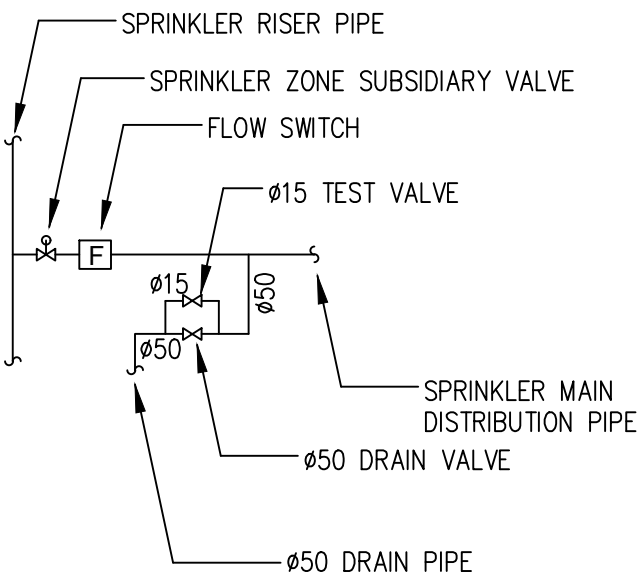


Appendix I
Fire Service Installations Proposal



DETAIL INSTALLATION OF SPRINKLER
FLOW SWITCH ASSEMBLY
(NOT TO SCALE)

PIPE COLOUR CODE

PIPE SIZE mm	COLOUR CODE	
25	GREEN	—
32	RED	—
40	PURPLE	—
50	YELLOW	—
65	LIGHT BLUE	—
80	DARK GREEN	—
100	LIGHT BROWN	—
150	BROWN	—
200	DARK BLUE	—

ABBREVIATION

FS	FIRE SERVICES
SPR	SPRINKLER
T/A	TO ABOVE
T/B	TO BELOW
F/A	FROM ABOVE
F/B	FROM BELOW
H/L	HIGH LEVEL
M/L	MIDDLE LEVEL
L/L	LOW LEVEL
C/W	COMPLETE WITH
AAV	AUTOMATIC AIR VENT
FSD	FIRE SERVICES DEPARTMENT
UG	UNDERGROUND
FR	FIRE RESISTANT

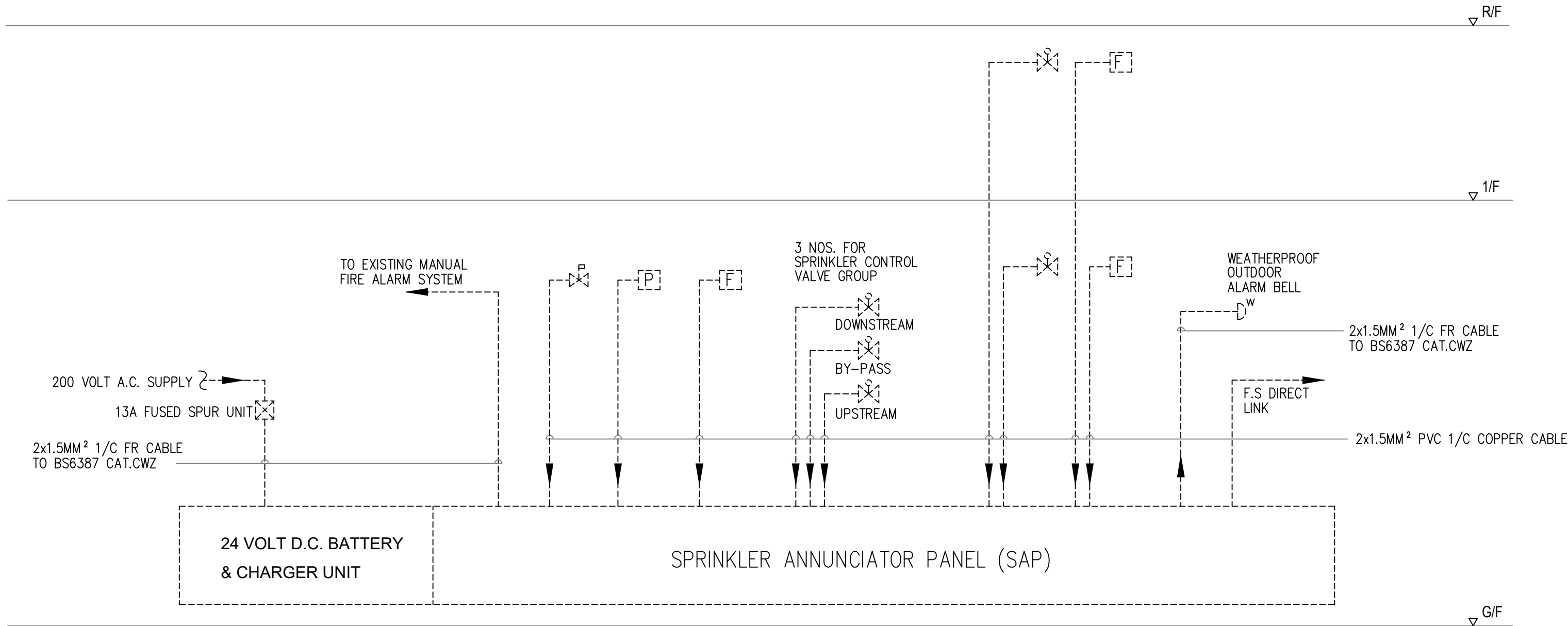
FS NOTES

- AN IMPROVISED SPRINKLER SYSTEM WITH WATER SUPPLIED FROM A DIRECT CONNECTION TO THE CITY TOWN MAINS AND IN ACCORDANCE WITH LOSS PREVENTION COUNCIL RULES FOR AUTOMATIC SPRINKLER INSTALLATIONS SHALL BE PROVIDED FOR THE PREMISES. THE HAZARD GROUP IS ORDINARY HAZARD GROUP 1 (OH1).
- SYSTEM ALARM OF THE IMPROVISED SPRINKLER SYSTEM SHALL BE CONNECTED TO THE FIRE SERVICES COMMUNICATION CENTRE OF FIRE SERVICES DEPARTMENT BY DIRECT TELEPHONE LINE.
- FOR HEADROOM BELOW 2 METERS, SPRINKLER GUARD SHALL BE PROVIDED FOR SPRINKLER HEAD.
- FS WATER SUPPLY SYSTEM IS SUBJECT TO THE REQUIREMENT AND APPROVAL OF THE WATER SUPPLIES DEPARTMENT (WSD). THE SIZE AND LOCATION OF THE WATER CHECK METER SHOULD BE DETERMINED BY THE WSD.
- ALL ASSOCIATED BUILDING WORKS ARE SUBJECT TO THE CONTROL UNDER THE BUILDINGS ORDINANCE. APPROVAL/CONSENT FROM THE BUILDINGS DEPARTMENT IS REQUIRED PRIOR TO THE COMMENCEMENT OF THE INSTALLATION WORKS.
- ALL NEWLY INSTALLED ELECTRICAL INSTALLATION WORKS SHALL BE COMPLIED WITH THE COP FOR THE ELECTRICITY (WIRING) REGULATIONS. SUPPLY RULES OF RELEVANT SUPPLY COMPANY AND ALLIED WITH THE EXISTING ELECTRICAL INSTALLATIONS.
- THE MEANS OF ESCAPE SHOULD NOT BE OBSTRUCTED BY ANY FS INSTALLATIONS.
- THIS SUBMISSION IS THE EXTEND OF AN EXISTING IMPROVISED SPRINKLER SYSTEM.
- EXISTING FIRE SERVICES INSTALLATION SHOULD BE REMAINED UNCHANGED AND SHOWN IN DOTTED LINE, NEW INSTALLATION SHOWN IN CONTINUOUS LINE IS NEW INSTALLATION IN THIS SUBMISSION.
- SPRINKLER EXTENSION AREAS ARE APPROXIMATELY 650 AND 495 SQUARE METER FOR G/F AND 1/F RESPECTIVELY.

LEGEND

- NEW INSTALLATION/PIPEWORK/EQUIPMENT/CABLE
--- EXISTING INSTALLATION/PIPEWORK/EQUIPMENT/CABLE
- 15mm SPRINKLER HEAD OPERATED AT 68 °C (UNDER SLAB)
⊗ 15mm SPRINKLER HEAD OPERATED AT 68 °C (UNDER FALSE CEILING)
⊙ 15mm SPRINKLER HEAD OPERATED AT 68 °C UNDER OBSTRUCTION
⊕ 15mm SPRINKLER HEAD OPERATED AT 93 °C NEAR STOVES UNDER EXHAUST HOOD WITH PROTECTIVE GUARD
▽ 15mm SPRINKLER HEAD (FOR SCHEMATIC PIPING DIAGRAM)
- ⋈ GATE VALVE
⋈ GATE VALVE WITH PLUG
⊗ ZONE SUBSIDIARY STOP VALVE C/W ELECTRICAL MONITORING DEVICE
⋈ NON-RETURN VALVE
⋈ Y-STRAINER
⊕ SPRINKLER FLOW SWITCH ASSEMBLY REFER TO DETAIL INSTALLATION
⊕ SPRINKLER FLOW SWITCH
⋈ FIRE ALARM BELL (w DENOTES WEATHERPROOF)
⊕ PRESSURE SWITCH FOR 0.5 BAR PRESSURE DROP SIGNAL
⋈ SPRINKLER INLET
AAV AUTOMATIC AIR VENT
⊕ CHECK METER POSITION
⊕ SPRINKLER ANNUNCIATOR PANEL
⊕ SPRINKLER ALARM CONTROL VALVE WITH WATER MOTOR ALARM GONG
⊕ SPR PROVING PIPE
⊕ ANTI-POLLUTION VALVE WITH ELECTRICAL MONITORING DEVICE (MONITORED BUTTERFLY VALVE)

SCHEMATIC PIPING DIAGRAM FOR IMPROVISED SPRINKLER SYSTEM



SCHEMATIC CONTROL WIRING DIAGRAM FOR IMPROVISED SPRINKLER SYSTEM

FSD REF:		
FEHD REF:		
V. D. REF:		
WWO. REF:		
REV	DATE	DESCRIPTION
CONTRACTOR :		
 新聯消防工程有限公司 SUN'S FIRE ENGINEERING CO. LTD. 		
PROJECT:		
"COMMERCIAL/RESIDENTIAL" AND "RESIDENTIAL (GROUP D)" ZONES, LOTS 3250 S.B. ss.24 S.A. RP AND 3250 S.B. ss.34 RP IN D.D. 104 AND ADJOINING GOVERNMENT LAND. MAI PO, YUEN LONG. N.T.		
TITLE:		
FS NOTES, LEGEND, ABBREVIATION, PIPE COLOUR CODE, SCHEMATIC PIPING LINE DIAGRAM AND SCHEMATIC CONTROL WIRING DIAGRAM FOR IMPROVISED SPRINKLER SYSTEM		
DRAWN BY :		
CHECKED BY:		
APPROVED BY :		
JOB NO. :		
SCALE :		NOT TO SCALE
DATE :		04/06/2025
REVISION :		D
DWG. NO.:		FS-1



1/F PLAN

FSD REF:

FEHD REF:

V. D. REF:

WWO. REF:

REV.	DATE	DESCRIPTION
CONTRACTOR :  新聯消防工程有限公司 SUN'S FIRE ENGINEERING CO., LTD.		

PROJECT:
"COMMERCIAL/RESIDENTIAL" AND
"RESIDENTIAL (GROUP D)" ZONES.
LOTS 3250 S.B. ss.24 S.A. RP AND 3250
S.B.ss.34 RP IN D.D. 104 AND ADJOINING
GOVERNMENT LAND. MAI PO, YUEN LONG.
N.T.

TITLE:

1/F LAYOUT PLAN FOR
IMPROVISED SPRINKLER
SYSTEM AND LEGEND

DRAWN BY :

CHECKED BY:

APPROVED BY :

JOB NO. :

SCALE : 1 : 100 @ A1

DATE : 04/06/2025

REVISION : D

DWG. NO.: FS-3

HYDRAULIC CALCULATION FOR IMPROVISED SPRINKLER SYSTEM

Ordinary Hazard (OH1) Installation

The installation is designed from the pre-calculated table in LPC rule and is determined by two sections:
1) The friction loss shall not exceed 0.5 bar at a flow of 1000 l/min. for the highest design point and the sprinkler main valve.

equivalent length of pipe and fittings from the alarm valve to the design point B at 1/F is calculated below:

Pipe size (mm)	no. of turns (3.04m per turn)	no. of tee (6.1m per tee)	no. of gate valve (0.81m per valve)	no. of control valve (5.07m per valve)	Total equivalent length (m)	Pipe length (m)	Total pipe length (m)	friction loss per meter (mbar)	Total friction loss (mbar)
100	6	2	2	1	37.13	34.64	71.77	4.4	315.79

100mm total equivalent length = 6x3.04 + 2x6.1 + 2x0.81 + 5.07 = 37.13 m

Pressure loss per unit of pipe for design flow rates in OH installation shall be refer to LPC table 59

Total friction loss = 315.79 mbar

Refer to LPC rule, the friction loss at 1000 l/min. is 315.79 mbar which is less than 500 mbar as required.

2) From LPC clause 15.2 table 15, for OH1; minimum pressure require at highest sprinkler:

=375 l/min. @1 bar & 540 l/min. @0.7 bar

*S is the static pressure difference between the 'C' gauge and the highest sprinkler in the installation.

Pipe run from Government main to control valve	Pipe size (mm)	no. of turns (3.04m per turn)	no. of tee (6.1m per tee)	no. of gate valve (0.81m per valve)	no. of non-return valve (5.07m per valve)	no. of buttrfly valve (4.56m per valve)	Total equivalent length (m)	Pipe length (m)	Total pipe length (m)
	100	10	1	3	2	1	53.63	44.36	97.99

100mm total equivalent length = 10x3.04 + 6.1 + 3x0.81 + 2x5.07 + 4.56 = 53.63 m

From LPC, clause 18.22 hydraulic calculation is as following:

k = 1.24 x 10⁻⁵(for 100mm dia. Pipe)

P_{loss} = k x Q^{1.85} x L

Pipe pressure loss from government town main to control valve :

a. At 375 l/min.
P_{loss} = 1.24 x 10⁻⁵ x 375^{1.85} x 97.99 = 0.07 bar

b. At 540 l/min.
P_{loss} = 1.24 x 10⁻⁵ x 540^{1.85} x 97.99 = 0.138 bar

Pipe pressure loss from control valve to design point B (L refer item 1)

c. At 375 l/min.
P_{loss} = 1.24 x 10⁻⁵ x 375^{1.85} x 71.77 = 0.051 bar

d. At 540 l/min.
P_{loss} = 1.24 x 10⁻⁵ x 540^{1.85} x 71.77 = 0.101 bar

Static head difference from control valve to highest sprinkler head (*S)

1.74 + 2.6 = 4.34 m. = 0.43 bar

Therefore, minimum main pressures required at the highest sprinkler head to control valve:

For 375 l/min. @1 bar

= (1 + 0.43 + 0.051) bar = 1.481 bar

For 540 l/min. @0.7 bar

= (0.7 + 0.43 + 0.101) bar = 1.231 bar

Static head difference from Government town main to control valve (*T)

1+1.2. = 2.2m = 0.22 bar

Pressure obtains at control valve from Government main:

Government town main water pressure provided = 2 bar

Pressure available at control valve:

Pressure at 375 l/min. = 2.0 - 0.07 - 0.22 = 1.71 bar > pressure required 1.481 bar

Pressure at 540 l/min. = 2.0 - 0.138 - 0.22 = 1.642 bar > pressure required 1.231 bar

Finally, minimum main pressures required at highest sprinkler head to Government town main:

= {pressure required + static (*S+*T) + pipe pressure loss} < Government pressure available

For 375 l/min. @1 bar:

= (1 + 0.43 +0.22 + 0.07 + 0.051) bar = 1.771 bar < pressure available at Government main (2 bar)

For 540 l/min. @0.7 bar:

= (0.7 + 0.43 + 0.22 + 0.138 + 0.101) bar = 1.589 bar < pressure available at Government main (2 bar)

CONCLUSION: THE GOVERNMENT MAIN SUPPLY WATER PRESSURE CAN CATER THE FLOW REQUIRED AT HE HIGHEST SPRINKLER HEAD AND THE DESIGN OPERATING PRESSURES AT CONTROL VALVE AT REQUIRED WATER PRESSURE ACCORDING TO THE CODE OF PRACTICE FOR MINIMUM FIRE SERVICE INSTALLATIONS AND EQUIPMENT AND CIRCULAR LETTER NO. 4/96 AS FOLLOWS:

REQUIRED

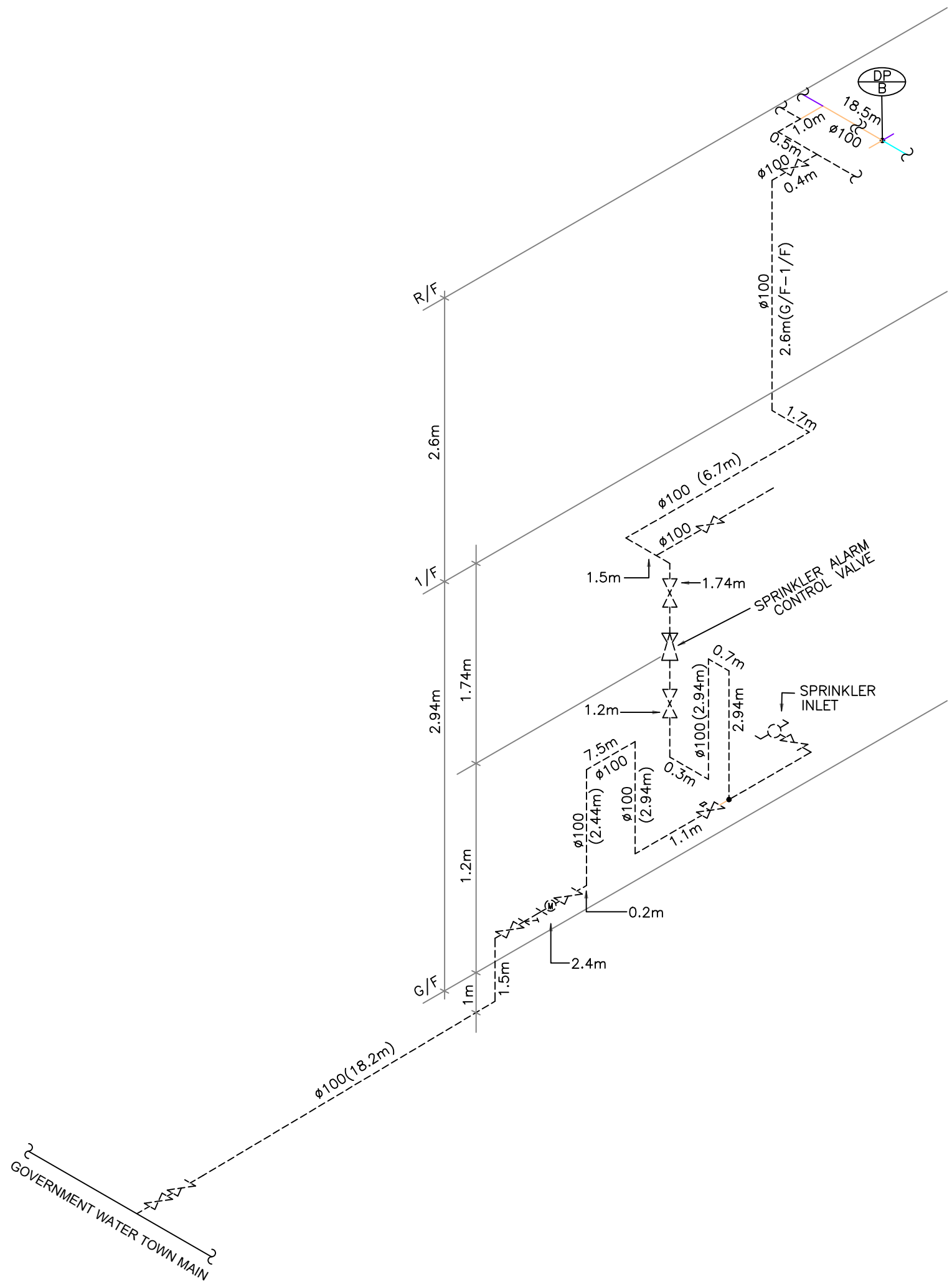
For 375 l/min. @1.481 bar

For 540 l/min. @1.231 bar

PROVIDED

For 375 l/min. @1.71 bar

For 375 l/min. @1.642 bar



ISOMETRIC VIEW FOR CALCULATION OF IMPROVISED SPRINKLER SYSTEM
(NOT TO SCALE)

FSD REF:

FEHD REF:

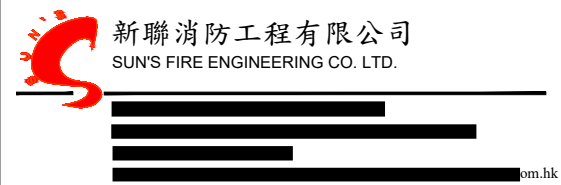
V. D. REF:

WWO. REF:

A 07/23 REVISED AS PER FSD'S COMMENT ON 3/7/2023

REV. DATE DESCRIPTION

CONTRACTOR :



PROJECT:
"COMMERCIAL/RESIDENTIAL" AND
"RESIDENTIAL (GROUP D)" ZONES.
LOTS 3250 S.B. ss.24 S.A. RP AND 3250
S.B.ss.34 RP IN D.D. 104 AND ADJOINING
GOVERNMENT LAND. MAI PO, YUEN LONG.
N.T.

TITLE:

HYDRAULIC CALCULATION
AND ISOMETRIC VIEW FOR
IMPROVISED SPRINKLER
SYSTEM

DRAWN BY :

CHECKED BY:

APPROVED BY :

JOB NO. :

SCALE : NOT TO SCALE

DATE : 04/06/2025

REVISION : D

DWG. NO.: FS-4

Appendix II

Accepted Drainage Proposal under Previous Application No. A/YL-MP/342

規劃署

粉嶺、上水及元朗東規劃處
新界荃灣青山公路 388 號
中染大廈 22 樓 2202 室

**Planning Department**

Fanling, Sheung Shui & Yuen Long East
District Planning Office
Unit 2202, 22/F, CDW Building,
388 Castle Peak Road, Tsuen Wan, N.T.

來函檔號 Your Reference : DD104 Lot 3250
本署檔號 Our Reference : () in TPB/A/YL-MP/342
電話號碼 Tel. No. : 3168 4072
傳真機號碼 Fax No. : 3168 4074 / 3168 4045

By Post and Fax

17 September 2024

R-riches Property Consultants Ltd.

(Attn.: Mr Danny NG)

Dear Sir,

**Compliance with Approval Condition (d)
The Submission of a Revised Drainage Proposal**

**Temporary Eating Place for a Period of 3 Years in "Commercial/Residential"
and "Residential (Group D)" Zones, Lots 3250 S.B ss.24 S.A RP and
3250 S.B ss.34 RP in D.D. 104 and Adjoining Government Land, Mai Po, Yuen Long
(Planning Application No. A/YL-MP/342)**

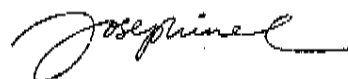
I refer to your submission dated 26.8.2024 regarding the submission of a revised drainage proposal to comply with the approval condition (d). Your submission is considered:

- ☒ Acceptable. The captioned condition has been complied with. Please find detailed departmental comments in *Appendix*.
- ☐ Acceptable. Since the captioned condition requires both the submission and implementation of the proposal, it has not been fully complied with. Please proceed to implement the accepted proposal for full compliance with the approval condition.
- ☐ Not acceptable. The captioned condition has not been complied with.

- 2 -

Should you have any queries, please contact Mr. Terence TANG (Tel: 2300 1257) of the Drainage Services Department directly.

Yours sincerely,



(Josephine LO)
District Planning Officer/
Fanling, Sheung Shui and Yuen Long East
Planning Department

c.c.

CE/MN, DSD
CTP/TPB(3)

(Attn: Mr. Terence TANG)

JL/ckl

Appendix

Detailed comments of the CE/MN, DSD:

- (i) The applicant should implement the drainage facilities on site in accordance with the agreed drainage proposal.
- (ii) The applicant is required to rectify the drainage system if they are found to be inadequate or ineffective during operation. The applicant shall also be liable for and shall indemnify claims and demands arising out of damage or nuisance caused by a failure of the drainage system.
- (iii) The proposed development would neither obstruct overland flow nor adversely affected any existing natural streams, village drains, ditches and the adjacent areas.
- (iv) The applicant(s) shall resolve any conflict/disagreement with relevant lot owner(s) and seek Lands Department's permission for laying new drains/channels and/or modifying/upgrading existing ones in other private lots or on Government land (where required) outside the application site(s).

Our Ref.: DD104 Lot 3250
Your Ref.: TPB/A/YL-MP/342

The Secretary,
Town Planning Board,
15/F, North Point Government Offices,
333 Java Road,
North Point, Hong Kong

By Email

26 August 2024

Dear Sir,

Compliance with Approval Condition (d)

**Temporary Eating Place for a Period of 3 Years in “Commercial/Residential”
and “Residential (Group D)” Zones, Lots 3250 S.B ss.24 S.A RP and
3250 S.B ss.34 RP in D.D. 104 and Adjoining Government Land, Mai Po, Yuen Long**

(S.16 Planning Application No. A/YL-MP/342)

We are writing to submit a response-to-the-comments table and a revised drainage proposal for compliance with approval condition (d) of the subject application, i.e. *the submission of a revised drainage proposal (Appendices I and II)*.

Should you require more information regarding the application, please contact the undersigned at your convenience. Thank you for your kind attention.

Yours faithfully,

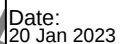
For and on behalf of
R-riches Property Consultants Limited

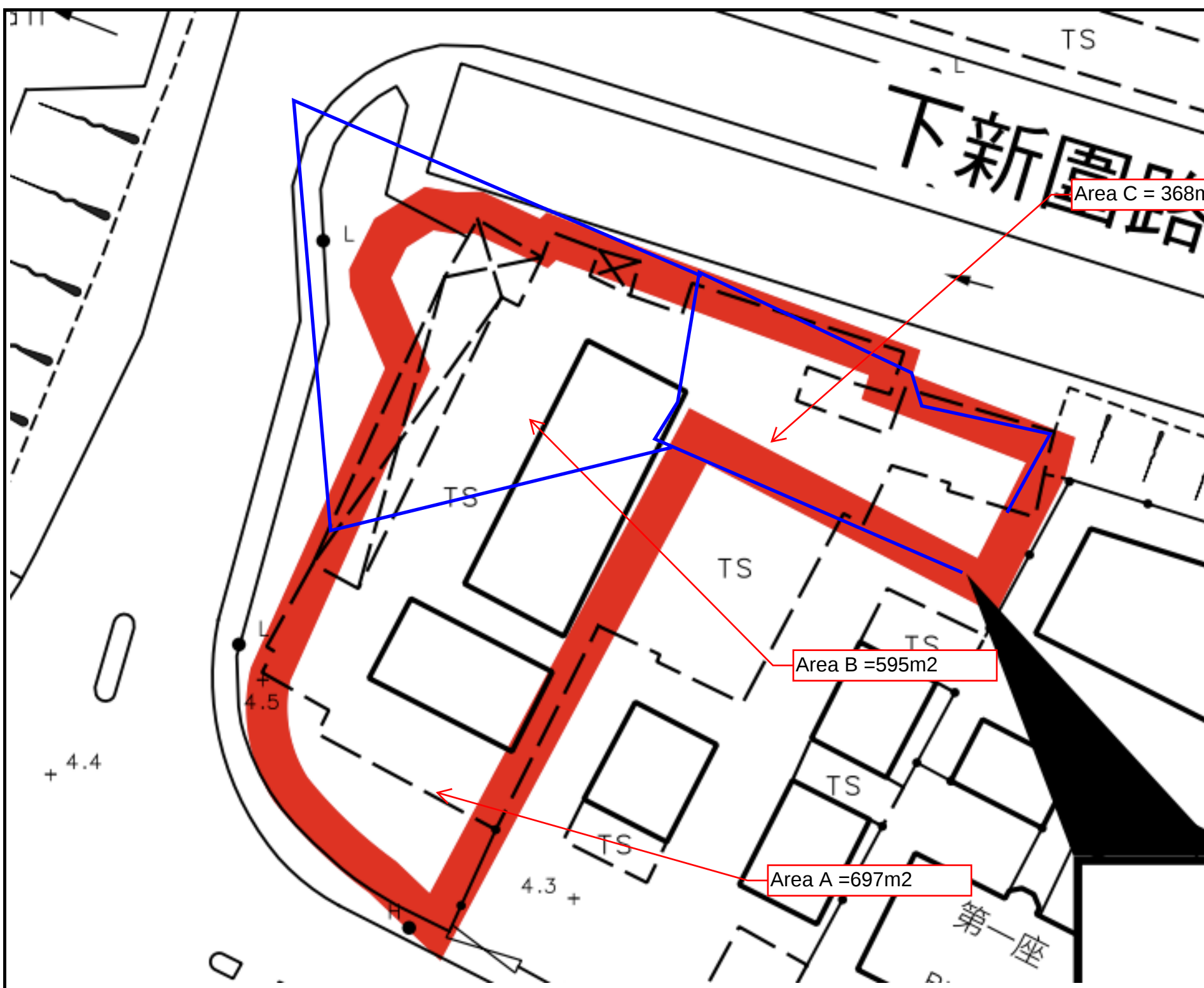


Danny NG
Assistant Town Planner

Appendix I – Response to the Comments of Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD)

Comments of the CE/MN, DSD (Contact Person: Mr. Terence TANG; Tel: 2300 1257)		
(i)	U-channel size from CP1 to CP2 has not been upgraded yet.	Noted. Please confirm that U-channel size from CP1 to CP2 has been upgraded (Appendix II).
(ii)	In the calculation, the total peak runoff for Site B should be the sum of Site A and Site B. Please review the calculation.	Noted. Please confirm that total peak runoff for Site B is revised accordingly (Appendix II).
(iii)	Catchpit details for EX CP3 are not correct as there are two inlets which the invert levels should also be indicated on drainage plan.	Noted. Please confirm that catchpit detail for EX CP3 is provided accordingly (Appendix II).





Legend:

-  Existing Drain
-  Proposed Catchpit
-  Existing Catchpit

Company:

Project:

Lot 3250 S.B ss.24 S.A
RP and 3250 S.B ss.34
RP in D.D. 104 and
Adjoining Government
Land, Mai Po, Yuen
Long(A/YL-MP/342)
(Drainage Proposal)

Title:

Catchment Zone

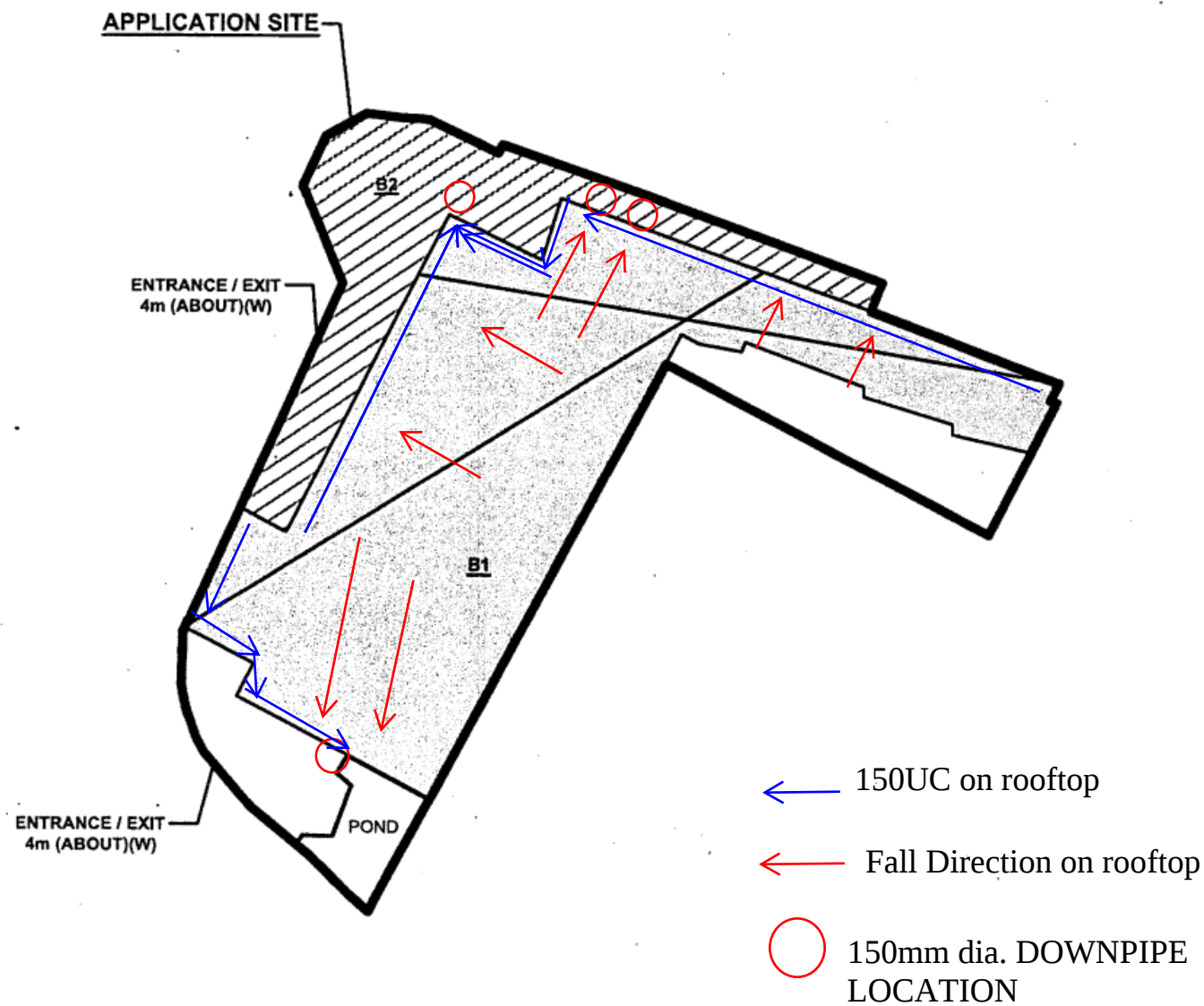
Dwg No:

Fig.2

Date:
20 Jan 2023

File:

Lot 247 in D.D.
99



Rooftop and downpipe location

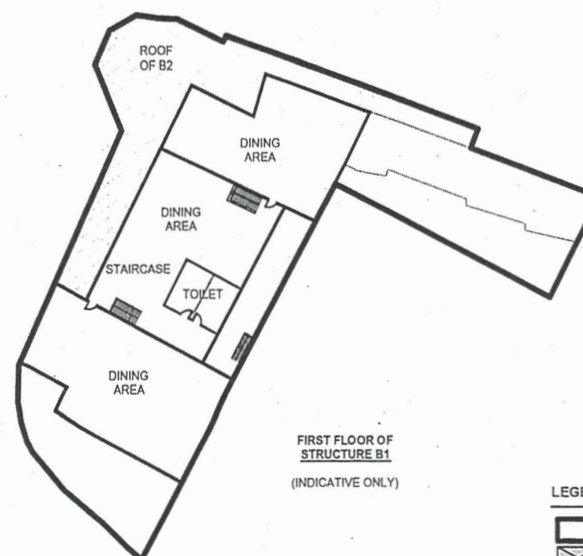
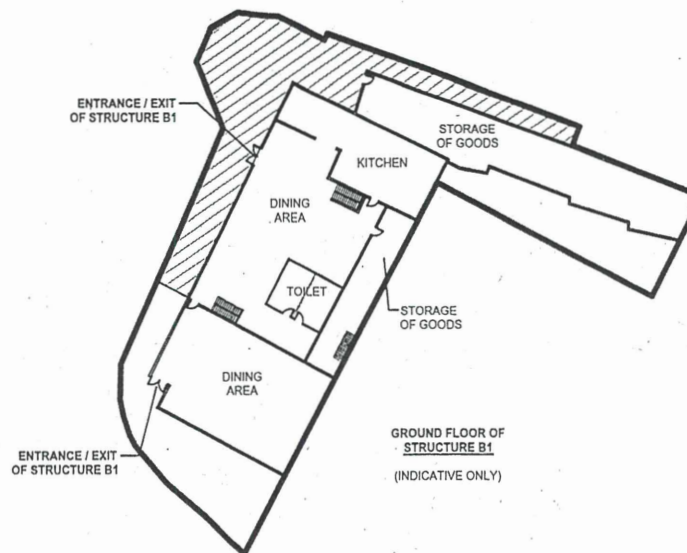
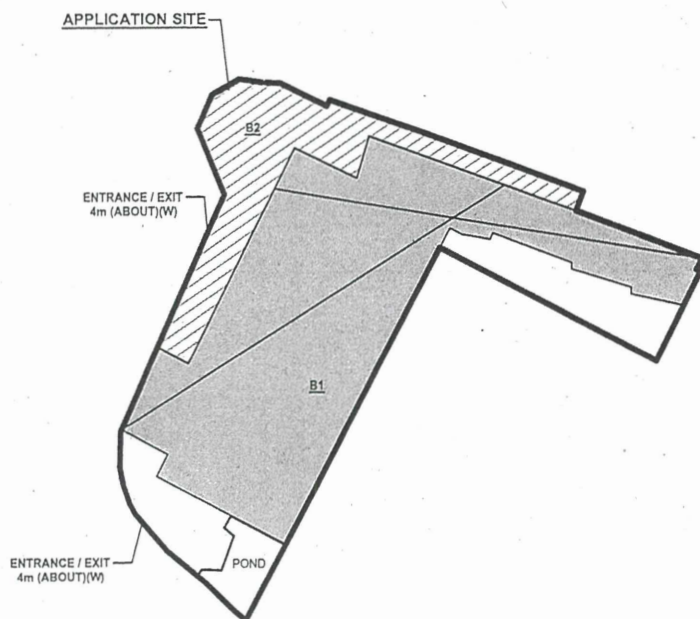
DEVELOPMENT PARAMETERS

APPLICATION SITE AREA : 1,187m² (ABOUT)
COVERED AREA : 980m² (ABOUT)
UNCOVERED AREA : 207m² (ABOUT)

PLOT RATIO : 1.36 (ABOUT)
SITE COVERAGE : 83% (ABOUT)

NO. OF STRUCTURE : 2
DOMESTIC GFA : N/A
NON-DOMESTIC GFA : 1,610m² (ABOUT)
BUILDING HEIGHT : 4m - 7m (ABOUT)
NO. OF STOREY : 1 - 2

STRUCTURE	USE	COVERED AREA	GFA	BUILDING HEIGHT
B1	EATING PLACE (G/F)	750m ² (ABOUT)	750m ² (ABOUT)	7m (ABOUT)(2-STOREY)
B2	EATING PLACE (1/F) RAIN SHELTER (CANOPY)	230m ² (ABOUT)	530m ² (ABOUT) 230m ² (ABOUT)	4m (ABOUT)(1-STOREY)
TOTAL		980m ² (ABOUT)	1,610m ² (ABOUT)	



LEGEND

- APPLICATION SITE
- STRUCTURE (ENCLOSED)
- STRUCTURE (CANOPY)

Drawing No.
P04

Ver.
01

Project
PROPOSED TEMPORARY
EATING PLACE FOR A
PERIOD OF 3 YEARS

LOTS 3250 S.B ss.24 S.A RP
AND 3250 S.B ss.34 RP IN
D.D. 104, AND ADJOINING GL
MAI PO, YUEN LONG, NEW
TERRITORIES

Drawing Title
LAYOUT PLAN

Scale of A4
1 : 700

Drawn OL	Date 12.7.2021
Revised OL	Date 5.5.2023

申請編號 Application No. : A / YL-MP / 342

此頁摘自申請人提交的文件。

This page is extracted from applicant's submitted documents.

Company:
Project :

Date: 12/2/2023

Calculation for channels:

Catchment Area of site

Site Area A = 697 m²
= 0.000697 km²

Peak runoff in m³/s = 0.278 x 0.95 x 250 mm/hr x 0.000697 km²
= 0.04602 m³/s
= 2761 liter/min

Site Area B = 595 m²
= 0.000595 km²

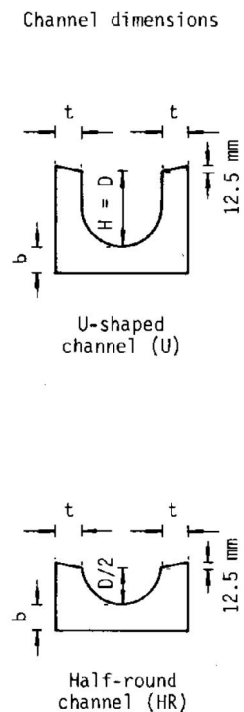
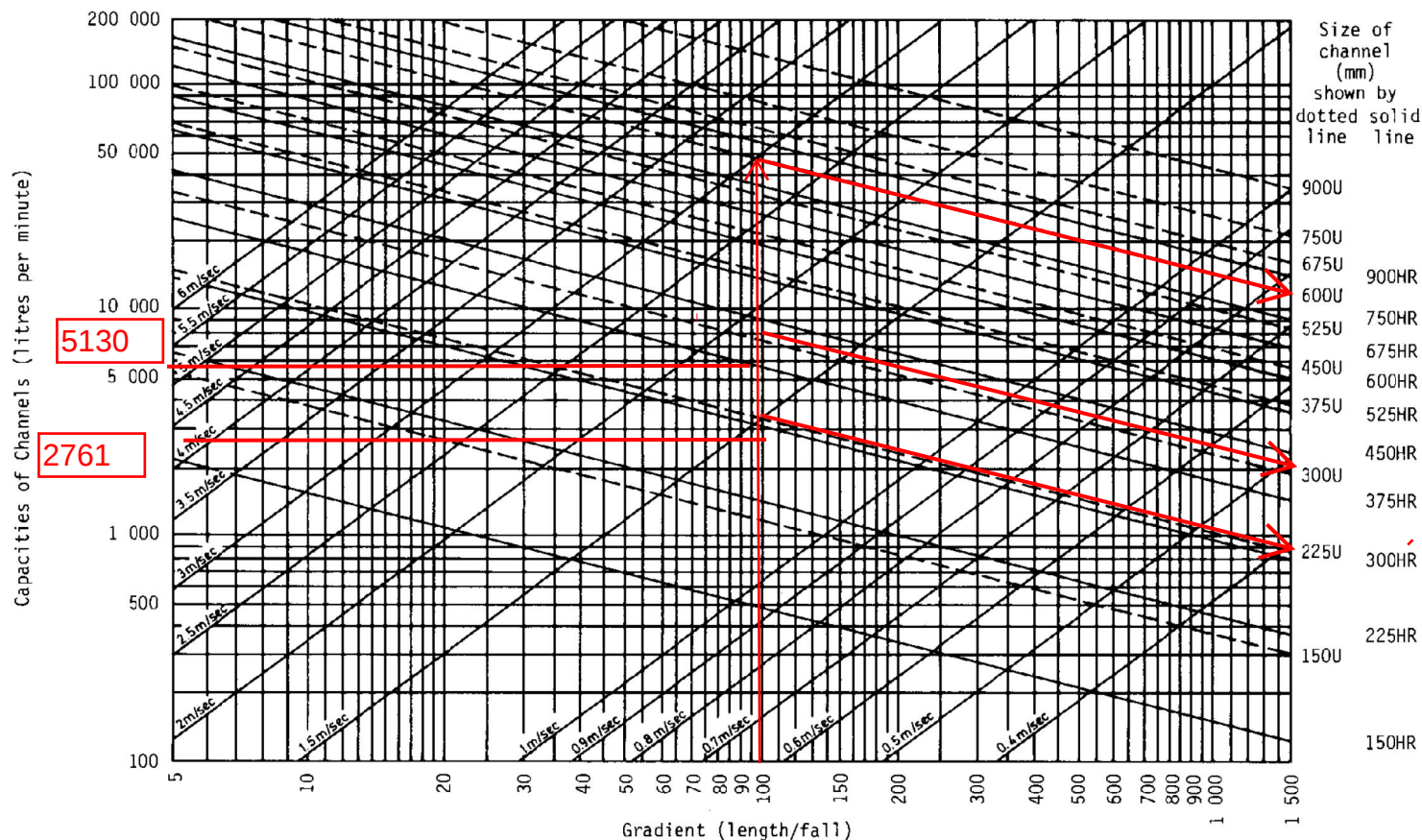
Peak runoff in m³/s = 0.278 x 0.95 x 250 mm/hr x 0.000595 km²
= 0.039285 m³/s
= 2357 liter/min

Site Area C = 368 m²
= 0.000368 km²

Peak runoff in m³/s = 0.278 x 0.95 x 250 mm/hr x 0.000368 km²
= 0.024297 m³/s
= 1458 liter/min

Total Peak Runoff for Site A	=	0.04602	m ³ /s	=	2761	liter/min
Total Peak Runoff for Site B	=	0.085305	m ³ /s	=	5118	liter/min
Total Peak Runoff for Site C	=	0.085502	m ³ /s	=	5130.1425	liter/min

According to (Figure 8.7 - Chart for the Rapid Design of Channels),
For gradient 1:100, 225UC will be suitable for the site A
For gradient 1:100, 300UC will be suitable for the site B
For gradient 1:100, 600UC will be suitable for the site C



DESIGN METHOD USING CHART

(a) Normal channel Solution

1. Runoff
2. Gradient
3. Channel size
4. Velocity

Example :

1. Enter Runoff = 4 000 litre/min.
2. Enter Gradient = 1 in 40
3. Read channel required = 225 U or 300HR
4. Read velocity = 2.2 m/sec. (<4 m/sec. ∴ OK)

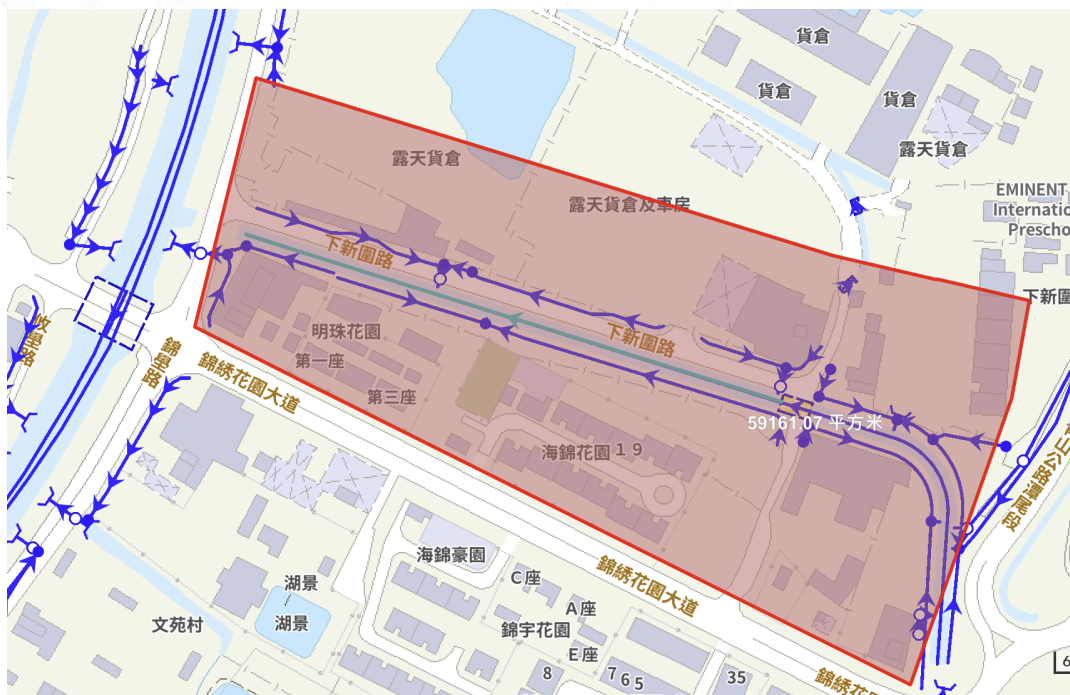
(b) Stepped channel Solution

2. Runoff
3. Channel size
4. Gradient
1. Velocity

Example :

1. Enter Velocity = 5 m/sec.
2. Enter Runoff = 20 000 litre/min.
3. Read required channel size = 300U
4. Read required gradient = 1 in 14

Figure 8.7 - Chart for the Rapid Design of Channels



$$\text{Catchment Area} = 60000 \text{ m}^2$$

$$\begin{aligned} Q &= 0.278 C_i A \\ &= 0.278 (0.95)(250) (60000 \times 10^{-6}) \\ &= 3.9615 \text{ m}^3/\text{hr} \end{aligned}$$

7.2m x 5m existing channel is final discharge Point

By Manning's Equation,

$$Q = \frac{1}{n} \frac{A^{\frac{5}{3}}}{P^{\frac{2}{3}}} S_0^{\frac{1}{2}}$$

$$= \frac{1}{0.015} \frac{(36)^{\frac{5}{3}}}{(17.2)^{\frac{2}{3}}} (0.001)^{\frac{1}{2}}$$

$$= 124 \text{ m}^3/\text{hr}$$

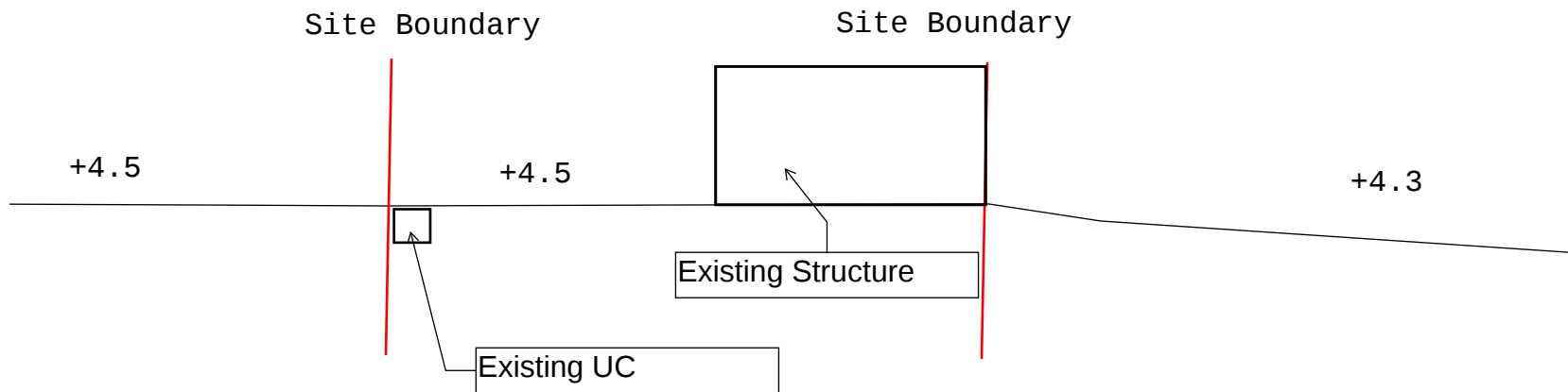
$$> 3.9615 \text{ m}^3/\text{hr} \quad (10\%)$$

where $n = 0.015$

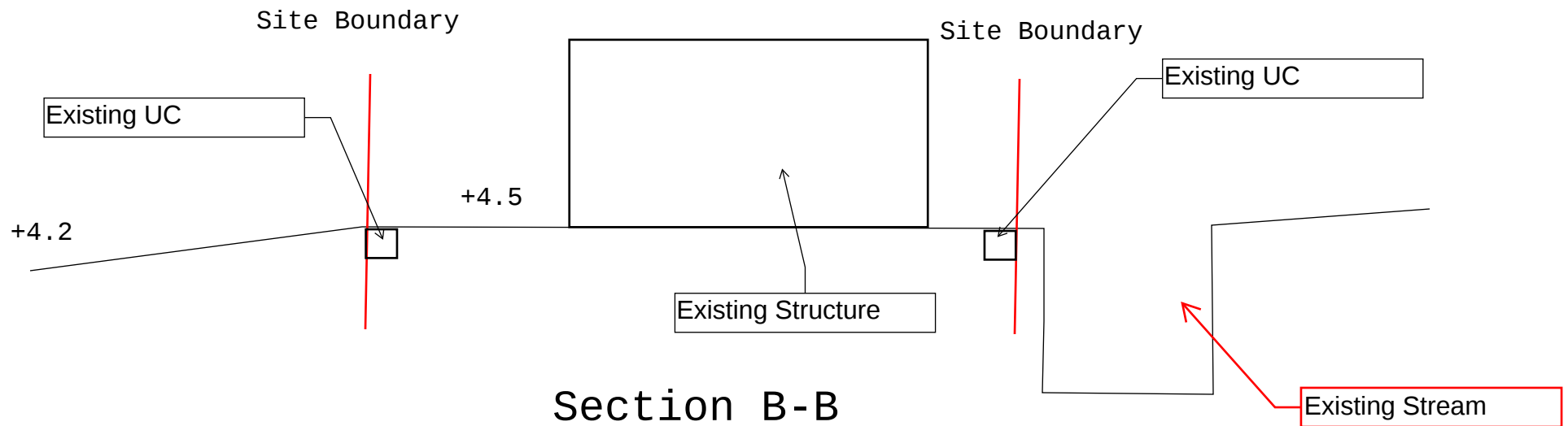
$$S_0 = 0.001$$

$$A = 7.2 \times 5 = 36 \text{ m}^2$$

$$P = 5 \times 2 + 7.2 = 17.2 \text{ m}$$



Section A-A



Section B-B



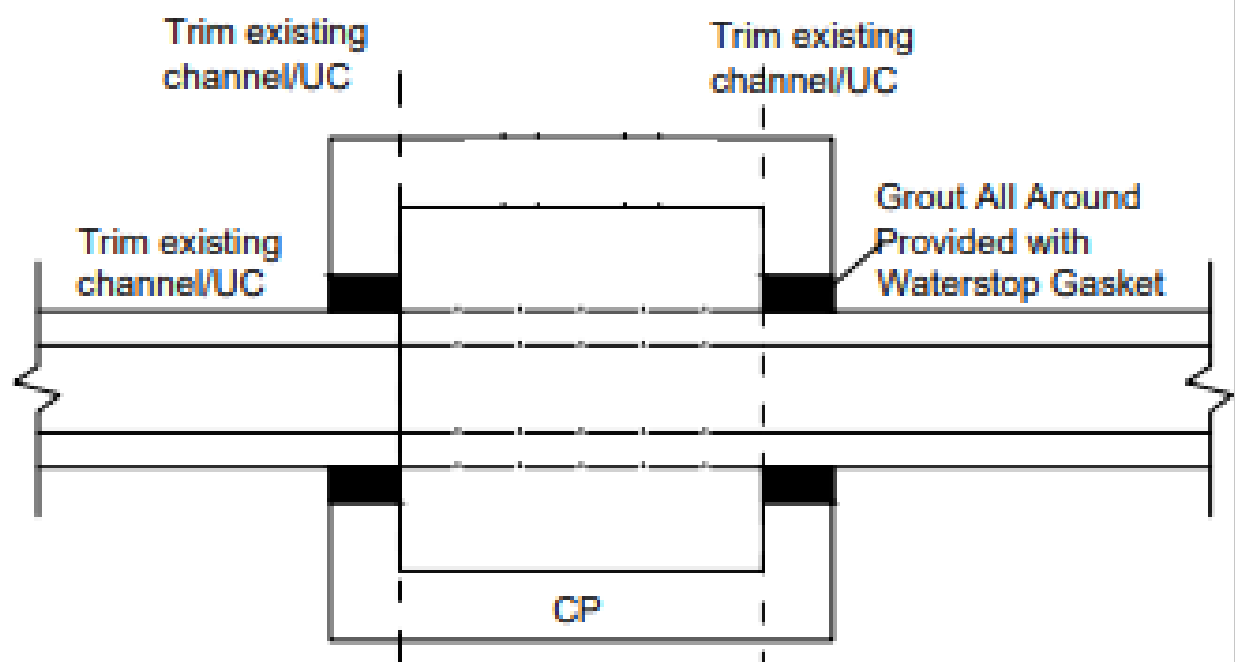
View 1: Existing Nullah condition and downpipe location



View 2: Existing downpipe location

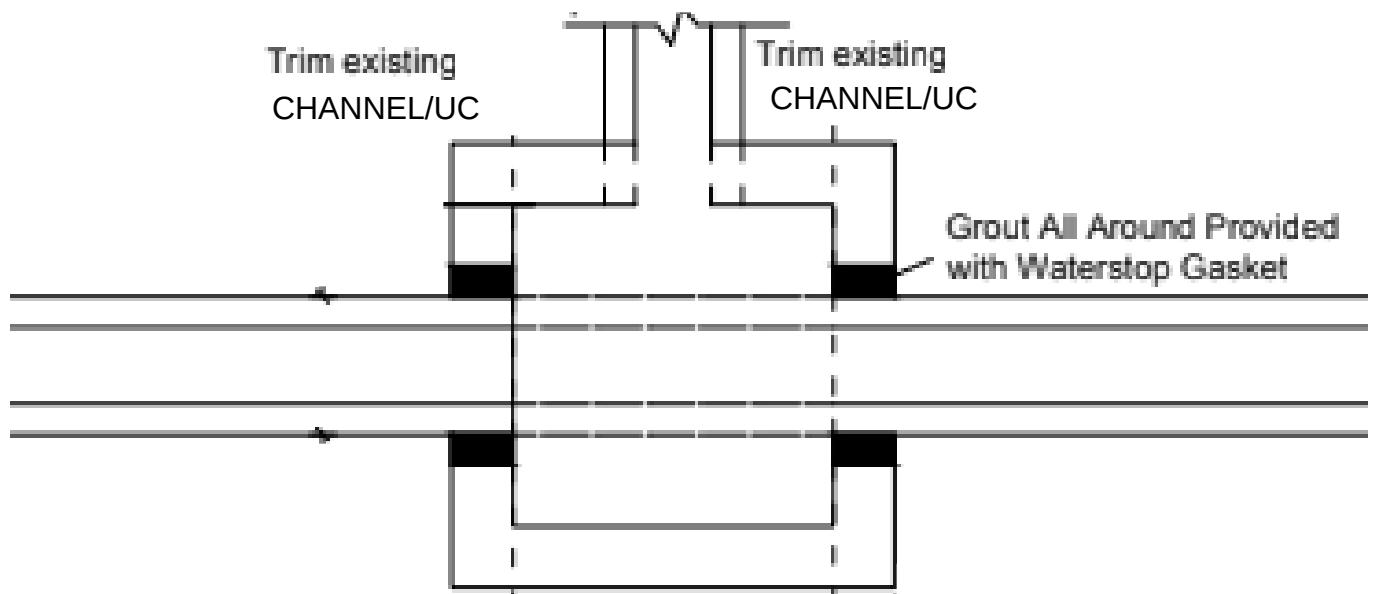


View 3: Existing downpipe location

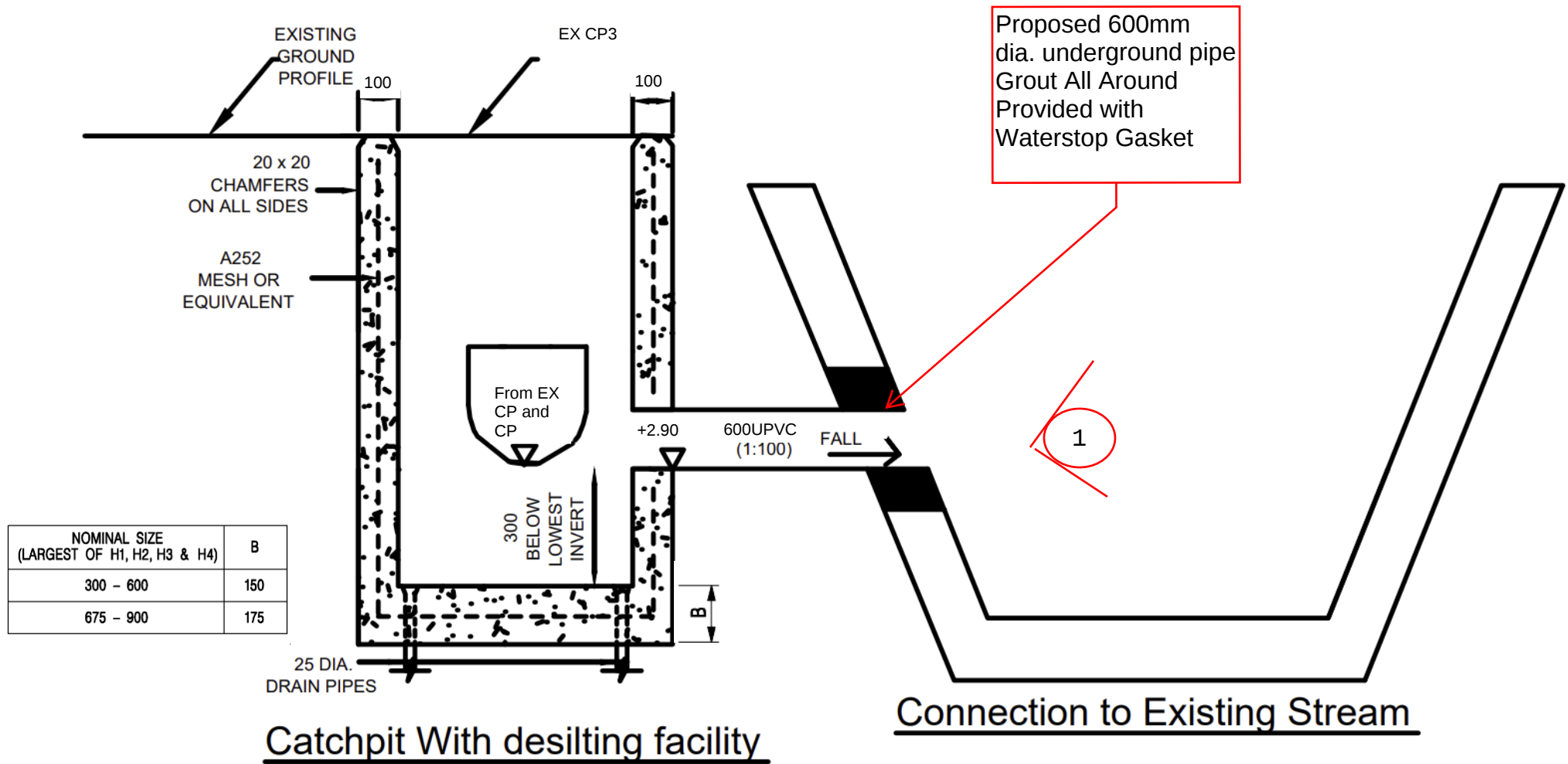


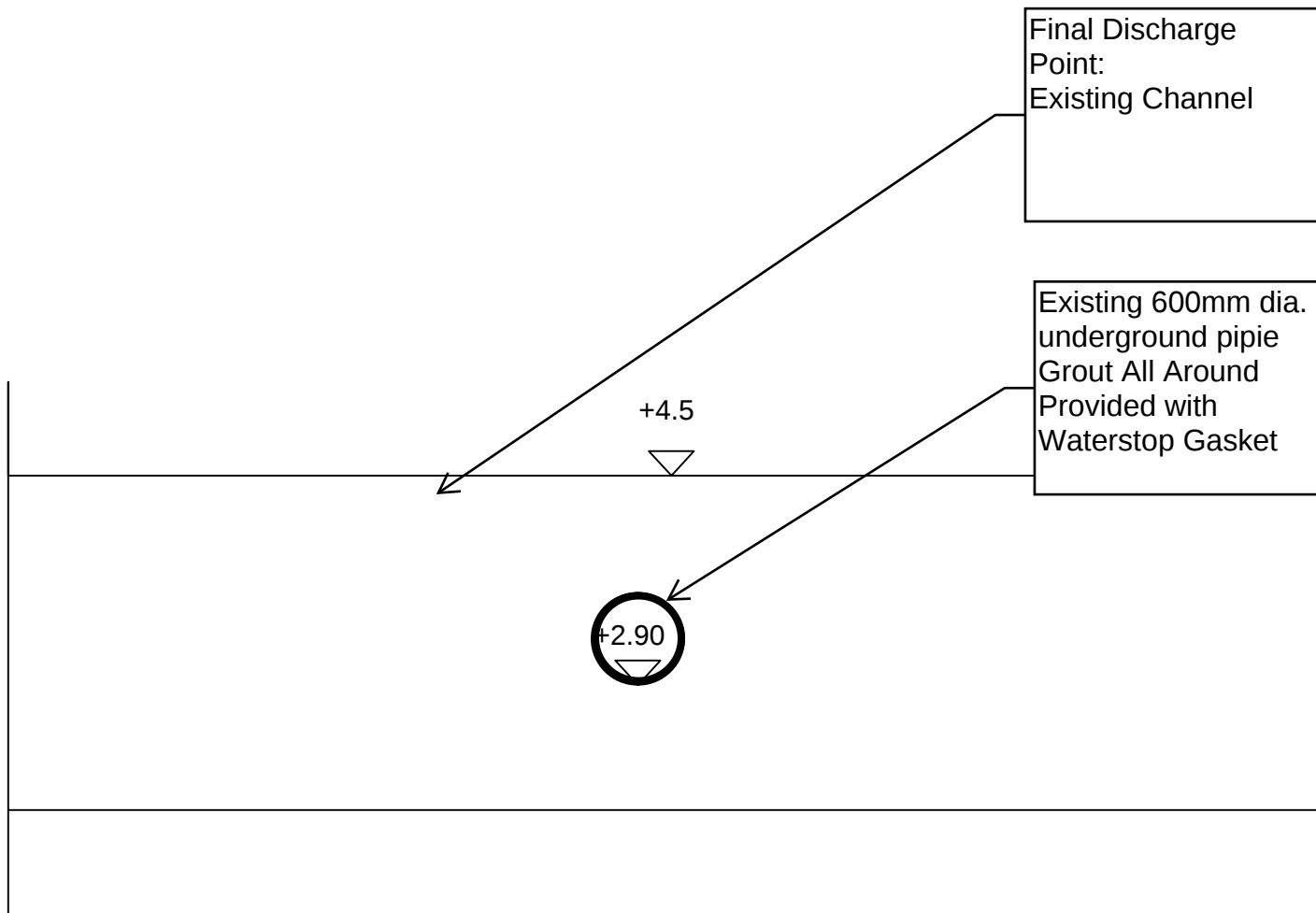
CONNECTION DETAILS

FOR CP1 , CP2

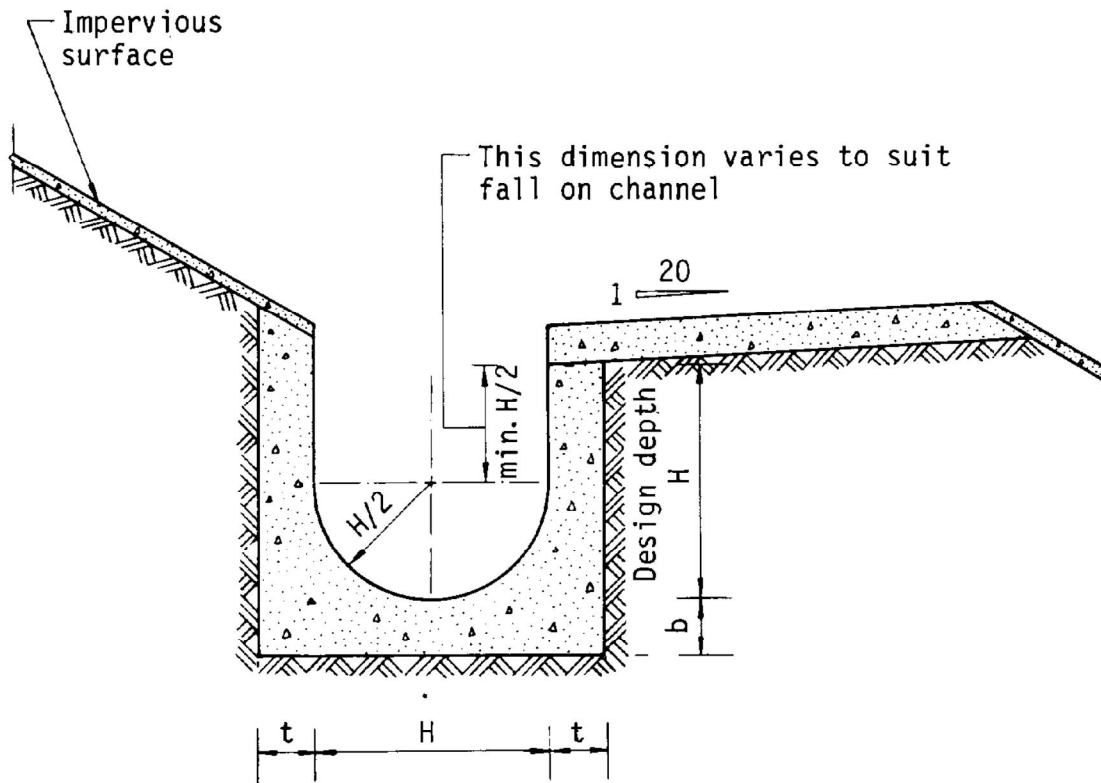


FOR CP3





SECTION 1: Connection Detail of Existing channel



Dimensions of U - channel

Nominal size of channel H (mm)	Thickness t (mm)	Thickness b (mm)
225 to 600	150	150
675 to 1200	175	225

Figure 8.11 - Typical U-channel Details

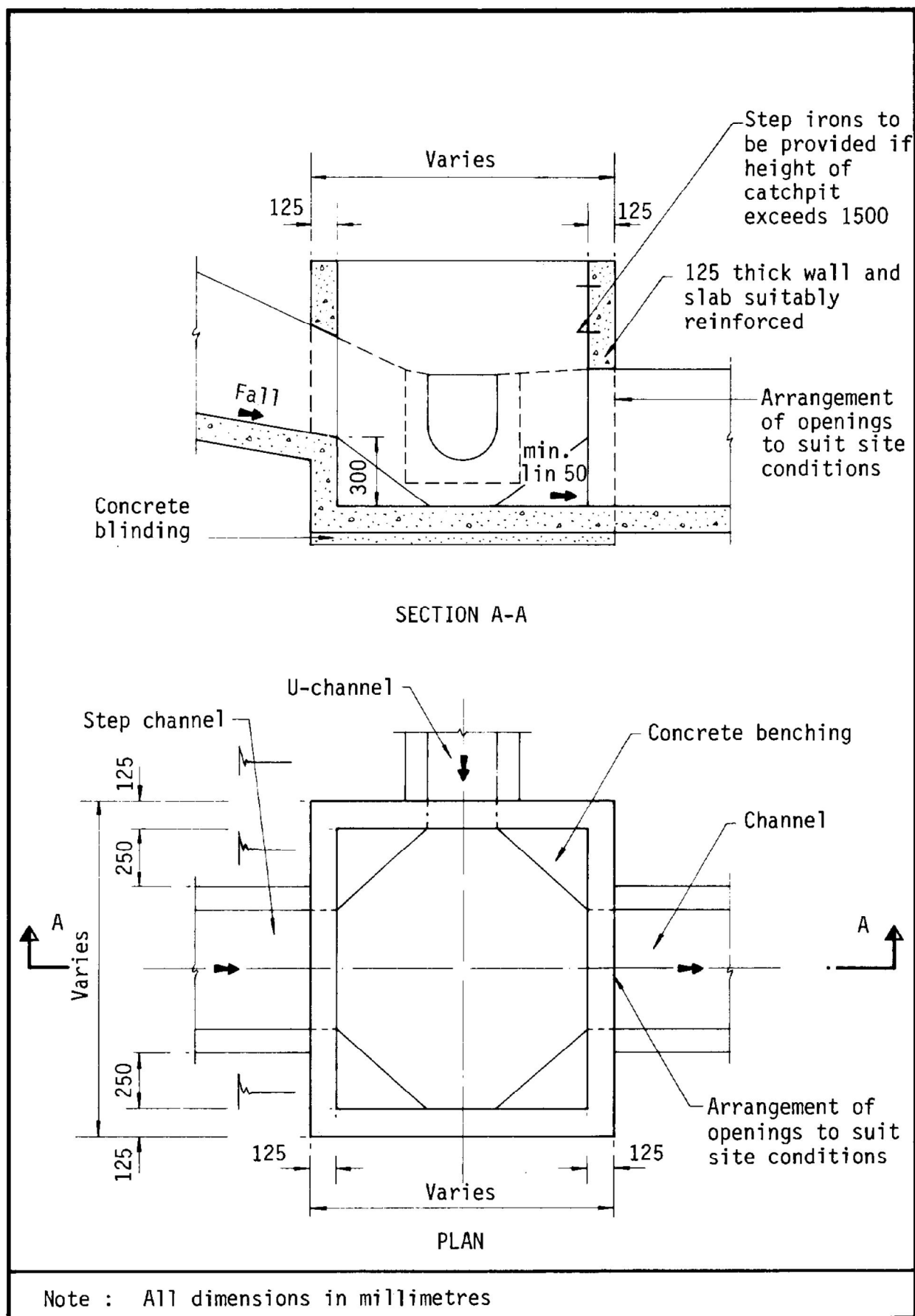
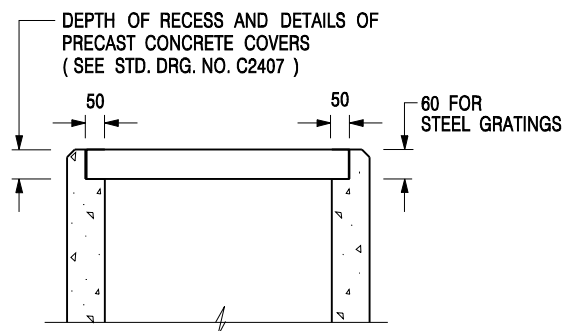


Figure 8.10 - Typical Details of Catchpits



ALTERNATIVE TOP SECTION FOR PRECAST CONCRETE COVERS / GRATINGS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE SHALL BE GRADE 20 /20.
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2 OR F2 AS APPROPRIATE.
4. FOR DETAILS OF JOINT, REFER TO STD. DRG. NO. C2413.
5. CONCRETE TO BE COLOURED AS SPECIFIED.
6. UNLESS REQUESTED BY THE MAINTENANCE PARTY AND AS DIRECTED BY THE ENGINEER, CATCHPIT WITH TRAP IS NORMALLY NOT PREFERRED DUE TO PONDING PROBLEM.
7. UPON THE REQUEST FROM MAINTENANCE PARTY, DRAIN PIPES AT CATCHPIT BASE CAN BE USED BUT THIS IS FOR CATCHPITS LOCATED AT SLOPE TOE ONLY AND AS DIRECTED BY THE ENGINEER.
8. FOR CATCHPITS CONSTRUCTED ON OR ADJACENT TO A FOOTPATH, STEEL GRATINGS (SEE DETAIL 'A' ON STD. DRG. NO. C2405) OR CONCRETE COVERS (SEE STD. DRG. NO. C2407) SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.
9. IF INSTRUCTED BY THE ENGINEER, HANDRAILING (SEE DETAIL 'G' ON STD. DRG. NO. C2405; EXCEPT ON THE UPSLOPE SIDE) IN LIEU OF STEEL GRATINGS OR CONCRETE COVERS CAN BE ACCEPTED AS AN ALTERNATIVE SAFETY MEASURE FOR CATCHPITS NOT ON A FOOTPATH NOR ADJACENT TO IT. TOP OF THE HANDRAILING SHALL BE 1 000 mm MIN. MEASURED FROM THE ADJACENT GROUND LEVEL.
10. MINIMUM INTERNAL CATCHPIT WIDTH SHALL BE 1 000 mm FOR CATCHPITS WITH A HEIGHT EXCEEDING 1 000 mm MEASURED FROM THE INVERT LEVEL TO THE ADJACENT GROUND LEVEL. AND, STEP IRONS (SEE DSD STD. DRG. NO. DS1043) AT 300 c/c STAGGERED SHALL BE PROVIDED. THICKNESS OF CATCHPIT WALL FOR INSTALLATION OF STEP IRONS SHALL BE INCREASED TO 150 mm.
11. FOR RETROFITTING AN EXISTING CATCHPIT WITH STEEL GRATING, SEE DETAIL 'F' ON STD. DRG. NO. C2405.
12. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

-	FORMER DRG. NO. C2406J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE

CATCHPIT WITH TRAP
(SHEET 2 OF 2)



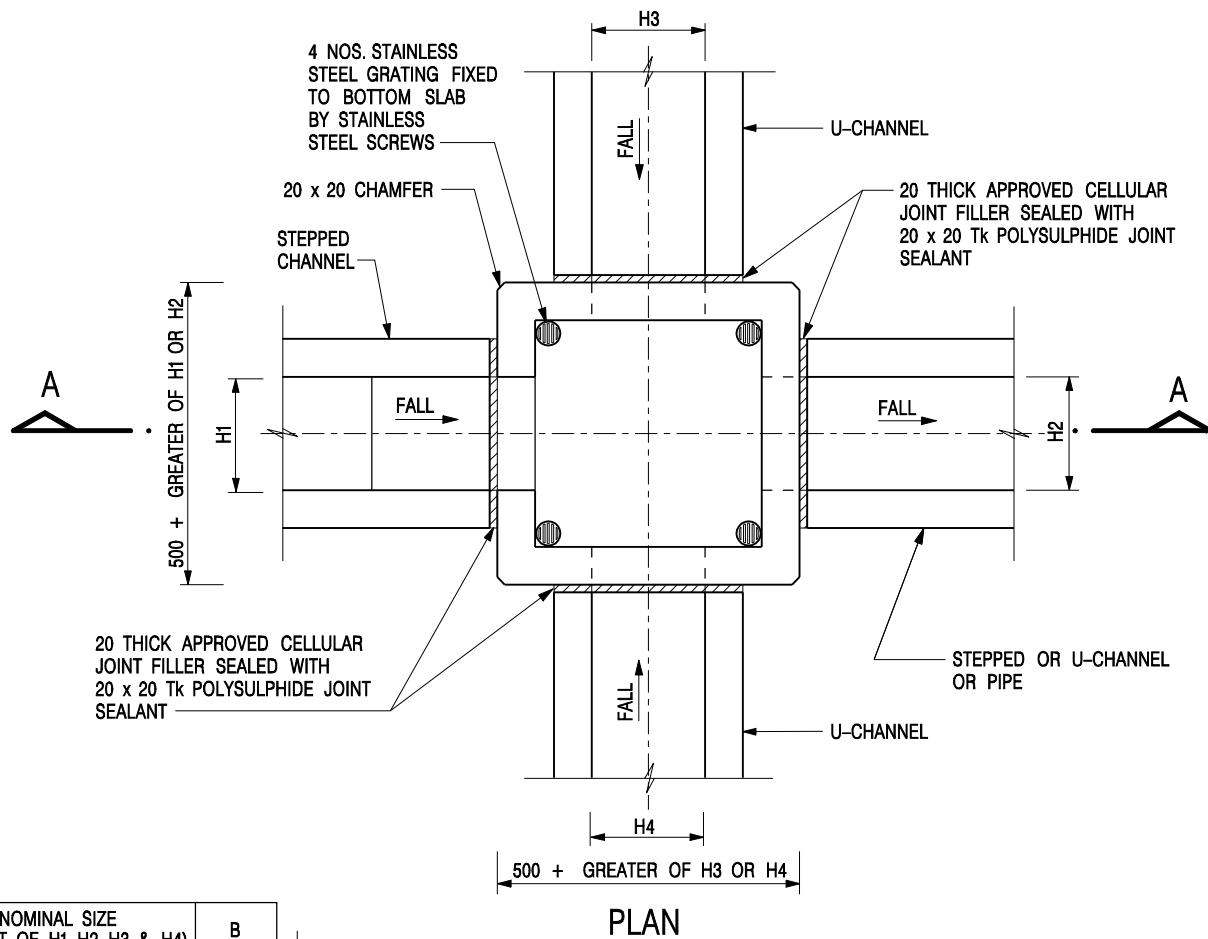
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

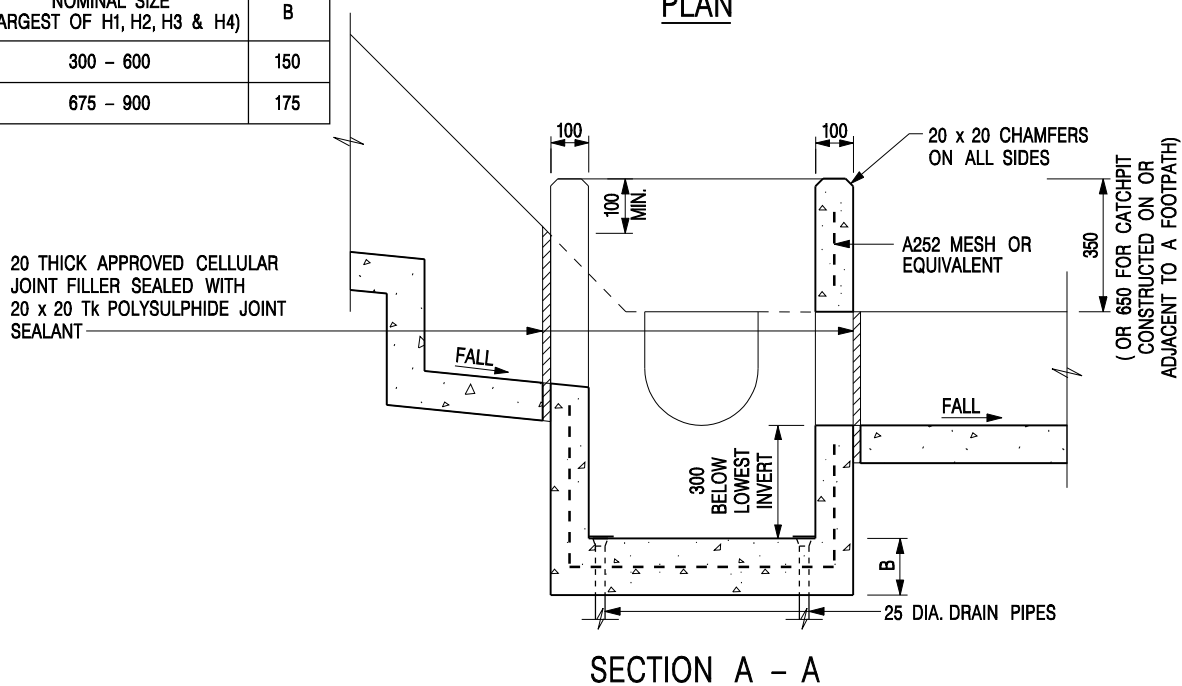
DATE JAN 1991

DRAWING NO.

C2406 /2



NOMINAL SIZE (LARGEST OF H1, H2, H3 & H4)	B
300 - 600	150
675 - 900	175



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 2 FOR OTHER NOTES.

CATCHPIT WITH TRAP
(SHEET 1 OF 2)

-	FORMER DRG. NO. C2406J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE
 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT		SCALE 1 : 20	
		DATE JAN 1991	
		DRAWING NO. C2406 /1	