

Urgent Return receipt Expand Group Restricted Prevent Copy

From: Chong Hermose [REDACTED]
Sent: Wednesday, May 27, 2026 5:04 PM
To: tpbpd/PLAND <tpbpd@pland.gov.hk>
Cc: [REDACTED]
Subject: A/SK-PK/320_補充文件（請以這份為準）

城規會 / 規劃處：

有關規劃申請：A/SK-PK/320，現附上補充文件。

這電郵將取代 2026 年 5 月 26 日的電郵，請查收。

謝謝。

Ms Chong
[REDACTED]

(d) Name and number of the related statutory plan(s) 有關法定圖則的名稱及編號	北港及沙角尾分區計劃大綱核准圖編號 S/SK-PK/11 Approved Pak Kong & Sha Kok Mei Outline Zoning Plan No. S/SK-PK/11
(e) Land use zone(s) involved 涉及的土地用途地帶	「康樂」 Recreation
(f) Current use(s) 現時用途	空置的土地及空置的構築物 (If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)

4. “Current Land Owner” of Application Site 申請地點的「現行土地擁有人」

The applicant 申請人 –

is the sole “current land owner”^{#&} (please proceed to Part 6 and attach documentary proof of ownership).
是唯一的「現行土地擁有人」^{#&} (請繼續填寫第 6 部分，並夾附業權證明文件)。

is one of the “current land owners”^{#&} (please attach documentary proof of ownership).
是其中一名「現行土地擁有人」^{#&} (請夾附業權證明文件)。

is not a “current land owner”[#].
並不是「現行土地擁有人」[#]。

The application site is entirely on Government land (please proceed to Part 6).
申請地點完全位於政府土地上 (請繼續填寫第 6 部分)。

**5. Statement on Owner's Consent/Notification
就土地擁有人同意/通知土地擁有人陳述**

(a) According to the record(s) of the Land Registry as at (DD/MM/YYYY), this application involves a total of “current land owner(s)”[#].
根據土地註冊處截至 年 月 日的記錄，這宗申請共牽涉 名「現行土地擁有人」[#]。

(b) The applicant 申請人 –

has obtained consent(s) of “current land owner(s)”[#].
已取得 名「現行土地擁有人」[#]的同意。

Details of consent of “current land owner(s)” [#] obtained 取得「現行土地擁有人」 [#] 同意的詳情		
No. of ‘Current Land Owner(s)’ 「現行土地擁有人」數目	Lot number/address of premises as shown in the record of the Land Registry where consent(s) has/have been obtained 根據土地註冊處記錄已獲得同意的地段號碼/處所地址	Date of consent obtained (DD/MM/YYYY) 取得同意的日期 (日/月/年)

(Please use separate sheets if the space of any box above is insufficient. 如上列任何方格的空間不足，請另頁說明)

擬議發展細節

1. 申請人現根據《城市規劃條例》(第 131 章)第 16 條，提交有關新界西貢大涌口路徑丈量約份第 217 約多個地的規劃申請，擬在上述地段申請為期三年的臨時商店及服務行業。
2. 申請地點位於西貢大涌口路附近，在《北港及沙角尾分區計劃大綱核准圖編號 S/SK-PK/11》上劃為「康樂」。
3. 申請地盤面積為約 920 平方米，上蓋總面積 320 平方米，露天地方面積為 600 平方米，上蓋覆蓋率為約 34.8%。
4. 申請地點將設有 4 個臨時構築物，總樓面面積不多於 500 平方米，用途如下：
 - 構築物 A：臨時商店及服務行業，兩層高，上蓋面積約 80 平方米，總面積約 140 平方米，高度不多於 7 米。
 - 構築物 B、C 及 D：臨時商店及服務行業，兩層高，上蓋面積約 80 平方米，總面積約 120 平方米，高度不多於 7 米。
5. 擬議發展的臨時商店及服務行業，主要包括：便利店及日用品零售、寵物用品零售、雜貨飲品乾貨零售等，主要為附近的居民提供服務。
6. 申請地點涉及 2 個臨時上落貨車位。
7. 擬議發展的營運時間為星期一至日上午 9 時至下午 8 時（包括公眾假期）。

申請原因

1. 申請地點之前涉及一個相同用途的規劃申請(A/SK-PK/296)，因之前申請人未能履行附帶條件，該申請已被撤銷。有關渠務：申請人之前曾向渠務處遞交渠務報告，但未能在限期前回覆部門；至於消防：因之前地政處仍未批 STW，所以未能完成相關附帶條件。申請人這次已遞交渠務報告及消防裝置建議書，承諾會完成附帶條件，給城規會考慮。
2. 申請地點的面積約為 920 平方米，根據北港及沙角尾分區計劃大綱核准圖編號 S/SK-PK/11，申請地點現時被規劃為「康樂」。擬議申請用途為臨時商店及服務行業，屬於第二欄的准許用途，須先向城規會申請。
3. 擬議發展並非貨倉或露天存放用途，屬社區小規模運作，與規劃意向「康樂」並無衝突，與周遭的土地用途並非不協調。擬議發展是在申請地點上設 4 個由貨櫃改建的簡單臨時上蓋構築物，不涉及大型基建工程，只是臨時商店及服務行業，出售一些與民生相關的零售商店。
4. 申請用途屬臨時性質，不會有任何損害周邊環境設施，不會安裝霓虹燈光招牌；夜間不會有音響播放及商業推銷活動，也不會產生光害滋擾，不會有過大的噪音聲浪問題，不會影響附近環境及民居。
5. 申請人會採取環境保護署發出的《處理臨時用途及露天貯存用地的環境問題作業指引》所列載的緩解環境影響措施，以盡量舒緩擬議發展對環境造成的滋擾。
6. 申請地點的工作人員約 4-5 人，不會有人在留宿，他們只在營業時間內上班。
7. 按規劃處記錄，在申請地點附近（同樣是「康樂」規劃用途的地段），曾獲小組委員會批出同屬臨時商店申請個案，申請人明白每一宗申請都是個別獨立個案，並無必然關係，唯上述規劃許可申請和本申請用途類近，而該申請都能得到委員會有條件下批出，因此申請人懇請城市規劃委員考慮本申請時參考上述類近申請。
8. 擬議發展有充分的理由支持，當中包括以下規劃考量因素：
 - * 附近有大量民居，擬議申請的臨時商店能提供服務給他們，提供方便；
 - * 符合「康樂」地帶的規劃意向；
 - * 擬議發展屬臨時三年的性質，不會影響土地規劃用途的長遠規劃發展；
 - * 擬議發展並不會造成任何不良的交通、園藝及景觀影響；及

根據以上各點，申請人誠意懇求城市規劃委員會寬大批准新界西貢大涌口路徑丈量約份第 217 約多個地段作為期三年的臨時商店及服務行業。

擬議發展計劃的各方面影響

1. 土地行政

申請地點已獲西貢地政處批出短期豁免書。

2. 擬議發展的入口

申請地點可以經西貢大通口路經鄉村小徑前往，步行距離約 65 米。



3. 擬議發展的上落貨安排

申請用途涉及 2 個臨時上落貨位置，送貨司機會提前致電職員，看現場是否有空置車位才安排送貨，不會影響附近的交通。

4. 環境方面

申請人會按照環保署對臨時商店的指引，將對周邊環境的影響減到最低。

5. 空氣方面

申請地點是臨時商店，不會對空氣造成污染。

6. 噪音方面

申請地點是臨時商店，只是顧客來購物時會產生說話交談的聲音，不會帶來重大的噪音影響。

7. 排污方面

申請用途不涉及洗手間，職員/訪客可使用附近的大涌口公共洗手間。



8. 渠務方面

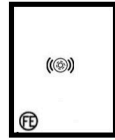
申請人會按照渠務處的指引和要求建造排水渠，不會影響周邊環境。

9. 消防方面

申請人會將按照消防處的指引和要求放置消防裝置。

申請人承諾如獲城規會批准擬議用途，將會盡力減少對周邊環境影響，並承諾在規劃許可到期後，還原申請地點，懇請城市規劃委員會寬大批准新界西貢大涌口路徑丈量約份第 217 約多個地段作為期不超過三年的臨時商店及服務行業。

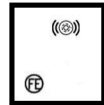
1/F of Structure A
GFA : 60m²



Structure A
Shop & Services
Covered Area: 80m² (ABOUT)
GFA: 140m² (ABOUT)
No. of storey: 2
Height: Not exceeding 7m

Structure B
Shop & Services
Covered Area: 80m² (ABOUT)
GFA: 120m² (ABOUT)
No. of storey: 2
Height: Not exceeding 7m

1/F of Structure B
GFA : 40m²



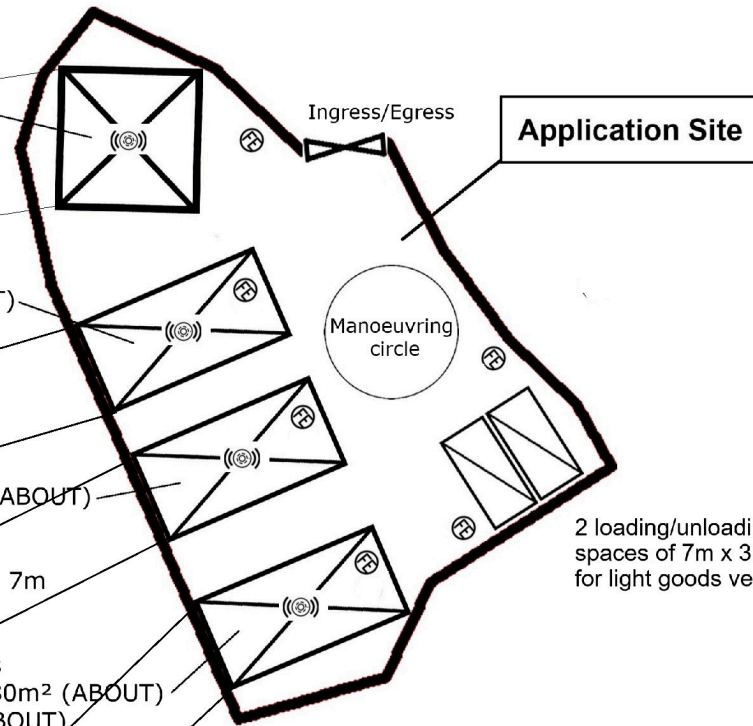
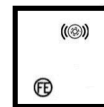
Structure C
Shop & Services
Covered Area: 80m² (ABOUT)
GFA: 120m² (ABOUT)
No. of storey: 2
Height: Not exceeding 7m

1/F of Structure C
GFA : 40m²



Structure D
Shop & Services
Covered Area: 80m² (ABOUT)
GFA: 120m² (ABOUT)
No. of storey: 2
Height: Not exceeding 7m

1/F of Structure D
GFA : 40m²



Application Site

F.S. NOTES :

Proposed Fire Services Installation

- 1) SUFFICIENT STAND-ALONE FIRE DETECTOR SHALL BE PROVIDED THROUGHOUT THE ENTIRE BUILDING IN ACCORDANCE WITH "STAND-ALONE FIRE DETECTOR GENERAL GUIDELINES ON PURCHASE, INSTALLATION & MAINTENANCE [SEP 2021]".
- 2) IN RELATION TO 1) ABOVE, WHERE TWO OR MORE STAND-ALONE FIRE DETECTORS ARE INSTALLED IN AN ENCLOSED STRUCTURE, ALL STAND-ALONE DETECTORS SHALL BE INTERCONNECTED (EITHER WIRED OR WIRELESSLY) SUCH THAT WHEN ONE OF THE STAND-ALONE FIRE DETECTOR IS TRIGGERED, ALL CONNECTED STAND-ALONE FIRE DETECTORS SHALL SOUND AN ALARM SIMULTANEOUSLY.
- 3) PORTABLE HAND-OPERATED APPROVED APPLIANCE SHALL BE PROVIDED AS REQUIRED BY OCCUPANCY.



Project 項目名稱:
A/SK-PK/320

Drawing Title 圖紙標題:

FS Plan

Remarks 備註:

((C)) Stand-Alone Fire Detector

(FE) 4 KG Dry Powder Type Fire Extinguisher

Drawing No. 圖號:

TEMPORARY DRAINAGE PROPOSAL

APPLICATION SITE OF PROPOSED TEMPORARY SHOP AND SERVICES FOR A PERIOD OF 3 YEARS AT LOT No.762 S.A(Part),762 S.B(Part),762 S.C(Part),762 S.E(Part),762 S.F(Part),961 S.A(Part),961 S.B(Part),962 S.B(Part),962 S.C,962 RP,963 S.A(Part)in D.D. 217, Tai Chung Hau Road Track, Sai Kung, N.T.

Application No.: A/SK-PK/320

20 May 2026

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2 Introduction

2.1 Background

This report presents the drainage proposal for supporting the proposed temporary shop and services for a period of 3 years at various Lots in D.D. 217, Tai Chung Hau Road Track, Sai Kung, New Territories.

2.2 Objectives of the Report

This report shall be prepared to include the following:

- Identify the potential drainage impact assessment from the proposed Application Site
- Recommend and implement all necessary measures to mitigate adverse drainage impacts arising from the application site

2.3 Report Structure

The report contains the following sections:

- Section 1 on Introduction;
- Section 2 on Development Proposal;
- Section 3 on Assessment Criteria;
- Section 4 on Potential Drainage Impact; and
- Section 5 on Conclusion.

3 Development Proposal

3.1 Location of the Application Site

The application Site is located within the Tai Chung Hau Road Track, Sai Kung, with an area of around 930m² and ground level varying between + 6.1mPD and + 5.9mPD. The layout plan is provided in **Appendix B**.

This application site is "Recreation" zoning, the type of application is the Temporary Use/Development in Rural Areas for a Period of 3 Years.

There is an existing catchpit vicinity of the application site, the location and site photos of the existing catchpit are provided in **Appendix C**.

4 Assessment Criteria

4.1 Design Return Periods

The drainage system in the Application site is to collect surface flows and convey to the existing catchpit and finally convey to downstream village drain. The recommended design return periods based on the flood levels for the various drainage systems depend on the drainage system, land use, hazard to public safety and community expectations. The recommended design return period is reproduced in Table 4-1 below:

DESCRIPTION	DESIGN RETURN PERIODS
Intensively Used Agricultural Land	2 – 5 Years
Village Drainage including internal Drainage System under a polder Scheme	10 Years
Main Rural Catchment Drainage Channels	50 Years
Urban Drainage Trunk System	200 Years
Urban Drainage Branch System	50 Years

Table 4-1 Recommended Design Return Periods based on Flood Levels

As per Storm Drainage Manual (SDM) Section 6.6.2 Urban Drainage Branch and Urban Drainage Trunk Systems “An ‘Urban Drainage Branch System’ is defined as a group or network of connecting drains collecting runoff from the urban area and conveying stormwater to a trunk drain, river or sea. For a simple definition, the largest pipe size or the equivalent diameter in case of a box culvert in a branch system will normally be less than 1.8m.

An ‘Urban Drainage Trunk System’ collects stormwater from branch drains and/or river inlets, and conveys the flow to outfalls in river or sea. Pipes with size or diameter equal to or larger than 1.8m are normally considered as trunk drains.”

As per SDM, since the proposed U-channels are sized smaller than 1.8m, the drainage system would be defined as an urban drainage branch with recommended design return period of 50 years.

The 50 years design return period will be considered to ensure adequacy of the stormwater drainage system.

4.2 Calculation Methodology for Runoff

Peak instantaneous runoff values before and after the development were calculated based on the Rational Method and with recommended physical parameters including runoff coefficient (C) and storm constants for different return periods referred to the SDM, based on the following equation:

$$Q_p = 0.278 C i A$$

where	Q_p	=	Peak Runoff, m ³ /s
	C	=	Runoff Coefficient
	i	=	Rainfall Intensity, mm/hr
	A	=	Catchment Area, km ²

The paved area of the site will account for 5240m². For conservative, the runoff coefficient of 0.9 is assumed, such that the all the run-off would be collected from the catchment area without any infiltration as the critical scenario.

Based on the storm constants for 50-year return period recommended in the SDM, the appropriate rainfall intensities (i) are calculated as detailed in Appendix D

4.3 Calculation Methodology for Pipe Capacity Checking

Due to the catchment areas are less than 1ha, U-channels are recommended to be constructed to collect the stormwater runoff of the open area within the site. For the catchment area within the roofing of the one-story warehouse, stormwater would be collected by the gutter, and then be diverted to U-channel system at ground level via downpipe. The collected stormwater should finally be diverted to the downstream via the proposed U-channel system.

For the worst-case scenario, bad condition of concrete pipe is assumed for the Manning's roughness coefficient (coefficient value is 0.016) for calculating capacities of concrete U-channel using Manning's Equation.

Manning's Equation for calculating the channel and pipe capacities is adopted.

5 Potential Drainage Impact

5.1 Existing Site Condition

The application Site is located within the Tai Chung Hau Road Track, Sai Kung with an area of around 930m² and ground level varying between + 6.1mPD and + 5.9mPD.

5.2 Changes in Drainage Characteristics

Since the existing ground level of application site is generally higher than the adjacent ground surface. No external catchment shall be considered in the calculation. And the hoarding of adjacent site control the runoff within application site won't convey to adjacent site, prevent extra runoff affecting adjacent site.

The change in sub-catchment is summarized in Table 5-1.

	Before	After
Grassland (m ²)	0	0
Paved Area (m ²)	930	930
External Catchment Area(m ²)	0	0
Total Catchment Area (m ²)	930	930

Table 5-1 Change in sub-catchment within the site

5.3 Potential Drainage Impact

The details of the proposed drainage works are illustrated in **Appendix C**.

To effectively convey stormwater away from the application site and minimize the potential impact to the drainage infrastructure of the village area, drainage works consists of U-channels, are proposed to convey the stormwater runoff to the terminate catchpit with sand trap (TCP).

The runoff within application site separated to two catchment area, catchment area CA1 approximate 590m², collected by a 225mm U-channel, runoff would then be conveyed to 500mm U-channel and finally conveyed to existing terminate catchpit. Catchment area CA2 approximate is collected by one 500mm U-channel along the lower level boundary at right hand side of the site, runoff would then be conveyed to the existing terminate catchpit with sand trap (TCP) within the application site, before discharging to the existing village Nullah at the Eastern direction of the application site, and eventually discharge to the further downstream as indicated in the **Appendix C**.

The 500 mm U-channel receives stormwater from the surface. For Conservative, the critical scenario is considered for collecting all the flow leading to the 500mm U-channel. The design calculation of the proposed drainage is provided in **Appendix D**. The design calculation is summarized in Table 4-2.

Drainage System	Estimated Flow (L/min)	Capacity (L/min)	Reserve Capacity
225mm u-channel	3363	3800	12%
450mm u-channel	5441	24000	77%

Table 4-2 Design calculation of the proposed drainage work

1. Rainfall increase due to climate change at the end of 21st century is considered according to

TEMPORARY DRAINAGE PROPOSAL

stormwater drainage manual Table 28.

2. The reserve capacity is calculated by assuming that the U-channel reach its full capacity.

The design runoff arise from the proposed Application Site is to be discharged into the proposed terminate catchpit with the runoff anticipated to be 5440L/min, which is within the drainage capacity of the proposed 500mm u-channel of 24000L/min, the reserve capacity is 77%. And there would be a 300mm existing discharge pipe convey the flow from existing terminal catchpit within the application site, the runoff also within the drainage capacity of the proposed 250mm drainage pipe of 6150L/min, the reserve capacity is 12%.

It is considered that the drainage discharge from the Application Site will not cause adverse impact to the entire downstream drainage system.

All u-channels & catch pits will be constructed according to the CEDD's standard drawings, please refer to the **Appendix E**.

6 Construction Stage

6.1 Temporary Drainage Arrangements

Proper measures shall be taken to maintain the existing drainage characteristics of the catchment areas and to minimize drainage impacts associated with the construction works. The principal drainage impacts which are associated with construction of the works have been identified as follows:

- (i) Erosion of ground materials;
- (ii) Sediment transportation to existing downstream drainage system; and
- (iii) Obstruction to drainage systems.

Regular inspections shall be carried out to ensure integrity of the works. These inspections shall cover works under construction as well as recently completed areas.

To ensure proper operation of the site drainage channels and desilting facilities, inspection of the perimeter drains shall be carried out on a weekly basis and the desilting facilities shall be cleaned on a daily basis.

If excavated materials are not possible to transport away the excavated material within the same day, the material should be covered by tarpaulin/impervious sheets. Stockpiles of construction materials (for examples aggregate, fill materials) of more than 50 m³ in an open area shall also be covered with tarpaulin or similar fabric during rainstorms.

TEMPORARY DRAINAGE PROPOSAL

All runoff discharged into the existing drainage system will be settled in a silt trap to ensure no sediment will be discharged into the channel. Silt traps will normally be provided along the site drainage immediately upstream of the proposed discharge point to the existing Site. The silt traps will be inspected daily and immediately after each rainstorm.

Liaison will be carried out with relevant parties regarding temporary drainage arrangements to ensure that the drainage system is functioning adequately.

7 Conclusions

7.1 Conclusions

The analyzed catchment area of 930m² consists of the site area of the proposed Application Site only and no external catchment area had been identified.

U-channels are proposed to convey runoff from the application site for collection. The proposed U-channels are located along the lower-level boundary which is subject to change to suit the building layout.

The assessment reviews the drainage pipe have the sufficient capacity to cater for the drainage flow from the Application Site.

Mitigation measures are proposed during the construction period and to ensure that the existing drainage system within the site will not be affected during the construction stage.

APPENDIX A

SITE LAYOUT PLAN

APPENDIX B

LAYOUT PLAN

Structure A

Shop & Services
Covered Area: 80m² (ABOUT)
GFA: 140m² (ABOUT)
No. of storey: 2
Height: Not exceeding 7m

Structure B

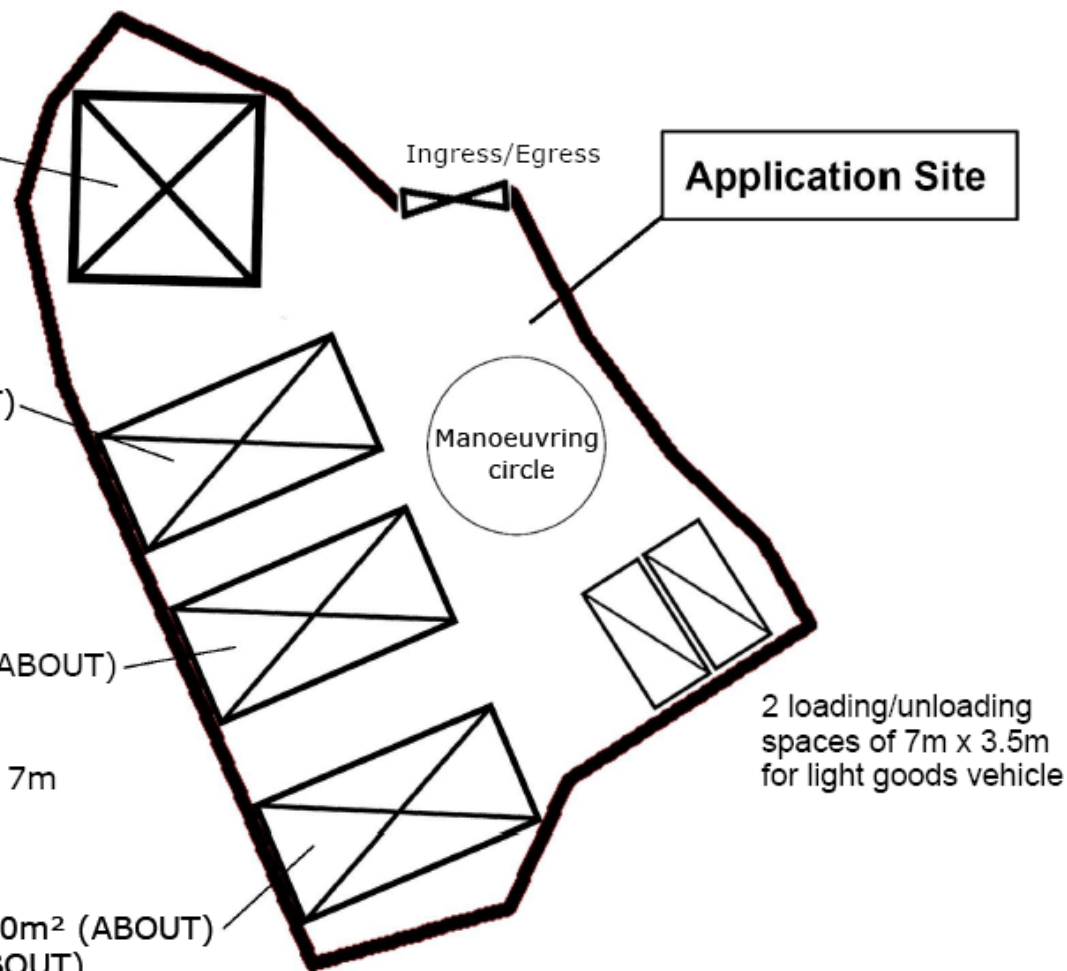
Shop & Services
Covered Area: 80m² (ABOUT)
GFA: 120m² (ABOUT)
No. of storey: 2
Height: Not exceeding 7m

Structure C

Shop & Services
Covered Area: 80m² (ABOUT)
GFA: 120m² (ABOUT)
No. of storey: 2
Height: Not exceeding 7m

Structure D

Shop & Services
Covered Area: 80m² (ABOUT)
GFA: 120m² (ABOUT)
No. of storey: 2
Height: Not exceeding 7m



Application Site

Ingress/Egress

Manoeuvring circle

2 loading/unloading spaces of 7m x 3.5m for light goods vehicle



Project 項目名稱:



Proposed Temporary Shop and Services for a Period of 3 Years at Various Lots in D.D. 217, Tai Chung Hau Road Track, Sai Kung, New Territories

Drawing Title 圖紙標題:

Layout Plan

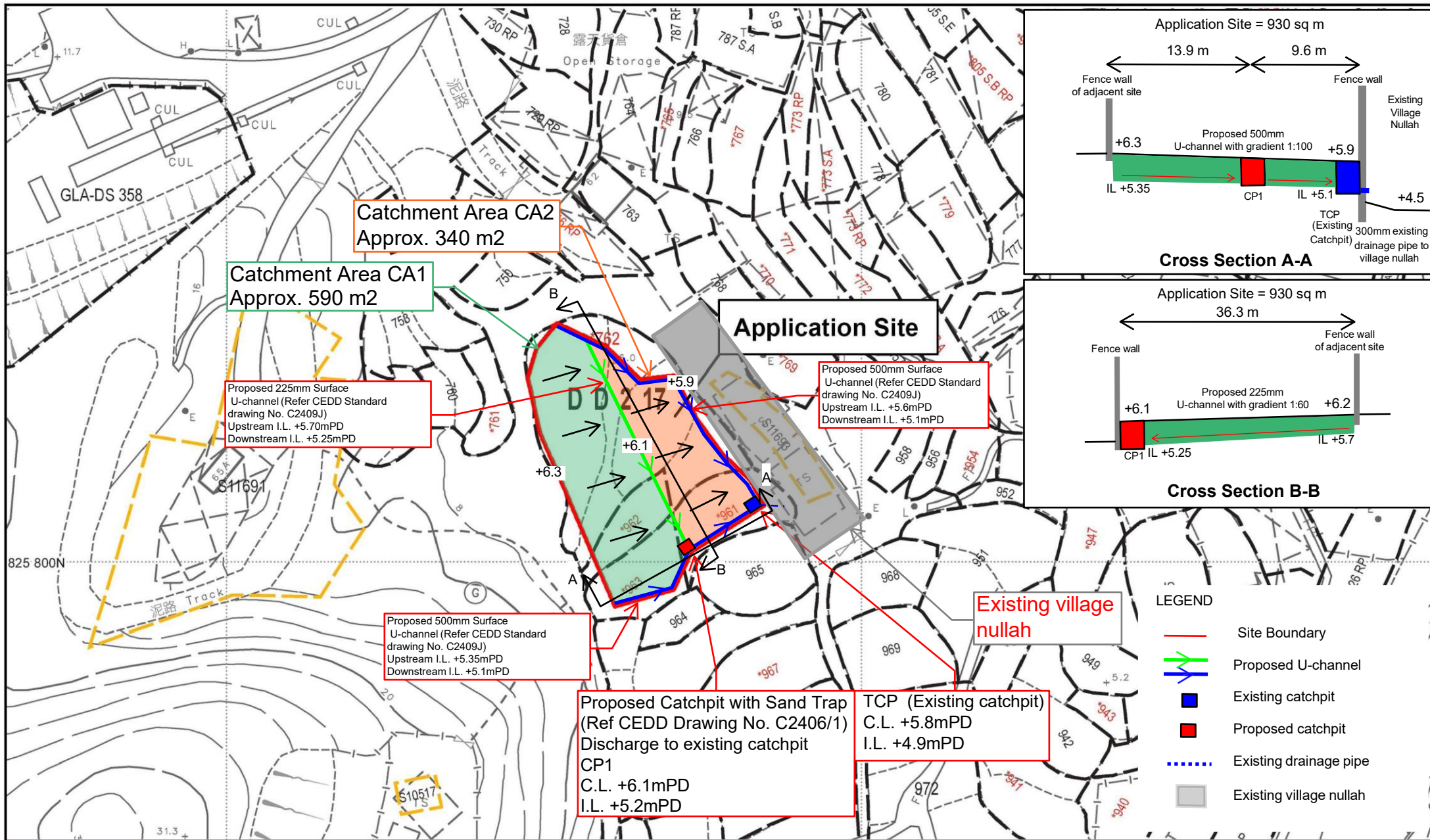
Drawing No. 圖號:

Remarks 備註:

-  Loading/unloading for light goods vehicle
-  Structure

APPENDIX C

PROPOSED DRAINAGE PLAN



Project 項目名稱:
Proposed Temporary Shop and Services for a Period of 3 Years at Lots No.762(Part), 961(Part), 962(Part) and 963(Part) in D.D. 217, Tai Chung Hau Road Track, Sai Kung, New Territories

Drawing Title 圖紙標題:
Site Plan

Drawing No. 圖號:
20240625

Remarks 備註:

APPENDIX D

DESIGN CALCULATION OF THE PROPOSED DRAINAGE SYSTEM

Check of Surface Drainage System

PROJECT: APPLICATION SITE OF PROPOSED TEMPORARY SHOP AND SERVICES
FOR A PERIOD OF 3 YEARS AT TAI CHUNG HAU RAOD TRACK, SAI KUNG
JOB NO : ALPL/TDM/004
TITLE : Temporary Drainage Design Calculation

Revision : 0
Date : 1-Feb-25
Prepare By: JW

DETERMINE THE CATCHMENT OF AREA

CA1 = 590 (m²)
CA2 = 340 (m²)

DETERMINE THE INLET TIME

Section	A = Catchment of Area (m ²)		Level of remote point (mPD)	Level of inlet point (mPD)	L (m)	H (m/100m)	t _e = Time of Natural flow (min)
1	CA1	590	6.3	6.1	13.9	1.44	0.99
2	CA2	340	6.1	5.9	9.6	2.08	0.67

Ref.: Bransby Williams Equation

$$t_e = \frac{0.14465L}{H^{0.2} \cdot A^{0.1}}$$

Note: H = average slope (m per 100m), measured along the line of natural flow, from the summit of the catchment to the point under consideration
L = distance (on plan) measured on the line of natural flow between the summit and the point under consideration (m).

DETERMINE THE SIZE OF STEPPED / U-CHANNEL

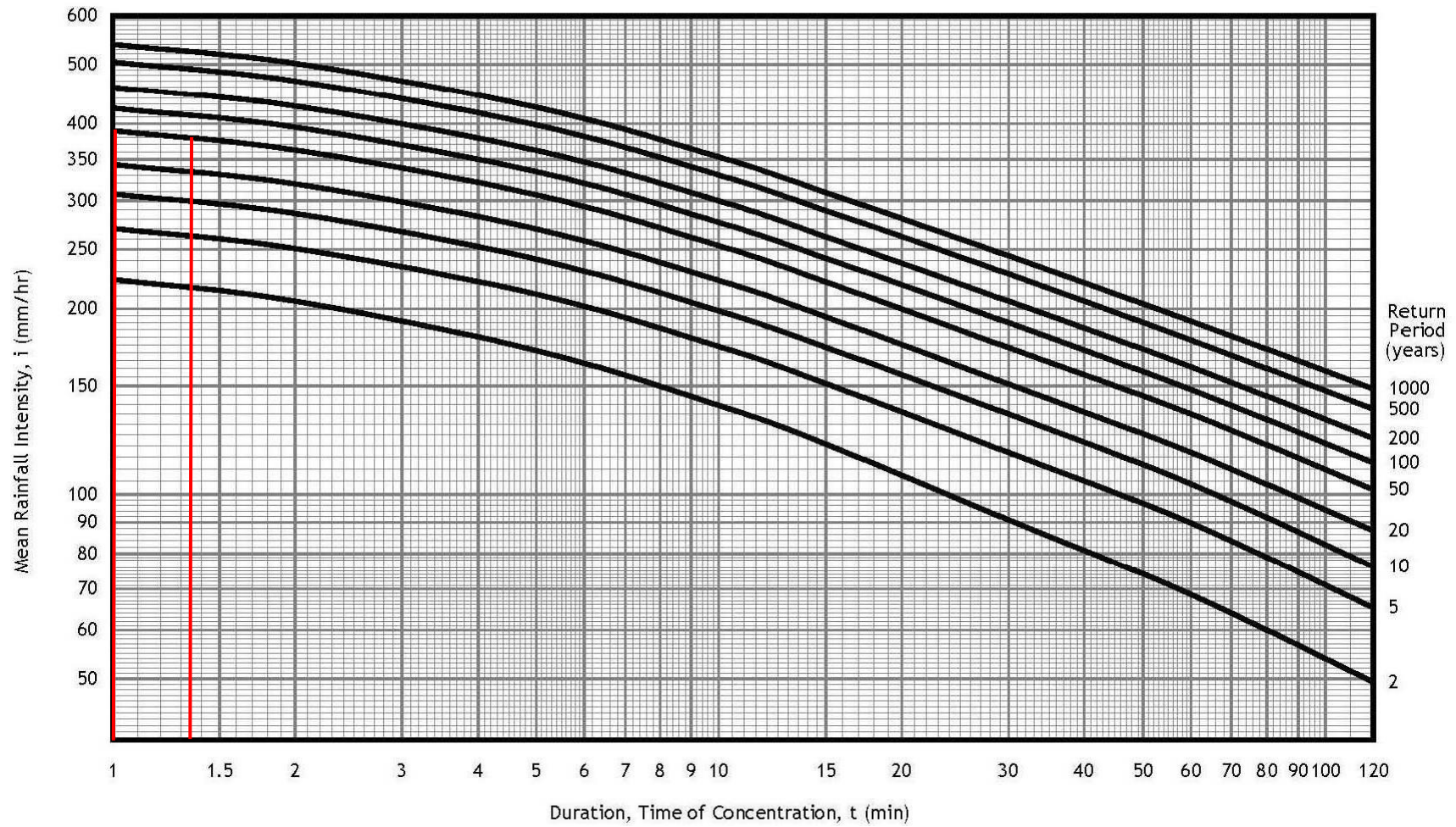
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Section No.	Ldr (m)	Lh (m)	L (m)	Gradient (1 in)	Site area (m ²)	others area (m ²)	Total area (m ²)	A (m ²)	channel size	Capacity (l/min)	Assumed Flow	t _i (min)	t _c (min)	t _e (min)	I (mm/hr)	Runoff (l/min)	Remark
1	0.45	36.30	36.30	80.67	590.00	0.00	590.00	590.00	225	3800	1.70	0.36	0.39	1.34	380.00	3363.0	O.K.
2	0.50	40.50	40.50	81.00	340.00	590.00	930.00	930.00	450	24000	2.75	0.25	0.67	0.91	390.00	5440.5	O.K.

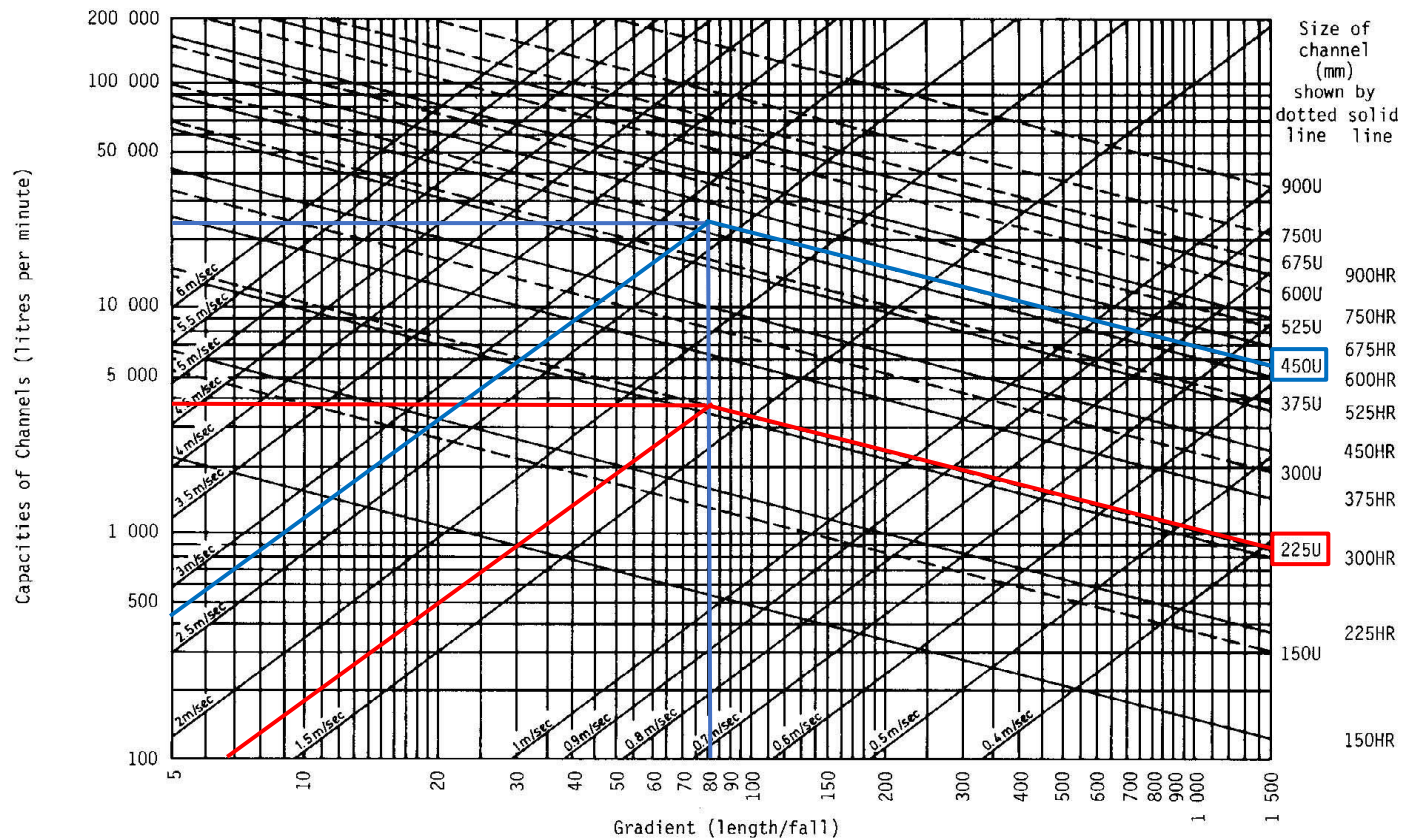
CAPACITY > RUNOFF

[Use new 225 U, so it is O.K.]
[Use new 500 U, so it is O.K.]

Note: Ldr = Different level between U-channel section
Gradient = 1 in (Lh/Ldr)
Total area = Site area + others area
A=Cumulative area = Total area + others section area
Capacity = Refer to the extracted Figure 8.7 - Chart for the Rapid Design of Channels (Geotechnical Manual for Slopes P.253)
Assumed flow velocity = Assumed velocity of runoff
Actual Flow velocity = Refer to the extracted Figure 8.7 - Chart for the Rapid Design of Channels (Geotechnical Manual for Slopes P.253)
t_i = Flow time = L / assumed flow velocity
t_c = inlet time (time taken for flow from the remotest point to reach the most upstream point of the urban drainage system)
t_e = Time of concentration = t_i + t_c (Min. t_e = 1 min. for conservative design)
I = Intensity Refer to the extracted Figure 8.2 - Curves Showing Duration and Intensity of Rainfall in H.K. for Various Return Periods (Geotechnical Manual for Slopes P.248)
K = Runoff coefficient = 0.9 refer to Character of Surface (refer DSD(2013))
Design Return Period = 50 years
Runoff = K.I.A./3600 (l/s) = K.I.A./60 (l/min)
UC U-channel
SC Stepped channel

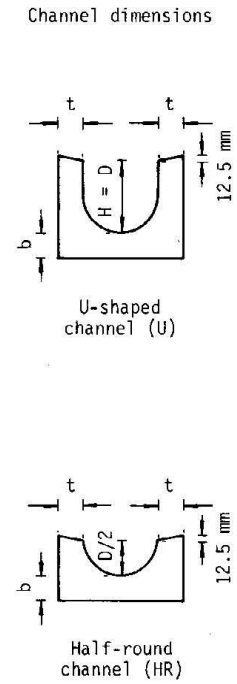
For section no. 1.00 , Actual Flow Velocity = 1.70 m/s < 4m/s, O.K.
For section no. 2.00 , Actual Flow Velocity = 2.75 m/s < 4m/s, O.K.





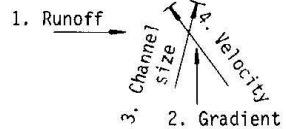
Size of channel (mm) shown by dotted solid line line

900U
750U
675U
600U
525U
450U
375U
300U
225U
150U



DESIGN METHOD USING CHART

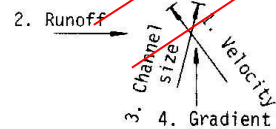
(a) Normal channel Solution



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



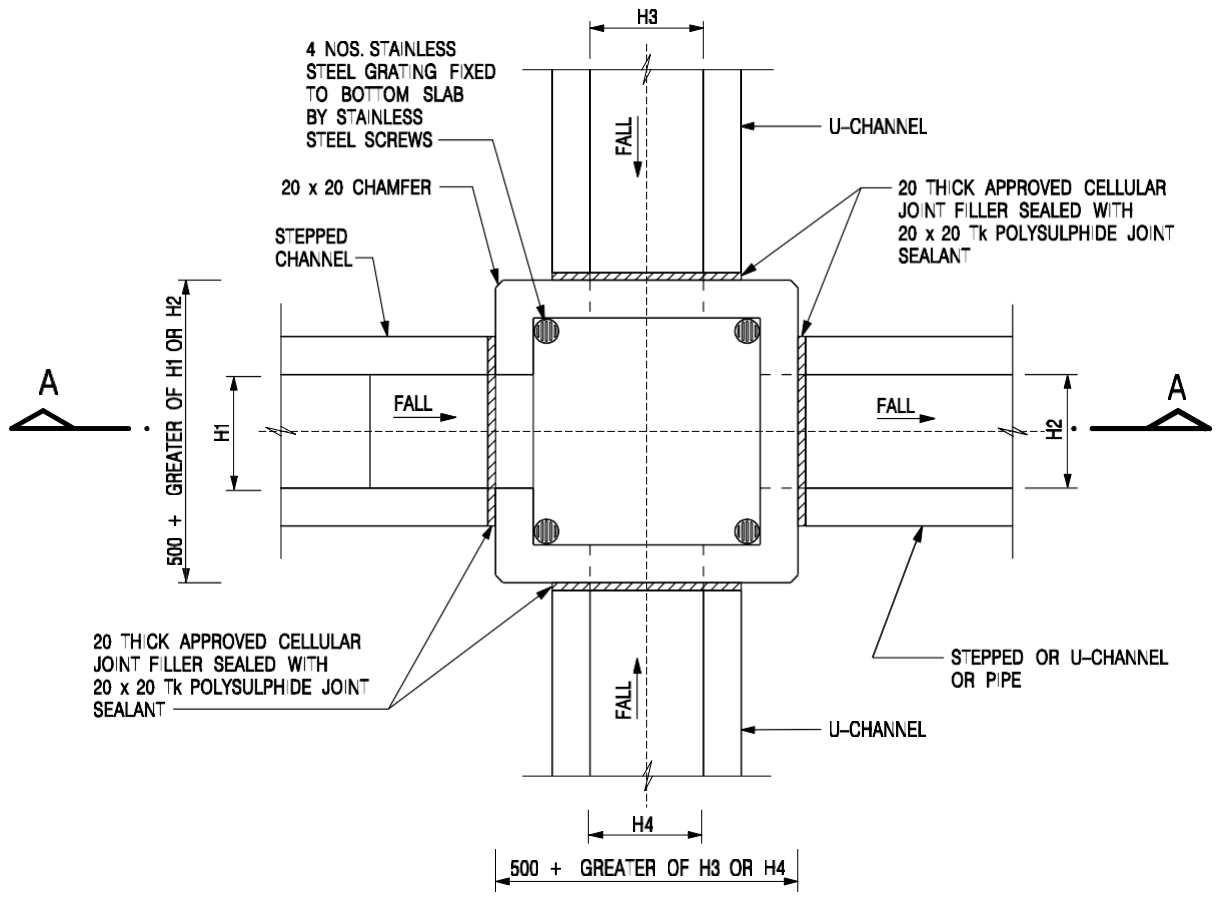
Example :

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

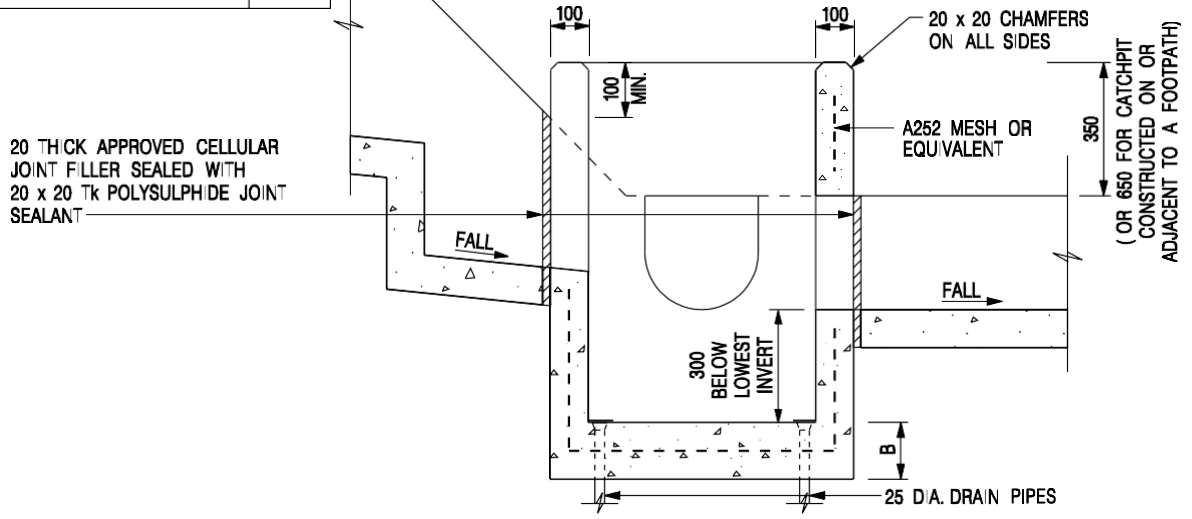
APPENDIX E

TYPICAL STANDARD DRAWINGS OF U-CHANNEL AND CATCHPIT

(EXTRACTED FROM CEDD, FOR REFERENCE ONLY)



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



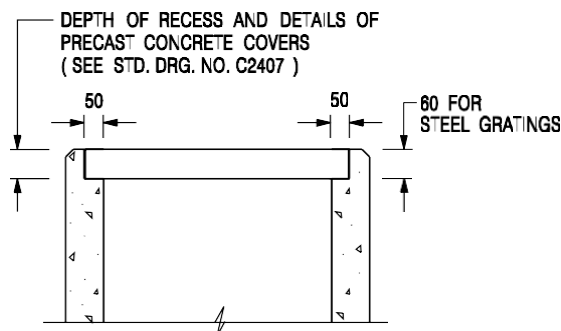
- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
 2. REFER TO SHEET 2 FOR OTHER NOTES.

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

CATCHPIT WITH TRAP
(SHEET 1 OF 2)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20 DRAWING NO. C2406 /1
DATE JAN 1991



**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 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 'G' ON STD. DRG. NO. C2405 /4.
12. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

A	MINOR AMENDMENT.	Original Signed	04.2016
-	FORMER DRG. NO. C2406J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE

**CATCHPIT WITH TRAP
(SHEET 2 OF 2)**



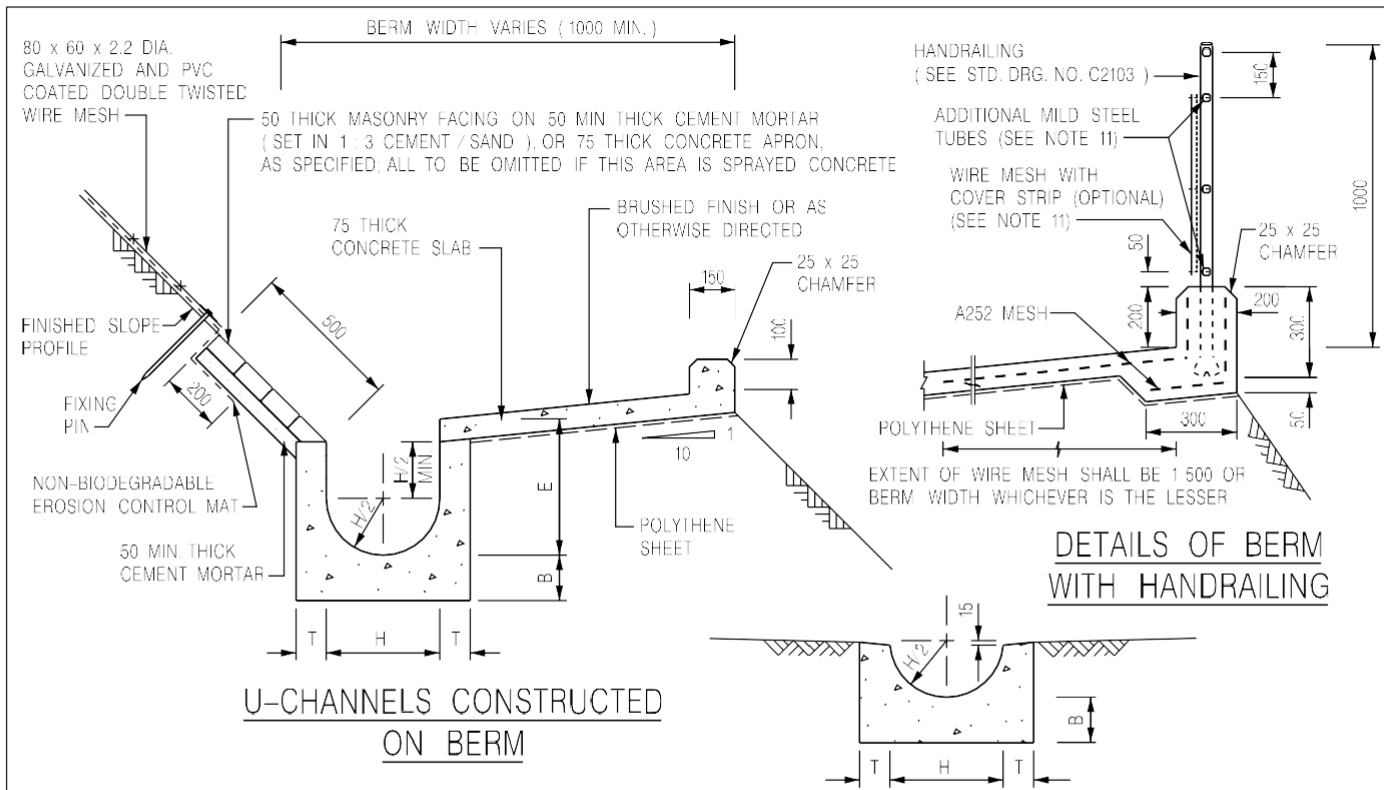
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

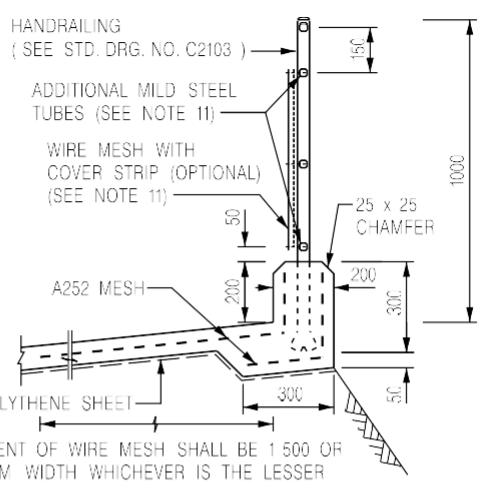
DRAWING NO.

DATE JAN 1991

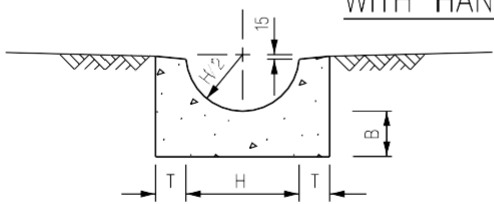
C2406 /2A



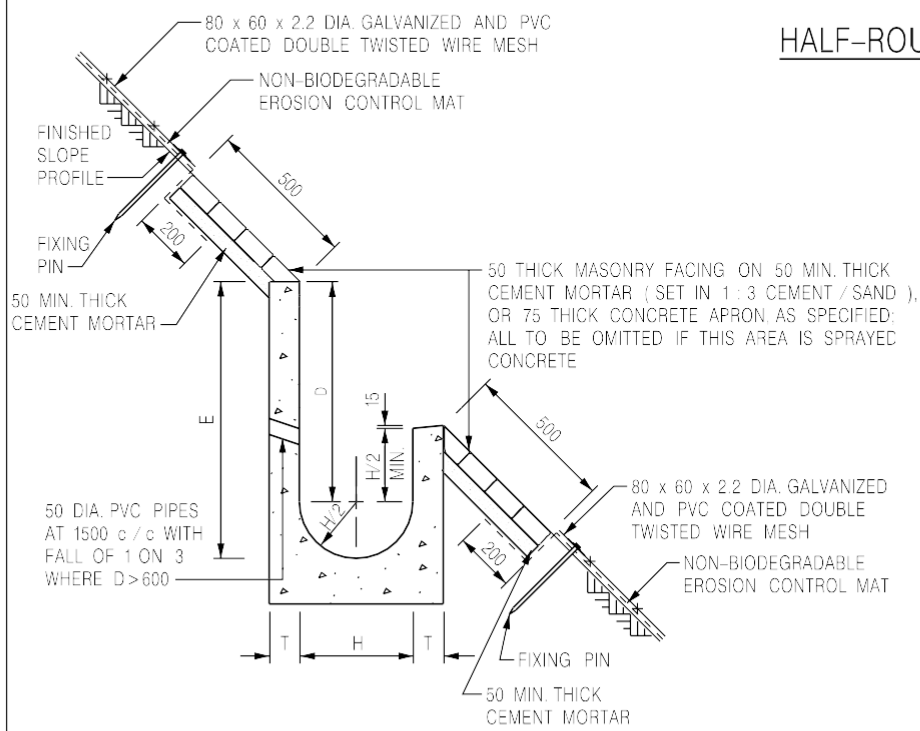
U-CHANNELS CONSTRUCTED ON BERM



DETAILS OF BERM WITH HANDRAILING



HALF-ROUND CHANNEL



U-CHANNELS NOT CONSTRUCTED ON BERM

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES
2. ALL CONCRETE TO BE GRADE 20 / 20
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2 F2 OR BRUSHED FINISH AS DIRECTED.
4. SPACING OF EXPANSION JOINT IN CHANNELS, BERM SLABS AND APRONS TO BE 10 METRES MAXIMUM. SEE STD. DRG. NO. C2413 FOR DETAILS.
5. JOINTS FOR CHANNELS, BERM SLABS, APRONS AND WALLS ETC TO BE ON THE SAME ALIGNMENT.
6. FOR DIMENSIONS T, H, & B, SEE TABLE BELOW.
7. BIODEGRADABLE EROSION CONTROL MAT IF REQUIRED. SEE STD. DRG. NO. C2511/E
8. CONCRETE TO BE COLOURED AS SPECIFIED
9. CONCRETE U-CHANNEL CAN BE CAST IN-SITU OR PRECAST CONCRETE SUBJECT TO THE ENGINEER'S AGREEMENT ON THE DETAILS.
10. DETAILS OF EROSION CONTROL MAT AND WESH MESH ON BERM (SEE STD. DRG. NO. C2511/E)
11. THE WIRE MESH ON HANDRAILING IS OPTIONAL THE COVER STRIP AND ADDITIONAL MILD STEEL TUBES ARE NEEDED ONLY IF WIRE MESH IS PROVIDED. (SEE STD. DRG. NO. C2103)

NOVINAL SIZE H	T	B	REINFORCEMENT
300	80	100	A252 MESH PLACED CENTRALLY AND T=100 WHEN E>650
375 - 600	100	150	
675 - 900	125	175	A252 MESH PLACED CENTRALLY

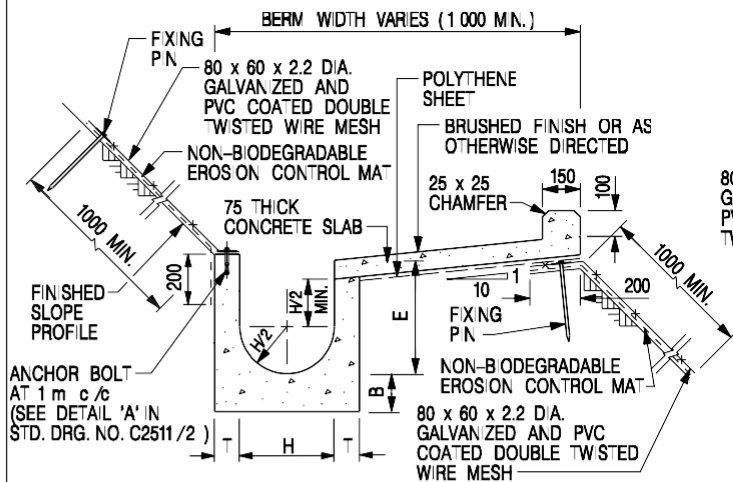
REF.	REVISION	SIGNATURE	DATE
J	DETAILS OF HANDRAILING AMENDED	Original Signed	08.2024
I	MINOR AMENDMENT	Original Signed	07.2018
H	THICKNESS OF MASONRY FACING AMENDED.	Original Signed	01.2005
G	MINOR AMENDMENT	Original Signed	01.2004
F	GENERAL REVISION.	Original Signed	12.2002

DETAILS OF HALF-ROUND AND U-CHANNELS (TYPE A - WITH MASONRY APRON)

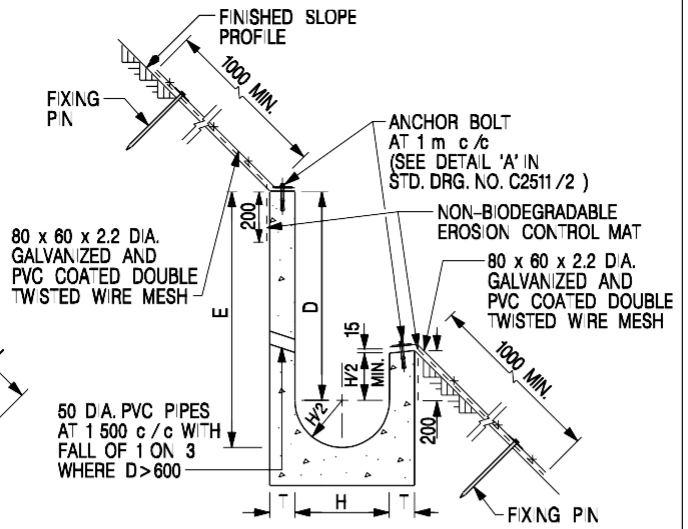
CEDD
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 25 **DRAWING NO.** C2409J

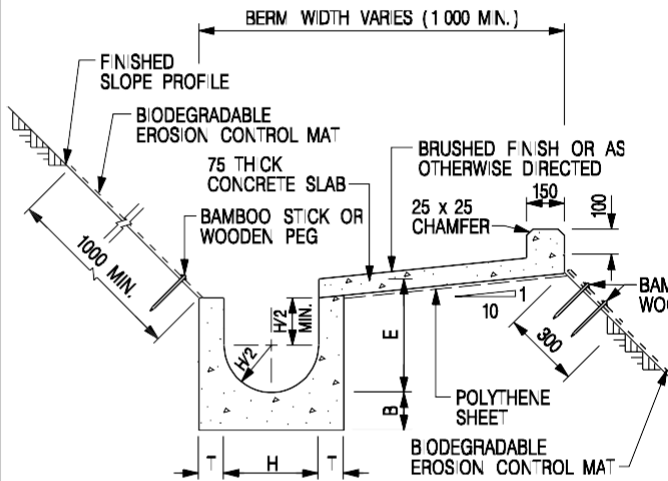
DATE JAN 1997



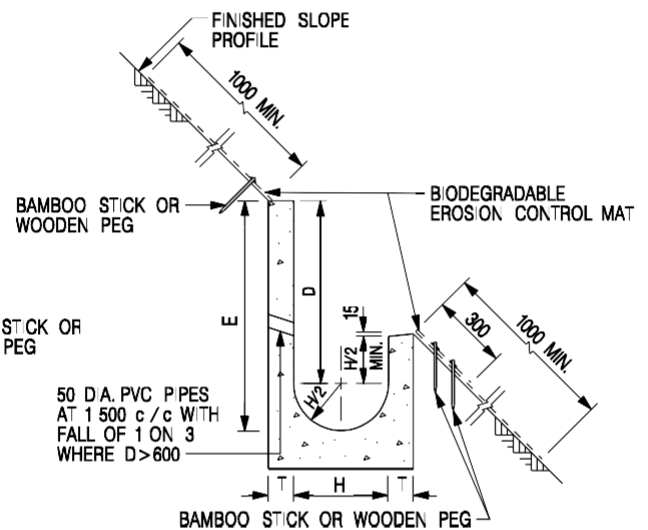
U-CHANNELS CONSTRUCTED ON BERM WITH NON-BIODEGRADABLE EROSION CONTROL MAT



U-CHANNELS NOT CONSTRUCTED ON BERM WITH NON-BIODEGRADABLE EROSION CONTROL MAT



U-CHANNELS CONSTRUCTED ON BERM WITH BIODEGRADABLE EROSION CONTROL MAT



U-CHANNELS NOT CONSTRUCTED ON BERM WITH BIODEGRADABLE EROSION CONTROL MAT

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES.
- ALL CONCRETE TO BE GRADE 20 / 20.
- CONCRETE SURFACE FINISH SHALL BE CLASS U2, F2 OR BRUSHED FINISH AS DIRECTED.
- SPACING OF EXPANSION JOINT IN CHANNELS, BERM SLABS AND APRONS TO BE 10 METRES MAXIMUM, SEE STD. DRG. NO. C2413 FOR DETAILS.
- JOINTS FOR CHANNELS, BERM SLABS, APRONS AND WALLS, ETC. TO BE ON THE SAME ALIGNMENT.
- FOR DIMENSIONS T, H, & B, SEE TABLE BELOW.
- FOR TYPICAL FIXING PIN DETAILS, SEE STD. DRG. NO. C2511/2.
- MINIMUM SIZE OF 25 x 50 x 300mm SHALL BE PROVIDED FOR WOODEN PEG.
- MINIMUM SIZE OF 10mm DIAMETER WITH 200mm LONG SHALL BE PROVIDED FOR BAMBOO STICK.
- THE FIXING DETAILS OF NON-BIODEGRADABLE AND BIODEGRADABLE EROSION CONTROL MATS ON EXISTING BERM SHALL REFER TO STD. DRG. NO. C2511/1.

NOMINAL SIZE H	T	B	REINFORCEMENT
300	80	100	A252 MESH PLACED CENTRALLY AND T=100 WHEN E>650
375 - 600	100	150	
675 - 900	125	175	A252 MESH PLACED CENTRALLY

REF.	REVISION	SIGNATURE	DATE
I	MINOR AMENDMENT.	Original Signed	07.2018
H	FIXING DETAILS OF BIODEGRADABLE EROSION CONTROL MAT ADDED.	Original Signed	12.2017
G	DIMENSION TABLE AMENDED.	Original Signed	01.2005
F	MINOR AMENDMENT.	Original Signed	01.2004
E	GENERAL REVISION.	Original Signed	12.2002
D	MINOR AMENDMENT.	Original Signed	08.2001
C	150 x 100 UPSTAND ADDED ABOVE.	Original Signed	6.99
B	MINOR AMENDMENT.	Original Signed	3.94
A	MINOR AMENDMENT.	Original Signed	10.92

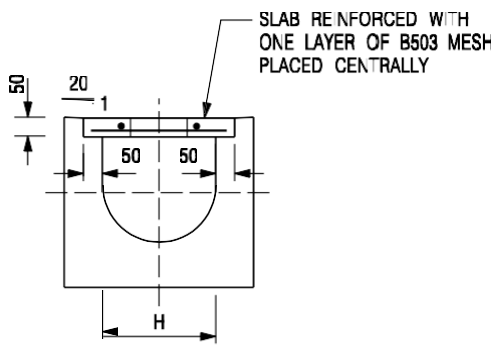
DETAILS OF HALF-ROUND AND U-CHANNELS (TYPE B - WITH EROSION CONTROL MAT APRON)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

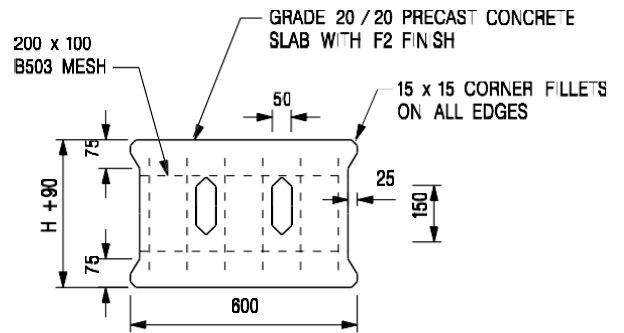
SCALE: DIAGRAMMATIC DRAWING NO. C24101

DATE: JAN 1991

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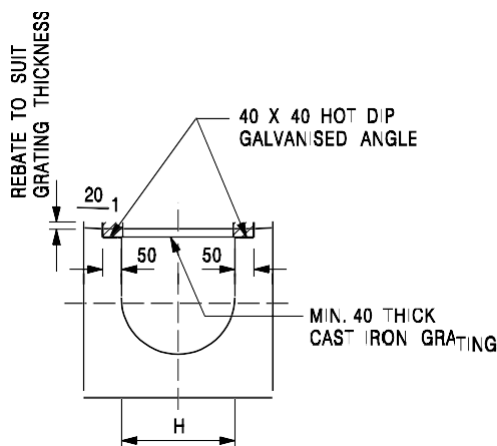
TYPICAL SECTION



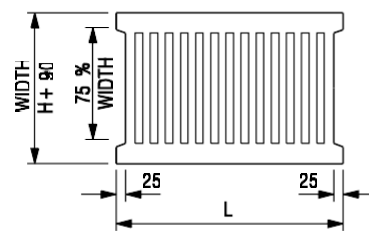
PLAN OF SLAB

U-CHANNELS WITH PRECAST CONCRETE SLABS

(UP TO H OF 525)



TYPICAL SECTION



L = 600mm FOR H ≤ 375mm
L = 400mm FOR H > 375mm

CAST IRON GRATING

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

U-CHANNEL WITH CAST IRON GRATING

(UP TO H OF 525)

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. H=NOMINAL CHANNEL SIZE.
3. ALL CAST IRON FOR GRATINGS SHALL BE GRADE EN-GJL-150 COMPLYING WITH BS EN 1561.
4. FOR COVERED CHANNELS TO BE HANDED OVER TO HIGHWAYS DEPARTMENT FOR MAINTENANCE, THE GRATING DETAILS SHALL FOLLOW THOSE AS SHOWN ON HyD STD. DRG. NO. H3156.

E	NOTES 3 & 4 AMENDED.	Original Signed	12.2014
D	NOTE 4 ADDED	Original Signed	06.2008
C	MINOR AMENDMENT, NOTE 3 ADDED.	Original Signed	12.2005
B	NAME OF DEPARTMENT AMENDED	Original Signed	01.2005
A	CAST IRON GRATING AMENDED.	Original Signed	12.2002
REF.	REVISION	SIGNATURE	DATE

COVER SLAB AND CAST IRON GRATING FOR CHANNELS



CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DATE JAN 1991

DRAWING NO. C2412E