

From: Howard Tong <[REDACTED]>
Sent: 03 February 2026 18:05
To: tpbpd/PLAND
Cc: [REDACTED]
Subject: s.16 Planning Application No. A/YL-KTS/1079 - Reply to Departmental Comment (FSD/DSD)
Attachments: Attachment 1 - Fire Services Proposal.pdf; Attachment 2 - Drainage Proposal.pdf; Attachment 3 - Colour Water Test Report on Existing Village Box Culvert.pdf; Attachment 4 - Table for the Hydraulic Design for Pipe, Sewers and Channel, A18.pdf; Attachment 5 - Letter from the Adjoining Owner of Lot TS 601.pdf
Categories: Internet Email

Attn: Town Planning Board Secretariat

Dear Sir/Madam,

Refer to captioned Planning Application No. A/YL-KTS/1079, please find below our reply to departmental comments (FSD/DSD) for TPB consideration:

1. Reply to FSD comment

Please find attached Fire Services Proposal (Drawing No. FS-01 Rev. A and FS-02 Rev. A) (**Attachment 1**) to incorporate FSD comment:

We wish to clarify that our submission is to apply for a "Temporary Vocational Training Centre" which should be classified as "Training Centre" use under Institutional Building instead of "Workshop" use under Industrial Building.

HKCIEGU is providing courses for construction trades in order for the unemployed students to get back to job market to construction work after attending their training courses. The courses are based of practical aspect of construction work such as installation of window, welding, plumbing & drainage work, formwork, levelling etc. which needs large space to demonstrate to students at the premises, and they therefore name the "Classroom" to "Workshop". There are no industrial activities to be carried out at the Temporary Vocational Training Centre at the above captioned premises.

2. Reply to DSD comment

Please find attached Drainage Proposal - Item a) to d) to incorporate DSD comment:

Urgent Return receipt Expand Group Restricted Prevent Copy Confidential

1. Drainage Plan (Drawing No. J25140/SUB/D/01 Rev. A, J25140/SUB/D/01A, J25140/SUB/D/01B, J25140/SUB/D/01C, J25140/SUB/D/02 Rev. A and J25140/SUB/D/03) **(Attachment 2)**
2. Colour Water Test Report on Existing Village Box Culvert **(Attachment 3)**
3. Table for the Hydraulic Design for Pipe, Sewers and Channel, A18 **(Attachment 4)**
4. Letter from the Adjoining Owner of "Lot TS 601" confirm no objection to share the use and maintenance of the new / existing catchpit and surface channel **(Attachment 5)**

The above submission is subjected to following conditions:

1. No site formation work and levelling work to be carried out under this application.
2. No wall / hoarding to be erected / laid along the site boundary line under this application.
3. All drainage pipe and manhole inside and outside lot boundary showing on this drawing to be maintenance by this Applicant.
4. Site survey for existing underground drainage installation will be carried out after award of works, contractor to verify the actual size of existing culvert and pipework, upgrading works would be carried out if necessary.
5. Insufficient space to install new catchpit inside Lot 602 S.B. (Part) since it has been fully covered by existing building. After further coordination with Land Owner of "Lot TS 601", new catchpit ST-R-01 would be located inside "Lot TS 601" boundary area and share the use / maintenance of the new catchpit and surface channel. Agreement is attached for further consideration.

Should you have any query, please feel free to contact the undersigned at [REDACTED]

Regards,
Howard Tong

For or on behalf to HKFTU/ HKCIEGU

FIRE SERVICES NOTES:

- 1) THE TRAINING CENTER WILL BE USED FOR EDUCATIONAL PURPOSE TO PROVIDE TRAINING FOR CONSTRUCTION WORKERS.
- 2) SECONDARY SOURCE OF SUPPLY SHALL BE PROVIDED TO MAINTAIN EMERGENCY LIGHTING, ESSENTIAL FIRE SERVICES INSTALLATION BEFORE MAIN SWITCH IN THE EVENT OF MAIN POWER FAILURE.
- 3) EMERGENCY LIGHTING C/W AT LEAST TWO HOUR BATTERY BACKUP TYPE TO BE PROVIDED AND INSTALLED IN ACCORDANCE WITH BS 5266-1:2016, BS EN 1838:2013 AND THE FSD CIRCULAR LETTER NO. 4/2021.
- 4) SUFFICIENT DIRECTIONAL AND EXIT SIGN TO BE PROVIDED AS INDICATED ON PLAN AND INSTALLED IN ACCORDANCE WITH BS5266-1:2016 AND FSD CIRCULAR LETTER NO. 5/2008 TO ENSURE THAT ALL EXIT ROUTE FROM ANY AREA WITHIN THE ENCLOSED STRUCTURE ARE CLEARLY INDICATED AS REQUIRED BY THE CONFIGURATION OF FIRE EXIT DOOR SERVING THE ENCLOSED STRUCTURE.
- 5) STAND ALONE DETECTOR WILL BE PROVIDED FOR ALL ENCLOSED COMPARTMENTS OF THE TRAINING CENTER EXCEPT SERVICES DUCTS, WATER/ELEC. METER CABINETS, SPRINKLER CONTROL VALVE CABINET.
- 6) THE STAND ALONE DETECTOR WILL BE INSTALLED IN ACCORDANCE WITH THE "STAND-ALONE FIRE DETECTOR GENERAL GUIDELINES ON PURCHASE, INSTALLATION & MAINTENANCE (SEP2021)". ALL STAND ALONE DETECTORS WILL BE INTERCONNECTED. UPON ACTIVATION OF ANY ONE STAND ALONE DETECTOR WITHIN SAME ENCLOSED COMPARTMENT AS LISTED IN ABOVE ITEM 5, ALL OTHER STAND ALONE DETECTORS WILL SOUND.
- 7) WHEELED TYPE 25KG DRY POWDER CAPACITY FIRE EXTINGUISHER WILL BE PROVIDED AND INSTALLED AT POSITION AS INDICATED ON PLAN.
- 8) AN AUTOMATIC SPRINKLER SYSTEM TO BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE LPC RULES INCORPORATING BS EN 12845 : 2015 AND FSD CIRCULAR LETTER NO. 5/2020. THE CLASSIFICATION OF THE OCCUPANCIES TO BE ORDINARY HAZARD GROUP 1.
 - a) SPRINKLERS TO BE PROVIDED FOR THE TRAINING CENTER EXCEPT E/M PLANT ROOMS, SERVICES DUCTS, WATER / ELEC. METER CABINET, SPRINKLER CONTROL VALVE CABINET.
 - b) NEW 37 CU. M SPRINKLER TANK WILL BE PROVIDED AT POSITION AS INDICATION ON PLAN C/W DUTY, STANDBY AND JOCKEY PUMP.
 - c) SPRINKLER CONTROL VALVE SET AND SPRINKLER INLET TO BE PROVIDED AS INDICATED ON PLANS.
 - d) ALL SPRINKLER ALARM SIGNALS WILL BE TRANSMITTED TO THE SPRINKLER ANNUNCIATOR PANEL LOCATED AT POSITION AS INDICATED ON PLAN
 - e) SPRINKLER ALARM WILL BE CONNECTED TO THE FIRE SERVICES COMMUNICATIONS CENTER VIA F.S DIRECT TELEPHONE LINK.
- 9) SMOKE EXTRACTION SYSTEM WILL NOT BE PROVIDED AS ANY FIRE COMPARTMENT NOT EXCEED 7000 cu.m.
- 10) ANY INTENDED STORAGE OR USE OF DANGEROUS GOODS AS DEFINED IN CHAPTER 295 OF THE LAWS OF HONG KONG TO BE NOTIFIED TO THE DIRECTOR OF FIRE SERVICES.

LEGEND

SYMBOL	DESCRIPTION
	MOTOR PUMP SET
	GATE VALVE
	GATE VALVE C/W PLUG
	CHECK VALVE
	DRAIN VALVE C/W PLUG
	GATE VALVE WITH MICRO-SWITCH
	BUTTERFLY VALVE WITH MICRO-SWITCH
	BUTTERFLY VALVE
	BALL FLOAT VALVE
	AUTOMATIC AIR VENT
	F.S. INLET/SPRINKLER INLET
	FIRE HOSE REEL SET
	PRESSURE GAUGE WITH STOP CORK
	SPRINKLER CONTROL VALVE SET
	LEVEL SWITCH
	VORTEX INHIBITOR
	FLOW SWITCH
	DIRECT READING FLOW METER
	68°C SPRINKLER HEAD UNDER THE STRUCTURAL SLAB
	68°C SPRINKLER HEAD UNDER THE FALSE CEILING
	68°C DOUBLE LAYERS SPRINKLER HEAD
	WHEELED TYPE 25KG DRY POWDER CAPACITY F.E
	STAND ALONE DETECTOR
	REMOTE INDICATING LAMP FOR DETECTOR
	FIRE ALARM BELL
	BREAKGLASS UNITS
	PUMP PANEL
	FIRE CONTROL PANEL
	EXIT SIGN

PIPEWORK MATERIAL SCHEDULE

NOMINAL PIPE SIZE	SPECIFICATION
Ø150mm & BELOW (ABOVE-GROUND)	GALVANIZED STEEL PIPE CONFORMING TO BS 1387 (BS EN 10255:2004), MEDIUM GRADE
Ø200mm & ABOVE (ABOVE-GROUND)	DUCTILE IRON PIPE CONFORMING TO BS EN 545, CLASS K12
Ø150mm & BELOW (UNDERGROUND)	GALVANIZED STEEL PIPE CONFORMING TO BS 1387 (BS EN 10255:2004), HEAVY GRADE



SITE PLAN

REV.	DATE	DESCRIPTION
A	05/11	2ND SUBMISSION
0	03/10	1ST SUBMISSION

REVISION

- ALL MEASUREMENT MUST BE CHECKED AT THE SITE
- DO NOT SCALE DRAWING FIGURED DIMENSIONS TO BE OBSERVED
- READ THIS DRAWING IN CONNECTION WITH GENERAL ARCHITECTURAL PLANS AND OTHER RELATED DOCUMENTS
- THE M&E CONSULTANT TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND HEREIN

ARCHITECT:

K.A. KHO & ASSOCIATES
 ARCHITECTS & CONSULTANTS LTD.
 許金安副總裁有限公司
 1710 TAI YAU BUILDING, 181 JOHNSON ROAD, HONG KONG. TEL: 8522888-8813

F.S. CONTRACTOR:

堅英工程有限公司
 KIN YING CONTRACTING LIMITED
 Unit B & C, 1/F., R. & T. Centre,
 No. 81-83 Tsech St., Tsimshatsui.

PROJECT

TRAINING CENTRE
 LOTS NO. 602 S.B.(Part), 602 S.C.(Part), 602 R.P., 603 S.C.(Part), 603 S.D.(Part), 603 R.P., IN D.D. 106, KAM SHING ROAD, KAM TIN, YUEN LONG.

TITLE

F.S NOTES , PUMP SCHEDULES AND SITE PLAN

DRAWN BY	LY	SCALE	NIL
DESIGNED BY	LY	DATE	10/2025
CHECKED BY	H.F.FOK	DRAWING NO.	REV.
APPROVED BY		FS-01	A



LOCATION PLAN

REV.	DATE	DESCRIPTION
A	05/11	2ND SUBMISSION
0	03/10	1ST SUBMISSION

REVISION

- ALL MEASUREMENT MUST BE CHECKED AT THE SITE
- DO NOT SCALE DRAWING FIGURED DIMENSIONS TO BE OBSERVED
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- THE M&E CONSULTANT TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND HEREIN

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 KIN YING CONTRACTING LIMITED
 Unit B & C, 1/F., R. & T. Centre,
 No.81-83 Lorch St., ToloKkluu,

PROJECT
 TRAINING CENTRE
 LOTS NO. 602 S.B.(Part), 602 S.C.(Part), 602 R.P., 603 S.C.(Part), 603 S.D.(Part), 603 R.P., IN D.D. 106, KAM SHING ROAD, KAM TIN, YUEN LONG.

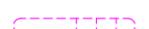
TITLE
 FS LAYOUT PLAN

DRAWN BY	LY	SCALE	1:200 (A1)
DESIGNED BY	LY	DATE	10/2025
CHECKED BY	H.F.FOK	DRAWING NO.	FS-02
APPROVED BY		REV.	A

NOTES:

1. NO SITE FORMATION WORK AND LEVELING WORK TO BE CARRIED OUT UNDER THIS APPLICATION
2. NO WALL / HOLDING TO BE ERECTED / LAID ALONG THE SITE BOUNDARY LINE UNDER THIS APPLICATION
3. ALL DRAINAGE PIPE AND MANHOLE INSIDE AND OUTSIDE LOT BOUNDARY SHOWING ON THIS DRAWING TO BE MAINTENANCE BY THIS APPLICANT.
4. SITE SURVEY FOR THE EXISTING UNDERGROUND DRAINAGE INSTALLATION WILL BE CARRIED OUT AFTER AWARD OF WORKS CONTRACTOR TO VERIFY THE ACTUAL SIZE OF EXISTING CULVERT AND PIPEWORK, UPGRADING WORKS WOULD BE CARRIED OUT IF NECESSARY.

LEGENDS:

-  RAIN WATER PIPE
-  EXISTING PIPE
-  EXISTING CHANNEL WITH GRATING (OUTSIDE BOUNDARY)
-  EXISTING CHANNEL WITH GRATING (INSIDE BOUNDARY)
-  NEW CHANNEL WITH GRATING (INSIDE & OUTSIDE BOUNDARY)

EX. VILLAGEE BOX CULVERT CONNECTED TO DSD BOX CULVERT NEAR THE "Ng Ka Tsuen Archway"

EX.Ø300 RWP AT U/G CONNECTED TO EXISTING CULVERT (80.22 l/s)

EX.Ø300 RWP AT U/G (FALL 1:150)(80.22 l/s)

EX.MH-04 (RE-CONSTRUCTED)
C.L. 9.65
I.L. 8.17
(TYPE D1)

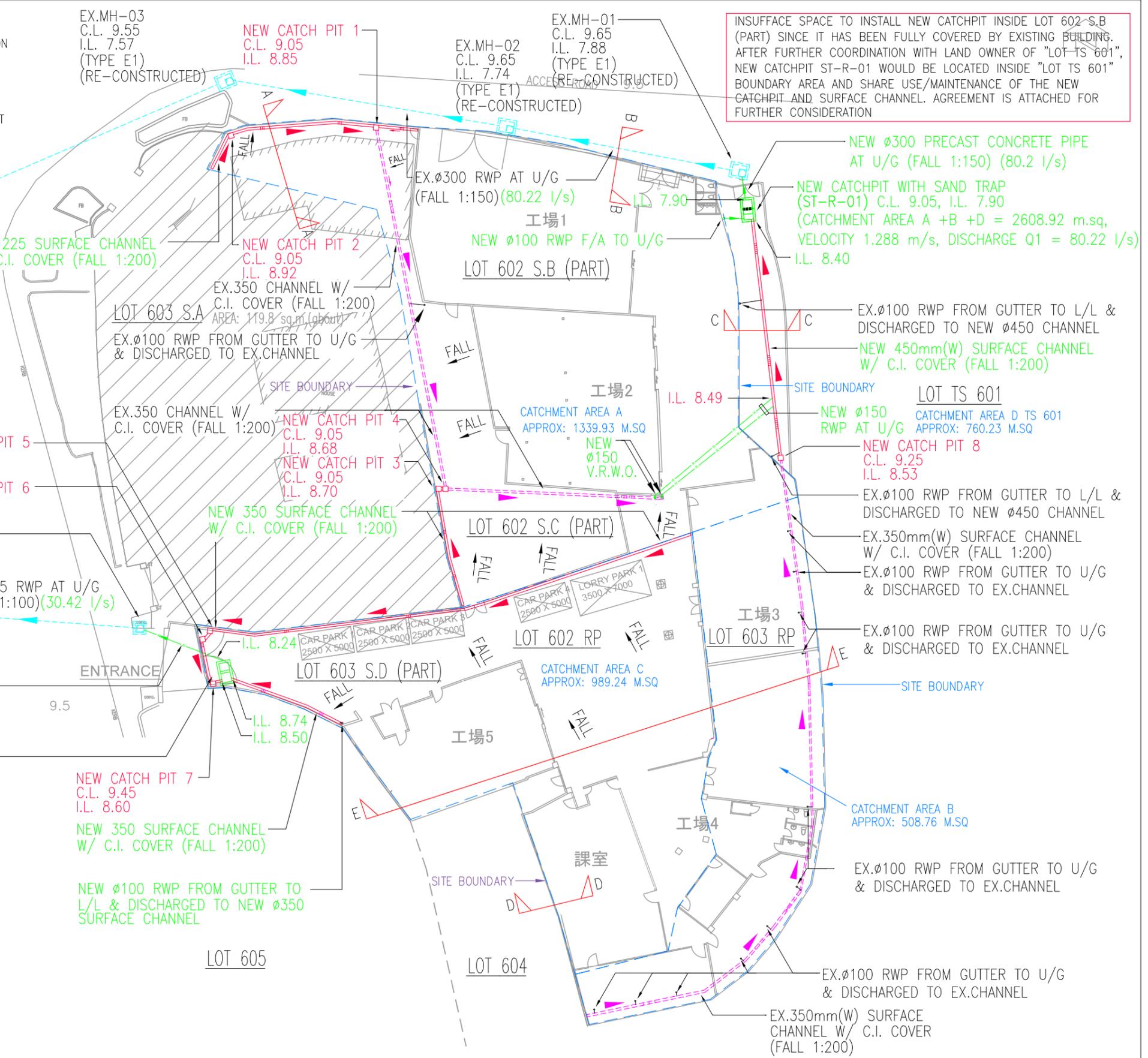
EX.Ø225 RWP AT U/G CONNECTED TO EX. VILLAGE BOX CULVERT (30.42 l/s)

NEW Ø225 PRECAST CONCRETE PIPE AT U/G (FALL 1:100) (30.42 l/s)

NEW CATCHPIT WITH SAND TRAP (ST-R-02)
C.L. 9.45, I.L. 8.24
(CATCHMENT AREA C = 989.24 m.sq, VELOCITY 1.306 m/s, DISCHARGE Q2 = 30.42 l/s)

G/F DRAINAGE PLAN (UNDERGROUND)

SCALE 1:200@A1,1:400@A3



INSUFFICIENT SPACE TO INSTALL NEW CATCHPIT INSIDE LOT 602-S.B (PART) SINCE IT HAS BEEN FULLY COVERED BY EXISTING BUILDING. AFTER FURTHER COORDINATION WITH LAND OWNER OF "LOT TS 601", NEW CATCHPIT ST-R-01 WOULD BE LOCATED INSIDE "LOT TS 601" BOUNDARY AREA AND SHARE USE/MAINTENANCE OF THE NEW CATCHPIT AND SURFACE CHANNEL. AGREEMENT IS ATTACHED FOR FURTHER CONSIDERATION

M&E CONSULTANT VIGOR & Partners (M&E) Limited 維嘉機電顧問有限公司	REVISION	DATE	TITLE	SCALE	DWN.	PROJECT TRAINING CENTRE LOTS NO. 602 S.B.(Part), 602 S.C.(Part), 602 R.P., 603 S.C.(Part), 603 S.D.(Part), 603 R.P., IN D.D. 106, KAM SHING ROAD, KAM TIN, YUEN LONG.
	-	OCT 2025	DRAINAGE LAYOUT PLAN (UNDERGROUND)(RAINWATER SYSTEM)	1:200@A1, 1:400@A3	DATE	
	A	DEC 2025			CHK.	
					DATE	
					APP.	PLAN
					DATE	DRAINAGE PLAN
						JOB NO.
						DWG. NO.
						REVISION
						J25140
						J25140/SUB/D/01
						A

K.A. KHO & ASSOCIATES
ARCHITECTS & CONSULTANTS LTD.
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 1710 TAI YAU BUILDING, 181 JOHNSTON ROAD, HONG KONG. TEL:(852)2833-8813
 香港灣仔莊士敦道一八一號大有大廈一七-〇室 電話:(八五二)二八三三六八一三

GENERAL NOTES:

1. NEW MANHOLE COVERS OUTSIDE LOT BOUNDARY SHALL BE 675mm X 675mm SIZE AND COMPLY WITH DSD STANDARD.
2. NEW STORM WATER MANHOLE SHOULD BE CONSTRUCTED TO DSD STANDARDS AND HANDED OVER TO DSD FOR MAINTENANCE. MANHOLE IDENTIFICATION TAGS TO DSD STANDARDS SHOULD BE FIXED IN THE MANHOLES TO BE HANDED OVER TO DSD. THE APPLICANT SHOULD APPLY TO THIS OFFICE FOR MANHOLE IDENTIFICATION TAG NUMBERS FOR PUTTING ON THE TAGS.
3. THE PROPOSED DRAINAGE WORKS, WHETHER WITHIN OR OUTSIDE THE LOT BOUNDARY, SHOULD BE CONSTRUCTED AND MAINTAINED BY THE LOT OWNER AT THEIR OWN EXPENSE. FOR WORKS TO BE UNDERTAKEN OUTSIDE THE LOT BOUNDARY, THE APPLICANT SHOULD OBTAIN PRIOR CONSENT AND AGREEMENT FROM DLO/N AND/OR RELEVANT PRIVATE LOT OWNERS.
4. EVERY DRAIN OR SEWER SHALL BE LAID WITH A MINIMUM FALL AS FOLLOW OR AS INDICATED ON DRAWINGS (FOR BOTH ABOVEGROUND AND UNDERGROUND DRAINAGE)

A. BELOW 100mm DIA. AND 100mm DIA.	1 TO 40
B. 150mm DIA.	1 TO 70
C. 225mm DIA.	1 TO 100
D. 300mm DIA.	1 TO 150

EVALUATION OF STORMWATER CONNECTION PIPE FOR KAM TIN SITE CATCHMENT AREAS AND RUNOFF CALCULATION

REFERENCE FROM "STORMWATER DRAINAGE MANUAL CORRIGRNDUM NO. 1/2024" TO FIND THE EXTREME INTENSITY OF RAINFALL UNDER ALGEBRAIC EQUATION:

$$i = a / (td+b)^c$$

i = extreme mean intensity in mm/hr
 td = duration in minutes (td < 240), and
 a,b,c, = storm constants given in Table 3a, 3b,3c and 3d.

$$i = 504.6 / (240+3.53)^{0.302}$$

$$i = 504.6 / 5.257$$

$$i = 95.956 \text{ mm/hr}$$

UNDER "STORMWATER DRAINAGE MANUAL CORRIGRNDUM NO. 1/2022" THE RAINFALL INCREASE DUE TO CLIMATE CHANGE IN END OF 21th CENTURY SHOULD BE 16% AND RAINFALL INCREASE 12.1%

$$i = 95.956 \times 1.281$$

$$i = 122.92 \text{ mm/hr}$$

HENSE, THE RAINFALL INTENSITY TO BE 122.92 mm/hr (ROUND UP TO 123 mm/hr)

ACCORDING TO GBP, AREA OF CATCHMENT "AREA A" IS APPROX. 1339.93 m.sq. AREA OF CATCHMENT "AREA B" IS APPROX. 508.76 m.sq. AREA OF CATCHMENT "AREA D" FOR LOT TS 601 IS APPROX. 760.23 m.sq. TOTAL AREA APPROX. 2608.92 m.sq.

RUNOFF FROM THE DEVELOPMENT SITE IS CALCULATED ACCORDING TO RATIONAL METHOD,
 $Q = CIA / 3600$

WHERE Q=PEAK RUNOFF (l/s)
 C=RUNOFF COEFFICIENT 0.9(PRAVED)
 I=RAINFALL INTENSITY 123 mm/hr
 A=CATCHMENT AREA(A+B+D) 2608.92 m.sq (SITE AREA)

$$Q1 = (0.9 \times 123 \times 2608.92) / 3600$$

$$= 80.22 \text{ l/s}$$

THE RUNOFF FROM THE DEVELOPMENT SITE IS PROPOSED TO BE DISCHARGED TO AN EXISTING MANHOLE VIA NEW SAND TRAP (ST-R-01) BY A NEW DIA. 300mm DRAINAGE PIPE.

ACCORDING TO THE HYDRAULIC TABLE A18(ks=0.6mm), DIA 300mm DRAINAGE PIPE RUN AT GRADIENT OF 1:150 @ VELOCITY 1.288 m/s, CAN ACCOMMODATE 91.041 l/s. UNDER SECTION 9.3 OF STORMAWATER DRAINAGE MANUAL, FOR THE PERMISSIBLE DEGRADATION BETWEEN DESILTING CYCLES, THE FOLLOWING GUIDLINE IS PROPOSED TO TAKE

- a) 5% REDUCTION IN FLOW AREA IF GRADIENT IS GREATER THAN 1 IN 25.
- b) 10% REDUCTION IN FLOW AREA IN OTHER CASES.

USING (b): DIA. 300 PRECAST STORMWATER PIPE CAN ACCOMMDATE

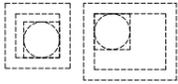
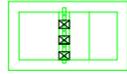
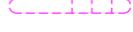
$$91.041 \text{ l/s} \times 0.9 = 81.9369 \text{ l/s}$$

AS A RESULT, DIA. 300 PRECAST CONCRETE DRAINAGE PIPE (ks=0.6mm) RUN AT GRADIENT OF 1:150@ VELOCITY 1.288 m/s, CAN ACCOMMODATE 81.9369 l/s, WHICH IS GREATER THAN THE STORMWATER RUNOFF AT 80.22 l/s FROM THE DEVELOPMENT SITE.

FROM ABOVE, IT CAN CONCLUDE THAT THE PROPSOED DIA 300mm DRAINAGE PIPE IS ADEQUATE FOR COLLECTING THE STORMWATER FROM THE DEVELOPMENT SITE.

THE TABLE PLEASE REFER TO "TABLE FOR THE HYDRAULIC DESIGN OF PIPE, SEWERS AND CHANNELS (APPENDIX A)"

LEGENDS:

-  RAIN WATER PIPE
-  EXISTING PIPE
-  EXISTING STORM WATER MANHOLE
-  SAND TRAP
-  RAIN WATER OUTLET
-  VERTICAL RAIN WATER OUTLET
-  EXISTING CHANNEL WITH GRATING (OUTSIDE BOUNDARY)
-  EXISTING CHANNEL WITH GRATING (INSIDE BOUNDARY)
-  NEW CHANNEL WITH GRATING (INSIDE & OUTSIDE BOUNDARY)

MATERIAL FOR PIPEWORK (DRAINAGE)

TYPE OF PIPE	DIA. OF PIPE (mm)	MATERIAL OF PIPE
RAIN WATER PIPES RUN OUTSIDE BUILDING	ø80 TO ø150	UPVC PIPE TO BS EN 1329-1:2014 WITH CEMENT SOLVENT JOINT (WITH FIRE SEALANT ACROSS FIRE COMPARTMENT)
UNDERGROUND RAINWATER PIPE	ø100 TO ø150	CAST IRON PIPE TO B.S. 437:2008 BITUMEN COATED INTERNALLY AND EXTERNALLY.
STORMWATER CONNECTION TO EXISTING MANHOLE	ø225 TO ø300	PRECAST CONCRETE PIPE TO BS 5911-1:2002 +A12010 or BS EN 1916:2002

MANHOLE SCHEDULE

MANHOLE NO.	C.L.	I.L.	DEPTH	TYPE	REMARK
EX.MH-01	9.65	7.88	1770	E1	EXISTING MANHOLE RE-CONSTRUCTED
EX.MH-02	9.65	7.74	1910	E1	
EX.MH-03	9.55	7.57	1980	E1	
EX.MH-04	9.65	8.17	1480	E1	

ACCORDING TO GBP, AREA OF CATCHMENT "AREA C" IS APPROX. 989.24 m.sq.

RUNOFF FROM THE DEVELOPMENT SITE IS CALCULATED ACCORDING TO RATIONAL METHOD,
 $Q = CIA / 3600$

WHERE Q=PEAK RUNOFF (l/s)
 C=RUNOFF COEFFICIENT 0.9(PRAVED)
 I=RAINFALL INTENSITY 123 mm/hr
 A=CATCHMENT AREA(C) 989.24 m.sq(SITE AREA)

$$Q2 = (0.9 \times 123 \times 989.24) / 3600$$

$$= 30.42 \text{ l/s}$$

THE RUNOFF FROM THE DEVELOPMENT SITE IS PROPOSED TO BE DISCHARGED TO AN EXISTING MANHOLE VIA NEW SAND TRAP (ST-R-02) BY A NEW DIA. 225mm DRAINAGE PIPE.

ACCORDING TO THE HYDRAULIC TABLE A18(ks=0.6mm), DIA 225mm DRAINAGE PIPE RUN AT GRADIENT OF 1:100 @ VELOCITY 1.306 m/s, CAN ACCOMMODATE 51.924 l/s. UNDER SECTION 9.3 OF STORMAWATER DRAINAGE MANUAL, FOR THE PERMISSIBLE DEGRADATION BETWEEN DESILTING CYCLES, THE FOLLOWING GUIDLINE IS PROPOSED TO TAKE

- a) 5% REDUCTION IN FLOW AREA IF GRADIENT IS GREATER THAN 1 IN 25.
- b) 10% REDUCTION IN FLOW AREA IN OTHER CASES.

USING (b): DIA. 225mm PRECAST STORMWATER PIPE CAN ACCOMMDATE

$$51.924 \text{ l/s} \times 0.9 = 46.7316 \text{ l/s}$$

AS A RESULT, DIA. 225 PRECAST CONCRETE DRAINAGE PIPE (ks=0.6mm) RUN AT GRADIENT OF 1:100@ VELOCITY 1.306 m/s, CAN ACCOMMODATE 46.7316 l/s, WHICH IS GREATER THAN THE STORMWATER RUNOFF AT 30.42 l/s FROM THE DEVELOPMENT SITE.

FROM ABOVE, IT CAN CONCLUDE THAT THE PROPSOED DIA 225mm DRAINAGE PIPE IS ADEQUATE FOR COLLECTING THE STORMWATER FROM THE DEVELOPMENT SITE.

M&E CONSULTANT	REVISION	DATE	TITLE GENERAL NOTE, LEDENDS DRAINAGE CALCULATION, MANHOLE SCHEDULE & MATERIAL SCHEDULE (RAINWATER SYSTEM)	SCALE	DWN. DATE	PROJECT TRAINING CENTRE LOTS NO. 602 S.B.(Part), 602 S.C.(Part), 602 R.P., 603 S.C.(Part), 603 S.D.(Part), 603 R.P., IN D.D. 106, KAM SHING ROAD, KAM TIN, YUEN LONG.
	-	JAN 2026		1:200@A1, 1:400@A3		
 維嘉機電顧問有限公司			 許金安則師樓有限公司 1710 TAI YAU BUILDING, 181 JOHNSTON ROAD, HONG KONG. TEL:(852)2833-6813 香港灣仔莊士敦道一八一號大有大廈一七-〇室 電話：(八五二)二八三三六八一三	CHK.	DATE	PLAN DRAINAGE PLAN JOB NO. J25140 DWG. NO. J25140/SUB/D/01A REVISION -
				APP.	DATE	

NOTES:

1. NO SITE FORMATION WORK AND LEVELING WORK TO BE CARRIED OUT UNDER THIS APPLICATION
2. NO WALL / HOLDING TO BE ERECTED / LAID ALONG THE SITE BOUNDARY LINE UNDER THIS APPLICATION
3. ALL DRAINAGE PIPE AND MANHOLE INDSIDE AND OUTSIDE LOT BOUNDARY SHOWING ON THIS DRAWING TO BE MAINTENANCE BY THIS APPLICANT.
4. SITE SURVEY FOR THE EXISTING UNDERGROUND DRAINAGE INSTALLATION WILL BE CARRIED OUT AFTER AWARD OF WORKS CONTRACTOR TO VERIFY THE ACTUAL SIZE OF EXISTING CULVERT AND PIPEWORK, UPGRADING WORKS WOULD BE CARRIED OUT IF NECESSARY.

LEGENDS:

-  RAIN WATER PIPE
-  EXISTING PIPE
-  EXISTING CHANNEL WITH GRATING (OUTSIDE BOUNDARY)
-  EXISTING CHANNEL WITH GRATING (INSIDE BOUNDARY)
-  NEW CHANNEL WITH GRATING (INSIDE & OUTSIDE BOUNDARY)

EX. VILLAGE BOX CULVERT CONNECTED TO DSD BOX CULVERT NEAR THE "Ng Ka Tsuen Archway"

EX.Ø300 RWP AT U/G CONNECTED TO EXISTING CULVERT

EX.Ø300 RWP AT U/G (FALL 1:150)

EX.MH-04 (RE-CONSTRUCTED)
C.L. 9.65
I.L. 8.17
(TYPE D1)

EX.Ø225 RWP AT U/G CONNECTED TO EX. VILLAGE BOX CULVERT

NEW Ø225 PRECAST CONCRETE PIPE AT U/G (FALL 1:100) (30.42 l/s)

NEW CATCHPIT WITH SAND TRAP (ST-R-02)
C.L. 9.45, I.L. 8.24

EX.MH-03
C.L. 9.55
I.L. 7.57
(TYPE E1)
(RE-CONSTRUCTED)

NEW CATCH PIT 1
C.L. 9.05
I.L. 8.85

EX.MH-02
C.L. 9.65
I.L. 7.74
(TYPE E1)
(RE-CONSTRUCTED)

EX.MH-01
C.L. 9.65
I.L. 7.88
(TYPE E1)
(RE-CONSTRUCTED)

INSUFFICE SPACE TO INSTALL NEW CATCHPIT INSIDE LOT 602 S.B (PART) SINCE IT HAS BEEN FULLY COVERED BY EXISTING BUILDING. AFTER FURTHER COORDINATION WITH LAND OWNER OF "LOT TS 601", NEW CATCHPIT ST-R-01 WOULD BE LOCATED INSIDE "LOT TS 601" BOUNDARY AREA AND SHARE USE/MAINTENANCE OF THE NEW CATCHPIT AND SURFACE CHANNEL. AGREEMENT IS ATTACHED FOR FURTHER CONSIDERATION

NEW 225 SURFACE CHANNEL W/ C.I. COVER (FALL 1:200)

NEW CATCH PIT 2
C.L. 9.05
I.L. 8.92

EX.350 CHANNEL W/ C.I. COVER (FALL 1:200)
AREA: 119.8 sq.m. (about)

NEW CATCH PIT 4
C.L. 9.05
I.L. 8.68

NEW CATCH PIT 3
C.L. 9.05
I.L. 8.70

NEW 350 SURFACE CHANNEL W/ C.I. COVER (FALL 1:200)

NEW CATCH PIT 5
C.L. 9.45
I.L. 8.75

NEW CATCH PIT 6
C.L. 9.45
I.L. 8.70

EX.Ø225 RWP AT U/G (FALL 1:100)

ENTRANCE

LOT 603 S.D (PART)

I.L. 8.24
I.L. 8.74
I.L. 8.50

NEW CATCH PIT 7
C.L. 9.45
I.L. 8.60

NEW 350 SURFACE CHANNEL W/ C.I. COVER (FALL 1:200)

LOT 605

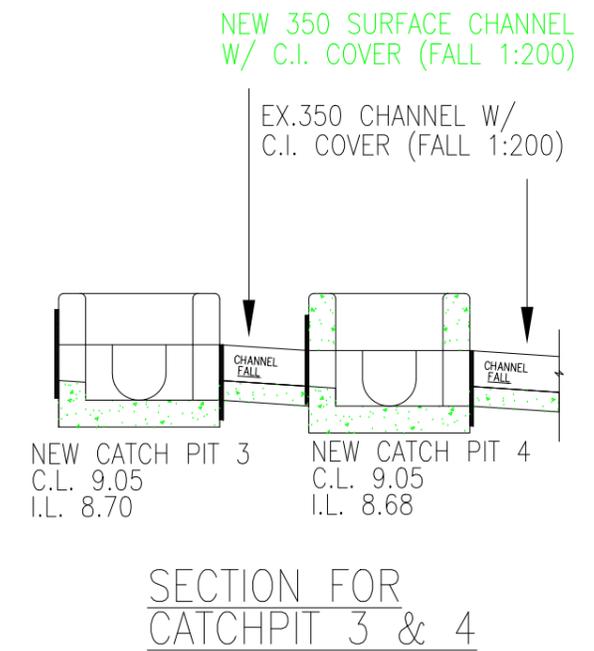
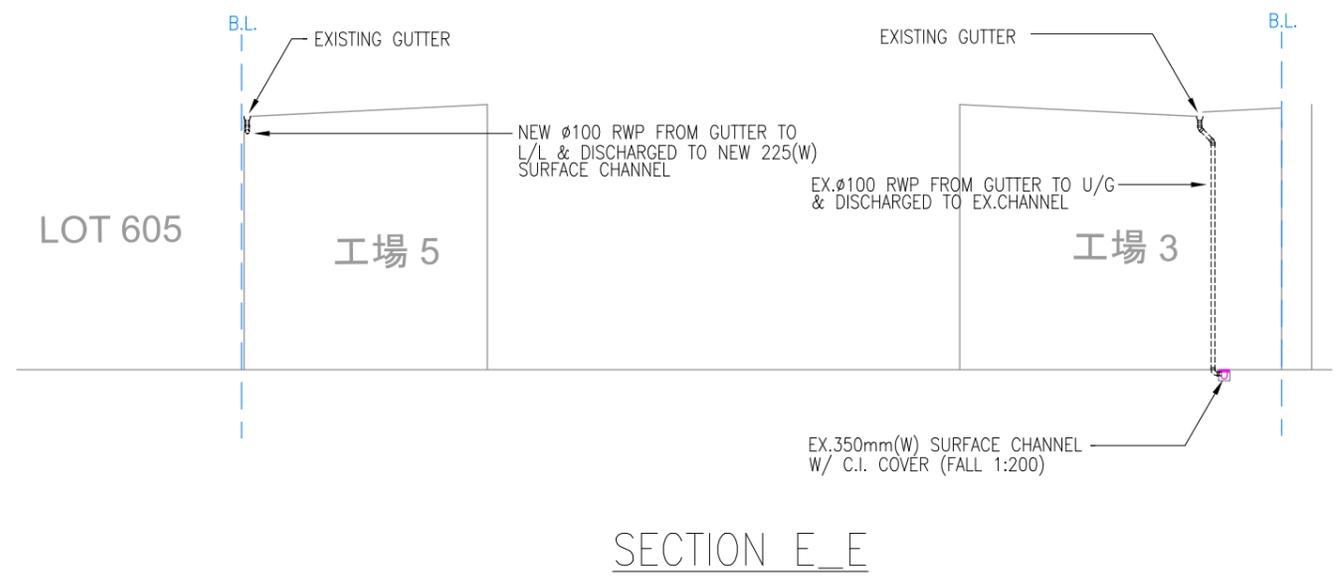
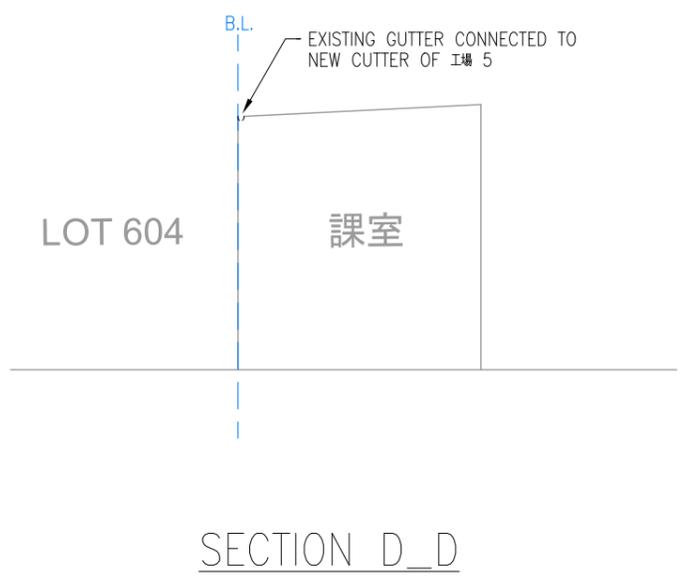
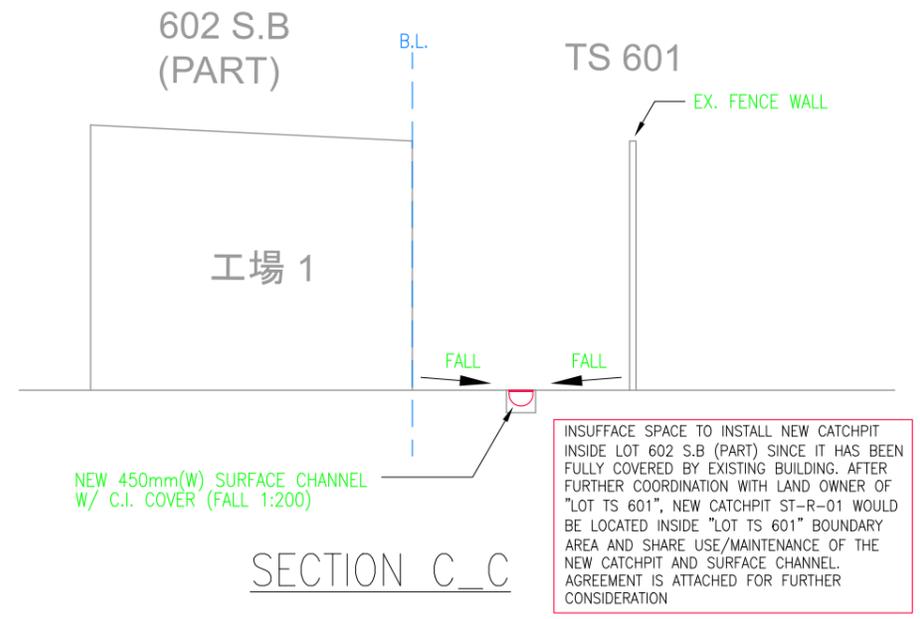
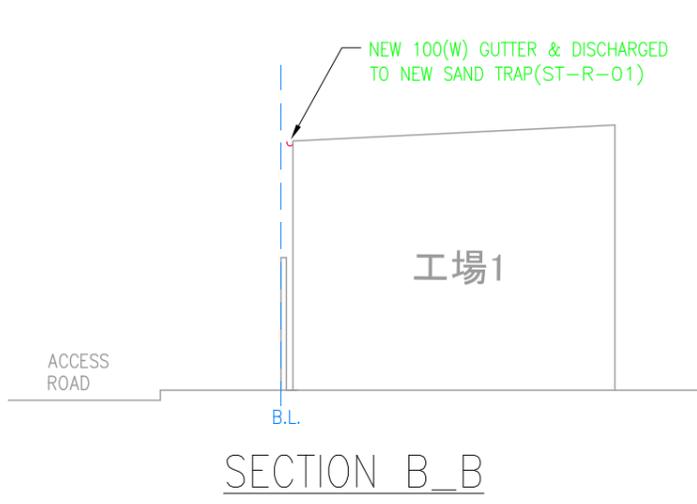
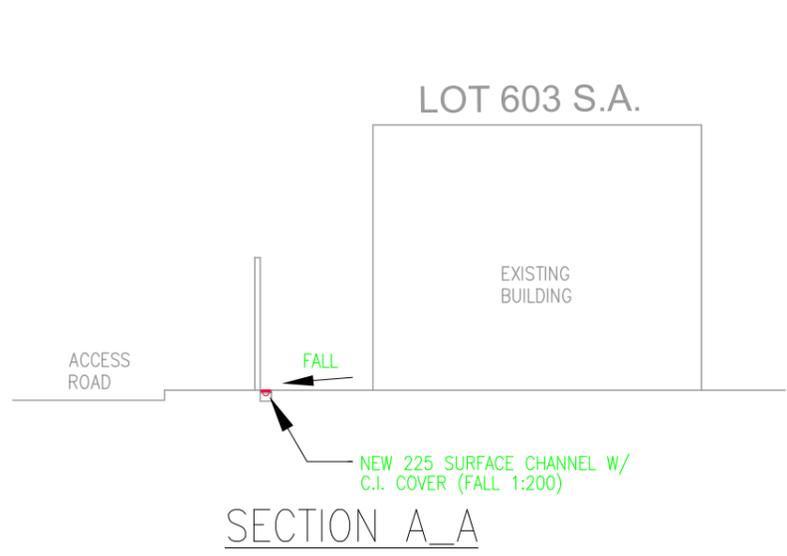
LOT 604

EX.350mm(W) SURFACE CHANNEL W/ C.I. COVER (FALL 1:200)

G/F DRAINAGE CHANNEL LAYOUT PLAN (WITH UNDERGROUND PIPE)

SCALE 1:200@A1,1:400@A3

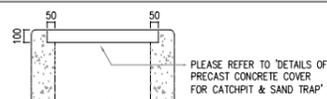
<p>M&E CONSULTANT</p> <p>VIGOR & Partners (M&E) Limited 維嘉機電顧問有限公司</p>	REVISION	DATE	TITLE	SCALE	DWN.	<p>PROJECT TRAINING CENTRE LOTS NO. 602 S.B.(Part), 602 S.C.(Part), 602 R.P., 603 S.C.(Part), 603 S.D.(Part), 603 R.P., IN D.D. 106, KAM SHING ROAD, KAM TIN, YUEN LONG.</p>	
	-	JAN 2026	DRAINAGE CHANNEL LAYOUT PLAN (WITH UNDERGROUND PIPE)	N.T.S.@ A3	DATE		
<p>K.A. KHO & ASSOCIATES ARCHITECTS & CONSULTANTS LTD. 許金安則師樓有限公司</p> <p>1710 TAI YAU BUILDING, 181 JOHNSTON ROAD, HONG KONG. TEL:(852)2833-6813 香港灣仔莊士敦道一八一號大有大廈七-0室 電話:(八五二)二八三三六八一三</p>	CHK.	DATE	DATE	DATE	DATE	<p>PLAN DRAINAGE PLAN</p>	
	APP.	DATE	DATE	DATE	DATE		JOB NO. J25140
	DATE	DATE	DATE	DATE	DATE	DWG. NO. J25140/SUB/D/01C	REVISION -



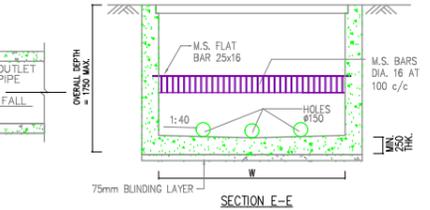
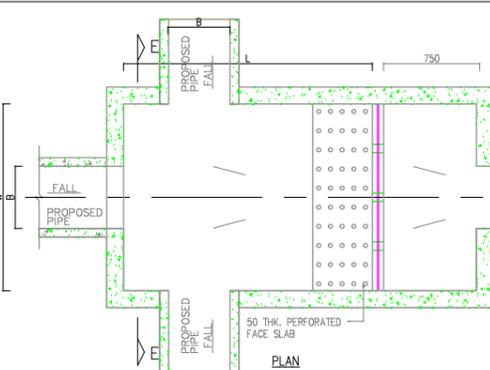
M&E CONSULTANT VIGOR & Partners (M&E) Limited 維嘉機電顧問有限公司	REVISION	DATE	TITLE	SCALE	DWN.	PROJECT TRAINING CENTRE LOTS NO. 602 S.B.(Part), 602 S.C.(Part), 602 R.P., 603 S.C.(Part), 603 S.D.(Part), 603 R.P., IN D.D. 106, KAM SHING ROAD, KAM TIN, YUEN LONG.			
	-	JAN 2026	SECTION FOR DRAINAGE LAYOUT PLAN	N.T.S.@ A3	DATE				
			 1710 TAI YAU BUILDING, 181 JOHNSTON ROAD, HONG KONG. TEL:(852)2833-8813 香港灣仔莊士敦道一八一號大有大廈一七-〇室 電話：(八五二)二八三三六八一三		CHK.	PLAN DRAINAGE PLAN	JOB NO. J25140	DWG. NO. J25140/SUB/D/01B	REVISION -
					DATE				
					APP.				
					DATE				

SAND TRAP SCHEDULE

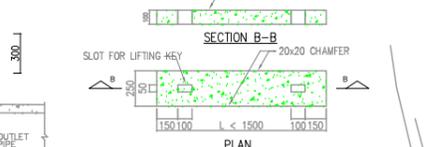
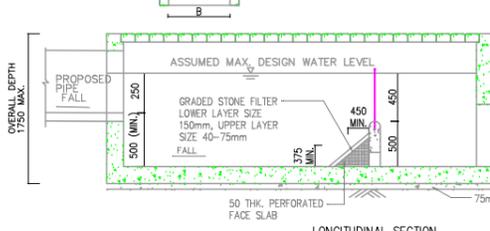
	B	L	W	C.L.	I.L.
ST-R-01	450	1200	900	9.05	8.15
ST-R-02	350	1200	900	9.45	8.55



NOTES:
ALL UNDERGROUND DRAINAGE PIPE TO BE CAST IRON PIPE TO B.S. 437 TYTON JOINT
ALTERNATIVE TOP SECTION FOR PRECAST CONCRETE COVER

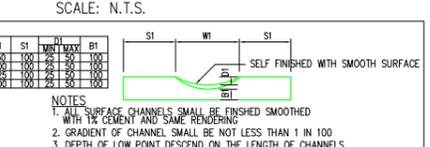
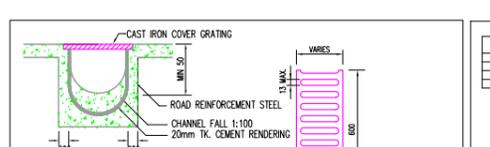


EXACT LEVELS TO BE CONFIRMED ON SITE ACCEPTED BY ENGINEER.

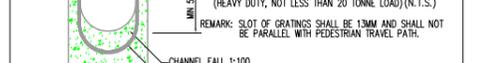


DETAILS OF PRECAST CONCRETE COVER FOR CATCHPIT & SAND TRAP
SCALE: N.T.S.

TYPICAL DETAILS OF SAND TRAP
SCALE: N.T.S.



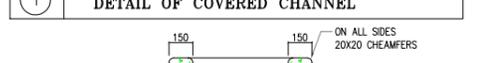
NOTES:
1. ALL SURFACE CHANNELS SHALL BE FINISHED SMOOTHED WITH 1% CEMENT AND SAME RENDERING
2. GRADIENT OF CHANNEL SHALL BE NOT LESS THAN 1 IN 100
3. DEPTH OF LOW POINT DESCEND ON THE LENGTH OF CHANNELS



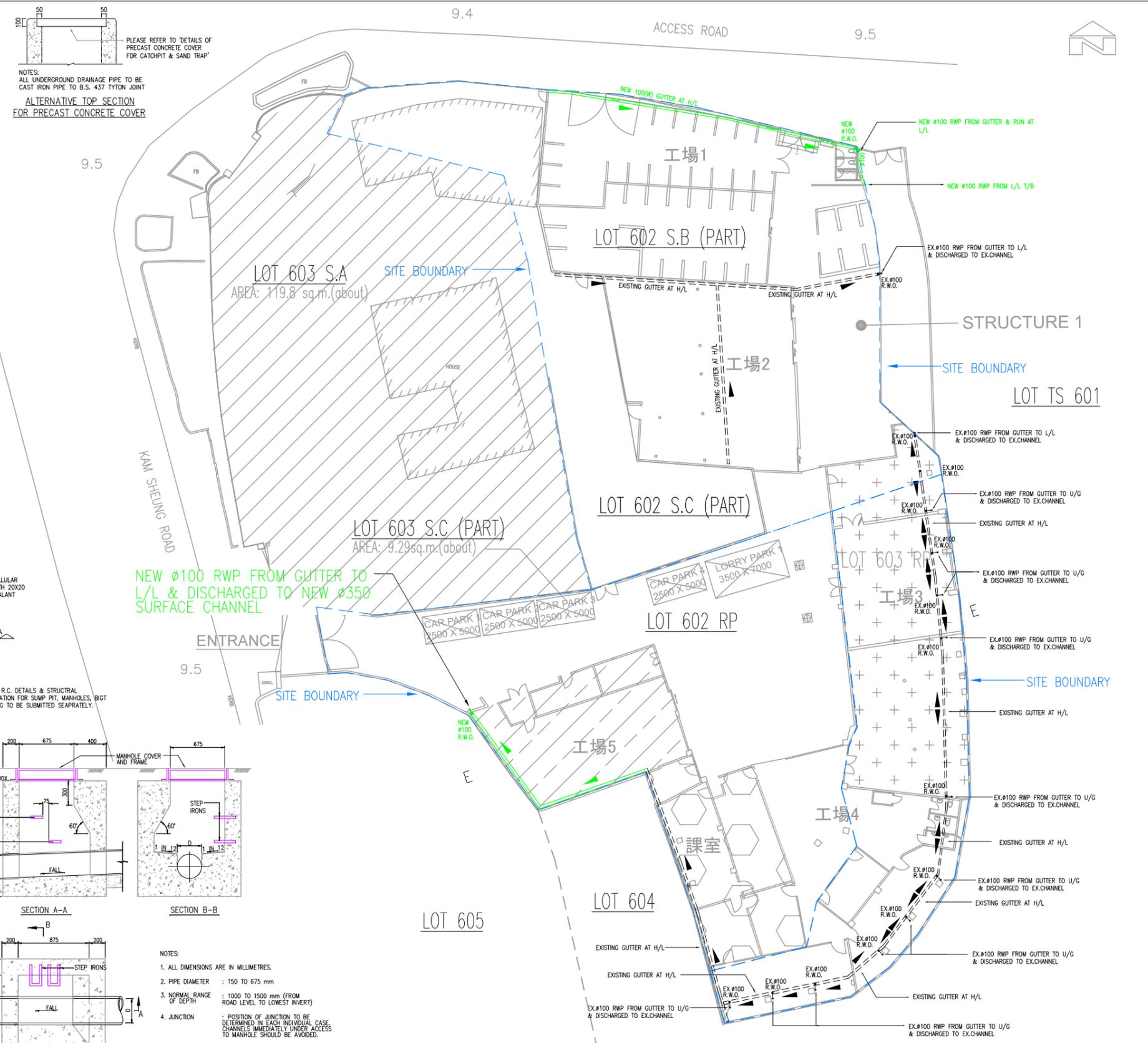
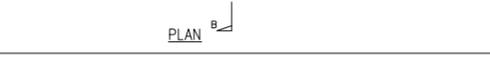
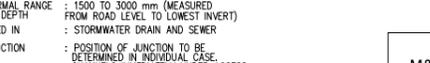
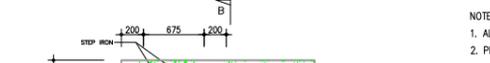
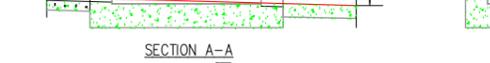
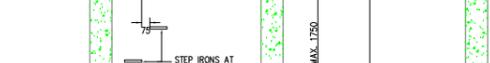
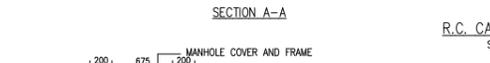
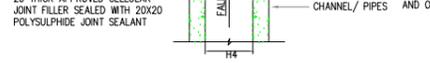
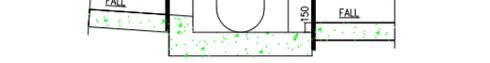
DETAIL OF COVERED CHANNEL
SCALE: N.T.S.



NOTES: R.C. DETAILS & STRUCTURAL CALCULATION FOR SUMP PIT, MANHOLES, BGT AND OTG TO BE SUBMITTED SEPARATELY.

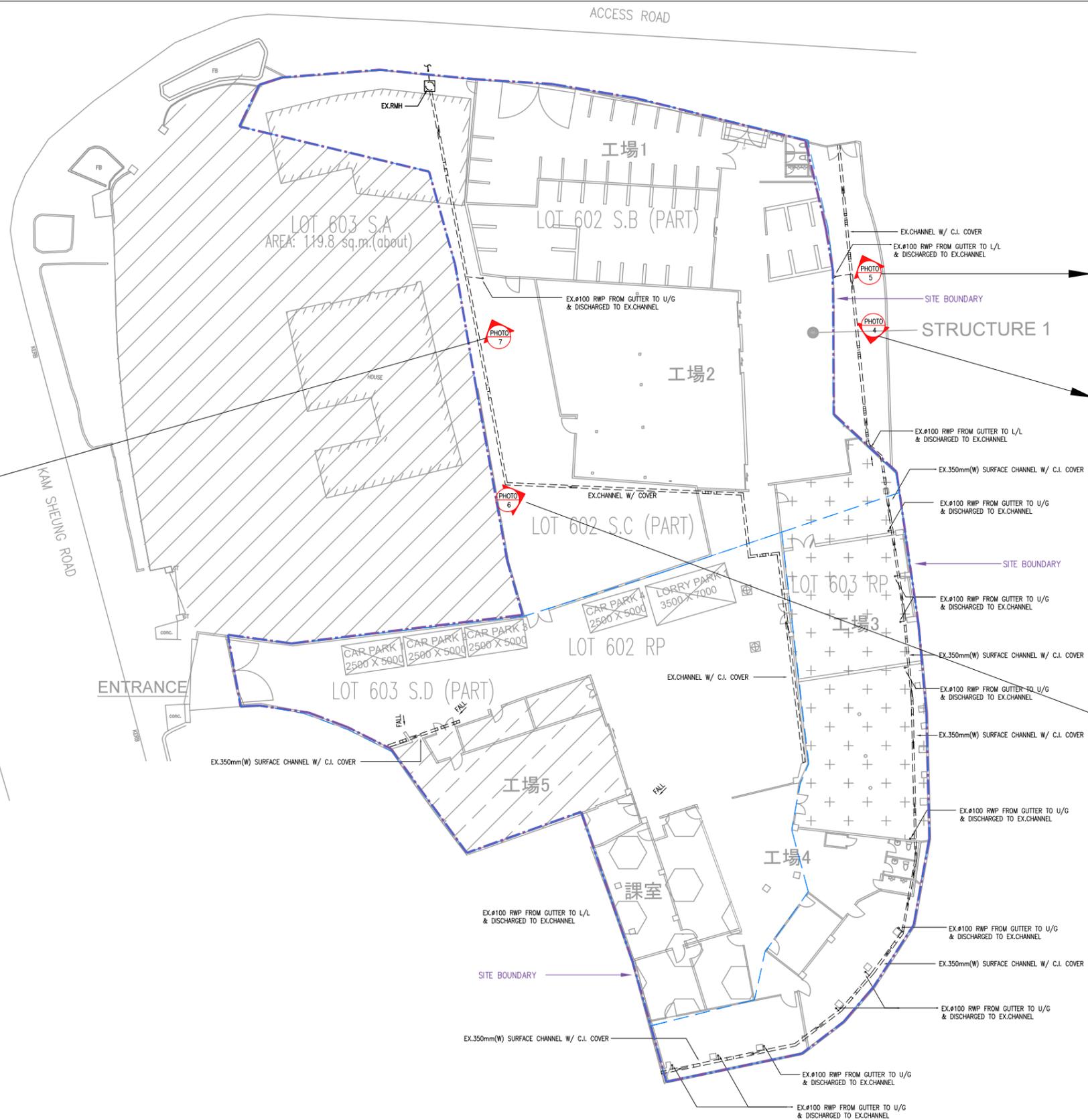
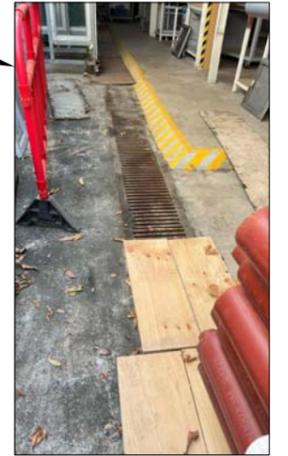


R.C. CATCH PIT DETAILS
SCALE: N.T.S.



G/F DRAINAGE PLAN (HIGH LEVEL & ABOVEGROUND)
SCALE 1:200@A1, 1:400@A3

M&E CONSULTANT	REVISION	DATE	TITLE DRAINAGE LAYOUT PLAN & DRAINAGE INSTALLATION DETAILS (HIGH LEVEL & ABOVEGROUND)(RAINWATER SYSTEM)	SCALE 1:200@A1, 1:400@A3	DWN.	DATE	PROJECT TRAINING CENTRE LOTS NO. 602 S.B(Part), 602 S.C(Part), 602 R.P., 603 S.C(Part), 603 S.D(Part), 603 R.P., IN D.D. 106, KAM SHING ROAD, KAM TIN, YUEN LONG.
	A	OCT 2025					
VIGOR & Partners (M&E) Limited 維嘉機電顧問有限公司			K.A. KHO & ASSOCIATES ARCHITECTS & CONSULTANTS LTD. 許金安則師樓有限公司			DATE	PLAN
			1710 TAI YAU BUILDING, 181 JOHNSTON ROAD, HONG KONG. TEL:(852)2833-6813 香港灣仔莊士敦道一八一號大有大廈一七〇室 電話:(八五二)二八三三六八一三			DATE	J25140
							DWG. NO.
							J25140/SUB/D/02
							REVISION
							A



EXISTING DRAINAGE PLAN (UNDERGROUND)
SCALE 1:200@A1, 1:400@A3

M&E CONSULTANT VIGOR & Partners (M&E) Limited 維嘉機電顧問有限公司	REVISION	DATE	TITLE	SCALE	DWN.	PROJECT TRAINING CENTRE LOTS NO. 602 S.B.(Part), 602 S.C.(Part), 602 R.P., 603 S.C.(Part), 603 S.D.(Part), 603 R.P., IN D.D. 106, KAM SHING ROAD, KAM TIN, YUEN LONG.	
	-	DEC 2025	EXISTING DRAINAGE LAYOUT PLAN	1:200@A1, 1:400@A3	DATE		
K.A. KHO & ASSOCIATES ARCHITECTS & CONSULTANTS LTD. 許金安則師樓有限公司 1710 TAI YAU BUILDING, 181 JOHNSTON ROAD, HONG KONG. TEL:(852)2833-6813 香港灣仔莊士敦道一八一號大有大廈一七〇室 電話：(八五二)二八三三六八一三	CHK.	DATE	APP.	DATE	PLAN	JOB NO. DWG. NO. REVISION	
					DRAINAGE PLAN		J25140 J25140/SUB/D/03 -



New Land Parcel and Building FSDTs are released on 30 December 2025. See [What's New](#).



空間數據共享平台
Common Spatial
Data Infrastructure

CATALOG

MAP

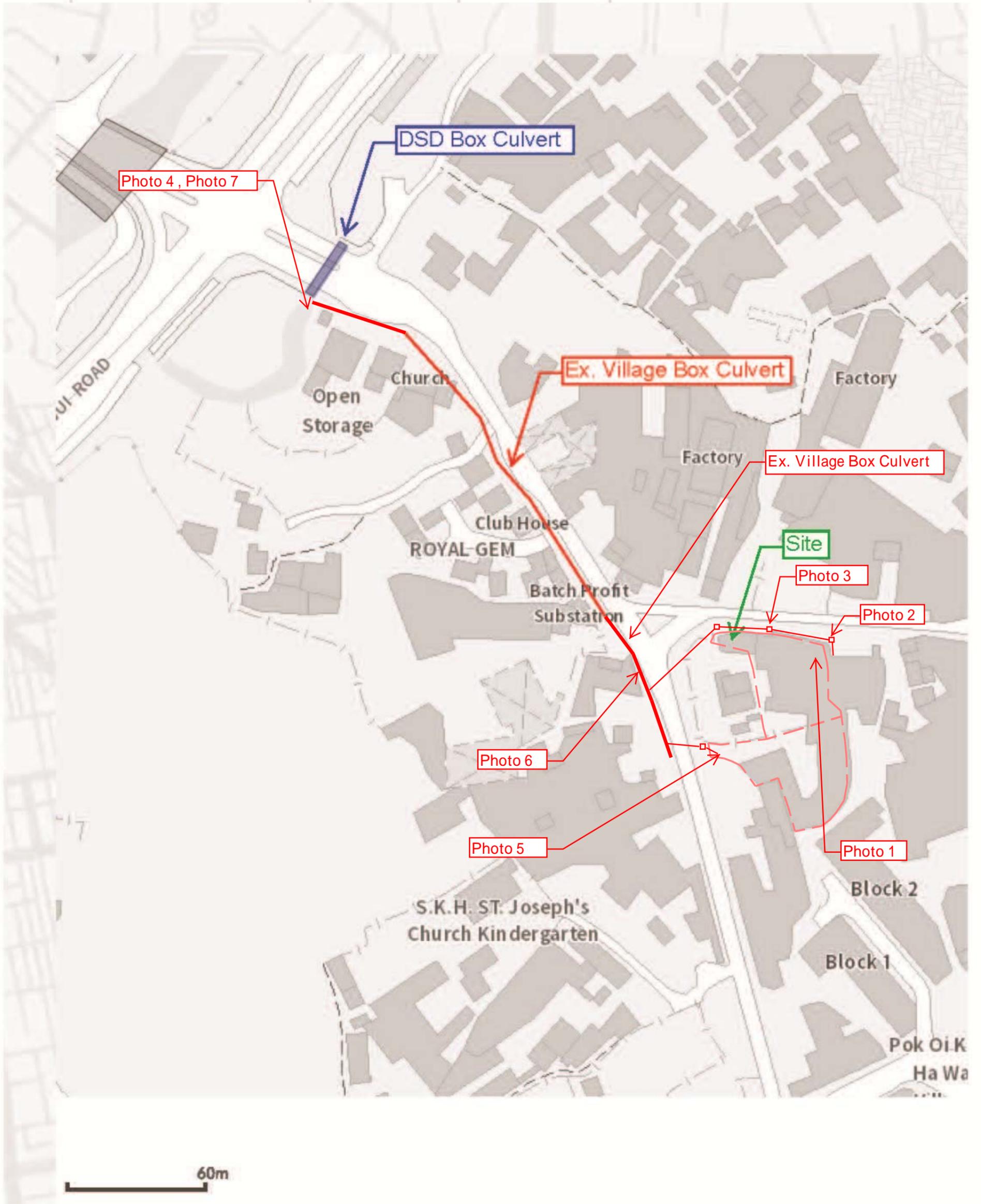


Photo 1
(Lot 602
S.B.(Part))

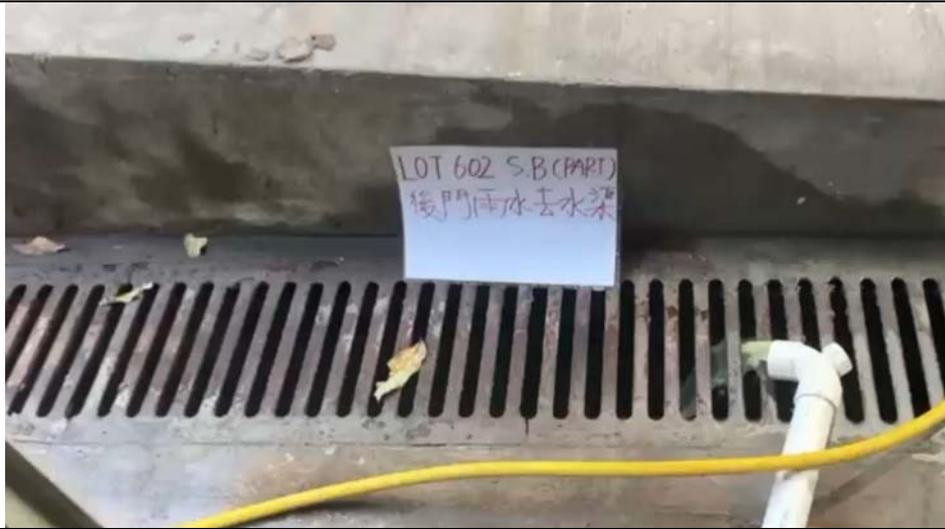


Photo 2
(Lot 602
S.B.(Part))



Photo 3
(Lot 602
S.B.(Part))



Photo 4
(Existing
Village Box
Culvert
discharged
to DSD Box
Culvert)



Photo 5
(LOT 603
SD (part))



Photo 6
(LOT 603
SD (part))



Photo 7
(Existing
DSD Box
Culvert)



$k_s = 0.60 \text{ mm}$
 $S = 0.00300 \text{ to } 0.01000$

Water (or sewage) at 15°C ;
 full bore conditions.

A18

(p.4 of 6)

ie hydraulic gradient =
 1 in 333 to 1 in 100

velocities in ms^{-1}
 discharges in litres/sec

Gradient	(Equivalent) Pipe diameters in mm													
	150	200	225	250	275	300	350	375	400	450	500	525	600	630
0-00300	0.543	0.657	0.709	0.759	0.807	0.854	0.943	0.985	1.027	1.106	1.183	1.220	1.327	1.368
1/ 333	9.6035	20.629	28.193	37.269	47.961	60.368	90.705	108.82	129.01	175.96	232.21	264.02	375.09	426.41
0-00320	0.562	0.679	0.733	0.785	0.834	0.882	0.974	1.018	1.061	1.143	1.222	1.260	1.371	1.413
1/ 313	9.9260	21.319	29.135	38.513	49.560	62.379	93.723	112.43	133.29	181.80	239.92	272.78	387.53	440.53
0-00340	0.579	0.700	0.756	0.809	0.861	0.910	1.005	1.050	1.094	1.179	1.260	1.299	1.413	1.457
1/ 294	10.239	21.988	30.048	39.719	51.110	64.329	96.648	115.94	137.45	187.47	247.39	281.27	399.58	454.23
0-00360	0.597	0.721	0.778	0.833	0.886	0.937	1.034	1.081	1.126	1.213	1.297	1.337	1.455	1.500
1/ 278	10.542	22.638	30.934	40.889	52.616	66.222	99.488	119.35	141.49	192.96	254.64	289.51	411.28	467.52
0-00380	0.613	0.741	0.800	0.856	0.910	0.963	1.063	1.111	1.157	1.247	1.333	1.374	1.495	1.541
1/ 263	10.837	23.270	31.797	42.028	54.080	68.063	102.25	122.66	145.41	198.31	261.69	297.53	422.66	480.46
0-00400	0.630	0.760	0.821	0.879	0.935	0.988	1.091	1.140	1.188	1.280	1.368	1.411	1.534	1.582
1/ 250	11.125	23.885	32.637	43.137	55.506	69.856	104.94	125.89	149.23	203.52	268.56	305.34	433.74	493.05
0-00420	0.645	0.779	0.841	0.901	0.958	1.013	1.118	1.168	1.217	1.312	1.402	1.446	1.572	1.621
1/ 238	11.405	24.486	33.456	44.219	56.896	71.606	107.57	129.03	152.96	208.60	275.26	312.96	444.55	505.34
0-00440	0.661	0.798	0.862	0.922	0.981	1.037	1.145	1.196	1.246	1.343	1.435	1.480	1.610	1.660
1/ 227	11.679	25.072	34.256	45.276	58.255	73.314	110.13	132.11	156.60	213.57	281.81	320.39	455.11	517.34
0-00460	0.676	0.816	0.881	0.943	1.003	1.061	1.171	1.223	1.275	1.373	1.468	1.514	1.646	1.697
1/ 217	11.947	25.645	35.038	46.308	59.582	74.983	112.63	135.11	160.16	218.42	288.20	327.66	465.43	529.06
0-00480	0.691	0.834	0.900	0.964	1.025	1.084	1.196	1.250	1.302	1.403	1.500	1.546	1.682	1.734
1/ 208	12.209	26.206	35.804	47.319	60.882	76.617	115.09	138.05	163.65	223.16	294.46	334.78	475.52	540.54
0-00500	0.705	0.852	0.919	0.984	1.046	1.107	1.221	1.276	1.329	1.432	1.531	1.579	1.717	1.770
1/ 200	12.466	26.755	36.553	48.308	62.154	78.217	117.49	140.93	167.06	227.81	300.59	341.74	485.41	551.78
0-00525	0.723	0.873	0.942	1.009	1.073	1.134	1.252	1.308	1.363	1.468	1.569	1.618	1.760	1.814
1/ 190	12.780	27.426	37.469	49.518	63.709	80.173	120.42	144.45	171.23	233.49	308.08	350.26	497.50	565.51
0-00550	0.741	0.894	0.965	1.033	1.098	1.161	1.281	1.339	1.395	1.503	1.606	1.656	1.801	1.857
1/ 182	13.086	28.082	38.364	50.700	65.228	82.083	123.29	147.88	175.30	239.04	315.40	358.58	509.30	578.93
0-00575	0.757	0.914	0.987	1.056	1.123	1.188	1.311	1.369	1.427	1.537	1.643	1.694	1.842	1.899
1/ 174	13.385	28.723	39.239	51.854	66.713	83.950	126.09	151.24	179.28	244.18	322.55	366.70	520.84	592.04
0-00600	0.774	0.934	1.008	1.079	1.148	1.214	1.339	1.399	1.458	1.571	1.679	1.731	1.881	1.940
1/ 167	13.678	29.350	40.094	52.984	68.165	85.777	128.83	154.53	183.17	249.12	328.55	373.80	528.98	604.87
0-00625	0.790	0.954	1.029	1.102	1.172	1.239	1.367	1.428	1.488	1.603	1.713	1.767	1.921	1.981
1/ 160	13.965	29.964	40.933	54.091	69.588	87.567	131.51	157.75	186.99	254.97	336.40	382.45	543.19	617.44
0-00650	0.806	0.973	1.050	1.124	1.195	1.264	1.394	1.457	1.518	1.635	1.748	1.802	1.959	2.020
1/ 154	14.247	30.566	41.754	55.176	70.983	89.321	134.15	160.90	190.72	260.06	343.12	390.08	554.03	629.75
0-00675	0.822	0.992	1.070	1.146	1.218	1.288	1.421	1.485	1.547	1.667	1.781	1.837	1.997	2.059
1/ 148	14.523	31.157	42.560	56.240	72.351	91.041	136.73	164.00	194.39	265.06	349.71	397.57	564.66	641.84
0-00700	0.837	1.010	1.090	1.167	1.241	1.312	1.447	1.512	1.576	1.697	1.814	1.871	2.034	2.097
1/ 143	14.794	31.736	43.351	57.285	73.694	92.730	139.26	167.04	197.99	269.97	356.18	404.93	575.09	653.70
0-00725	0.852	1.028	1.110	1.188	1.263	1.335	1.473	1.539	1.604	1.728	1.846	1.904	2.070	2.134
1/ 138	15.060	32.306	44.129	58.311	75.013	94.389	141.75	170.02	201.53	274.78	362.53	412.15	585.35	665.35
0-00750	0.867	1.046	1.129	1.208	1.285	1.358	1.499	1.566	1.631	1.758	1.878	1.937	2.106	2.171
1/ 133	15.321	32.866	44.892	59.319	76.310	96.020	144.20	172.95	205.00	279.52	368.78	419.25	595.42	676.80
0-00800	0.896	1.081	1.167	1.249	1.327	1.403	1.548	1.618	1.685	1.816	1.940	2.001	2.175	2.243
1/ 125	15.832	33.958	46.383	61.288	78.840	99.202	148.97	178.68	211.79	288.76	380.97	433.10	615.09	699.14
0-00850	0.924	1.115	1.203	1.287	1.369	1.447	1.596	1.668	1.738	1.872	2.000	2.063	2.243	2.312
1/ 118	16.327	35.016	47.828	63.195	81.292	102.29	153.60	184.22	218.36	297.72	392.78	446.53	634.14	720.80
0-00900	0.951	1.147	1.238	1.325	1.409	1.489	1.641	1.714	1.783	1.920	2.059	2.123	2.308	2.380
1/ 111	16.807	36.044	49.231	65.047	83.674	105.28	158.00	189.82	223.16	299.72	396.78	451.53	640.14	728.80
0-00950	0.978	1.179	1.272	1.362	1.448	1.531	1.689	1.764	1.833	1.980	2.116	2.182	2.372	2.445
1/ 105	17.274	37.044	50.595	66.849	85.990	108.19	162.46	194.85	230.95	314.88	415.41	472.24	670.64	762.28
0-01000	1.003	1.210	1.306	1.398	1.486	1.571	1.733	1.810	1.886	2.032	2.171	2.239	2.434	2.509
1/ 100	17.729	38.018	51.924	68.604	88.246	111.03	166.72	199.95	237.00	323.12	426.27	484.59	688.17	782.20
	0.77	0.78	0.79	0.79	0.80	0.80	0.81	0.81	0.82	0.82	0.83	0.83	0.84	0.84

For 300mm Precast Concrete pipe

For 225mm Precast Concrete Pipe

$V_{r(0.5)medial}$ for half-full circular pipes.

$S = 0.00300 \text{ to } 0.01000$

$k_s = 0.60 \text{ mm}$

申請編號：KTS / 1079

本人 李國祥 為 LOT TS 601 業主, 本人不反對與 LOT 602 S.B (PART) (香港工會聯合會、工聯會職業再訓練中心 及 香港建造業總工會用地) 共用現有及新建的雨水明渠及沙井, 並共同清潔以確保渠道暢通.

簽署: 李國祥

日期: 16. 1. 2016