

A Z U M A
Design

Laboratory Report

Date

07-October-2015

Customer Yintec

306A Crown St, Wollongong NSW 2500

Test No :

AZT0315.15

AZUMA DESIGN

TESTING LABORATORY REPORT

SIGNATORIES	Reported by:	Jayden Mudford
	Checked by:	Robert Irwin

Date:	07-Oct-15
	Test No:
AZT0315.15	

Wind and Water Penetration Testing

Testing to AS2047 and as per test method AS4420.0 to .6

Manufacturer / Customer

Yintec

Test Sample Data

Deflection Ratio

1

100

Unit type	18 Blade Louvre Window	
Unit code	2 LH Locking Handles	
Size	H (mm)	2647
	W (mm)	850
Design Pa:	0	

Tested For	Y / N	Rating	Units
Structural Deflection Positive	No	Not Tested	Pa
Structural Deflection Negative	No	Not Tested	Pa
Air Infiltration	Yes	Failed	Pa
Operating Force Initial / Constant	No	Not Tested	N
Water Penetration	Yes	150	Pa
Ultimate Strength Positive	Yes	3000	Pa
Ultimate Strength Negative	Yes	3000	Pa

Test Unit Specifications

Results

Frame	Sash	Glass	Sizes		Area sq m	Glass Type	Structural Framing Member	Span (mm)	Allowable Deflection	Deflection Result	Actual Ratio	Test Press (Pa)	Results
			H	W									
			2647	850	2.25		Interlock P	0		0.00			
			0	0	0.00		Interlock N	0		0.00			
			0	0	0.00		Mullion P	0		0.00			
			0	0	0.00		Mullion N	0		0.00			
			Thickness (mm)				Transom P	0		0.00	0		
			06	700	153	0.11	Toughened	0		0.00	0		
			00	0	0	0.00	H/L Trans P	0		0.00	0		
			00	0	0	0.00	H/L Trans N	0		0.00	0		
			00	0	0	0.00	H/L Mullion P	0		0.00			
							H/L Mullion N	0		0.00			
							Meet Stile 1,2,3	0		0.00			
							Meet Stile 1,2,3	0		0.00			
							Meet Stile 4,5,6	0		0.00			
							Meet Stile 4,5,6	0		0.00			

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TESTING LABORATORY REPORT

Test equipments

The test equipment and methods used in the above test comply with the requirements of AS 4420.1-6.

Test Specimen

See drawings at the end of this report.

Test Methods

The test sample was fixed into the rig as outlined in AS 4420.1.

Deflection Test

The test sample was subjected to both positive and negative pressure as prescribed in AS 4420.2. After the initial settling in of the unit at 50% of the required test pressure, the differential pressure was then applied slowly until the nominated design pressure was reached in positive. This process was then repeated for the negative.

Results of Test

Not tested

Observations

Nil

Operating Force Test

A force gauge was attached to the operating handle of the sash to determine the force required to set the sash in motion and thereafter to maintain motion as per AS 4420.3.

Force in Newtons

		Opening Force	Closing Force
Initiating Movement	Sash 1	0	0
Sustaining Movement	Sash 1	0	0
Initiating Movement	Sash 2		
Sustaining Movement	Sash 2		
Initiating Movement	Sash 3		
Sustaining Movement	Sash 3		

Results of test

Not tested

Observations

Nil

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Air Infiltration Test

The test was first completely sealed as per AS 4420.4 to determine the air leakage of the test rig. It was then subjected to 75 Pa of both positive and negative pressure. Differential pressures were recorded. The test sample was then unsealed and subjected to 75 Pa of both positive and negative pressure. Differential pressures were recorded and air leakage then calculated. The actual leakage of the test sample was then determined.

Barometric pressure (Pbar): 1028 Air temperature (°C) 23

Max Pressure (Pa)	SEALED		UNSEALED	
	Positive (Pa)	Negative (Pa)	Positive (Pa)	Negative (Pa)
75	5	4	871	705

Test Pressure	Pressure Direction	Building / Window Type	Allowable leakage flow L/s m ²	Test results			
				Is ⁻¹ m ⁻² Positive	Is ⁻¹ m ⁻² Negative	Pos +	Neg -
75 Pa	+/-	Air conditioned	1.0	11.20	10.08	N/A	N/A
75 Pa	+	Non air conditioned	5.0	11.20	10.08	Failed	

Results of test

The test unit failed the requirement of AS 4420.4. The net flow readings are as per previous page:

Observations

Nil

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TESTING LABORATORY REPORT

WATER PENETRATION

Water was applied to the exterior of the test sample with no less than 0.05 ls-1m-2 for a period of five minutes at zero pressure. After five minutes, a nominated pressure was applied for fifteen minutes as per AS 4420.5.

Maximum pressure (Pa) applied for 15 minutes (Nominated pressure)

150

Results of test

The test unit satisfied the requirement of AS 4420.5 in positive pressure at the nominated design pressure.

Observations

Every louvre blade had fitted a UPVC moulding on the leading/ top edge.
The UPVC moulding ran the full width of the louvre blade.
At 150Pa eater leaked through the bottom locking lever.
With the UPVC moulding installed water did not penetrate the louvre blade.

ULTIMATE STRENGTH TEST

The test sample shall be subjected to a smoothly increasing differential pressure. The pressure shall be conducted in both a positive and negative direction as per AS 4420.6. The test pressure shall be

Max. pressure reached for 10 seconds	
Positive	Negative
3000	3000

Results of test :

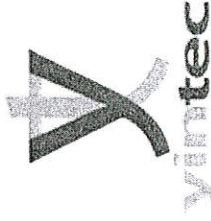
	Y or N
Dislodgement of any glass?	No
Dislodgement of a frame or any part of a frame?	No
Removal of alignment with or without its framing sash from a frame?	No
Loss of support of a frame such as when it is unstable in its opening in the building structure?	No
Failure of any sash, locking device, fasteners or supporting stay which would allow an opening light to come open?	No
The test unit satisfied the requirement of AS 4420.6.	

Observations

Nil

BUILDER CHECKLIST:

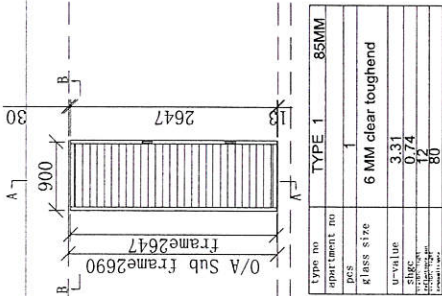
- SLAB THICKNESS
- BANDBEAMS
- MECHANICAL
- DOWN PIPES CLASHING WITH AWNINGS
- WALL TYPES
- LEFT/ RIGHT HAND SLIDE OR HINGE
- CONDENSER
- MECHANICAL GRILLS
- BLANKING PLANTS
- VERMIN MESH
- HOBS
- SINGLE MULLION
- DOUBLE MULLION
- INTERNAL WALLS MEETS WINDOWS
- GLAZING TYPE
- FINISHES
- WINDOW PROFILE
- ALIGNMENT WITH RETURN WINDOWS
- CONTINUOUS SUBSILL
- KITCHEN JOINERY AGAINST WINDOW
- SPANDRAL GLASS
- WINDOW ALIGNMENT IE HEIGHT OF TRANSOME
- CEILING HEIGHT AND TRANSOM HEIGHT
- BUILDING TOLERANCE
- IE PRECAST/TIMBER OR METAL FRAME/ STRUCTURAL STEEL
- SUB JAMB REQUIREMENT



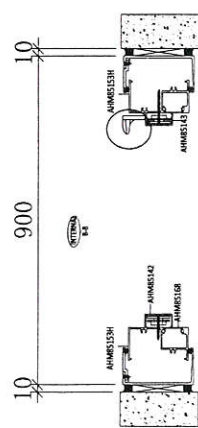
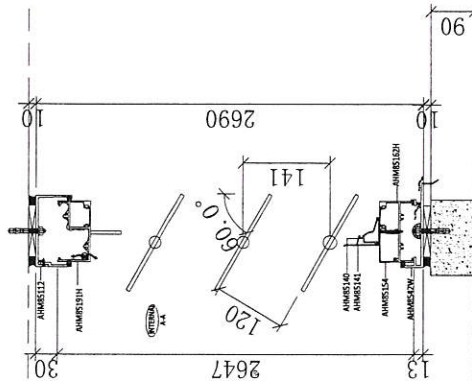
Address: 89 Toolijooa Road,
 Toolijooa, NSW 2534, Australia
 Contact: Mr. Luke Salzmann
 Tel: 61-447060205
 E-mail: luke@yintec.net.au

NO.	DATE	AMENDMENT	CUSTOMER
A	20-7-2015	Final fix	HAMILTON MARINO
PROJECT:			
DRAWING TITLE:			
Drawing NO.:			
JOB NO.:			
COLOR:			
Scale:			

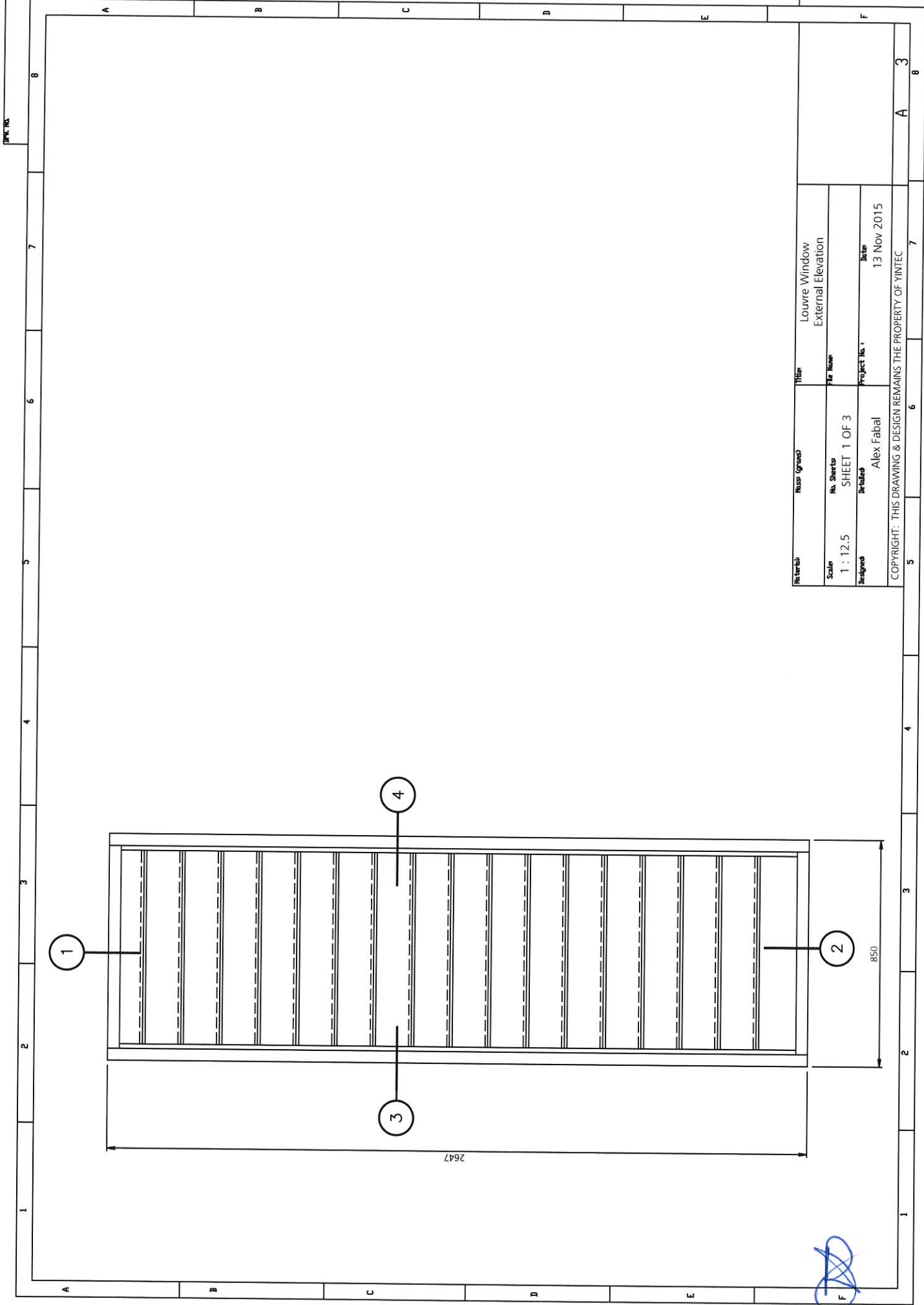
DO NOT SCALE



Type no	TYPE 1	85MM
apartment no	1	
PCS	1	
GLASS SIZE	6 MM clear toughend	
W VAL UP	3.31	
SLAC	0.74	
COLLECTOR	12	
COLLECTOR	80	



(Handwritten signature)



Material	House (group)	Title	Louvre Window External Elevation
Scale	No. Sheets	File Name	
1 : 12.5	SHEET 1 OF 3		
Designed	Detailer	Project No.	Date
	Alex Fabal		13 Nov 2015

A 3

7

6

5

4

3

2

1

Proj. No.

8

7

6

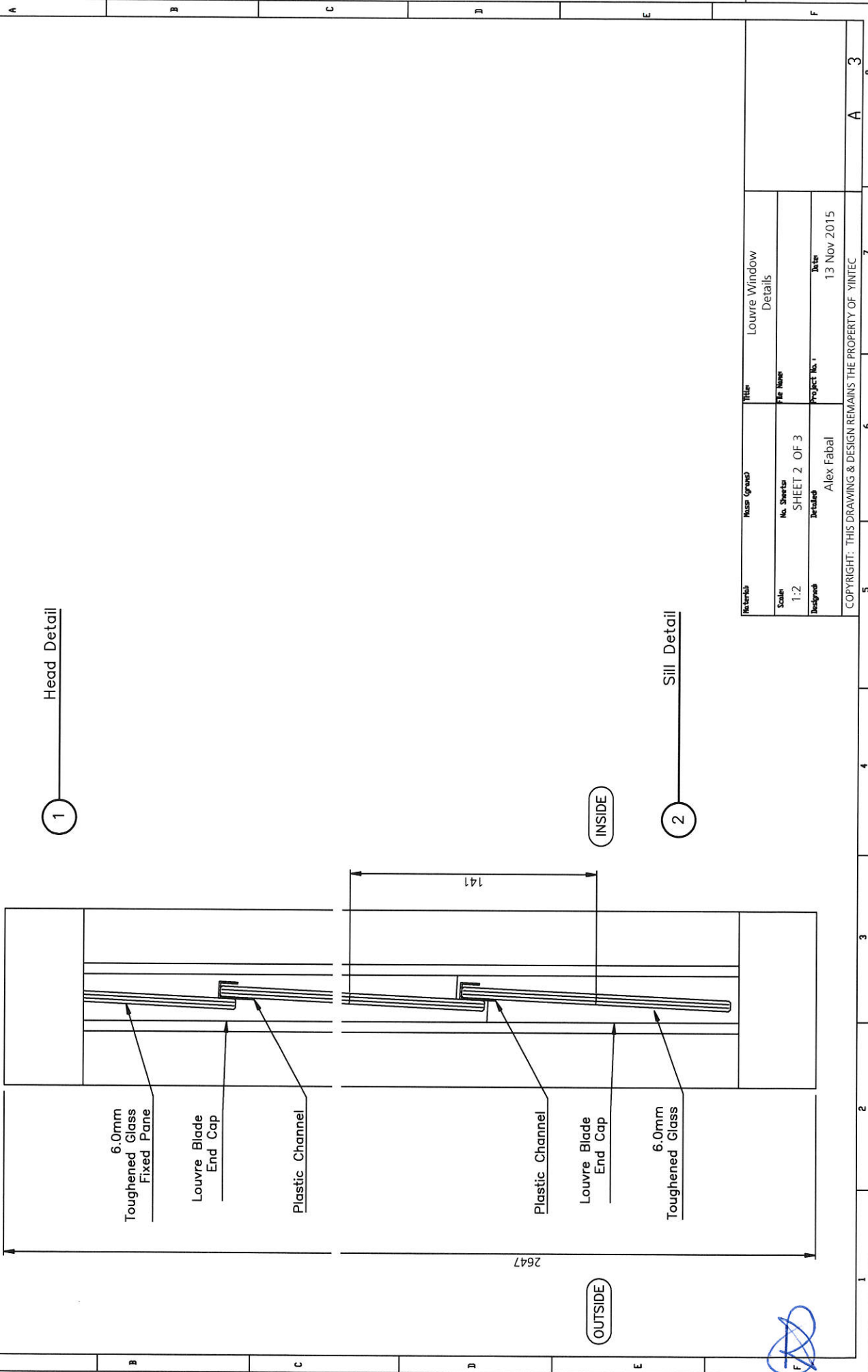
5

4

3

2

1



1 Head Detail

2 Sill Detail

INSIDE

OUTSIDE

Materials	House Ground	Title	Louvre Window Details
Scale	No. Sheets	File Name	
1:2	SHEET 2 OF 3		
Designer	Detailer	Project No. 1	Date
Alex Fabal		13 Nov 2015	
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A 3

7

6

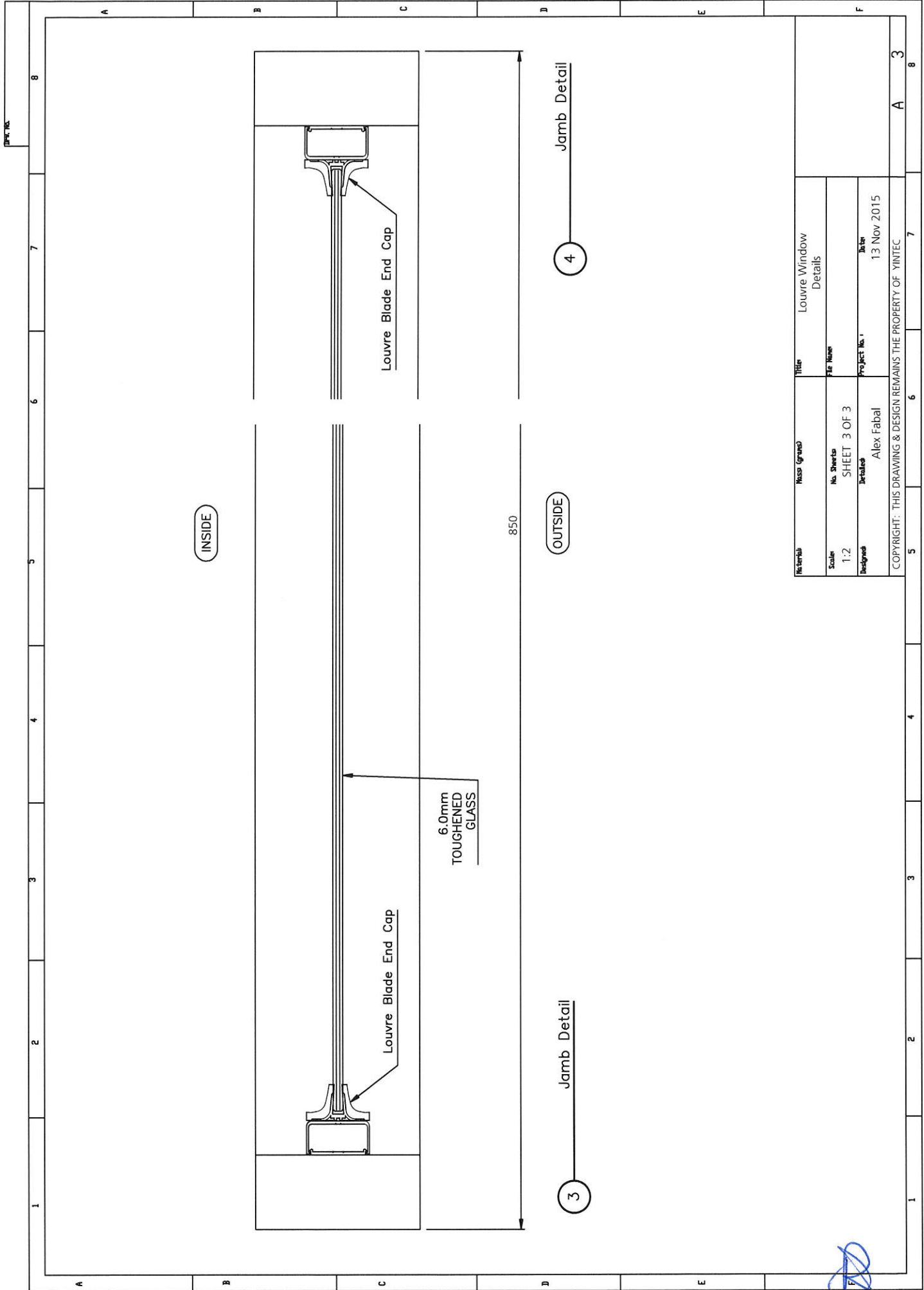
5

4

3

2

1



INSIDE

OUTSIDE

850

Title: Louvre Window Details File Name:		Draw. No.
Scale: 1:2 No. Sheets: SHEET 3 OF 3 Designer: Alex Fabal	Project No. 1: 13 Nov 2015	Date:
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