

4.3 Equipment Dimensions, Weights and Operation Space

Due to the variety and continuous improvement of equipment in feature and safety, the type of the equipment and hence its dimensions and weight may vary from time to time. The substation layout is subjected to the equipment being used.

In general, the minimum clearances and safe operating areas required around the electrical equipment shall be :

- | | |
|--|---|
| 11kV switchgear | <ul style="list-style-type: none"> - 1000mm at the back of the panels. - 1500mm in front of 11kV circuit breakers. Where metering circuit breaker panels are installed, 2000mm for the operation of the VT lifting trolley may be required. - 750mm on the other two sides of the switchboard. |
| Distribution transformer | <ul style="list-style-type: none"> - 900mm around the LV terminals. - 750mm on the other sides. |
| LV board | <ul style="list-style-type: none"> - 1000mm in front of the board. - 750mm on the sides where cables turn in and out. - The cable trench edge shall be 120mm from wall. - Two wall mounted eye bolts with safety loading of 1 ton shall be provided at 2.7m above floor level. |
| LV capacitor bank | <ul style="list-style-type: none"> - 750mm in front and 200mm on two or rear sides. |
| LV fuse cutout unit for
LV capacitor bank | <ul style="list-style-type: none"> - 1000mm in front of cutout. |
| Remote terminal unit | <ul style="list-style-type: none"> - 1000mm in front of the unit. Maximum 20m wiring distance between LV board and CRTU / LRTU. |

4.4 Foundations

- 4.4.1 The transformer foundation/plinth shall be capable of supporting a minimum load of 9000kg. The minimum loading of the passage for delivery of the transformer from the unloading point to the transformer plinth shall be sufficient to support the transformer weight. Normally, the transformer is supported by two metallic frames in form of channels or inverted U-channels or four steel wheels which stand on the transformer foundation/plinth. The plinth

strength shall be adequate to stand for the pressure imposed by transformer base channels or wheels.

In case there is requirement to maintain a low noise environment for sensitive receivers under customer's duty, the building owner/customer may adopt an option for constructing a transformer plinth with vibration isolation pads, according to typical design provided in drawing T-COP-10250-D-E33-0103-48.

- 4.4.2 The minimum dimensions of the transformer plinth should be 1.8m long x 1.35m wide and level with finished floor level. Actual plinth size is subjected to the transformer rating and type.
- 4.4.3 The 11kV switchgear foundation shall be capable of supporting a maximum static plus dynamic load of 17kN per panel. The minimum cover between the finished floor level and the reinforcement bar of the foundation shall be 80mm. The floor surface shall be flat and within a tolerance of 1mm in 1000mm.

4.5 Earthing Design for Electrical Equipment

Earthing design for the electrical equipment shall be in compliance with CLP Power earthing standard. The designer or builder of the distribution substation should coordinate with Senior Planning and Design Manager of CLP Power for the provisions of the earthing installation.

For the connection of CLP Power earthing network outside the distribution substation, the earthing bars which are provided and installed by the building owner for the distribution substation shall be extended to the first cable draw-pit. Earthing draw-pits and related pipe ducts should be provided along the CLP Power supply cables within the private area managed by the building owner / property manager.

For ground floor substation directly accessible to open space, a layer of 150mm thick crushed rock shall be provided within a distance of 1500mm as sub-base material from the external wall of the substation. For other substations, floor finishes within a distance of 1500mm directly outside the substation entrance / exits shall follow the requirement as stated in clause 5.1.12.

4.6 Equipment for Metering at High Voltage Supply

When metering of high voltage supply is used, additional space and building provisions shall be required in the substation for accommodating the HV metering equipment. The building owner shall agree with CLP Power to provide enough space and provisions in the substation.

5.10 Requirements of Substation External Decorative Louvre

- 5.10.1 Generally, no external decorative louver should be installed, affixed or attached outside the distribution substation. For special circumstances, the building owner should obtain prior agreement of CLP Power if they wish to add such decoration.
- 5.10.2 Moreover, under such special circumstances, the external decorative louvre shall meet all statutory requirements but not limited to:
- (i) Decorative louvre shall not obstruct the access of any person, operation and transport of equipment in and out of the substation.
 - (ii) CLP substation exit doors with panic bar installed shall be always free from any possible obstruction to allow for emergency escape. Adequate space shall be allowed such that the exit door should be able to open outwards into an unobstructed space with 180 degree swing.
 - (iii) External decorative louvre should not be fixed directly or indirectly onto substation stainless steel doors and ventilation louvres.
 - (iv) The weight and the fixing method of the external decorative louvre shall be certified by the Authorized Person representing the building owner / customer to ensure that it will not impose hazard to our operation staff and the general public. The Authorized Person should also submit this design to the relevant authorities for approval according to the statutory regulation.
 - (v) The external decorative louvre shall not affect the substation ventilation.
 - (vi) The decorative louvre shall provide fitting provisions for installing the substation nameplate, danger warning notice etc. and shall not affect the display of the substation nameplate and notice plates.
 - (vii) The building owner/management company / customer shall be the owner of the external decorative louvre and responsible for the maintenance of the decorative louvre. Annual inspection of the louver should be carried out by a competent person to confirm its safety.
 - (viii) The external decorative louvre shall be fabricated with stainless steel or aluminium plate with minimum 3mm thick, or other fire retardant and corrosion resistant materials to the satisfaction of CLP Power. All coatings for the proposed decorative louvre shall be fire retardant and fire resistant non-toxic paint.

- 6.11 The noise level measured from the substation, in condition that the ventilation system is in operation, shall comply with the requirement of the Noise Control Ordinance. The building owner / customer shall be responsible for further improvement on noise reduction when more stringent noise requirement for the site is raised by other parties like the residents.
- 6.12 A hoisting hook / eye bolt to withstand 100kg shall be provided at the ceiling next to the removable panel of the air trunking, or above the fan, to facilitate fan replacement. Safe Working Load (SWL) marking shall be displayed next to the hook.
- 6.13 For substation situated in the basement or upper floor and the access to the substation have to go through enclosed corridor or staircase, mechanical ventilation to supply fresh air and with manual control to the corridor or staircase shall be provided by the building owner / customer. The minimum ventilation rate shall not be less than 5 air changes per hour.

7. **LIGHTING DESIGN**

- 7.1 Illumination inside the substation should be average 160 lux measured on the floor for general areas and minimum average 400 lux on the vertical surface of the meters and switches.
- 7.2 The adjacent lighting fittings should be fed from different circuits of the distribution board such that illumination in part of the distribution substation will not be totally lost when one lighting circuit is tripped.
- 7.3 Twin **light tube** batten fittings of nominal length 1.2m fitting with **T8 LED standard tube with G5 or G13 bi-pin cap base** should be used. The fluorescent lighting fittings shall be fixed on the wall at 2.1m above floor level or suspended from the ceiling at 2.8m above floor to provide adequate illumination in the working area.
- 7.4 Battery operated fixed fluorescent lighting shall be provided to enable a safe exit in the event of loss of power supply.
- 7.5 The emergency lighting should operate for not less than 2 hours. The batteries should be charged from the substation local supply.
- 7.6 Exit sign shall be provided inside the substation. Except ground floor substation with exit door opened directly to public area outside the building boundary.
- 7.7 Adequate exit signage and emergency lights in compliance with the relevant BD, FSD regulations shall be provided along the emergency exit route of 11kV distribution substation / transformer room.

Item	Provision of Material	Installation	Maintenance
1.12 Cable trench, duct, draw pit and similar provision for cable installation inside customer property boundaries	B	B	B
1.13 Anti-flooding provision as described in clause 5.1.3	B	B	B
1.14 Transformer plinth	B	B	B
2. Substation Access			
2.1 Substation door in accordance with typical drawings	B	B	B
2.2 Emergency exit deadlock set with panic bar	C	B	C
2.3 Lock for substation door	C	B	C
2.4 Panic bolt on exit door without lock	B	B	B
2.5 Conduit, junction box and accessories for door contact	B	B	C
2.6 Substation statutory notice plates	C	C	C
2.7 Notices for treatment of electric shock and for emergency action	C	C	C
2.8 Chain box for the storage of access control chain	B	B	B
2.9 Keybox for gate	B	B	B
3. Substation Building Works for Cables			
3.1 Chequer plate	B	B	B
3.2 Steel rack for holding cable cleats	B	B	B
3.3 Cable brackets and cleats in substation	B	B	B
3.4 Cable brackets in cable riser room for high rise building	B	B	B

T-COP-10250-D-E33-0103-20	Typical Details Of Double Leaf Stainless Steel Door (1500W x 2500H) For H.V. Switchgear Room
T-COP-10250-D-E33-0103-21	Typical Details Of Double Leaf Stainless Steel Door Without Lock
T-COP-10250-D-E33-0103-33	For Fire Rated Door With Insulation Typical Details Of Single Leaf Laminated Steel Door Without Lock
T-COP-10250-D-E33-0103-34	For Fire Rated Door With Insulation Typical Details Of Single Leaf Laminated Steel Door
T-COP-10250-D-E33-0103-35	For Fire Rated Door With Insulation Typical Details Of Double Leaf Laminated Steel Door and Without Lock
T-COP-10250-D-E33-0103-36	For Fire Rated Door With Insulation Typical Details Of Double Leaf Laminated Steel Door
T-COP-10250-D-E33-0103-41	For Fire Rated Door With Insulation Typical Details Of Double Leaf Laminated Steel Door With Lock Eye
T-COP-10250-D-E33-0103-42	For Fire Rated Door With Insulation Typical Details Of Single Leaf Laminated Steel Door With Lock Eye
T-COP-10250-D-E33-0103-46	For Fire Rated Door With Insulation Typical Details Of Double Leaf Laminated Steel Door With Wicket On The Right
T-COP-10250-D-E33-0103-47	For Fire Rated Door With Insulation Typical Details Of Double Leaf Laminated Steel Door With Wicket On The Left
T-COP-10250-D-E33-0103-22	Details Of Emergency Exit Deadlock Set With Panic Bar
T-COP-10250-D-E33-0103-23	Typical Arrangement Of Panic Bolt and Door Contact Installation For Transformer Room Doors
T-COP-10250-D-E33-0103-24	Typical Details Of Metal Trunking & Stainless Steel Louvre For 630mm Dia. Wall Mounted Exhaust Fan
T-COP-10250-D-E33-0103-25	Typical Details Of Metal Trunking & Stainless Steel Louvre For 800mm Dia. Wall Mounted Exhaust Fan
T-COP-10250-D-E33-0103-26	Typical Details Of Stainless Steel Louvre
T-COP-10250-D-E33-0103-27	Plastic Chain Storage Box
T-COP-10250-D-E33-0103-28	Cable Trench Cover For LV Cables Dropping From Transformer LV Terminals Into The Cable Trench
T-COP-10250-D-E33-0103-29	Details Of Outlet For Temporary Supply Cables
T-COP-10250-D-E33-0103-32	Typical Details For Upper Floor Substation With Retractable Hoist Beam And Trolley
T-COP-10250-D-E33-0103-43	Typical Details For Upper Floor Substation With Hoist Beam And Trolley

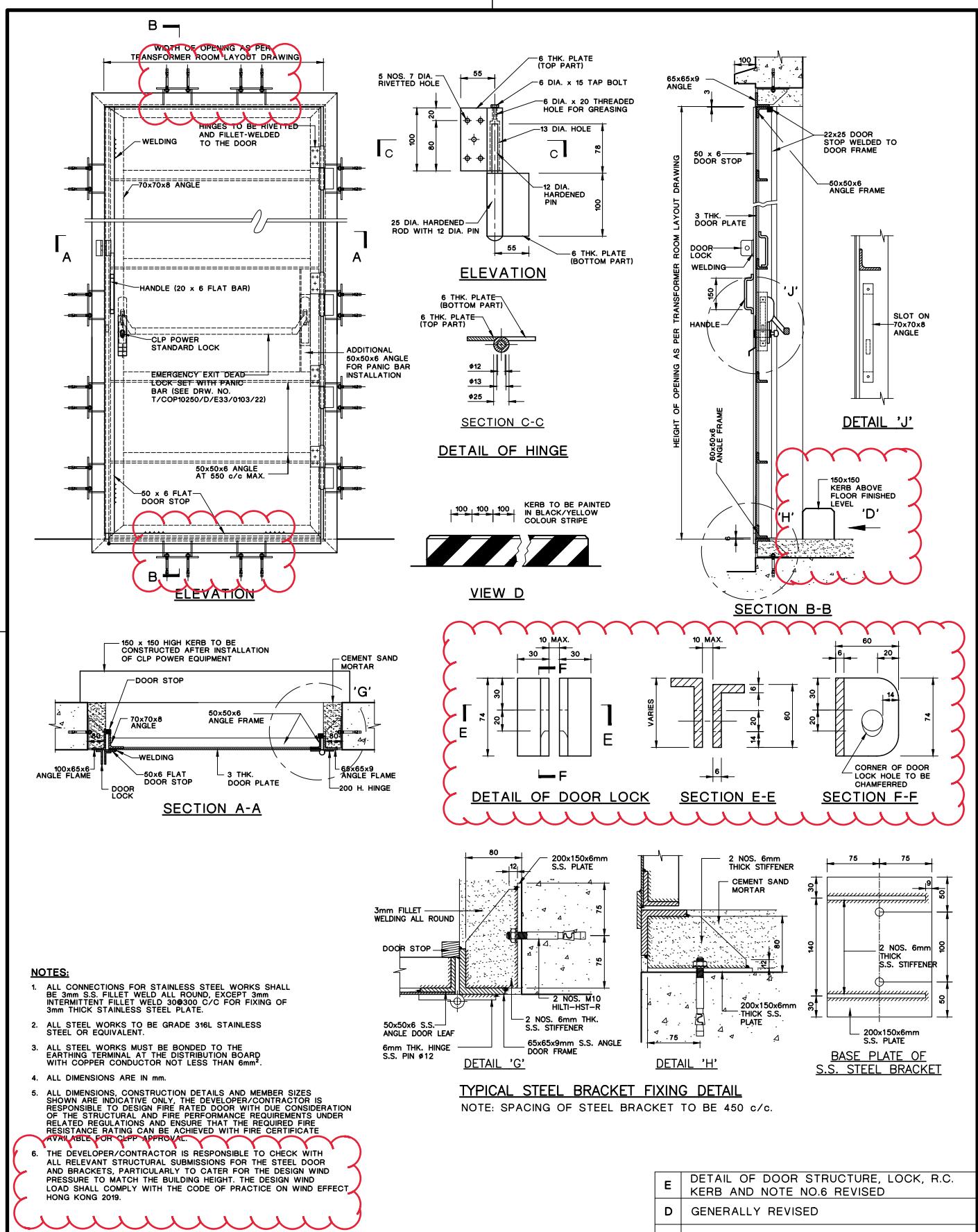
T-COP-10250-D-E33-0103-45	Typical Details For Upper Floor Substation With Hoist Beam And Trolley And Protected Lobby
T-COP-10250-D-E33-0103-37	Typical Details Of Hook for Independent Lifeline
T-COP-10250-D-E33-0103-38	Typical Design Of Fall Restraint System
T-COP-10250-D-E33-0103-39	Typical Design Of Ground Floor Entrance For Basement Substation
T-COP-10250-D-E33-0103-40	Typical Details Of Eyebolt Installation For L.V. Board
T-COP-10250-D-E33-0103-44	Steel Cabinet For Single Core Cable Brackets And Cleats In Customer Main Switch Room
T-COP-10250-D-E33-0103-48	Typical Details Of Transformer Floating Plinth
T-COP-10250-D-E33-0112-01	Details Of Stainless Steel Floodgate For Single/Double Leaf Door
T-COP-10250-D-E33-0112-02	Details Of Stainless Steel Floodgate For Ground Floor Louvre
T-COP-10250-D-E33-0112-03	Stainless Steel Floodgate Storage Frame Installation Details

Outdoor Substation Details

T-COP-10250-D-E33-0104-01	Details Of Metal Gate And Fence With Steel Post For Outdoor Substation
T-COP-10250-D-E33-0104-02	Withdrawn in version 11
T-COP-10250-D-E33-0104-03	Details Of Metal Gate And Brick Wall Surround For Outdoor Substation
T-COP-10250-D-E33-0104-04	Typical Details Of Cable Trench R.C. Cover
T-COP-10250-D-E33-0104-05	Typical Details Of Cable Draw-Pit (Straight Application)
T-COP-10250-D-E33-0104-06	Typical Details Of Cable Draw-Pit (Angle Application)
T-COP-10250-D-E33-0104-07	Typical Details Of Cable Draw-Pit (Tee Application)
T-COP-10250-D-E33-0104-08	Roofing With Insulation Parapet & Wall Details
T-COP-10250-D-E33-0104-17	Typical Details Of uPVC Pipe Connecting Socket
T-COP-10250-D-E33-0104-18	Earthing Draw Pit Arrangement For Substation
T-COP-10250-D-E33-0104-19	Typical Details Of Earthing Draw Pit
T-COP-10250-D-E33-0104-20	Typical Details Of Cover For Earthing Draw Pit
T-COP-10250-D-E33-0104-21	Typical Details Of Frame For Earthing Draw Pit
T-COP-10250-D-E33-0104-22	Typical On Grade Slab Detail Outside Substation

Summary of new and revised drawings in Addendum No.1/2021.

Drawing	Revision	Title
T-COP-10250-D-E33-0103-14	E	Typical Details Of Single Leaf Stainless Steel Door
T-COP-10250-D-E33-0103-15	E	Typical Details Of Single Leaf Stainless Steel Door Without Lock
T-COP-10250-D-E33-0103-16	G	Typical Details Of Double Leaf Stainless Steel Door With Wicket On The Right
T-COP-10250-D-E33-0103-17	G	Typical Details Of Double Leaf Stainless Steel Door With Wicket On The Left
T-COP-10250-D-E33-0103-18	G	Typical Details Of Double Leaf Stainless Steel Door With Wicket On The Right And Without Lock
T-COP-10250-D-E33-0103-19	G	Typical Details Of Double Leaf Stainless Steel Door With Wicket On The Left And Without Lock
T-COP-10250-D-E33-0103-20	G	Typical Details Of Double Leaf Stainless Steel Door (1500W x 2500H) For H.V. Switchgear Room
T-COP-10250-D-E33-0103-21	G	Typical Details Of Double Leaf Stainless Steel Door Without Lock
T-COP-10250-D-E33-0103-33	B	For Fire Rated Door With Insulation Typical Details Of Single Leaf Laminated Steel Door Without Lock
T-COP-10250-D-E33-0103-34	C	For Fire Rated Door With Insulation Typical Details Of Single Leaf Laminated Steel Door
T-COP-10250-D-E33-0103-35	B	For Fire Rated Door With Insulation Typical Details Of Double Leaf Laminated Steel Door and Without Lock
T-COP-10250-D-E33-0103-36	C	For Fire Rated Door With Insulation Typical Details Of Double Leaf Laminated Steel Door
T-COP-10250-D-E33-0103-41	A	For Fire Rated Door With Insulation Typical Details Of Double Leaf Laminated Steel Door With Lock Eye
T-COP-10250-D-E33-0103-42	A	For Fire Rated Door With Insulation Typical Details Of Single Leaf Laminated Steel Door With Lock Eye
T-COP-10250-D-E33-0103-46	New	For Fire Rated Door With Insulation Typical Details Of Double Leaf Laminated Steel Door With Wicket On The Right
T-COP-10250-D-E33-0103-47	New	For Fire Rated Door With Insulation Typical Details Of Double Leaf Laminated Steel Door With Wicket On The Left
T-COP-10250-D-E33-0103-48	New	Typical Details Of Transformer Floating Plinth



NOTES

1. ALL CONNECTIONS FOR STAINLESS STEEL WORKS SHALL BE FULL PENETRATION WELD AROUND, EXCEPT 3mm INTERMITTENT FILLET WELD 308L300 C/C FOR FIXING OF 3mm THICK STAINLESS STEEL PLATE.
 2. ALL STEEL WORKS TO BE GRADE 316L STAINLESS STEEL OR EQUIVALENT.
 3. ALL STEEL WORKS MUST BE BONDED TO THE EARTHING TERMINAL AT THE DISTRIBUTION BOARD WITH COPPER CONDUCTOR NOT LESS THAN 6mm².
 4. ALL DIMENSIONS ARE IN mm.
 5. ALL DIMENSIONS, CONSTRUCTION DETAILS AND MEMBER SIZES SHOWN ARE INDICATIVE ONLY. THE DEVELOPER/CONTRACTOR IS RESPONSIBLE FOR DESIGN, FIRE TESTS AND OTHER CONSIDERATION OF THE STRUCTURAL AND FIRE PERFORMANCE REQUIREMENTS UNDER RELATED REGULATIONS AND ENSURE THAT THE REQUIRED FIRE RESISTANCE RATING CAN BE ACHIEVED WITH FIRE CERTIFICATE AVAILABLE FOR CCP APPROVAL.
 6. THE DEVELOPER/CONTRACTOR IS RESPONSIBLE TO CHECK WITH ALL RELEVANT STRUCTURAL SUBMISSIONS FOR THE STEEL DOOR AND BRACKETS, PARTICULARLY TO CATER FOR THE DESIGN WIND PRESSURE TO MATCH THE BUILDING HEIGHT. THE DESIGN WIND LOAD SHALL COMPLY WITH THE CODE OF PRACTICE ON WIND EFFECT HONG KONG 2019.

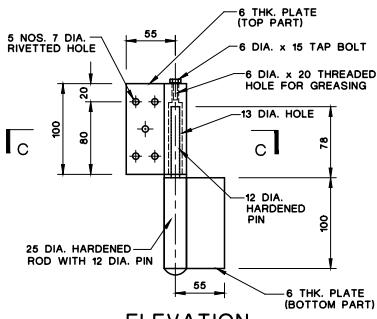
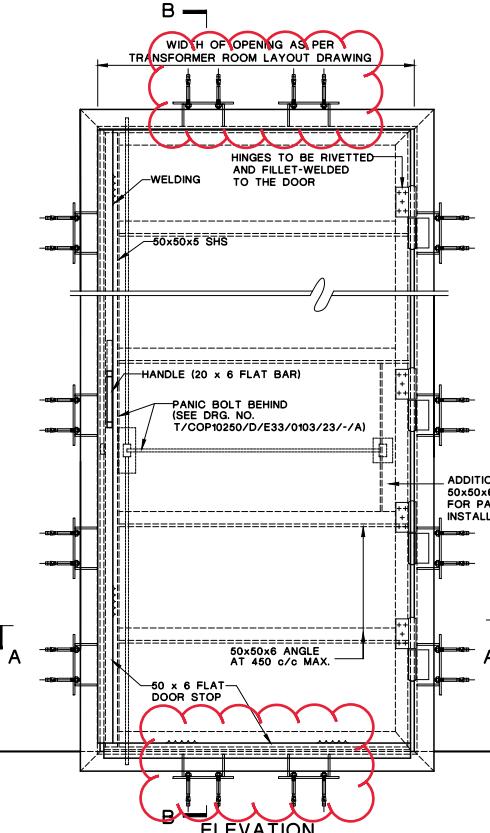
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DRAWN:	M. S. FONG	DATE:	04-11-2021
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SCALE:	AS SHOWN	SHEET(S) IN SET:	

ASSET MANAGEMENT

TYPICAL DETAILS OF SINGLE LEAF STAINLESS STEEL DOOR

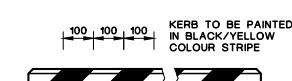
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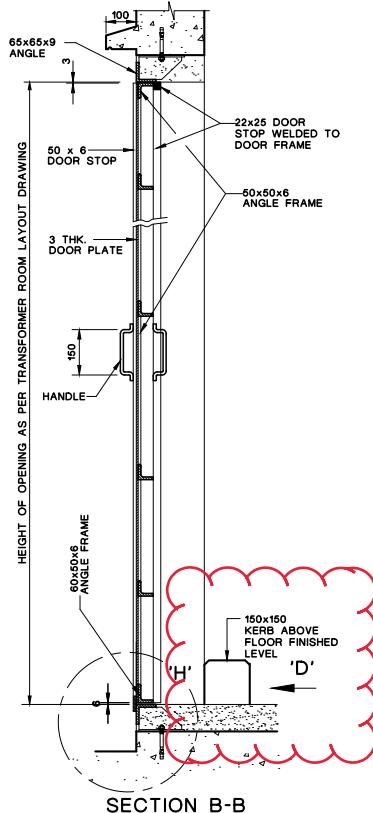
ELEVATION

SECTION C-C

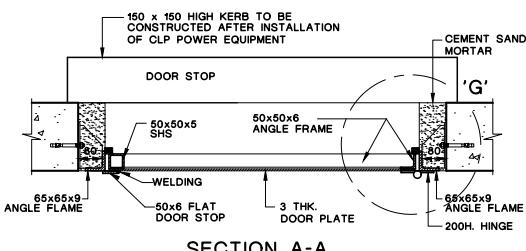
DETAIL OF HINGE



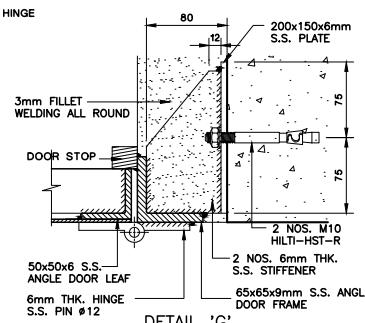
VIEW D



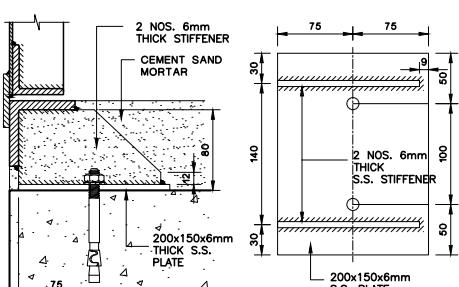
SECTION B-B



SECTION A-A



DETAIL 'G'



DETAIL 'H'

BASE PLATE OF
S.S. STEEL BRACKET

NOTES:

- ALL CONNECTIONS FOR STAINLESS STEEL WORKS SHALL BE 3mm S.S. FILLET WELD ALL ROUND, EXCEPT 3mm INTERMITTENT FILLET WELD 30@300 C/C FOR FIXING OF 3mm THICK STAINLESS STEEL PLATE.
- ALL STEEL WORKS TO BE GRADE 316L STAINLESS STEEL OR EQUIVALENT.
- ALL STEEL WORKS MUST BE BONDED TO THE EARTHING TERMINAL AT THE DISTRIBUTION BOARD WITH COPPER CONDUCTOR NOT LESS THAN 6mm².
- ALL DIMENSIONS ARE IN mm.
- ALL DIMENSIONS, CONSTRUCTION DETAILS AND MEMBER SIZES PROVIDED ON THIS DRAWING BY THE DEVELOPER-CONTRACTOR IS RESPONSIBLE TO DESIGN FIRE RATED DOOR WITH DUE CONSIDERATION OF THE STRUCTURAL AND FIRE PERFORMANCE REQUIREMENTS UNDER RELATED REGULATIONS AND ENSURE THAT THE REQUIRED FIRE RESISTANCE RATING CAN BE ACHIEVED WITH FIRE CERTIFICATE AVAILABLE FOR CLP APPROVAL.
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A S S E T M A N A G E M E N T

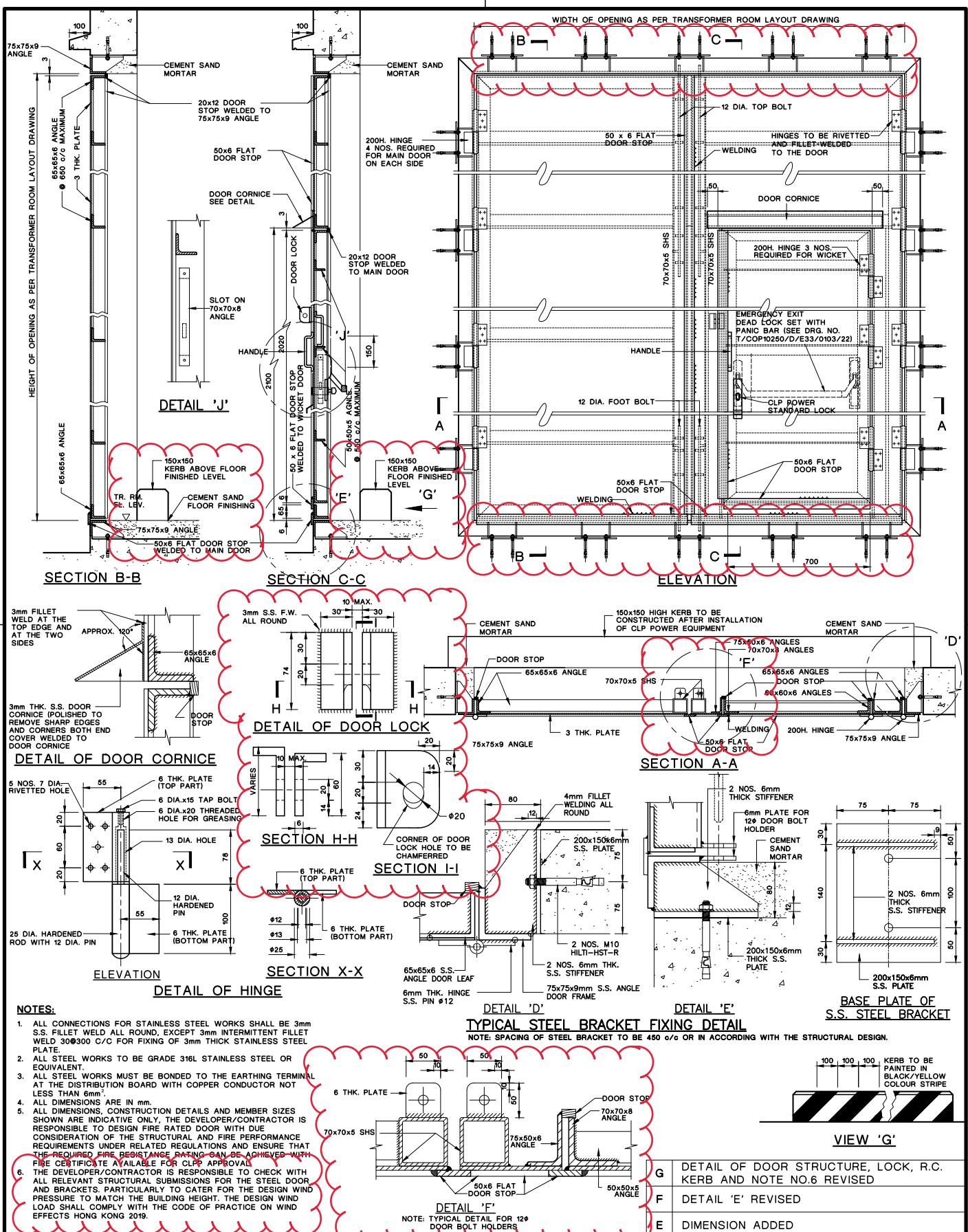
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INITIAL	K.C.C	K.C.C	H.T.YU	M.S.FONG	M.S.FONG					

TITLE :

TYPICAL DETAILS OF SINGLE LEAF STAINLESS STEEL DOOR WITHOUT LOCK

E	DETAIL OF DOOR STRUCTURE, R.C. KERB AND NOTE NO.6 REVISED
D	GENERALLY REVISED
C	AMENDMENT OF DESCRIPTION TO VIEW 'C'

DRG. NO. T C O P 1 0 2 5 0 D F 3 3 0 1 0 3 1 5 F A



NOTES

- NOTES:**

 1. ALL CONNECTIONS FOR STAINLESS STEEL WORKS SHALL BE 3mm S.S. FILLET WELD ALL ROUND, EXCEPT 3mm INTERMITTENT FILLET WELD 300x300 C/C FOR FIXING OF 3mm THICK STAINLESS STEEL PLATE.
 2. ALL STEEL WORKS TO BE GRADE 316L STAINLESS STEEL OR EQUIVALENT.
 3. ALL STEEL WORKS MUST BE BONDED TO THE EARTHING TERMINAL AT THE DISTRIBUTION BOARD WITH COPPER CONDUCTOR NOT LESS THAN 6mm².
 4. ALL DIMENSIONS ARE IN mm.
 5. ALL DIMENSIONS, CONSTRUCTION DETAILS AND MEMBER SIZES SHOWN ARE INDICATIVE ONLY. THE DEVELOPER/CONTRACTOR IS RESPONSIBLE TO DESIGN FIRE RATED DOOR WITH DUE CONSIDERATION OF THE STRUCTURAL AND FIRE PERFORMANCE REQUIREMENTS UNDER RELATED REGULATIONS AND ENSURE THAT THE REQUIRED FIRE RESISTANCE RATING CAN BE ACHIEVED WITH FIRE CERTIFICATE AVAILABLE FOR CLP APPROVAL.
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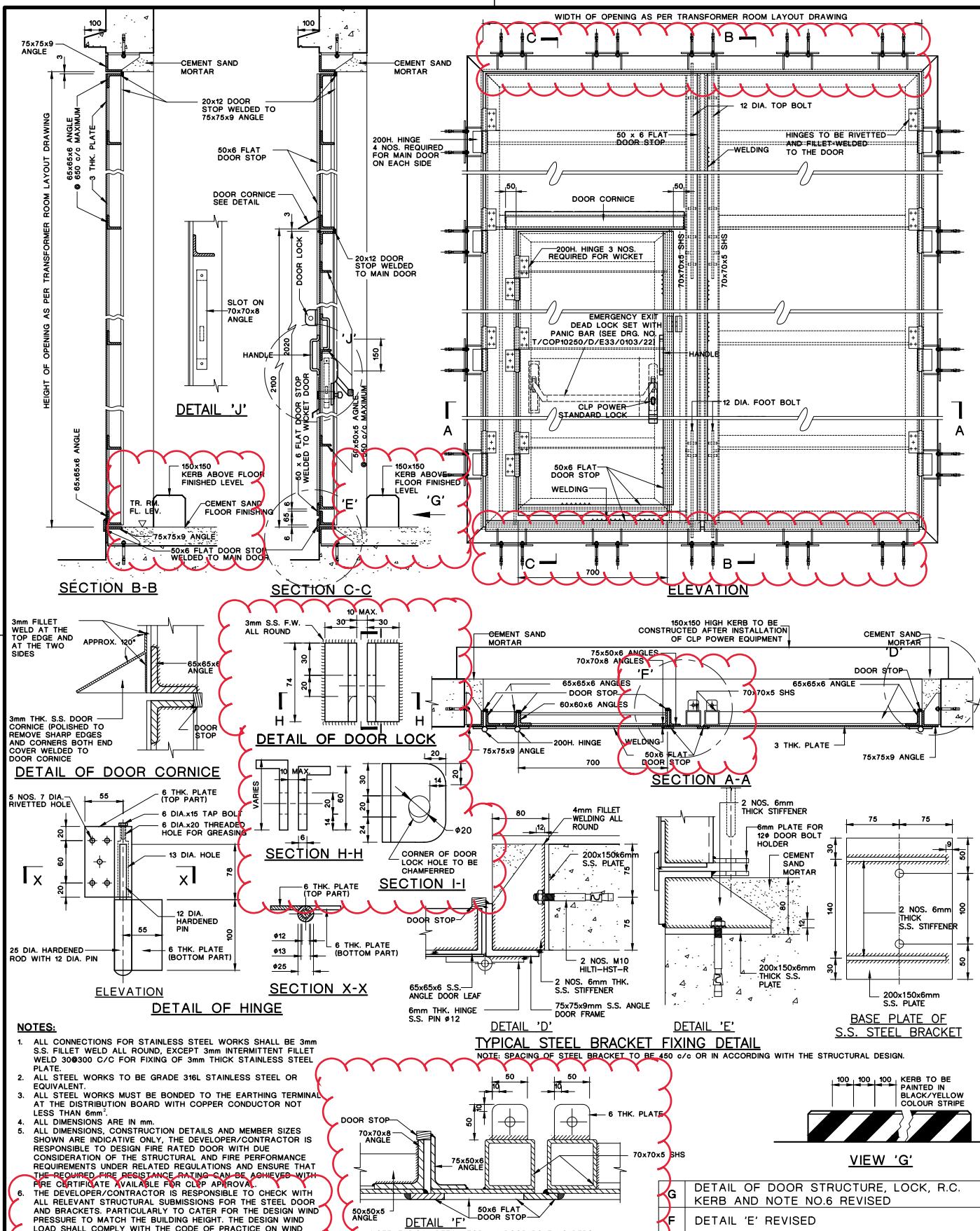
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ASSET MANAGEMENT

TYPICAL DETAILS OF DOUBLE LEAF STAINLESS STEEL DOOR WITH WICKET ON THE RIGHT

DRG. NO. T C O P 1 0 2 5 0 D E 3 3 0 1 0 3 1 6 G A



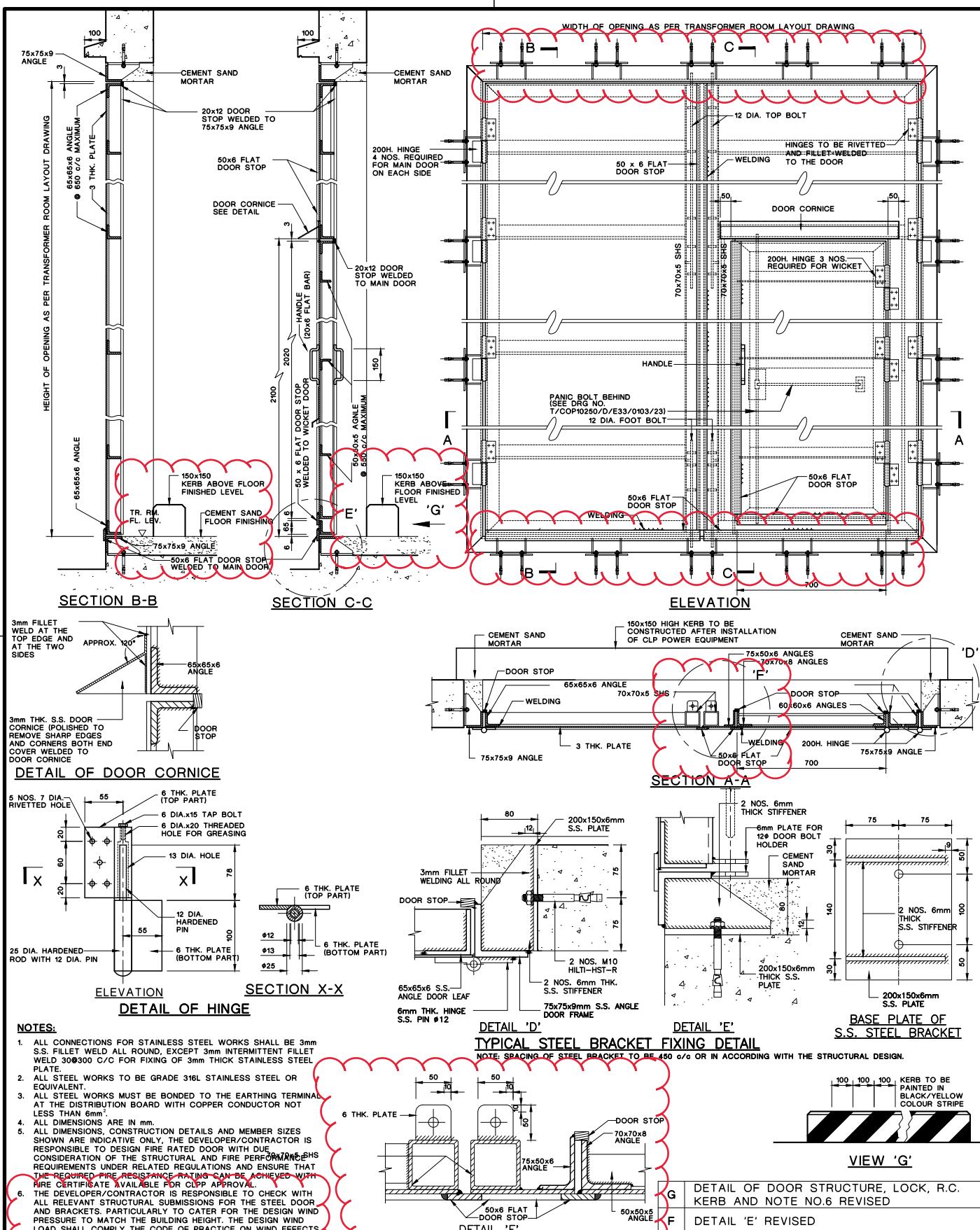
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INITIAL	A	B	C	D	E	F	G	H	J	K	L

TITLE :

TYPICAL DETAILS OF DOUBLE LEAF STAINLESS STEEL DOOR WITH WICKET ON THE LEFT

DRAWN: FONG, MING SUM DATE: 04-11-2021
CHECKED: FONG, MING SUM APPROVED: GARY KWOK
SCALE: N. T. S. SHEET(S) IN SET:
ASSET MANAGEMENT

DRG. NO. T C O P 1 0 2 5 0 D F 3 3 0 1 0 3 1 7 G A



REVS.	13-9-04	10-8-09	18-03-14	01-06-17	25-06-19	08.06.20	04-11-21				
INITIAL	A	B	C	D	E	F	G	H	J	K	L

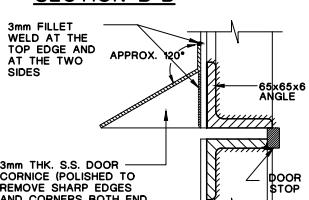
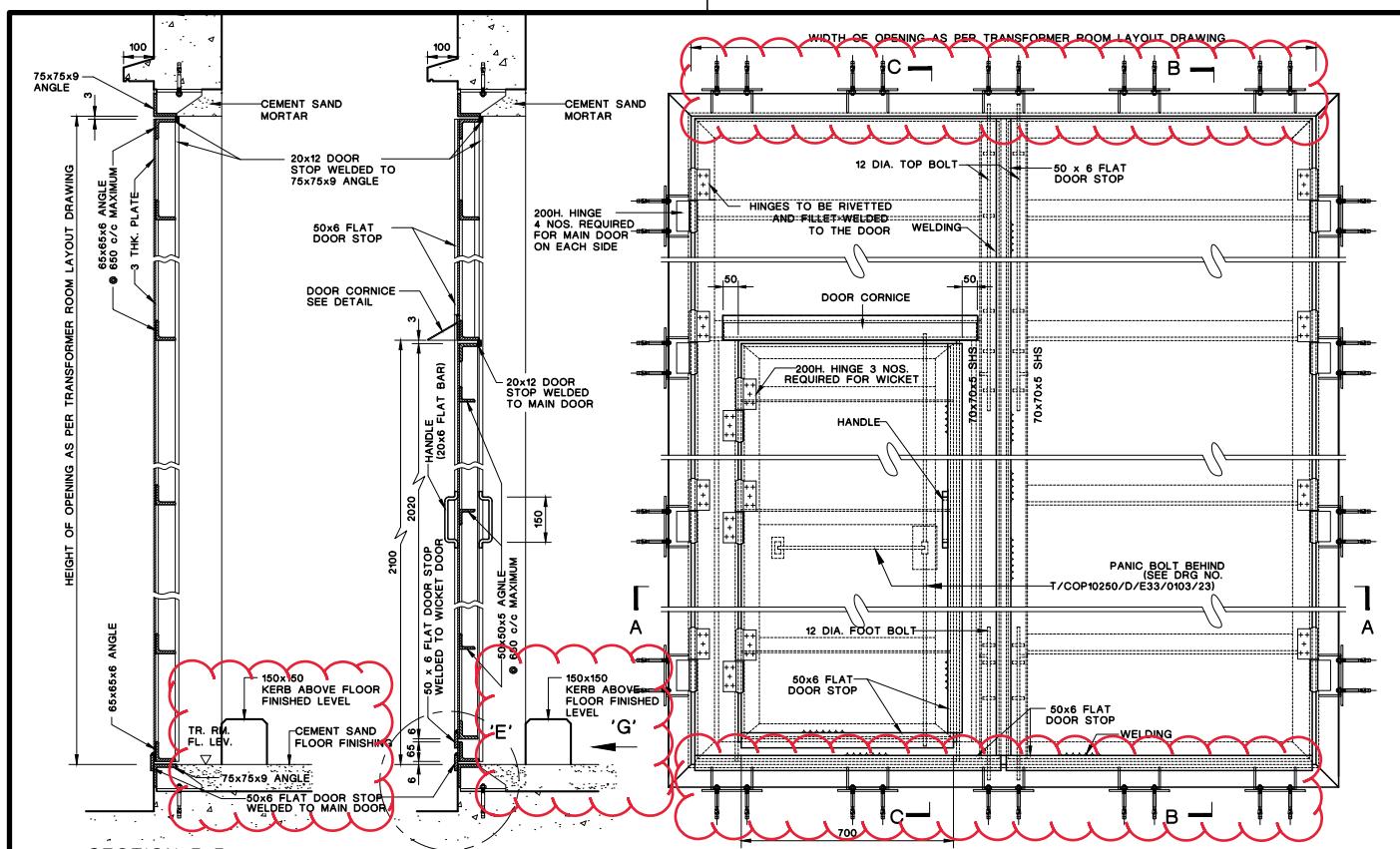
TITLE :

TYPICAL DETAILS OF DOUBLE LEAF STAINLESS STEEL DOOR WITH WICKET ON THE RIGHT AND WITHOUT LOCK

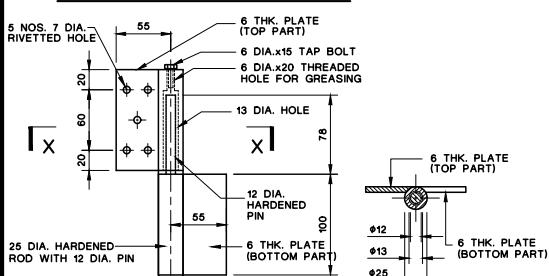
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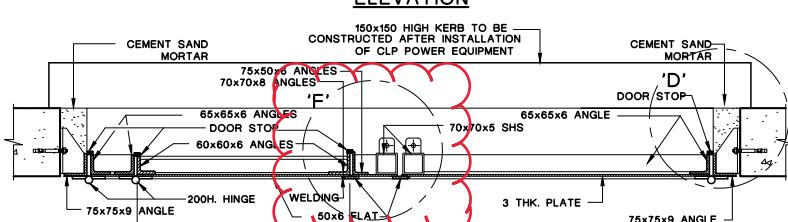
END CORNERS BOTH END
OVER WELDED TO
DOOR CORNICE



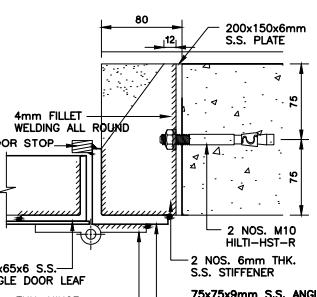
ELEVATION

- NOTES:**

 - ALL CONNECTIONS FOR STAINLESS STEEL WORKS SHALL BE 3mm SS. FILLET WELD ALL ROUND, EXCEPT 3mm INTERMITTENT FILLET WELD 30x300 C/C FOR FIXING OF 3mm THICK STAINLESS STEEL PLATE.
 - ALL STEEL WORKS TO BE GRADE 316L STAINLESS STEEL OR EQUIVALENT.
 - ALL STEEL WORKS MUST BE BONDED TO THE EARTHING TERMINAL AT THE DISTRIBUTION BOARD WITH COPPER CONDUCTOR NOT LESS THAN 6mm².
 - ALL DIMENSIONS ARE IN mm.
 - DESIGN, CONSTRUCTION DETAILS AND MEMBER SIZES SHOWN ARE INDICATIVE ONLY. THE DEVELOPER/CONTRACTOR IS RESPONSIBLE TO DESIGN FIRE RATED DOOR WITH DUE CONSIDERATION OF THE STRUCTURAL AND FIRE PERFORMANCE REQUIREMENTS UNDER RELATED REGULATIONS AND ENSURE THAT THE REQUIRED FIRE RESISTANCE RATING CAN BE ACHIEVED WITH FIRE CERTIFICATE AVAILABLE FOR CPR APPROVAL.
 - THE DEVELOPER/CONTRACTOR IS RESPONSIBLE TO CHECK WITH ALL RELEVANT STRUCTURAL SUBMISSIONS FOR THE STEEL DOOR AND BRACKETS PARTICULARLY TO CATER FOR THE DESIGN WIND PRESSURE AND MAXIMUM BUILDING HEIGHT. THE DESIGN WIND LOAD SHALL COMPLY WITH THE CODE OF PRACTICE ON WIND EFFECTS HONG KONG 2010.

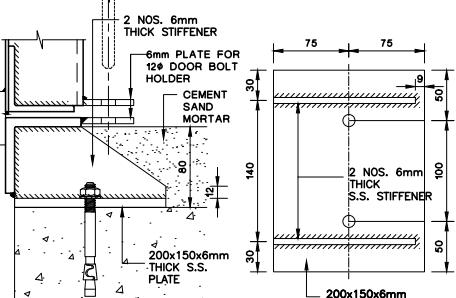


SECTION A-A

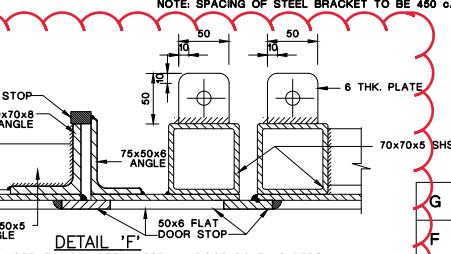


DETAIL 'D' DETAIL 'E'
TYPICAL STEEL BRACKET FIXING DETAIL

TYPICAL STEEL BRACKET FIXING DETAIL



S.S. PLATE
BASE PLATE OF
S.S. STEEL BRACKET



GLE DETAIL 'F' DOOR STOP

E DIMENSION ADDED											
REVS.	13-9-04	10-8-09	18-03-14	01-06-17	25-06-19	08.06.20	04-11-21				
	A	B	C	D	E	F	G	H	J	K	L

INITIAL

TYPICAL DETAILS OF DOUBLE LEAF STAINLESS STEEL DOOR WITH WICKET ON THE LEFT AND WITHOUT LOCK

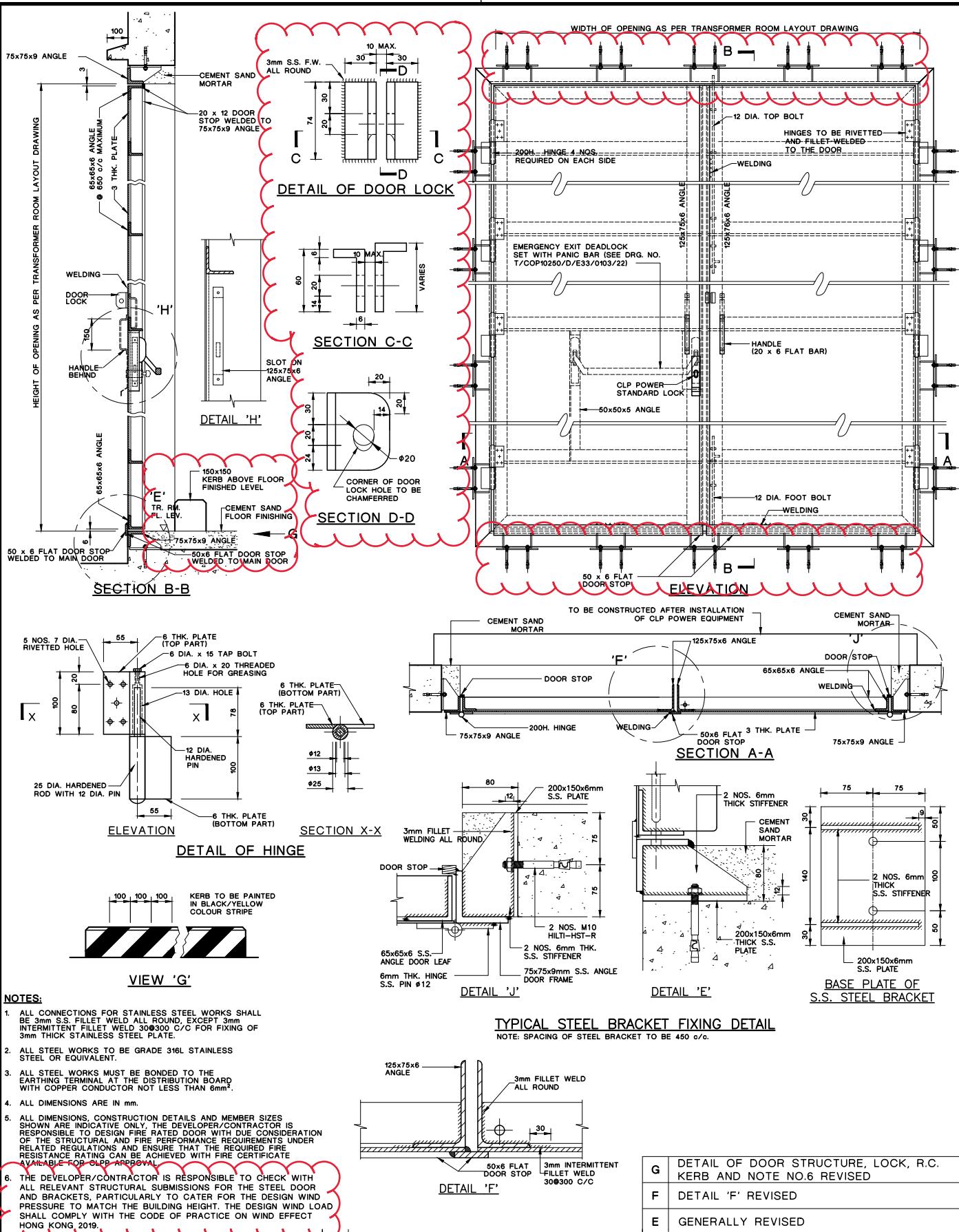
DRAWN: FONG MING SUM | DATE: 04-11-2021

CHECKED: FONG, MING SUM APPROVED: GARY KWOK

SCALE: N. T. S. SHEET(S) IN SET:

ASSET MANAGEMENT

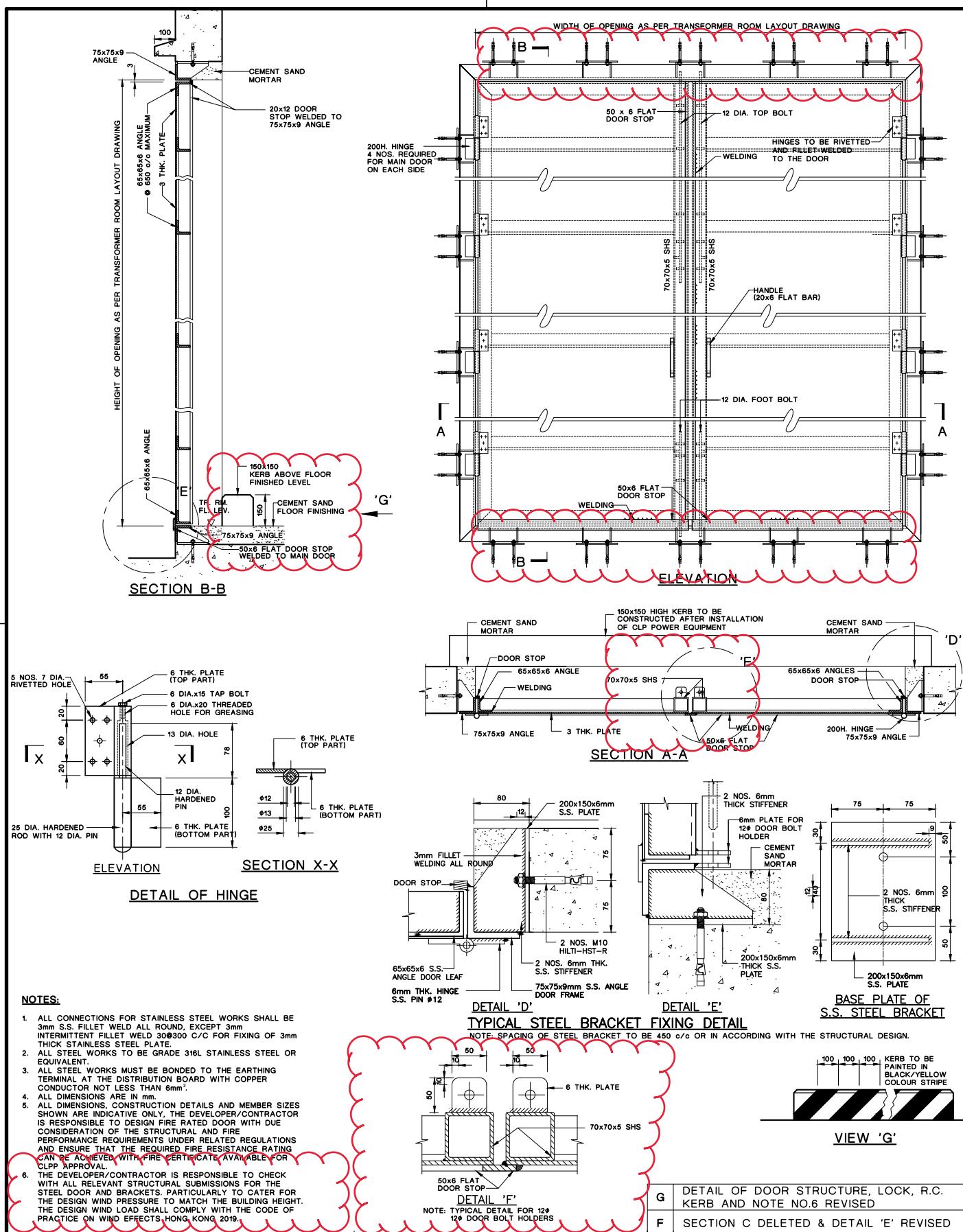
DRG. NO. T // C O P // 1 0 2 5 0 // D // E 3 3 // 0 1 0 3 // 1 9 // G // A



REVS.	21.9.04	13.10.09	26.03.12	18.03.14	01.03.16	13.11.18	04.11.21				
INITIAL	A K.C.C.	B K.C.C.	C K.C.C.	D H.T.YU	E M.S.FONG	F M.S.FONG	G M.S.FONG	H	J	K	L
TITLE :											
TYPICAL DETAILS OF DOUBLE LEAF STAINLESS STEEL DOOR (1500W x 2500H) FOR H. V. SWITCHGEAR ROOM											
DRAWN:	M. S. FONG	DATE:	04-11-2021								
CHECKED:	M. S. FONG	APPROVED:	GARY KWOK								
SCALE:	AS SHOWN	SHEET(S) IN SET:									
A S S E T M A N A G E M E N T											
DRG. NO.	T	C	O	P	1	0	2	5	0	D	E
	1	1	0	1	1	0	1	1	0	1	1
	0	1	0	1	0	1	0	1	0	1	0
	3	3	0	1	0	3	2	0	1	0	1
	2	0	1	0	1	0	1	0	1	0	1
	G	A									

CLP 中電

DRAWN: M. S. FONG DATE: 04-11-2021
CHECKED: M. S. FONG APPROVED: GARY KWOK
SCALE: AS SHOWN SHEET(S) IN SET:

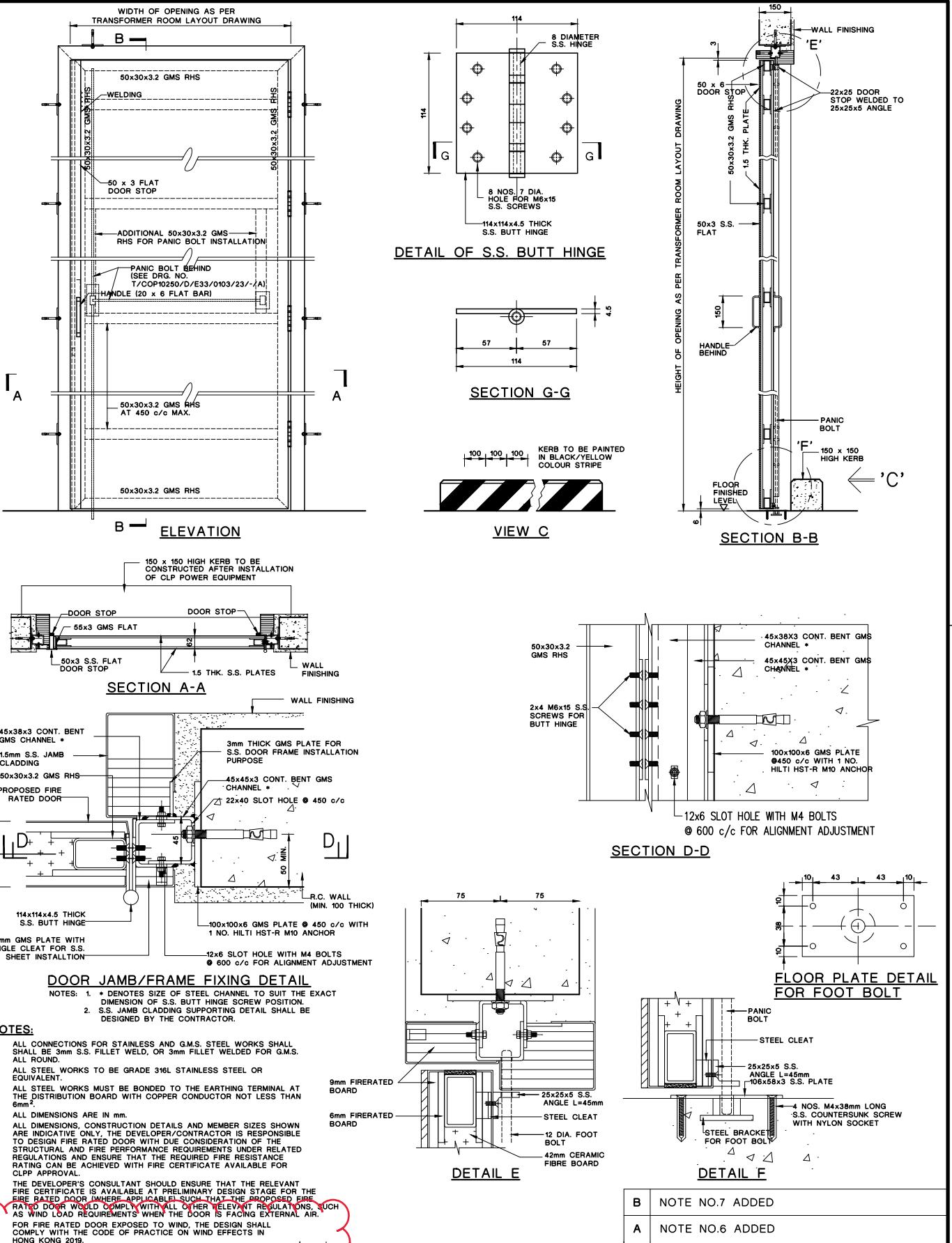


DRAWN:	FONG, MING SUM	DATE:	04-11-2021
CHECKED:	FONG, MING SUM	APPROVED:	GARY KWOK
SCALE:	N.T.S.	SHEET(S) IN SET:	

ASSET MANAGEMENT

TYPICAL DETAILS OF DOUBLE LEAF STAINLESS STEEL DOOR WITHOUT LOCK

DRG. NO. T C O P 1 0 2 5 0 D E 3 3 0 1 0 3 2 1 G A

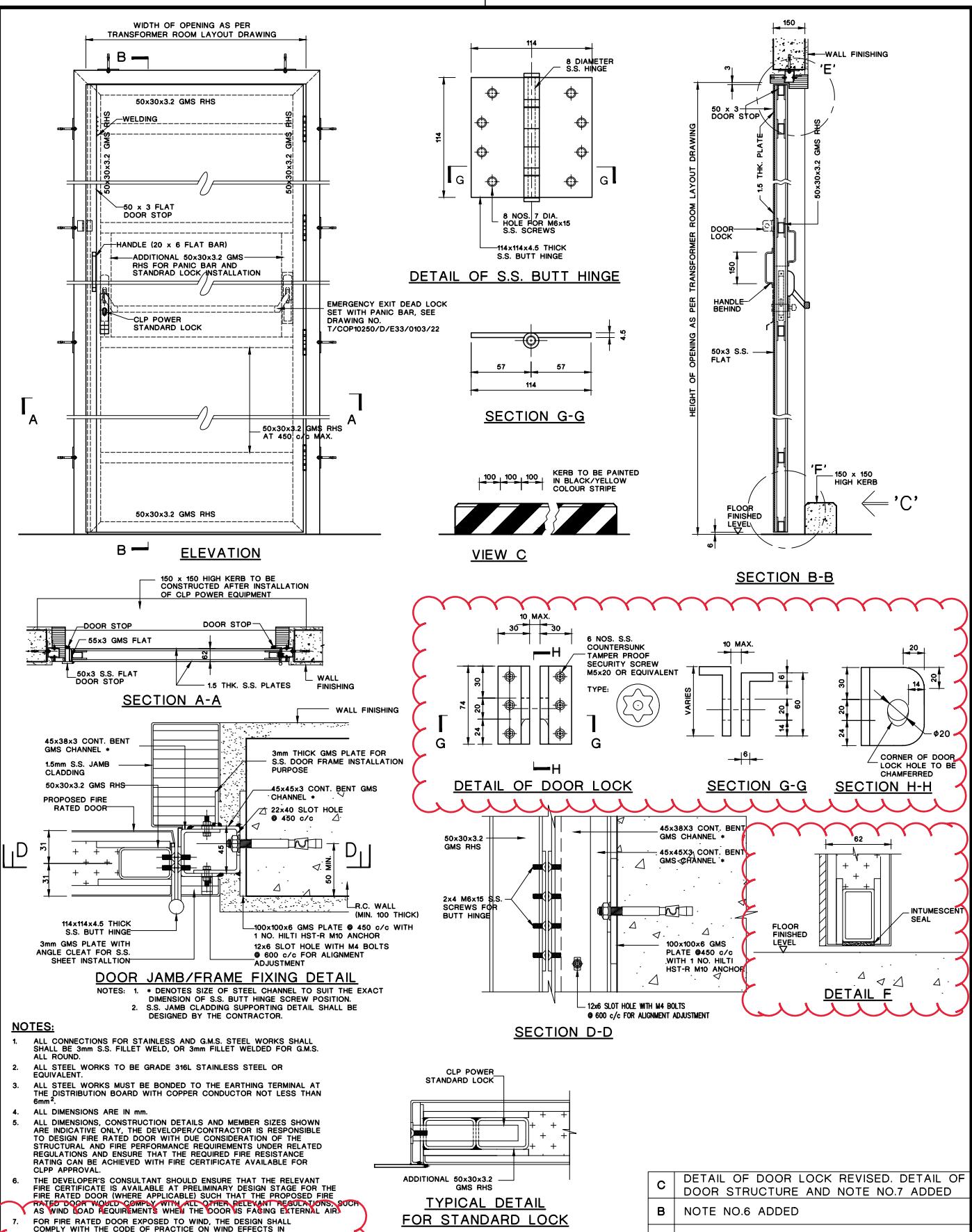


DRAWN:	M. S. FONG	DATE:	04-11-2021
CHECKED:	M. S. FONG	APPROVED:	GARY KWOK
SCALE:	AS SHOWN	SHEET(S) IN SET:	

ASSET MANAGEMENT

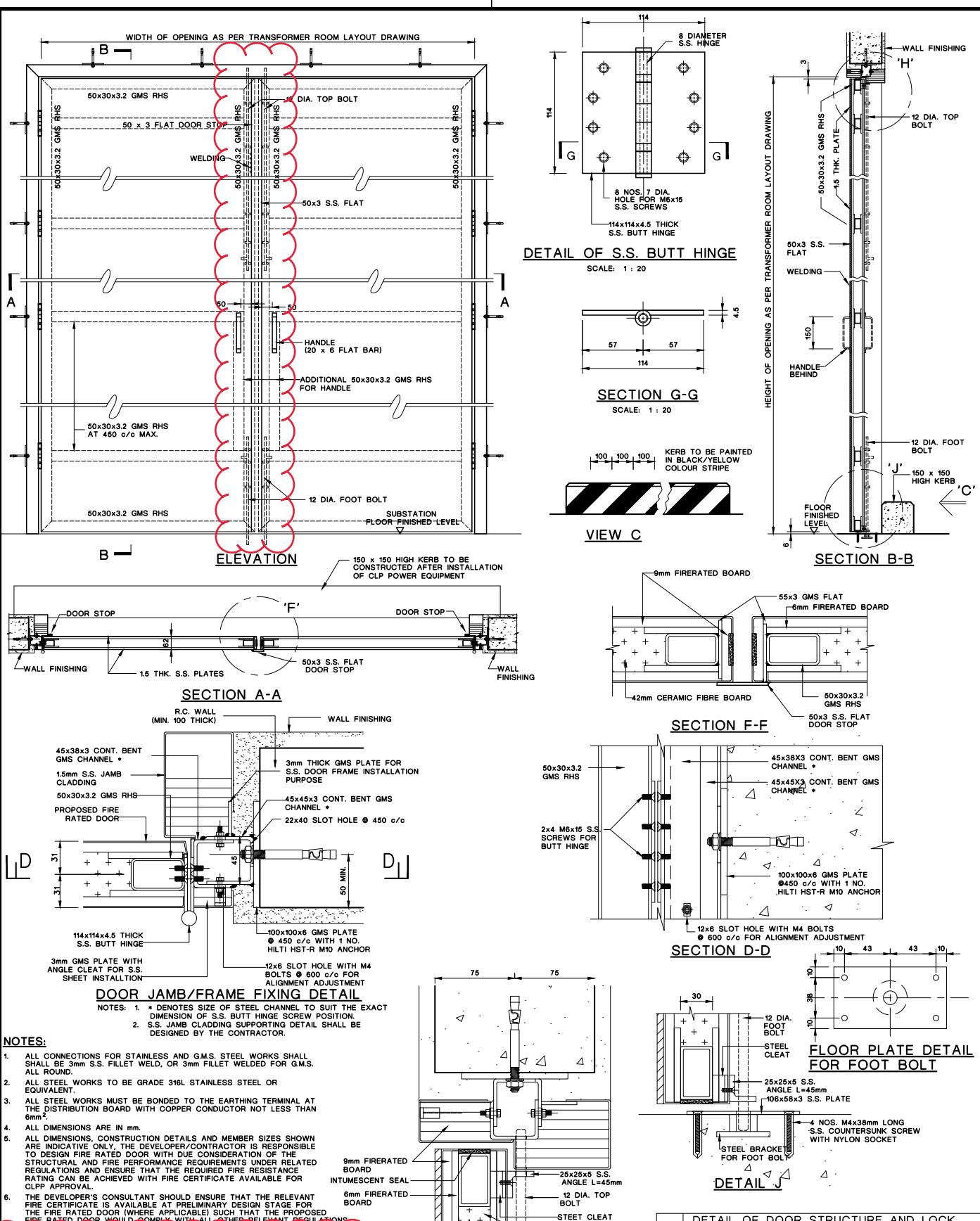
			A	NOTE NO.6 ADDED
REVS.	19.06.20	04.11.21		
	A	B	C	D
INITIAL	H.T.YU	MS FONG		E
TITLE :				
FOR FIRE RATED DOOR WITH INSULATION TYPICAL DETAILS OF SINGLE LEAF LAMINATED STEEL DOOR WITHOUT LOCK				
DRG. NO.	T	C O P	1 0 2 5 0	D E 3 3 0 1 0 3 3 3 B A

**FOR FIRE RATED DOOR WITH INSULATION
TYPICAL DETAILS OF SINGLE LEAF LAMINATED
STEEL DOOR WITHOUT LOCK**



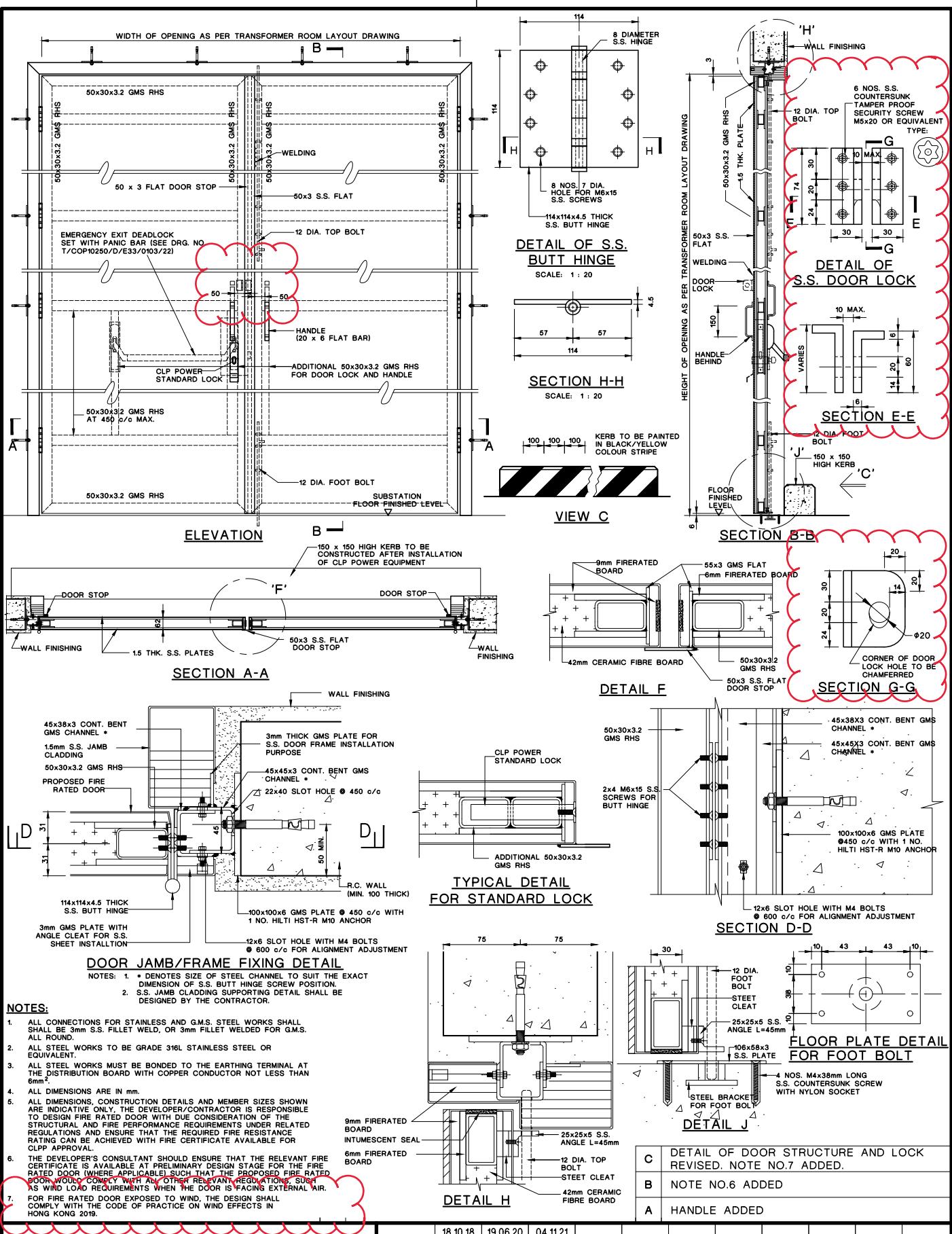
REVS.	18.10.18	19.06.20	04.11.21								
INITIAL	A H.T.YU	B H.T.YU	C M.S. FONG	D	E	F	G	H	J	K	L
TITLE :											
FOR FIRE RATED DOOR WITH INSULATION TYPICAL DETAILS OF SINGLE LEAF LAMINATED STEEL DOOR											
DRAWN: FONG, MING SUM DATE: 04-11-2021											
CHECKED: FONG, MING SUM APPROVED: GARY KWOK											
SCALE: AS SHOWN SHEET(S) IN SET:											
A S S E T M A N A G E M E N T											

CLP 中電



REVS.	19.06.20	04.11.21									
INITIAL	H.T.YU	M.S.FONG									
TITLE :											
FOR FIRE RATED DOOR WITH INSULATION TYPICAL DETAILS OF DOUBLE LEAF LAMINATED STEEL DOOR AND WITHOUT LOCK											
DRAWN: M. S. FONG		DATE: 04-11-2021		CHECKED: M. S. FONG		APPROVED: GARY KWOK		SCALE: N.T.S.		SHEET(S) IN SET:	
ASSET MANAGEMENT											
DRG. NO.		T	C	O	P	1	0	2	5	0	D
F		1	1	2	1	1	1	1	1	1	E
3		3	3	3	3	3	3	3	3	3	F
0		1	1	0	3	0	1	0	3	3	G
1		1	1	0	3	1	1	0	3	3	H
5		5	5	5	5	5	5	5	5	5	I
B		1	1	1	1	1	1	1	1	1	J
A		1	1	1	1	1	1	1	1	1	K
A		1	1	1	1	1	1	1	1	1	L

CLP 中電

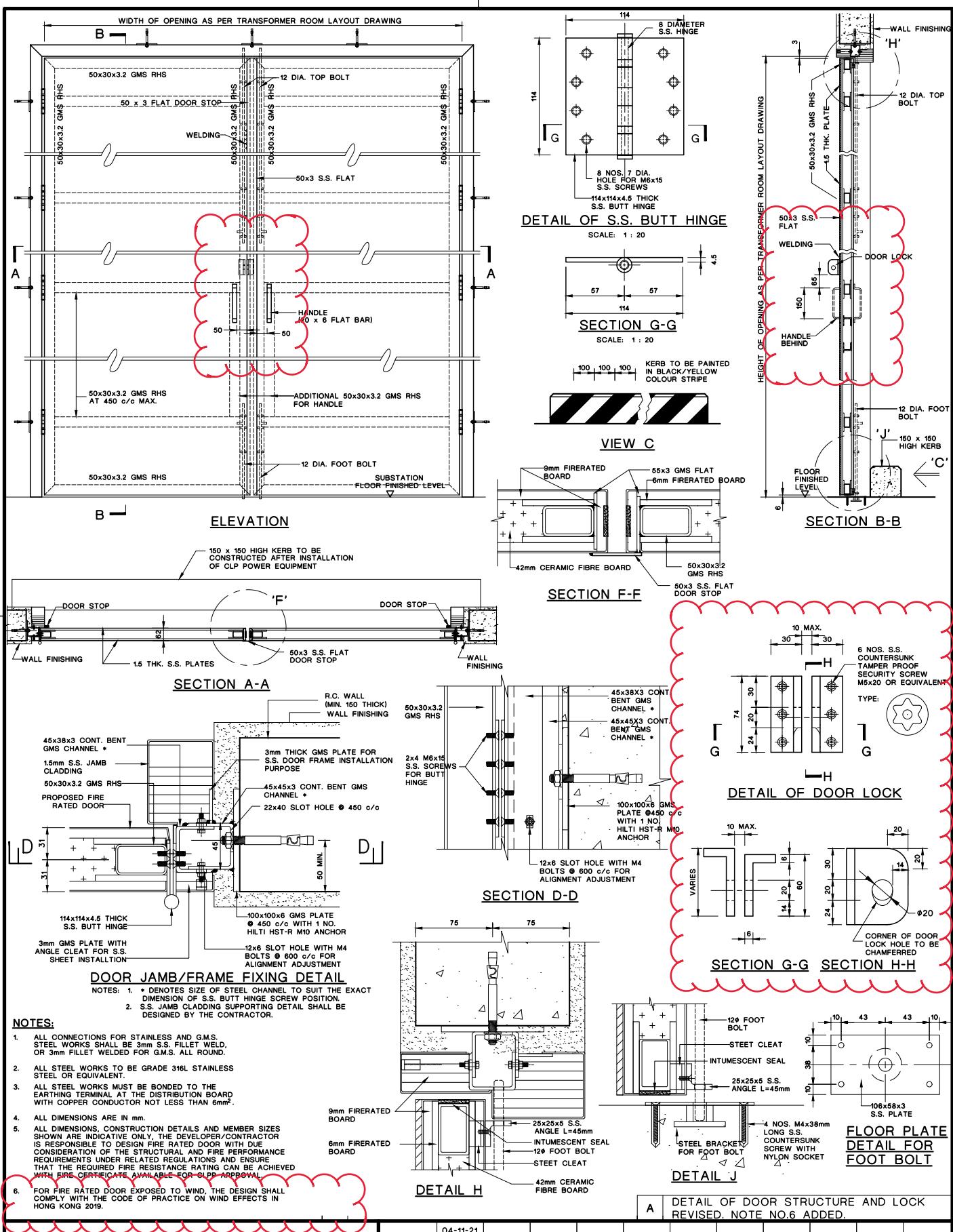


CLP 中電

DRAWN: M. S. FONG DATE: 04-11-2021
CHECKED: M. S. FONG APPROVED: GARY KWOK
SCALE: AS SHOWN SHEET(S) IN SET:

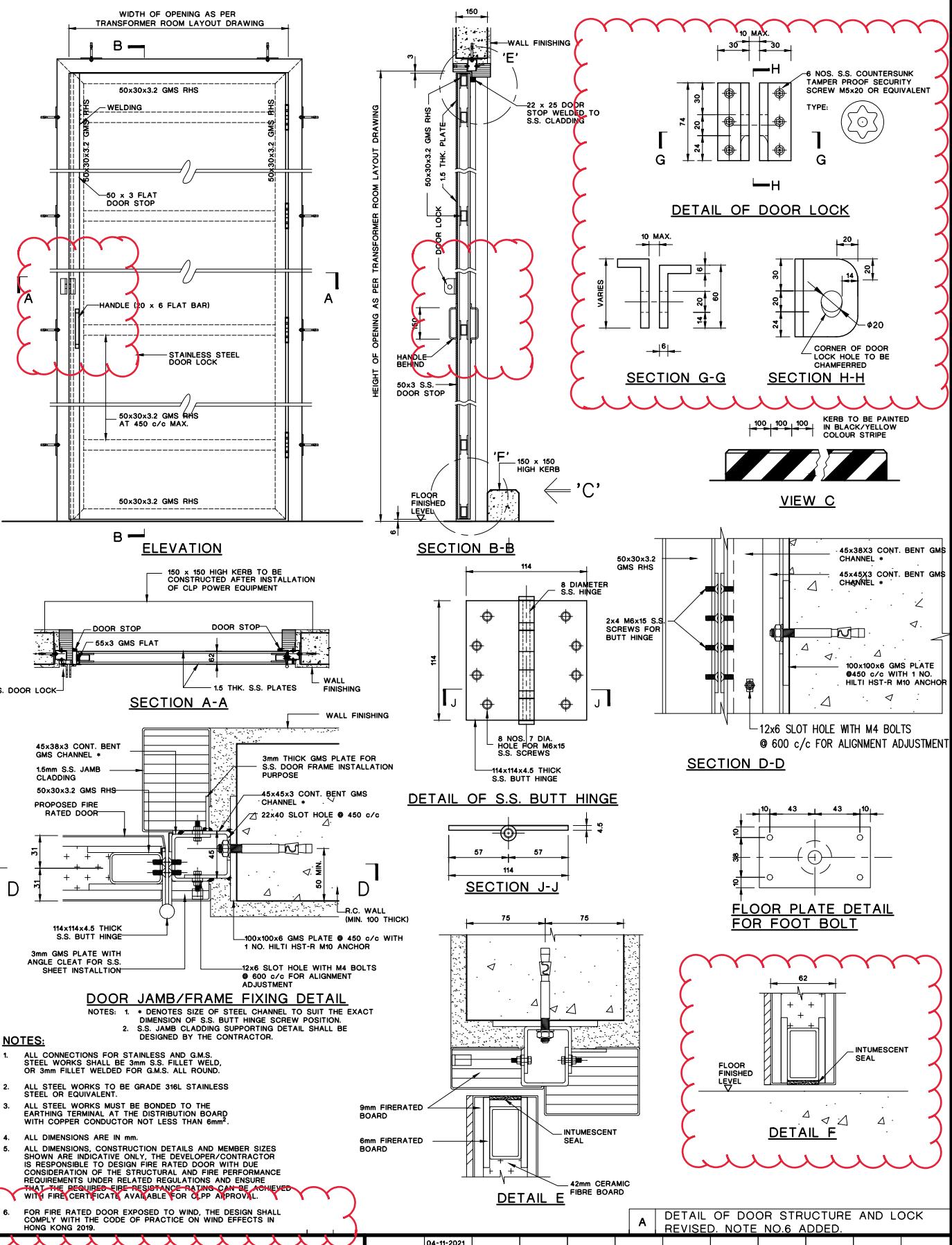
A S S E T M A N A G E M E N T

REVS.	18.10.18	19.06.20	04.11.21								
INITIAL	A H.T.YU	B H.T.YU	C M.S. FONG	D	E	F	G	H	J	K	L
TITLE :											
FOR FIRE RATED DOOR WITH INSULATION TYPICAL DETAILS OF DOUBLE LEAF LAMINATED STEEL DOOR											
DRG. NO. T/COP/10250/D/F33010336CA											



REVS.	04-11-21																							
INITIAL	A	B	C	D	E	F	G	H	J	K	L													
TITLE :	FOR FIRE RATED DOOR WITH INSULATION TYPICAL DETAILS OF DOUBLE LEAF LAMINATED STEEL DOOR WITH LOCK EYE																							
DRAWN: M. S. FONG DATE: 04-11-2021 CHECKED: M. S. FONG APPROVED: GARY KWOK SCALE: N.T.S. SHEET(S) IN SET:																								
ASSET MANAGEMENT																								

CLP 中電

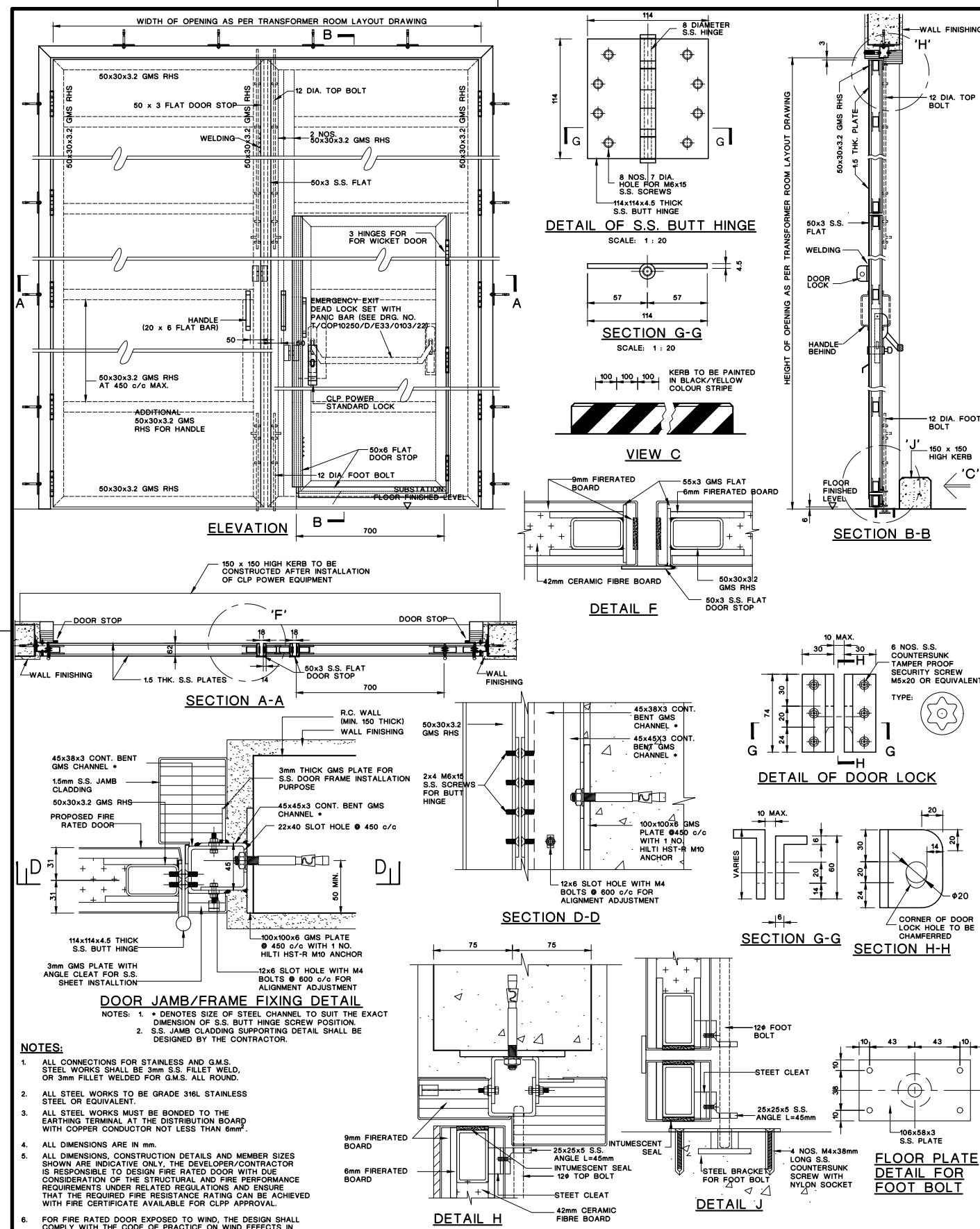


REVS.	A	B	C	D	E	F	G	H	J	K	L									
INITIAL	M.S. FONG																			
TITLE :																				
FOR FIRE RATED DOOR WITH INSULATION TYPICAL DETAILS OF SINGLE LEAF LAMINATED STEEL DOOR WITH LOCK EYE																				
DRG. NO.	T	C	O	P	1	0	2	5	0	D	3	3	0	1	0	3	4	2	A	A

CLP 中電

DRAWN: MING SUM FONG DATE: 04-11-2021
CHECKED: MING SUM FONG APPROVED: GARY KWOK
SCALE: N.T.S. SHEET(S) IN SET:

A S S E T M A N A G E M E N T



TITLE :

FOR FIRE RATED DOOR WITH INSULATION
TYPICAL DETAILS OF DOUBLE LEAF
LAMINATED STEEL DOOR WITH WICKET
ON THE RIGHT

DRAWN: M S FONG

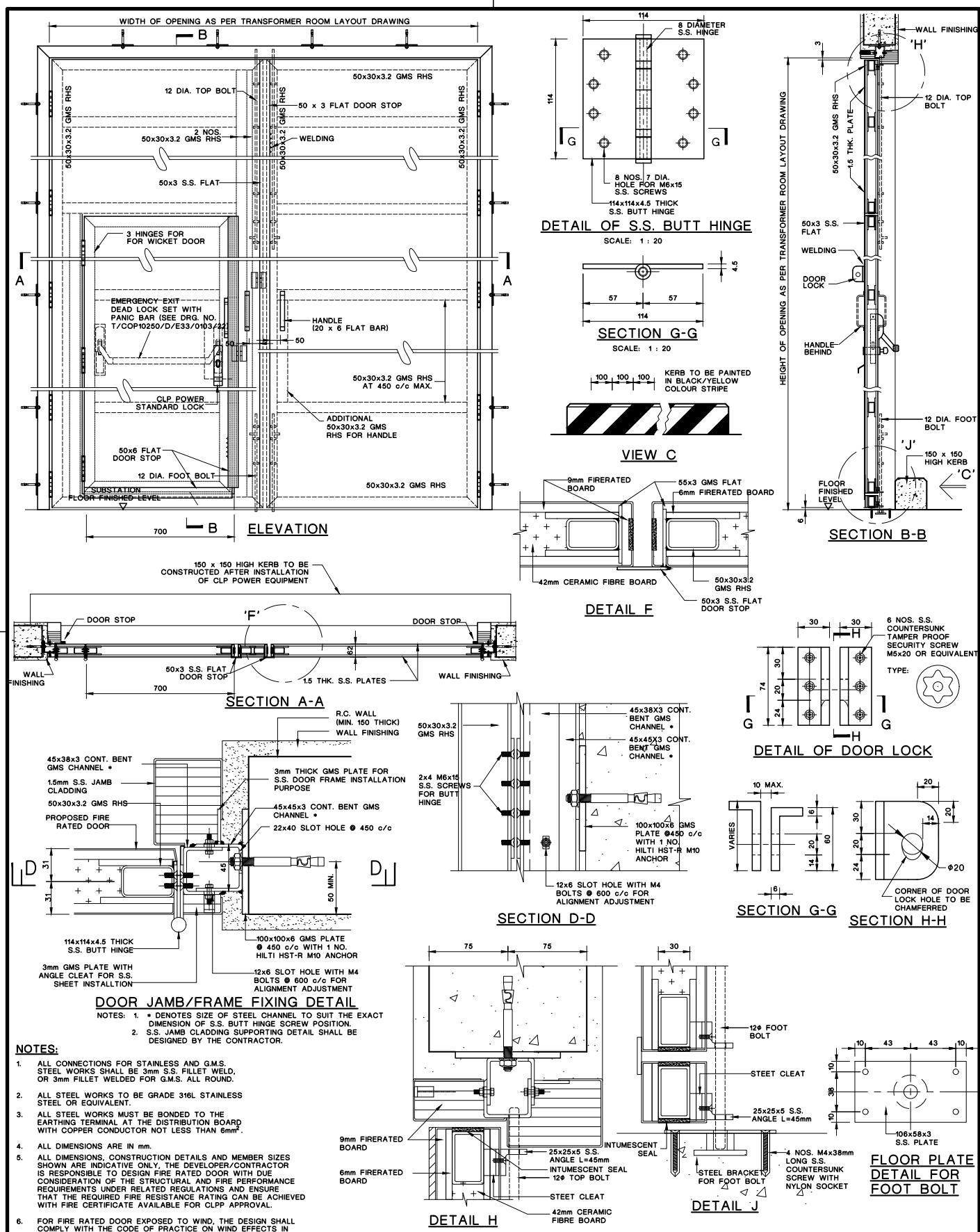
DATE: 04-11-2021

CHECKED: M. S. FONG

APPROVED: GARY KWOK

SCALE: N.T.S. SHEET(S) IN SET:

DRG. NO. T C O P 1 0 2 5 0 D E 3 3 0 1 0 3 4 6 - A



CLP 中電

TITLE

FOR FIRE RATED DOOR WITH INSULATION
TYPICAL DETAILS OF DOUBLE LEAF
LAMINATED STEEL DOOR WITH WICKET
ON THE LEFT

DRAWN: M S FONG

DATE: 04-11-2021

CHECKED: M. S. FONC

APPROVED: GARY KWOK

SCALE: N.T.S. SHEET(S) IN SET:

DRG. NO. T C O P 1 0 2 5 0 D E 3 3 0 1 0 3 4 7 - A

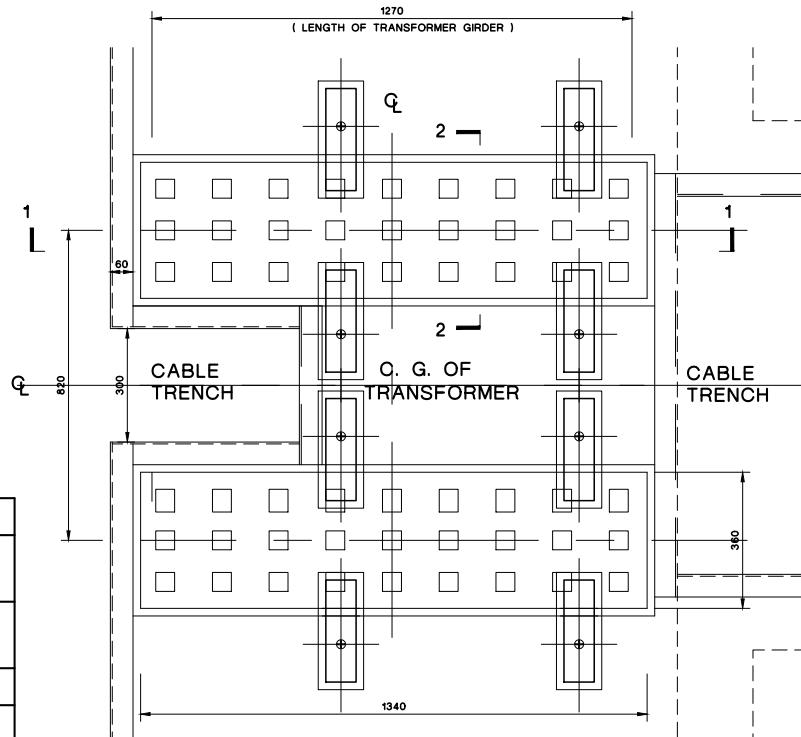
NOTES FOR FLOATING PLINTH

IN ORDER TO REDUCE NUISANCE OF SOUND AND VIBRATION DUE TO THE OPERATION OF TRANSFORMER, FLOATING SLAB MAY BE PROPOSED WITH SOUND OR VIBRATION ISOLATION PADS. THE FOLLOWING INFORMATION SHALL BE SUBMITTED FOR CLP PRIOR APPROVAL:

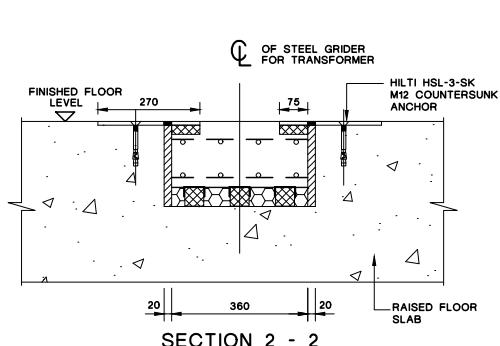
1. DESIGN OF THE FLOATING SLAB WITH SOUND OR VIBRATION ISOLATION PADS. THE C.G. OF ISOLATION PADS SHALL COINCIDE WITH THE C.G. OF CLP TRANSFORMER.
2. LIFTING EYES SHALL BE INSTALLED IN THE FLOATING SLAB SUCH THAT ANY DEFLECTED OR MALFUNCTION ISOLATION PADS COULD BE REPLACED WITHOUT BREAKING THE FLOATING SLAB.

LEGEND FOR R.C. FLOATING PLINTH

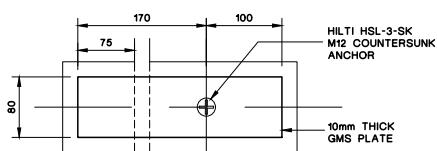
ELEMENT MARK	ELEMENT TYPE
A	2 NOS. HILTI HST3-R M16 @ 300 c/c HORIZONTALLY
B	10mm THICK NOISE STOP ISOLATION BOARD
C	10mm THICK GMS PLATE
D	JOINT SEALANT
E	0.2mm POLYTHYLENE SHEET ON 2mm G.I. STEEL SHEET, AND 1mm THICK GMS CHANNEL FOR LOAD TRANSFER TO VIBRATION ISOLATION PADS
F	VIBRATION ISOLATION PAD
G	50mm 48kg/m ³ FIBREGLASS
H	STEEL FABRIC B283 TO BS4483



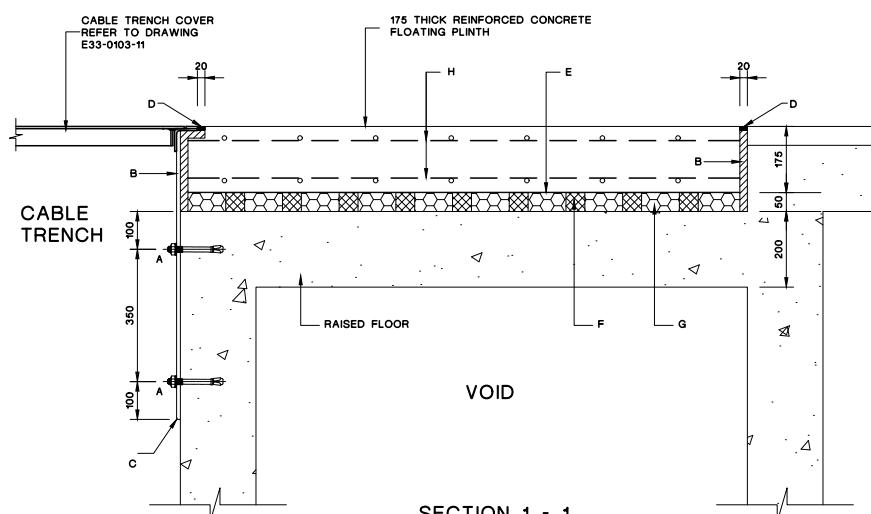
FLOATING PLINTH PLAN



SECTION 2 - 2



STEEL CRAMP DETAIL



SECTION 1 - 1

CLP 中電

DRAWN: M. S. FONG	DATE: 04-11-2021
CHECKED: M. S. FONG	APPROVED: GARY KWOK
SCALE: N.T.S.	SHEET(S) IN SET: 1

A S S E T M A N A G E M E N T

REVS.	A	B	C	D	E	F	G	H	J	K	L
INITIAL											

TITLE :

**TYPICAL DETAILS OF TRANSFORMER
FLOATING PLINTH**

DRG. NO. T/COP/10250/D/F330103/48-A