Gammon

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Ref.: J3168/EPD/0474/07

02 August 2007

Environmental Impact Assessment Ordinance Register Office
27th floor, Southorn Centre
130 Hennessy Road
Wan Chai
Hong Kong

Attn: Mr Victor Yeung, Senior Environmental Protection Officer

Dear Sirs

Reprovisioning and Upgrading of Salt Water Services Reservoirs in Western District for Water Supplies Department
Noise Enclosure Design Plan

Pursuant to Condition 2.7(a) of Environmental Permit (No. EP-279/2007), we are pleased to submit on behalf of The University of Hong Kong a revised noise enclosure design plan, which is certified in writing by the Environmental Team Leader on 2 August 2007. Four hard copies and one electronic copy of a noise enclosure design plan are enclosed for your retention.

Please feel free to contact our Mr. Eddie Tse at 92017059 if further information is required.

Yours faithfully
For and on behalf of
Gammon Construction Limited

K F Tam
Senior Project Manager

KFT/ET/rc

Encl (4 copies + CD)

c.c. HKU – Andy Fung
B&V – Edwin Chung
ERM – Marcus Ip

Leading through quality for 50 years

Supplementary Notes on Noise Enclosure Design Plan

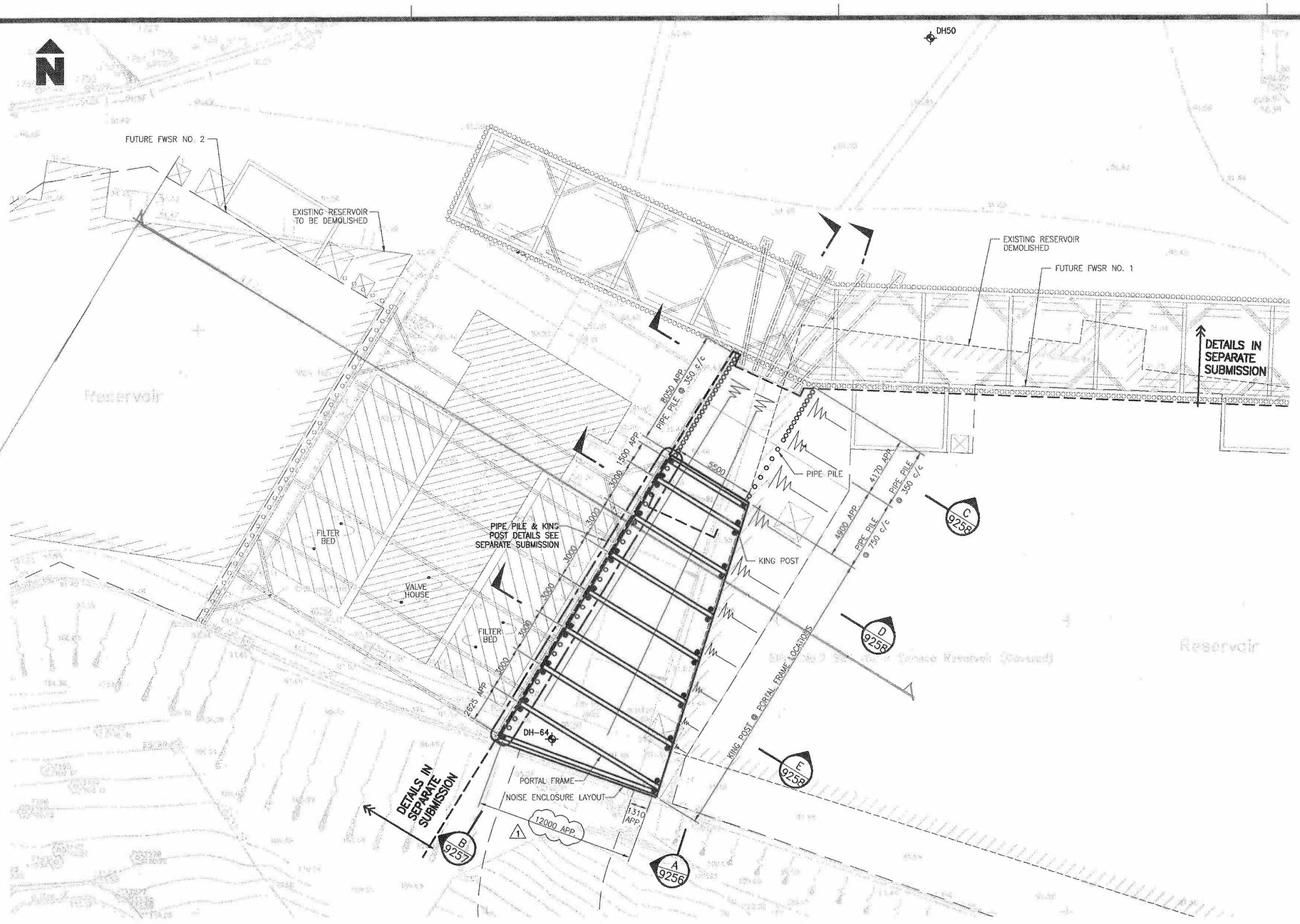
1. The supplementary notes are applicable to Drawing No. J3168-T03-9251, J3168-T03-9256, J3168-T03-9257, J3168-T03-9258 and J3168-T03-9271.

2. The pipe piles and king posts shown in design plans are constructed primarily for the protection of the structure stability of the Elliot treatment Works and as a retaining structure to ensure safe excavation.

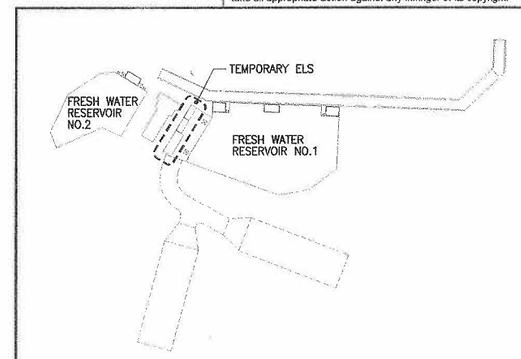
3. The pipe piles and king posts are utilized as support for the noise enclosure structure such that:
   - The provision of a noise enclosure with better acoustic performance by adopting acoustic material with higher surface density according to EP condition 2.7(a)(ii);
   - Completion of installation of the noise enclosure at the portal of the project before commencement of construction works such as excavation according to EP condition 2.7(b); and
   - Maintenance of the proper functioning of the noise enclosure, especially the portal door and folding gate, throughout the entire construction stage of the project according to EP condition 2.7(c).

4. To further minimize noise impacting arising from the erection of noise enclosure, minor activities involving only welding and fastening of nuts and bolts will be undertaken during the assembly of the enclosure and installation of acoustic panels, in line with the details stipulated in Figure 3 of the Environmental Permit No. EP-279/2007.

Drawing No. J3168-T03-9251



LAYOUT PLAN 1 : 150
(STAGE FOR RAMP)



KEY PLAN 1 : 1500

NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. 9001.
2. ALL STRUCTURAL STEEL SHALL BE GADE 43A TO BS4360.
3. HIGHEST WATER LEVEL ASSUMED TO BE AT +87.5mPD.
4. VEHICLE LOAD ON RAMP ASSUMED TO BE 20kPa.

LEGEND:

○ ○ ○ ○ ○	ø273 x 6.3TK. (43A) PIPE PILE
● ●	ø273 x 6.3TK. (43A) WITH 152x152x37 UC (43A) KING POST
DH-64	EXISTING S.I. LOG

NOTES ON DESIGN PARAMETERS

THE FOLLOWING TABLES LIST THE FUNDAMENTAL DESIGN PARAMETERS USED IN THE DESIGN OF THIS TEMPORARY WORKS SUBMISSION.

TABLE 1 : GEOTECHNICAL DESIGN SOIL PARAMETERS

MATERIAL	BULK DENSITY γ_b (kN/m³)	c' (kPa)	ϕ' (DEGREES)	E (MPa)
GRANULAR FILL	19	0	33	8
COLLUVIUM	19	2	34	10
SAPROLITE	19	5	35	30

TABLE 2 : MISCELLANEOUS DESIGN PARAMETERS

WALL FRICTION ANGLE	$= \frac{2}{3}\phi'$ (ACTIVE)
	$= \delta/2$ (PASSIVE) ($\delta = 0.7\ \phi'$ FOR ROUGH STEEL)

Rev	Description	Date	Dgn	Chk	App
1	INCORPORATED ICE'S COMMENTS	09/05/07			
0	FIRST ISSUE	24/04/07	DW	NN	SKC

香港大學
The University of Hong Kong

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

DESIGN AND CONSTRUCTION OF RE-PROVISIONING OF WSD UTILITIES AND INFRASTRUCTURE WORKS FOR PROPOSED CENTENNIAL CAMPUS OF THE UNIVERSITY OF HONG KONG

Contractor: Gammon

Originator: LAMBETH

SWSR TUNNEL PORTAL ENCLOSURE AND EXTERNAL WORKS
LAYOUT PLAN
SHEET 1

Drawn	TS	Scale	1:150 @A1
Designed	DW	Status	FOR DA SUBMISSION
Checked	NN		
Approved	SKC	Drawing No.	J3168-T03-9251
CAD Ref	J:\JOB\J3168\9251	Rev	1

Original Size A1

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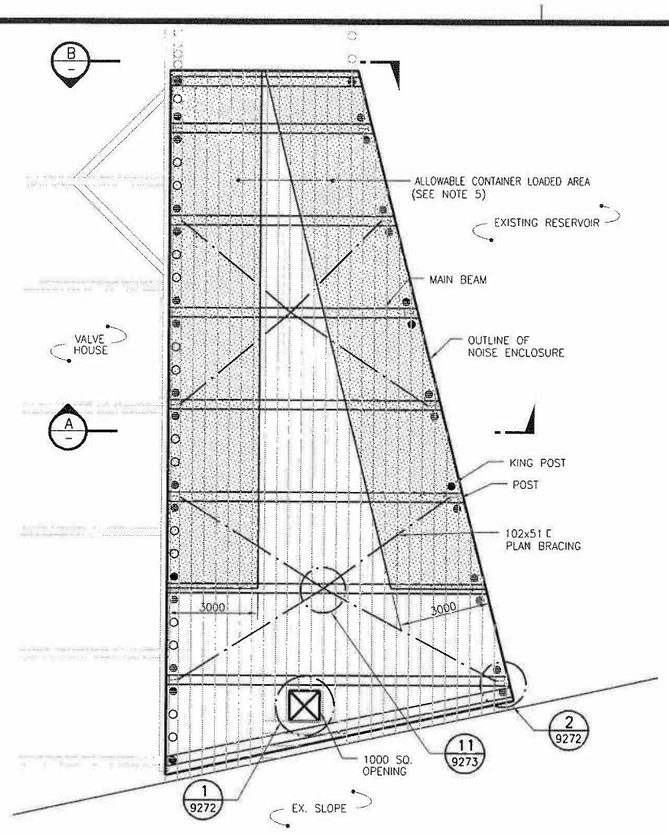
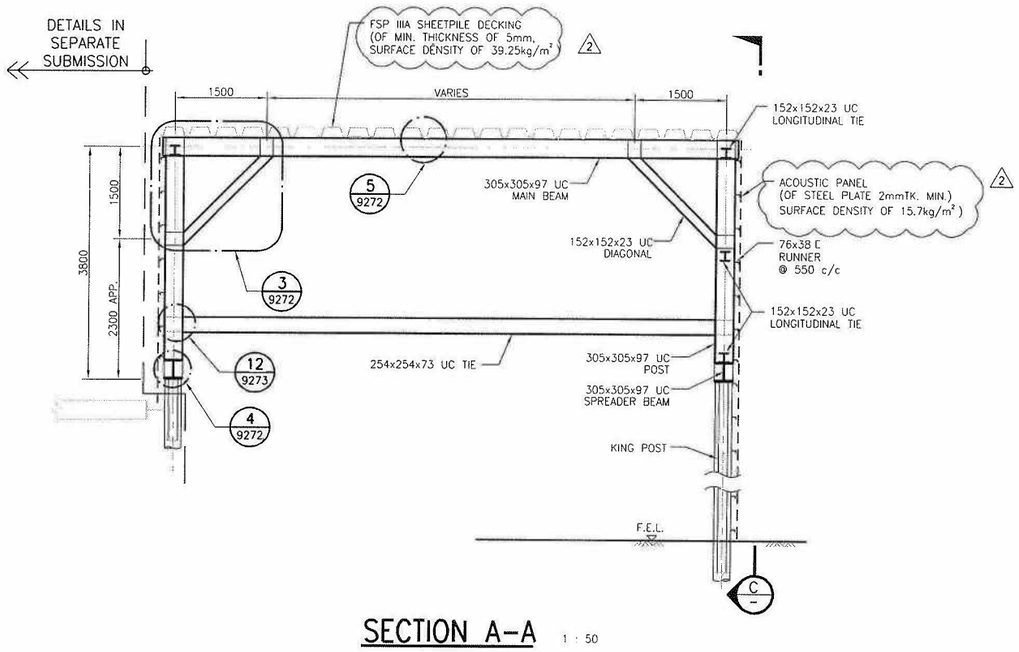
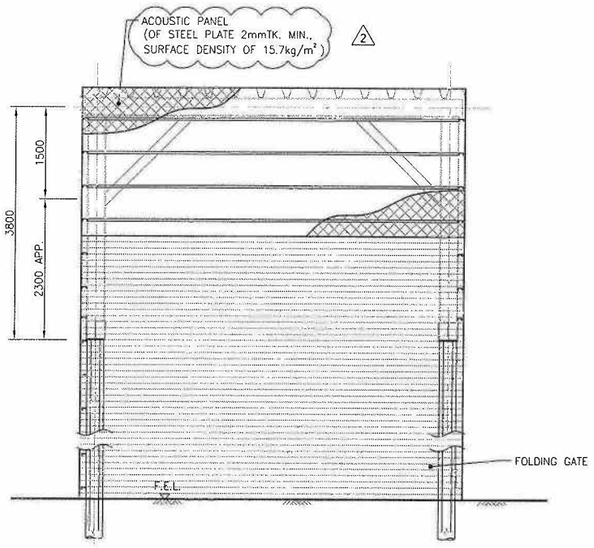
Drawing No. J3168-T03-9271



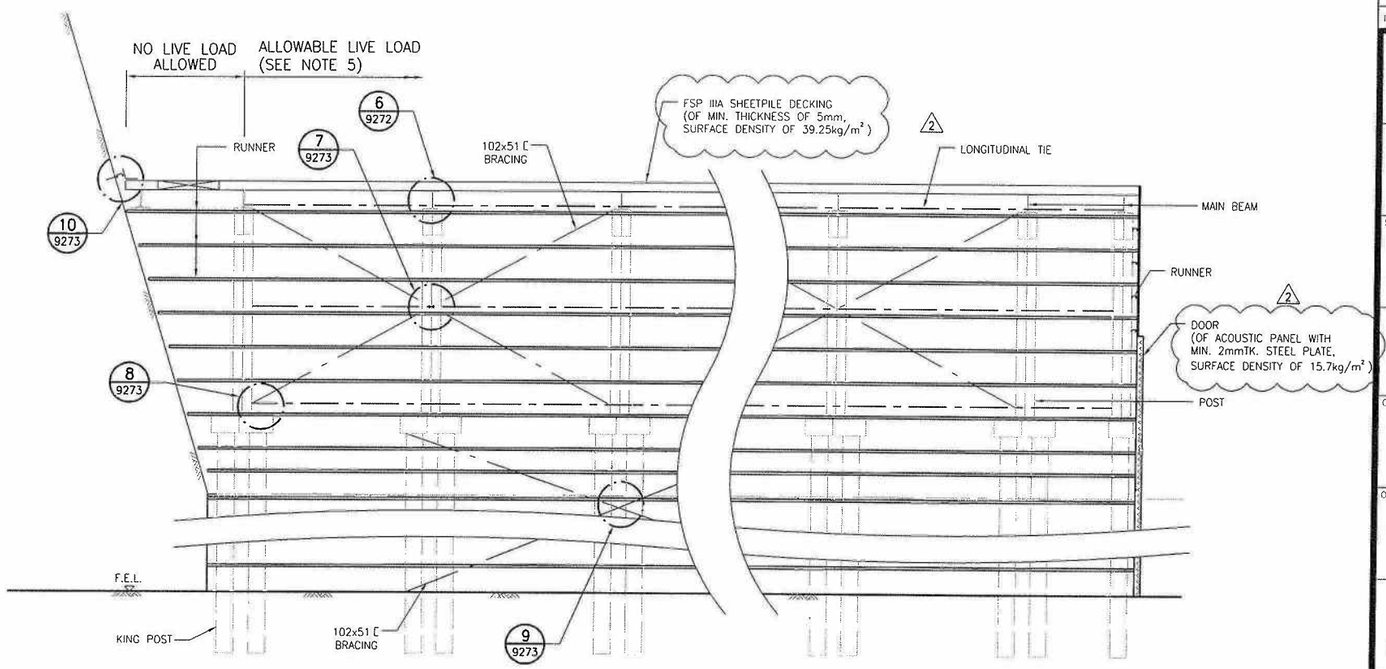
FRAMING PLAN 1 : 100



SECTION A-A 1 : 50



SECTION B-B 1 : 50



SECTION C-C 1 : 50

NOTES:

1. FOR STEELWORKS NOTES, REFER TO DWG. NO. 9001.
2. ALL WELDING TO BE 6mm FILLET WELD ALL ROUND U.N.O.
3. ALL STIFFENERS SHALL BE 10mm THICK WITH 6mm FILLET WELD ALL ROUND U.N.O.
4. DESIGN WIND PRESSURE IS ACCORDANCE TO "CODE OF PRACTICE ON WIND EFFECTS ON HONG KONG 2004".
5. DESIGNED WORKING LIVE LOAD ON DECK TO BE 5kPo AND TWO EMPTY CONTAINERS. (2.2 ton EACH MAX.) (2500 W x 6000 L x 3000 H MAX.)
6. ACOUSTIC PANEL/DOOR AND CORRESPONDING CONNECTION DETAILS TO BE PROPOSED BY SITE.
7. ALL SPLICING TO BE FULL PENETRATION BUTT WELD U.N.O.

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Agent: 香港大學 The University of Hong Kong

OWNER: 水務署 Water Supplies Department

Supervising Officer: BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司

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Contractor: Gammon

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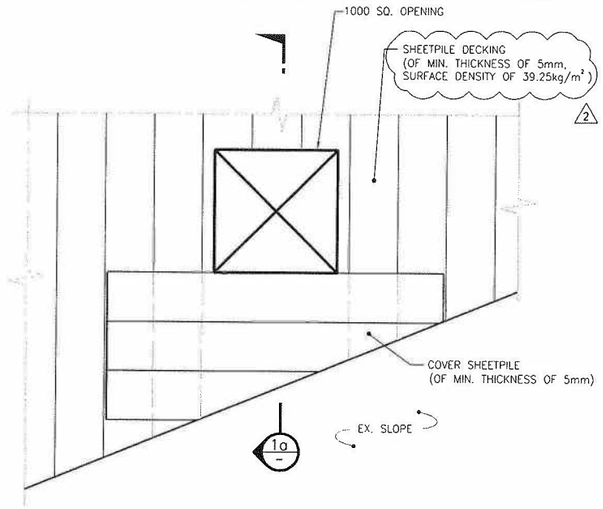
SWSR TUNNEL PORTAL ENCLOSURE AND EXTERNAL WORKS
NOISE ENCLOSURE FRAMING DETAILS
SHEET 1

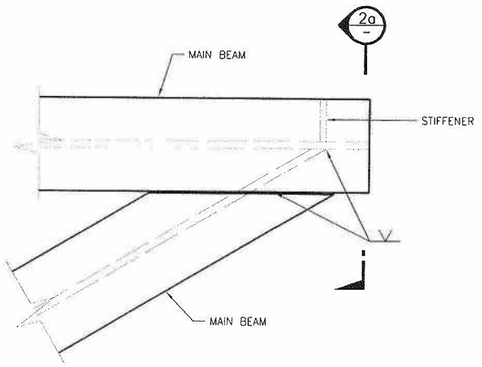
Drawn	TS	Scale	AS SHOWN @A1
Designed	DW	Status	FOR DA SUBMISSION
Checked	NN		
Approved	SKC	Drawing No.	J3168-T03-9271
CAD Ref	J:\JOB\J3168\9271	Rev	2

Original Size A1

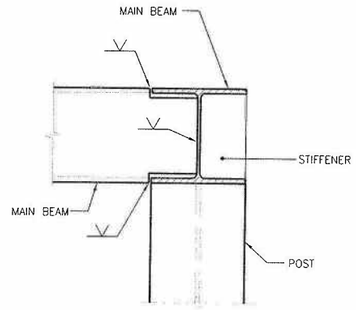
Drawing No. J3168-103-9272



DETAIL 1 1 : 25



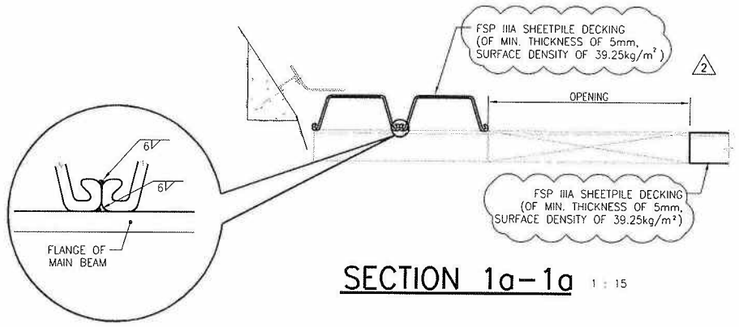
DETAIL 2 1 : 10



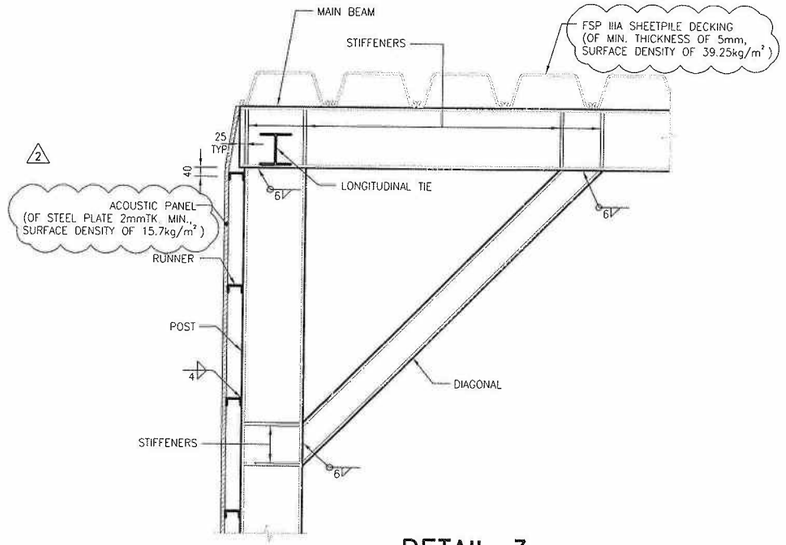
SECTION 2a–2a 1 : 10

NOTES:

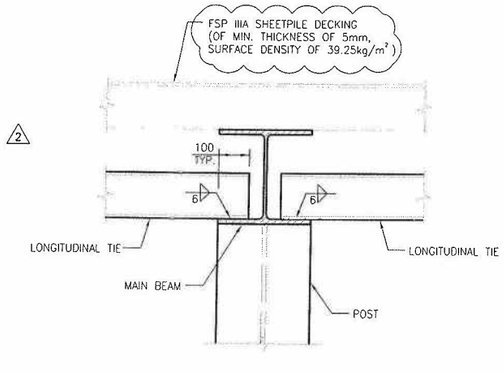
1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH DRG 9271 SERIES.



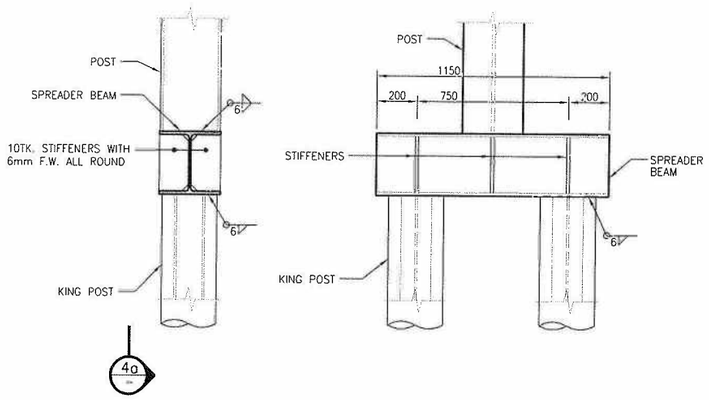
SECTION 1a–1a 1 : 15



DETAIL 3 1 : 15

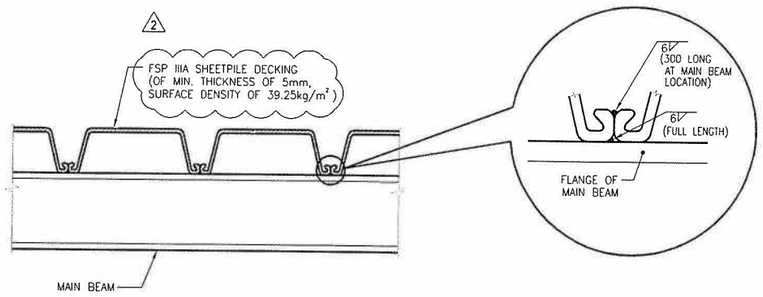


DETAIL 6 1 : 10



DETAIL 4 1 : 15

SECTION 4a–4a 1 : 15



DETAIL 5 1 : 10

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Originator
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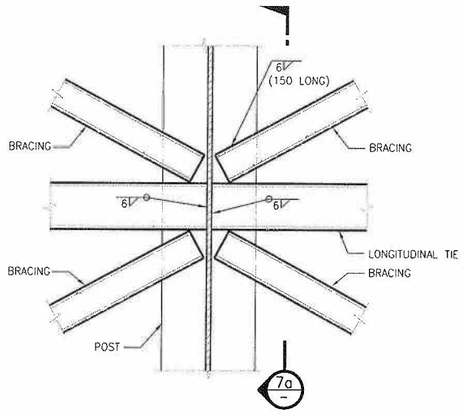
SWSR TUNNEL PORTAL ENCLOSURE AND EXTERNAL WORKS NOISE ENCLOSURE FRAMING DETAILS

SHEET 2

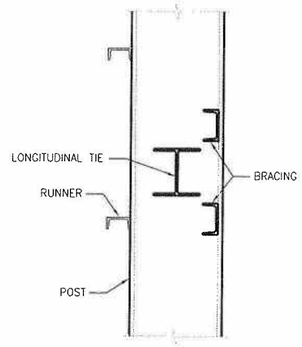
Drawn	TS	Scale	AS SHOWN @A1
Designed	DW	Status	FOR DA SUBMISSION
Checked	NN		
Approved	SKC	Drawing No.	J3168-T03-9272
CAD Ref	J:\JOB\J3168\9272	Rev	2

Original Size A1

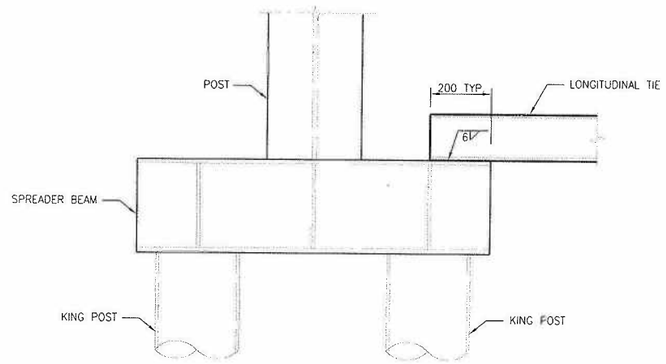
Drawing No. J3168-T03-9273



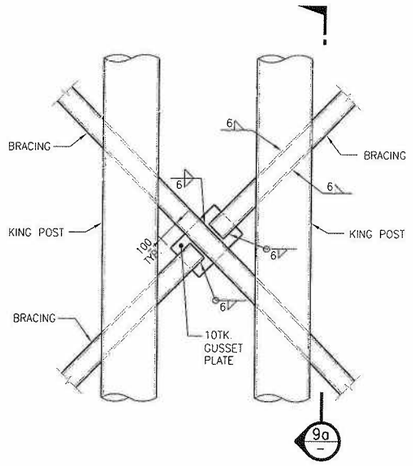
DETAIL 7 1 : 10



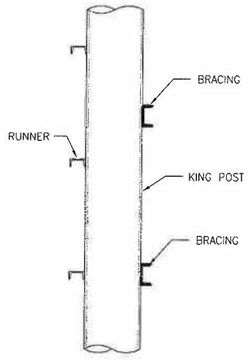
SECTION 7a-7a 1 : 10



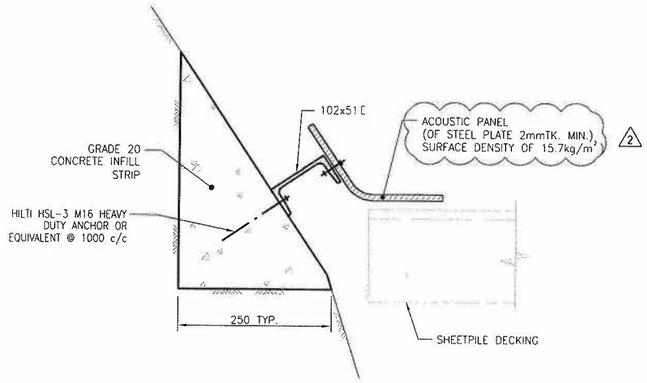
DETAIL 8 1 : 10



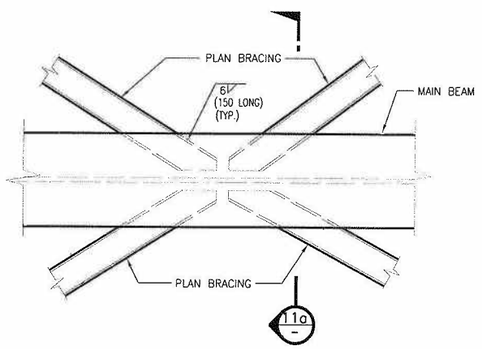
DETAIL 9 1 : 15



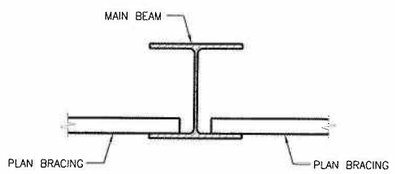
SECTION 9a-9a 1 : 15



DETAIL 10 1 : 5



DETAIL 11 1 : 10



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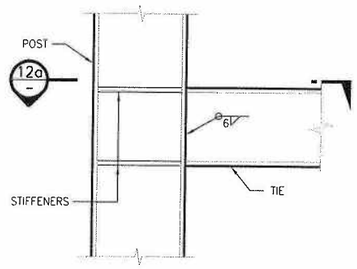
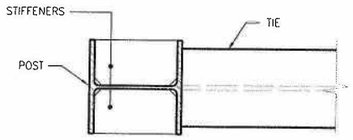


DETAIL 12 1 : 10



SECTION 12a-12a 1 : 10

NOTES:

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH DRG 9271 SERIES.

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SHEET 3

Drawn	TS	Scale	AS SHOWN @A1
Designed	DW	Status	FOR DA SUBMISSION
Checked	NN		
Approved	SKC	Drawing No.	J3168-T03-9273
CAD Ref	J:\JOB\J3168\9273	Rev	2

Original Size A1

100mm