

Appendix X

Geotechnical Planning Review Report



Geotechnical Planning Review Report for Proposed SCAA Sports Link at South China Athletic Association

Section 16 Application | 88 Caroline Hill Road, Hong Kong

B190171.GPR01 Rev. D | 17 September 2025

South China Athletic Association

Contents

Contents	1
1. Introduction	1
1.1 The Project	1
1.2 The Report	1
1.3 Employer	1
1.4 Lead Architect / Consultant	1
1.5 Planning Consultant	1
1.6 Structural and Geotechnical Engineers	1
2. The Proposed Development	2
3. DESK STUDY	2
3.1 Topography	2
3.2 Geology	2
3.3 Man-made Features	2
3.4 Existing Foundation	4
3.5 Recorded Landslide Incident	4
3.6 Existing Ground Investigation Information	5
4. GEOTECHNICAL ASSESSMENT	5
4.1 Site Formation Works	5
4.2 ELS Works	6
4.3 Potential Natural Terrain Hazards	7
5. CONCLUSIONS AND RECOMMENDATIONS	7
6. REFERENCES	8

Plates

Plate 1	Top View of the Site
Plate 2	General View of the Site
Plate 3	General View of the Southern End of the Site and the Existing Slope 11SW-B/C659
Plate 4	General View of the Bored Pile Wall

Figures

Figure 1	Site Location Plan
Figure 2	Site Layout Plan with Existing Ground Investigation and Structures
Figure 3	Geological Map

Appendices

- Appendix A Proposed Development Layout
- Appendix B SIS Record
- Appendix C Relevant Site Formation Plans and Foundation Plans
- Appendix D Relevant Ground Investigation Record

1. Introduction

1.1 The Project

The proposed development will be situated on the existing level platform at South China Athletic Association at 88 Caroline Hill Road, with a total area of approximately 6,131.97m². The site was once occupied by the North Stand and ancillary structures of the Sport Ground during the 1970s to 1990s. The proposed site is a developed area with land formed after demolition works in late 90s. In the 2000s, substantial reformation of the site was carried out after the clearance and demolition of the north stand of the sport ground.

The development site is bounded by Caroline Hill Road to the north and east. There is a football court supported mainly by a temporary anchored bored pile wall to the west and south, with precautionary raking strut supports against the wall face. Switch room and then staircase building are located to the northwest of the proposed site.

Location and layout of the Site are shown on **Figures 1 and 2**. General views of the development site is shown in **Plates 1 to 4**.

1.2 The Report

This Geotechnical Planning Review Report (GPRR) is prepared in conjunction with the planning application in view that the proposed development at the site may affect or be affected by man-made slopes.

The content of the GPRR is prepared to address the followings:-

- a) There are geotechnical features located within and in the vicinity of the site. The stability of these features could affect and be affected by the development.

1.3 Employer

South China Athletic Association

1.4 Lead Architect / Consultant

Design 2 (HK) Limited

1.5 Planning Consultant

KTA Planning Limited

1.6 Structural and Geotechnical Engineers

Fugro (Hong Kong) Limited

2. The Proposed Development

The proposed development layout consists of a 4-storey complex with a total Construction Floor Area (CFA) of around 15,830m², and Gross Floor Area (GFA) of 31,327.12m². The maximum building height is about 36m from the Mean Street Level of +8.811mPD and is about 23.8m above the level of existing football field. A new golf fence extends a further 16.2m above the main building roof of the proposed building to align with the height of the existing Golf Fence rising 40m from the football field. The preliminary Development Layout Plan of the proposed complex is shown in **Appendix A**.

3. DESK STUDY

3.1 Topography

Based on the topographic survey plan prepared by Sam Mak & Associates Surveyors (HK) Ltd. in November 2024, the existing formed platform within the site area is about +7mPD. The existing football field to the west of the development site is about +21.6mPD. The level of Caroline Hill Road bounded to the north and east is varying from about +7 mPD to +11 mPD.

3.2 Geology

Based on the Hong Kong Geological Survey, 1:20,000-scale geological map, Series No. HGM20, Sheet No. 11 – Hong Kong and Kowloon (Edition II – 2012) published by the Geotechnical Engineering Office, majority of the Site is underlain by medium-grained Granite.

A part-print of the geological map extracted from the 1:20,000 Geological Survey Map is shown in **Figure 3**.

However, based on the site-specific GI, the site is underlain by a stratigraphic sequence of fill and saprolite of granite.

3.3 Man-made Features

There is only one registered geotechnical feature located in the vicinity of the subject site and the general information is summarized below:-

Table 1 : Summary of Existing Registered Man-made Feature

Feature No.	Type of Feature	Dimension (Length x Max. Height)	Average Angle (Degree)	Maintenance
11SW-B/C659 (BD 3/3053/96)	Soil Slope	80m x 7.9m	32°	IL 9041 (SCAA)

The slope basic information extracted from Geotechnical Engineering Office (hereinafter refer as GEO) is presented in **Appendix B**.

Feature 11SW-B/C659 is located immediately to the south of the proposed development. The feature was modified in September 2002 in conjunction with the demolition of the north stand and associated retaining walls. Based on the available information, the existing slope possessed a FOS of 1.41.

Apart from the registered man-made feature, there are unregistered temporary retaining wall and cut slope located to the west and south of the proposed site area. The general information of the temporary geotechnical feature within the subject site is summarized below:

Table 2 : Summary of Existing Temporary Feature / Retaining Structures

Feature	Type of Feature	Dimension (Length x Max. Height)	Average Angle
Temporary Slope	Soil cut slope with 4 rows soil nails at 2m c/c	27m x 11.5m	65°
Temporary Bored Pile Wall	2m Dia. Bored pile wall at 4m c/c with 4 levels of ground anchor tie back and precautionary raking struts	98m x 17m	90°
Solider Pile Wall (Southern end)	305x305x158kg/m UC at 800mm c/c with 3 layers of tie bars	16m x 11.5m	90°
Solider Pile Wall (Western corner)	305x305x158kg/m UC at 800mm & 1000mm c/c with 4 layers of strut	23m x 17m	90°

Temporary Cut Slope (BD Ref.: BD 3/3053/96)

The Temporary Cut Slope with 4 rows of soil nails is located to the south of the proposed development. The feature comprises an average angle of 65° cut slope with 4 layers of 10m to 12m long soil nail. Based on the available information, the existing slope possessed a min. FOS of 1.21.

Temporary Bored Pile Wall (BD Ref.: BD 3&6/3053/96)

The temporary Bored Pile Wall is located along the western bound of the proposed development, which was constructed in 1998. The temporary retaining wall comprises 25 numbers of Bored Piles of 2.0m diameter at 4.0m c/c with 4 levels of ground anchor of length varies from 26 to 31.5m. The Bored Pile Wall is 98m long align in parallel with the long side of the football pitch and founded at -7mPD. The retaining height of the pile wall varies from 17m at the northern and central portions to 11.5m at the southern end portion. Regular monitoring was carried out to the ground anchors.

In addition, precautionary works in the form of providing raking strutting system against the face of the bored pile wall were constructed in December 2013 under BD ref. 3/2053/96.

Temporary Soldier Pile Wall (BD Ref.: BD 3/3053/96)

The temporary Soldier Pile Walls constructed as part of the temporary ELS works for the development of north site in late 90s are located to the west and south of the proposed development. The pile walls are located at the corner of the football pitch with L"-Shaped on plan. The Solider Pile Walls are about 16m long at the southern end of the site and 23m long at the western corner of the site. Tie bars and struts were installed to the pile wall to provide lateral resistance.

Extracts of the latest site formation and ELS plans and associated man-made features are shown in **Appendix C** for reference.

3.4 Existing Foundation

Raft footing foundation was constructed at the proposed site location in early 2000s for the north site development. The founding level of the footing was +4.5mPD with the allowable bearing capacity of 350kPa.

3.5 Recorded Landslide Incident

No landslide incident within the vicinity of the site could be located at the GEO.

3.6 Existing Ground Investigation Information

Site-specific ground investigation works were carried out for the proposed redevelopment of the north stand, which are summarized as follows:

Table 3 : Summary of Available GI information

Project Title	Investigation Period	Details of Investigation in Vicinity of the Site
Re-Development of South China Athletic Association – Phase 1	September 1996	8 Drillholes (BH1 to BH7, BH3A)
Proposed Redevelopment of South China Athletic Association – Phase 1 (Additional Work)	June 1999	3 Drillholes (BHA1-BHA3)
Proposed Staircase ST-E5 at South China Athletic Association	June 2017	2 Drillholes (VH1 & VH2)
Proposed A & A Works to Steel Golf Fence at South China Athletic Association	November 2024	2 Drillholes (DHF1 & DHF2)

The drillhole logs indicated that the superficial geology is mainly composed of completely decomposed Granite. No adverse geotechnical feature was recorded from the existing drillhole records. The geological information obtained from the drillhole logs is consistent with that inferred in the Geological Map.

The site layout plan showing the existing drillholes within and in the vicinity of the sites are presented in **Figure 2**. The existing GI records relevant to the proposed Sites are given in **Appendix D**.

4. GEOTECHNIAL ASSESSMENT

4.1 Site Formation Works

For the existing slopes affecting/ being affected by the proposed development, stability of the slopes will be assessed to cater for the change of ground profiles and any service loading. Stabilization measures to the slopes will be provided, if necessary. Based on the proposed development layout, the existing temporary soil nailed slope shall be modified to a permanent registerable man-made feature up to current required safety standard to suit the proposed development. The slope could be modified with a L-shape retaining toe wall and no-fines concrete backfill slope at the crest, in order to maintain the required level difference for the pedestrian passage to the south-eastern entrance of the proposed building. The proposed L-shape retaining wall will be connected to the south-eastern end of the building screen wall.

Provision of top soil with erosion control mat on the concrete backfill slope could be utilized for landscaping purpose.

The existing registered slope 11SW-B/C659 with average gradient of 32° located to the south of proposed development is unlikely to be affected by the proposed development. Extracts of the slope stability with a min. of FOS of 1.4 under previous site formation design report approved by BD Ref no. 3/3053/96 in May 2000 is attached for reference. Nevertheless, the effect of the proposed development to adjacent man-made features including 11SW-B/C659 shall be reviewed in the detailed design stage. The effect of the Schematic site formation works associated with the development is presented in **Figure 3**.

Based on a review of the desk study information, assessment of the stability condition of existing man-made features and/or upgrading works are considered required:-

Table 4: Summary of Recommendation of Proposed Works for Features within Development

Feature	Location	Existing CTL	Proposed Works
Temporary soil nailed slope	South of proposed complex	-	Feature to be modified and registered

Table 5: Summary of Existing Feature outside the Development

Feature	Location	Existing CTL	Proposed Works
11SW-B/C659	South of proposed complex	2	Slope with average gradient of 32° with FoS= 1.4 min. will be retained and no site formation works required.

4.2 ELS Works

As discussed in Section 3.3 above, there are temporary ELS works at the west bound of the proposed development. The ELS work is supporting the existing football field at +21.5mPD. It is expected that the existing temporary ELS works including the anchored bored pile wall and soldier pile wall shall be replaced by permanent building screen wall or retaining structures under the proposed development. The temporary anchors and steel waling/strut shall be destressed and dismantled in a safety manner respectively. The existing bored pile wall will be abandoned after erection of the building.

Table 6 : Summary of Recommendation of Proposed ELS Works within Development

Feature	Location	Proposed Works
Bored pile wall (Temp. ELS)	Along western boundary of the site	Feature to be removed with erection of building screen wall and retaining structures, and destressing of anchors and dismantling of raking strut.
Soldier pile wall (Temp. ELS)	At southern portion and north-western corner of the site	Feature to be removed with erection of building screen wall and retaining structures, and dismantling of strut/waling.

The temporary ELS works shall be reviewed or modified to fulfill the stability requirements with due consideration of the staged construction of the foundation and building works.

4.3 Potential Natural Terrain Hazards

The development is situated at the build-up area and does not meet the alert criteria for carrying out a natural terrain hazard study (NTHS).

5. CONCLUSIONS AND RECOMMENDATIONS

- A temporary soil nailed slope is located at the southern boundary of the development. The feature will be modified/upgraded to current safety standard under this development and registered after completion of the works.
- Existing feature 11SW-B/C659 is located to the south and adjoining the temporary slope. It is unlikely that the feature will be affected by the proposed development. Nevertheless, the effect of the proposed development to adjacent man-made features including 11SW-B/C659 shall be reviewed in the detailed design stage.
- The existing temporary ELS works including the anchored bored pile wall and soldier pile wall shall be replaced by permanent building screen wall or retaining structures under the proposed development. The temporary anchors and steel waling/strut shall be destressed and dismantled in a safety manner respectively. The existing bored pile wall will be abandoned after erection of the building.
- The development is situated at the build-up area and does not meet the alert criteria for natural terrain screening based on GEO Report No. 138 (2nd Edition). Therefore, NTH Study is not required.
- Based on the above discussions, it can be concluded that the construction of the proposed development is geotechnically feasible.

6. REFERENCES

1. Geotechnical Control Office (2012). "Solid and Superficial Geology. Hong Kong Geological Survey HGM20, Edition 2, Sheet No. 11, 1:20,000 scale". Government Press, Hong Kong.
2. Geotechnical Control Office (1987). "Geotechnical Area Study for Hong Kong Island and Kowloon. GASP Report I". Geotechnical Engineering Office, Hong Kong.

Plates

PROPOSED DEVELOPMENT FOR SCAA		LOCATION No. 88 CAROLINE HILL ROAD, HONG KONG	
REF. 190171	NEGATIVE NO. -	TAKEN IN October 2018	SHEET 1 OF 2



Plate 1: Top View of the Site



Plate 2: General View of the Site

DEVELOPMENT OF NORTH STAND
SOUTH CHINA ATHLETIC ASSOCIATION
AT 88 CAROLINE HILL ROAD

FUGRO FUGRO (HONG KONG) LIMITED

PROPOSED DEVELOPMENT FOR SCAA		LOCATION No. 88 CAROLINE HILL ROAD, HONG KONG	
REF. 190171	NEGATIVE NO. -	TAKEN IN October 2018	SHEET 2 OF 2

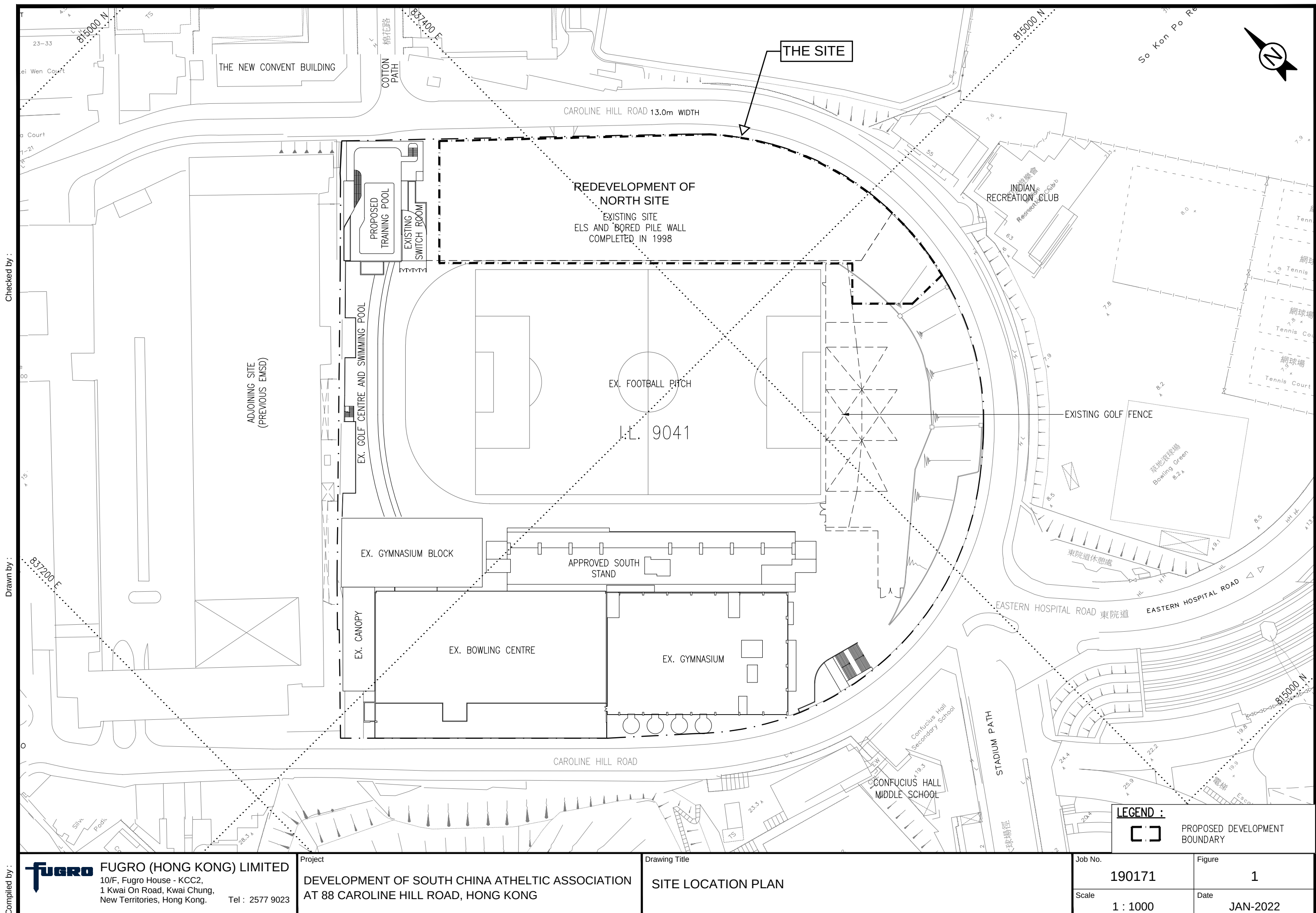


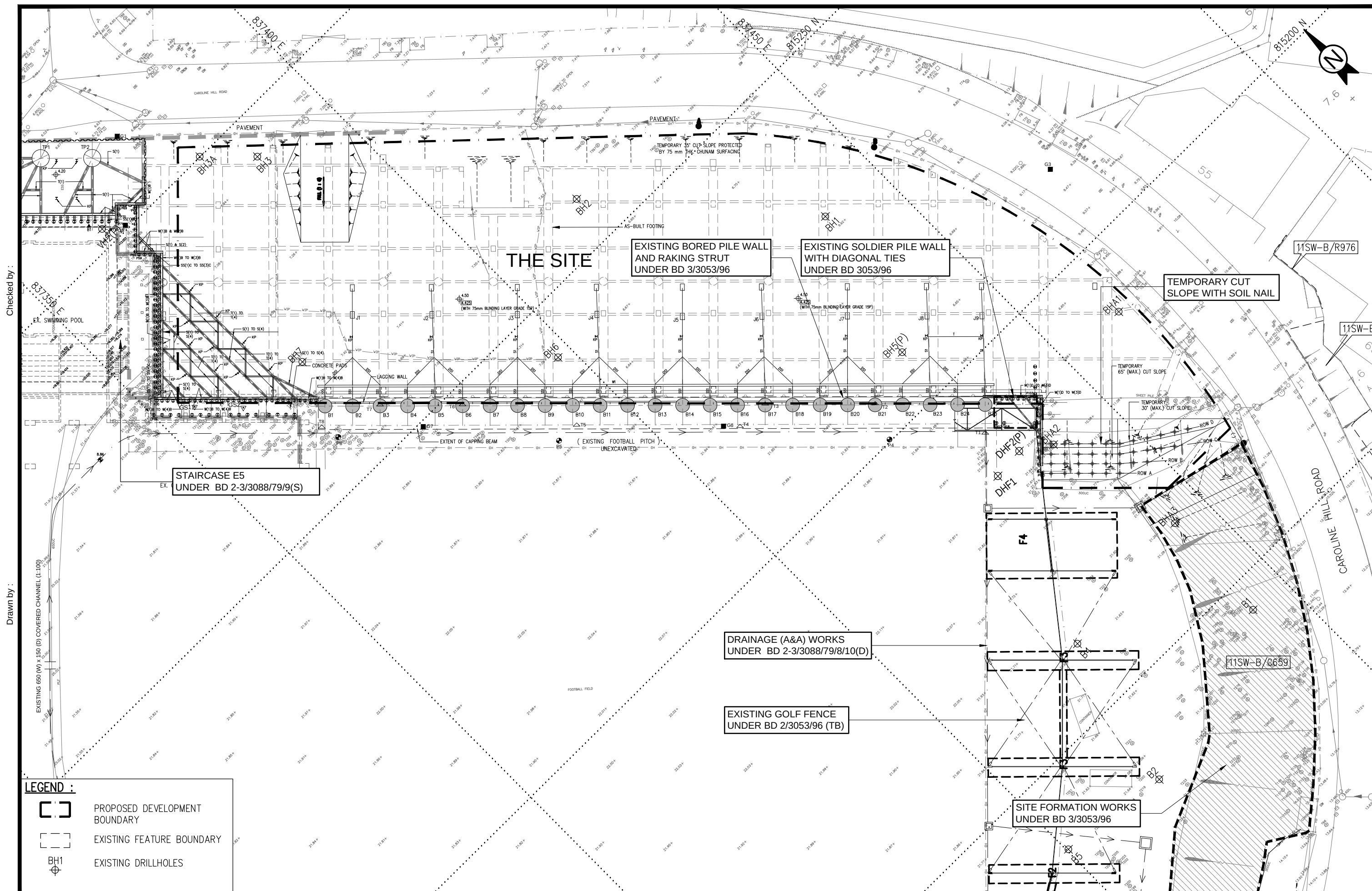
Plate 3: General View of the Southern End of the Site and the Existing Slope 11SW-B/C659



Plate 4: General View of the Bored Pile Wall

Figures



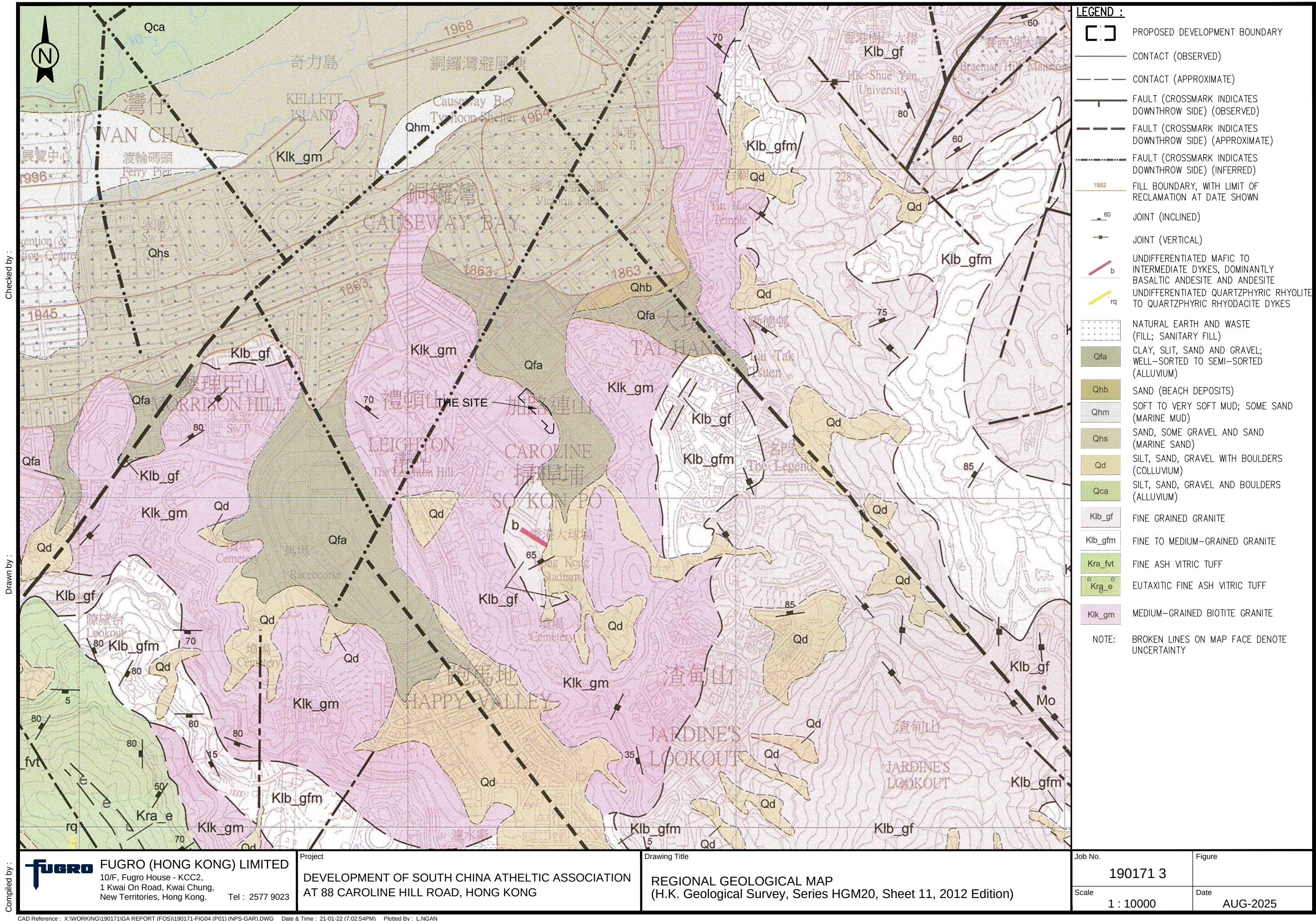


Checked by :
Drawn by :
Compiled by :

LEGEND :

- PROPOSED DEVELOPMENT BOUNDARY
- EXISTING FEATURE BOUNDARY
- EXISTING DRILLHOLES

 FUGRO (HONG KONG) LIMITED 10/F, Fugro House - KCC2, 1 Kwai On Road, Kwai Chung, New Territories, Hong Kong. Tel : 2577 9023	Project DEVELOPMENT OF SOUTH CHINA ATHELTIC ASSOCIATION AT 88 CAROLINE HILL ROAD, HONG KONG	Drawing Title SITE LAYOUT PLAN WITH EXISTING GI AND STRUCTURES	Job No. 190171	Figure 2
			Scale 1 : 500	Date AUG-2025



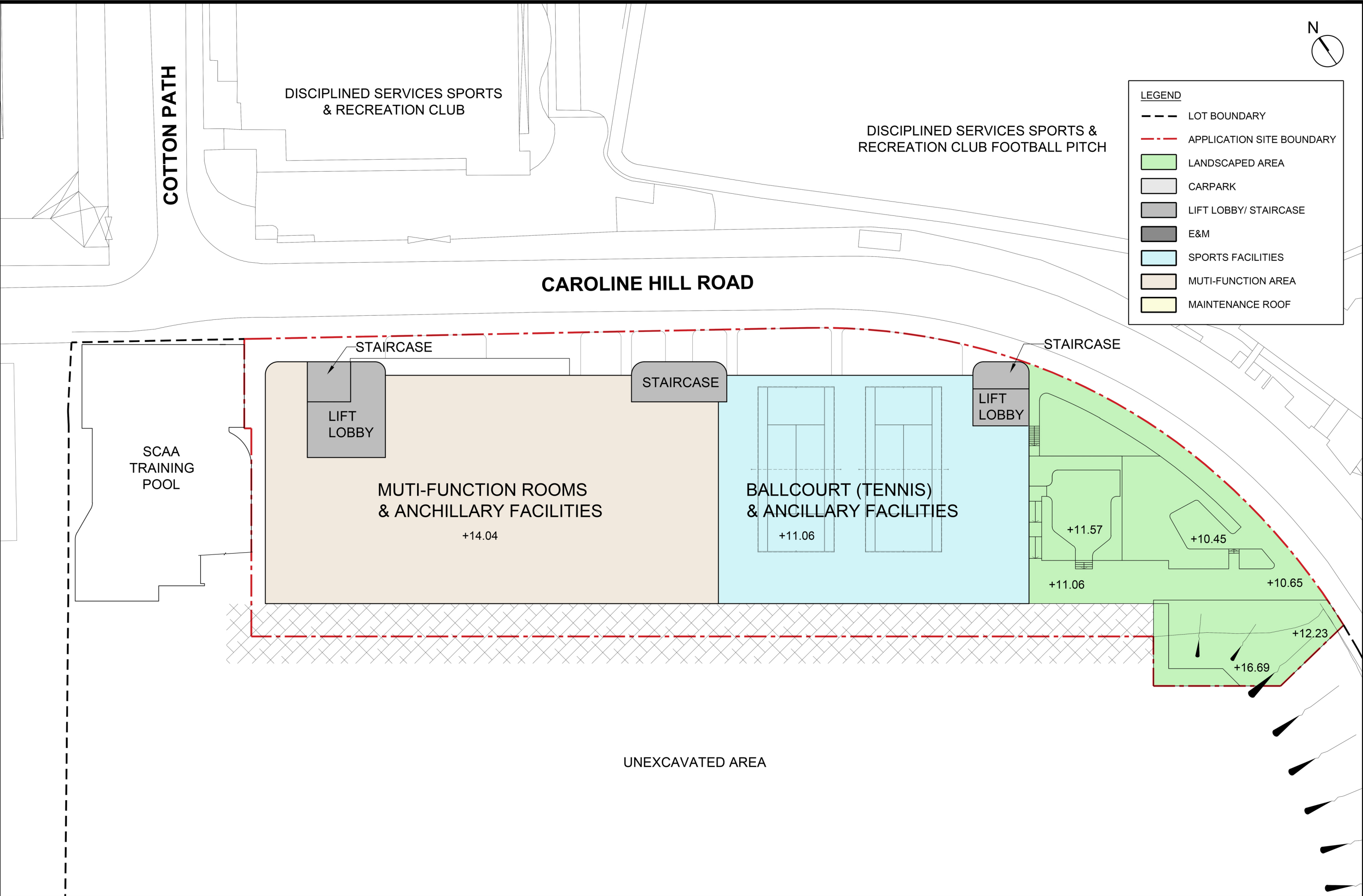
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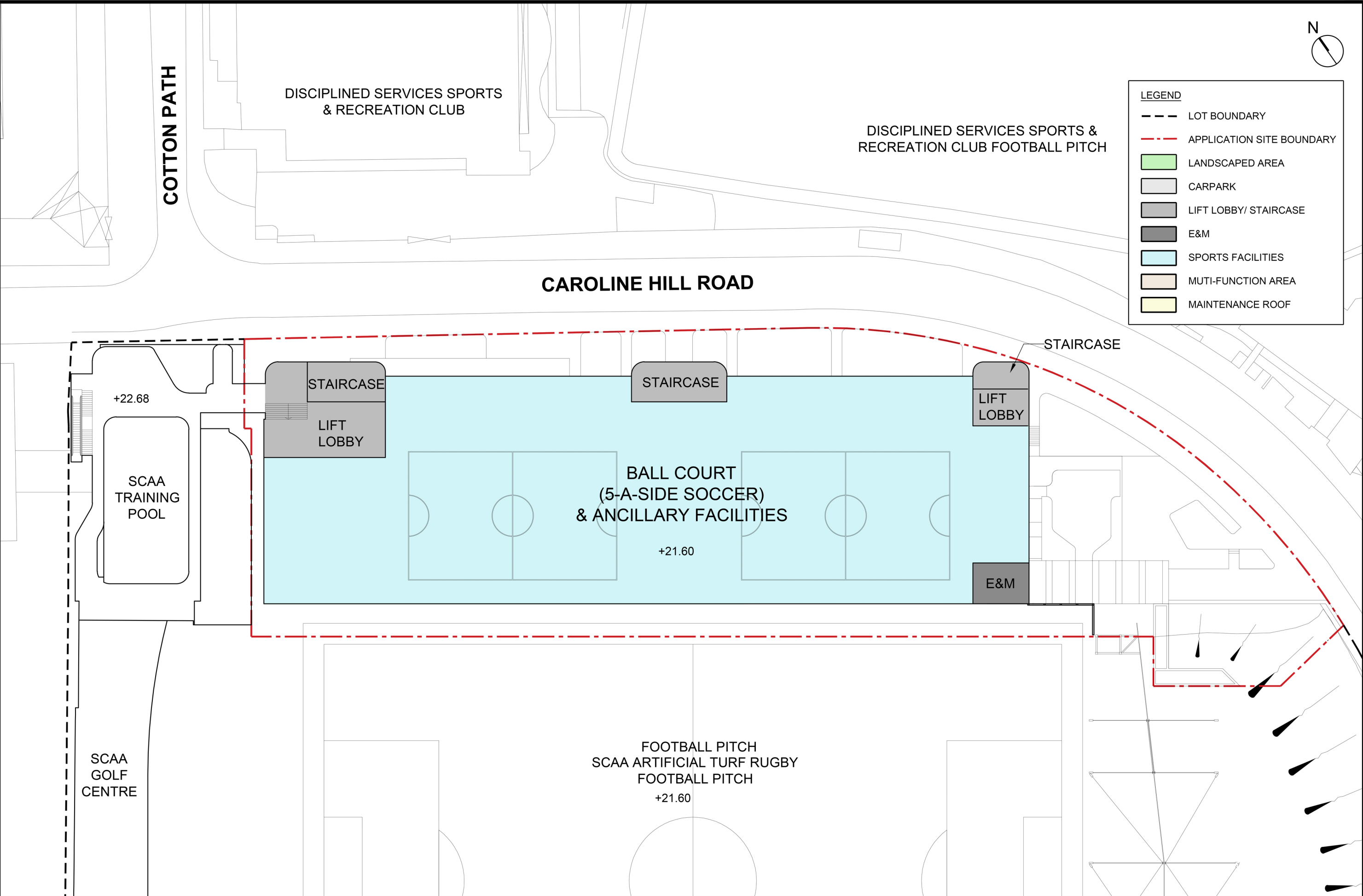
- PROPOSED DEVELOPMENT BOUNDARY
- CONTACT (OBSERVED)
- CONTACT (APPROXIMATE)
- FAULT (CROSSMARK INDICATES DOWNTROW SIDE) (OBSERVED)
- FAULT (CROSSMARK INDICATES DOWNTROW SIDE) (APPROXIMATE)
- FAULT (CROSSMARK INDICATES DOWNTROW SIDE) (INFERRED)
- FILL BOUNDARY, WITH LIMIT OF RECLAMATION AT DATE SHOWN
- JOINT (INCLINED)
- JOINT (VERTICAL)
- UNDIFFERENTIATED MAFIC TO INTERMEDIATE DYKES, DOMINANTLY BASALTIC ANDESITE AND ANDESITE
- UNDIFFERENTIATED QUARTZPHYRIC RHYOLITE TO QUARTZPHYRIC RHYODACITE DYKES
- NATURAL EARTH AND WASTE (FILL; SANITARY FILL)
- CLAY, SLIT, SAND AND GRAVEL; WELL-SORTED TO SEMI-SORTED (ALLUVIUM)
- SAND (BEACH DEPOSITS)
- SOFT TO VERY SOFT MUD; SOME SAND (MARINE MUD)
- SAND, SOME GRAVEL AND SAND (MARINE SAND)
- SILT, SAND, GRAVEL WITH BOULDERS (COLLUVIUM)
- SILT, SAND, GRAVEL AND BOULDERS (ALLUVIUM)
- FINE GRAINED GRANITE
- FINE TO MEDIUM-GRAINED GRANITE
- FINE ASH VITRIC TUFF
- EUTAXITIC FINE ASH VITRIC TUFF
- MEDIUM-GRAINED BIOTITE GRANITE

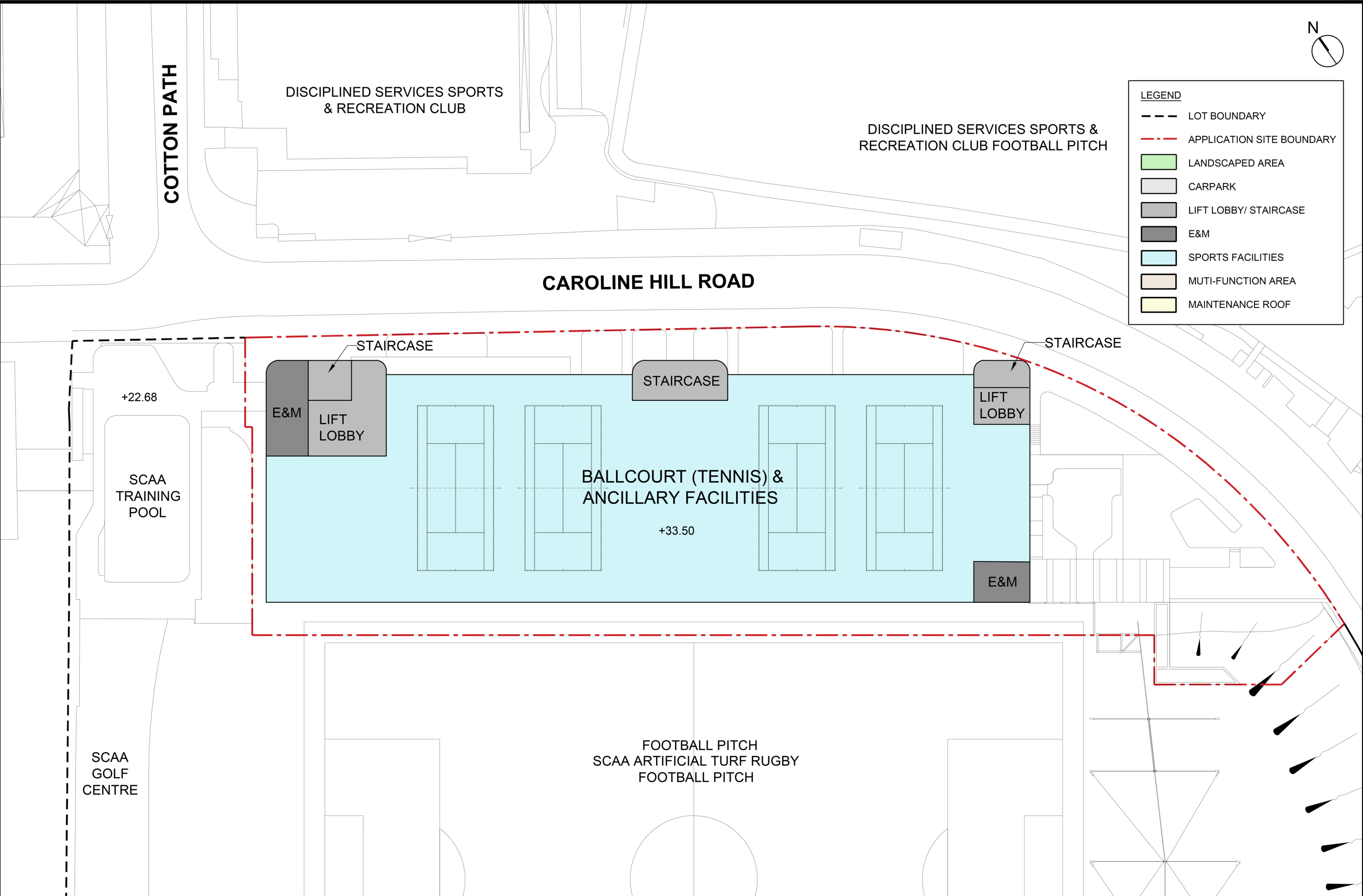
NOTE: BROKEN LINES ON MAP FACE DENOTE UNCERTAINTY

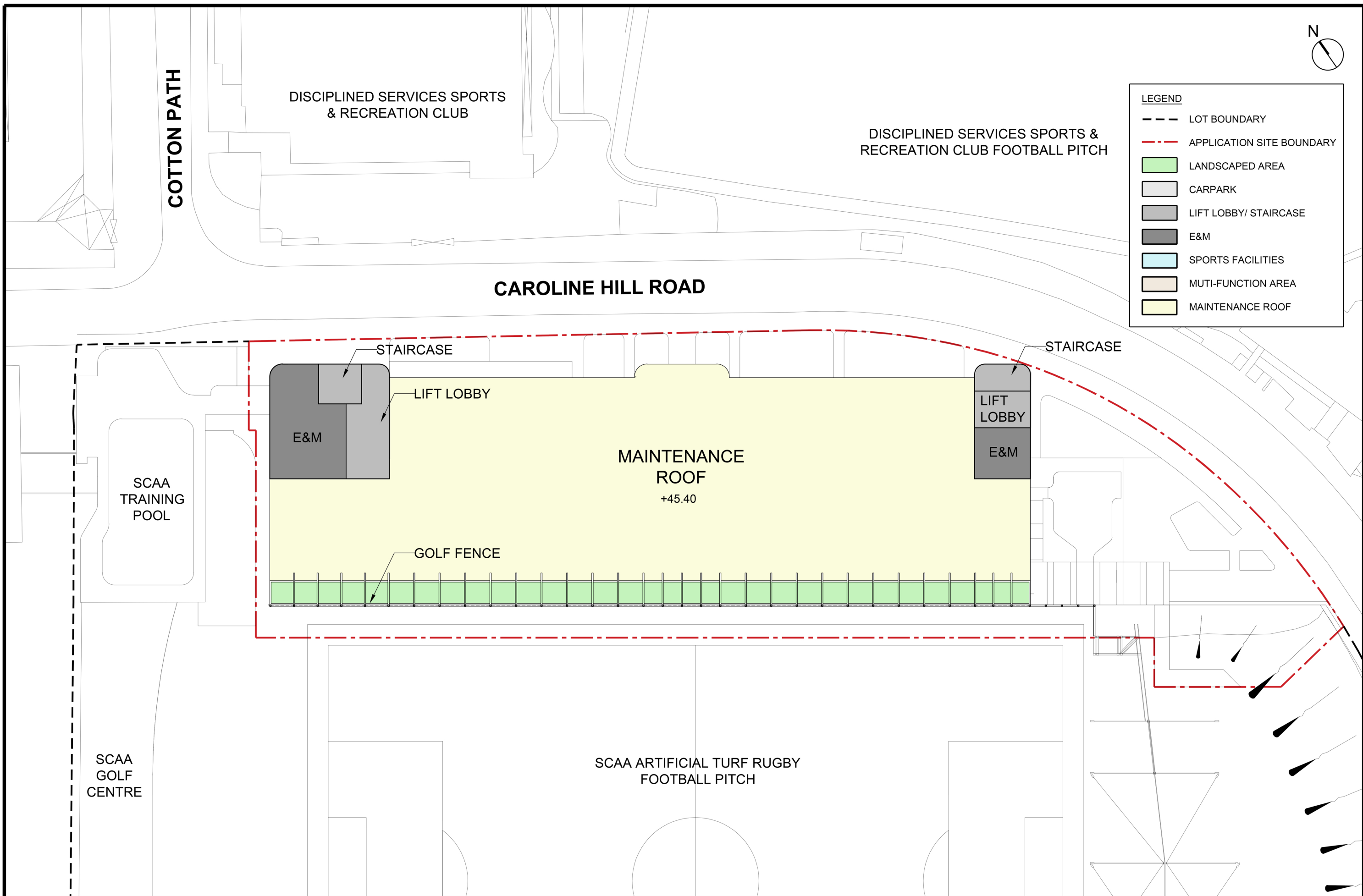
Appendix A

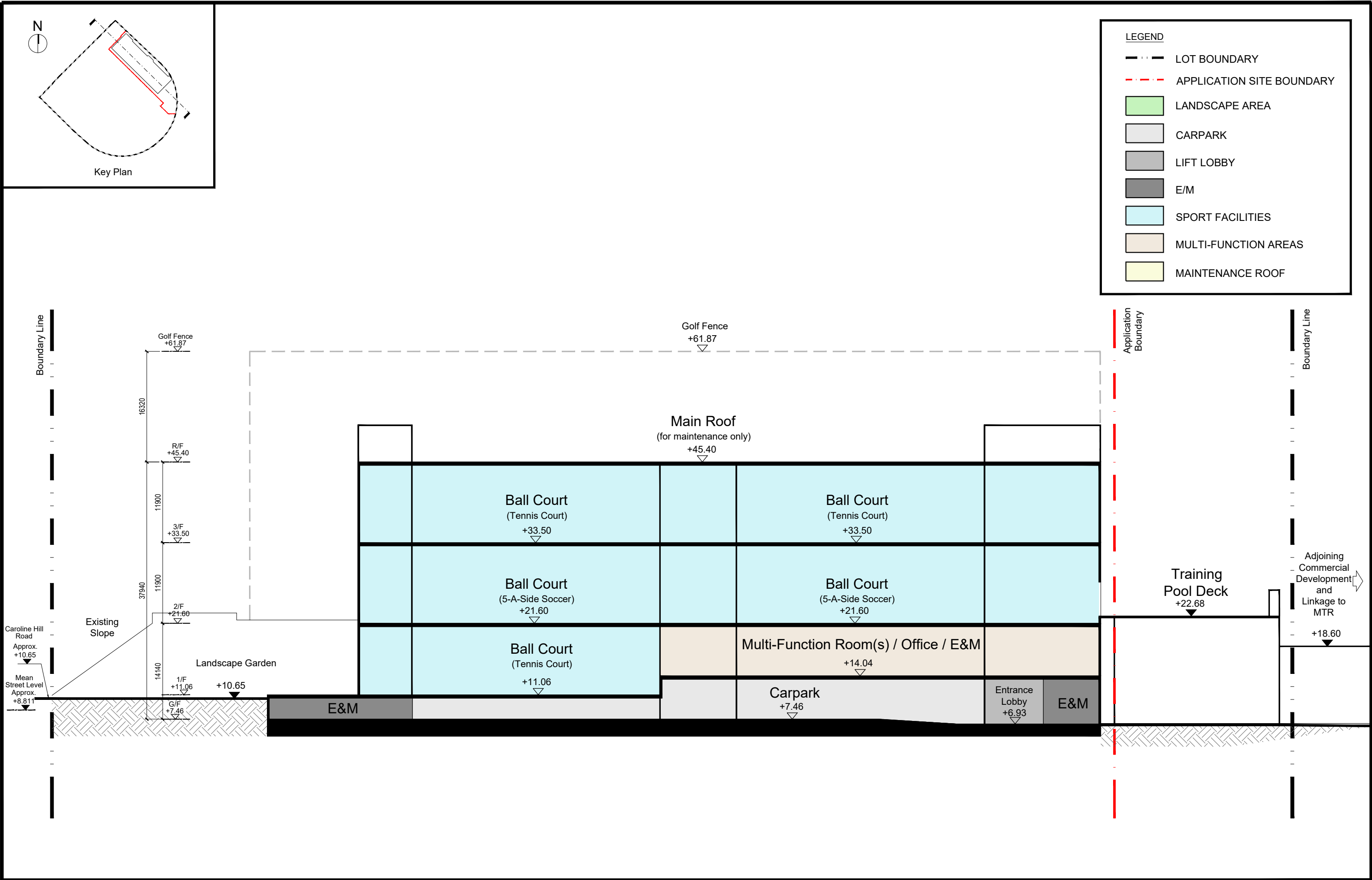
Proposed Development Layout





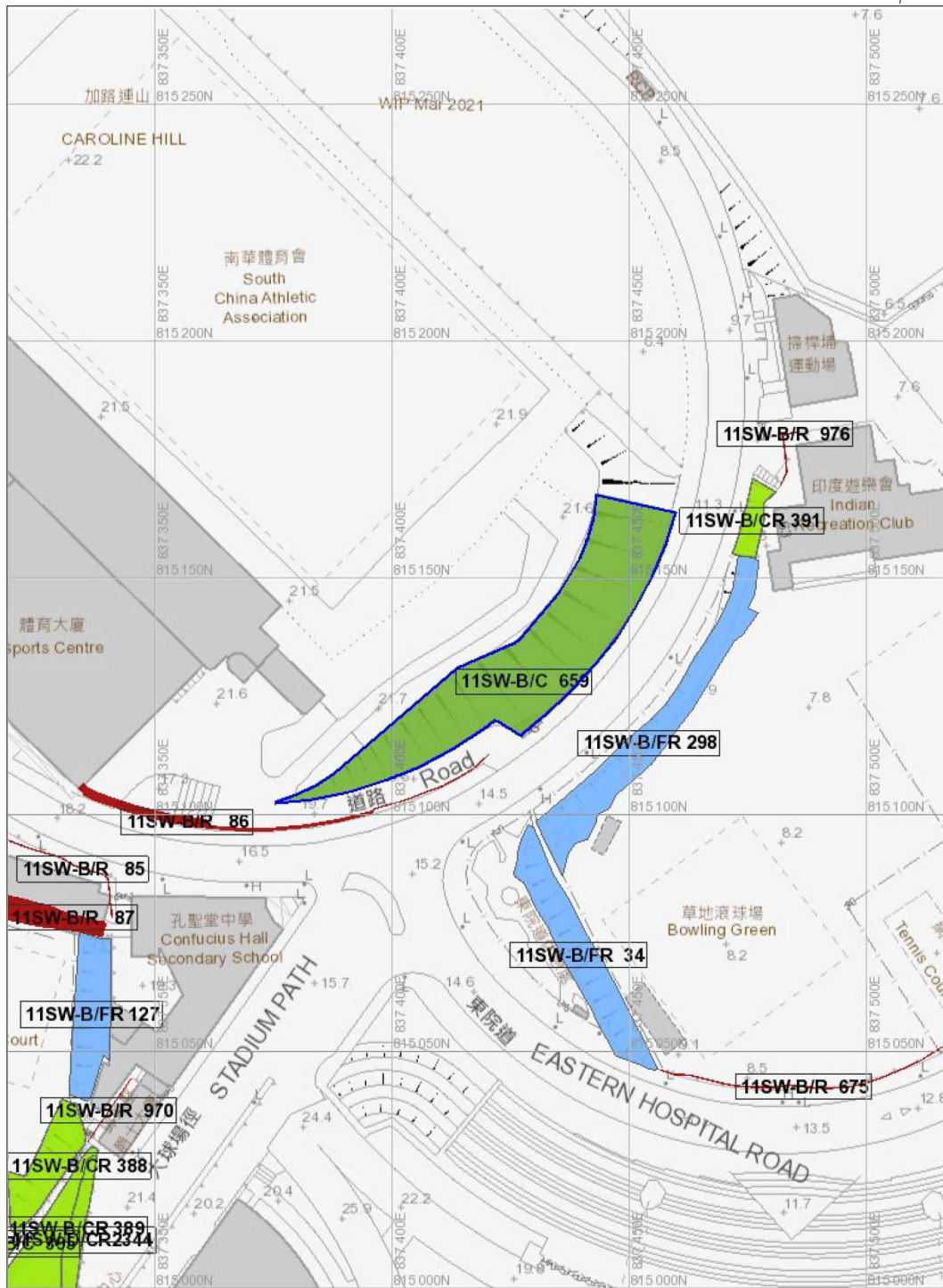






Appendix B

SIS Record



BASIC INFORMATION

Location: 88 Caroline Road, Causeway Bay, H.K.

Date of Formation: N/A

Date of Construction/
Modification: 02-09-2002

Approximate Coordinates: Easting : 837439 Northing : 815140

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Densely-used open area/facilities

Distance of Facility from Crest (m): 18

Facility at Toe: Road/footpath with moderate traffic density

Distance of Facility from Toe (m): 3

Consequence-to-life Category: 2

Remarks: N/A

SLOPE PART

(1) Max. Height (m): 7.9 Length (m): 80 Average Angle (deg): 32

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Private Feature Party: IL 9041 Agent: N/A

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 23-07-2019

Data Source: AP

Slope Part Drainage: (1) Position: Crest Size(mm): 300
(2) Position: On slope Size(mm): 300
(3) Position: Toe Size(mm): 300

Wall Part Drainage: N/A

SLOPE PART

Slope Part (1)

Surface Protection (%): Bare: 0 Vegetated: 100 Chunam: 0 Shotcrete: 0 Other Cover: 0

Material Description: Material type: Soil Geology: N/A

Berm: No. of Berms: N/A Min. Berm Width (m): N/A

Weepholes: Size (mm): N/A Spacing (m): N/A

WALL PART

N/A

SERVICES

N/A

STAGE 1 STUDY REPORT

Inspected On:

Weather:

District: N/A

Section No: 1-1

Height(m):

Type of Toe Facility: Road/footpath with moderate traffic density

Distance from Toe(m): 3

Type of Crest Facility: Densely-used open area/facilities

Distance from Crest(m): 18

Consequence Category:

Engineering Judgement:

Section No: 2-2

Type of Toe Facility:

Distance from Toe(m):

Type of Crest Facility:

Distance from Crest(m):

Consequence Category:

Engineering Judgement:

Sign of Seepage:

Criterion A satisfied:

Sign of Distress:

Criterion D satisfied:

Non-routine maintenance required:

Note:

Masonry wall/Masonry facing:

Note:

Consequence category (for critical section):

Observations: N/A

Emergency Action Required:

Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A

Action By: N/A

Further Study:

Action By: N/A

OTHER EXTERNAL ACTION

Check / repair Services:

Action By: N/A

Non-routine Maintenance:

Action By: N/A

PHOTO



Appendix C

Relevant Site Formation Plans
and Foundation Plans

	EXISTING FEATURES
	PROPOSED FEATURES
	INFERRED GEOLOGICAL BOUNDARY
	INFERRED ROCKHEAD LEVEL
	INFERRED GROUNDWATER LEVEL
	FILL (FILL)
	COMPLETELY DECOMPOSED GRANITE (CDG)
	COMPLETELY TO HIGHLY DECOMPOSED GRANITE (C/HDG)
	HIGHLY DECOMPOSED GRANITE (HDG)
	HIGHLY TO MODERATELY DECOMPOSED GRANITE (H/M/DG)
	MODERATELY TO SLIGHTLY DECOMPOSED GRANITE (M/SDG)
	SLIGHTLY DECOMPOSED GRANITE (SDG)
	SPT 'N' VALUE
	DEPTH OF PIEZOMETER TIP

CHENG Wai-kit
Building Surveyor
for BUILDING AUTHORITY

RECORD PLAN

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS ARE IN METERS ABOVE PRINCIPAL DATUM (mPD) UNLESS OTHERWISE STATED.
2. ALL MEASUREMENTS MUST BE CHECKED ON SITE, DO NOT SCALE FROM THE DRAWINGS.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS.
4. REFER TO OTHER RELEVANT DRAWINGS FOR DETAILS OF TEMPORARY FENCE, CONCRETE PADS AND CAPPING BEAM.
5. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED PLANS. IF THERE ARE ANY VARIATIONS OF WORKS WHICH ARE INCONSISTENT WITH THE APPROVED PLANS, THE SUPERVISORS SHALL NOTIFY THE AP/RSE/RCE/RSC OF SUCH VARIATIONS IMMEDIATELY. THE AP/RSE/RCE/RSC SHALL REVIEW THE SITUATIONS AND TAKE APPROPRIATE ACTIONS SO AS TO COMPLY WITH THE BUILDINGS ORDINANCE.

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.



 JIANHONG C.W. WANG
 AUTHORIZED PERSON



 LIU Chi Kwan, ALBERT
 B.So BE (Hon) CEng MSocE MHKIE RSE
 AUTHORIZED PERSON (ENGINEER)

AMENDED PLAN **BD SUBMISSION**

RECEIVED BY
2013 FEB 21 P 4:41
R & D Section
BUILDINGS DEPARTMENT

SECTION 3 - 3

SECTION 4 - 4

REVISIONS

No.	Description
1	ADDED
2	SECTION 1-1 AND 2-2 REVISED
3	AS PER BD APPROVED ON 11.1.00
4	FORMATION LEVEL, LEVEL OF WALKWAY
5	FORMATION LEVEL REVISED
6	AS PER APPROVED ON 14.9.99
7	SECTION 1-1 AND 2-2 REVISED
8	SECTION 1-1 REVISED
9	CORRECTION AT BD
10	Description
11	PROPOSED REDEVELOPMENT
12	SOUTH CHINA ATHLETIC CENTRE
13	SECTIONS OF PROPOSED BUILDING

NOTES: DO NOT SCALE FROM THIS DRAWING, FIGURED DIMENSIONS ARE TO BE FOLLOWED.

READ THIS DRAWING IN CONJUNCTION WITH OTHER RELATED DRAWINGS; THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.

COPYRIGHT OF THIS DRAWING IS RESERVED BY THE ENGINEER.

CAD FILE NO.: X:\Working\U05511\Site Formation\U05501-SF03G (P01) (SF-PH1).dwg
PLOTTED BY: Janna 19 Feb 2013 - 3:01pm



NOTES :-

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS ARE IN METERS ABOVE PRINCIPAL DATUM (mPD) UNLESS OTHERWISE STATED.
2. ALL MEASUREMENTS MUST BE CHECKED ON SITE, DO NOT SCALE FROM THE DRAWINGS.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS.
4. DETAILS OF LAGGING WALL SHALL REFER TO DWG. NO. SF / 13.
5. CONNECTION DETAILS OF TEMPORARY SOIL ANCHOR TO BORED PILE SHALL REFER TO DWG. NO. SF / 14.
6. THE TEMPORARY SOIL ANCHOR SYSTEM SHALL BE APPROVED BY BD PRIOR TO THE COMMENCEMENT OF THE EXCAVATION WORKS.
7. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED PLANS. IF THERE ARE ANY VARIATIONS OF WORKS WHICH ARE INCONSISTENT WITH THE APPROVED PLANS, THE SUPERVISORS SHALL NOTIFY THE AP/RSE/RCE/RSC OF SUCH VARIATIONS IMMEDIATELY. THE AP/RSE/RCE/RSC SHALL REVIEW THE SITUATIONS AND TAKE APPROPRIATE ACTIONS SO AS TO COMPLY WITH THE BUILDINGS ORDINANCE.

INITIAL STEP

STEP 1 (AS-CONSTRUCTED)

1. EXCAVATE SOIL AND PROGRESSIVELY CONSTRUCT LAGGING WALLS TO LEVEL + 18.20 mPD.
2. INSTALL TEMPORARY SOIL ANCHORS AND PRESTRESS THE ANCHORS TO LOCK OFF LOAD.
3. CARRY OUT ANCHOR TESTS AS PER DWG. NO. SF / 15.

STEP 2 (AS-CONSTRUCTED)

1. EXCAVATE SOIL AND PROGRESSIVELY CONSTRUCT LAGGING WALLS TO LEVEL + 13.70 mPD.
2. INSTALL TEMPORARY SOIL ANCHORS AND PRESTRESS THE ANCHORS TO LOCK OFF LOAD.
3. CARRY OUT ANCHOR TESTS AS PER DWG. NO. SF / 15.

STEP 3 (AS-CONSTRUCTED)

1. EXCAVATE SOIL; CONSTRUCT CAPPING BEAM WITH BOTTOM LEVEL AT +20.20 mPD PROGRESSIVELY CONSTRUCT LAGGING WALLS TO LEVEL + 9.70 mPD.
2. INSTALL TEMPORARY SOIL ANCHORS AND PRESTRESS THE ANCHORS TO LOCK OFF LOAD.
3. CARRY OUT ANCHOR TESTS AS PER DWG. NO. SF / 15.

STEP 4 (AS-CONSTRUCTED)

1. EXCAVATE SOIL AND PROGRESSIVELY CONSTRUCT LAGGING WALLS TO LEVEL + 6.20 mPD.
2. INSTALL TEMPORARY SOIL ANCHORS AND PRESTRESS THE ANCHORS TO LOCK OFF LOAD.
3. CARRY OUT ANCHOR TESTS AS PER DWG. NO. SF / 15.

STEP 5 (AS-CONSTRUCTED)

1. EXCAVATE SOIL TO THE FINAL FORMATION LEVEL (+4.50mPD)
2. CONSTRUCT LAGGING WALL TO LEVEL +4.50mPD.

STEP 6
(CONSTRUCTION PROCEDURES FOR PRECAUTIONARY WORK SEE THIS DRAWING)

Plan Approved

CHENG Wai-kit
Building Surveyor
for BUILDING AUTHORITY
18 APR 2013

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ACM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.

DESIGN 2 (HK) LTD.

YIP WING C.W. KUNG
AUTHORIZED PERSON

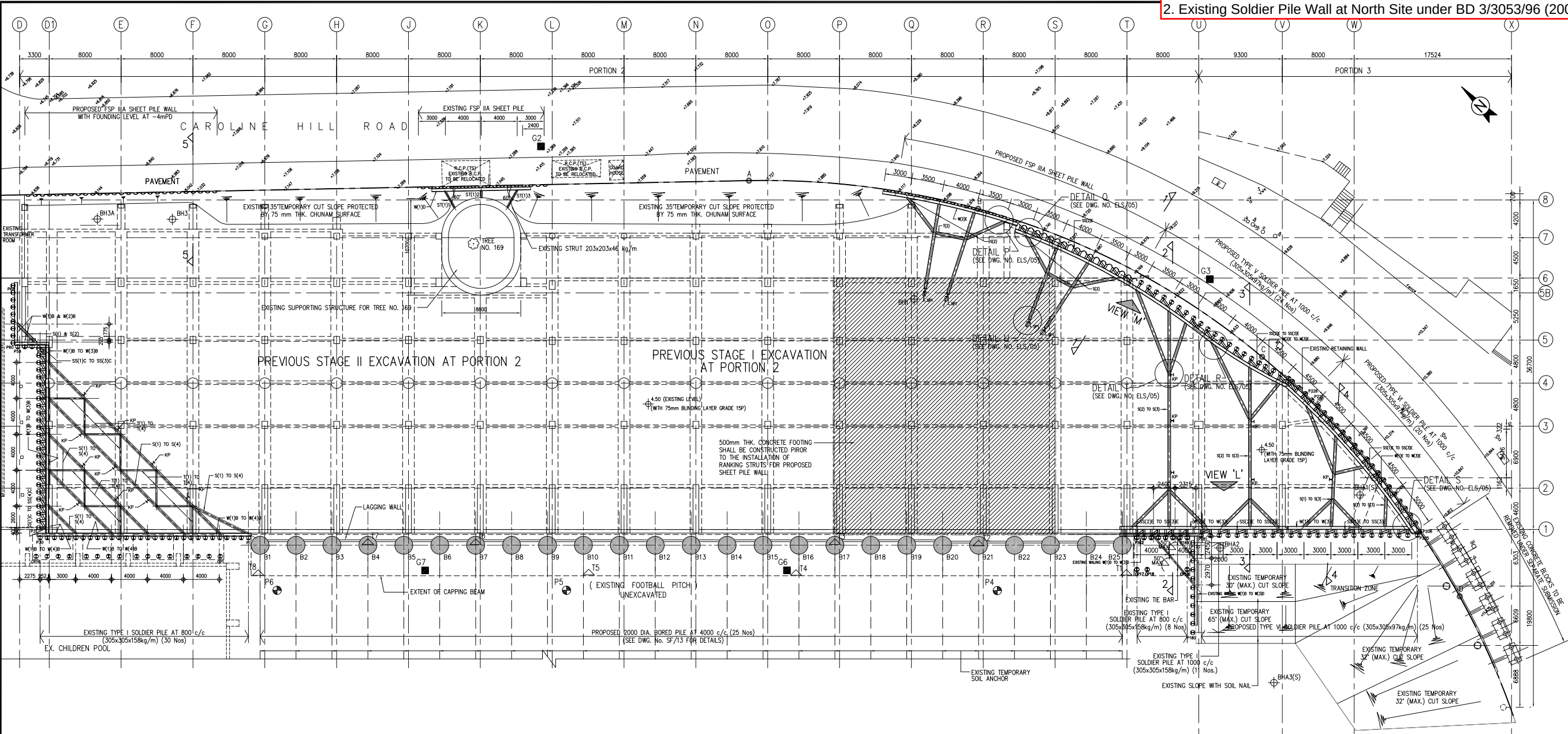
LIU Chi Kwun, ALBERT
B.Sc. (Hon) Civil Engineering
REGISTERED PERSON (ENGINEER)
Registered Structural Engineer

I CERTIFY THAT THE SUBMITTED
RECORD PLAN IS IDENTICAL TO
THOSE APPROVED BY THE BA
ON 18-APR-2013

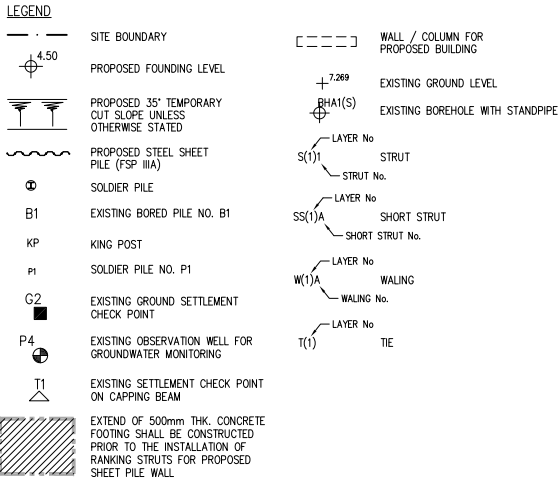
RECORD PLAN

BD SUBMISSION
AMENDED PLAN

MEMBER SIZE FOR PRECAUTIONARY WORKS ADDED: STEP 6 ADDED	/ / / /	19.2.13	C
AS PER BA APPROVED ON 11.10.00			
FORMATION LEVEL AND LEVEL OF WALING	MON / MKS / GL / LC	8.12.99	B
REVISED	MON / MKS / GL / LC	7.6.97	A
CORRECTION AT BD			
Description	Drawn / Designed / Checked / Approved	Date	Revision
PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE 1	Job No.	U05511	Drawing No. SF / 08C
EXCAVATION SEQUENCE OF SITE FORMATION (SECTION C-C)	Scale	AS SHOWN	Date 11 APR., 1997
(SHEET 3 OF 3)	Drawn / Designed / Checked / Approved		
FUGRO (HONG KONG) LIMITED 7/F, Guardian House, 32 Oi Kwan Road, Wanchai, Hong Kong. Tel: 2577 9023	MON / MKS / GL / LC		



EXCAVATION LAYOUT PLAN



GENERAL NOTES FOR SETTLEMENT AND GROUNDWATER MONITORING

- ALL EXISTING SETTLEMENT CHECKPOINTS AND OBSERVATION WELLS AS INDICATED ON THIS DRAWING SHALL BE MONITORED.
- INITIAL READINGS OF ALL SETTLEMENT CHECKPOINTS AND OBSERVATION WELLS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER AND THE BUILDINGS DEPARTMENT PRIOR TO THE COMMENCEMENT OF SITE WORKS.
- ALL MONITORING RECORDS SHALL BE SUBMITTED TO THE ENGINEER NOT LATER THAN 1 DAY AFTER EACH SET OF READING IS OBTAINED, AND SHALL BE SUBMITTED TO BD REGULARLY.
- THE MONITORING OF SETTLEMENT CHECKPOINTS AND OBSERVATION WELLS SHALL BE CARRIED OUT DAILY DURING THE SITE WORKS THROUGHOUT THE CONTRACT PERIOD. THE MONITORING RECORD WITH COMMENTS SHALL BE SUBMITTED TO THE ENGINEER AND THE BUILDINGS DEPARTMENT BI-WEEKLY.
- IF UNDOE SETTLEMENT OF MOVEMENT OF ADJACENT STRUCTURES AND ROAD IS OBSERVED, SITE WORKS SHALL BE STOPPED IMMEDIATELY AND THE ENGINEER, THE AUTHORIZED PERSON AND THE BUILDINGS DEPARTMENT SHALL BE NOTIFIED.
- ACCESS/WORKING PLATFORM FOR CARRYING OUT MONITORING SHALL BE PROVIDED BY CONTRACTOR.
- DURING PERIODS OF HEAVY RAINFALL THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXPOSED SURFACES OF CUT AND FILL SLOPES WITH HEAVY DUTY PLASTIC SHEETING. THE CONTRACTOR SHALL AT ALL TIME PROVIDE ON SITE SUFFICIENT HEAVY DUTY PLASTIC SHEETING TO PROTECT ALL THE EXPOSED SURFACES. ANY SURFACE EROSION THAT OCCURS SHALL BE MADE GOOD AT THE CONTRACTOR'S EXPENSE.
- SURFACE WATER FLOWING INTO THE SITE SHALL BE INTERCEPTED AND CONDUCTED FROM THE SITE TO SAFE DISCHARGE POINTS. AT EACH INTERSECTION AND ABRUPT CHANGE IN DIRECTION OF SURFACE DRAINAGE CHANNELS AND ACCESSIBLE CATCHPITS SHALL BE PROVIDED. ALL DRAINAGE WORKS SHALL BE KEPT CLEAR OF DEBRIS.
- ALL EARTHWORK PLATFORMS SHALL BE GRADED TO ENSURE RUN-OFF AND TO AVOID PONDING.
- TEMPORARY PUMP PITS EQUIPPED WITH AUTOMATIC OPERATED PUMPS SHALL BE PROVIDED AT THE FINAL EXCAVATION LEVEL.
- DURING HEAVY RAINFALL, ADEQUATE PUMPS SHALL BE PROVIDED AND PUMPS SHALL BE KEPT RUNNING 24 HOURS IF REQUIRED.
- ALL PUMPED WATER SHALL BE SCREENED THROUGH A SEDIMENTATION OR SETTLING TANK AND QUANTITIES OF SEDIMENT SHALL BE MONITORED TO ENSURE THAT EXCESSIVE FINES ARE NOT REMOVED FROM THE SUBSOIL. SHOULD EXCESSIVE FINES BE OBSERVED, ALL PUMPING SHALL CEASE AND THE ENGINEER BE NOTIFIED.
- A METHOD OF WORKING SHALL BE ADOPTED TO MINIMISE THE BARE SOIL TO BE EXPOSED AT ANY TIME.
- WHERE TEMPORARY BARE EARTH SLOPE FACES ARE UNAVOIDABLE, THEY SHALL BE PROTECTED WITH HEAVY DUTY PLASTIC SHEETING WELL-SECURED AGAINST THE WIND, SEALED AT THE CREST AND LAPPED AT JOINTS.
- WHERE SLOPE FACES ARE TO BE TEMPORARILY EXPOSED FOR MORE THAN 2 WEEKS, TEMPORARY HARD SURFACE PROTECTION SHALL BE PROVIDED AND TEMPORARY DRAINS SHALL BE INSTALLED.
- TRENCHES ON OR ADJACENT TO SLOPES SHALL BE EXCAVATED WITH EXTREME CARE IN SHORT SECTIONS AT A TIME. THE METHOD OF WORKING AND THE EXACT SECTION LENGTHS SHALL BE AGREED WITH THE ENGINEER BEFOREHAND. PRECAUTIONS SHALL ALWAYS BE TAKEN TO PREVENT WATER FROM ENTERING AND COLLECTING IN TRENCHES. TRENCH EXCAVATIONS ON OR ADJACENT TO SLOPES SHALL BE LEFT OPEN FOR THE MINIMUM POSSIBLE TIME.

NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM (mPD) UNLESS OTHERWISE STATED.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS.
- ALL MEASUREMENTS MUST BE CHECKED ON SITE. DO NOT SCALE FROM THE DRAWINGS.
- THE CONTRACTOR SHALL CONFIRM WITH THE ARCHITECT/ENGINEER ALL THE SETTING OUT DIMENSIONS PRIOR TO THE EXECUTION OF THE WORKS.
- DESIGN SOIL STRENGTH PARAMETERS:

	DENSITY (kN/m ³)	COHESION (kPa)	FRICTION ANGLE (°)
FILL/RS	19	0	35
CDG	19	3	37
C/HDG	19	9	38

- REFER TO DRAWING NO. SF/01 TO SF/18 FOR PREVIOUS SITE FORMATION WORKS.
- REFER TO OTHER RELEVANT DRAWINGS FOR DETAILS OF TEMPORARY FENCE, CONCRETE PADS AND CAPPING BEAM.

GENERAL NOTES ON EXCAVATION WORKS

- BEFORE THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, THE CONTRACTOR SHALL CHECK THE CONDITION OF THE EXISTING MONITORING CHECKPOINTS AT LOCATIONS AS SHOWN ON THIS DRAWING. RESPONSE TEST SHALL BE CARRIED OUT FOR ALL EXISTING OBSERVATION WELLS TO ENSURE THEY ARE FUNCTIONED PROPERLY. RECORDS OF THE RESPONSE TEST SHALL BE SUBMITTED TO ENGINEER FOR INFORMATION. DESIGN AND FREQUENCY OF MONITORING SHALL REFER TO GENERAL NOTES FOR SETTLEMENT AND GROUND WATER MONITORING IN THIS DRAWING.
- THE PROPOSED EXCAVATION WORKS SHALL BE COMMENCED BY CONSTRUCTING SOLDIER PILES AND STEEL SHEET PILES FOR THE TEMPORARY SHORING SYSTEM AS PER THE LAYOUT SHOWN ON THE DRAWINGS.
- ANY TEMPORARY ACCESS AND WORKING PLATFORMS TO BE FORMED WITHIN THE SITE TO FACILITATE THE CONSTRUCTION WORKS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR'S ATTENTION IS DRAWN THAT AT ANY TIME EXCAVATION WORKS INVOLVED SHALL BE KEPT TO A MINIMUM.
- PRIOR TO THE COMMENCEMENT OF BULK EXCAVATION, AS-BUILT RECORD PLAN SHOWING FOUNDING LEVELS OF THE SOLDIER PILES, SHEET PILES AND KING POSTS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER/BD FOR RECORD AND APPROVAL.
- BULK EXCAVATION SHALL ONLY BE COMMENCED AFTER THE CONCRETE OR CEMENT GROUT AT THE SHORING SYSTEM HAS REACHED. THE REQUIRED STRENGTH AT 28 DAYS AS SPECIFIED IN THE DRAWINGS.
- EXCAVATION CAN PROCEED TO THE NEXT LEVEL ONLY WHEN THE PROPOSED WALINGS AND STRUTTINGS FOR THE PREVIOUS EXCAVATION LEVEL HAVE BEEN INSTALLED AS SPECIFIED AND APPROVED BY THE ARCHITECT/ENGINEER.

OVERALL CONSTRUCTION SEQUENCE

IN GENERAL, THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE FOLLOWED.

- INSTALL SHEET PILES FROM GRID D TO GRID F, GRID Q TO GRID T, SOLDIER PILES NO. P181 TO P249 AS SHOWN IN THIS DRAWING.
- SUBMIT RECORD OF INSTALLED SHEET PILES AND SOLDIER PILE TO BD PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.
- AFTER OBTAINING EXCAVATION CONSENT FROM BD, EXCAVATION WORKS CAN BE CARRIED OUT IN FRONT OF SHEET PILE FROM GRID D TO GRID F AND IN FRONT OF SOLDIER PILES AT PORTION 3 (SEE DRAWING NO. ELS/04 FOR DETAIL EXCAVATION SEQUENCE).
- AFTER EXCAVATION WORK AT PORTION 3 DOWN TO +9.1mPD, EXCAVATION WORK IN FRONT OF SHEET PILES FROM GRID Q TO GRID T CAN BE CARRIED OUT (SEE DRAWING NO. ELS/04 FOR DETAIL EXCAVATION SEQUENCE).

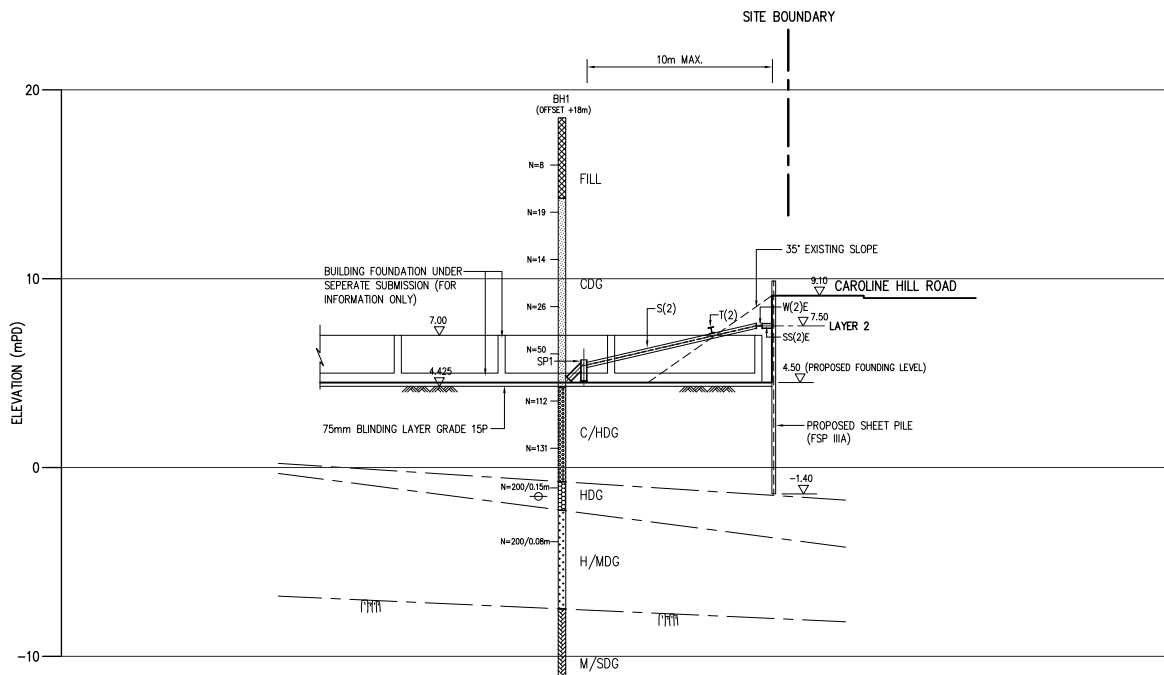
NOTES ON HEAVY RAINFALL PRECAUTIONS DURING EXCAVATION

- DURING PERIODS OF HEAVY RAINFALL THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXPOSED SURFACES OF CUT AND FILL SLOPES WITH HEAVY DUTY PLASTIC SHEETING. THE CONTRACTOR SHALL AT ALL TIME PROVIDE ON SITE SUFFICIENT HEAVY DUTY PLASTIC SHEETING TO PROTECT ALL THE EXPOSED SURFACES. ANY SURFACE EROSION THAT OCCURS SHALL BE MADE GOOD AT THE CONTRACTOR'S EXPENSE.
- SURFACE WATER FLOWING INTO THE SITE SHALL BE INTERCEPTED AND CONDUCTED FROM THE SITE TO SAFE DISCHARGE POINTS. AT EACH INTERSECTION AND ABRUPT CHANGE IN DIRECTION OF SURFACE DRAINAGE CHANNELS AND ACCESSIBLE CATCHPITS SHALL BE PROVIDED. ALL DRAINAGE WORKS SHALL BE KEPT CLEAR OF DEBRIS.
- ALL EARTHWORK PLATFORMS SHALL BE GRADED TO ENSURE RUN-OFF AND TO AVOID PONDING.
- TEMPORARY PUMP PITS EQUIPPED WITH AUTOMATIC OPERATED PUMPS SHALL BE PROVIDED AT THE FINAL EXCAVATION LEVEL.
- DURING HEAVY RAINFALL, ADEQUATE PUMPS SHALL BE PROVIDED AND PUMPS SHALL BE KEPT RUNNING 24 HOURS IF REQUIRED.
- ALL PUMPED WATER SHALL BE SCREENED THROUGH A SEDIMENTATION OR SETTLING TANK AND QUANTITIES OF SEDIMENT SHALL BE MONITORED TO ENSURE THAT EXCESSIVE FINES ARE NOT REMOVED FROM THE SUBSOIL. SHOULD EXCESSIVE FINES BE OBSERVED, ALL PUMPING SHALL CEASE AND THE ENGINEER BE NOTIFIED.
- A METHOD OF WORKING SHALL BE ADOPTED TO MINIMISE THE BARE SOIL TO BE EXPOSED AT ANY TIME.
- WHERE TEMPORARY BARE EARTH SLOPE FACES ARE UNAVOIDABLE, THEY SHALL BE PROTECTED WITH HEAVY DUTY PLASTIC SHEETING WELL-SECURED AGAINST THE WIND, SEALED AT THE CREST AND LAPPED AT JOINTS.
- WHERE SLOPE FACES ARE TO BE TEMPORARILY EXPOSED FOR MORE THAN 2 WEEKS, TEMPORARY HARD SURFACE PROTECTION SHALL BE PROVIDED AND TEMPORARY DRAINS SHALL BE INSTALLED.
- TRENCHES ON OR ADJACENT TO SLOPES SHALL BE EXCAVATED WITH EXTREME CARE IN SHORT SECTIONS AT A TIME. THE METHOD OF WORKING AND THE EXACT SECTION LENGTHS SHALL BE AGREED WITH THE ENGINEER BEFOREHAND. PRECAUTIONS SHALL ALWAYS BE TAKEN TO PREVENT WATER FROM ENTERING AND COLLECTING IN TRENCHES. TRENCH EXCAVATIONS ON OR ADJACENT TO SLOPES SHALL BE LEFT OPEN FOR THE MINIMUM POSSIBLE TIME.

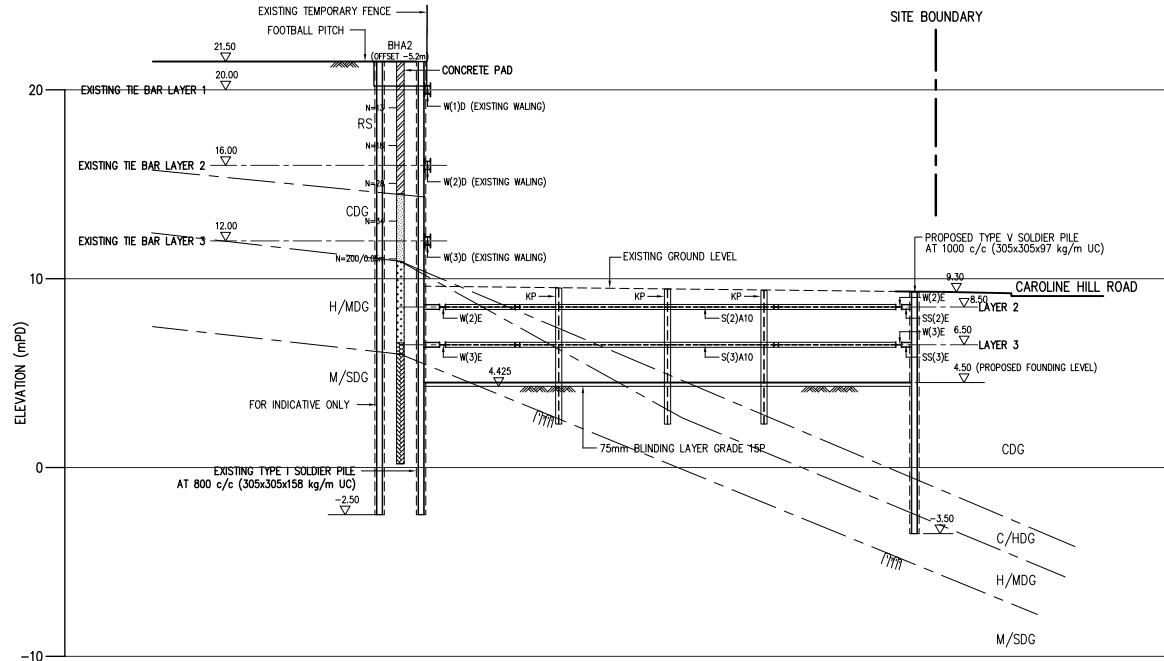
THE EXTENT OF SHEET PILE WALL AMENDED	/	/	/	/	24.9.2001	D			
LOCATION OF SHEET PILE WALL AND SOLDIER PILES FROM GRID R TO GRID V AMENDED	MON	/	SLC	/	GL	/	LC	27.4.2001	C
THE EXTENT OF SHEET PILE WALL, SECTIONS OF SOLDIER PILES AND SHORING MEMBERS AMENDED	MON	/	SLC	/	GL	/	LC	19.5.2000	B
AS PER BD APPROVED ON 28.4.2000	MON	/	MKS	/	GL	/	SHS	18.4.2000	A
EXTENT OF CONCRETE FOOTING REVISED	MON	/	MKS	/	GL	/	SHS	18.4.2000	A
Revision	Drawn	/	Designed	/	Checked	/	Approved	Date	Reference
PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION – PHASE 1								Job No.	Drawing No.
								U05501	ELS / 02
LAYOUT PLAN OF PROPOSED EXCAVATION WORKS								Scale	Date
								1 : 250	FEB. 2000
 FUGRO (HONG KONG) LIMITED 22/F., Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong. Tel : 2577 9023								Drawn / Designed / Checked / Approved	
								MON / MKS	GL LC

- NOTES**
1. ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS ARE IN METRE ABOVE PRINCIPAL DATUM (mPD) UNLESS OTHERWISE STATED.
 2. ALL MEASUREMENT MUST BE CHECKED ON SITE. DO NOT SCALE FROM THE DRAWINGS.
 3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS.

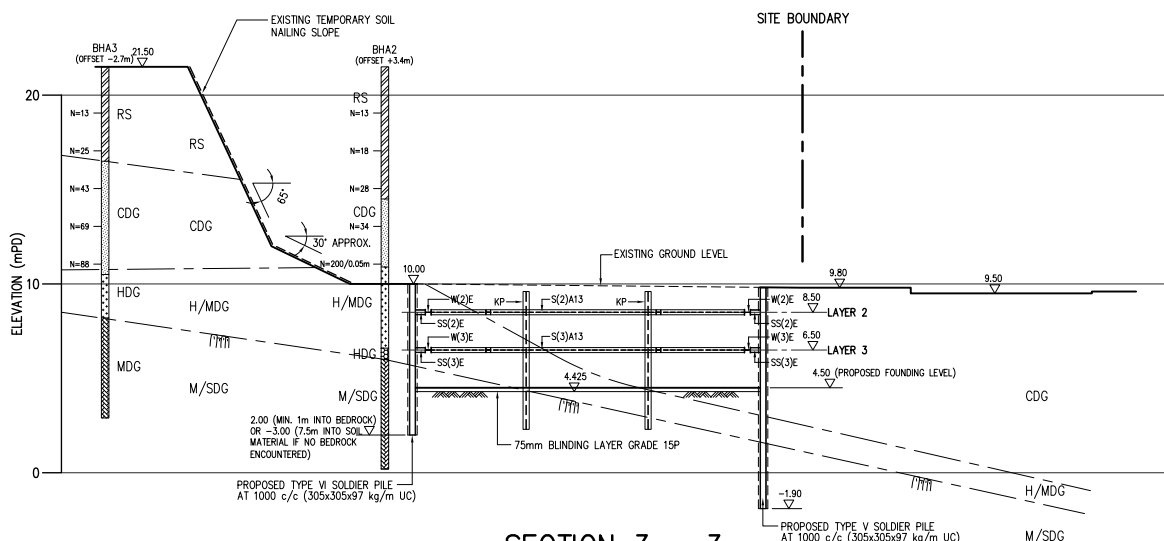
- LEGEND :**
- EXISTING FEATURES
 - PROPOSED FEATURES
 - - - - - INFERRED GEOLOGICAL BOUNDARY
 - - - - - INFERRED ROCKHEAD LEVEL
 - - - - - INFERRED GROUNDWATER LEVEL
 - █ FILL (FILL)
 - █ COMPLETELY DECOMPOSED GRANITE (CDG)
 - █ COMPLETELY TO HIGHLY DECOMPOSED GRANITE (C/HDG)
 - █ HIGHLY DECOMPOSED GRANITE (HDG)
 - █ HIGHLY TO MODERATELY DECOMPOSED GRANITE (H/MDG)
 - █ MODERATELY TO SLIGHTLY DECOMPOSED GRANITE (M/SDG)
 - █ SLIGHTLY DECOMPOSED GRANITE (SDG)
 - 14-| SPT 'N' VALUE
 - ⊕ DEPTH OF PIEZOMETER TIP
 - LAYER No. STRUT
 - SS(1)A LAYER No. SHORT STRUT
 - W(1)A LAYER No. WALING
 - A(1)13 LAYER No. TEMPORARY SOIL ANCHOR



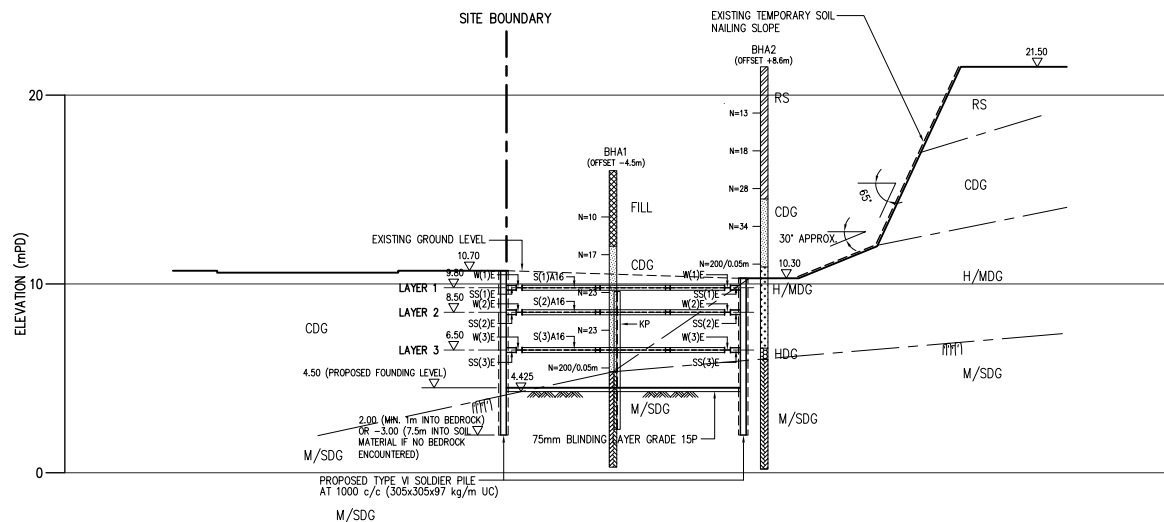
SECTION 1 - 1



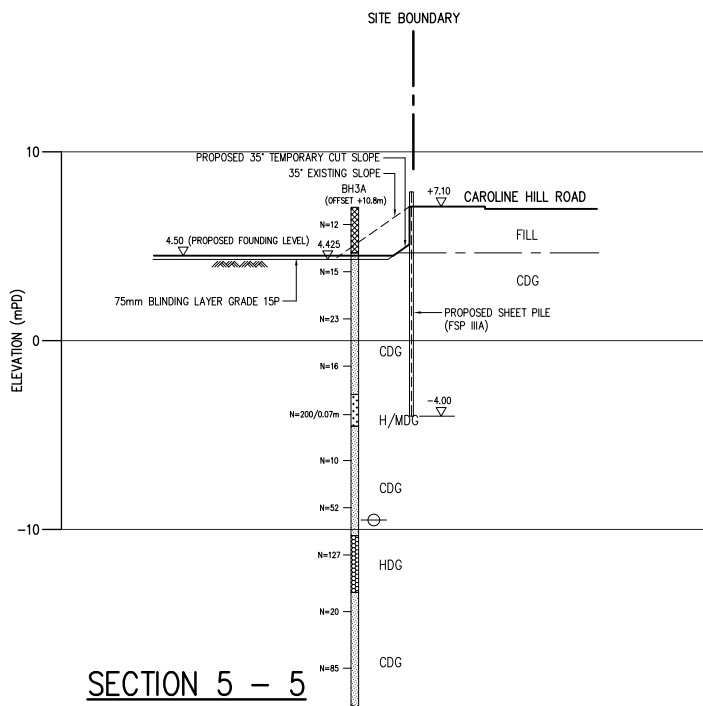
SECTION 2 - 2



SECTION 3 - 3



SECTION 4 - 4



SECTION 5 - 5

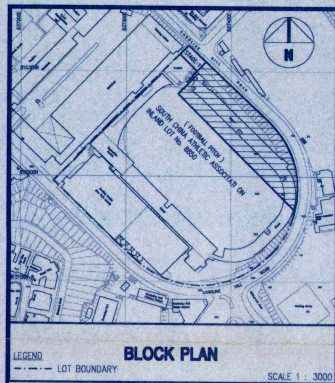
NOTES: DO NOT SCALE FROM THIS DRAWING, FIGURED DIMENSIONS ARE TO BE FOLLOWED.

READ THIS DRAWING IN CONJUNCTION WITH OTHER RELATED DRAWINGS; THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.

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CAD FILE : U055E030

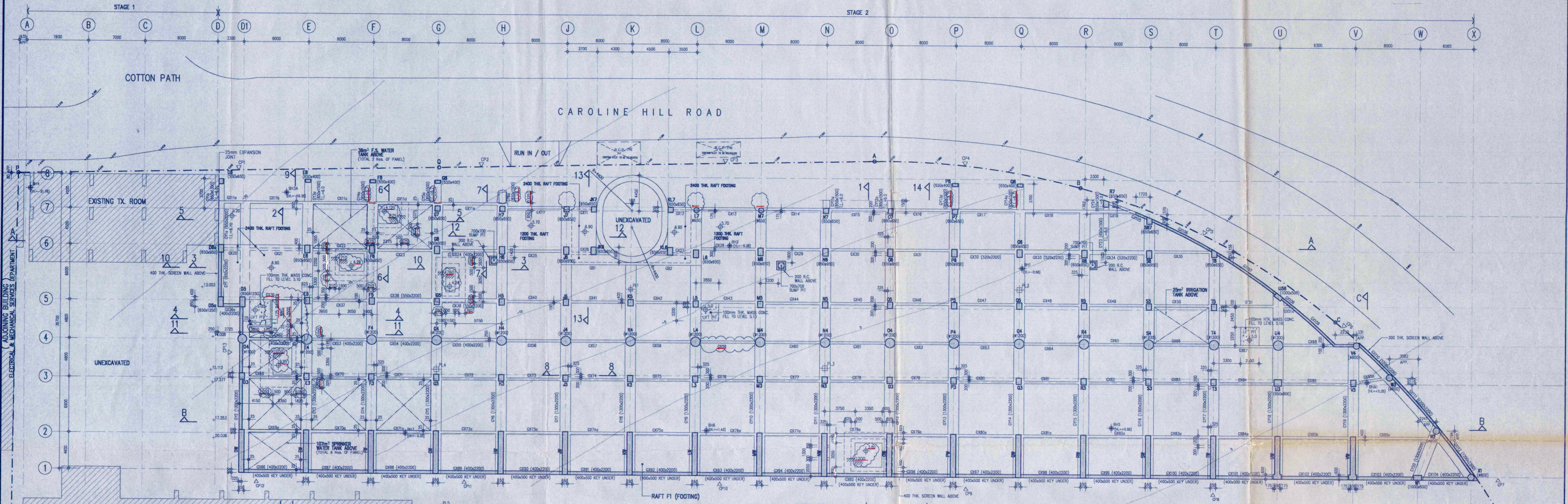
SECTIONS 6-6 AND 7-7 DELETED, LOCATION OF SHEET PILE WALL AND SOLDIER PILES FROM GRID R TO GRID V AMENDED	/	/	/	/	24.9.2001	D			
SECTION 6-6 & 7-7 ADDED, SECTIONS OF SOLDIER PILES AND SHORING MEMBERS AMENDED	MON	/	SLC	/	GL	/	LC	27.4.2001	C
AS PER BD APPROVED ON 28.4.2000	MON	/	SLC	/	GL	/	LC	19.5.2000	B
LENGTH OF PILES IN SECTION 2-2 AND 5-5 REVISED	MON	/	MKS	/	GL	/	SHS	18.4.2000	A
Revision	Drawn	/	Designed	/	Checked	/	Approved	Date	Reference
PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE 1	U05501							Job No.	Drawing No.
									ELS / 03
SECTIONS OF PROPOSED WORKS (SECTIONS 1-1 TO 5-5)								Scale	Date
								1 : 200	FEB. 2000
 FUGRO (HONG KONG) LIMITED 22/F., Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong. Tel : 2577 9023	Drawn / Designed / Checked / Approved								
	MON / MKS / GL / LC								

**MONITORING NOTES :**

- 13 Nos SETTLEMENT CHECK POINTS (Nos. CP1 to CP13) SHALL BE INSTALLED AROUND THE BUILDING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION WORKS.
- INITIAL MONITORING RESULTS OF ALL CHECK POINTS SHALL BE MEASURED AND SUBMITTED TO THE RSE AND BUILDINGS DEPARTMENT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION WORKS.
- ALL CHECK POINTS SHALL BE MONITORED AND RECORDED DAILY. THE MONITORING RECORD SHALL BE KEPT ON SITE AND SUBMITTED TO THE RSE AND BUILDINGS DEPARTMENT ON A BIWEEKLY BASIS.
- DURING THE CONSTRUCTION PERIOD, SHOULD ANY UNDESIRABLE SETTLEMENT AT CHECK POINTS BE RECORDED, THE CONSTRUCTION WORKS SHOULD BE SUSPENDED IMMEDIATELY AND THE RSE AND BUILDINGS DEPARTMENT SHOULD BE NOTIFIED. REMEDIAL PROPOSAL SHOULD BE SUBMITTED TO THE RSE AND BUILDINGS DEPARTMENT FOR APPROVAL BEFORE THE RESUMPTION OF THE CONSTRUCTION WORKS.

GENERAL NOTES :

- BUILDING HEIGHT TO BE 45.0m.
- PROPOSED GROUND FLOOR LEVEL TO BE +7.0mPD.
- ALL LIFT PIT LEVEL TO BE +5.10mPD.
- ALL CONCRETE MIX OF COLUMNS & WALLS TO BE DESIGN MIX. GRADE 40 D.
- 10.0 kPa OF IMPOSED LOAD ON GROUND FLOOR.
- WEIGHT OF FOOTING, BACKFILL AND 200mm THK. ON-GRADE SLAB ARE EXCLUDED IN THE LOADING SCHEDULE.
- PROPOSED BOTTOM LEVEL OF FOOTING IS TO BE +4.5mPD.
- THE DESIGN IS COMPLYING WITH H.K. BUILDING (CONSTRUCTION) REGULATION 1990.
- BEARING CAPACITY OF SOIL TO BE 350 kPa. IN WIND CASE TO BE 437.5 kPa. THE REPORT OF PLATE LOAD TEST SHALL BE SUBMITTED SEPARATELY.
- CONCRETE MIX. OF FOOTING & BEAMS TO BE DESIGN MIX. GRADE 30 D.
- EXCAVATION WORK & LATERAL SUPPORTS ARE TO BE SUBMITTED SEPARATELY.
- SOIL ANCHORS IN BORED PILE WALL OR SOLDIER PILE WALL WILL NOT BE RELEASED UNTIL THE COMPLETION OF R.C. SUPERSTRUCTURE WORKS.
- IN ORDER TO DRAIN THE CAVITIES OF THE RAFT FOUNDATION DURING PERMANENT AND TEMPORARY CONSTRUCTION STAGE, THE FOLLOWING SHALL BE INSTALLED INTO THE RAFT AS INDICATED IN THE DRAWINGS.
 - 50mm DIAMETER WEEP-HOLES IN THE FORM OF PVC PIPES THROUGH THE CONCRETE MEMBERS OF THE RAFT AT EACH WALL OF THE 700x700 SUMP PITS AT AN INVERT LEVEL OF +6.575mPD AND +5.0mPD CONNECTING EACH 200mm THICK HARDWARE LAYER.
 - 50mm DIAMETER WEEP-HOLES (TWO NOS) IN THE FORM OF PVC PIPES THROUGH THE CONCRETE MEMBERS OF THE RAFT AT EACH WALL OF THE 700x700 SUMP PITS AT AN INVERT LEVEL OF +6.575mPD AND +5.0mPD TO ENABLE WATER TO BE FREELY DRAINED INTO THE SUMP PITS.
 - THE PVC PIPES SHALL BE WRAPPED WITH TWO LAYERS OF NON-WOVEN GEOTEXTILE FILTER FABRIC MATERIAL TO THE APPROVAL OF THE ENGINEER TO ENSURE THE WEEP-HOLES WILL NOT BE OBSTRUCTED.
 - THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE RAFT AND SUMP PIT IN A DRY CONDITION.

**FOOTING LAYOUT PLAN**

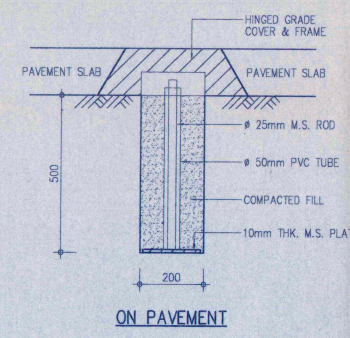
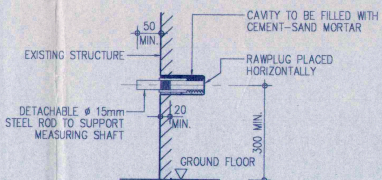
1 : 200

NOTES :-

- UNLESS OTHERWISE STATED:
ALL COLUMN SIZE TO BE 650 x 800
ALL BEAM SIZE TO BE: 300 x 2200 & T.L.=6.70
ALL RAFT FOOTING TO BE 500mm THK. & T.L.=5.00
- SECTION A-A TO C-C REFER TO DWG. No. S/F02.
SECTION 9-9 TO 14-14 REFER TO DWG. No. S/F07.

LEGENDS :-

- PROPOSED STRUCTURAL LEVEL
- SITE BOUNDARY LINE
- EXISTING LEVEL
- CONTOUR OF HIGHLY DECOMPOSED GRANITE STRATUM AT +5mPD
- BOREHOLE LOCATION
- PLATE LOAD TEST LOCATION (TEST RESULTS TO BE SUBMITTED PRIOR TO THE APPLICATION OF CONSENT)
- SETTLEMENT CHECK POINT
- INVERT LEVEL

**SETTLEMENT CHECK POINT DETAILS**

N.T.S.

Plan Approved
TANG NGAR YIN
Senior Structural Engineer
for BUILDING AUTHORITY
15 OCT 2001

REVISION	DATE	BY	CHKD	APPD
MINOR REVISION	14-09-01	F		
REVISED AS PER B.D. APPROVAL PLAN & MINOR REVISION	21-03-01	E		
REVISED AS PER B.D. APPROVAL PLAN & MINOR REVISION	17-11-00	D		
SPRINKLER WATER TANK & MINOR REVISION	08-08-00	C		
MINOR REVISION	14-07-00	B		
REVISED AS PER B.D. APPROVAL PLAN & GENERAL REVISION	25-05-00	A		
Drawn / Designed / Checked / Approved	Date	Reference		
PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION ON L.L. No.8550 AT CAROLINE HILL ROAD, H.K.	U05502	S / F01 F		
RAFT FOOTING LAYOUT PLAN (STAGE 2)	AS SHOWN	18 AUG., 1999		
Drawn / Designed / Checked / Approved	Date	Reference		
FUGRO (HONG KONG) LIMITED 22/F, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong. Tel : 2577 9023	Y.C.Y. H.S.G. P.S. P.S.			

NOTES: DO NOT SCALE FROM THIS DRAWING, FIGURED DIMENSIONS ARE TO BE FOLLOWED.

READ THIS DRAWING IN CONJUNCTION WITH OTHER RELATED DRAWINGS; THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.

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CAD FILE : U145F01F.DWG

B.D. REFERENCE No. : 2-3 / 3088 / 79 / 9

NOTES :

- UNLESS OTHERWISE STATED :
ALL WALL THICKNESS TO BE 400mm
ALL SLAB THICKNESS TO BE 175mm
ALL BEAM SIZE TO BE 400(B) x 600(D)
- BEAM SIZE NOTATIONS ARE IN BREADTH (B) x DEPTH (D)
- ABBREVIATION :
T.L. TOP LEVEL
B.L. BOTTOM LEVEL
B.W. BEARING WALL
H.W. HANGER WALL
- LEGEND :

STRUCTURAL LEVEL

A & A WORKS AT EXISTING TRANSFORMER ROOM (UNDER SEPARATE SUBMISSION)

A & A WORKS AT EXISTING SWITCH ROOM, SWIMMING POOL, GOLF AND GYMNASIUM BUILDING (UNDER SEPARATE SUBMISSION)

CONSTRUCTION SITE SUSPENDED (BD REF. No. 3/3053/96) (FOR INFORMATION ONLY)

WALL UNDER

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.

Plan Approved

YAM Kwan-kit

Senior Structural Engineer
for BUILDING AUTHORITY
19 NOV 2019

C	05-07-19	REVISED AS PER B.D. APPROVED PLAN & MINOR REVISION	KKM	KAL	AW	AW
B	13-11-18	REVISED AS PER B.D. APPROVED PLAN & REVISED AS PER GBP DATED 24 AUG. 2018	KKM	KAL	AW	AW
A	26-02-18	REVISED AS PER GBP DATED 9 NOV. 2017	KKM	WYL	BY	AW

Rev. Date Description Drawn Design Ckd. Appr.
* Do not scale from this drawing. Figured dimensions are to be followed.
* Read this drawing in conjunction with other related drawings. The Engineer shall be notified immediately of any discrepancy found therein.
* Copyright of this drawing is reserved by the Engineer.

R.S.E. / R.G.E.

For B.D. Approval

Job No. 120361

Project Title
PROPOSED NEW TRAINING POOL AND ST-E5 BLOCK AT S.C.A.A. ON I.L. No. 9041 AT CAROLINE HILL ROAD, HONG KONG

Drawing Title
G/F FRAMING PLAN (NEW STAIRCASE ST-E5)

Scale 1 : 100 Date 27 JUL., 2017

Drawing No. S/ST-E5/P01 Revision C

E.F. W.Y.L. B.Y. A.W.
Drawn Designed Checked Approved

AMENDED PLAN

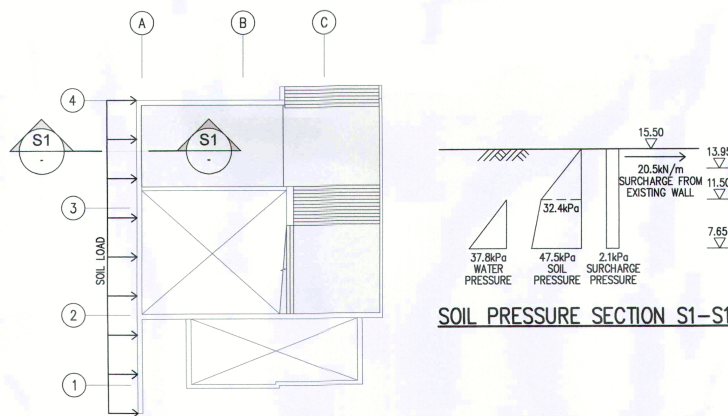
STATEMENT II: THE WORKS SHOWN ON THESE PLANS ARE TYPE II STRUCTURAL (ALTERATIONS AND ADDITIONS) - STAIRCASE ST-E5 AND TRAINING POOL WORKS IN RESPECT OF WHICH THE BUILDING AUTHORITY'S CONSENT IS APPLIED FOR.

In accordance with paragraph 2 of the PNAP ADM-9, all amendments to the previously approved works have been highlighted, and shall be highlighted in case of further amendments, on all sets of plans submitted to the Buildings Department for approval.

FUGRO (HONG KONG) LIMITED
7/F, Guardian House, Tel: 2577 9025
32 Oi Kwan Road, Fax: 2895 2379 / 2895 3499
Wanchai, Hong Kong E-mail: fugro@fugro.com.hk
Website: www.fugro.com

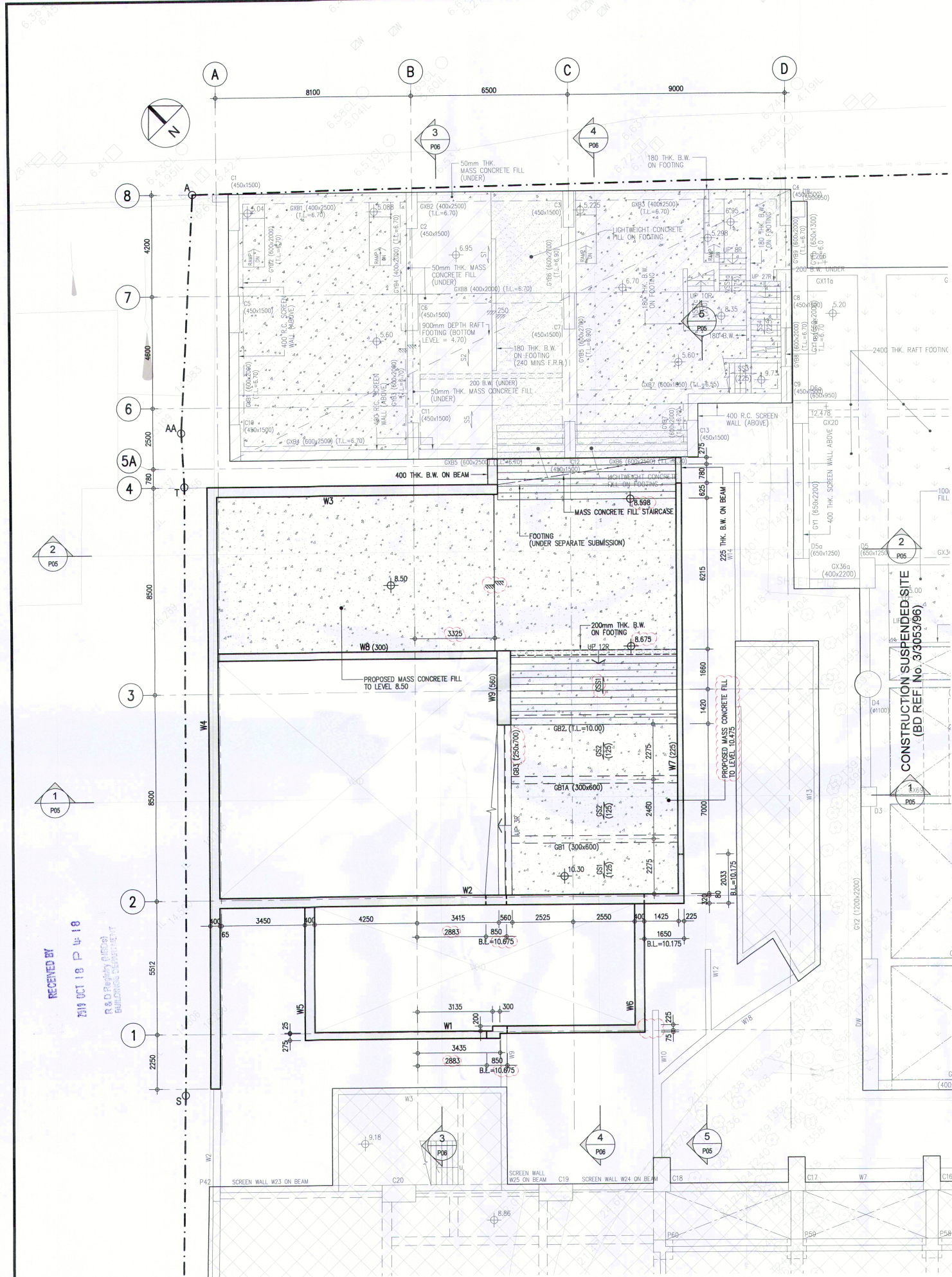
G/F FRAMING PLAN

R.C. DETAIL FOR MASS CONCRETE FILL AT G/F



KEY PLAN OF LOADING INTENSITY

DESIGN LOADING SCHEDULE				
LEGEND	USAGE	(kN/m ²)	IMPOSED D.L. (kN/m ²)	F.R.R. (MINS.)
	STAIRCASE	5.0	1.2	120



Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.

YAM Krok-kit
Senior Structural Engineer
for BUILDING AUTHORITY
19 NOV 2019

Rev	Date	Description	Drawn	Design	Chk'd	App'd
D	18-10-19	MINOR REVISION	KKM	KAL	AW	AW
C	05-07-19	REVISED AS PER B.D. APPROVED PLAN & MINOR REVISION	KKM	WYL	AW	AW
B	13-11-18	REVISED AS PER B.D. APPROVED PLAN & REVISED AS PER GBP DATED 24 AUG. 2018	KKM	KAL	AW	AW
A	26-02-18	REVISED AS PER GBP DATED 9 NOV. 2017	KKM	WYL	BY	AW

Rev.	Date	Description	Drawn/Design	Chkd.	Appr.
• Do not scale from this drawing. Figured dimensions are to be followed. • Read this drawing in conjunction with other related drawings; The Engineer shall be notified immediately of any discrepancy found therein. • Copyright of this drawing is reserved by the Engineer.					

Wong Yiu Wang Andes
BSc(Eng) MHKIE RPE
Registered Structural Engineers

Job No.	120361
---------	--------

Project Title
PROPOSED NEW TRAINING POOL
AND ST-E5 BLOCK AT S.C.A.A. ON
I.L. No. 9041 AT CAROLINE HILL
ROAD, HONG KONG

Drawing Title
SECTIONS
(NEW STAIRCASE ST-E5)

Scale	Date
1 : 100	27 JUL. 2017

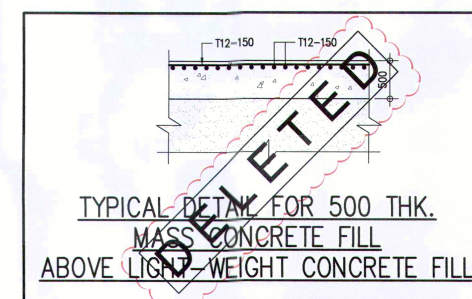
Drawing No.		Revision	
S/ST-E5/P05		D	
E.F. Drawn	W.Y.L. Designed	B.Y. Checked	A.W. Approved

FUGRO (HONG KONG) LIMITED
7/F, Guardian House,
32 Oi Kwan Road,
Wanchai, Hong Kong.
Tel : 2577 9023
Fax : 2895 2379 / 2895 3495
E-mail : fugro@fugro.com.hk
Website : www.fugro.com

STATEMENT II : THE WORKS SHOWN ON THESE PLANS
ARE TYPE II STRUCTURAL (ALTERATIONS AND ADDITIONS
- STAIRCASE ST-E5 AND TRAINING POOL WORKS IN
RESPONSE OF WHICH THE BUILDING AUTHORITY'S
CONSENT IS APPLIED FOR

AMENDED PLAN

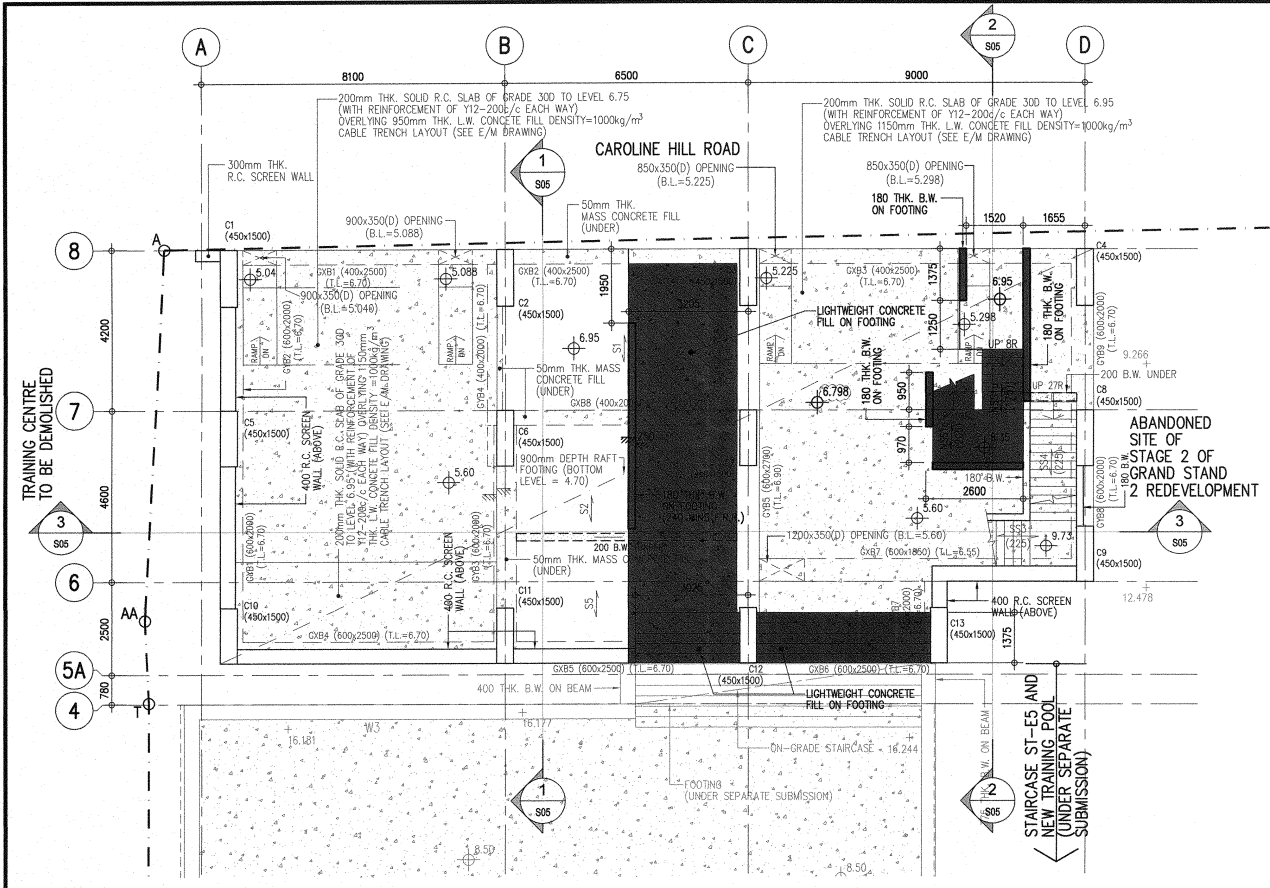
in accordance with paragraph 2 of the PNPAD ADM all amendments to the previously approved works have been highlighted, and shall be highlighted in case of further amendments, on all sets of plans submitted to the Buildings Department for approval.



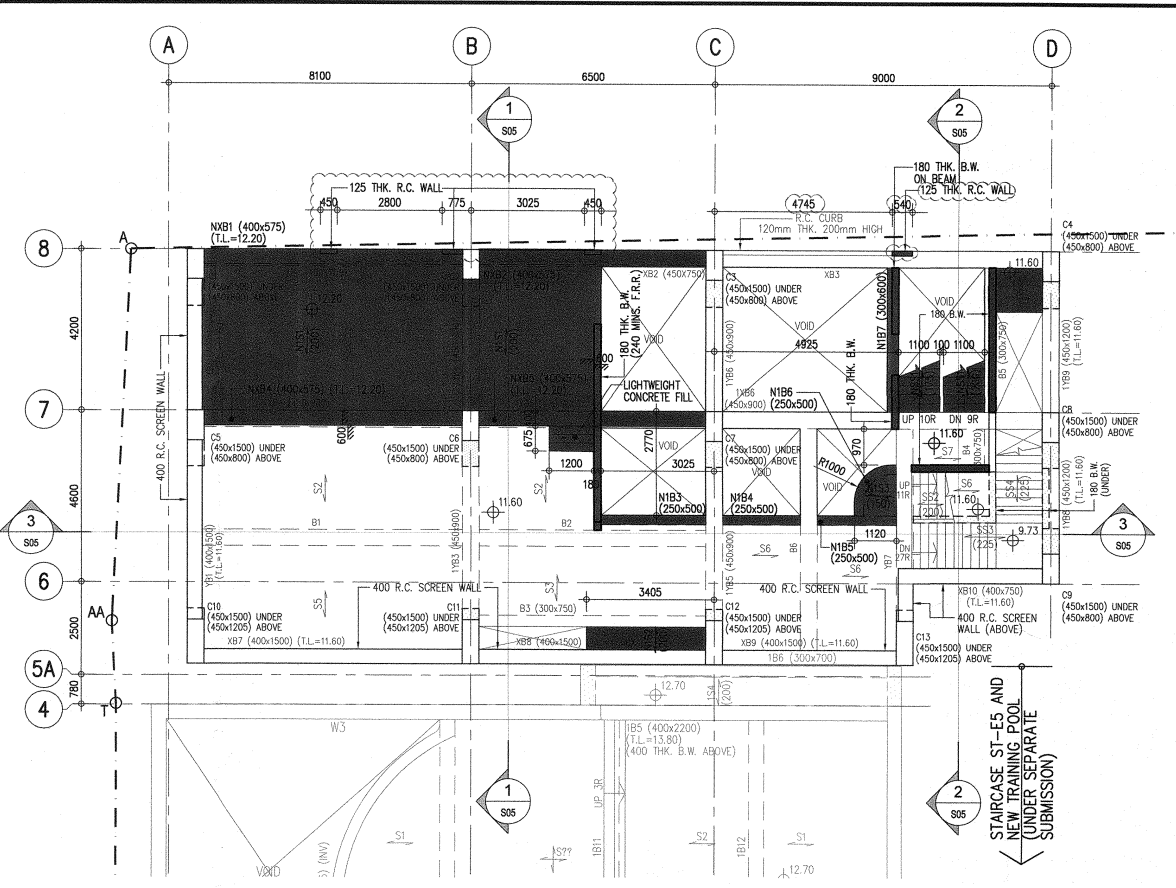
STATEMENT II : THE WORKS SHOWN ON THESE PLANS
ARE TYPE II STRUCTURAL (ALTERATIONS AND ADDITIONS
- STAIRCASE ST-E5 AND TRAINING POOL WORKS IN
RESPONSE OF WHICH THE BUILDING AUTHORITY'S
CONSENT IS APPLIED FOR

AMENDED PLAN

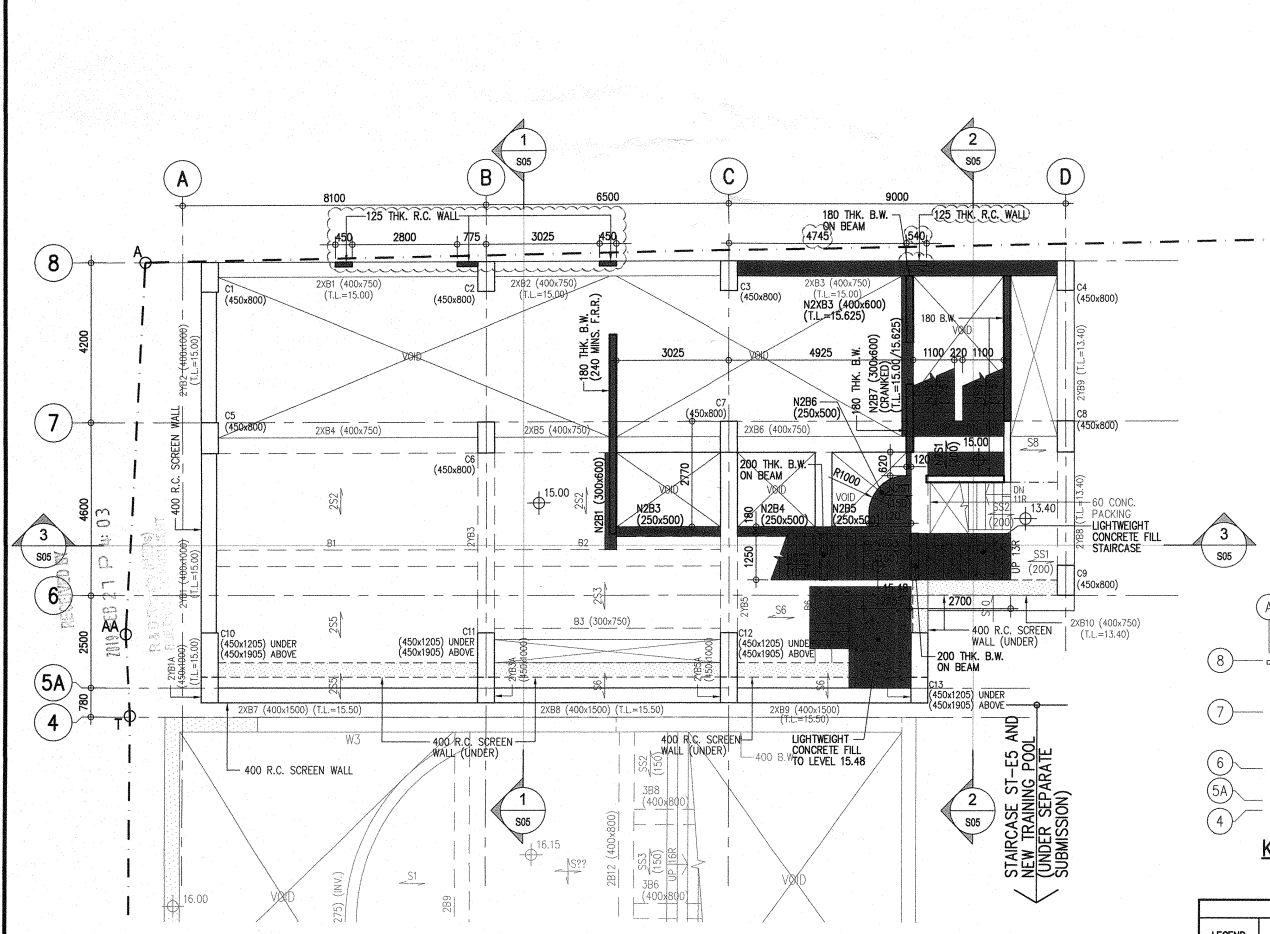
in accordance with paragraph 2 of the PNPAD ADM all amendments to the previously approved works have been highlighted, and shall be highlighted in case of further amendments, on all sets of plans submitted to the Buildings Department for approval.



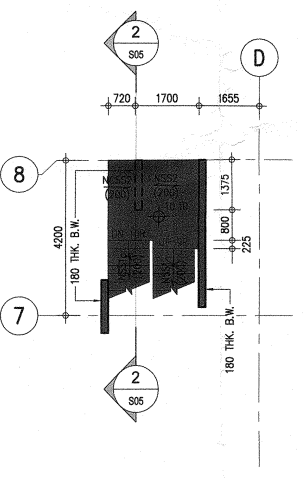
G/F FRAMING PLAN



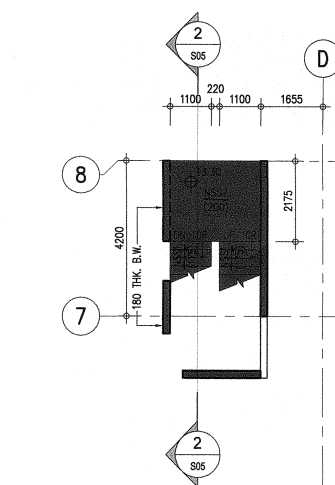
1/F FRAMING PLAN



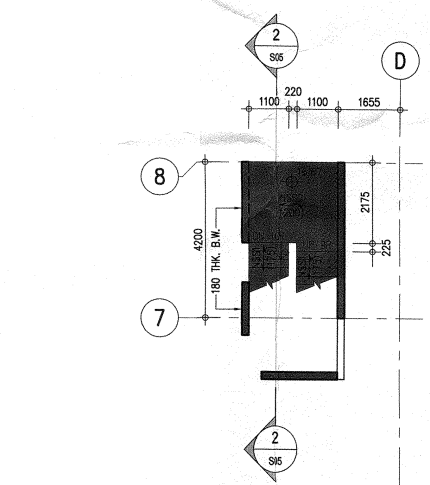
2/F FRAMING PLAN



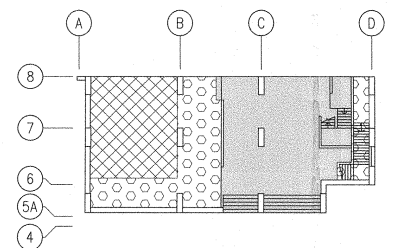
PART PLAN AT LEVEL 10.10



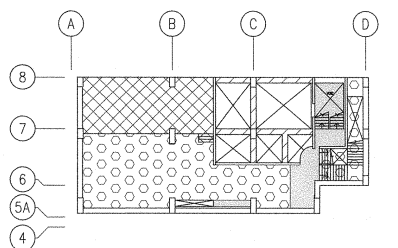
PART PLAN AT LEVEL 13.30



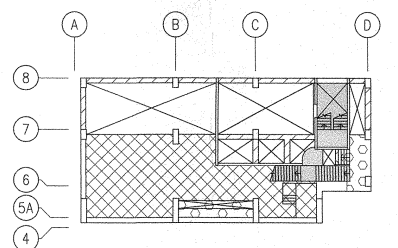
PART PLAN AT LEVEL 16.67



KEY PLAN OF LOADING INTENSITY (FOR G/F)



KEY PLAN OF LOADING INTENSITY (FOR 1/F)



KEY PLAN OF LOADING INTENSITY (FOR 2/F)

DESIGN LOADING SCHEDULE FOR G/F				
LEGEND	USAGE	IMPOSED D.L. (kN/m²)	F.R.R. (MINS.)	
[Pattern]	STAIRCASE & CORRIDOR	5	1.2	120
[Pattern]	TRANSFORMER ROOM (EXISTING)	20	0.5	240
[Pattern]	SWITCH ROOM (EXISTING)	10	0.5	240

NOTES: # CONSTRUCTION LOAD IS NOT ALLOWED TO EXCEED THE DESIGN LIVE LOAD.

DESIGN LOADING SCHEDULE FOR 1/F				
LEGEND	USAGE	IMPOSED D.L. (kN/m²)	F.R.R. (MINS.)	
[Pattern]	STAIRCASE & CORRIDOR	5	1.2	120
[Pattern]	PUMP ROOM	7.5	1.2	120
[Pattern]	SWITCH ROOM (EXISTING)	10	0.5	240
[Pattern]	INACCESSIBLE AREA	2	-	120
[Pattern]	DOUBLE SLAB UNDER (EXISTING)	0.5*	0.5	-

NOTES: * FOR LEFT-IN FORMWORK.
CONSTRUCTION LOAD IS NOT ALLOWED TO EXCEED THE DESIGN LIVE LOAD.

DESIGN LOADING SCHEDULE FOR 2/F				
LEGEND	USAGE	IMPOSED D.L. (kN/m²)	F.R.R. (MINS.)	
[Pattern]	STAIRCASE & CORRIDOR	5	1.2	120
[Pattern]	VENT DUCT ROOM	5	1.2	120
[Pattern]	SWITCH ROOM (EXISTING)	10	0.5	240
[Pattern]	INACCESSIBLE AREA	2	-	120

NOTES: # CONSTRUCTION LOAD IS NOT ALLOWED TO EXCEED THE DESIGN LIVE LOAD.

AMENDED PLAN

STATEMENT 1: THE WORKS SHOWN ON THESE PLANS ARE TYPE 1 STRUCTURAL ALTERATIONS AND ADDITIONS - TRANSFORMER ROOM WORKS IN RESPECT OF WHICH THE BUILDING AUTHORITY'S CONSENT IS APPLIED FOR.

B.D. REFERENCE No.: 2-3 / 3088 / 79 / 9(S)

NOTES :-

- FOR GENERAL NOTES, REFER TO DWG. Nos. AA/TR/S01 AND AA/TR/S01-1.
- UNLESS OTHERWISE STATED :
ALL EXISTING SLAB THICK TO BE 200mm.
ALL EXISTING BEAM TO BE 450(8) x 750(0).

LEGEND :-

- PROPOSED MASS CONCRETE FILL
- PROPOSED LIGHTWEIGHT CONCRETE FILL (DENSITY=1000 kg/m³)

3. ABBREVIATION:

- FLOOR No.
- B FOR BEAM; S FOR SLAB
- BEAM No.
- C FOR CANTILEVER; T FOR TRANSFER
- NEW STRUCTURE

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 14(1)(b) and the provision of section 14(1)(c) of the Buildings Ordinance are of particular relevance in this regard.

B	26-02-10	REVISED AS PER B.D. APPROVED PLAN & MINOR REVISION	KKM	WYL	AW	AW
A	14-02-18	REVISED AS PER GBP DATED 9 NOV. 2017	KKM	WYL	BY	AW

Rev. Date Description Drawn/Design Ckd. Appr.

Do not scale from this drawing. Figured dimensions are to be followed.
Read this drawing in conjunction with other related drawings. The Engineer shall be notified immediately of any discrepancy found therein.
Copyright of this drawing is reserved by the Engineer.

R.S.E./R.G.E.

Wong Yiu Wang Andes
BSC(Eng) MPhil RPE
Registered Structural Engineer

For B.D. Approval

Plan Approved

YIFENG Kwok-wai
Senior Structural Engineer
for BUILDING AUTHORITY
22 MAR 2019

Job No. 120361

Project Title
PROPOSED ALTERATION AND ADDITION WORKS OF EXISTING TRANSFORMER ROOM AT S.C.A.A. ON I.L. No. 9041 AT CAROLINE HILL ROAD, HONG KONG

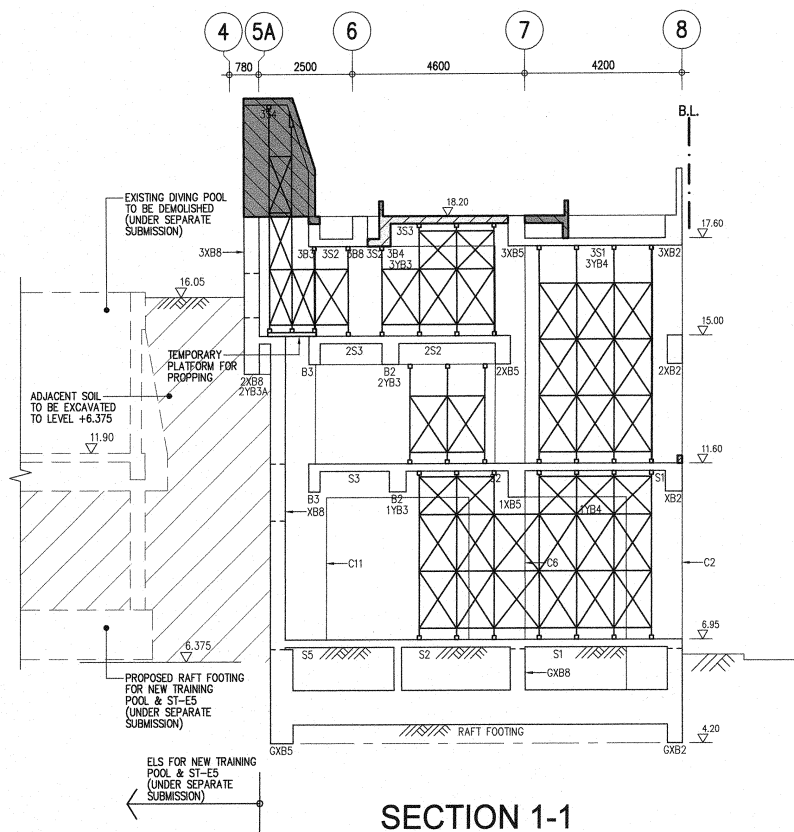
Drawing Title
G/F TO 2/F FRAMING PLANS (TRANSFORMER ROOM)

Scale 1 : 100 Date 27 JUL., 2017

Drawing No. AA/TR/S03 Revision B

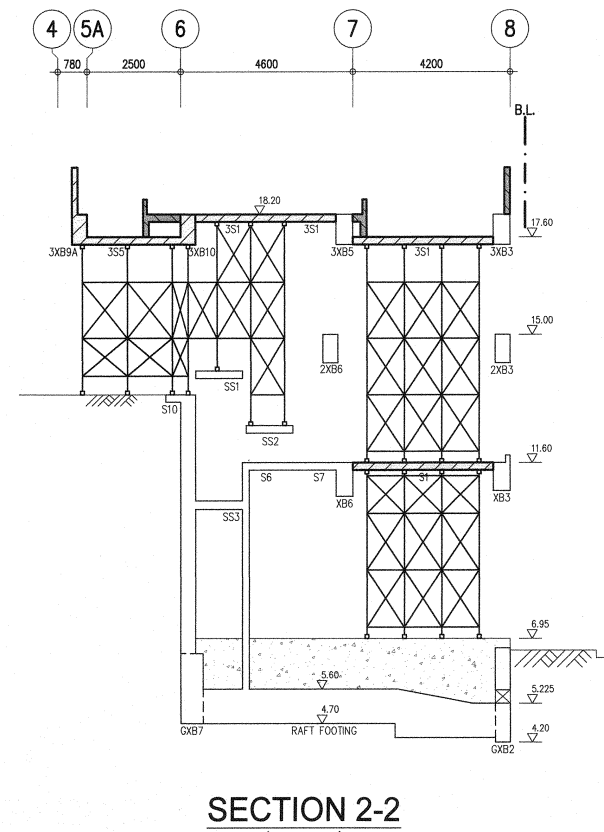
K.K.M. Drawn	W.Y.L. Designed	B.Y. Checked	A.W. Approved
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7/F, Guardian House, 32 Oi Kwan Road, Wanchai, Hong Kong.
Tel : 2577 9523 Fax : 2895 2379 / 2895 3499
E-mail : fugo@fugo.com.hk Website : www.fugo.com

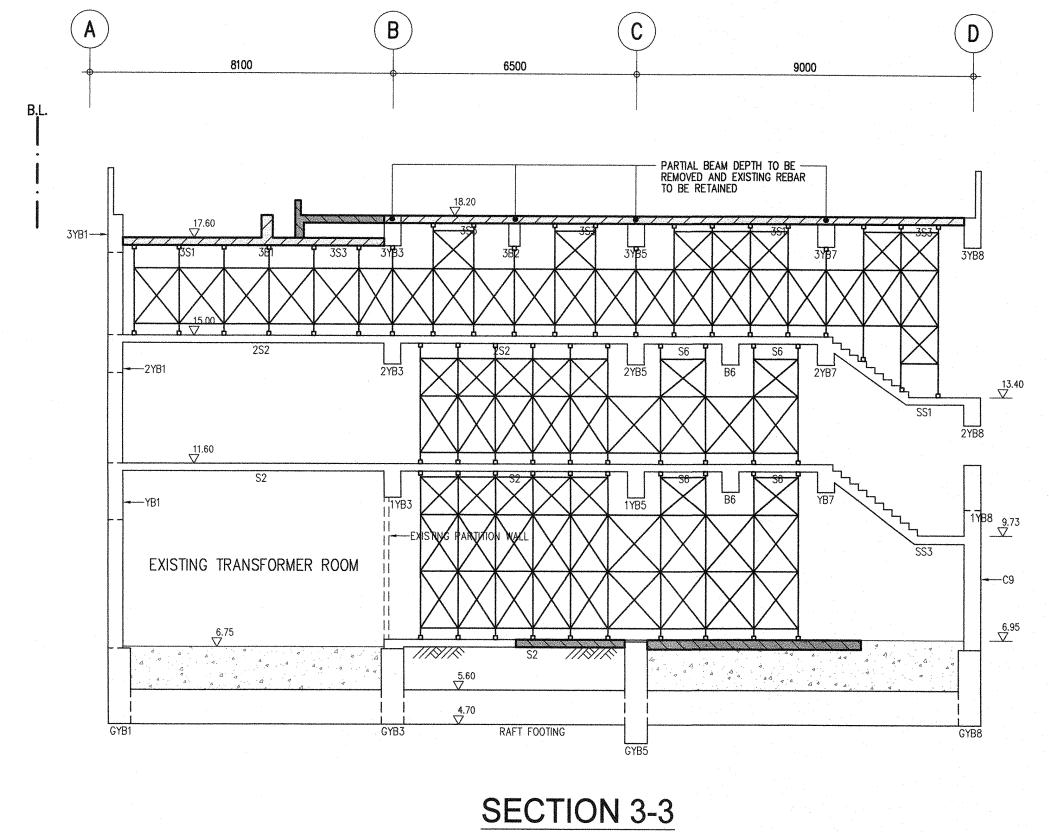


SECTION 1-1
(EXISTING)

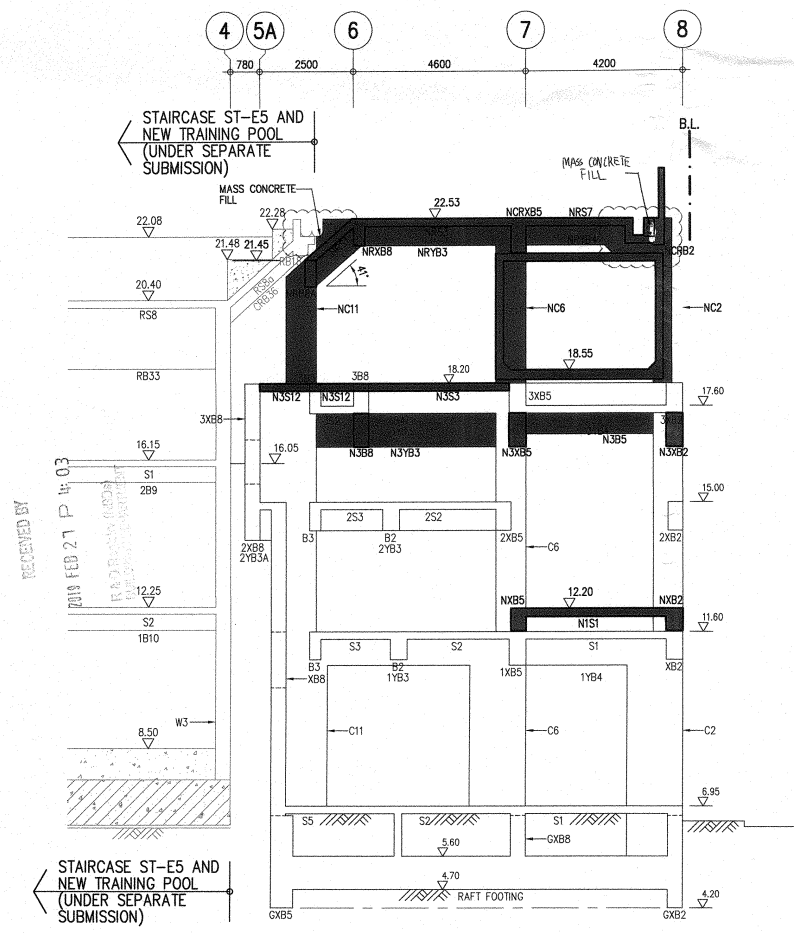
* DEMOLITION SEQUENCE REFERS TO PLAN AA/TR/S05-1



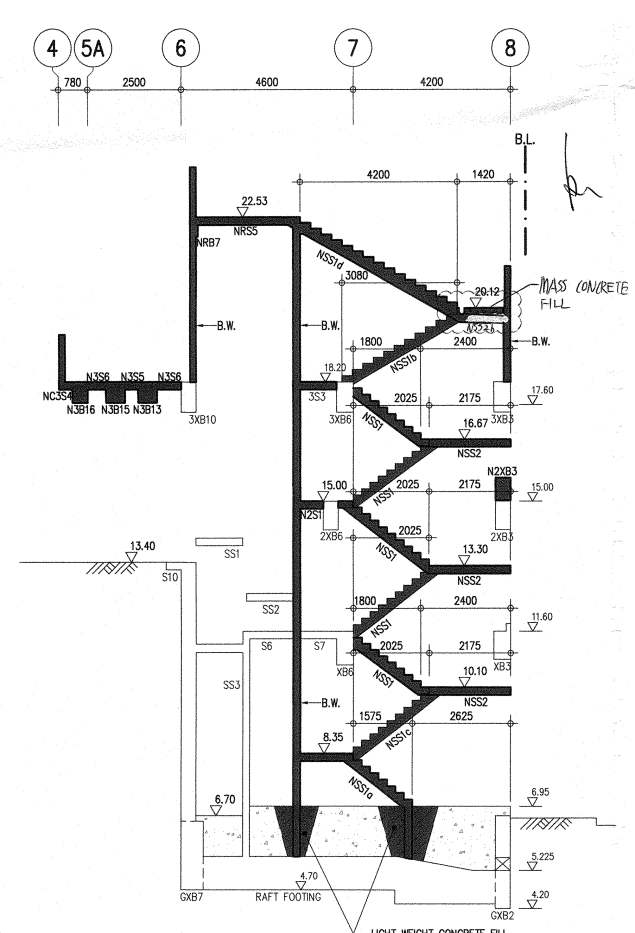
SECTION 2-2
(EXISTING)



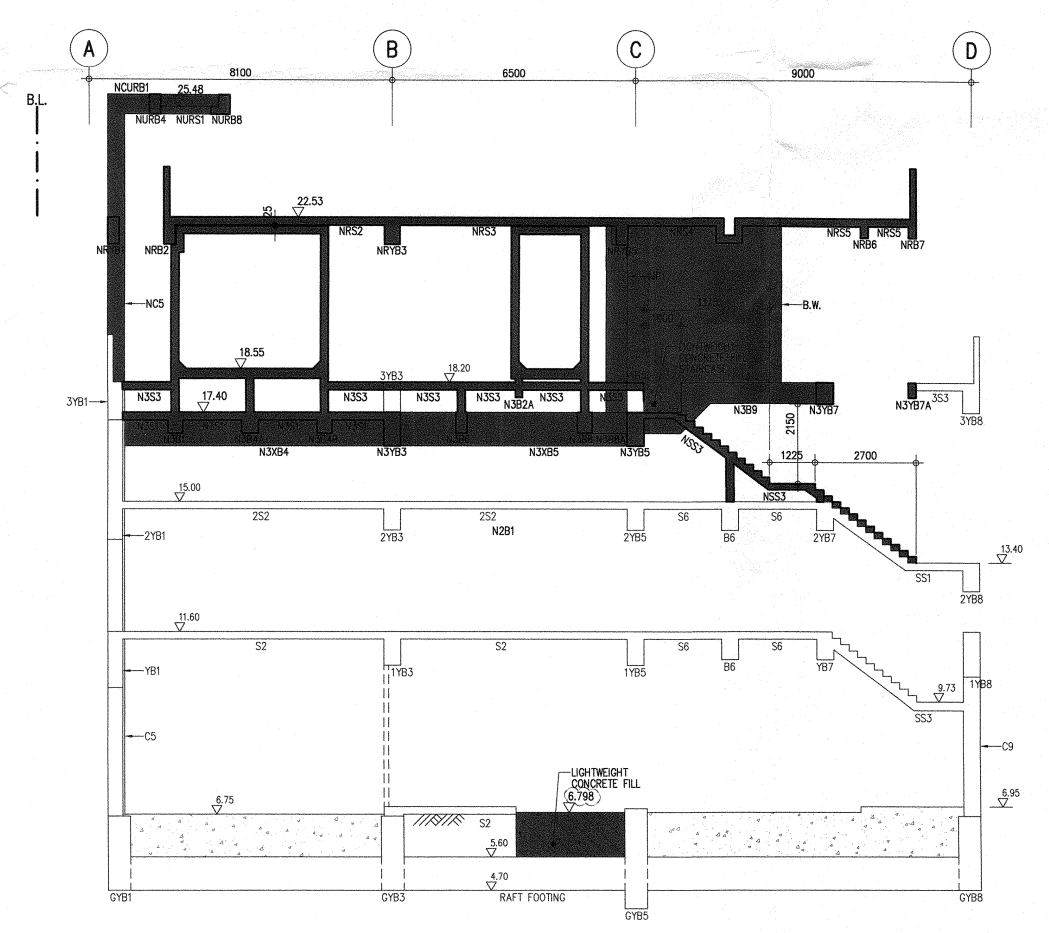
SECTION 3-3
(EXISTING)



SECTION 1-1
(PROPOSED)



SECTION 2-2
(PROPOSED)



SECTION 3-3
(PROPOSED)

AMENDED PLAN

STATEMENT II: THE WORKS SHOWN ON THESE PLANS ARE TYPE II STRUCTURAL ALTERATIONS AND ADDITIONS - TRANSFORMER ROOM WORKS IN RESPECT OF WHICH THE BUILDING AUTHORITY'S CONSENT IS APPLIED FOR.

In accordance with paragraph 2 of the PNAP ADM-9, all amendments to the previously approved works have been highlighted, and shall be highlighted in case of further amendments, on all sets of plans submitted to the Buildings Department for approval.

B.D. REFERENCE No.: 2-3 / 3088 / 79 / 9(S)

LEGEND :-

- R.C. STRUCTURE TO BE DEMOLISHED AFTER THE ADJACENT SOIL OF A&A FOR ST-E5 AREA HAS BEEN EXCAVATED TO LEVEL +6.375 (WORK SEQUENCE REFERS TO STAGES 1b TO 5 AS SHOWN ON PLAN AA/TR/S05-1) (EXCAVATION UNDER SEPARATE SUBMISSION)
- R.C. STRUCTURE TO BE DEMOLISHED BEFORE EXCAVATION OF THE ADJACENT SOIL OF A&A FOR ST-E5 AREA (WORK SEQUENCE REFERS TO STAGE 1a AS SHOWN ON PLAN AA/TR/S05-1)
- PROPOSED NEW R.C. STRUCTURE
- PROPOSED MASS CONCRETE FILL
- PROPOSED LIGHTWEIGHT CONCRETE FILL (DENSITY = 1000 kg/m³)

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 19(1)(b) of the Buildings Ordinance are of particular relevance in this regard.

Rev.	Date	Description	Drawn	Design	Ckd.	Appr.
B	26-02-19	REVISED AS PER B.D. APPROVED PLAN & MINOR REVISION	KKM	WYL	AW	AW
A	06-08-18	REVISED AS PER B.D. APPROVED PLAN & MINOR REVISION	KKM	WYL	AW	AW

Do not scale from this drawing. Figured dimensions are to be followed.
Read this drawing in conjunction with other related drawings. The Engineer shall be notified immediately of any discrepancy found therein.
Copyright of this drawing is reserved by the Engineer.

R.S.E. / R.G.E.

Wong Yiu Wang And
SSE(Eng) MKE RPE
Registered Structural Engineer

For B.D. Approval

Plan Approved

YUEN Kwok-wai
Senior Structural Engineer
for BUILDING AUTHORITY
22 MAR 2019

Job No. 120361

Project Title
PROPOSED ALTERATION AND ADDITION WORKS OF EXISTING TRANSFORMER ROOM AT S.C.A.A. ON I.L. No. 9041 AT CAROLINE HILL ROAD, HONG KONG

Drawing Title
SECTIONS (TRANSFORMER ROOM)

Scale 1 : 100 Date 14 FEB. 2018

Drawing No. AA/TR/S05 Revision B

K.K.M.	W.Y.L.	B.Y.	A.W.
Drawn	Designed	Checked	Approved

FUGRO (HONG KONG) LIMITED
7/F, Guardian House,
32 Oil Kwan Road,
Wanchai, Hong Kong.
Tel : 2877 9223
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E-mail : fugro@fugro.com.hk
Website : www.fugro.com

**REDEVELOPMENT OF
SOUTH CHINA ATHLETIC ASSOCIATION
- PHASE 1
PROPOSED SITE FORMATION WORKS AT AREA 4**

Fugro Ref No. : U05501.14

March 2000

Rev	Date	Purpose of Issue	Prepared	Checked
--	7-03-2000	Original Issue		
A				
B				

Should you have any queries on the contents of this report, please contact Mr Gary Luk at 2577 9023.

1 INTRODUCTION

In the Area 4 redevelopment of the South China Athletic Association site, it is intended to erect a permanent 40m high fencing for the golf court drive, and demolish the existing non-standard retaining structures for the development of a corridor and permanent fences along the site boundary at Area 4 as shown in sketch no. SK950201/133 and 134.

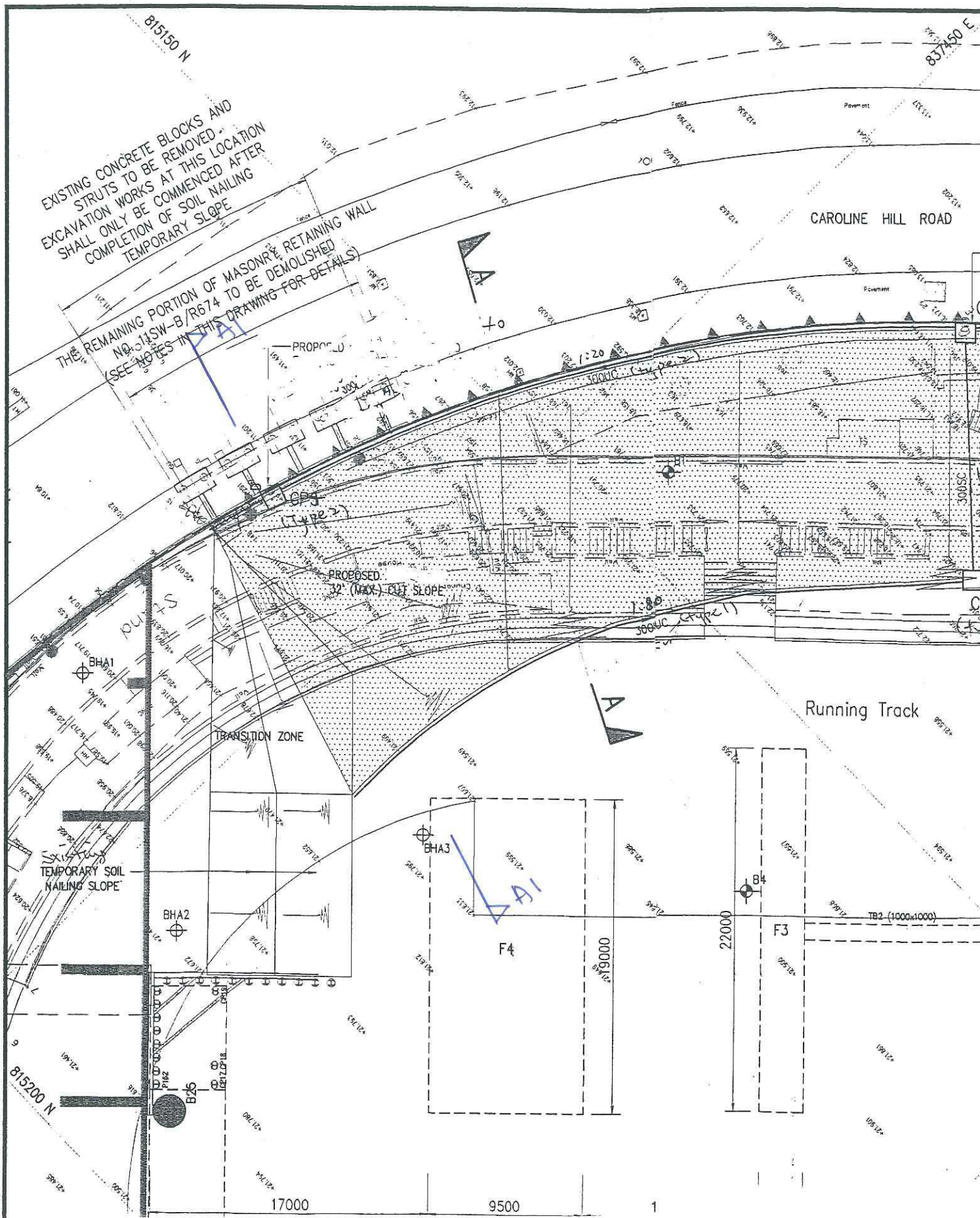
The site formation works for the redevelopment would comprise a cut slope formation below the Area 4, demolition of existing retaining structures during slope formation, upgrading of existing retaining structures next to the access ramp, and provision of a surface drainage system to the area. The layout of proposed site formation works is shown in the attached Drawing No. AS/01.

For the purpose to obtain additional geological information for design of site formation works at the Area 4, additional ground investigation works have been carried out to assess the subsurface ground conditions.

This geotechnical report covers the site formation for the Area 4. It presents the data obtained from the additional ground investigation field work and laboratory testing works, review the geotechnical parameters for design, design of the proposed cut slope and upgrading works for retaining structures. This report shall be read in conjunction with our previously submitted report Ref. U05501.13 for the adjoining portion 3 area.

2 GROUND INVESTIGATION AT EXTENDED AREA

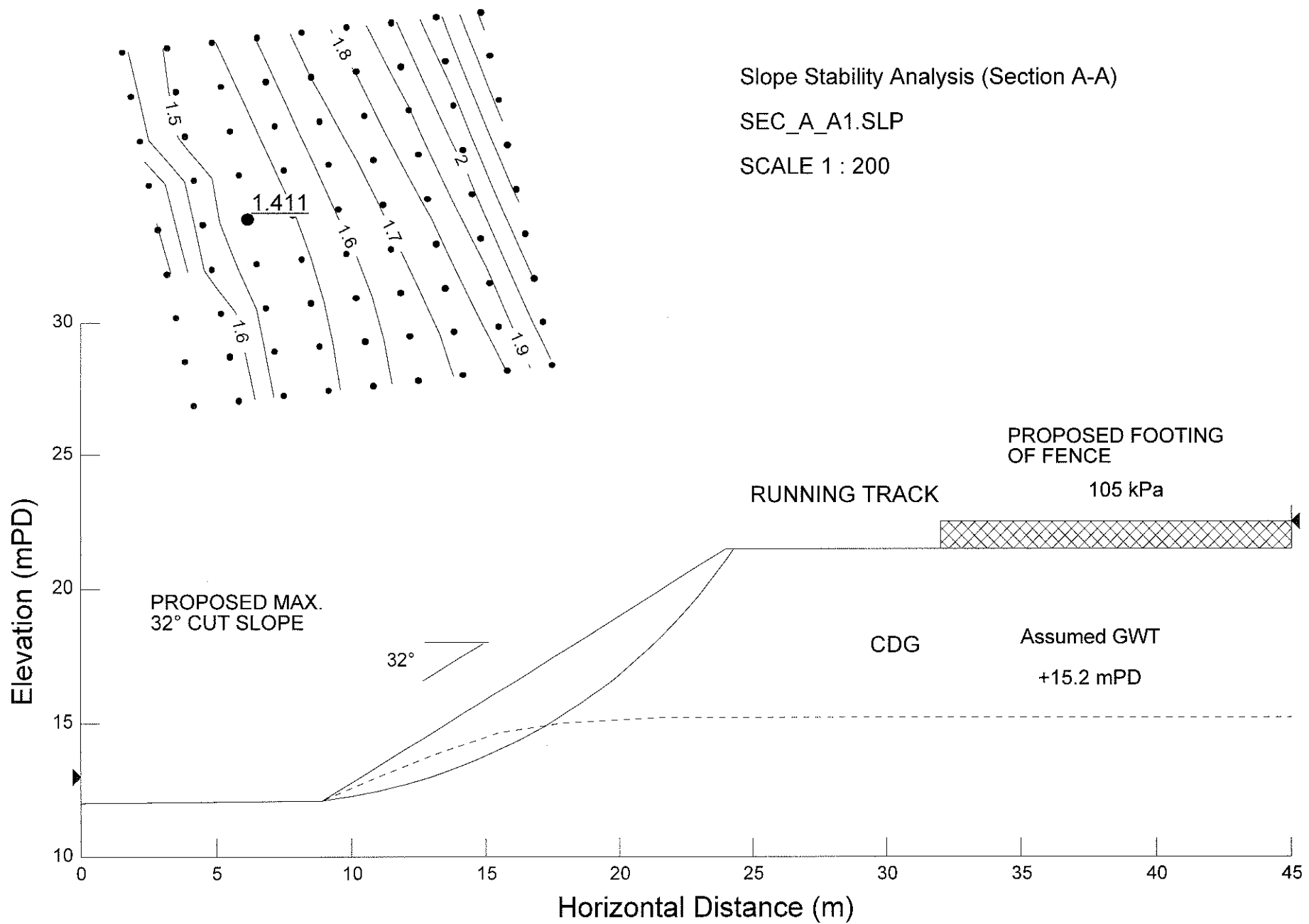
Ground investigation at the Area 4 area was carried out in October 1999 by Paul Y Construction and Engineering Co. Ltd. The investigation comprised 5 vertical boreholes (B1 to B5) and 4 coreholes (HC1 to HC4) through the existing masonry retaining wall. Records of ground investigation works are included in Appendix A.

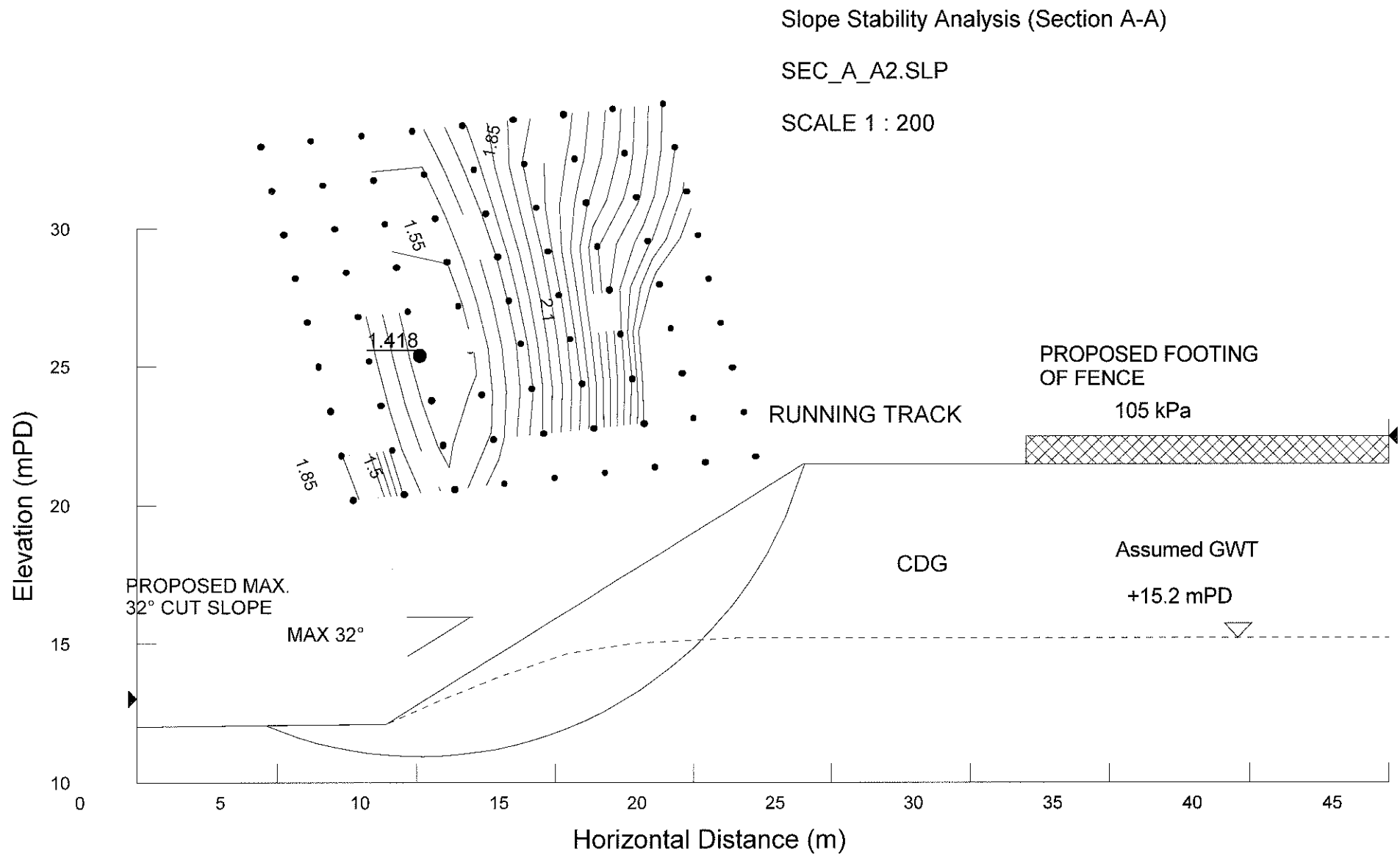


Appendix E

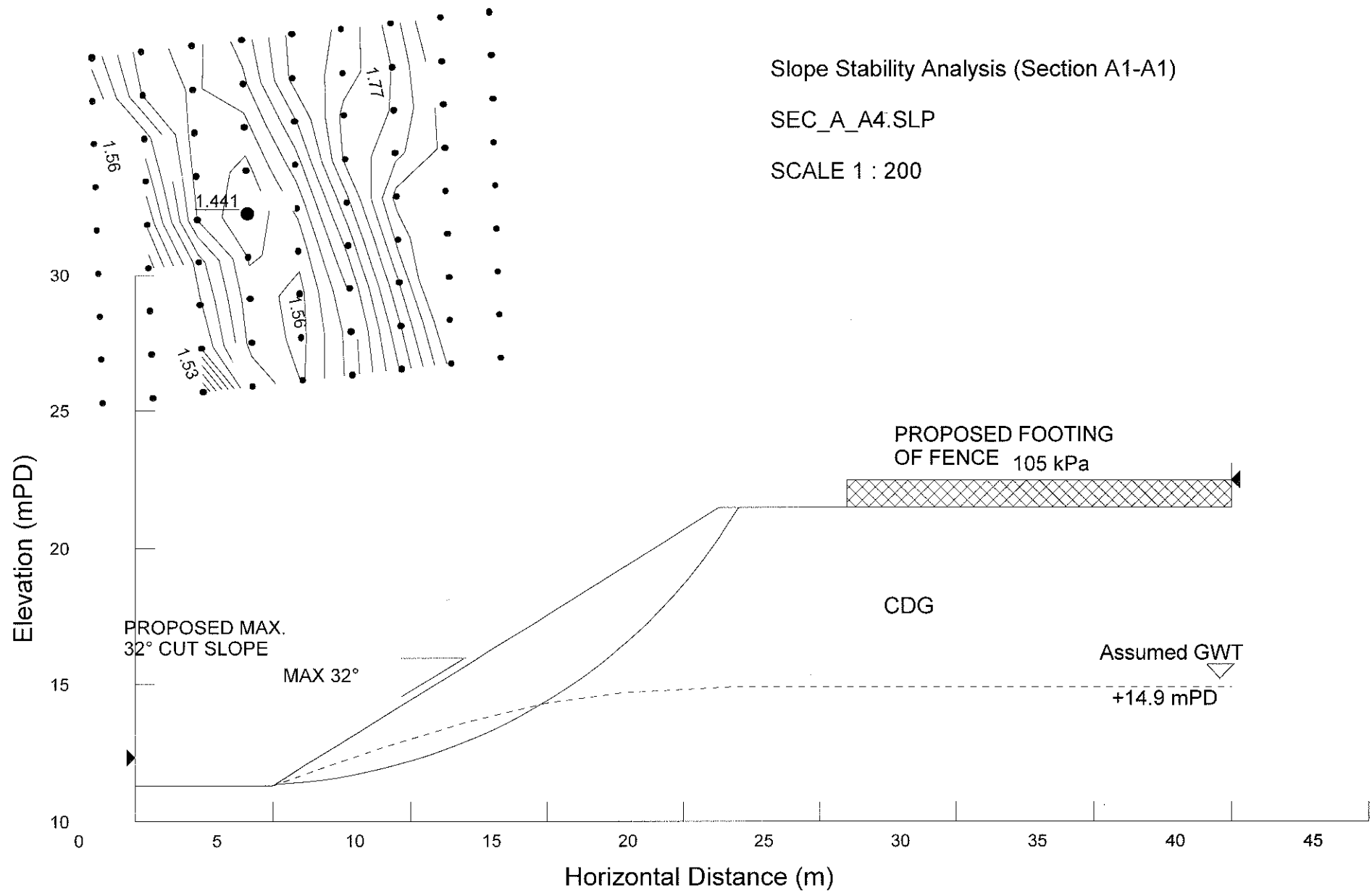
Stability Analysis for the 32° Soil Cut Slope

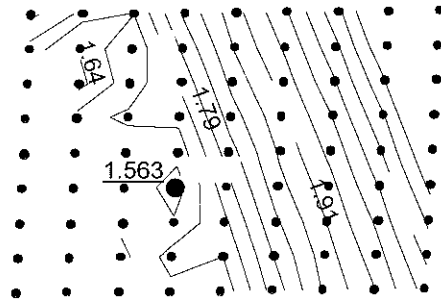
Section A – A





Section A1 - A1

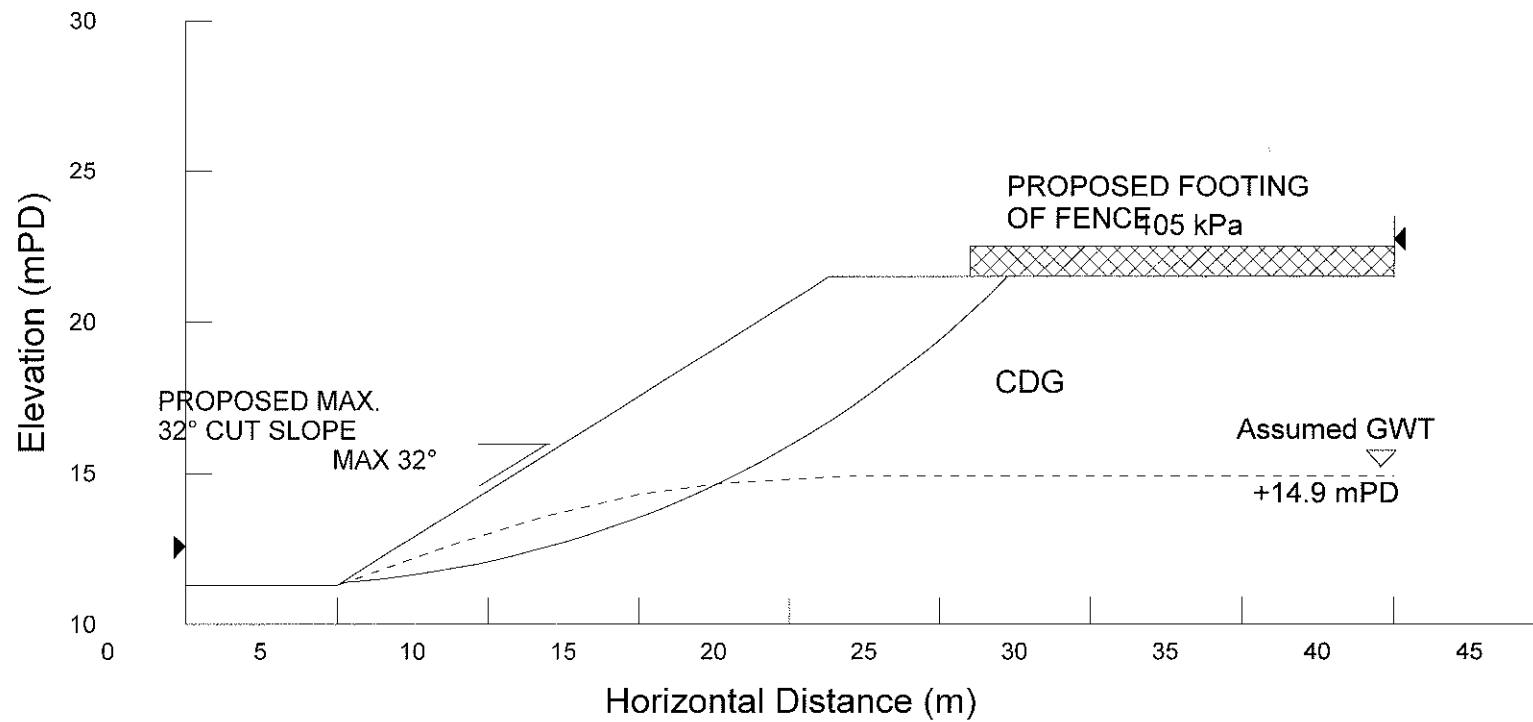




Slope Stability Analysis (Section A1-A1)

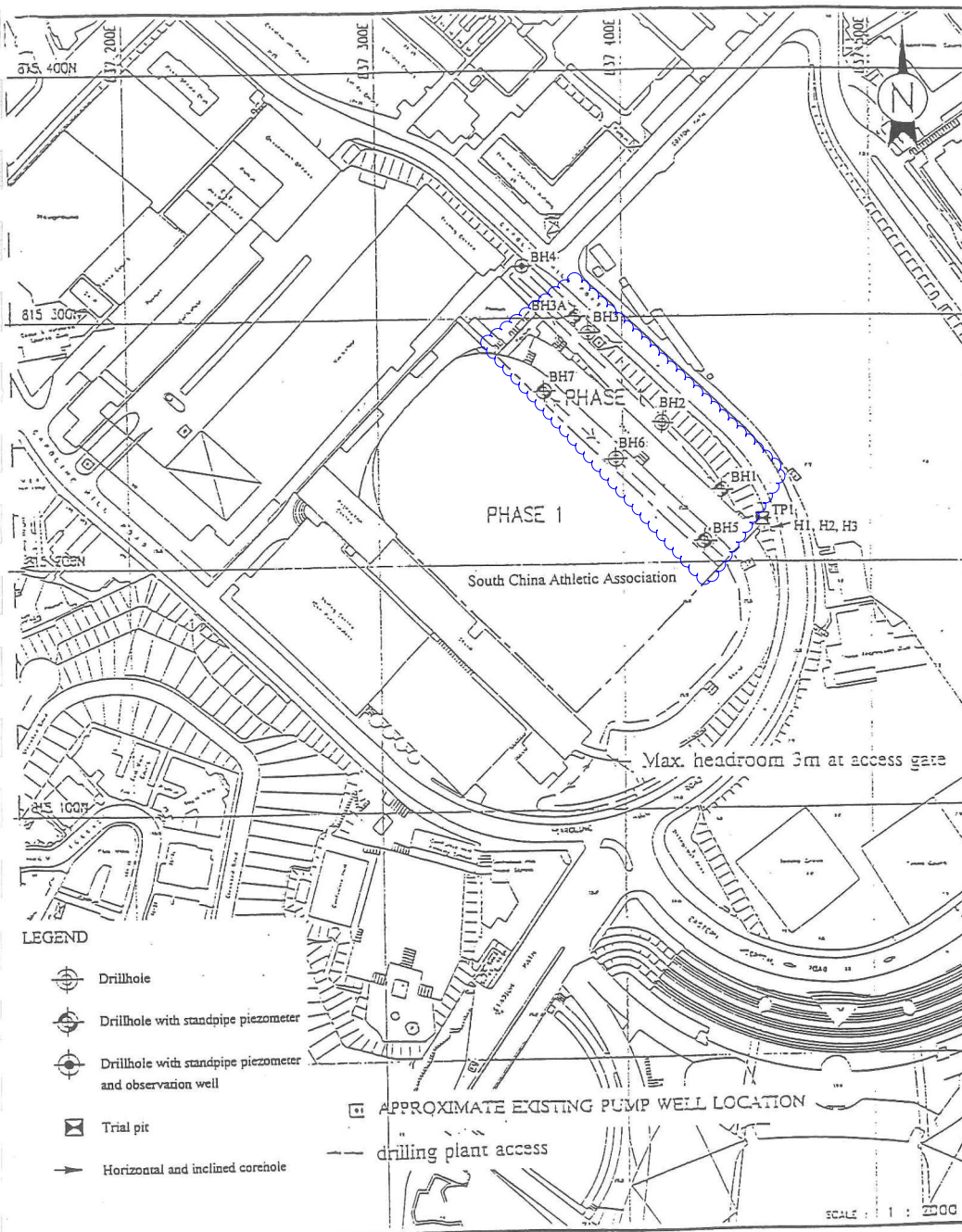
SEC_A_A44.SLP

SCALE 1 : 250



Appendix D

Relevant Ground Investigation Record



GOLD RAM ENGINEERING & DEVELOPMENT LTD.										DRILLHOLE RECORD									
PROJECT Re-development of South China Athletic Association - PHASE 1										JOB No. CONTRACT No. HOLE No. BH-1 DATE from 04-09-96 To 06-09-96									
METHOD Rotary Drill										CO-ORDINATES E 837439.90 N 815229.92									
MACHINE No. DR.21										ROCK COREBIT T2-101 HOLE DIA. P x H x									
FLUSHING MEDIUM Water										ORIENTATION Vertical GROUND-LEVEL +18.32mPD									
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description				
1	Inspection Pit									18.32	0.00				CONCRETE				
2										18.12	0.20				Loose, brown, slightly gravelly, clayey, silty fine to coarse SAND. (FILL)				
3										16.82	1.50				Firm, brown, gravelly, very sandy SILT & CLAY. (FILL)				
4										14.32	4.00				Extremely weak, brown, completely decomposed, coarse-grained GRANITE (Medium dense, gravelly clayey silty fine to coarse SAND) (C.D.G.)				
5										11.82	6.50				Extremely weak, yellowish pink, completely decomposed, coarse-grained GRANITE (Medium dense, gravelly slightly clayey, silty fine to coarse SAND.) (C.D.G.)				
6										7.50									
7										7.35									
8										9.00									
9										10.00									
10																			

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE

- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

REMARKS :
A piezometer is installed at 20m. (-1.48MPD)

Form No. PRO/05/03

B3

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD	
JOB No.		CONTRACT No.	
HOLE No. BH-1		DATE from 04-09-96 To 06-09-96	
PROJECT Re-development of South China Athletic Association - PHASE 1		SHEET 2 of 4	
METHOD Rotary Drill	CO-ORDINATES E 837439.90 N 815229.92	ROCK COREBIT T2-101	
MACHINE No. DR.21		HOLE DIA. Pz Hx	
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +18.32mPD	
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %
			Total core Recovery %
			Solid core Recovery %
			R.Q.D.
			Fracture Index/m
			Tests
			Samples
			Reduced level
			Depth (m)
			Legend
			Grade
			Zone
			Description
11			As sheet 1 of 4
12			Extremely weak, yellowish brown to yellowish pink, completely decomposed coarse-grained GRANITE (Dense, gravelly, silty fine to coarse SAND) (C.D.G.)
13			
14			
15			Extremely to very weak, yellowish brown, completely to highly decomposed coarse-grained GRANITE. (Very dense, very gravelly, fine to coarse SAND) (C.D.G.-H.D.G.)
16			
17			
18			
19			
20			As sheet 3 of 4
• SMALL DISTURBED SAMPLE ▲ BULK DISTURBED SAMPLE ■ S.P.T. LINER SAMPLE □ U100 UNDISTURBED SAMPLE □ U76 UNDISTURBED SAMPLE □ U70 UNDISTURBED SAMPLE		■ MAZIER SAMPLE ▲ WATER SAMPLE ▼ WATER LEVEL ▽ STANDARD PENETRATION TEST □ PISTON SAMPLE ▽ PERMEABILITY TEST	
LOGGED : C.M.Yee CHECKED : P.S.Nau		REMARKS : A piezometer is installed at 20m. (-1.48MPD)	
Form No. PRO/05/03			

B4

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD	
JOB No.		CONTRACT No.	
HOLE No. BH-1		DATE from 04-09-96 To 06-09-96	
PROJECT Re-development of South China Athletic Association - PHASE 1		SHEET 3 of 4	
METHOD Rotary Drill	CO-ORDINATES E 837439.90 N 815229.92	ROCK COREBIT T2-101	
MACHINE No. DR.21		HOLE DIA. Pz Hx	
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +18.32mPD	
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %
			Total core Recovery %
			Solid core Recovery %
			R.Q.D.
			Fracture Index/m
			Tests
			Samples
			Reduced level
			Depth (m)
			Legend
			Grade
			Zone
			Description
21			Very weak, yellow and pink mottled brown, highly decomposed coarse grained GRANITE. (Very dense, very gravelly fine to coarse SAND) (H.D.G.)
22			Moderately strong to strong, partly very weak to weak, yellowish pink, moderately decomposed coarse-grained GRANITE with moderately spaced iron-stained rough planar joints dipping 10° and 30°. (M.D.G.)
23			
24			
25			Very weak to weak, yellowish pink to yellowish brown, highly decomposed coarse grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)
26			
27			Moderately strong, yellowish pink, moderately decomposed coarse-grained GRANITE with very closely spaced iron-stained, manganese coated rough planar joints dipping 10° and 30° with very weak to weak highly to moderately decomposed zone at 25.00-25.30. (H.D.G. to M.D.G.)
28			
29			
30			As sheet 4 of 4
• SMALL DISTURBED SAMPLE ▲ BULK DISTURBED SAMPLE ■ S.P.T. LINER SAMPLE □ U100 UNDISTURBED SAMPLE □ U76 UNDISTURBED SAMPLE □ U70 UNDISTURBED SAMPLE		■ MAZIER SAMPLE ▲ WATER SAMPLE ▼ WATER LEVEL ▽ STANDARD PENETRATION TEST □ PISTON SAMPLE ▽ PERMEABILITY TEST	
LOGGED : C.M.Yee CHECKED : P.S.Nau		REMARKS : A piezometer is installed at 20m. (-1.48MPD)	
Form No. PRO/05/03			

65

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD JOB No. _____ CONTRACT No. _____ HOLE No. BH-1 DATE from 04-09-96 To 06-09-96	
PROJECT <i>Re-development of South China Athletic Association - PHASE 1</i>		SHEET 4 of 4	
METHOD <i>Rotary Drill</i>	CO-ORDINATES E 837439.90 N 815229.92	ROCK COREBIT T2-101	
MACHINE No. DR.21		HOLE DIA. P _x H _x	
FLUSHING MEDIUM <i>Water</i>	ORIENTATION <i>Vertical</i>	GROUND-LEVEL <i>+18.32mPD</i>	
Drilling Progress Casing depth/size Water level/time/date Water Recovery % Total core Recovery % Solid core Recovery % R.Q.D. Fracture Index/m Tests Samples Reduced level Depth (m) Legend Grade Zone	Description		
06-09-96 5.50m at 18:00 60 90 90 70 9 T2-101 -11.88 30.00 -12.44 30.76 + H/M	Moderately strong to strong, yellowish pink to pink, moderately to slightly decomposed coarse-grained GRANITE with very closely (25.75-26.18m, 29.87-30.76m), moderately (26.18-29.26m) & widely (29.26-29.87m) spaced, iron-stained rough planar joints dipping 10°, 30° and 60° (M.D.G. to S.D.G.) — DRILLHOLE COMPLETED —		
• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE ▴ BULK DISTURBED SAMPLE ▲ WATER SAMPLE ■ S.P.T. LINER SAMPLE ✕ WATER LEVEL ■ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST ■ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE ■ U70 UNDISTURBED SAMPLE ⊞ PERMEABILITY TEST		LOGGED : C.M.Yee CHECKED : P.S.Nau Form No. PRO/05/03	
		REMARKS : A piezometer is installed at 20m. (-1.48MPD)	

66

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD JOB No. _____ CONTRACT No. _____ HOLE No. BH-2 DATE from 31-08-96 To 03-09-96	
PROJECT <i>Re-development of South China Athletic Association - PHASE 1</i>		SHEET 1 of 4	
METHOD <i>Rotary Drill</i>	CO-ORDINATES E 837415.96 N 815257.15	ROCK COREBIT T2-101	
MACHINE No. DR.21		HOLE DIA. P _x H _x	
FLUSHING MEDIUM <i>Water</i>	ORIENTATION <i>Vertical</i>	GROUND-LEVEL <i>+17.56MPD</i>	
Drilling Progress Casing depth/size Water level/time/date Water Recovery % Total core Recovery % Solid core Recovery % R.Q.D. Fracture Index/m Tests Samples Reduced level Depth (m) Legend Grade Zone	Description		
08-09-96 Inspection Pit 17.56 17.36 16.06 2.50 2.95 4.00 5.00 5.45 6.50 7.50 7.95 8.56 9.00 10.00 H	CONCRETE Loose, reddish brown, gravelly, slightly clayey silty fine to coarse SAND. (FILL) Extremely weak, reddish brown, completely decomposed, coarse-grained GRANITE. (Medium dense, gravelly clayey silty fine to coarse SAND) (C.D.G.) As sheet 2 of 4		
• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE ▴ BULK DISTURBED SAMPLE ▲ WATER SAMPLE ■ S.P.T. LINER SAMPLE ✕ WATER LEVEL ■ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST ■ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE ■ U70 UNDISTURBED SAMPLE ⊞ PERMEABILITY TEST		LOGGED : C.M.Yee CHECKED : P.S.Nau Form No. PRO/05/03	
		REMARKS : One falling head permeability test is done at 15.0-15.6m.	

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD	
JOB No.		CONTRACT No.	
HOLE No. BH-2		DATE from 31-08-96 To 03-09-96	
PROJECT Re-development of South China Athletic Association - PHASE 1		SHEET 2 of 4	
METHOD Rotary Drill	CO-ORDINATES E 837415.96 N 815257.15	ROCK COREBIT T2-101	
MACHINE No. DR.21		HOLE DIA. Pz Hx	
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +17.56MPD	
Drilling Progress Casing depth/ size Water level/ time/ date	Water Recovery % Total core Recovery % Solid core Recovery %	R.Q.D. Fracture Index/m Tests Samples Reduced level Depth (m) Legend Grade Zone	Description
11 31-08-96 Pr	90	10.45 11.50 12.50 12.95 10.00 14.00 15.00 15.45 1.00 16.50 17.50 17.95 -1.44 19.00 20.00	Extremely weak, brown, completely decomposed coarse-grained GRANITE. (Medium dense to dense, gravelly, silty, fine to coarse SAND) (C.D.G.)
14 02-09-96 Hx	87	15.00 15.45 1.00 16.50 17.50 17.95 -1.44 19.00 20.00	Extremely weak, brown, completely decomposed coarse-grained GRANITE. (Medium dense to dense, gravelly, slightly clayey, silty, fine to coarse SAND) (C.D.G.)
17 02-09-96 Hx	100	17.50 17.95 -1.44 19.00 20.00	Very weak, pinkish brown, completed to highly decomposed coarse-grained GRANITE. (Very dense, very gravelly, slightly silty, fine to coarse SAND) (C.D.G.-H.D.G.)
19	100		As sheet 3 of 4
• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE ◆ BULK DISTURBED SAMPLE ▲ WATER SAMPLE ■ S.P.T. LINER SAMPLE ▽ WATER LEVEL ■ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST ■ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE ■ U70 UNDISTURBED SAMPLE ⊥ PERMEABILITY TEST		LOGGED : C.M.Yee CHECKED : P.S.Nau Form No. PRO/05/03	REMARKS : One falling head permeability test is done at 15.0-15.6m.

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD	
JOB No.		CONTRACT No.	
HOLE No. BH-2		DATE from 31-08-96 To 03-09-96	
PROJECT Re-development of South China Athletic Association - PHASE 1		SHEET 3 of 4	
METHOD Rotary Drill	CO-ORDINATES E 837415.96 N 815257.15	ROCK COREBIT T2-101	
MACHINE No. DR.21		HOLE DIA. Pz Hx	
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +17.56MPD	
Drilling Progress Casing depth/ size Water level/ time/ date	Water Recovery % Total core Recovery % Solid core Recovery %	R.Q.D. Fracture Index/m Tests Samples Reduced level Depth (m) Legend Grade Zone	Description
21 31-08-96 Pr	90	20.45 22.00 23.00 23.45 25.00 25.45 -9.38 25.94 -10.17 27.73 -10.44 28.00 29.78 29.77	Extremely weak, pinkish brown, completely decomposed coarse-grained GRANITE. (Very dense, gravelly, clayey, silty, fine to coarse SAND) (C.D.G.)
24 02-09-96 Hx	85	25.00 25.45 -9.38 25.94 -10.17 27.73 -10.44 28.00 29.78 29.77	Extremely weak, yellowish brown, completely decomposed coarse-grained GRANITE. (Very dense, very gravelly, silty, fine to coarse SAND) (C.D.G.)
27 02-09-96 Hx	90	27.73 28.00 29.78 29.77	Strong to very strong, greyish pink, slightly decomposed coarse-grained GRANITE with moderately (29.77-30.70m) to closely-spaced iron-stained, rough planar joints dipping 10°, 30°, 45° & 60°. Highly decomposed GRANITE zone is found at 27.73-27.94m
29	90		
30	95		
• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE ◆ BULK DISTURBED SAMPLE ▲ WATER SAMPLE ■ S.P.T. LINER SAMPLE ▽ WATER LEVEL ■ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST ■ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE ■ U70 UNDISTURBED SAMPLE ⊥ PERMEABILITY TEST		LOGGED : C.M.Yee CHECKED : P.S.Nau Form No. PRO/05/03	REMARKS : One falling head permeability test is done at 15.0-15.6m.

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD JOB No. _____ CONTRACT No. _____ HOLE No. BH-2 DATE from 31-08-96 To 03-09-96	
PROJECT <i>Re-development of South China Athletic Association - PHASE 1</i>		SHEET 4 of 4	
METHOD <i>Rotary Drill</i>	CO-ORDINATES E 837415.96 N 815257.15	ROCK COREBIT T2-101	
MACHINE No. DR.21		HOLE DIA. Px Hx	
FLUSHING MEDIUM <i>Water</i>	ORIENTATION <i>Vertical</i>	GROUND-LEVEL +17.56MPD	
Drilling Progress Casing depth/size Water level/time/date Water Recovery % Total core Recovery % Solid core Recovery % R.Q.D. Fracture Index/m Tests Samples Reduced level Depth (m) Legend Grade Zone	Description		
31 03-09-96	60	95 97	70 80
32			
33			
34			
35			
36			
37			
38			
39			
40			
• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE ▴ BULK DISTURBED SAMPLE ▲ WATER SAMPLE ■ S.P.T. LINER SAMPLE ∇ WATER LEVEL ▨ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST ▩ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE ▪ U70 UNDISTURBED SAMPLE ⊗ PERMEABILITY TEST		LOGGED : C.M.Yee CHECKED : P.S.Nau Form No. PRO/05/03	
		REMARKS : One falling head permeability test is done at 15.0-15.6m.	

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD JOB No. _____ CONTRACT No. _____ HOLE No. BH-3 DATE from 22-8-96	
PROJECT <i>Re-development of South China Athletic Association - PHASE 1</i>		SHEET 1 of 1	
METHOD <i>Rotary</i>	CO-ORDINATES E N	ROCK COREBIT T2-101	
MACHINE No. BR-21		HOLE DIA. Hx	
FLUSHING MEDIUM <i>Water</i>	ORIENTATION <i>Vertical</i>	GROUND-LEVEL	
Drilling Progress Casing depth/size Water level/time/date Water Recovery % Total core Recovery % Solid core Recovery % R.Q.D. Fracture Index/m Tests Samples Reduced level Depth (m) Legend Grade Zone	Description		
1 22-08-96	60	100	
2			
3			
4			
5			
6			
7			
8			
9			
10			
• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE ▴ BULK DISTURBED SAMPLE ▲ WATER SAMPLE ■ S.P.T. LINER SAMPLE ∇ WATER LEVEL ▨ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST ▩ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE ▪ U70 UNDISTURBED SAMPLE ⊗ PERMEABILITY TEST		LOGGED : C.M.Yee CHECKED : P.S.Nau Form No. PRO/05/03	
		REMARKS : Drilling terminated according to Engineer's instruction.	

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD													
JOB No. CONTRACT No.		HOLE No. BH-3A DATE from 11-09-96 To 17-09-96													
PROJECT Re-development of South China Athletic Association - PHASE 1		SHEET 1 of 6													
METHOD Rotary Drill	CO-ORDINATES E 837381.34	ROCK COREBIT T2-101													
MACHINE No. BR.21	N 815300.08	HOLE DIA. Hx													
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +8.65MPD													
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level 8.65 0.00	Depth (m)	Legend	Grade	Zone	Description
1	Inspection Pit										1.50				Medium dense, yellowish brown, gravelly, clayey silty, fine to coarse SAND. (FILL)
2				88						2.50					
3										2.95					
4										4.65	4.00				
5										5.00					
6				100						5.45					Extremely weak, pinkish brown completely decomposed, coarse-grained GRANITE. (Medium dense, gravelly clayey silty fine to coarse SAND) (C.D.G.)
7										7.50					
8										7.95					
9										9.00					
10				100						10.00					
● SMALL DISTURBED SAMPLE ▲ BULK DISTURBED SAMPLE ■ S.P.T. LINER SAMPLE □ U100 UNDISTURBED SAMPLE □ U76 UNDISTURBED SAMPLE □ U70 UNDISTURBED SAMPLE ■ MAZIER SAMPLE ▲ WATER SAMPLE ▽ WATER LEVEL ↓ STANDARD PENETRATION TEST □ PISTON SAMPLE ⊥ PERMEABILITY TEST										LOGGED : C.M.Yee CHECKED : P.S.Nau		REMARKS : A Piezometer is installed at 18m. (-9.35MPD)			
Form No. PRO/05/03															

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD													
JOB No. CONTRACT No.		HOLE No. BH-3A DATE from 11-09-96 To 17-09-96													
PROJECT Re-development of South China Athletic Association - PHASE 1		SHEET 2 of 6													
METHOD Rotary Drill	CO-ORDINATES E 837381.34	ROCK COREBIT T2-101													
MACHINE No. BR.21	N 815300.08	HOLE DIA. Hx													
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +8.65MPD													
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level -1.35 10.00	Depth (m)	Legend	Grade	Zone	Description
11											10.45				As sheet 1 of 6
12										-2.85	11.50				
13										-3.92	12.67				Weak, yellowish brown, highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)
14										-4.55	13.20				
15											14.00				Moderately strong to strong, yellowish brown to pinkish brown, moderately decomposed coarse-grained GRANITE with very closely spaced iron-stained manganese-coated rough planar joints dipping 10°. (M.D.G.)
16											15.00				
17											15.45				
18											16.50				
19											17.50				
20											17.95				
21											19.00				
22											20.00				
● SMALL DISTURBED SAMPLE ▲ BULK DISTURBED SAMPLE ■ S.P.T. LINER SAMPLE □ U100 UNDISTURBED SAMPLE □ U76 UNDISTURBED SAMPLE □ U70 UNDISTURBED SAMPLE ■ MAZIER SAMPLE ▲ WATER SAMPLE ▽ WATER LEVEL ↓ STANDARD PENETRATION TEST □ PISTON SAMPLE ⊥ PERMEABILITY TEST										LOGGED : C.M.Yee CHECKED : P.S.Nau		REMARKS : A Piezometer is installed at 18m. (-9.35MPD)			
Form No. PRO/05/03															

GOLD RAM ENGINEERING & DEVELOPMENT LTD.										DRILLHOLE RECORD									
PROJECT Re-development of South China Athletic Association - PHASE 1					SHEET 5 of 6					JOB No. CONTRACT No.					HOLE No. BH-3A DATE from 11-09-96 To 17-09-96				
METHOD Rotary Drill					CO-ORDINATES E 837381.34 N 815300.08					ROCK COREBIT T2-101					HOLE DIA. Hx				
MACHINE No. BR.21					FLUSHING MEDIUM Water					ORIENTATION Vertical					GROUND-LEVEL +8.65MPD				
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description				
41				0						31.35	40.00				Moderately weak to moderately strong yellowish brown to pinkish brown, moderately decomposed, coarse-grained GRANITE with very closely spaced, iron-stained, rough planar joints dipping 10° and 30°. Highly decomposed zones at 37-37.8m and 38.9-42m. (M.D.G. with H.D.G. zones)				
42				13	0	0	NI			33.35	42.00								
43				0						33.95	42.80								
44				0						43.00	43.00								
45			60							44.00	44.15				Weak to moderately weak pinkish brown, highly decomposed coarse grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)				
46				0						46.00	46.00								
47										38.38	47.03								
48		1.55m at 18:00		100	0	0	NI			39.21	47.86				Moderately weak to moderately strong pinkish brown moderately decomposed coarse grained GRANITE. (Very dense, sandy GRAVELS) (M.D.G.)				
49		2.10m at 18:00		99	99	0	>10			48.96	48.96								
50		3.05m at 08:00		100	100	49	>10								As sheet 6 of 6				
• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE ▴ BULK DISTURBED SAMPLE ▲ WATER SAMPLE ▢ S.P.T. LINER SAMPLE ▽ WATER LEVEL ▨ U100 UNDISTURBED SAMPLE ▾ STANDARD PENETRATION TEST ▩ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE ▪ U70 UNDISTURBED SAMPLE ⊞ PERMEABILITY TEST										LOGGED : C.M.Yee CHECKED : P.S.Nau Form No. PRO/05/03					REMARKS : A Piezometer is installed at 18m. (-9.35MPD)				

GOLD RAM ENGINEERING & DEVELOPMENT LTD.										DRILLHOLE RECORD									
PROJECT Re-development of South China Athletic Association - PHASE 1					SHEET 6 of 6					JOB No. CONTRACT No.					HOLE No. BH-3A DATE from 11-09-96 To 17-09-96				
METHOD Rotary Drill					CO-ORDINATES E 837381.34 N 815300.08					ROCK COREBIT T2-101					HOLE DIA. Hx				
MACHINE No. BR.21					FLUSHING MEDIUM Water					ORIENTATION Vertical					GROUND-LEVEL +8.65MPD				
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description				
51				100	100	49	>10			41.65	50.00				Moderately strong to strong, pinkish brown, moderately to slightly decomposed coarse-grained GRANITE with closely to very closely spaced, iron-stained, rough planar joints dipping 10°, 30°, 45° & 80°. (M/S.D.G.)				
52				100	100	75	7.5			50.40	50.40								
53		2.60m at 18:00		100	100	80	8			44.25	52.90								
54															DRILLHOLE COMPLETED				
55																			
56																			
57																			
58																			
59																			
60																			
• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE ▴ BULK DISTURBED SAMPLE ▲ WATER SAMPLE ▢ S.P.T. LINER SAMPLE ▽ WATER LEVEL ▨ U100 UNDISTURBED SAMPLE ▾ STANDARD PENETRATION TEST ▩ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE ▪ U70 UNDISTURBED SAMPLE ⊞ PERMEABILITY TEST										LOGGED : C.M.Yee CHECKED : P.S.Nau Form No. PRO/05/03					REMARKS : A Piezometer is installed at 18m. (-9.35MPD)				

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD													
JOB No. HOLE No. BH-4		CONTRACT No. DATE from 23-08-96 To 29-08-96													
PROJECT Re-development of South China Athletic Association - PHASE 1		SHEET 1 of 5													
METHOD Rotary Drill	CO-ORDINATES E 837358.97	ROCK COREBIT T2-101													
MACHINE No. DR.21	N 815322.57	HOLE DIA. Pz Hx													
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +11.24mPD													
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
1	Inspection Pit									11.24	0.00				
2				100							1.50				Loose, reddish brown very gravelly, clayey, silty, fine to coarse SAND. (FILL)
3											2.50				
4	Pz										2.95				
5			60	0							7.24	4.00			Extremely weak, yellowish brown to pinkish brown, completely decomposed coarse-grained GRANITE. (Loose silty SAND with slightly decomposed pegmatite dyke at 5.0-6.5m) (C.D.G.)
6				30							6.24	5.00			
7				100							4.74	6.50			
8	Hx										7.50				Extremely weak, reddish brown, completely decomposed coarse-grained GRANITE. (Loose to medium dense very gravelly, clayey, silty, fine to coarse SAND). (C.D.G.)
9											7.95				
10		2.00m at 18:00		100							9.00				
• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE ▣ BULK DISTURBED SAMPLE ▲ WATER SAMPLE ▣ S.P.T. LINER SAMPLE ▽ WATER LEVEL ▣ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST ▣ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE ▣ U70 UNDISTURBED SAMPLE ▢ PERMEABILITY TEST										LOGGED : C.M.Yee CHECKED : P.S.Nau		REMARKS : A Standpipe piezometer is installed at 18m. (-6.28mPD) observation well is installed at 10m. (-1.72mPD)			
Form No. PRO/05/03															

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD													
JOB No. HOLE No. BH-4		CONTRACT No. DATE from 23-08-96 To 29-08-96													
PROJECT Re-development of South China Athletic Association - PHASE 1		SHEET 2 of 5													
METHOD Rotary Drill	CO-ORDINATES E 837358.97	ROCK COREBIT T2-101													
MACHINE No. DR.21	N 815322.57	HOLE DIA. Pz Hx													
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +11.24mPD													
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
11		1.10m at 08:00								1.24	10.00				As sheet 1 of 5
12				98							10.45				Strong to very strong, greyish pink, slightly decomposed coarse-grained GRANITE with very widely spaced iron-stained joints dipping at 10°. (S.D.G.)
13				100							11.55				
14											12.39				
15	Hx	2.50m at 18:00	60								14.00				Very weak, yellowish brown, inequigranular, highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS). (H.D.G.)
16		4.50m at 08:00		100							14.45				
17											15.50				
18											16.95				
19											18.00				Extremely weak, pinkish brown, completely decomposed coarse-grained GRANITE. (Medium dense to dense, gravelly, slightly clayey, silty fine to coarse SAND.) (C.D.G.)
20											19.00				
• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE ▣ BULK DISTURBED SAMPLE ▲ WATER SAMPLE ▣ S.P.T. LINER SAMPLE ▽ WATER LEVEL ▣ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST ▣ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE ▣ U70 UNDISTURBED SAMPLE ▢ PERMEABILITY TEST										LOGGED : C.M.Yee CHECKED : P.S.Nau		REMARKS : A Standpipe piezometer is installed at 18m. (-6.28mPD) observation well is installed at 10m. (-1.72mPD)			
Form No. PRO/05/03															

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD	
JOB No.		CONTRACT No.	
HOLE No. BH-4		DATE from 23-08-96 To 29-08-96	
PROJECT Re-development of South China Athletic Association - PHASE 1		SHEET 3 of 5	
METHOD Rotary Drill	CO-ORDINATES E 837358.97	ROCK COREBIT T2-101	
MACHINE No. DR.21	N 815322.57	HOLE DIA. P _r H _x	
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +11.24mPD	
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %
			Total core Recovery %
			Solid core Recovery %
			R.Q.D.
			Fracture Index/m
			Tests
			Samples
			Reduced level
			Depth (m)
			Legend
			Grade
			Zone
			Description
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
• SMALL DISTURBED SAMPLE ▲ BULK DISTURBED SAMPLE ■ S.P.T. LINER SAMPLE ■ U100 UNDISTURBED SAMPLE ■ U76 UNDISTURBED SAMPLE ■ U70 UNDISTURBED SAMPLE		■ MAZIER SAMPLE ▲ WATER SAMPLE ▼ WATER LEVEL ■ STANDARD PENETRATION TEST □ PISTON SAMPLE ■ PERMEABILITY TEST	
LOGGED : C.M.Yee		REMARKS :	
CHECKED : P.S.Nau		A Standpipe piezometer is installed at 18m. (-6.28mPD)	
Form No. PRO/05/C3		observation well is installed at 10m. (-1.72mPD)	

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD	
JOB No.		CONTRACT No.	
HOLE No. BH-4		DATE from 23-08-96 To 29-08-96	
PROJECT Re-development of South China Athletic Association - PHASE 1		SHEET 4 of 5	
METHOD Rotary Drill	CO-ORDINATES E 837358.97	ROCK COREBIT T2-101	
MACHINE No. DR.21	N 815322.57	HOLE DIA. P _r H _x	
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +11.24mPD	
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %
			Total core Recovery %
			Solid core Recovery %
			R.Q.D.
			Fracture Index/m
			Tests
			Samples
			Reduced level
			Depth (m)
			Legend
			Grade
			Zone
			Description
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
• SMALL DISTURBED SAMPLE ▲ BULK DISTURBED SAMPLE ■ S.P.T. LINER SAMPLE ■ U100 UNDISTURBED SAMPLE ■ U76 UNDISTURBED SAMPLE ■ U70 UNDISTURBED SAMPLE		■ MAZIER SAMPLE ▲ WATER SAMPLE ▼ WATER LEVEL ■ STANDARD PENETRATION TEST □ PISTON SAMPLE ■ PERMEABILITY TEST	
LOGGED : C.M.Yee		REMARKS :	
CHECKED : P.S.Nau		A Standpipe piezometer is installed at 18m. (-6.28mPD)	
Form No. PRO/05/C3		observation well is installed at 10m. (-1.72mPD)	

GOLD RAM ENGINEERING & DEVELOPMENT LTD.										DRILLHOLE RECORD									
PROJECT <i>Re-development of South China Athletic Association - PHASE 1</i>					SHEET <i>5 of 5</i>					JOB No. <i>CONTRACT No.</i>					HOLE No. <i>BH-4</i> DATE <i>from 23-08-96 To 29-08-96</i>				
METHOD <i>Rotary Drill</i>					CO-ORDINATES					ROCK COREBIT					T2-101				
MACHINE No. <i>DR.21</i>					E <i>837358.97</i>					HOLE DIA. <i>Px Hx</i>					N <i>815322.57</i>				
FLUSHING MEDIUM <i>Water</i>					ORIENTATION <i>Vertical</i>					GROUND-LEVEL <i>+11.24mPD</i>									
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description				
41	Hx									-28.78	40.07				As sheet 4 of 5				
42				0						-31.18	42.00								
43			80	90	80	33	>10				42.40								
44				91	91	66	8				43.77				Moderately strong to strong, yellowish pink to greyish pink, moderately to slightly decomposed coarse-grained GRANITE with closely to medium spaced iron-stained, rough planar joints dipping at 10°, 45°, 65°. (M/S.D.G.)				
45				91	91	66	8				45.30								
46				95	95	67	8.1				45.41								
47				95	95	62	7				47.40								
48															DRILLHOLE COMPLETED				
49																			
50																			

• SMALL DISTURBED SAMPLE ▨ MAZIER SAMPLE

◄ BULK DISTURBED SAMPLE ▲ WATER SAMPLE

▨ S.P.T. LINER SAMPLE ▼ WATER LEVEL

▤ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST

▥ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE

▦ U70 UNDISTURBED SAMPLE ⊥ PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :

A Standpipe piezometer is installed at 18m. (-6.28mPD)

observation well is installed at 10m. (-1.72mPD)

GOLD RAM ENGINEERING & DEVELOPMENT LTD.										DRILLHOLE RECORD									
PROJECT <i>Re-development of South China Athletic Association - PHASE 1</i>					SHEET <i>1 of 4</i>					JOB No. <i>CONTRACT No.</i>					HOLE No. <i>BH-5</i> DATE <i>from 29-8-96 to 3-9-96</i>				
METHOD <i>Rotary</i>					CO-ORDINATES					ROCK COREBIT					T2-101				
MACHINE No. <i>DR-17</i>					E <i>837433.95</i>					HOLE DIA. <i>Px Hx</i>					N <i>815208.02</i>				
FLUSHING MEDIUM <i>Water</i>					ORIENTATION <i>Vertical</i>					GROUND-LEVEL <i>+21.41MPD</i>									
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description				
1										21.41	0.00				Loose, grey, fine to coarse SAND. (FILL)				
2										21.31	0.10								
3										2.50	1.50								
4										2.35	2.35								
5										4.00	4.00								
6										5.00	5.45								
7										6.50	6.50								
8										7.50	7.95								
9										12.41	8.00								
10															As sheet 2 of 4				

• SMALL DISTURBED SAMPLE ▨ MAZIER SAMPLE

◄ BULK DISTURBED SAMPLE ▲ WATER SAMPLE

▨ S.P.T. LINER SAMPLE ▼ WATER LEVEL

▤ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST

▥ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE

▦ U70 UNDISTURBED SAMPLE ⊥ PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :

Piezometer is installed at 18.0m. (+5.41MPD)

GOLD RAM ENGINEERING & DEVELOPMENT LTD.										DRILLHOLE RECORD									
JOB No.					CONTRACT No.					HOLE No. BH-5					DATE from 29-8-96 to 3-9-96				
PROJECT <i>Re-development of South China Athletic Association - PHASE 1</i>										SHEET 2 of 4									
METHOD <i>Rotary</i>					CO-ORDINATES E 837433.95 N 815208.02					ROCK COREBIT T2-101 HOLE DIA. Px Hx									
MACHINE No. DR-17					FLUSHING MEDIUM Water					ORIENTATION Vertical					GROUND-LEVEL +21.41MPD				
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description				
11	Px			100					8	11.41	10.00				Extremely weak, yellowish brown, completely decomposed coarse-grained GRANITE. (Very dense, very gravelly, clayey, silty fine to coarse SAND) (C.D.G.)				
12				100					10	12.50	12.50								
13									10	12.95	12.95								
14				100					11	14.00	14.00								
15	31-08-96		80						12	15.00	15.00								
16	Hx								13	16.50	16.50				Extremely weak, pinkish brown to yellowish brown, completely to highly decomposed coarse-grained GRANITE. (Very dense, very gravelly, clayey silty fine to coarse SAND) (C.D.G.)				
17				75					14	17.50	17.50								
18									14	17.95	17.95								
19									15	19.00	19.00								
20				95					15	20.00	20.00								

• SMALL DISTURBED SAMPLE ▨ WATER SAMPLE
 ◆ BULK DISTURBED SAMPLE ▲ WATER SAMPLE
 ■ S.P.T. LINER SAMPLE ▼ WATER LEVEL
 □ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST
 □ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE
 □ U70 UNDISTURBED SAMPLE * PERMEABILITY TEST

LOGGED : C.M.Yee
 CHECKED : P.S.Nau
 Form No. PRO/CC/76

GOLD RAM ENGINEERING & DEVELOPMENT LTD.										DRILLHOLE RECORD									
JOB No.					CONTRACT No.					HOLE No. BH-5					DATE from 29-8-96 to 3-9-96				
PROJECT <i>Re-development of South China Athletic Association - PHASE 1</i>										SHEET 3 of 4									
METHOD <i>Rotary</i>					CO-ORDINATES E 837433.95 N 815208.02					ROCK COREBIT T2-101 HOLE DIA. Px Hx									
MACHINE No. DR-17					FLUSHING MEDIUM Water					ORIENTATION Vertical					GROUND-LEVEL +21.41MPD				
31-08															As sheet 2 of 4				
21				100	100	76	8			16	20.45								
22				0						16	20.75								
23				94	74	0	NI			16	21.25								
24				0						16	21.70								
25										16	22.20								
26										16	22.20								
27										16	22.20								
28										16	22.20								
29										16	22.20								
30										16	22.20								

• SMALL DISTURBED SAMPLE ▨ WATER SAMPLE
 ◆ BULK DISTURBED SAMPLE ▲ WATER SAMPLE
 ■ S.P.T. LINER SAMPLE ▼ WATER LEVEL
 □ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST
 □ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE
 □ U70 UNDISTURBED SAMPLE * PERMEABILITY TEST

LOGGED : C.M.Yee
 CHECKED : P.S.Nau
 Form No. PRO/CC/76

GOLD RAM ENGINEERING & DEVELOPMENT LTD.										DRILLHOLE RECORD									
PROJECT Re-development of South China Athletic Association - PHASE 1					SHEET 4 of 4					JOB No. HOLE No. BH-5					CONTRACT No. DATE from 29-8-96 to 3-9-96				
METHOD Rotary					CO-ORDINATES E 837433.95 N 815208.02					ROCK COREBIT T2-101					HOLE DIA. Px Hx				
MACHINE No. DR-17					FLUSHING MEDIUM Water					ORIENTATION Vertical					GROUND-LEVEL +21.41MPD				
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description				
31				100	98	70	>10		T2-101	30.40	30.40				Strong to very strong, greyish pink, slightly decomposed coarse-grained GRANITE with very closely (28.9-30.82m), moderately (27.95-28.9m, 31.89-24.82m) and widely (30.82-31.89m) spaced, iron-stained, rough planar joints dipping 10° and 30°. (S.D.G.)				
32				100	100	85	7		T2-101	30.82	30.82								
33				100	100	100	0		T2-101	31.89	31.89								
34				100	100	99	3.3		T2-101	33.37	33.37								
35		9.20m at 16:00		100	100	99	3.3		T2-101	34.82	34.82								
36															— DRILLHOLE COMPLETED —				
37																			
38																			
39																			
40																			
• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE ▣ BULK DISTURBED SAMPLE ▴ WATER SAMPLE ▣ S.P.T. LINER SAMPLE ▾ WATER LEVEL ▣ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST ▣ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE ▣ U70 UNDISTURBED SAMPLE ▤ PERMEABILITY TEST										LOGGED : C.M.Yee CHECKED : P.S.Nau Form No. PRO/05/03					REMARKS : Piezometer is installed at 16.0m. (+5.41MPD)				

GOLD RAM ENGINEERING & DEVELOPMENT LTD.										DRILLHOLE RECORD									
PROJECT Re-development of South China Athletic Association - PHASE 1					SHEET 1 of 4					JOB No. HOLE No. BH-6					CONTRACT No. DATE from 05-09-96 To 11-09-96				
METHOD Rotary Drill					CO-ORDINATES E 837397.85 N 815242.68					ROCK COREBIT T2-101					HOLE DIA. Hx				
MACHINE No. DR.17					FLUSHING MEDIUM Water					ORIENTATION Vertical					GROUND-LEVEL +21.50mPD				
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description				
1										21.40	0.00				Loose, grey, fine to coarse SAND. (FILL)				
2										1.50	1.50				Extremely weak, yellowish brown, completely decomposed coarse-grained GRANITE. (Very dense, gravelly, slightly clayey, silty, fine to coarse SAND) (C.D.G.)				
3										2.50	2.50								
4										4.20	4.20				Weak to moderately strong, yellowish pink, moderately to highly decomposed coarse-grained GRANITE with very closely spaced, iron-stained rough planar joints dipping 10° and dipping 10° and 70°. (M.D.G. to H.D.G.)				
5										4.80	4.80								
6										5.15	5.15				Extremely weak, yellowish brown, completely to highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS.) (C.D.G. to H.D.G.)				
7										6.10	6.10								
8										7.78	7.78				Very strong, yellowish brown to greyish pink, slightly decomposed coarse-grained GRANITE with widely spaced iron-stained, manganese coated rough planar joints dipping 10° & 30°. (S.D.G.)				
9										8.15	8.15								
10										9.50	9.50				As sheet 2 of 4				
• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE ▣ BULK DISTURBED SAMPLE ▴ WATER SAMPLE ▣ S.P.T. LINER SAMPLE ▾ WATER LEVEL ▣ U100 UNDISTURBED SAMPLE ↓ STANDARD PENETRATION TEST ▣ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE ▣ U70 UNDISTURBED SAMPLE ▤ PERMEABILITY TEST										LOGGED : C.M.Yee CHECKED : P.S.Nau Form No. PRO/05/03					REMARKS : One falling head Permeability test is done at 6.5m to 7.5m.				

827

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD JOB No. _____ CONTRACT No. _____ HOLE No. BH-6 DATE from 05-09-96 To 11-09-96	
PROJECT <i>Re-development of South China Athletic Association - PHASE 1</i>		SHEET 2 of 4	
METHOD <i>Rotary Drill</i>	CO-ORDINATES E 837397.85 N 815242.68		ROCK COREBIT T2-101
MACHINE No. DR.17			HOLE DIA. Hx
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +21.50mPD	

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
11				100						11.50	10.00				Extremely weak, pinkish brown, completely decomposed coarse-grained GRANITE. (Very dense, very gravelly, slightly clayey, silty, fine to coarse SAND) (C.D.G.)
12		NIL 18:00		100	100	24	10			10.40	11.10				
13		NIL 08:00		100						9.70	11.80				Weak to moderately strong, yellowish brown, moderately (11.1-11.8m) to completely to highly (11.8-14.5m) decomposed coarse-grained GRANITE. (M.D.G. to C/H.D.G.)
14				100						12.00	13.00				
15	Hx		80	100						13.45	14.50				Extremely weak, yellowish brown to pinkish brown, completely decomposed coarse-grained GRANITE. (C.D.G.) (Very dense, very gravelly, slightly clayey silty, fine to coarse SAND)
16				100						15.50	15.95				
17				100						17.00	18.00				As sheet 3 of 4
18				100						3.50	18.45				
19										19.50	20.00				
20				80											

• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE

▲ BULK DISTURBED SAMPLE ▲ WATER SAMPLE

■ S.P.T. LINER SAMPLE ▼ WATER LEVEL

■ U100 UNDISTURBED SAMPLE STANDARD PENETRATION TEST

■ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE

■ U70 UNDISTURBED SAMPLE ▣ PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

Form No. PRO/05/C3

REMARKS :

One falling head Permeability test is done at 6.5m to 7.5m.

828

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD JOB No. _____ CONTRACT No. _____ HOLE No. BH-6 DATE from 05-09-96 To 11-09-96	
PROJECT <i>Re-development of South China Athletic Association - PHASE 1</i>		SHEET 3 of 4	
METHOD <i>Rotary Drill</i>	CO-ORDINATES E 837397.85 N 815242.68		ROCK COREBIT T2-101
MACHINE No. DR.17			HOLE DIA. Hx
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +21.50mPD	

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
21				95	85	85	4.4			1.43	20.00				Extremely weak, yellowish brown to pinkish brown, highly to completely decomposed coarse grained GRANITE. (H.D.G.-C.D.G.) (Very dense, sandy gravels.)
22										20.20	20.60				
23				70						22.50	23.50				Strong to very strong, yellowish brown to greyish pink, moderately to slightly decomposed coarse-grained GRANITE with moderately spaced iron-stained rough planar joints dipping 10°. (M.D.G. to S.D.G.)
24		12.30m 18:00		93	68	56	>10			23.60	24.00				
25	Hx		80							-2.50	24.30				Extremely weak to weak, yellowish brown, highly (20.6-24m) to moderately (24-24.3m) decomposed coarse-grained GRANITE. (H.D.G. to M.D.G.)
26				80						25.50	26.50				
27				90	48	8	>10			-5.00	26.70				Extremely weak to weak, yellowish pink, highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)
28										-5.40	28.90				
29				33	0	0	NI			-5.80	28.30				Extremely weak, yellowish pink, completely decomposed coarse-grained GRANITE. (Very dense, very gravelly, clayey, silty fine to coarse SAND) (C.D.G.)
30				0						29.80	30.00				

• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE

▲ BULK DISTURBED SAMPLE ▲ WATER SAMPLE

■ S.P.T. LINER SAMPLE ▼ WATER LEVEL

■ U100 UNDISTURBED SAMPLE STANDARD PENETRATION TEST

■ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE

■ U70 UNDISTURBED SAMPLE ▣ PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

Form No. PRO/05/C3

REMARKS :

One falling head Permeability test is done at 6.5m to 7.5m.

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD JOB No. _____ CONTRACT No. _____ HOLE No. BH-6 DATE from 05-09-96 To 11-09-96																																																																																																																																																																										
PROJECT <i>Re-development of South China Athletic Association - PHASE 1</i>		SHEET 4 of 4																																																																																																																																																																										
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MACHINE No. DR.17		HOLE DIA. Hx																																																																																																																																																																										
FLUSHING MEDIUM <i>Water</i>	ORIENTATION <i>Vertical</i>	GROUND-LEVEL +21.50mPD																																																																																																																																																																										
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Drilling Progress</th> <th>Casing depth/size</th> <th>Water level/time/date</th> <th>Water Recovery %</th> <th>Total core Recovery %</th> <th>Solid core Recovery %</th> <th>R.Q.D.</th> <th>Fracture Index/m</th> <th>Tests</th> <th>Samples</th> <th>Reduced level</th> <th>Depth (m)</th> <th>Legend</th> <th>Grade</th> <th>Zone</th> <th>Description</th> </tr> <tr> <td>31</td> <td>Hx</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>22</td> <td>-8.50</td> <td>30.00</td> <td></td> <td></td> <td></td> <td rowspan="2">Weak, moderately strong to strong, moderately to highly decomposed coarse-grained GRANITE with very closely spaced, iron-stained, manganese coated rough planar joints dipping 10°, 30° and 60°. (M.D.G. to H.D.G.)</td> </tr> <tr> <td>32</td> <td>10.50m at 16:00</td> <td></td> <td>100</td> <td>100</td> <td>100</td> <td>1</td> <td></td> <td></td> <td></td> <td>-9.65</td> <td>31.19</td> <td></td> <td></td> <td></td> </tr> <tr> <td>33</td> <td>14.07m at 08:00</td> <td></td> <td>100</td> <td>100</td> <td>87</td> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td>32.23</td> <td></td> <td></td> <td></td> <td rowspan="4">Very strong, greyish pink to pink, slightly decomposed to fresh coarse-grained GRANITE with widely to moderately spaced iron-stained rough planar joints dipping 10° & 30°. (S.D.G. to F.G.)</td> </tr> <tr> <td>34</td> <td></td> <td></td> <td>100</td> <td>100</td> <td>99</td> <td>2.3</td> <td></td> <td></td> <td></td> <td></td> <td>32.70</td> <td></td> <td></td> <td></td> </tr> <tr> <td>35</td> <td></td> <td></td> <td>100</td> <td>100</td> <td>90</td> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td>33.58</td> <td></td> <td></td> <td></td> </tr> <tr> <td>36</td> <td>10.93m at 16:00</td> <td></td> <td>100</td> <td>100</td> <td>96</td> <td>1.7</td> <td></td> <td></td> <td></td> <td></td> <td>34.94</td> <td></td> <td></td> <td></td> </tr> <tr> <td>37</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td rowspan="4">— DRILLHOLE COMPLETED —</td> </tr> <tr> <td>38</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>39</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>40</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description	31	Hx								22	-8.50	30.00				Weak, moderately strong to strong, moderately to highly decomposed coarse-grained GRANITE with very closely spaced, iron-stained, manganese coated rough planar joints dipping 10°, 30° and 60°. (M.D.G. to H.D.G.)	32	10.50m at 16:00		100	100	100	1				-9.65	31.19				33	14.07m at 08:00		100	100	87	4					32.23				Very strong, greyish pink to pink, slightly decomposed to fresh coarse-grained GRANITE with widely to moderately spaced iron-stained rough planar joints dipping 10° & 30°. (S.D.G. to F.G.)	34			100	100	99	2.3					32.70				35			100	100	90	5					33.58				36	10.93m at 16:00		100	100	96	1.7					34.94				37															— DRILLHOLE COMPLETED —	38															39															40															LOGGED : C.M.Yee CHECKED : P.S.Nau Form No. PRO/05/03		REMARKS : One falling head Permeability test is done at 6.5m to 7.5m.
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description																																																																																																																																																													
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GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD JOB No. _____ CONTRACT No. _____ HOLE No. BH-7 DATE from 12-9-96 to 18-9-96																																																																																																																																																																																																																																							
PROJECT <i>Re-development of South China Athletic Association - PHASE 1</i>		SHEET 1 of 4																																																																																																																																																																																																																																							
METHOD <i>Rotary</i>	CO-ORDINATES E 837370.95 N 815268.37	ROCK COREBIT T2-101																																																																																																																																																																																																																																							
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FLUSHING MEDIUM <i>Water</i>	ORIENTATION <i>Vertical</i>	GROUND-LEVEL +21.50mPD																																																																																																																																																																																																																																							
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Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description																																																																																																																																																																																																																										
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GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD													
JOB No. HOLE No. BH-7		CONTRACT No. DATE from 12-9-96 to 18-9-96													
PROJECT Re-development of South China Athletic Association - PHASE 1		SHEET 2 of 4													
METHOD Rotary	CO-ORDINATES E 837370.95 N 815268.37	ROCK COREBIT T2-101													
MACHINE No. DR-17		HOLE DIA. Hx													
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +21.50mPD													
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
13-00-06		3.07m at 16:00	100	100	100	0			T2-101	11.50	10.00		I		Very strong, pinkish grey spotted with black slightly decomposed to fresh GRANITE with widely to moderately spaced, iron-stained, rough planar joints dipping 10° and 30°. (S.D.G. to F.G.)
11		5.71m at 08:50	100	100	90	4			T2-101	10.57	10.83		I		
12			95								12.00				
13-00-06											12.45				
14			90								13.50				
15	Hx	6.94m at 16:00	80								14.50				Extremely weak, pinkish brown, completely decomposed coarse-grained GRANITE. (Very dense, gravelly, clayey, silty fine to coarse SAND) (C.D.G.)
16		10.00m at 08:50									14.95				
17			95								15.00				
17-00-06											17.00				
18											17.45				
19			95								19.50				As sheet 2 of 4
20											19.95				

• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE
 ▣ BULK DISTURBED SAMPLE ▲ WATER SAMPLE
 ▣ S.P.T. LINER SAMPLE ▣ WATER LEVEL
 ▣ U100 UNDISTURBED SAMPLE ▣ STANDARD PENETRATION TEST
 ▣ U76 UNDISTURBED SAMPLE ▣ PISTON SAMPLE
 ▣ U70 UNDISTURBED SAMPLE ▣ PERMEABILITY TEST

LOGGED : C.M.Yee
 CHECKED : P.S.Nau
 Form No. PRO/05/03

REMARKS :
 Piezometer is installed at 21m. (+0.28MPD)
 One falling head permeability test done at 16m to 17m.

GOLD RAM ENGINEERING & DEVELOPMENT LTD.		DRILLHOLE RECORD													
JOB No. HOLE No. BH-7		CONTRACT No. DATE from 12-9-96 to 18-9-96													
PROJECT Re-development of South China Athletic Association - PHASE 1		SHEET 3 of 4													
METHOD Rotary	CO-ORDINATES E 837370.95 N 815268.37	ROCK COREBIT T2-101													
MACHINE No. DR-17		HOLE DIA. Hx													
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND-LEVEL +21.50mPD													
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
21										1.50	20.00				As sheet 2 of 4
22										0.50	21.00				Extremely weak to weak, pinkish brown, highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)
23										-0.42	21.92				
24	Hx									-1.28	22.78				Very strong, yellowish pink to yellowish brown, slightly decomposed coarse-grained GRANITE with moderately spaced, iron-stained, manganese coated, rough planar joints dipping 10° and 30°. (S.D.G.)
25											24.00				
26											25.00				Extremely weak, yellowish brown, completely decomposed coarse-grained GRANITE. (Very dense, very gravelly, clayey, silty fine to coarse SAND) (C.D.G.)
27										-5.35	26.85				
28											28.20				Weak to moderately strong, yellowish brown, moderately to highly decomposed coarse-grained GRANITE with very closely spaced, iron-stained rough planar joints dipping 10°, 30° and 45°. (M.D.G. to H.D.G.)
29										-7.28	28.78				
30															As sheet 4 of 4

• SMALL DISTURBED SAMPLE ▣ MAZIER SAMPLE
 ▣ BULK DISTURBED SAMPLE ▲ WATER SAMPLE
 ▣ S.P.T. LINER SAMPLE ▣ WATER LEVEL
 ▣ U100 UNDISTURBED SAMPLE ▣ STANDARD PENETRATION TEST
 ▣ U76 UNDISTURBED SAMPLE ▣ PISTON SAMPLE
 ▣ U70 UNDISTURBED SAMPLE ▣ PERMEABILITY TEST

LOGGED : C.M.Yee
 CHECKED : P.S.Nau
 Form No. PRO/05/03

REMARKS :
 Piezometer is installed at 21m. (+0.28MPD)
 One falling head permeability test done at 16m to 17m.

633

21-05-99 11:13 FAX
2005-99 12:00

REDEVELOPMENT OF SOUTH CHINA

25045237

634
4/03
P.03

GOLD RAM ENGINEERING & DEVELOPMENT LTD.										DRILLHOLE RECORD									
PROJECT Re-development of South China Athletic Association - PHASE 1										SHEET 4 of 4									
METHOD Rotary										CO-ORDINATES E 837370.95 N 815268.37									
MACHINE No. DR-17										ROCK COREBIT T2-101 HOLE DIA. Hx									
FLUSHING MEDIUM Water										ORIENTATION Vertical GROUND-LEVEL +21.50mPD									
Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description				
31				85	83	82	8		T2-101	-8.50	30.00				Moderately strong to very strong, yellowish brown to pinkish grey, moderately to slightly decomposed coarse-grained GRANITE with very closely spaced, iron-stained, rough planar joints dipping 10°, 30° and 45° (M.D.G. to S.D.G.)				
				52	48	26	>10		T2-101										
32				100	100	82	5		T2-101	-10.37	31.87								
33				100	100	98	1		T2-101		32.24				Very strong, pinkish grey to yellowish brown, fresh (33.29-36.02m) to slightly (31.87-33.29m and 36.02-37.06m) decomposed coarse-grained GRANITE with widely to moderately spaced, occasionally iron-stained, rough planar joints dipping 10°, 30°, 45° and 60° (F.G. to S.D.G.)				
34				100	100	100	0		T2-101		33.29								
35				100	100	100	0		T2-101		33.97								
36				100	100	92	2.8		T2-101		35.52								
37				100	100	90	0		T2-101		36.02								
38				100	100	41	7		T2-101		37.06								
39															DRILLHOLE COMPLETED				
40																			

• SMALL DISTURBED SAMPLE ▽ MAZIER SAMPLE

▲ BULK DISTURBED SAMPLE ▲ WATER SAMPLE

■ S.P.T. LINER SAMPLE ▽ WATER LEVEL

■ U100 UNDISTURBED SAMPLE ▽ STANDARD PENETRATION TEST

■ U76 UNDISTURBED SAMPLE □ PISTON SAMPLE

■ U70 UNDISTURBED SAMPLE ▽ PERMEABILITY TEST

LOGGED : C.M.Yee

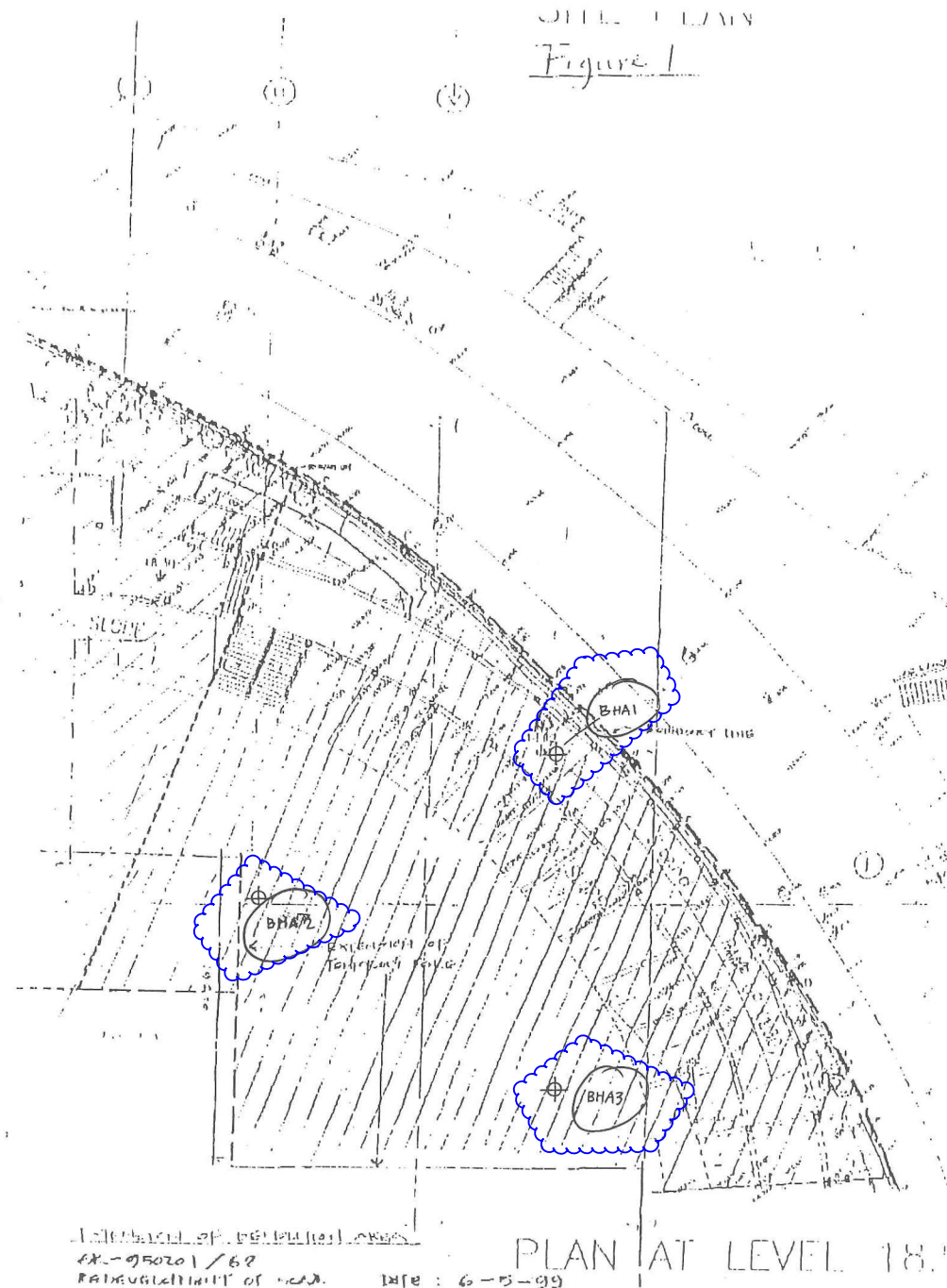
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :

Piezometer is installed at 21m. (+0.28MPD)

One falling head permeability test done at 16m to 17m.



D-17

PAUL Y. - ITC CONSTRUCTION & ENGINEERING CO. LTD. JOB NO. BHA1
 SHEET 1 of 2
 DRILL / BORE HOLE LOG DATE from 28.05.99 to 03.06.99

PROJECT PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE I (ADDITIONAL WORK)

METHOD ROTARY CO-ORDINATES E 37,455.977 N 15,200.855
 RIG & No. D1 HOLE DIA. HX/T2-101
 FLUSHING MEDIUM WATER ORIENTATION VERTICAL GROUND-LEVEL +16.00 mP.D.

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
28.5.99	Hx	NA at 08:00	70							+15.00	1.00				Brown, silty fine to coarse SAND with occasional fine to medium gravel. (FILL)
			70	80				(2, 3, 2, 3, 2, 3) N = 10	3	+14.00	2.00				
			70						4	+13.55	2.45				
28.5.99		2.5m at 17:30	70							+13.00	3.00				
29.5.99		Dry at 08:00	70	80						+12.00	4.00				
			70					(3, 4, 3, 4, 5, 5) N = 17	7	+11.55	4.45				Extremely weak, brown mottled white, completely decomposed medium-grained GRANITE. (Fine to coarse sandy SILT)
			70							+11.00	5.00				
			70	100						+10.00	6.00				
			70					(3, 5, 4, 5, 6, 6) N = 23	11	+9.55	6.45				
29.5.99		6.8m at 17:30	70							+9.00	7.00				
1.6.99		Dry at 08:00	70	95						+8.00	8.00				
			70					(5, 6, 6, 5, 6, 6) N = 23	15	+7.55	8.45				
			70							+7.00	9.00				
			70							+6.85	9.15				
			70												

LOGGED C. Tai
 DATE 9.6.99
 CHECKED E. Ho
 DATE 10.6.99

REMARKS
 One Piezometer installed at depth of 7.15m.
 One Standpipe installed at depth of 5.50m.

PAUL Y. - ITC CONSTRUCTION & ENGINEERING CO. LTD. JOB NO. BHA1
 SHEET 2 of 2
 DRILL / BORE HOLE LOG DATE from 28.05.99 to 03.06.99

PROJECT PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE I (ADDITIONAL WORK)

METHOD ROTARY CO-ORDINATES E 37,455.977 N 15,200.855
 RIG & No. D1 HOLE DIA. HX/T2-101
 FLUSHING MEDIUM WATER ORIENTATION VERTICAL GROUND-LEVEL +16.00 mP.D.

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
	10.65 Hx							N = 200/0.05		+5.35	10.65				Strong, pinkish brown, slightly decomposed medium-grained GRANITE. Joints are medium spaced, rough undulatory, very narrow, iron stained, dipping 10°-20°, 20°-30° and 30°-40°.
			80	87	85	77				+4.27	11.73				
1.6.99	9.3m at 17:30									+3.24	12.76				
2.6.99	11.30m at 08:00		80	97	97	91				+2.64	13.36				
3.6.99	8.7m at 17:30		80	97	97	95	3.2			+1.60	14.40				
	11.36m at 08:00		80	96	96	96				+1.30	14.70				
			80	91	82	80				+0.30	15.70				
	9.58m at 17:30														
3.6.99															

LOGGED C. Tai
 DATE 9.6.99
 CHECKED E. Ho
 DATE 10.6.99

REMARKS
 HOLE END AT DEPTH OF 15.70m.

337

GENERAL SOUTHCB I GENERAL GOT 27/06/99338GENERAL SOUTH.CPJ GENERAL.GDT 27/06/99

PAUL Y. - ITC CONSTRUCTION & ENGINEERING CO. LTD.			JOB NO. _____ HOLE NO. _____ BH A2 SHEET <u>3</u> of <u>3</u> DATE from <u>19.06.99</u> to <u>21.06.99</u>
DRILL / BORE HOLE LOG			
PROJECT PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE I (ADDITIONAL WORK)			
METHOD	ROTARY	CO-ORDINATES E 37,441.626 N 15,185.795	ROCK CORE BIT T2-101 / TN
Rig & No.	D1		HOLE DIA. HX/T2-101/TN
FLUSHING MEDIUM	WATER	ORIENTATION VERTICAL	GROUND-LEVEL +21.50 mP.D.

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
		14.23m at 17:30	80	98	98	98			TN	+0.20	21.30	+ + + + + + +			As sheet 2 of 3.
															HOLE END AT DEPTH OF 21.30m.

GENERAL SOUTH COAST GP GENERAL GDT 27/06/99

- Small Disturbed Sample ▲ Water Sample
- Large Disturbed Sample ✕ Water Level
- SPT Liner Sample | Standard Penetration Test
- U76 Undisturbed Sample T Permeability Test
- U100 Undisturbed Sample ± Piezometer Tip
- Mazler Sample (70mm) ∇ In-situ Vane Shear Test
- Piston Sample

LOGGED C. Tal

DATE 23.6.99

CHECKED E. Ho

DATE 24.6.99

REMARKS

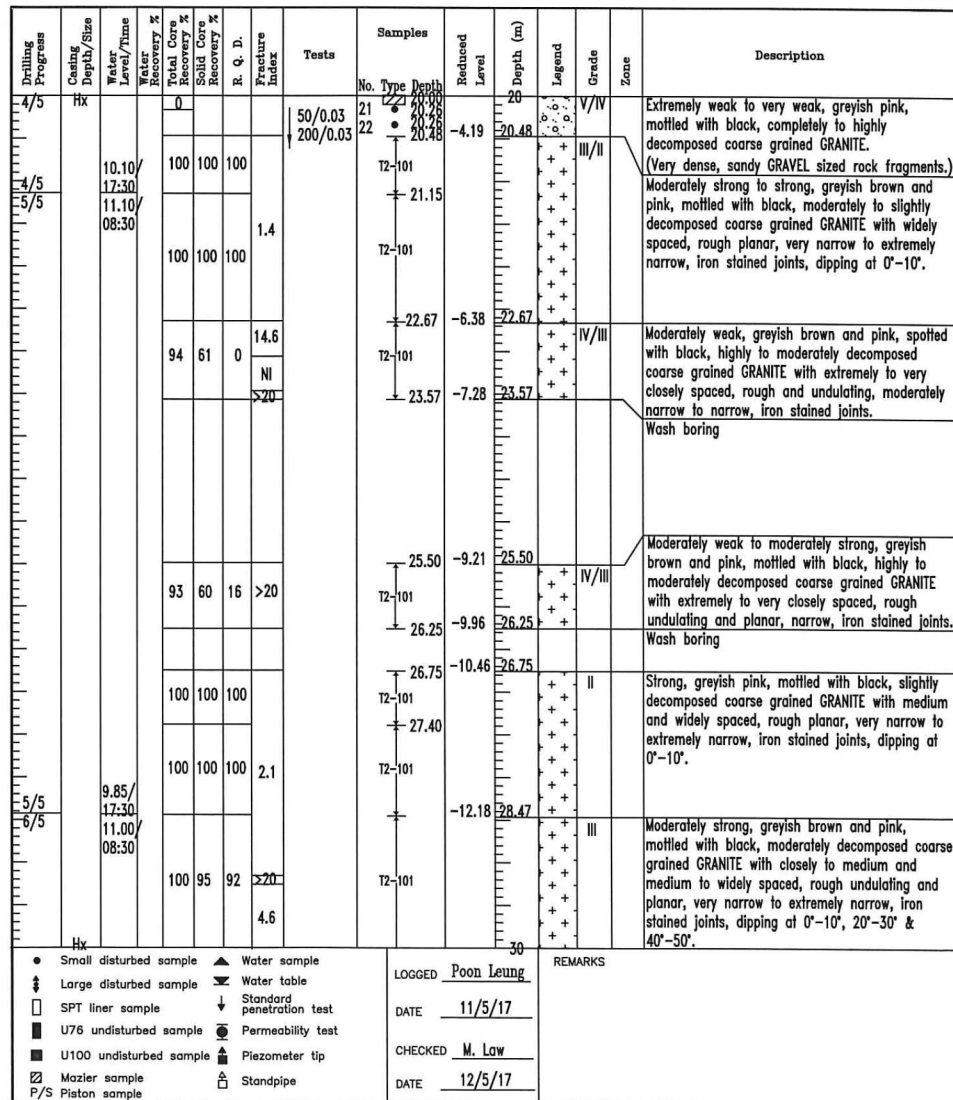
GENERAL SOUTHCGPJ GENERAL GOT 27/06/99

PAUL Y. - ITC CONSTRUCTION & ENGINEERING CO. LTD.				JOB NO.	
				HOLE NO.	BH A3
				SHEET	1 of 2
DRILL / BORE HOLE LOG				DATE from	09.06.99 to 10.06.99
PROJECT PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE I (ADDITIONAL WORK)					
METHOD	ROTARY	CO-ORDINATES E 37,448.800 N 15,171.705		ROCK CORE BIT T2-101 / TN	
Rig & No.	D1			HOLE DIA. HX/T2-101/TN	
FLUSHING MEDIUM	WATER	ORIENTATION	VERTICAL	GROUND-LEVEL +21.50 mP.D.	

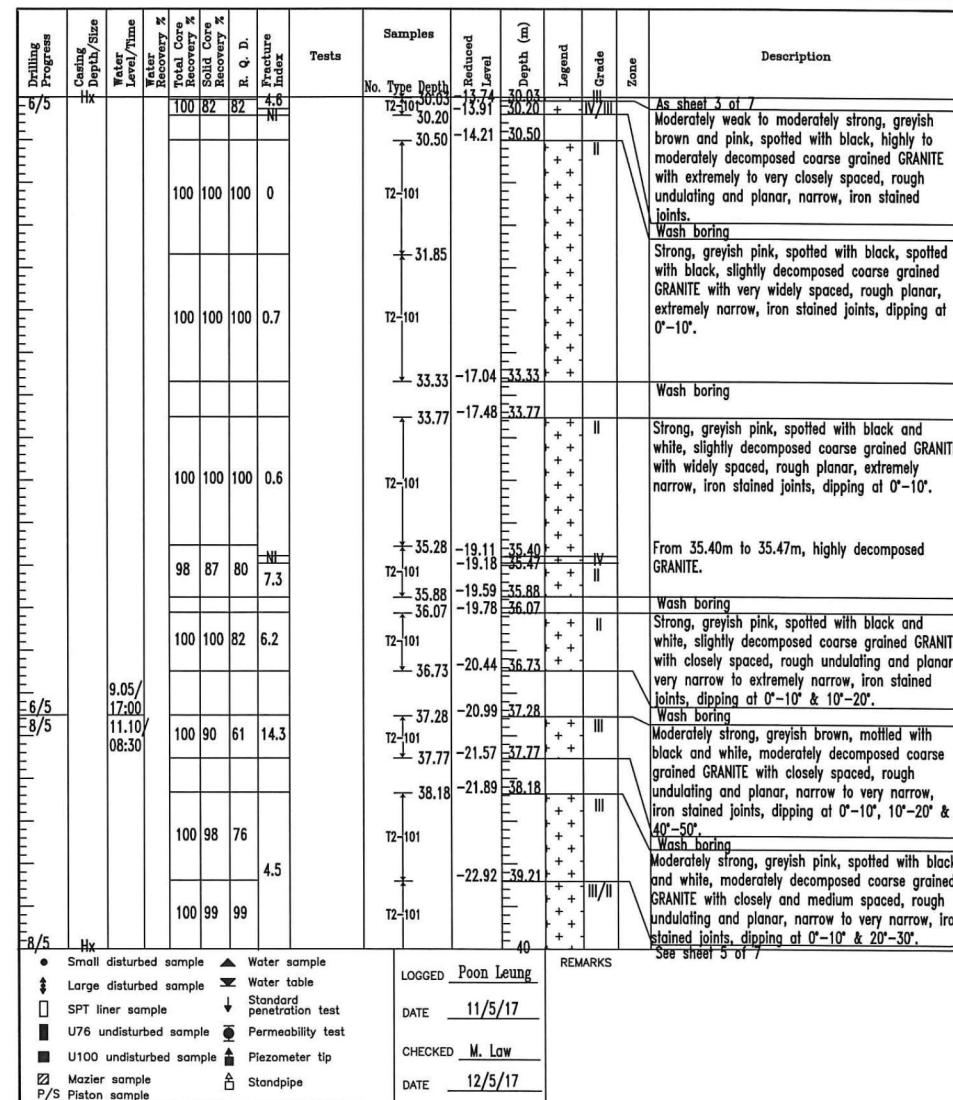
[illegible]

GENERAL SOUTH.CPJ GENERAL GDT 29/06/99

WING SHING CAISSON & FOUNDATION LTD.		JOB NO.:
DRILLHOLE RECORD		HOLE NO.: VH1
		SHEET: 3 OF 7
		DATE: 27/4/17 TO 11/5/17
PROJECT: South China Athletic Association - Ground Investigation at Diving Pool		
METHOD: ROTARY	CO-ORDINATES	ROCK COREBIT: T2-120/T2-101
	E 837339.884	
MACHINE & NO.: XY-28	N 815301.306	HOLE DIA.: PX/HX
FLUSHING MEDIUM: WATER	ORIENTATION: VERTICAL	GROUND LEVEL: +16.29 mPD.



WING SHING CAISSON & FOUNDATION LTD.		JOB NO.:
DRILLHOLE RECORD		HOLE NO.: VH1
		SHEET: 4 OF 7
		DATE: 27/4/17 TO 11/5/17
PROJECT: South China Athletic Association - Ground Investigation at Diving Pool		
METHOD: ROTARY	CO-ORDINATES	ROCK COREBIT: T2-120/T2-101
	E 837339.884	
MACHINE & NO.: XY-28	N 815301.306	HOLE DIA.: PX/HX
FLUSHING MEDIUM: WATER	ORIENTATION: VERTICAL	GROUND LEVEL: +16.29 mPD.



WING SHING CAISSON & FOUNDATION LTD.		JOB NO.:	
DRILLHOLE RECORD		HOLE NO.: VH1	
PROJECT: South China Athletic Association - Ground Investigation at Diving Pool		SHEET: 5 OF 7	
METHOD: ROTARY		DATE: 27/4/17 TO 11/5/17	
CO-ORDINATES		ROCK COREBIT: T2-120/T2-101	
E 837339.884		HOLE DIA.: PX/HX	
N 815301.306			
FLUSHING MEDIUM: WATER		ORIENTATION: VERTICAL	
		GROUND LEVEL: +16.29 mPD.	

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
8/5	Hx								T2-101		40	+	III/II		Moderately strong to strong, greyish brown and pink, spotted with black, moderately to slightly decomposed coarse grained GRANITE with closely to medium and medium to widely spaced, rough planar, very narrow to extremely narrow, iron stained joints, dipping at 0°-10° & 20°-30°.
			100	99	99		4.5		T2-101		40.72	+			
			100	100	100				T2-101		42.21	+			
			100	100	100		0.9		T2-101		43.27	+			
									T2-101		43.27	+			Wash boring
			93	73	0	NI			T2-101		44.23	+	IV/III		Moderately weak to moderately strong, greyish brown and pink, mottled with black, highly to moderately decomposed coarse grained GRANITE with very closely to closely spaced, rough undulating and planar, narrow to very narrow, iron stained joints.
			100	96	83		5.7		T2-101		44.53	+			
							>20		T2-101		45.83	+			Wash boring
							>20		T2-101		46.46	+	IV		Moderately strong to strong, greyish brown and pink, spotted with black and white, moderately to slightly decomposed coarse grained GRANITE with closely and medium spaced, rough undulating and planar, very narrow, iron stained joints, dipping at 0°-10° & 10°-20°.
			100	95	88		3.8		T2-101		47.62	+	III/II		From 46.46m to 46.54m, highly decomposed GRANITE.
			100	97	86		>20		T2-101		49.07	+			From 49.45m to 49.85m, highly to moderately decomposed GRANITE.
			97	78	47		7.5		T2-101		49.85	+	IV/III		
8/5	Hx	10.20/17:30					>20		T2-101		49.85	+			Wash boring
9/5	Hx	10.20/17:30					15.0				50				

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample

- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 11/5/17
CHECKED M. Law
DATE 12/5/17

REMARKS

WING SHING CAISSON & FOUNDATION LTD.		JOB NO.:	
DRILLHOLE RECORD		HOLE NO.: VH1	
PROJECT: South China Athletic Association - Ground Investigation at Diving Pool		SHEET: 6 OF 7	
METHOD: ROTARY		DATE: 27/4/17 TO 11/5/17	
CO-ORDINATES		ROCK COREBIT: T2-120/T2-101	
E 837339.884		HOLE DIA.: PX/HX	
N 815301.306			
FLUSHING MEDIUM: WATER		ORIENTATION: VERTICAL	
		GROUND LEVEL: +16.29 mPD.	

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
9/5	Hx								T2-101		50	+			Wash boring
									T2-101		53.18	+	IV		Moderately weak, light greyish brown and pink, highly decomposed coarse grained GRANITE with extremely to very closely spaced, undulating and planar, narrow, iron stained joints.
			100	94	38	11.4			T2-101		54.07	+	III		Moderately strong, pinkish brown, spotted with black, moderately decomposed coarse grained GRANITE with closely spaced, rough undulating and planar, narrow to very narrow, iron and occasional chlorite stained joints, dipping at 0°-10°, 10°-20°, 30°-40° & 40°-50°.
			98	98	94	3.3			T2-101		55.36	+	III/II		Moderately strong to strong, greyish brown and pink, mottled with black and white, moderately to slightly decomposed coarse grained GRANITE with closely and medium spaced, rough undulating and planar, very narrow to extremely narrow, iron stained joints, dipping at 0°-10°, 10°-20° & 40°-50°.
			100	96	91		4.2		T2-101		56.70	+			
			100	100	100				T2-101		58.09	+			
			100	100	100	2.1			T2-101		59.54	+			
10/5	Hx	9.85/17:30							T2-101		59.54	+			
11/5	Hx	11.15/08:30							T2-101		60	+			

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample

- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 11/5/17
CHECKED M. Law
DATE 12/5/17

REMARKS

WING SHING CAISSON & FOUNDATION LTD.		JOB NO.:
DRILLHOLE RECORD		HOLE NO.: VH2
PROJECT: Proposed New South Stand at South China Athletic Association on I.L. No. 9041 at Caroline Hill Road, Hong Kong.		SHEET: 4 OF 6
METHOD: ROTARY		DATE: 18/5/17 TO 26/5/17
MACHINE & NO.: XY-28	CO-ORDINATES E 837361.738 N 815303.647	ROCK COREBIT: T2-120/T2-101
FLUSHING MEDIUM: WATER	ORIENTATION: VERTICAL	HOLE DIA.: PX/HX
		GROUND LEVEL: +16.32 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples		Reduced Level	Depth (m)	Legend	Grade	Zone	Description
									No.	Type Depth						
23/5	Hx											30				Wash boring
23/5	Hx											40				

☐ Small disturbed sample ☐ Water sample
☐ Large disturbed sample ☐ Water table
☐ SPT liner sample ☐ Standard penetration test
☐ U76 undisturbed sample ☐ Permeability test
☐ U100 undisturbed sample ☐ Piezometer tip
☒ Mazier sample ☐ Standpipe
☐ P/S Piston sample

LOGGED Poon Leung
 DATE 27/5/17
 CHECKED M. Law
 DATE 29/5/17

WING SHING CAISSON & FOUNDATION LTD.		JOB NO.:
DRILLHOLE RECORD		HOLE NO.: VH2
PROJECT: Proposed New South Stand at South China Athletic Association on I.L. No. 9041 at Caroline Hill Road, Hong Kong.		SHEET: 5 OF 6
METHOD: ROTARY		DATE: 18/5/17 TO 26/5/17
MACHINE & NO.: XY-28	CO-ORDINATES E 837361.738 N 815303.647	ROCK COREBIT: T2-120/T2-101
FLUSHING MEDIUM: WATER	ORIENTATION: VERTICAL	HOLE DIA.: PX/HX
		GROUND LEVEL: +16.32 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples		Reduced Level	Depth (m)	Legend	Grade	Zone	Description
									No.	Type Depth						
23/5	Hx											40				Wash boring
23/5																
24/5																
24/5	Hx											50				

☐ Small disturbed sample ☐ Water sample
☐ Large disturbed sample ☐ Water table
☐ SPT liner sample ☐ Standard penetration test
☐ U76 undisturbed sample ☐ Permeability test
☐ U100 undisturbed sample ☐ Piezometer tip
☒ Mazier sample ☐ Standpipe
☐ P/S Piston sample

LOGGED Poon Leung
 DATE 27/5/17
 CHECKED M. Law
 DATE 29/5/17

WING SHING CAISSON & FOUNDATION LTD.		JOB NO.:	
DRILLHOLE RECORD		HOLE NO.: VH2	
PROJECT: Proposed New South Stand at South China Athletic Association on I.L. No. 9041 at Caroline Hill Road, Hong Kong.		SHEET: 6 OF 6	
METHOD: ROTARY		DATE: 18/5/17 TO 26/5/17	
CO-ORDINATES E 837361.738 N 815303.647		ROCK COREBIT: T2-120/T2-101	
MACHINE & NO.: XY-2B		HOLE DIA.: PX/HX	
FLUSHING MEDIUM: WATER		ORIENTATION: VERTICAL	
		GROUND LEVEL: +16.32 mPD.	

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples		Reduced Level	Depth (m)	Legend	Grade	Zone	Description
									No.	Type						
24/5	50.32 Hx															Wash boring
24/5				80	28	0	NI									Weak, light greyish brown and pink, highly decomposed coarse grained GRANITE with extremely to very closely spaced, rough undulating and planar, moderately narrow to narrow, iron stained joints.
24/5				100	98	96										
25/5	10.50/17:00															
25/5	11.10/08:30			98	96	85	6.0									
25/5				100	95	54	>20									
25/5	9.80/17:30															Moderately strong, light greyish brown and pink, spotted with black, moderately decomposed coarse grained GRANITE with closely and medium spaced, rough undulating and planar, very narrow to extremely narrow, iron stained joints, dipping at 0°-10°, 20°-30°, 50°-60°, 70°-80° & subvertical.
26/5	11.05/08:30			100	100	60	5.8									
26/5	9.50/11:30			100	100	97										
26/5																End of hole at 57.90m.

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 27/5/17
CHECKED M. Low
DATE 29/5/17

REMARKS

Tak Foo Engineering & Construction Co., Ltd.		JOB NO.		HOLE NO.		SHEET		DATE from		DHF1		1 of 4		09.11.24 to 16.11.24	
DRILLHOLE RECORD															
PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION															
METHOD Rotary				CO-ORDINATES E 837,431.38 N 815,185.49				ROCK CORE BIT AT3				HOLE DIA. PW, HW			
MACHINE & NO. XY-2B				FLUSHING MEDIUM Water				ORIENTATION VERTICAL				ELEVATION +21.71 m P.D.			

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrumentation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
24/5	PW													Extremely weak, yellowish brown, spotted black and white, completely decomposed, medium to coarse grained GRANITE. (Slightly clayey, silty, fine to coarse SAND, with some, subangular, fine gravel.)
1								4, 4 4, 5, 4, 8 N = 21	1	+21.21	0.50		V	Extremely weak, yellowish brown, spotted black and white, completely decomposed, medium to coarse grained GRANITE. (Slightly silty, fine to coarse SAND, with some, subangular, fine to medium gravel.)
2									2	+20.71	1.00			
3									3	+20.21	1.50			
4									4	+19.76	1.95			
5									5	+19.21	2.50			
6								18, 18 15, 21, 24, 30 N = 90	6	+18.21	3.50			
7									7	+18.11	3.60			
8									8	+17.66	4.05			
9									9	+17.21	4.50			
10									10	+16.21	5.50			
11								3, 4 8, 12, 14, 16 N = 50	11	+16.11	6.05			V
12									12	+15.66	6.60			
13									13	+15.21	7.10			
14									14	+14.21	7.50			
15									15	+14.11	7.60			
16								4, 7 7, 9, 12, 14 N = 42	16	+13.66	8.05			
17									17	+13.21	8.50			
18									18	+12.21	9.50			
19									19	+12.11	9.60			
20									20					

- LEGEND
- Small Disturbed Sample
 - Large Disturbed Sample
 - SPT Liner Sample
 - U76 Undisturbed Sample
 - U100 Undisturbed Sample
 - Mazier Sample (74mm)
 - Piston Sample
 - Water Sample
 - Water Level
 - Standard Penetration Test
 - Permeability Test
 - Standpipe/Piezometer Tip
 - In-situ Vane Shear Test
 - N.A. = Not Applicable.
 - N.I. = Non-intact
 - N.R. = No recovery

REMARKS
Inspection pit was carried out at 0.00-1.50m.

LOGGED BY C.H. Lau CHECKED BY B.C. Tam
DATE 18.11.24 DATE 19.11.24

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary

CO-ORDINATES

ROCK CORE BIT AT3

MACHINE & NO. XY-2B

E 837,431.38
N 815,185.49

HOLE DIA. PW, HW

FLUSHING MEDIUM Water

ORIENTATION VERTICAL

ELEVATION +21.71 m P.D.

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrumentation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
10										+11.66	10.05			As sheet 1 of 4.
11				100						+11.21	10.50			
12										+10.21	11.50			
13				100						+9.66	12.05			
14										+8.21	13.50			
15				100						+7.21	14.50			
16				100	190	99	1.4			+5.26	16.45			
17				100	100	100	0.3			+3.89	17.82			
18				100	100	100				+3.09	18.62			
19				81	81	81	2.3			+2.73	18.98			
20										+2.55	19.16			
										+2.27	19.44			
										+1.95	19.76			

LEGEND	REMARKS
• Small Disturbed Sample	Water Level
Large Disturbed Sample	Standard Penetration Test
SPT Liner Sample	Permeability Test
U76 Undisturbed Sample	Standpipe/Piezometer Tip
U100 Undisturbed Sample	In-situ Vane Shear Test
Mazier Sample (74mm)	N.A. = Not Applicable.
Piston Sample	N.I. = Non-intact
Water Sample	N.R. = No recovery

REMARKS

LOGGED BY C.H. Lau CHECKED BY B.C. Tam

DATE 18.11.24 DATE 19.11.24

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary

CO-ORDINATES

ROCK CORE BIT AT3

MACHINE & NO. XY-2B

E 837,431.38
N 815,185.49

HOLE DIA. PW, HW

FLUSHING MEDIUM Water

ORIENTATION VERTICAL

ELEVATION +21.71 m P.D.

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrumentation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
20										+1.69	20.02			20.02-20.20m: Moderately strong, moderately decomposed.
21										+1.51	20.20			20.02-20.07m: Highly fractured.
22										+0.65	21.05			
23										+0.45	21.26			
24										+0.31	21.40			
25										+0.15	21.58			
26										+0.08	21.63			
27										-1.00	22.71			
28										-1.37	23.08			
29										-2.93	24.64			
30										-3.34	25.05			
31										-3.64	25.35			
32										-3.99	25.70			
33										-4.42	26.13			
34										-4.78	26.47			
35										-5.28	26.99			
36										-5.96	27.67			
37										-7.41	29.12			
38														
39														
40														

LEGEND	REMARKS
• Small Disturbed Sample	Water Level
Large Disturbed Sample	Standard Penetration Test
SPT Liner Sample	Permeability Test
U76 Undisturbed Sample	Standpipe/Piezometer Tip
U100 Undisturbed Sample	In-situ Vane Shear Test
Mazier Sample (74mm)	N.A. = Not Applicable.
Piston Sample	N.I. = Non-intact
Water Sample	N.R. = No recovery

REMARKS

LOGGED BY C.H. Lau CHECKED BY B.C. Tam

DATE 18.11.24 DATE 19.11.24

Tak Foo Engineering & Construction Co., Ltd.

JOB NO.

HOLE NO.

SHEET

DATE from

09.11.24

to

16.11.24

DRILLHOLE RECORD

PROJECT

PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD

Rotary

CO-ORDINATES

E 837,431.38
N 815,185.49

ROCK CORE BIT

AT3

MACHINE & NO.

XY-2B

HOLE DIA.

PW, HW

FLUSHING MEDIUM

Water

ORIENTATION

VERTICAL

ELEVATION

+21.71 m P.D.

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrumentation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
31				94	94	94			AT3	-8.85	30.56		II	As sheet 3 of 4.
32				96	96	96	0.4		AT3	-9.85	31.56		III	31.56-31.83m: Moderately strong, moderately decomposed.
33				93	93	93	1.5		AT3	-10.12	31.83		II	
34		8.85m at 18:00		99	99	99			AT3	-10.29	32.00		III	
35										-11.81	33.52			33.98-34.40m: Moderately strong, moderately decomposed.
36										-12.27	33.98			END of borehole at 34.40m
37										-12.69	34.40			

Small Disturbed Sample

Large Disturbed Sample

SPT Liner Sample

U76 Undisturbed Sample

U100 Undisturbed Sample

Mazier Sample (74mm)

Piston Sample

Water Sample

Water Level

Standard Penetration Test

Permeability Test

Standpipe/Piezometer Tip

In-situ Vane Shear Test

N.A. = Not Applicable.

N.I. = Non-intact

N.R. = No recovery

LOGGED BY

C.H. Lau

CHECKED BY

B.C. Tam

DATE

18.11.24

DATE

19.11.24

Tak Foo Engineering & Construction Co., Ltd.

JOB NO.

HOLE NO.

SHEET

DATE from

28.10.24

to

06.11.24

DRILLHOLE RECORD

PROJECT

PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD

Rotary

CO-ORDINATES

E 837,436.15
N 815,185.95

ROCK CORE BIT

AT3

MACHINE & NO.

XY-2B

HOLE DIA.

SW, PW, HW

FLUSHING MEDIUM

Water

ORIENTATION

VERTICAL

ELEVATION

+21.68 m P.D.

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrumentation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
28.10.24	SW									+21.18	0.50		V	Extremely weak, yellowish brown, spotted black and white, completely decomposed, medium to coarse grained GRANITE. (Slightly clayey, silty, fine to coarse SAND, with some, subangular, fine gravel.)
28.10.24		dry at 18:00						4, 4 N = 19	1	+20.68	1.00			
28.10.24		dry at 08:00						4, 4 N = 19	2	+20.10	1.50			Weak, yellowish brown, spotted black and white, highly decomposed, medium to coarse grained GRANITE. (Sandy, subangular, fine to coarse GRAVEL.)
29.10.24	SW								3	+19.73	1.95			
29.10.24	PW								4	+19.10	2.50			
29.10.24		1.35m at 18:00						4, 4 N = 27	5	+19.18	3.50			
30.10.24		dry at 08:00						5, 5, 7, 10 N = 50	6	+18.06	3.60		IV	
31.10.24									7	+17.63	4.05			
32.10.24									8	+17.18	4.50			
33.10.24								6, 9 N = 50	9	+16.18	5.50			
34.10.24								10, 10, 14, 16 N = 50	10	+16.08	5.60			
35.10.24									11	+15.63	6.05			
36.10.24									12	+15.18	6.50		IV	Weak, dark pinkish brown, spotted black and white, highly decomposed, medium to coarse grained GRANITE. (Sandy, subangular, fine to medium GRAVEL.)
37.10.24								8, 10 N = 62	13	+14.18	7.50			
38.10.24									14	+14.08	7.60			
39.10.24									15	+13.63	8.05			Weak, yellowish brown, spotted black and white, highly decomposed, medium to coarse grained GRANITE. (Slightly sandy, subangular, fine to coarse GRAVEL and COBBLES.)
40.10.24									16	+13.18	8.50			
41.10.24									17	+12.18	9.50			
42.10.24									18	+12.08	9.60			
43.10.24									19	+12.05	9.63		II	Very strong, pinkish grey, spotted black and white, slightly decomposed, medium

Small Disturbed Sample

Large Disturbed Sample

SPT Liner Sample

U76 Undisturbed Sample

U100 Undisturbed Sample

Mazier Sample (74mm)

Piston Sample

Water Sample

Water Level

Standard Penetration Test

Permeability Test

Standpipe/Piezometer Tip

In-situ Vane Shear Test

N.A. = Not Applicable.

N.I. = Non-intact

N.R. = No recovery

LOGGED BY

C.H. Lau

CHECKED BY

B.C. Tam

DATE

9.11.24

DATE

11.11.24

D-30

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary

CO-ORDINATES

ROCK CORE BIT AT3

MACHINE & NO. XY-2B

E 837,436.15
N 815,185.95

HOLE DIA. SW, PW, HW

FLUSHING MEDIUM Water

ORIENTATION VERTICAL

ELEVATION +21.68 m P.D.

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrumentation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
10				100	100	100	0.9						II	to coarse grained GRANITE. Joints are widely spaced, rough planar, tight to extremely narrow, iron oxide stained, dipping 40°-50°.
11		2.41m at 18:00 dry at 08:00						19.24 / 22.20, 12.11 N = 65					IV	Weak, yellowish brown, spotted black and white, highly decomposed, medium to coarse grained GRANITE. (Sandy, subangular, fine to coarse GRAVEL and COBBLES.)
12				100										
13				100	100	100							II	Very strong, pinkish grey, spotted black and white, slightly decomposed, medium to coarse grained GRANITE. Joints, where intact, are widely, occasionally medium spaced, rough planar, tight to extremely narrow, iron oxide stained, dipping 0°-10° and 40°-50°.
14				82	82	82	N.R.						V	13.88-14.09m: No recovery, inferred to be completely decomposed.
15				85	85	85							II	
16	1.11.24 HW	10.51m at 18:00					N.R.	25 25/65mm					V	15.51-15.66m: No recovery, inferred to be completely decomposed.
17		13.48m at 08:00						100/10mm (100bbs / 10mm)					IV	Weak, yellowish brown, spotted black and white, highly decomposed, medium to coarse grained GRANITE. (Sandy, subangular, fine to coarse GRAVEL.)
18				100	100	100							II	Very strong, pinkish grey, spotted black and white, slightly decomposed, medium to coarse grained GRANITE. Joints, where intact, are widely to very widely, occasionally medium spaced, rough planar, tight to extremely narrow, iron oxide stained, dipping 0°-10°.
19				100	100	100							II	
20		5.50m at 18:00		92	92	92							III	19.37-19.49m: Moderately strong, moderately decomposed.
				100	100	100	0.8						III	19.66-19.80m: Moderately strong, moderately decomposed.

LEGEND

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (74mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Standpipe/Piezometer Tip
- In-situ Vane Shear Test
- N.A. = Not Applicable.
- N.I. = Non-Intact
- N.R. = No recovery

REMARKS

LOGGED BY C.H. Lau CHECKED BY B.C. Tam

DATE 9.11.24 DATE 11.11.24

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary

CO-ORDINATES

ROCK CORE BIT AT3

MACHINE & NO. XY-2B

E 837,436.15
N 815,185.95

HOLE DIA. SW, PW, HW

FLUSHING MEDIUM Water

ORIENTATION VERTICAL

ELEVATION +21.68 m P.D.

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrumentation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
20		13.92m at 08:00		100	100	100	0.8						II	As sheet 2 of 4.
21				72	68	68	2.6						III	20.74-21.00m: Moderately strong, moderately decomposed.
22							N.R.						II	21.36-21.67m: No recovery, inferred to be completely decomposed.
23		10.38m at 18:00		100	100	100							V	21.67-21.85m: Moderately strong, moderately decomposed.
24		11.73m at 08:00		96	96	96							III	
25													II	
26				100	100	100	0.3						III	23.72-24.00m: Moderately strong, moderately decomposed.
27				77	77	77							II	
28							N.R.						III	24.68-24.82m: Moderately strong, moderately decomposed.
29				96	90	90	0.8						II	24.92-25.23m: No recovery, inferred to be completely decomposed.
30		6.81m at 18:00											III	Strong, pinkish grey, spotted black and white, slightly decomposed, medium to coarse grained GRANITE. Joints are widely, occasionally very closely and medium spaced, rough planar and rough undulating, tight to extremely narrow, iron oxide stained, dipping 0°-10°, 30°-40° and 60°-70°.
		13.58m at 08:00		100	95	95	2.8						III	26.41-27.48m: Moderately strong, moderately decomposed.
													II	26.55-26.63m: Highly fractured.

LEGEND

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- Large Disturbed Sample
- SPT Liner Sample
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- U100 Undisturbed Sample
- Mazier Sample (74mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Standpipe/Piezometer Tip
- In-situ Vane Shear Test
- N.A. = Not Applicable.
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REMARKS

LOGGED BY C.H. Lau CHECKED BY B.C. Tam

DATE 9.11.24 DATE 11.11.24

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary

CO-ORDINATES

ROCK CORE BIT AT3

MACHINE & NO. XY-2B

E 837,436.15
N 815,185.95

HOLE DIA. SW, PW, HW

FLUSHING MEDIUM Water

ORIENTATION VERTICAL

ELEVATION +21.68 m P.D.

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrumentation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
30							4.8			-8.43 -30.11				As sheet 3 of 4.
										-8.60 -30.28			III	30.11-30.28m: Moderately strong, moderately decomposed.
				97	94	94	1.5		AT3	-9.00 -30.68			II	
31							≥20			-9.28 -30.86			III	30.68-30.96m: Moderately strong, moderately decomposed.
										-9.58 -31.20			II	30.83-30.94m: Highly fractured.
										-9.72 -31.40				31.26-33.00m: Moderately strong, moderately decomposed.
32				100	100	92			AT3	-10.45 -32.13			III	
				94	91	91	0.6		AT3	-11.32 -33.00				
33														
				99	99	99			AT3	-12.62 -34.30			II	
34		4.98m at 18.00												END of borehole at 34.30m
35														
36														
37														
38														
39														
40														

LEGEND

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazfer Sample (74mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
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- In-situ Vane Shear Test
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REMARKS

LOGGED BY C.H. Lau CHECKED BY B.C. Tam

DATE 9.11.24 DATE 11.11.24