Test Report

AZUMA

WIND AND WATER TEST TO THE REQUIREMENTS OF AS2047

CLIENT – CIVRO Building Technology (Guangdong) Co.Ltd

PRODUCT – XD63LS Lift & Sliding Door

TESTED AT – AZUMA JIANGMEN BRANCH LABORATORY

REPORTED BY – AZUMA TESTING LIMITED

REPORT NO. – AZHK260832

Issue Date: 4th September 2026

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Test results in this report are relevant only to the sample tested.

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SS1 Customer Requirements

Customer requires all applicable tests to the performance requirements of AS 2047, using the test procedures from AS/NZS 4420.1.

2 Reference Standard

- AS 2047: 2014 Windows and External Glazed Doors in Buildings
- AS/NZS 4420.1: 2016 Windows external glazed timber and composite doors - Methods of test - Test sequence, sampling and test methods

3 General Information

Test Lab/ Site No.	Azuma (Jiangmen) Testing Limited / 26054
Address	Room 101, Building 4, 80 Longxi Road, Jianghai District, Jiangmen City, China
Date(s) of Test	24th July 2026
Test Job Number	AZJM260758
Report Issuing Lab	Azuma Testing Limited
Test Report Number	AZHK260832

3.1 Customer & Sample Information

Customer	CIVRO Building Technology (Guangdong) Co.Ltd
Customer's Address	No.3 Guandi Area, Fanhu, Leping, Sanshui CentralTechnology Park, Sanshui District, Foshan City, Guangdong,China
Window/Door Type	Lift & Sliding Door
Model	XD63LS
Test Sample Description	XD63LS Lift & Sliding Door
Number of Sample Testing	1
Manufacturer (s)	CIVRO Building Technology (Guangdong) Co.Ltd
Manufacturer's Address	No.3 Guandi Area, Fanhu, Leping, Sanshui CentralTechnology Park, Sanshui District, Foshan City, Guangdong,China

The above information is provided by the client. Azuma does not take liability to the accuracy of this information.

4 Test Result Summary

Test Method per AS/NZS 4420.1	Figures Recorded	Result for compliance with AS2047
Deflection Test	Positive – 2200 Pa	Pass
	Negative – 2200 Pa	Pass
Operating Force Test	180N/ 110N	Pass
Air Infiltration Test	Low	Pass
Water Penetration Resistance Test	700 Pa	Pass
Ultimate Strength Test	Positive – 3300 Pa	Pass
	Negative – 3300 Pa	Pass

* N/A: Not Applicable
** N/T: Not Tested

5 Test Sample Description

Product Name	XD63LS Lift & Sliding Door
Model	XD63LS
Dimension of Frame	3012mm (Height) x 3460mm (Width) x 163mm (Thickness)
Dimension of Sashes	Operable Sash 1: 2874mm (Height) x 1698mm (Width) Operable Sash 2: 2874mm (Height) x 1698mm (Width)
Glazing – Size/Type	Operable Sash 1: 2772mm (Height) x 1596mm (Width) Glass Thickness/Type: 10G+12A+10GDouble Ultra Clear Tempered Glass Manufacturer: Sunglas Technics Co.,Ltd Operable Sash 2: 2772mm (Height) x 1596mm (Width) Glass Thickness/Type: 10G+12A+10GDouble Ultra Clear Tempered Glass Manufacturer: Sunglas Technics Co.,Ltd
Flyscreen – Size/Type	None
Hardware	Name: Handle Model No.: C710127 Quantity: 2 Manufacturer: Beijing Source Building Materials Co., Ltd.

	Name: Clasping handle Model No.: C710025 Quantity: 2 Manufacturer: Beijing Source Building Materials Co., Ltd. Name: Transmission box Model No.: C721034-2600 Quantity: 2 Pairs Manufacturer: Beijing Source Building Materials Co., Ltd. Name: Front pulley Model No.: C733036 Quantity: 2 Manufacturer: Beijing Source Building Materials Co., Ltd. Name: Rear pulley Model No.: C733037 Quantity: 2 Manufacturer: Beijing Source Building Materials Co., Ltd. Name: Lock bracket Model No.: C742082 Quantity: 4 Manufacturer: Beijing Source Building Materials Co., Ltd. Name: Anti-collision block Model No.: C762003 Quantity: 2 Manufacturer: Beijing Source Building Materials Co., Ltd.
Drawing Identification	M2
Profile Section	Material: 6060T6 Manufacturer: Foshan Yinghui Aluminum Profile co.,LTD
Frame Corner Construction Details	See Drawings for Details
Drain holes	Size: 20mm x 8 mm Spacing: 457mm Quantity: 7 Size: 10mm x 8 mm Spacing: 50mm Quantity: 2 Size: 30mm x 8 mm Spacing: 450 mm Quantity: 8

	Size: 30mm x 5.6 mm Spacing: 235 mm Quantity: 2 Size: 30mm x 10.6 mm Spacing: 235 mm Quantity: 4 Size: 30mm x 5 mm Spacing: 35 mm Quantity: 8 See Drawings for Details
Weep holes	Size: 20mm x 8 mm Spacing: 457mm Quantity: 5 Size: ø6mm Spacing: 15 mm Quantity: 6 See Drawings for Details
Gasket/Seals/Hairs	Model No.: C318086 Material: Butyl Rubber Manufacturer: GUANGZHOU FURISING COMPOSITE MATERIAL CO., LTD Model No.: C318087 Material: Butyl Rubber Manufacturer: GUANGZHOU FURISING COMPOSITE MATERIAL CO., LTD Model No.: C310005 Material: CR4305 Manufacturer: GUANGZHOU FURISING COMPOSITE MATERIAL CO., LTD Model No.: C310006 Material: CR4305 Manufacturer: GUANGZHOU FURISING COMPOSITE MATERIAL CO., LTD Model No.: C310008 Material: CR4305 Manufacturer: GUANGZHOU FURISING COMPOSITE MATERIAL CO., LTD Model No.: C310009 Material: CR4305

	Manufacturer: GUANGZHOU FURISING COMPOSITE MATERIAL CO., LTD Model No.: 50X30-3.0 Rectangular Steel Tubel Material: Hot-dip galvanized steel Manufacturer: Foshan Nanhai Chengxun Steel Business Department Model No.: C445004 Material: 304 Stainless Steel Manufacturer: Foshan Xingwo Stainless Steel Products Co., Ltd. Model No.: C331006 Material: Siliconization + Fabrication Manufacturer: Haining Lijialong Pile Weather Strip Co., Ltd. Model No.: C331025 Material: Siliconized Stripes + Non-woven Fabric Manufacturer: Foshan Xianan Industrial Co.,Ltd
Weather Strip	Model No.: C358011 Material: EPDM Manufacturer: JIANGYIN HAIDA RUBBER & PLASTIC CO.,LTD. Model No.: C358010 Material: EPDM Manufacturer: JIANGYIN HAIDA RUBBER & PLASTIC CO.,LTD. Model No.: C358014 Material: EPDM Manufacturer: JIANGYIN HAIDA RUBBER & PLASTIC CO.,LTD. Model No.: C358012 Material: EPDM Manufacturer: JIANGYIN HAIDA RUBBER & PLASTIC CO.,LTD. Model No.: C358039 Material: EPDM Manufacturer: Foshan Shunde Wingkay Plastic Products Co., Ltd. Name: C670032 Lower track waterproofing component Model No.: C670032 Material: PA6 Supplier: Foshan Lingshi Plastic & Hardware Co., Ltd.
Glass Retention	Gasket sealing Model No.: C358010 Material: EPDM Manufacturer: JIANGYIN HAIDA RUBBER & PLASTIC CO.,LTD. Model No.: C358014

	Material: EPDM Manufacturer: JIANGYIN HAIDA RUBBER & PLASTIC CO.,LTD. Model No.: C811015 Material: Hydroxy-terminated polydimethylsiloxane Manufacturer: Guangzhou jitai chemical industry co., ltd Sealant Locations: 1. Bottom corner of right sliding door 2. Bottom right subframe
Thermal Break	Model No.: C422201 Material: PA66+GF25 Manufacturer: Ensinger(China)Co.， Ltd Model No.: C422501 Material: PA66+GF25 Manufacturer: Ensinger(China)Co.， Ltd
Sub Head and Sub Sill Used	Yes See Drawings for Details
Reinforcement	None
Fillers	None
Installation	The exterior perimeter of the test specimen was sealed with silicone sealant
Support Fixings	The test specimen and frame were fixed securely onto the test rig using screws fixings.

The above information is provided by the client. Azuma does not take liability to the accuracy of this information.

6 Procedures

6.1 Deflection Test

1. The test sample shall be operative and pre-loaded as described in AS/NZS 4420.1:2016.

2. The pre-load pressure shall be removed and the zero position of the displacement measuring devices recorded.

3. Differential pressures in the same direction shall then be applied across the test sample in not less than four approximately equal increments until the test pressure is reached. The pressure shall be held for at least 1 min at each pressure increment, and the readings of the displacement measuring devices recorded before the pressure is increased.

4. The differential pressure shall be removed and after 2 min the zero displacement readings shall be taken.

5. The direction of the air pump or test sample shall be reversed and Steps (1) to (4) shall be repeated using the opposite test loading.

6.2 Operating Force Test

1. With the window closed, but unlocked, an operating force shall be applied, without shock, in the plane and direction of the sash operation.

2. For both directions of sash travel, the following forces shall be noted and recorded:

(a) That capable of setting the sash in motion.

(b) That capable of maintaining the motion after the sash frame is clear of the perimeter frame of the test sample.

3. Each sliding sash of the test sample is tested separately.

4. For horizontally sliding sashes, the force shall be applied either at the position of a fixed handle, or at one-third of the height of the pull stile above the sill for continuous or adjustable handgrips.

5. For vertically sliding sashes, the force shall be applied at the sash pulls or at the midpoint of the bottom rail, or at the position nominated by the manufacturer.

6.3 Air Infiltration Test

1. Operation and pre-loading as described in AS/NZS 4420.1: 2016.

2. The face of the test sample shall then be sealed airtight by covering it with an impervious film. If this is not practicable, all joints, weep holes, and glazing or sealant lines of the test sample shall be sealed with impervious adhesive tape.

3. Positive and negative test pressures shall then be applied, and the base air infiltration rates through the test apparatus shall be determined by air flow meter.

4. The sealing film or tape shall be removed from the test sample and the air infiltration rates determined. The air infiltration through the test sample shall be the difference between the base and total readings.

6.4 Water Penetration Resistance Test

1. The test sample shall be subjected to water sprayed uniformly and continuously over the exterior face of the test sample at a rate not less than 0.05 L/m^2s. At the start of the test, the water sprays shall operate for 5 min with zero air pressure differential on the test sample.

2. The test pressure shall be applied and maintained for 15 min with the water sprays still operating. The visible internal surfaces of the test sample shall be inspected throughout the water spray operation.

3. Any water appearing on the inside surfaces of the test sample shall be noted and recorded, with the extent and, if possible, the source of penetration of uncontrolled water. Uncontrolled water shall be as defined in AS 2047.

4. The pressure and water sprays shall then be removed from the test sample.

6.5 Ultimate Strength Test

1. The test sample shall be subjected to a smoothly increasing differential pressure up to the test pressure determined in Clause 6.1, conducted individually in both positive and negative directions.

2. The time taken to reach the structural test pressure shall be approximately 1 min. Test pressure shall be maintained on the test sample for a period of 10 s.

3. If a sponsor requires incremental tests, each increment shall represent a separate test requiring 10 s duration.

4. At the conclusion of the test at each loading, the test sample shall be inspected and any signs of deformity or damage or collapse of the test sample noted and recorded.

7 Results

7.1 Test for Operation

☑ The test specimen has been opened and closed for 5 times and operates well.

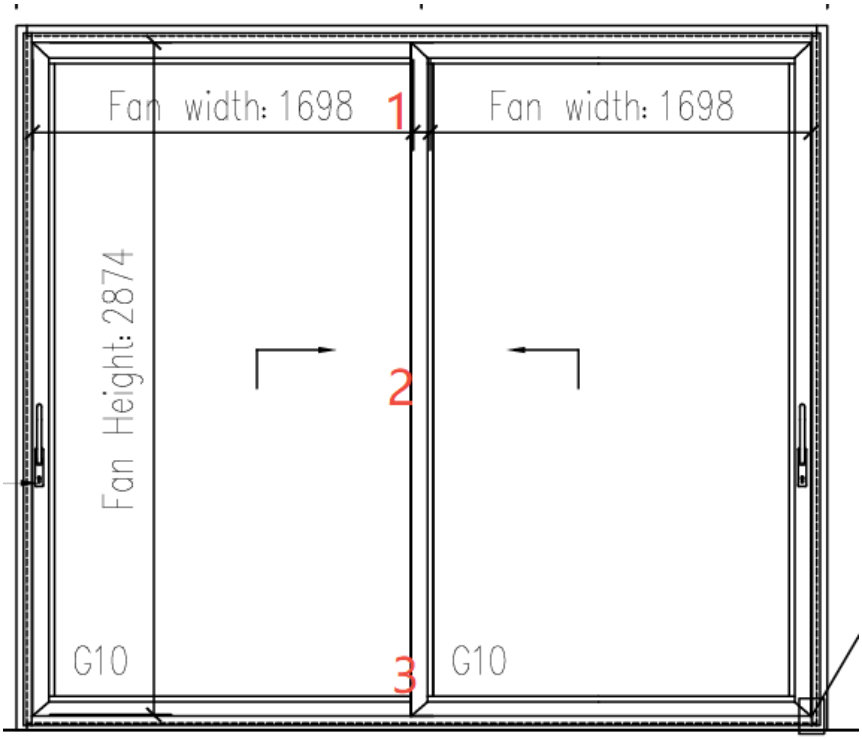

Figure 1 Transducer Locations

7.2 Deflection Test

Setup 1								
Structural Member	Interlock							
Span Length	2780 mm							
Transducers Used	1,2,3							
Maximum Allowable Deflection	11.12 mm							
Direction	**Positive**				**Negative**			
Pressure (Pa)	**1 (mm)**	**2 (mm)**	**3 (mm)**	**Net Deflection (mm)**	**1 (mm)**	**2 (mm)**	**3 (mm)**	**Net Deflection (mm)**
400 Pa	0.77	2.72	1.84	1.42	0.82	2.77	2.16	1.28
800 Pa	1.46	5.19	3.54	2.69	1.54	5.39	3.64	2.80
1200 Pa	2.86	8.17	5.20	4.14	2.98	8.22	4.92	4.27

1600 Pa	4.59	11.46	6.93	5.70	4.90	11.47	6.35	5.85
1900 Pa	6.08	14.18	8.29	7.00	6.10	13.80	7.39	7.06
2200 Pa	7.66	16.92	9.67	8.26	7.27	16.22	8.47	8.35
Span Ratio	Positive - 337				Negative - 333			
Result	Positive - Pass				Negative - Pass			

7.3 Operating Force Test

Movement Type	Panel	Opening Force (N)	Closing Force (N)	Allowable (N)	Result
Initiating	Right Sash	78.0 N	45.4 N	≤ 180 N	Pass
Sustaining	Right Sash	43.5 N	36.2 N	≤ 110 N	Pass
Initiating	Left Sash	78.9 N	51.0 N	≤ 180 N	Pass
Sustaining	Left Sash	46.1 N	49.8 N	≤ 110 N	Pass

7.4 Air Infiltration Test

Barometric Pressure	101030 Pa
Air Temperature	33.6 °C
Overall Area	10.42 m^2

Pressure	Sealed	Unsealed	Net Leakage
Positive - 75 Pa	23.08 Ls^{-1}	25.98 Ls^{-1}	2.90 Ls^{-1}
Negative - 75 Pa	28.11 Ls^{-1}	30.54 Ls^{-1}	2.43 Ls^{-1}

Air Infiltration Level	Direction	Allowable	Actual	Result
Low	Positive Negative	≤ 1 $Ls^{-1}m^{-2}$	0.28 $Ls^{-1}m^{-2}$ 0.23 $Ls^{-1}m^{-2}$	Pass
High	Positive Only	≤ 5 $Ls^{-1}m^{-2}$	0.28 $Ls^{-1}m^{-2}$	Pass

7.5 Water Penetration Resistance Test

Wet Down Complete – 5 minutes	Yes
Maximum Pressure Applied to Sample	700 Pa
Time Pressure Held for	15 minutes
Leakages Observed	Nil
Observations	No Observable Leakage

7.6 Ultimate Strength Test

Maximum Pressure Applied to Sample	Positive – 3300 Pa Negative – 3300 Pa
Time Pressure Held for	10 seconds
Compliant with AS2047 Clause 2.3.1.7	Yes
Observations	No Observable Damage

7.7 Photos

Figure 2 Photo of Test Specimen Closed (Interior) Before Test

Figure 3 Photo of Test Specimen Open (Interior) Before Test

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Figure 4 Photo of Test Specimen Open (Interior) Before Test

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Figure 5 Photo of Test Specimen Open (Exterior) Before Test

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Figure 6 Photo of Test Specimen Open (Exterior) Before Test

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Figure 7 Photo of Test Specimen Closed (Exterior) Before Test

Figure 8 Photo of Hardware Details

Figure 9 Photo of Hardware Details

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Figure 10 Photo of Hardware Details

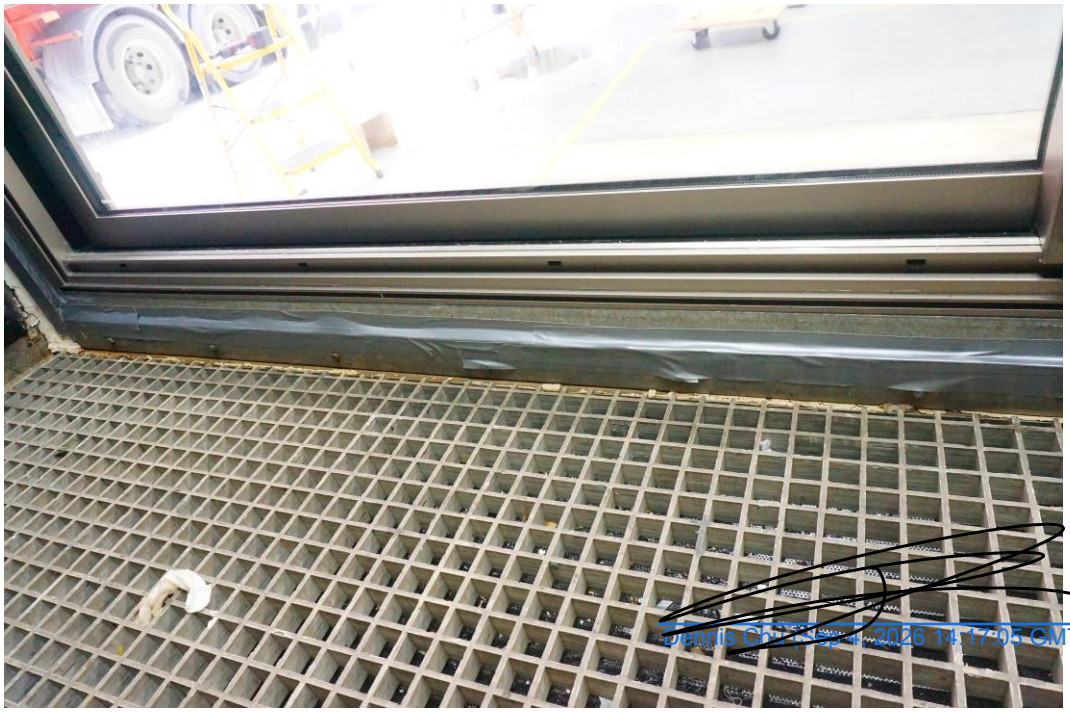

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Figure 11 Photo of Drain Holes Detail

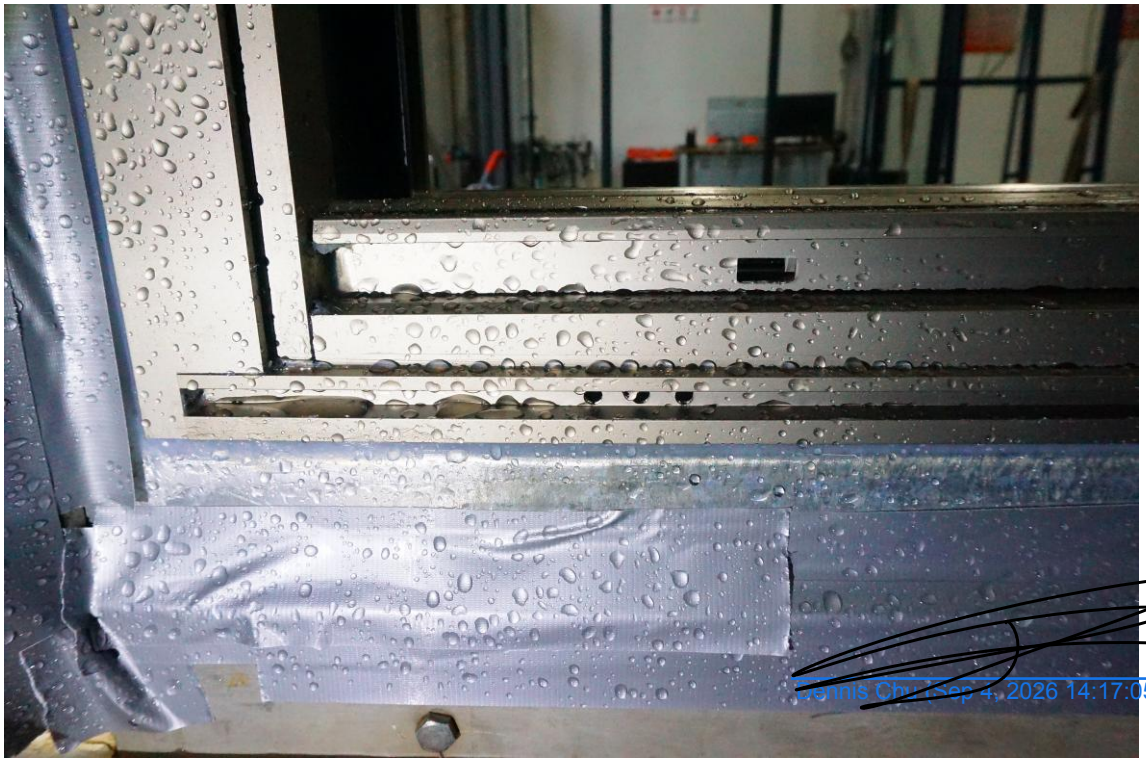

Figure 12 Photo of Drainage / Weep Holes Detail

Figure 13 Photo of Joint

Test results in this report are relevant only to the sample tested
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8 Signatories

Tested By: **Dennis Chu**

Signature: Dennis Chu (Sep 4, 2026 14:17:05 GMT+8)

Date: **4th September 2026**

Checked By: **George Cheung**

Signature: George Cheung (Sep 4, 2026 15:10:22 GMT+8)

Date: **4th September 2026**

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9 Appendix (Drawing supplied by customer)

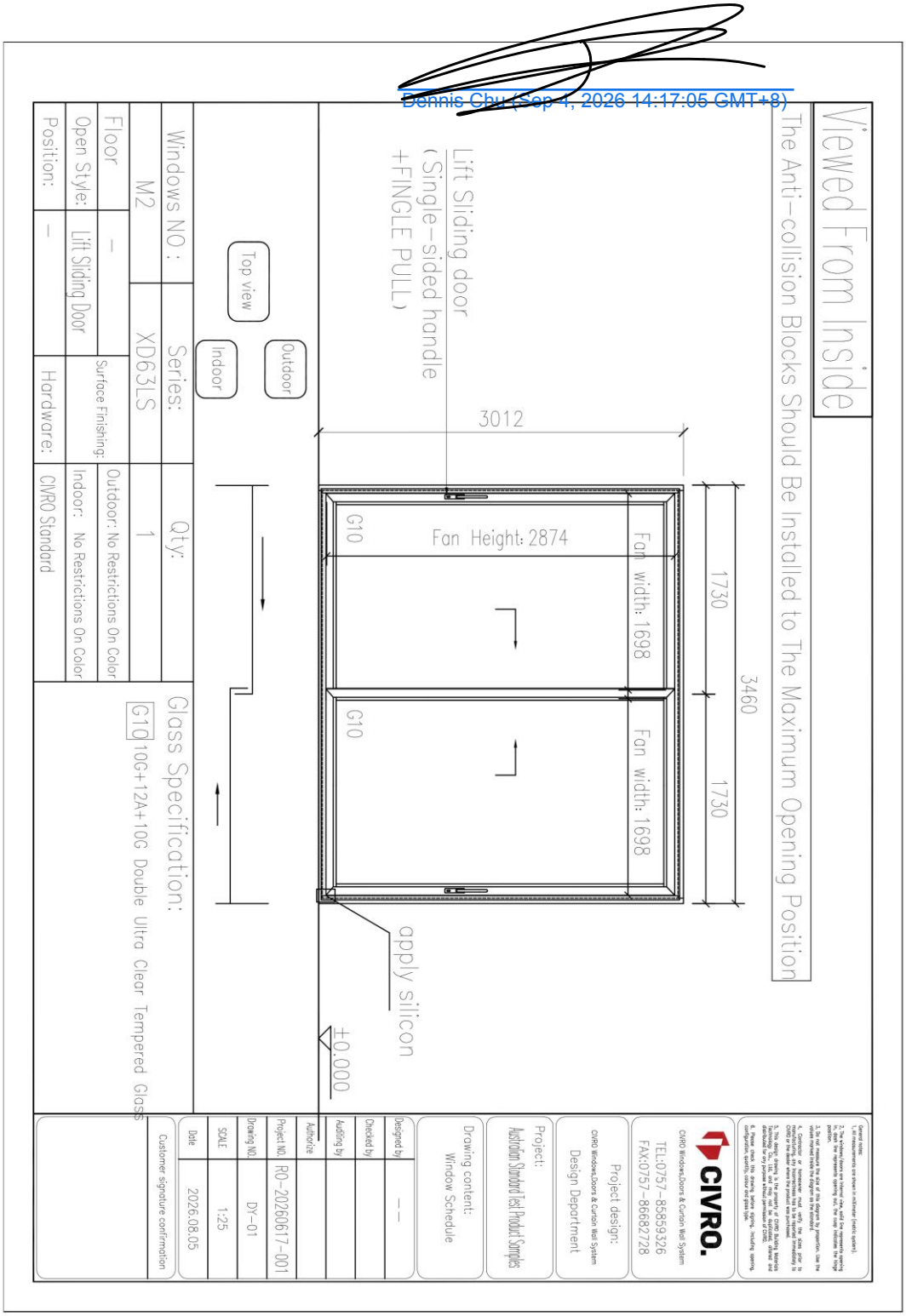

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Figure 14 Drawing of Test Specimen Elevations

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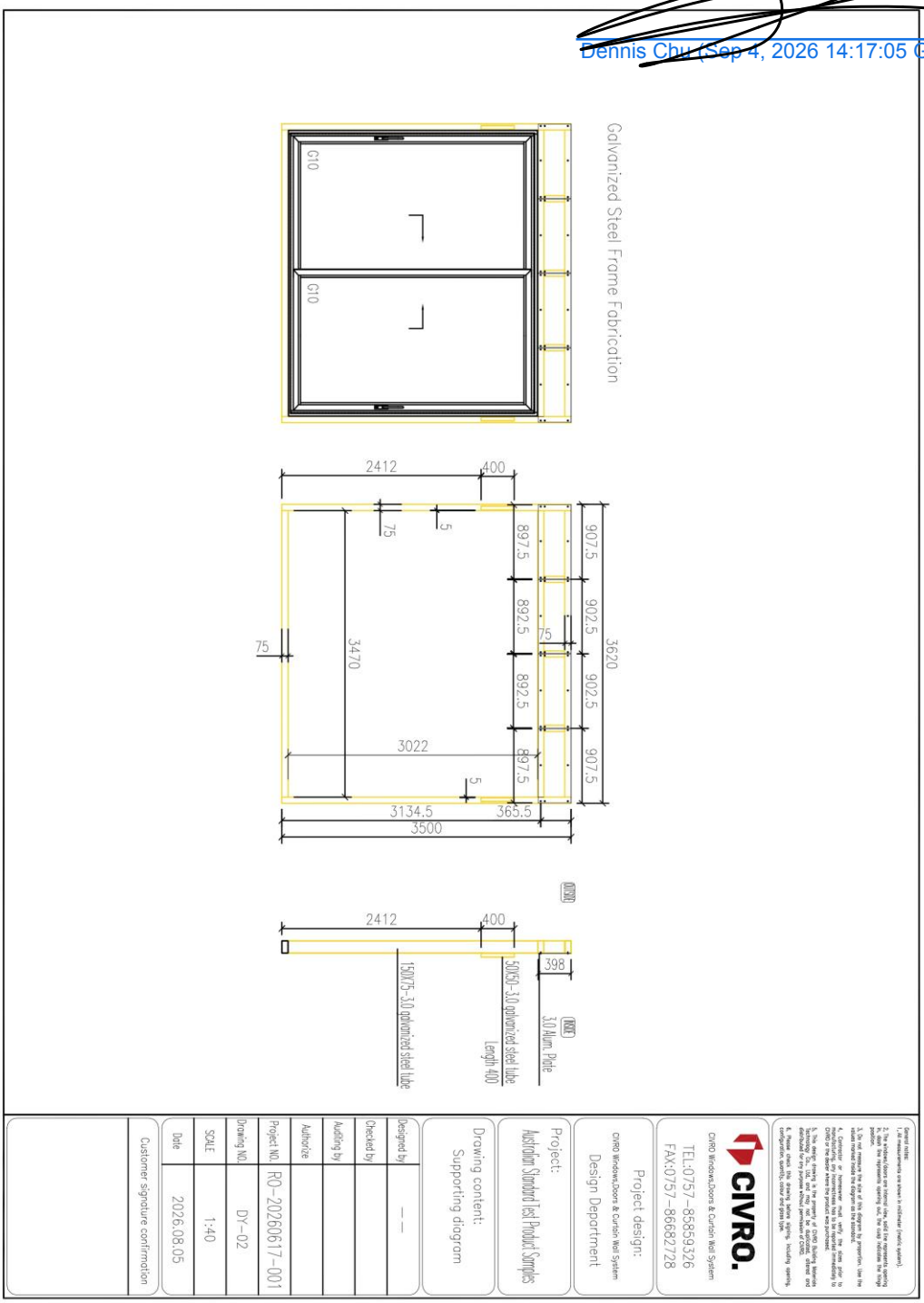

Figure 15 Drawing of Test Specimen Elevations

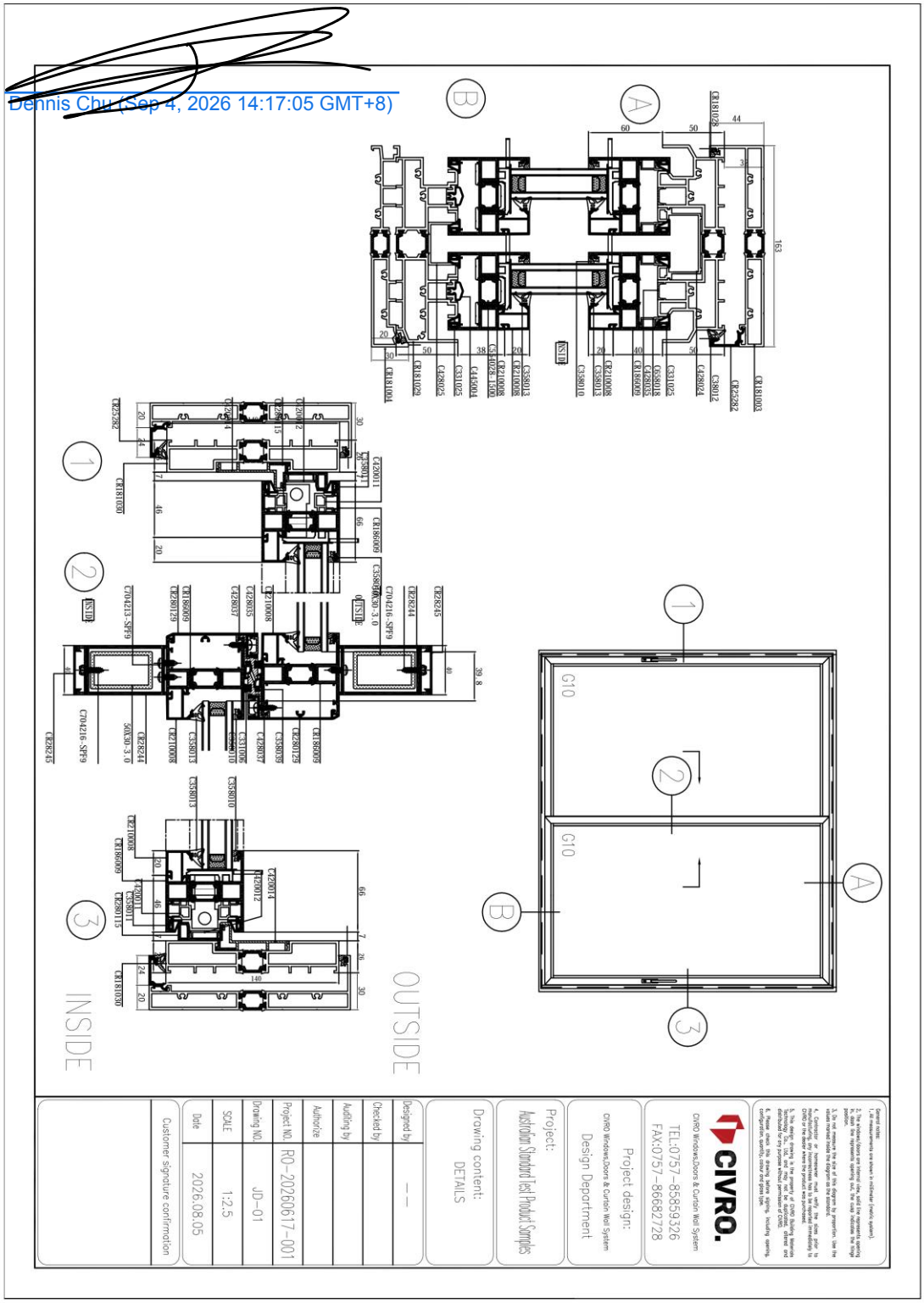

Figure 16 Drawing of Test Specimen Elevations and Test Specimen Cross Sections

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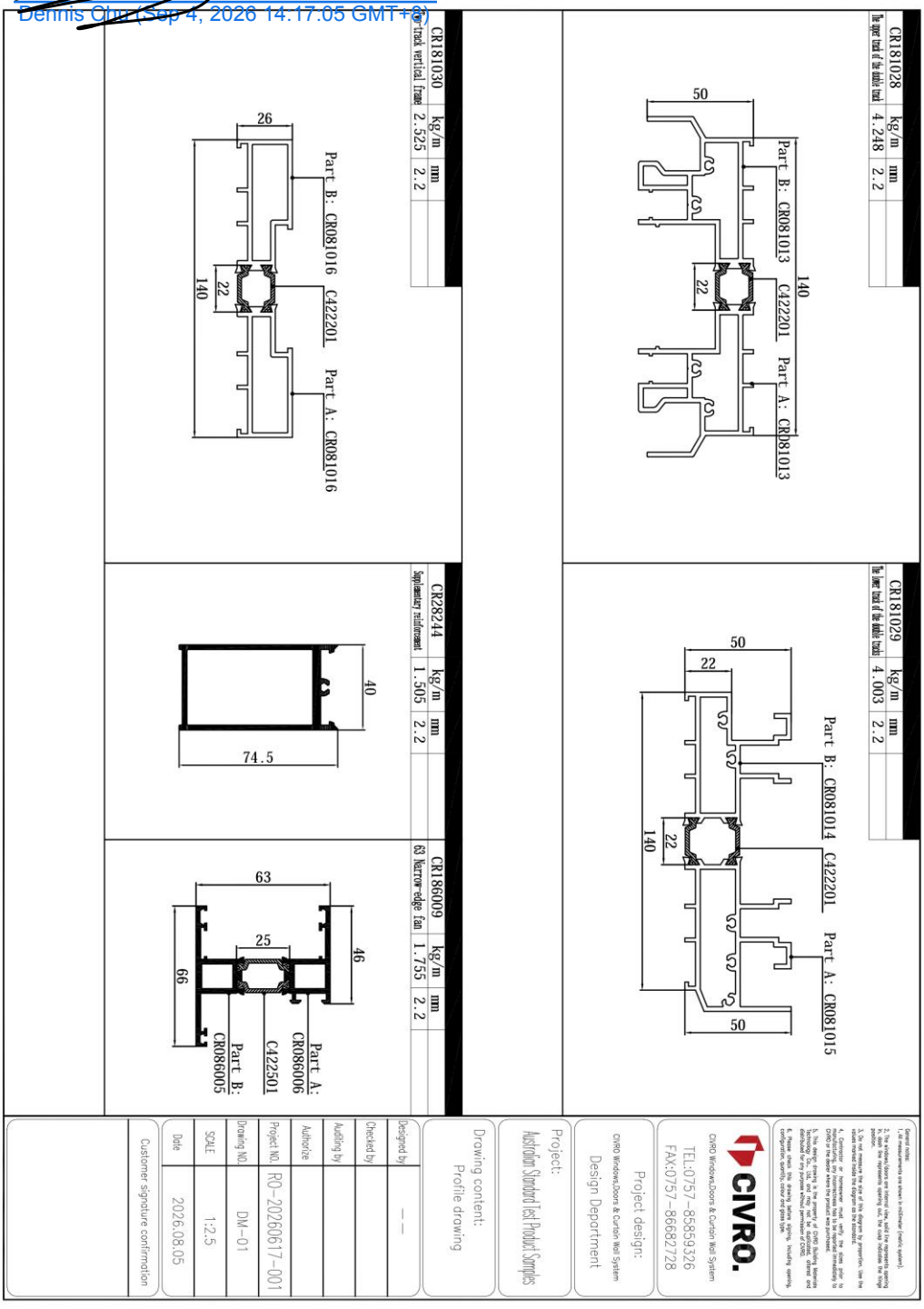

Figure 17 Drawing of Profile Details

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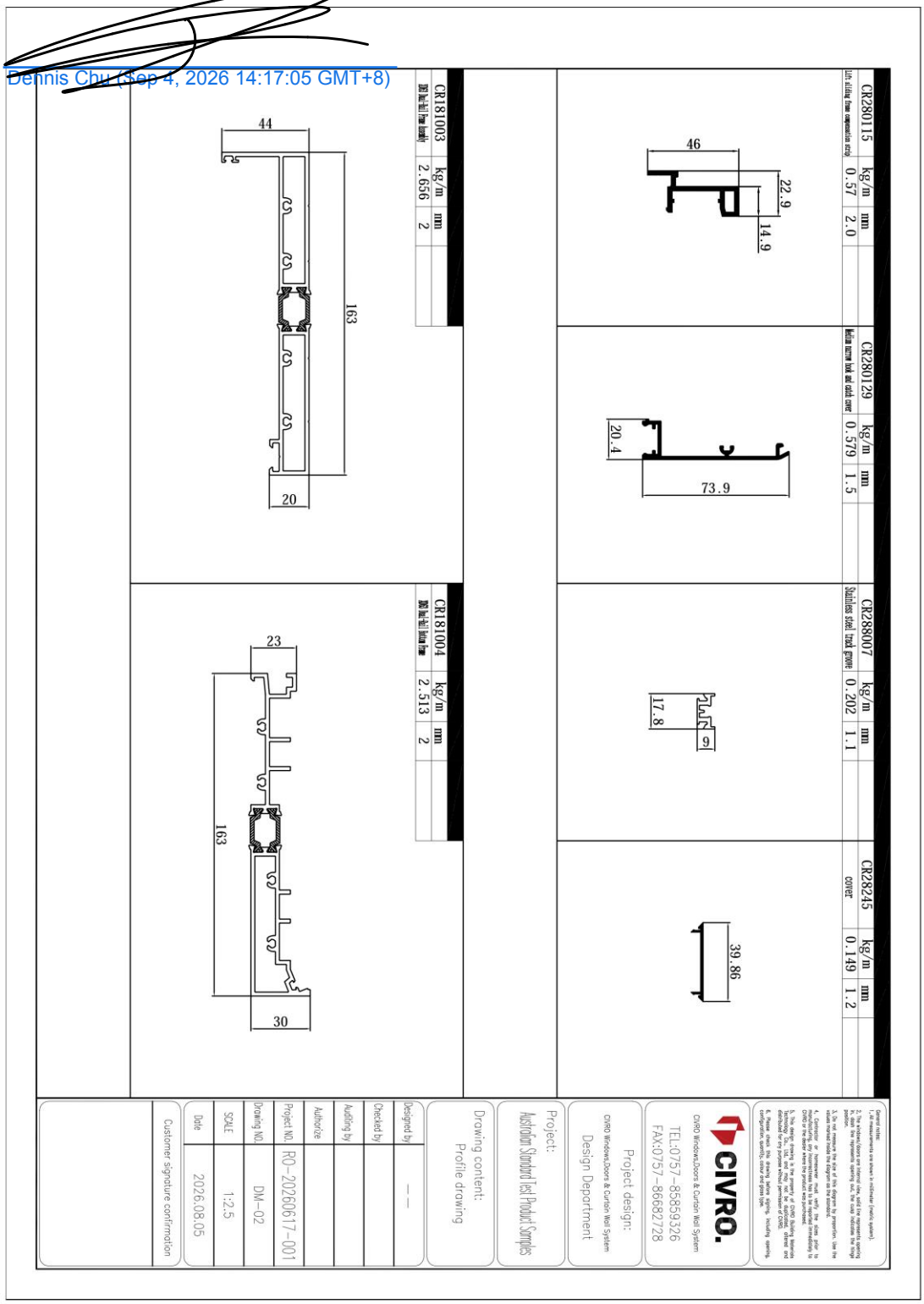

Figure 18 Drawing of Profile Details

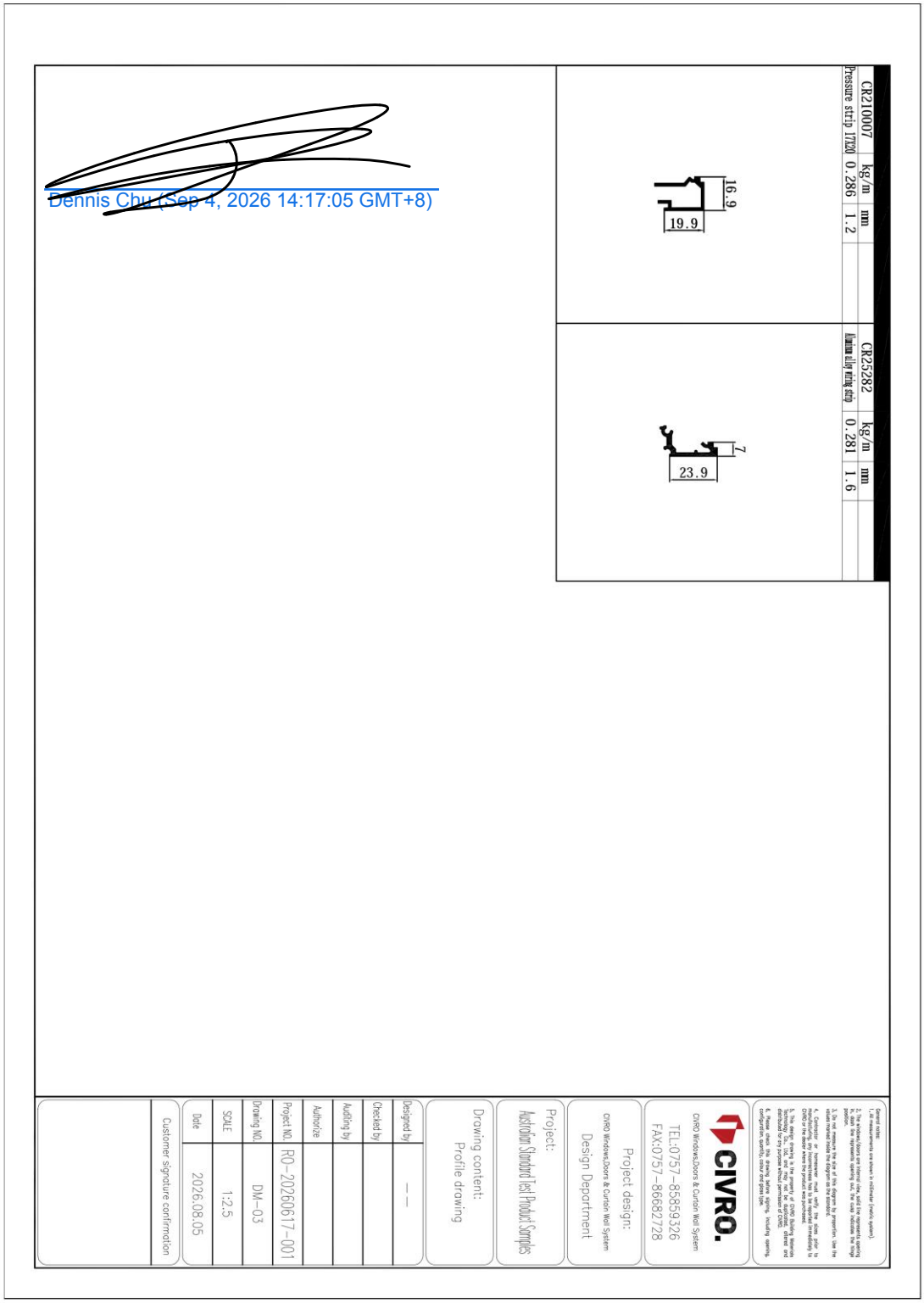

Figure 19 Drawing of Profile Details

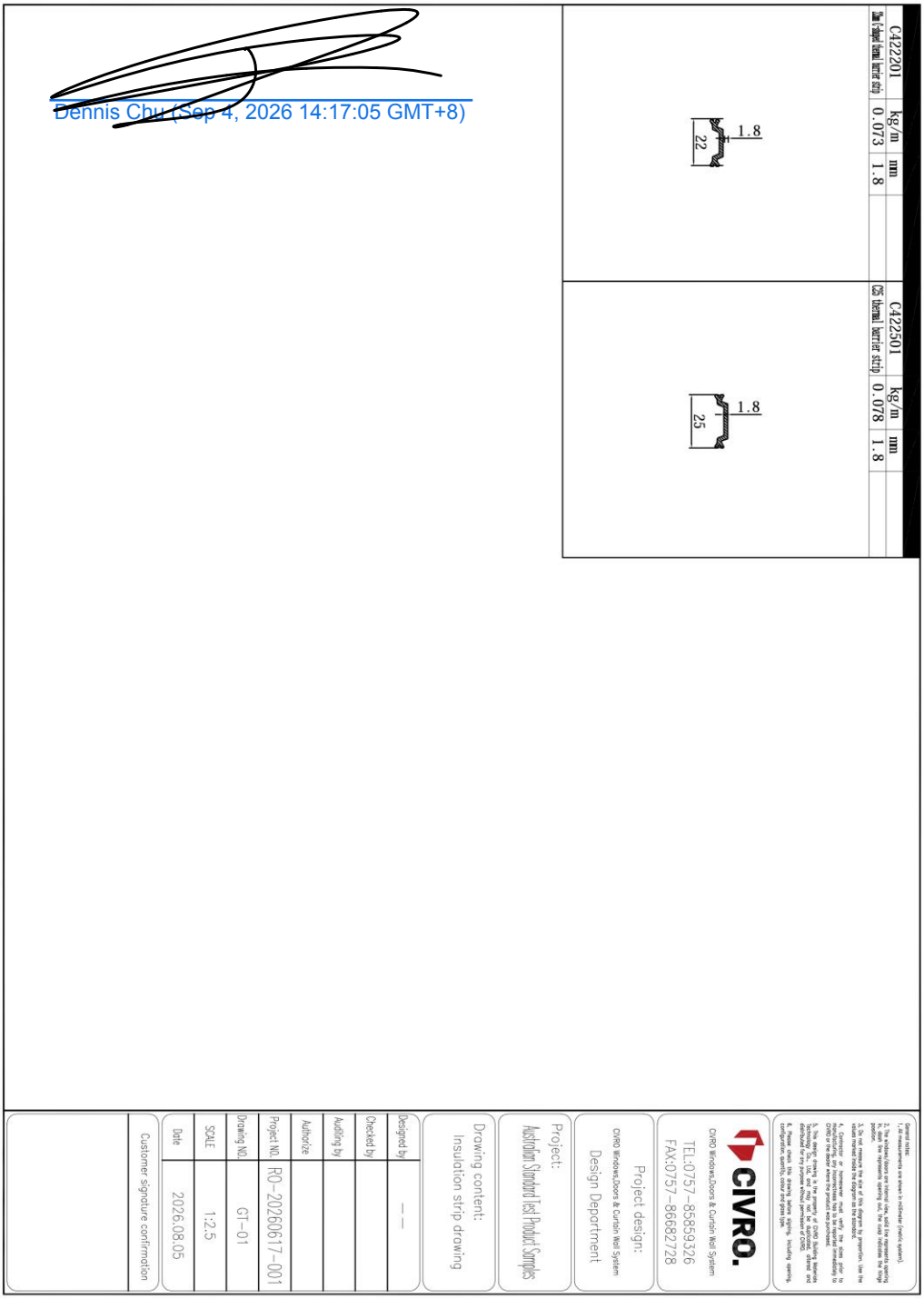

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Figure 20 Drawing of Thermal Break Details

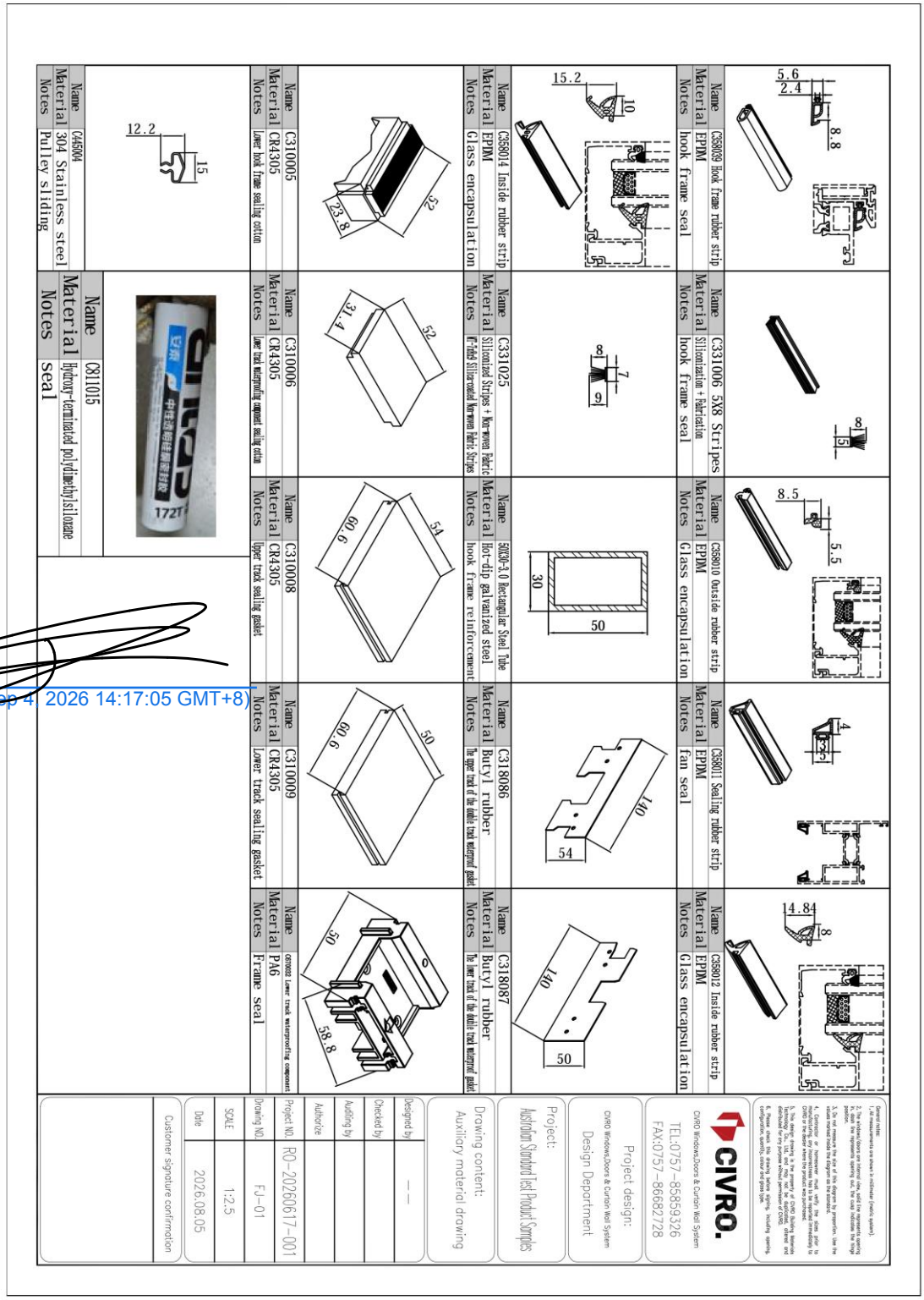

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Figure 21 Drawing of Gaskets, Seals and Weatherstripping Details

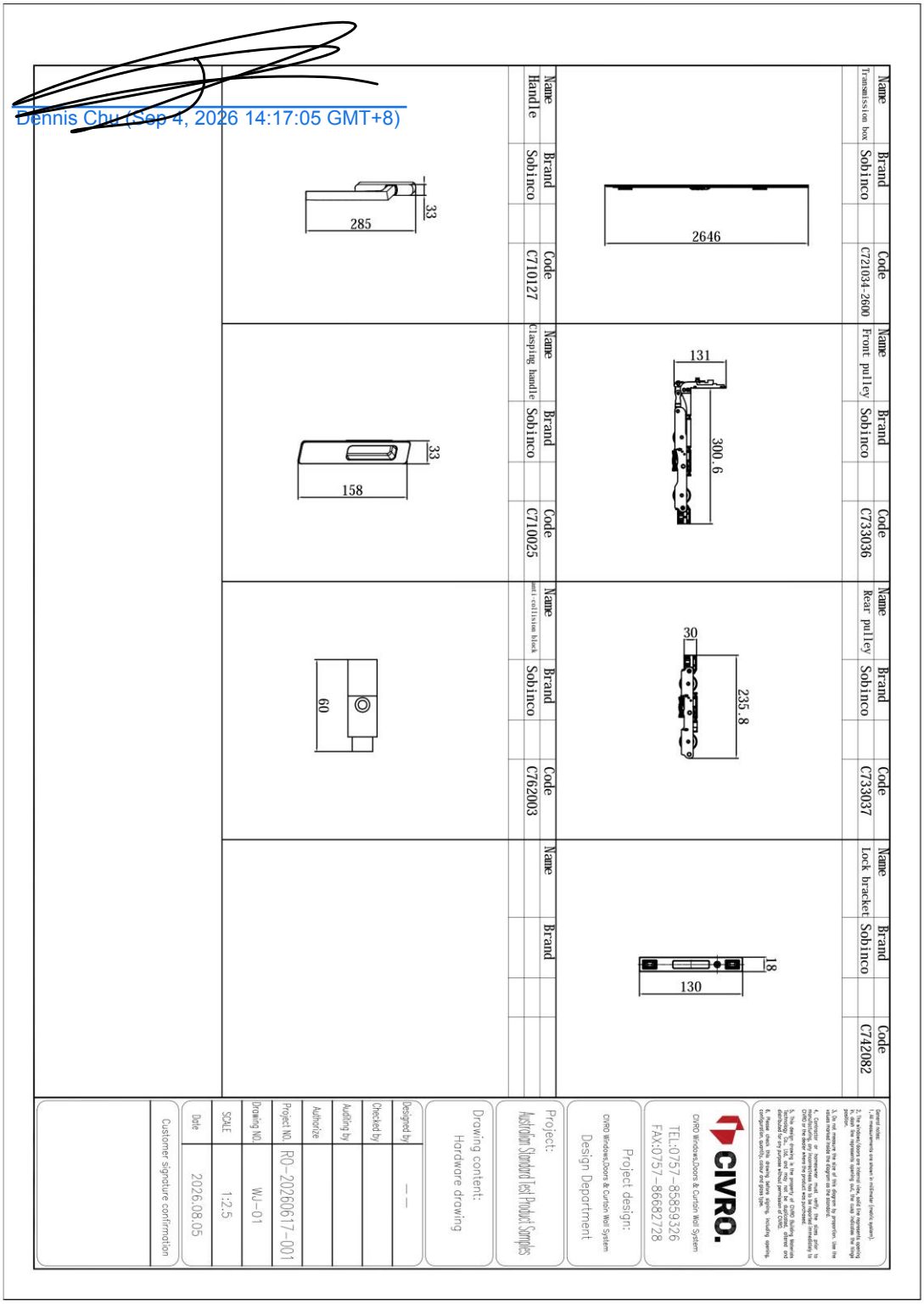

Figure 22 Drawing of Hardware Details

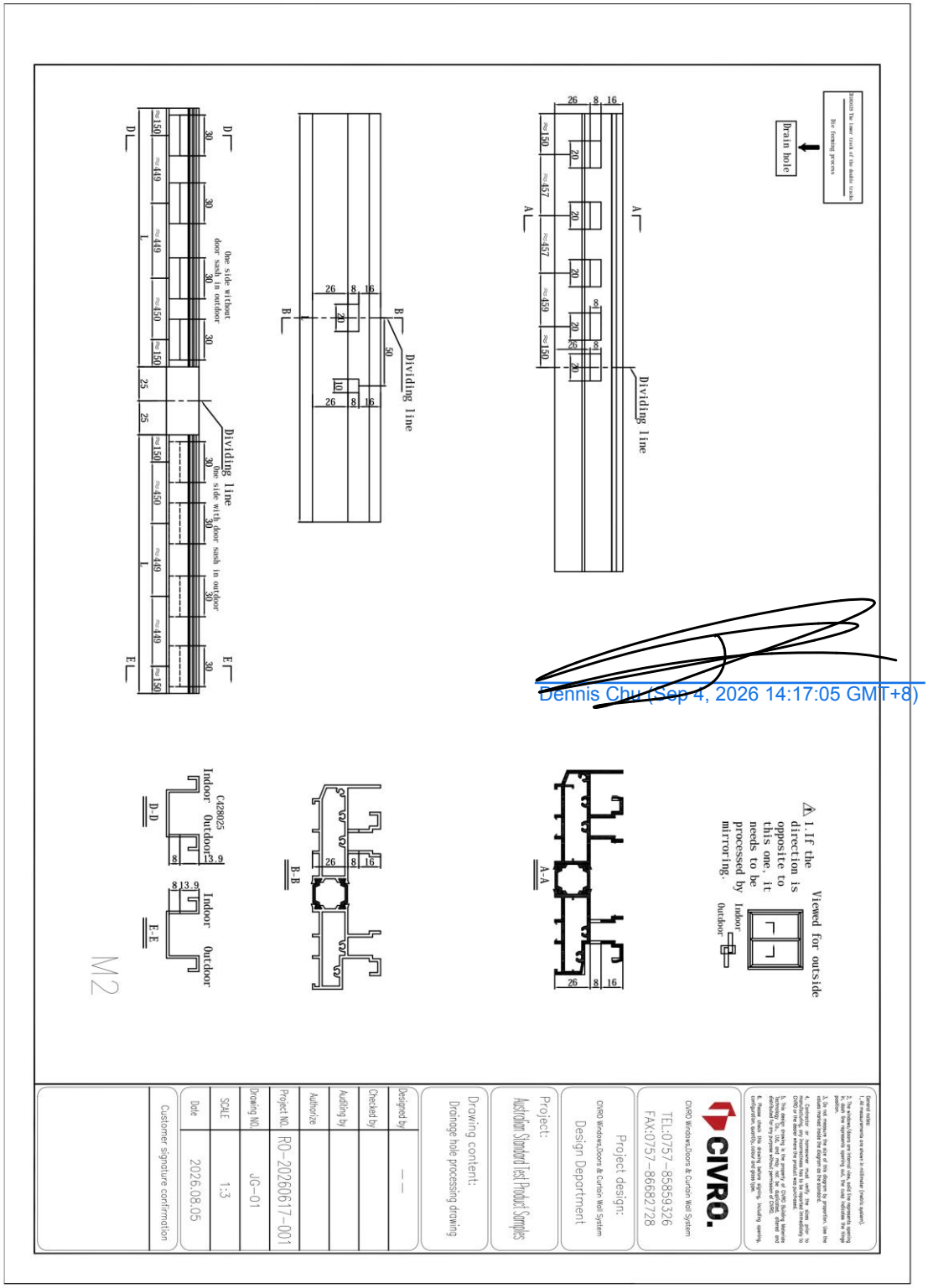

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Figure 23 Drawing of Drainage System and Details

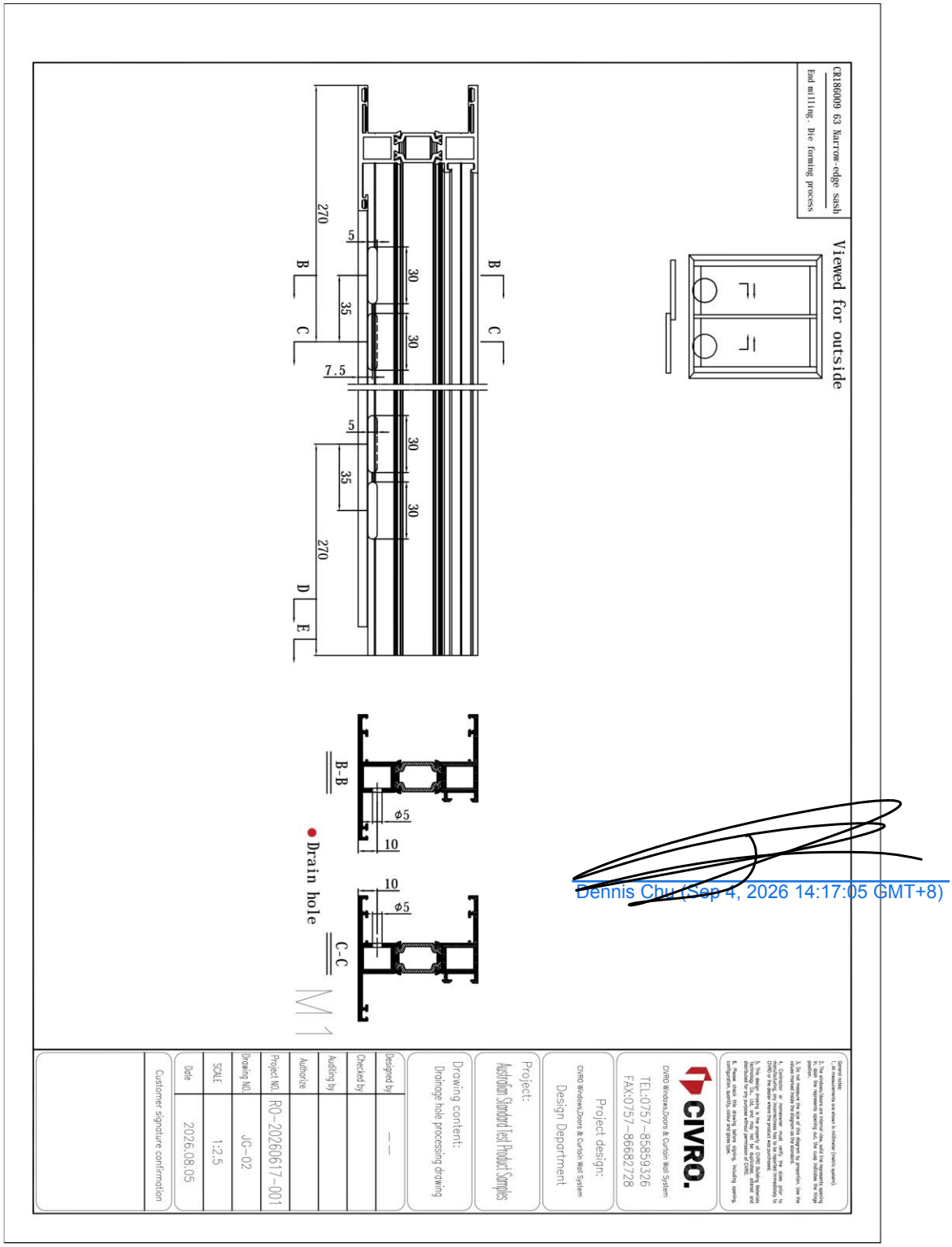

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Figure 24 Drawing of Drainage System and Details

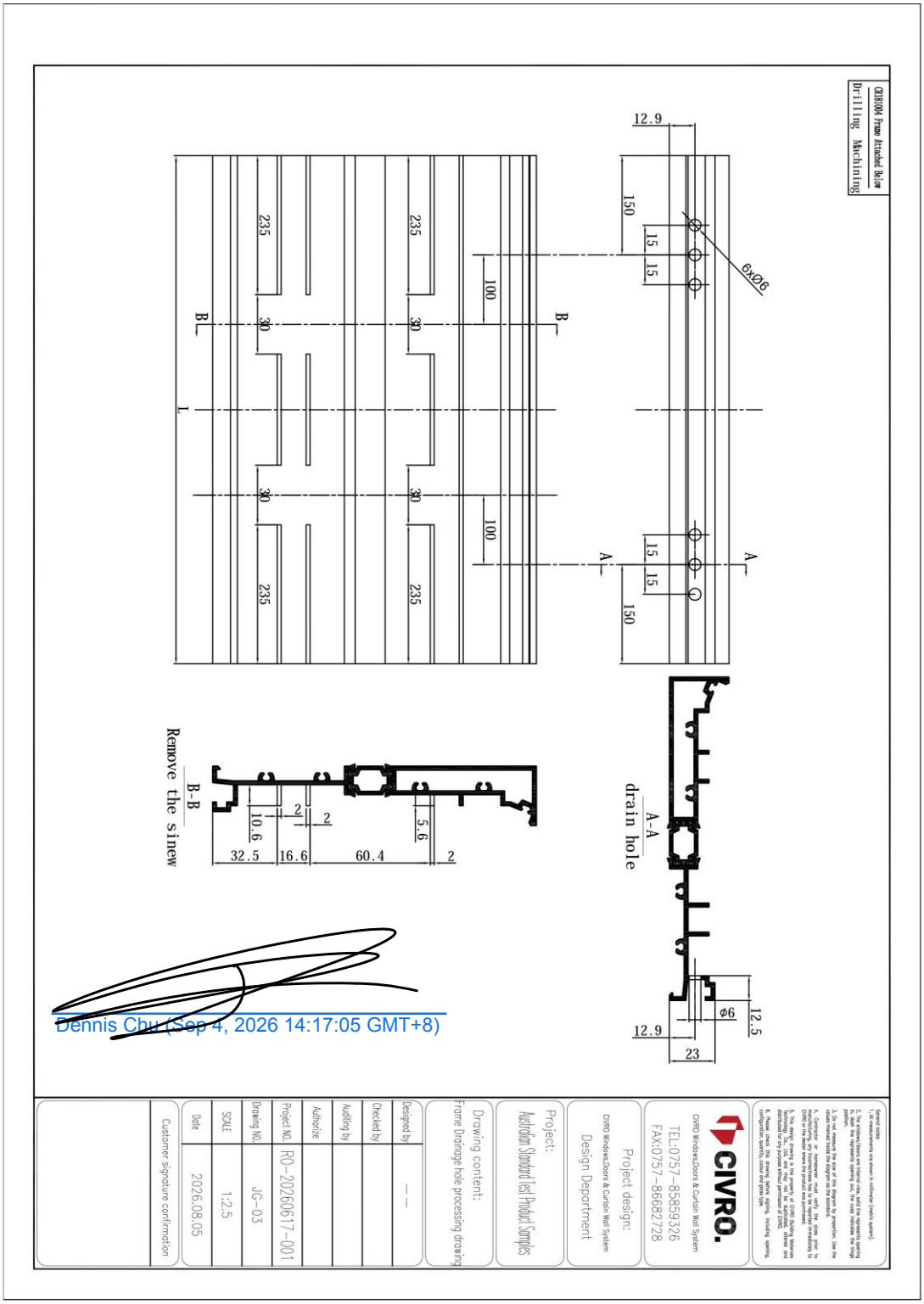

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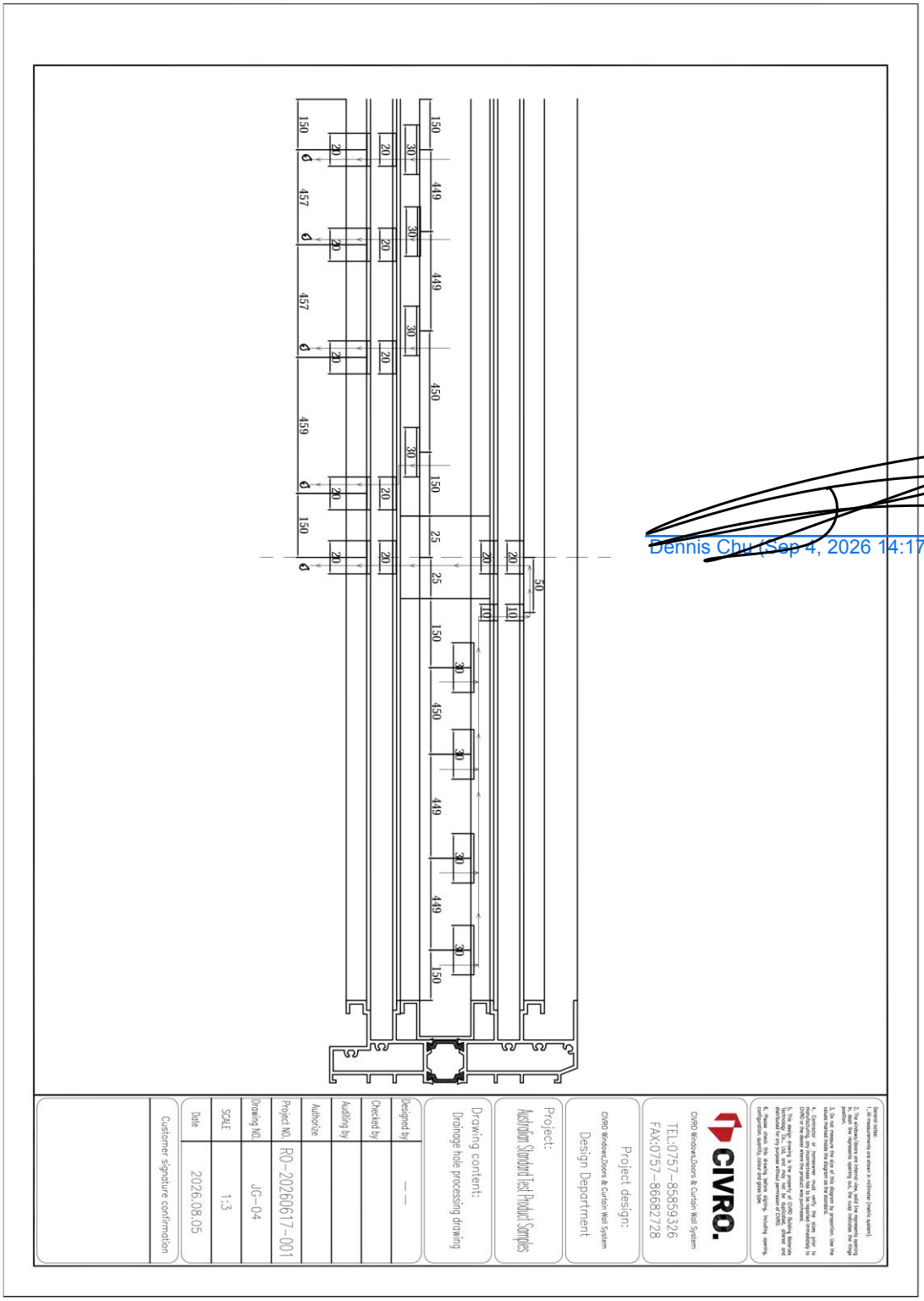
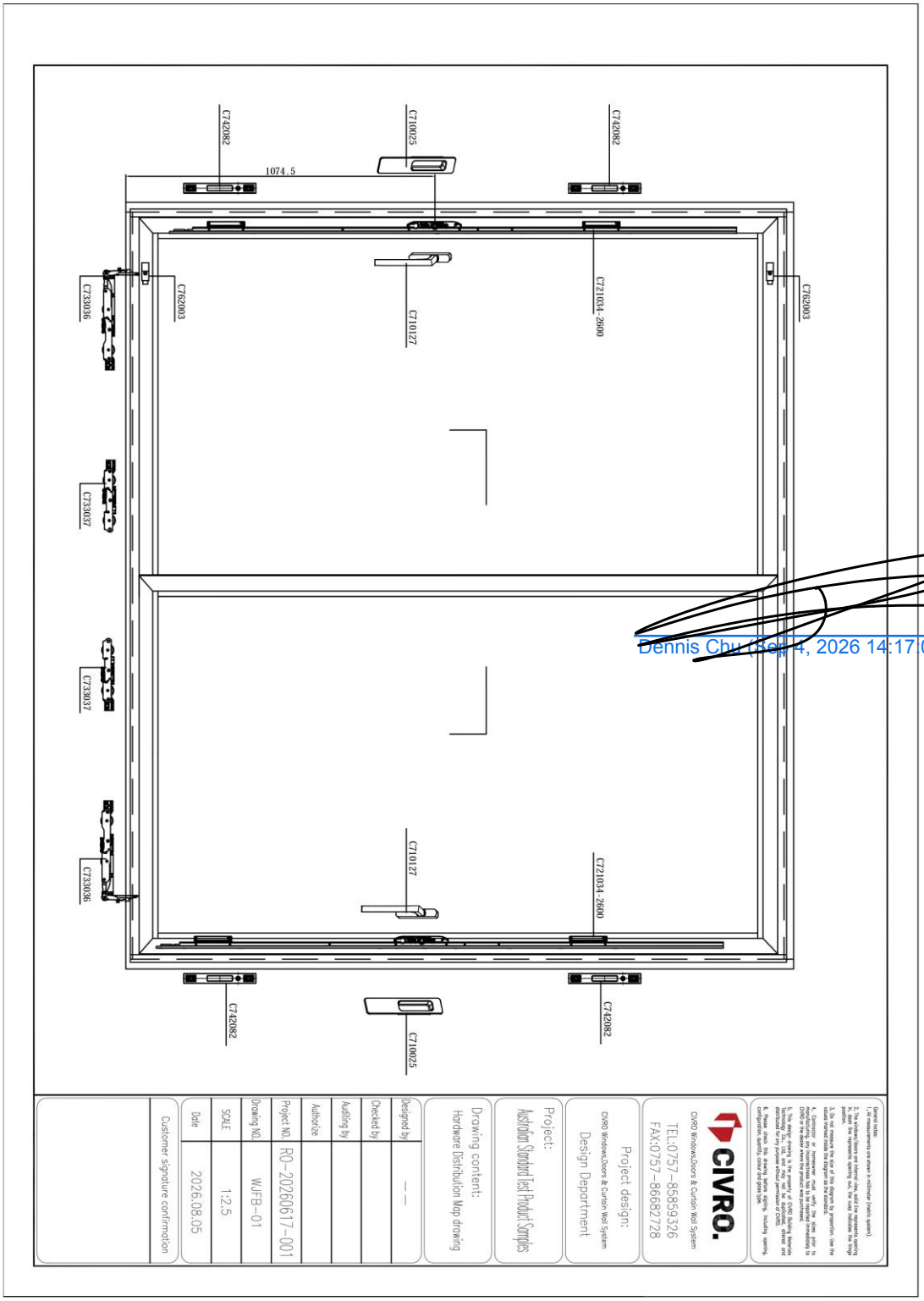
Figure 25 Drawing of Drainage System and Details



Dennis Chu (Sep 4, 2026 14:17:05 GMT+8)

Figure 26 Drawing of Drainage System and Details



Dennis Chu (Sep 4, 2026 14:17:05 GMT+8)

Figure 27 Drawing of Hardware Details

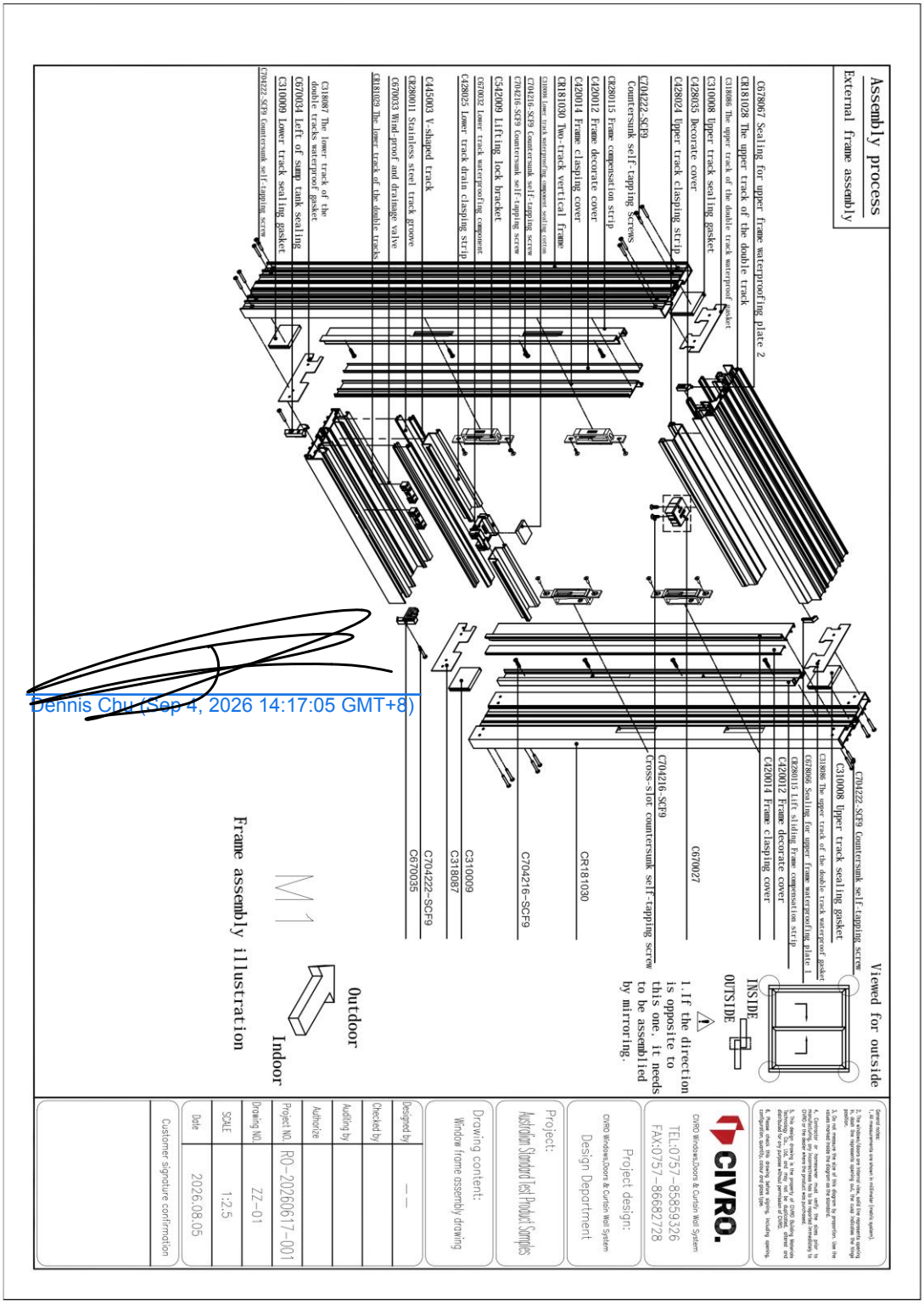


Figure 28 Drawing of Frame and Sash Construction Details

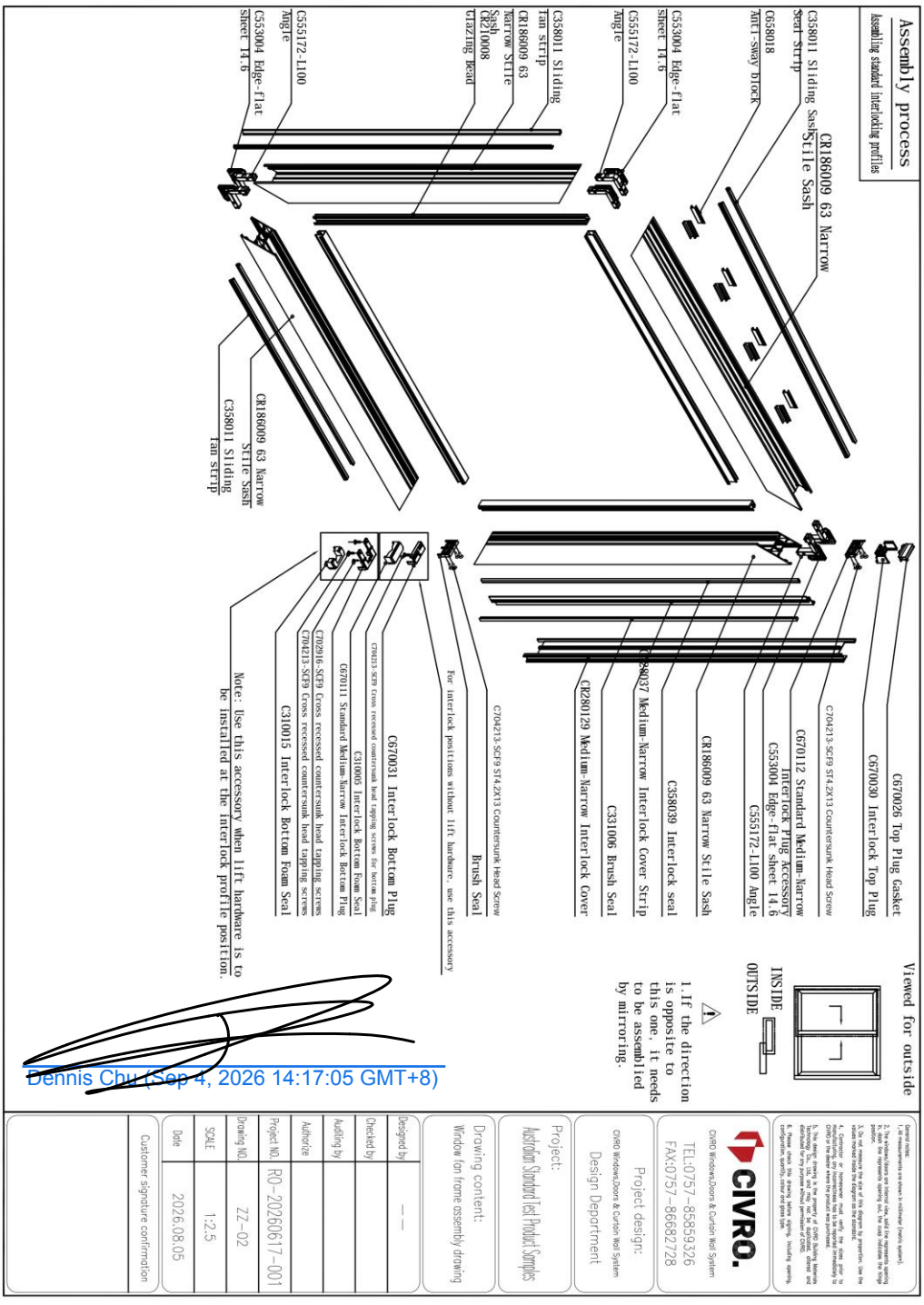


Figure 29 Drawing of Frame and Sash Construction Details

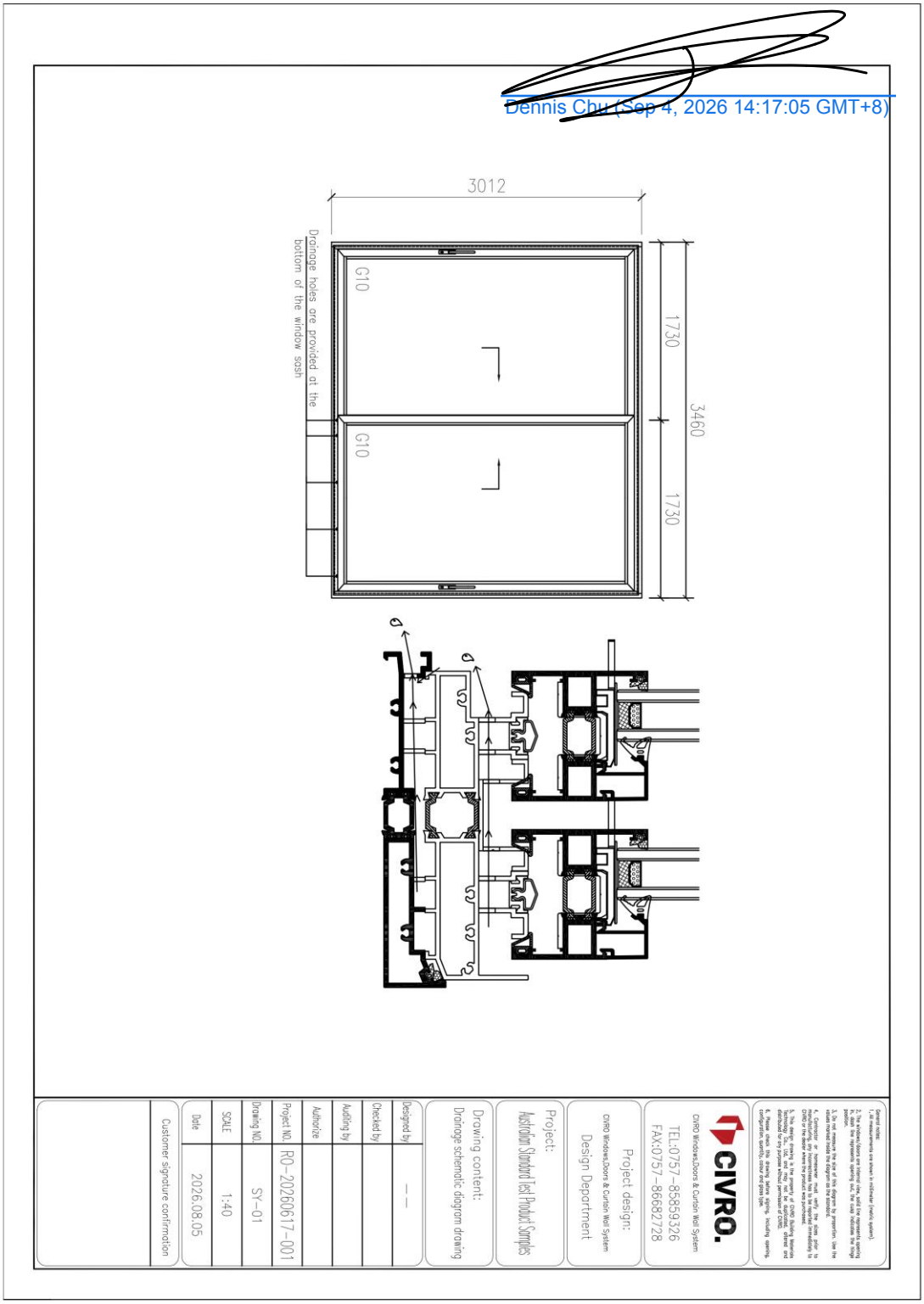


Figure 30 Drawing of Drainage System and Details

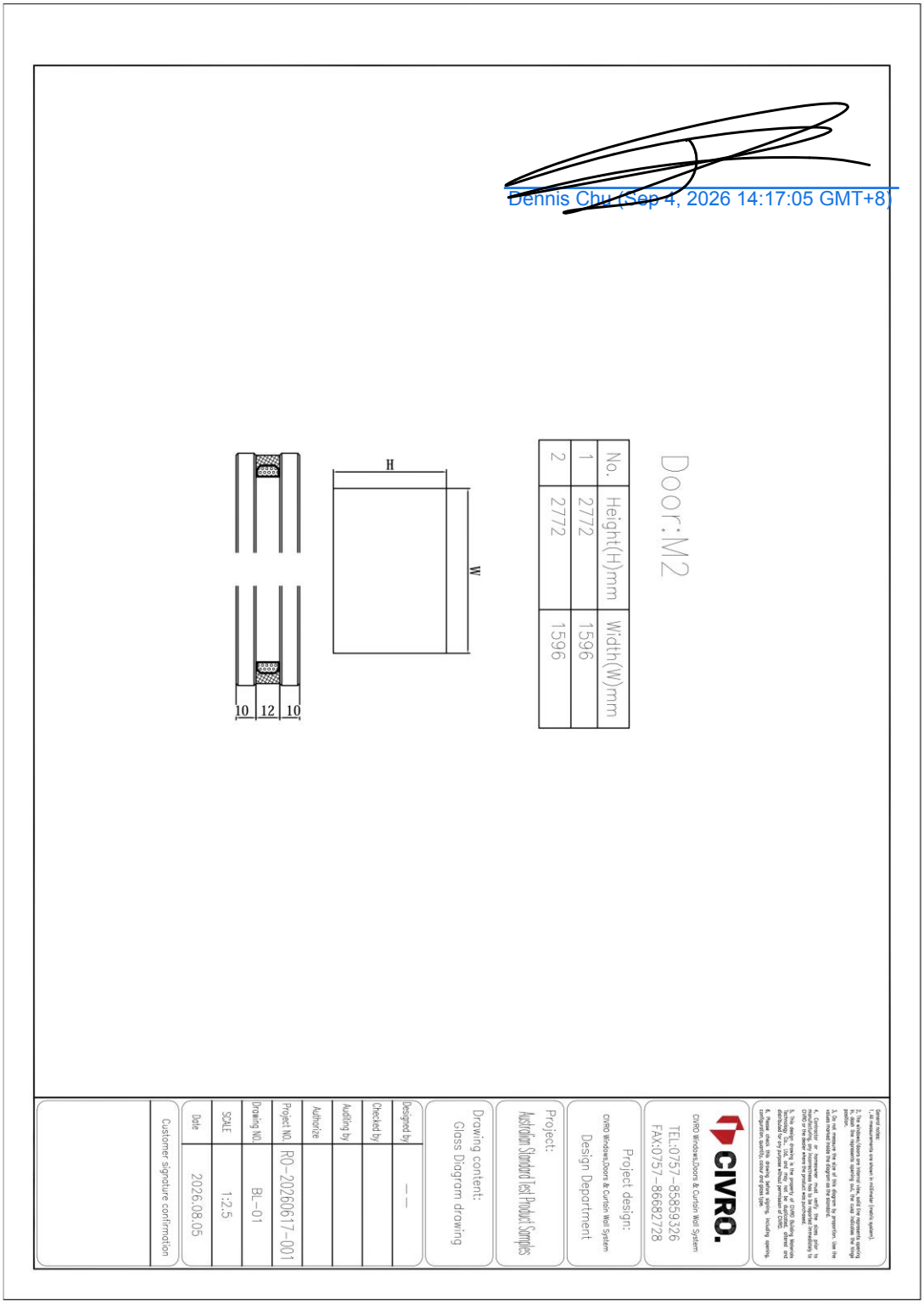


Figure 31 Drawing of Glazing Details

END OF REPORT

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