

**From:**

**Sent:** 2024-05-14 星期二 16:54:55

**To:** Ying Yeung MO/PLAND <yymo@pland.gov.hk>; tpbpd/PLAND <tpbpd@pland.gov.hk>

**Cc:**

**Subject:** Fwd: DEPARTMENTAL COMMENTS - A/YL - KTS/988

**Attachment:** 地物測量師行 ~ PSL REL 20240304(6) - DD 113 LOT 475, KAM TIN, YUEN LONG DTD 14 MAY 2024 20240514\_164942.pdf

Dear Mr. Mo,

Please disregard my letter dated 13 May 2024

Please kindly note my letter dated 14 May 2024 accordingly.

Thank you & Best Regards,

for

地物測量師行有限公司

**Polyland Surveyors Limited**

**Tel :**

**Fax :**

地物測量師行有限公司  
POLYLAND SURVEYORS LIMITED

Your Ref. : TPB/A/YL-KTS/988  
Our Ref. : PSL/REL/20240304(6) - DD 113 LOT 475, KAM TIN, YUEN LONG

14 May 2024

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

To: District Planning Officer -  
Fanling, Sheung Shui & Yuen Long East  
District Planning Office,  
Planning Department,  
Unit 2202, CDW Building,  
No. 388 Castle Peak Road,  
Tsuen Wan, New Territories.

By Fax & By Email  
(Fax No. 28770245)  
(Email:- [tpbpd@pland.gov.hk](mailto:tpbpd@pland.gov.hk))

Attn.: Mr. MO Ying Yeung  
Tel: 31684047

By Fax & By Email  
(Fax No. 31684074)  
(Email:- [yymo@pland.gov.hk](mailto:yymo@pland.gov.hk))

Dear Sir / Madam,

**Submission of Further Information**  
**S.16 Application for**  
**Proposed Temporary Animal Boarding Establishment for a Period of 5 Years**  
**In "Agriculture" Zone, Lot 475 in DD 113, Kam Tin, Yuen Long, New Territories**  
**Planning Application No. A/YL-KTS/988**

We refer to the comments received from the Drainage Services Department (DSD) in connection with the captioned Planning Application and are pleased to enclose herewith solutions and explanations attached demonstrating fulfillment of the comments herewith thereat Lot 475 in DD 113 for your onward submission to the DSD for their further comments please.

2. Should you have any further question(s) and/or require any further data or information from us, please do not hesitate to contact the undersigned by phone or email whenever required. Thank you for your kind attention.

Yours faithfully,  
For and on behalf of  
**Polyland Surveyors Limited**

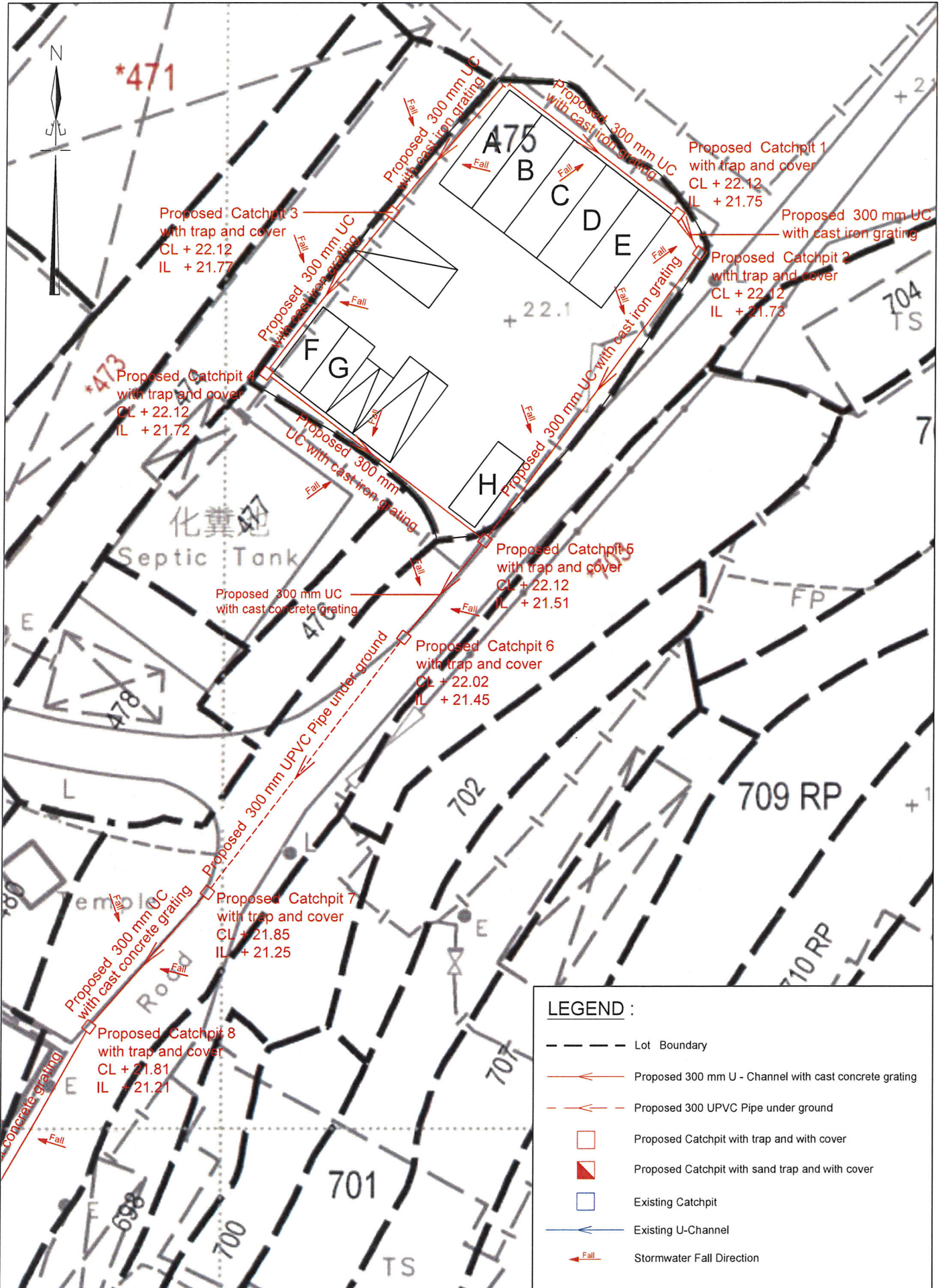


**Eric Cheuk** MRICS MCIREA MHKILA M.CPM  
**Chartered Surveyor** HKMAAL Accredited Mediator  
PMP (Tier 1) RI(2) MBA

Encl.  
c.c. Client

## Drainage Proposal & Related Supporting Documents

1. Please refer to the plans.
2. Please refer to the calculations.
3. Please refer to the calculations.
4. We are responsible for handling and resolving any conflict/disagreement arisen for discharging the runoff from the application site(s) to the proposed discharge point(s). We ensure that this drainage system and the existing downstream drains/channels/streams have adequate capacity to convey the additional runoff from the application site(s). We will perform regular maintenance to ensure that the drainage system does not get blocked.
5. Please refer to Proposed Catchpit 10 and it is a sand trap.
6. The application site will have a hoarding built in the future, with an approximate 200 mm gap from the ground.
7. We ensure that the development should neither obstruct overland flow nor adversely affect existing natural streams, village drains, ditches and the adjacent areas, etc.
8. Please refer to the plans.

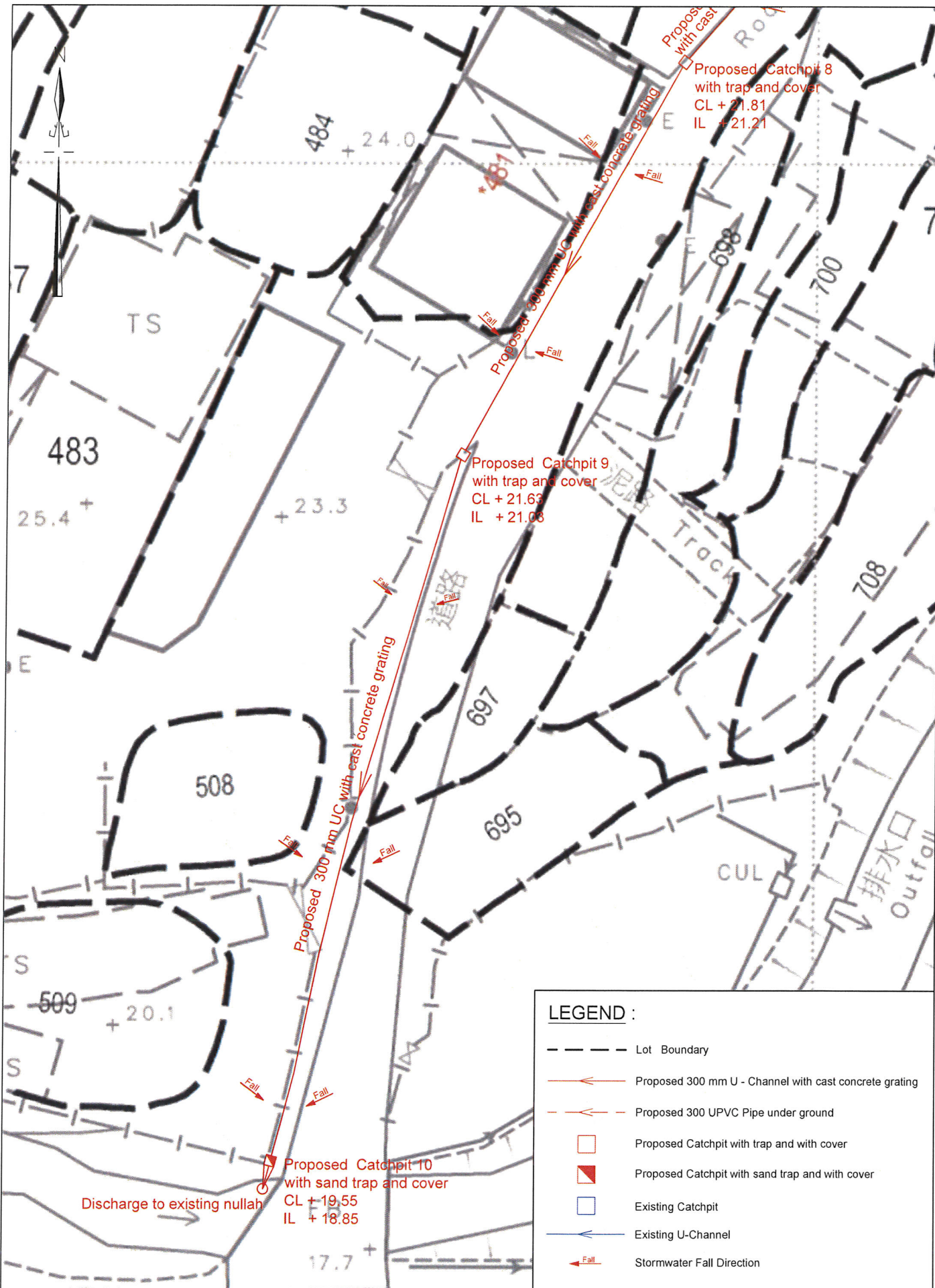


**LEGEND :**

- Lot Boundary
- Proposed 300 mm U - Channel with cast concrete grating
- Proposed 300 UPVC Pipe under ground
- Proposed Catchpit with trap and with cover
- ▣ Proposed Catchpit with sand trap and with cover
- Existing Catchpit
- Existing U-Channel
- ← Fall Stormwater Fall Direction

CHUO WANG SURVEY SERVICES COMPANY 1/F, Flat A, Wo Tai Building, No.2-24, Wo Tai Street, Luen Wo Hui, Fanling, N.T. Telephone : 26831600 Mobile : 66862836 Fax : 26831380 E-mail - chuwang.ssc@gmail.com / h.y.pang@hotmail.com	Project Title	D.D. 113 LOT 475	Scale	--	Figure No.	DP-01a
	Figure Title	PROPOSED STORMWATER DRAINAGE PLAN	Date	05-05-2024	Revision	--





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Luen Wo Hui, Fanling, N.T.  
Telephone : 29831600 Mobile : 66862936 Fax : 26831380  
E-mail - chuowang.ssc@gmail.com / h.y.pang@hotmail.com

Project Title D.D.113 LOT 475

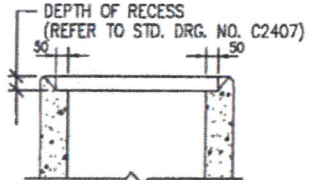
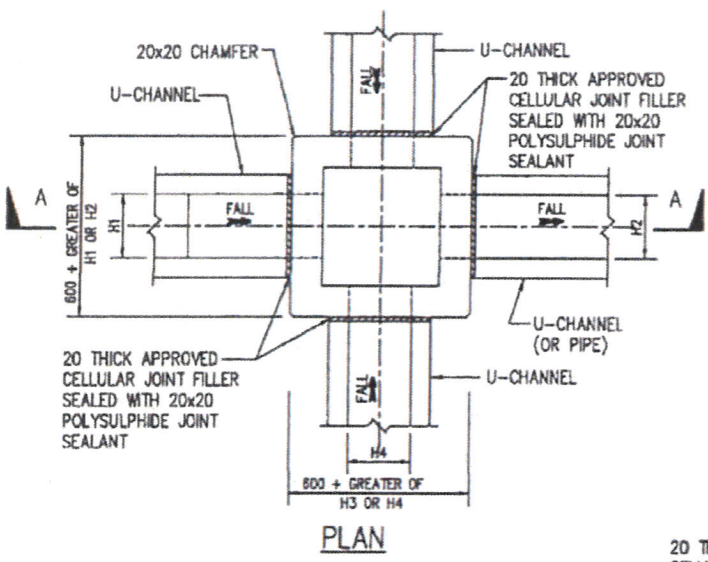
Scale --

Figure No. DP-01b

Figure Title PROPOSED STORMWATER DRAINAGE PLAN

Date 05-05-2024

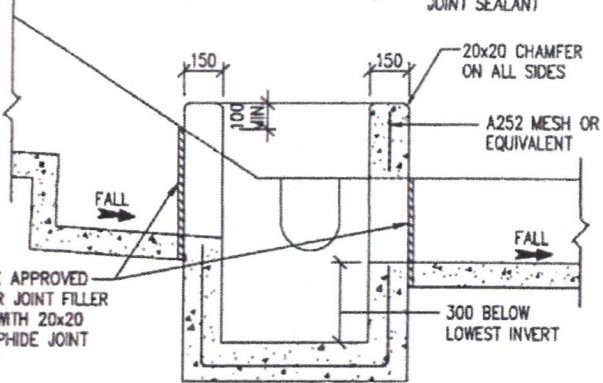
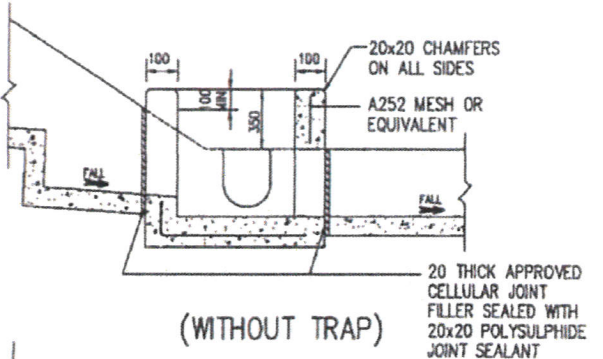
Revision --



**ALTERNATIVE TOP SECTION FOR PRECAST CONCRETE COVER**

**STANDARD CATCHPIT DETAILS**

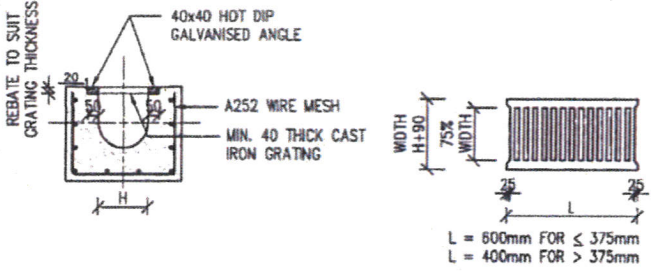
(ACCORDING TO CEDD'S DRAWING NO. C2405I & 2406I)



**NOTES**

**SECTION A - A**

- (1) ALL DIMENSIONS ARE IN MILLIMETRES.
- (2) SIZE - DEPTH :  $D < 750$   
WIDTH :  $W > 3B$   
LENGTH :  $L = 4.80^{0.87} h^{0.5} F^{-0.5} > 4B$
- (3) GRADED STONE FILTER SHALL BE CRUSHER RUN GRANITE AGGREGATE.
- (4) THE SANDTRAP SHALL BE REGULARLY DESILTED TO AVOID BLOCKAGE.



**TYPICAL SECTION**

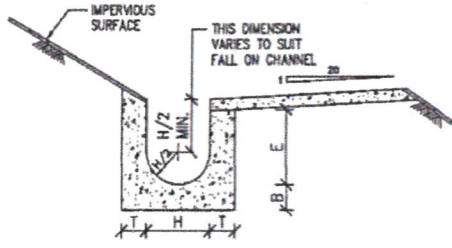
**CAST IRON GRATING**

(DIMENSIONS ARE FOR GUIDANCE ONLY, CONTRACTOR MAY SUBMIT EQUIVALENT TYPE)

**U-CHANNEL WITH CAST IRON GRATING**

(UP TO H OF 525)

(ACCORDING TO CEDD'S DRAWING NO. C2412E)



NOMINAL SIZE (H)	T	B	REINFORCEMENT
225-300	80	100	A252 MESH PLACED CENTRALLY AND T=100
375-600	100	150	WHEN E>650
675-900	100	150	A252 MESH PLACED CENTRALLY

**TYPICAL U-CHANNEL DETAILS**

(ACCORDING TO CEDD'S DRAWING NO. C2410G)

N.T.S.

**NOTES FOR U-CHANNEL**

1. THE COVER OF PROPOSED U-CHANNEL SHALL BE FLUSH WITH THE PATH SURFACE AND ANY HOLE IN SUCH COVER SHALL NOT EXCEED 20mm IN ONE DIMENSION.
2. CAST IRON GRATINGS TO BE USED SHALL BE COMPLIANCE WITH BS 437:2008.



## Hydraulic Assessment of the Stormwater Drainage for Lot 475 in D.D. 113

Locations	Sub-catchment reference	catchment area						channel character				hydraulic parameter		type of catchment area	50 yr (mm/h)	Peak Runoff (m <sup>3</sup> /s)	Full bore Capacity (m <sup>3</sup> /s)	Full bore Velocity (m/s)		
		impermeable		permeable		total		channel shape	channel size			cross area (m <sup>2</sup> )	equi. D (m)							
		sub-catchment (m <sup>2</sup> )	accumulative area (m <sup>2</sup> )		accumulative area (m <sup>2</sup> )		accumulative area (m <sup>2</sup> )		width (mm)	height (mm)	length (m)								channel slope	
Lot 475	-	1	617	617	0	0	617	617	uc	300	300	-	0.01000	0.08	0.42	u	343.74	0.016	0.138	1.713
Lot 474	-	2	381	381	0	0	381	381	uc	300	300	-	0.01000	0.08	0.42	u	343.74	0.010	0.138	1.713
Lot 477	-	3	219	219	0	0	219	219	uc	300	300	-	0.01000	0.08	0.42	u	343.74	0.006	0.138	1.713
Lot 476	-	4	101	101	0	0	101	101	uc	300	300	-	0.01000	0.08	0.42	u	343.74	0.003	0.138	1.713
Lot 489	-	5	113	113	0	0	113	113	uc	300	300	-	0.01000	0.08	0.42	u	343.74	0.003	0.138	1.713
Lot 705	-	6	328	328	0	0	328	328	uc	300	300	-	0.01000	0.08	0.42	u	343.74	0.009	0.138	1.713
Lot 698	-	7	378	378	0	0	378	378	uc	300	300	-	0.01000	0.08	0.42	u	343.74	0.010	0.138	1.713
Lot 481	-	8	312	312	0	0	312	312	uc	300	300	-	0.01000	0.08	0.42	u	343.74	0.008	0.138	1.713

I = Rainfall intensity (50 year storm frequency may be specified)

Peak Runoff = 0.278\*I/1000/60/60\*accumulative area

Cross area for 300 u channel = 0.150\*0.3+0.150^2\*pi/2

Equivalent Diameter = 4\*Hydraulic Radius

Hydraulic Radius = cross area of u channel / wetted perimeter of u channel

Roughness coefficient (ks) at 3.3mm

The roughness of a pipe is normally specified in either mm or inches and common values range from 0.0015 mm for PVC pipes through to 3.0 mm for rough concrete pipes

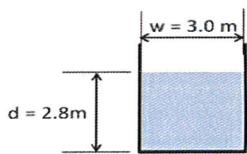
Full bore Capacity = Full bore Velocity \* cross area

Full Bore Velocity - The Full Bore Velocity is calculated using either the Manning Formula or the Colebrook-White Formula and is based on full bore conditions.

### HYDRAULIC RADIUS (R)

$$v = \frac{R^{2/3} S^{1/2}}{n} \quad \text{(Mannings Equation)}$$

$$\text{Hydraulic Radius (R)} = \frac{\text{Cross sectional area of flow (A)}}{\text{Wetted Perimeter (P)}}$$



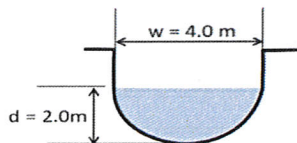
$$A = d * w$$

$$P = d + w + d = 2d + w$$

$$A = 2.8 * 3.0 = 8.4 \text{ m}^2$$

$$P = 2.8 + 3.0 + 2.8 = 8.6$$

$$R = A/P = 8.4/8.6 = 0.98$$



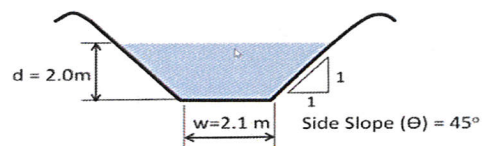
$$A = \pi * (w/2)^2 / 2$$

$$P = \pi w / 2$$

$$A = \pi * (4.0/2)^2 / 2 = 6.28$$

$$P = \pi * 4 / 2 = 6.28$$

$$R = A/P = 6.28/6.28 = 1.0$$



$$A = 2 * (d * d * \tan \theta / 2) + w * d$$

$$= (d^2 * \tan \theta) + w * d$$

$$P = 2 * (d / \cos \theta) + w$$

$$A = (2^2 * \tan 45) + (2.1 * 2.0) = 4.0 + 4.2 = 8.2 \text{ m}^2$$

$$P = 2.8 + 3.0 + 2.8 = 8.6$$

$$R = A/P = 8.2/8.6 = 0.95$$

The Manning Formula is used for Velocity calculations within the software.

$$V = \frac{1}{n} R^{2/3} S^{1/2}$$

where;

V = Velocity

n = Manning's roughness coefficient (see Pipe Roughness)

R = Hydraulic Radius

S = Hydraulic gradient

The equation is in meter-per-second units but the n values are the same as those specified in the foot-per-second format of the equation (e.g. smooth concrete pipe n = 0.012 approximately). The formula is sometimes known as Strickler's formula and 1/n as the Strickler's coefficient.

A concrete pipe with a smooth interior would have a Manning's n of approximately 0.012.

Manning's n may be derived from 1/Strickler coefficient.