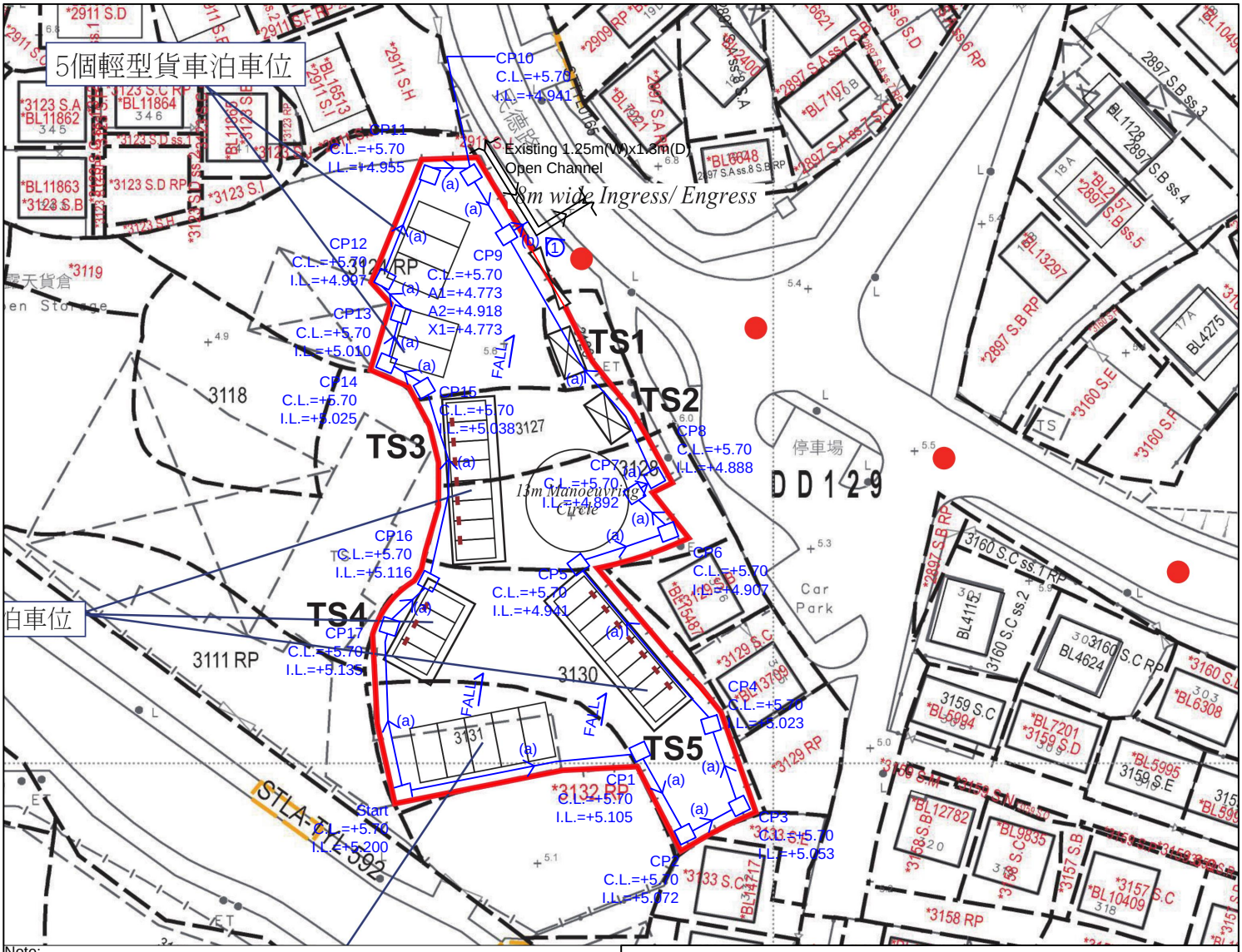
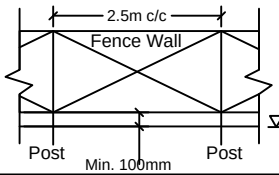


Note:

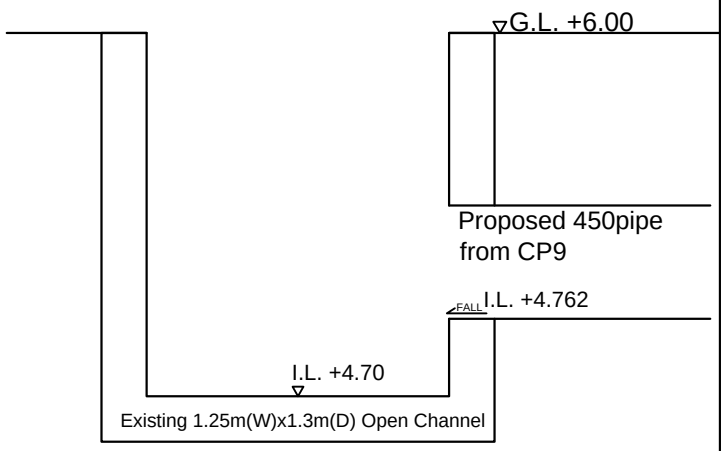
1. Catchpits (CP9) with trap facility shall follow CEDD standard drawing No. C2406I.
2. Catchpit and UC follows Typical Details of Geotechnical Manual for Slope Fig.8.10 and Fig.8.11 respectively.
3. Fence Wall to be erected (if any) shall be Open-bottom type.
4. Maximum 600mm filling for levelling the site.

LEGEND

☒MH	Existing Manhole
⇢	Existing 1.25m(W)x1.3m(D) Open Channel
□CP	Proposed CatchPit
(a) ⇢	Proposed 450UC (1:300) with Cast Iron Cover
(b) ⇢	Proposed 450mm dia. cocnrete pipe(1:200)
①	Photo Viewspot



TYPICAL DETAIL OF OPEN-BOTTOM TYPE FENCE WALL



CONNECTION DETAILS

正宏工程顧問公司

CHING WAN ENGINEERING CONSULTANT COMPANY

Title: Drainage Proposal - LAYOUT

D01–1b

Drawn by: DM

Date: 17–7–2026

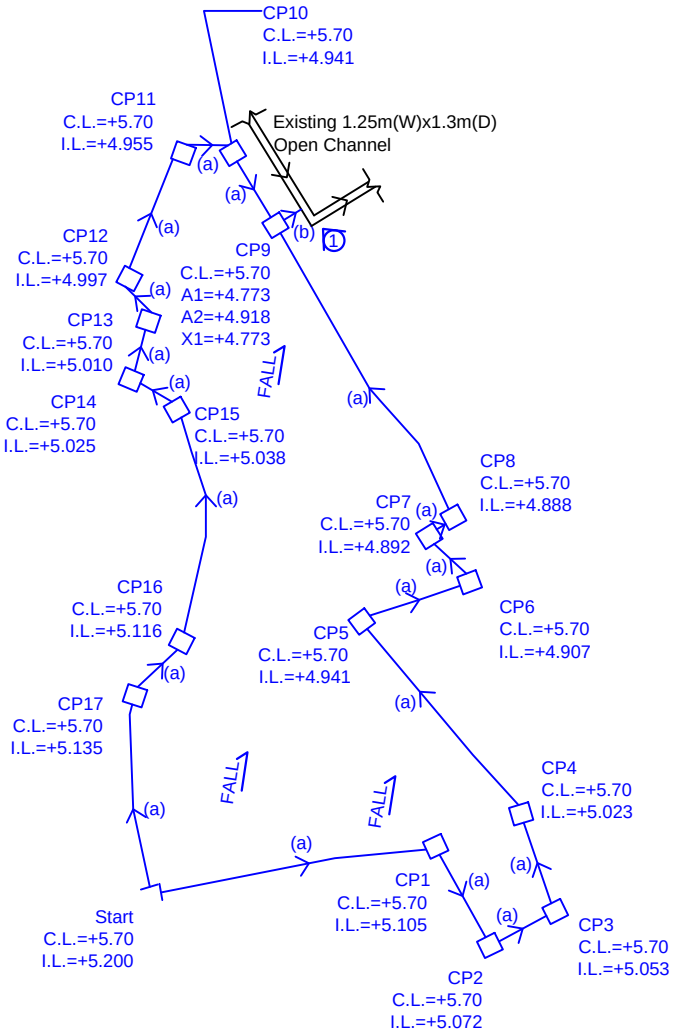
Check by: DM

Scale: ----

Project:

Proposed Private Carpark and Associated Filling of Land for a Period of 3 Years at Lots Lot 3124RP 3127 3128 3130 3131 in DD129, Yuen Long, New Territories

(Application Number:)



Note:

1. Catchpits (CP9) with trap facility shall follow CEDD standard drawing No. C2406I.
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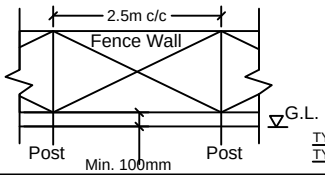
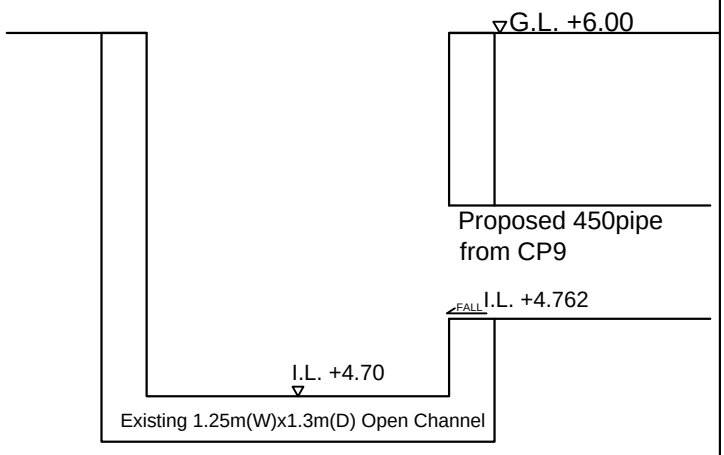
LEGEND

⊠MH	Existing Manhole
	Existing 1.25m(W)x1.3m(D) Open Channel
□CP	Proposed CatchPit
(a)	Proposed 450UC (1:300) with Cast Iron Cover
(b)	Proposed 450mm dia. cocnrete pipe(1:200)
①	Photo Viewspot



TYPICAL DETAIL OF OPEN-BOTTOM TYPE FENCE WALL



CONNECTION DETAILS

正宏工程顧問公司

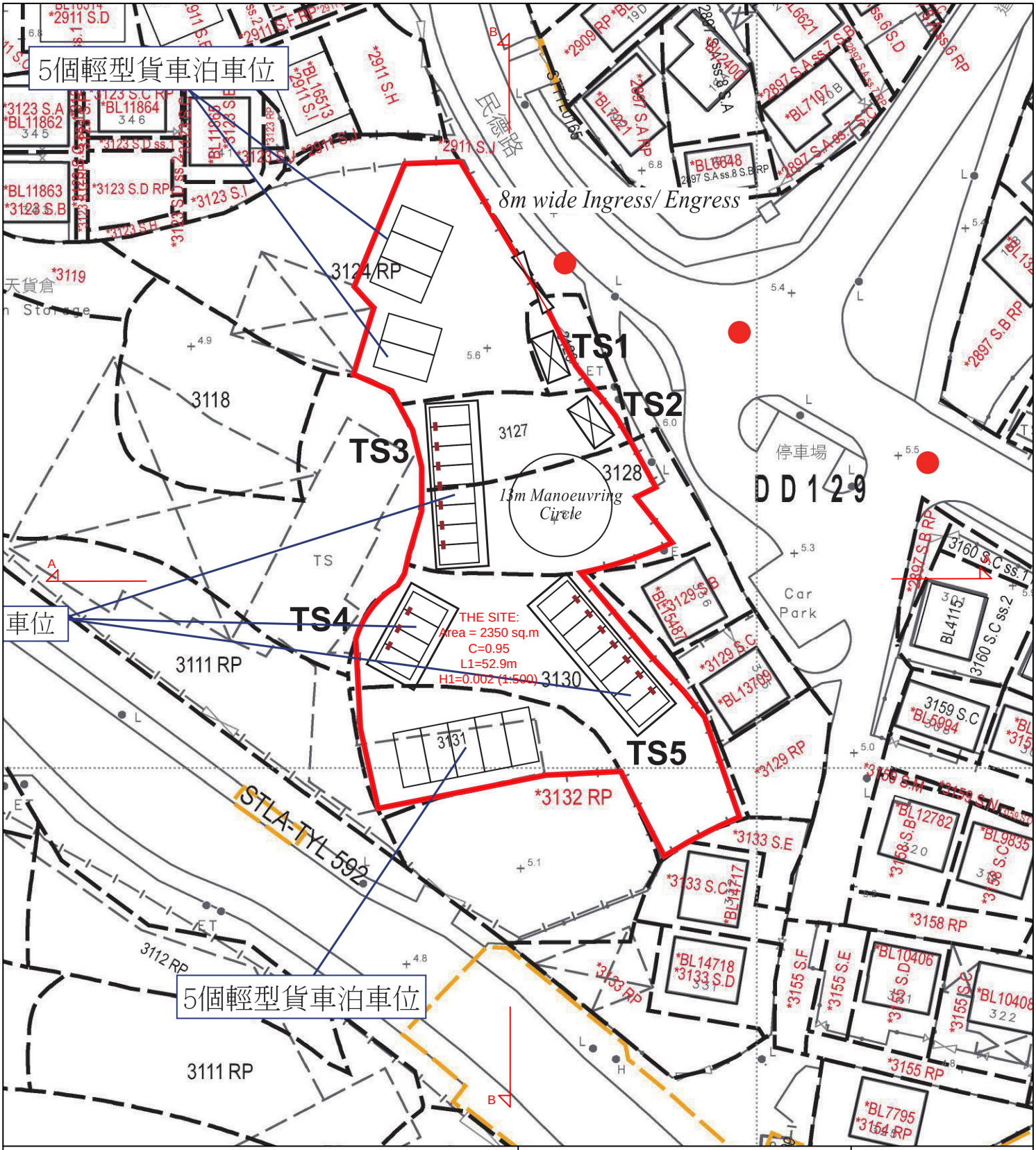
CHING WAN ENGINEERING CONSULTANT COMPANY

Project:

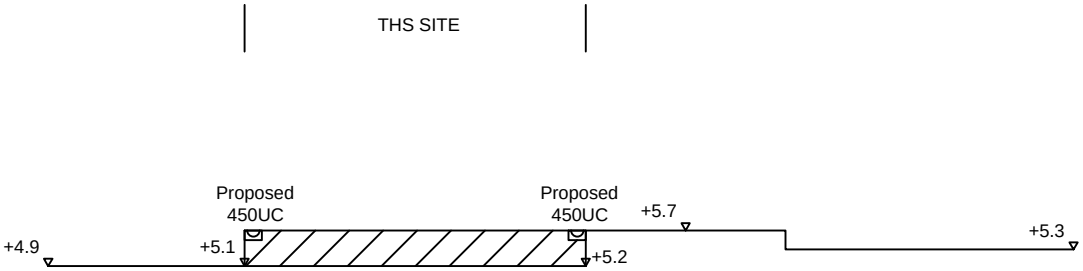
Proposed Private Carpark and Associated Filling of Land for a Period of 3 Years at Lots Lot 3124RP 3127 3128 3130 3131 in DD129, Yuen Long, New Territories

(Application Number:)

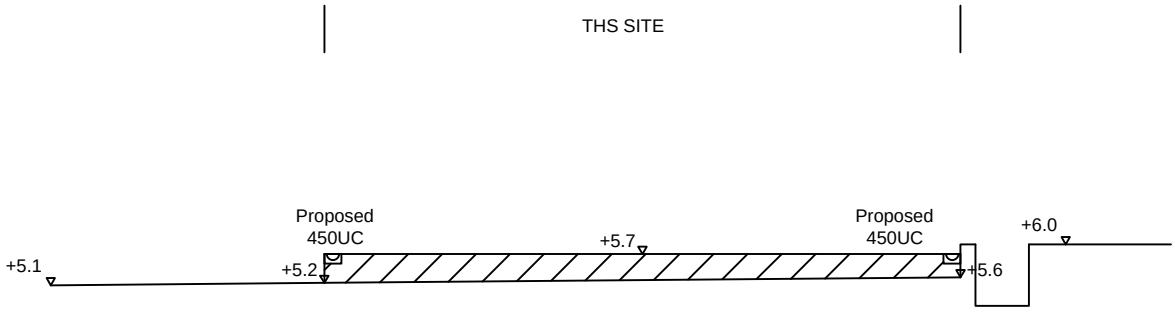
Title: Drainage Proposal - LAYOUT	D01–1b
Drawn by: DM	Date: 17–7–2026
Check by: DM	Scale: ————



正宏工程顧問公司 CHING WAN ENGINEERING CONSULTANT COMPANY	Title: Drainage Proposal - CATCHEMTN AREA PLAN	D02
	Drawn by: DM	Date: 17−7−2026
Project: **Proposed Private Carpark and Associated Filling of Land for a Period of 3 Years at Lots Lot 3124RP 3127 3128 3130 3131 in DD129, Yuen Long, New Territories** **(Application Number:)**	Check by: DM	Scale: −−−−



SECTION A-A



SECTION B-B

正宏工程顧問公司 CHING WAN ENGINEERING CONSULTANT COMPANY	Title: Drainage Proposal - SECTIONS	D03
	Drawn by: DM	Date: 17−7−2026
Project: **Proposed Private Carpark and Associated Filling of Land for a Period of 3 Years at Lots Lot 3124RP 3127 3128 3130 3131 in DD129, Yuen Long, New Territories** **(Application Number:)**	Check by: DM	Scale: −−−−

Photo 1

THE SITE, Area = 2350 m^2 (C= 0.95) L= 59.2 m, H= 0.002 m

Calculation of Design Runoff of the Proposed Development,

The Site:

A = 2350 m^2
= 2350
= 0.00235 km^2

t = $0.14465\ L/\ H^{0.2}A^{0.1}$
= $0.14465*59.2/0.002^{0.2}*2350^{0.1}$
= 13.656 min

i = $1.16*a/(t+b)^c$ (50 yrs return period, Table 3a, Corrigendum 2024, SDM) and (16% increase due to climate change)
= $1.16*505.5/(4.476+3.29)^{0.355}$
= 214.7 mm/hr

Therefore, Q1 = 0.278*0.95*214.7*0.00235/0.9 (0.9 factor is adopted for sedimentation)
= **0.1481** m^3/sec

Manning Equation V = $R^{2/3}*S_f^{0.5}/n$

where R = $(\pi r^2/2+2r^2)/(\pi r+2r)$ r= 0.225 m
= 0.1563 m A= 0.1808 m^2

n = 0.014 $s/m^{1/3}$ (Talbe 13 of Stormwater Drainage Manual)

S_f = 0.003 (1: 300)

Therefore, V = $0.1563^{2/3}*0.003^{0.5}/0.014$
= **1.196** m/sec

Maximum Capacity (Q_{max}) = V*A
= **0.2163** m^3/sec
> **0.1481** m^3/sec
% of capacity utilization = **68%**

Provide 450UC (1:300) is OK

Colebrook-White Equation

$$V = -\sqrt{(8gDs)}\log\left(\frac{ks}{3.7D}+\frac{2.51v}{D\sqrt{(2gDs)}}\right)$$

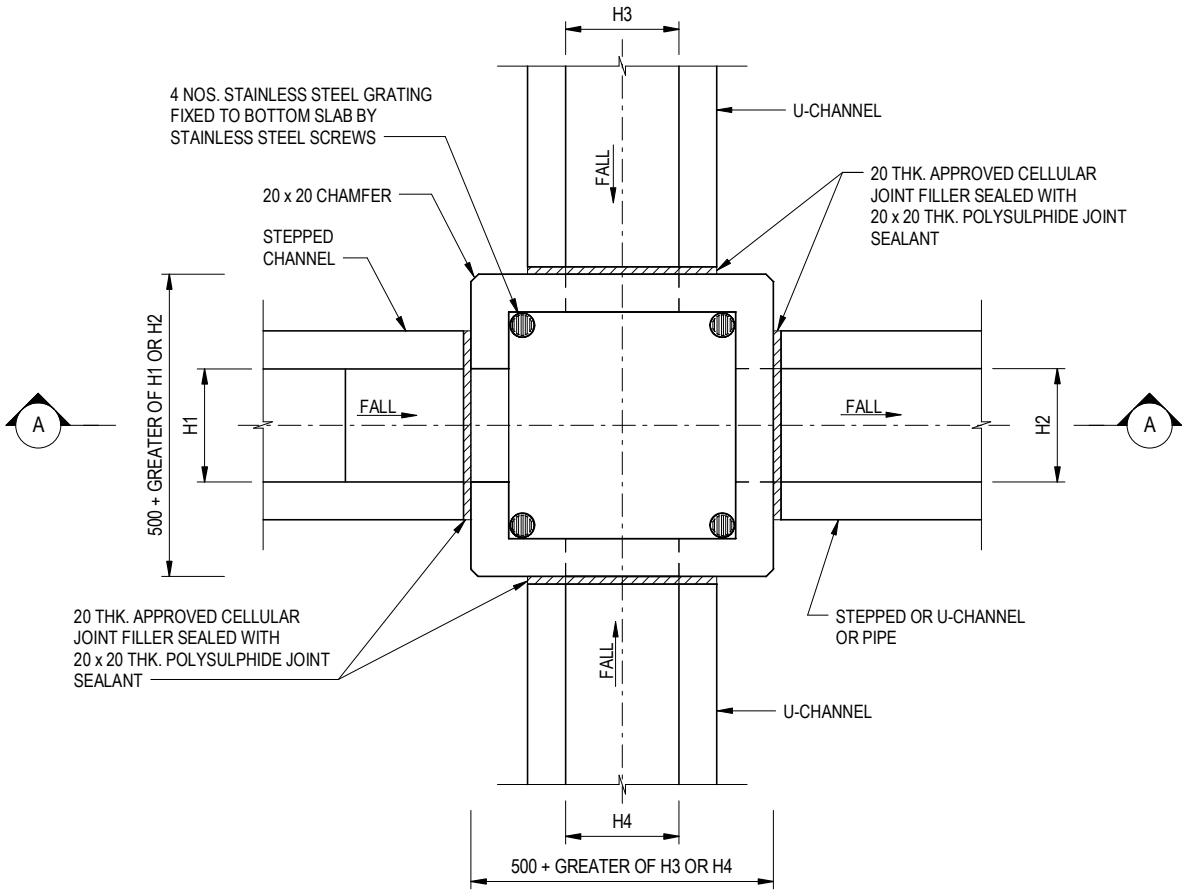
where :

V	=			mean velocity (m/s)
g	=	9.81	m/s2	gravitational acceleration (m/s2)
D	=	0.45	m	internal pipe diameter (m)
ks	=	0.00006	m	hydraulic pipeline roughness (m) (Table14, from DSD SDM 2018, concrete pipe)
v	=	1.14E-06	m2/s	kinematic viscosity of fluid (m2/s)
s	=	0.005		hydraulic gradient (1: 200)

Therefore, design V of pipe capacity = 1.756 m/s

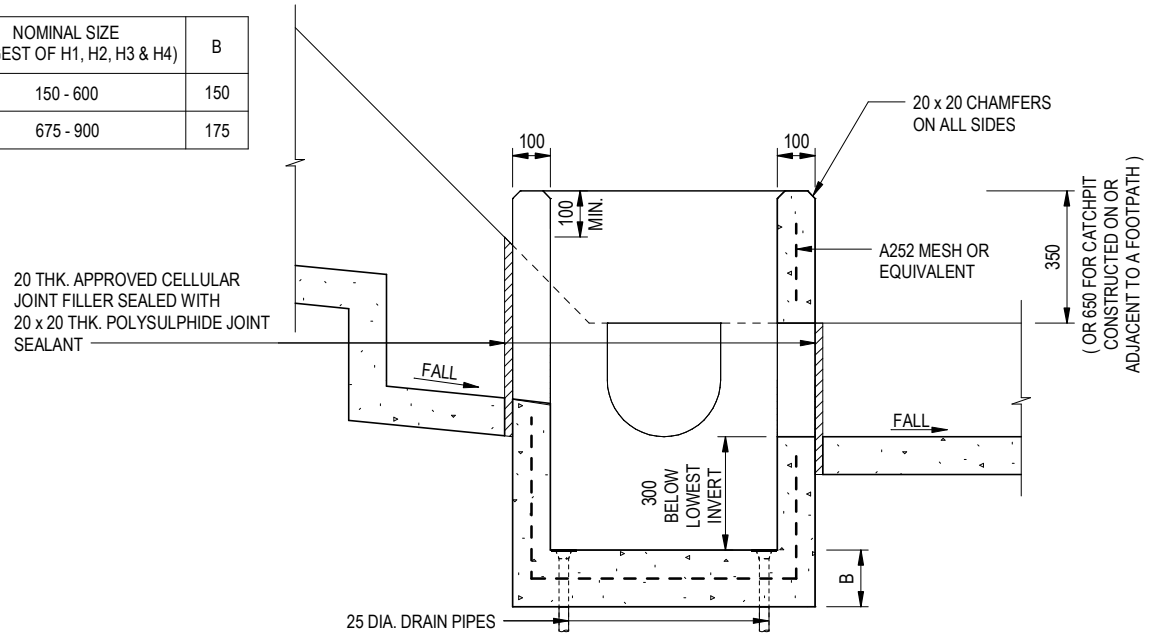
Q = VA (0.8 factor for sedimentation)
= **0.279** m3/s
> **0.1481** lit/min Ok
% of capacity utilization = **53%**

Provide 450mm dia. concrete pipe (1:200) is OK



PLAN

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



SECTION A - A

NOTES:

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

REF.	REVISION	SIGNATURE	DATE
A	BIM OBJECT REVISION.	Original Signed	12.2025
–	FORMER DRG. NO. C2406J.	Original Signed	03.2015

CATCHPIT WITH TRAP (SHEET 1 OF 2)

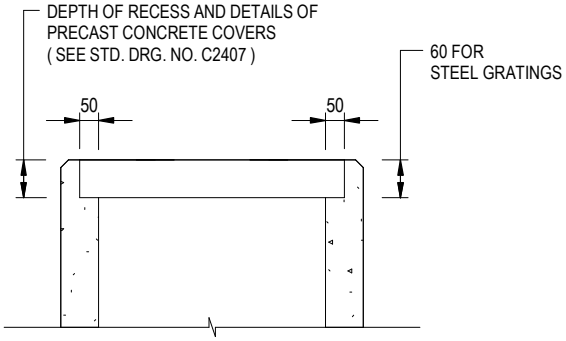
CEDD

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DATE JAN 1991

DRAWING NO. C2406 /1A



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 /2) 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 'J' ON STD. DRG. NO. C2405 /5; 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 1000 mm MIN. MEASURED FROM THE ADJACENT GROUND LEVEL.

10. MINIMUM INTERNAL CATCHPIT WIDTH SHALL BE 1000 mm FOR CATCHPITS WITH A HEIGHT EXCEEDING 1000 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 'G' ON STD. DRG. NO. C2405 /4.

12. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

REF.	REVISION	SIGNATURE	DATE
B	BIM OBJECT REVISION.	Original Signed	12.2025
A	MINOR AMENDMENT.	Original Signed	04.2016
–	FORMER DRG. NO. C2406J.	Original Signed	03.2015

CATCHPIT WITH TRAP
(SHEET 2 OF 2)

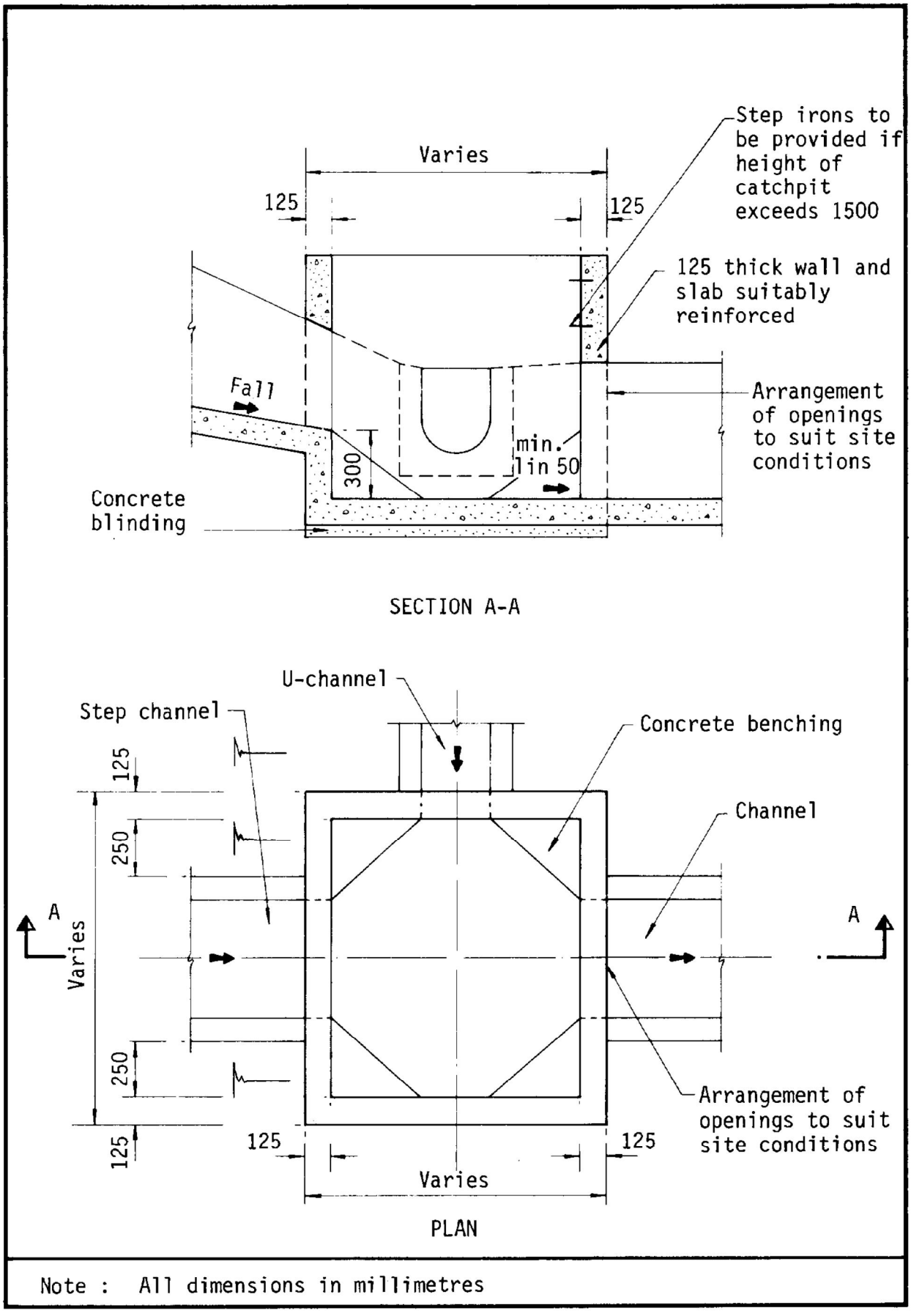
CEDD

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20

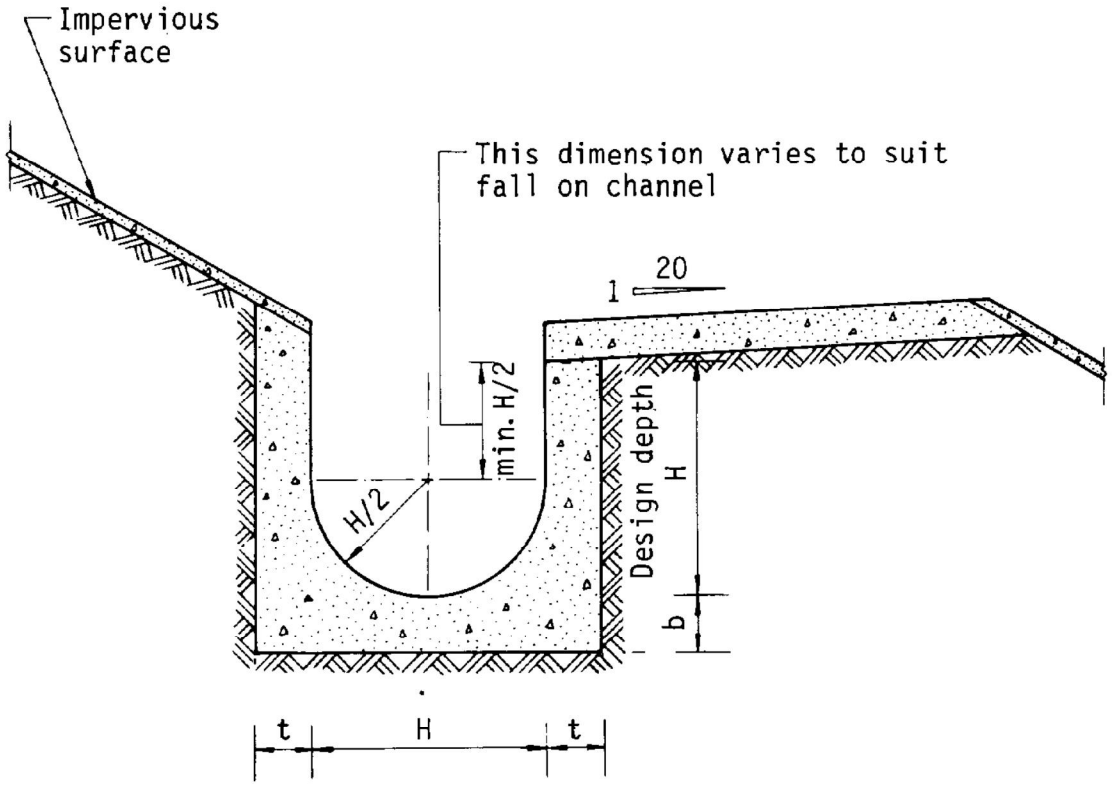
DATE JAN 1991

DRAWING NO.
C2406 /2B



Note : All dimensions in millimetres

Figure 8.10 - Typical Details of Catchpits



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