

工程指示 / 要求簡箋(E.I.)

工程指示編號：EI/ 9376 /18 修改版次：  
 工程編號：J836 工程名稱：日出康城7期平盤 MASTER FILE  
 工程項目：Window Wall (WW4, N to RH) 鐵件拆圖  
 收件人：Maggie Lo 發件人：李發鵬 日期：2018/6/21

要求提供 /  確認 事項：

- |                                    |                                     |                               |
|------------------------------------|-------------------------------------|-------------------------------|
| <input type="checkbox"/> 初步鋁料 B.M. | <input type="checkbox"/> 加工拆圖，然後生產  | <input type="checkbox"/> 尺寸表  |
| <input type="checkbox"/> 正式鋁料 B.M. | <input type="checkbox"/> 技術上資料 / 指示 | <input type="checkbox"/> 報價   |
| <input type="checkbox"/> 配件 B.M.   | <input type="checkbox"/> 樣辦或貨品說明書   | <input type="checkbox"/> 分判合約 |
| <input type="checkbox"/> 其他：_____  |                                     |                               |

內容：

煩請安排強記拆圖：WW4, N to RH. (附上此份拆圖連 CAD檔)  
拆正、橫、底窗鐵件。

注意：先提供拆圖，待地盤覆尺及批核後方可進行加工，  
(加工指示會再另行通知)

請在 2018/6/15 前完成上列要求。

附有關圖紙 / 文件：

WW4 N to RH 拆圖 1份 (連 CAD)

以上項目為：

- 原合約工程包       原合約工程加 / 減賬       新工程報價

原因：-

分發東莞各部門：

- ( ) 生產技術總監  連附件    ( ) 技術部  連附件    ( ) 生產部  連附件    ( ) 機械設計部  連附件  
 ( ) 採購部  連附件    ( ) 生產統籌部  連附件  
 ( ) 質檢部  連附件    ( ) 會計部  連附件    ( ) 報關組  連附件    ( ) 其他 \_\_\_\_\_  連附件

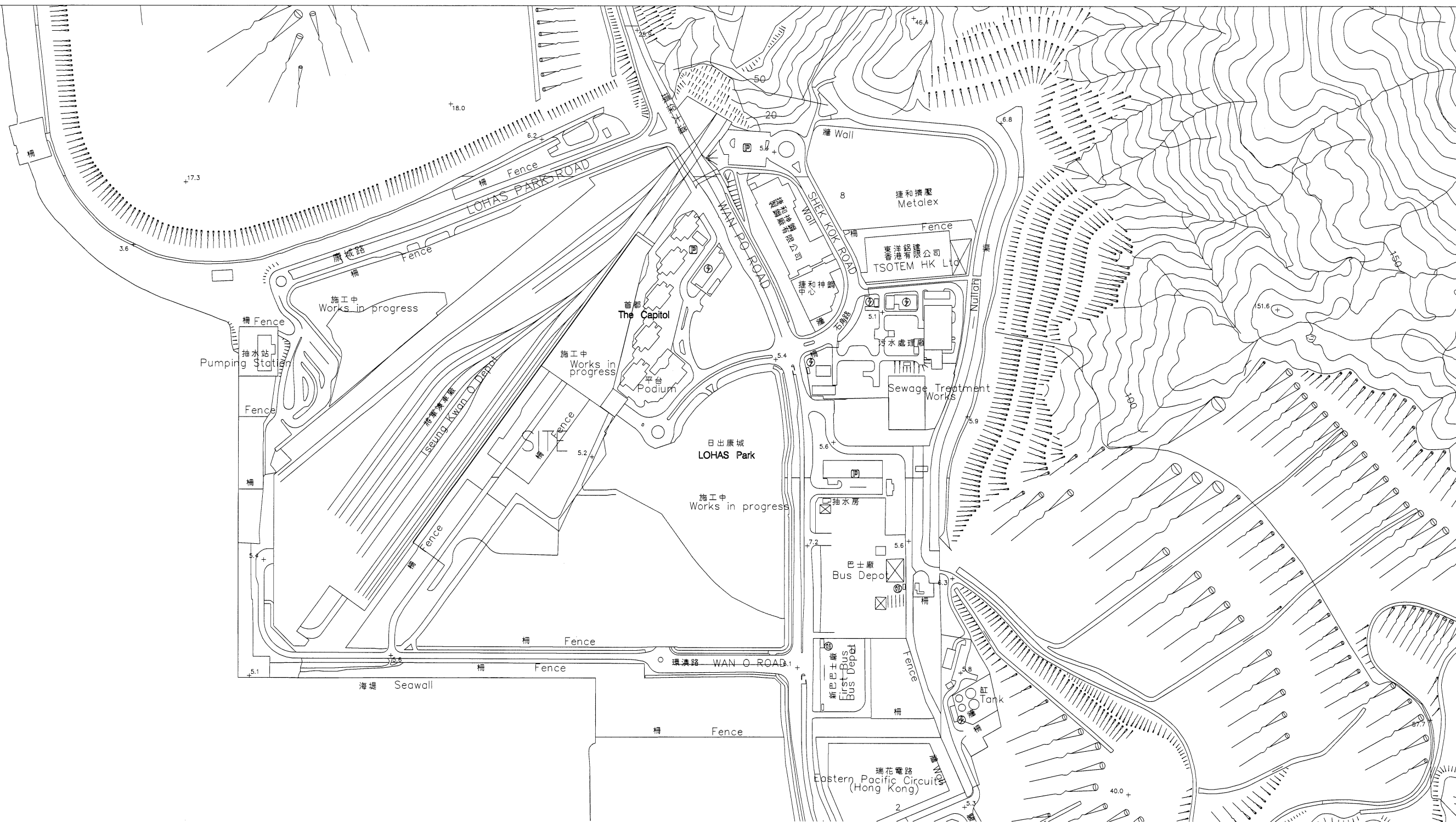
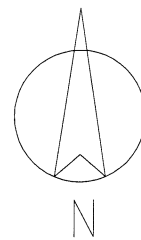
分發香港各部門：

- ( ) 行政部  連附件    ( ) 會計部  連附件    ( ) 統籌部  連附件    ( ) 工程部地盤科文  連附件  
 ( ) 採購部  連附件    ( ) QS 部  連附件    ( ) 維修部  連附件    ( ) 其他 \_\_\_\_\_  連附件

傳遞編號：

發件人簽署：

項目經理簽署：



**PROJECT : PROPOSED SITE C1, DEVELOPMENT AT AREA 86,  
TKOTL 70 RP, TSEUNG KWAN O, NEW TERRITORIES**

4

**TITLE : WINDOW WALL (WW4) @ 3/F AND 4/F  
SHOP DRAWING SUBMISSION (N TO RH)**

**DATE: 09 - MAY - 2018**

**美特鋁質有限公司**  
**MIDI ALUMINIUM FABRICATOR LTD.**  
 Units 6-8, Sunray Industrial Centre, 1/F  
 610 Cha Kwo Ling Road, Kowloon  
 Tel: 23489211-4 Fax: (852) 2727666  
 DWG NO. : J836-WW4-0000 REV. : A



# GENERAL NOTES FOR WINDOW WALL

ALL STRUCTURAL DETAIL FOR WINDOW ARE APPROVED IN LOCKED POSITION

## (A) STANDARDS AND CODES

### GENERAL DESIGN:

CODE OF PRACTICE ON WIND EFFECTS IN HONG KONG - 2004  
 CODE OF PRACTICE FOR THE STRUCTURAL USE OF CONCRETE, 2013  
 BUILDING (CONSTRUCTION) REGULATIONS CAP 123, 1990  
 CODE OF PRACTICE FOR DEAD AND IMPOSED LOADS 2011

### GLASS GLAZING:

BS6262: BRITISH STANDARD CODE OF PRACTICE FOR GLAZING OF BUILDINGS - 1982

### ALUMINIUM, STEEL & STAINLESS STEEL:

BS8118: STRUCTURAL USE OF ALUMINIUM  
 BS EN 485: PART 2: 2004  
 BS1474: SPECIFICATION FOR WROUGHT ALUMINIUM AND ALUMINIUM ALLOYS FOR GENERAL ENGINEERING PURPOSE; BAR, EXTRUDED ROUND TUBES AND SECTIONS  
 HONG KONG CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011  
 CONCISE GUIDE TO THE STRUCTURAL DESIGN OF STAINLESS STEEL  
 BS6105: CORROSION-RESISTANT STAINLESS STEEL FASTENERS - 1981

## (B) DESIGN LOAD

### 1. WIND LOAD

ACCORDING TO WIND TUNNEL TEST REPORTS:  
 POSITIVE  $q_p = 3.50 \text{ kPa}$  MAXIMUM  
 NEGATIVE  $q_p = 7.00 \text{ kPa}$  MAXIMUM

### 2. HORIZONTAL IMPOSED LOAD

HORIZONTAL IMPOSED LOAD ON PROTECTIVE BARRIERS SHALL DESIGN IN ACCORDANCE WITH TABLE 3.13 OF CODE OF PRACTICE FOR DEAD & IMPOSED LOADS 2011.  
 AREA WHERE CONGREGATION OF PEOPLE IS NOT EXPECTED:  
 - CASE 1 : 0.75 kN/m LINE LOAD TO BE APPLIED AT A HEIGHT OF 1.1m ABOVE FLOOR LEVEL  
 - CASE 2 : 1.0kPa UDL APPLIED ON THE INFILL BETWEEN FLOOR AND TOP RAIL  
 - CASE 3 : 0.5 kN CONCENTRATED LOAD APPLIED AT TOP RAIL LEVEL

### 3. DEAD LOAD

DESIGN DEAD LOAD = 1.25 kPa

## (C) MATERIAL WEIGHT

1. DENSITY OF GLASS = 26.0 kN/m<sup>3</sup>  
 2. DENSITY OF STEEL = 77.0 kN/m<sup>3</sup>  
 3. DENSITY OF ALUMINIUM ALLOY = 27.2 kN/m<sup>3</sup>

## (D) MATERIAL USED

### 1. STRUCTURAL STEEL

THE STEEL HOLLOW TO BE GRADE S275 JO(CLASS 1) COMPLY WITH BS EN 10210 PART 1:2006.  
 THE OTHER STEEL TO BE GRADE S275 JO(CLASS 1) COMPLY WITH BS EN 10025:2004.  
 - MODULUS OF ELASTICITY = 205000 MPa  
 - DESIGN STRENGTH (T<sub>16</sub>) = 275 MPa (FOR MEMBER THICKNESS ≤ 16mm)  
 - DESIGN STRENGTH (T<sub>16</sub> & T<sub>40</sub>) = 265 MPa (FOR 16mm < MEMBER THICKNESS ≤ 40mm)  
 ALL STRUCTURAL STEEL TO BE HOT DIP GALVANIZED COMPLY WITH BS EN ISO 1461:1999.

### 2. ALUMINIUM

THE EXTRUDED SECTION TO BE GRADE 6063-T6, (FOR STRUCTUAL USE)  
 MECHANICAL PROPERTIES TO BE EN 755-2:1997,  
 CHEMICAL COMPOSITION TO BE EN 573-3:2003,  
 LIMITING STRESSES (BASED ON TABLE 4.1 OF BS 8118(PART1:1991))--  
 - FOR BENDING AND OVAL YIELDING ( $\sigma_b$ ) = 160 MPa  
 - FOR LOCAL TENSION OR COMPRESSION ( $\sigma_c$ ) = 175 MPa  
 - FOR SHEAR ( $\sigma_v$ ) = 95 MPa  
 - 0.2% TENSILE PROOF STRESS = 160 MPa  
 - MINIMUM TENSILE STRENGTH = 185 MPa

THE EXTRUDED SECTION TO BE GRADE 6063-T5, (FOR STRUCTUAL USE)  
 MECHANICAL PROPERTIES TO BE EN 755-2:1997,  
 CHEMICAL COMPOSITION TO BE EN 573-3:2003,  
 LIMITING STRESSES (BASED ON TABLE 4.1 OF BS 8118(PART1:1991))--  
 - FOR BENDING AND OVAL YIELDING ( $\sigma_b$ ) = 110 MPa  
 - FOR LOCAL TENSION OR COMPRESSION ( $\sigma_c$ ) = 130 MPa  
 - FOR SHEAR ( $\sigma_v$ ) = 65 MPa  
 - 0.2% TENSILE PROOF STRESS = 110 MPa  
 - MINIMUM TENSILE STRENGTH = 150 MPa

ALL ALUMINIUM CLADDING TO BE GRADE 3003-H14,  
 MECHANICAL PROPERTIES TO BE EN485-2:2008,  
 CHEMICAL COMPOSITION TO BE EN 573-3:2003,  
 LIMITING STRESSES (BASED ON TABLE 4.1 OF BS 8118(PART1:1991))--  
 - FOR BENDING AND OVAL YIELDING ( $\sigma_b$ ) = 125 MPa  
 - FOR LOCAL TENSION OR COMPRESSION ( $\sigma_c$ ) = 135 MPa  
 - FOR SHEAR ( $\sigma_v$ ) = 75 MPa  
 - 0.2% TENSILE PROOF STRESS = 125 MPa  
 - MINIMUM TENSILE STRENGTH = 145 MPa

MODULUS OF ELASTICITY OF ALUMINIUM = 70000 MPa

## (E) STAINLESS STEEL BOLT & SCREW

1. STAINLESS STEEL BOLT & SCREW & WASHER TO BE A4-70 COMPLY WITH BS EN ISO 3506 FOR MECHANICAL PROPERTIES, UNLESS OTHERWISE SPECIFIED.  
 - ULTIMATE TENSILE STRENGTH ( $\sigma_b$ ) = 700 MPa  
 - STRESS AT 0.2% PERMANENT STRAIN ( $\sigma_{0.2}$ ) = 450 MPa

## (F) DEFLECTION CRITERIA

1. DEFLECTION LIMIT FOR WINDOW TO BE COMPLY WITH PNAP106 (APP-37)  
 2. DEFLECTION LIMIT FOR STRUCTURAL MEMBER  
 - CANTILEVERS = L/180  
 - OTHER BEAMS = L/200  
 - TRANSOMS FOR VERTICAL DEAD LOAD = 3.0mm MAX  
 3. DEFLECTION LIMIT FOR ALUMINIUM PANEL  
 - SINGLE PANE PANEL = L/90  
 4. DEFLECTION LIMIT FOR GLASS PANEL  
 - SINGLE PANE PANEL = L/60

## (G) SEPARATION BETWEEN DISSIMILAR MATERIALS

1. CONTACT SURFACE BETWEEN DISSIMILAR MATERIALS WILL BE ISOLATED BY A LAYER OF PVC TAPE (VERTICAL)/BITUMAN PAINT(HORIZONTAL).

## (H) GLASS PANEL

1. ALL GLASS PANEL DESIGN SHALL BE COMPLIED WITH BS6262: BRITISH STANDARD CODE OF PRACTICE FOR GLAZING BUILDING - 1982.  
 2. IMPACT TEST OF TEMPERED GLASS SHALL BE COMPLIED WITH BS 6206.  
 3. ALL GLASS PANEL QUALITY SHALL BE COMPLIED WITH ASTM C1048.  
 - MODULUS OF ELASTICITY = 70000 MPa  
 - DEFLECTION LIMIT = SPAN/60  
 4. ALLOWABLE STRESS  
 - INSULATED GLAZING UNIT (UNFACTORED LOAD) = 50 MPa  
 SURFACE COMPRESSIVE STRENGTH OF ALL GLASS TYPE SHOULD NOT LESS THAN 69MPa.  
 5. HEAT SOAK TEST OF TEMPERED GLASS SHALL BE CARRIED OUT ACCORDING TO PNAP APP-37 & BS EN 14179.

No	GLASS TYPE	MAX PANEL SIZE (mm)
GL01	12mm THK. TEMPERED GLASS+12mm AIR+12mm THK. TEMPERED GLASS I.G.U.	2100(W)x3500(H)

## (I) SILICONE SEALANT

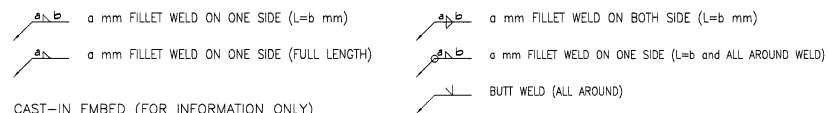
1. DOW CORNING 791 TO BE USED AS WEATHER SEALANT BETWEEN MATERIAL OF ALUMINIUM/ALUMINIUM, GLASS/GLASS & ALUMINIUM/GLASS.  
 2. DOW CORNING 983 TO BE USED AS STRUCTURAL SEALANT. (BD REF.: BD-SS-001)

## (J) GASKET & SETTING BLOCK

1. ALL GASKET USED SHALL BE DENSE EXTRUDED SANTOPRENE WITH A HARDNESS OF 60' +/-5' & SHALL BE COMPLIED WITH BS 4255 PART 1; 1986  
 2. SETTING BLOCKS SHALL BE DENSE EXTRUDED SANTOPRENE WITH A HARDNESS OF 85' +/-5' SHORE A,  
 A MIN. LENGTH OF 120 mm & A MIN. WIDTH CORRESPONDING TO THE GLASS THICKNESS & LOCATED AT GLASS QUARTER POINTS.

## (K) WELDING

1. ALL WELDING SHALL COMPLY TO BS EN 1011-1 : 2009.  
 2. ALL WELD PROCEDURES TO BE COMPLIED WITH BS EN ISO 15614.  
 3. ALL WELD SHALL BE 8mm FILLET WELD UNLESS OTHERWISE SPECIFIED.  
 4. ALL WELDING SHALL BE DONE BY THE QUALIFIED WELDERS COMPLIED WITH BS EN 287-1 : 2009.  
 5. ALL SITE WELDS SHALL BE RECEIVED WITH 2 COATS OF ZINC CHROMATE PRIMER.  
 DESIGN STRENGTH = 220 N/mm<sup>2</sup>  
 6. WELD SIZE SHALL BE IN FULL LENGTH UNLESS OTHERWISE SPECIFIED BELOW:



## (L) CAST-IN EMBED (FOR INFORMATION ONLY)

1. ALL MULLION FIXING LOCATION ARE TO BE CAST-IN EMBED TYPE EM-K.

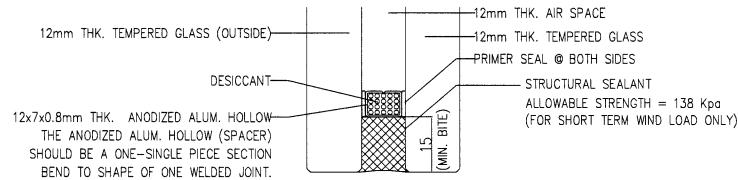
## (O) STRUCTURAL CONCRETE GRADE (FOR INFORMATION ONLY)

1. CONCRETE GRADE = 45D (MIN.)

## " TYPICAL STRUCTURAL SEALANT BITE "

FOR DOUBLE GLAZING GLASS UNIT (I.G.U)

QUALITY ASSURANCE DOCUMENT SUCH AS TEST REPORT / CERTIFICATES INDICATING COMPLES WITH ASTM E2190 OR EQUIVALENT WITH RESPECT TO THE SEAL PERFORMANCE FOR INSTALLING GLASS UNIT SHALL BE SUBMITTED TO BD PRIOR FOR INSTALLING GLASS UNIT SHALL BE SUBMITTED TO BD PRIOR TO COMMENCE OF WORKS.



## (P) ANCHOR BOLT

1. ALL ANCHOR BOLT TO BE ACCORDING TO MANUFACTURER'S TECHNICAL DATA.  
 2. INSTALLATION OF ANCHOR BOLT FOLLOW WITH MANUFACTURER'S RECOMMEDATION.  
 3. FACTOR OF SAFETY = 3

B.D. REF.	TYPE	MINIMUM CONCRETE THICKNESS (mm)	EFFECTIVE ANCHORAGE DEPTH (mm)	MINIMUM EDGE DISTANCE (mm)	MINIMUM SPACING (mm)	RECOMMENDED TENSILE FORCE (KN)	RECOMMENDED SHEAR FORCE (KN)	PULL-OUT TEST LOAD (KN)
BD-AF 149 (FOR CRACKED CONCRETE)	"HILTI" HST3-R M10 SAFETY ANCHOR BOLTS	120	60	45	40	4.00	8.40	1.50 x 4.00 = 6.00
BD-AF 149 (FOR CRACKED CONCRETE)	"HILTI" HST3-R M16 SAFETY ANCHOR BOLTS	160	85	65	65	9.40	21.2	1.50 x 9.40 = 14.10

B.D. REF : 3/7192/97/4 (C1)

CLIENT :



ARCHITECT :



MAIN CONTRACTOR :



STRUCTURAL ENGINEER :

**ARUP**

KWAN KIN KEI  
 鄧景熹  
 REGISTERED STRUCTURAL ENGINEER

FACADE CONSULTANT:



## NOTE :

1. ALL DIMENSIONS ARE IN mm.  
 2. ALL ELEVATIONS ARE VIEWED FROM OUTSIDE.  
 3. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE FABRICATION.

## LEGEND :

X1 --- DETAIL MARK NO.  
 X001 --- REFER SHEET NO.

1. F.F.L. --- FINISHED FLOOR LEVEL  
 2. S.F.L. --- STRUCTURAL FLOOR LEVEL  
 3. (R) --- REVERSED DETAIL

NO.	DATE	REVISED	BY

JOB NO. : J-836

PROJECT : PROPOSED SITE C1 DEVELOPMENT AT AREA 86, TKOTL 70 RP, TSEUNG KWAN O, NEW TERRITORIES

TITLE : GENERAL NOTES FOR WINDOW WALL (WW4)

DATE : 20-NOV-17

SCALE : NTS

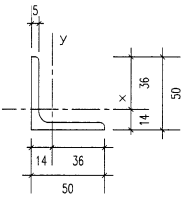
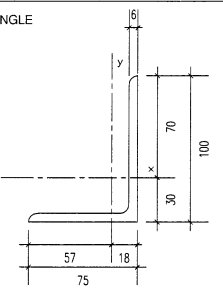
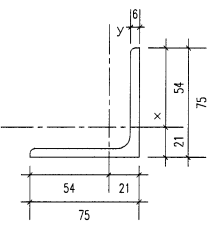
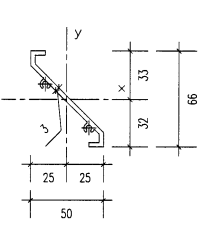
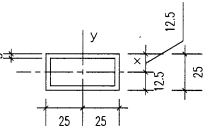
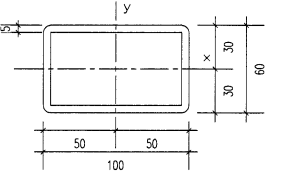
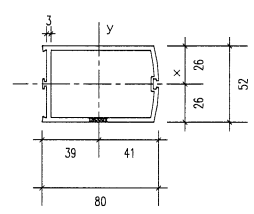
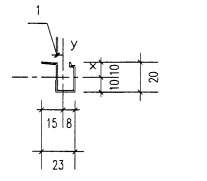
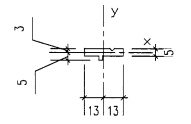
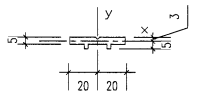
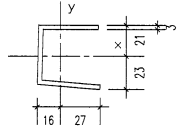
DRAWN BY : C.F

CHECKED BY : M.K

**英特鋁質有限公司**  
**MIDI ALUMINIUM FABRICATOR LTD.**  
 Units 6-8, Sunray Industrial Centre, 1/F  
 610 Cha Kwo Ling Road, Kowloon  
 Tel:23489211-4 Fax:(852)27727666

DWG NO. : J836-WW4-0002

REV. : -

PROPERTIES	PROPERTIES	PROPERTIES	PROPERTIES																																																																								
<p>MEMBER : 120X80X6.3mm THK GMS SHS GRADE : S275 MBO1</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>2387.170</td></tr> <tr><td>Perimeter(mm)</td><td>738.784</td></tr> <tr><td>Bounding box(mm)</td><td>X: -60.000 -- 60.000 Y: -40.000 -- 40.000</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.000 Y: 0.000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 2328879.109 Y: 4444872.341</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: 0.000</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 31.634 Y: 45.703</td></tr> <tr><td>Principal moments and X-Y directions about centroid(mm<sup>4</sup>)</td><td>I: 2328879.109 along [0.000 0.000] J: 4444872.341 along [0.000 1.000]</td></tr> <tr><td>Elastic Modulus(mm<sup>3</sup>)</td><td>Zx: I / y<sub>max</sub>= 98222 Zy: J / x<sub>max</sub>= 74081</td></tr> </table>	Area(mm <sup>2</sup> )	2387.170	Perimeter(mm)	738.784	Bounding box(mm)	X: -60.000 -- 60.000 Y: -40.000 -- 40.000	Centroid(mm)	X: 0.000 Y: 0.000	Moments of inertia(mm <sup>4</sup> )	X: 2328879.109 Y: 4444872.341	Product of inertia(mm <sup>4</sup> )	XY: 0.000	Radius of gyration(mm)	X: 31.634 Y: 45.703	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 2328879.109 along [0.000 0.000] J: 4444872.341 along [0.000 1.000]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 98222 Zy: J / x <sub>max</sub> = 74081	<p>MEMBER : 150X100X12.5mm THK GMS RHS GRADE : S275 MBO2</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>5480.874</td></tr> <tr><td>Perimeter(mm)</td><td>878.540</td></tr> <tr><td>Bounding box(mm)</td><td>X: -50.000 -- 50.000 Y: -75.000 -- 75.000</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.000 Y: 0.000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 15217900.746 Y: 7805820.282</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: -0.001</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 55.645 Y: 51.704</td></tr> <tr><td>Principal moments and X-Y directions about centroid(mm<sup>4</sup>)</td><td>I: 15217900.745 along [1.000 0.000] J: 7805820.281 along [0.000 1.000]</td></tr> <tr><td>Elastic Modulus(mm<sup>3</sup>)</td><td>Zx: I / y<sub>max</sub>= 202905 Zy: J / x<sub>max</sub>= 156116</td></tr> </table>	Area(mm <sup>2</sup> )	5480.874	Perimeter(mm)	878.540	Bounding box(mm)	X: -50.000 -- 50.000 Y: -75.000 -- 75.000	Centroid(mm)	X: 0.000 Y: 0.000	Moments of inertia(mm <sup>4</sup> )	X: 15217900.746 Y: 7805820.282	Product of inertia(mm <sup>4</sup> )	XY: -0.001	Radius of gyration(mm)	X: 55.645 Y: 51.704	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 15217900.745 along [1.000 0.000] J: 7805820.281 along [0.000 1.000]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 202905 Zy: J / x <sub>max</sub> = 156116	<p>MEMBER : 50X50X5mm THK GMS ANGLE GRADE : S275</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>484.36880</td></tr> <tr><td>Perimeter(mm)</td><td>194.63494</td></tr> <tr><td>Bounding box(mm)</td><td>X: -14.081266 -- 35.918734 Y: -14.081266 -- 35.918734</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.000000 Y: 0.000000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 111418.759933 Y: 111418.759933</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: -65016.750121</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 15.166386 Y: 15.166386</td></tr> <tr><td>Principal moments and X-Y directions about centroid(mm<sup>4</sup>)</td><td>I: 45402.002832 along [0.707107 -0.707107] J: 176435.510073 along [0.707107 0.707107]</td></tr> <tr><td>Elastic Modulus(mm<sup>3</sup>)</td><td>Zx: I / y<sub>max</sub>= 3102 Zy: J / x<sub>max</sub>= 3102</td></tr> </table>	Area(mm <sup>2</sup> )	484.36880	Perimeter(mm)	194.63494	Bounding box(mm)	X: -14.081266 -- 35.918734 Y: -14.081266 -- 35.918734	Centroid(mm)	X: 0.000000 Y: 0.000000	Moments of inertia(mm <sup>4</sup> )	X: 111418.759933 Y: 111418.759933	Product of inertia(mm <sup>4</sup> )	XY: -65016.750121	Radius of gyration(mm)	X: 15.166386 Y: 15.166386	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 45402.002832 along [0.707107 -0.707107] J: 176435.510073 along [0.707107 0.707107]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 3102 Zy: J / x <sub>max</sub> = 3102	<p>MEMBER : 75X100X6mm THK GMS ANGLE GRADE : S275</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>4206.274</td></tr> <tr><td>Perimeter(mm)</td><td>342.274</td></tr> <tr><td>Bounding box(mm)</td><td>X: -57.093 -- 17.907 Y: -30.310 -- 69.690</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.000 Y: 0.000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 1005327.255 Y: 406192.183</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: 411631.128</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 31.611 Y: 21.981</td></tr> <tr><td>Principal moments and X-Y directions about centroid(mm<sup>4</sup>)</td><td>I: 29169.453 along [0.483 0.876] J: 1832549.985 along [-0.876 0.483]</td></tr> <tr><td>Elastic Modulus(mm<sup>3</sup>)</td><td>Zx: I / y<sub>max</sub>= 14429 Zy: J / x<sub>max</sub>= 8516</td></tr> </table>	Area(mm <sup>2</sup> )	4206.274	Perimeter(mm)	342.274	Bounding box(mm)	X: -57.093 -- 17.907 Y: -30.310 -- 69.690	Centroid(mm)	X: 0.000 Y: 0.000	Moments of inertia(mm <sup>4</sup> )	X: 1005327.255 Y: 406192.183	Product of inertia(mm <sup>4</sup> )	XY: 411631.128	Radius of gyration(mm)	X: 31.611 Y: 21.981	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 29169.453 along [0.483 0.876] J: 1832549.985 along [-0.876 0.483]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 14429 Zy: J / x <sub>max</sub> = 8516
Area(mm <sup>2</sup> )	2387.170																																																																										
Perimeter(mm)	738.784																																																																										
Bounding box(mm)	X: -60.000 -- 60.000 Y: -40.000 -- 40.000																																																																										
Centroid(mm)	X: 0.000 Y: 0.000																																																																										
Moments of inertia(mm <sup>4</sup> )	X: 2328879.109 Y: 4444872.341																																																																										
Product of inertia(mm <sup>4</sup> )	XY: 0.000																																																																										
Radius of gyration(mm)	X: 31.634 Y: 45.703																																																																										
Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 2328879.109 along [0.000 0.000] J: 4444872.341 along [0.000 1.000]																																																																										
Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 98222 Zy: J / x <sub>max</sub> = 74081																																																																										
Area(mm <sup>2</sup> )	5480.874																																																																										
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<p>MEMBER : 75X75X6mm THK GMS ANGLE GRADE : S275</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>877.520</td></tr> <tr><td>Perimeter(mm)</td><td>253.562</td></tr> <tr><td>Bounding box(mm)</td><td>X: -34.371 -- 20.629 Y: -20.629 -- 34.371</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.000 Y: 0.000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 465721.182 Y: 465721.182</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: 273952.028</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 23.037 Y: 23.037</td></tr> <tr><td>Principal moments and X-Y directions about centroid(mm<sup>4</sup>)</td><td>I: 192708.54 along [0.707 0.707] J: 728673.210 along [-0.707 0.707]</td></tr> <tr><td>Elastic Modulus(mm<sup>3</sup>)</td><td>Zx: I / y<sub>max</sub>= 8566 Zy: J / x<sub>max</sub>= 8566</td></tr> </table>	Area(mm <sup>2</sup> )	877.520	Perimeter(mm)	253.562	Bounding box(mm)	X: -34.371 -- 20.629 Y: -20.629 -- 34.371	Centroid(mm)	X: 0.000 Y: 0.000	Moments of inertia(mm <sup>4</sup> )	X: 465721.182 Y: 465721.182	Product of inertia(mm <sup>4</sup> )	XY: 273952.028	Radius of gyration(mm)	X: 23.037 Y: 23.037	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 192708.54 along [0.707 0.707] J: 728673.210 along [-0.707 0.707]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 8566 Zy: J / x <sub>max</sub> = 8566	<p>MEMBER : ALUM LOUVER BLADE GRADE : 6063-T5</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>330.8370</td></tr> <tr><td>Perimeter(mm)</td><td>238.4562</td></tr> <tr><td>Bounding box(mm)</td><td>X: -24.9259 -- 25.0741 Y: -32.3929 -- 33.3645</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.0000 Y: 0.0000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 131426.9692 Y: 90229.6362</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: -105727.5264</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 19.9323 Y: 16.5125</td></tr> <tr><td>Principal moments and X-Y directions about centroid(mm<sup>4</sup>)</td><td>I: 3142.1173 along [0.6398 -0.7718] J: 61887.4881 along [0.7718 0.6398]</td></tr> <tr><td>Elastic Modulus(mm<sup>3</sup>)</td><td>Zx: I / y<sub>max</sub>= 3941 Zy: J / x<sub>max</sub>= 3599</td></tr> </table>	Area(mm <sup>2</sup> )	330.8370	Perimeter(mm)	238.4562	Bounding box(mm)	X: -24.9259 -- 25.0741 Y: -32.3929 -- 33.3645	Centroid(mm)	X: 0.0000 Y: 0.0000	Moments of inertia(mm <sup>4</sup> )	X: 131426.9692 Y: 90229.6362	Product of inertia(mm <sup>4</sup> )	XY: -105727.5264	Radius of gyration(mm)	X: 19.9323 Y: 16.5125	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 3142.1173 along [0.6398 -0.7718] J: 61887.4881 along [0.7718 0.6398]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 3941 Zy: J / x <sub>max</sub> = 3599	<p>MEMBER : 50X25X3MM ALUM RHS GRADE : 6063-T6</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>414.0000</td></tr> <tr><td>Perimeter(mm)</td><td>276.0000</td></tr> <tr><td>Bounding box(mm)</td><td>X: -25.0000 -- 25.0000 Y: -12.5000 -- 12.5000</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.0000 Y: 0.0000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 0.0000 Y: 39954.5000</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: 90229.6362</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 0.0000 Y: 19.9323</td></tr> <tr><td>Principal moments and X-Y directions about centroid(mm<sup>4</sup>)</td><td>I: 17.4138 J: 39954.5000 along [0.0000 1.0000] K: 125542.0000 along [0.0000 1.0000]</td></tr> <tr><td>Elastic Modulus(mm<sup>3</sup>)</td><td>Zx: I / y<sub>max</sub>= 3196 Zy: J / x<sub>max</sub>= 2522</td></tr> </table>	Area(mm <sup>2</sup> )	414.0000	Perimeter(mm)	276.0000	Bounding box(mm)	X: -25.0000 -- 25.0000 Y: -12.5000 -- 12.5000	Centroid(mm)	X: 0.0000 Y: 0.0000	Moments of inertia(mm <sup>4</sup> )	X: 0.0000 Y: 39954.5000	Product of inertia(mm <sup>4</sup> )	XY: 90229.6362	Radius of gyration(mm)	X: 0.0000 Y: 19.9323	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 17.4138 J: 39954.5000 along [0.0000 1.0000] K: 125542.0000 along [0.0000 1.0000]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 3196 Zy: J / x <sub>max</sub> = 2522	<p>MEMBER : 70X70X5MM GMS SHS GRADE : S275</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>1278.5398</td></tr> <tr><td>Perimeter(mm)</td><td>511.4776</td></tr> <tr><td>Bounding box(mm)</td><td>X: -35.0000 -- 35.0000 Y: -35.0000 -- 35.0000</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.0000 Y: 0.0000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 0.0000 Y: 896176.7086</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: 896176.7086</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 26.4752 Y: 26.4752</td></tr> <tr><td>Principal moments and X-Y directions about centroid(mm<sup>4</sup>)</td><td>I: 896176.7086 along [1.0000 0.0000] J: 896176.7086 along [0.0000 1.0000]</td></tr> <tr><td>Elastic Modulus(mm<sup>3</sup>)</td><td>Zx: I / y<sub>max</sub>= 25605 Zy: J / x<sub>max</sub>= 25605</td></tr> </table>	Area(mm <sup>2</sup> )	1278.5398	Perimeter(mm)	511.4776	Bounding box(mm)	X: -35.0000 -- 35.0000 Y: -35.0000 -- 35.0000	Centroid(mm)	X: 0.0000 Y: 0.0000	Moments of inertia(mm <sup>4</sup> )	X: 0.0000 Y: 896176.7086	Product of inertia(mm <sup>4</sup> )	XY: 896176.7086	Radius of gyration(mm)	X: 26.4752 Y: 26.4752	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 896176.7086 along [1.0000 0.0000] J: 896176.7086 along [0.0000 1.0000]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 25605 Zy: J / x <sub>max</sub> = 25605
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<p>MEMBER : 100X60X5MM GMS RHS GRADE : S275</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>1478.5398</td></tr> <tr><td>Perimeter(mm)</td><td>391.4139</td></tr> <tr><td>Bounding box(mm)</td><td>X: -50.0000 -- 50.0000 Y: -30.0000 -- 30.0000</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.0000 Y: 0.0000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 84578.2591 Y: 191200.6686</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: 0.0000</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 28.9003 Y: 35.9531</td></tr> <tr><td>Principal moments and X-Y directions about centroid(mm<sup>4</sup>)</td><td>I: 84578.2591 along [1.0000 0.0000] J: 191200.6686 along [0.0000 1.0000]</td></tr> <tr><td>Elastic Modulus(mm<sup>3</sup>)</td><td>Zx: I / y<sub>max</sub>= 28153 Zy: J / x<sub>max</sub>= 38224</td></tr> </table>	Area(mm <sup>2</sup> )	1478.5398	Perimeter(mm)	391.4139	Bounding box(mm)	X: -50.0000 -- 50.0000 Y: -30.0000 -- 30.0000	Centroid(mm)	X: 0.0000 Y: 0.0000	Moments of inertia(mm <sup>4</sup> )	X: 84578.2591 Y: 191200.6686	Product of inertia(mm <sup>4</sup> )	XY: 0.0000	Radius of gyration(mm)	X: 28.9003 Y: 35.9531	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 84578.2591 along [1.0000 0.0000] J: 191200.6686 along [0.0000 1.0000]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 28153 Zy: J / x <sub>max</sub> = 38224	<p>MEMBER : ALUM DOOR FRAME (TOP/BOTTOM) GRADE : 6063-T5</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>839.8902</td></tr> <tr><td>Perimeter(mm)</td><td>504.4414</td></tr> <tr><td>Bounding box(mm)</td><td>X: -25.0000 -- 25.0000 Y: -40.6515 -- 39.3485</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.0000 Y: 0.0000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 582411.5607 Y: 320420.4246</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: -1.2043</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 26.3332 Y: 19.5324</td></tr> <tr><td>Principal moments and X-Y directions about centroid(mm<sup>4</sup>)</td><td>I: 320420.4246 along [1.0000 -1.0000] J: 582411.5607 along [1.0000 0.0000]</td></tr> <tr><td>Elastic Modulus(mm<sup>3</sup>)</td><td>Zx: I / y<sub>max</sub>= 14287 Zy: J / x<sub>max</sub>= 12817</td></tr> </table>	Area(mm <sup>2</sup> )	839.8902	Perimeter(mm)	504.4414	Bounding box(mm)	X: -25.0000 -- 25.0000 Y: -40.6515 -- 39.3485	Centroid(mm)	X: 0.0000 Y: 0.0000	Moments of inertia(mm <sup>4</sup> )	X: 582411.5607 Y: 320420.4246	Product of inertia(mm <sup>4</sup> )	XY: -1.2043	Radius of gyration(mm)	X: 26.3332 Y: 19.5324	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 320420.4246 along [1.0000 -1.0000] J: 582411.5607 along [1.0000 0.0000]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 14287 Zy: J / x <sub>max</sub> = 12817	<p>MEMBER : ALUM DOOR FRAME (SIDE) GRADE : 6063-T5</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>750.4630</td></tr> <tr><td>Perimeter(mm)</td><td>506.0774</td></tr> <tr><td>Bounding box(mm)</td><td>X: -40.9901 -- 39.0099 Y: -26.0000 -- 26.0000</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.0000 Y: 0.0000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 326472.4518 Y: 616420.4354</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: 0.0000</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 32.0873 Y: 28.6006</td></tr> <tr><td>Principal moments and X-Y directions about centroid(mm<sup>4</sup>)</td><td>I: 326472.4518 along [1.0000 0.0000] J: 616420.4354 along [0.0000 1.0000]</td></tr> <tr><td>Elastic Modulus(mm<sup>3</sup>)</td><td>Zx: I / y<sub>max</sub>= 12827 Zy: J / x<sub>max</sub>= 15039</td></tr> </table>	Area(mm <sup>2</sup> )	750.4630	Perimeter(mm)	506.0774	Bounding box(mm)	X: -40.9901 -- 39.0099 Y: -26.0000 -- 26.0000	Centroid(mm)	X: 0.0000 Y: 0.0000	Moments of inertia(mm <sup>4</sup> )	X: 326472.4518 Y: 616420.4354	Product of inertia(mm <sup>4</sup> )	XY: 0.0000	Radius of gyration(mm)	X: 32.0873 Y: 28.6006	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 326472.4518 along [1.0000 0.0000] J: 616420.4354 along [0.0000 1.0000]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 12827 Zy: J / x <sub>max</sub> = 15039	<p>MEMBER : ALUM DOOR FRAME (SIDE) GRADE : 6063-T5</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>750.7817</td></tr> <tr><td>Perimeter(mm)</td><td>521.3461</td></tr> <tr><td>Bounding box(mm)</td><td>X: -38.9776 -- 41.0625 Y: -26.0000 -- 26.0000</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.0000 Y: 0.0000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 326830.3976 Y: 614133.1650</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: 0.0000</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 32.0843 Y: 28.6006</td></tr> <tr><td>Principal moments and X-Y directions about 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0.0000 Y: 0.0000	Moments of inertia(mm <sup>4</sup> )	X: 351.2874 Y: 877.2703	Product of inertia(mm <sup>4</sup> )	XY: -976.1262	Radius of gyration(mm)	X: 7.2990 Y: 6.5702	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 2181.5875 along [0.3804 -0.8143] J: 4246.3102 along [0.8143 0.3804]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 243 Zy: J / x <sub>max</sub> = 192	<p>MEMBER : ALUM PRESSURE BAR GRADE : 6063-T6</p>  <p>REGIONS</p> <table border="1"> <tr><td>Area(mm<sup>2</sup>)</td><td>136.0000</td></tr> <tr><td>Perimeter(mm)</td><td>70.1716</td></tr> <tr><td>Bounding box(mm)</td><td>X: -17.0536 -- 17.4377 Y: -16.4888 -- 15.9824</td></tr> <tr><td>Centroid(mm)</td><td>X: 0.0000 Y: 0.0000</td></tr> <tr><td>Moments of inertia(mm<sup>4</sup>)</td><td>X: 584.8090 Y: 7716.0262</td></tr> <tr><td>Product of inertia(mm<sup>4</sup>)</td><td>XY: 30.1312</td></tr> <tr><td>Radius of gyration(mm)</td><td>X: 1.6699 Y: 7.4775</td></tr> <tr><td>Principal moments 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/ y<sub>max</sub>= 4702 Zy: J / x<sub>max</sub>= 2385</td></tr> </table>	Area(mm <sup>2</sup> )	355.8007	Perimeter(mm)	242.7580	Bounding box(mm)	X: -15.7703 -- 27.2758 Y: 22.5177 -- 21.0285	Centroid(mm)	X: 0.0000 Y: 0.0000	Moments of inertia(mm <sup>4</sup> )	X: 105688.6863 Y: 62056.8283	Product of inertia(mm <sup>4</sup> )	XY: -3771.9830	Radius of gyration(mm)	X: 17.2508 Y: 13.5221	Principal moments and X-Y directions about centroid(mm <sup>4</sup> )	I: 64711.2524 along [0.0912 -0.9958] J: 106228.2622 along [0.9958 0.0912]	Elastic Modulus(mm <sup>3</sup> )	Zx: I / y <sub>max</sub> = 4702 Zy: J / x <sub>max</sub> = 2385
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B.D. REF : 3/7192/97/4(C1)

**LEGEND :**

GL01 -- 12mm THK CLEAR TEMPERED GLASS  
+12mm AIR SPACE  
+12mm THK CLEAR TEMPERED GLASS I.G.U

MBO1 -- (MULLION)  
120X80X6.3mm THK GMS RHS

MBO2 -- (TRANSON)  
150X100X12.5mm THK GMS RHS

CLIENT :

**MTR**

ARCHITECT :

**P&T Architects and Engineers Ltd**  
巴馬丹拿建築及工程師有限公司  
www.p-t-group.com

MAIN CONTRACTOR :

**CHINA OVERSEAS BUILDING CONSTRUCTION LTD.**

STRUCTURAL ENGINEER :

**ARUP**

FAÇADE CONSULTANT:

**MEIN-HARDT**

**NOTE :**

- ALL DIMENSIONS ARE IN mm.
- ALL ELEVATIONS ARE VIEWED FROM OUTSIDE.
- ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE FABRICATION.

**LEGEND :**

X1 --- DETAIL MARK NO.  
X001 --- REFER SHEET NO.

- F.F.L. --- FINISHED FLOOR LEVEL
- S.F.L. --- STRUCTURAL FLOOR LEVEL
- (R) --- REVERSED DETAIL

NO.	DATE	REVISED	BY

JOB NO. : J-836

PROJECT : PROPOSED SITE C1 DEVELOPMENT AT KWA 86, TKOTL 70 RP, TSEUNG KWAN O, NEW TERRITORIES

TITLE : SECTION PROPERTIES FOR WINDOW WALL (WW4)

DATE : 20-NOV-17      SCALE : 1:5

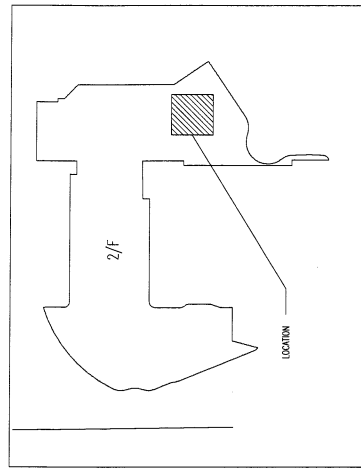
DRAWN BY : C.F      CHECKED BY : M.K

**美特鋁質有限公司**  
MIDI ALUMINIUM FABRICATOR LTD.  
Units 6-8, Sunray Industrial Centre, 1/F  
610 Cha Kwo Ling Road, Kowloon  
Tel: 23489211-4 Fax: (852) 2727666

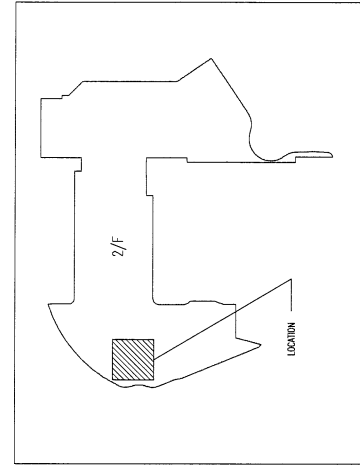
DWG NO. : J836-WW4-0003      REV. : -



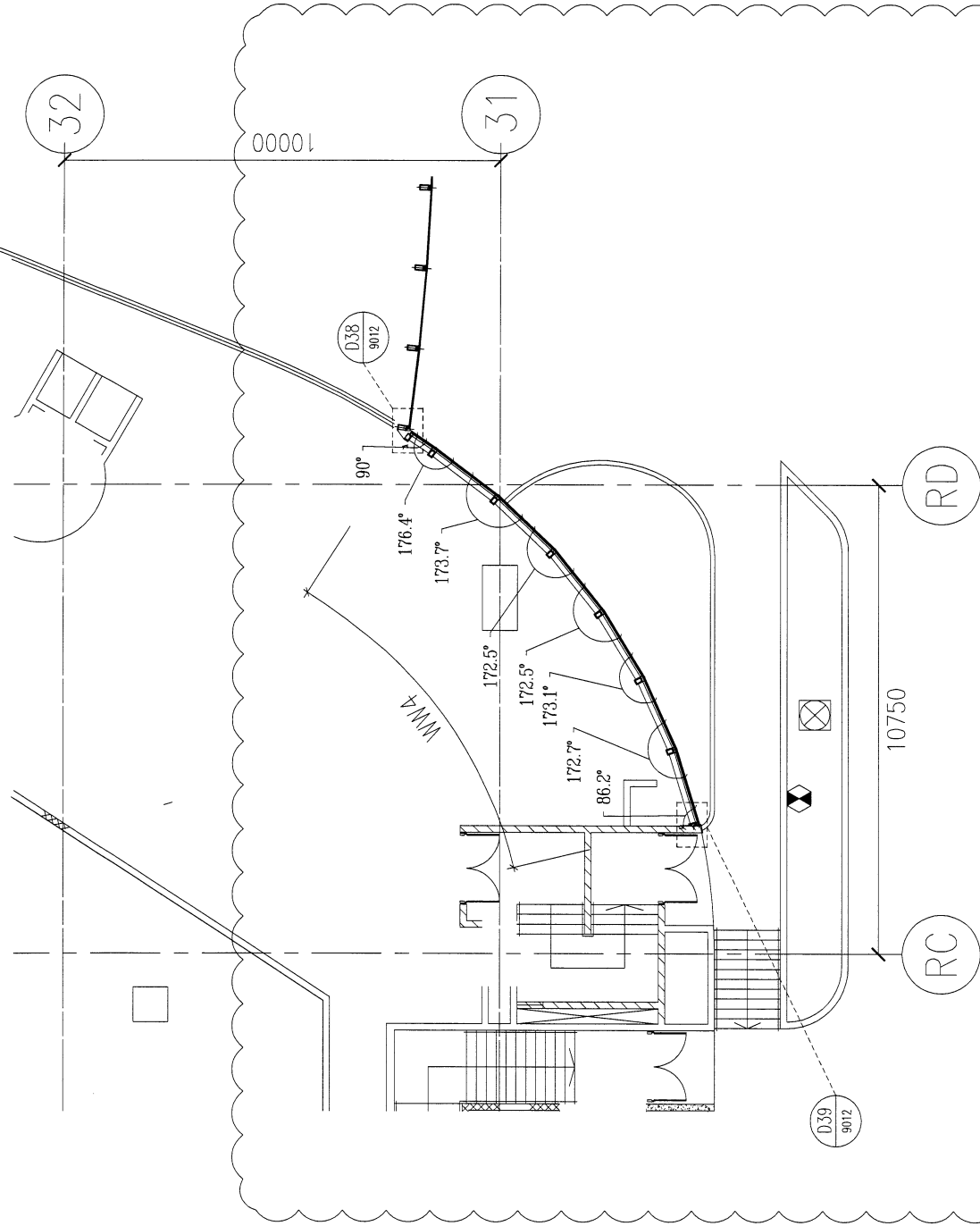




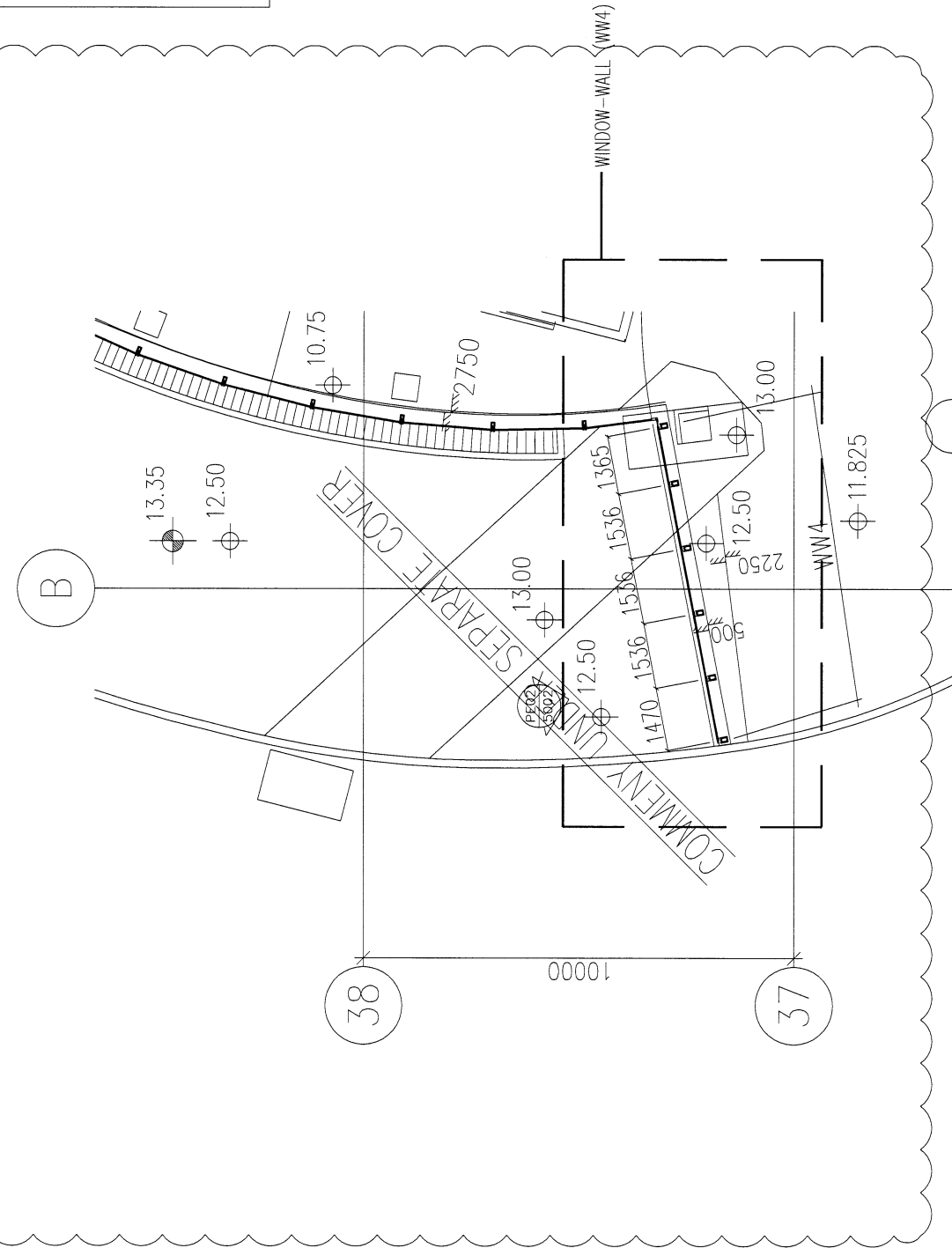
LP03  
LOCATION PLAN  
3007



LP04  
LOCATION PLAN  
3007



PP03  
PART PLAN OF WINDOW-WALL (WW4)  
@2/F  
3007



B.D. REF : 3/7192/97/4(C1)

- LEGEND :
- GL01 -- 12mm THK CLEAR TEMPERED GLASS  
+12mm AIR SPACE  
+12mm THK CLEAR TEMPERED GLASS I.G.U
  - MB01 -- (MULLION)  
120X80X6.3mm THK GMS RHS
  - MB02 -- (TRANSOM)  
150X100X12.5mm THK GMS RHS

CLIENT :

**MTR**

ARCHITECT :

**P&T Architects and Engineers Ltd**  
巴丹拿建築及工程師有限公司  
www.p-t-group.com

MAIN CONTRACTOR :

**CHINA OVERSEAS BUILDING CONSTRUCTION LTD.**

STRUCTURAL ENGINEER :

**ARUP**

FACADE CONSULTANT:

**MEINHARDT**

- NOTE :
1. ALL DIMENSIONS ARE IN mm.
  2. ALL ELEVATIONS ARE VIEWED FROM OUTSIDE.
  3. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE FABRICATION.

- LEGEND :
- X1 -- DETAIL MARK NO.
  - X001 -- REFER SHEET NO.
  - F.F.L. -- FINISHED FLOOR LEVEL
  - S.F.L. -- STRUCTURAL FLOOR LEVEL
  - ⊗ -- REVERSED DETAIL

NO.	DATE	REVISED	BY

JOB NO. : J-836

PROJECT :

PROPOSED SITE C1  
DEVELOPMENT AT AREA 86,  
TKOTL 70 RP, TSEUNG KWAN O,  
NEW TERRITORIES

TITLE :

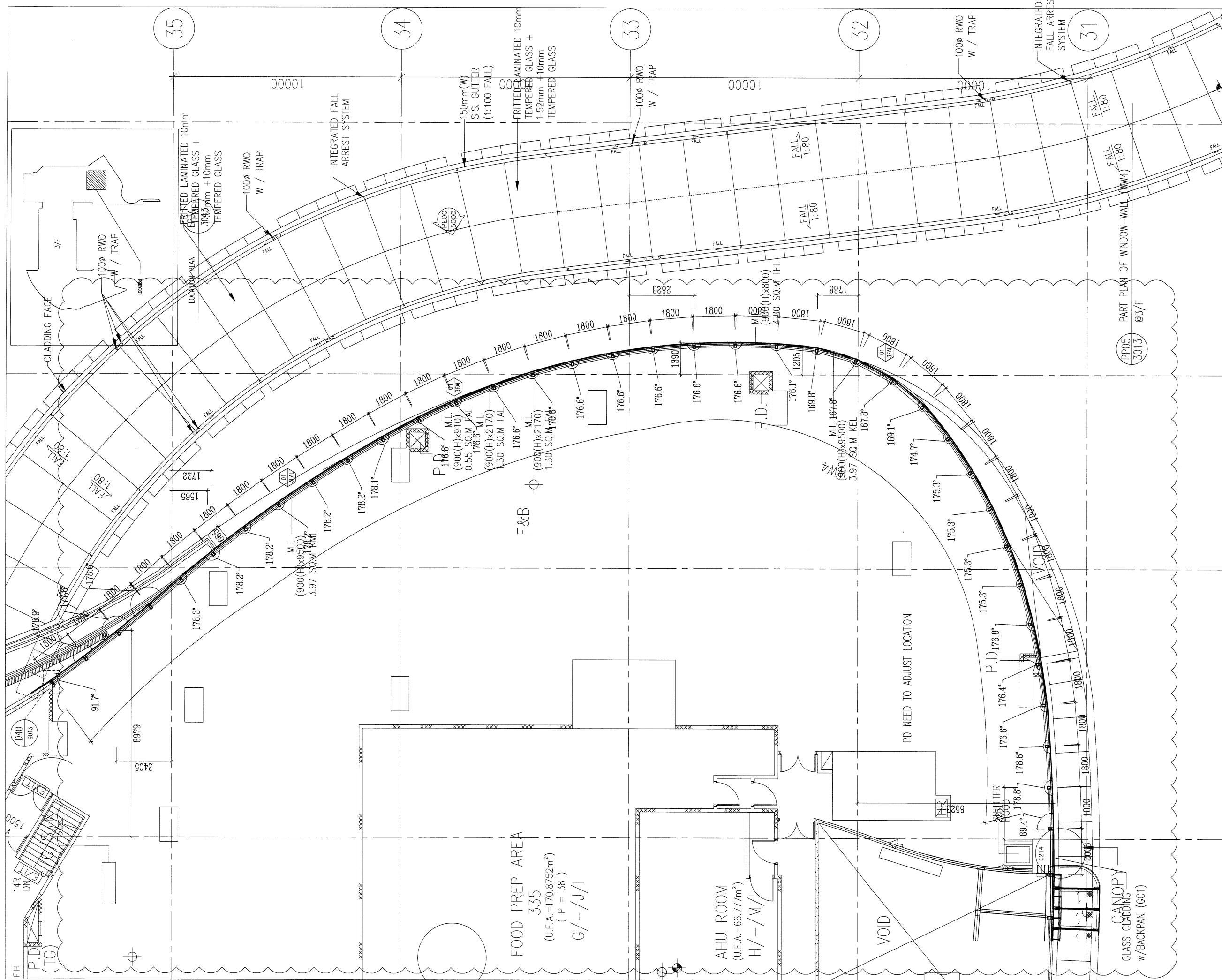
PART PLAN  
FOR WINDOW-WALL (WW4)  
@ 2/F

DATE : 07-DEC-2017 SCALE : 1:150

DRAWN BY : C.F. CHECKED BY : M.K.

**美特鋁質有限公司**  
**MIDI ALUMINIUM FABRICATOR LTD.**  
Units 6-B, Sunray Industrial Centre, 1/F  
610 Cha Kwo Ling Road, Kowloon  
Tel:23489211-4 Fax:(852)27727666

DWG NO. : J836-WW4-3007 REV. : -



B.D. REF : 3/7192/97/4(C1)

LEGEND :

GL01 -- 12mm THK CLEAR TEMPERED GLASS +12mm AIR SPACE +12mm THK CLEAR TEMPERED GLASS I.G.U

MBO1 -- (MULLION) 120X80X6.3mm THK GMS RHS

MBO2 -- (TRANSON) 150X100X12.5mm THK GMS RHS

CLIENT :

**MTR**

ARCHITECT :

**P&T Architects and Engineers Ltd**  
 巴丹丹建築及工程師有限公司  
 www.p-t-group.com

MAIN CONTRACTOR :

**CHINA OVERSEAS BUILDING CONSTRUCTION LTD.**

STRUCTURAL ENGINEER :

**ARUP**

FAÇADE CONSULTANT:

**MEINHARDT**

NOTE :

1. ALL DIMENSIONS ARE IN mm.
2. ALL ELEVATIONS ARE VIEWED FROM OUTSIDE.
3. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE FABRICATION.

LEGEND :

X1 -- DETAIL MARK NO.  
 X001 -- REFER SHEET NO.

1. F.F.L. -- FINISHED FLOOR LEVEL
2. S.F.L. -- STRUCTURAL FLOOR LEVEL
3. (R) -- REVERSED DETAIL

NO.	DATE	REVISED	BY

JOB NO. : J-836

PROJECT : PROPOSED SITE C1 DEVELOPMENT AT AREA B6, TKOTL 70 RP, TSEUNG KWAN O, NEW TERRITORIES

TITLE : PART PLAN FOR WINDOW-WALL (WW4) @ 3/F

DATE : 07-DEC-2017 SCALE : 1:150

DRAWN BY : C.F. CHECKED BY : M.K.

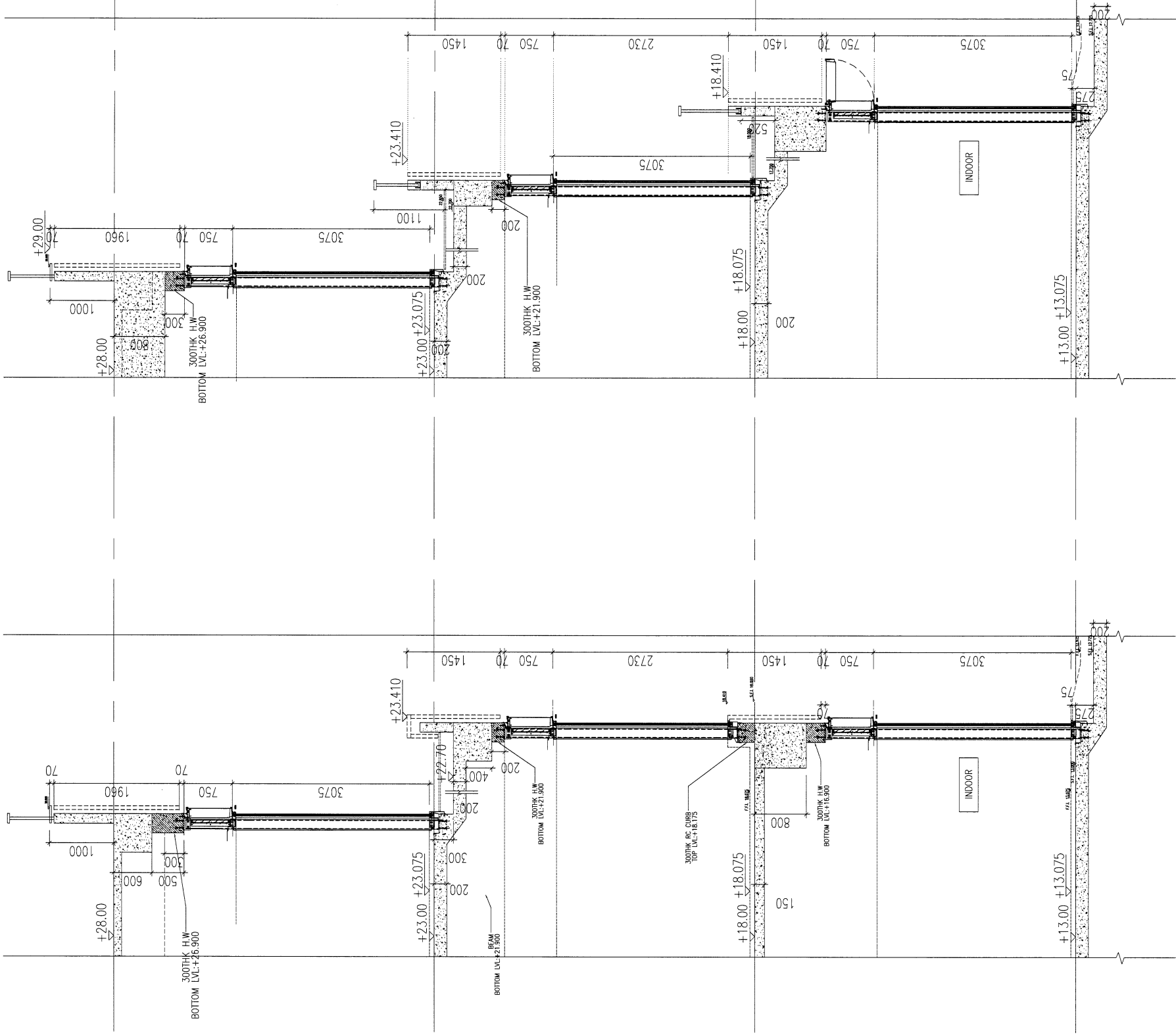
**英特鋁質有限公司**  
**MIDI ALUMINIUM FABRICATOR LTD.**  
 Units 6-8, Sunray Industrial Centre, 1/F  
 610 Cha Kwo Ling Road, Kowloon  
 Tel:23489211-4 Fax:(852)2727666

DWG NO. : J836-WW4-3013 REV. : -

Shop Drawing\WW4\3d\_submission\WW4\_05/09/18\_16:33.dwg







B.D. REF : 3/7192/97/4(C1)

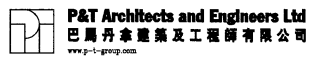
LEGEND :

- GLO1 -- 12mm THK. CLEAR TEMPERED GLASS  
+12mm AIR SPACE  
+12mm THK CLEAR TEMPERED GLASS I.G.U
- MB01 -- (MULLION)  
120X80X6.3mm THK GMS RHS
- MB02 -- (TRANSOM)  
150X100X12.5mm THK GMS RHS

CLIENT :



ARCHITECT :



MAIN CONTRACTOR :



STRUCTURAL ENGINEER :



FACADE CONSULTANT:



NOTE :

1. ALL DIMENSIONS ARE IN mm.
2. ALL ELEVATIONS ARE VIEWED FROM OUTSIDE.
3. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE FABRICATION.

LEGEND :

- X1 -- DETAIL MARK NO.
- X001 -- REFER SHEET NO.

1. F.F.L. -- FINISHED FLOOR LEVEL
2. S.F.L. -- STRUCTURAL FLOOR LEVEL
3. (R) -- REVERSED DETAIL

NO.	DATE	REVISED	BY

JOB NO. : J-836  
 PROJECT : PROPOSED SITE C1  
 DEVELOPMENT AT AREA 86,  
 TKOTL 70 RP, TSEUNG KWAN O,  
 NEW TERRITORIES

TITLE : PART SECTION  
 FOR WINDOW WALL (WW4)  
 @ 2/F~4/F (ZONE 3)

DATE : 07-DEC-2017 SCALE : 1:100

DRAWN BY : C.F. CHECKED BY : M.K

**美特鋁質有限公司**  
**MIDI ALUMINIUM FABRICATOR LTD.**  
 Units 6-8, Sunray Industrial Centre, 1/F  
 610 Cha Kwo Ling Road, Kowloon  
 Tel: 23489211-4 Fax: (852) 2727666

DWC NO. : J836-WW4-S000A REV. : -

B.D. REF : 3/7192/97/4(C1)

LEGEND :

- GL01 -- 12mm THK CLEAR TEMPERED GLASS  
+12mm AIR SPACE  
+12mm THK CLEAR TEMPERED GLASS I.G.U
- MB01 -- (MULLION)  
120X80X6.3mm THK GMS RHS
- MB02 -- (TRANSOM)  
150X100X12.5mm THK GMS RHS

CLIENT :



ARCHITECT :



MAIN CONTRACTOR :



STRUCTURAL ENGINEER :



FACADE CONSULTANT:

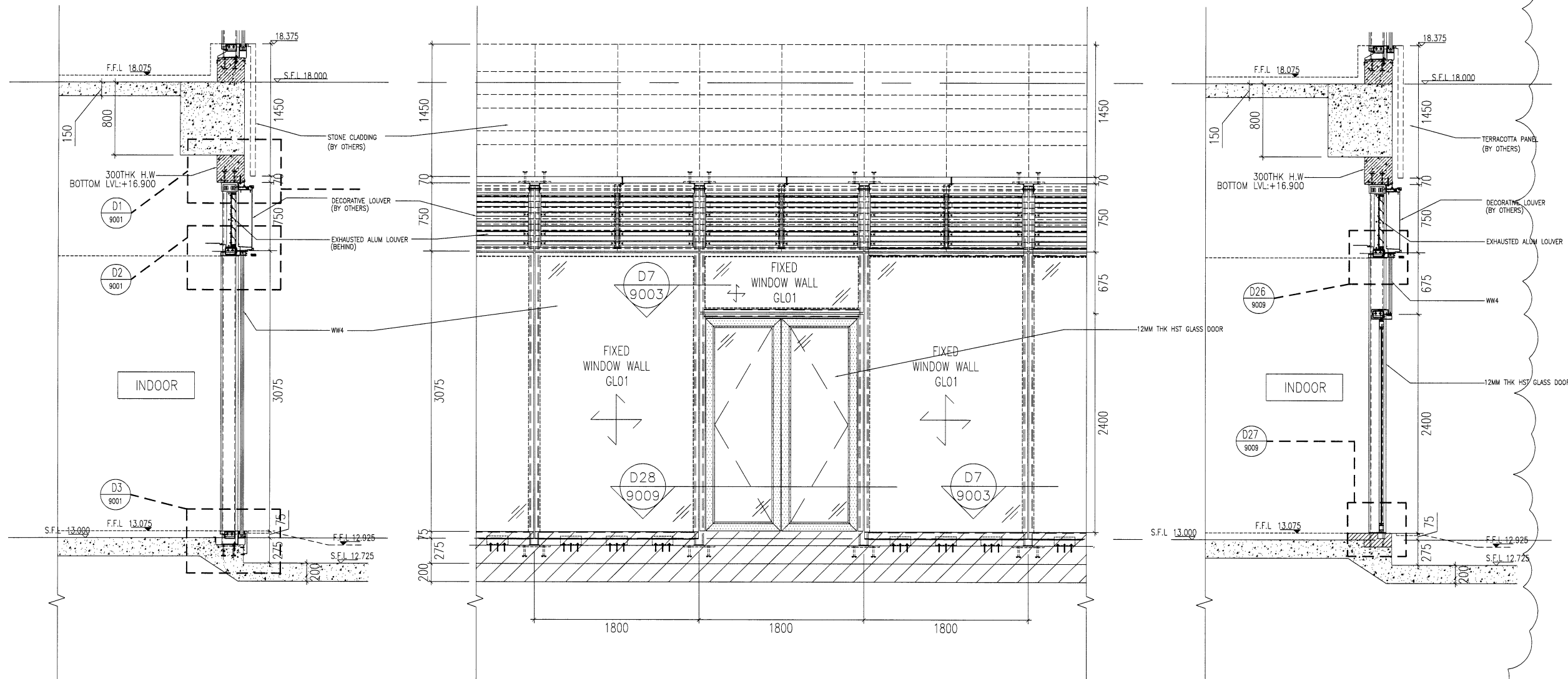


NOTE :

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2. ALL ELEVATIONS ARE VIEWED FROM OUTSIDE.
3. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE FABRICATION.

LEGEND :

- X1 -- DETAIL MARK NO.
- X001 -- REFER SHEET NO.
- 1. F.F.L. -- FINISHED FLOOR LEVEL
- 2. S.F.L. -- STRUCTURAL FLOOR LEVEL
- 3. (R) -- REVERSED DETAIL



SS03 PART SECTION OF WINDOW-WALL (WW4)  
5001 @2/F

PE01 PART ELEV OF WINDOW-WALL (WW4)  
5001 @2/F

SS02 PART SECTION OF WINDOW-WALL (WW4)  
5001 @2/F (DOOR)

NO.	DATE	REVISED	BY

JOB NO. :	J-B36
PROJECT :	PROPOSED SITE C1 DEVELOPMENT AT AREA 86, TKOTL 70 RP, TSEUNG KWAN O, NEW TERRITORIES
TITLE :	PART ELEV. & SECTION FOR WINDOW WALL (WW4)

DATE : 07-DEC-2017 SCALE : 1:50

DRAWN BY : C.F CHECKED BY : M.K

**美特鋁質有限公司**  
**MIDI ALUMINIUM FABRICATOR LTD.**  
 Units 6-B, Sunray Industrial Centre, 1/F  
 610 Cha Kwo Ling Road, Kowloon  
 Tel: 23489211-4 Fax: (852) 27727666

DWG NO. : J836-WW4-5001 REV. : A

LEGEND :

- GL01 -- 12mm THK. CLEAR TEMPERED GLASS  
+12mm AIR SPACE  
+12mm THK CLEAR TEMPERED GLASS I.G.U
- MB01 -- (MULLION)  
120X80X6.3mm THK GMS RHS
- MB02 -- (TRANSOM)  
150X100X12.5mm THK GMS RHS

CLIENT :



ARCHITECT :



MAIN CONTRACTOR :



STRUCTURAL ENGINEER :



FACADE CONSULTANT:



NOTE :

1. ALL DIMENSIONS ARE IN mm.
2. ALL ELEVATIONS ARE VIEWED FROM OUTSIDE.
3. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE FABRICATION.

LEGEND :

- X1 -- DETAIL MARK NO.
- X001 -- REFER SHEET NO.
- 1. F.F.L. -- FINISHED FLOOR LEVEL
- 2. S.F.L. -- STRUCTURAL FLOOR LEVEL
- 3. (R) -- REVERSED DETAIL

NO.	DATE	REVISED	BY

JOB NO. : J-836  
 PROJECT : PROPOSED SITE C1  
 DEVELOPMENT AT AREA 86,  
 TKOTL 70 RP, TSEUNG KWAN O,  
 NEW TERRITORIES

TITLE : PART ELEV. & SECTION  
 FOR WINDOW WALL (WW4)

DATE : 07-DEC-2017 SCALE : 1:50

DRAWN BY : C.F CHECKED BY : M.K

**美特鋁質有限公司**  
**MIDI ALUMINIUM FABRICATOR LTD.**  
 Units 6-8, Sunray Industrial Centre, 1/F  
 610 Cha Kwo Ling Road, Kowloon  
 Tel:23489211-4 Fax:(852)2727666

DWG NO. : J836-WW4-5003 REV. : -

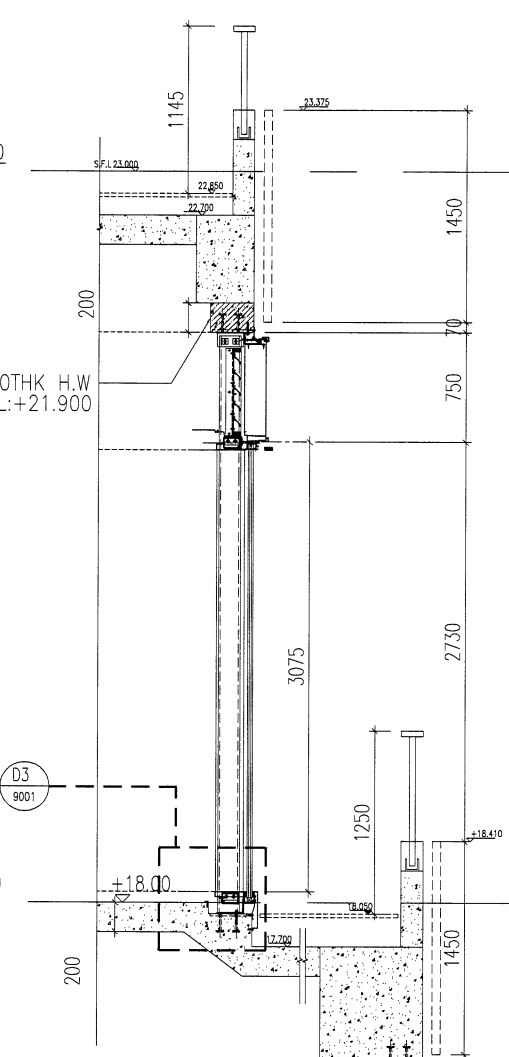
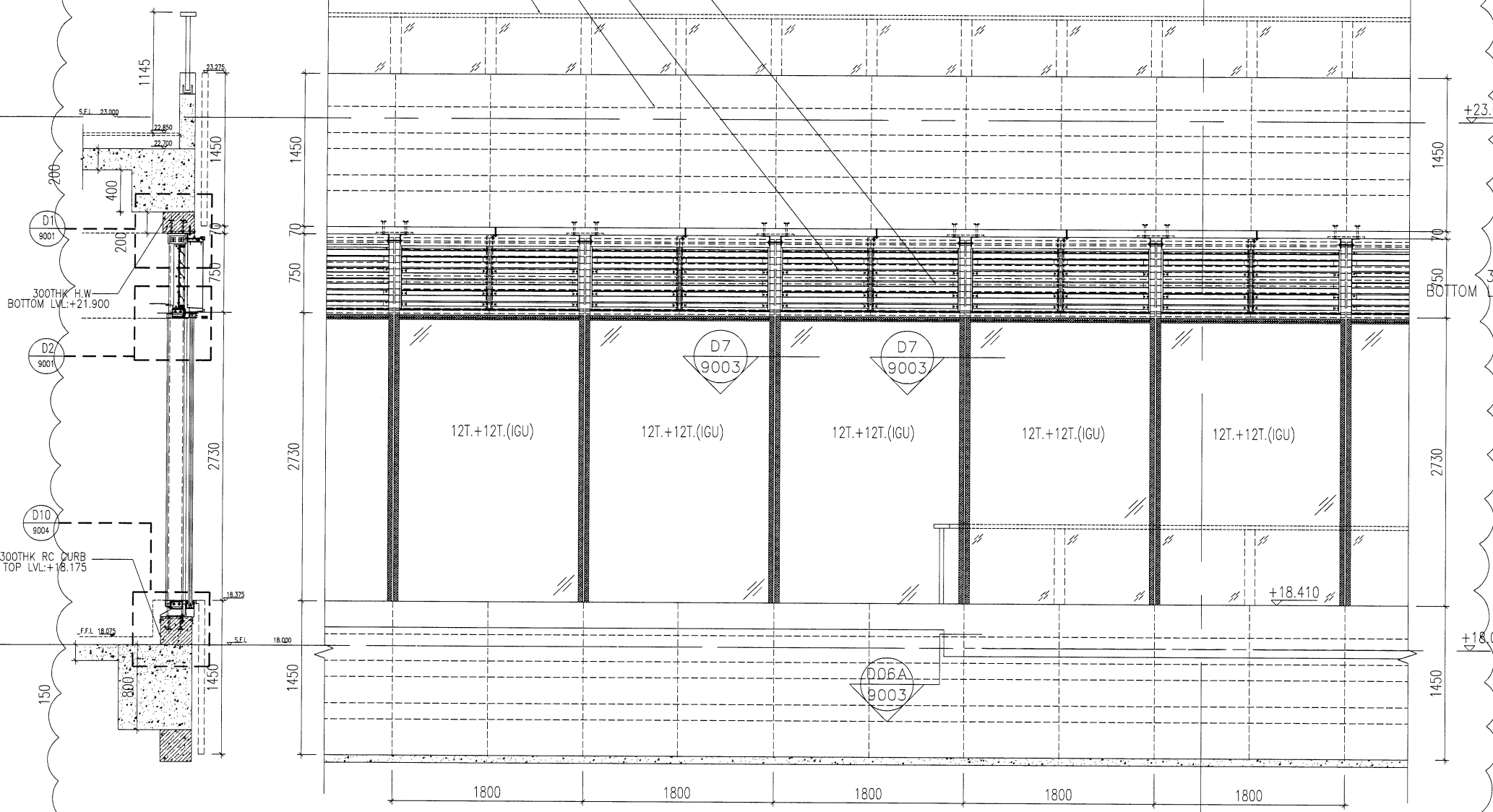
35

EXHAUSTED ALUM LOUVER  
OR 3mm THK. BACKPAN  
(BEHIND)

DECORATIVE LOUVER  
(BY OTHERS)

STONE CLADDING  
(BY OTHERS)

GLASS BALUSTRADE  
(BY OTHERS)



SS04 PART SECTION OF WINDOW-WALL (WW4)  
 5003 @3/F (WITHOUT BALUSTRADE OUTSIDE)

PE03 PART ELEV. OF WINDOW-WAL (WW4)  
 5003 @3/F (ZONE7)

SS05 PART SECTION OF WINDOW-WALL (WW4)  
 5003 @3/F (WITH BALUSTRADE OUTSIDE)

B.D. REF : 3/7192/97/4(C1)

LEGEND :

- GL01 -- 12mm THK. CLEAR TEMPERED GLASS  
+12mm AIR SPACE  
+12mm THK CLEAR TEMPERED GLASS I.G.U
- MB01 -- (MULLION)  
120X80X6.3mm THK GMS RHS
- MB02 -- (TRANSOM)  
150X100X12.5mm THK GMS RHS

CLIENT :



ARCHITECT :



MAIN CONTRACTOR :



STRUCTURAL ENGINEER :



FACADE CONSULTANT :

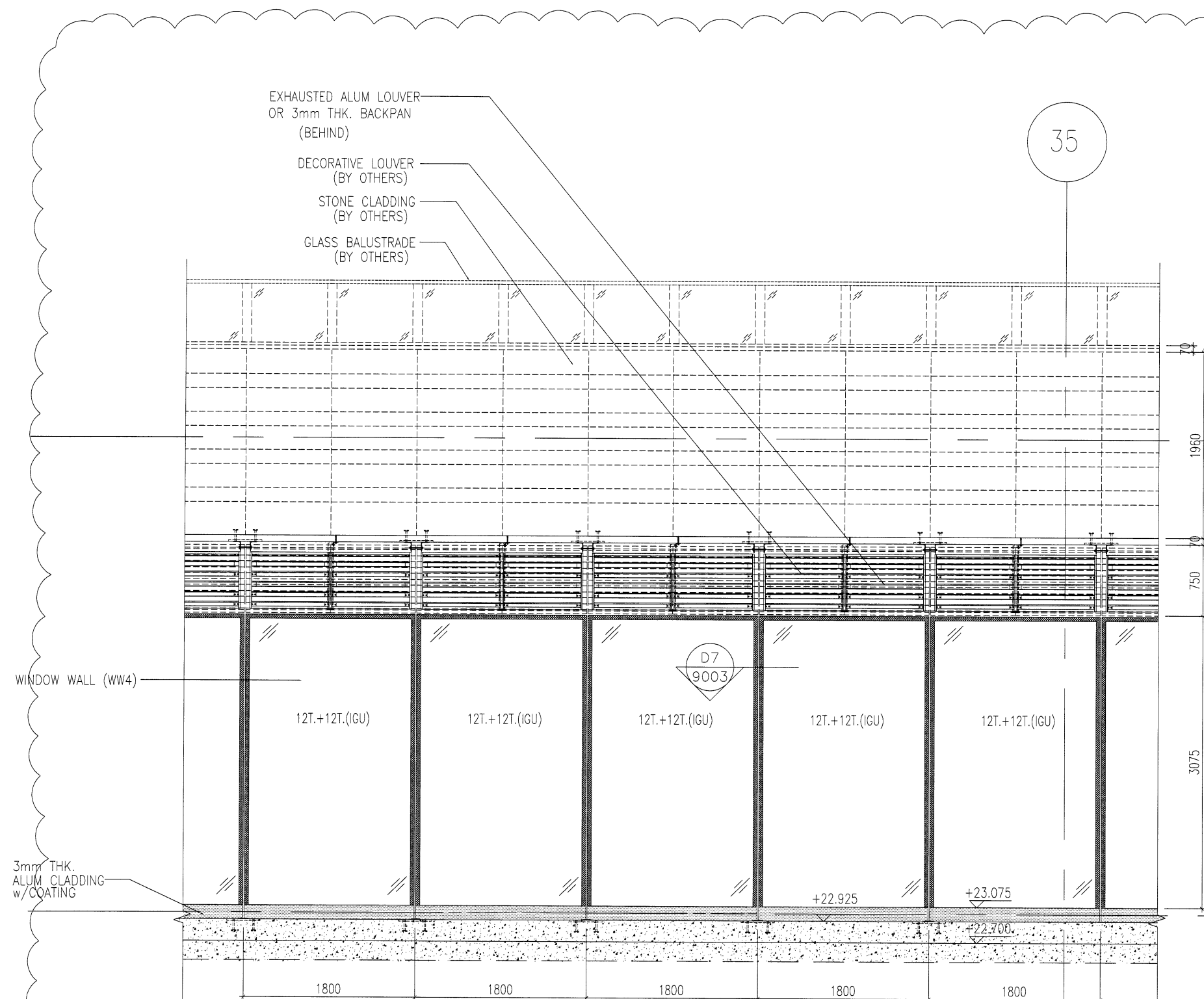


NOTE :

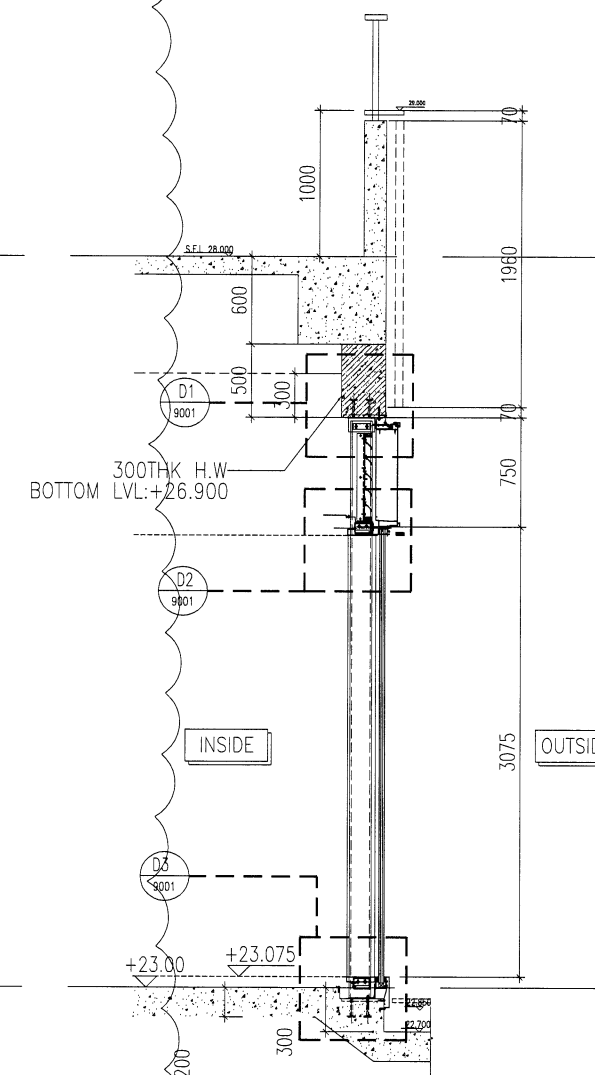
1. ALL DIMENSIONS ARE IN mm.
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3. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE FABRICATION.

LEGEND :

- X1 -- DETAIL MARK NO.
- X001 -- REFER SHEET NO.
- 1. F.F.L. -- FINISHED FLOOR LEVEL
- 2. S.F.L. -- STRUCTURAL FLOOR LEVEL
- 3. (R) -- REVERSED DETAIL



PE04 PART ELEV. OF WINDOW WALL (WW4)  
5004 @4/F (ZONE7)



SS06 PART SECTION OF WINDOW-WALL (WW4)  
5004 @4/F

NO.	DATE	REVISED	BY

JOB NO. : J-836

PROJECT :  
PROPOSED SITE C1  
DEVELOPMENT AT AREA 86,  
TKOTL 70 RP, TSEUNG KWAN O,  
NEW TERRITORIES

TITLE :  
PART ELEV. & SECTION  
FOR WINDOW WALL (WW4)

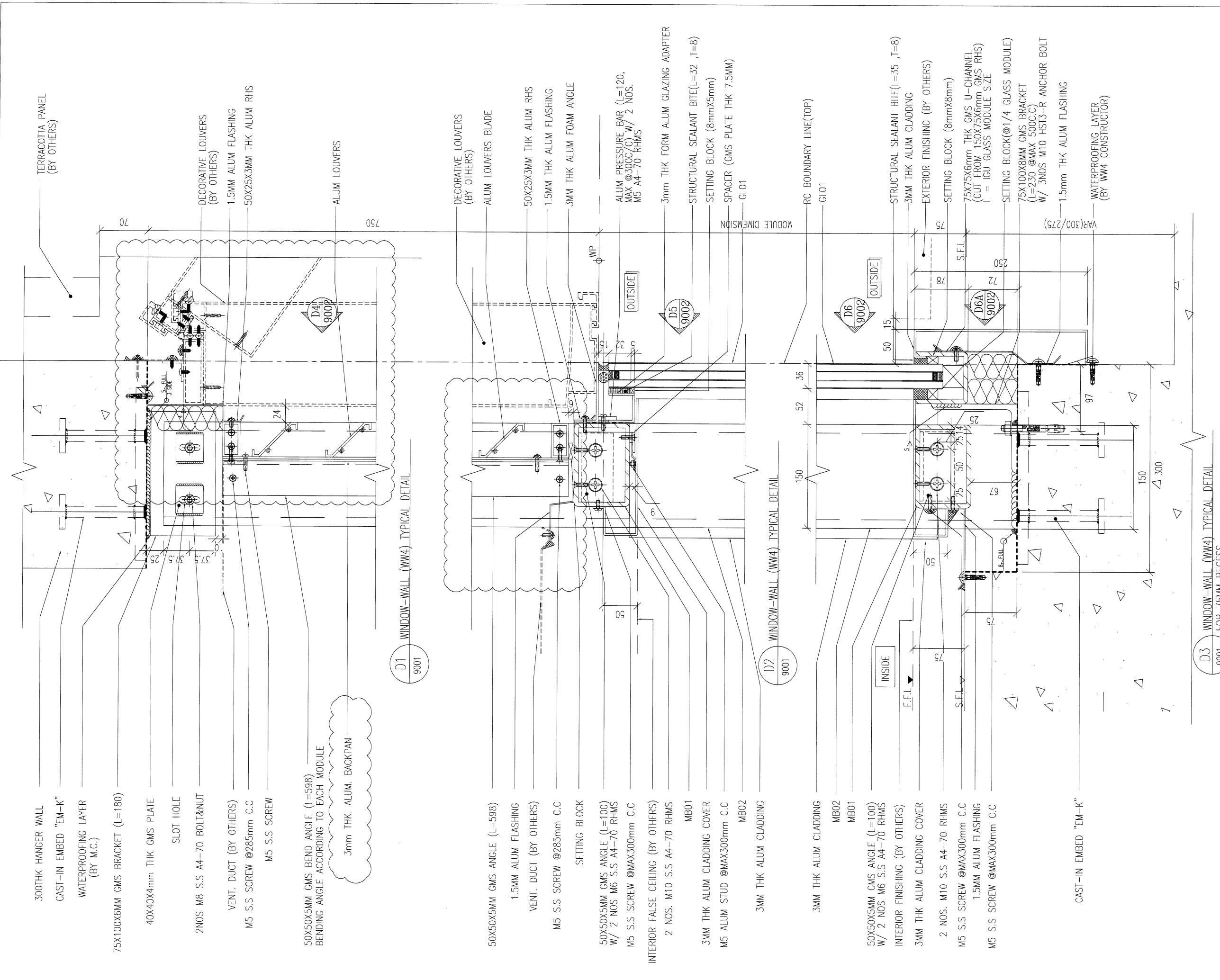
DATE : 07-DEC-2017 SCALE : 1:50

DRAWN BY : C.F CHECKED BY : M.K

**美特鋁質有限公司**  
MIDI ALUMINIUM FABRICATOR LTD.  
Units 6-8, Sunray Industrial Centre, 1/F  
610 Cha Kwo Ling Road, Kowloon  
Tel:23489211-4 Fax:(852)2772666

DWG NO. : J836-WW4-5004 REV. : -





300THK HANGER WALL  
 CAST-IN EMBED "EM-K"  
 WATERPROOFING LAYER (BY M.C.)  
 75X100X6MM GMS BRACKET (L=180)  
 40X40X4mm THK GMS PLATE  
 SLOT HOLE  
 2NOS M8 S.S A4-70 BOLT&NUT  
 VENT. DUCT (BY OTHERS)  
 M5 S.S SCREW @285mm C.C  
 M5 S.S SCREW  
 50X50X5MM GMS BEND ANGLE (L=598)  
 BENDING ANGLE ACCORDING TO EACH MODULE  
 3mm THK. ALUM. BACKPAN

D1 WINDOW-WALL (WW4) TYPICAL DETAIL  
9001

50X50X5MM GMS ANGLE (L=598)  
 1.5MM ALUM FLASHING  
 VENT. DUCT (BY OTHERS)  
 M5 S.S SCREW @285mm C.C  
 SETTING BLOCK  
 50X50X5MM GMS ANGLE (L=100)  
 W/ 2 NOS M6 S.S A4-70 RHMS  
 M5 S.S SCREW @MAX300mm C.C  
 INTERIOR FALSE CEILING (BY OTHERS)  
 2 NOS. M10 S.S A4-70 RHMS  
 MB01  
 3MM THK ALUM CLADDING COVER  
 M5 ALUM STUD @MAX300mm C.C  
 MB02  
 3MM THK ALUM CLADDING  
 MB02  
 MB01  
 3MM THK ALUM CLADDING  
 MB02  
 MB01  
 50X50X5MM GMS ANGLE (L=100)  
 W/ 2 NOS M6 S.S A4-70 RHMS  
 INTERIOR FINISHING (BY OTHERS)  
 3MM THK ALUM CLADDING COVER  
 2 NOS. M10 S.S A4-70 RHMS  
 M5 S.S SCREW @MAX300mm C.C  
 1.5MM ALUM FLASHING  
 M5 S.S SCREW @MAX300mm C.C

D2 WINDOW-WALL (WW4) TYPICAL DETAIL  
9001

3MM THK ALUM CLADDING  
 MB02  
 MB01  
 50X50X5MM GMS ANGLE (L=100)  
 W/ 2 NOS M6 S.S A4-70 RHMS  
 INTERIOR FINISHING (BY OTHERS)  
 3MM THK ALUM CLADDING COVER  
 2 NOS. M10 S.S A4-70 RHMS  
 M5 S.S SCREW @MAX300mm C.C  
 1.5MM ALUM FLASHING  
 M5 S.S SCREW @MAX300mm C.C  
 CAST-IN EMBED "EM-K"

D3 WINDOW-WALL (WW4) TYPICAL DETAIL  
9001 FOR 75MM RECESS

B.D. REF : 3/7192/97/4(C1)  
 LEGEND :  
 GL01 -- 12mm THK CLEAR TEMPERED GLASS  
 +12mm AIR SPACE  
 +12mm THK CLEAR TEMPERED GLASS I.G.U  
 MB01 -- (MULLION)  
 120X80X6.3mm THK GMS RHS  
 MB02 -- (TRANSOM)  
 150X100X12.5mm THK GMS RHS

CLIENT :

ARCHITECT :  
  
 P&T Architects and Engineers Ltd  
 巴丹拿建築及工程師有限公司  
 www.p-t-group.com

MAIN CONTRACTOR :  
  
 CHINA OVERSEAS BUILDING CONSTRUCTION LTD.

STRUCTURAL ENGINEER :

FAÇADE CONSULTANT:

NOTE :  
 1. ALL DIMENSIONS ARE IN mm.  
 2. ALL ELEVATIONS ARE VIEWED FROM OUTSIDE.  
 3. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE FABRICATION.

LEGEND :  
 X1 -- DETAIL MARK NO.  
 X001 -- REFER SHEET NO.  
 1. F.F.L. -- FINISHED FLOOR LEVEL  
 2. S.F.L. -- STRUCTURAL FLOOR LEVEL  
 3. (R) -- REVERSED DETAIL

NO.	DATE	REVISED	BY
A	07-12-2017	1ST AMENDMENT	
-	25-09-2017	1ST SUBMISSION	

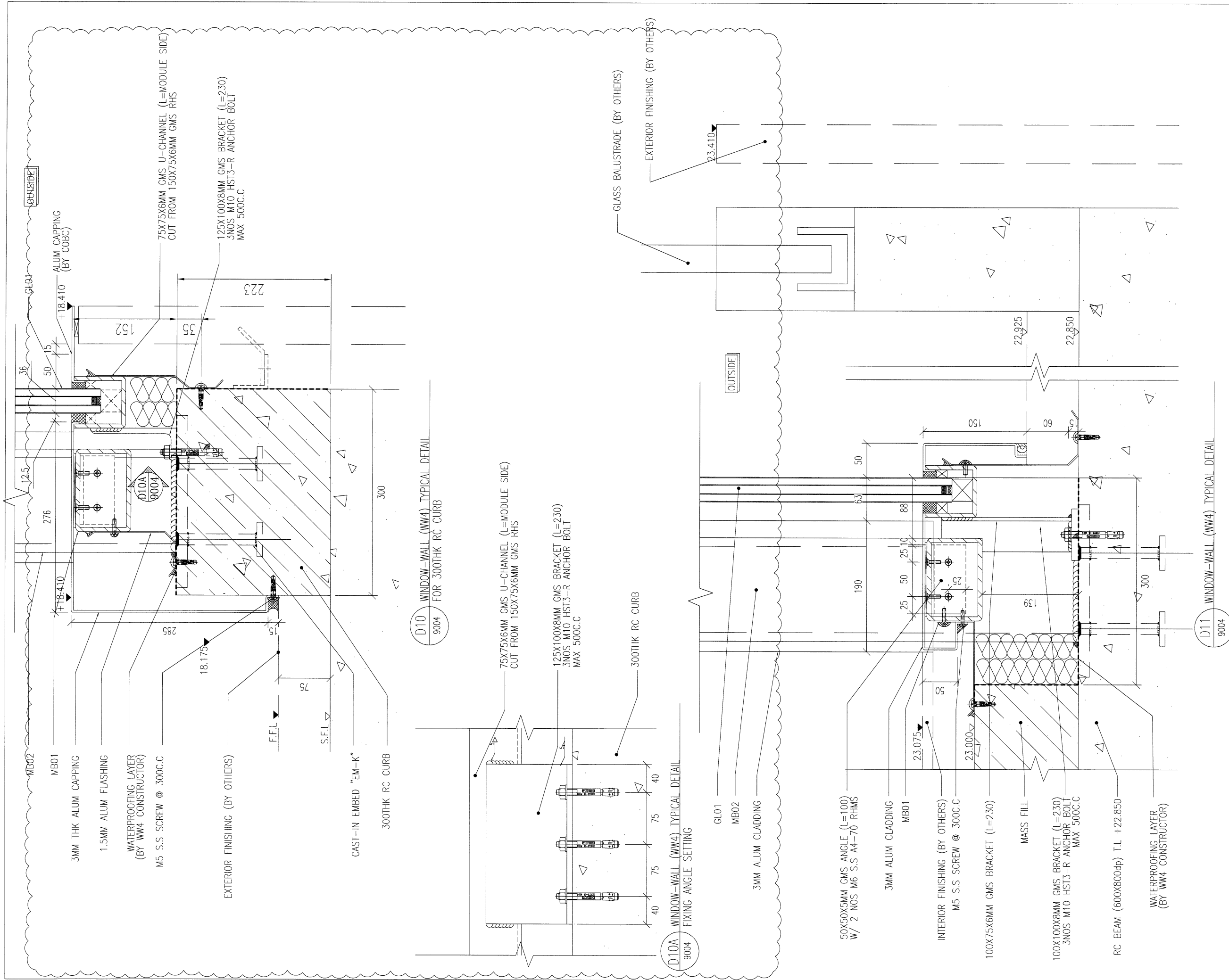
JOB NO. : J-836  
 PROJECT : PROPOSED SITE C1 DEVELOPMENT AT AREA 86, TKOTL 70 RP, TSEUNG KWAN O, NEW TERRITORIES

TITLE : TYPICAL DETAILS FOR WINDOW-WALL (WW4)

DATE : 20-NOV-17 SCALE : 1:5  
 DRAWN BY : C.F CHECKED BY : M.K

MIDI ALUMINIUM FABRICATOR LTD.  
 Units 6-8, Sunray Industrial Centre, 1/F  
 610 Cha Kwo Ling Road, Kowloon  
 Tel:23489211-4 Fax:(852)27727666  
 DWG NO. : J836-WW4-9001 REV. : A





B.D. REF : 3/7192/97/4(C1)

LEGEND :

GL01 -- 12mm THK CLEAR TEMPERED GLASS  
+12mm AIR SPACE  
+12mm THK CLEAR TEMPERED GLASS I.G.U

MB01 -- (MULLION)  
120X80X6.3mm THK GMS RHS

MB02 -- (TRANSOM)  
150X100X12.5mm THK GMS RHS

CLIENT :

**MTR**

ARCHITECT :

**P&T Architects and Engineers Ltd**  
巴丹拿建築及工程師有限公司  
www.p-t-group.com

MAIN CONTRACTOR :

**CHINA OVERSEAS BUILDING CONSTRUCTION LTD.**

STRUCTURAL ENGINEER :

**ARUP**

FAÇADE CONSULTANT:

**MEINHARDT**

NOTE :

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LEGEND :

X1 -- DETAIL MARK NO.  
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1. F.F.L. -- FINISHED FLOOR LEVEL
2. S.F.L. -- STRUCTURAL FLOOR LEVEL
3. (R) -- REVERSED DETAIL

NO.	DATE	REVISED	BY

JOB NO. : J-836

PROJECT : PROPOSED SITE C1 DEVELOPMENT AT AREA B6, TKOTL 70 RP, TSEUNG KWAN O, NEW TERRORIES

TITLE : TYPICAL DETAILS FOR WINDOW-WALL (WW4)

DATE : 07-DEC-2017 SCALE : 1:5

DRAWN BY : C.F CHECKED BY : M.K

**美特鋁質有限公司**  
**MIDI ALUMINIUM FABRICATOR LTD.**  
Units 6-8, Sunray Industrial Centre, 1/F  
610 Cha Kwo Ling Road, Kowloon  
Tel:23489211-4 Fax:(852)27727666

DWG NO. : J836-WW4-9004 REV. : -







- LEGEND :**
- GL01 -- 12mm THK CLEAR TEMPERED GLASS +12mm AIR SPACE +12mm THK CLEAR TEMPERED GLASS I.G.U
  - MB01 -- (MULLION) 120X80X6.3mm THK GMS RHS
  - MB02 -- (TRANSOM) 150X100X12.5mm THK GMS RHS

CLIENT :

**MTR**

ARCHITECT :

**P&T Architects and Engineers Ltd**  
 巴丹拿建築及工程師有限公司  
 www.p-t-group.com

MAIN CONTRACTOR :

**CHINA OVERSEAS BUILDING CONSTRUCTION LTD.**

STRUCTURAL ENGINEER :

**ARUP**

FAÇADE CONSULTANT:

**MEINHARDT**

- NOTE :**
1. ALL DIMENSIONS ARE IN mm.
  2. ALL ELEVATIONS ARE VIEWED FROM OUTSIDE.
  3. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE FABRICATION.
- LEGEND :**
- x1 -- DETAIL MARK NO.
  - x001 -- REFER SHEET NO.
1. F.F.L. -- FINISHED FLOOR LEVEL
  2. S.F.L. -- STRUCTURAL FLOOR LEVEL
  3. (R) -- REVERSED DETAIL

NO.	DATE	REVISED	BY

JOB NO. : J-836

PROJECT : PROPOSED SITE C1 DEVELOPMENT AT AREA 86, TKOTL 70 RP, TSEUNG KWAN O, NEW TERRITORIES

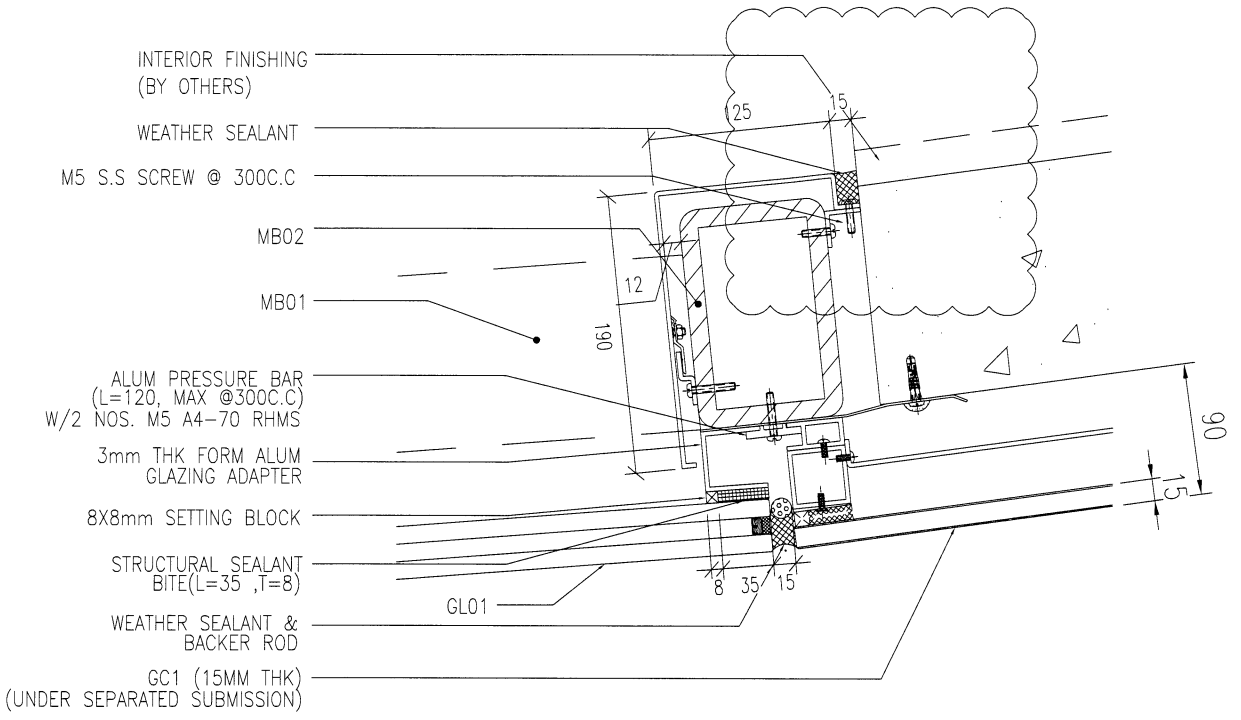
TITLE : TYPICAL DETAILS FOR WINDOW-WALL (WW4)

DATE : 07-DEC-2017 SCALE : 1:5

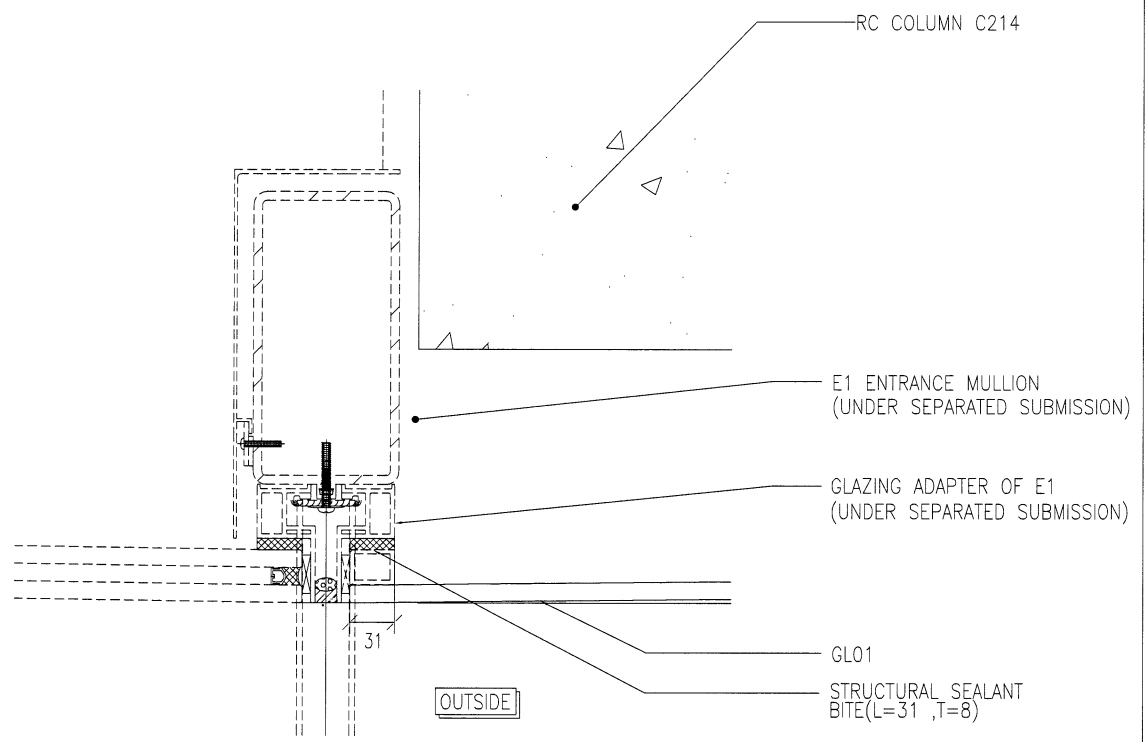
DRAWN BY : C.F. CHECKED BY : M.K.

**美特鋁質有限公司**  
**MIDI ALUMINIUM FABRICATOR LTD.**  
 Units 6-8, Sunray Industrial Centre, 1/F  
 610 Cha Kwo Ling Road, Kowloon  
 Tel:23489211-4 Fax:(852)27727666

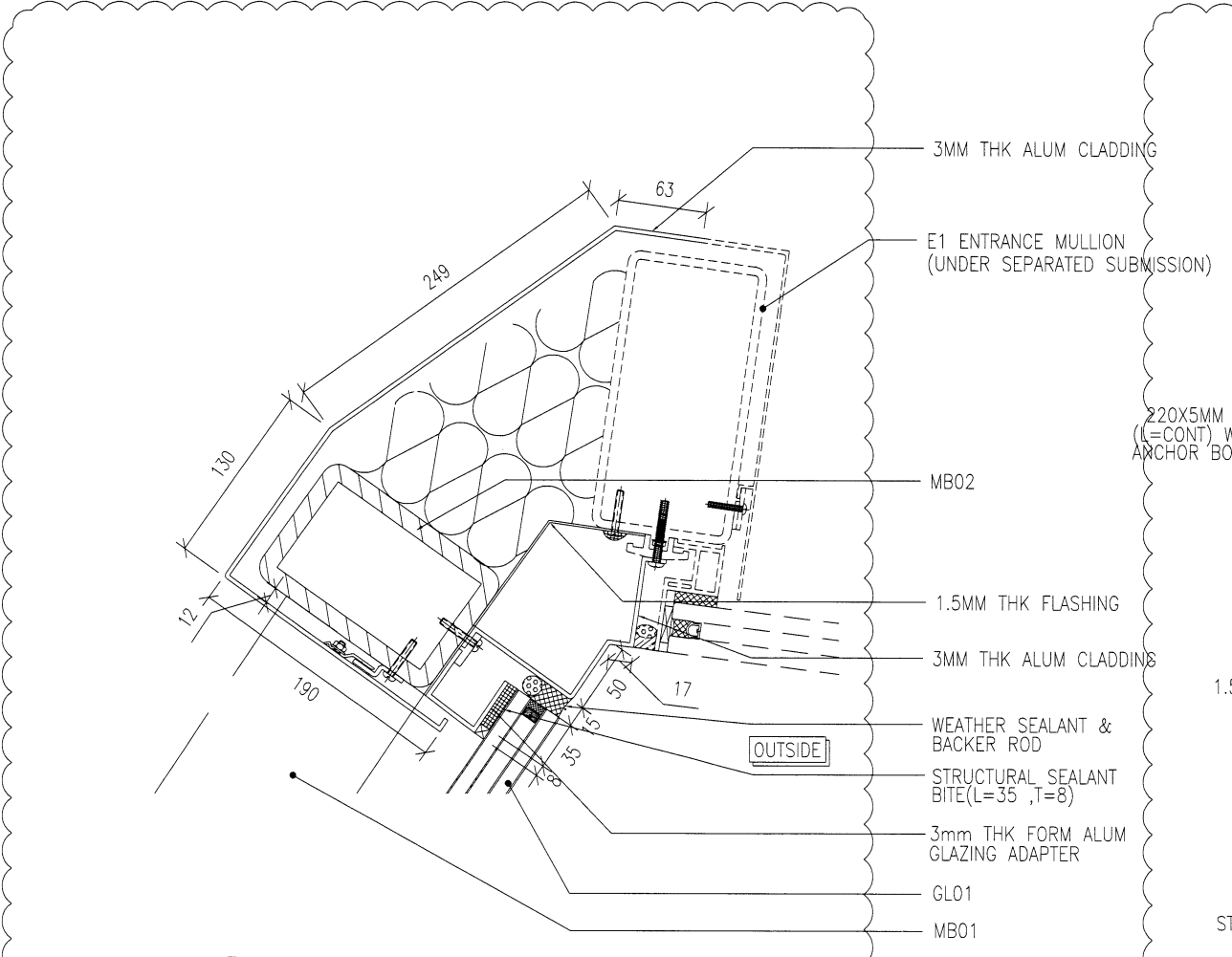
DWG NO. : J836-WW4-9012 REV. : -



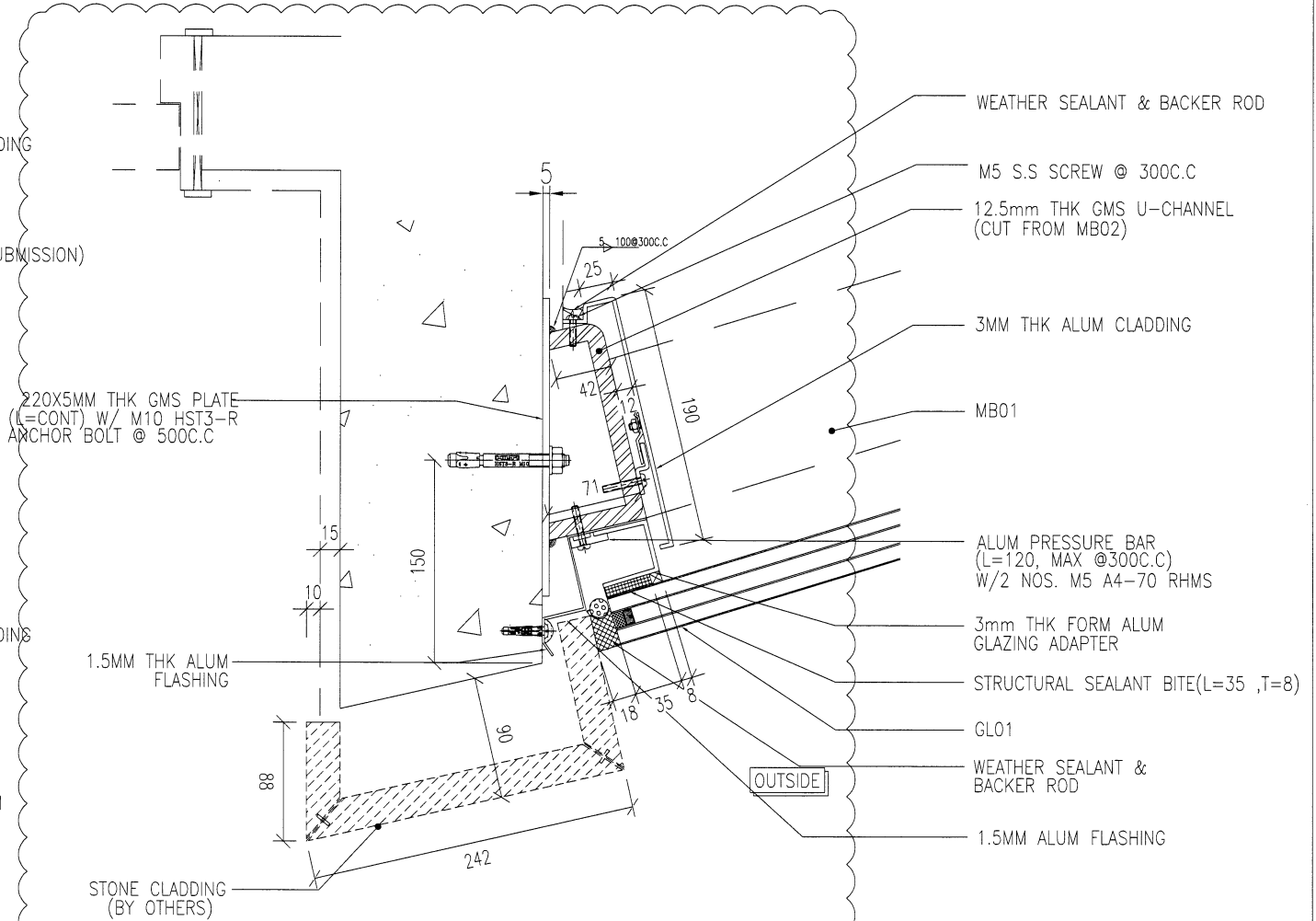
**D36** WINDOW-WALL (WW4) TYPICAL DETAIL  
 9012 WW4 INTERFACE GC1



**D37** WINDOW-WALL (WW4) TYPICAL DETAIL  
 9012 WW4 INTERFACE E1



**D38** WINDOW-WALL (WW4) TYPICAL DETAIL  
 9012 WW4 INTERFACE E1



**D39** WINDOW-WALL (WW4) TYPICAL DETAIL  
 9012

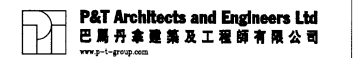
LEGEND :

- GL01 -- 12mm THK. CLEAR TEMPERED GLASS  
+12mm AIR SPACE  
+12mm THK CLEAR TEMPERED GLASS I.G.U
- MB01 -- (MULLION)  
120X80X6.3mm THK GMS RHS
- MB02 -- (TRANSOM)  
150X100X12.5mm THK GMS RHS

CLIENT :



ARCHITECT :



MAIN CONTRACTOR :



STRUCTURAL ENGINEER :



FACADE CONSULTANT:



NOTE :

1. ALL DIMENSIONS ARE IN mm.
2. ALL ELEVATIONS ARE VIEWED FROM OUTSIDE.
3. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE FABRICATION.

LEGEND :

- X1 -- DETAIL MARK NO.
- X001 -- REFER SHEET NO.

1. F.F.L. -- FINISHED FLOOR LEVEL
2. S.F.L. -- STRUCTURAL FLOOR LEVEL
3. (R) -- REVERSED DETAIL

NO.	DATE	REVISED	BY

JOB NO. : J-836

PROJECT : PROPOSED SITE C1  
DEVELOPMENT AT AREA 86,  
TKOTL 70 RP, TSEUNG KWAN O,  
NEW TERRITORIES

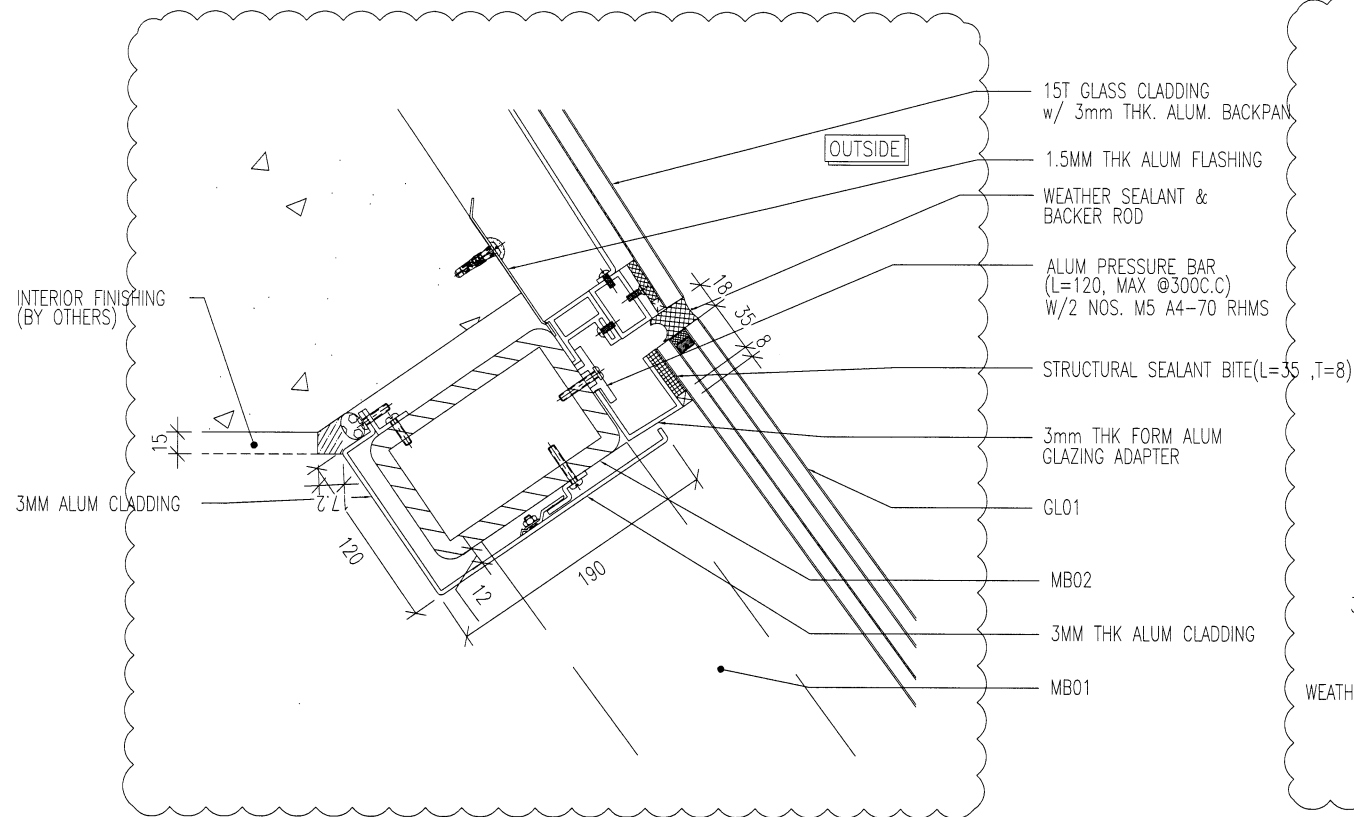
TITLE : TYPICAL DETAILS  
FOR WINDOW-WALL (WW4)

DATE : 07-DEC-2017 SCALE : 1:5

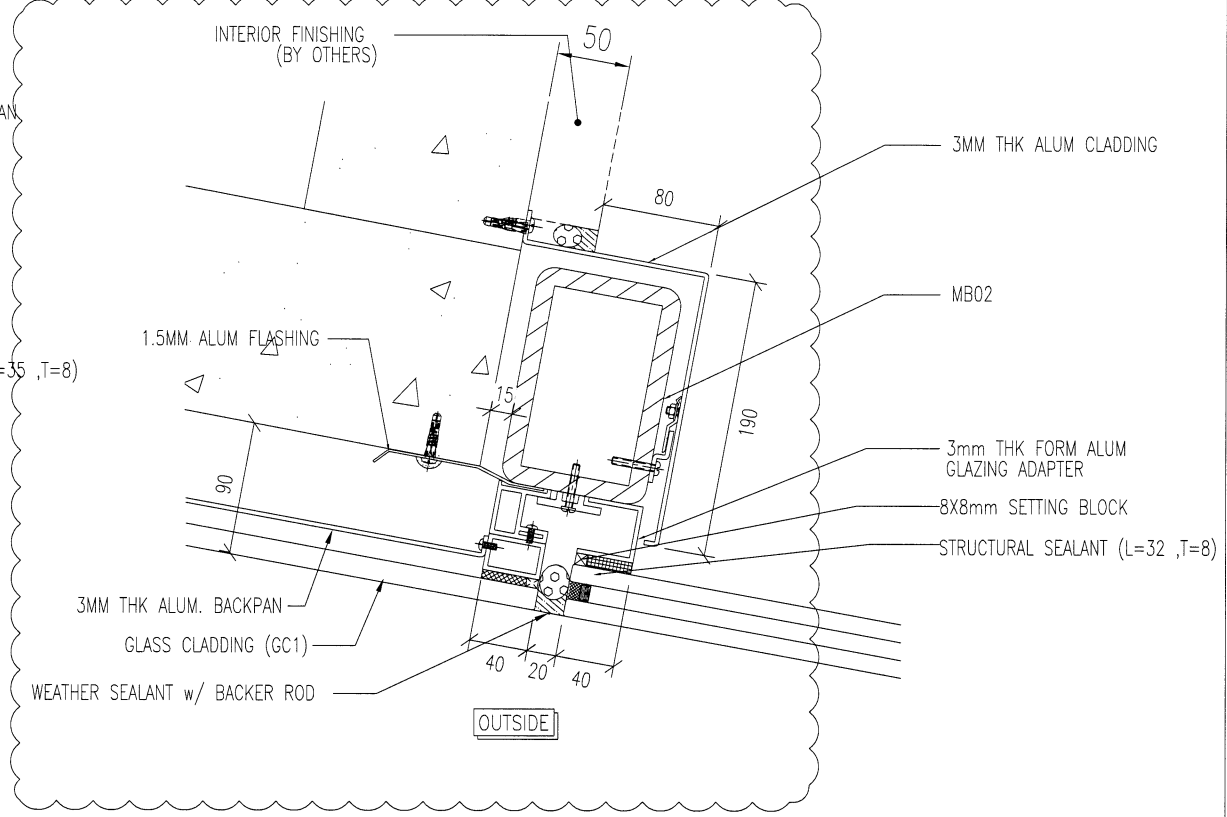
DRAWN BY : C.F CHECKED BY : M.K

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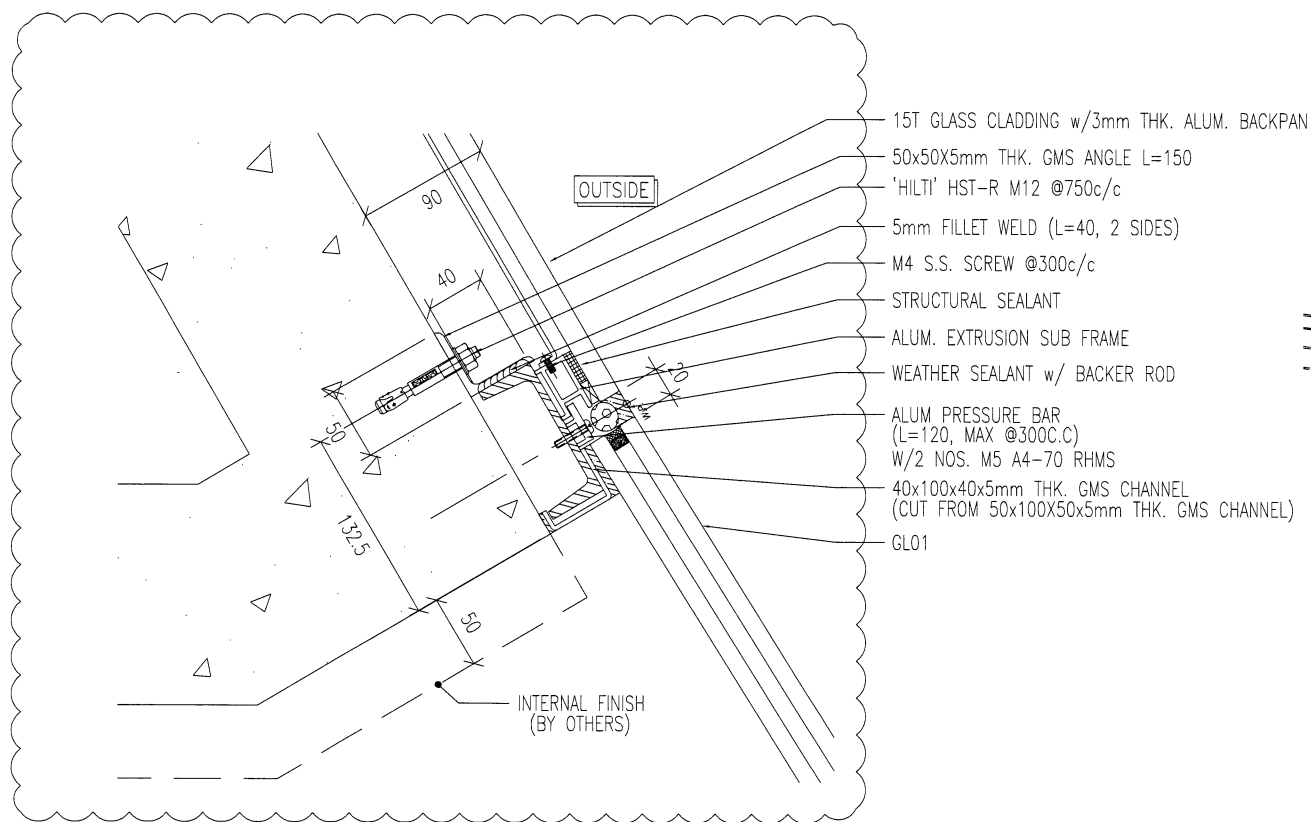
DWG NO. : J836-WW4-9013 REV. : -



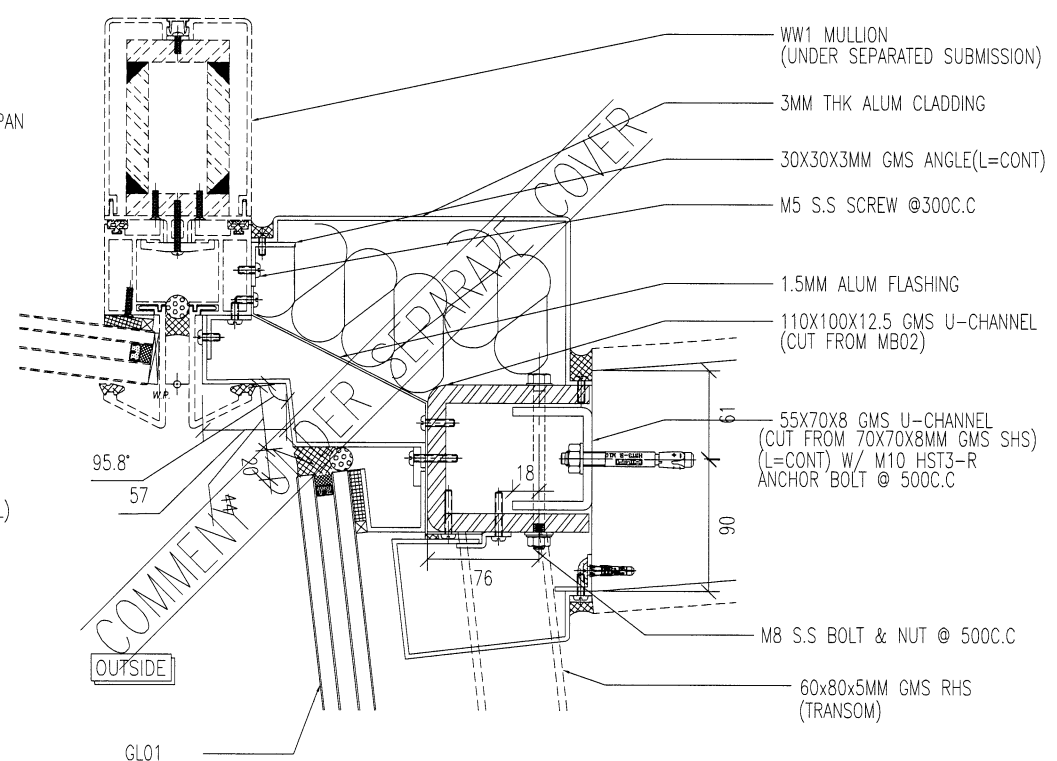
D40 WINDOW-WALL (WW4) TYPICAL DETAIL  
9013 WW4 INTERFACE GC1



D41 WINDOW-WALL (WW4) TYPICAL DETAIL  
9013



D42 WINDOW-WALL (WW4) TYPICAL DETAIL  
9013 WW4 INTERFACE GC1



D43 WINDOW-WALL (WW4) TYPICAL DETAIL  
9013 WW4 INTERFACE WW1