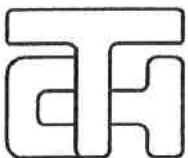
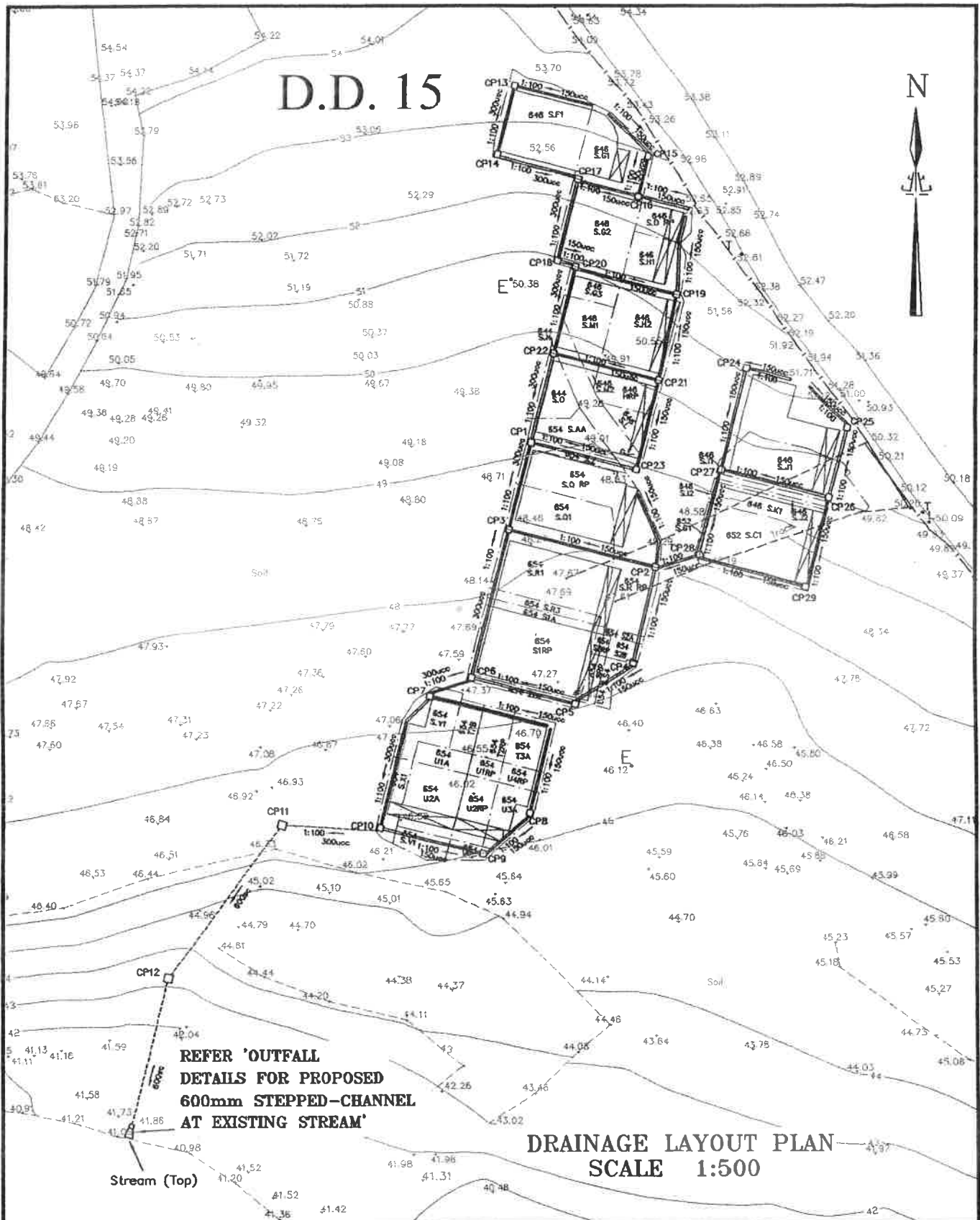


# D.D. 15



**T. H. & ASSOCIATES LTD.**

Address: M/F 39 Po Yick Street, Tai Po  
Tel: 26577726 Fax: 26588757

House 19 (Lot 646S.I 2, 646S.J 2, 646S.K1, 652S.C1 & 652 SG1)

(TPB/A/NE-TK/510)

Drainage Proposal

Catchpit Schedule

Catchpit No.	Cover Levels (mPD)	Invert Levels (mPD)	Remarks
CP24	+51.10	+50.70	Under separate application
CP25	+50.50	+50.10	
CP26	+50.00	+49.60	
CP27	+49.40	+49.00	
CP28	+48.50	+48.15	
CP29	+48.60	+48.30	
CP13	+52.00	+51.30	According to the letter dated 23/7/2014 issued from Planning Department (Ref. No.: TPB/A/NE-TK/485), DSD accept the drainage proposal and have no adverse comment.
CP14	+51.30	+50.70	
CP15	+51.90	+51.40	
CP16	+51.30	+50.70	According to the letter dated 7/7/2014 issued from Planning Department (Ref. No.: TPB/A/NE-TK/467), DSD accept the drainage proposal and have no adverse comment.
CP17	+51.00	+50.40	
CP18	+50.20	+49.70	
CP19	+50.20	+49.70	According to the letter dated 24/2/2014 issued from Planning Department (Ref. No.: TPB/A/NE-TK/471), DSD accept the drainage proposal and have no adverse comment.
CP20	+49.90	+49.40	
CP21	+49.60	+49.00	
CP22	+49.20	+48.70	
CP23	+49.10	+48.50	
CP1	+48.70	+48.20	According to the letter dated 6/1/2014 issued from Planning Department (Ref. No.: TPB/A/NE-TK/428), DSD accept the drainage proposal and have no adverse comment.
CP2	+48.40	+48.10	
CP3	+48.40	+47.95	
CP4	+47.90	+47.60	
CP5	+47.70	+47.30	
CP6	+47.50	+47.10	
CP7	+47.10	+46.60	
CP8	+46.80	+46.45	
CP9	+46.70	+46.35	
CP10 (with trap)	+46.60	+45.90	
CP11	+46.40	+45.70	
CP12	+43.50	+42.50	
Final Outfall 600mm SC to existing stream	-	+41.10	

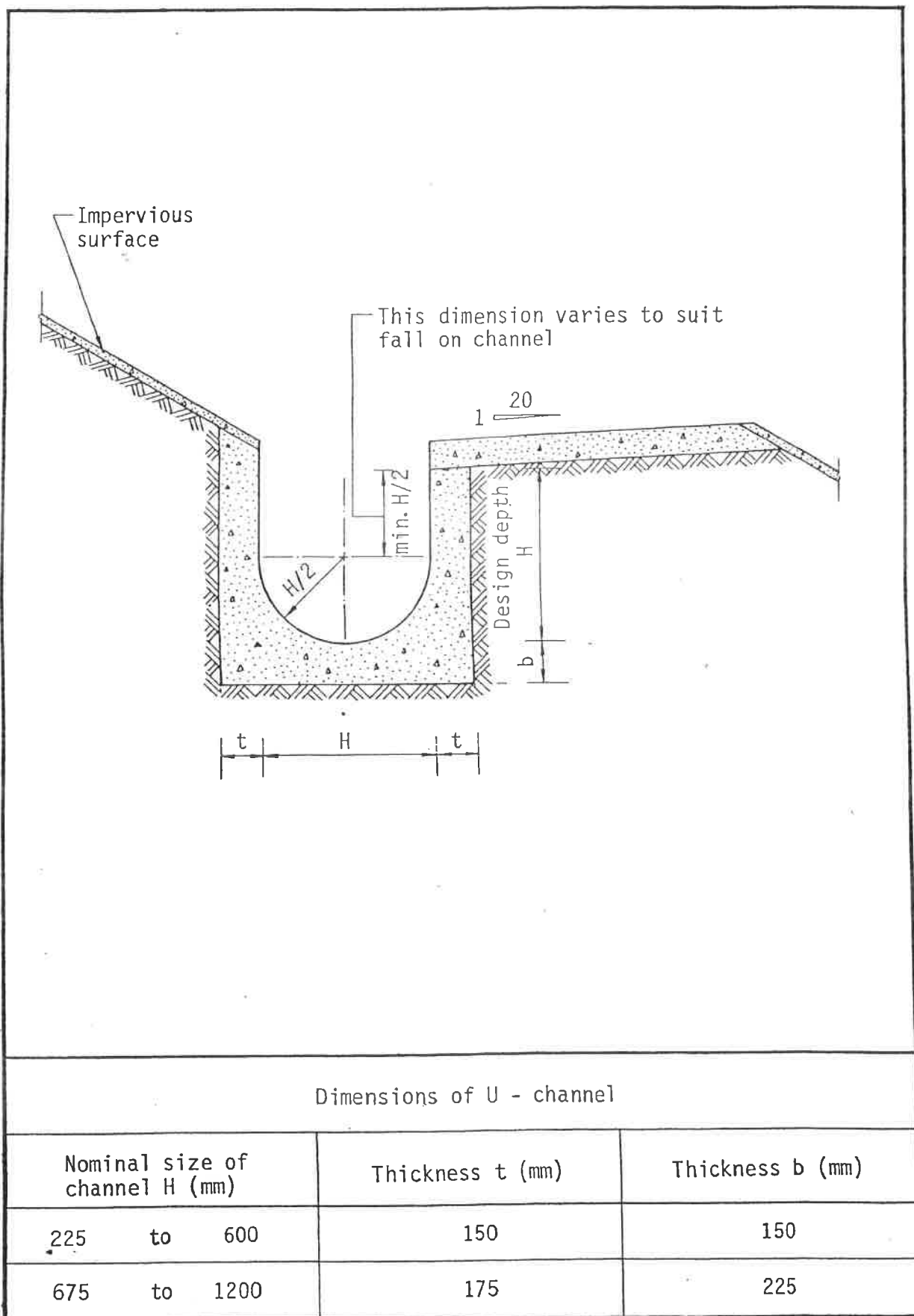
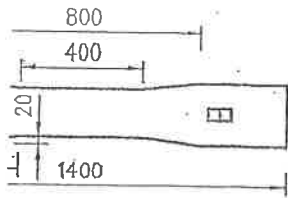


Figure 8.11 - Typical U-channel Details

Extracted from 'Geotechnical manual for slopes', GTO.

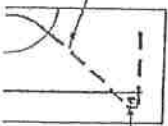


## ONCRETE COVER

N.T.S.

-60mm DIA x 30mm DEEP RECESS

10mm DIA GALVANIZED MILD STEEL HANDLING HOOKS



2T12

## S OF LIFTING KEY

N.T.S.

50 x 610 x 5 TK. M.S. FLAT BAR

GATE HINGE (SEE DETAIL 'X')

40 INTERNAL DIA. x 3.2 TK. GMS TUBULAR FRAME

16 DIA. TOWER BOLT

30 x 5 TK. FLAT BARS

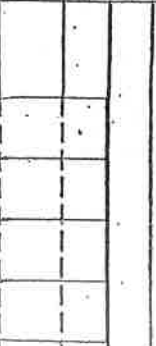
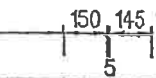
50 INTERNAL DIA. x 3.6 TK. GMS PIPES

APPROVED GALVANIZED MESH WELDED TO 30 x 5 TK. FLAT BAR

TOP OF BASIN LEVEL

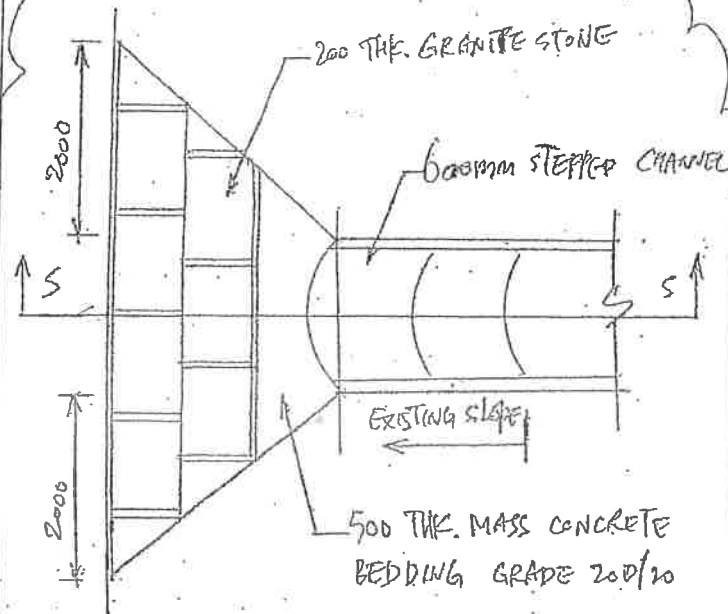


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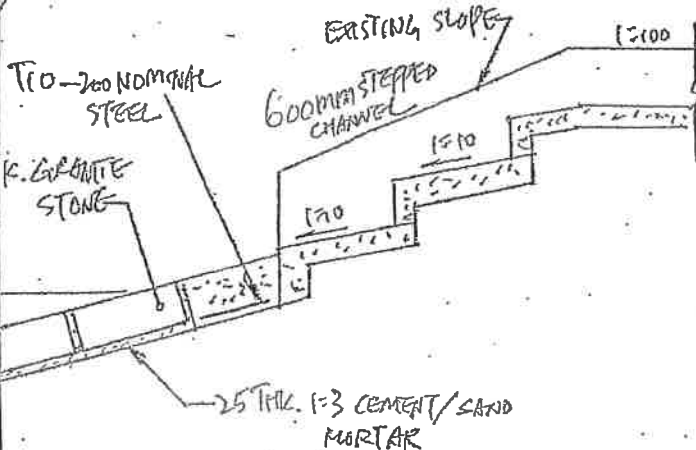


EXISTING SLOPE WITH DENSE VEGETATION

E



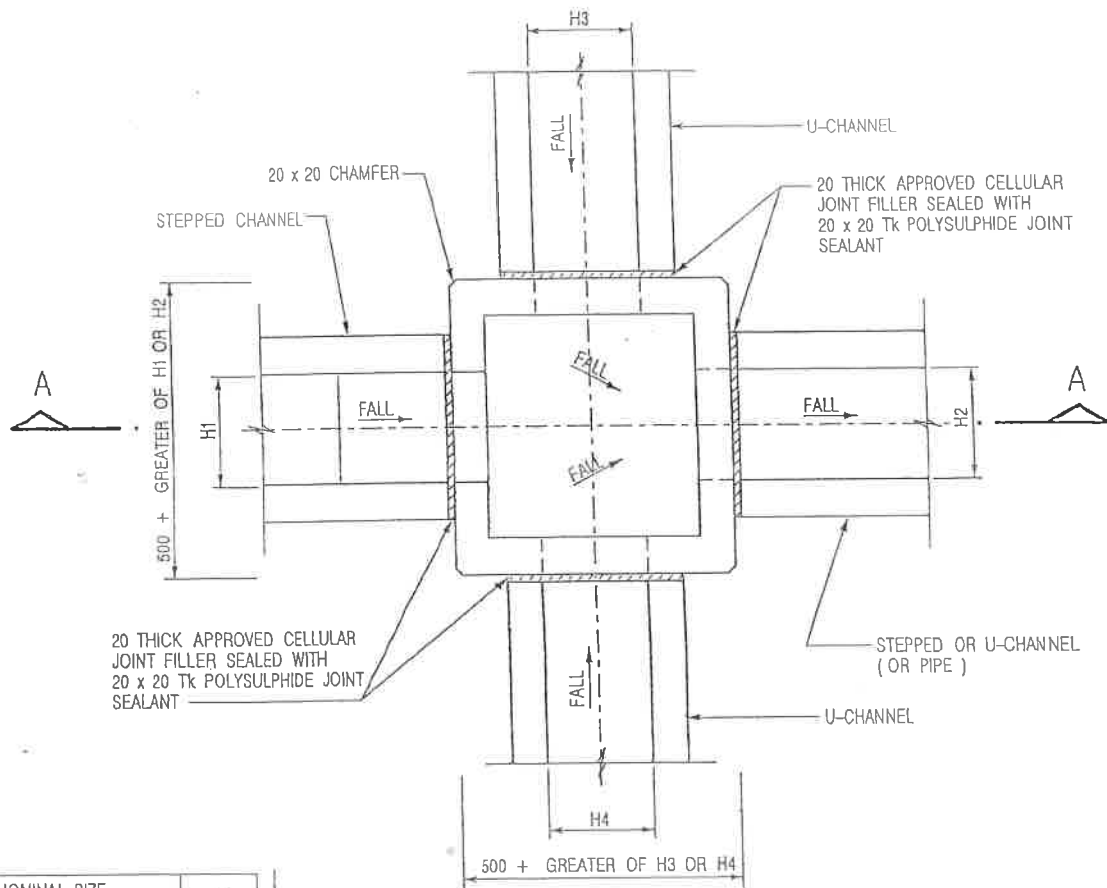
PLAN



SECTION S-S

CUTFAU DETAILS FOR PROPOSED 600mm STEPPED-CHANNEL AT THE EXISTING STREAM

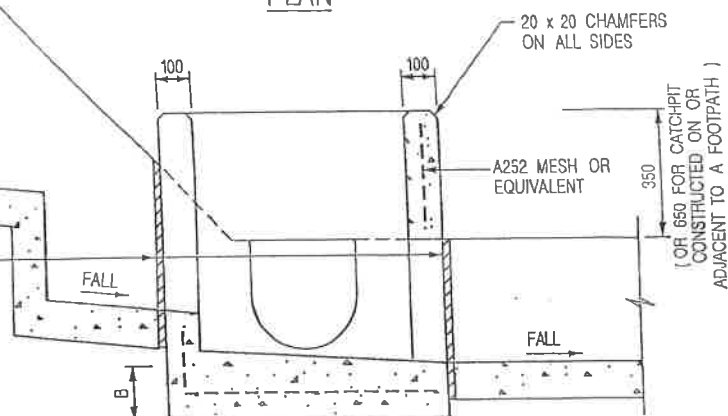
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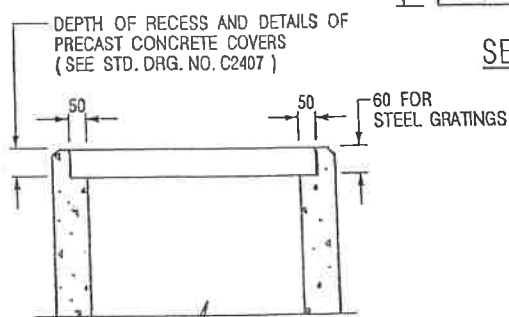
PLAN

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

20 THICK APPROVED CELLULAR JOINT FILLER SEALED WITH 20 x 20 Tk POLYSULPHIDE JOINT SEALANT



SECTION A - A



ALTERNATIVE TOP SECTION FOR  
PRECAST CONCRETE COVERS / GRATINGS

NOTES:

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

I	DETAILS OF STEEL GRATINGS AMENDED. SHEET 5 ADDED.	Original Signed	03.2009
H	DIMENSIONS OF CATCHPIT AMENDED. NOTES ADDED. SHEETS 2 TO 4 ADDED.	Original Signed	10.2008
G	"FALL" ON BOTTOM OF CATCHPIT ADDED.	Original Signed	05.2008
F	DIMENSION B ADDED.	Original Signed	08.2007
E	NAME OF DEPARTMENT AMENDED.	Original Signed	01.2005
D	GENERAL REVISION.	Original Signed	12.2002
REF.	REVISION	SIGNATURE	DATE

STANDARD CATCHPIT DETAILS



CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT

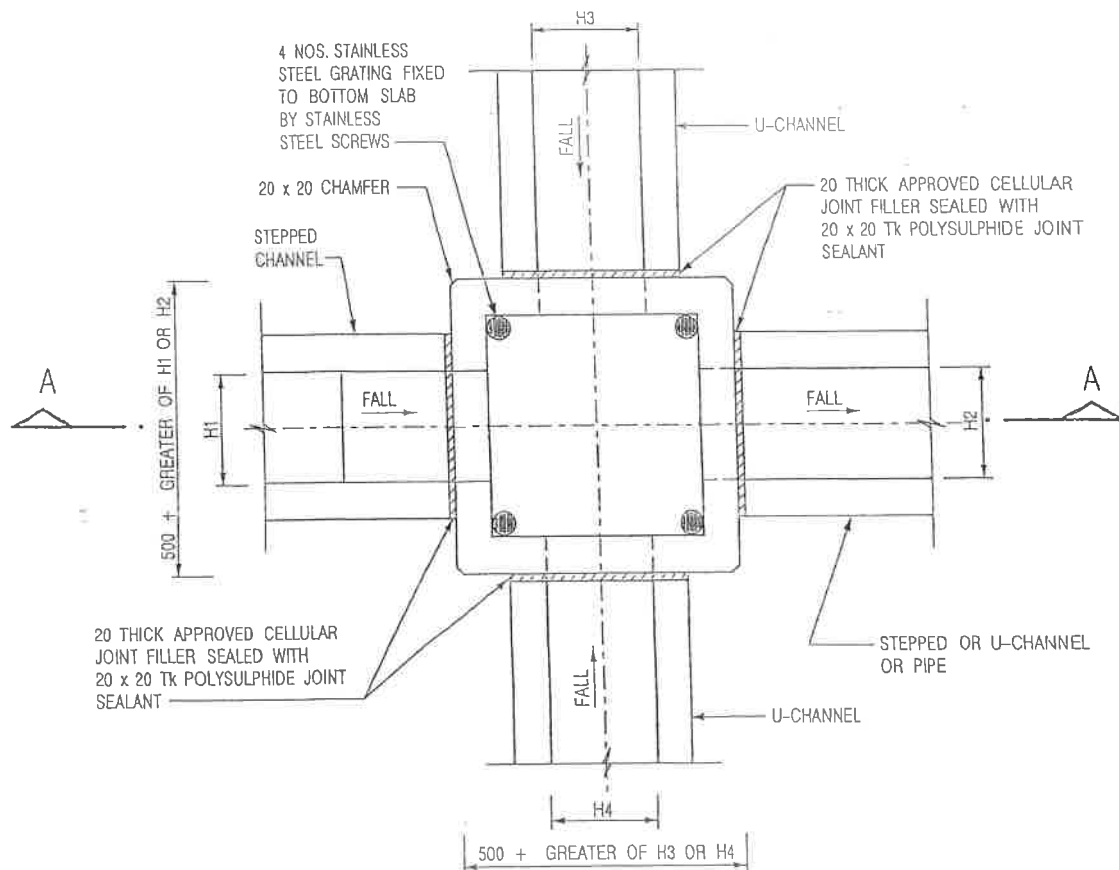
SCALE 1 : 20

DATE JAN 1991

DRAWING NO.

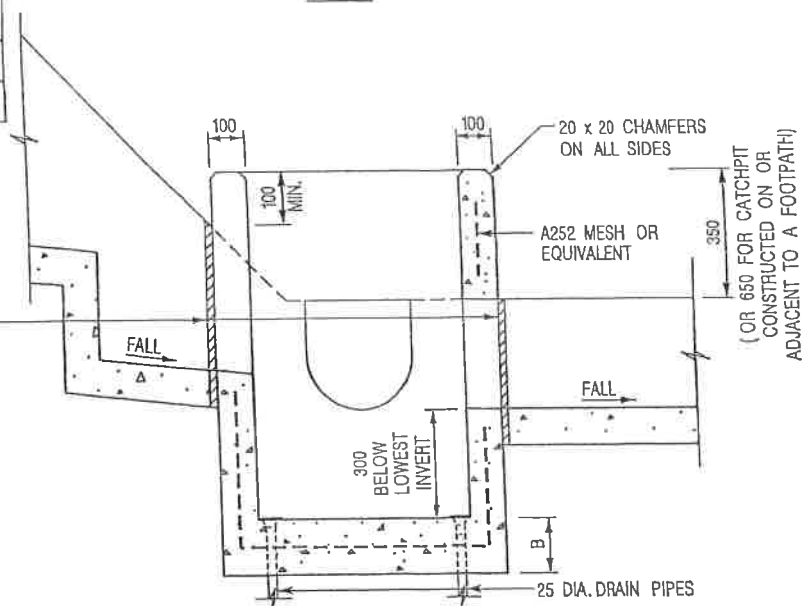
C24051

SHEET 1 OF 5



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

20 THICK APPROVED CELLULAR JOINT FILLER SEALED WITH 20 x 20 TK POLYSULPHIDE JOINT SEALANT



SECTION A - A

NOTES:

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

I	DIMENSIONS OF CATCHPIT AMENDED. NOTES ADDED. SHEET 2 ADDED.	Original Signed	10.2008
H	NOTES 7 & 8 ADDED. DRAIN PIPES AT BASE SLAB ADDED.	Original Signed	05.2008
G	DIMENSION B ADDED.	Original Signed	08.2007
F	NAME OF DEPARTMENT AMENDED.	Original Signed	01.2005
REF.	REVISION	SIGNATURE	DATE

CATCHPIT WITH TRAP



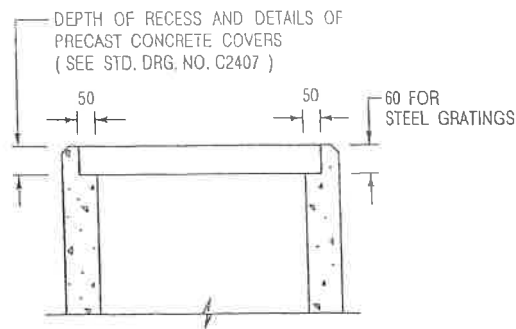
CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DATE JAN 1991

DRAWING NO.

C24061 SHEET 1 OF 2



### 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 1000 mm MIN. MEASURED FROM THE ADJACENT GROUND LEVEL.
10. MINIMUM- INTERNAL CATCHPIT WIDTH SHALL BE 1000 mm FOR CATCHPITS WITH A HEIGHT EXCEEDING 1000 mm MEASURED FROM THE INVERT LEVEL TO THE ADJACENT GROUND LEVEL. AND, STEP IRONS (SEE DSD STD. DRG. NO. DS1043 ) AT 300 c/c STAGGERED SHALL BE PROVIDED. THICKNESS OF CATCHPIT WALL FOR INSTALLATION OF STEP IRONS SHALL BE INCREASED TO 150 mm.
11. FOR RETROFITTING AN EXISTING CATCHPIT WITH STEEL GRATING, SEE DETAIL 'F' ON STD. DRG. NO. C2405.
12. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

1	DIMENSIONS OF CATCHPIT AMENDED. NOTES ADDED. SHEET 2 ADDED.	Original Signed	10.2008
H	NOTES 7 & 8 ADDED. DRAIN PIPES AT BASE SLAB ADDED.	Original Signed	05.2008
G	DIMENSION B ADDED.	Original Signed	08.2007
F	NAME OF DEPARTMENT AMENDED.	Original Signed	01.2005
REF.	REVISION	SIGNATURE	DATE

CATCHPIT WITH TRAP



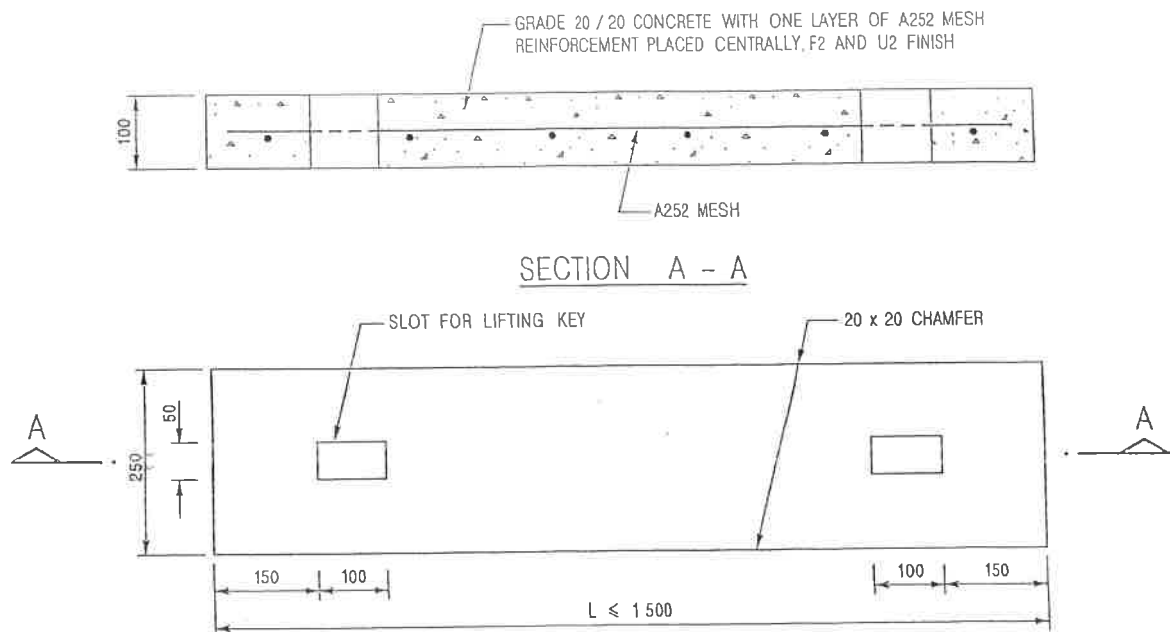
CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DATE JAN 1991

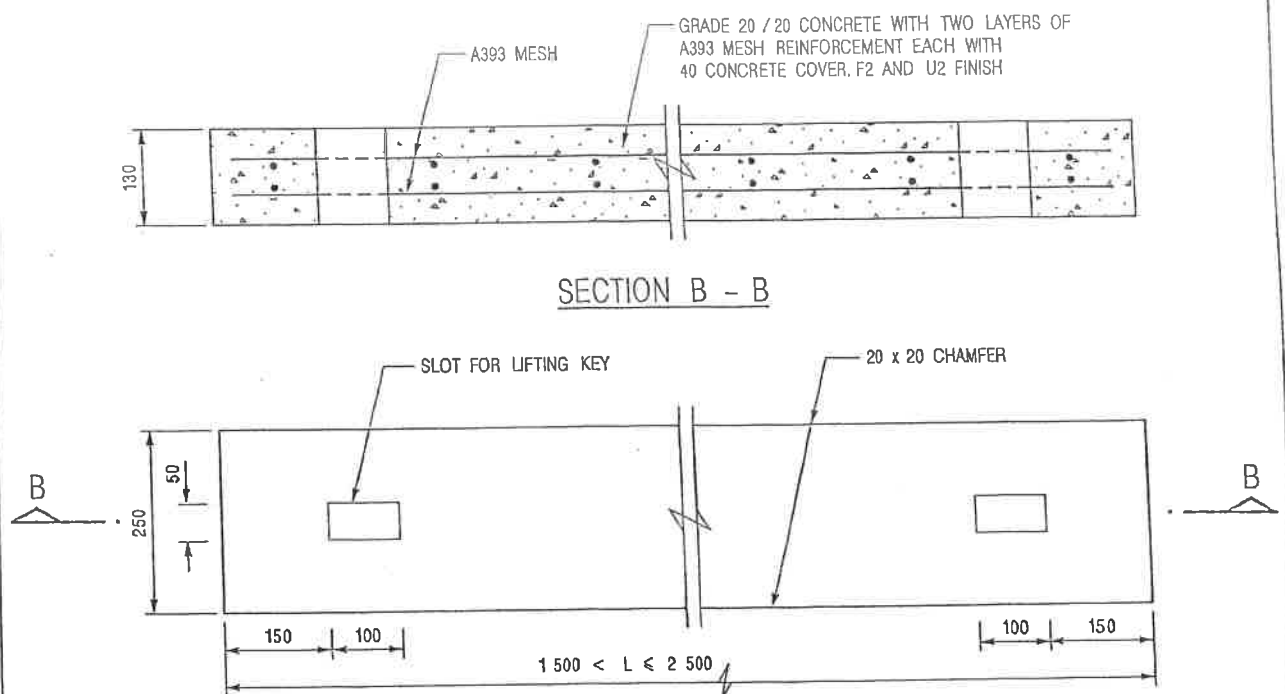
DRAWING NO.

C24061 SHEET 2 OF 2



### PLAN

TYPE 1 - FOR SPAN UP TO 1.5 m



### 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.

PRECAST CONCRETE COVERS  
FOR CATCHPIT AND SAND TRAP

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



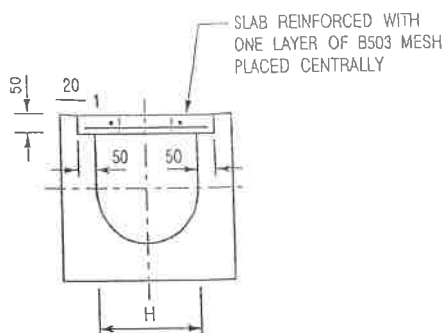
CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT

SCALE 1 : 10

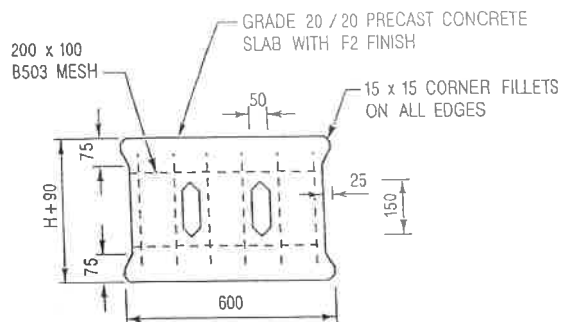
DATE JAN 1991

DRAWING NO.  
C2407B





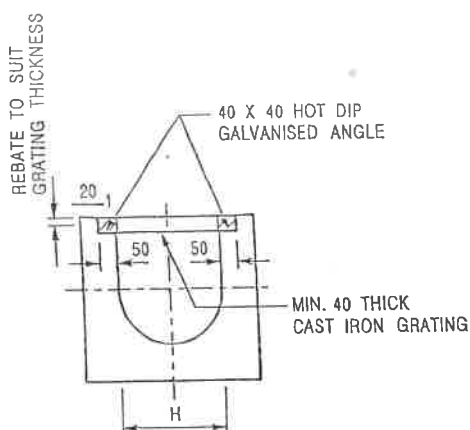
TYPICAL SECTION



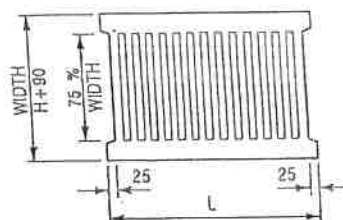
PLAN OF SLAB

## 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 150 TO BS 1452.
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. H2233.

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.

C2412D

卓越工程 建設香港

We Engineer Hong Kong's Development