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Cheryl Tsz Man TSANG/PLAND

From: sun wo wong <[redacted]>
Sent: Monday, November 2, 2026 11:06 AM
To: tpbpd/PLAND <tpbpd@pland.gov.hk>; Sheren Si Wai LEE/PLAND <[redacted]>; Adrian Tsz Hin TAM/PLAND <[redacted]>
Subject: A/NE-TKL/839

CC : [redacted]

現附上新一份雨水排放建議書及消防裝置建議圖
給貴會轉交有關部門審議

F.S.NOTES:

1. FIRE DETECTOR SYSTEM

1.1 THE STAND-ALONE FIRE DETECTOR SHALL BE PROVIDED IN ACCORDANCE WITH THE "STAND-ALONE FIRE DETECTOR GENERAL GUIDELINES ON PURCHASE, INSTALLATION & MAINTENANCE [SEP 2021]"

1.2 WHERE TWO OR MORE STAND-ALONE FIRE DETECTORS ARE INSTALLED IN AN ENCLOSED STRUCTURE, ALL DETECTORS SHALL BE INTERCONNECTED (EITHER WIRED OR WIRELESSLY) SUCH THAT WHEN ONE OF THE DETECTORS IS TRIGGERED, ALL CONNECTED DETECTORS SHALL SOUND AN ALARM SIMULTANEOUSLY.

2. PORTABLE APPLIANCES

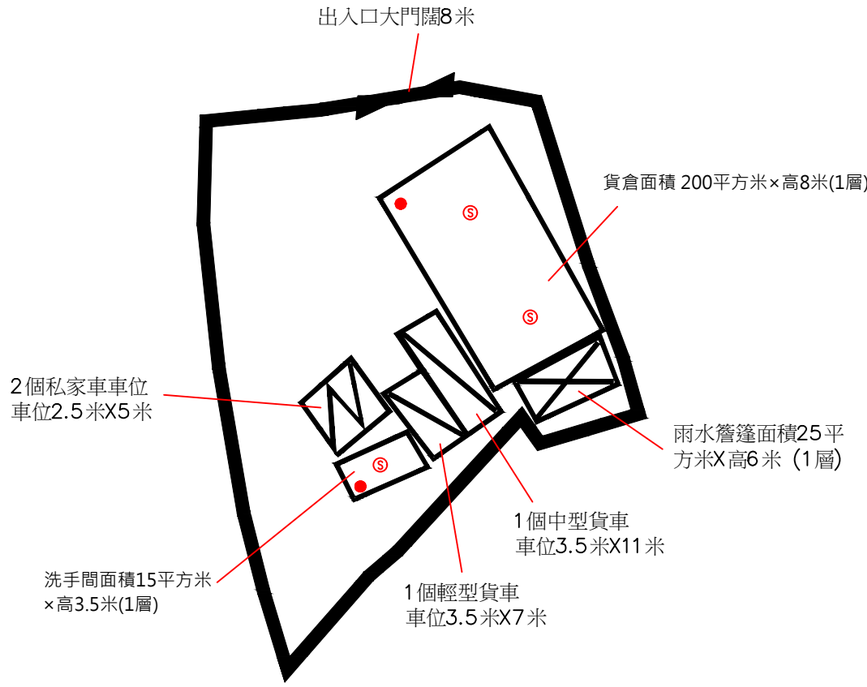
2.1 PORTABLE HAND OPERATED APPLIANCES SHALL BE PROVIDED AS INDICATED ON PLAN.

2.2 A SUITABLE TYPE OF PORTABLE FIRE EXTINGUISHER SHALL BE PROVIDED IN LOCATIONS WHERE EASILY ACCESSIBLE BY PERSON IN CHARGE WHERE THE NO. OF F.E. SHALL BE PROVIDED ACCORDING TO THE FORMULA = [STORAGE AREA] (M^2) X (0.003]

LEGEND

Ⓢ STAND ALONE BATTERY TYPE SMOKE DETECTOR

● 5KG DRY POWDER FIRE EXTINGUISHER



PROJECT : A/NE-TKL/839 Proposed Temporary Rural Workshop (Furniture Processing) with Ancillary Warehouse for a Period of 3 Years at Lots 2264 and 2265 (Part) in D.D. 76, Ta Kwu Ling, New Territories	DRAWING TITLE : **F.S. Notes, Legend, Fire Service Installation Layout Plan**	REV	DESCRIPTION	DATE	ARCHITECT :	CONSULTANT :	FIRE SERVICE CONTRACTOR : **Century Fire Service Engineering Co., Ltd.**		NAME	DATE
								DRAWN BY	C.K.NG	22 Oct 2026
								CHECKED BY		
								APPROVED BY		

DRAWING NO :	FS-01
REV.	0
SCALE :	1:500 @ A3
SOURCE :	B.O.O. Ref. BD F.S.D. Ref. FP

A/NE-TKL/839

Comments from DSD General Comments

1. the applicant should be advised that the limited desk-top checking by the Government on the drainage proposal covers only the fundamental aspects of the drainage design which will by no means relieve the obligations to ensure that (i) the proposed drainage works will not cause any adverse drainage or environmental impacts in the vicinity; and (ii) the proposed drainage works and the downstream drainage systems have the adequate capacity and are in good conditions to accommodate all discharge water collected from the subject lots and all upstream catchments. The applicant shall effect any subsequent upgrading of these proposed works and the downstream drainage systems whenever necessary;
   我等清楚明白有關是次申請地點的排水工程絕對不會影響鄰近良好的排水環境，而我等場地面積較少承接的雨水流量輕微不會對鄰近河道產生不良影響，我等同意在有須要時，我等會協助下游排水系統升級事宜。
2. the cover levels of proposed u-channels and catch pits should be flush with the adjoining ground level;
   我等的 U 型渠全部與地面相平。
3. the applicant should check and ensure that the existing drainage system to which the proposed connection will be made have adequate capacity and satisfactory condition to cater for the additional discharge from the subject lots. The applicant should also ensure that the flow from the subject site will not overload the existing drainage system;
   經通計算，我等地面接收雨水流量足以應付額外排放，不會影響現有排水系統通載。
4. where walls are erected or kerbs are laid along the boundary of the subject site, peripheral channels should be provided on both sides of the walls or kerbs with details to be agreed by DSD;
   位於場地東面不會設置圍板，南面及西面下方底於我等約 900mm 有關雨水不會流經我等場地，而北面為政府河道。
5. all existing flow paths as well as the run-off falling onto and passing through the subject site should be intercepted and disposed of via proper discharge points. The applicant shall also ensure that no works, including any site formation works, shall be carried out as they may adversely interfere with the free flow condition of the existing drain, channels and watercourses on or in the vicinity of the subject site any time during or after the works;
   現有排水渠以現時及使用多年，經常進行保養的工作，及在出河道前設有隔沙井，因此所有垃圾及泥沙絕對不會經由我等排水系統流進政府河道。
6. the proposed drainage works, whether within or outside the lot boundary, should be constructed and maintained by the applicant at his/her own expense;
   我等清楚明白有關渠道全部由申請人自資建造及進行維修保養的工作。

7. for works to be undertaken outside the lot boundary, the applicant should obtain prior agreement from the District Lands Officer/North, Lands Department and/or relevant private lot owners;
地界以外的建造工程，我等會取得北區地政處力同意才會施工。
8. the applicant should make good all the adjacent affected areas upon the completion of the drainage works;
我等完工後會收復鄰近地方至現有狀況。
9. the applicant should construct and maintain the proposed drainage works properly and rectify the system if it is found to be inadequate or ineffective during operation;
我等會妥善保護現有渠道及保證運作正常，如有問題出現立即作行修正。
10. as usual, the Government should be empowered to inspect conditions of the private drainage system and to enforce its cleansing by the owners, if necessity arises (e.g. upon receipt of complaints);
我等同意政府有權檢查我等排水渠及有需要時強制我等進行清理事宜。
11. the applicant should conduct site checking to confirm invert levels of the public drainage system to which the stormwater from the subject site is proposed to be discharged;
在雨季及大雨來能前，我等必定作行渠道排查工序，防止有阻塞情況出現。
12. upon completion of the works, the applicant should submit a duly completed 'Form HBP1' together with a cheque to DSD for either a technical audit by DSD or self-certification by registered professional at the applicant's cost on the completed connection works. The applicant should submit a duly completed declaration form (Form HBP1_CC) and provide the latest approved and certified as-built drainage plans as well as relevant construction records to DSD at least nine days before each technical audit by DSD. The applicant may refer to 'DSD Advice Note No. 2 - How to make Drainage Connections' which is available on DSD's homepage;
工程完成後我等會向 DSD 提交{HBP1}和 (FORM HBP1_CC)J 向渠務署提交查驗及審核申請。
13. the existing drainage facilities, watercourse, river, channel and the like should not be affected and obstructed by the construction materials, waste or debris from the applied use;

我等會妥善保護現有渠道及保證運作正常，如有問題出現立即作行修正。

Specific Comments

14. the applicant should supplement sectional views of the subject site in two different directions showing clearly any walls would be erected or kerbs would be laid along the boundary of the subject site, the proposed and existing drainage facilities, flow direction, the existing ground level of the adjacent lands and the formation level of the subject site;
將會隋函附上橫切面圖給貴署審議。

15 drainage layout plan refers:

(a) the applicant should clarify whether the UC downstream to CP4 is connected to ST or CP5;

因隔沙井在 CP4 及 CP5 之間，因此兩邊渠道都會直至進入隔沙井。

(b) the applicant should clarify whether the UC downstream to CP5 is connected to ST;

因隔沙井在 CP4 及 CP5 之間，因此兩邊渠道都會直至進入隔沙井。

(c) the applicant should indicate the details of drainage facility connecting ST and the existing culvert. Typical details of the connection between the proposed drainage facility and the existing culvert should be supplemented;

隋函附上大樣圖給貴會審議。

(d) thickness of concrete cover/grating should be considered when determining the invert levels of catch pits and u-channels to ensure the depths of u-channels are adequate. For instance, the depth of 225UC at the start point is less than 225mm. The applicant should review;

有關的錯誤以作更正，及在新一份設計圖內。

(e) catchpit CP19 with desilting facility is not found. The applicant should advise; and

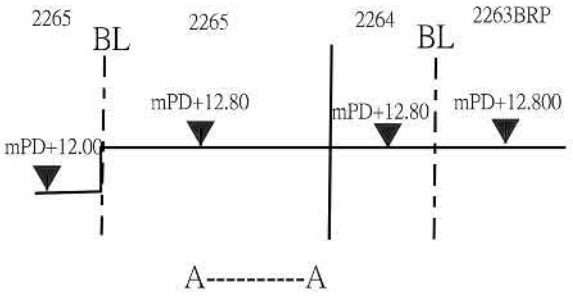
設計圖並沒有 CP19，可能在打印時出錯。

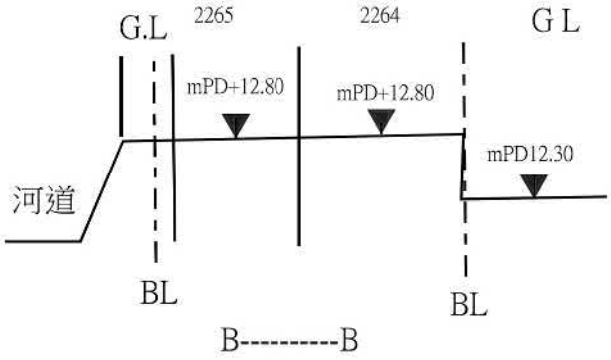
(f) the applicant should indicate the formation levels and fall direction of the subject site and the areas in the vicinity;

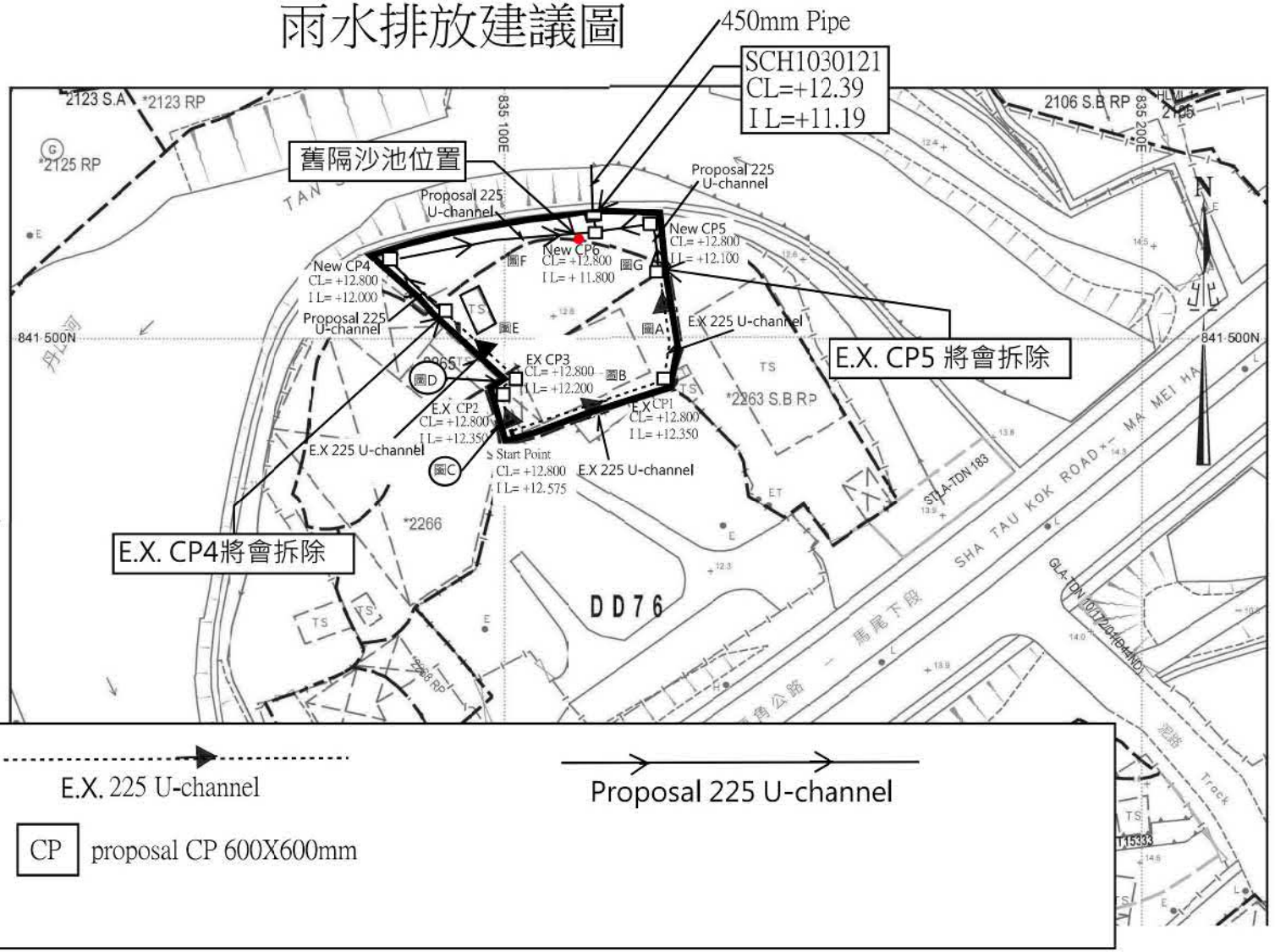
將會隋函附上橫切面圖給貴署審議。

16 there are existing 300UC and culvert maintained by DSD within the subject site. The applicant should advise whether these facilities would be modified or removed; andthe applicant should supplement typical details of the proposed sand trap cover for catch pit.
我等並沒有更改政府的排水渠，及隋函附上大樣圖給貴會審議。

雨水排放建議圖

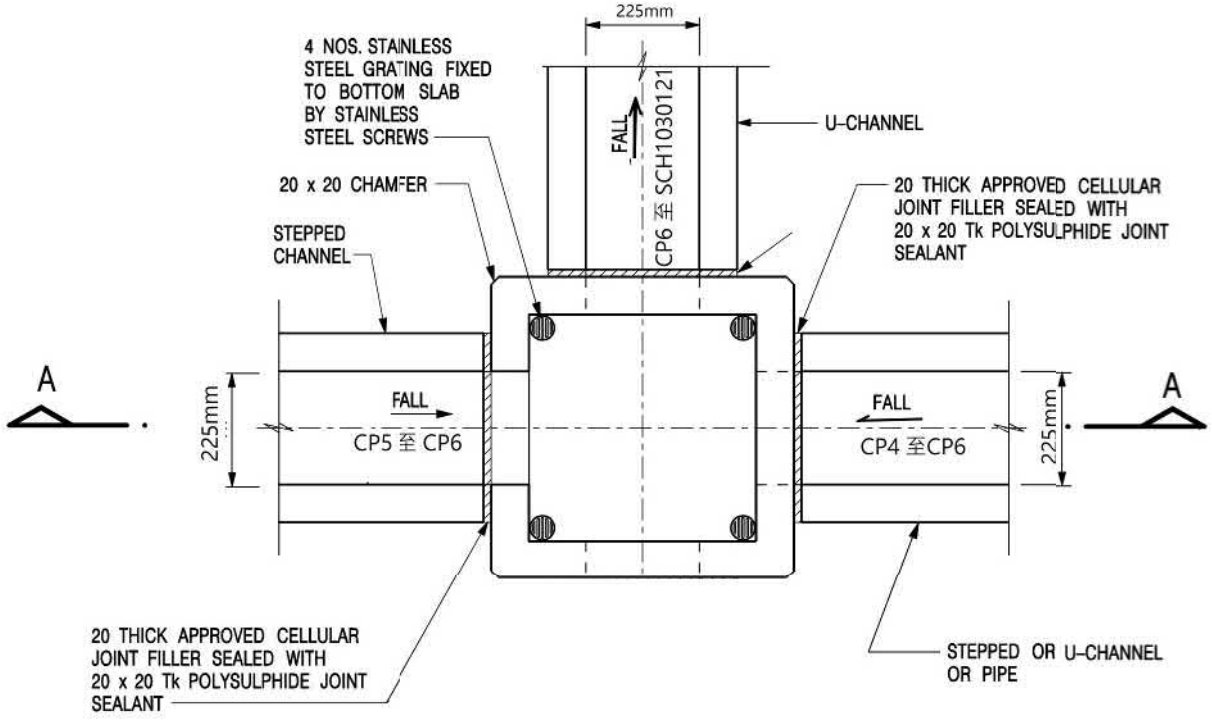




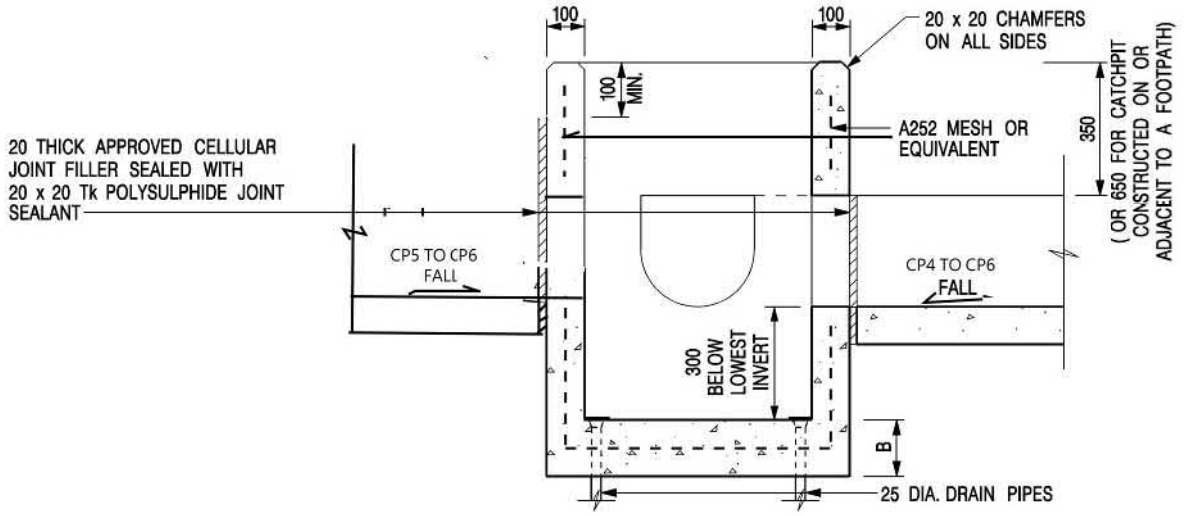


Catchment Area
Site Catchment Area = 1120 m^2 = 0.001120 km^2
Peak runoff in m^3/s = 0.278 x 0.95 x 240 mm/hr x 0.001120 km^2 = 0.07099 m^3/s
= 4437 liter/min

Note:
1. Catchpit (CP6) with desilting facility shall follow CEDD's standard drawing No. C2406/1,C2406/2A
2. Catchpit and UC follows Typical Details of Geotechnical Manual for Slope Fig.8.10 and Fig.8.11 respectively.
3. The inverted level of the connection point shall be verified on site prior the commencement of work
4.Grating Concrete Cover follows CEDD's standard drawing No. C2412E: U-CHANNELS WITH PRECAST CONCRETE SLABS



CP6
PLAN



SECTION A – A

CP6 至 SCH1030121 大樣圖

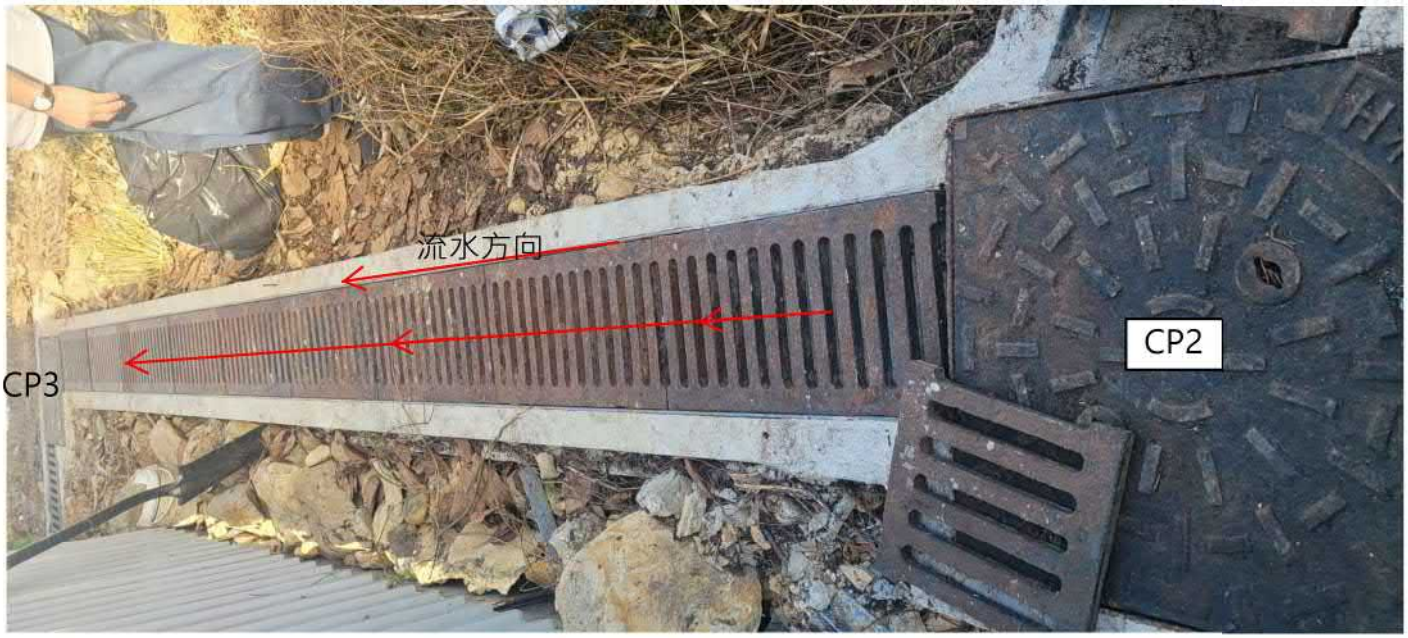
圖A



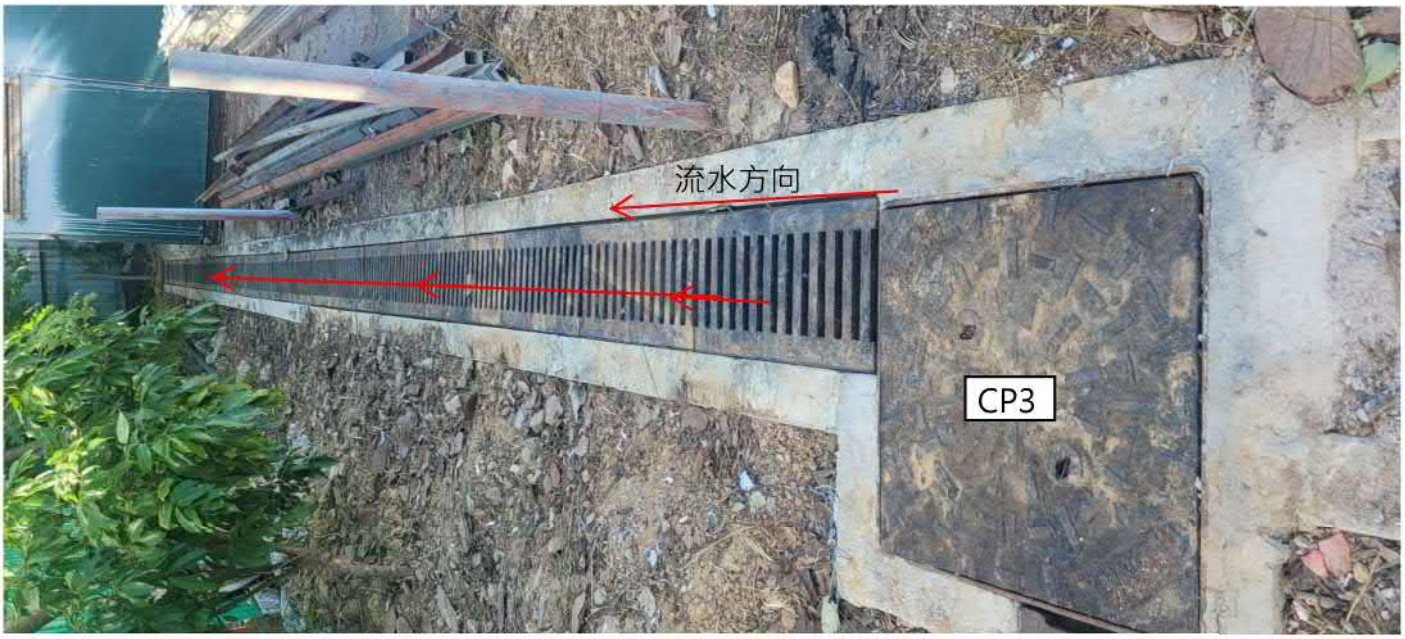
圖B



圖D



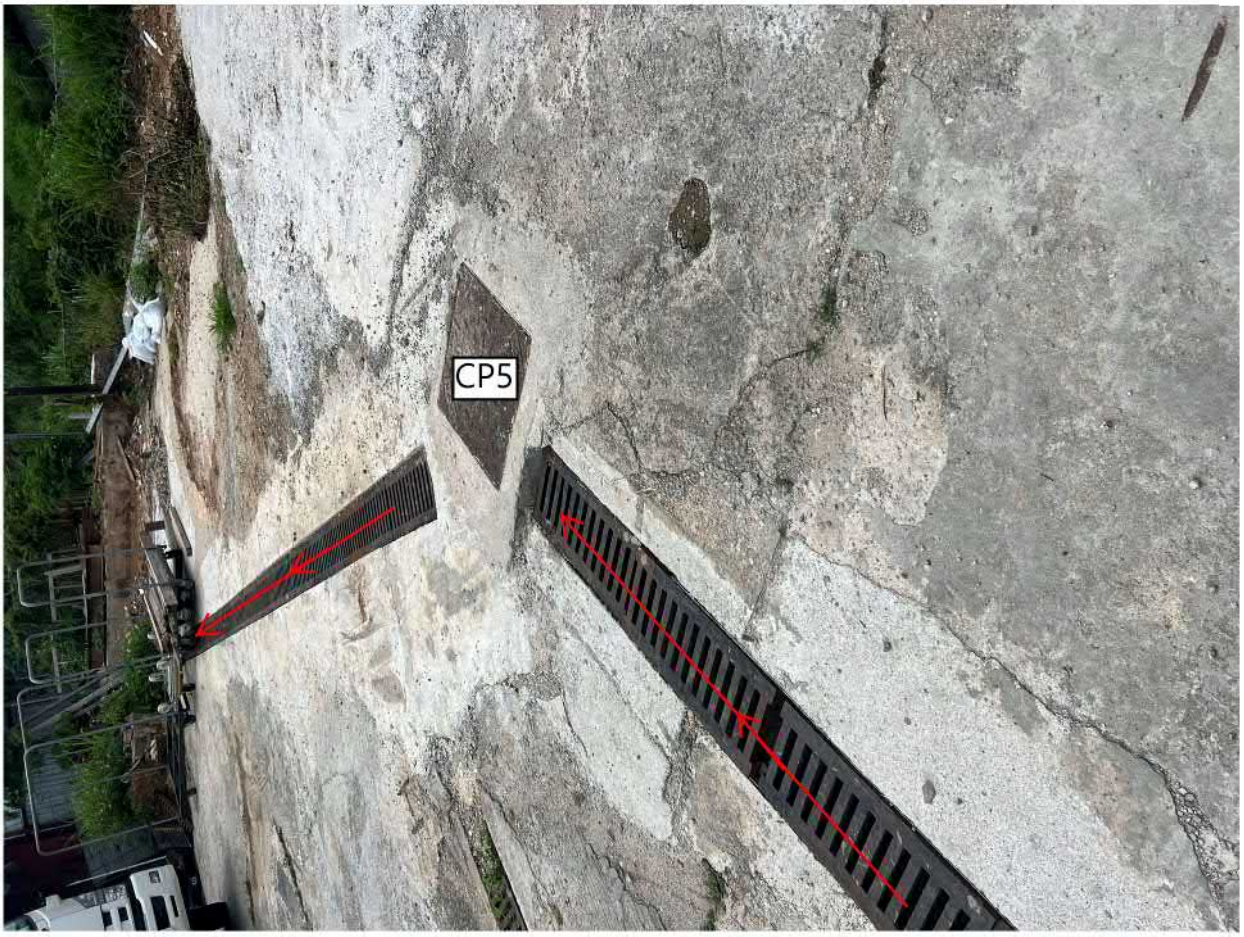
圖E



圖F



圖G



圖H



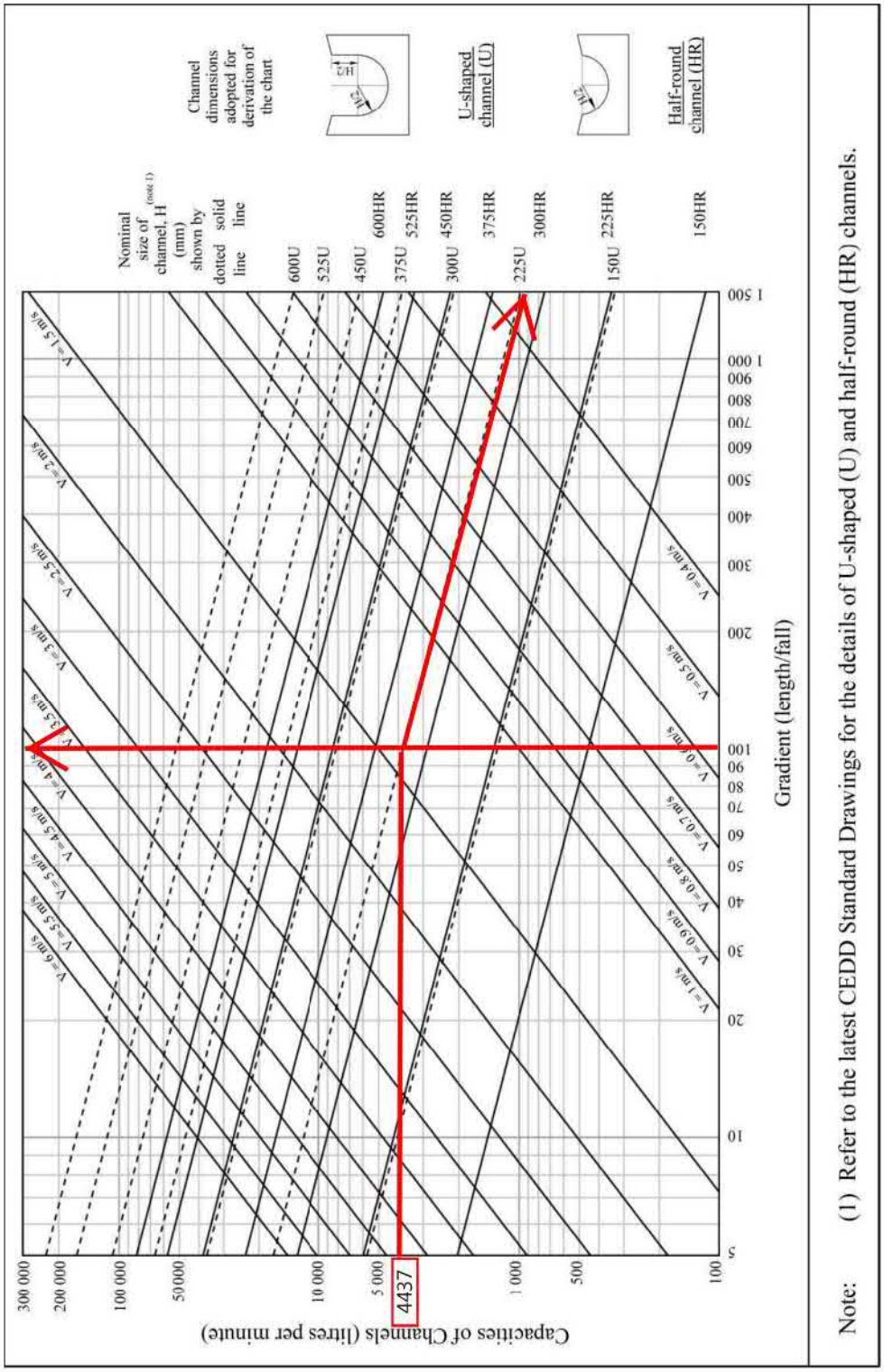
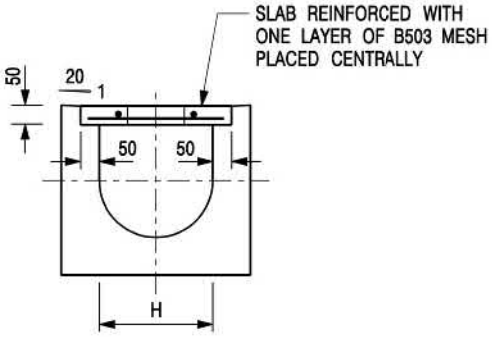
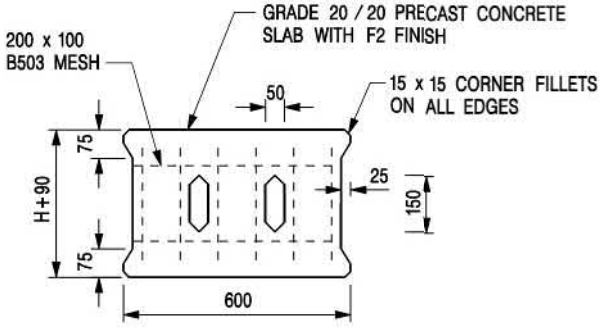


Figure 1 - Chart for the rapid design of U-shaped and half-round channels up to 600 mm

Note: (1) Refer to the latest CEDD Standard Drawings for the details of U-shaped (U) and half-round (HR) channels.



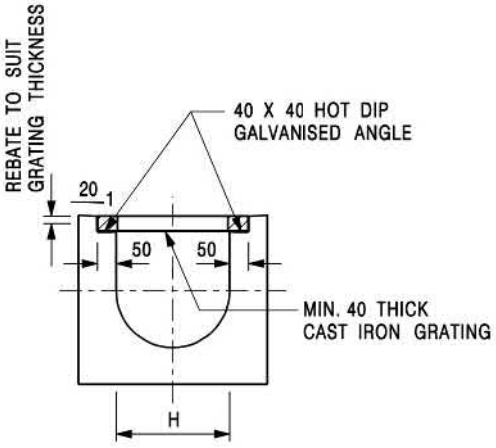
TYPICAL SECTION



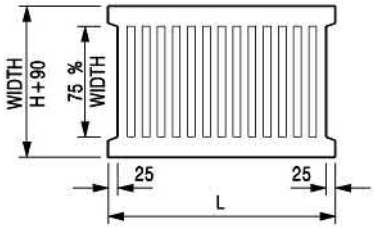
PLAN OF SLAB

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.

REF.	REVISION	SIGNATURE	DATE
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

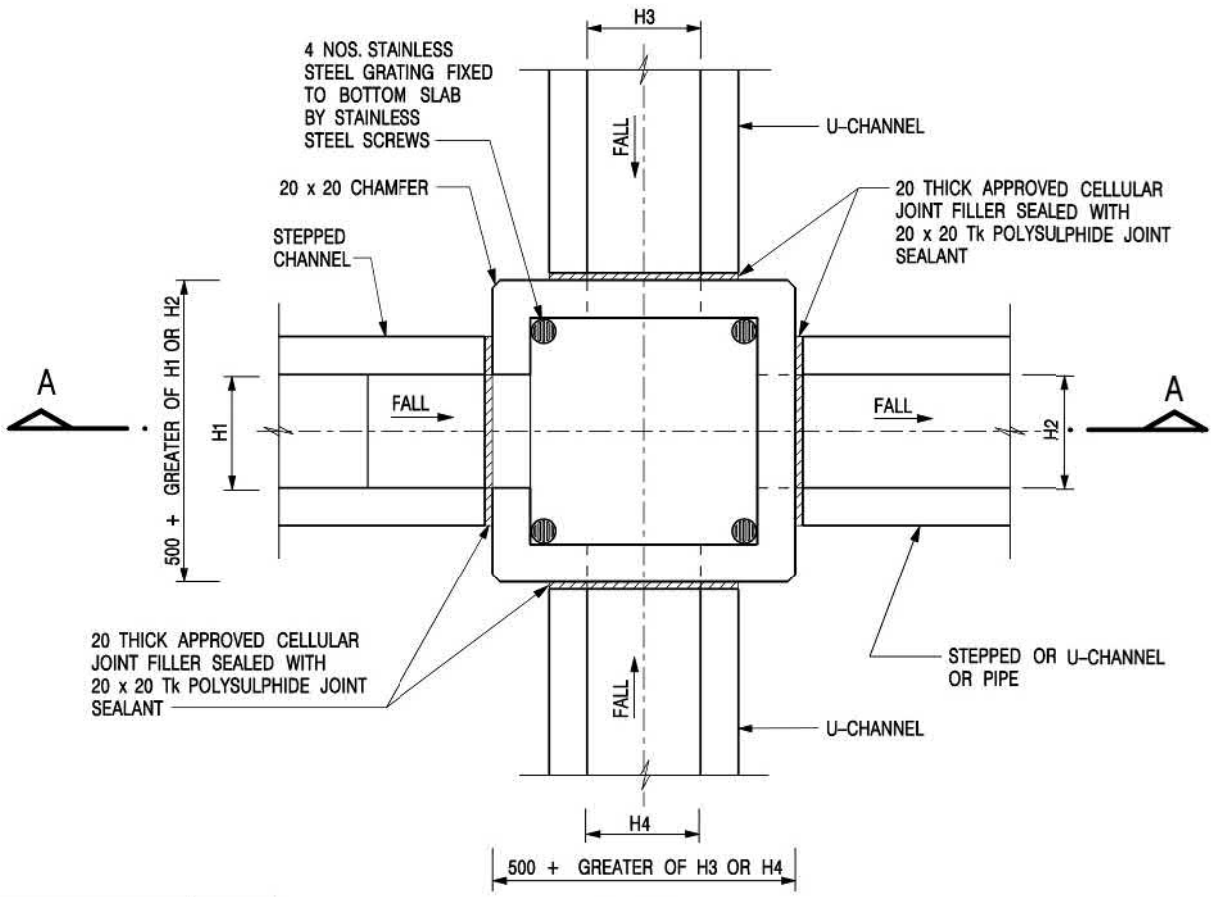
COVER SLAB AND CAST IRON GRATING FOR CHANNELS

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20

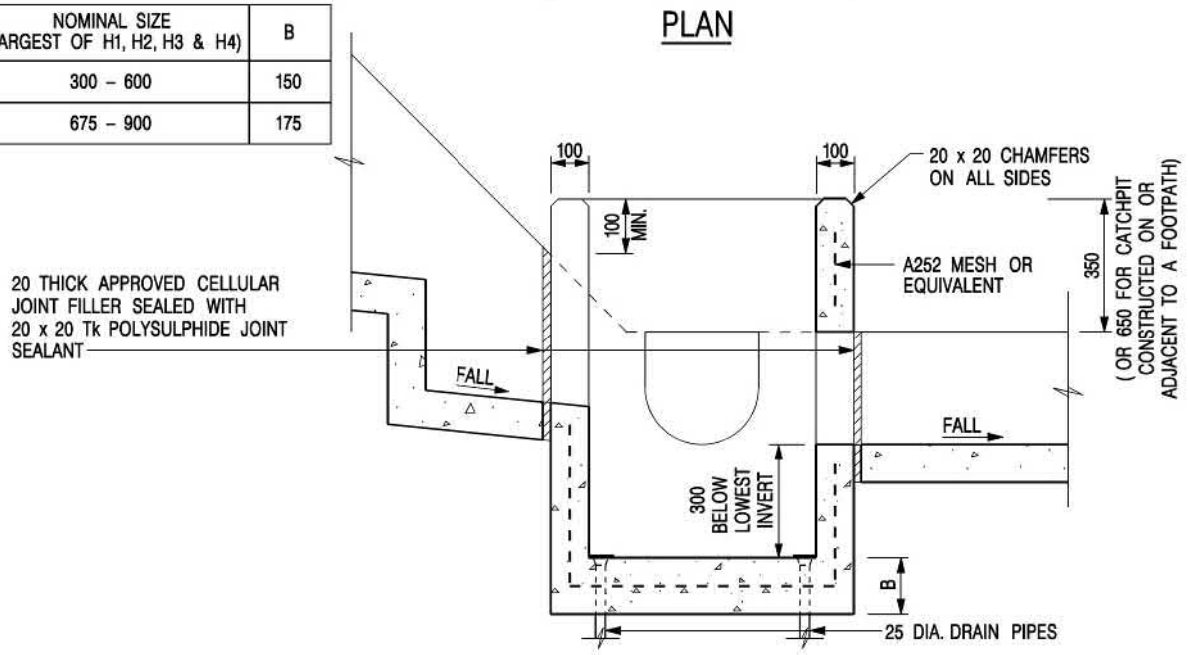
DATE JAN 1991

DRAWING NO. C2412E



PLAN

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



SECTION A – A

NOTES:

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

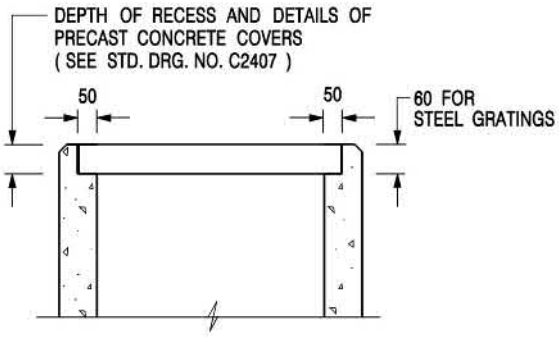
REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG. NO. C2406J.	Original Signed	03.2015

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) 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.

REF.	REVISION	SIGNATURE	DATE
–	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 /2

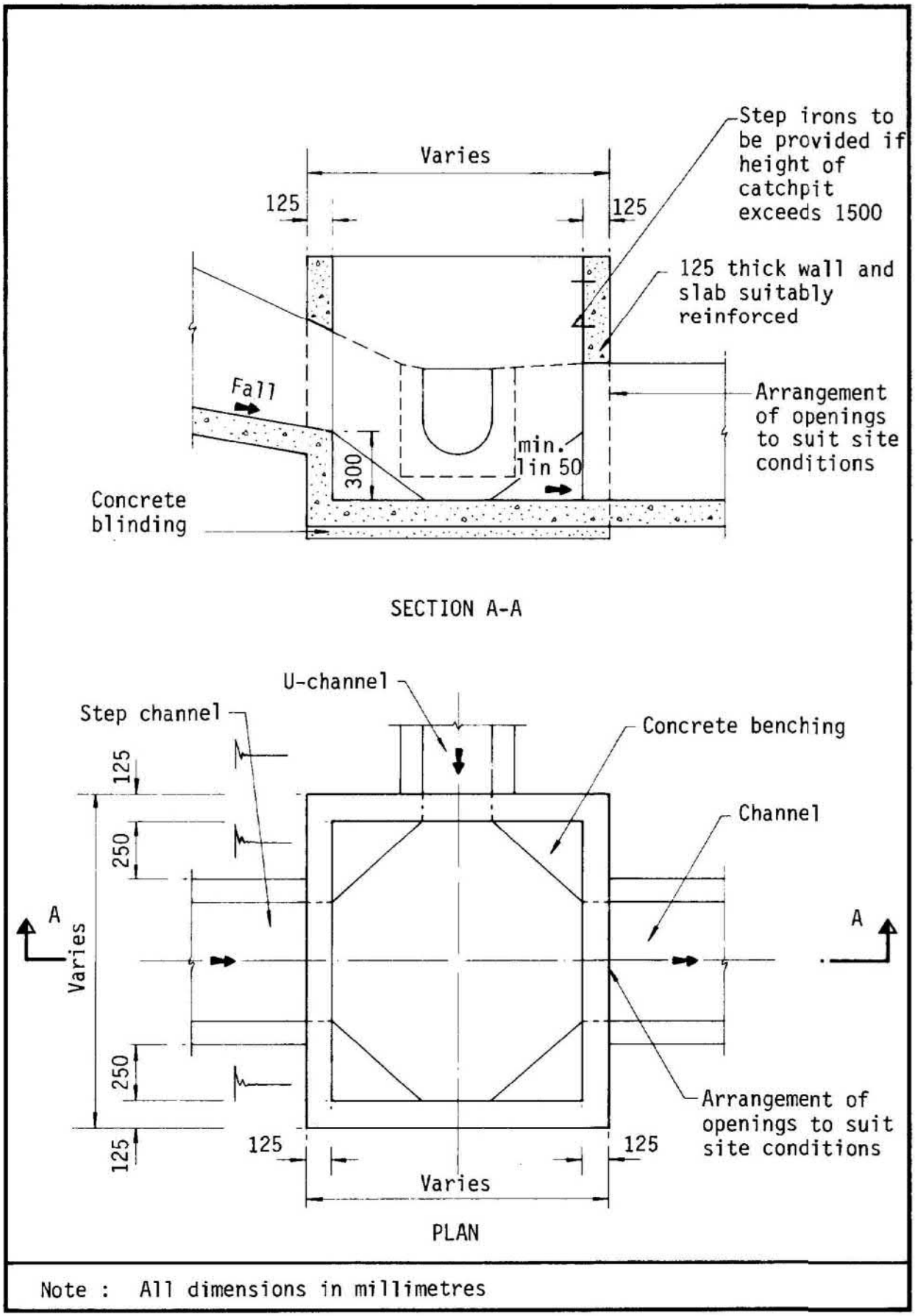
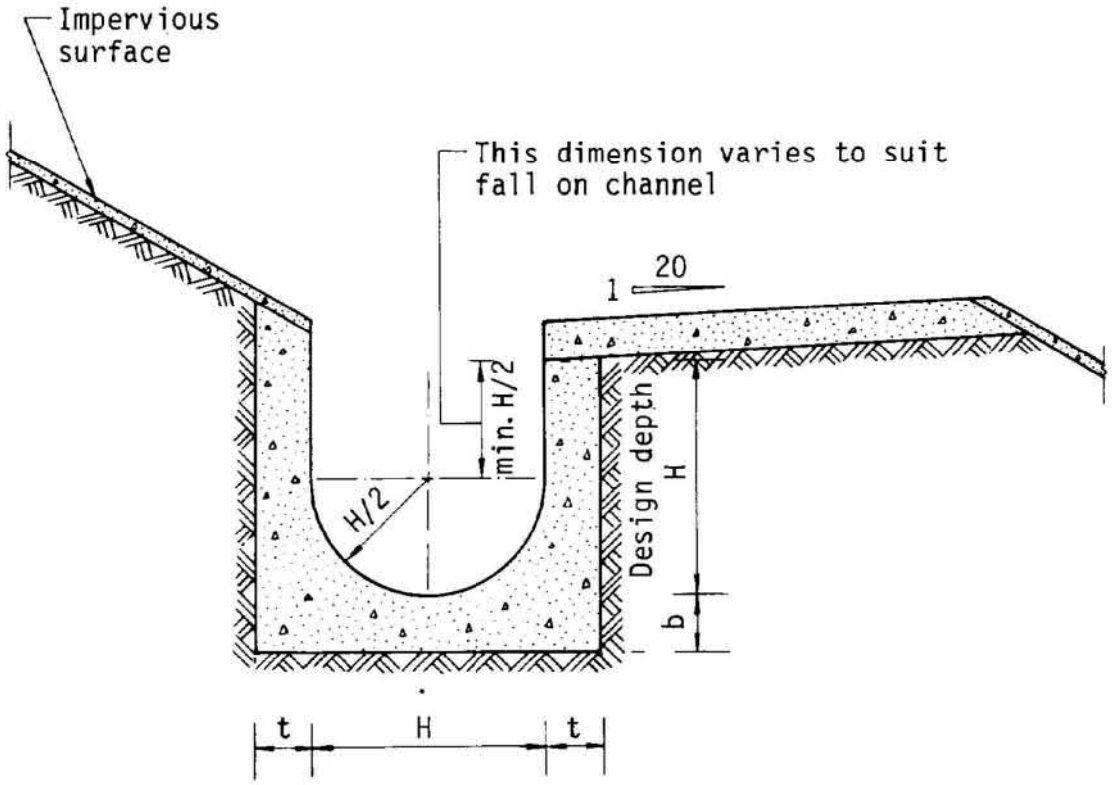


Figure 8.10 - Typical Details of Catchpits



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

Stormwater Drainage Manual

CORRIGENDUM No. 1/2024 (26 March 2024)

(a) Section 4.3.3 Intensity-Duration-Frequency (IDF) Relationship

Replace the Section with the following:

The rainfall statistics at HKO Headquarters* are recommended for general application (except Tai Mo Shan area, West Lantau area and North District area) because of its long-term and good quality records. The recommended IDF Relationship is based on the GEV distribution model, which is the best-fit model for different rainstorm durations on average and also adopted by HKO, in the frequency analysis of the annual maximum rainfall recorded at HKO Headquarters*.

For Tai Mo Shan, West Lantau and North District areas, it is recommended to adopt the annual maximum rainfall for various durations recorded by the local rain gauges within the 3 areas in the statistical analysis. The distribution models which fit the respective durations the best are applied and regional frequency analysis of extreme rainfall has also been employed to develop the IDF Relationships.

Non-stationary extreme value analysis models accounting for climate change impacts on extreme rainfall[1] and consideration for stochastic nature of rainfall were taken into account when determining the IDF Relationships. These relationships are presented in Tables 2a, 2b, 2c and 2d and Figures 4a, 4b, 4c and 4d for various durations not exceeding 4 hours.

The IDF data can also be expressed by the following algebraic equation for easy application:

$$i = \frac{a}{(t_d + b)^c}$$

where i = extreme mean intensity in mm/hr,

t_d = duration in minutes ($t_d \leq 240$), and

a, b, c = storm constants given in Tables 3a, 3b, 3c and 3d.

* See Notes 2 & 3 of Table 2a

[1]IPCC AR6 Projection Reference Period (1995- 2014) is adopted as the reference period

For durations exceeding 4 hours, the rainfall depth instead of the mean intensity is normally used. The Depth-Duration-Frequency (DDF) Relationships for duration exceeding 4 hours are given in Tables 4a, 4b, 4c and 4d. The IDF data can be generated by dividing rainfall depth with duration.

(b) Table 2a, Table 2d, Table 3a, Table 3d, Table 4a, Table 4d, Table 5a, Table 5d

Replace the listed tables below with the following pages:

Table 2a – Intensity-Duration-Frequency (IDF) Relationship of HKO Headquarters for durations not exceeding 240 minutes

Table 2d – Intensity-Duration-Frequency (IDF) Relationship of North District Area for durations not exceeding 240 minutes

Table 3a – Storm Constants for Different Return Periods of HKO Headquarters

Table 3d – Storm Constants for Different Return Periods of North District Area

Table 4a – Depth-Duration-Frequency (DDF) Relationship of HKO Headquarters for durations of more than 4 hours

Table 4d – Depth-Duration-Frequency (DDF) Relationship of North District Area for durations of more than 4 hours

Table 5a – Design Rainstorm Profile Intensity-Duration-Frequency Relationships of HKO Headquarters

Table 5d – Design Rainstorm Profile Intensity-Duration-Frequency Relationships of North District Area

Table 2a – Intensity-Duration-Frequency (IDF) Relationship of HKO Headquarters
for durations not exceeding 240 minutes

Duration (min)	**Extreme Intensity (mm/h) for various Return Periods T (year)**								
	2	5	10	20	50	100	200	500	1000
240**	31.5	41.6	48.5	55.1	63.9	70.6	77.3	86.3	93.2
120++	50.4	66.0	75.7	84.7	95.9	104	112	121	128
60++	72.5	93.5	107	119	134	145	155	168	178
30++	93.3	115	128	139	153	162	170	180	187
15++	116	138	151	163	176	185	194	204	211
10*	131	155	169	181	195	204	212	222	229
5*	157	185	200	212	226	235	242	251	257
2*	191	223	239	252	265	273	280	287	291
1*	217	251	268	280	293	300	306	312	315
0.50*	242	279	296	309	320	327	332	337	339
0.25+++	268	307	324	336	347	353	357	361	363

Notes:

1. non-stationary GEV distribution analysis by assuming the location and scale parameters changing linearly over time and shape parameter remaining unchanged has been incorporated in the frequency analysis.
2. ++ based on continuous rainfall recorded at HKO Headquarters (1947 – 2023).
3. +++ based on Jardi rate-of-rainfall records at King's Park (1952 – 2015), and the 1-min OTT data at King's Park (2016 – 2023) scaled into the rate-of-rainfall.
4. * distribution parameters are interpolated.
5. ** based on hourly rainfall records at HKO Headquarters (1884 – 1939; 1947 – 2023).

Table 2d – Intensity-Duration-Frequency (IDF) Relationship of North District Area
for durations not exceeding 240 minutes

Duration (min)	**Extreme Intensity (mm/h) for various Return Periods T (year)**						
	2	5	10	20	50	100	200
240	29.0	38.2	44.5	50.7	59.1	65.6	72.3
120	42.4	54.9	63.2	71.2	81.8	89.8	97.8
60	62.0	77.1	86.1	94.3	104	111	118
30	85.7	103	113	122	133	141	148
15	108	129	141	151	164	173	182
10	120	141	155	168	187	203	219
5	139	162	177	192	214	231	251

Notes:

1. based on continuous rainfall recorded at GEO rain gauges N05 (40 years), N34 (24 years), N46 (24 years), N33 (24 years), N35 (24 years), N36 (24 years), N45 (24 years) and HKO rain gauges EPC (31 years), SSH (20 years), TKL (38 years), R24 (40 years), R29 (39 years), R30_KAT (34 years), SEK (27 years) up to 2023.
2. rainfall IDF relationships are derived from regional frequency analysis of extreme rainfall of local rain gauges.
3. the trends of the extreme rainfalls observed at HKO Headquarters are used to infer the trends at other locations.

Table 3a – Storm Constants for Different Return Periods of HKO Headquarters

Return Period T (years)	2	5	10	20	50	100	200	500	1000
a	446.1	470.5	485.0	496.0	505.5	508.6	508.8	504.6	498.7
b	3.38	3.11	3.11	3.17	3.29	3.38	3.46	3.53	3.55
c	0.463	0.419	0.397	0.377	0.355	0.338	0.322	0.302	0.286

Table 3d – Storm Constants for Different Return Periods of North District Area

Return Period T (years)	2	5	10	20	50	100	200
a	439.1	448.1	454.9	462.3	474.6	486.6	501.4
b	4.10	3.67	3.44	3.21	2.90	2.67	2.45
c	0.484	0.437	0.412	0.392	0.371	0.358	0.348

Table 4a - Depth-Duration-Frequency (DDF) Relationship of HKO Headquarters

for durations of more than 4 hours

Duration	**Extreme Depth (mm) for various Return Periods T(year)**								
	2	5	10	20	50	100	200	500	1000
31 days	715	918	1047	1166	1314	1422	1525	1656	1752
15 days	515	675	775	866	979	1060	1138	1235	1306
7 days	386	515	601	683	788	867	*1022	*1141	*1231
5 days	333	461	550	638	756	*856	*975	*1101	*1199
4 days	332	460	549	637	756	849	944	1076	1179
3 days	310	424	501	576	673	748	823	923	1000
2 days	268	366	432	496	580	645	709	796	862
24 hours	225	304	360	417	495	558	623	714	787
18 hours	201	272	323	375	448	507	570	659	731
12 hours	175	237	282	330	397	453	514	601	674
8 hours	152	200	235	271	322	364	408	472	524
6 hours	141	185	216	248	291	326	362	413	453

Notes:

1. non-stationary GEV distribution analysis by assuming the location and scale parameters changing linearly over time and shape parameter remaining unchanged has been incorporated in the frequency analysis.
2. based on hourly records measured at HKO Headquarters (1884 – 1939; 1947 – 2023)
3. the Intensity-Duration-Frequency (IDF) data can be generated from the above by dividing depth with duration
4. * rainfall depths are interpolated to ensure a physically reasonable rainfall IDF/DDF relationships.

Table 4d - Depth-Duration-Frequency (DDF) Relationship of North District Area
for durations of more than 4 hours

Duration	Extreme Depth x (mm) for various Return Periods T(year)						
	2	5	10	20	50	100	200
31 days	668	897	1088	1314	1692	2062	2530
15 days	482	639	743	844	977	1082	1190
7 days	384	502	573	636	714	770	876
5 days	357	475	546	610	688	747	810
4 days	337	452	523	588	670	731	790
3 days	314	416	480	538	613	668	723
2 days	271	361	419	473	543	597	650
24 hours	210	275	321	368	431	483	536
18 hours	192	248	289	332	395	450	511
12 hours	168	221	258	296	347	389	432
8 hours	147	189	218	247	284	314	344
6 hours	133	173	200	227	264	293	323

Notes:

1. based on continuous rainfall recorded at GEO rain gauges N05 (40 years), N34 (24 years), N46 (24 years), N33 (24 years), N35 (24 years), N36 (24 years), N45 (24 years) and HKO rain gauges EPC (31 years), SSH (20 years), TKL (38 years), R24 (40 years), R29 (39 years), R30_KAT (34 years), SEK (27 years) up to 2023
2. rainfall IDF relationships are derived from regional frequency analysis of extreme rainfall of local rain gauges
3. the trends of the extreme rainfalls observed at HKO Headquarters are used to infer the trends at other locations.
4. * rainfall depths are interpolated to ensure a physically reasonable rainfall IDF/DDF relationships.

Table 5a – Design Rainstorm Profile Intensity-Duration-Frequency Relationships of HKO Headquarters

Duration Interval (min)	*Rate of Rainfall (mm/hr) for Return Periods T (years)				
	2	10	50	200	1000
-0.5 – 0.5	225	277	301	314	323
0.5 – 1.5	171	216	244	261	275
1.5 – 2.5	133	174	202	221	238
2.5 – 3.5	112	149	177	197	215
3.5 – 4.5	98	133	160	180	199
4.5 – 5.5	88	122	148	168	187
5.5 – 6.5	80	113	139	158	177
6.5 – 7.5	75	106	131	150	170
7.5 – 8.5	70	100	125	144	163
8.5 – 9.5	66	96	119	138	158
9.5 – 10.5	63	92	115	134	153
10.5 – 11.5	60	88	111	130	149
11.5 – 12.5	57	85	108	126	145
12.5 – 13.5	55	82	104	123	142
13.5 – 14.5	53	80	102	120	139
14.5 – 15.5	51	77	99	117	136
15.5 – 16.5	50	75	97	114	133
16.5 – 17.5	48	74	95	112	131
17.5 – 18.5	47	72	93	110	129
18.5 – 19.5	46	70	91	108	127
19.5 – 20.5	45	69	89	106	125
20.5 – 21.5	44	67	88	105	123
21.5 – 22.5	43	66	86	103	122
22.5 – 23.5	42	65	85	101	120
23.5 – 24.5	41	64	83	100	118
24.5 – 25.5	40	63	82	99	117
25.5 – 26.5	39	62	81	97	116
26.5 – 27.5	39	61	80	96	114
27.5 – 28.5	38	60	79	95	113
28.5 – 29.5	37	59	78	94	112
29.5 – 30.5	37	58	77	93	111
30.5 – 31.5	36	57	76	92	110
31.5 – 32.5	36	57	75	91	109
32.5 – 33.5	35	56	74	90	108
33.5 – 34.5	35	55	74	89	107
34.5 – 35.5	34	55	73	88	106
35.5 – 36.5	34	54	72	88	105
36.5 – 37.5	33	53	71	87	104
37.5 – 38.5	33	53	71	86	104
38.5 – 39.5	32	52	70	85	103
39.5 – 40.5	32	52	69	85	102
40.5 – 41.5	32	51	69	84	101
41.5 – 42.5	31	51	68	83	101
42.5 – 43.5	31	50	68	83	100
43.5 – 44.5	31	50	67	82	99
44.5 – 45.5	30	49	66	81	99
45.5 – 46.5	30	49	66	81	98
46.5 – 47.5	30	49	65	80	97
47.5 – 48.5	29	48	65	80	97
48.5 – 49.5	29	48	64	79	96
49.5 – 50.5	29	47	64	79	96
50.5 – 51.5	28	47	63	78	95
51.5 – 52.5	28	47	63	78	95
52.5 – 53.5	28	46	63	77	94
53.5 – 54.5	28	46	62	77	94
54.5 – 55.5	27	46	62	76	93
55.5 – 56.5	27	45	61	76	93
56.5 – 57.5	27	45	61	75	92
57.5 – 58.5	27	45	61	75	92
58.5 – 59.5	27	44	60	75	91
59.5 – 60.5	26	44	60	74	91

Duration Interval (min)	*Rate of Rainfall (mm/hr) for Return Periods T (years)				
	2	10	50	200	1000
60.5 – 61.5	26	44	60	74	90
61.5 – 62.5	26	43	59	73	90
62.5 – 63.5	26	43	59	73	90
63.5 – 64.5	26	43	59	73	89
64.5 – 65.5	25	43	58	72	89
65.5 – 66.5	25	42	58	72	88
66.5 – 67.5	25	42	58	72	88
67.5 – 68.5	25	42	57	71	88
68.5 – 69.5	25	42	57	71	87
69.5 – 70.5	25	41	57	71	87
70.5 – 71.5	24	41	56	70	87
71.5 – 72.5	24	41	56	70	86
72.5 – 73.5	24	41	56	70	86
73.5 – 74.5	24	40	56	69	86
74.5 – 75.5	24	40	55	69	85
75.5 – 76.5	24	40	55	69	85
76.5 – 77.5	23	40	55	68	85
77.5 – 78.5	23	40	55	68	84
78.5 – 79.5	23	39	54	68	84
79.5 – 80.5	23	39	54	68	84
80.5 – 81.5	23	39	54	67	83
81.5 – 82.5	23	39	54	67	83
82.5 – 83.5	23	39	53	67	83
83.5 – 84.5	23	38	53	66	82
84.5 – 85.5	22	38	53	66	82
85.5 – 86.5	22	38	53	66	82
86.5 – 87.5	22	38	52	66	82
87.5 – 88.5	22	38	52	65	81
88.5 – 89.5	22	38	52	65	81
89.5 – 90.5	22	37	52	65	81
90.5 – 91.5	22	37	52	65	81
91.5 – 92.5	22	37	51	65	80
92.5 – 93.5	21	37	51	64	80
93.5 – 94.5	21	37	51	64	80
94.5 – 95.5	21	37	51	64	80
95.5 – 96.5	21	36	51	64	79
96.5 – 97.5	21	36	50	63	79
97.5 – 98.5	21	36	50	63	79
98.5 – 99.5	21	36	50	63	79
99.5 – 100.5	21	36	50	63	78
100.5 – 101.5	21	36	50	63	78
101.5 – 102.5	21	36	50	62	78
102.5 – 103.5	20	35	49	62	78
103.5 – 104.5	20	35	49	62	78
104.5 – 105.5	20	35	49	62	77
105.5 – 106.5	20	35	49	62	77
106.5 – 107.5	20	35	49	61	77
107.5 – 108.5	20	35	49	61	77
108.5 – 109.5	20	35	48	61	76
109.5 – 110.5	20	34	48	61	76
110.5 – 111.5	20	34	48	61	76
111.5 – 112.5	20	34	48	61	76
112.5 – 113.5	20	34	48	60	76
113.5 – 114.5	20	34	48	60	75
114.5 – 115.5	19	34	47	60	75
115.5 – 116.5	19	34	47	60	75
116.5 – 117.5	19	34	47	60	75
117.5 – 118.5	19	34	47	60	75
118.5 – 119.5	19	33	47	59	75
119.5 – 120.5	19	33	47	59	74
120.5 – 121.5	19	33	47	59	74

Note: * Rate of Rainfall is the average value over consecutive time intervals

Table 5d – Design Rainstorm Profile Intensity-Duration-Frequency Relationships of North District Area

Duration Interval (min)	*Rate of Rainfall (mm/hr) for Return Periods T (years)			
	2	10	50	200
-0.5 – 0.5	200	246	286	326
0.5 – 1.5	155	194	225	254
1.5 – 2.5	122	156	183	206
2.5 – 3.5	102	133	158	180
3.5 – 4.5	89	119	143	163
4.5 – 5.5	80	108	131	150
5.5 – 6.5	73	100	122	141
6.5 – 7.5	68	94	115	133
7.5 – 8.5	63	89	109	127
8.5 – 9.5	59	84	105	122
9.5 – 10.5	56	80	100	117
10.5 – 11.5	54	77	97	113
11.5 – 12.5	51	74	94	110
12.5 – 13.5	49	72	91	107
13.5 – 14.5	47	70	88	104
14.5 – 15.5	46	68	86	101
15.5 – 16.5	44	66	84	99
16.5 – 17.5	43	64	82	97
17.5 – 18.5	42	62	80	95
18.5 – 19.5	40	61	78	93
19.5 – 20.5	39	60	77	91
20.5 – 21.5	38	58	76	90
21.5 – 22.5	38	57	74	88
22.5 – 23.5	37	56	73	87
23.5 – 24.5	36	55	72	86
24.5 – 25.5	35	54	71	84
25.5 – 26.5	34	53	70	83
26.5 – 27.5	34	53	69	82
27.5 – 28.5	33	52	68	81
28.5 – 29.5	33	51	67	80
29.5 – 30.5	32	50	66	79
30.5 – 31.5	32	50	65	78
31.5 – 32.5	31	49	64	77
32.5 – 33.5	31	48	64	77
33.5 – 34.5	30	48	63	76
34.5 – 35.5	30	47	62	75
35.5 – 36.5	29	46	62	74
36.5 – 37.5	29	46	61	74
37.5 – 38.5	28	45	60	73
38.5 – 39.5	28	45	60	72
39.5 – 40.5	28	44	59	72
40.5 – 41.5	27	44	59	71
41.5 – 42.5	27	44	58	70
42.5 – 43.5	27	43	58	70
43.5 – 44.5	26	43	57	69
44.5 – 45.5	26	42	57	69
45.5 – 46.5	26	42	56	68
46.5 – 47.5	26	42	56	68
47.5 – 48.5	25	41	55	67
48.5 – 49.5	25	41	55	67
49.5 – 50.5	25	40	54	66
50.5 – 51.5	25	40	54	66
51.5 – 52.5	24	40	54	65
52.5 – 53.5	24	39	53	65
53.5 – 54.5	24	39	53	64
54.5 – 55.5	24	39	52	64
55.5 – 56.5	23	39	52	64
56.5 – 57.5	23	38	52	63
57.5 – 58.5	23	38	51	63
58.5 – 59.5	23	38	51	62
59.5 – 60.5	23	37	51	62

Duration Interval (min)	*Rate of Rainfall (mm/hr) for Return Periods T (years)			
	2	10	50	200
60.5 – 61.5	22	37	50	62
61.5 – 62.5	22	37	50	61
62.5 – 63.5	22	37	50	61
63.5 – 64.5	22	36	50	61
64.5 – 65.5	22	36	49	60
65.5 – 66.5	22	36	49	60
66.5 – 67.5	21	36	49	60
67.5 – 68.5	21	36	48	59
68.5 – 69.5	21	35	48	59
69.5 – 70.5	21	35	48	59
70.5 – 71.5	21	35	48	58
71.5 – 72.5	21	35	47	58
72.5 – 73.5	21	35	47	58
73.5 – 74.5	20	34	47	58
74.5 – 75.5	20	34	47	57
75.5 – 76.5	20	34	46	57
76.5 – 77.5	20	34	46	57
77.5 – 78.5	20	34	46	57
78.5 – 79.5	20	33	46	56
79.5 – 80.5	20	33	46	56
80.5 – 81.5	20	33	45	56
81.5 – 82.5	19	33	45	56
82.5 – 83.5	19	33	45	55
83.5 – 84.5	19	33	45	55
84.5 – 85.5	19	32	45	55
85.5 – 86.5	19	32	44	55
86.5 – 87.5	19	32	44	54
87.5 – 88.5	19	32	44	54
88.5 – 89.5	19	32	44	54
89.5 – 90.5	19	32	44	54
90.5 – 91.5	18	32	43	54
91.5 – 92.5	18	31	43	53
92.5 – 93.5	18	31	43	53
93.5 – 94.5	18	31	43	53
94.5 – 95.5	18	31	43	53
95.5 – 96.5	18	31	43	53
96.5 – 97.5	18	31	42	52
97.5 – 98.5	18	31	42	52
98.5 – 99.5	18	30	42	52
99.5 – 100.5	18	30	42	52
100.5 – 101.5	18	30	42	52
101.5 – 102.5	17	30	42	51
102.5 – 103.5	17	30	41	51
103.5 – 104.5	17	30	41	51
104.5 – 105.5	17	30	41	51
105.5 – 106.5	17	30	41	51
106.5 – 107.5	17	29	41	51
107.5 – 108.5	17	29	41	50
108.5 – 109.5	17	29	41	50
109.5 – 110.5	17	29	40	50
110.5 – 111.5	17	29	40	50
111.5 – 112.5	17	29	40	50
112.5 – 113.5	17	29	40	50
113.5 – 114.5	16	29	40	50
114.5 – 115.5	16	29	40	49
115.5 – 116.5	16	28	40	49
116.5 – 117.5	16	28	40	49
117.5 – 118.5	16	28	39	49
118.5 – 119.5	16	28	39	49
119.5 – 120.5	16	28	39	49
120.5 – 121.5	16	28	39	48

Note: * Rate of Rainfall is the average value over consecutive time intervals

(c)	Table 2b Intensity-Duration-Frequency (IDF) Relationship of Tai Mo Shan Area for durations not exceeding 240 minutes	**Replace the following notes:** 1. based on continuous rainfall recorded at GEO rain gauges N14 (40 years), N36 (24 years), N37 (24 years) & N40 (24 years) up to 2023
(d)	Table 2c Intensity-Duration-Frequency (IDF) Relationship of West Lantau Area for durations not exceeding 240 minutes	**Replace the following notes:** 1. based on continuous rainfall recorded at GEO rain gauges N17 (33 years), N19 (24 years) & N21 (24 years) up to 2023
(e)	Table 4b Depth-Duration-Frequency (DDF) Relationship of Tai Mo Shan Area for durations of more than 4 hours	**Replace the following notes:** 1. based on continuous rainfall recorded at GEO rain gauges N14 (40 years), N36 (24 years), N37 (24 years) & N40 (24 years) up to 2023

(f)	Table 4c Depth-Duration-Frequency (DDF) Relationship of West Lantau Area for durations of more than 4 hours	**Replace the following notes:** 1. based on continuous rainfall recorded at GEO rain gauges N17 (33 years), N19 (24 years) & N21 (24 years) up to 2023
(g)	Figure 4a, Figure 4d, Figure 5a, Figure 5d	**Replace the listed figures below with the following pages:** Figure 4a – Intensity-Duration-Frequency Curves of HKO Headquarters (for durations not exceeding 4 hours) Figure 4d – Intensity-Duration-Frequency Curves of North District Area (for durations not exceeding 4 hours) Figure 5a – Synthetic Rainstorm Profiles of HKO Headquarters Figure 5d – Synthetic Rainstorm Profiles of North District Area

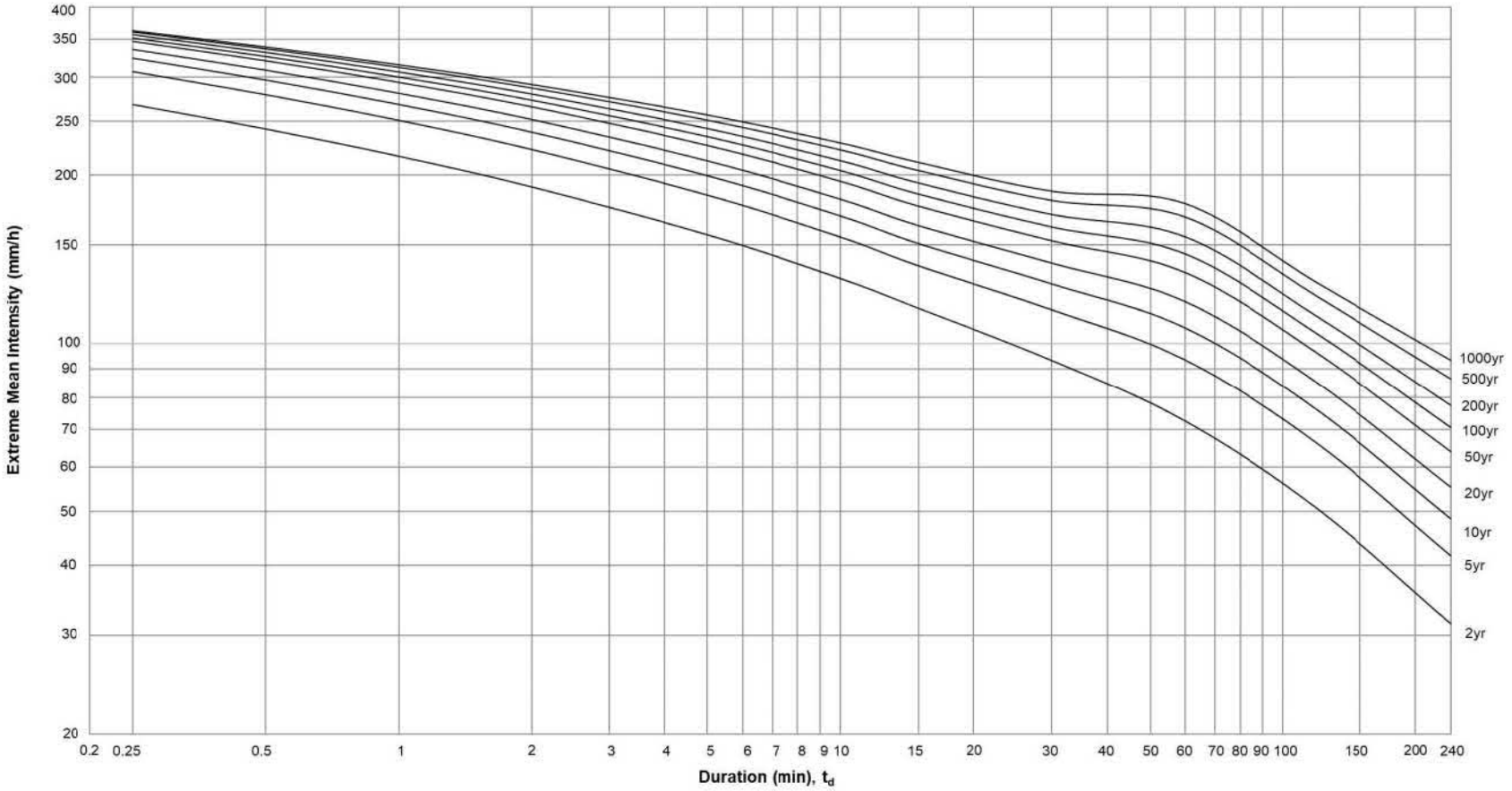


Figure 4a – Intensity-Duration-Frequency Curves of HKO Headquarters
(for durations not exceeding 4 hours)

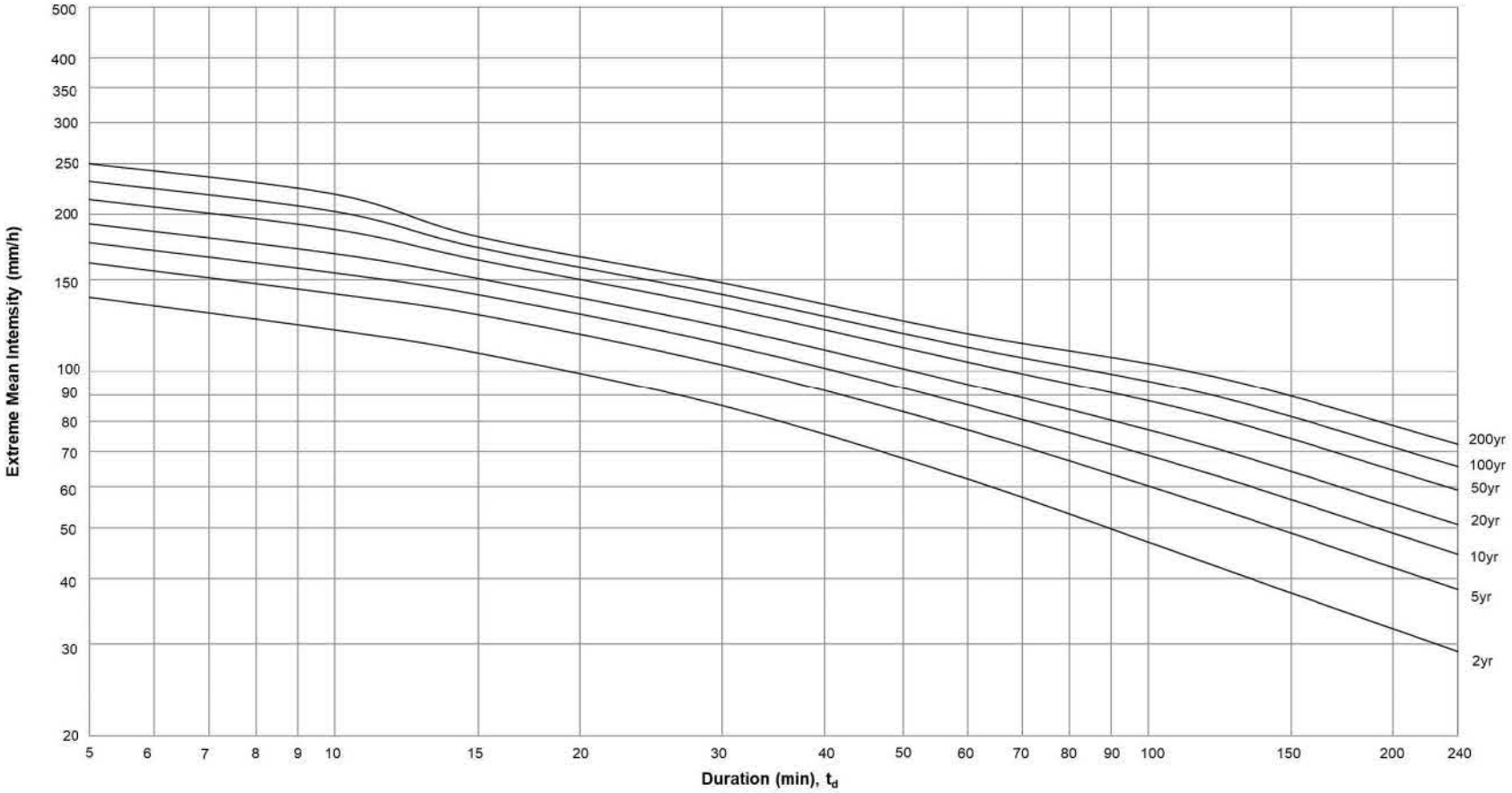


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

Figure 5a – Synthetic Rainstorm Profiles of HKO Headquarters

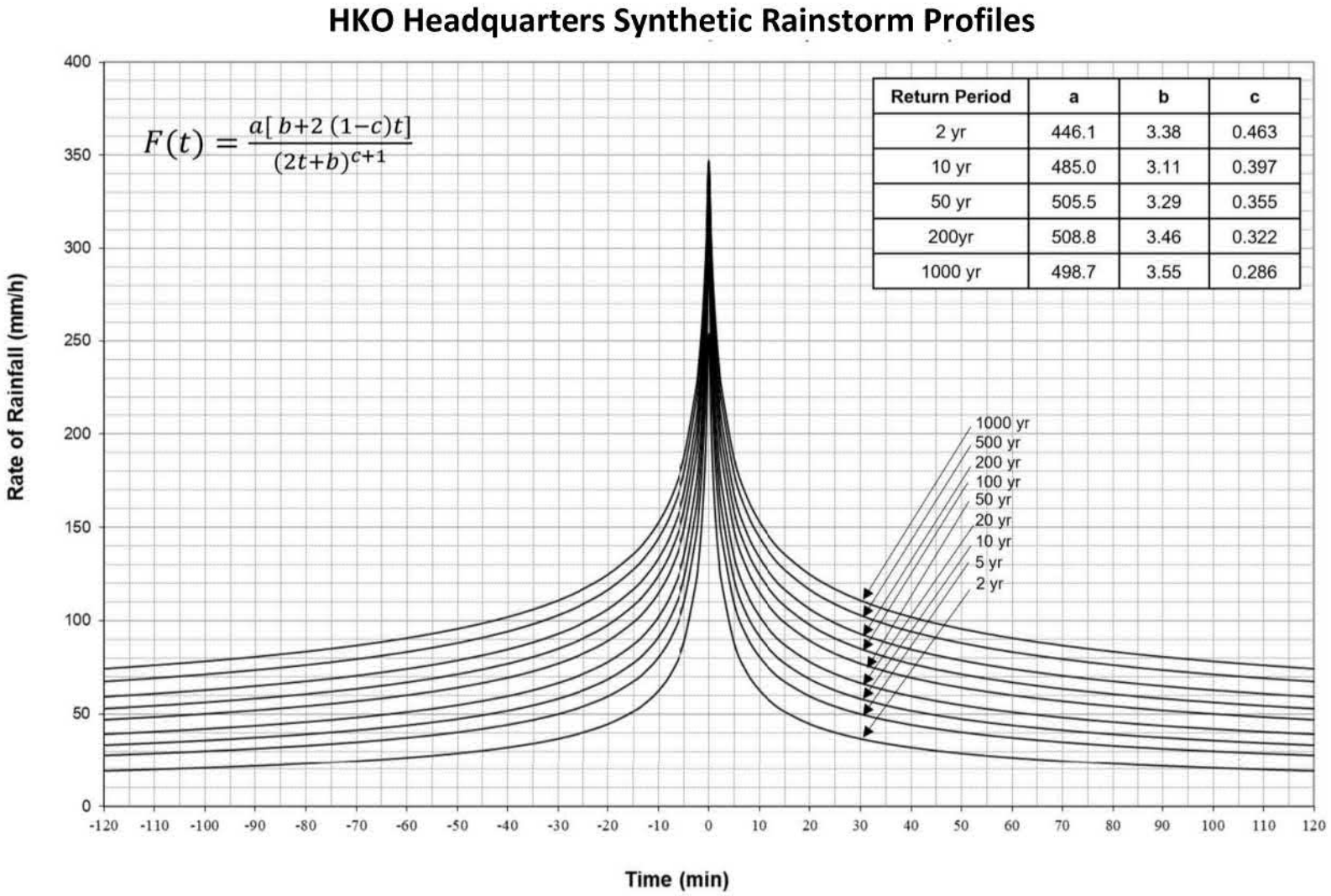


Figure 5d – Synthetic Rainstorm Profiles of North District Area

