Appendix 3

Drainage Proposal

Drainage Submission in support of

S16 Planning Application for

Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi) for a Period of 3 Years in "Agriculture" zone

at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yeuk Tau, Fanling, New Territories

(HT25040)

May 2025

Drainage Consultant:

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Prepared & approved by	LEE Kwok Cheung *RPE(Civil)*	

1. Background

1.1 With respect to a S16 Planning Application for Proposed Temporary Public Vehicle Park with Electric Charging Device for a Period of 3 Years in "Agriculture" zone at Taxlord Lot 464SA RP(Part) in DD83 and adjoining Government Land, Sha Tau Kok Road – Lung Yeuk Tau, Fanling, New Territories, Messrs. Ho Tin & Associates Consulting Engineers Limited was appointed to prepare a drainage submission.

2. Approach to Prepare this Proposal

2.1 This Drainage Submission is prepared in line with the "Technical Note to prepare a Drainage Submission (Relating to applications for temporary change of land use such as temporary storage areas, car parks, workshops, small factories … etc. under S.16 of the Town Planning Ordinance)" issued by Drainage Services Department in December 2024.

3. The Subject Site and Proposed Development

3.1 The subject site of approximately triangular shape with a total site area of about 1,143m^2 comprises of Taxlord Lot 464SA RP(Part) in DD83 and Adjoining Government Land (about 570m^2), Sha Tau Kok Road – Lung Yeuk Tau, Fanling, New Territories. The subject site is on the south side of Sha Tau Kok Road – Lung Yeuk Tau and the west of Kwan Tei Children's Playground. A Site Location Plan is shown in **Figure D1**.

3.2 The subject development consists of one single-storey transformer room and switch room structure (3.5m high, total floor area = 53m^2), and 2 numbers of container for EV chargers (3m high, total floor area = 29m^2 each) accompanying with 12 numbers of EV charging spaces for electric taxi and 7 numbers of parking spaces/waiting spaces for electric taxi. A plan showing the proposed site layout is at **Figure D2**.

4. Existing Drainage Conditions of the Site

4.1 At present, the subject site is hard paved, partitioned into sub-units and partly used for storage use and car repairing workshop and partly vacant. In front of the northern subject site boundary is a cycle track beside Sha Tau Kok Road – Lung Yeuk Tau. (refer to **Plate 1** to **4**).

4.2 The subject site is encroached upon an access road of the adjacent site to its southwest side (refer to **Plate 5** and **6**). To the southeast side of the subject site is an existing hard paved football field (refer to **Plate 7**).

4.3 At present, surface runoff of the subject site would flow into an existing watercourse at its southern corner (refer to **Plate 8** and **9**) and from which the existing watercourse runs southeastward to join a major existing watercourse of the area at the further southeast.

4.4 Current conditions of the subject site and its existing drainage conditions are shown in the following photos (photo taking locations are shown on **Figure D3**):

Plate 1 – Photo of the northern side of the subject site taken from Sha Tau Kok Road – Lung Yeuk Tau (1 of 4)

Plate 2 – Photo of the northern side of the subject site taken from Sha Tau Kok Road – Lung Yeuk Tau (2 of 4)

Plate 3 – Photo of the northern side of the subject site taken from Sha Tau Kok Road – Lung Yeuk Tau (3 of 4)

Plate 4 – Photo of the northern side of the subject site taken from Sha Tau Kok Road – Lung Yeuk Tau (4 of 4)

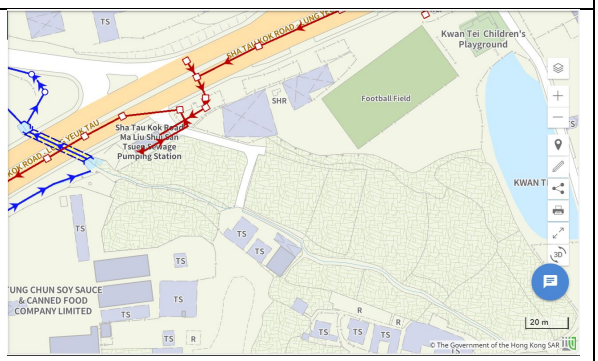
Plate 5 – Entrance of the adjacent site on the southwest side of the subject site

Plate 6 – The adjacent site on the southwest side of the subject site

Plate 7 – View to the subject site from the existing football field on the southeast side of the subject site

Plate 8 – Existing watercourse at the southern corner of the subject site to which surface runoff would flow into

Plate 9 – Existing watercourse at the further downstream of the southern corner of the subject site to which surface runoff would flow into



Extract of the Drainage Records from LandsD's GeoInfo Map in May 2025

5. Drainage Assessment and Proposal

5.1 The subject site is a simple small site with a total site area of about 1,143m^2 (very much less than 1 ha in size). The existing subject site levels are generally same as those of the area close to Sha Tau Kok Road – Lung Yeuk Tau and relatively higher than the surroundings at the remaining three sides. There is no prominent existing surface channels intercepting surface runoff on the area. In general, at present surface runoff of the area would flow toward the existing watercourses with respect to the ground levels. The subject site is obviously not the relatively lower spot of the concerned area. Hence, it is not anticipated that the subject site would receive noticeable runoff from the surroundings.

5.2 The existing site levels would be maintained and no site formation/leveling works would be carried out such that the subject proposed development would be maintained at levels relatively higher than its adjacent developments/areas to its east, west and north, and would be at similar levels of the existing cycle track running along its northern boundary. For conservative, in order to ensure no surface runoff from the surroundings, due to any unexpected reasons, flowing onto the subject site to be obstructed, 100mm high gap will be formed at the bottom of the security hoarding/fence wall along the subject site boundary. Cross sections of the proposed subject development and typical details of the gap at the bottom of proposed security hoarding/fence are shown in **Figure D5**.

5.3 With respect to the "Technical Note to prepare a Drainage Submission" (the "TN") published by Drainage Services Department, for the subject site area = 1,143m^2 ≤ 1,800m^2, peripheral 375mm U channel at 1 in 200 gradient would be appropriate.
It is therefore proposed to construct new peripheral 375mm U channel at 1 in 200 gradient for the subject development. A new catchpit with trap will be constructed at the end of the proposed 375 U channels at the southern corner of the subject site before discharging into the existing watercourse. The discharge point is basically same as that of the existing. A Proposed Stormwater Drainage Layout Plan is shown in **Figure D4**.

5.4 Besides, the Applicant is committed to obtain consents from owners of adjacent relevant land/lots prior to commencement of the proposed drainage works outside the subject site and to maintain regularly to avoid blockage of the drainage system to the satisfaction of relevant Government departments.

5.5 Details of proposed drainage provisions shall follow relevant details shown in Government departments' Standard Drawings as follows:

Proposed Drainage Provisions	*Standard Drawings*	*Drawing No. & Title*
Catchpit	CEDD Standard Drawings	C 2405/1 to /5 – Standard Catchpit Details
Catchpit with trap		C 2406/1 to /2A – Catchpit with Trap
Catchpit precast concrete cover		C 2407B – Precast Concrete Covers for Catchpit and Sand Trap
U-channel		C 2409J – Details of Half-round and U-channels
Channel cover		C 2412E – Cover Slab and Cast Iron Grating for Channels

6. Conclusion and Recommendations

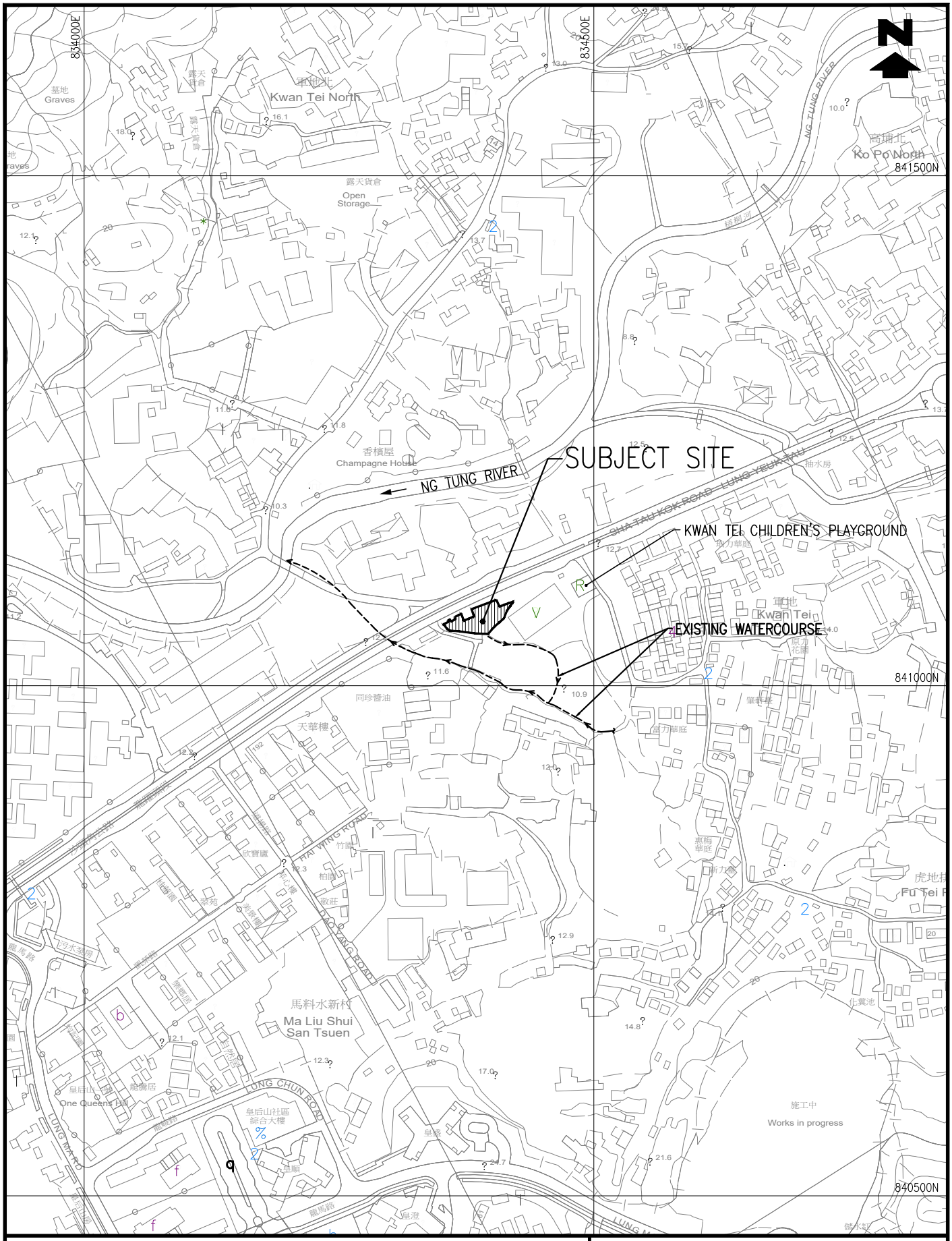
6.1 The subject development as Proposed Temporary Public Vehicle Park with Electric Charging Device for a Period of 3 Years. The subject site area has been hard paved for a very long period without complaints on drainage conditions. The existing site levels would be maintained and no site formation/leveling works would be carried out.

6.2 At present, the levels of the subject site are relatively higher than/similar to those of the surroundings. In principle, no surface runoff would flow onto the subject site from its surroundings. 375mm U channel at 1 in 200 gradient will be constructed at the peripheral of the subject site to intercept all crossing surface runoff. For conservative, 100mm high gap will be formed at the bottom of the security hoarding/fence along the subject site boundary to ensure no surface runoff from the adjacent, due to any unexpected incidents, to be obstructed. A new catchpit with trap will be constructed

at the ends of the 375mm U channel before discharging into the existing watercourse at the southern corner.

6.3 The Applicant is committed to obtain consents from owners of adjacent relevant land/lots prior to commencement of the proposed drainage works outside the subject site and to maintain regularly to avoid blockage of the system to the satisfaction of relevant Government departments.

6.4 The subject development would not alter the existing drainage conditions and pattern of the area and the proposed drainage system would be maintained with appropriate drainage clearance and repair works, i.e. debris clearance and damage repair. Therefore, in conclusion, the subject development would not cause any adverse drainage impact onto the area.



TITLE

SITE LOCATION PLAN

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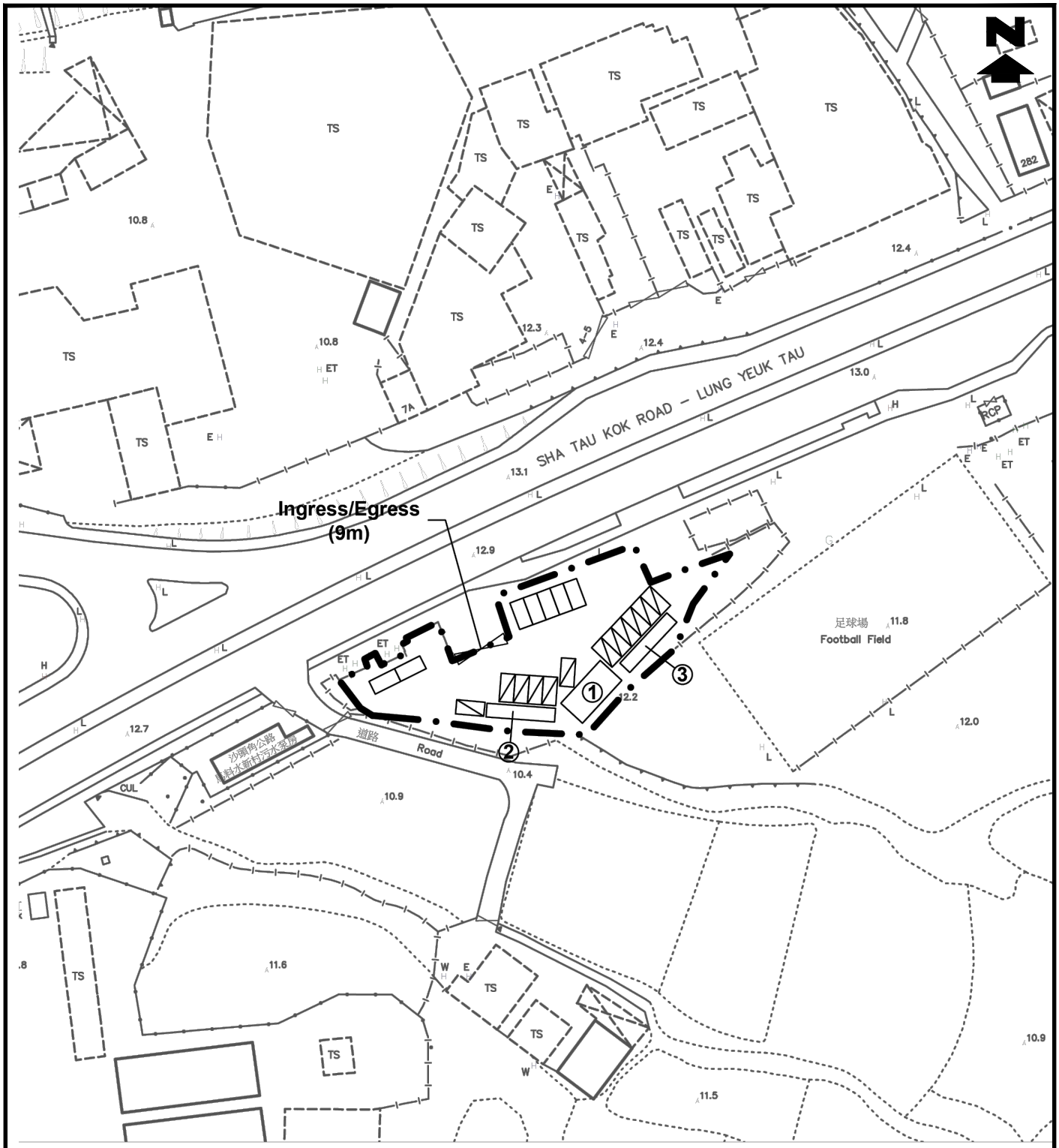
SCALE
1 : 5000 – A4

DRAWING No.
FIGURE D1

H:\25040_LungYeukTau_Site2\DRAWING\25040_FIGD1_00.dwg, 22/5/2025 17:11:21



Structure No.	Uses	No. of Storey	Floor Area (m²)	Height (m)
1	Transformer Room and Switch Room	1	53	3.5
2	Container for EV Chargers	1	29	3.0
3	Container for EV Chargers	1	29	3.0

Legend:

- Application Site (Area: about 1,143m²)
- EV Charing Spaces for Electric Taxi (12 nos.)
- Parking Spaces/Waiting Spaces for Electric Taxi (7 nos.)

TITLE

LAYOUT PLAN

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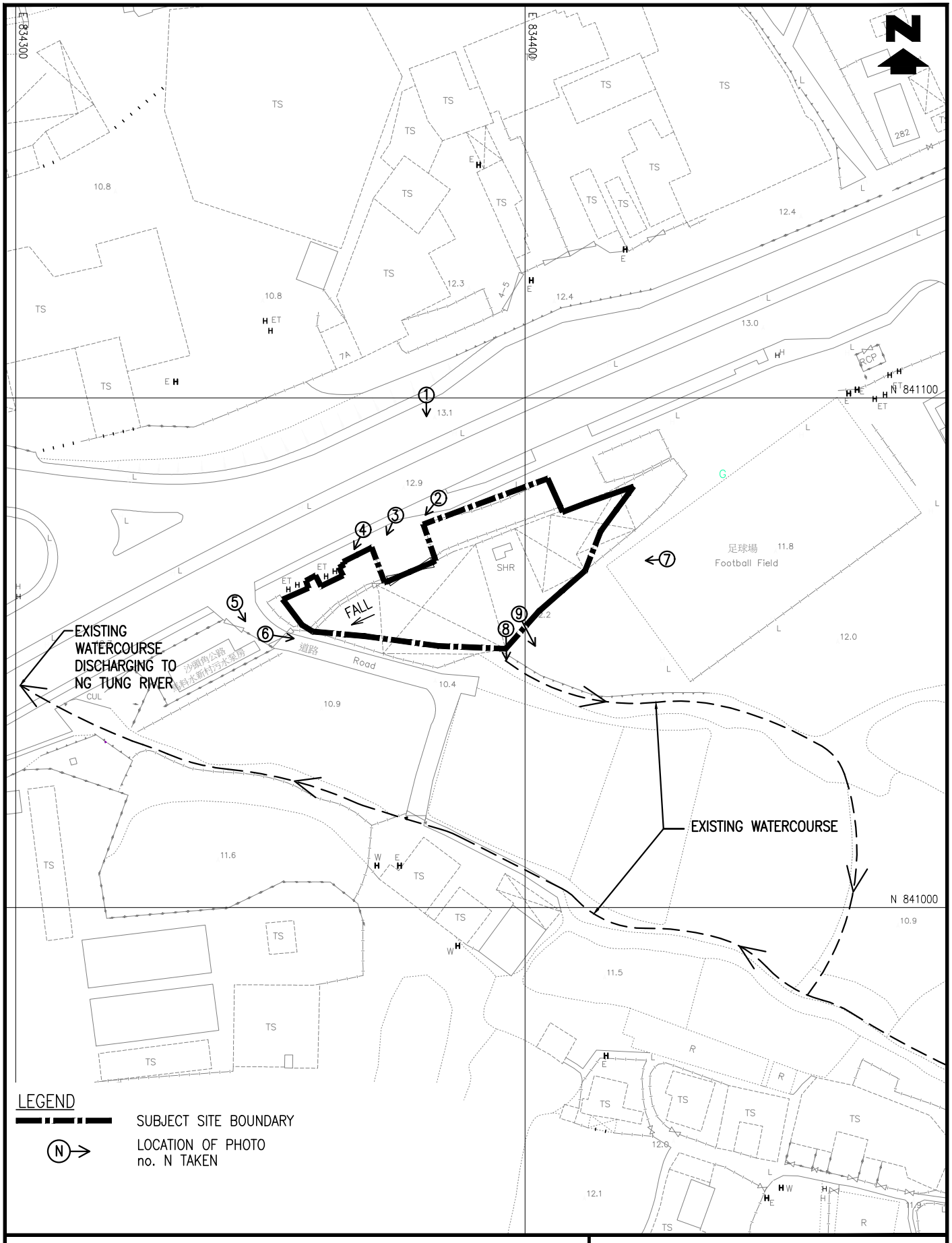
SCALE
1 : 1000 – A4

DRAWING No.
FIGURE D2

H:\25040_LungYeukTau_Site2\DRAWING\25040_FIGD2_00 FIGD3_00 FIGD4_00 & FIGD5_00.dwg, 20/5/2025 10:46:06



TITLE

EXISTING DRAINAGE AND LOCATIONS OF PHOTO TAKEN

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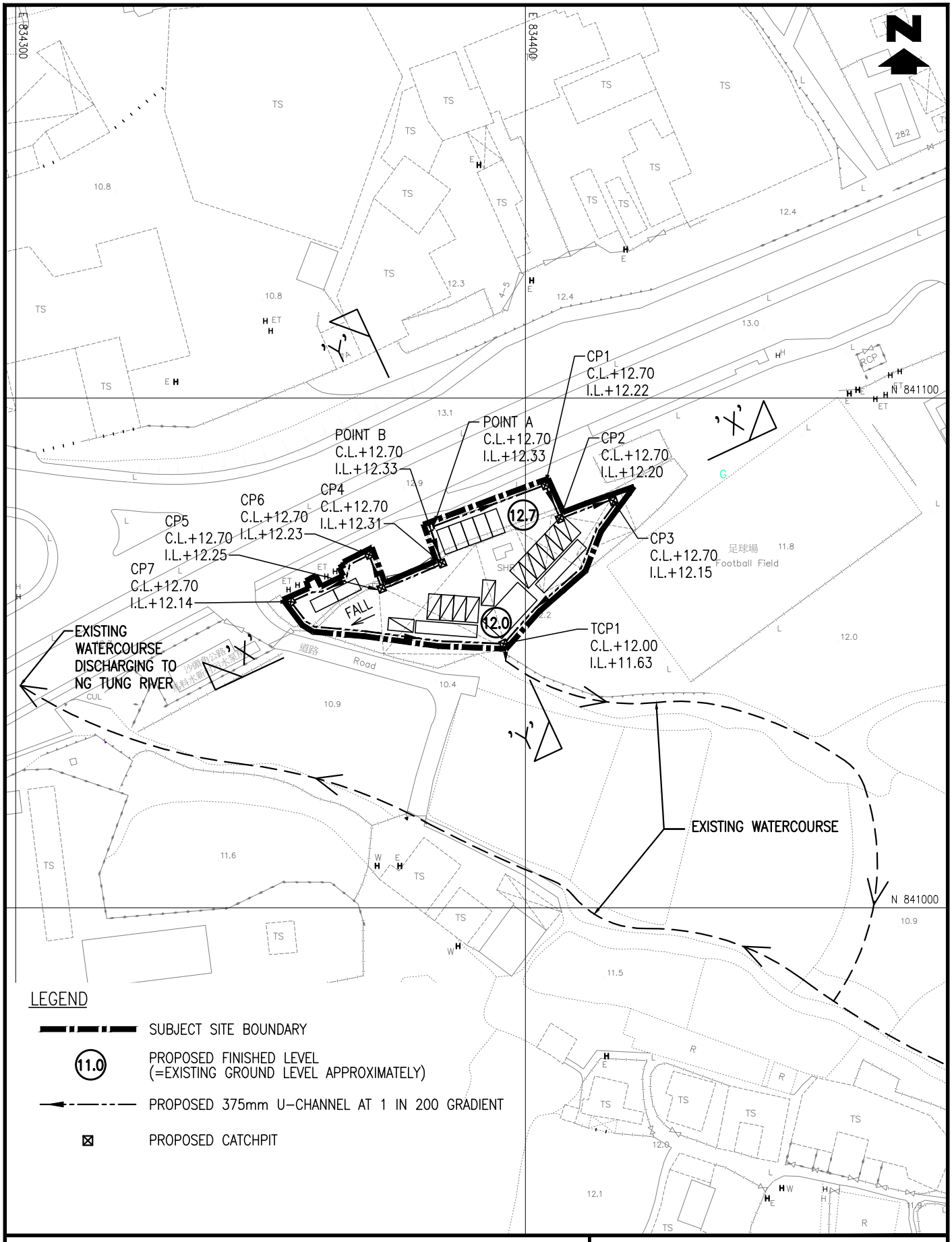
SCALE
1 : 1000 – A4

DRAWING No.
FIGURE D3

H:\25040_LungYeukTau_Site2\DRAWING\25040_FIGD2_00 FIGD3_00 FIGD4_00 & FIGD5_00.dwg, 22/5/2025 16:51:21



TITLE

PROPOSED STORMWATER DRAINAGE LAYOUT PLAN

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SCALE
1 : 1000 – A4

DRAWING No.
FIGURE D4

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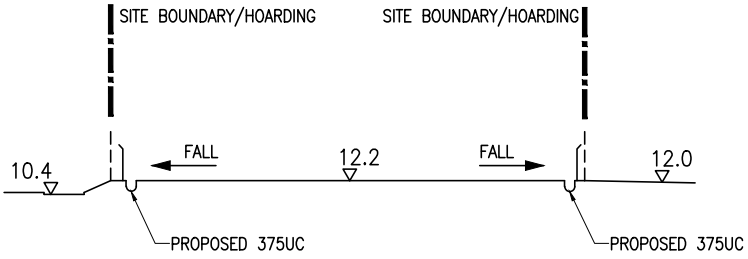
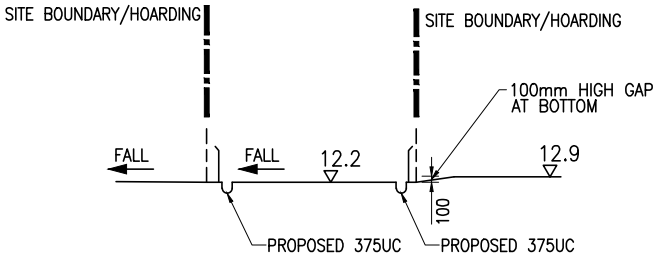


SECTION 'X'–'X'



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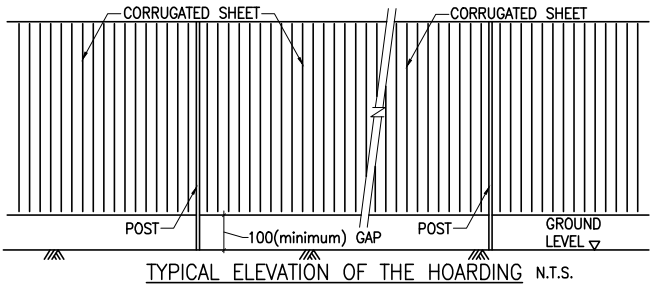

TYPICAL ELEVATION OF THE HOARDING WITH 100mm HIGH GAP AT BOTTOM N.T.S.

TITLE

SITE CROSS SECTIONS

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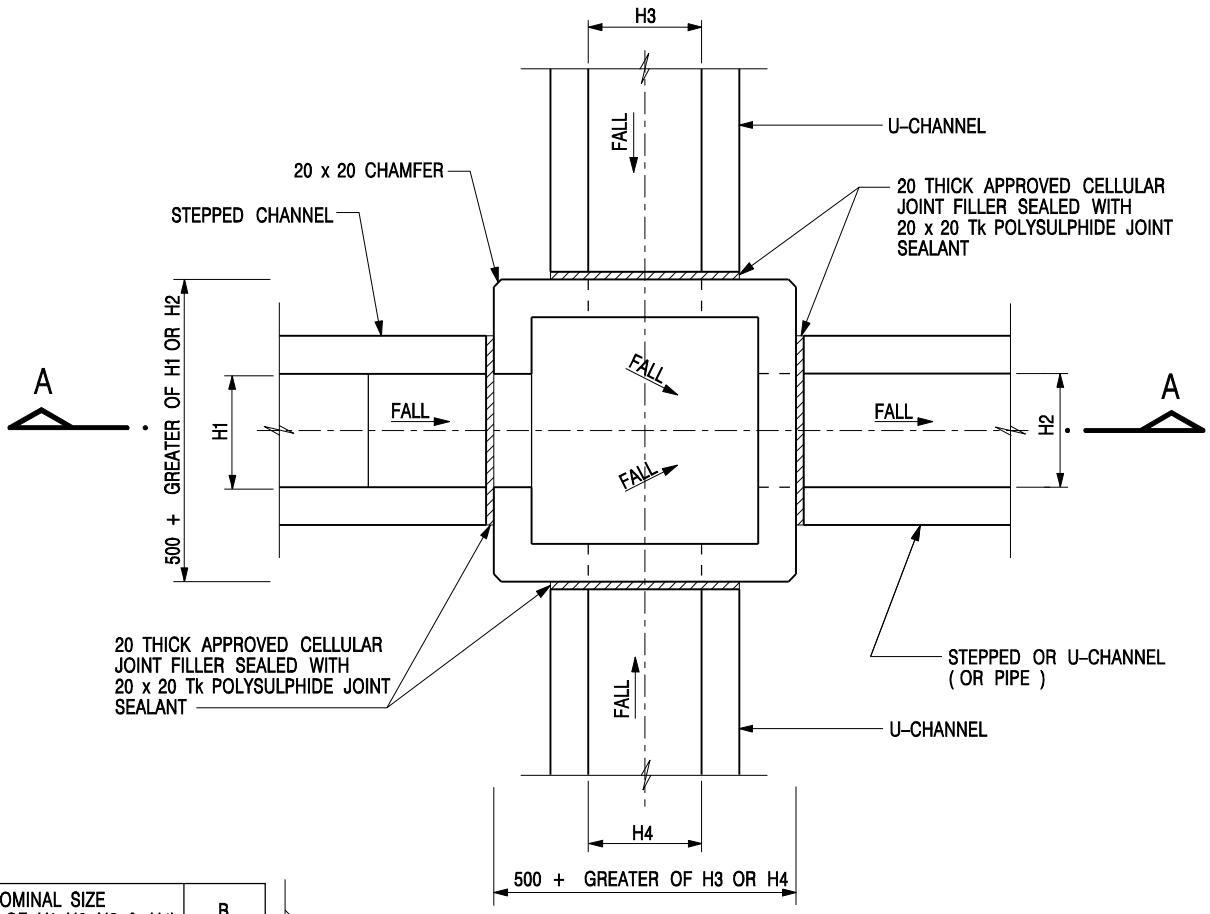
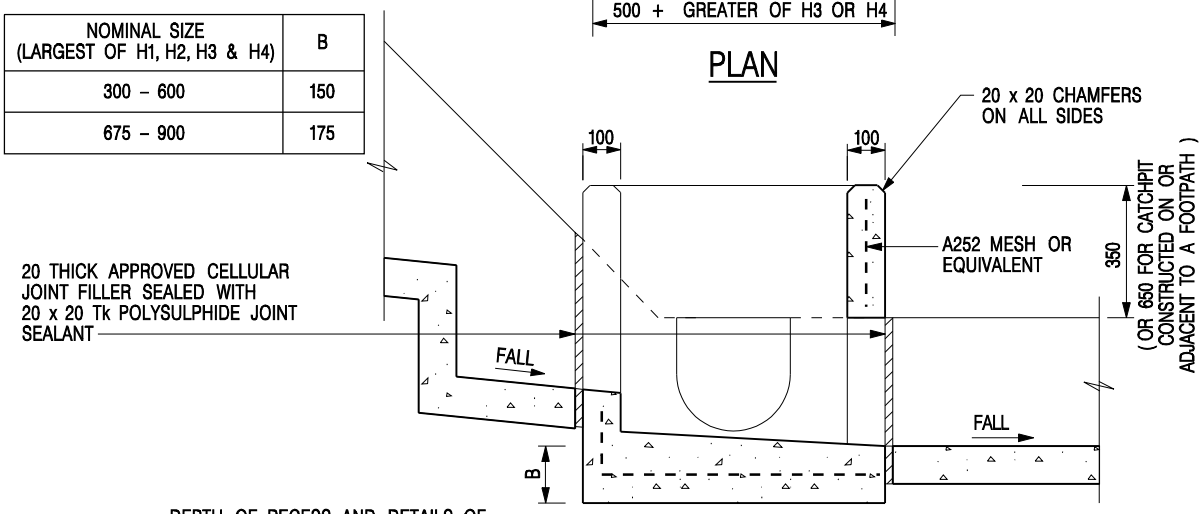
SCALE
1 : 500 – A4

DRAWING No.
FIGURE D5

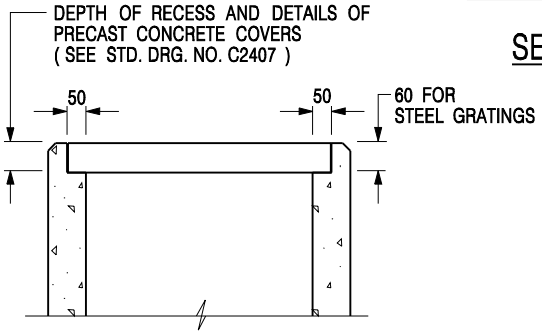


PLAN

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 5 FOR OTHER NOTES.

ALTERNATIVE TOP SECTION FOR PRECAST CONCRETE COVERS / GRATINGS

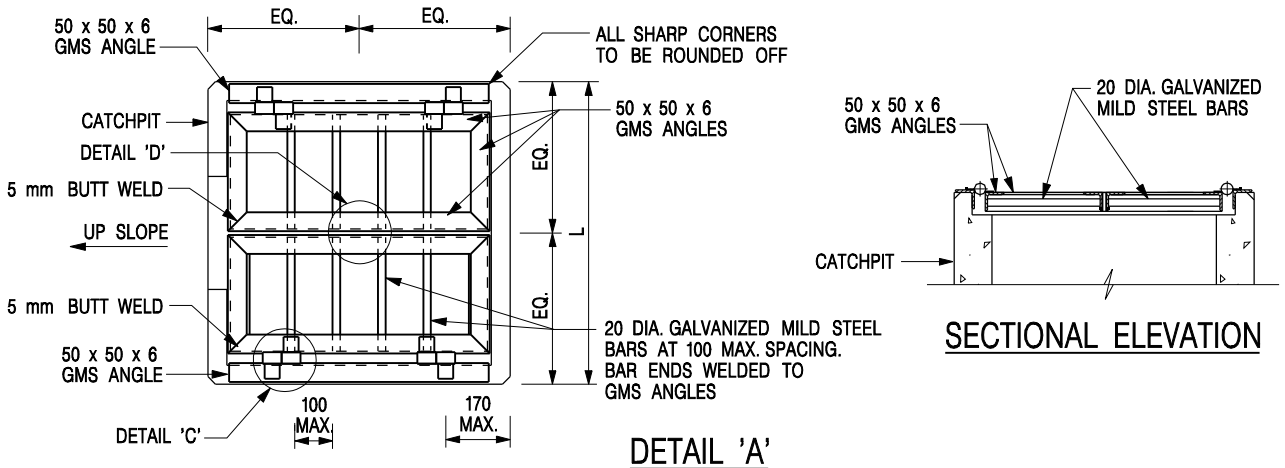
REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG. NO. C2405J.	Original Signed	03.2015

STANDARD CATCHPIT DETAILS

(SHEET 1 OF 5)

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

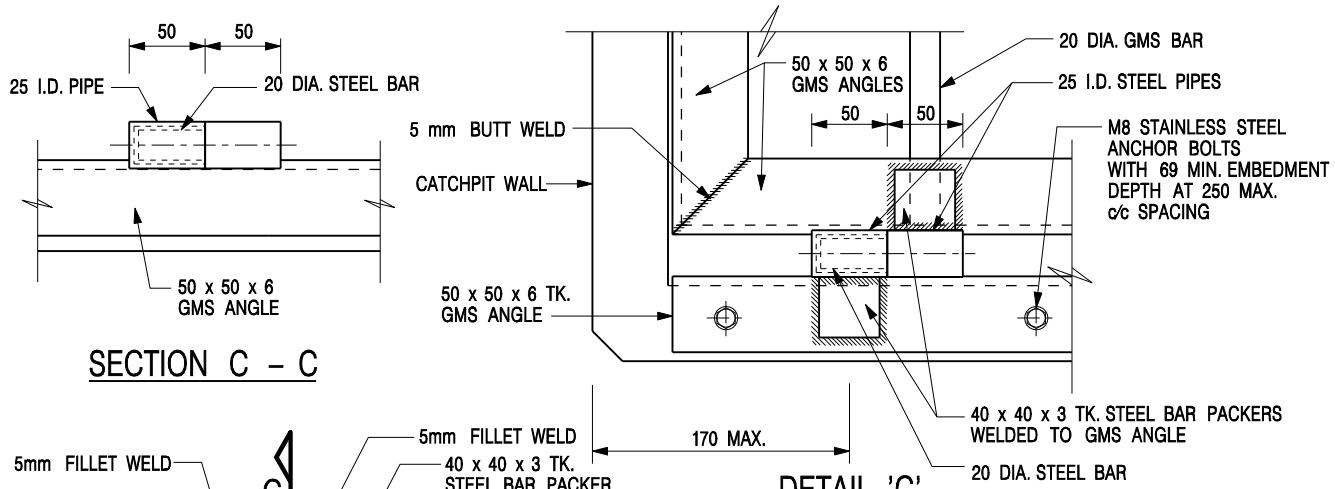
SCALE	1 : 20	DRAWING NO.
DATE	JAN 1991	C2405 /1



DETAIL 'A'

(DETAILS OF DOUBLE SIDE OPENING STEEL GRATING FOR L>900mm)

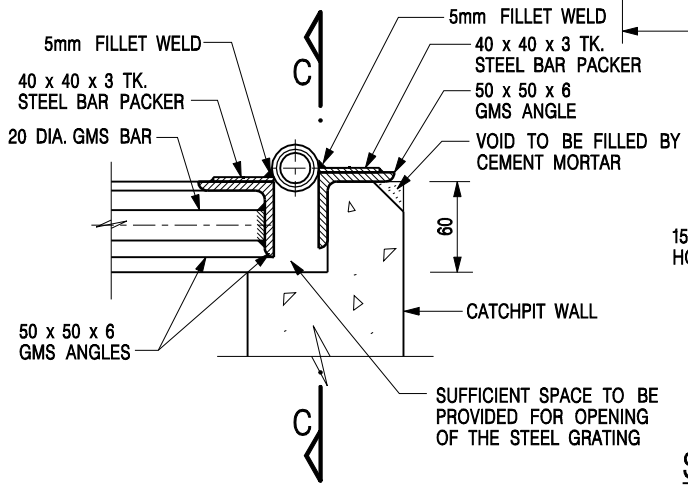
SCALE 1 : 20



DETAIL 'C'

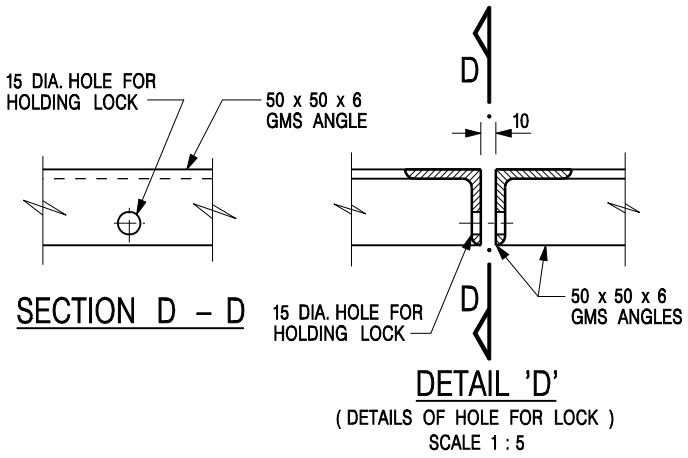
(DETAILS OF HINGE)

SCALE 1 : 5



SECTIONAL ELEVATION

(DETAIL 'C')



DETAIL 'D'

(DETAILS OF HOLE FOR LOCK)

SCALE 1 : 5

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 5 FOR OTHER NOTES.

REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG. NO. C2405J.	Original Signed	03.2015

STANDARD CATCHPIT DETAILS

(SHEET 2 OF 5)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE	AS SHOWN	DRAWING NO.
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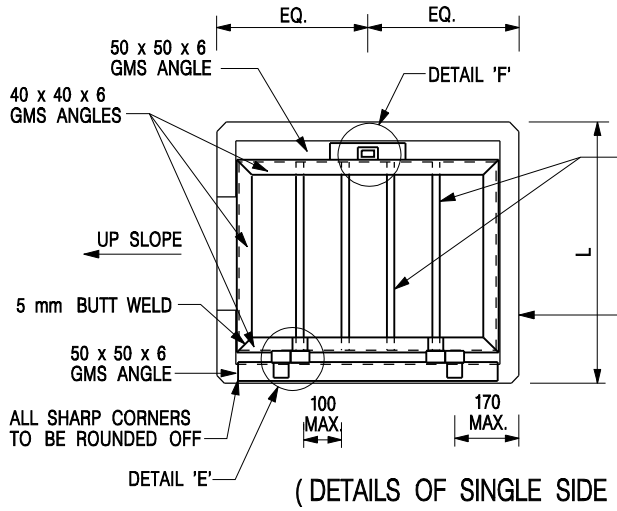
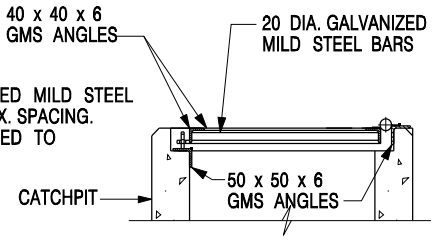


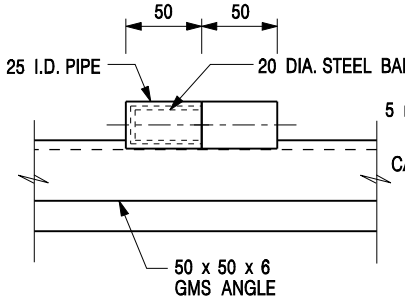


SECTIONAL ELEVATION

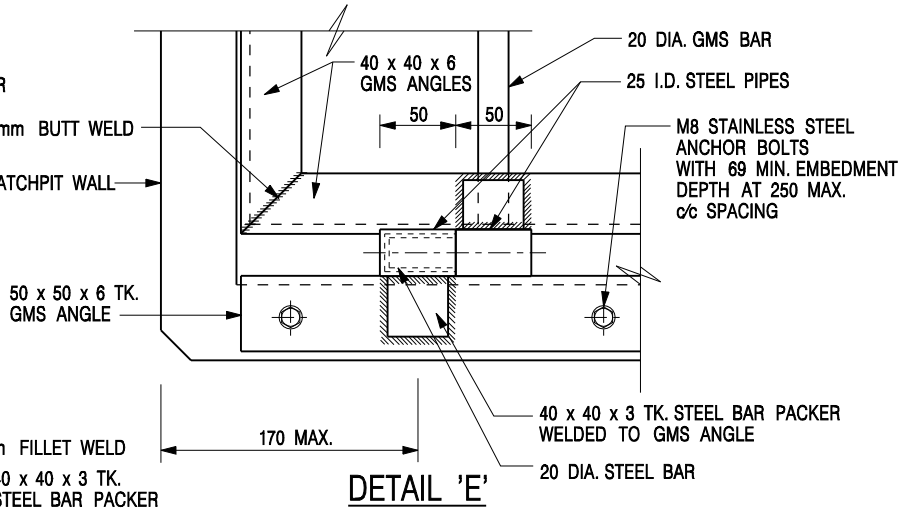
DETAIL 'B'

(DETAILS OF SINGLE SIDE OPENING STEEL GRATING FOR L≤900mm)

SCALE 1 : 20



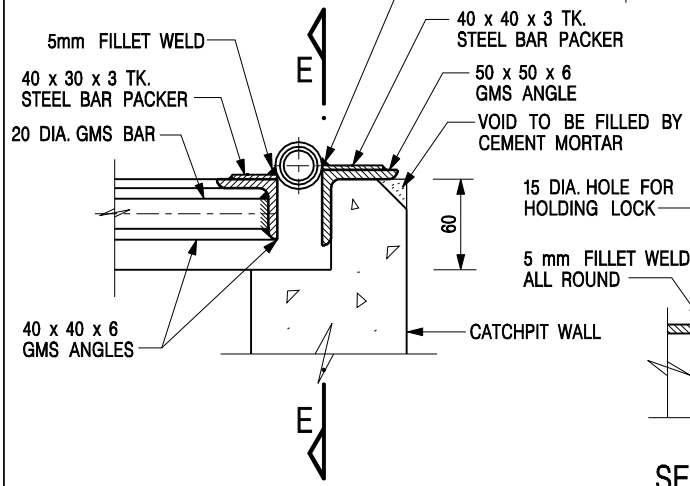
SECTION E – E



DETAIL 'E'

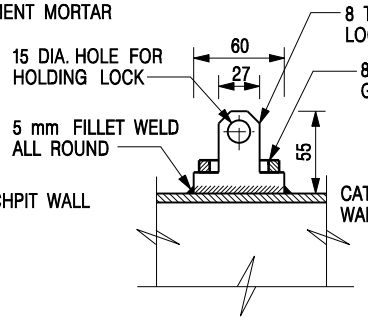
(DETAILS OF HINGE)

SCALE 1 : 5

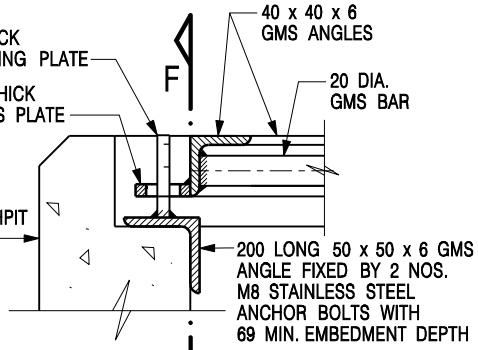


SECTIONAL ELEVATION

(DETAIL 'E')



SECTION F – F



DETAIL 'F'

(DETAILS OF LOCKING PLATE)

SCALE 1 : 5

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 5 FOR OTHER NOTES.

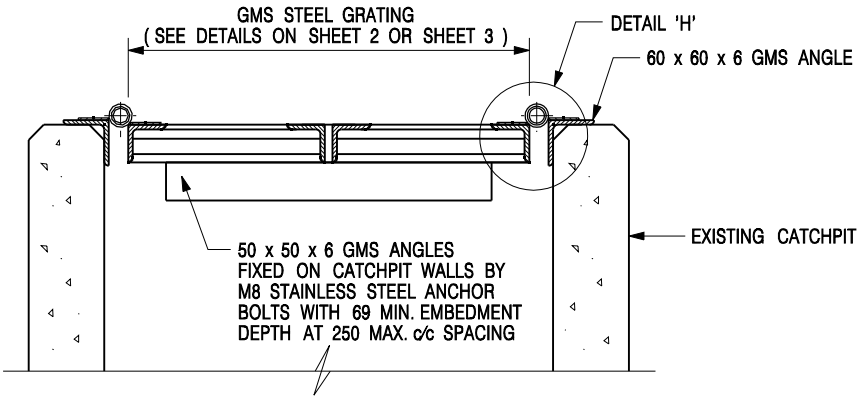
REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG. NO. C2405J.	Original Signed	03.2015

STANDARD CATCHPIT DETAILS

(SHEET 3 OF 5)

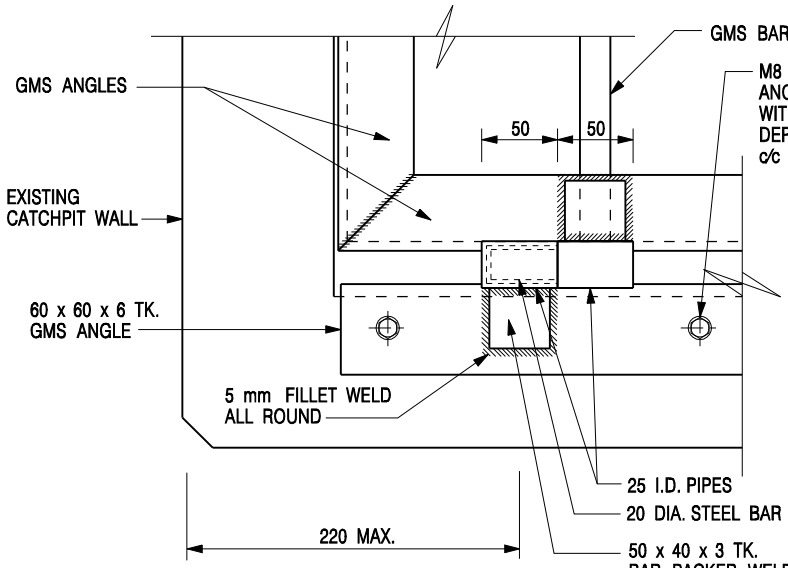
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE AS SHOWN	DRAWING NO. C2405 /3
DATE JAN 1991	



DETAIL 'G' – DETAILS OF STEEL GRATING CONSTRUCTED ON EXISTING CATCHPIT

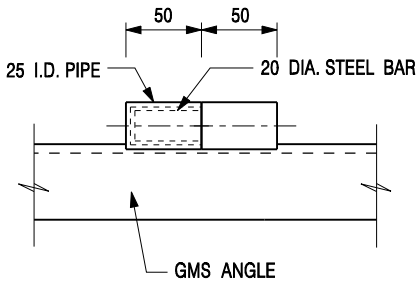
SCALE 1 : 10



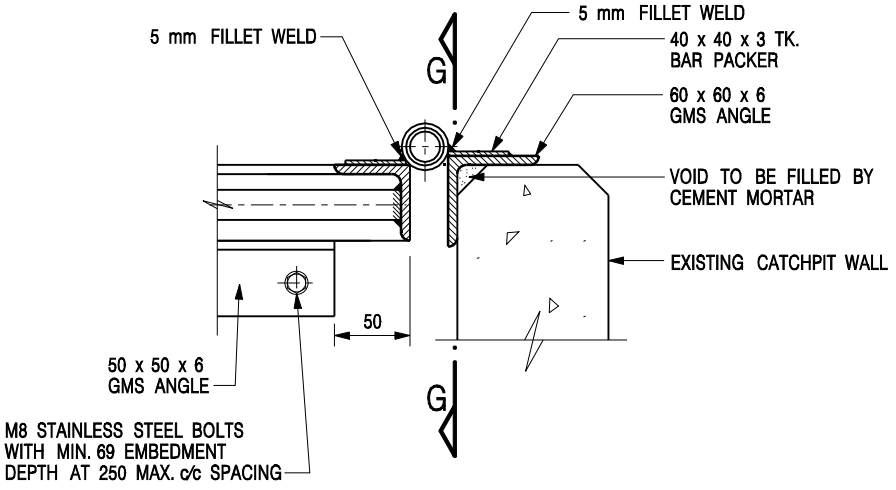
DETAIL 'H'

(DETAILS OF HINGE)

SCALE 1 : 5



SECTION G – G



SECTIONAL ELEVATION

(DETAIL 'H')

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 5 FOR OTHER NOTES.

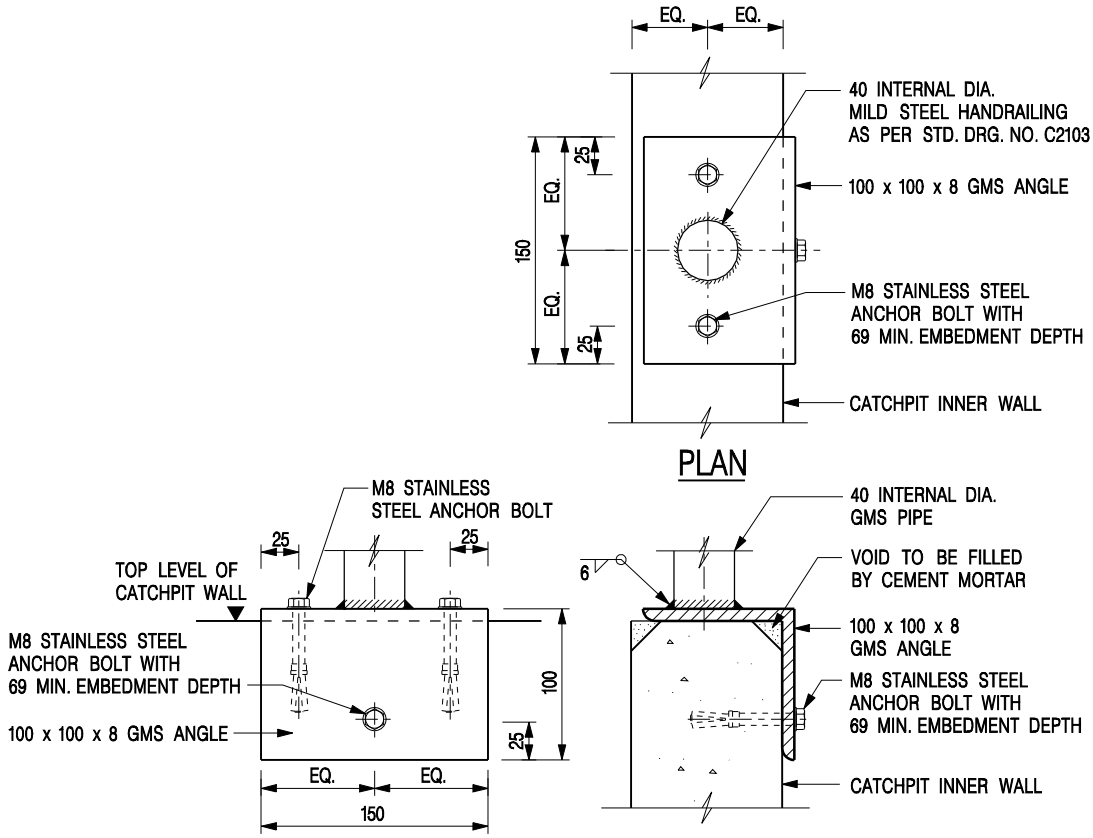
REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG. NO. C2405J.	Original Signed	03.2015

STANDARD CATCHPIT DETAILS

(SHEET 4 OF 5)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE AS SHOWN	DRAWING NO. C2405 /4
DATE JAN 1991	



DETAIL 'J' – FIXING DETAILS FOR HANDRAILING ON TOP OF CATCHPIT WALL

SCALE 1 : 5

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. FOR CATCHPITS CONSTRUCTED ON OR ADJACENT TO A FOOTPATH, STEEL GRATINGS (SEE DETAILS ON SHEET 2 OR SHEET 3) OR CONCRETE COVERS (SEE STD. DRG. NO. C2407) SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.
7. IF INSTRUCTED BY THE ENGINEER, HANDRAILING (SEE DETAIL 'J' ON SHEET 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.
8. 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 mm c/c STAGGERED SHALL BE PROVIDED. THICKNESS OF CATCHPIT WALL FOR INSTALLATION OF STEP IRONS SHALL BE INCREASED TO 150 mm.
9. FOR RETROFITTING AN EXISTING CATCHPIT WITH STEEL GRATING, SEE DETAIL 'G' ON SHEET 4.
10. ALL STEEL ANGLES SHALL COMPLY WITH BS EN 10025 AND BS EN 10056.
11. UNLESS OTHERWISE SPECIFIED, ALL WELDS SHALL BE 5 mm CONTINUOUS FILLET WELDS.
12. ALL WELDS SHALL BE CHIPPED, GROUND SMOOTH, BRUSHED TO REMOVE SLAG PRIOR TO HOT-DIP GALVANIZATION.
13. ALL STEELWORK SHALL BE HOT-DIP GALVANIZED TO BS EN ISO 1461. ALL EXPOSED STEELWORK SURFACES SHALL BE TREATED AND PAINTED IN ACCORDANCE WITH THE GENERAL SPECIFICATION.
14. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG. NO. C2405J.	Original Signed	03.2015

STANDARD CATCHPIT DETAILS

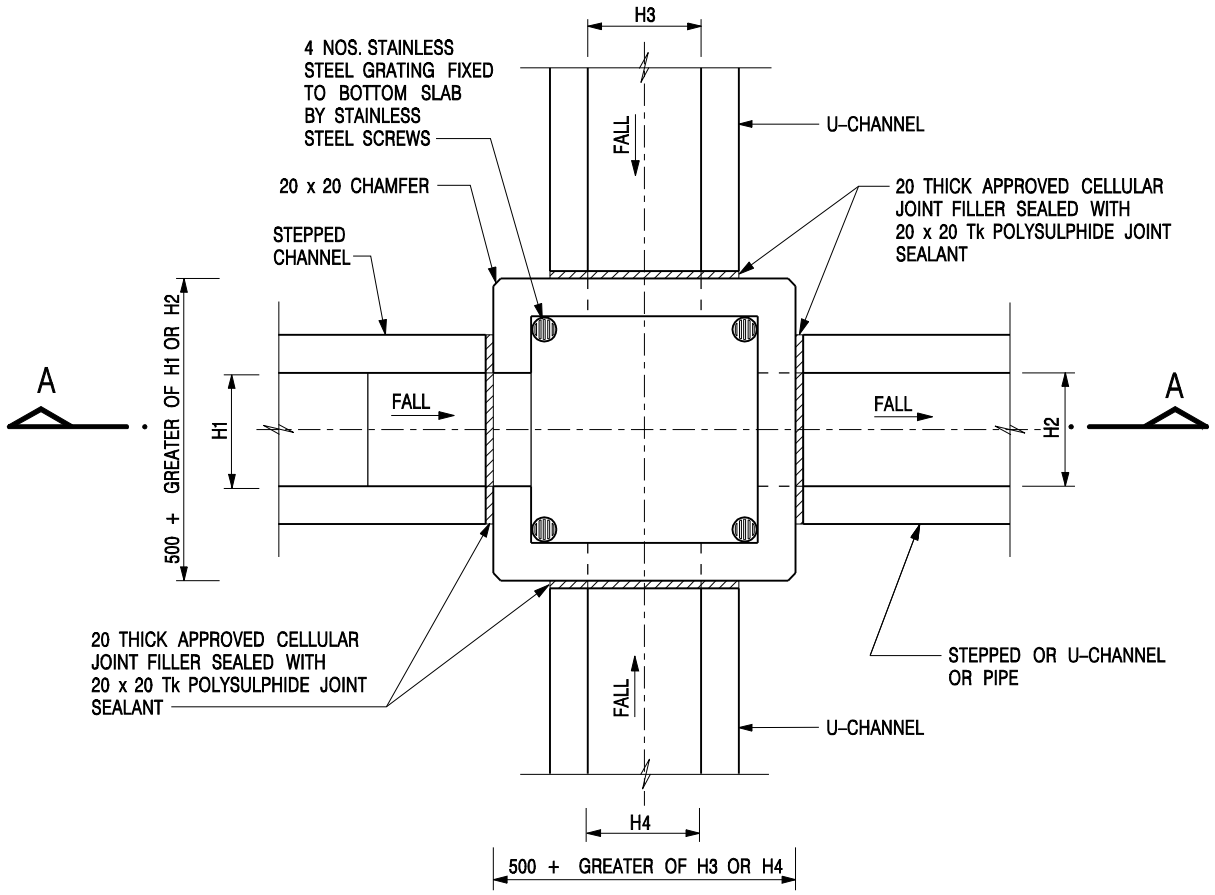
(SHEET 5 OF 5)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE AS SHOWN

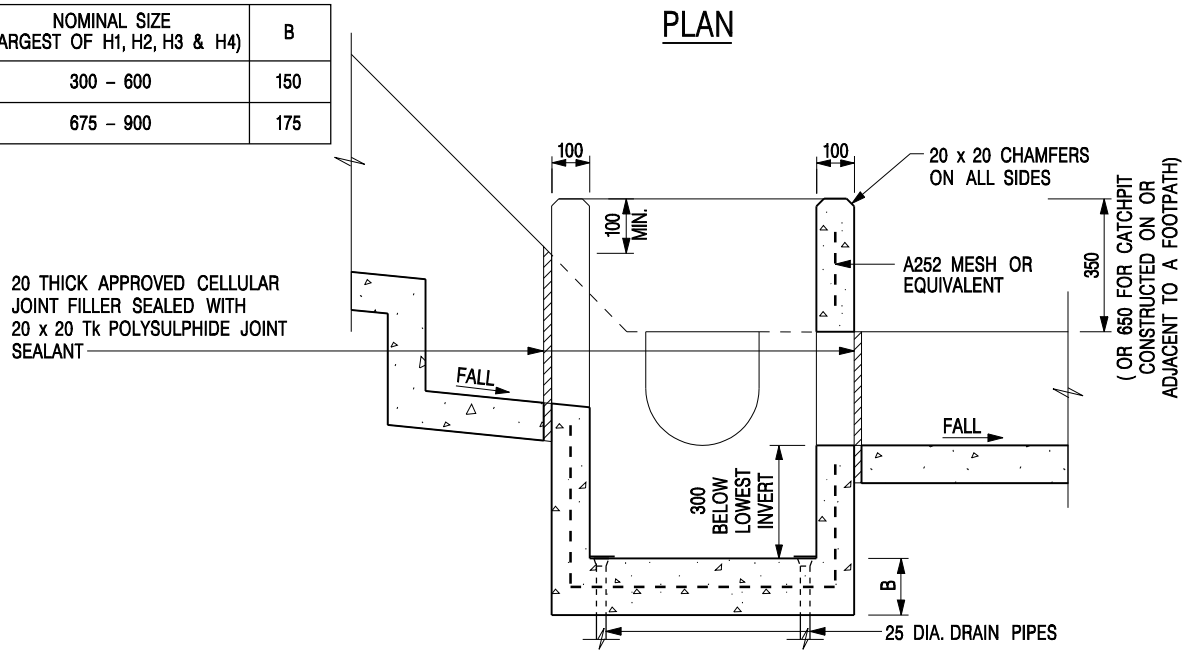
DATE JAN 1991

DRAWING NO. C2405 /5



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

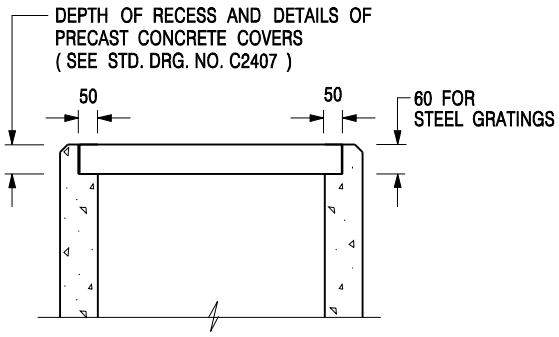
(SHEET 1 OF 2)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DATE JAN 1991

DRAWING NO. C2406 /1



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.

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

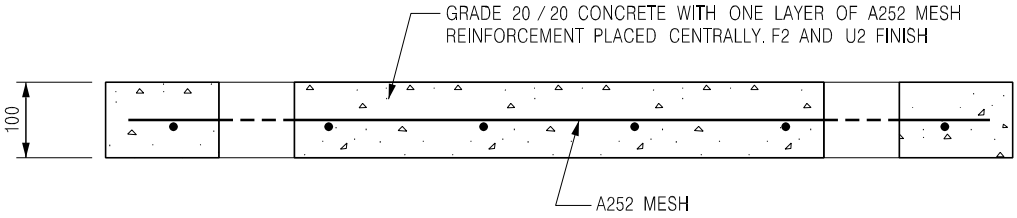
CATCHPIT WITH TRAP
(SHEET 2 OF 2)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

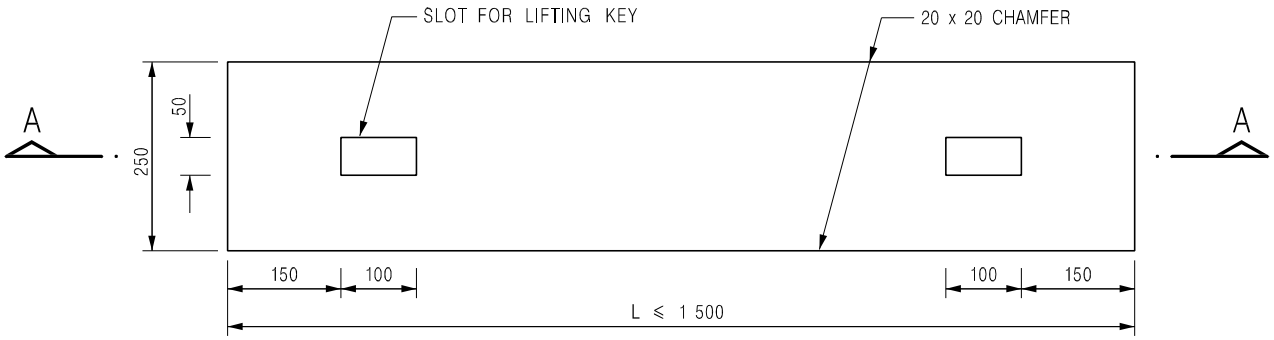
SCALE 1 : 20

DATE JAN 1991

DRAWING NO. C2406 /2A

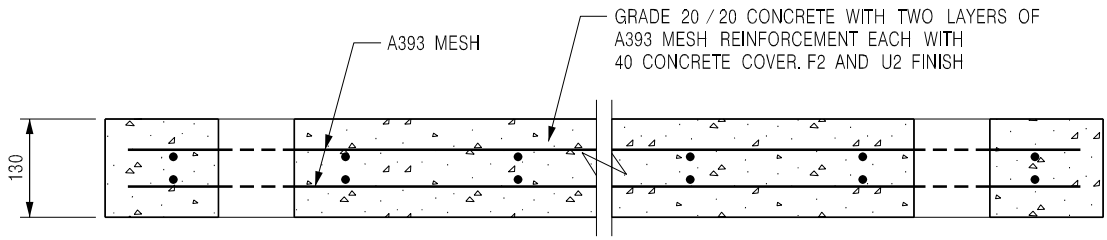


SECTION A – A

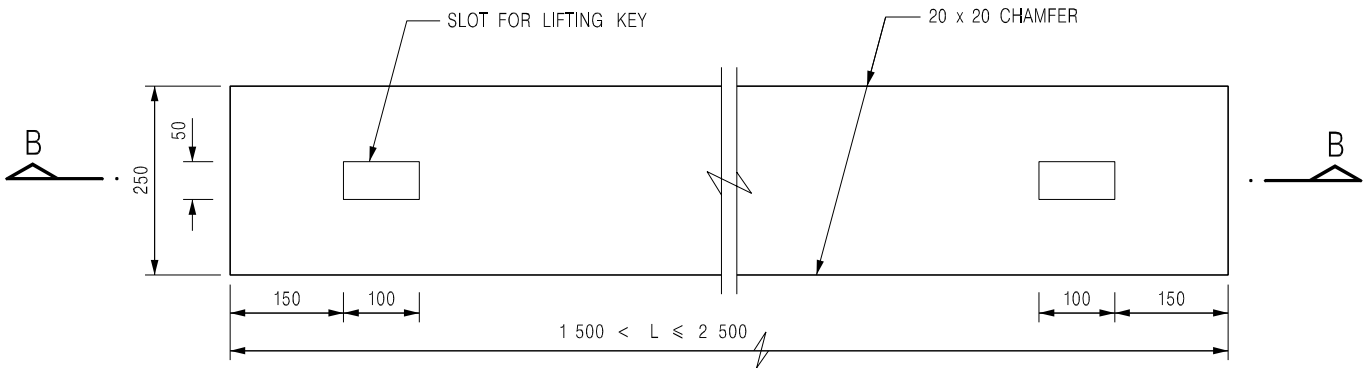


PLAN

TYPE 1 – FOR SPAN UP TO 1.5 m



SECTION B – B



PLAN

TYPE 2 – FOR SPANS 1.5 m TO 2.5 m

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL EXTERNAL EDGES OF THE COVERS SHALL BE 20mm CHAMFERED.

REF.	REVISION	SIGNATURE	DATE
B	NAME OF DEPARTMENT AMENDED.	Original Signed	01.2005
A	GENERAL REVISION	Original Signed	12.2002

PRECAST CONCRETE COVERS FOR CATCHPIT AND SAND TRAP

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 10

DATE JAN 1991

DRAWING NO. C2407B

興土木 利民生 齊拓展 創明天

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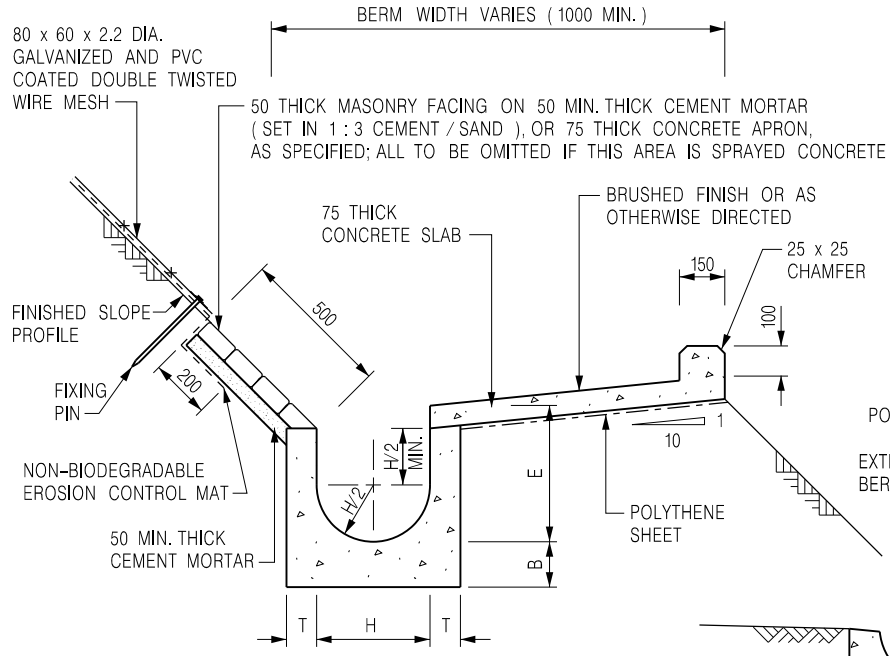
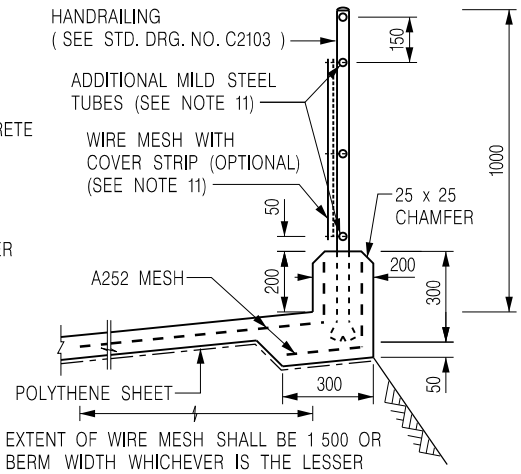
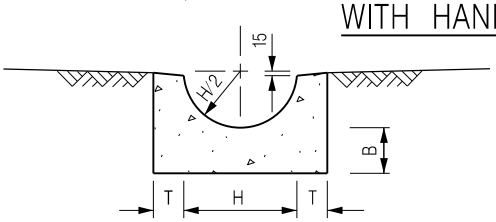


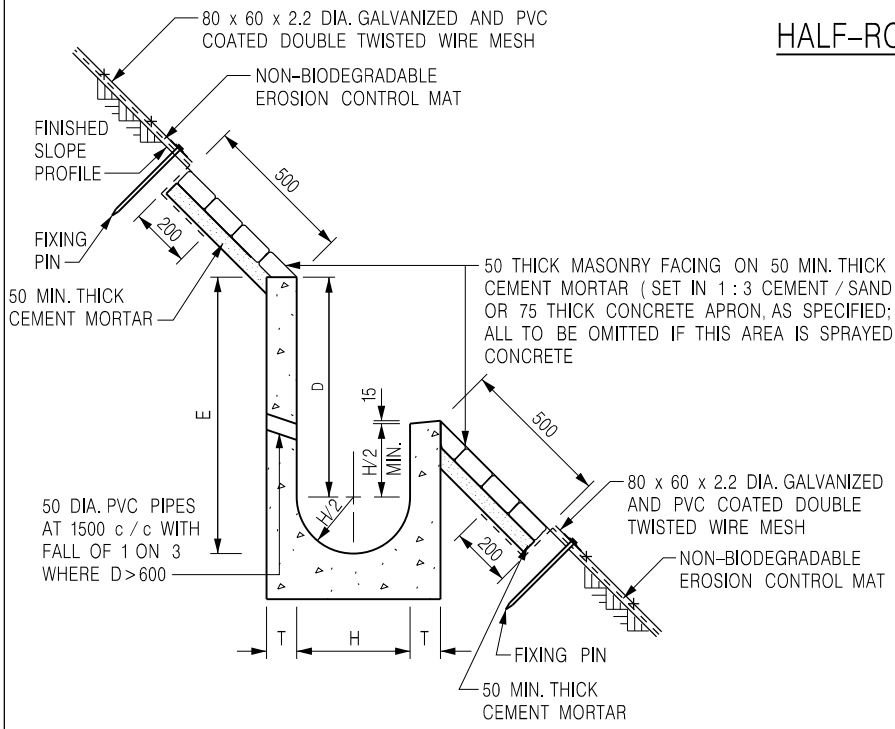
U-CHANNELS CONSTRUCTED ON BERM



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. C2511/1E.
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. C2511/1E)
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)

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
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

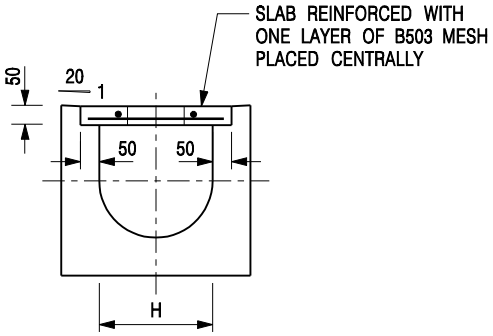
DETAILS OF HALF-ROUND AND U-CHANNELS (TYPE A – WITH MASONRY APRON)

CEDD **CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT**

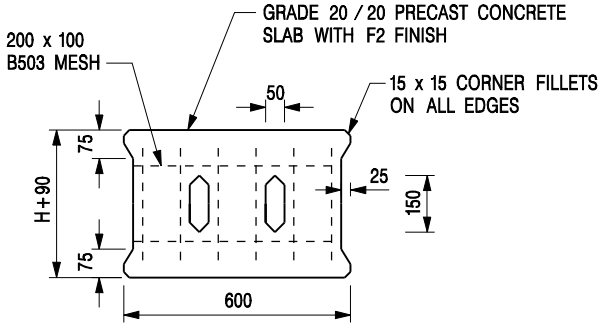
SCALE 1 : 25

DATE JAN 1991

DRAWING NO. C2409J



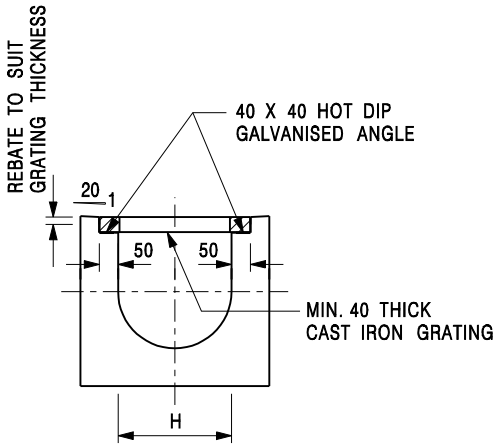
TYPICAL SECTION



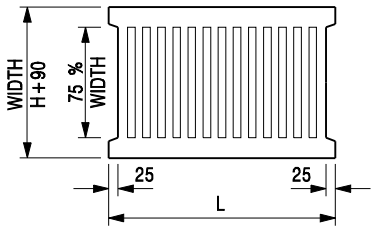
PLAN OF SLAB

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