

E. Schematic Drawing of Facilities in T2 Building

E.1 Emergency Power Supply System No.1

E.2 Emergency Power Supply System No.2

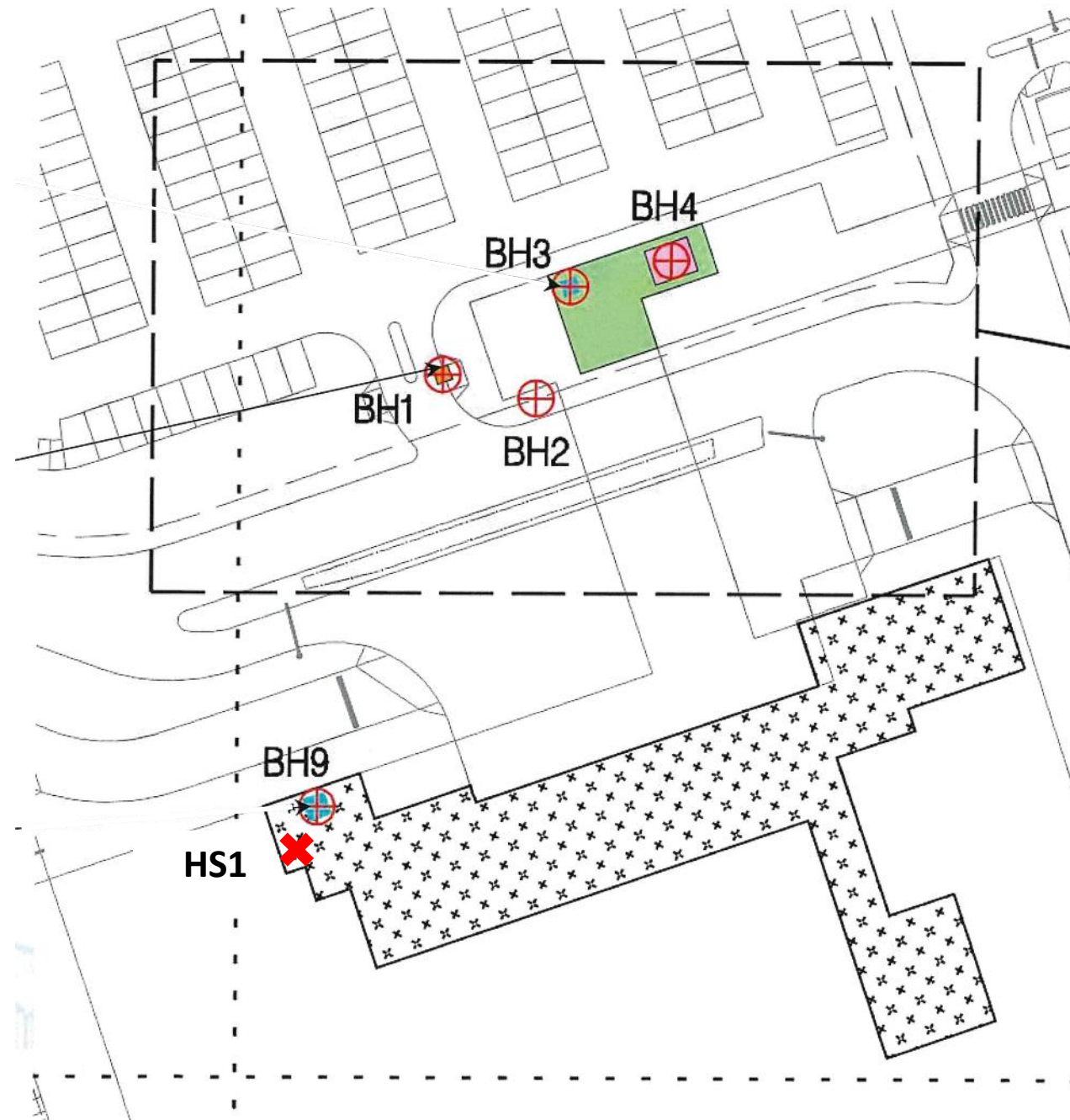
E.3 Emergency Power Supply System No.3

E.4 Emergency Power Supply System No.4

E.5 Emergency Power Supply System No.5

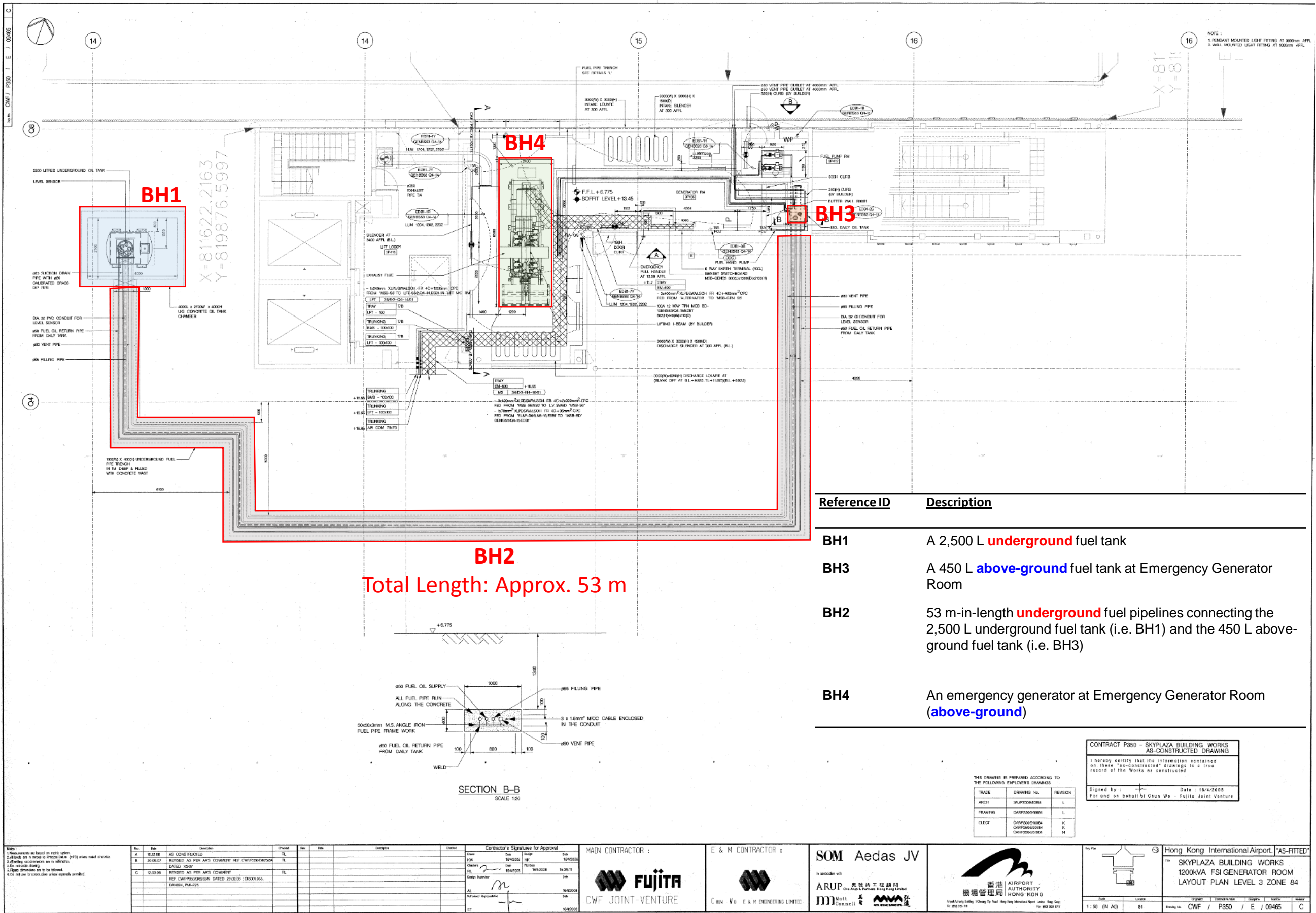
Appendix E.1 Emergency Power Supply System No. 1 (**BH 1**, **BH2**, **BH3** and **BH4**)

Northern Section of T2 Building



<u>Reference ID</u>	<u>Description</u>
BH1	A 2,500 L underground fuel tank
BH3	A 450 L above-ground fuel tank at Emergency Generator Room
BH2	53 m-in-length underground fuel pipelines connecting the 2,500 L underground fuel tank (i.e. BH1) and the 450 L above-ground fuel tank (i.e. BH3)
BH4	An emergency generator at Emergency Generator Room (above-ground)

Appendix E.1 Emergency Power Supply System No. 1 (BH 1, BH2, BH3 and BH4)



Notes:

- Measurements are based on metric system.
- Dimensions are in metric unless otherwise indicated.
- Referencing and dimensions are in millimeters.
- See separate drawings.
- Right dimensions are to be followed.
- Do not use to construct unless expressly permitted.

Rev.	Date	Description	Checked	Appr.	Date	Description	Checked
A	10.12.06	AS CONSTRUCTED					
B	30.09.07	REVISED AS PER AAS COMMENT REF. CWP/PS5002/0004 DATED 2007					
C	12.03.08	REVISED AS PER AAS COMMENT REF. CWP/PS5002/0025 DATED 23.03.08 ; 02/01/08, 04/03/08, 04/03/08					

Contractor's Signatures for Approval

Name	Date	Signature	Date
Site Engineer	19/03/08	[Signature]	19/03/08
Design Supervisor	19/03/08	[Signature]	19/03/08
Project Representative	19/03/08	[Signature]	19/03/08

MAIN CONTRACTOR : **FUJITA**
CWF JOINT-VENTURE

E & M CONTRACTOR : **CHUN WU E & M ENGINEERING LIMITED**

SOM Aedas JV
In association with:
ARUP 英國特許工程師
Mott MacDonald 英國特許工程師

香港國際機場管理局
AIRPORT AUTHORITY HONG KONG

Hong Kong International Airport, "AS-FITTED"
The SKYPLAZA BUILDING WORKS
1200KVA FSI GENERATOR ROOM
LAYOUT PLAN LEVEL 3 ZONE 84

Scale: 1:50 (IN A3) 84
Drawing No: CWF / P350 / E / 09465
Sheet: C

CONTRACT P350 - SKYPLAZA BUILDING WORKS
AS-CONSTRUCTED DRAWING

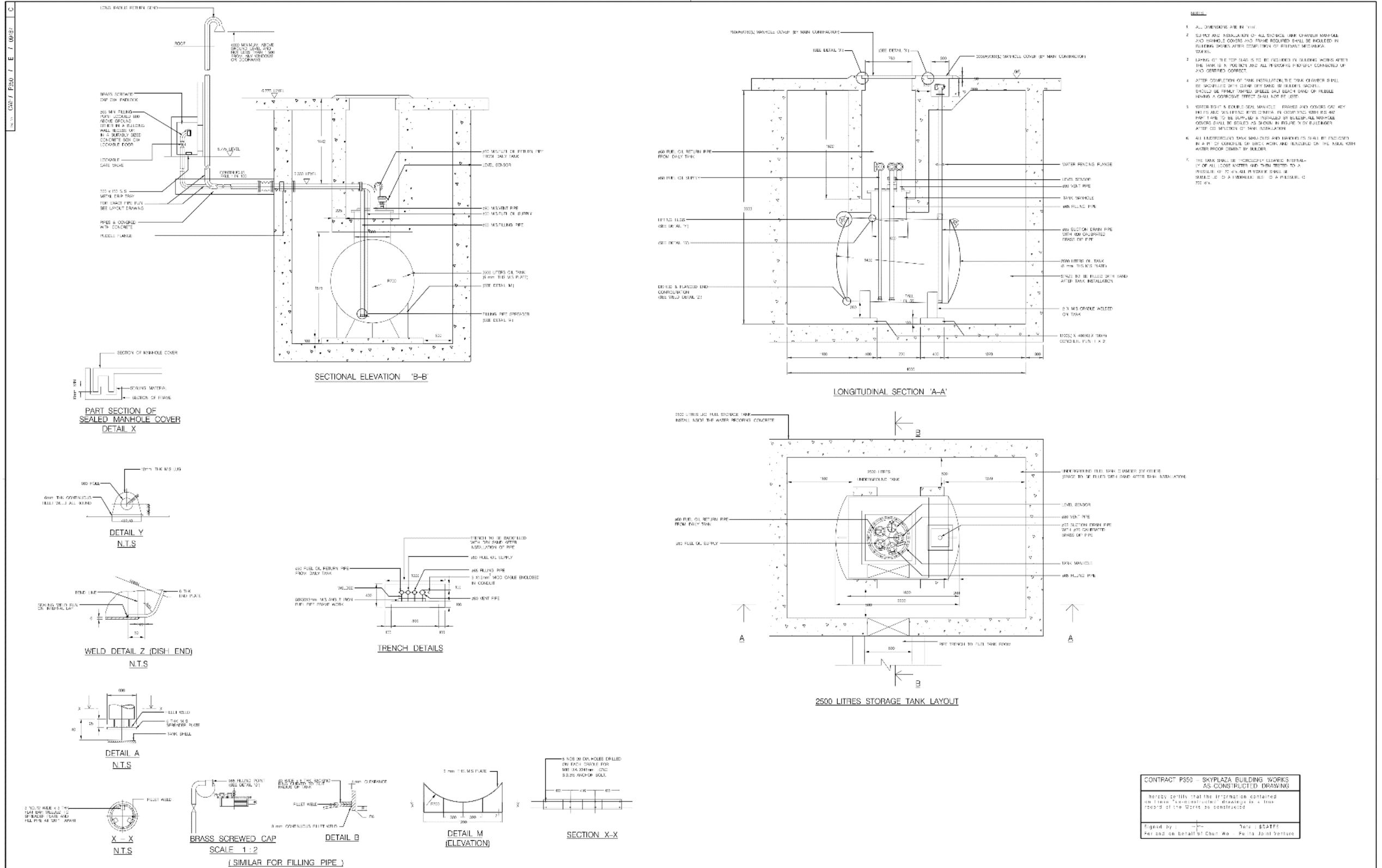
I hereby certify that the information contained on these "as-constructed" drawings is a true record of the Works as constructed.

Signed by: [Signature] Date: 16/4/2008
For and on behalf of Chun Wu - Fujita Joint Venture

THIS DRAWING IS PREPARED ACCORDING TO THE FOLLOWING EMPLOYER'S DRAWINGS

TRICE	DRAWING No.	REVISION
ARCHT	SAUP/PS5002/0004	L
FRAMING	CAWP/PS5002/0004	L
ELECT	CAWP/PS5002/0004 CAWP/PS5002/0004 CAWP/PS5002/0004	K K H

Appendix E.1 Emergency Power Supply System No. 1 (BH 1, BH2, BH3 and BH4)



CONTRACT P850 - SKYPLAZA BUILDING WORKS
AS-CONSTRUCTED DRAWING

I hereby certify that the information contained in these 'AS-CONSTRUCTED' drawings is a true record of the Works as constructed.

Signed by: _____ Date: 04/11/15
Per and on behalf of: Chen Wai Fung Joint Venture

Rev	Date	Description	Author	Check	Appr	Appr	Appr	Appr	Appr
A	15/12/15	AS-CONSTRUCTED	RL						
B	20/10/16	PROPOSED JOINT VENTURE PER COMPRESSION	RL						
C	17/03/16	REVISED JOINT VENTURE PER COMPRESSION	RL						
D	17/03/16	REVISED JOINT VENTURE PER COMPRESSION	RL						

Contractor's Signature for Approval			
Name	Date	Signature	Scale
Chen Wai Fung	04/11/15	[Signature]	\$04/15
Chen Wai Fung	04/11/15	[Signature]	\$04/15
Chen Wai Fung	04/11/15	[Signature]	\$04/15
Chen Wai Fung	04/11/15	[Signature]	\$04/15

Contractor	Scale	Signature	Date
MAIN CONTRACTOR: FUJITA CWF JOINT-VENTURE	SCALE: 1/10	[Signature]	04/11/15
E & Y CONTRACTOR: E & Y ENGINEERING LIMITED	SCALE: 1/10	[Signature]	04/11/15
SOM Aedas JV	SCALE: 1/10	[Signature]	04/11/15
ARUP	SCALE: 1/10	[Signature]	04/11/15
Mott MacDonald	SCALE: 1/10	[Signature]	04/11/15
SKYPLAZA BUILDING WORKS	SCALE: 1/10	[Signature]	04/11/15

Hong Kong International Airport 'AS-FITTED'	
Scale	Sheet No.
1:50 (R/A)	84
Project: SKYPLAZA BUILDING WORKS 2500 LITRES UNDERGROUND FUEL STORAGE TANK LAYOUT AND ELEVATION AND DETAILS (ZONE 84)	
Contract: CWF / P850 / E / 09457	Sheet: C

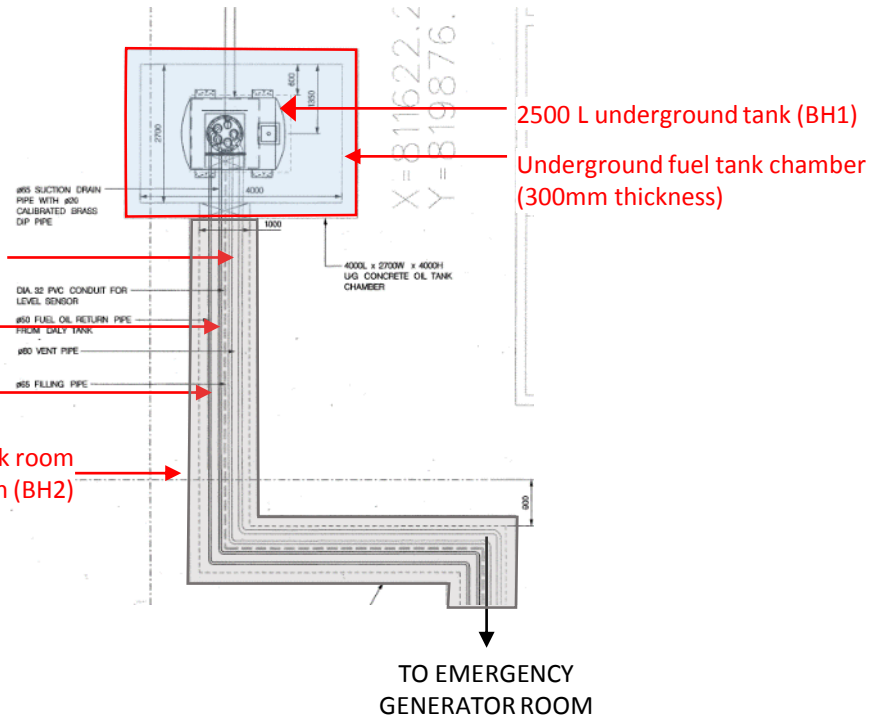
Appendix E.1 Emergency Power Supply System No. 1 Details of BH1 (2,500 L Underground Fuel Tank) & BH2 (Underground Fuel Pipeline)



Notes

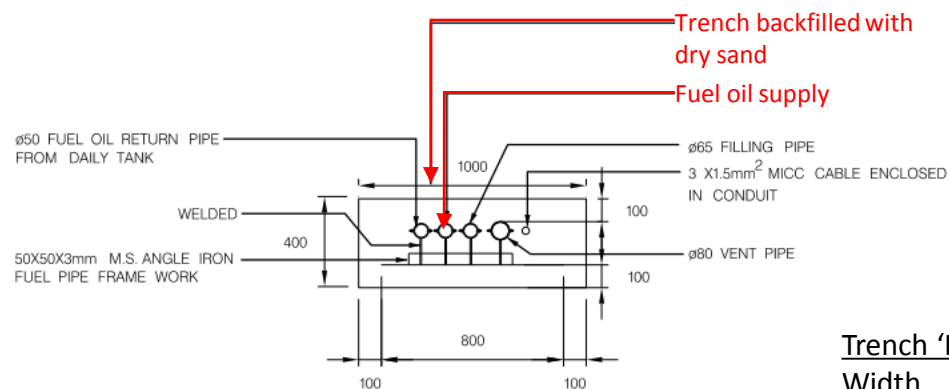
- Underground fuel tank fully encased in 300mm thick concrete chamber
- Space between the tank and the chamber is filled with sand
- Test run of emergency generator conducted monthly (for 30-60 mins)
- Manhole chamber of U/G tank is checked monthly and re-filled approx. every 6 months
- The quantity of fuel inside the tank is automatically monitored by level sensor. No sign of leakage is detected.

PLAN VIEW

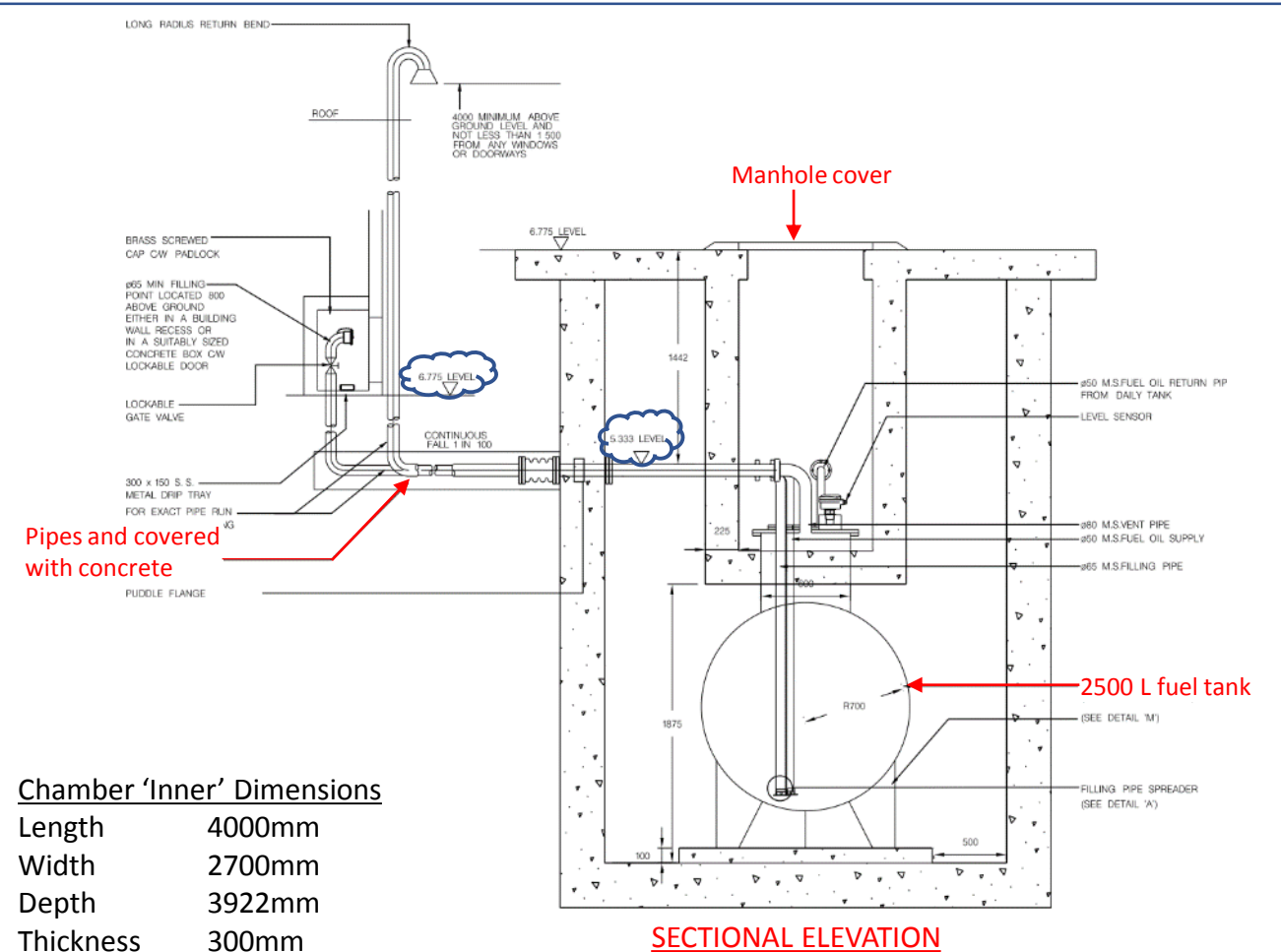
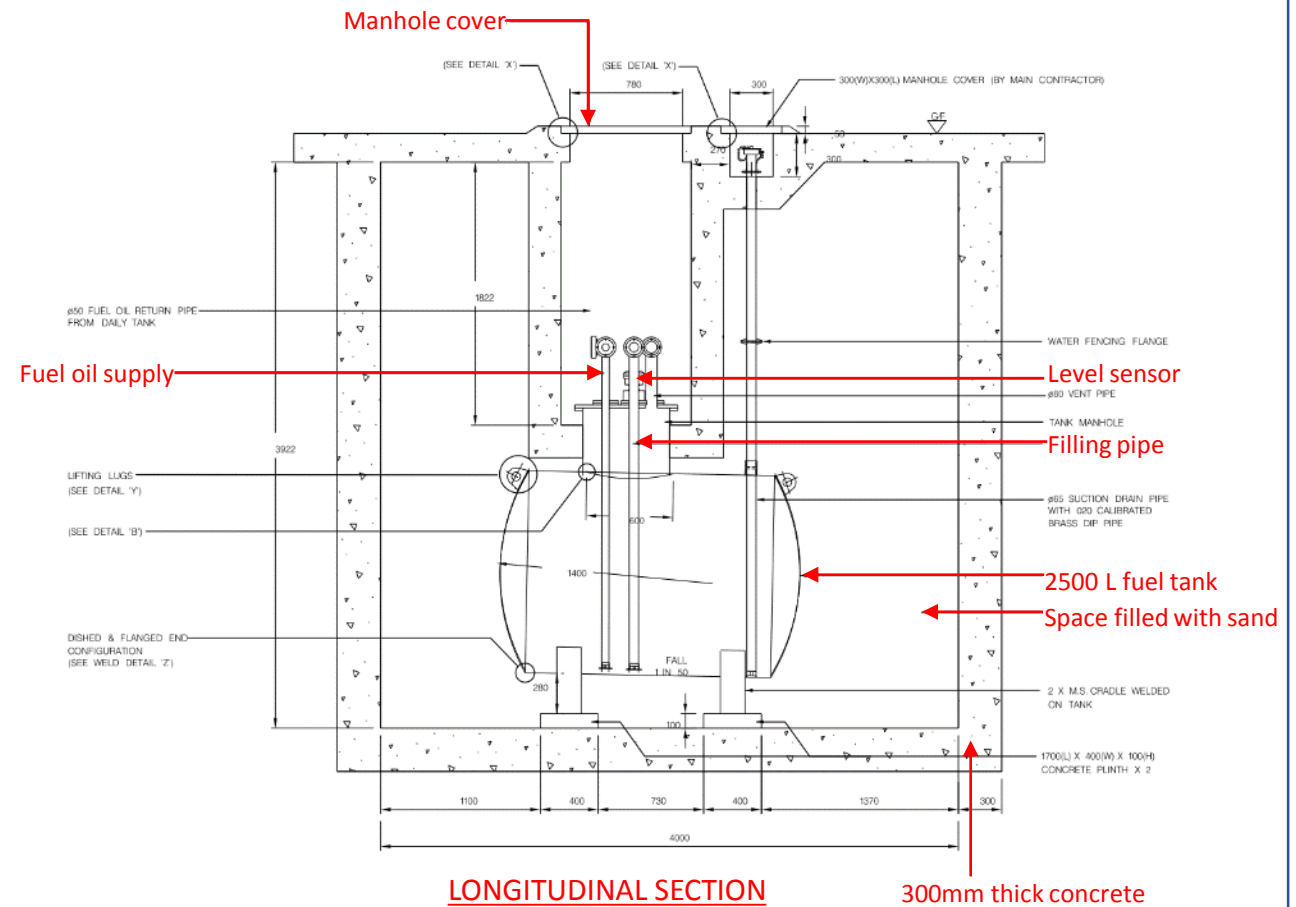


TRENCH DETAILS

(Underground Pipeline (BH2) – Approx. 1.5m below ground level)



Trench 'Inner' Dimensions	
Width	800mm
Depth	300mm
Thickness	100mm



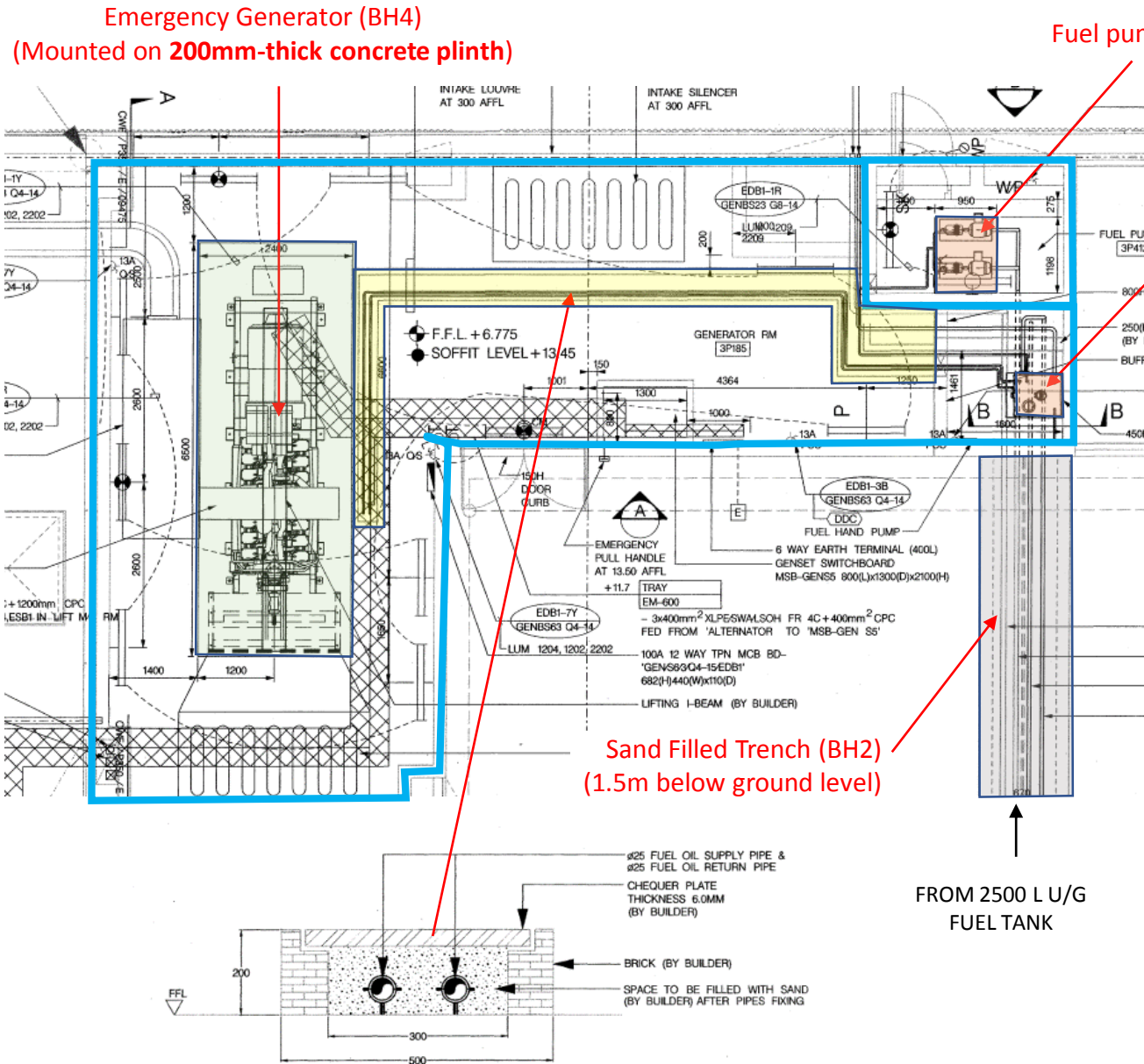
Chamber 'Inner' Dimensions

Length	4000mm
Width	2700mm
Depth	3922mm
Thickness	300mm

Appendix E.1 Emergency Power Supply System No. 1

Details of BH3 (450 L Above-ground Fuel Tank) & BH4 (Above-ground Emergency Generator)

PLAN VIEW



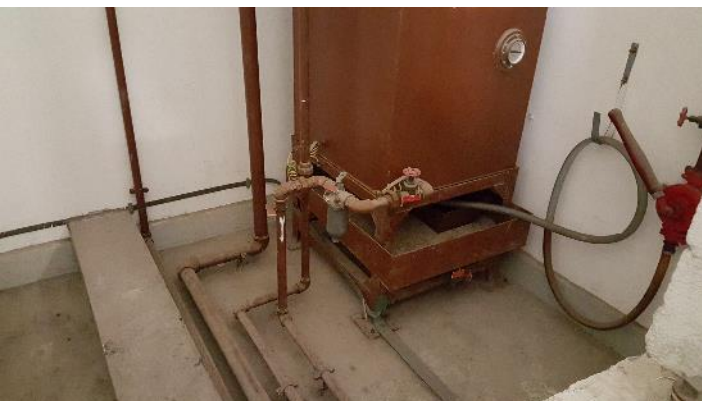
Fuel pump room



450 L fuel tank (BH3)



Fuel pipes within the fuel tank chamber (leading to generator BH4)



Metal drip tray and concrete curb surrounding fuel tank



Fuel pipes to/from 450L fuel tank and the generator



Sand filled trench containing fuel pipes (outside the fuel tank chamber)

Supply and return pipe from fuel oil tank (Sand Filled Trench at floor level)

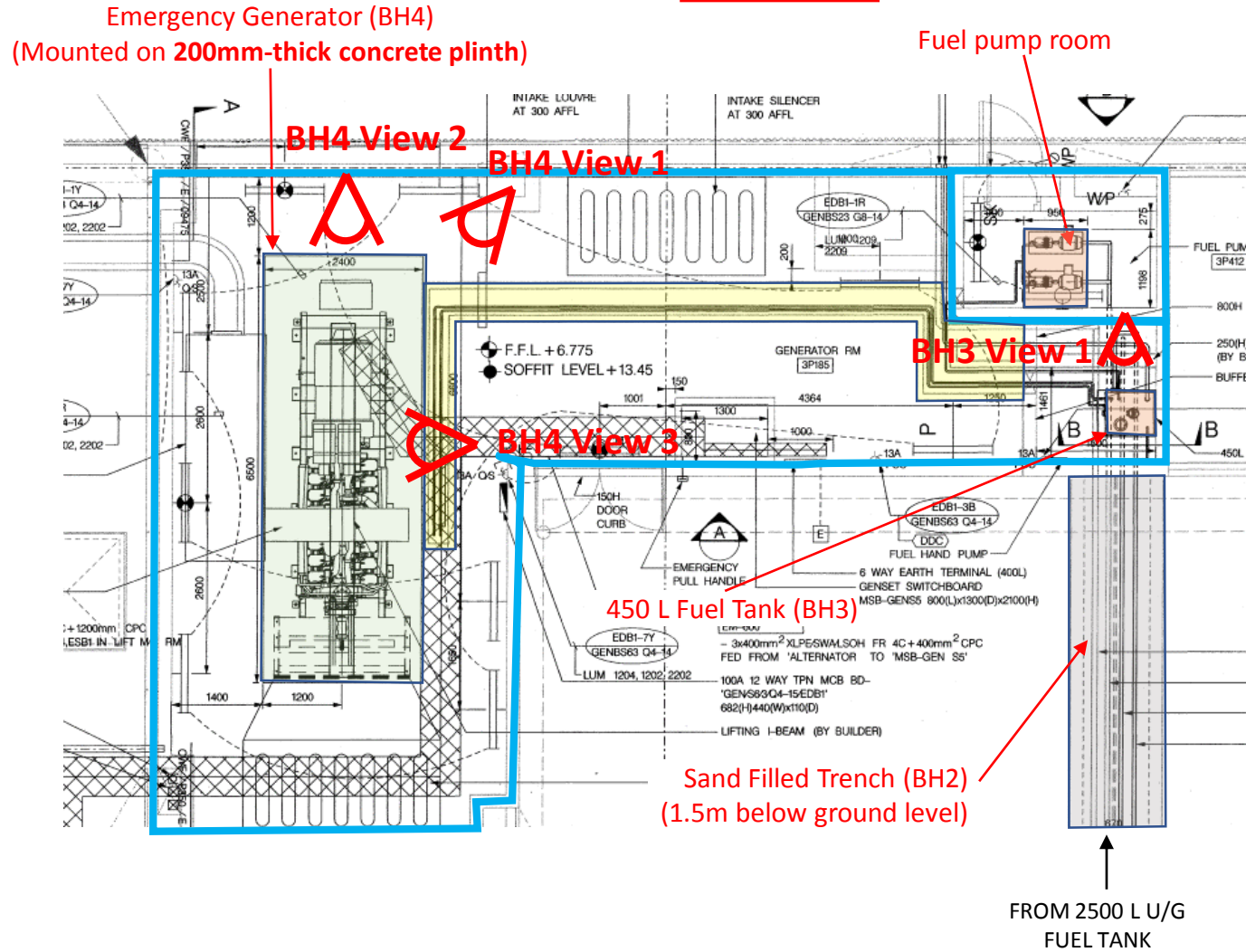
Notes

- Both the fuel tank and generator mounted on intact concrete floor with no any oil stain.
- Fuel tank with metal drip tray and surrounded by concrete curb
- Fuel pipes inside sand filled concrete trench
- Test run of emergency generator conducted monthly (for 30-60 mins)
- Fuel tank is checked monthly and re-filled approx. every 6 months. No fuel leakage was recorded.

Appendix E.1 Emergency Power Supply System No. 1

Details of BH3 (450 L Above-ground Fuel Tank) & BH4 (Above-ground Emergency Generator)

PLAN VIEW



BH3 View 1 – concrete floor condition underneath 450 L fuel tank



BH4 View 1 - Emergency Generator (BH4) (Mounted on 200mm-thick concrete plinth)



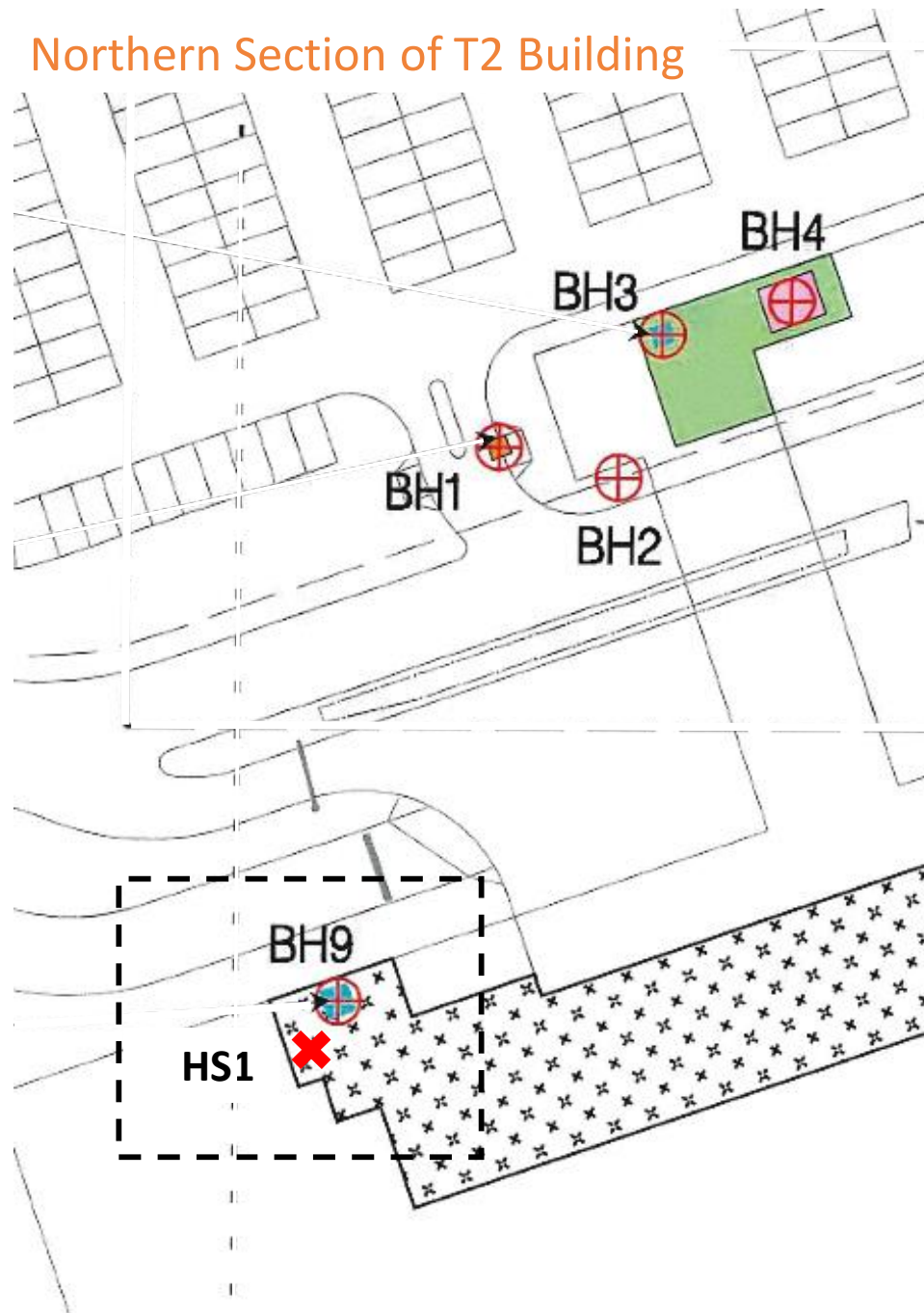
BH4 View 2 - concrete floor condition underneath Emergency Generator



BH4 View 3 - concrete floor condition underneath Emergency Generator

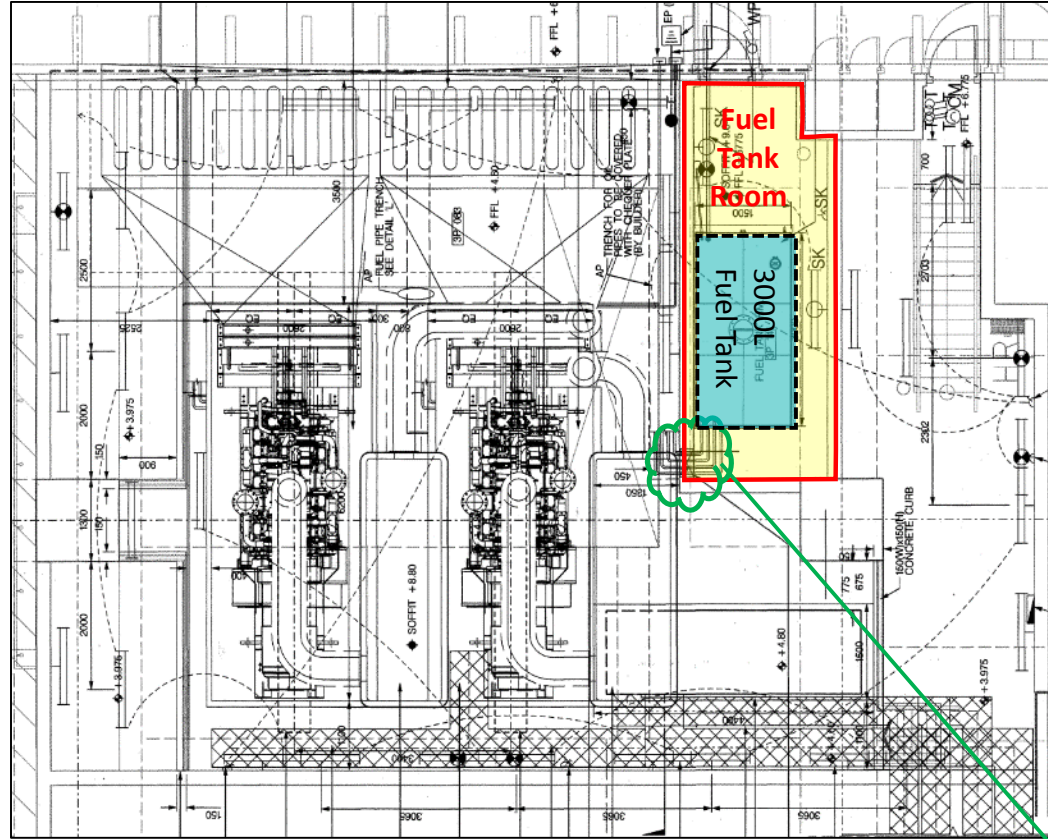
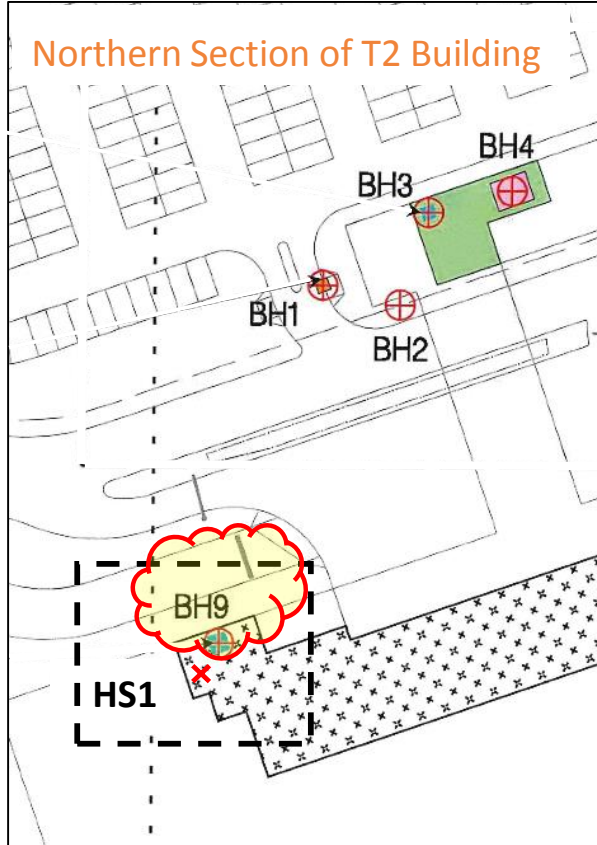
Appendix E.2 Emergency Power Supply System No. 2 ([BH 9](#) and [HS1](#))

Northern Section of T2 Building



<u>Reference ID</u>	<u>Description</u>
BH9	A 3,000 L above-ground fuel tank at Fuel Tank Room
HS1	Two emergency generators at Emergency Generator Room, connected to 3,000 L above-ground fuel tank (i.e. BH9) (above-ground)

Appendix E.2 Emergency Power Supply System No. 2
 Details of **BH9** (3000L **Above-ground** Fuel Tank inside T2)



Reference ID	Description
BH9	A 3,000 L above-ground fuel tank at Fuel Tank Room
HS1	Two above-ground emergency generators at Emergency Generator Room, connected to 3,000 L above-ground fuel tank (i.e. BH9)

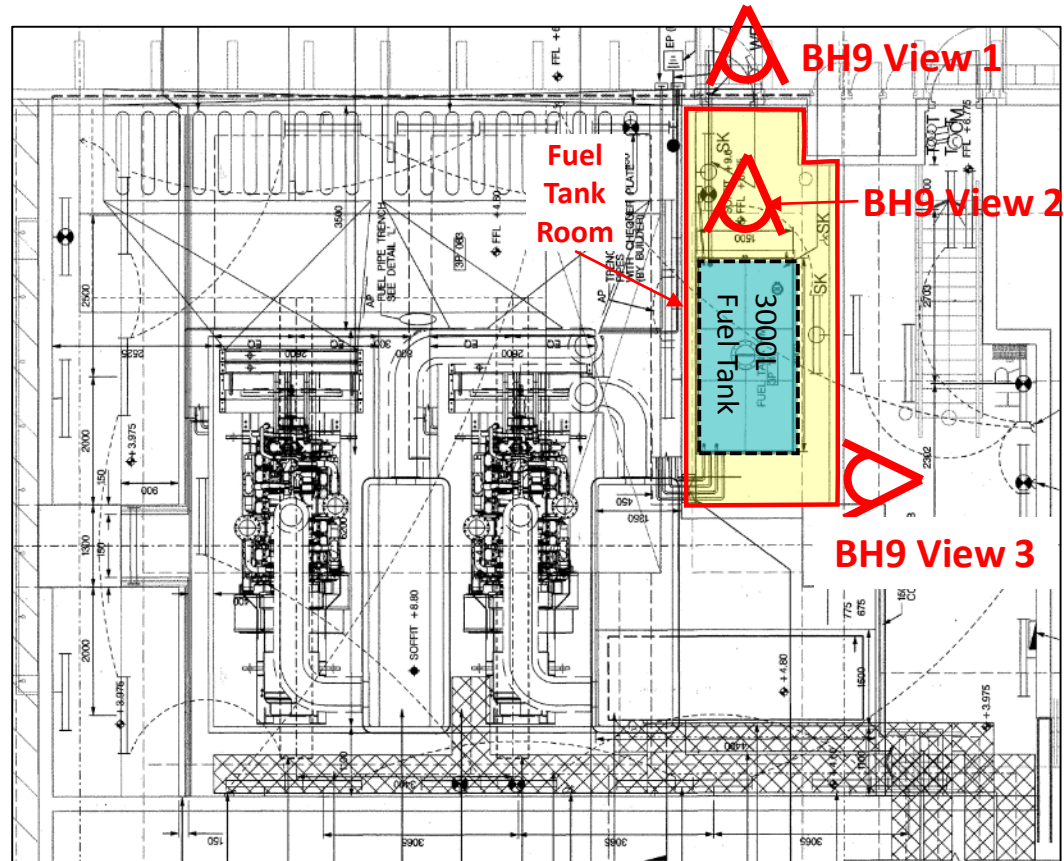


3000 L fuel tank with metal drip tray



Fuel pipes penetrating the wall and connect to the generators at lower floor

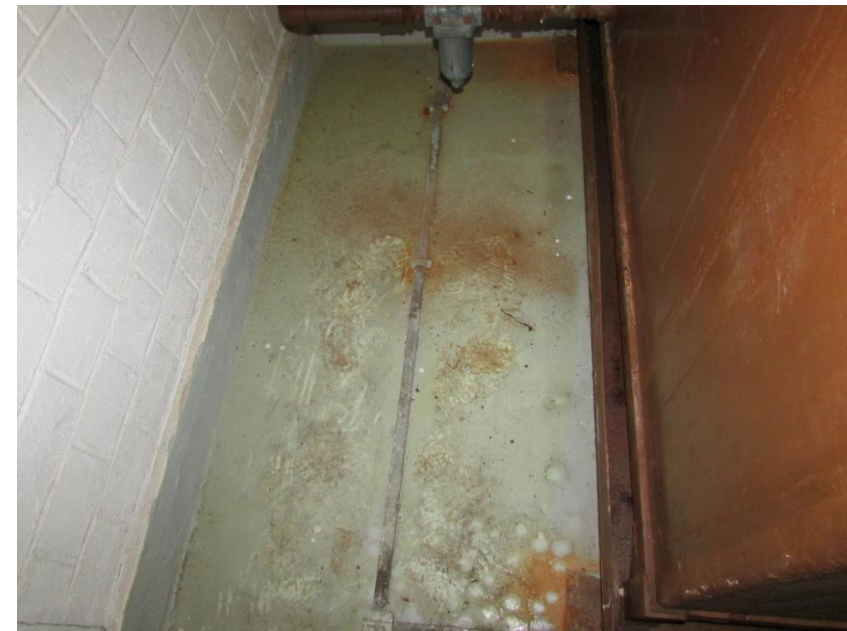
Appendix E.2 Emergency Power Supply System No. 2
Details of **BH9** (3000L **Above-ground** Fuel Tank inside T2)



BH9 View 1 - 3000L Above-ground Fuel Tank (BH9)



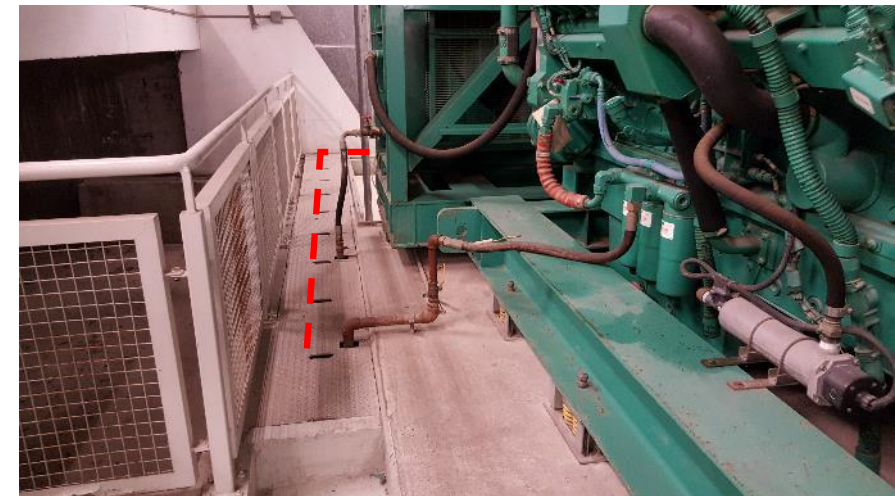
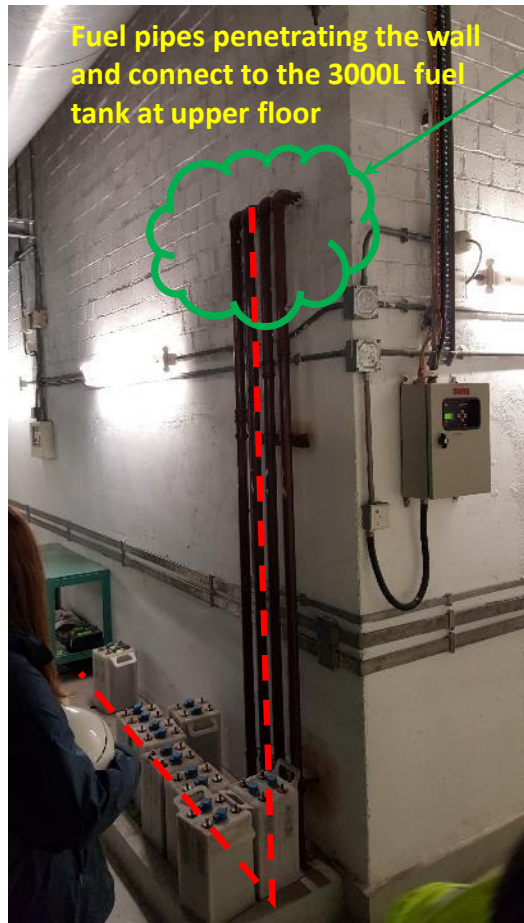
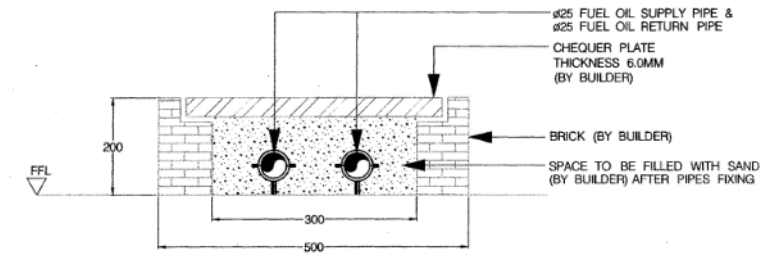
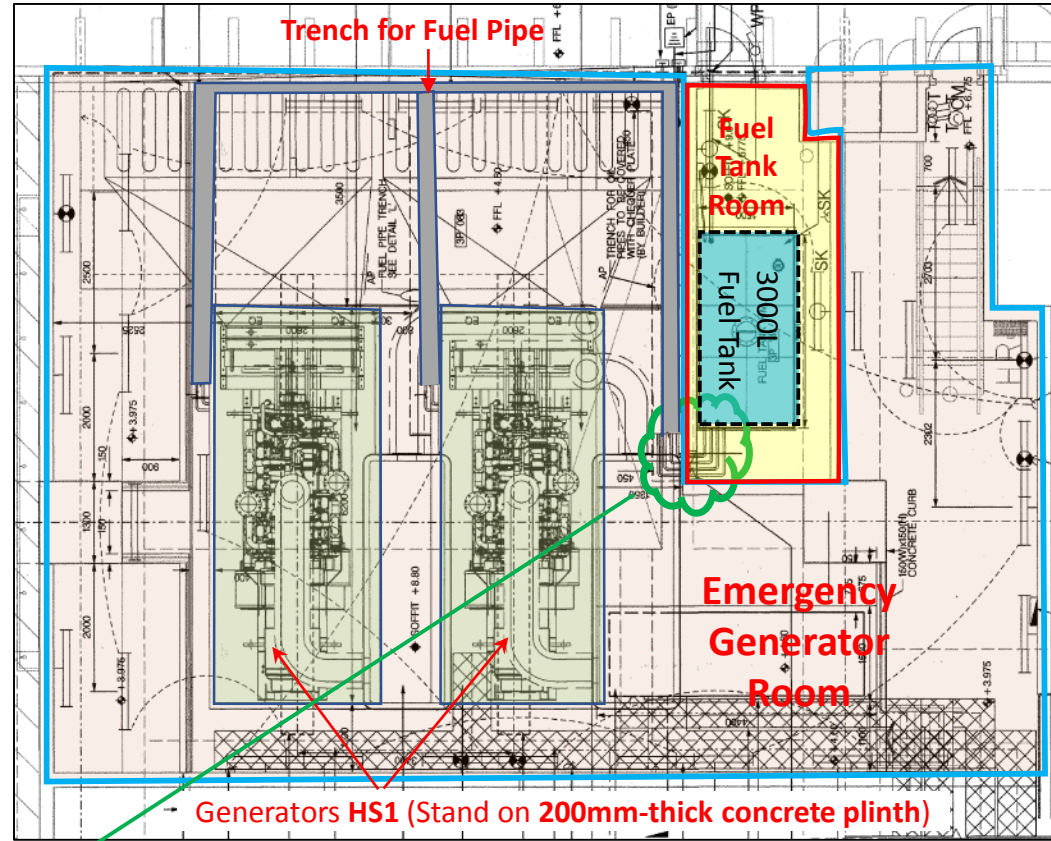
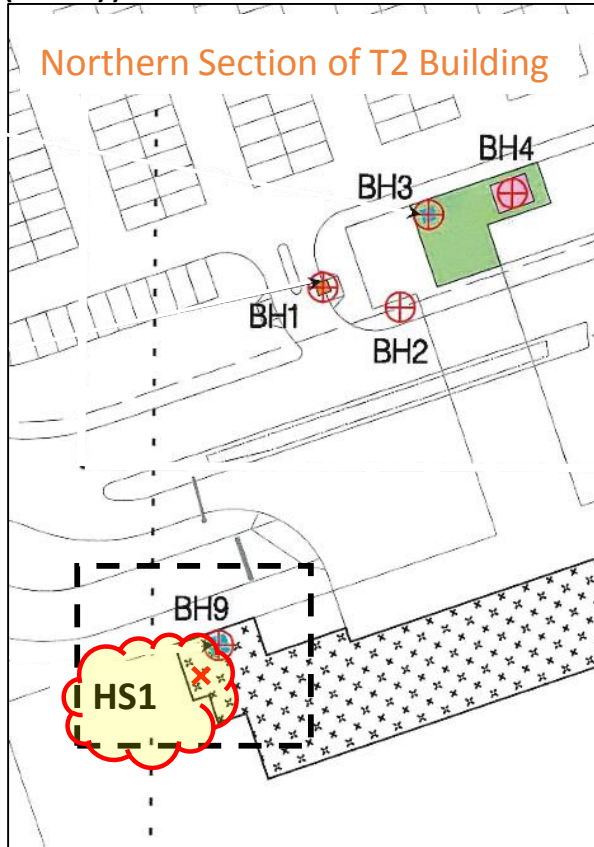
BH9 View 2 - concrete floor condition underneath 3000L Above-ground Fuel Tank



BH9 View 3 - concrete floor condition of fuel tank room with 3000L Above-ground Fuel Tank

Appendix E.2 Emergency Power Supply System No. 2

Details of **HS1** (2 Newly identified above-ground Emergency generators connected with 3,000 L Above-ground Fuel Tank inside (BH9))

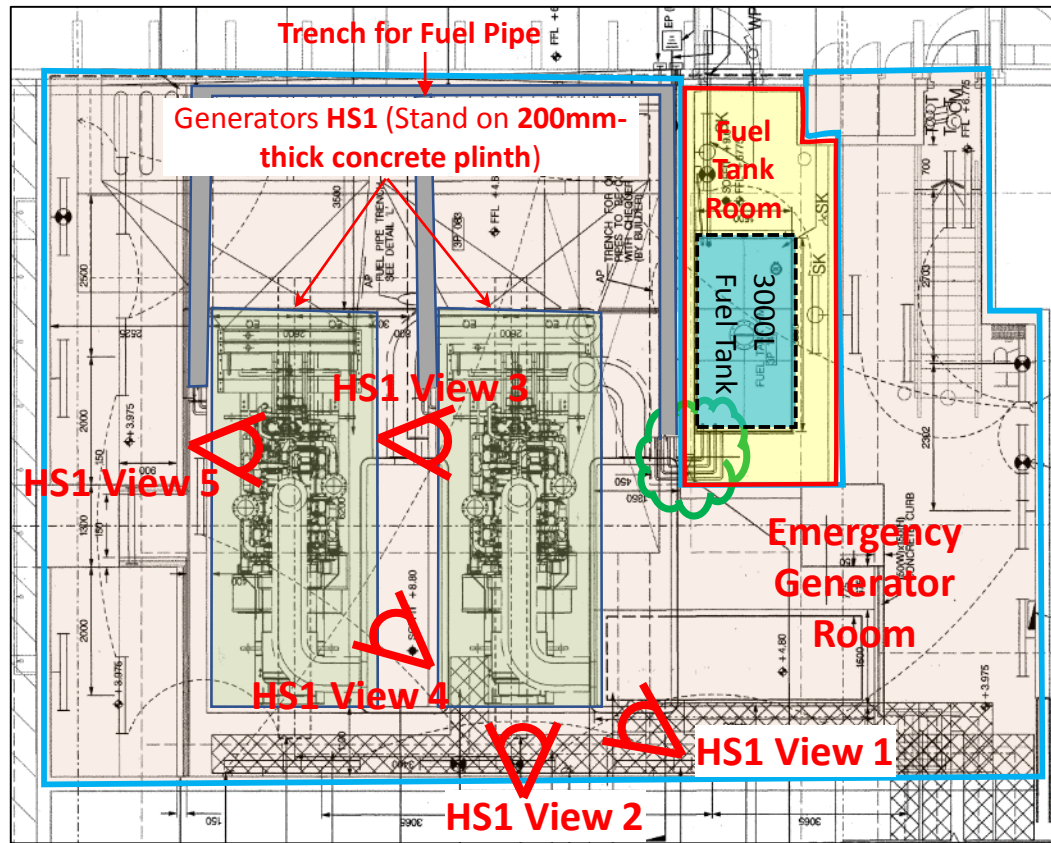


Notes

- Both the fuel tank and generator mounted on intact concrete floor with no any oil stain.
- Test run of emergency generator conducted monthly (for 30-60 mins)
- The fuel tank is checked monthly and re-filled approx. every 6 months
- The quantity of fuel inside the tank is monitored by level sensor. No sign of leakage is detected.

Appendix E.2 Emergency Power Supply System No. 2

Details of **HS1** (2 Newly identified above-ground Emergency generators connected with 3,000 L **Above-ground** Fuel Tank inside (**BH9**))



HS1 View 1 - concrete floor condition underneath emergency generators



HS1 View 2 - concrete floor condition underneath emergency generators



HS1 View 3 - concrete floor condition underneath emergency generators



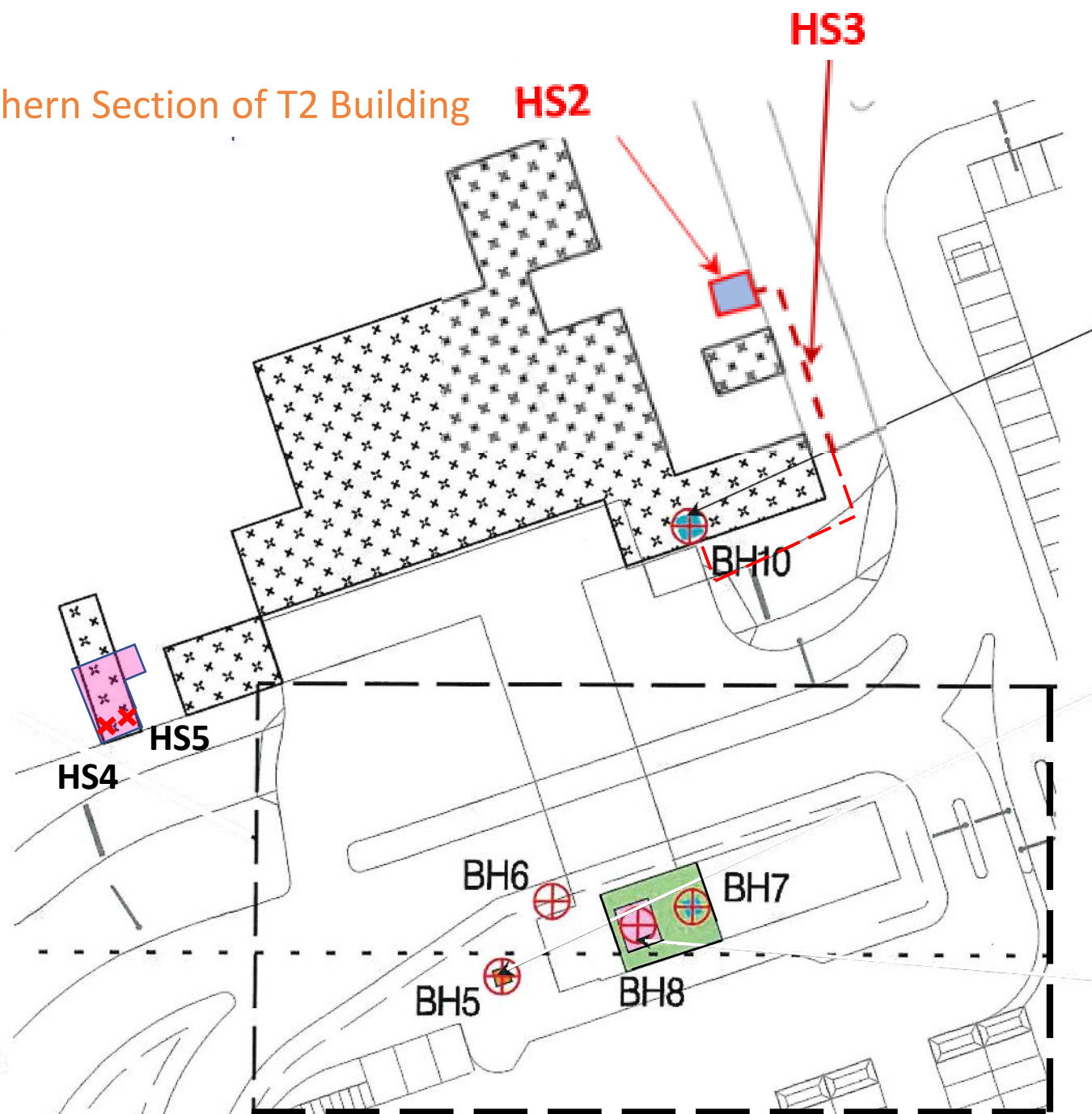
HS1 View 4 - concrete floor condition underneath emergency generators



HS1 View 5 - concrete floor condition underneath emergency generators

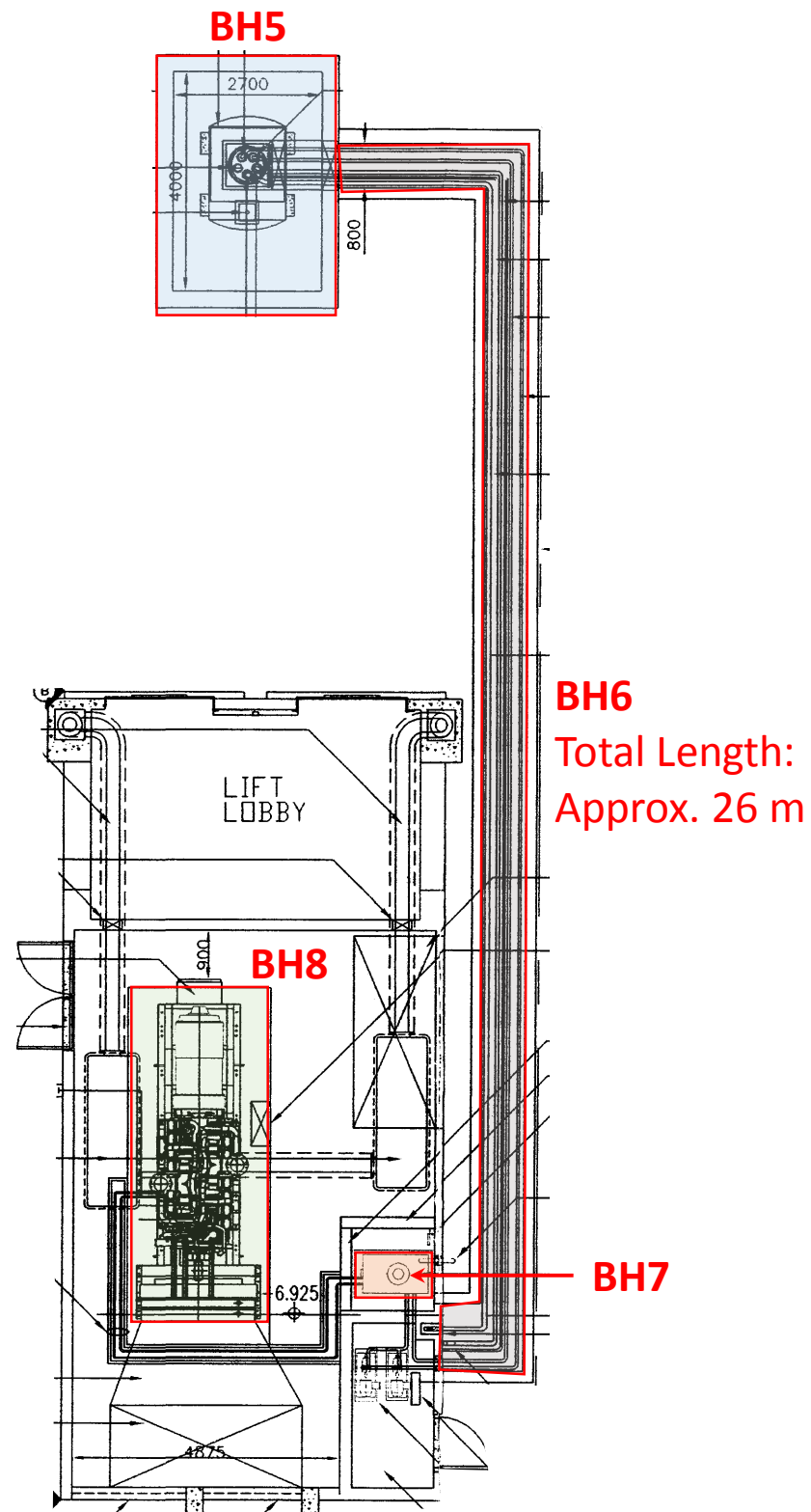
Appendix E.3 Emergency Power Supply System No. 3 (**BH 5, BH6, BH7** and **BH8**)

Southern Section of T2 Building

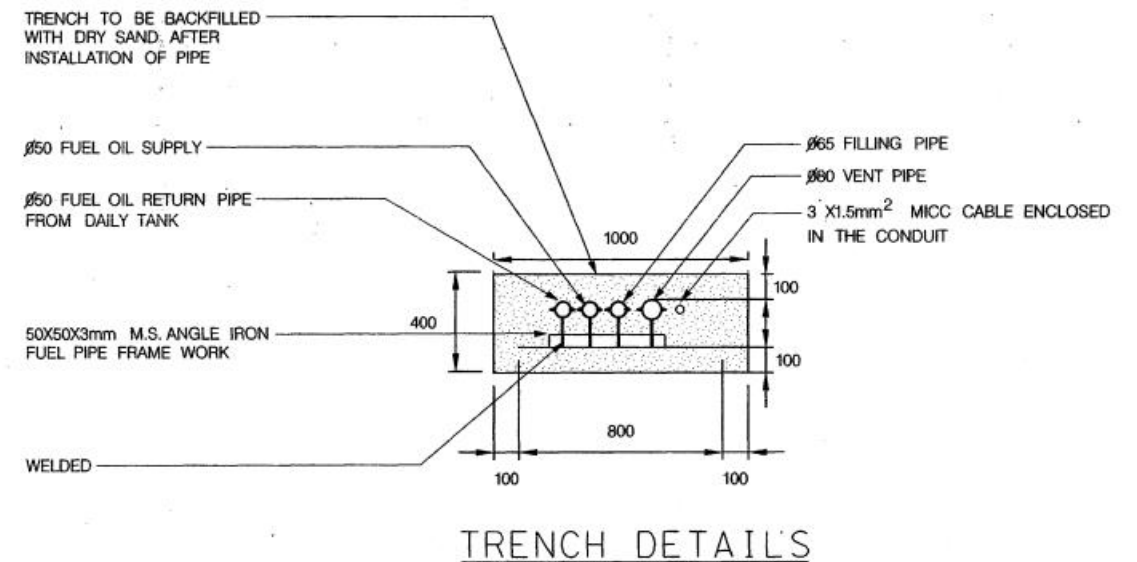


<u>Reference ID</u>	<u>Description</u>
BH5	A 3,000 L underground fuel tank
BH7	A 450 L above-ground fuel tank at Emergency Generator Room
BH6	26 m-in-length underground fuel pipelines connecting the 3,000 L underground fuel tank (i.e. BH5) and the 450 L above-ground fuel tank (i.e. BH7)
BH8	An emergency generator at Emergency Generator Room (above-ground)

Appendix E.3 Emergency Power Supply System No. 3 (**BH 5, BH6, BH7** and **BH8**)



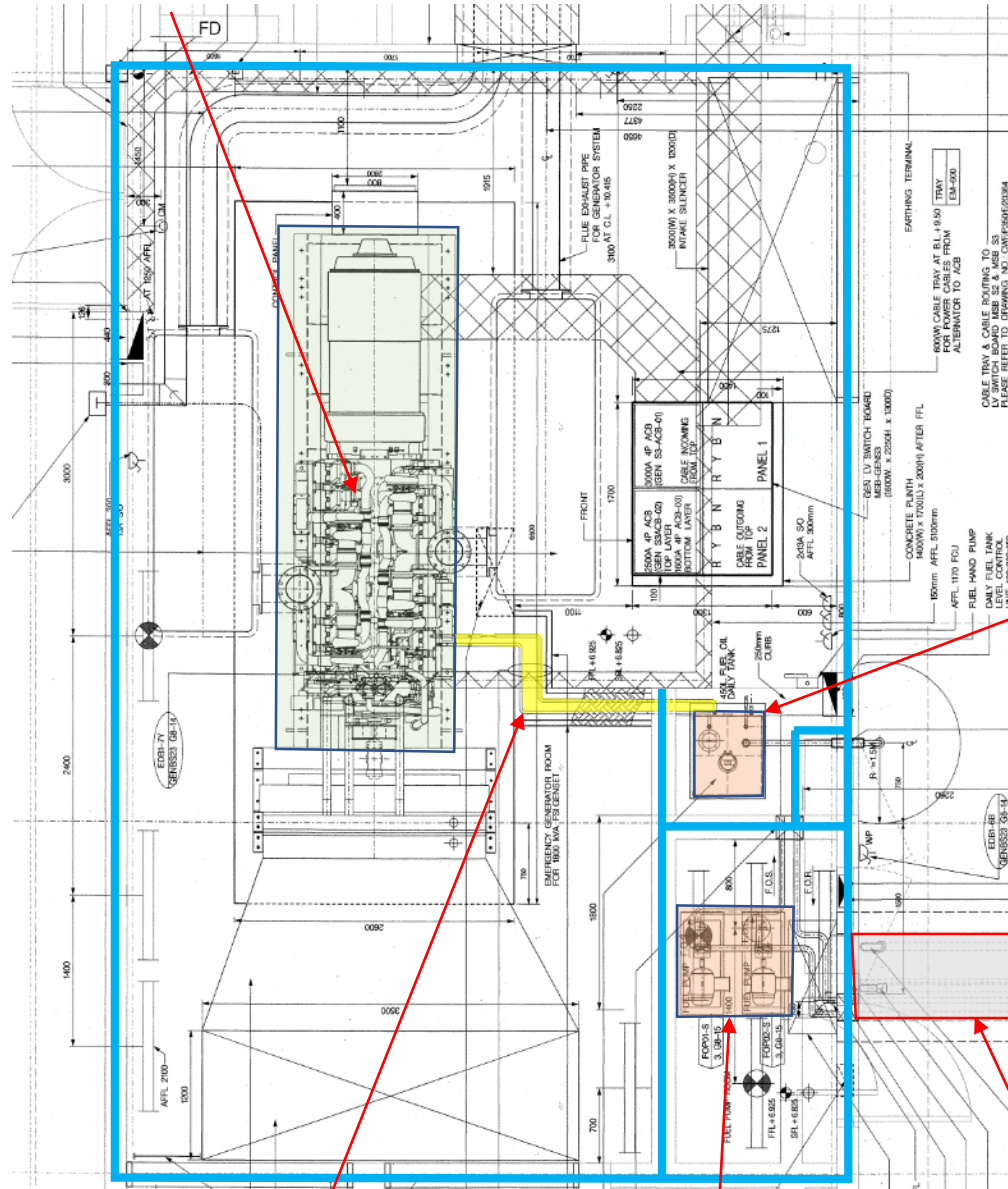
Reference ID	Description
BH5	A 3,000 L underground fuel tank
BH7	A 450 L above-ground fuel tank at Emergency Generator Room
BH6	26 m-in-length underground fuel pipelines connecting the 3,000 L underground fuel tank (i.e. BH5) and the 450 L above-ground fuel tank (i.e. BH7)
BH8	An emergency generator at Emergency Generator Room (above-ground)



Appendix E.3 Emergency Power Supply System No. 3 – Details of BH7 (450 L Above-ground Fuel Tank) & BH8 (Emergency Generator)

Emergency Generator (BH8)
(Stand on 200mm-thick concrete plinth)

PLAN VIEW



Fuel pipes to/from fuel tank and the generator



Sand filled trench containing fuel pipes (outside the fuel tank chamber)



Exposed fuel pipes



Fuel pump room



450 L fuel tank (BH7)



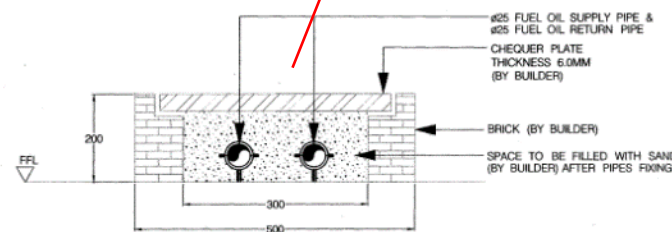
Metal drip tray and concrete curb surrounding fuel tank

450 L Fuel Tank (BH7)

From 3000L U/G Fuel Tank

Fuel pump room

BH6
Sand Filled Trench
(1.5m below ground level)

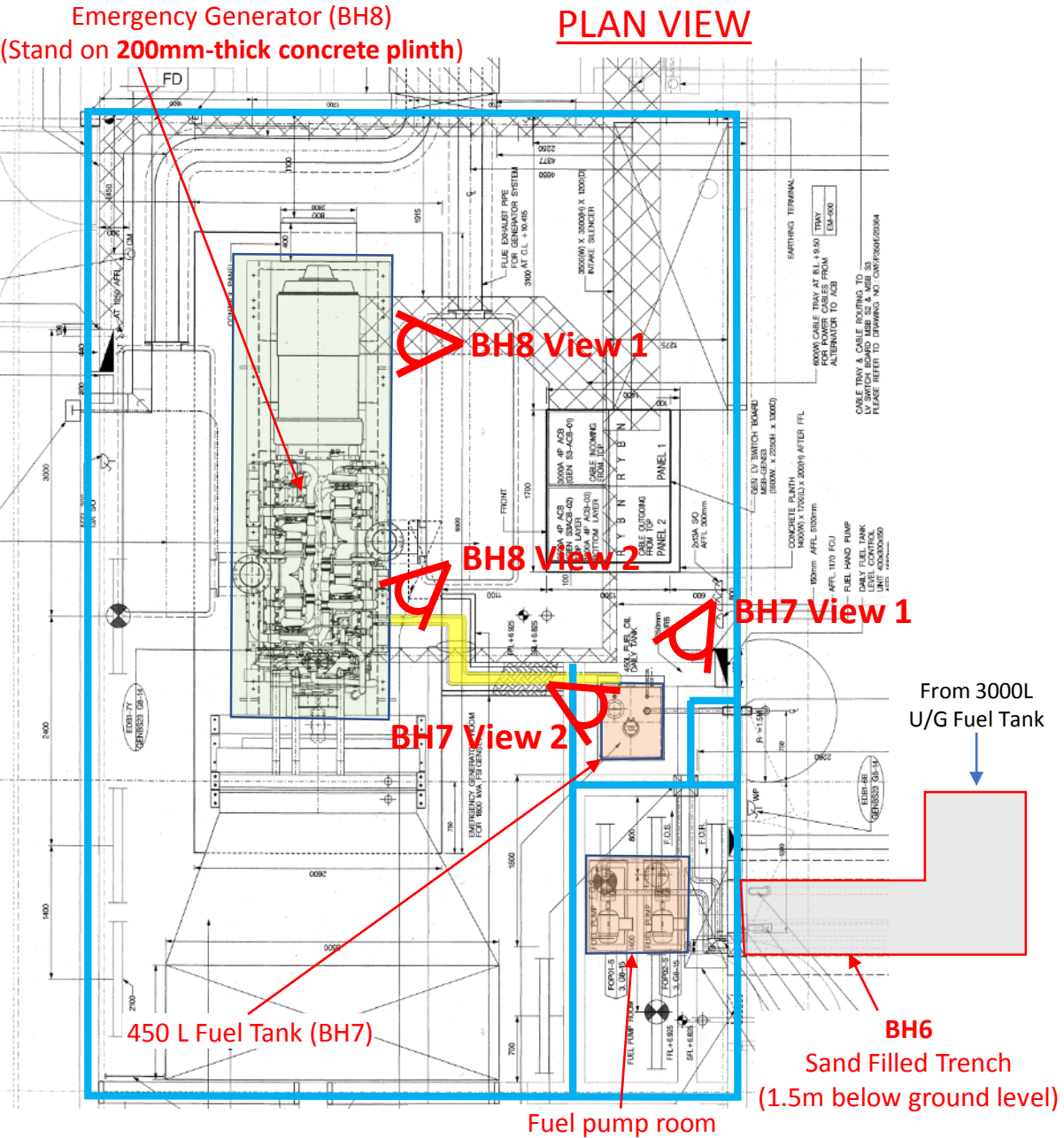


Supply and return pipe from fuel oil tank
(Sand Filled Trench at floor level)

Notes

- Both the fuel tank and generator mounted on intact concrete floor with no any oil stain.
- Test run of emergency generator conducted monthly (for 30-60 mins)
- Fuel tank is checked monthly and re-filled approx. every 6 months.
- The quantity of fuel inside the tank is monitored by level sensor. No sign of leakage is detected.

Appendix E.3 Emergency Power Supply System No. 3 –
 Details of **BH7** (450 L Above-ground Fuel Tank) & **BH8** (Emergency Generator)



BH8 View 1 - concrete floor condition underneath emergency generator



BH8 View 2 - concrete floor condition underneath emergency generator

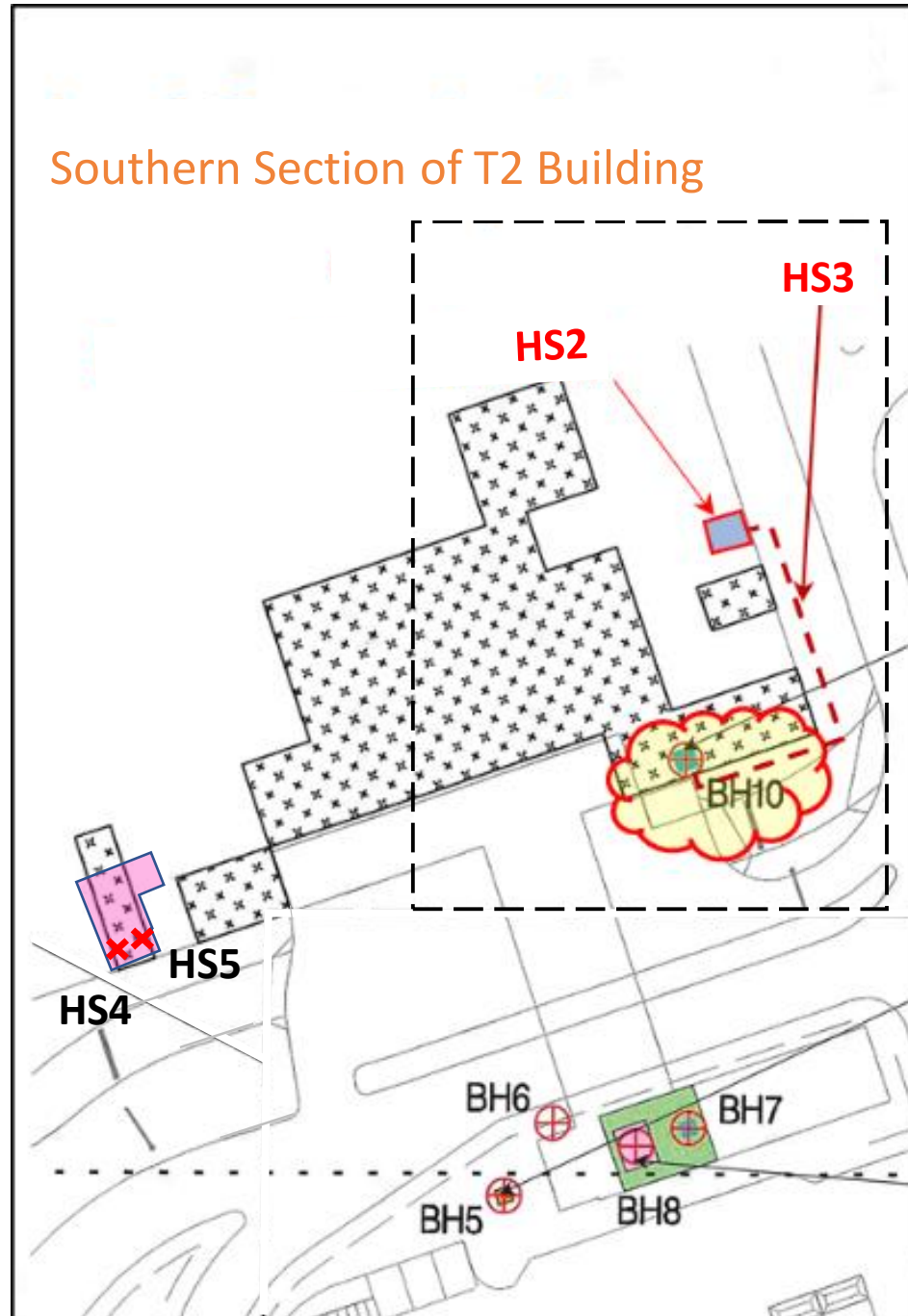


BH7 View 1 - 450 L Above-ground Fuel Tank



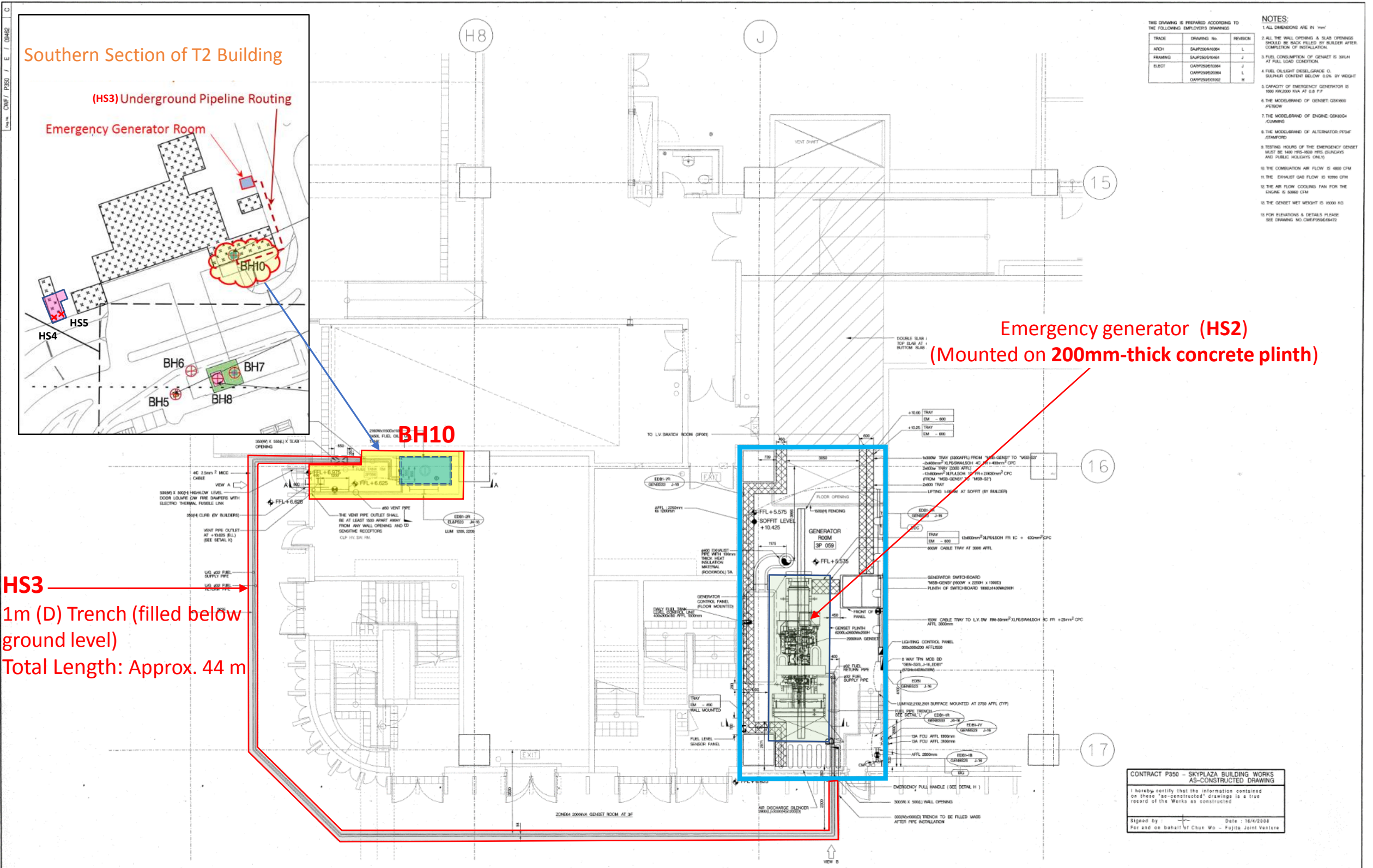
BH7 View 2 - concrete floor condition underneath 450 L Above-ground Fuel Tank

Appendix E.4 Emergency Power Supply System No. 4 (**BH10**, **HS2** and **HS3**)



<u>Reference ID</u>	<u>Description</u>
BH10	A 1,500 L above-ground fuel tank at Fuel Tank Room
HS2	(Newly Identified) An emergency generator at Emergency Generator Room (above-ground)
HS3	(Newly Identified) 44 m-in-length underground fuel pipelines connecting the 1,500 L above-ground fuel tank (i.e. BH10) and the emergency generator (i.e. HS2)

Appendix E.4 Emergency Power Supply System No. 4 - **BH10** (1,500L Above-ground Fuel Tank inside T2), **HS2** (Newly Identified emergency generator at Emergency Generator Room) and **HS3** (underground fuel pipelines connecting **BH10** and **HS2**)



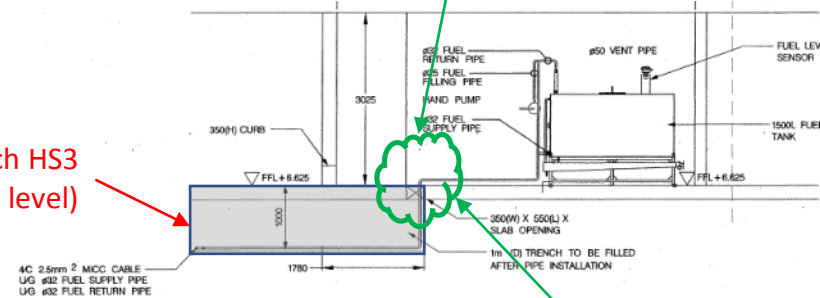
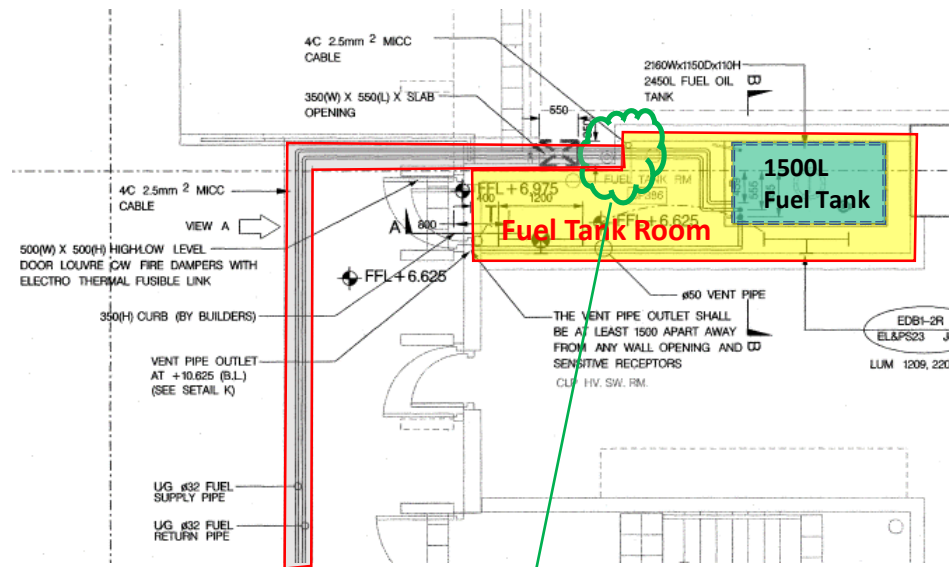
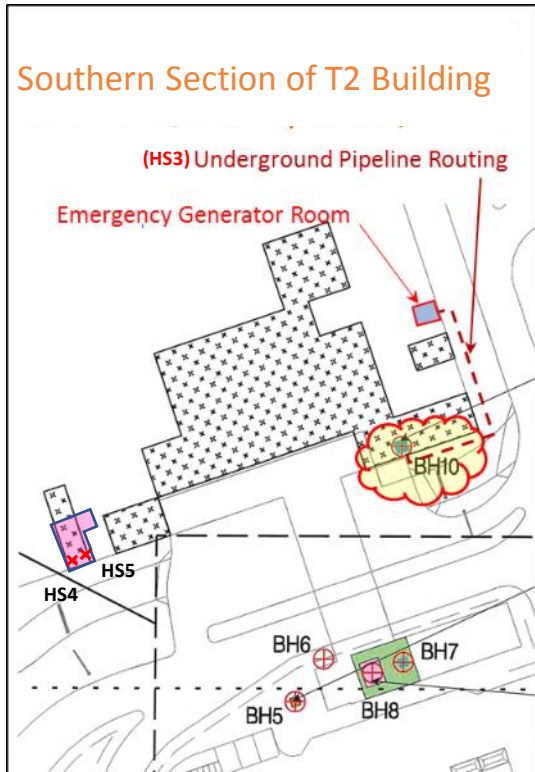
CONTRACT P350 - SKYPLAZA BUILDING WORKS AS-CONSTRUCTED DRAWING

I hereby certify that the information contained on these "as-constructed" drawings is a true record of the Works as constructed.

Signed by: _____ Date: 16/4/2008
For and on behalf of Chun Wo - Fujita Joint Venture

<p>Notes:</p> <ol style="list-style-type: none"> 1. Measurements are based on metric system. 2. Dimensions are to centre line unless otherwise stated. 3. All drawings shall be in accordance with the latest edition of the relevant standards. 4. All dimensions are to be followed. 5. All dimensions are to be followed. 6. Do not scale for construction unless expressly permitted. 	<table border="1"> <tr> <th>No.</th> <th>Date</th> <th>Description</th> <th>Checked</th> <th>By</th> <th>Date</th> <th>Description</th> <th>Checked</th> </tr> <tr> <td>A</td> <td>16.12.06</td> <td>AS CONSTRUCTED</td> <td>RL</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>B</td> <td>30.09.07</td> <td>REVISED AS PER AIA'S COMMENT REF. CWF/P350/0462/04</td> <td>RL</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>C</td> <td>12.03.08</td> <td>REVISED AS PER AIA'S COMMENT REF. CWF/P350/0462/04 DATED 29.02.08</td> <td>RL</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	No.	Date	Description	Checked	By	Date	Description	Checked	A	16.12.06	AS CONSTRUCTED	RL					B	30.09.07	REVISED AS PER AIA'S COMMENT REF. CWF/P350/0462/04	RL					C	12.03.08	REVISED AS PER AIA'S COMMENT REF. CWF/P350/0462/04 DATED 29.02.08	RL					<p>Contractor's Signatures for Approval</p> <table border="1"> <tr> <th>Design</th> <th>Date</th> <th>Design</th> <th>Date</th> </tr> <tr> <td>AW</td> <td>16/12/06</td> <td>AW</td> <td>16/12/06</td> </tr> <tr> <td>AW</td> <td>16/12/06</td> <td>AW</td> <td>16/12/06</td> </tr> <tr> <td>AW</td> <td>16/12/06</td> <td>AW</td> <td>16/12/06</td> </tr> </table>	Design	Date	Design	Date	AW	16/12/06	AW	16/12/06	AW	16/12/06	AW	16/12/06	AW	16/12/06	AW	16/12/06	<p>MAIN CONTRACTOR :</p> <p>FUJITA CWF JOINT-VENTURE</p>	<p>E & M CONTRACTOR :</p> <p>CHUN WO E & H ENGINEERING LIMITED</p>	<p>SOM Aedas JV</p> <p>In association with</p> <p>ARUP Mott MacDonald</p>	<p>Hong Kong International Airport, "AS-FITTED"</p> <p>SKYPLAZA BUILDING WORKS 1800KVA NON FSI GENSET RM LAYOUT AT LEVEL 3 ZONE 64</p>
No.	Date	Description	Checked	By	Date	Description	Checked																																															
A	16.12.06	AS CONSTRUCTED	RL																																																			
B	30.09.07	REVISED AS PER AIA'S COMMENT REF. CWF/P350/0462/04	RL																																																			
C	12.03.08	REVISED AS PER AIA'S COMMENT REF. CWF/P350/0462/04 DATED 29.02.08	RL																																																			
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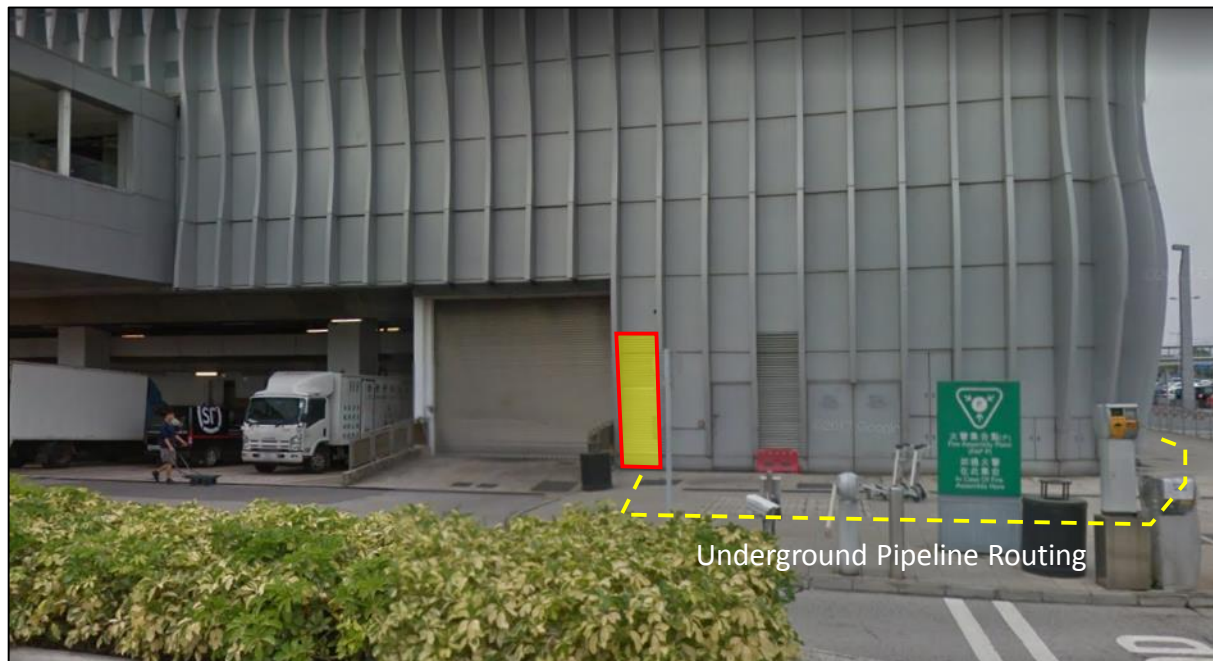
Appendix E.4 Emergency Power Supply System No. 4 - Details of **BH10** (1,500L Above-ground Fuel Tank inside T2) and **HS3** (**Newly identified underground** fuel pipelines connecting **BH10** and **HS2**)



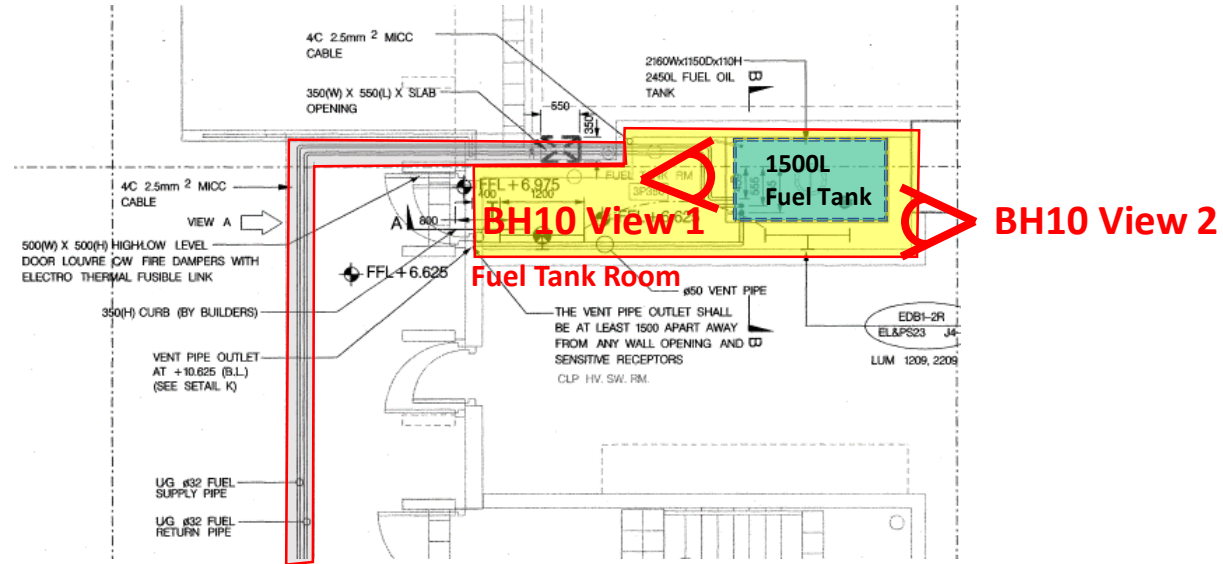
1m (D) Trench HS3 (filled below ground level)



1,500L fuel tank (BH10) with metal drip tray



Appendix E.4 Emergency Power Supply System No. 4 - Details of **BH10** (1,500L **Above-ground** Fuel Tank inside T2)

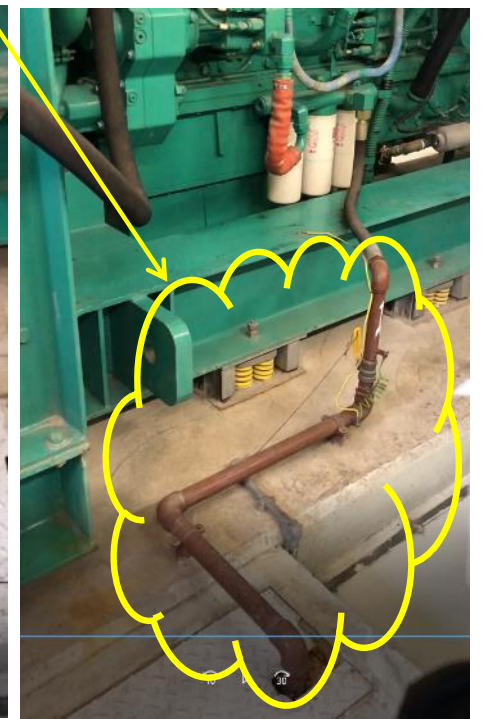
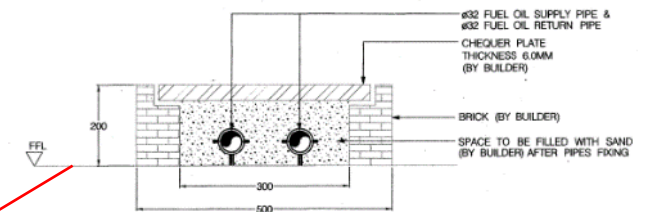
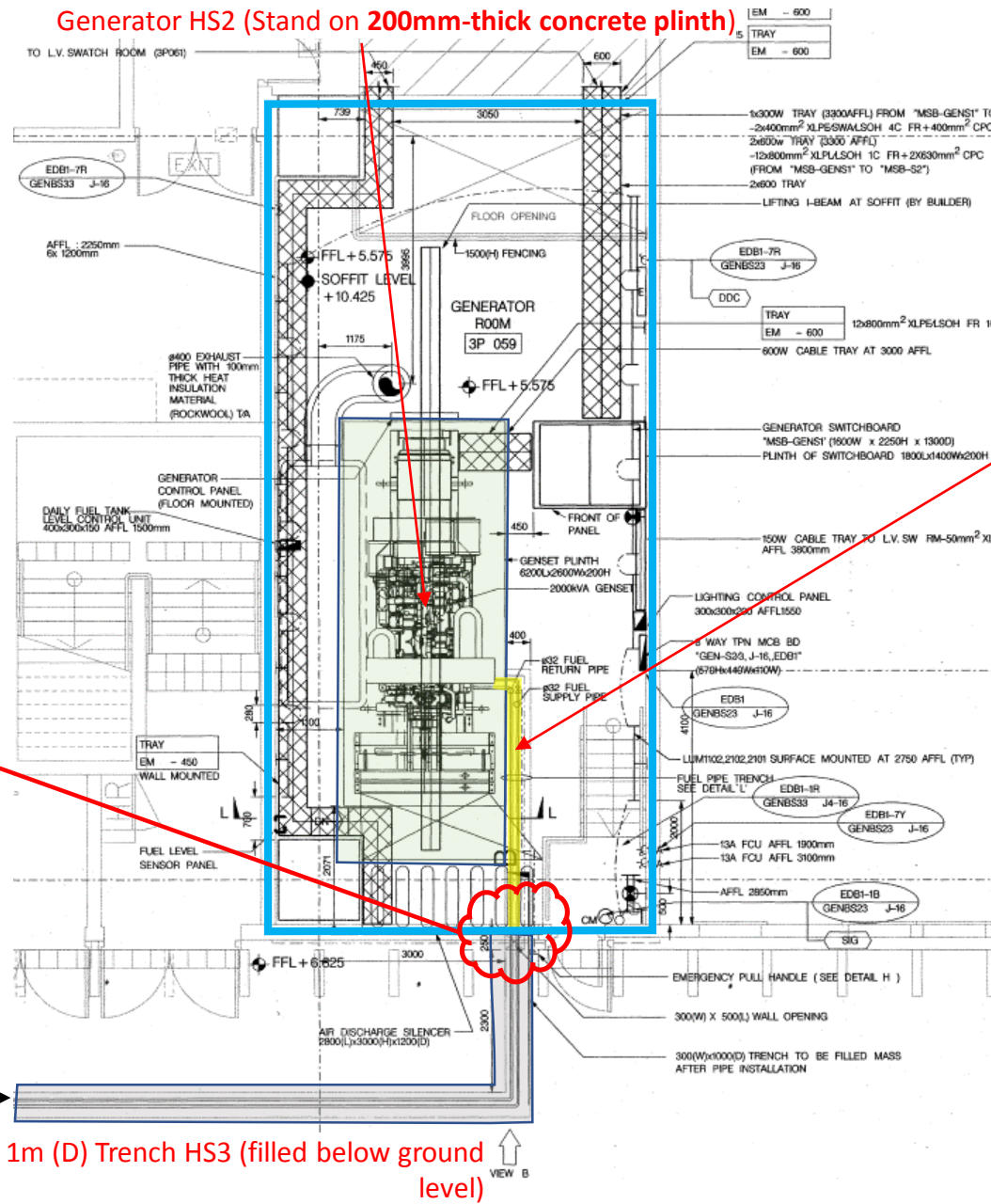


BH10 View 1 - concrete floor condition underneath 1,500L Above-ground Fuel Tank



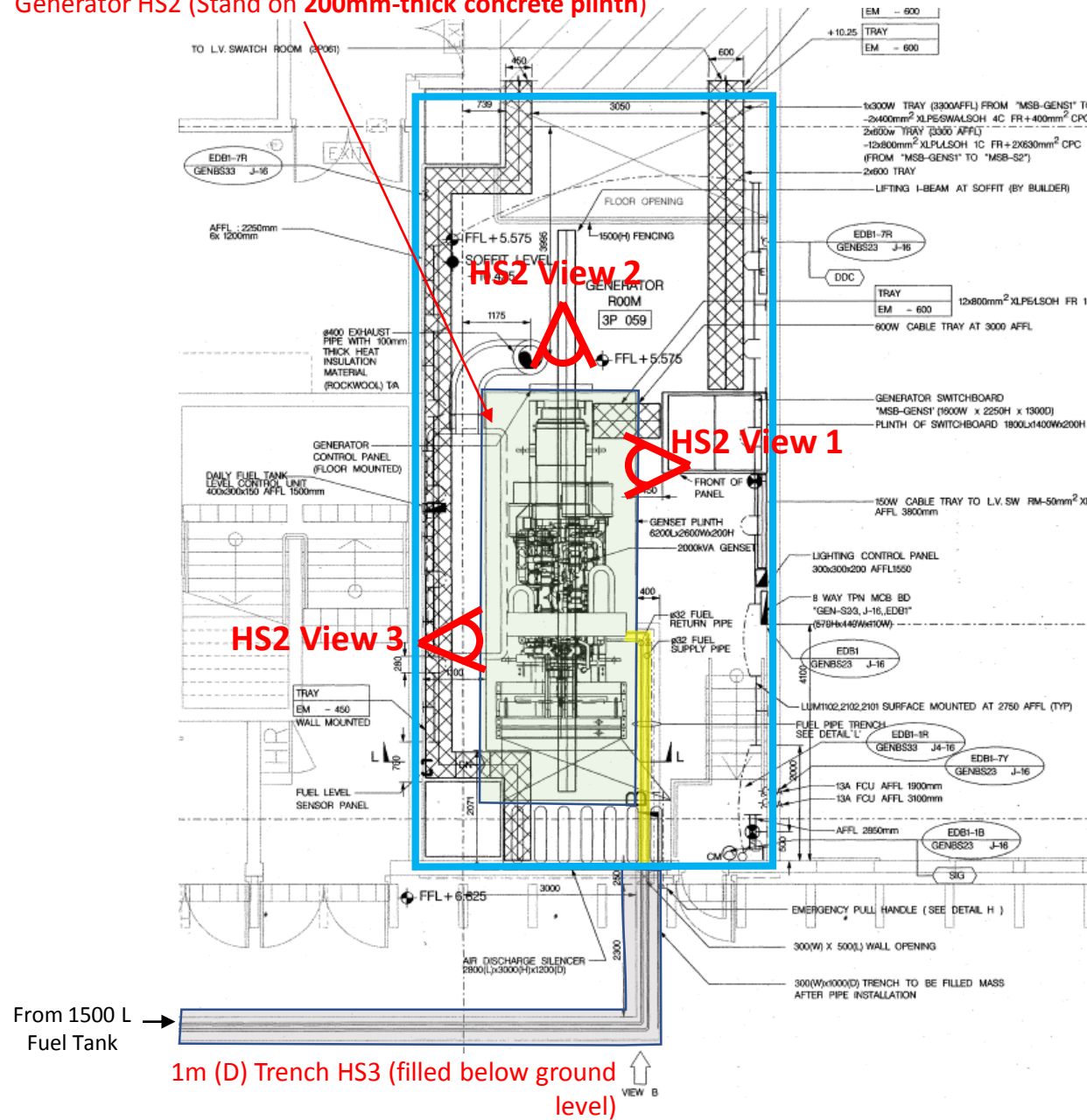
BH10 View 2 - concrete floor condition underneath 1,500L Above-ground Fuel Tank

Appendix E.4 Emergency Power Supply System No. 4 – Details of HS2 (Emergency Generator connected to 1,500L Above-ground Fuel Tank inside T2 (BH10))



Appendix E.4 Emergency Power Supply System No. 4 – Details of HS2 (Emergency Generator connected to 1,500L Above-ground Fuel Tank inside T2 (BH10))

Generator HS2 (Stand on 200mm-thick concrete plinth)



HS2 View 1 - concrete floor condition underneath emergency generator

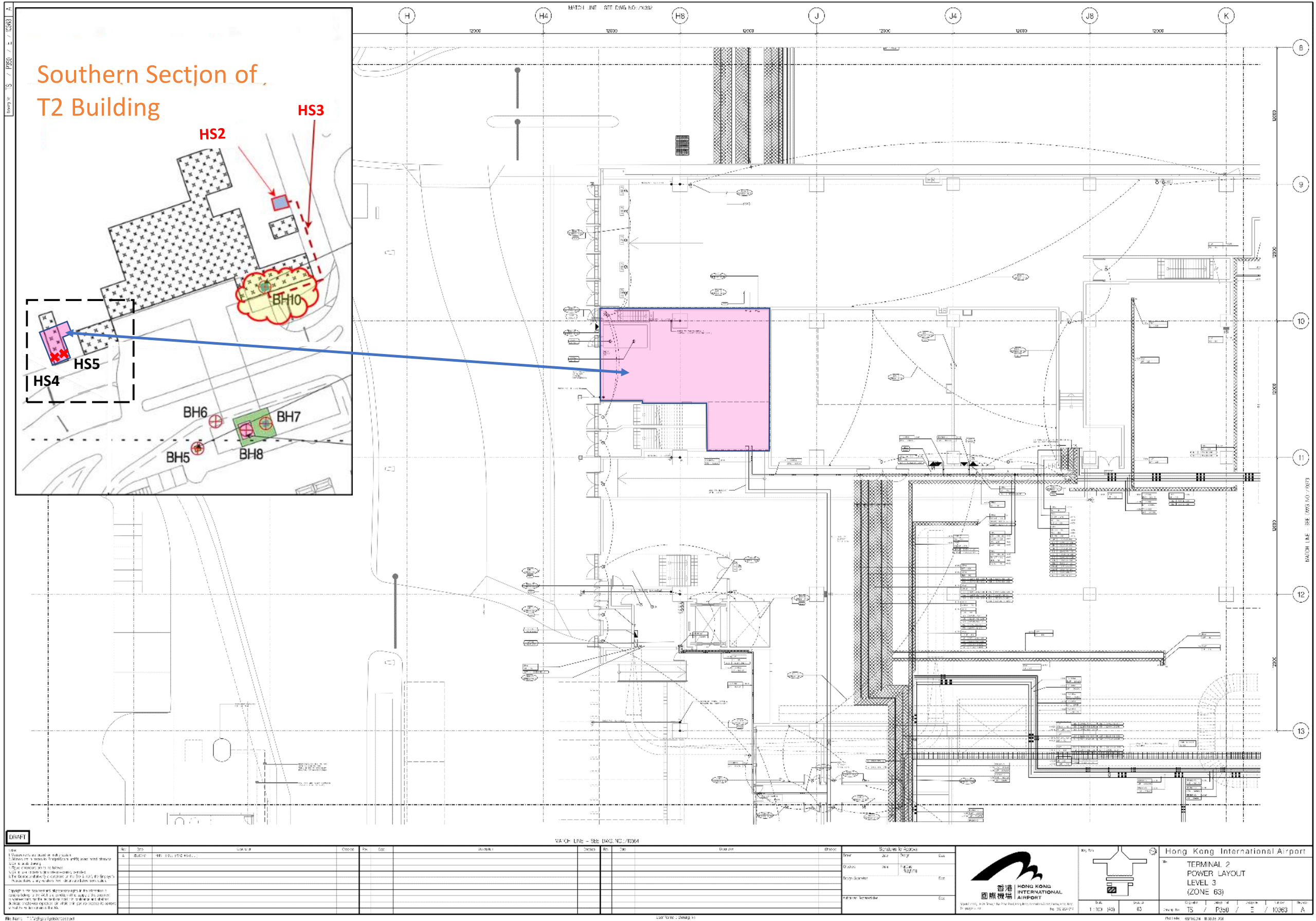


HS2 View 2 - concrete floor condition underneath emergency generator



HS2 View 3 - concrete floor condition underneath emergency generator

Appendix E.5 Emergency Power Supply System No. 5 – Location of **Newly Identified HS4 (Above-ground Fuel Tank)** and **Newly identified HS5 (Above-ground Emergency Generator)**



DRAFT

1. This drawing is a draft and should not be used for construction purposes without the approval of the design team.	2. All dimensions are in millimeters unless otherwise stated.	3. All dimensions are to be finished unless otherwise stated.	4. All dimensions are to be finished unless otherwise stated.	5. All dimensions are to be finished unless otherwise stated.
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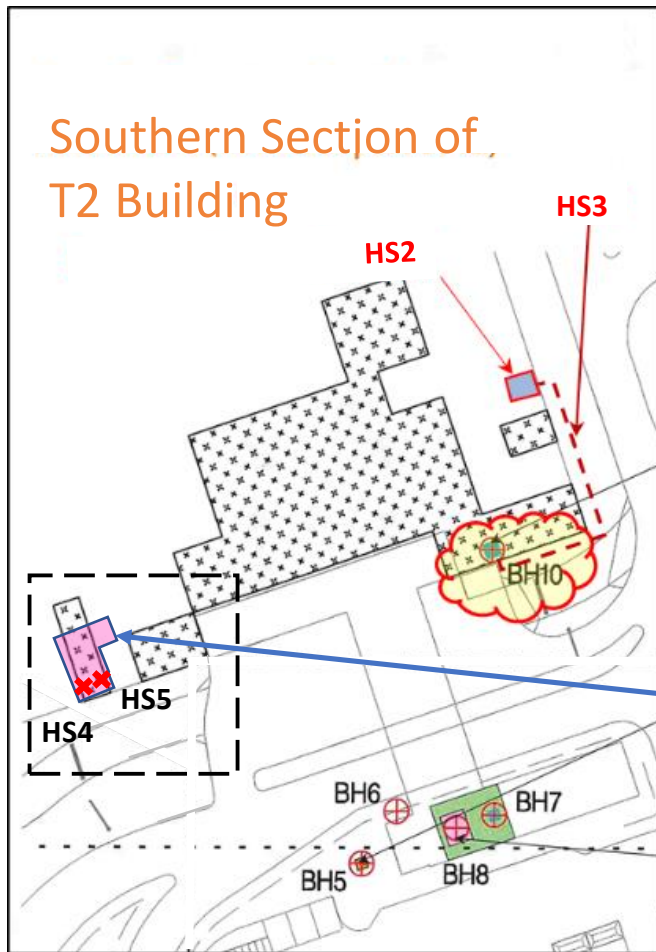
No.	Rev.	Description	Date	By	Check	Appr.
1	1	Issue for construction	2018/08/01	TS	TS	TS

Scale	1:100 (A3)
Sheet No.	63
Project No.	TS / P350 / E / 10363

Hong Kong International Airport

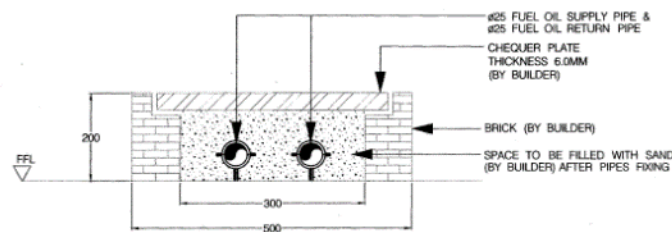
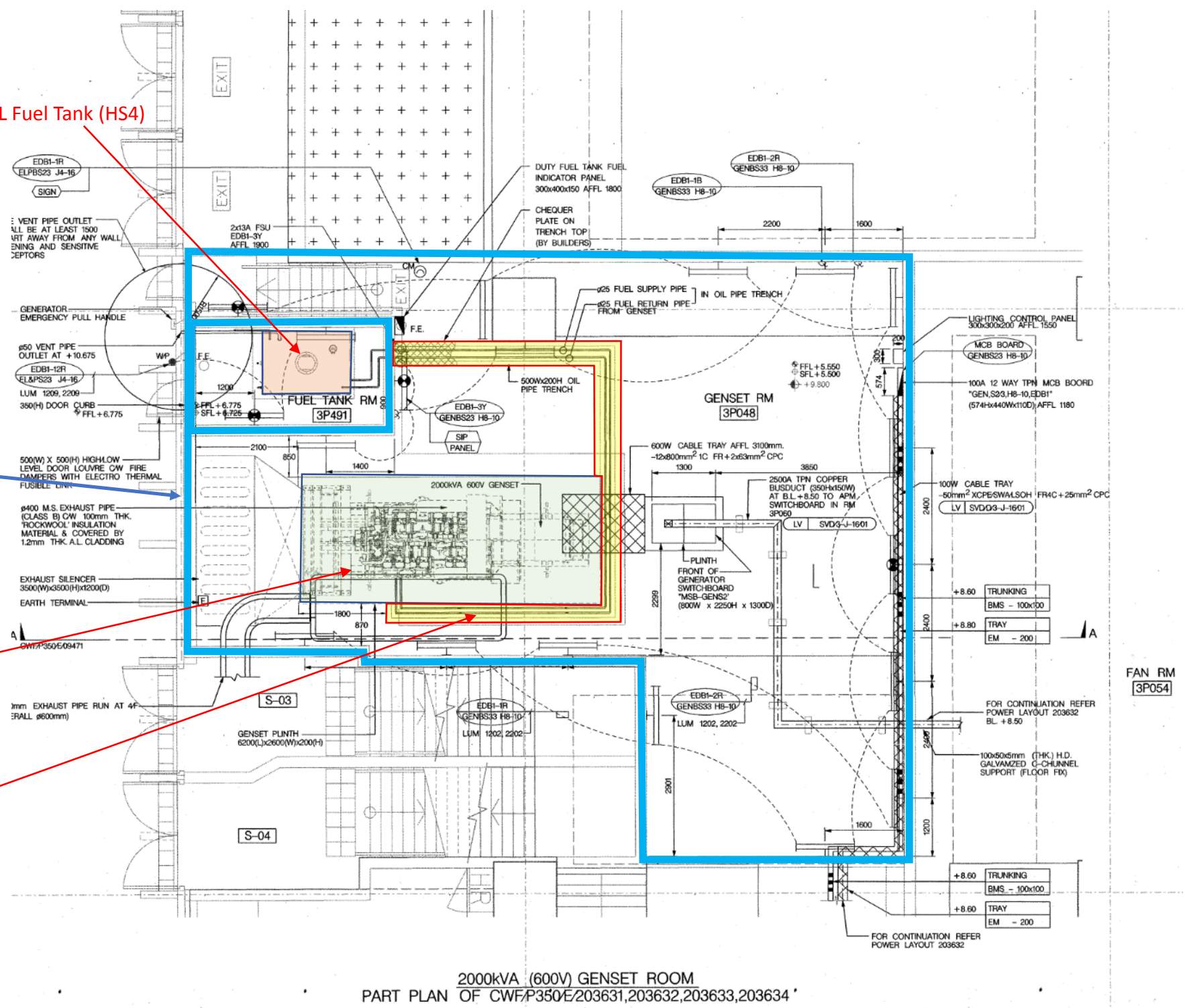
TERMINAL 2
POWER LAYOUT
LEVEL 3
(ZONE 63)

Appendix E.5 Emergency Power Supply System No. 5 – Details of **Newly identified HS4 (Above-ground Fuel Tank)** and **Newly identified HS5 (Above-ground Emergency Generator)**



1,500 L Fuel Tank (HS4)

Emergency Generator (HS5)
(Mounted on 200mm-thick concrete plinth)



Supply and return pipe from fuel oil tank
(Sand Filled Trench at floor level)

Notes

- Both the fuel tank and generator mounted on intact concrete floor with no any oil stain.
- Test run of emergency generator conducted monthly (for 30-60 mins)
- Fuel tank is checked monthly and re-filled approx. every 6 months.
- The quantity of fuel inside the tank is monitored by level sensor. No sign of leakage is detected.

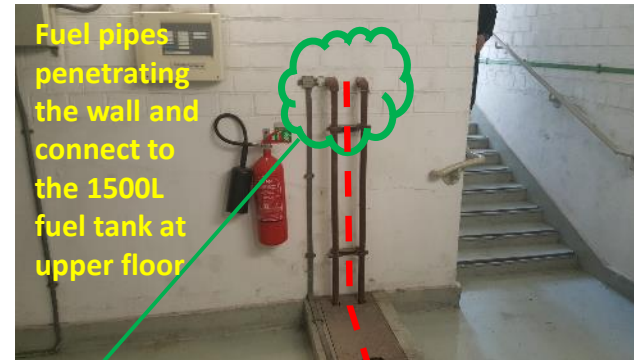
Appendix E.5 Emergency Power Supply System No. 5 – Details of Newly identified HS4 (Above-ground Fuel Tank) and Newly identified HS5 (Above-ground Emergency Generator)



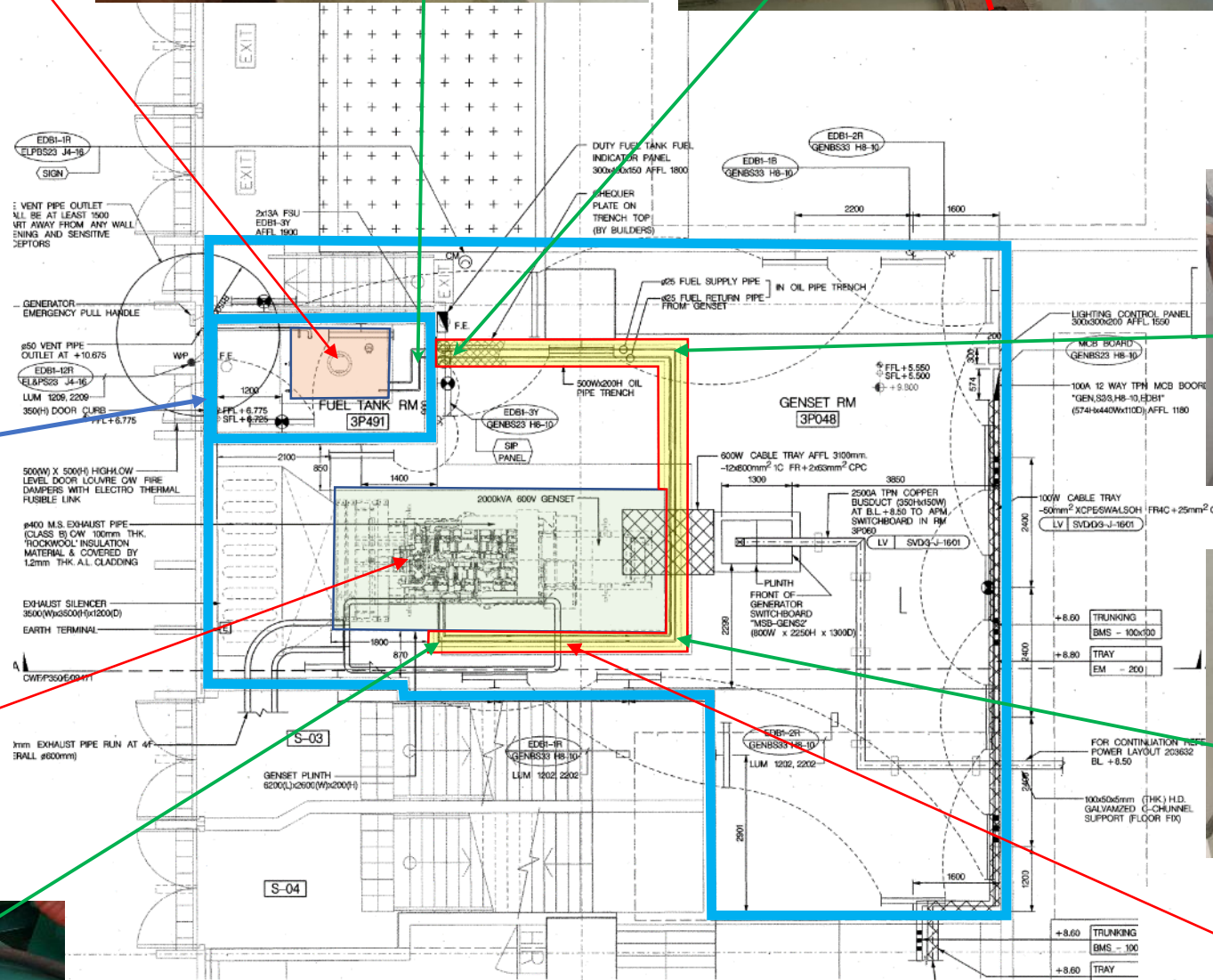
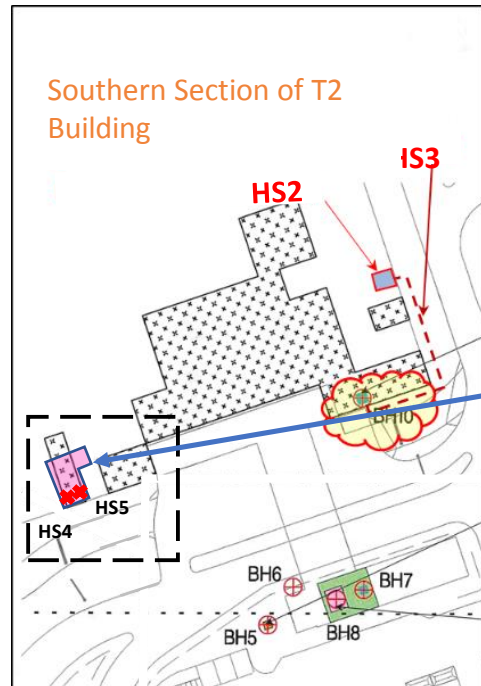
1,500 L fuel tank (HS4) with metal drip tray



Fuel pipes penetrating the wall and connect to the generators at lower floor

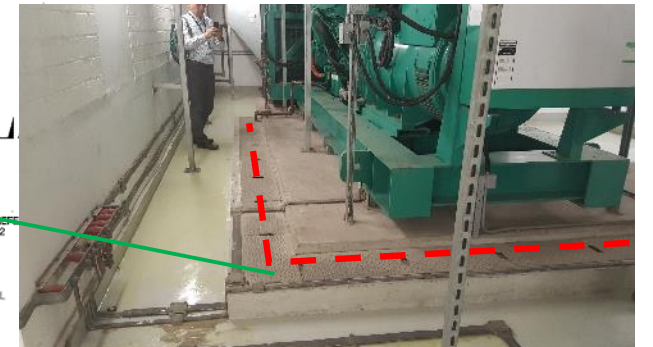


Fuel pipes penetrating the wall and connect to the 1500L fuel tank at upper floor

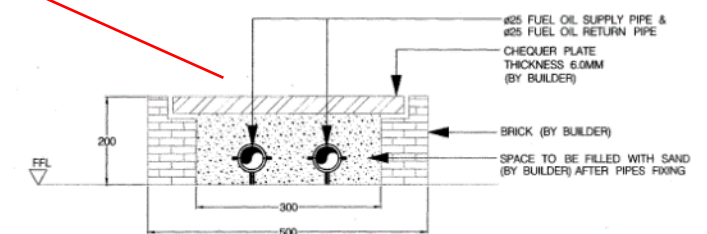


Notes

- Both the fuel tank and generator mounted on intact concrete floor with no any oil stain.
- Test run of emergency generator conducted monthly (for 30-60 mins)
- Fuel tank is checked monthly and re-filled approx. every 6 months.
- The quantity of fuel inside the tank is monitored by level sensor. No sign of leakage is detected.

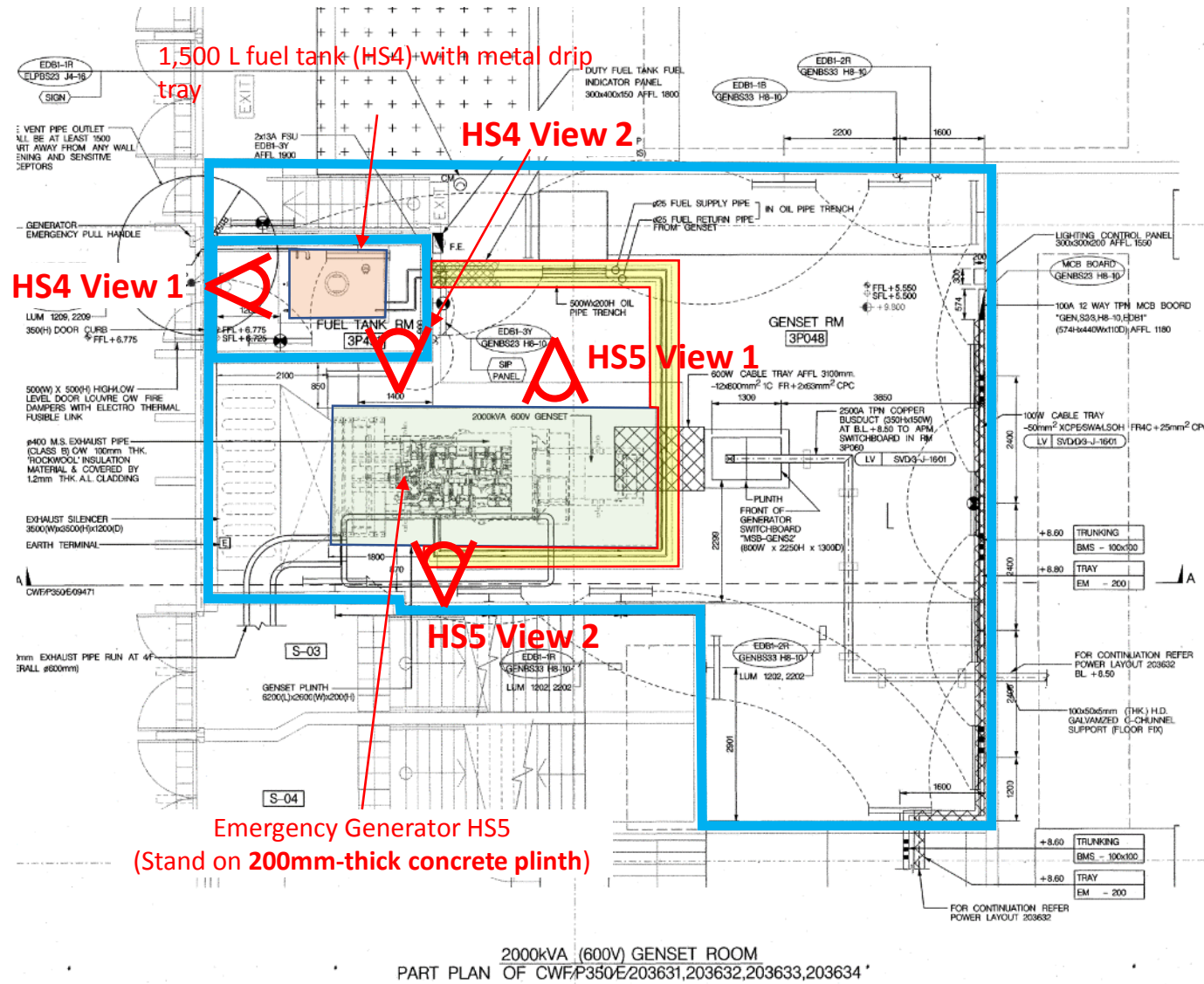


Emergency Generator HS5 (Stand on 200mm-thick concrete plinth)



Supply and return pipe from fuel oil tank (Sand Filled Trench at floor level)

Appendix E.5 Emergency Power Supply System No. 5 – Details of **Newly identified HS4 (Above-ground Fuel Tank)** and **Newly identified HS5 (Above-ground Emergency Generator)**



HS4 View 1 - concrete floor condition underneath 1,500L Above-ground Fuel Tank



HS4 View 2 - concrete floor condition of fuel tank room with 1,500 L above-ground fuel tank



HS5 View 1 - concrete floor condition underneath emergency generator



HS5 View 2 - concrete floor condition underneath emergency generator