

Environmental
Resources
Management

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3 August 2007

Gammon Construction Limited
28/F Devon House
Taikoo Place
979 King's Road
Hong Kong

Attn: Ir K F Tam, Senior Project Manager

(By Email and Post)

Our ref: 0067560_let_Gammon_Cert_enclosure_070803



Dear Sir,

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

We refer to the following drawings/ plans relating to the noise enclosure design provided by Gammon Construction Ltd:

1. Drawing No. J3168-T62-9526 (Rev 0);
2. Drawing Nos. J3168-T03-9251 (Rev 1), J3168-T03-9256 (Rev 1), J3168-T03-9257 (Rev 1), J3168-T03-9258 (Rev 1) dated 9 May 2007;
3. Drawing No. J3168-T03-9271 (Rev 2) dated 26 June 2007; and
4. Supplementary Notes to the drawings listed in Items 2 and 3.

We are pleased to provide our certification for the noise enclosure design drawings/plans pursuant to Condition 2.7(a) of Environmental Permit No. EP-279/2007.

Yours faithfully
For ERM-Hong Kong, Ltd


Marcus Ip
Environmental Team Leader
Direct Tel: (852) 2271 3102
E-mail: marcus.ip@erm.com

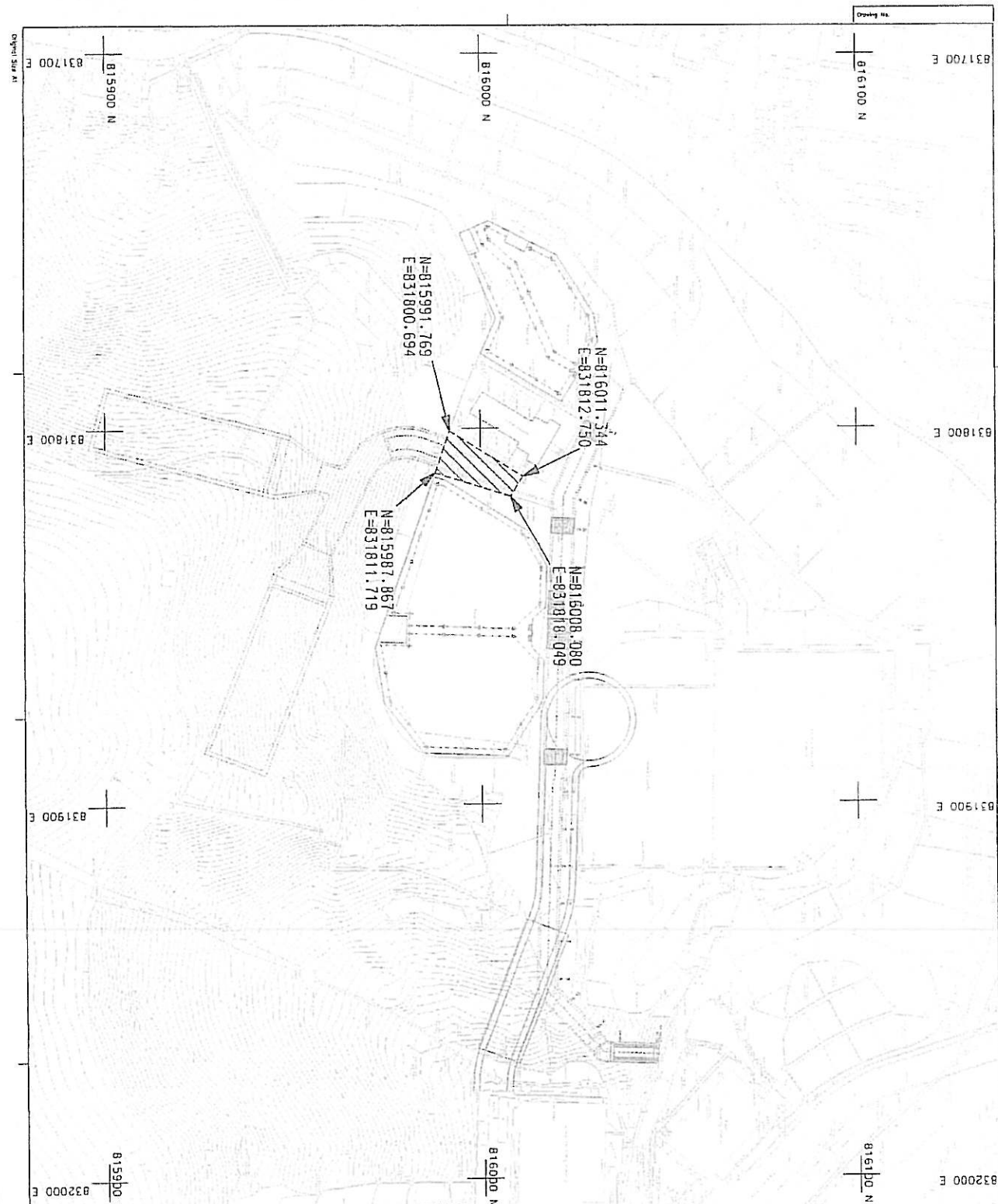


Registered Office
ERM-Hong Kong, Ltd
21/F Lincoln House
979 King's Road
Taikoo Place
Island East
Hong Kong

Offices worldwide

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.



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No.	Part	Description	Start Date	End Date	By	Check By
1	Part 1	Site Preparation	15/01/2007	31/01/2007
2	Part 2	Excavation	01/02/2007	15/02/2007	...	...
3	Part 3	Foundation	16/02/2007	31/02/2007	...	...
4	Part 4	Structural Formwork	01/03/2007	15/03/2007	...	...
5	Part 5	Reinforcement	16/03/2007	31/03/2007	...	...
6	Part 6	Concrete Pouring	01/04/2007	15/04/2007	...	...
7	Part 7	Formwork Striking	16/04/2007	31/04/2007	...	...
8	Part 8	Brickwork	01/05/2007	15/05/2007	...	...
9	Part 9	Roofing	16/05/2007	31/05/2007
10	Part 10	Final Finishes	01/06/2007	15/06/2007

香港大學
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BUCK & YEUNG ENGINEERING LIMITED
 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

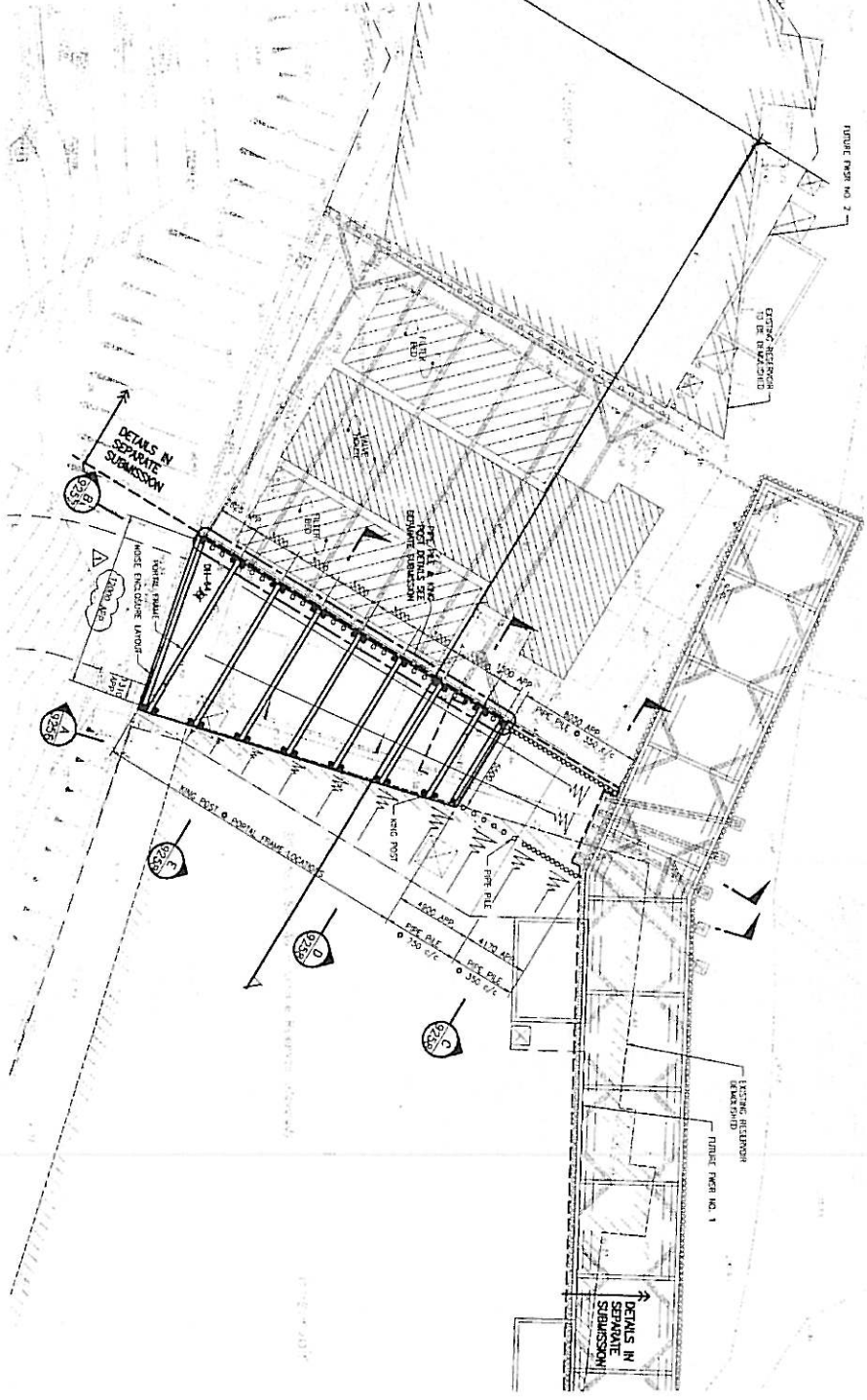
DESIGN AND CONSTRUCTION OF
 REINFORCED CONCRETE FOUNDATIONS FOR
 PROPOSED CENTRAL CANALS OF THE HKU
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Gammson

LAMBETH

LOCATION PLAN OF HORSE ENCLOSURE

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Checked	By	Date	SIGNATURE
Author	By	Drawing No.	2318B-102-9126
Date	By		



LAYOUT PLAN
(STAGE FOR RAMP)

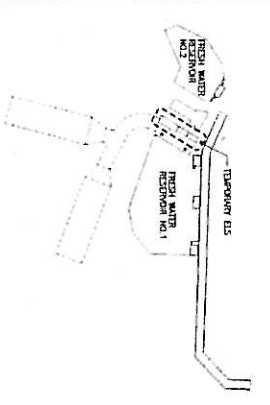
NOTES ON DESIGN PARAMETERS
THE FOLLOWING NOTES ON THE PROPOSED DESIGN PARAMETERS APPLY IN THE CASE OF THIS SUBMISSION ONLY. FOR OTHER SUBMISSIONS:

TABLE 1: GEOTECHNICAL DESIGN PARAMETERS

PARAMETER	UNIT	VALUE	REFERENCE
BULK DENSITY	(kN/m ³)	20	AS 1755
SOIL STRENGTH	(kPa)	100	AS 1755
SOIL MODULUS	(kN/m ²)	10000	AS 1755
SOIL POISSON'S RATIO		0.3	AS 1755
SOIL PERMEABILITY	(m/s)	1.0E-08	AS 1755
SOIL COHESION	(kPa)	10	AS 1755
SOIL FRICTION ANGLE	(degrees)	30	AS 1755

TABLE 2: RETENTION DESIGN PARAMETERS

PARAMETER	VALUE	REFERENCE
SOIL SURFACE COEFFICIENT	0.5	AS 1755
SOIL SURFACE COEFFICIENT	0.5	AS 1755



KEY PLAN

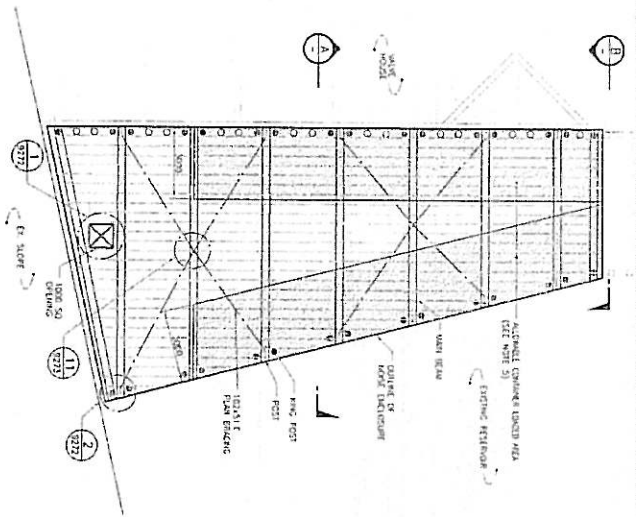
NOTES:
1. THIS DRAWING SHALL BE USED IN CONSTRUCTION WITH DCS NO. 9001.
2. ALL STRUCTURAL STEEL SHALL BE GRADE 43A.
3. PROTECT WORKER LEVEL ASSUMED TO BE AT 4100.
4. VEHICLE LOAD ON RAMP ASSUMED TO BE 20kPa.

LEGEND:

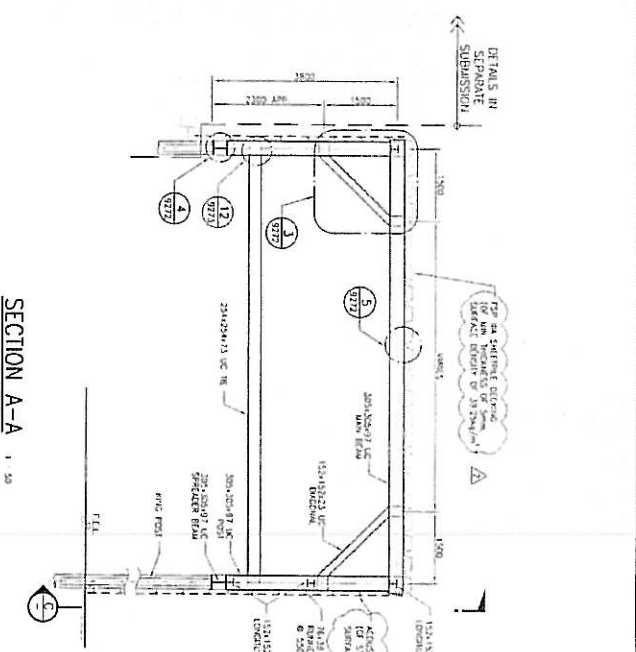
●●●●●	*275 x 8.3M (43A) PFC PILE
●●	*275 x 8.3M (43A) WITH 1250MMx357 DEE (43A) RIGID END
▲	EXISTING 51.12M

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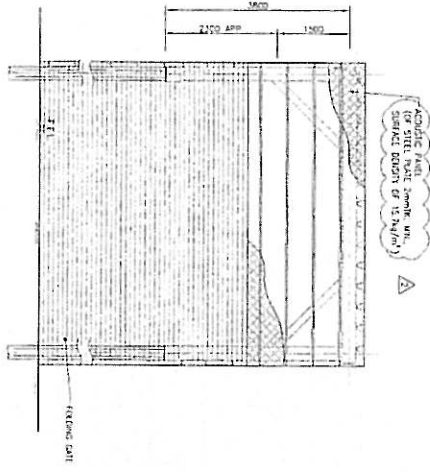
<p>香港大學 The University of Hong Kong</p>		<p>BLACK & VEATCH HONG KONG LIMITED 黑域士工程顧問有限公司</p>	
<p>Gammon</p>		<p>LAMBETH</p>	
<p>DESIGN AND CONSTRUCTION OF RE-PROVISIONING OF V&V UNITS AND INFRASTRUCTURE WORKS FOR PROPOSED CENTRAL CAMPUS OF THE UNIVERSITY OF HONG KONG</p>			
<p>SWR TUNNEL PORTAL ENCLOSURE AND EXTERNAL WORKS LAYOUT PLAN</p>		<p>FOR DA SUBMISSION LAYOUT PLAN</p>	
Scale:	1:500 (R1)	Sheet:	1
Drawn by:	...	Checked by:	...
Project No.:	13168-703-9251	Revision:	1



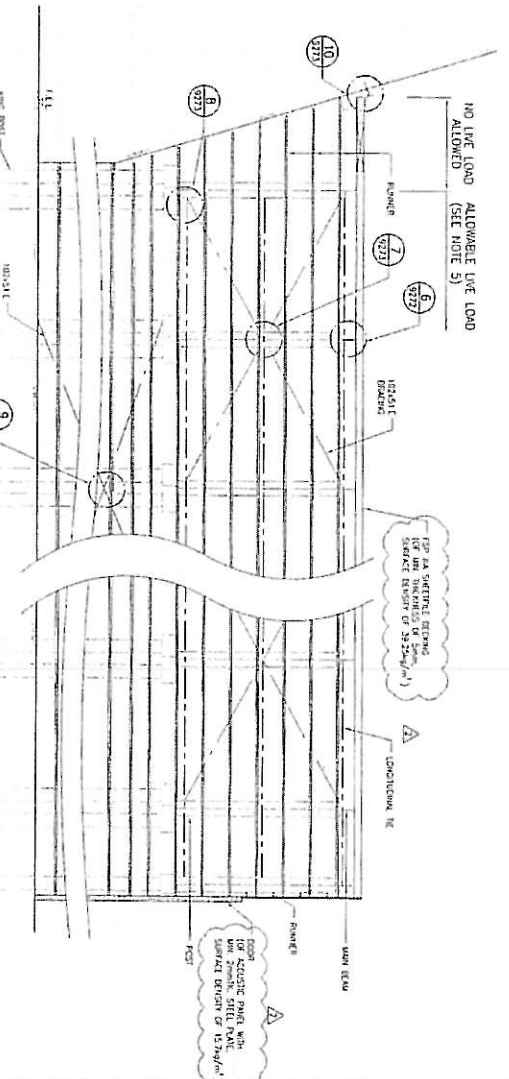
FRAMING PLAN 1:100



SECTION A-A 1:50



SECTION B-B 1:50



SECTION C-C 1:50

- NOTES**
- FOR STRUCTURE WITH REF TO Dwg. NO. 9801
 - ALL DIMENSIONS TO BE FROM FACE UNLESS OTHERWISE SPECIFIED
 - ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE SPECIFIED
 - CONCRETE SHALL BE PRECAST OR CAST-IN-PLACE TO 28MPa
 - STEEL SHALL BE AS PER SPECIFICATION AND TO BE SUPPLIED BY THE CONTRACTOR
 - ACROUSTIC PANELS SHALL BE PROVIDED BY THE CONTRACTOR
 - ALL DIMENSIONS TO BE FROM FACE UNLESS OTHERWISE SPECIFIED

No.	Description	Quantity	Unit	Spec.
1	ACROUSTIC PANEL	200.00	m ²	AS PER SPECIFICATION
2	CONCRETE FLOOR	200.00	m ²	AS PER SPECIFICATION
3	STEEL BEAM	200.00	m	AS PER SPECIFICATION
4	STEEL COLUMN	200.00	m	AS PER SPECIFICATION

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Water Supplies Department

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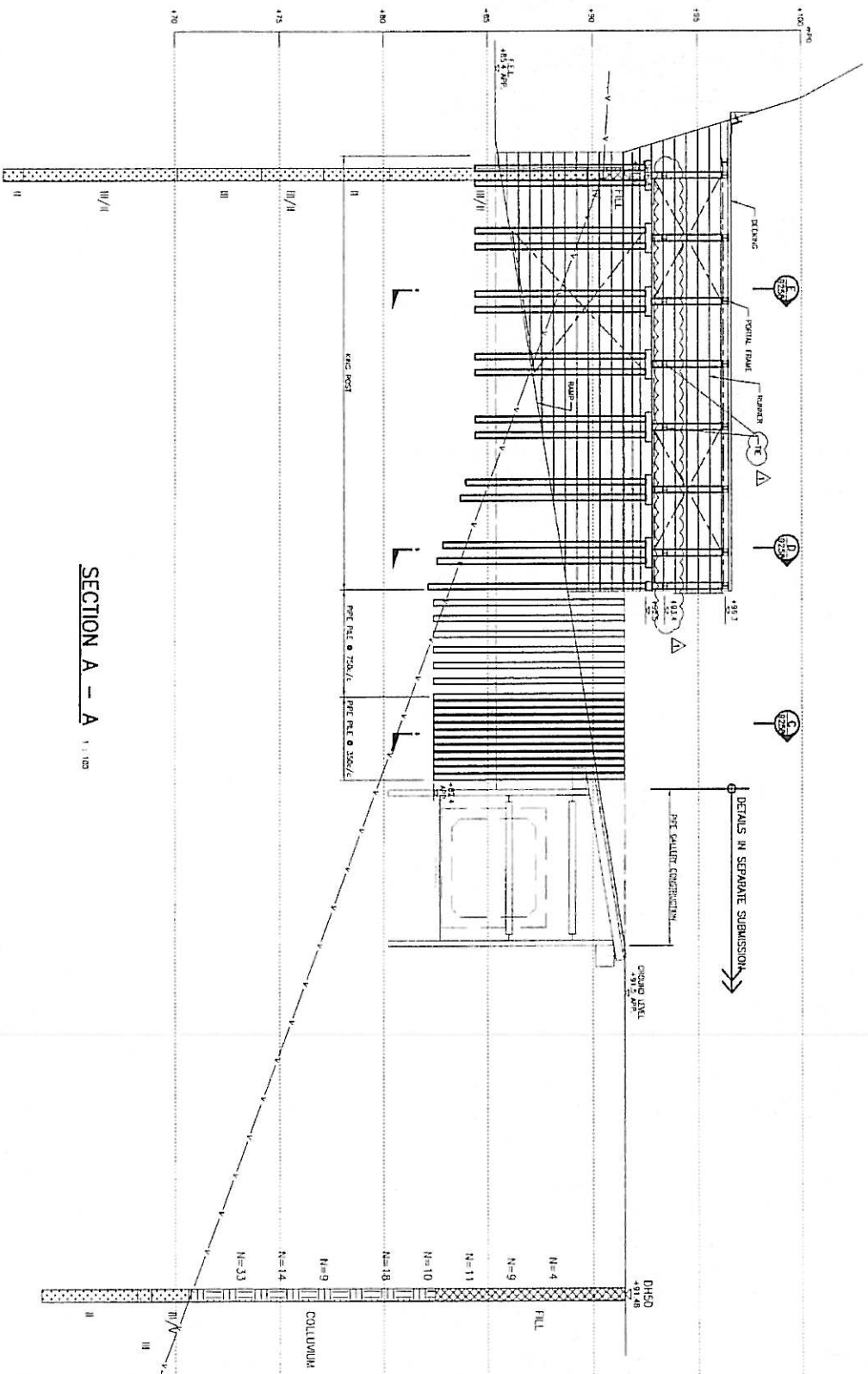
DESIGN AND CONSTRUCTION OF
INTERNAL ENCLOSURE WORKS FOR
THE UNIVERSITY OF HONG KONG

CELESTION

LAM TETH

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

FOR DA SUBMISSION
J3168-103-9271 2

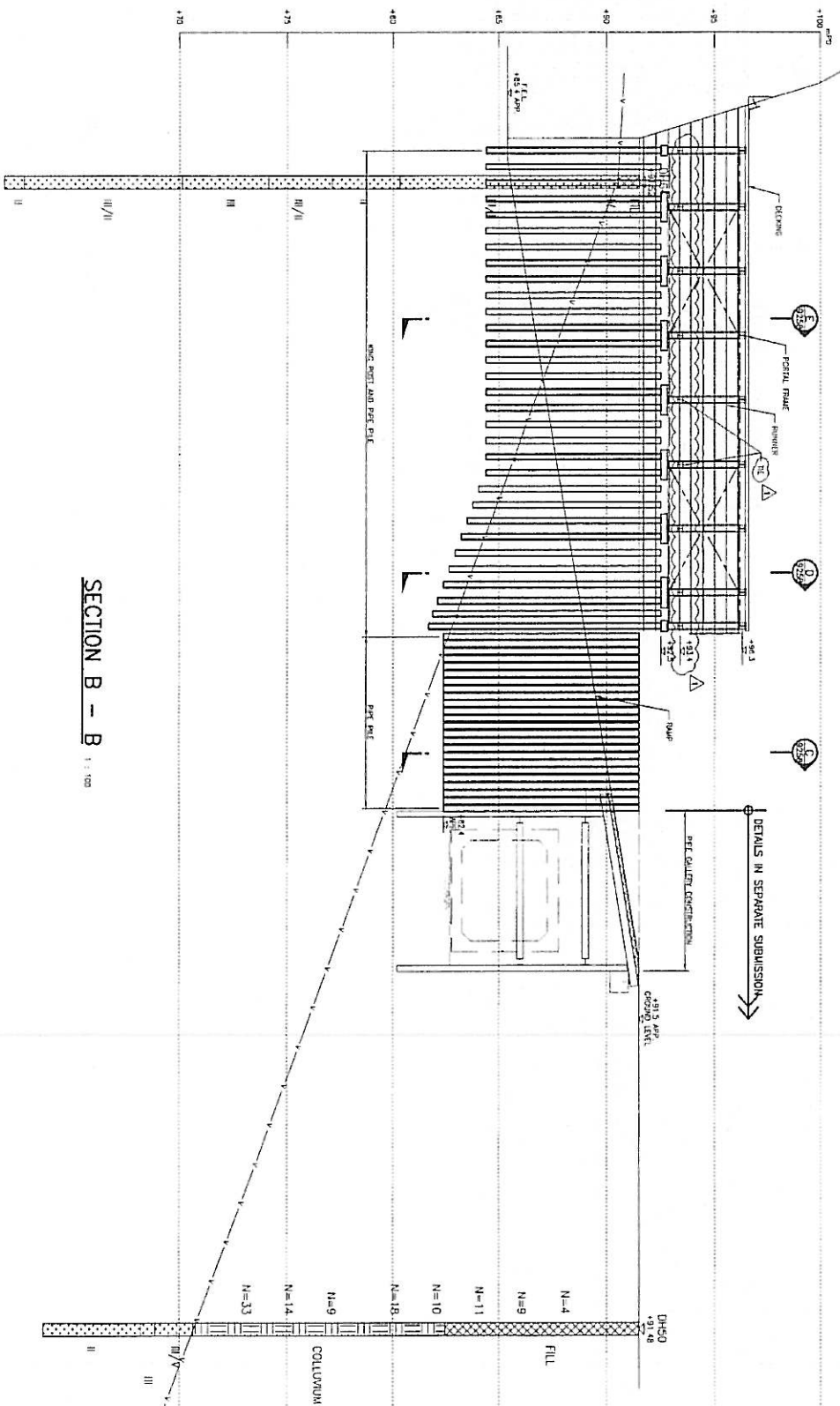


SECTION A - A 1:100

NOTES:
 1. NOTE: FINISHES: FINISH: 200.5. 200.5. 200.5. TO DPC AND 50% SLOPE.

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<p>Gammon LAMBETH</p>		<p>DESIGN AND CONSTRUCTION OF REINFORCED CONCRETE AND INFRASTRUCTURE WORKS FOR PROPOSED CENTRAL CAMPUS OF THE UNIVERSITY OF HONG KONG</p>	
<p>SMSR TUNNEL PORTAL ENCLOSURE AND EXTERNAL WORKS SECTIONS</p>			
<p>FOR DA SUBMISSION</p>			
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Checker	NH	Approved	DM
Approved	SEC	Drawing No.	JJ168-T03-0256
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Original Size A1



SECTION B - B
1:100

DETAILS IN SEPARATE SUBMISSION

NOTES:

1. REFER ENCLOSED DRAWING DETAILS REFER TO DMS NO. 3178 2/2007.

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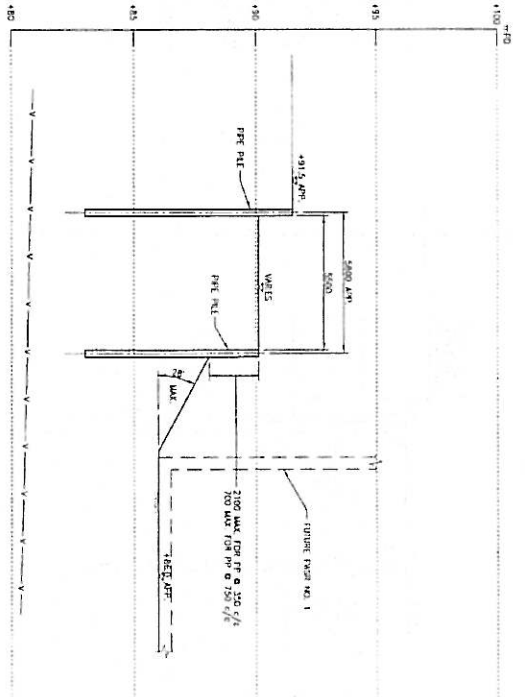
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 BLACK & VEATCH HONG KONG LIMITED
 DESIGN AND CONSTRUCTION OF
 RE-PROVISIONING OF TWO LINES
 OF TRACKS FOR THE PROPOSED
 CENTRAL CAMPUS OF
 THE UNIVERSITY OF HONG KONG

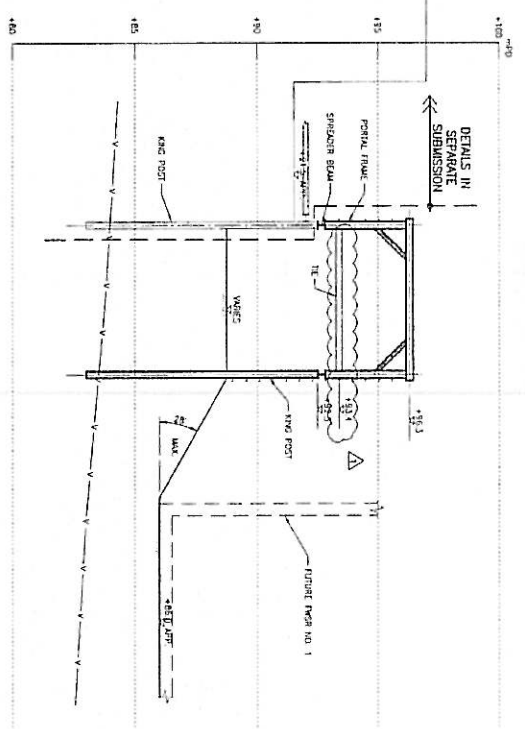
LAMBETH

**SMSR TUNNEL PORTAL ENCLOSURE
 AND EXTERNAL WORKS
 SECTIONS**

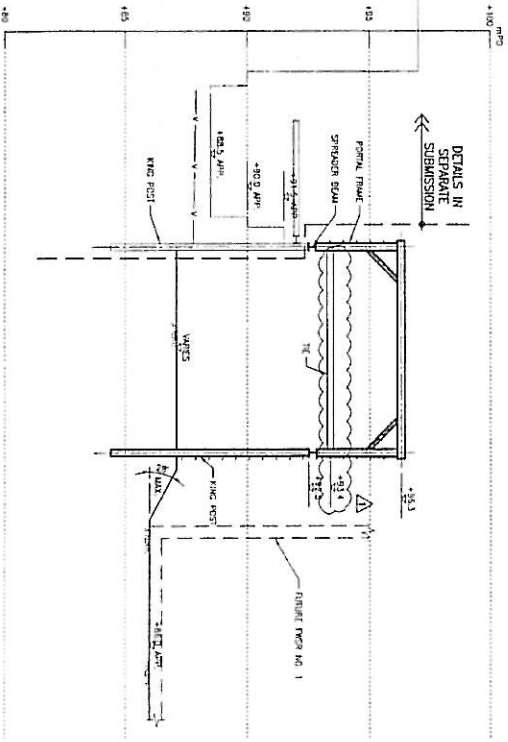
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Doc No.	21168-103-9257	1
Project No.	LAMBETH/03/02/01	



SECTION C - C 1 : 100



SECTION D - D 1 : 100



SECTION E - E 1 : 100

Drawn: SIA M

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No.	Description	Date	Drawn	Checked	Appr.
1	INCORPORATED INTO COMMENTS 09/02/07	09/02/07	SM	SM	SM
0	FIRST ISSUE	21/01/07	SM	SM	SM

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DESIGN AND CONSTRUCTION OF
 RE-FINISHING OF W&S UNITS
 AND INFRASTRUCTURE WORKS FOR
 PROPOSED CENTRAL CANALS FOR
 THE UNIVERSITY OF HONG KONG

Gammon

LAMBETH

SMSR TUNNEL PORTAL ENCLOSURE
 AND EXTERNAL WORKS
 SECTIONS

Scale	1:100 (DA)	SHEET 3
Project No.	J3168-101-9256	Rev
Drawn	SIA M	1
Checked	SIA M	
Approved	SIA M	
Drawn No.	J3168-101-9256	
DAU No.	DAU/01/01/01/01	