

APPLICATION FOR DEVELOPMENT AND/OR CONSTRUCTION

TYPE OF APPLICATION

Please tick the type/s of applications required

☐ DEVELOPMENT APPLICATION

Please also nominate below (if applicable)

☐ Designated Development ☐ Modification (S96) DA No

☐ Integrated Development ☐ Extension of Consent DA No

☐ Advertised Development ☐ Review of Determination DA No

☐ Other

☐ SUBDIVISION

Number of lots

☐ Subdivision Certificate

Existing

☐ Strata

Proposed

☐ Land/Torrens Title

Road ☐ Yes

☐ Community Title

☐ No

Related DA No.

Does the Subdivision include works other than a road? ☐ Yes ☐ No

☒ CONSTRUCTION CERTIFICATE

Related DA No.

☐ COMPLYING DEVELOPMENT CERTIFICATE

Please select the Planning Policy you are applying under

☐ State Environmental Planning Policy (Name and Number)

☐ Penrith Council Local Environmental Plan (Policy Name)

☐ INSTALL A SEWERAGE MANAGEMENT SYSTEM

(Section 68 Local Government Act 1993)

☐ Aerated (Brand and Model)

☐ On Site Disposal or ☐ Pump Out

☐ Irrigation ☐ Trench Disposal

☐ OTHER APPROVALS

(Section 68 Local Government Act 1993)

Planning and/or Building Construction Applications/Certificates under the Environmental Planning and Assessment Act 1979, or Local Government Act 1993.



Please note, applications for Construction Certificates or Complying Development must be accompanied by a contract for undertaking of certification work.

OFFICE USE ONLY
Receipt Number

Date

Amount

Application Number(s)

PENRITH
CITY COUNCIL

Location of the proposal. All details must be provided.

Provide details of the current use of the site and any previous uses. Eg vacant land, farm, dwelling, car park.

Include all work associated with the application. Eg construction of single dwelling, landscaping, garage, demolition.

Estimated or contract value of the works. Council may request verification through builders quote or by a Quantity Surveyor.

All correspondence relating to the application will be directed to the applicant. The applicant may be, but is not necessarily, the owner. The applicant's name will appear on the consent.

Council will use this email for correspondence. This field is mandatory, please print clearly.

PROPERTY DETAILS

Lot No/Sec No.

374

DP/SP No.

713863

Land No. (Office Use)

Street No.

57

Street Name

Peppertree Drive

Suburb

Erskine Park

Post Code

2759

Description of current and previous use/s of the site

child care centre.

Is this use still operating? ☒ Yes ☐ No

If no, when did the use cease?

DESCRIPTION OF THE PROPOSAL

Increase in child care Centre Capacity & Enclosing existing Verandah.

VALUE OF WORK PROPOSED

Must include materials, labour costs and GST. Subdivision applications are to provide details of costs of construction.

Major developments are to provide Capital Investment Value (CIV) where required.

\$76000

APPLICANT DETAILS

Name / Company Name

PENRITH. CITY COUNCIL

Street No.

Street Name 1 / PO Box

Street Name 2

Suburb

Post Code

Contact Name

Contact Phone Number

Email Address

This must be completed to include details of ALL owners. If there are more than two owners please attach a separate authority.

OWNER'S DETAILS

Owner 1

First Name

Surname

Owner 2

First Name

Surname

Postal Address

Street No.

Street Name / PO Box

Suburb

Post Code

Contact Phone Number

Email Address

Company Name (if applicable)

Name of signatory for company

Position held by signatory

This must be completed to include signatures of ALL owners (see above note). If the property is subject to strata or community title the application must have consent from the Body Corporate.

OWNER'S CONSENT

As owner/s of the property the subject of this application I/we consent to the application. I/we grant permission for Council Officers to enter the premises for the purpose of assessment of this application and to conduct inspections relative to this application.

Owner 1/Company Signatory

Print

Signature

Date

Owner 2

Print

Signature

Date

Details of any pecuniary interest to be disclosed here.

PECUNIARY INTEREST

Is the applicant an employee of Penrith City Council, or is the application being submitted on behalf of an employee of Penrith City Council?

☒ Yes

☐ No

Does the applicant have a relationship to any staff or Councillor of Penrith City Council or is the application being submitted on behalf of someone who has such a relationship?

☐ Yes

☐ No

If the answer is yes to any of the above the relationship must be disclosed

BUILDER/OWNER BUILDER DETAILS

Please Nominate

☒ Licenced Builder

☐ Owner Builder

First Name

Surname/Company Name

Licence No.

Covent Building Group Pty Ltd

Postal Address

Street No.

Street Name

18 37-47

Bene rd, Benit

Suburb

Post Code

Benit

2750

Contact Phone Number

Email Address

Covent Home & Garden.com

This is required to be completed for the Australian Bureau of Statistics.

MATERIALS TO BE USED

Please Nominate

Walls

- ☐ Brick Veneer
☐ Double Brick
☐ Concrete
☐ Fibre Cement
☐ Curtain Glass
☒ Steel
☐ Aluminium
☐ Other

Roof

- ☐ Tiles
☐ Fibre Cement
☐ Aluminium
☒ Steel
☐ Other

Floor

- ☒ Concrete
☐ Timber
☐ Other

Frame

- ☐ Timber
☒ Steel
☐ Aluminium
☐ Other

Gross Floor Area of Proposal (if applicable)

Existing

Proposed

Total

312

+

46

=

358

If the development is Integrated and requires approval under another Act, please nominate which approvals are required.

INTEGRATED DEVELOPMENT

- ☐ Fisheries Management Act
☐ National Parks and Wildlife Act
☐ Water Management Act
☐ Protection of the Environment Operations Act
☐ Heritage Act
☐ Roads Act
☐ Rural Fires Act
☐ Other

If you answered 'yes' to this question, you are required to include a written summary within your submission about how the advice has been incorporated into your design. This may be included in your statement of environmental effects.

PRE LODGEMENT/URBAN DESIGN REVIEW PANEL

Have you attended a Prelodgement/UDRP meeting regarding this application?

☐ Yes ☐ No

Reference No.

LODGEMENT

Electronic lodgement removes the need for multiple hard copies of plans and documents, and helps us assess your application more efficiently. You need to provide:

- **1 complete set of all plans and documentation in hard copy format** (see rules below), and
- **1 complete set of all plans and documentation in electronic format** (see rules below), on a CD or USB.
- **Applications that require neighbour notification are to supply 6 hard copy A4 notification plans** (see rules below).

Upon release of the determination, we will send all documentation and plans in an electronic format to the email address you provided in your application.

If you require hard copy documents and plans with your determination, a printing and postage fee will apply. We will contact you prior to release of the determination to confirm the fee (see applicant's declaration on page 6 to nominate this option).

RULES FOR ELECTRONIC COPIES

All DAs should be accompanied by an electronic copy of all plans and supporting documents. Where an electronic copy is not provided, a scanning fee will apply. Any CD/USB provided becomes Council's property.

Electronic documents must be:

- ✓ virus free
- ✓ submitted in PDF format
- ✓ Electronic modelling data, eg. MUSIC files and flood models must be submitted in their true file type (eg. sqz) and

Electronic documents must not be:

- ✗ protected by security settings or passwords, or
- ✗ stored within folder structures

Electronic plans

All different plan and report types require individual PDF files. For example building work or architectural plans (eg site, plan, floor plan, sections and elevations) are to be in one file and named as architectural plans. Other plan types are also to be in one file and individually named for example stormwater plans or engineering plans

Reports or assessments are also to be saved and named separately. For example the statement of environmental effects, traffic, contamination or geotechnical report.

File names must include the name of the file/document first, followed by the address of the property.

RULES FOR HARD COPIES

- ✓ All DAs should be accompanied by an electronic copy of all plans and supporting documents (see above)
- ✓ all plans are folded to A4 size
- ✓ only originals of subdivision certificates are rolled
- ✓ notification plans:
 - are A4 size
 - are kept separate from other plans, and
 - do not include any floor plans that affect your right to privacy

MAJOR APPLICATIONS

- Additional CDs /USBs will be required for major and integrated developments
- An appointment is required to lodge an advertised or integrated development (please contact Council on the below number to make an appointment)
- Certain applications may require the submission of additional information not listed in the guide

Please contact the Development and Environmental Health team on 4732 7991 to confirm documentation required.

- ❖ Indicates this information may also be required (refer to the relevant policies or contact Council for further details before lodging your application).

All political donations must be disclosed.

POLITICAL DONATIONS

All donations and gifts made by any person with a financial interest in the application (from 2 years prior to this application up to the time it is determined), must be disclosed including:

- all reportable donations made to any Councillor of Penrith City Council, and
- all gifts made to any Councillor or employee of Penrith City Council.

Any disclosure must be made in a statement accompanying the relevant application by the person who makes the application. If a further donation or gift is made after the lodgement of the application, a further statement must be provided within seven days after the donation or gift is made.

Is a disclosure statement required?

☒ Yes ☐ No

If yes, has it been attached to the application?

☒ Yes ☐ No

PRIVACY NOTICE

All information contained in your application including plans and supporting documents may be available for public access or disclosure under the Government Information (Public Access) Act 2009 (GIPA) and other legislation.

The form must be completed correctly and all required information and copies of plans/ documents provided before the application can be accepted.

ACCEPTANCE OF APPLICATION

Council will not process applications that are incomplete or non-complying with lodgement requirements. These will not be accepted or may be returned to applicants within fourteen (14) days.

OFFICE USE ONLY

Additional Information required before the application will be accepted

This is an electronic Development Application

☒ Yes ☐ No

Value of work acceptable

☒ Yes ☐ No

Declaration signed and matrix checklist completed

☒ Yes ☐ No

Satisfactory to Lodge?

☒ Yes ☐ No

Responsible Officer

Date

26.6.2017

CONTACT US

Penrith City Council
601 High Street
PENRITH NSW 2750

PO Box 60
PENRITH NSW 2751, or

PHONE: (02) 4732 7991

FAX: (02) 4732 7958

EMAIL: council@penrithcity.nsw.gov.au

WEB: www.penrithcity.nsw.gov.au

PAGE LEFT BLANK

This plan / document relates
to Development Consent: **DA17/0240**

Subject to the conditions outlined in the consent

MEMO

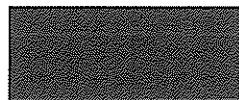
Subject: Development Application
COLOUR SCHEDULE – PEPPERTREE, ERSKINE PARK
Alterations and Additions to Erskine Park OOSH

Address: 57 Peppertree Drive, Erskine Park

Date: 6 March 2017

Rev B

WINDOWS/DOOR FRAMES
New (to match existing)



STATEMENT OF ENVIRONMENTAL EFFECTS

A Statement of Environmental Effects is a written document that supports the development application. It demonstrates that consideration has been given to the impact the proposed development may have on the natural and built environment and any mitigation measures to address any negative effects. All development will require a Statement of Environmental Effects although the level of detail may vary according to the type of development.

A Statement of Environmental Effects should include, but is not limited to, the following:

Site Suitability

- Is the site: affected by flooding? identified as bushfire prone land? subject to mine subsidence/soil erosion/landslip etc?
- Where will stormwater drain to? Is the site serviced?

Access and Traffic

- Demonstrate driveway access, manoeuvrability and pedestrian safety
- Suitability of the existing road network and the number of vehicles entering/exiting the site
- Discuss the number and location of parking spaces.

Streetscape and Design

- Discuss how the design of the development is consistent with the existing streetscape
- Provide details of the proposed external finishes, including material type and colour.
- Discuss the availability of utility services such as power, water, sewer and telephone.
- Describe the method of sewage effluent and stormwater disposal.

Privacy Views and Overshadowing

- Explain how the proposal satisfies Council's requirements for solar access.
- Discuss how the proposal affects the views both from and into the site, from neighbouring properties, roads and any more distant elevated vantage points together with any measures to reduce the impact.

Social and Economic Effects

- Discuss whether the development will have a positive or negative social and/or economic impact on the locality.

Flora and Fauna

- Discuss the impact that the development will have on any vegetation or fauna for the site.

SHADOW DIAGRAM

Shadow diagrams are to be provided with all developments that are two-storeys or greater. Shadow diagrams are to demonstrate shadows at 9am, 12noon and 3pm on Winter Solstice (21 June). These should show the location of building footprints on adjoining properties where affected by any shadow.

LANDSCAPING INFORMATION

Penrith DCP 2014 details submission requirements in Chapter C6 (Landscape Design) and Appendix 3. The level of landscaping detail varies according to the type of proposal.

EROSION AND SEDIMENT CONTROL DETAILS

Where appropriate, details of the proposed method of soil erosion and sediment control are to be provided with the development application.

DRAINAGE INFORMATION

Detailed stormwater management plans are to accompany the development application where the development results in additional stormwater run-off. These plans are to include details of pipe sizes and location, size and location of pits, on-site detention areas (where required) and stormwater calculations. If an easement is being created through an adjoining property, you will need to provide evidence of agreement from the owners of that property, and their consent to lodgement of the development application.

For more information, refer to Appendix F3 (DA Submission Requirements) in Penrith Development Control Plan 2014 or contact Development Services on 4732 7991.

DEVELOPMENT APPLICATION (DA) INFORMATION SHEET

SITE PLAN (SCALE 1:200)

A site plan is an aerial view of the land showing the existing and proposed development. This plan should include the:

- location of the land, the measurements of the boundaries of the land, and which direction is north.
- location and uses of buildings, structures, swimming pools and fences that are proposed and existing on the land and adjoining land.
- distances to boundaries and other structures from the proposed development.
- existing and proposed levels of the land (provide AHD levels on flood affected properties).
- extent of any cut or fill and details of proposed retaining walls.
- location of any trees (including street trees), their species names and canopy diameter.
- location and width of any restriction on the use of the land, easement, rights of way and watercourses.
- location of driveways, laybacks and utility installations (such as light poles) where applicable.
- landscape area calculation.
- location and uses of buildings on sites that adjoin the land.

FLOOR PLAN (SCALE 1:100)

A floor plan is an aerial view of the internal layout of the development. These should include the:

- layout of the proposed and existing rooms, the room names, areas and dimensions.
- window and door locations and sizes.
- wall structure type and thickness.
- floor levels (provide AHD levels on flood affected properties).
- location of smoke detectors (where applicable).

ELEVATION PLAN (SCALE 1:100)

An elevation plan is an external view of the proposed development. These should include the:

- side views of each profile of the proposed development.
- external walls and ridge heights.
- window and door locations and sizes.
- external materials and finishes.

For additions and alterations you must clearly distinguish between the existing and proposed work.

A 3D coloured perspective may be required for certain developments.

SECTION PLAN (SCALE 1:100)

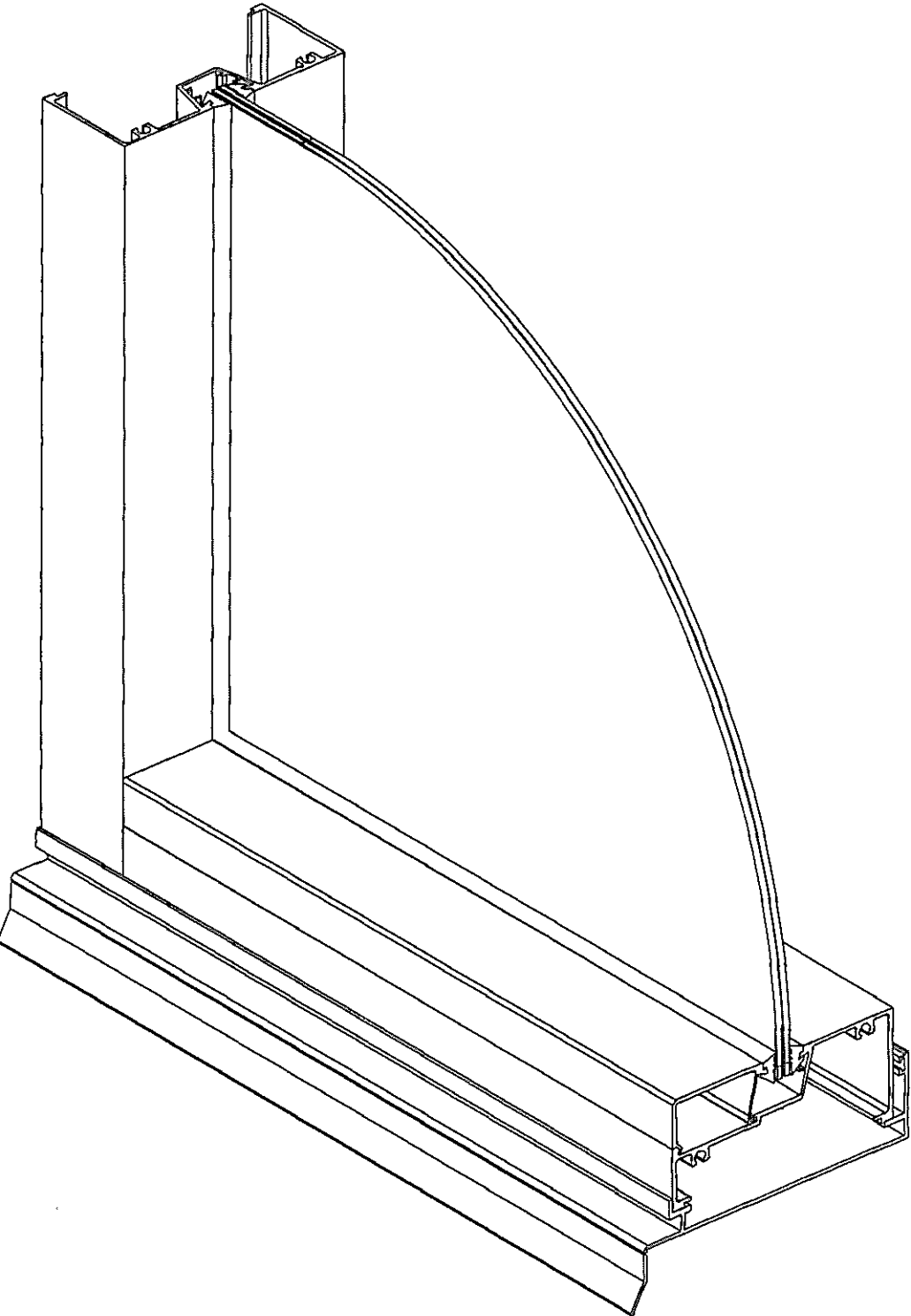
A section plan is a diagram showing a cut through the development at important or typical points. These should include:

- The section names and their location on the floor plan.
- Proposed construction methods for floors, walls and roofs.
- Floor to ceiling heights.

NOTIFICATION PLAN

Council requires that certain development proposals be notified to neighbouring property owners and residents. Where this is required, the development application will need to include an A4 size copy of the site and elevation plans (larger developments should also include an A3 size plan as well as the A4 size).

Y 101.6x45mm SINGLE CENTRE GLAZED SYSTEM



DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

CONTENTS

INTRODUCTION.....	4
GENERAL CONFIGURATION.....	5
HEAD OPTION	
Light Duty.....	6
Heavy Duty.....	7
SILL OPTION	
Light Duty.....	8
Heavy Duty.....	9
TRANSOM OPTION.....	10
JAMB OPTIONS.....	11
MULLION OPTIONS	
Light Duty.....	13
Heavy Duty.....	14
Light/Heavy Duty.....	15
Standard.....	16
TRANSOM STRENGTH CHARTS	
TJ302+TJ303+TJ304.....	17
TJ302+TJ303+TJ305.....	18
TJ302+TJ303+TJ364.....	19
MULLION STRENGTH CHARTS	
TJ301+TJ304.....	20
TJ301+TJ305.....	21
TJ301+TJ364.....	22
TJ367+TJ304.....	23
TJ320+TJ320.....	24
TJ320+TJ333.....	25
TJ333+TJ333.....	26
CUTTING FORMULAE.....	27
LABORATORY TEST RESULTS.....	28

ENERGY RATINGS

Definitions.....	29
Heavy Duty Mullion.....	30
Light Duty Mullion.....	31

SECTION PROFILES

TJ301.....	32
TJ300.....	32
TJ390.....	33
TJ367.....	33
TJ360.....	33
TJ302.....	34
TJ303.....	34
TJ303B.....	34
TJ362.....	35
TJ304.....	35
TJ364.....	35
TJ320.....	36
TJ333.....	36
TJ309.....	37
TJ399.....	37
TJ429.....	38
TJ430.....	38
TJ359.....	39
TJ368.....	39
TJ379.....	40
TJ259.....	40
JM2809.....	41
TJ335.....	41
TJ306.....	41

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

CONTENTS

SECTION PROFILES

TJ305.....	42
TJ342.....	42
TJ345.....	42
TJ385.....	43
TJ307.....	43
TJ308.....	44
TJ720.....	44

SMALL PARTS

Subsill End Dam Placement.....	45
Glazing Wedges and Combinations.....	46
Seals.....	47

MACHINING DETAILS.....	48
------------------------	----

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

INTRODUCTION

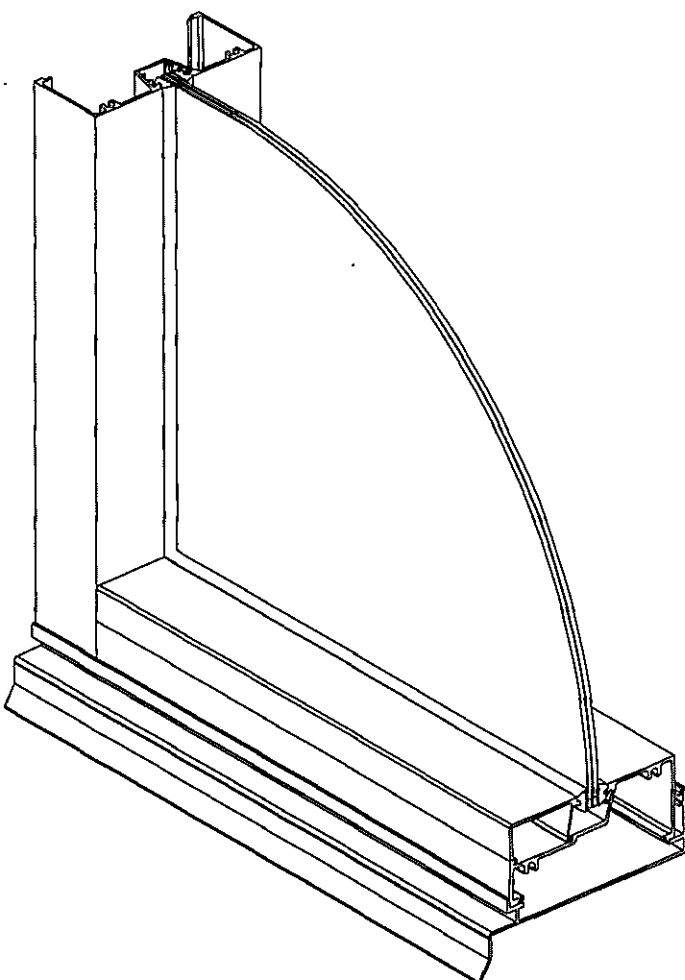
Darley's 101.6x45mm Single Centre Glazed System is the ideal choice for modern architectural requirements, meeting current design trends as well as performance specifications.

The system is ideally suited for shopping centres, offices, show rooms, and commercial buildings. It is also widely used in high end residential developments and apartments.

Framing options include hinged, pivot, sliding and bi-fold door combinations and can be incorporated in a variety of awning/casement, double hung and sliding sash window options. (Refer to Door Sections.)

Glazing ranging from 6mm to 10.38mm can be installed without the need for adaptors. Roll-in and captive wedges are available for glass thickness up to 10.38mm.

All Darley framing systems are available in powder coat and anodised finishes. (Refer to Darley Aluminium Product Catalogue for further information.)



Design Features:

- Accepts glass thickness from 6mm-10.38mm
- Compatible with other Darley Aluminium Commercial and Residential Systems
- Self draining transom
- Accepts a variety of awning sash options (refer to Awning Section)
- Range of sub head and sub sill options
- Range of heavy duty mullion options for tall framing and high wind areas

Specifications:

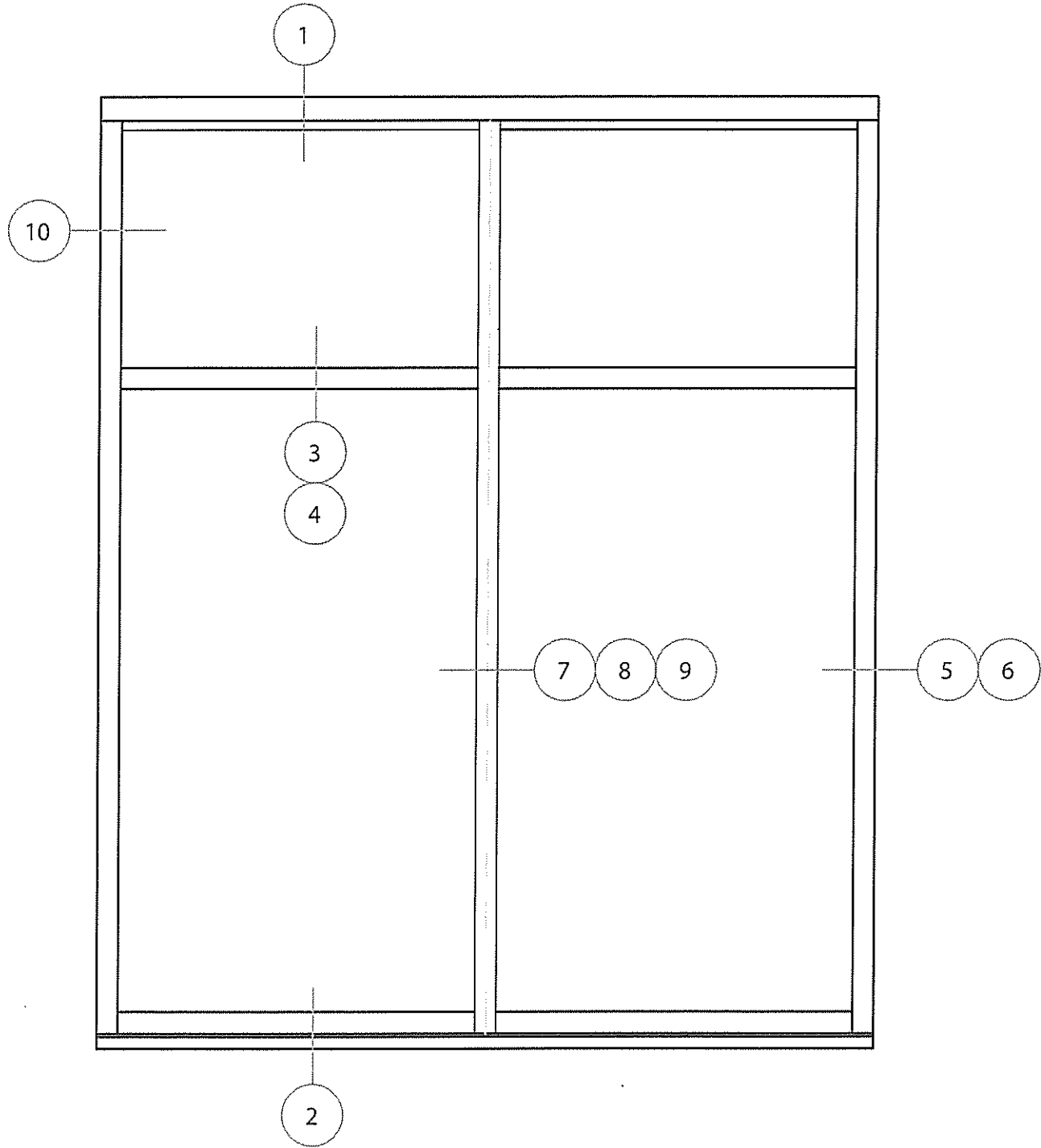
- Aluminium frames to be manufactured using Darley 101.6x45mm Single Centre Glazed System.
- Engineering, manufacture and installation of frames must meet requirements of:
 - » AS 2047-2048 (Windows in Buildings)
 - » AS/NZS 1170 (Loading Code)
 - » AS/NZS 1664 (Aluminium Structures Code)
- Glazing selected must meet requirements of AS 1288 (Glass in Buildings)
- Size limitations are governed by design intent, glass selection and local wind load and deflection requirements. For further technical assistance and fabricator selection contact Darley Aluminium.
- An Engineer should be consulted to ensure selected framing meets the requirements as set out in the relevant Australian Standards.

DATE: APR - 2009 - V2
REPLACES: APR - 2009 - V1
DWG SCALE: Not to Scale



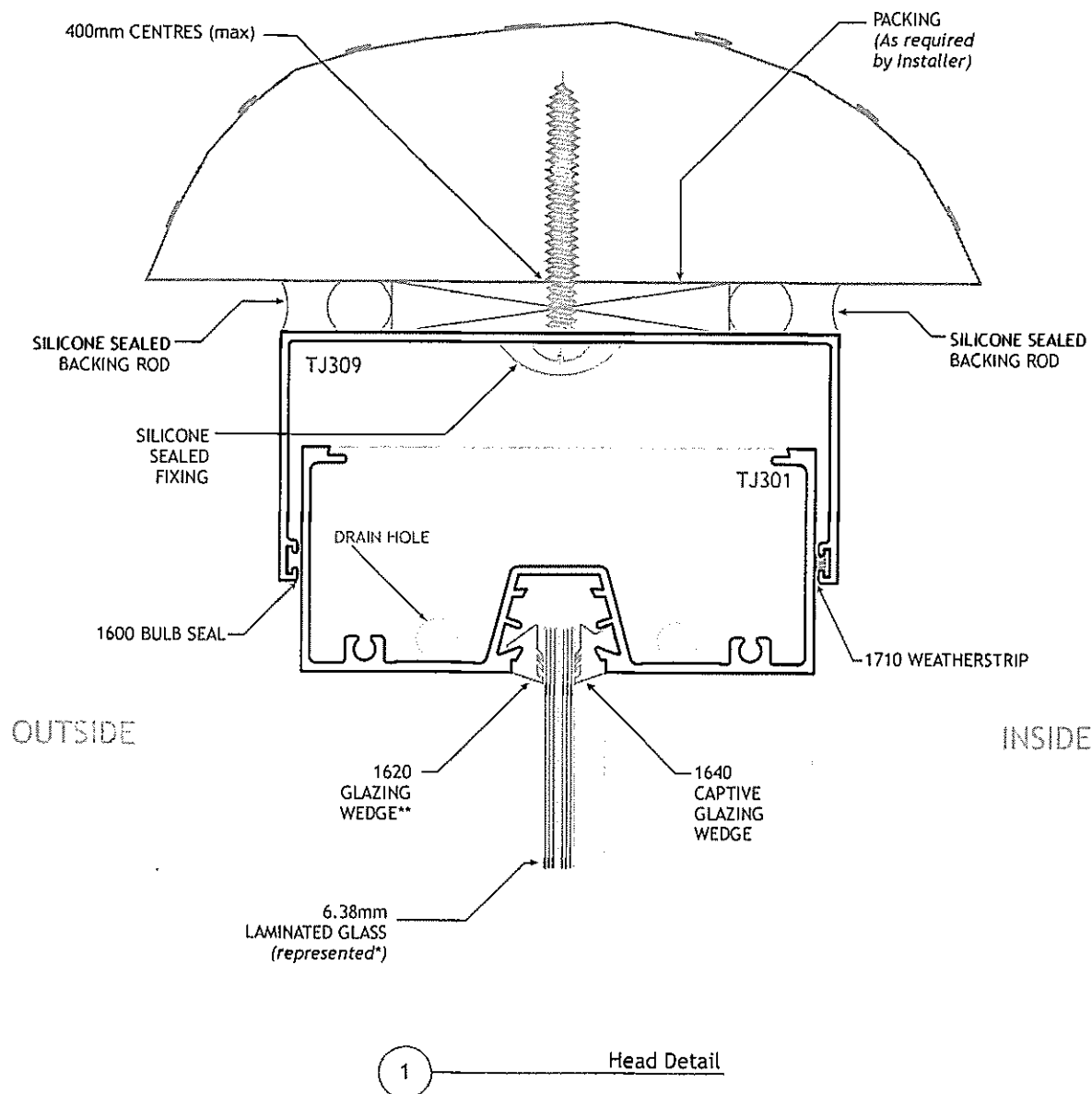
DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

GENERAL CONFIGURATION



DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

HEAD OPTION - Light Duty



NOTES:

* Glass should be selected according to the product configuration and the site performance factors required. Please refer to AS1288 when selecting your glass requirements.

** Refer to Small Parts List.

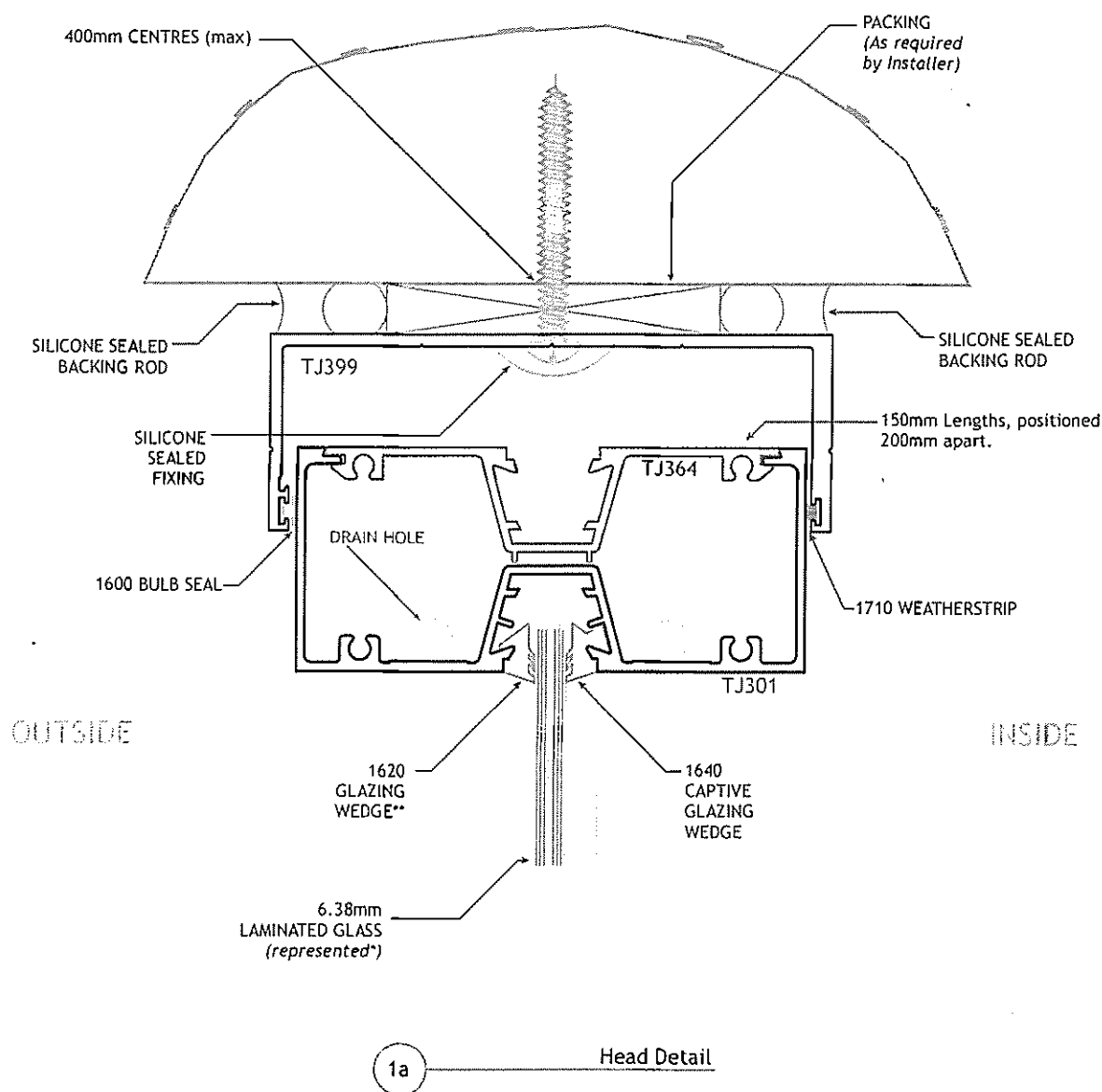
N.B.

- For panels above 2.5m² use TJ399 Heavy Duty Subhead, TJ379 Heavy Duty Subsill, and TJ364 Heavy Duty Adaptor in frame, as shown on page 6.

- All joints need to be sealed with small joint sealer or foam tab option.

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

HEAD OPTION - Heavy Duty (for panels above 2.5m²)



NOTES:

* Glass should be selected according to the product configuration and the site performance factors required. Please refer to AS1288 when selecting your glass requirements.

** Refer to Small Parts List.

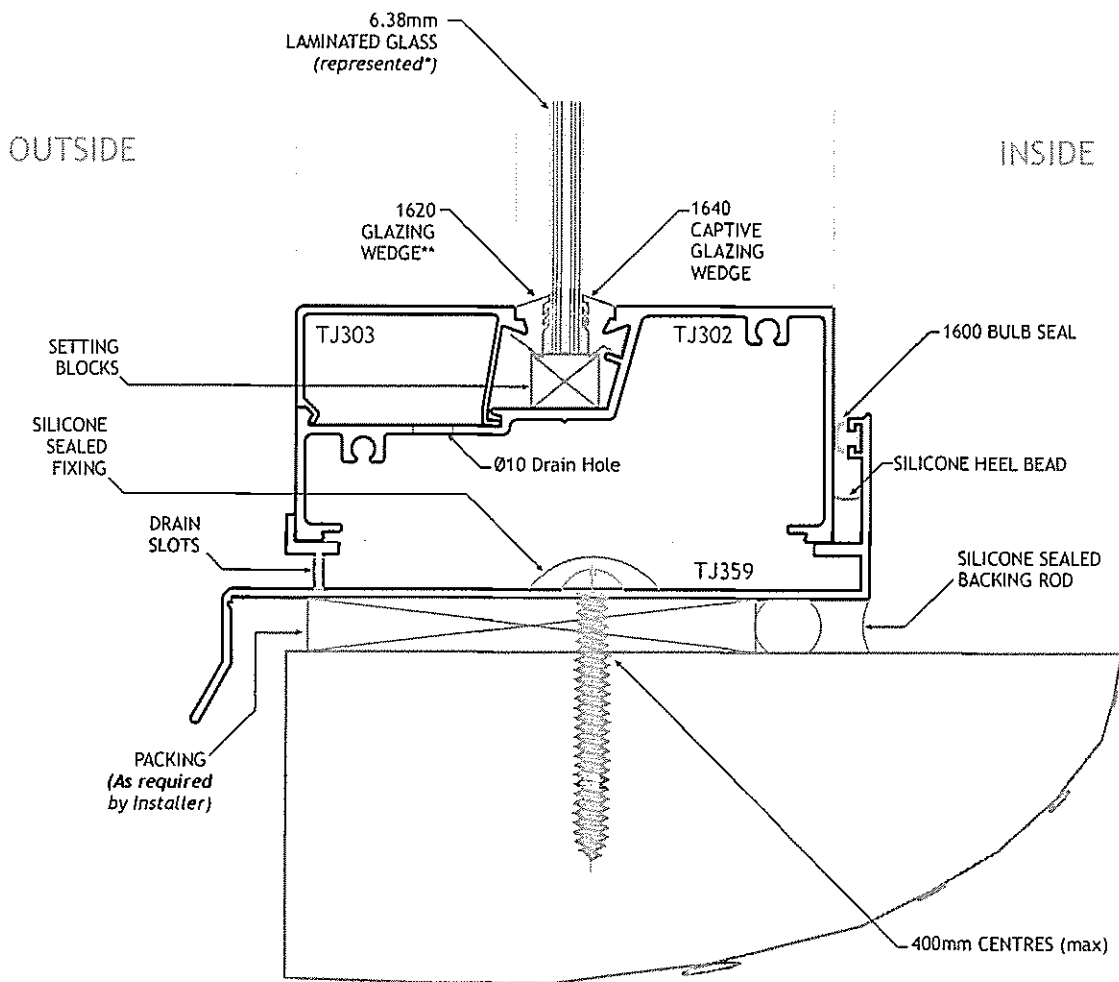
N.B.

- For panels above 2.5m² use TJ399 Heavy Duty Subhead, TJ379 Heavy Duty Subsill, and TJ364 Heavy Duty Adaptor in frame.

- All joints need to be sealed with small joint sealer or foam tab option.

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SILL OPTION - Light Duty



2

Sill Detail

NOTES:

* Glass should be selected according to the product configuration and the site performance factors required. Please refer to AS1288 when selecting your glass requirements.

** Refer to Small Parts List for vinyls.

N.B.

- All joints need to be sealed with small joint sealer or foam tab option.

- For panels above 2.5m² use TJ399 Heavy Duty Subhead, TJ379 Heavy Duty Subsill, and TJ364 Heavy Duty Adaptor in frame, as shown on page 6.

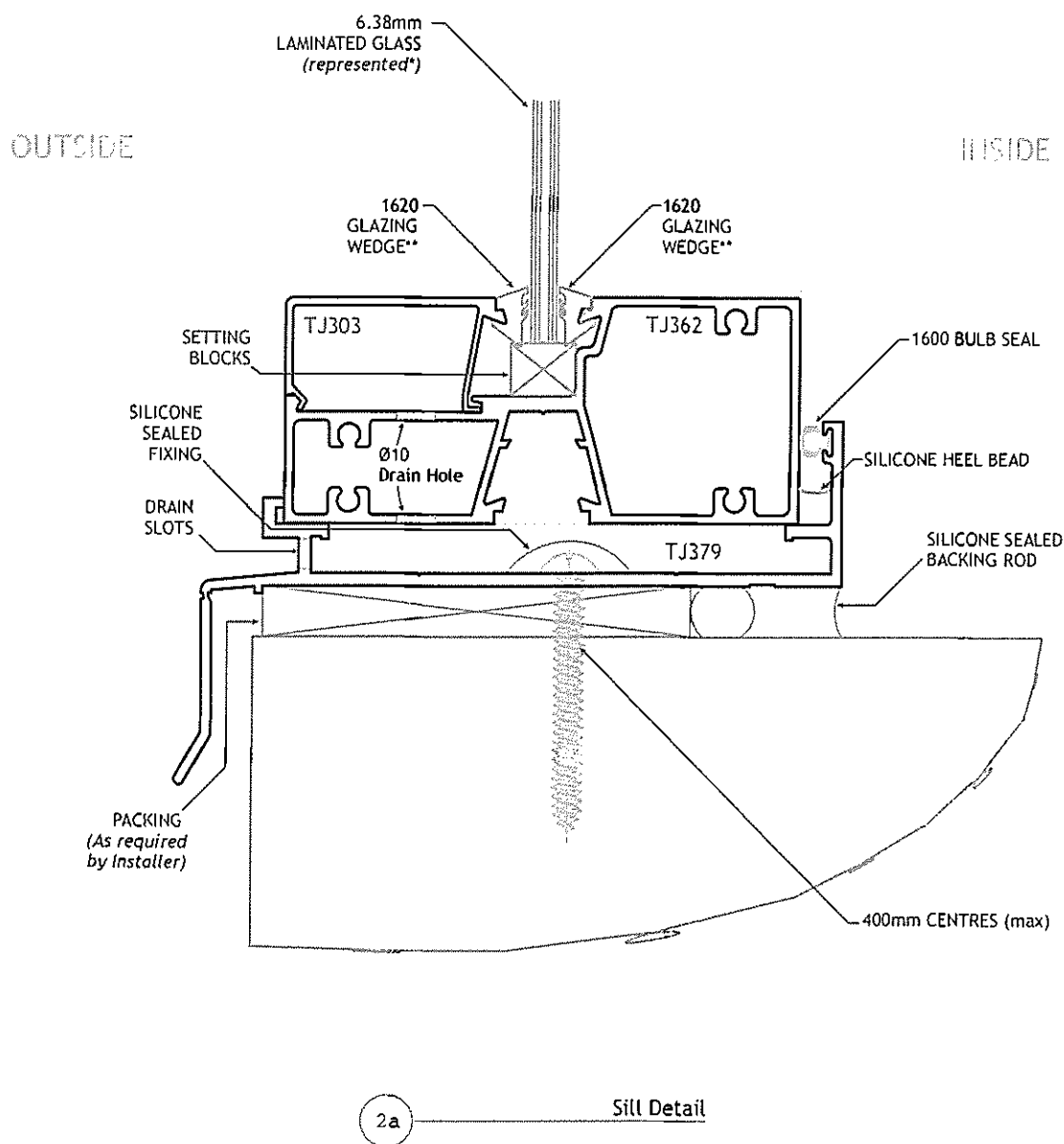
DATE: APR - 2009 - V2

REPLACES: APR - 2009 - V1

DWG SCALE: Not to Scale

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SILL OPTION - Heavy Duty (for panels above 2.5m²)



NOTES:

* Glass should be selected according to the product configuration and the site performance factors required. Please refer to AS1288 when selecting your glass requirements.

** Refer to Small Parts List for vinyls.

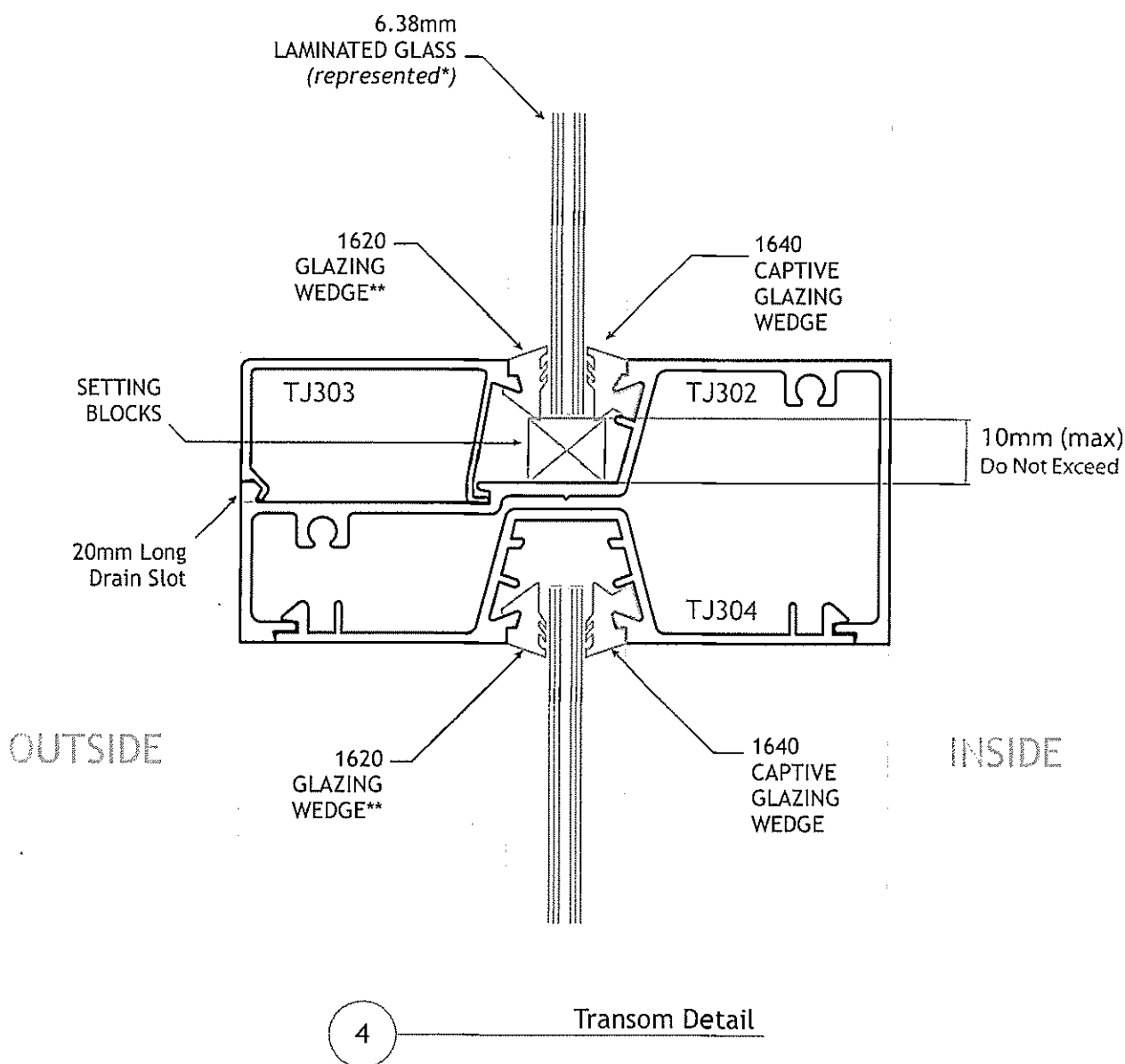
N.B.

- All joints need to be sealed with small joint sealer or foam tab option.

- For panels above 2.5m² use TJ399 Heavy Duty Subhead, TJ379 Heavy Duty Subsill, and TJ364 Heavy Duty Adaptor in frame, as shown on page 6.

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

TRANSOM OPTION



NOTES:

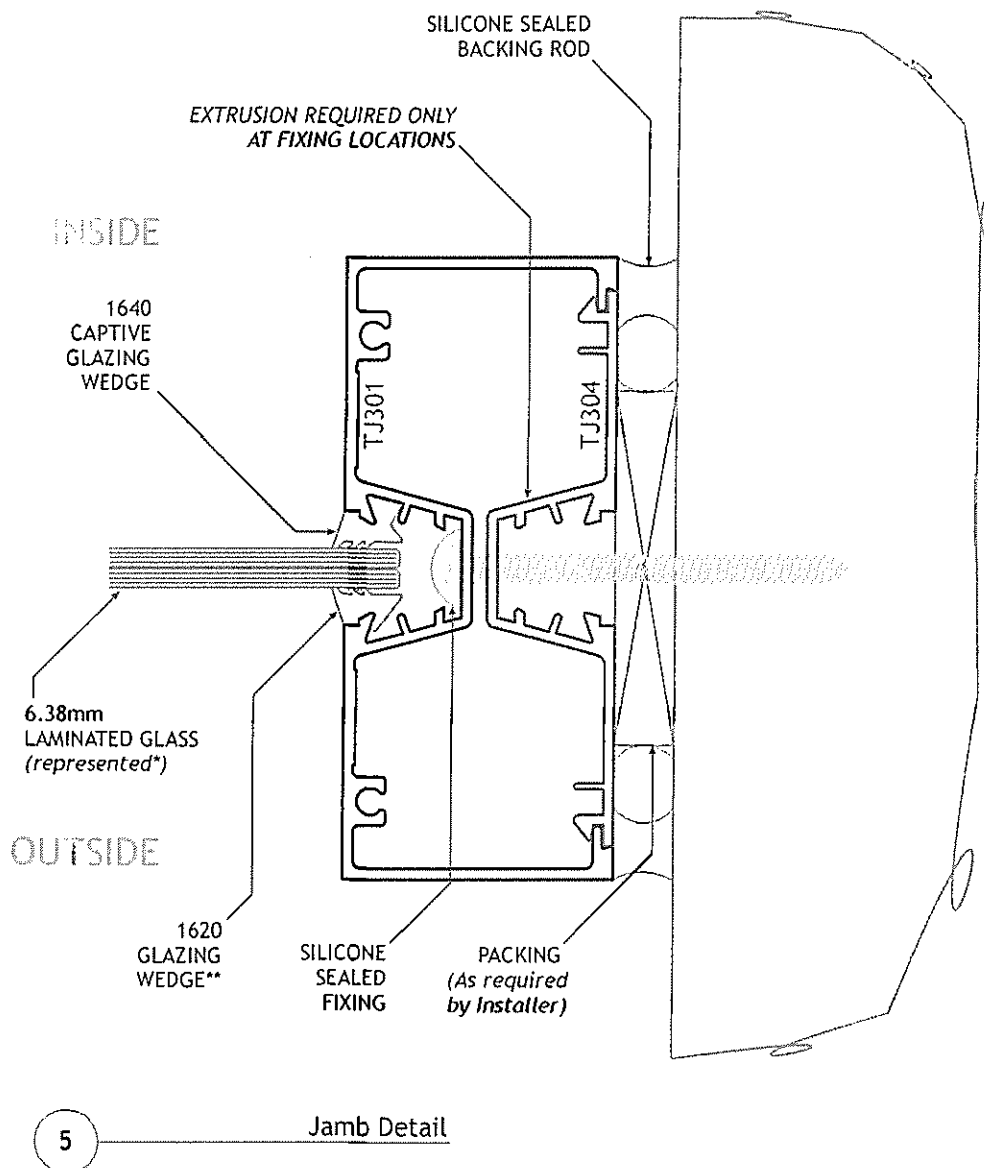
* Glass should be selected according to the product configuration and the site performance factors required. Please refer to AS1288 when selecting your glass requirements.

** Refer to Small Parts List for wedge options.

N.B. All joints need to be sealed with small joint sealer or foam tab option.

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

JAMB OPTIONS



NOTES:

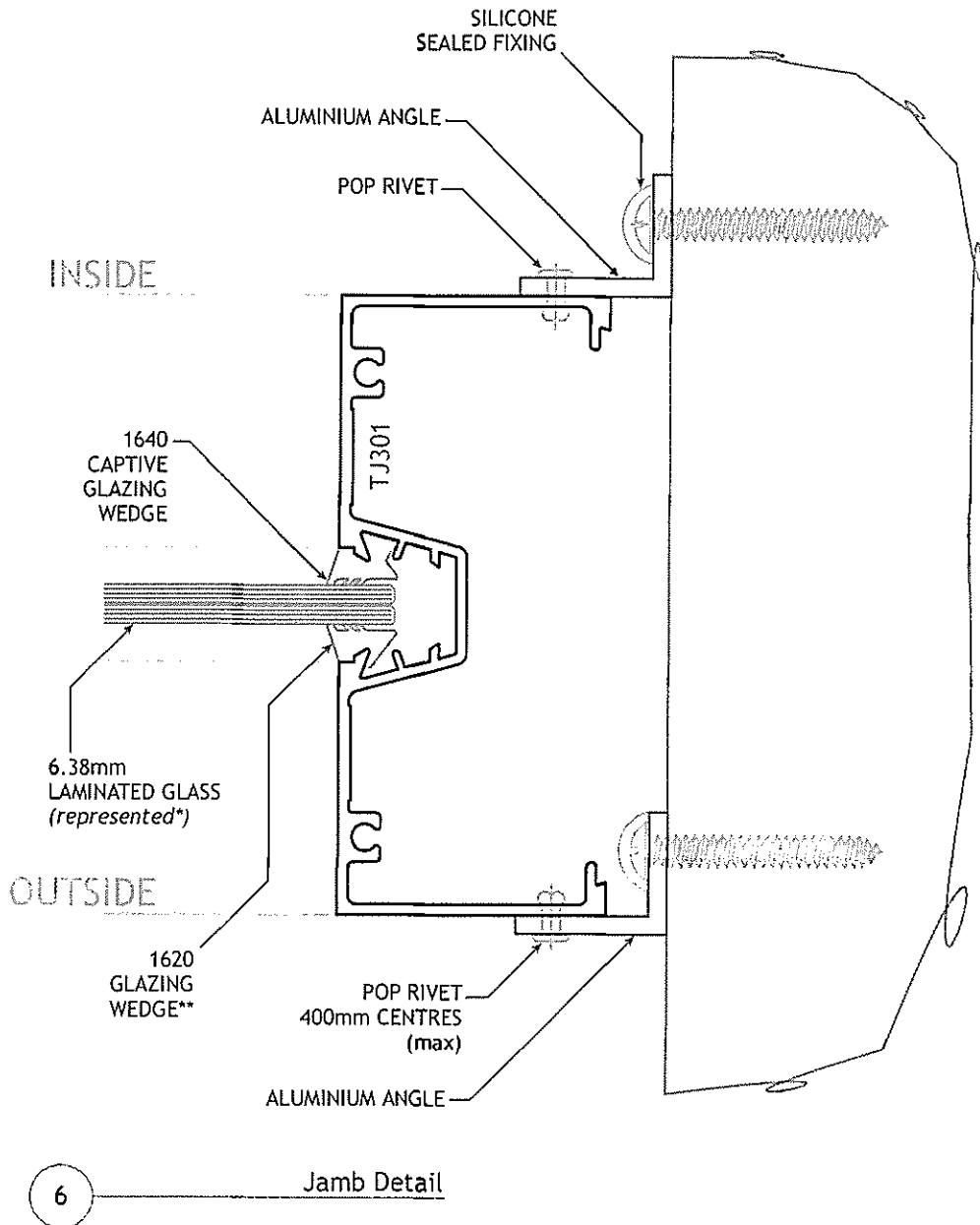
* Glass should be selected according to the product configuration and the site performance factors required. Please refer to AS1288 when selecting your glass requirements.

** Refer to Small Parts List.

N.B. All joints need to be sealed with small joint sealer or foam tab option.

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

JAMB OPTIONS



NOTES:

* Glass should be selected according to the product configuration and the site performance factors required. Please refer to AS1288 when selecting your glass requirements.

** Refer to Small Parts List.

N.B. All joints need to be sealed with small joint sealer or foam tab option.

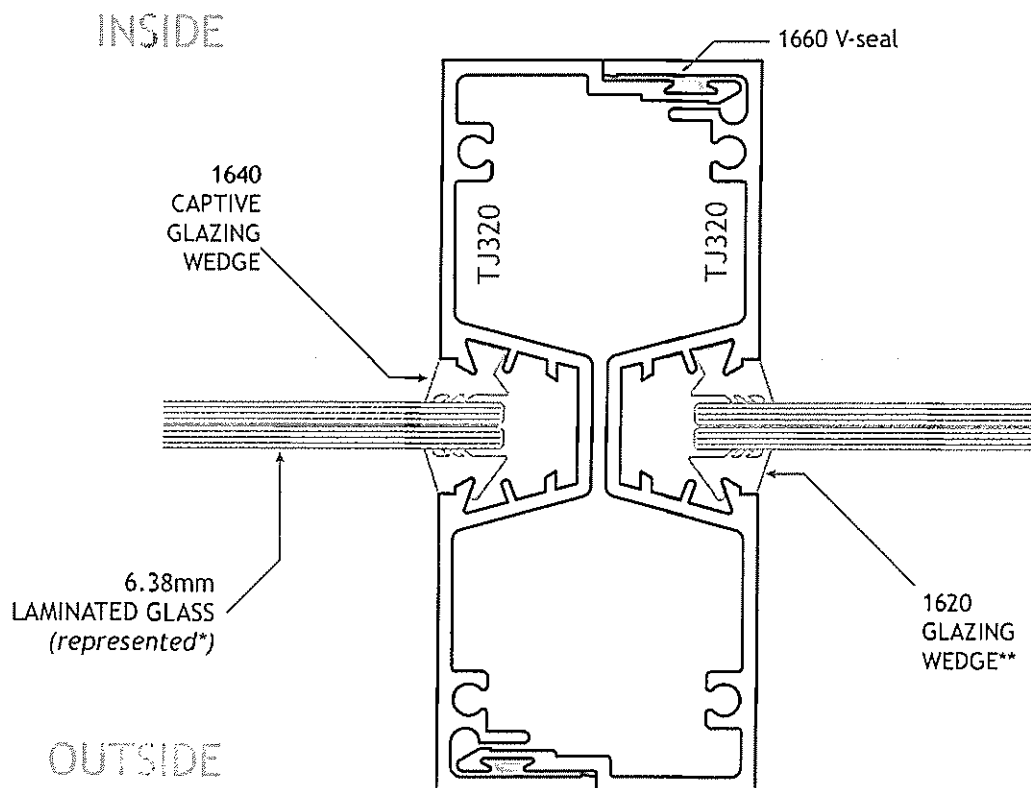
DATE: APR - 2009 - V2

REPLACES: APR - 2009 - V1

DWG SCALE: Not to Scale

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

MULLION OPTIONS - Light Duty



7 Split Mullion Detail
(Light Duty)

NOTES:

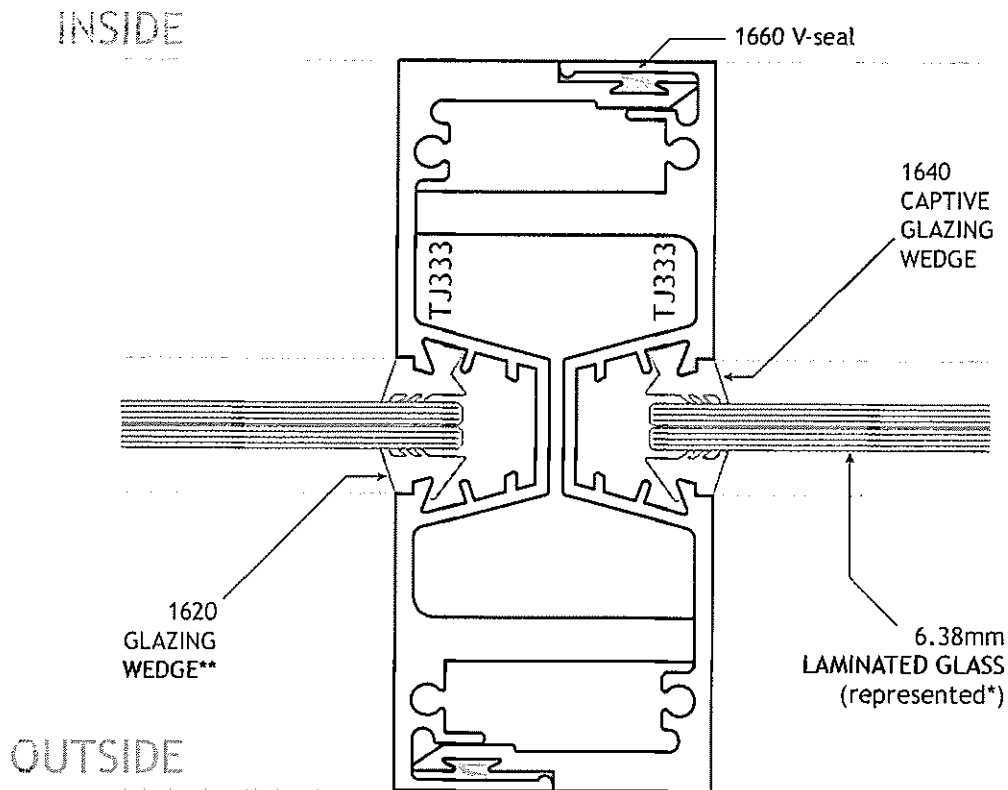
* Glass should be selected according to the product configuration and the site performance factors required. Please refer to AS1288 when selecting your glass requirements.

** Refer to Small Parts List.

N.B. All joints need to be sealed with small joint sealer or foam tab option.

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

MULLION OPTIONS - Heavy Duty



8

Split Mullion Detail
(Heavy Duty)

NOTES:

* Glass should be selected according to the product configuration and the site performance factors required. Please refer to AS1288 when selecting your glass requirements.

** Refer to Small Parts List.

N.B. All joints need to be sealed with small joint sealer or foam tab option.

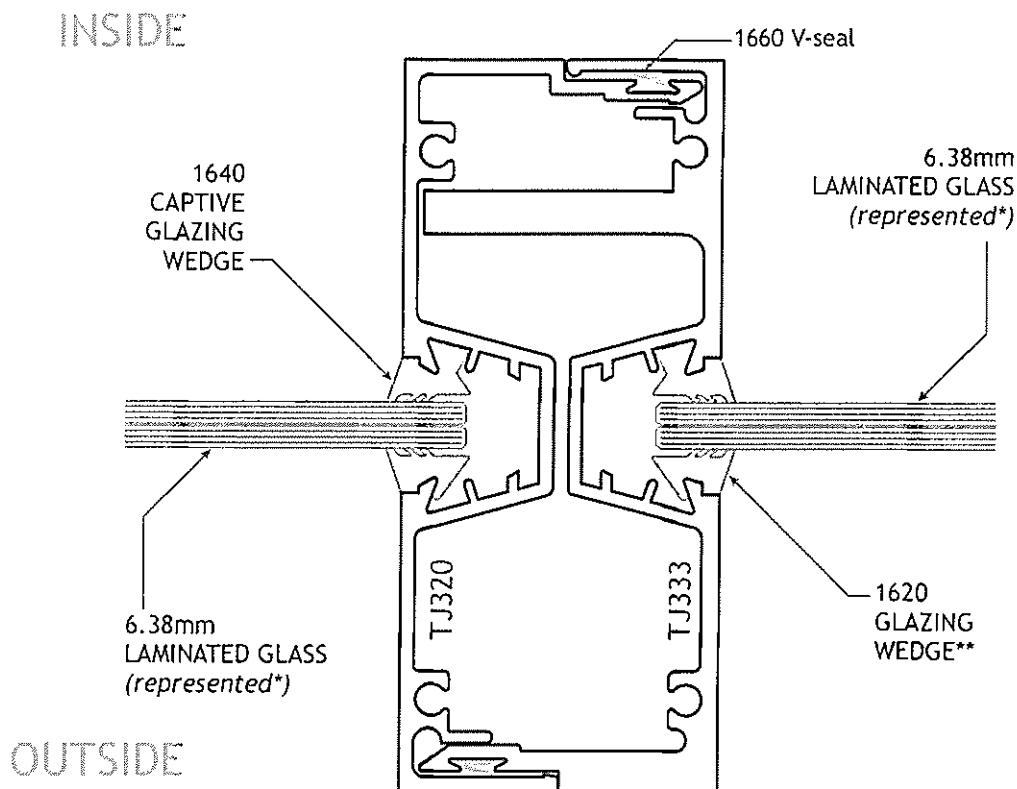
DATE: APR - 2009 - V2

REPLACES: APR - 2009 - V1

DWG SCALE: Not to Scale

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

MULLION OPTIONS - Light/Heavy Duty



9

Split Mullion Detail
(Light/Heavy Duty)

NOTES:

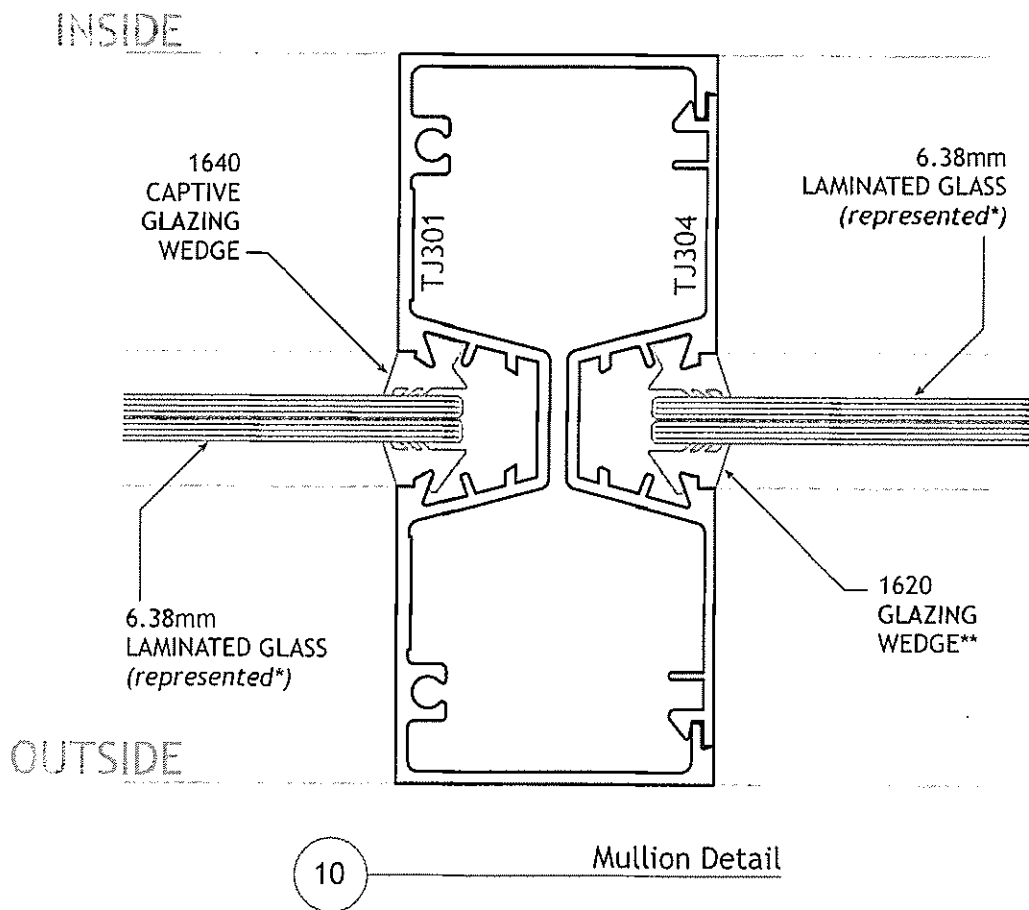
* Glass should be selected according to the product configuration and the site performance factors required. Please refer to AS1288 when selecting your glass requirements.

** Refer to Small Parts List.

N.B. All joints need to be sealed with small joint sealer or foam tab option.

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

MULLION OPTIONS



NOTES:

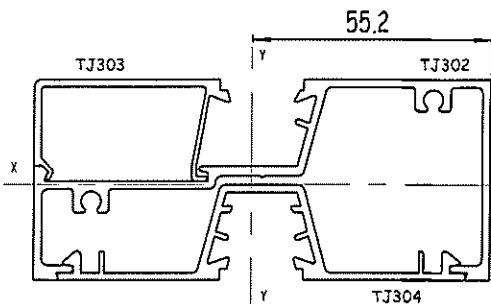
* Glass should be selected according to the product configuration and the site performance factors required. Please refer to AS1288 when selecting your glass requirements.

** Refer to Small Parts List.

N.B. All joints need to be sealed with small joint sealer or foam tab option.

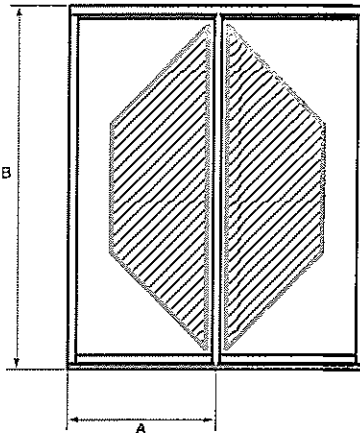
DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

TRANSOM STRENGTH CHARTS - TJ302+TJ303+TJ304



$$I_{xx} = 97.7 \times 10^3 \text{ mm}^4$$

$$I_{yy} = 774.2 \times 10^3 \text{ mm}^4$$



S = Serviceability limit state (deflection = L/150, L/180, L/250)

U = Ultimate strength limit state (factored yield strength = 110 MPa)

These tables have been calculated using nominal section properties.

A typical assembly has been tested as per the requirements of AS2047.

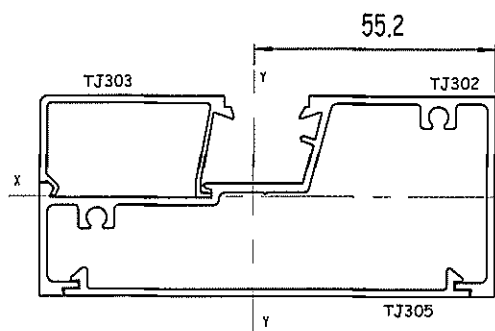
Serviceability rating has been limited to 5000 Pa and Ultimate strength rating has been limited to 8000 Pa.

Darley 100 x 45 Centre Glazed	Deflection Ratio's Serviceability =1/150		Serviceability =1/180		Serviceability =1/250		Ultimate = U	Limitations: Serviceability to 5000 Pa & Ultimate to 8000 Pa		Extrusions: TJ302 Plus TJ303 Plus TJ304	
	Glazing Width either side of the mullion in mm (A)										
Window Height (mm) (B)	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
2200	2215	1993	1819	1680	1567	1475	1399	1336	1285	1244	1211
	2215	1993	1819	1680	1567	1475	1399	1336	1285	1244	1211
	2033	1833	1677	1552	1452	1370	1303	1249	1205	1169	1141
	3323	2990	2729	2520	2350	2212	2098	2005	1928	1866	1817
2400	1848	1659	1511	1391	1294	1214	1147	1091	1044	1005	973
	1848	1659	1511	1391	1294	1214	1147	1091	1044	1005	973
	1552	1396	1274	1176	1096	1031	976	931	894	863	837
	2771	2489	2266	2087	1941	1820	1720	1636	1566	1508	1460
2600	1565	1404	1276	1172	1088	1018	959	909	868	832	802
	1565	1404	1276	1172	1088	1018	959	909	868	832	802
	1213	1089	991	913	849	796	752	714	683	657	635
	2348	2105	1914	1759	1632	1527	1438	1364	1301	1248	1203
2800	1344	1203	1092	1002	928	867	815	771	733	701	674
	1341	1203	1092	1002	928	867	815	771	733	701	674
	966	866	787	724	671	628	592	561	535	513	
	2016	1805	1638	1503	1392	1300	1222	1156	1100	1052	1011
3000	1166	1043	946	867	802	748	702	663	629	600	575
	1086	973	883	810	751	701	659	624	593	567	545
	782	700	636	584	541	505					
	1749	1565	1419	1300	1203	1121	1052	994	943	900	863
3200	1022	914	828	758	700	652	611	576	546	520	
	892	798	724	663	614	572	537	507			
	642	574	521								
	1533	1371	1241	1137	1050	978	916	864	819	780	
3400	889	795	721	660	610	568	533	502			
	741	663	601	550	508						
	534										
	1355	1210	1095	1002	925	860	805	758			
3600	747	668	605	553	511						
	623	557	504								
	1206	1077	974	890	821						
3800	634	566	513								
	634	566	513								
	1081	964	872								

N.B. For values in bold italics use heavy duty subhead/subsill.

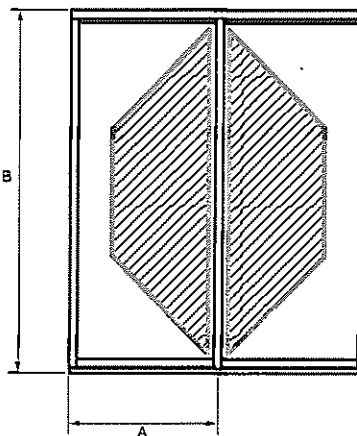
DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

TRANSOM STRENGTH CHARTS - TJ302+TJ303+TJ305



$$I_{xx} = 84.65 \times 10^3 \text{ mm}^4$$

$$I_{yy} = 750 \times 10^3 \text{ mm}^4$$



S = Serviceability limit state (deflection = L/150, L/180, L/250)
U = Ultimate strength limit state (factored yield strength = 110 MPa)

These tables have been calculated using nominal section properties.
A typical assembly has been tested as per the requirements of AS2047.

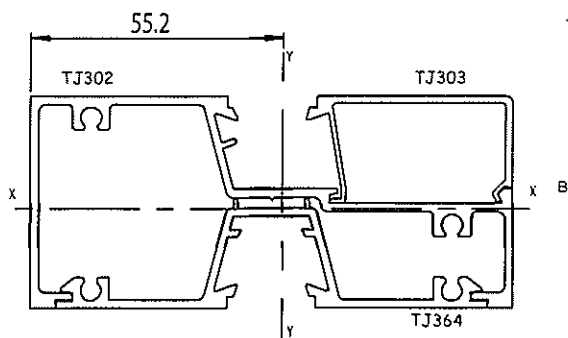
Serviceability rating has been limited to 5000 Pa and Ultimate strength rating has been limited to 8000 Pa.

Darley 100 x 45 Centre Glazed	Deflection Ratio's Serviceability =1/150		Serviceability =1/180		Serviceability =1/250		Ultimate = U	Limitations: Serviceability to 5000 Pa & Ultimate to 8000 Pa		Extrusions: TJ302 Plus TJ303 Plus TJ305	
	Glazing Width either side of the mullion in mm (A)										
Window Height (mm) (B)	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
2200	2154	1938	1769	1633	1524	1434	1360	1299	1250	1210	1178
	2154	1938	1769	1633	1524	1434	1360	1299	1250	1210	1178
	1969	1776	1624	1504	1407	1327	1263	1210	1167	1133	1106
	3230	2907	2653	2450	2285	2151	2040	1949	1874	1814	1767
2400	1796	1613	1469	1353	1258	1180	1115	1061	1015	978	946
	1796	1613	1469	1353	1258	1180	1115	1061	1015	978	946
	1504	1353	1234	1139	1062	998	946	902	866	836	811
	2695	2420	2203	2029	1887	1770	1672	1591	1523	1466	1419
2600	1522	1365	1240	1140	1058	989	932	884	843	809	780
	1522	1365	1240	1140	1058	989	932	884	843	809	780
	1175	1055	960	884	822	771	728	692	662	636	615
	2283	2047	1860	1710	1587	1484	1399	1326	1265	1213	1169
2800	1306	1170	1062	974	903	843	792	750	713	682	655
	1299	1165	1059	974	903	843	792	750	713	682	655
	936	839	763	701	650	608	573	543	518		
	1960	1755	1593	1462	1354	1264	1188	1124	1070	1023	983
3000	1134	1015	920	843	780	727	682	644	612	583	559
	1052	942	855	785	727	679	639	604	575	549	528
	757	678	616	565	524						
	1701	1522	1380	1264	1169	1090	1023	966	917	875	839
3200	994	888	805	737	681	634	594	560	531	505	
	864	773	701	643	594	554	520				
	622	557	505								
	1491	1332	1207	1105	1021	950	891	840	796	758	
3400	862	770	698	639	591	550	516				
	718	642	582	533							
	517										
	1317	1177	1065	974	899	836	783				
3600	724	647	586	536							
	603	539									
	1173	1047	947	866							
3800	614	549									
	614	549									
	1051	938									

N.B. For values in bold italics use heavy duty subhead/subsill.

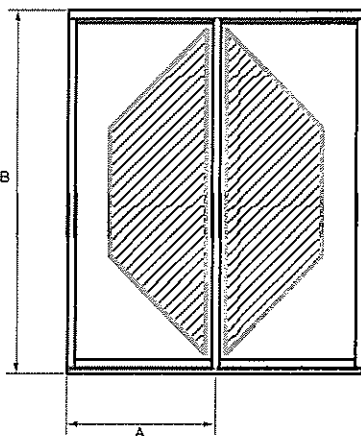
DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

TRANSOM STRENGTH CHARTS - TJ302+TJ303+TJ364



$$I_{xx} = 98.9 \times 10^3 \text{ mm}^4$$

$$I_{yy} = 801.3 \times 10^3 \text{ mm}^4$$



S = Serviceability limit state (deflection = $L/150$, $L/180$, $L/250$)
U = Ultimate strength limit state (factored yield strength = 110 MPa)

These tables have been calculated using nominal section properties.

A typical assembly has been tested as per the requirements of AS2047.

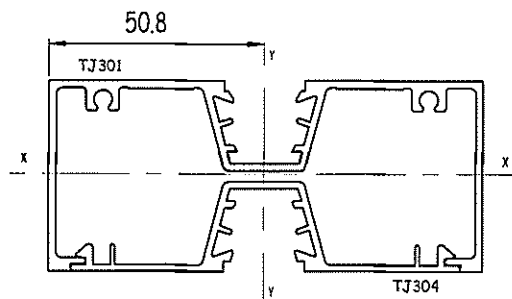
Serviceability rating has been limited to 5000 Pa and Ultimate strength rating has been limited to 8000 Pa.

Darley 100 x 45 Centre Glazed	Deflection Ratio's Serviceability =1/150		Serviceability =1/180		Serviceability =1/250		Ultimate = U		Limitations: Serviceability to 5000 Pa & Ultimate to 8000 Pa		Extrusions: TJ302 Plus TL303 Plus TJ364	
	Glazing Width either side of the mullion in mm (A)											
Window Height (mm) (B)	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	
2200	2301	2071	1890	1745	1628	1532	1453	1388	1335	1292	1258	
	2301	2071	1890	1745	1628	1532	1453	1388	1335	1292	1258	
	2104	1897	1736	1607	1503	1418	1349	1293	1247	1210	1181	
	3451	3106	2835	2618	2442	2298	2179	2082	2003	1938	1887	
2400	1919	1724	1569	1445	1344	1261	1191	1133	1085	1044	1011	
	1919	1724	1569	1445	1344	1261	1191	1133	1085	1044	1011	
	1606	1445	1319	1217	1134	1067	1010	964	925	893	867	
	2879	2585	2354	2168	2016	1891	1787	1700	1627	1567	1516	
2600	1626	1458	1325	1218	1130	1057	996	945	901	864	833	
	1626	1458	1325	1218	1130	1057	996	945	901	864	833	
	1255	1127	1026	945	879	824	778	739	707	680	657	
	2439	2187	1988	1827	1695	1586	1494	1417	1352	1296	1249	
2800	1396	1250	1134	1041	964	900	846	801	762	728	700	
	1388	1245	1132	1040	964	900	846	801	762	728	700	
	1000	896	815	749	695	650	612	581	554	530	511	
	2094	1875	1702	1562	1446	1350	1270	1201	1143	1093	1050	
3000	1212	1084	983	901	833	776	729	688	653	623	597	
	1124	1007	914	839	777	726	682	645	614	587	564	
	809	725	658	604	559	522						
	1817	1626	1474	1351	1249	1165	1093	1032	980	935	896	
3200	1062	949	860	787	727	677	635	598	567	540	517	
	923	826	749	687	635	592	556	525				
	664	595	539									
	1593	1424	1289	1181	1091	1015	952	897	851	810	775	
3400	921	823	746	683	631	588	551	520				
	767	686	622	569	526							
	552											
	1407	1257	1138	1041	961	894	837	788				
3600	774	691	626	573	529							
	645	576	522									
	1253	1118	1012	925	853							
3800	656	586	530									
	656	586	530									
	1122	1002	906									

N.B. For values in bold italics use heavy duty subhead/subsill.

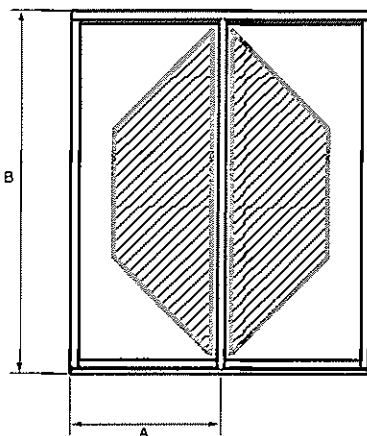
DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

MULLION STRENGTH CHARTS - TJ301+TJ304



$$I_{xx} = 111.6 \times 10^3 \text{ mm}^4$$

$$I_{yy} = 835.9 \times 10^3 \text{ mm}^4$$



S = Serviceability limit state (deflection = L/150, L/180, L/250)
U = Ultimate strength limit state (factored yield strength = 110 MPa)

These tables have been calculated using nominal section properties.

A typical assembly has been tested as per the requirements of AS2047.

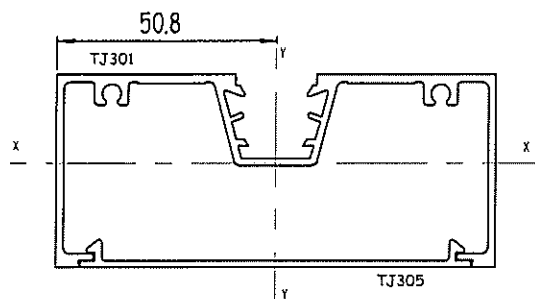
Serviceability rating has been limited to 5000 Pa and Ultimate strength rating has been limited to 8000 Pa.

Darley 100 x 45 Centre Glazed	Deflection Ratio's Serviceability =1/150		Serviceability =1/180		Serviceability =1/250		Ultimate = U	Limitations: Serviceability to 5000 Pa & Ultimate to 8000 Pa		Extrusions: TJ301 Plus TJ304	
Glazing Width either side of the mullion in mm (A)											
Window Height (mm) (B)	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
2200	2608	2347	2142	1978	1845	1736	1647	1574	1513	1465	1426
	2608	2347	2142	1978	1845	1736	1647	1574	1513	1465	1426
	2195	1979	1811	1676	1568	1479	1407	1348	1301	1262	1232
	3912	3521	3213	2967	2768	2605	2470	2360	2270	2197	2140
2400	2176	1954	1779	1638	1524	1429	1350	1285	1230	1184	1146
	2176	1954	1779	1638	1524	1429	1350	1285	1230	1184	1146
	1676	1508	1376	1270	1183	1113	1054	1005	965	932	904
	3263	2931	2668	2457	2285	2143	2025	1927	1844	1776	1719
2600	1843	1653	1502	1381	1281	1198	1129	1071	1021	980	944
	1818	1633	1487	1369	1273	1193	1127	1071	1021	980	944
	1309	1176	1071	986	917	859	811	771	738	709	685
	2765	2479	2253	2071	1921	1798	1694	1606	1532	1469	1416
2800	1582	1417	1286	1180	1093	1020	959	908	864	826	793
	1448	1299	1180	1085	1007	942	887	841	802	769	740
	1043	935	850	781	725	678	639	606	577	553	533
	2373	2125	1929	1770	1640	1531	1439	1362	1295	1239	1190
3000	1373	1229	1114	1021	944	880	826	780	741	707	677
	1172	1050	953	875	811	757	712	673	640	612	588
	844	756	686	630	584	545	512				
	2060	1843	1671	1531	1416	1320	1239	1170	1111	1060	1016
3200	1155	1034	937	859	795	741	696	657	624	595	571
	963	861	781	716	663	618	580	548	520		
	693	620	562	516							
	1805	1614	1462	1338	1236	1151	1079	1017	964	918	878
3400	960	859	778	713	659	613	575	542	514		
	800	716	648	594	549	511					
	576	515									
	1595	1425	1290	1180	1089	1013	948	893	845		
3600	807	721	653	598	552	513					
	673	601	544								
	1420	1268	1147	1048	967	899					
3800	685	612	553	506							
	685	612	553	506							
	1272	1135	1026	938							

N.B. For values in bold italics use heavy duty subhead/subsill.

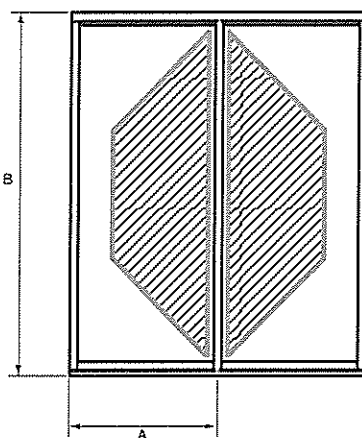
DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

MULLION STRENGTH CHARTS - TJ301+TJ305



$$I_{xx} = 98.55 \times 10^3 \text{mm}^4$$

$$I_{yy} = 811.7 \times 10^3 \text{mm}^4$$



S = Serviceability limit state (deflection = L/150, L/180, L/250)

U = Ultimate strength limit state (factored yield strength = 110 MPa)

These tables have been calculated using nominal section properties.

A typical assembly has been tested as per the requirements of AS2047.

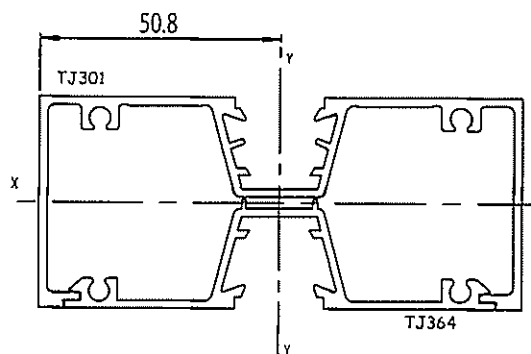
Serviceability rating has been limited to 5000 Pa and Ultimate strength rating has been limited to 8000 Pa.

Darley 100 x 45 Centre Glazed	Deflection Ratio's Serviceability =1/150		Serviceability =1/180		Serviceability =1/250		Ultimate = U	Limitations: Serviceability to 5000 Pa & Ultimate to 8000 Pa		Extrusions: TJ301 Plus TJ305	
	Glazing Width either side of the mullion in mm (A)										
Window Height (mm) (B)	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
2200	2533	2279	2080	1921	1792	1686	1599	1528	1470	1422	1385
	2533	2279	2080	1921	1792	1686	1599	1528	1470	1422	1385
	2131	1922	1758	1628	1522	1437	1367	1309	1263	1226	1197
	3799	3419	3120	2881	2687	2529	2399	2292	2204	2134	2078
2400	2113	1897	1727	1591	1479	1388	1311	1247	1194	1150	1113
	2113	1897	1727	1591	1479	1388	1311	1247	1194	1150	1113
	1627	1464	1336	1233	1149	1080	1024	976	937	905	878
	3169	2846	2591	2386	2219	2081	1967	1871	1791	1724	1669
2600	1790	1605	1459	1341	1244	1164	1096	1040	992	951	917
	1766	1586	1444	1329	1236	1159	1094	1040	992	951	917
	1271	1142	1040	957	890	834	788	749	716	689	665
	2685	2407	2188	2011	1866	1745	1645	1560	1488	1427	1375
2800	1536	1376	1249	1146	1061	991	932	881	839	802	770
	1406	1261	1146	1054	978	915	862	817	779	746	719
	1013	908	825	759	704	658	620	588	561	537	517
	2305	2064	1873	1719	1592	1486	1398	1322	1258	1203	1156
3000	1334	1193	1082	991	917	855	802	757	719	686	658
	1138	1020	926	850	787	735	691	654	622	595	571
	820	734	667	612	567	529					
	2000	1790	1622	1487	1375	1282	1203	1136	1079	1029	986
3200	1122	1004	910	835	772	720	676	638	606	578	554
	935	837	759	695	643	600	563	532	505	482	462
	673	602	546	501							
	1753	1567	1419	1299	1201	1118	1048	988	936	892	853
3400	933	834	756	692	639	596	558	527			
	777	695	630	577	533						
	560	500									
	1549	1384	1252	1146	1058	984	921	867			
3600	784	700	634	580	536						
	653	584	528								
	1379	1231	1114	1018	939						
3800	665	594	537								
	665										
	1235	1103	997								

N.B. For values in bold italics use heavy duty subhead/subsill.

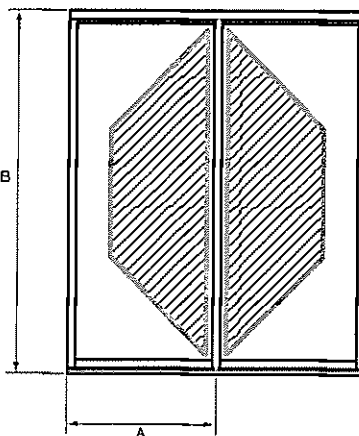
DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

MULLION STRENGTH CHARTS - TJ301+TJ364



$$I_{xx} = 112.8 \times 10^3 \text{ mm}^4$$

$$I_{yy} = 863.0 \times 10^3 \text{ mm}^4$$



S = Serviceability limit state (deflection = L/150, L/180, L/250)
U = Ultimate strength limit state (factored yield strength = 110 MPa)

These tables have been calculated using nominal section properties.

A typical assembly has been tested as per the requirements of AS2047.

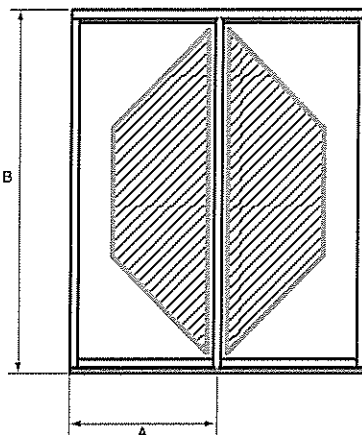
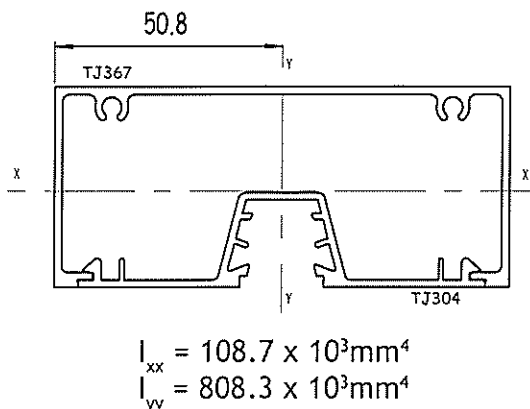
Serviceability rating has been limited to 5000 Pa and Ultimate strength rating has been limited to 8000 Pa.

Darley 100 x 45 Centre Glazed	Deflection Ratio's Serviceability =1/150		Serviceability =1/180		Serviceability =1/250		Ultimate = U	Limitations: Serviceability to 5000 Pa & Ultimate to 8000 Pa		Extrusions: TJ301 Plus TJ364	
	Glazing Width either side of the mullion in mm (A)										
Window Height (mm) (B)	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
2200	2693	2423	2211	2042	1905	1793	1700	1625	1562	1512	1473
	2693	2423	2211	2042	1905	1793	1700	1625	1562	1512	1473
	2266	2043	1869	1731	1619	1527	1453	1392	1343	1303	1272
	4039	3635	3317	3063	2857	2689	2551	2437	2344	2268	2209
2400	2246	2017	1837	1691	1573	1475	1394	1326	1269	1222	1183
	2246	2017	1837	1691	1573	1475	1394	1326	1269	1222	1183
	1730	1557	1420	1311	1222	1149	1088	1038	996	962	933
	3369	3026	2755	2537	2359	2213	2091	1989	1904	1833	1775
2600	1903	1706	1551	1425	1323	1237	1166	1106	1055	1011	975
	1877	1686	1535	1414	1314	1232	1164	1106	1055	1011	975
	1352	1214	1105	1018	946	887	838	796	761	732	707
	2854	2559	2326	2138	1984	1856	1749	1658	1582	1517	1462
2800	1633	1463	1328	1218	1128	1054	991	937	892	853	819
	1495	1341	1219	1120	1039	972	916	868	828	793	764
	1077	965	878	807	748	700	660	625	596	571	550
	2450	2194	1992	1828	1693	1580	1486	1406	1337	1279	1229
3000	1418	1268	1150	1054	975	909	853	805	765	729	699
	1210	1084	984	903	837	781	735	695	661	632	607
	872	781	709	650	603	563	529	500			
	2127	1903	1725	1581	1462	1363	1279	1208	1147	1094	1049
3200	1193	1067	968	887	821	765	719	679	644	615	589
	994	889	807	739	684	638	599	566	537	512	
	716	640	581	532							
	1864	1666	1509	1382	1276	1188	1114	1050	995	948	907
3400	991	887	803	736	680	633	594	560	531	506	
	826	739	669	613	567	528					
	595	532									
	1647	1471	1332	1218	1124	1046	979	922	873	830	
3600	833	745	674	617	570	530					
	694	620	562	514							
	500										
	1466	1309	1184	1082	998	928					
3800	707	631	571	522							
	707	631	571	522							
	1314	1172	1060	968							

N.B. For values in bold italics use heavy duty subhead/subsill.

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

MULLION STRENGTH CHARTS - TJ367+TJ304



S = Serviceability limit state (deflection = $L/150$, $L/180$, $L/250$)
 U = Ultimate strength limit state (factored yield strength = 110 MPa)

These tables have been calculated using nominal section properties.
 A typical assembly has been tested as per the requirements of AS2047.

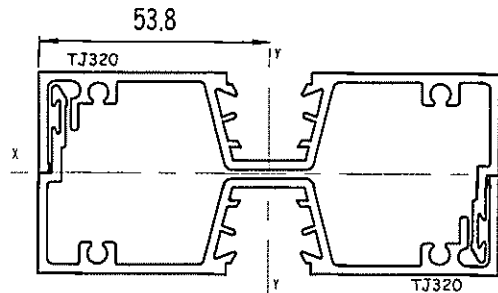
Serviceability rating has been limited to 5000 Pa and Ultimate strength rating has been limited to 8000 Pa.

Darley 100 x 45 Centre Glazed	Deflection Ratio's Serviceability =1/150		Serviceability =1/180		Serviceability =1/250		Ultimate = U	Limitations: Serviceability to 5000 Pa & Ultimate to 8000 Pa		Extrusions: TJ367 Plus TJ304	
	Glazing Width either side of the mullion in mm (A)										
Window Height (mm) (B)	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
2200	2522	2270	2071	1913	1784	1679	1593	1522	1463	1416	1379
	2522	2270	2071	1913	1784	1679	1593	1522	1463	1416	1379
	2122	1914	1751	1621	1516	1431	1361	1304	1258	1221	1192
	3783	3404	3107	2869	2676	2519	2389	2282	2195	2125	2069
2400	2104	1889	1720	1584	1473	1382	1306	1242	1189	1145	1108
	2104	1889	1720	1584	1473	1382	1306	1242	1189	1145	1108
	1620	1458	1330	1228	1144	1076	1019	972	933	901	874
	3156	2834	2580	2376	2210	2073	1959	1863	1784	1717	1662
2600	1782	1598	1452	1335	1239	1159	1092	1035	988	947	913
	1758	1579	1438	1324	1231	1154	1090	1035	988	947	913
	1266	1137	1035	953	886	831	785	746	713	686	662
	2674	2397	2179	2002	1858	1738	1638	1553	1482	1421	1370
2800	1530	1370	1244	1141	1057	987	928	878	835	798	767
	1400	1256	1142	1049	974	911	858	813	775	743	716
	1008	904	822	755	701	656	618	586	558	535	515
	2295	2055	1865	1712	1585	1480	1392	1317	1253	1198	1151
3000	1328	1188	1077	987	913	851	799	754	716	683	655
	1134	1016	922	846	784	732	688	651	619	592	569
	816	731	664	609	564	527					
	1992	1782	1616	1481	1370	1277	1198	1131	1074	1025	982
3200	1117	1000	907	831	769	717	673	636	603	576	552
	931	833	755	693	641	597	561	530	503		
	670	600	544								
	1746	1560	1413	1294	1196	1113	1043	984	932	888	849
3400	929	830	752	689	637	593	556	524			
	774	692	627	574	531						
	557										
	1543	1378	1247	1141	1053	979	917	864			
3600	780	697	631	578	533						
	650	581	526								
	1373	1226	1109	1014	935						
3800	662	591	535								
	662										
	1230	1098	993								

N.B. For values in bold italics use heavy duty subhead/subsill.

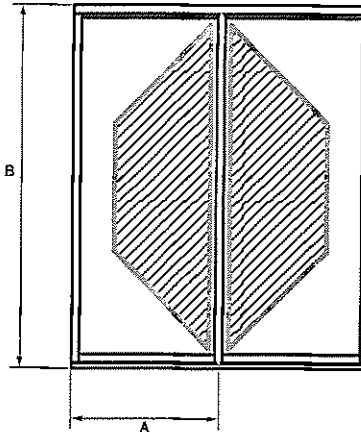
DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

MULLION STRENGTH CHARTS - TJ320+TJ320



$$I_{xx} = 89.6 \times 10^3 \text{ mm}^4$$

$$I_{yy} = 1147.8 \times 10^3 \text{ mm}^4$$



S = Serviceability limit state (deflection = L/150, L/180, L/250)
U = Ultimate strength limit state (factored yield strength = 110 MPa)

These tables have been calculated using nominal section properties.

A typical assembly has been tested as per the requirements of AS2047.

Serviceability rating has been limited to 5000 Pa and Ultimate strength rating has been limited to 8000 Pa.

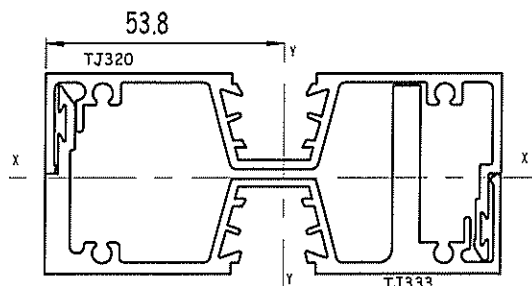
Report no. AZT0003.08 and AZT0004.08

Darley 100 x 45 Centre Glazed	Deflection Ratio's Serviceability =1/150		Serviceability =1/180		Serviceability =1/250		Ultimate = U	Limitations: Serviceability to 5000 Pa & Ultimate to 8000 Pa		Extrusions: TJ320 Plus TJ320	
Glazing Width either side of the mullion in mm (A)											
Window Height (mm) (B)	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
2200	3382	3043	2777	2565	2392	2251	2135	2040	1962	1899	1849
	3382	3043	2777	2565	2392	2251	2135	2040	1962	1899	1849
	3013	2718	2486	2302	2153	2031	1932	1852	1786	1733	1692
	5072	4565	4166	3847	3588	3377	3203	3060	2943	2849	2774
2400	2821	2533	2306	2124	1975	1853	1751	1666	1594	1535	1486
	2821	2533	2306	2124	1975	1853	1751	1666	1594	1535	1486
	2301	2070	1889	1743	1625	1528	1447	1381	1325	1279	1241
	4231	3800	3460	3186	2963	2779	2626	2498	2391	2302	2229
2600	2390	2143	1948	1790	1661	1554	1464	1388	1324	1270	1224
	2390	2143	1948	1790	1661	1554	1464	1388	1324	1270	1224
	1798	1615	1470	1354	1258	1180	1114	1059	1013	974	941
	3585	3214	2921	2685	2491	2331	2196	2083	1987	1905	1836
2800	2051	1837	1667	1530	1417	1323	1244	1177	1120	1071	1029
	1989	1783	1621	1490	1382	1293	1218	1155	1101	1055	1016
	1432	1284	1167	1073	995	931	877	832	793	760	732
	3077	2756	2501	2295	2126	1985	1866	1765	1679	1606	1543
3000	1781	1593	1444	1324	1224	1141	1071	1011	960	916	878
	1610	1442	1309	1201	1113	1039	977	924	879	841	807
	1159	1038	943	865	801	748	704	666	633	605	581
	2671	2390	2166	1985	1836	1712	1607	1517	1440	1374	1317
3200	1560	1395	1263	1157	1069	995	933	879	833	794	759
	1322	1183	1073	983	910	848	796	752	714	681	653
	952	852	772	708	655	611	573	542	514		
	2341	2092	1895	1735	1603	1492	1399	1319	1250	1190	1139
3400	1319	1179	1068	978	904	842	790	745	706	672	643
	1099	983	890	815	754	702	658	621	588	560	536
	791	707	641	587	543	505					
	2068	1848	1672	1530	1412	1313	1230	1158	1096	1042	995
3600	1108	990	897	820	758	705	660	622	589	560	535
	923	825	747	684	631	587	550	518			
	665	594	538								
	1841	1644	1487	1359	1254	1165	1090	1025	969	921	878
3800	940	840	760	695	641	596	558	525			
	940	840	760	695	641	596	558	525			
	564	504									
	1650	1472	1331	1216	1121	1041	973	914			

N.B. For values in bold italics use heavy duty subhead/subsill.

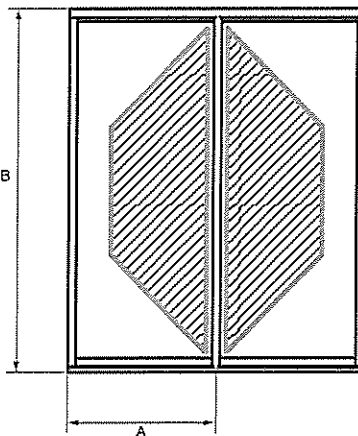
DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

MULLION STRENGTH CHARTS - TJ320+TJ333



$$I_{xx} = 155 \times 10^3 \text{ mm}^4$$

$$I_{yy} = 1540 \times 10^3 \text{ mm}^4$$



S = Serviceability limit state (deflection = L/150, L/180, L/250)
 U = Ultimate strength limit state (factored yield strength = 110 MPa)

These tables have been calculated using nominal section properties.
 A typical assembly has been tested as per the requirements of AS2047.

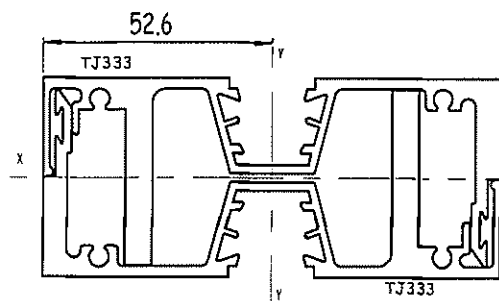
Serviceability rating has been limited to 5000 Pa and Ultimate strength rating has been limited to 8000 Pa.

Darley 100 x 45 Centre Glazed	Deflection Ratio's Serviceability =1/150		Serviceability =1/180		Serviceability =1/250		Ultimate = U	Limitations: Serviceability to 5000 Pa & Ultimate to 8000 Pa		Extrusions: TJ320 Plus TJ333	
	Glazing Width either side of the mullion in mm (A)										
Window Height (mm) (B)	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
2400	3784	3398	3094	2850	2650	2486	2349	2234	2139	2059	1993
	3784	3398	3094	2850	2650	2486	2349	2234	2139	2059	1993
	3087	2778	2534	2339	2180	2050	1942	1852	1778	1716	1665
	5676	5098	4642	4275	3975	3728	3523	3352	3208	3089	2990
2600	3206	2875	2613	2401	2228	2084	1964	1863	1777	1704	1642
	3206	2875	2613	2401	2228	2084	1964	1863	1777	1704	1642
	2412	2166	1972	1816	1688	1583	1495	1421	1359	1306	1262
	4809	4312	3919	3602	3342	3127	2946	2794	2665	2556	2464
2800	2752	2465	2237	2053	1901	1775	1669	1579	1502	1436	1380
	2668	2392	2175	1999	1855	1735	1634	1550	1477	1416	1363
	1921	1723	1566	1439	1335	1249	1177	1116	1064	1019	982
	4128	3697	3355	3079	2852	2663	2503	2368	2253	2155	2070
3000	2389	2137	1938	1776	1642	1531	1437	1357	1288	1229	1178
	2160	1935	1756	1612	1493	1394	1311	1240	1180	1128	1083
	1555	1393	1264	1161	1075	1004	944	893	849	812	780
	3583	3206	2906	2664	2464	2297	2156	2035	1932	1844	1767
3200	2093	1871	1695	1552	1434	1335	1251	1180	1118	1065	1018
	1773	1587	1439	1319	1221	1138	1068	1009	958	914	876
	1277	1143	1036	950	879	819	769	727	690	658	631
	3140	2807	2543	2328	2151	2002	1877	1769	1677	1597	1528
3400	1769	1582	1433	1313	1213	1130	1059	999	947	902	863
	1474	1318	1194	1094	1011	942	883	833	789	752	719
	1061	949	860	788	728	678	636	599	568	541	518
	2775	2479	2244	2052	1894	1762	1650	1553	1470	1398	1335
3600	1487	1329	1203	1101	1016	946	886	834	790	751	718
	1239	1107	1002	917	847	788	738	695	658	626	598
	892	797	722	660	610	567	531	501			
	2470	2205	1995	1824	1682	1563	1462	1375	1300	1235	1178
3800	1262	1127	1019	932	860	800	748	704	666	633	604
	1051	939	850	777	717	666	624	587	555	527	503
	757	676	612	559	516						
	2213	1975	1786	1631	1504	1396	1305	1227	1159	1099	1047
4000	1080	964	872	797	735	682	638	600	567	538	513
	1080	964	872	797	735	682	638	600	567	538	513
	648	578	523								
	1994	1779	1608	1468	1352	1255	1172	1101	1039	985	938

N.B. For values in bold italics use heavy duty subhead/subsill.

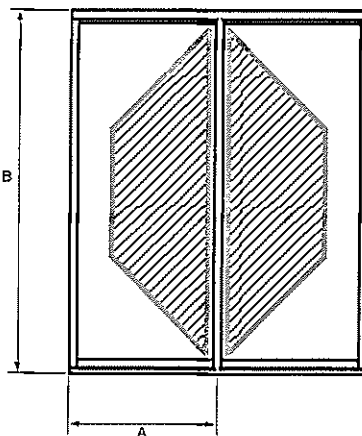
DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

MULLION STRENGTH CHARTS - TJ333+TJ333



$$I_{xx} = 220.4 \times 10^3 \text{ mm}^4$$

$$I_{yy} = 1932 \times 10^3 \text{ mm}^4$$



S = Serviceability limit state (deflection = L/150, L/180, L/250)
U = Ultimate strength limit state (factored yield strength = 110 MPa)

These tables have been calculated using nominal section properties.
A typical assembly has been tested as per the requirements of AS2047.

Serviceability rating has been limited to 5000 Pa and Ultimate strength rating has been limited to 8000 Pa.

Report no. AZT0003.08 and AZT0004.08

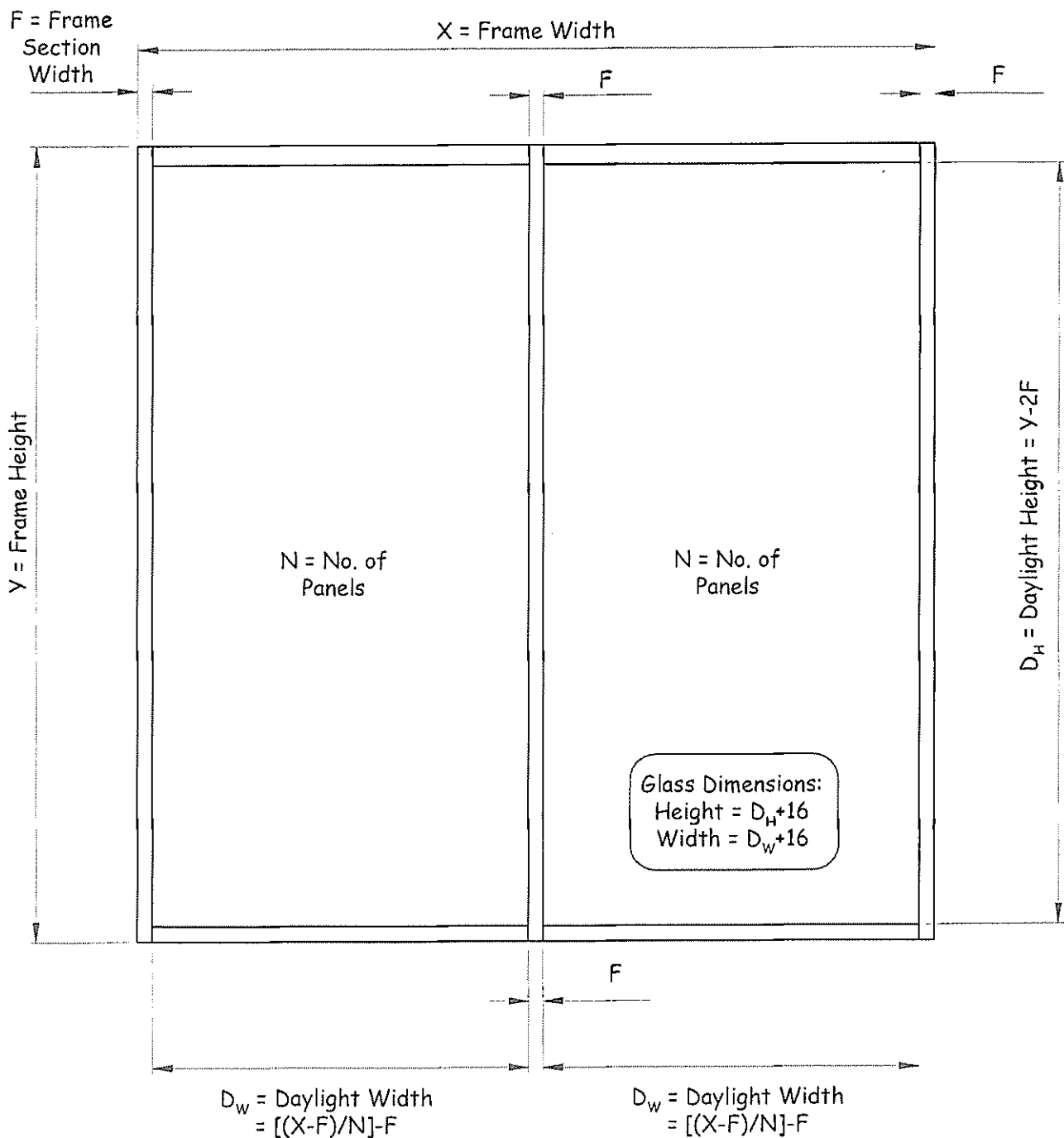
Darley 100 x 45 Centre Glazed	Deflection Ratio's Serviceability =1/150		Serviceability =1/180		Serviceability =1/250		Ultimate = U	Limitations: Serviceability to 5000 Pa & Ultimate to 8000 Pa		Extrusions: TJ333 Plus TJ333	
	Glazing Width either side of the mullion in mm (A)										
Window Height (mm) (B)	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
2600	4114	3689	3353	3082	2859	2675	2520	2390	2280	2187	2108
	4114	3689	3353	3082	2859	2675	2520	2390	2280	2187	2108
	3026	2718	2474	2278	2118	1986	1875	1783	1705	1639	1583
	6172	5534	5029	4623	4289	4012	3781	3585	3420	3280	3161
2800	3532	3163	2871	2634	2440	2278	2142	2026	1928	1843	1771
	3347	3002	2728	2508	2327	2177	2051	1944	1854	1776	1711
	2410	2161	1964	1806	1675	1567	1476	1400	1335	1279	1232
	5298	4744	4306	3951	3660	3417	3213	3039	2891	2765	2656
3000	3065	2743	2486	2279	2108	1965	1844	1741	1653	1577	1512
	2710	2427	2203	2022	1873	1749	1645	1556	1480	1415	1359
	1951	1748	1586	1456	1349	1260	1184	1120	1066	1019	978
	4598	4114	3730	3418	3161	2947	2766	2612	2480	2366	2267
3200	2670	2389	2167	1986	1838	1713	1606	1514	1435	1366	1307
	2225	1991	1806	1655	1531	1428	1341	1266	1202	1147	1099
	1602	1434	1300	1192	1103	1028	965	912	865	826	791
	4030	3602	3263	2987	2760	2569	2408	2271	2152	2050	1960
3400	2220	1985	1798	1647	1522	1417	1329	1253	1188	1132	1083
	1850	1654	1499	1372	1268	1181	1108	1044	990	943	902
	1332	1191	1079	988	913	850	797	752	713	679	650
	3561	3181	2879	2634	2431	2261	2117	1993	1887	1794	1713
3600	1865	1667	1509	1381	1275	1186	1111	1047	991	943	901
	1554	1389	1258	1151	1063	989	926	872	826	786	750
	1119	1000	905	829	765	712	667	628	595	566	540
	3170	2830	2560	2340	2158	2006	1876	1765	1669	1585	1512
3800	1583	1414	1279	1170	1079	1003	939	883	836	794	758
	1319	1178	1066	975	899	836	782	736	696	662	631
	950	848	767	702	648	602	563	530	501		
	2840	2534	2291	2093	1929	1792	1675	1574	1487	1411	1344
4000	1355	1209	1094	1000	922	856	801	753	711	675	644
	1129	1008	911	833	768	713	667	627	593	563	536
	813	726	656	600	553	514					
	2559	2283	2063	1884	1736	1611	1504	1413	1334	1264	1204
4200	1168	1043	943	861	793	737	688	647	611	579	552
	1168	1043	943	861	793	737	688	647	611	579	552
	701	626	566	517							
	2318	2068	1868	1705	1570	1456	1359	1276	1203	1140	1084

N.B. For values in bold italics use heavy duty subhead/subsill.

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

CUTTING FORMULAE

The following diagram displays a general window configuration with formulae for calculating the cutting dimensions of frames to fit a given window opening.



DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

LABORATORY TEST RESULTS

The following data was obtained from the results of the tests on Darley 100x45mm Centre Glazed windows as performed in the Azuma Testing Laboratory (NATA Accredited).

Test Report No: AZT0003.08.xls

Date: 13/02/2008

Mullion Type: Heavy Duty

Test: Wind and Water Penetration Testing

Results: The test unit satisfied the requirements of AS2047.1 in both the positive and negative deflection at the nominated design pressure of 2300Pa.

Test: Air Infiltration Test

Results: The test unit satisfied the requirement of AS2047. Unit passed 75Pa and 150Pa air pressure in the sealed and unsealed states. Results were as follows:

- 0.08L/s.m² @75Pa Positive
- 0.10L/s.m² @75Pa Negative
- 0.10L/s.m² @150Pa Positive
- 0.15L/s.m² @150Pa Negative

Test: Water Penetration

Results: The test unit satisfied the requirements of AS2047 in positive pressure at the nominated design pressure of 500Pa.

Test: Ultimate Strength Test

Results: The test satisfied the requirements of AS2047 at 2500Pa.

Test Report No: AZT0004.08.xls

Date: 20/02/2008

Mullion Type: Light Duty

Test: Wind and Water Penetration Testing

Results: The test unit satisfied the requirements of AS2047.1 in both the positive and negative deflection at the nominated design pressure of 1500Pa.

Test: Air Infiltration Test

Results: The test unit satisfied the requirement of AS 2047. Unit passed 75Pa and 150Pa air pressure in the sealed and unsealed states. Results were as follows:

- 0.16L/s.m² @75Pa Positive
- 0.29L/s.m² @75Pa Negative
- 0.19L/s.m² @150Pa Positive
- 0.40L/s.m² @150Pa Negative

Test: Water Penetration

Results: The test unit satisfied the requirements of AS2047 in positive pressure at the nominated design pressure of 450Pa.

Test: Ultimate Strength Test

Results: The test satisfied the requirements of AS2047 at 2300Pa.

DATE: APR - 2009 - V2

REPLACES: APR - 2009 - V1

DWG SCALE: Not to Scale



DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

ENERGY RATINGS

All Darley Products have been rated under the Australian Fenestration Ratings Council (AFRC) Energy Rating Scheme.

Definitions

The following are terms used in describing the energy ratings of windows as defined by the Window Energy Rating Scheme (WERS). For further information go to www.wers.net.

U-value (U_w)

U-value measures how well a product prevents heat from escaping. It is a measure of the rate of non solar heat loss or gain through a material or assembly. U-value ratings generally fall between 2.0-10.0 W/m².K for Australian products. The rate of heat is indicated in the terms of the U-value of a window assembly which includes the effect of the frame, glass, seals and any spacers. The lower the U-value, the greater a window's resistance to heat flow and the better its insulating value. The U-value for a window takes account of the various U-values for the components making up the window, so you may see these in technical literature; U_w is the value for whole window and because of its importance is usually abbreviated to U, U_c is the value at the centre of glass, U_f is the value for the frame.

Solar Heat Gain Co-efficient ($SHGC_w$)

SHGC measures how well a product blocks heat caused by sunlight. The SHGC is the fraction of incident solar radiation admitted through a window, both directly transmitted, and absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.

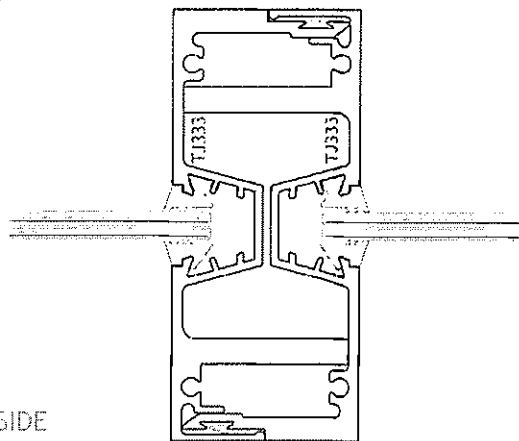
Visible Transmittance (T_{vw})

Visible transmittance measures how much light comes in through a product. It is an optical property that indicates the amount of visible light transmitted. T_{vw} is expressed as a number between 0 and 1. The higher the number, the more light is transmitted.

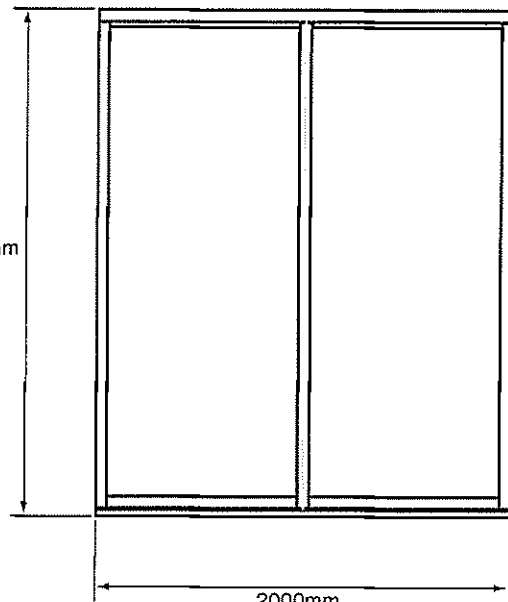
DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

ENERGY RATINGS: Heavy Duty Mullion

INSIDE



2000mm



2000mm

8 Split Mullion Detail
(Heavy Duty)

Darley Aluminium				%	%	Total Window System Values - NFRC			
Window ID	Glazing	Cooling Stars	Heating Stars			U _w	SHGC _w	T _{vw}	Air Inf.
Aluminium Commercial 101.6mm Centre Glazed-Heavy Duty Mullion - Single Glazed									
DAR_003_01	6Clr	☆	★★★	14%	23%	6.1	0.73	0.78	0.08
DAR_003_02	6TS21	★★★☆	★★	55%	10%	5.3	0.27	0.18	0.08
DAR_003_03	6.38CPNtrl	★★★	★★★☆	47%	34%	4.2	0.45	0.52	0.08
DAR_003_04	6.38CPGn	★★★	★★★☆	48%	34%	4.1	0.45	0.63	0.08
DAR_003_05	6.38CPGy	★★★	★★★☆	49%	34%	4.2	0.44	0.35	0.08
DAR_003_06	6Gy	★★	★★	34%	13%	6.1	0.51	0.39	0.08

NOTES

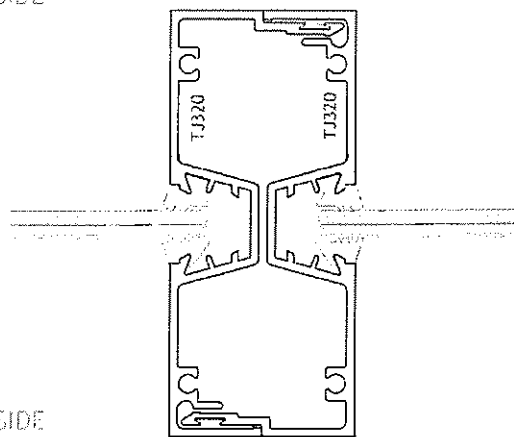
1. U_w is the whole window U-value
2. SHGC_w is the whole window solar heat gain coefficient
3. T_{vw} is the whole window visible (light) transmittance
4. Percentage improvement figures are compared with using base-case Generic Window 1 (3mm clear in standard aluminium frame)
5. A negative percentage improvement figure indicates performance worse than the base-case window
6. A positive percentage improvement figure indicates performance better than the base-case window
7. Maximum air infiltration is 5.0L/s.m² at a positive pressure difference of 75Pa as measured according to AS 2047
8. Static performance (U_w, SHGC_w, T_{vw}, T_{dw}) calculated using Window 5.2 and Therm 5.2 software (LBNL), 2000-2003
9. Annual energy performance (stars and % improvements) calculated using Nationwide House Energy Rating Software (AccuRate)
10. Results disclosed at National Fenestration Rating Council (NFRC) regulations.

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

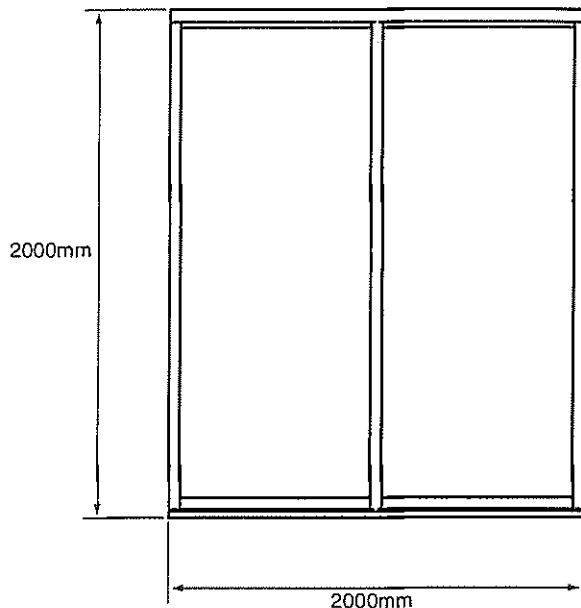
ENERGY RATINGS: Light Duty Mullion

INSIDE

OUTSIDE



7 Split Mullion Detail
(Light Duty)



Darley Aluminium				%	%	Total Window System Values - NFRC			
Window ID	Glazing	Cooling Stars	Heating Stars			Uw	SHGCw	Tvw	Air Inf.
Aluminium Commercial 101.6mm Centre Glazed - Single Glazed									
DAR_002_01	6Clr	☆	***	14%	23%	6.1	0.73	0.78	0.16
DAR_002_02	6TS21	***☆	**	55%	10%	5.3	0.27	0.18	0.16
DAR_002_03	6.38CPNtrl	***	***☆	47%	34%	4.2	0.45	0.52	0.16
DAR_002_04	6.38CPGn	***	***☆	48%	34%	4.1	0.45	0.63	0.16
DAR_002_05	6.38CPGy	***	***☆	49%	34%	4.1	0.44	0.35	0.16
DAR_002_06	6Gy	**	**	34%	13%	6.1	0.51	0.39	0.16

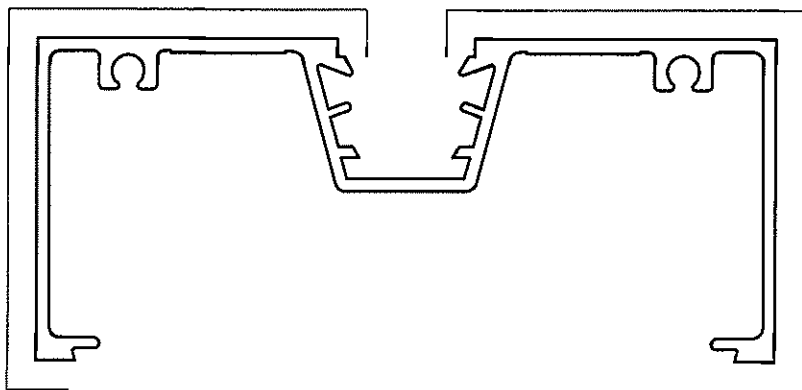
NOTES

1. U_w is the whole window U-value
2. $SHGC_w$ is the whole window solar heat gain coefficient
3. T_{vw} is the whole window visible (light) transmittance
4. Percentage improvement figures are compared with using base-case Generic Window 1 (3mm clear in standard aluminium frame)
5. A negative percentage improvement figure indicates performance worse than the base-case window
6. A positive percentage improvement figure indicates performance better than the base-case window
7. Maximum air infiltration is 5.0L/s.m² at a positive pressure difference of 75Pa as measured according to AS 2047
8. Static performance (U_w , $SHGC_w$, T_{vw} , T_{dw}) calculated using Window 5.2 and Therm 5.2 software (LBNL), 2000-2003
9. Annual energy performance (stars and % improvements) calculated using Nationwide House Energy Rating Software (AccuRate)
10. Results disclosed at National Fenestration Rating Council (NFRC) regulations.

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES

P.P.



TJ301
Captive Frame

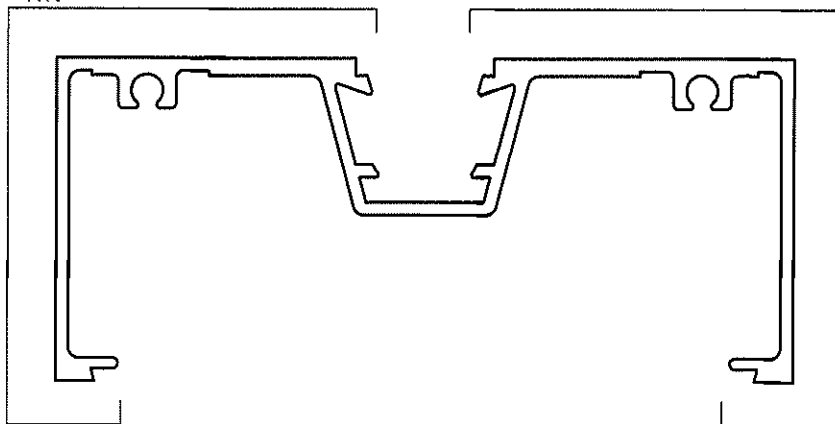
$$I_{xx} = 98.3 \times 10^3 \text{mm}^4$$

$$I_{yy} = 677.9 \times 10^3 \text{mm}^4$$

A.P. = 541.4mm

P.P. = 187.4mm

P.P.



TJ300
Heavy Duty Frame

$$I_{xx} = 102.52 \times 10^3 \text{mm}^4$$

$$I_{yy} = 715.75 \times 10^3 \text{mm}^4$$

A.P. = 532mm

P.P. = 190mm

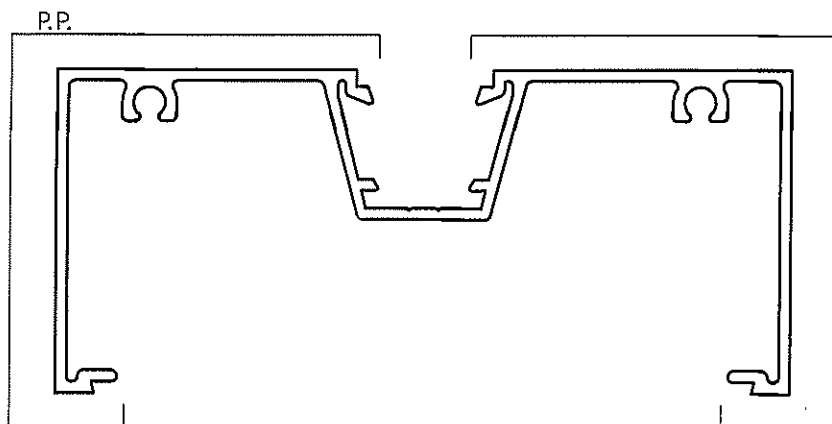
DATE: APR - 2009 - V2

REPLACES: APR - 2009 - V1

DWG SCALE: 1:1

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES

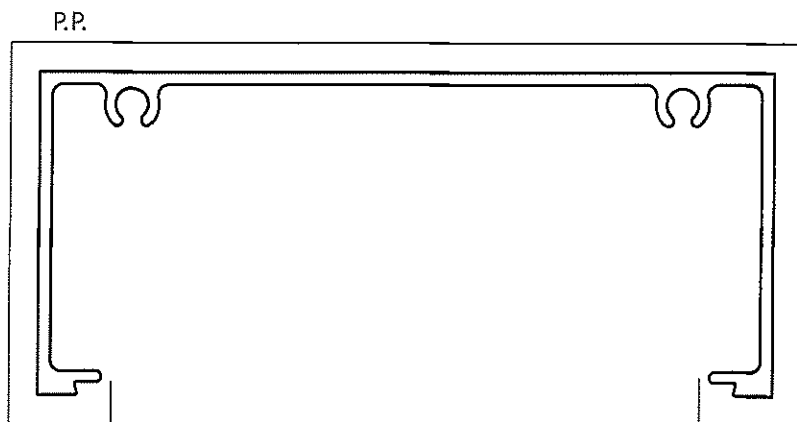


TJ390
Light Duty Frame

$$I_{xx} = 85.34 \times 10^3 \text{mm}^4$$
$$I_{yy} = 593.98 \times 10^3 \text{mm}^4$$

A.P. = 546mm

P.P. = 182mm

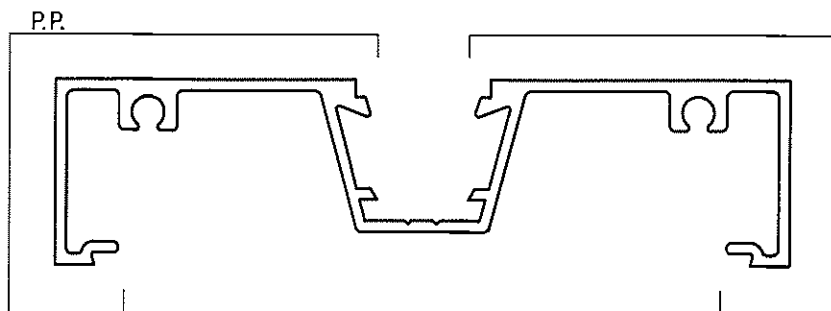


TJ367
Plain Frame

$$I_{xx} = 95.4 \times 10^3 \text{mm}^4$$
$$I_{yy} = 650.3 \times 10^3 \text{mm}^4$$

A.P. = 439mm

P.P. = 204mm



TJ360
Narrow Frame

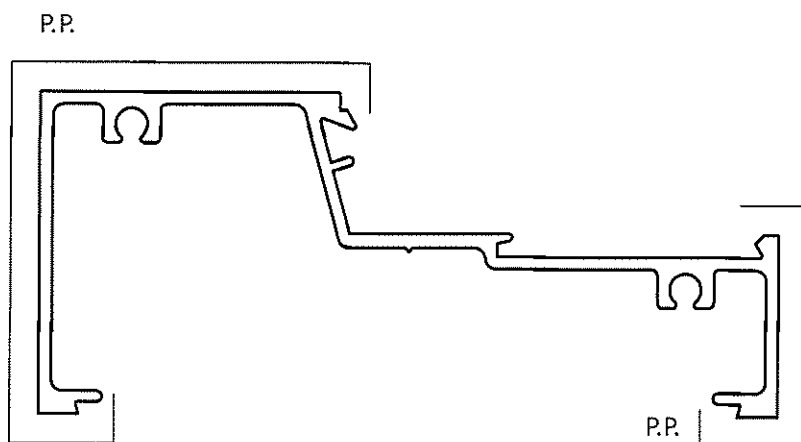
$$I_{xx} = 26.41 \times 10^3 \text{mm}^4$$
$$I_{yy} = 456.59 \times 10^3 \text{mm}^4$$

A.P. = 463mm

P.P. = 144mm

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES



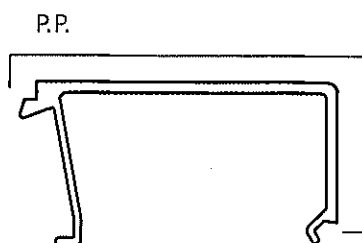
TJ302
Captive Sill

$$I_{xx} = 78.3 \times 10^3 \text{mm}^4$$

$$I_{yy} = 584.7 \times 10^3 \text{mm}^4$$

$$\text{A.P.} = 455.8 \text{mm}$$

$$\text{P.P.} = 129.2 \text{mm}$$



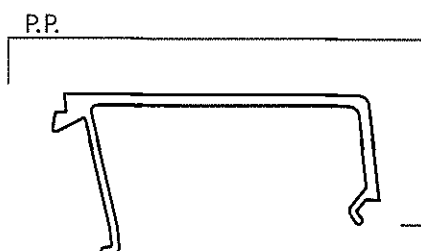
TJ303
Flat Bead

$$I_{xx} = 6.1 \times 10^3 \text{mm}^4$$

$$I_{yy} = 31.5 \times 10^3 \text{mm}^4$$

$$\text{A.P.} = 180.9 \text{mm}$$

$$\text{P.P.} = 62.3 \text{mm}$$



TJ303B
Sloped Bead

$$I_{xx} = 4.52 \times 10^3 \text{mm}^4$$

$$I_{yy} = 28.62 \times 10^3 \text{mm}^4$$

$$\text{A.P.} = 169 \text{mm}$$

$$\text{P.P.} = 100 \text{mm}$$

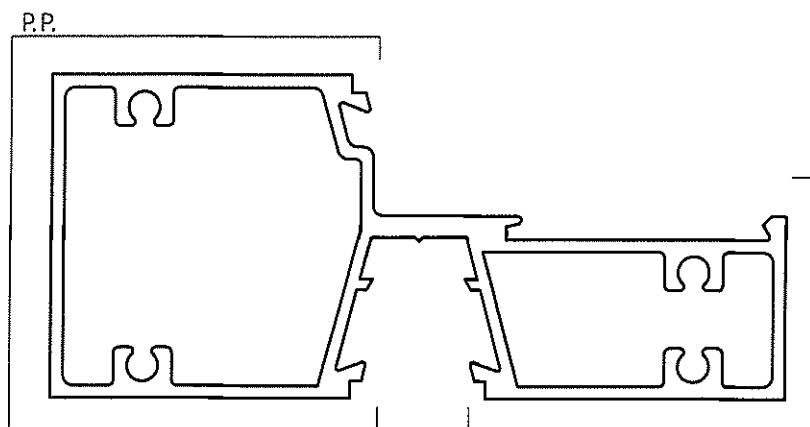
DATE: APR - 2009 - V2

REPLACES: APR - 2009 - V1

DWG SCALE: 1:1

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES

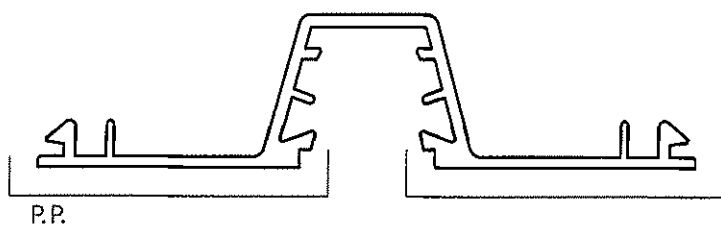


TJ362
Solid Transom/Sill

$$I_{xx} = 153 \times 10^3 \text{mm}^4$$
$$I_{yy} = 739.68 \times 10^3 \text{mm}^4$$

A.P. = 369mm

P.P. = 194mm

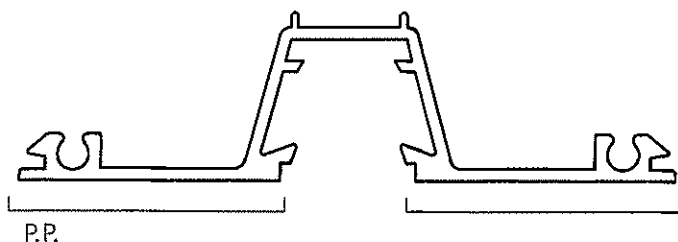


TJ304
Captive Adaptor

$$I_{xx} = 13.3 \times 10^3 \text{mm}^4$$
$$I_{yy} = 158 \times 10^3 \text{mm}^4$$

A.P. = 328mm

P.P. = 80.4mm



TJ364
Heavy Duty Adaptor

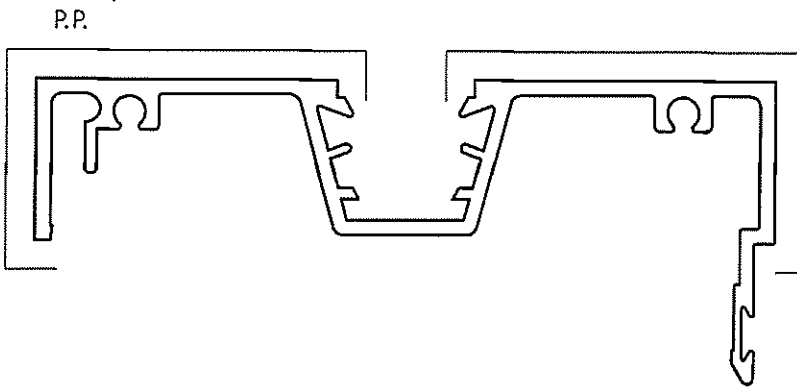
$$I_{xx} = 14.5 \times 10^3 \text{mm}^4$$
$$I_{yy} = 185.1 \times 10^3 \text{mm}^4$$

A.P. = 325mm

P.P. = 80mm

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES



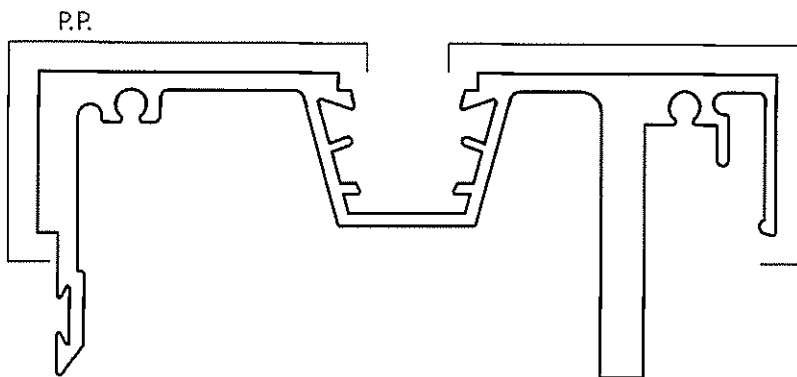
TJ320
Standard Split Mullion

$$I_{xx} = 44.8 \times 10^3 \text{mm}^4$$

$$I_{yy} = 573.9 \times 10^3 \text{mm}^4$$

$$A.P. = 489.3 \text{mm}$$

$$P.P. = 136.6 \text{mm}$$



TJ333
Heavy Duty Split Mullion

$$I_{xx} = 110.2 \times 10^3 \text{mm}^4$$

$$I_{yy} = 966 \times 10^3 \text{mm}^4$$

$$A.P. = 544 \text{mm}$$

$$P.P. = 138.2 \text{mm}$$

DATE: APR - 2009 - V2

REPLACES: APR - 2009 - V1

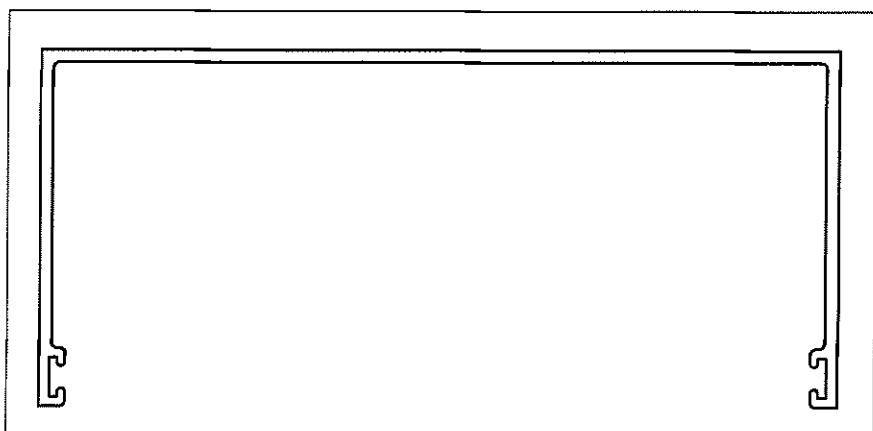
DWG SCALE: 1:1



DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES

P.P.



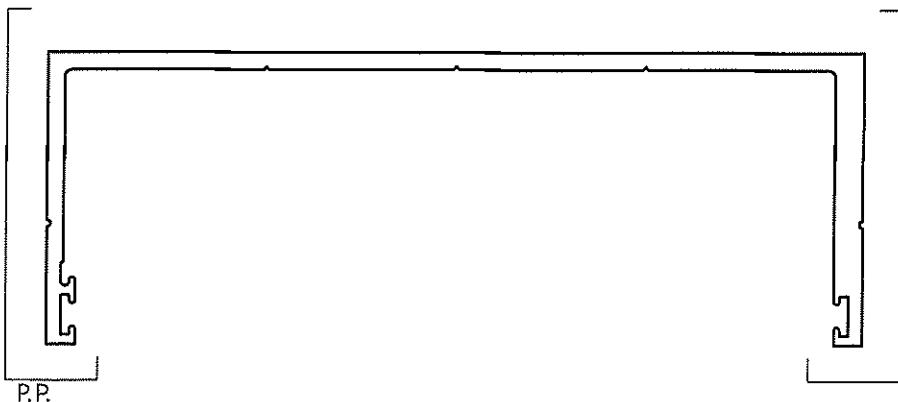
TJ309
Standard Subhead

$$I_{xx} = 95 \times 10^3 \text{mm}^4$$

$$I_{yy} = 701.4 \times 10^3 \text{mm}^4$$

A.P. = 435.05mm

P.P. = 216.7mm



P.P.

TJ399
Heavy Duty Subhead

$$I_{xx} = 75.40 \times 10^3 \text{mm}^4$$

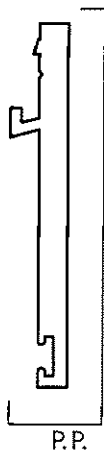
$$I_{yy} = 974.44 \times 10^3 \text{mm}^4$$

A.P. = 403mm

P.P. = 90mm

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES



TJ429

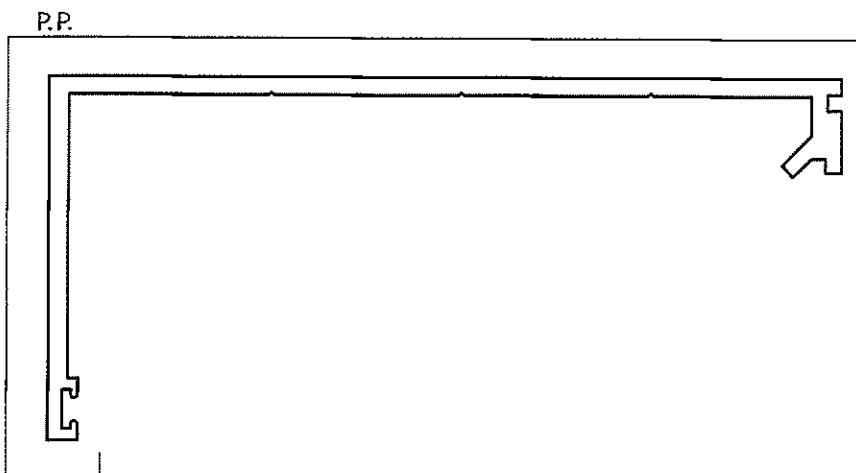
Two Piece Subhead Cover

$$I_{xx} = n/a$$

$$I_{yy} = n/a$$

A.P. = 129mm

P.P. = 100mm



TJ430

Two Piece Subhead

$$I_{xx} = n/a$$

$$I_{yy} = n/a$$

A.P. = 363mm

P.P. = 163mm

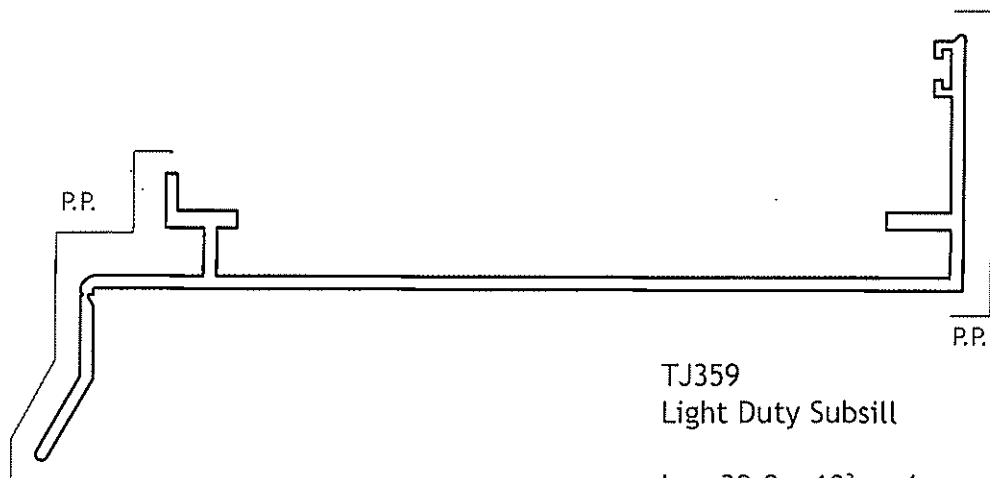
DATE: APR - 2009 - V2

REPLACES: APR - 2009 - V1

DWG SCALE: 1:1

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES



TJ359

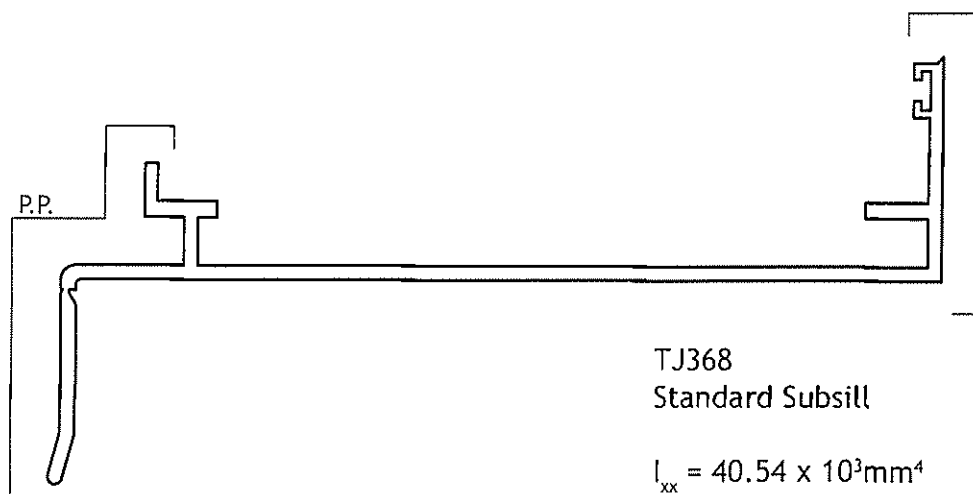
Light Duty Subsill

$$I_{xx} = 39.9 \times 10^3 \text{mm}^4$$

$$I_{yy} = 799.3 \times 10^3 \text{mm}^4$$

$$\text{A.P.} = 440.32 \text{mm}$$

$$\text{P.P.} = 105.32 \text{mm}$$



TJ368

Standard Subsill

$$I_{xx} = 40.54 \times 10^3 \text{mm}^4$$

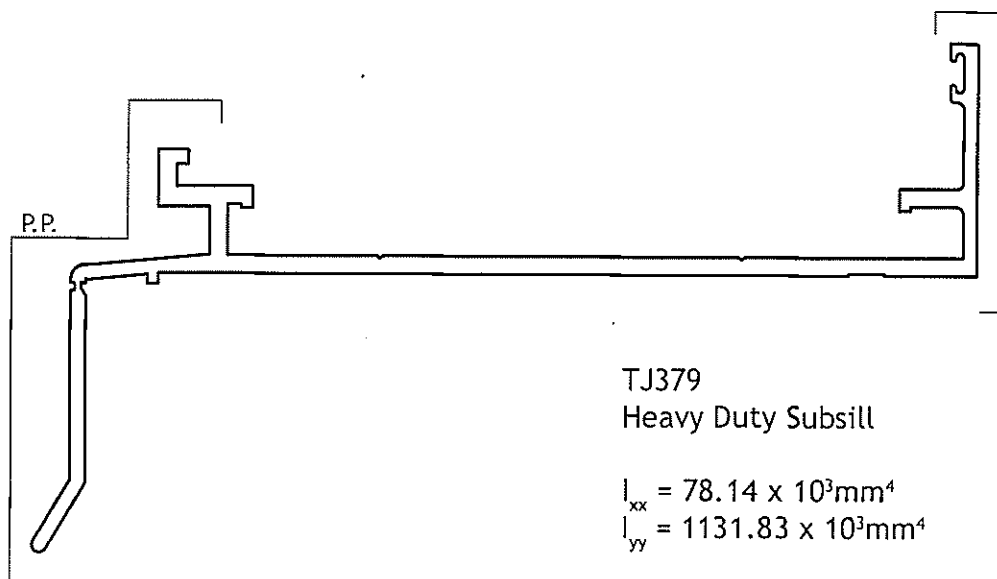
$$I_{yy} = 868.18 \times 10^3 \text{mm}^4$$

$$\text{A.P.} = 436 \text{mm}$$

$$\text{P.P.} = 105 \text{mm}$$

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES



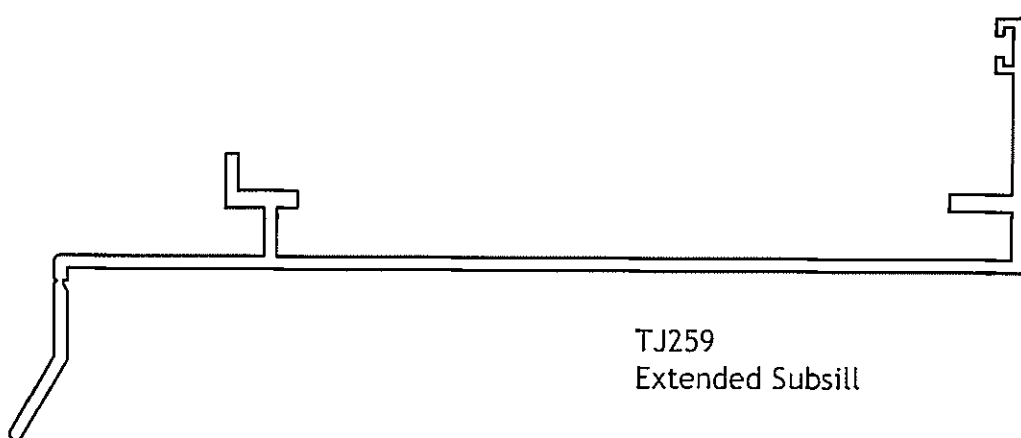
TJ379
Heavy Duty Subsill

$$I_{xx} = 78.14 \times 10^3 \text{mm}^4$$

$$I_{yy} = 1131.83 \times 10^3 \text{mm}^4$$

A.P. = 478mm

P.P. = 105mm



TJ259
Extended Subsill

$$I_{xx} = 42.45 \times 10^3 \text{mm}^4$$

$$I_{yy} = 999.80 \times 10^3 \text{mm}^4$$

A.P. = 465mm

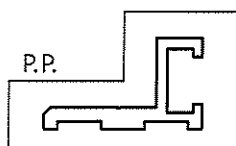
DATE: APR - 2009 - V2

REPLACES: APR - 2009 - V1

DWG SCALE: 1:1

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES



JM2809

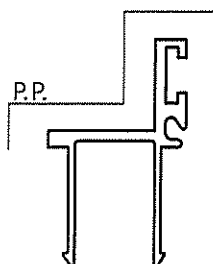
Plant-On Door Stop

$$I_{xx} = n/a$$

$$I_{yy} = n/a$$

A.P. = 87mm

P.P. = 100mm



TJ335

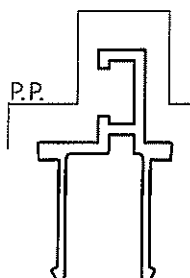
35mm Door Stop

$$I_{xx} = 5.51 \times 10^3 \text{mm}^4$$

$$I_{yy} = 3.26 \times 10^3 \text{mm}^4$$

A.P. = 152mm

P.P. = 100mm



TJ306

45mm Door Stop

$$I_{xx} = 7.09 \times 10^3 \text{mm}^4$$

$$I_{yy} = 2.76 \times 10^3 \text{mm}^4$$

A.P. = 154mm

P.P. = 100mm

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES



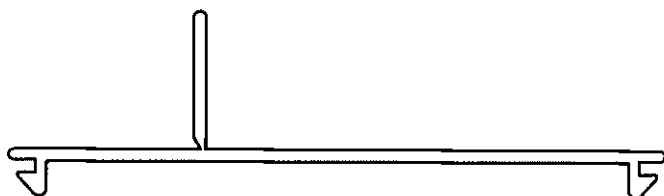
TJ305
Flush Adaptor

$$I_{xx} = 0.25 \times 10^3 \text{mm}^4$$

$$I_{yy} = 133.8 \times 10^3 \text{mm}^4$$

A.P. = 206.1mm

P.P. = 94mm

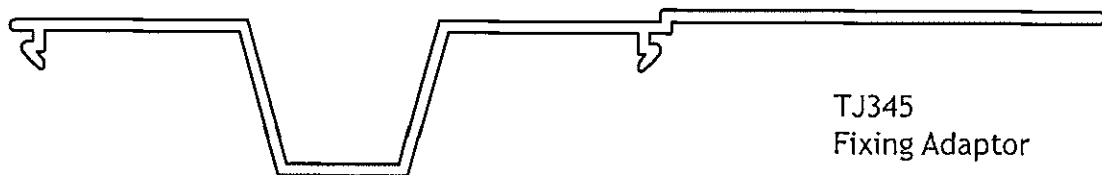


TJ342
Reveal Adaptor

$$I_{xx} = 4.31 \times 10^3 \text{mm}^4$$

$$I_{yy} = 150.12 \times 10^3 \text{mm}^4$$

A.P. = 246mm



TJ345
Fixing Adaptor

$$I_{xx} = 15.62 \times 10^3 \text{mm}^4$$

$$I_{yy} = 547 \times 10^3 \text{mm}^4$$

A.P. = 399mm

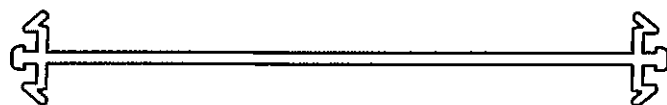
DATE: APR - 2009 - V2

REPLACES: APR - 2009 - V1

DWG SCALE: 1:1

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES



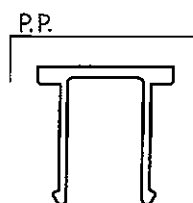
TJ385

Back-to-Back Adaptor

$$I_{xx} = 0.66 \times 10^3 \text{mm}^4$$

$$I_{yy} = 177.69 \times 10^3 \text{mm}^4$$

A.P. = 247mm



TJ307

Pocket Filler

$$I_{xx} = 2.58 \times 10^3 \text{mm}^4$$

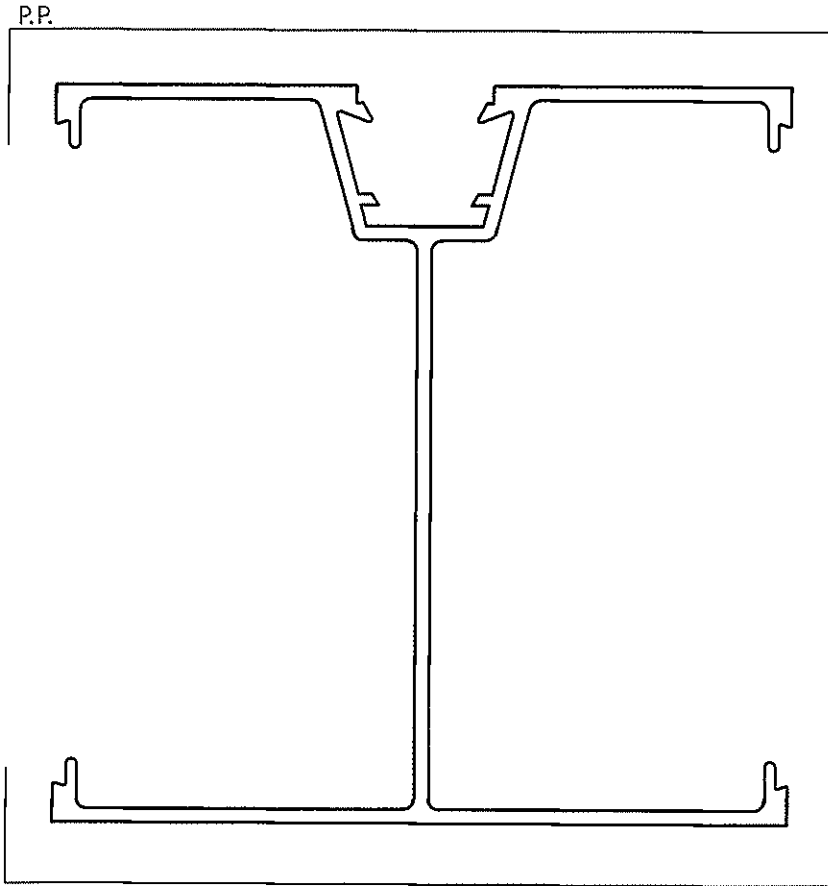
$$I_{yy} = 2.36 \times 10^3 \text{mm}^4$$

A.P. = 109mm

P.P. = 100mm

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SECTION PROFILES



TJ308

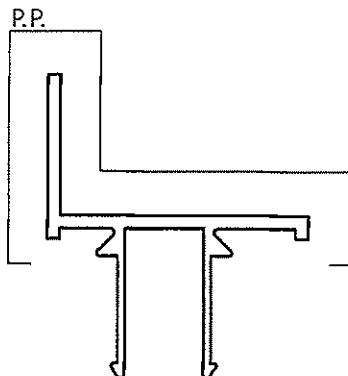
Post

$$I_{xx} = 1324.18 \times 10^3 \text{mm}^4$$

$$I_{yy} = 506.02 \times 10^3 \text{mm}^4$$

$$\text{A.P.} = 703 \text{mm}$$

$$\text{P.P.} = 205 \text{mm}$$



TJ720

Awning Stop

$$I_{xx} = 11.97 \times 10^3 \text{mm}^4$$

$$I_{yy} = 180.07 \times 10^3 \text{mm}^4$$

$$\text{A.P.} = 208 \text{mm}$$

$$\text{P.P.} = 100 \text{mm}$$

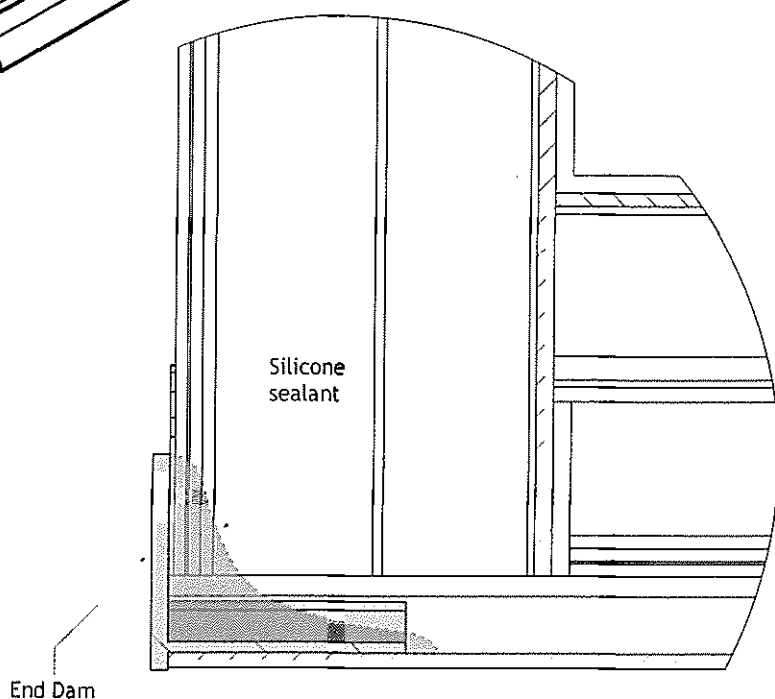
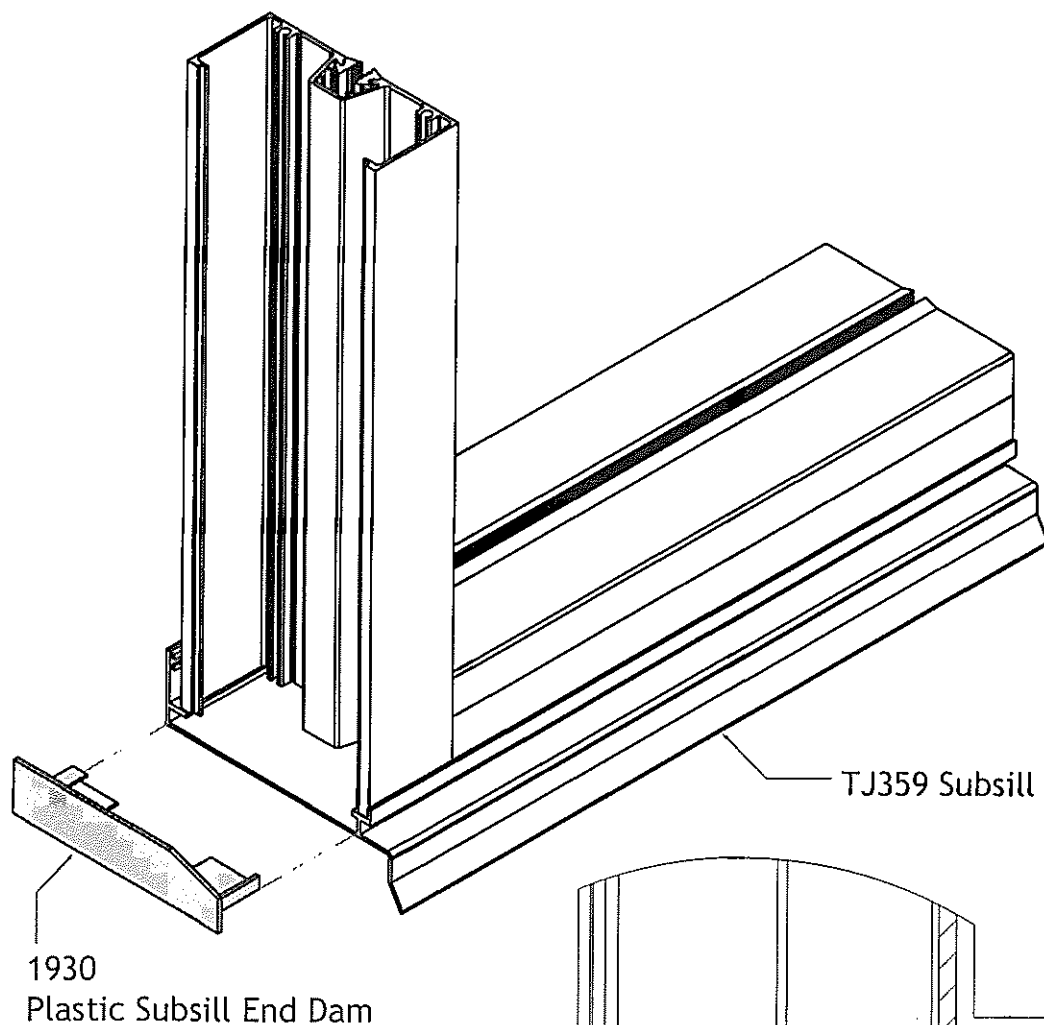
DATE: APR - 2009 - V2

REPLACES: APR - 2009 - V1

DWG SCALE: Not to Scale

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SMALL PARTS: Subsill End Dam Placement



DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SMALL PARTS: Glazing Wedges and Combinations



1620



1625



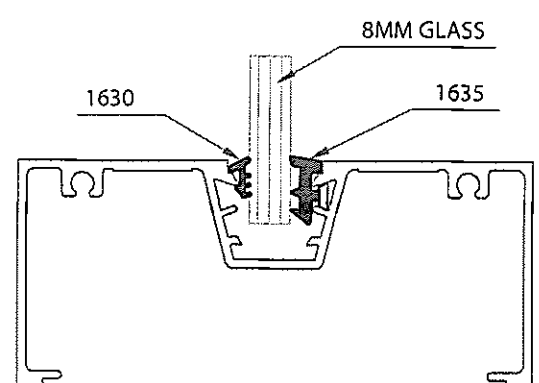
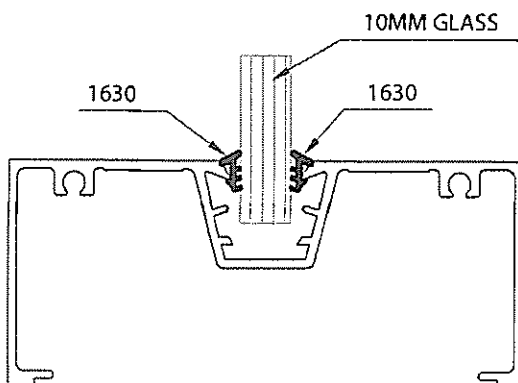
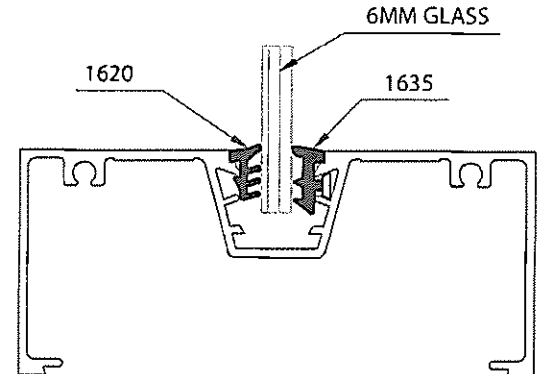
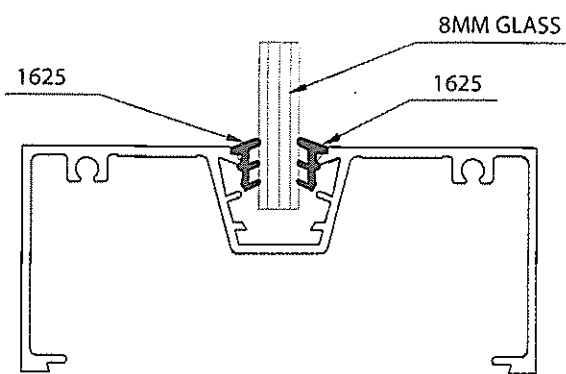
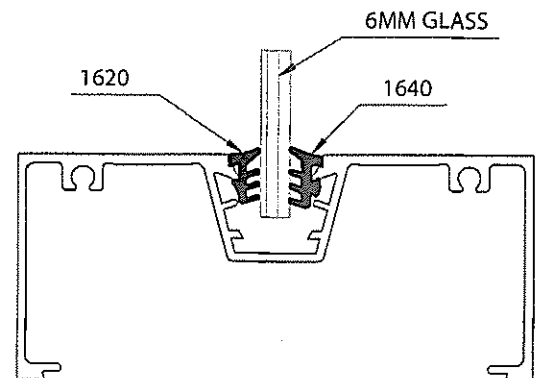
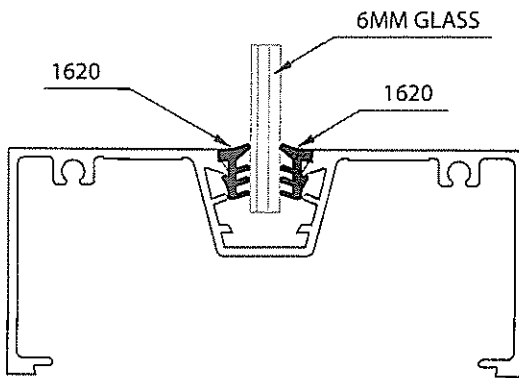
1630



1640



1635



DATE: APR - 2009 - V2

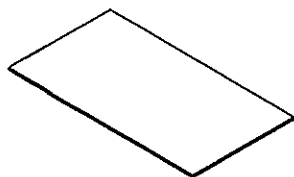
REPLACES: APR - 2009 - V1

DWG SCALE: Not to Scale

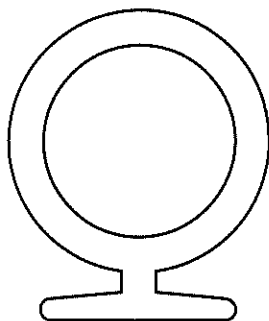
DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

SMALL PARTS

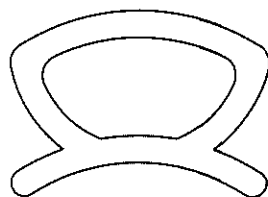
Seals



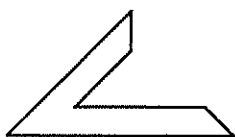
1472 - FOAM SEAL



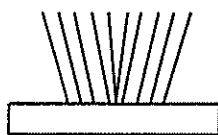
1600 - BULB SEAL



1610 - DOOR STOP

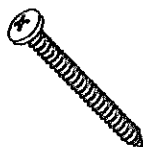


1660 - V-SEAL



1710 - WEATHER STRIP

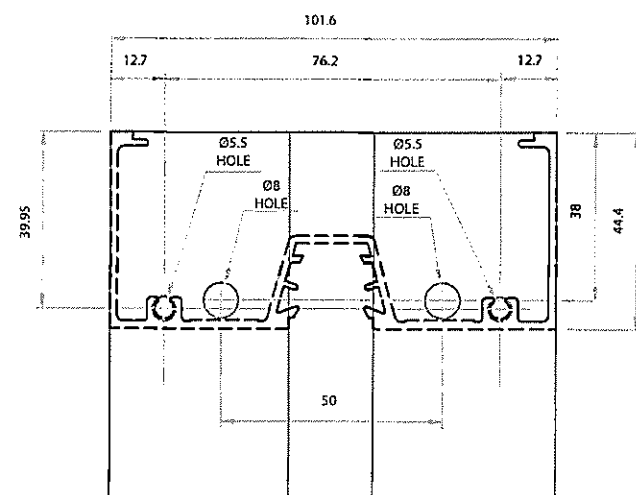
Fixing Screws



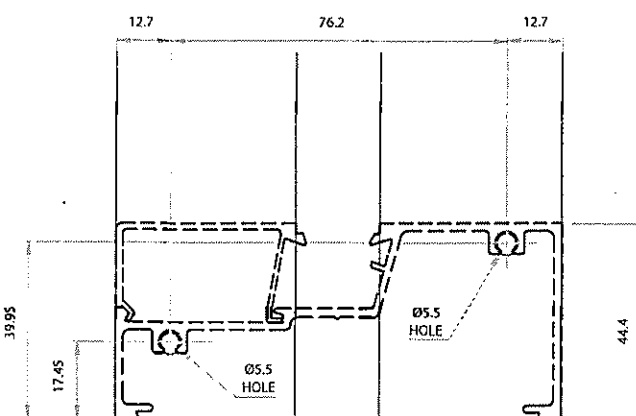
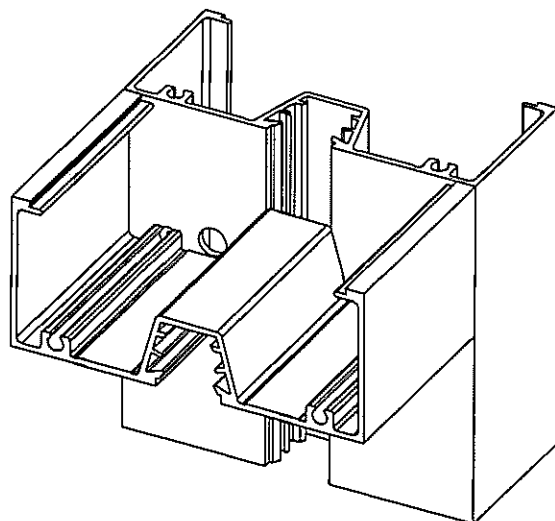
10# x25mm SS Pan

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

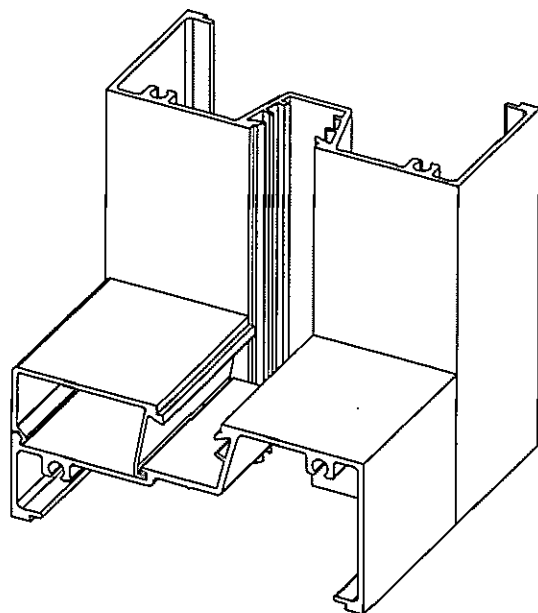
MACHINING DETAILS



1 Head



2 Sill



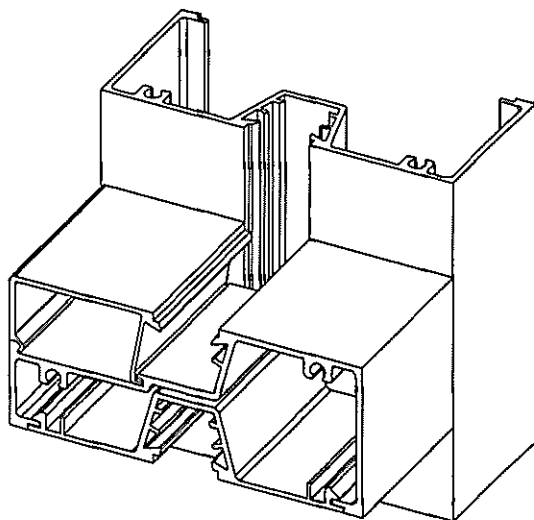
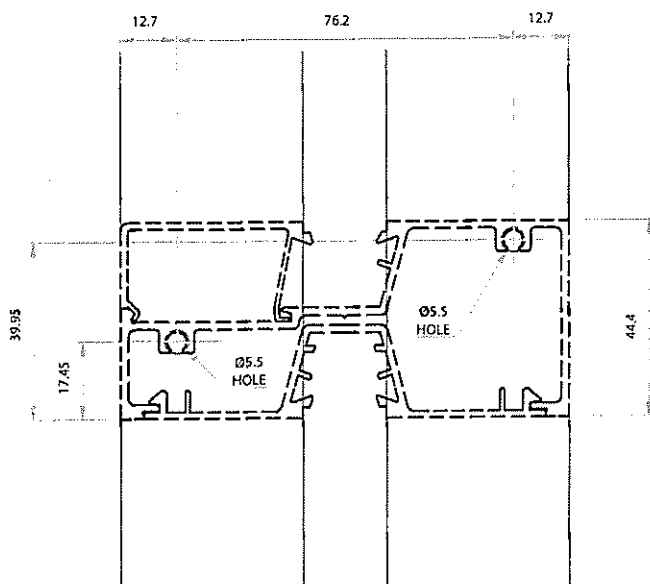
DATE: APR - 2009 - V2

REPLACES: APR - 2009 - V1

DWG SCALE: Not to Scale

DARLEY 101.6x45mm SINGLE CENTRE GLAZED SYSTEM

MACHINING DETAILS



3 Pocket Transom

4 Bead Transom

DA Fee Calculator - Estimate Only

	Estimated Cost	Fec(+GST)
Development: <-- Select -->	76000	\$0.00
Environmental Compliance Levy		\$0.00
<input type="checkbox"/> Advertising Signs		\$0.00
Notifications:		
<input type="checkbox"/> Designated Development		\$0.00
Advertised <-- Select -->		\$0.00
Admin Fee for Integrated Development		
Adjoining Owners <-- Select -->		\$0.00
<input type="checkbox"/> Section 101 Notification Fee		\$0.00
Construction Cert: Class 2-9		\$850.00 *
Complying Develop: <-- Select -->		\$0.00
Subdivision:		
<input type="checkbox"/> Subdivision with new Road	Existing New	\$0.00
<input type="checkbox"/> Subdivision without new Road		\$0.00
	No. of lots	
<input type="checkbox"/> Strata Subdivision		\$0.00
<input type="checkbox"/> Subdivision Certificate		\$0.00
<input type="checkbox"/> Strata Linen Release Fee		\$0.00
Other Fees:		
<input type="checkbox"/> Scanning Fee		\$0.00 — 80 *
<input type="checkbox"/> Long Service Levy		\$0.00
<input type="checkbox"/> Pool Resuscitation Board		\$0.00 *
<input type="checkbox"/> BASIX CC Assessment Fee		\$0.00
<input type="checkbox"/> Modification of Covenants (Sec 88b)		\$0.00
<input type="checkbox"/> Septic (Domestic) Install <input type="checkbox"/> Inspect		\$0.00
<input type="checkbox"/> Engineering CC Assess <input type="checkbox"/> Inspect		\$0.00
<input type="checkbox"/> UDRP - SEPP 65		\$0.00
<input type="checkbox"/> UDRP - Other		\$0.00
Asset Fees:		
<input type="checkbox"/> Infrastructure Inspection & Admin		\$0.00 —
<input type="checkbox"/> Road Reserve Opening Permit		\$0.00
<input type="checkbox"/> Vehicle Crossover - Single Res/Dual Occ		\$0.00
<input type="checkbox"/> Vehicle Crossover - Com/Ind		\$0.00 *

Common Insp:	<-- Select -->	1	\$750.00	*
	Occupation Certificate (Class 1)			
	Occupation Certificate (Class 10)			
	Occupation Certificate (Class 2-9)			

You Selected: Occupation Certificate (Class 2-9),

Commercial Insp:	Package for Commercial Alterations	1	1	\$500.00	*
------------------	------------------------------------	---	---	----------	---

Residential Insp:	<-- Select -->				*
	Residential Buildings (Individual)				
	Package for dwellings				
	Package for dwelling additions (1-2 rr)				
	Package for dwelling additions & alle				

Total Fee	\$2100.00
-----------	-----------

Please note these are estimated fees based on information provided at the time. All fees are subject to verification
 Fees are based on Council's fees and charges schedule and/or Statutory/Regulatory fees. Other fees may be applicable
 A 0.6% surcharge applies on all credit cards. * Denotes GST included fees.

Calculate

Clear All

DRAWING SCHEDULE

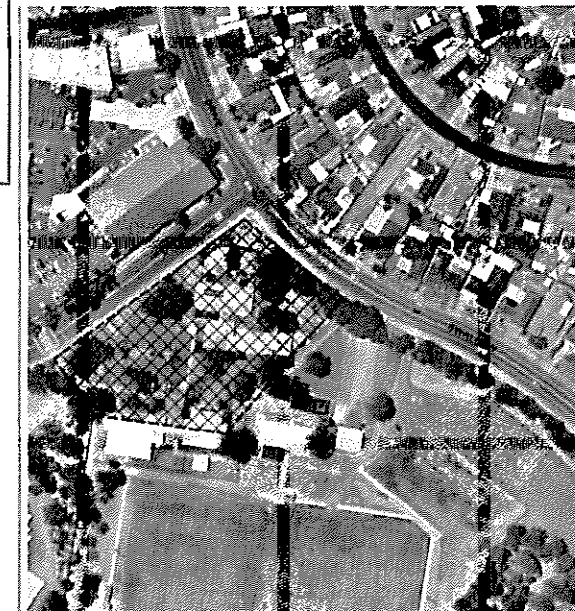
- A1614 000 Notification Plan
- A1614 100 Locality & Site Plan
- A1614 200 Existing Floor Plan
- A1614 300 Proposed Floor Plan
- A1614 400 Proposed Elevation, Section & Detail
- A1614 500 Window Schedule

PENRITH CITY COUNCIL

This plan / document relates
to Development Consent: **DA17/0240**

Subject to the conditions outlined in the consent

COUNCIL DOES
NOT ATTEST TO
THE ACCURACY
OF DETAILS
IN PLANS



PEPPERTREE DRIVE

boundary

boundary

SWALLOW DRIVE

boundary

new 1800mm high timber fence

LONG DAY CARE

BEFORE & AFTER
SCHOOL CARE

CARPARK

38 Car Spaces + 1 x Community Bus
(including 3 x accessible spaces)

LOT: 374
DP: 713863

Site Area
7956msq

LOT: 375
DP: 713863

LOT: 373
DP: 713863

ERSKINE PARK
COMMUNITY CENTRE

boundary

SITE PLAN
SCALE: 1:500

LEGEND

OOSH

LOCALITY PLAN

NTS

LEGEND

SITE

SPORTING FIELDS
CAR PARK 164 Spaces

AREA SCHEDULE EDUCATION AND CARE SERVICE		
TOTAL SITE AREA	7,956.00 msq	
Total Carpark on site 38 spaces + 1 x bus space	1,474.00 msq	
Total Other External Grounds	4,215.00 msq	
Total Childcare Area	2,267.00 msq	
Shared outdoor space	730.00msq	
Long Day Care	867.00msq	
Before and After School Care (OOSH)	670.00msq	

AREA SCHEDULE EDUCATION AND CARE SERVICE		
LONG DAY CARE		
Total indoor area	312msq	
Total indoor unencumbered area	167msq	
Total outdoor area	555msq	
Total outdoor unencumbered area	515msq	
Total outdoor covered area	143msq	
Total shared outdoor area	730msq	
Total shared outdoor unencumbered area	510msq	

AREA SCHEDULE EDUCATION AND CARE SERVICE		
BEFORE AND AFTER CARE		
Total indoor area	336msq	
Total indoor unencumbered area	210msq	
Total outdoor area	334msq	
Total outdoor unencumbered area	334msq	
Total outdoor covered area	91msq	
Total shared outdoor area	730msq	
Total shared outdoor unencumbered area	510msq	

AREA SCHEDULE EDUCATION AND CARE SERVICE		
Total Indoor Unencumbered Area (Day care)	167.00 msq	
Total Indoor Unencumbered Area (Before and After Care)	195.91 msq	
Total	362.91msq	
Indoor unencumbered area		1 child per 3.25msq
Total indoor unencumbered floor area 302.91msq		110 children
New additional floor area 40msq		14 children
Outdoor unencumbered area		1 child per 7msq
Total outdoor unencumbered floor area 1350 msq		194 children
Daycare		
Outdoor unencumbered floor area 1025 msq		146 children
Before and After Care		
Outdoor unencumbered floor area 644 msq		120 children

AREA SCHEDULE EDUCATION AND CARE SERVICE		
Carpark requirements		
Children numbers	110 Children	
On site park		
1 space per 10 children	11 spaces	
1 space per 5m ² (9 staff required)	14 spaces	

E 6.03.17 DA submission RMC
D 22.02.17 DA submission RMC
B 19.12.16 Pre DA discussion RMC
A 29.10.16 For Discussion RMC

REV DATE DESCRIPTION BY

PHASE FOR DA SUBMISSION

CLIENT
PENRITH CITY COUNCIL
CHILDCARE SERVICES

ARCHITECT

PENRITH CITY COUNCIL
Major Projects Department
601 High Street
PENRITH NSW 2750 Australia

Postal Address: p 027 4732 2177
GPO Box 60 f 027 4732 2958
Penrith NSW 2750 Australia e penrith@penrithcity.nsw.gov.au

PROJECT
ALTERATIONS - OOSH Erskine Park
Cnr Peppertree and Shallow Drive,
ERSKINE PARK

TITLE

SITE PLAN

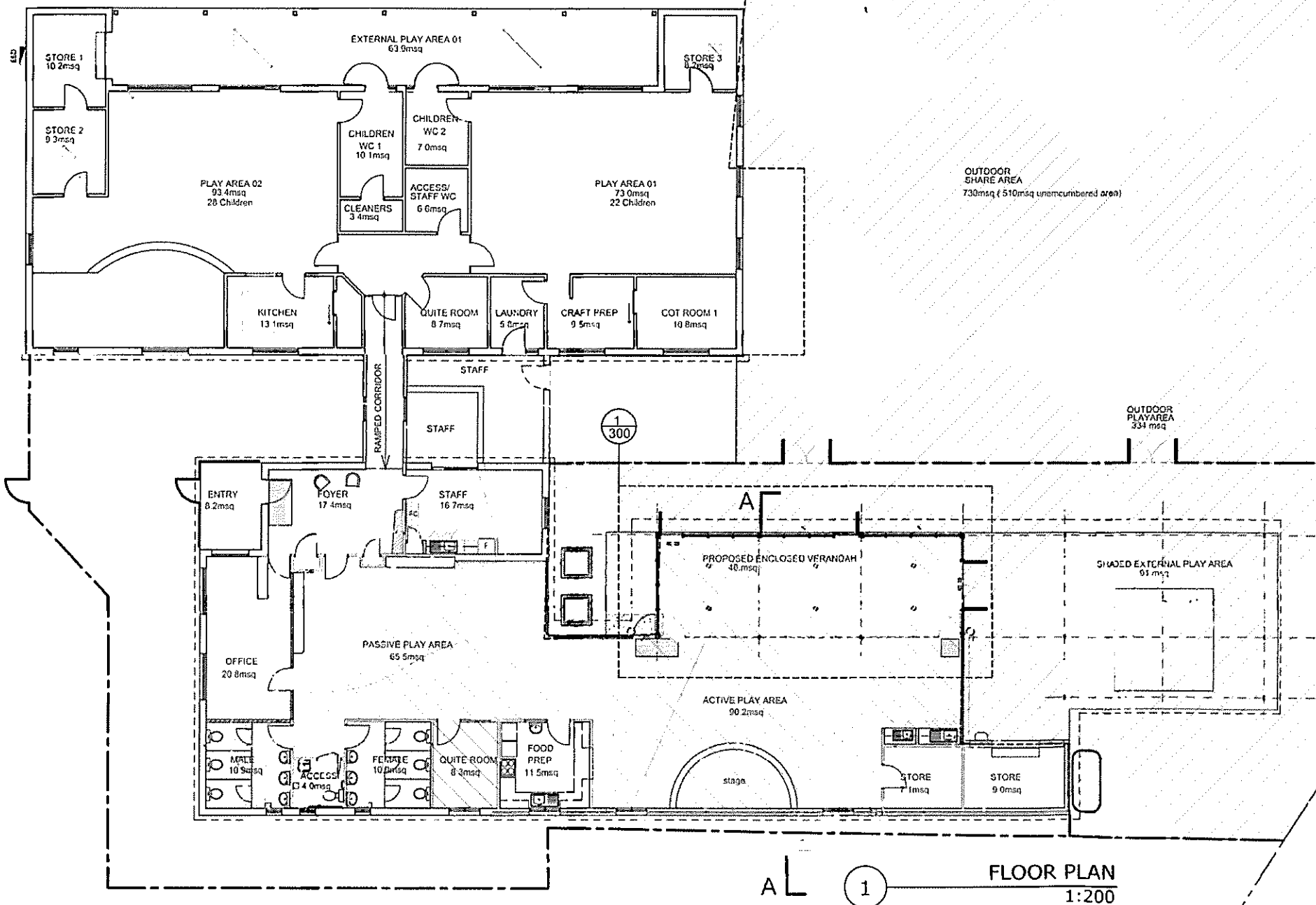
SCALE (A3) DRAWN RMC PROJECT CODE

DATE 22-10-2016 APPROVED

SHEET NO

A1614 - 100

REV[E]



REV	DATE	DESCRIPTION	BY
E	6.3.17	DA submission	RMC
D	22.02.17	DA submission	RMC
C	19.12.16	Pre DA discussion	RMC
B	03.11.16	For Discussion	RMC
A	29.10.16	For Discussion	RMC

PHASE **FOR DA SUBMISSION**

CLIENT
**PENRITH CITY COUNCIL
CHILDCARE SERVICES**

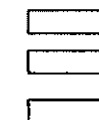
ARCHITECT
PENRITH CITY COUNCIL
Major Projects Department
601 High Street
PENRITH NSW 2150 Australia
Postal Address
GPO Box 60
Penrith NSW 2151 Australia
p: (02) 4732 7727
f: (02) 4732 7558
e: penrith@penrith.nsw.gov.au

PROJECT
**ALTERATIONS - OOSH Erskine Park
Cnr Peppertree and Shallow Drive,
ERSKINE PARK**

TITLE
PROPOSED FLOOR PLAN

SCALE (A3)	DRAWN	RMC	PROJECT CODE
DATE 22.10.2016	APPROVED		
SHEET NO A1614 - 200			REV[E]

LEGEND
New works
Indoor
Incumbent
Outdoor
Incumbent



LEGEND

GENERAL

(WX) Window number

(DX) Door number

FLOOR

FT Floor trim

Vinyl Floor vinyl to match existing.

CEILING

(P) Plasterboard

o F1 LED recessed downlights, lux 4000K, 150mm dia colour - white (connected to existing). Sunny lighting (SLA)

EMERGENCY SERVICES

(S) Smoke alarm

Exit Emergency Sign, provide stainless pole/stays

(E) Emergency light

(EX) Fire extinguisher

SCOPE OF WORKS

Demolition:

Carefully remove existing window / door glazing sections and dispose.

Cut concrete slab and dispose as required.

Earthworks:

Locate existing drainage and connect to new downpipe.

Glazing:

Supply and install new commercial grade glazing sections, colour to match existing. All new glazing to be 10.5mm thick tinted laminated safety glass with acoustic seal Q-Lon type.

Supply and install new operable glazing sections, (awning type).

Supply and install Lockwood (or equal) elevations electric window actuator and touch display. (commercial grade)

Supply and install flyscreens to all elevated operable windows.

Install all glazing to manufacturers' recommendations. Provide glazing certificate.

Flooring:

Waterproof membrane over concrete slab. Ardex or similar to level area, and eliminate step. New Vinyl flooring to area, with cover strips to change in material. to match existing, unless otherwise noted. Install all flooring to manufacturers' recommendations.

Electrical Services:

Supply and install new lights. Supply and install motion sensors to activate new lights

Mechanical Services:

Supply and install new air conditioning unit. Provide allowance of \$15,000 ex GST for supply and install. Ensure electrical works and ducting/tanking concealed within new upper wall.

Ceiling:

Supply and install new 13mm plasterboard ceiling lining. Furring channels as required. Create new plasterboard bulkhead, under box gutter,

Roofing:

Carefully lift metal roof sheeting and install sarking+100mm glass wool batts. Reinstate roof sheeting. Install metal roof capping, to edge and sides.

Plumbing:

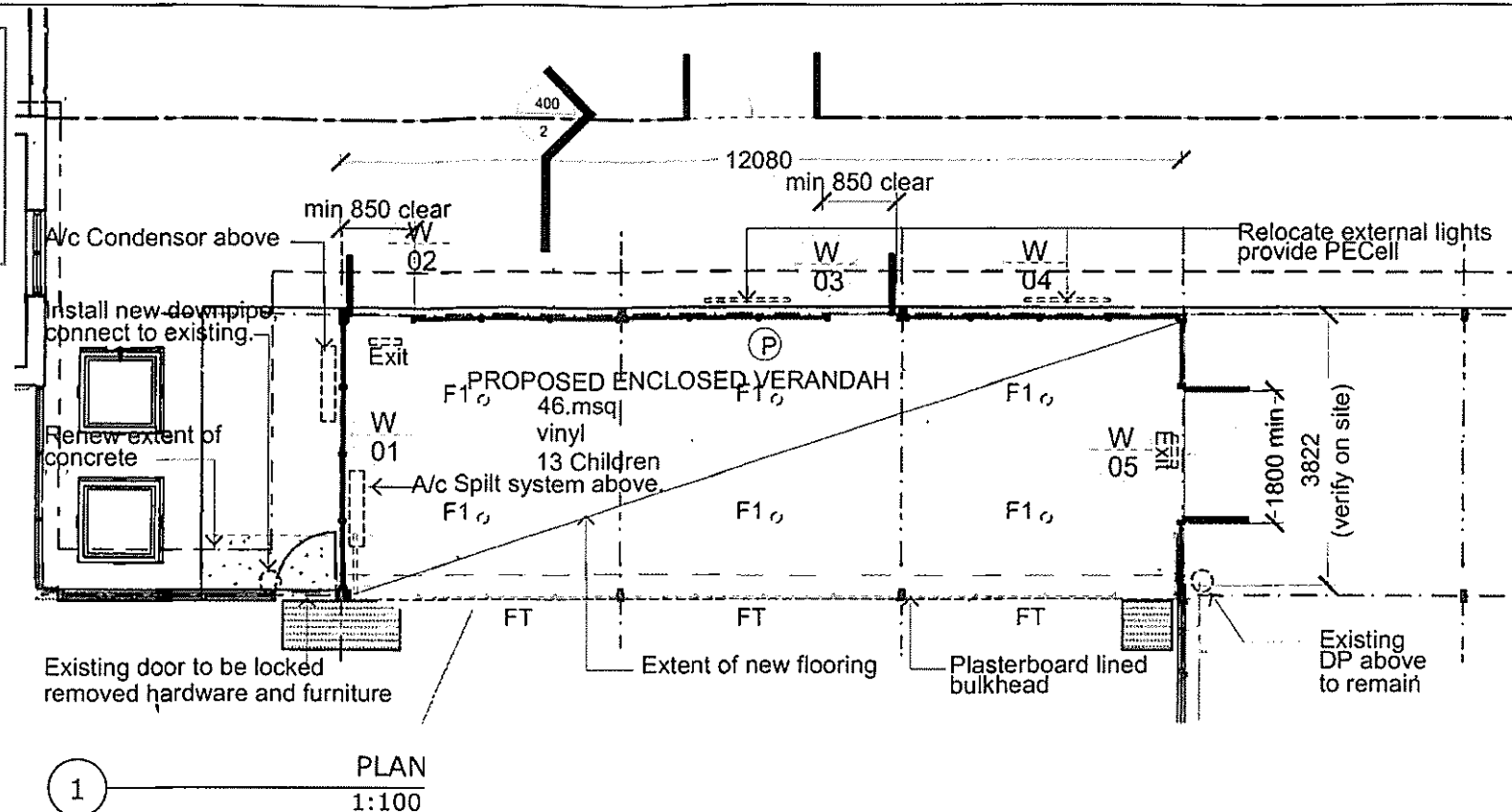
Renew length of box gutter to entire existing verandah. Install new downpipe, connect to existing system, make good concrete, and artificial turf. Renew rainwater head, material and colour to match existing. Ensure new rainwater sized to current standards. Rainwater head to be located no higher 50% flow depth of gutter. Ensure overflow adequately sized with high point 25mm below base of box gutter.

Door hardware / Furniture:

Reuse existing

Emergency services:

Install fire exits signs, to match existing, to two door way and provide Compliance Certificate. Supply and install new emergency lights, to match and connect to existing system, provide Compliance Certificate. Supply and install new smoke detectors and connect to existing system, provide Compliance Certificate.



1 PLAN 1:100

E	23.03.17	DA submission	RMC
D	22.02.17	DA submission	RMC
B	19.12.16	Pre DA discussion	RMC
A	29.11.16	For Discussion	RMC

REV	DATE	DESCRIPTION	BY
-----	------	-------------	----

PHASE FOR DA SUBMISSION

CLIENT
PENRITH CITY COUNCIL
CHILDCARE SERVICES

ARCHITECT

PENRITH CITY COUNCIL
Mayor Projects Department
City Hall
Penrith NSW 2150 Australia

Phone: 02 4732 1111
Fax: 02 4732 7555
Email: penrith@penrith.nsw.gov.au

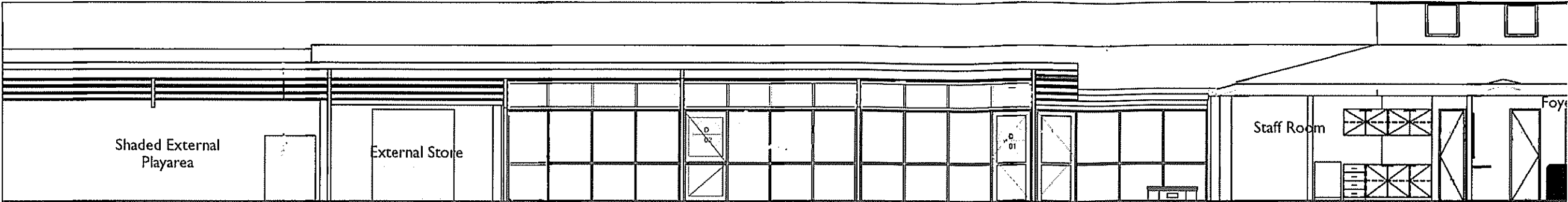
PROJECT
ALTERATIONS - OOSH Erskine Park
Cnr Peppertree and Shallow Drive,
ERSKINE PARK

TITLE

PROPOSED
SECTIONS & ELEVATIONS

SCALE (A3)	DRAWN	RMC	PROJECT CODE
DATE 22-10-2016	APPROVED		
SHEET NO			
A1614 - 300			REV[E]

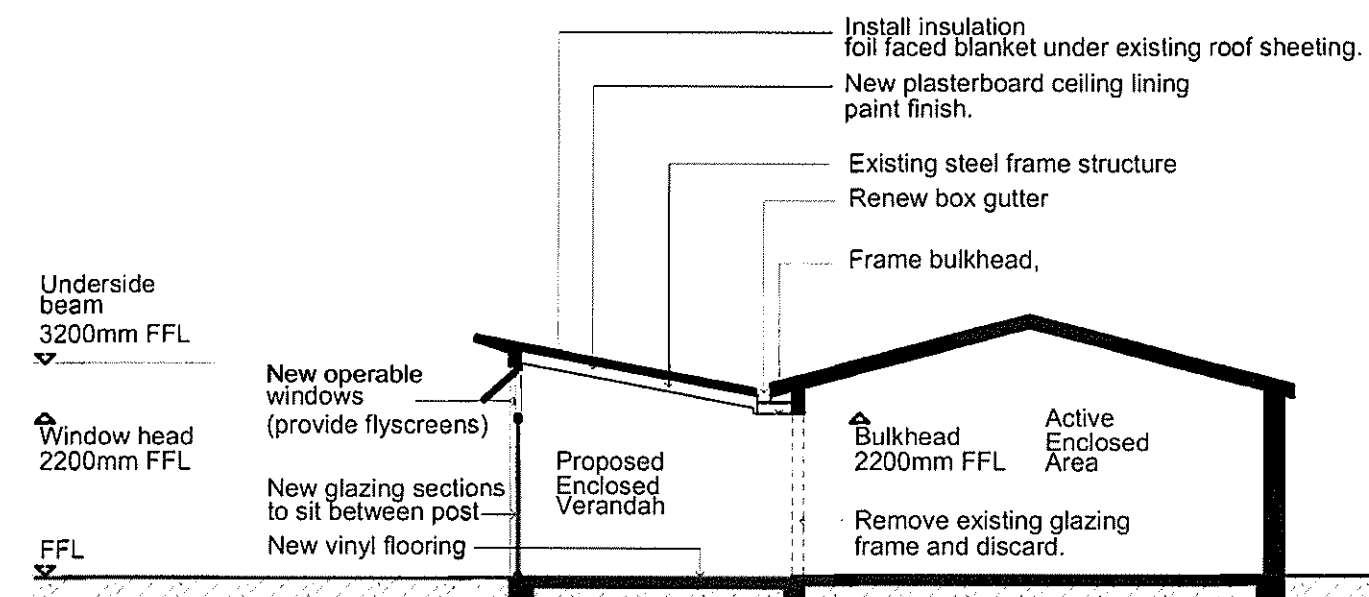
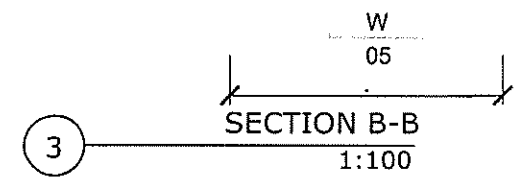
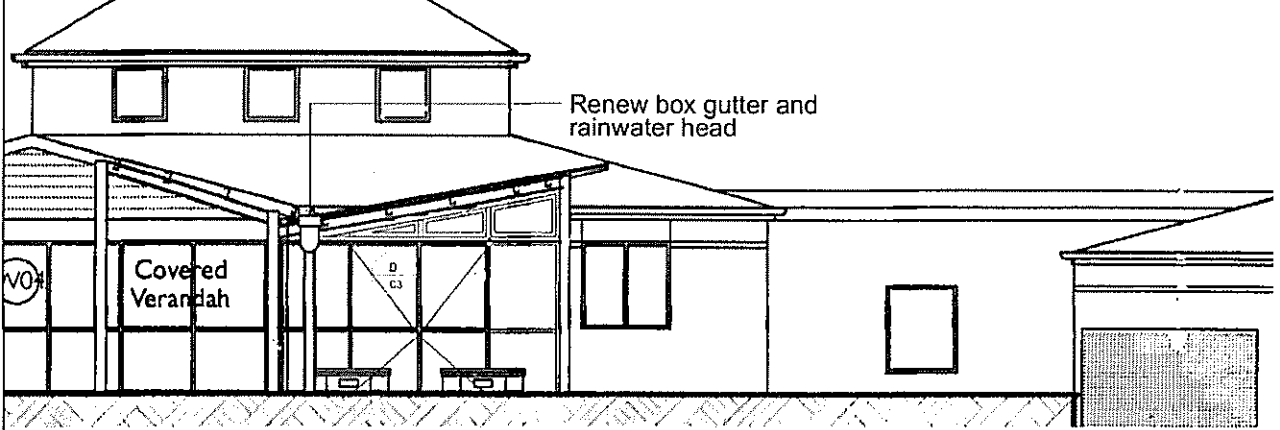
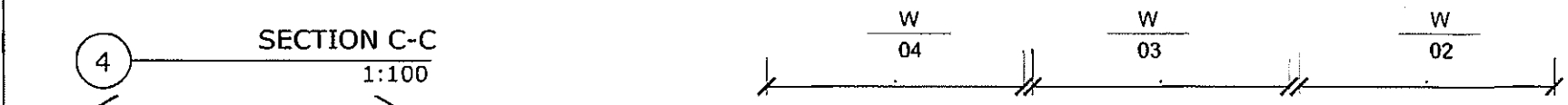




PENRITH CITY COUNCIL

This plan / document relates to Development Consent: **DA17/0240**

Subject to the conditions outlined in the consent



NOTE:
Original Construction documentation illustrates waterproof membrane to underslab.
Ensure no step or change in level between new vinyl and existing.

E	23.03.17	DA Submission	RMC
D	22.02.17	DA Submission	RMC
B	19.12.16	Pre DA discussion	RMC
A	29.11.16	For Discussion	RMC

REV	DATE	DESCRIPTION	BY
-----	------	-------------	----

FOR DA SUBMISSION

CLIENT
PENRITH CITY COUNCIL
CHILDCARE SERVICES

ARCHITECT
PENRITH CITY COUNCIL
Major Projects Department
621 High Street
PENRITH NSW 2750 Australia
Postal Address: GPO Box 60, Penrith NSW 2751 Australia
p: (02) 4732 7711
f: (02) 4732 7558
e: penrith@penrith.nsw.gov.au

PROJECT
ALTERATIONS - OOSH Erskine Park
Crn Peppertree and Shallow Drive,
ERSKINE PARK

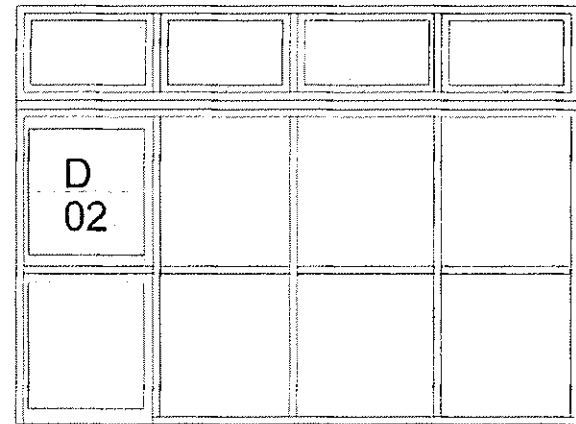
TITLE
PROPOSED SECTIONS & ELEVATIONS

SCALE (A3)	DRAWN	RMC	PROJECT CODE
DATE 22-10-2016	APPROVED		
SHEET NO			
A1614 - 400			REV[E]

Underside beam

Ex Window head
2200mm (approx) FFL
(verify on site)

FFL

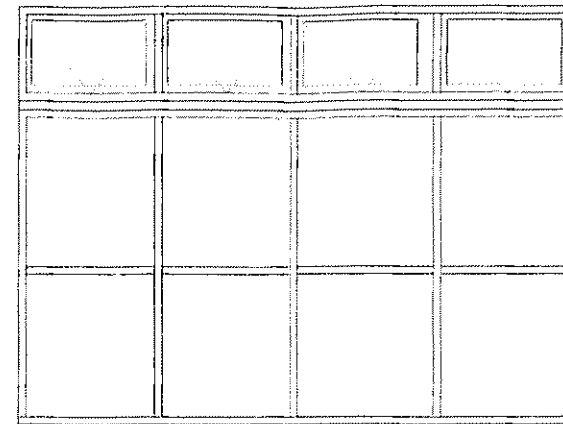


3

ELEVATION

1:50

W 03

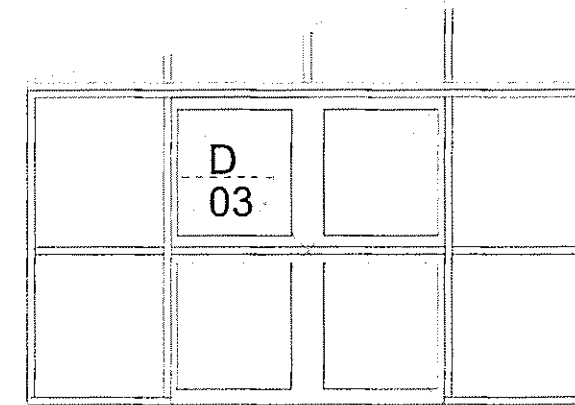


4

ELEVATION

1:50

W 04



5

ELEVATION

1:50

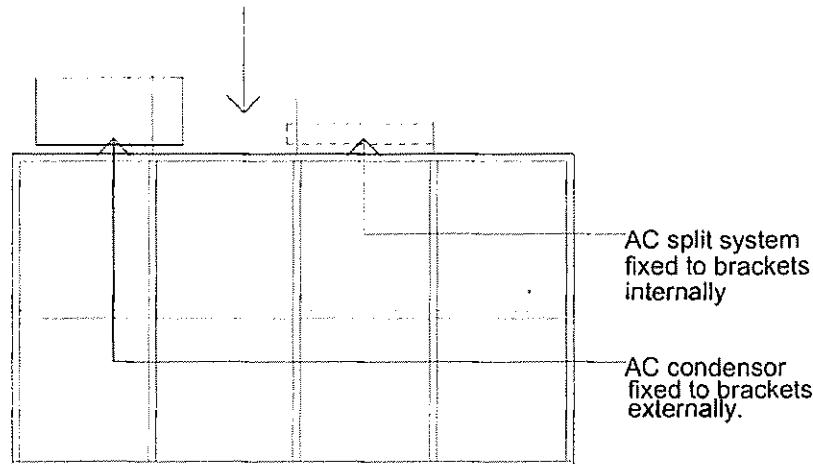
W 05

Underside beam

Ex Window head
2200mm (approx) FFL
(verify on site)

FFL

Above window sections,
light weight steel framing
with R2.5 bulk insulation in cavity,
with waterproof membrane to exterior skin,
Line exterior with FC sheeting, interior with
plasterboard set finish, both paint finish
(installed all to manufacturer's recommendations.

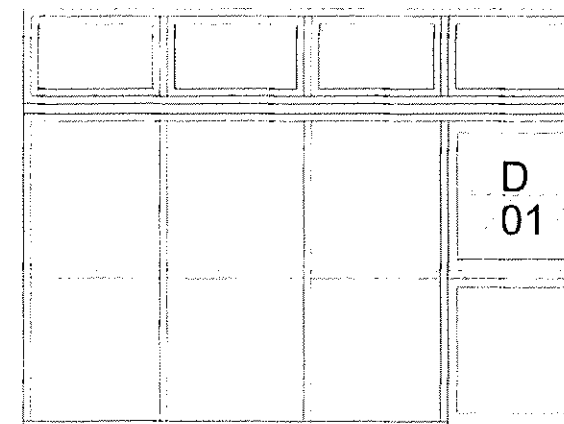


1

ELEVATION

1:50

W 01



2

ELEVATION

1:50

W 02

F	23.03.17	DA Submission	RMC
E	03.03.17	DA Submission	RMC
D	22.02.17	DA Submission	RMC
A	19.12.16	Pre DA discussion	RMC

REV	DATE	DESCRIPTION	BY
-----	------	-------------	----

PHASE
FOR DA SUBMISSION

CLIENT
PENRITH CITY COUNCIL
CHILDCARE SERVICES

ARCHITECT
PENRITH CITY COUNCIL
Major Projects Department
601 High Street
PENRITH NSW 2750 Australia
Phone: 02 4732 2111
Fax: 02 4732 7355
e: penrith@penrithcity.nsw.gov.au

PROJECT
ALTERATIONS - OOSH Erskine Park
Cnr Peppertree and Shallow Drive,
ERSKINE PARK

TITLE WINDOW SCHEDULE			
SCALE (A3)	DRAWN	RMC	PROJECT CODE
DATE 22.10.2016	APPROVED		
SHEET NO A1614 - 500		REV[E]	

NOTE:

- * Supply and install new aluminium glazing sections with 10.5mm tinted laminated safety glazing.
- * Supply and install high elevation operable windows to be tinted.
- *Supply and install Lockwood or equal, Elevations Electric window actuator and touch display (Commercial grade)
- * Glazing frame colour to match existing.
- * Reuse existing lock cylinders and door furniture for new doors.
- * Provide glazing certificate.
- * Install all new glazing sections to manufacturers recommendations.
- * Provide acoustic seals to all windows and junction with existing building Q-Lon type of equal.