CC6537
NT: Certifying Engineer (Structural) Reg No. 227617ES

Approved by the Victorian Building Authority Page **2** of 2

Engineering UA1800

ROBUST Consulting Engineers Pty Ltd
Civil & Structural, ABN 14 626 910 750

Suite 7, 750 Blackburn Rd, Clayton, Vic 3168
0418133012, (+613) 85102535
www.robustengineers.com.au
suresh@robustengineers.com.au

STRUCTURAL ENGINEERING COMPUTATIONS

PROJECT:	Raine & Horne_UA1800 Awning Signage (1.8x0.42)	CLIENT:	Theblueprint
ADDRESS:	Generic Computation for Australia (Wind Region A) (To be used in conjuction with Design Compliance Certificate)	REVISION:	0
PROJECT CODE:	TBP126	PREPARED BY:	A.R

CERTIFIED BY

Suresh Hada
FIEAust, CPEng, NER, IPENZ
Chartered Professional Engineer
Membership No. 2621329
ENGINEERS AUSTRALIA

Vic: Registered Professional Engineer, Civil Engineer – PE0002632
NSW: Registered Certifier- Structural Engineer Reg No. BPB 2816
Qld: Registered Professional Engineer of Qld, Div: Structural RPEQ 15255
Tas: Accredited Certifier, Div: Civil (Building Act 2000, Tas) CC6537
NT: Certifying Engineer (Structural) Reg No. 227617ES

Date: 13/June/2024

Raine & Horne_UA1800	*Project Code: TBP126*

Scope:

Provide engineering design and details for wall mounted sign as per drawing/sketch in this computation sheet

1. Design loads to be considered
   - DL Sign dead load [self weight]
   - WL Wind load
   - EL Earthquake load as applicable
2. Design and detail fixings to existing wall structure

Assumptions: Compuation is based on the drawing submitted by the client

Exclusion: The strata where the sign is connected shall be checked by other engineers before installation. This computation excludes checking of sign support structure.

Materials:		fy (Mpa)	fu (MPa)
Hot Rolled	UB, UC, PFC: Grade 300 (AS/NZS 3679.1 - 2010)	300	440
	Plate: Grade 250 (AS/NZS 3678 - 2011)	250	410
Cold Formed	SHS: Grade C450 (AS1163 - 2009)	450	500
	RHS: Grade C450 (AS 1163 - 2009)	450	500
	CHS: Grade C350 (AS 1163 - 2009)	350	430
	CA: Cold-formed angle (Duragal)	350	400
	CC: Cold formed channels (Duragal)	400	450
	CF: Cold-formed flats (Duragal)	350	400
Bolts	Bolts (4.6/S) - [Commercial]	240	400
	Bolts (8.8/S) - [High Strength Structural]	660	830
Welds	Welding - Category: General Purpose	GP	410
	Welding - Category: Structural Purpose	SP	410
Concrete:	Grade N25 [f'c @ 28 days]	25	MPa

Regulation & Codes:

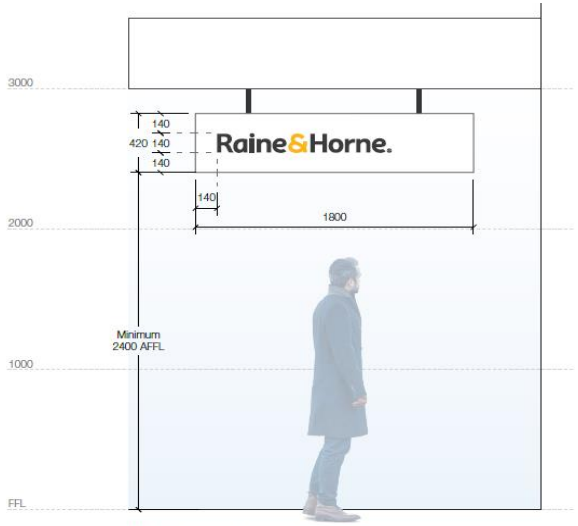
BCA - 2024: Building Code of Australia - 2024
AS/NZS 1170.0 - 2002: Structural design actions Part 0: General principles.
AS/NZS 1170.1 - 2002: Structural design actions Part 1: Permanent, imposed & other actions.
AS/NZS 1170.2 - 2011: Structural design actions Part 2: Wind actions.
AS 1170.4 - 2007: Structural design actions Part 4: Earthquake actions in Australia.
AS 3600 - 2018: Concrete structures.
AS 4100 - 2020: Steel structures.
AS/NZS 4600 - 2018: Cold-formed steel structures.

Page: 2

Engineering UA1800

Raine & Horne_UA1800	*Project Code: TBP126*

Client's Drawing 1

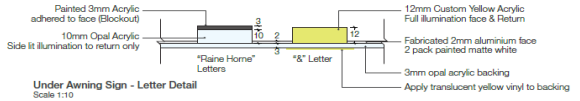


UA-1800 - Under Awning Sign - Right Side
Scale 1:25

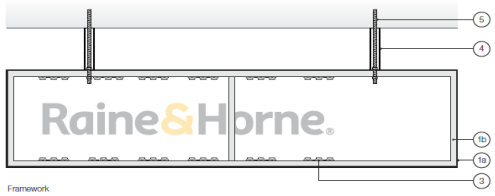
Page: 3

Raine & Horne_UA1800	*Project Code: TBP126*

Client's Drawing 2

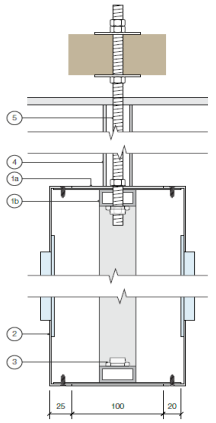


Under Awning Sign - Letter Detail
Scale 1:10



Framework

Under Awning Sign - Illuminated
Scale 1:10



Typical Section Detail

Under Awning Sign - Illuminated
Scale 1:3

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Engineering UA1800

Raine & Horne_UA1800		*Project Code: TBP126*	
Sign Dimension & Wind Pressure			
Description	Parameter	Value	Unit
Signage face height	h_s	0.42	m
Signage total hieght	h	0.42	m
Signage average width	b	1.80	m
Proportion of cladded area	A_c	1.00	-
Signage total area	A_s	0.76	m^2
Height of datum above NGL (z = 0)	h_d	2.40	m
Height above NGL (rounded up)	z	3	m
Select sign location		Near wall edge (h < 25m)	
Wind region	WR	A	-
Importance Level	IL	2	-
Terrain Category	TC	3	-
Average Recurrence Interval	R	500	-
Regional wind speed	V_R	45.0	m/s
Dynamic response factor	C_{dyn}	1.00	-
Area reduction factor	k_a	1.00	-
Combination factor	k_c	1.00	-
Local pressure factor	k_l x C_{pe}	1.30	-
Porous cladding factor	k_p	1.00	-
Aerodynamic Factor (Cfig=Cpe.ka.kc.kl.k	C_{fig}	1.30	-
Terrain & height multiplier	M_z	0.83	-
Pressure at ht z	p_z	0.84	kPa
Strength design pressure	p_d	1.09	kPa
Serviceability design pressure	p_s	0.73	kPa
Total wind load on entire signage	**W_s**	**0.8**	**kN**
Signage self weight	**G**	**0.2**	**kN**

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Raine & Horne_UA1800		*Project Code: TBP126*	
Horizontal Sign Frame Rail Check (RHS)			
Description	Parameter	Value	Unit
Modulus of elasticity	E	70.0E+3	MPa
Height of the Sign	H	0.42	m
Effective width of the rail member	LW	0.21	m
Ultimate wind load on the member	WL	0.23	kN/m
Take horizontal member as one piece			
Length of the rail member	L	0.90	m
Moment on the rail member	M*	0.023	kNm
Shear on the rail member	V*	0.10	kN
Section Chosen: 40 x 25 x 3mm	**Grade: 6060T5**		
Shear Capacity of section	ϕV_{vx}	14.100	kN
Moment capacity of section	ϕM_{sx}	0.317	kNm
Moment of Inertia	I_x	0.071	$x10^6\ mm^4$
Shear Ratio V* / ϕV_{vx}	**r_v**	**0.01**	**≤ 1 OK**
Moment Ratio M* / ϕM_{sx}	**r_m**	**0.07**	**≤ 1 OK**
Check unity	**c_u**	**0.06**	**≤ 1 OK**
Deflection at the top of sign	**Δ**	**0.2**	**mm**
Height to deflection ratio	**h/Δ**	**4324**	**≥ 50 OK**
Therefore 40 x 25 x 3mm use as horizontal sign frame is OKAY			

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Engineering UA1800

Raine & Horne_UA1800	*Project Code: TBP126*		
Vertical Sign Frame Check (RHS)			
Description	Parameter	Value	Unit
Modulus of elasticity	E	70.0E+3	MPa
Height of the Sign	H	0.42	m
Effective width of the vertical member	LW	0.900	m
Ultimate wind load on the member	WL	0.98	kN/m
Take vertical member as one piece			
Length of the rail member	L	0.42	m
Moment on the rail member	M*	0.022	kNm
Shear on the rail member	V*	0.21	kN
Section Chosen: 40 x 25 x 3mm	**Grade: 6060T5**		
Shear Capacity of section	ϕV_{vx}	14.100	kN
Moment capacity of section	ϕM_{sx}	0.317	kNm
Moment of Inertia	I_x	0.071	$x10^6 mm^4$
Shear Ratio V* / ϕV_{vx}	**r_v**	**0.01**	**≤ 1 OK**
Moment Ratio M* / ϕM_{sx}	**r_m**	**0.07**	**≤ 1 OK**
Check unity	**c_u**	**0.06**	**≤ 1 OK**
Deflection at the top of sign	**Δ**	**0.04**	**mm**
Height to deflection ratio	**h/Δ**	**9928**	**≥ 50 OK**
Therefore 40 x 25 x 3mm use as vertical sign frame is OKAY			

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Raine & Horne_UA1800	`		
Ceiling Fixing (Steel Strata)			
Description	Parameter	Value	Unit
Sign Height	h	0.42	m
Sign Width	b	1.80	m
Sign Area	A	0.76	m^2
Ultimate wind load on whole sign	WL_{uls}	0.82	kN
Deadload per letter (assumed weight = 0.20 kPa, factor of 1.3)	DL	0.34	kN
Average number of bolt connection	n	2	
Tension per bolt	N_t	0.41	kN
Shear per bolt	V_b	0.17	kN
Using, M10 threaded rod (Class 4.6)			
Bolt tensile strength	ϕN_{uc}	23.20	kN
Bolt shear strength	ϕV_{us}	12.60	kN
N / ϕNuc	**η_t**	**0.02**	**≤ 1 OK**
V / ϕV	**η_v**	**0.01**	**≤ 1 OK**
Check unity	**c_u**	**0.03**	**≤ 1.2 OK**
Provide Nominal galvanised 2 x M10 threaded rod bolted to top of lightbox and anchored or bolted to ceiling structure are SATISFACTORY.			

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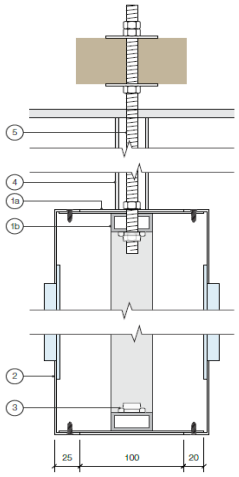
Engineering UA1800

Raine & Horne_UA1800	*Project Code: TBP126*

Robust's Frame Diagram

Framework

Under Awning Sign - Illuminated
Scale 1:10



Typical Section Detail

Under Awning Sign - Illuminated
Scale 1:3

CONSTRUCTION INTENT

1. Lightbox Case
1a. Fabricated 2mm aluminium perimeter layers. 2 pac painted white.
1b. 40x25x3mm aluminium RHS perimeter frame & vertical member.

2. Lightbox Faces
Fabricated 2mm aluminium faces with 25mm returns with equally spaced SS 316 grade CSK fixings. Paint heads to match returns

Faces intracut with profile cut opal acrylic logos protruding from signfaces with 3mm opal acrylic backing. Refer to letter detail.

Trademark Symbol profile cut 3mm acrylic adhesive fixed to face. 2 pack painted Charcoal.

3. Lighting
6500K side illuminating LEDs cool white and LED driver inside lightbox. Contractor to ensure even and adequate illumination of logo. Include 240V power cable & 3-pin plug.

4. Droppers
32x3mm aluminium SHS dropper sleeves, 2 pack painted R&H charcoal.

5. Ceiling Fixings
Nominal galvanised M10 threaded rod bolted to top of lightbox and anchored or bolted to ceiling structure to suit site requirements and engineers specifications.

Indicative ceiling structure shown in typical section detail.

Page: 9

Building Act 1993
Section 238(1)(a)
Building Regulations 2018
Regulation 126

CERTIFICATE OF COMPLIANCE FOR PROPOSED BUILDING WORK

This certificate is issued to Relevant building surveyor

Postal address (if applicable)

Email

This certificate is issued in relation to the proposed building work at:

Address of Generic Computation for
State Australia (Wind Region A)

Nature of proposed building work

Construction of: a new signage
Height:
Type of Construction: Steel strata

Version of BCA applicable to certificate

Building classification
Part of building: Signage BCA Classification: Class 10b

Prescribed class of building work for which this certificate is issued:
Design or part of the design of building work relating to Signage

Documents setting out the design that is certified by this certificate

Document no.	Document date	Type of document (e.g. drawings. Computations, specifications, calculations etc.)	No. of pages	Prepared by
TBP126	13/06/2024	Structural Engineering Computations	9	A.R

Approved by the Victorian Building Authority Page **1** of 2

Engineering UA1800

The design certified by this certificate complies with the following provisions of Building Act 1993, Building Regulations 2018 or National Construction Code

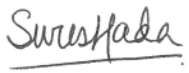
Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or other provision
NCC	National Construction Code 2022
Australian Standard	AS/NZS 1170.0 - 2002: Structural design actions Part 0: General principles.
Australian Standard	AS/NZS 1170.1 - 2002: Structural design actions Part 1: Permanent, imposed & other actions.
Australian Standard	AS/NZS 1170.2 - 2021: Structural design actions Part 2: Wind actions.
Australian Standard	AS 3600 - 2018: Concrete structures
Australian Standard	AS 4100 - 2020: Steel structures.
Australian Standard	AS/NZS 4600 - 2018: Cold-formed steel structures.
Australian Standard	AS/NZS 5131 - 2016: Structural steelwork-Fabrication and erections. -CC2

I prepared the design, or part of the design, set out in the documents listed above.

I certify that the design set out in the documents listed above complies with the provisions set out above.

I believe that I hold the required skills, experience and knowledge to issue this certificate and can demonstrate this if requested to do so.

Engineer
Name: **Suresh Hada**
Address **Suite 7, 750 Blackburn Rd, Clayton 3168**
Category and class: **Engineer Civil**
Registration No: **PE0002632**
Date of Issue of certificate: **13/Jun/2024**
Signature:



ENGINEERS AUSTRALIA
Suresh Hada
FIEAust, CPEng, NER, IPENZ
Chartered Professional Engineer
Membership No. 2621329

Vic: Registered Professional Engineer, Civil Engineer – PE0002632
NSW: Registered Certifier- Structural Engineer Reg No. BPB 2816
Qld: Registered Professional Engineer of Qld, Div: Structural RPEQ 15255
Tas: Accredited Certifier, Div: Civil (Building Act 2000, Tas) CC6537
NT: Certifying Engineer (Structural) Reg No. 227617ES

Approved by the Victorian Building Authority Page **2** of 2

Engineering WM/HL-500

ROBUST Consulting Engineers Pty Ltd
Civil & Structural, ABN 14 626 910 750

Suite 7, 750 Blackburn Rd, Clayton, Vic 3168
0418133012, (+613) 85102535
www.robustengineers.com.au
suresh@robustengineers.com.au

STRUCTURAL ENGINEERING COMPUTATIONS

PROJECT:	Raine & Horne WM/HL-500 Fascia Signage (1.78x6.5)	CLIENT:	TBP
ADDRESS:	Generic computation for Australia (Wind Region A-C) (To be used in conjunction with Design Compliance Certificate)	REVISION:	0
PROJECT CODE:	TBP126	PREPARED BY:	BB

CERTIFIED BY

ENGINEERS AUSTRALIA
Suresh Hada
FIEAust, CPEng, NER, IPENZ
Chartered Professional Engineer
Membership No. 2621329

Vic: Registered Professional Engineer, Civil Engineer – PE0002632
NSW: Registered Certifier- Structural Engineer Reg No. BPB 2816
Qld: Registered Professional Engineer of Qld, Div: Structural RPEQ 15255
Tas: Accredited Certifier, Div: Civil (Building Act 2000, Tas) CC6537
NT: Certifying Engineer (Structural) Reg No. 227617ES

Date: 27/June/2024

Raine & Horne WM/HL-500	***Project Code: TBP126***

Scope:

Provide engineering design and details for wall mounted sign as per drawing/sketch in this computation sheet

1. Design loads to be considered
   - DL Sign dead load [self weight]
   - WL Wind load
   - EL Earthquake load as applicable
2. Design and detail letter structural arrangement
3. Design and detail support frame structure
4. Design and detail fixings to existing wall structure

Assumptions: Compuation is based on the drawing submitted by the client

Materials:		fy (Mpa)	fu (MPa)
Hot Rolled	UB, UC, PFC: Grade 300 (AS/NZS 3679.1 - 2010)	300	440
	Plate: Grade 250 (AS/NZS 3678 - 2011)	250	410
Cold Formed	SHS: Grade C450 (AS1163 - 2009)	450	500
	RHS: Grade C450 (AS 1163 - 2009)	450	500
	CHS: Grade C350 (AS 1163 - 2009)	350	430
	CA: Cold-formed angle (Duragal)	350	400
	CC: Cold formed channels (Duragal)	400	450
	CF: Cold-formed flats (Duragal)	350	400
Bolts	Bolts (4.6/S) - [Commercial]	240	400
	Bolts (8.8/S) - [High Strength Structural]	660	830
Welds	Welding - Category: General Purpose	GP	410
	Welding - Category: Structural Purpose	SP	410
Concrete:	Grade N25 [f'c @ 28 days]	25	MPa

Regulation & Codes:

BCA - 2024: Building Code of Australia - 2024
AS/NZS 1170.0 - 2002: Structural design actions Part 0: General principles.
AS/NZS 1170.1 - 2002: Structural design actions Part 1: Permanent, imposed & other actions.
AS/NZS 1170.2 - 2011: Structural design actions Part 2: Wind actions.
AS 1170.4 - 2007: Structural design actions Part 4: Earthquake actions in Australia.
AS 3600 - 2018: Concrete structures.
AS 4100 - 2020: Steel structures.
AS/NZS 4600 - 2018: Cold-formed steel structures.

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Engineering WM/HL-500

Raine & Horne WM/HL-500	Project Code: TBP126

Client's Drawing 1

WORDMARK LOGO - HIGH LEVEL
Fabricated wordmark.
Illuminated or non-illuminated depending on Council regulations and approval.
Refer to following pages for details.

APPLICATION NOTES

A. Logo Size
Consistent sizes across all sites:
- Small 2341mmW x 300mmH
- Large 3900mmW x 500mmH.

B. Clear Space
Minimum clear space is the logo Ampersand height.

C. Logo Placement
Logo to be centred aligned on the most prominent high level building wall.

Page: 3

Raine & Horne WM/HL-500	Project Code: TBP126

Client's Drawing 2

CONSTRUCTION INTENT

1. Letter Body
Halo illuminated letters fabricated 3mm aluminium with returns 60mm deep. 2 pac painted to match R&H Charcoal. S/S countersunk screw fix faces to angle brackets & paint heads to match returns.

2. Illuminated Backs
Profile cut 9.5mm Zenolex clear polycarbonate (group 1 or 2 fire rated) letter backs or similar.

3. Back Brackets
Nominal 25x25x3mm aluminium angle brackets. M6 S/S CSK bolts angle bracket to polycarbonate backs.

4. Lighting
6500K LEDs (IP67) cool white fitted to backs, type & layout to suppliers specifications, ensure no shadowing & hot spotting.

5. Wall Fixings
Nominal M8 S/S anchors with Ø16mm CHS sleeves to match wall colour to engineers specification to suit structure at each location.

6. Trademark Symbol
Profile cut 6mm opal polycarbonate (group 1 or 2 fire rated) adhesive fixed direct to wall. 2 pack painted Charcoal.

7. Ampersand Body
Face illuminated ampersand fabricated 3mm aluminium with returns 60mm deep. 2 pac painted to match R&H Gold.

8. Illuminated Faces
Fabricated 4.5mm Zenolex opal polycarbonate (group 1 or 2 fire rated) face or similar, with returns for fixing to Ampersand body. Face applied translucent yellow vinyl. 2 pack paint returns of faces to match R&H Gold, opaque. S/S countersunk screw fix faces to body & paint heads to match returns.

Page: 4

Engineering WM/HL-500

Raine & Horne WM/HL-500		*Project Code: TBP126*	
Sign Dimension & Wind Pressure			
Description	Parameter	Value	Unit
Signage face height	h_s	0.50	m
Signage total height	h	1.78	m
Signage average width	b	6.50	m
Proportion of cladded area	A_c	1.00	-
Signage total area	A_s	3.25	m^2
Height of datum above NGL (z = 0)	h_d	3.00	m
Height above NGL (rounded up)	z	5	m
Select sign location		Windward wall	
Wind region	WR	C	-
Importance Level	IL	2	-
Terrain Category	TC	3	-
Average Recurrence Interval	R	500	-
Regional wind speed	V_R	69.0	m/s
Dynamic response factor	C_{dyn}	1.00	-
Area reduction factor	k_a	1.00	-
Combination factor	k_c	1.00	-
Local pressure factor	k_l x C_{pe}	0.80	-
Porous cladding factor	k_p	1.00	-
Aerodynamic Factor (Cfig=Cpe.ka.kc.kl.k	C_{fig}	0.80	-
Terrain & height multiplier	M_z	0.83	-
Pressure at ht z	p_z	1.97	kPa
Strength design pressure	p_d	1.57	kPa
Serviceability design pressure	p_s	1.05	kPa
Total wind load on entire signage	**W_s**	**5.1**	**kN**
Signage self weight	**G**	**0.8**	**kN**

Page: 5

Raine & Horne WM/HL-500		*Project Code: TBP126*	
Bolt letter fixing for concrete strata			
Description	Parameter	Value	Unit
Assume calculation is per letter, and shape rectangular			
Letter Height	h	0.50	m
Letter Width	b	0.45	m
Letter Area	A	0.23	m^2
Ultimate wind load on whole sign	WL_{uls}	0.35	kN
Deadload per letter (assumed weight = 0.20 kPa, factor of 1.3)	DL	0.46	kN
Average number of bolt connection	n	2	
Tension per bolt	N_t	0.18	kN
Shear per bolt	V_b	0.23	kN
Using, M10 (SS Class 50)			
Bolt tensile strength	ϕN_{uc}	18.56	kN
Bolt shear strength	ϕV_{us}	10.38	kN
N / ϕNuc	**η_t**	**0.01**	**≤ 1 OK**
V / ϕV	**η_v**	**0.02**	**≤ 1 OK**
Check unity	**c_u**	**0.03**	**≤ 1.2 OK**
Provide 2xM10 (SS Class 50) bolts for each letter fixing to concrete Emb depth 90 mm.			
M8 Coach screws to timber for Emb depth 30mm. Pull-out capacity = 16.21 kN. OK			
M10 bolts to concrete for Emb depth 90mm. Pull-out capacity = 13.6 kN. OK			
see recommended fixings in the next page			

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Engineering WM/HL-500

Raine & Horne WM/HL-500	*Project Code: TBP126*
Connection Specifications to various Strata:	
Strata	**Fixing requirement for Region A,B & C**
1) Metal Wall	Minimum of 2xM10 bolts to either Grit or stud + ST 5.8 (#12) screws to 0.48 BMT metal façade as per page 9.
2) Timber	Minimum of 2xM8 coach screws to either Gurt or stud + ST 5.8 (#12) screws as per page 9.
3) Concrete	M10 (4.6/S) Chemset bolts. Embedment depth = 90 mm. See page 10 for fixing positions.
4) Structural tube sections	Steel SHS or RHS with minimum wall thickness of 3 mm. Minimum 2 x M16x75mm Hollow bolts + ST 5.8 (#12) screws to metal facade as per page 9.

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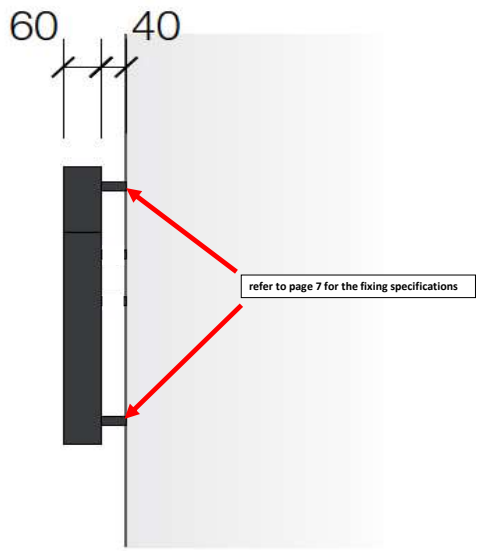
Raine & Horne WM/HL-500	*Project Code: TBP126*
Robust's letter fixing diagram 1	



Side View

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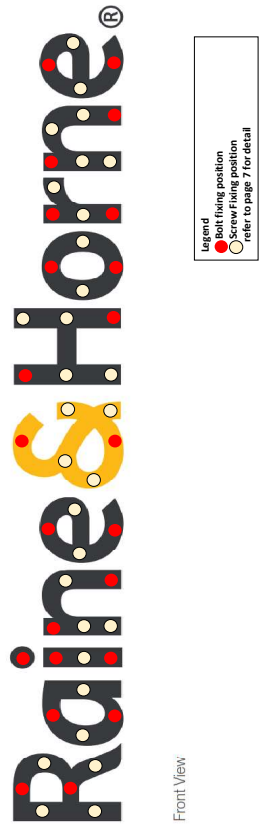
Engineering WM/HL-500

Raine & Horne WM/HL-500	Project Code: TBP126
Robust's letter fixing diagram 2: Metal, Timber, and Hollow Section Strata	



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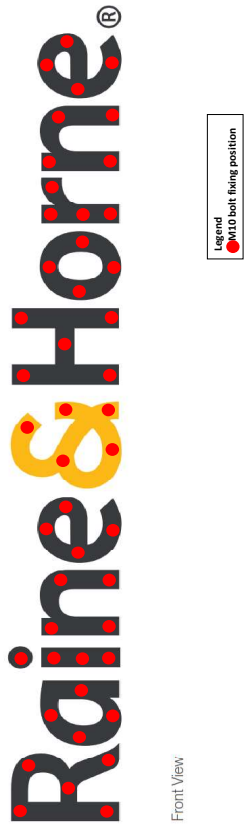
Raine & Horne WM/HL-500	Project Code: TBP126
Robust's letter fixing diagram 3: Concrete Strata	



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Engineering WM/HL-500

Building Act 1993
Section 238(1)(a)
Building Regulations 2018
Regulation 126

CERTIFICATE OF COMPLIANCE FOR PROPOSED BUILDING WORK

This certificate is issued to Relevant building surveyor

Postal address (if applicable)

Email

This certificate is issued in relation to the proposed building work at:

Address of Generic computation for
State Australia (Wind Region A-C)

Nature of proposed building work

Construction of: a new signage
Height:
Type of Construction: Steel Timber, and Concrete Strata

Version of BCA applicable to certificate

Building classification
Part of building: Signage BCA Classification: Class 10b

Prescribed class of building work for which this certificate is issued:
Design or part of the design of building work relating to Signage

Documents setting out the design that is certified by this certificate

Document no.	Document date	Type of document (e.g. drawings. Computations, specifications, calculations etc.)	No. of pages	Prepared by
TBP126	6/27/2024	Structural Engineering Computations	10	BB

The design certified by this certificate complies with the following provisions of Building Act 1993, Building Regulations 2018 or National Construction Code

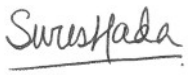
Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or other provision
NCC	National Construction Code 2022
Australian Standard	AS/NZS 1170.0 - 2002: Structural design actions Part 0: General principles.
Australian Standard	AS/NZS 1170.1 - 2002: Structural design actions Part 1: Permanent, imposed & other actions.
Australian Standard	AS/NZS 1170.2 - 2021: Structural design actions Part 2: Wind actions.
Australian Standard	AS 3600 - 2018: Concrete structures
Australian Standard	AS 4100 - 2020: Steel structures.
Australian Standard	AS/NZS 4600 - 2018: Cold-formed steel structures.
Australian Standard	AS/NZS 5131 - 2016: Structural steelwork-Fabrication and erections. -CC2

I prepared the design, or part of the design, set out in the documents listed above.

I certify that the design set out in the documents listed above complies with the provisions set out above.

I believe that I hold the required skills, experience and knowledge to issue this certificate and can demonstrate this if requested to do so.

Engineer
Name: **Suresh Hada**
Address **Suite 7, 750 Blackburn Rd, Clayton 3168**
Category and class: **Engineer Civil**
Registration No: **PE0002632**
Date of Issue of certificate: **27/Jun/2024**
Signature:



ENGINEERS AUSTRALIA
Suresh Hada
FIEAust, CPEng, NER, IPENZ
Chartered Professional Engineer
Membership No. 2621329

Vic: Registered Professional Engineer, Civil Engineer – PE0002632
NSW: Registered Certifier- Structural Engineer Reg No. BPB 2816
Qld: Registered Professional Engineer of Qld, Div: Structural RPEQ 15255
Tas: Accredited Certifier, Div: Civil (Building Act 2000, Tas) CC6537
NT: Certifying Engineer (Structural) Reg No. 227617ES

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