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**Appendix 6B**

**Practice Notes ProPECC PN 1/94 and APP-46**

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**ENVIRONMENTAL PROTECTION DEPARTMENT  
PRACTICE NOTE FOR PROFESSIONAL PERSONS**

**Construction Site Drainage**

**Introduction**

The purpose of this practice note is to provide some basic environmental guidelines for the handling and disposal of construction site discharges. It is hoped that through the issuance of this practice note, some of the pollution problems currently associated with construction activities can be prevented or minimized, for example :

- (i) siltation in storm drains caused by excessive sand and silt in the storm run-off;
- (ii) visual nuisance and hazard to aquatic life caused by discharge of muddy water into streams or the sea;
- (iii) pollution caused by improper handling and disposal of other types of construction site wastewater such as sewage from site toilets.

A total of ten types of discharges from construction sites have been identified. Good practice for dealing with these discharges is provided in the following sections.

**Surface Run-off**

2. Surface run-off from construction sites should be discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps (see Appendix A1 for reference), silt traps and sediment basins. Channels or earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries should be provided where necessary to intercept storm run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.

3. Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm

to ensure that these facilities are functioning properly at all times.

4. Construction works should be programmed to minimize soil excavation works in rainy seasons (April to September). If excavation in soil could not be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporarily exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm.

5. Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.

6. Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.

7. Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.

8. Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.

9. Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast and actions to be taken during or after rainstorms are summarized in Appendix A2 for easy reference.

## **Groundwater**

10. Groundwater pumped out of wells, etc. for the lowering of ground water level in basement or foundation construction, and groundwater seepage pumped out of tunnels or caverns under construction should be discharged into storm drains after the removal of silt in silt removal facilities.

## **Boring and Drilling Water**

11. Water used in ground boring and drilling for site investigation or rock/soil anchoring should as far as practicable be recirculated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.

## **Wastewater from Concrete Batching & Precast Concrete Casting**

12. Wastewater generated from the washing down of mixer trucks and drum mixers and similar equipment should wherever practicable be recycled. The discharge of wastewater should be kept to a minimum.

13. To prevent pollution from wastewater overflow, the pump sump of any water recycling system should be provided with an on-line standby pump of adequate capacity and with automatic alternating devices.

14. Under normal circumstances, surplus wastewater may be discharged into foul sewers after treatment in silt removal and pH adjustment facilities (to within the pH range of 6 to 10). Disposal of wastewater into storm drains will require more elaborate treatment. Surface run-off should be segregated from the concrete batching plant and casting yard area as much as possible, and diverted to the stormwater drainage system. Surface run-off contaminated by materials in a concrete batching plant or casting yard should be adequately treated before disposal into stormwater drains.

## **Wheel Washing Water**

15. All vehicles and plant should be cleaned before they leave a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.

### **Bentonite Slurries**

16. Bentonite slurries used in diaphragm wall and bore-pile construction should be reconditioned and reused wherever practicable. If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis.

17. If the used bentonite slurry is intended to be disposed of through the public drainage system, it should be treated to the respective effluent standards applicable to foul sewers, storm drains or the receiving waters as set out in the WPCO Technical Memorandum on Effluent Standards.

### **Water for Testing & Sterilization of Water Retaining Structures and Water Pipes**

18. Water used in water testing to check leakage of structures and pipes should be reused for other purposes as far as practicable. Surplus unpolluted water could be discharged into storm drains.

19. Sterilization is commonly accomplished by chlorination. Specific advice from EPD should be sought during the design stage of the works with regard to the disposal of the sterilizing water. The sterilizing water should be reused wherever practicable.

### **Wastewater from Building Construction**

20. Before commencing any demolition works, all sewer and drainage connexions should be sealed to prevent building debris, soil, sand etc. from entering public sewers/drains.

21. Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities should not be discharged into the stormwater drainage system. If the wastewater is to be discharged into foul sewers, it should undergo the removal of settleable solids in a silt removal facility, and pH adjustment as necessary.

### **Acid Cleaning, Etching and Pickling Wastewater**

22. Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul

sewers. If there is no public foul sewer in the vicinity, the neutralized wastewater should be tankered off site for disposal into foul sewers or treated to a standard acceptable to storm drains and the receiving waters.

### **Wastewater from Site Facilities**

23. Sewage from toilets, kitchens and similar facilities should be discharged into a foul sewer. If there is no foul sewer in the vicinity, a septic tank and soakaway system (see Appendix B, these guidelines are for interim reference only as they are currently under review by Government) or for large flows, a sewage treatment plant will have to be provided. For sites where there are only toilet wastes arising, the use of chemical toilets may also be considered if a septic tank and soakaway system is found to be not feasible.

24. Wastewater collected from canteen kitchens, including that from basins, sinks and floor drains, should be discharged into foul sewers via grease traps capable of providing at least 20 minutes retention during peak flow. Details of a typical grease trap are given at Appendix C for reference.

25. Drainage serving an open oil filling point should be connected to storm drains via a petrol interceptor with peak storm bypass (see Appendix D for reference).

26. Vehicle and plant servicing areas, vehicle wash bays and lubrication bays should as far as possible be located within roofed areas. The drainage in these covered areas should be connected to foul sewers via a petrol interceptor (see Appendix E for reference). Oil leakage or spillage should be contained and cleaned up immediately. Waste oil should be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance.

### **Licensing of Construction Site Discharges within Water Control Zones**

27. All discharges into any drainage or sewerage systems, or inland or coastal waters, or into the ground (e.g. from septic tanks) within a Water Control Zone are controlled under the Water Pollution Control Ordinance (WPCO), except the discharge of domestic sewage into foul sewers or the discharge of unpolluted water into storm drains or into the waters of Hong Kong. Construction site discharges are controlled under the WPCO. The geographical extents of the Water Control Zones are shown on the map at Appendix F.

28. Discharges controlled under the WPCO must comply with the terms and conditions of a valid WPCO licence. It should be noted that compliance with the recommendations in this practice note does not necessarily imply compliance with the terms and conditions of a licence issued under the WPCO. Depending on actual site conditions, facilities in addition to those recommended in this practice note might be necessary.

29. The WPCO licence application form (Form A) can be obtained from any EPD office or from District Offices. The applicant should include in the application, inter alia, information on the various points of discharge of storm run-off and wastewater, and the corresponding maximum (or range of) volume of discharge expected on a dry day. The application form, which can be filled in by the Owner, the Authorized Person, the Consulting Engineer or the Contractor, should be submitted to EPD as early as possible before the commencement of any discharge. In general, assuming adequate information has been provided together with the licence application, EPD would need at least 20 days for the processing of a licence for a discharge, and in the case of a discharge directly into any waters of Hong Kong, EPD would need at least 50 days to allow time for public notification as required by the WPCO. (EPD General Enquiry 835 1018)

(Stuart B. Reed)

Director of Environmental Protection

Environmental Protection Department  
28/F Southorn Centre  
130 Hennessy Road  
Wan Chai

Issued August 1994

Ref. : EP 50/D1/4

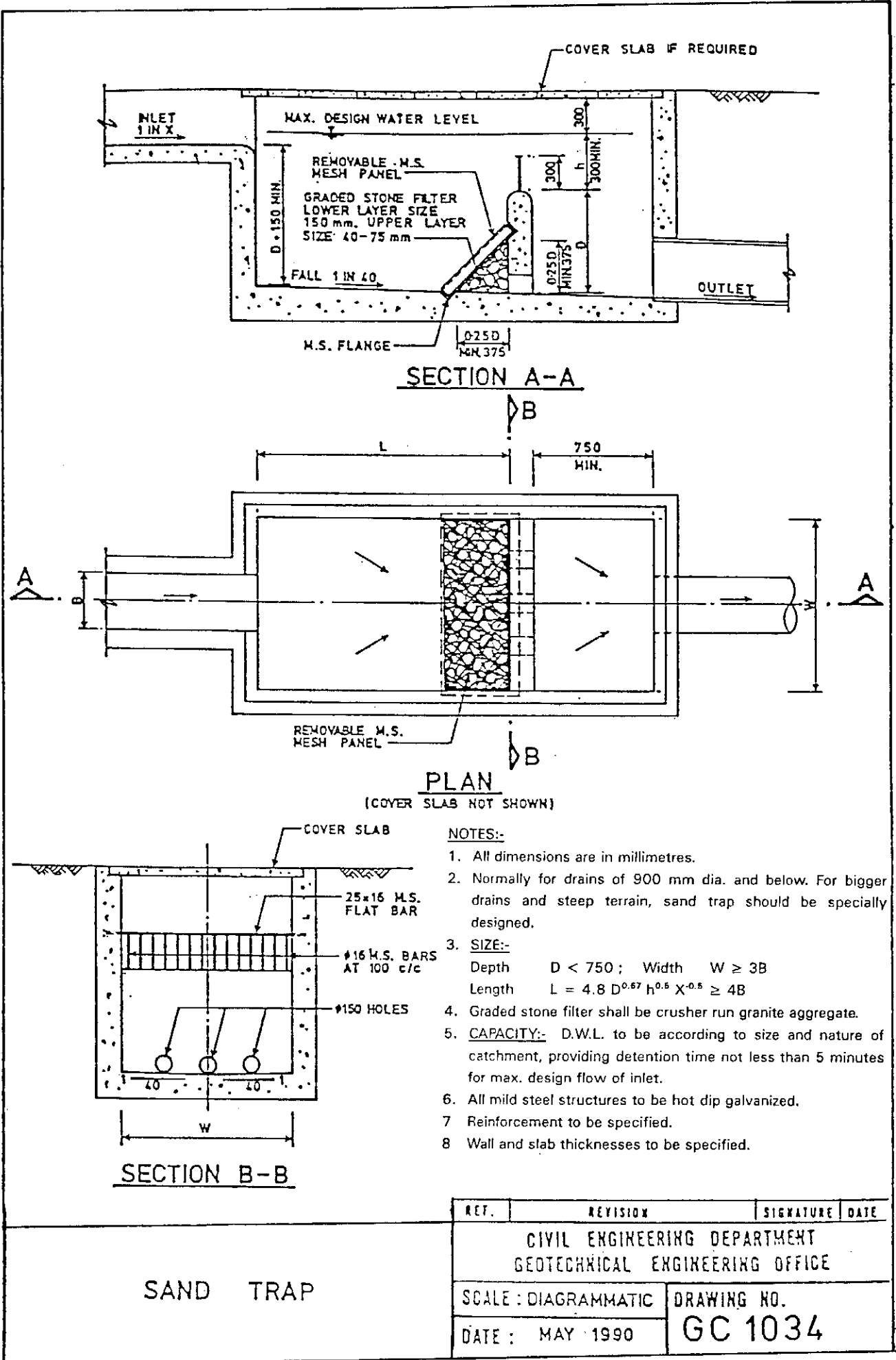
## LIST OF APPENDICES

Appendix A1	:	Sand Trap (CED Standard Drawing No. GC 1034)
Appendix A2	:	Precautions/Actions relating to Rainstorms
Appendix B	:	Septic Tank and Soakaway
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**Addendum to the ProPECC Practice Note PN 1/94**

<b>Original</b>	<b>Amendments</b>
Para 29, last sentence “(EPD General Enquiry 835 1018)”	“(EPD General Enquiry 2835 1018)”



- NOTES:-**
1. All dimensions are in millimetres.
  2. Normally for drains of 900 mm dia. and below. For bigger drains and steep terrain, sand trap should be specially designed.
  3. **SIZE:-**  
 Depth  $D < 750$  ; Width  $W \geq 3B$   
 Length  $L = 4.8 D^{0.67} h^{0.5} X^{-0.5} \geq 4B$
  4. Graded stone filter shall be crusher run granite aggregate.
  5. **CAPACITY:-** D.W.L. to be according to size and nature of catchment, providing detention time not less than 5 minutes for max. design flow of inlet.
  6. All mild steel structures to be hot dip galvanized.
  7. Reinforcement to be specified.
  8. Wall and slab thicknesses to be specified.

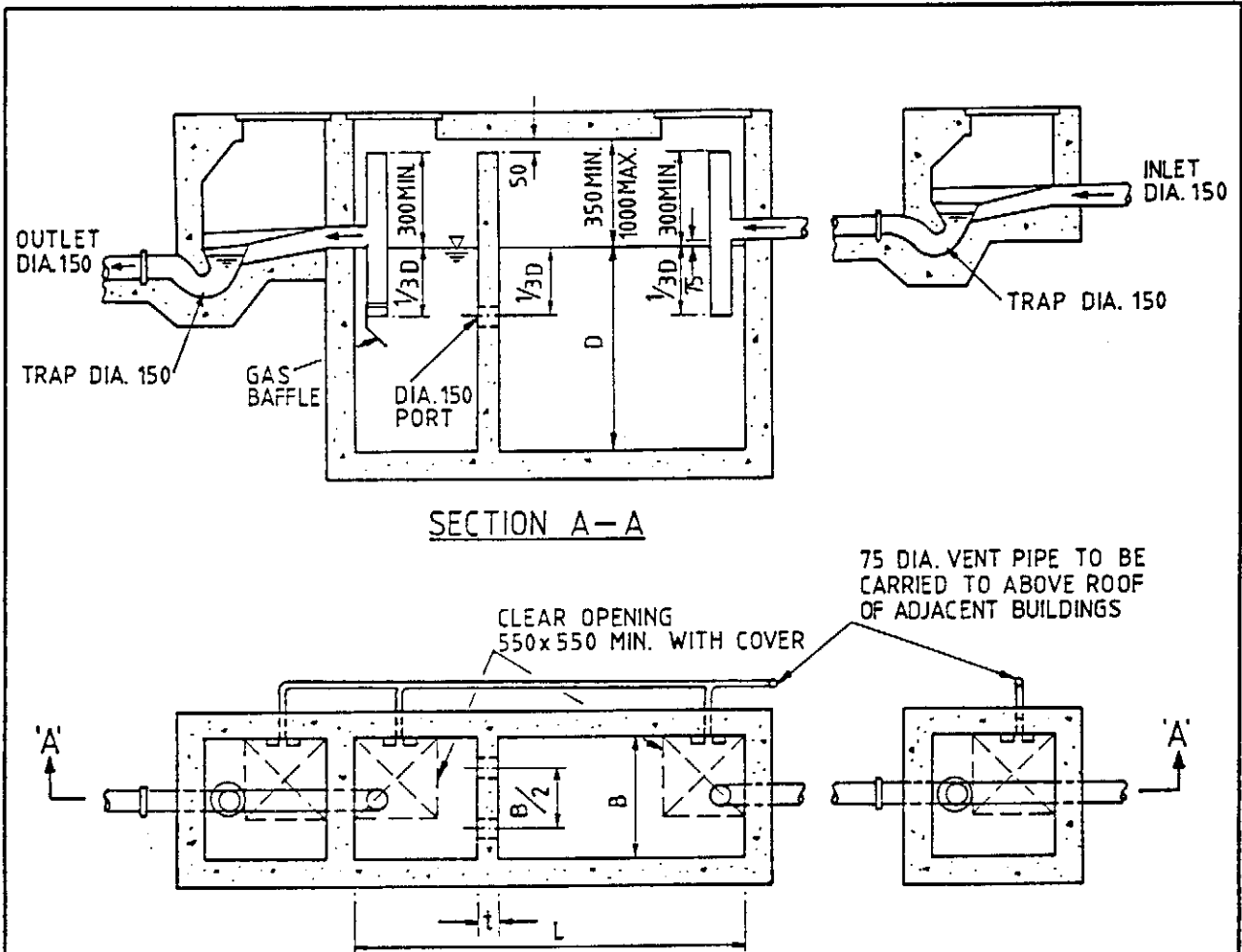
REF.	REVISION	SIGNATURE	DATE
CIVIL ENGINEERING DEPARTMENT GEOTECHNICAL ENGINEERING OFFICE			
SCALE : DIAGRAMMATIC		DRAWING NO.	
DATE : MAY 1990		GC 1034	

SAND TRAP

Precautions/Actions relating to Rainstorms

The following are extracted from the main text to highlight the specific precautions or actions concerned with rainstorms. For general precautions to be taken at all times in relation to surface run-off, please refer to Section 2 of the main text.

- (I) Precautions to be taken at any time of year when rainstorms are likely
- (a) Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly.
  - (b) Temporarily exposed slope surfaces should be covered e.g. by tarpaulin.
  - (c) Temporary access roads should be protected by crushed stone or gravel.
  - (d) Intercepting channels should be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces.
  - (e) Trenches should be dug and backfilled in short sections. Measures should be taken to minimize the ingress of rainwater into trenches.
- (II) Actions to be taken when a rainstorm is imminent or forecast
- (a) Silt removal facilities, channels and manholes should be checked to ensure that they can function properly.
  - (b) Open stockpiles of construction materials (e.g. aggregates, sand and fill materials) on site should be covered with tarpaulin or similar fabric.
  - (c) All temporary covers to slopes and stockpiles should be secured.
- (III) Actions to be taken during or after rainstorms
- (a) Silt removal facilities, channels and manholes should be checked and maintained to ensure satisfactory working conditions. Attention should be given to safety when carrying out this work.




SECTION A-A

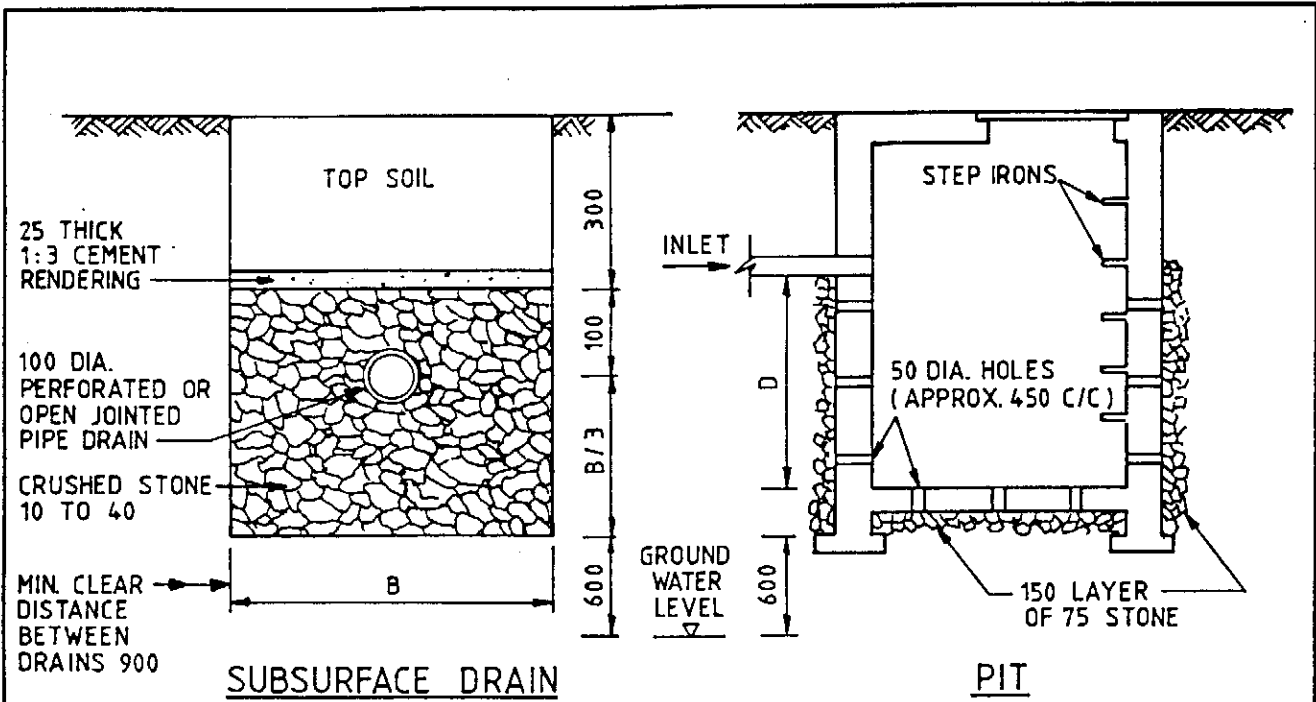
PLAN

**NOTES:-**

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.
2. SIZE
  - a.  $4B > L > 3B$
  - b.  $1800 \text{ mm} > D > 1200 \text{ mm}$
  - c. RATIO OF VOLUMES OF FIRST AND SECOND CHAMBERS = 2 : 1
3. CAPACITY (SUBJECT TO NOTE 2)
  - a. CAPACITY  $C = (L - t) \times B \times D$
  - b. NOT LESS THAN  $2.3 \text{ m}^3$  BUT NOT MORE THAN  $41 \text{ m}^3$
  - c. NOT LESS THAN  $QN$  WHERE  $N$  IS THE NUMBER OF PERSONS SERVED AND  $Q$  IS THE ESTIMATED ULTIMATE PER CAPITA DAILY WATER CONSUMPTION
  - d. SURFACE WATER MUST NOT BE CONNECTED TO THE TANK
  - e. TANK TO BE DESLUDGED EVERY 6 MONTHS
4. NO OVERFLOW OR BYPASS PIPE IS ALLOWED.
5. PLEASE REFER TO THE BOOKLET "GUIDANCE NOTES ON DISCHARGES FROM VILLAGE HOUSES" PUBLISHED BY EPD FOR FURTHER GUIDELINES ON OPERATION AND MAINTENANCE OF SEPTIC TANK SYSTEM.

**SEPTIC TANK**  
(FOR INTERIM REFERENCE ONLY)

drawing no. EP 50/D1/5/01		group Liquid Waste Projects	
date 5/93	scale NTS	ENVIRONMENTAL PROTECTION DEPARTMENT HONG KONG	



**NOTES:-**

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED
2. PERCOLATION TEST FOR DETERMINING ABSORPTION CAPACITY OF SOIL
  - a. EXCAVATE A HOLE 300 mm SQUARE TO THE SAME DEPTH OF THE PIT OR TRENCH.
  - b. FILL THE HOLE WITH APPROXIMATELY 150 mm OF WATER AND ALLOW TO SEEP AWAY COMPLETELY.
  - c. REFILL THE HOLE WITH WATER TO A DEPTH OF 150 mm AND OBSERVE THE TIME, IN MINUTES, FOR WATER TO SEEP COMPLETELY AWAY.
  - d. DIVIDE THE TIME BY 6 TO GIVE TIME TAKEN TO FALL 25 mm FOR USE IN TABLE BELOW.
3. ALLOWABLE LOADING OF SOAKAWAY SYSTEMS

TIME IN MINUTES FOR WATER TO FALL 25 mm IN TEST PIT	ALLOWABLE LOADING IN LITRES PER m <sup>2</sup> PER DAY	
	DRAIN TRENCH BOTTOM AREA	PIT PERCOLATION AREA
1 OR LESS	163	216
2	130	175
5	98	130
10	89	94
30	33	45

THE TOTAL ALLOWABLE LOADING PER DAY SHOULD EQUATE WITH THE DAILY INCOMING FLOW

4. MINIMUM CLEARANCE REQUIREMENTS FOR SOAKAWAY SYSTEMS

	DISTANCE FROM SOAKAWAY SYSTEMS (m)	
BUILDING	3	
RETAINING WALLS	6	
WELLS	50	
STREAM WHERE THE BED IS LOWER THAN INVERT OF SOAKAWAY SYSTEM	15 (30)*	* THESE DISTANCES SHOULD BE INCREASED TO DISTANCES SHOWN IN BRACKETS IF THE WATER FROM THE STREAM OR POOL IS USED OR LIKELY TO BE USED FOR DRINKING OR DOMESTIC PURPOSES.
POOLS	7.5 (30)*	
CUTS OR EMBANKMENTS	30	
PATHS	1.5	
BEACHES	100	(FROM BOUNDARIES OF GAZETTED BEACHES OR BATHING BEACH SUBZONES OF WATER CONTROL ZONES)
	30	(FROM H.W.M. AND FROM NEAREST WATERCOURSES FOR OTHER CASES)
GROUND WATER TABLE	0.6	(BELOW INVERT)

<b>SOIL SOAKAWAY SYSTEM (FOR INTERIM REFERENCE ONLY)</b>	drawing no. <b>EP 50/D1/5/02</b>		group <b>Liquid Waste Projects</b>	
	date <b>5/93</b>	scale <b>NTS</b>	ENVIRONMENTAL PROTECTION DEPARTMENT HONG KONG	



Grease Traps

(see Drawing no. EP 50/L1/1/01A for typical details of a grease trap)

<u>Kitchen Floor Area</u> (m <sup>2</sup> )	<u>Peaking Factor</u>	<u>Minimum Required Grease Trap Retention Volume</u> (m <sup>3</sup> )
12	5.5	0.7
24	4.3	1.1
50	3.0	1.6
100	2.4	2.5
150		3.3
200	1.85	4.0
250		4.7
300		5.4
350		6.1
400	1.62	6.7
450		7.3
500		7.8
550		8.3
600	1.38	8.7
650		9.1
700		9.4
750		9.7
800	1.15	10.0
850		10.2
900	1.03	10.3
1000	1.0	10.4

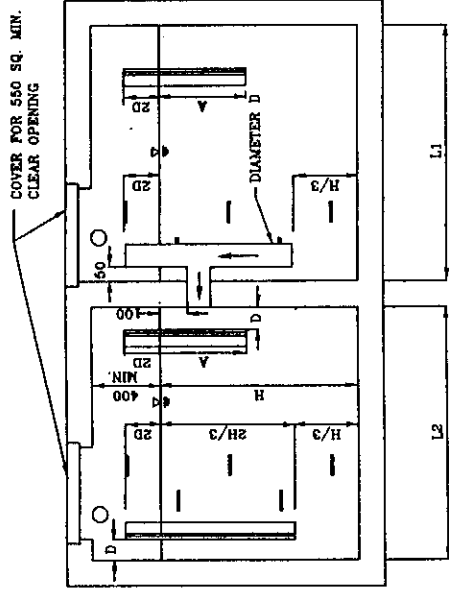
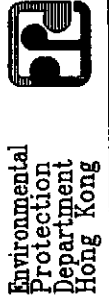
- Note
1. The minimum required grease trap retention volume tabulated above is based on an average water consumption of 0.5 m<sup>3</sup> per day per m<sup>2</sup> of kitchen floor area, and an average working day of 16 working hours. A larger grease trap should be provided if a higher water discharge intensity is anticipated.
  2. For kitchen floor areas in between the listed values, the minimum required grease trap retention volume can be calculated pro-rata.
  3. For kitchen floor areas smaller than 12 m<sup>2</sup>, a grease trap with retention volume 0.7 m<sup>3</sup> should be provided unless the adequacy of a smaller grease trap can be demonstrated.
  4. Depending on the actual operation of the proposed food premises, additional installations might be required to meet the standards given in the Technical Memorandum issued under section 21 of the Water Pollution Control (Amendment) Ordinance 1990.

Notes

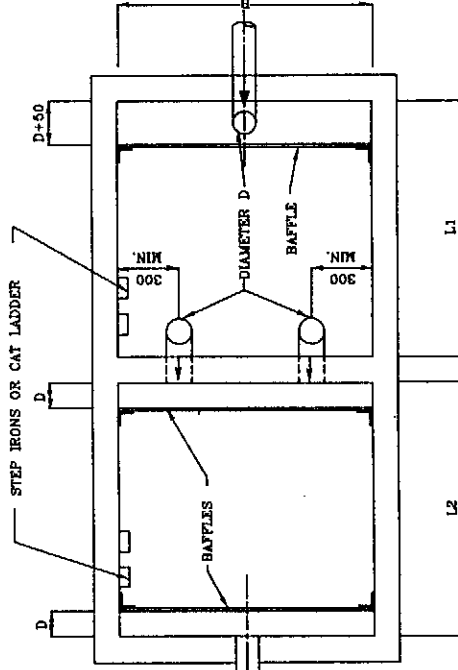
1. All dimensions are in millimetres unless otherwise stated.
2. Volume =  $B(L_1 + L_2)H$
3.  $750 \leq B \leq L_1 \leq L_2 \leq 1800$
4.  $600 \leq H \leq 1200$   
For kitchen floor areas  $\geq 50 \text{ m}^2$ , H should be 900 minimum.
5.  $L_1 + L_2 = L_T$   
 $2.0 \leq L_T/H \leq 3.0$   
 $1500 \leq B \times L_T/H \leq 4000$
6.  $A = H/2$  but not greater than 450
7. No. of pipes through the middle partition wall should be such that the velocity inside the pipes is not greater than  $0.2 \text{ m/s}$
8. Gradient of inlet pipe  $\geq 1$  in 10
9. Horizontal pipe between the last drainage funnel and the grease trap should not be longer than 10m. Where this cannot be achieved, the gradient of the pipe should be increased and rodding eyes should also be provided
10. Minimum diameter of inlet pipes 100mm
11. Minimum diameter of vent pipes 75mm
12. Reinforced concrete grease traps should be designed as liquid retaining structure with maximum surface crack widths 0.2mm
13. Grease traps should be easily accessible, allowing covers to be lifted and accumulated materials removed
14. A prominent sign should be erected adjacent to the grease trap to signify the location of the grease trap and should also contain the following information:
  - a) overall depth of the grease trap
  - b) liquid depth of the grease trap
  - c) the grease trap needs cleaning when the top 200mm of liquid depth is occupied by grease
  - d) warning signs and safety barriers should be erected around the manhole openings during cleaning and maintenance of the grease trap

Drawing No. EP50/L1/1/01A  
Scale: NTS

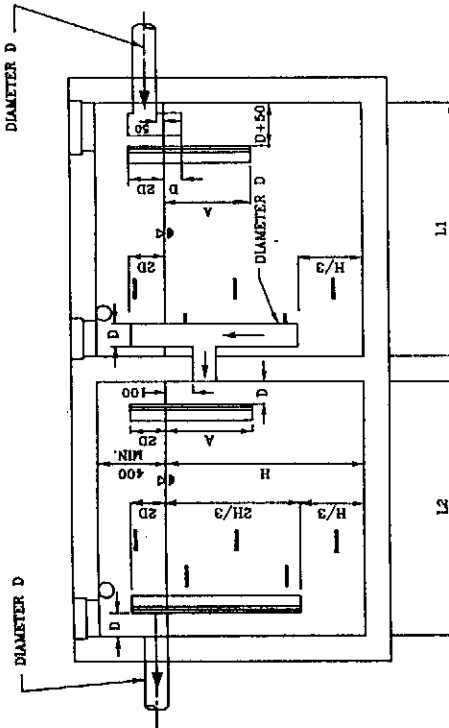
Group LIQUID WASTE PROJECTS



SECTION X-X



SECTIONAL PLAN



PLAN

TYPICAL DETAILS OF A GREASE TRAP

CLEAR OPENING  
550 X 550 MIN.  
WITH COVER

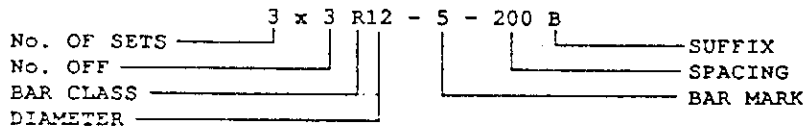
Y  
X

CLEANING HOLE  
300 X 300 mm  
WITH COVER

CLEANING HOLE  
200 X 200 mm  
WITH COVER

**GENERAL NOTES :**

1. THE PETROL INTERCEPTOR IS DESIGNED TO PROVIDE AT LEAST 20 MINUTES RETENTION TO 5-10% OF THE MAXIMUM RUNOFF COLLECTED BY THE TRANSPORT INTERCHANGE IN A 1 IN 2 YEAR RAINSTORM.
2. DETAILS OF PETROL INTERCEPTOR SHOWN IN THESE DRAWING IS FOR OPEN SPACE PUBLIC TRANSPORT INTERCHANGE. FOR PETROL INTERCEPTOR AT COVERED PUBLIC TRANSPORT INTERCHANGE SEE CEO STANDARD DRAWING CE 1041.
3. ALL DIMENSIONS ARE IN MILLIMETRES.
4. CONCRETE TO BE GRADE 30/20.
5. REINFORCEMENT SHALL COMPLY TO BS 4449 AND SHALL BE BENT IN ACCORDANCE WITH BS 4466.
6. COVER TO REINFORCEMENT TO BE 50 mm UNLESS OTHERWISE SPECIFIED.
7. REINFORCEMENT NOTATION :

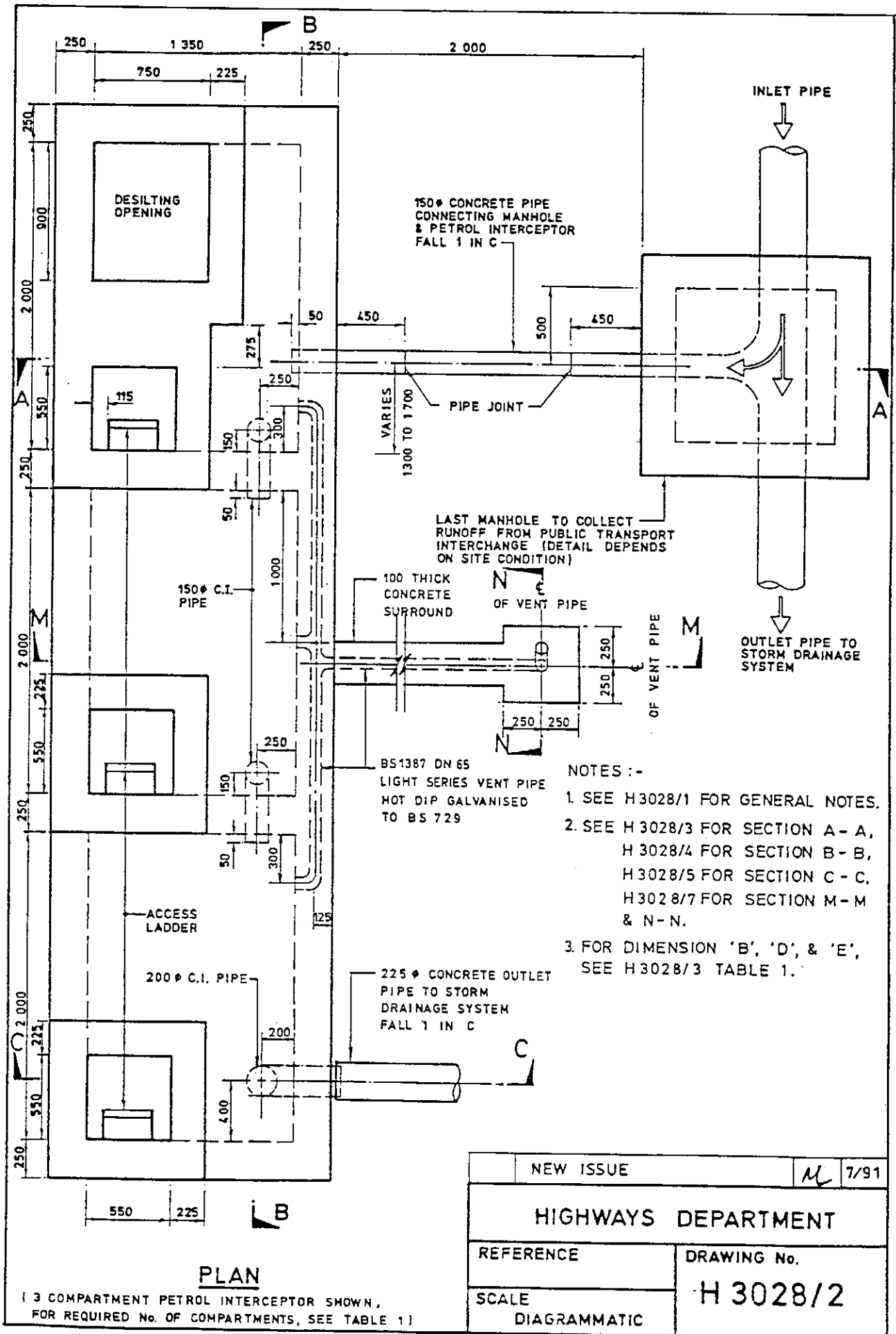


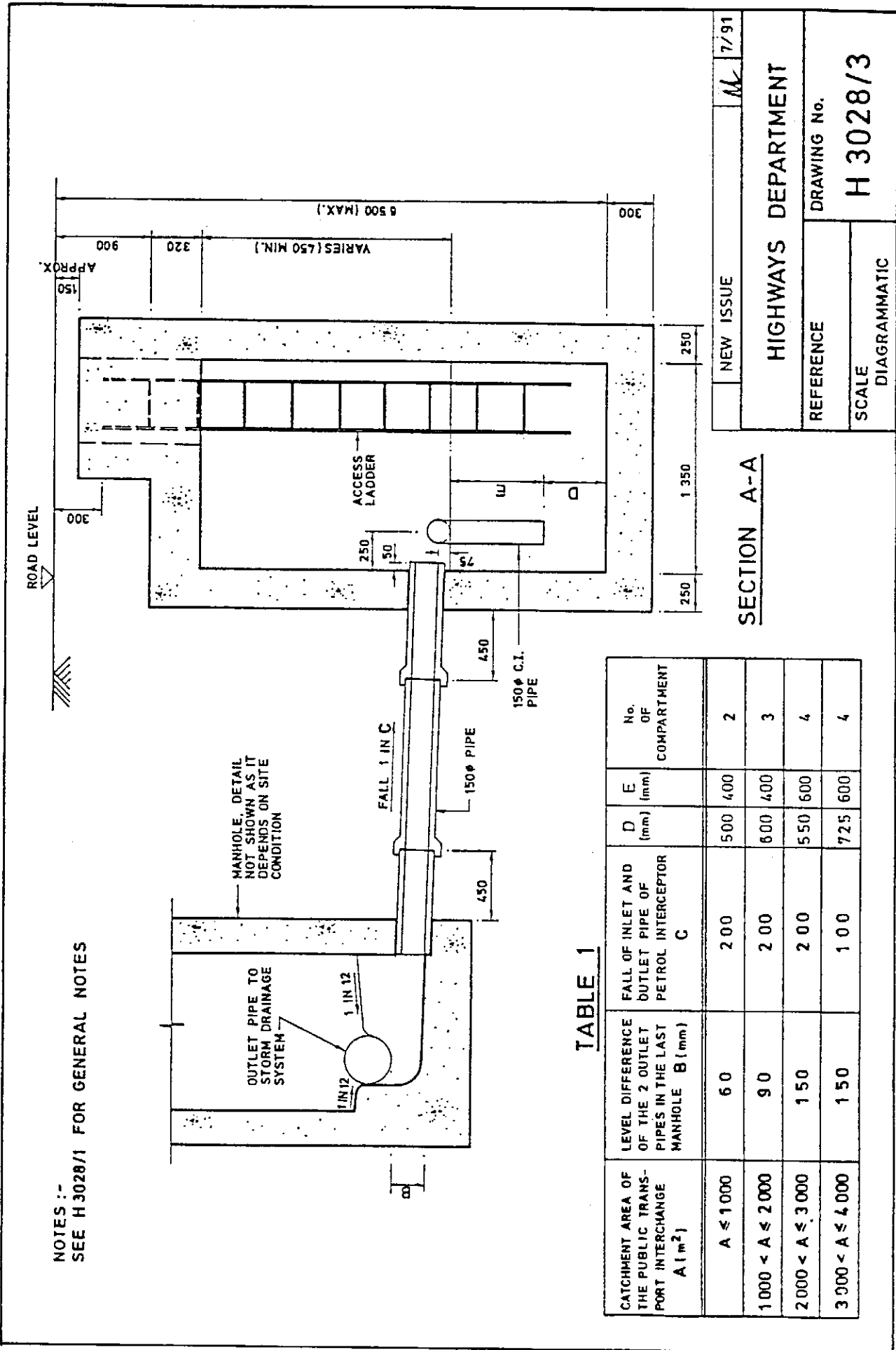
BAR CLASS - R= GRADE 250 PLAIN ROUND STEEL BAR  
 SUFFIX --- T= TOP  
               B= BOTTOM  
               NF= NEAR FACE  
               FF= FAR FACE  
               EF= EACH FACE

8. MINIMUM LAP LENGTH : 40 DIAMETER OF BAR FOR MILD STEEL PLAIN BAR.
9. STRUCTURAL STEELWORK SHALL BE GRADE 43C COMPLY WITH BS 4360 UNLESS OTHERWISE SPECIFIED.
10. ALL FILLET WELDS TO BE 6 mm UNLESS OTHERWISE SPECIFIED.
11. STAINLESS STEEL ACCESS LADDER TO BE OF MINIMUM GRADE 304 S12 TO BS 970:PT1:1983.
12. FOR RSJ CONNECTIONS, SEE CEO STANDARD DRAWING CE 1020.
13. FOR DETAILS OF TOP TREATMENT TO PETROL INTERCEPTOR, SEE CEO STANDARD DRAWING CE 1021 FOR FLEXIBLE ROAD SURFACE AND HIGHWAY STANDARD DRAWING H 1006 FOR CONCRETE ROAD SLAB.
14. FOR DETAILS OF COVER TO PETROL INTERCEPTOR, SEE CEO STANDARD DRAWING CE 1022.
15. FOR DETAILS OF DESILTING OPENING COVER, SEE CEO STANDARD DRAWING CE 1023.

<p><b>PETROL INTERCEPTOR FOR OPEN PUBLIC TRANSPORT INTERCHANGE</b></p>	NEW ISSUE		AL	7/91
	HIGHWAYS DEPARTMENT			
	REFERENCE	DRAWING No.		
	SCALE	H 3028/1		



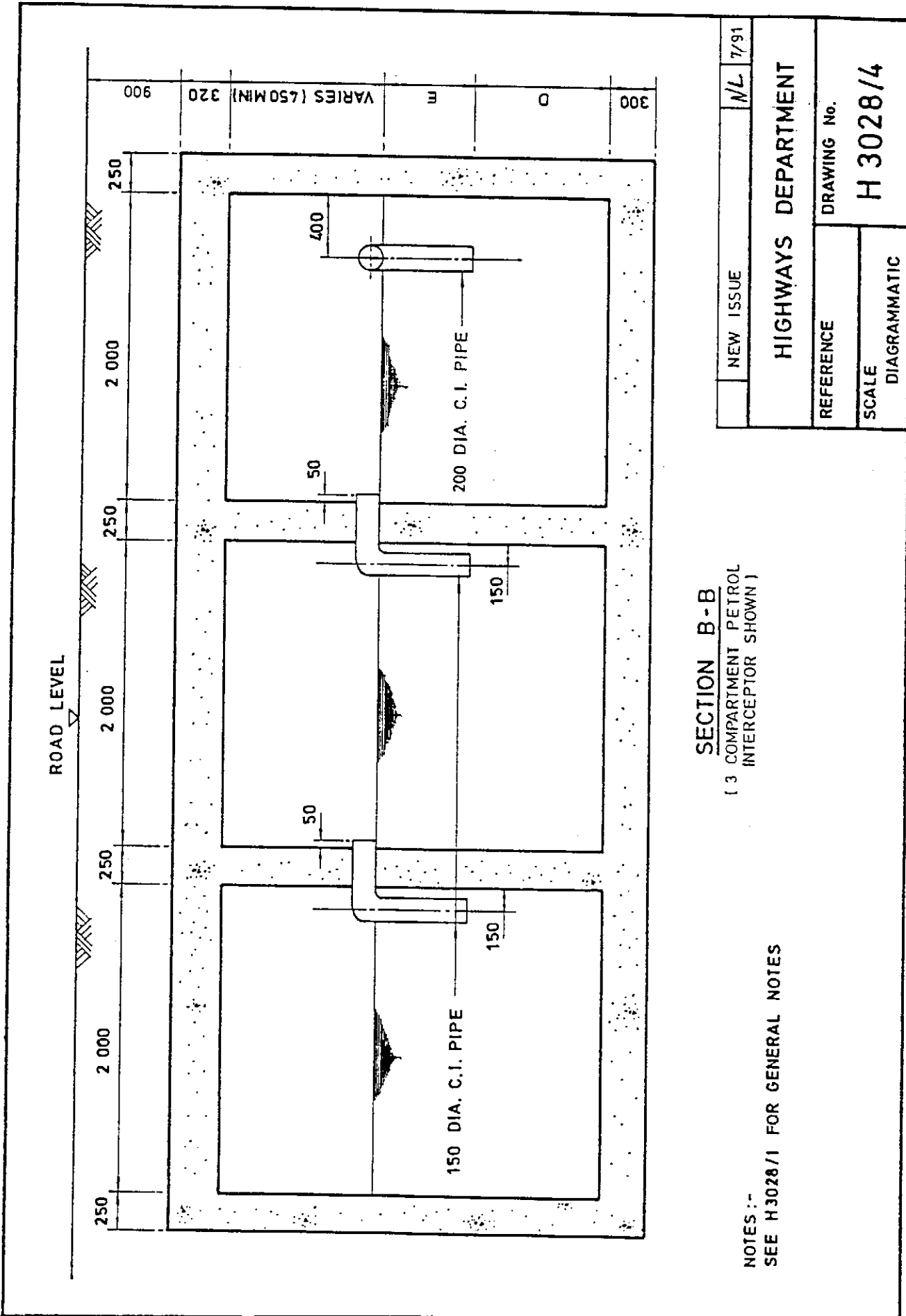




NOTES :-  
SEE H 3028/1 FOR GENERAL NOTES

TABLE 1

CATCHMENT AREA OF THE PUBLIC TRANS-PORT INTERCHANGE A (m <sup>2</sup> )	LEVEL DIFFERENCE OF THE 2 OUTLET PIPES IN THE LAST MANHOLE B (mm)	FALL OF INLET AND OUTLET PIPE OF PETROL INTERCEPTOR C	D (mm)	E (mm)	No. OF COMPARTMENT
A $\leq$ 1 000	60	2 00	500	400	2
1 000 < A $\leq$ 2 000	90	2 00	600	400	3
2 000 < A $\leq$ 3 000	150	2 00	550	600	4
3 000 < A $\leq$ 4 000	150	1 00	725	600	4

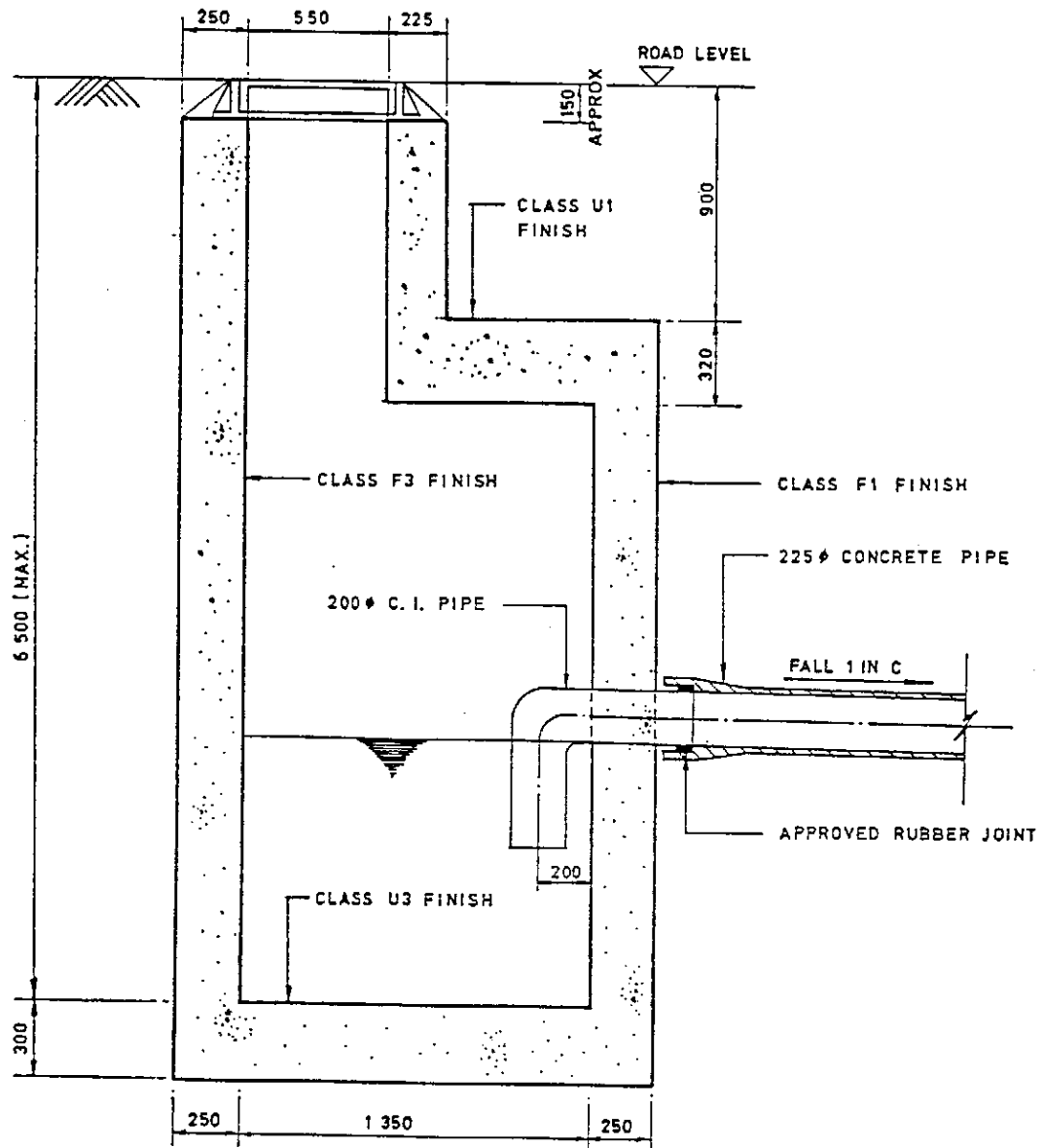


NOTES :-  
SEE H3028/1 FOR GENERAL NOTES

**SECTION B-B**  
( 3 COMPARTMENT PETROL INTERCEPTOR SHOWN )

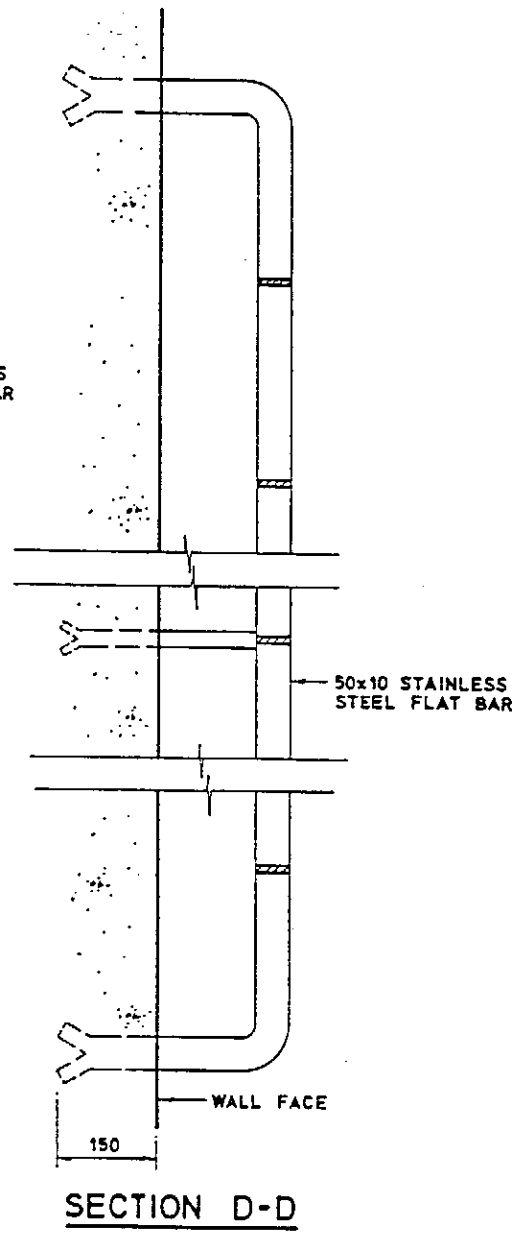
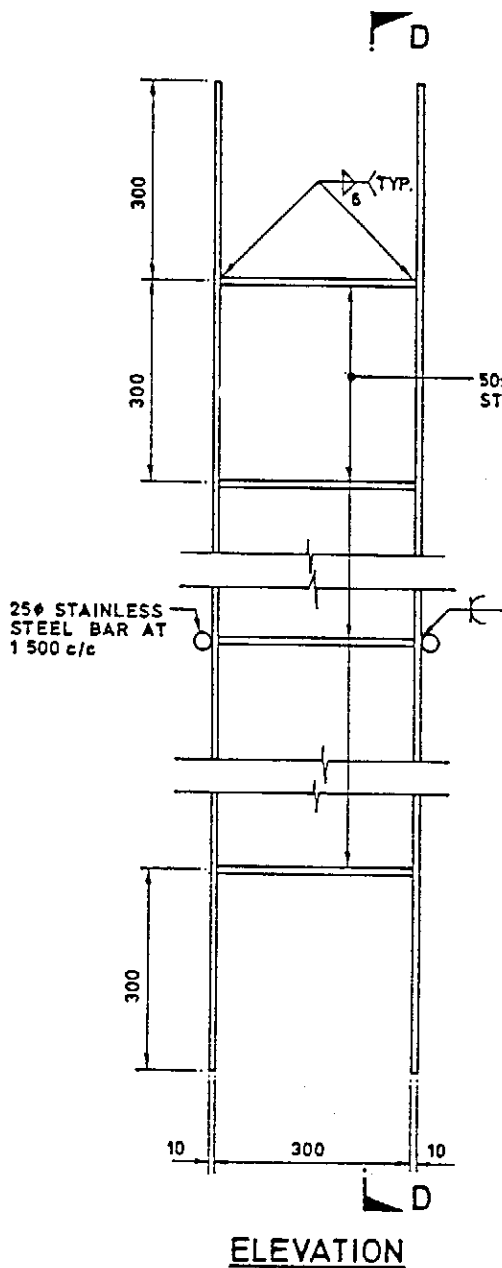
NEW ISSUE	N/L	7/91
<b>HIGHWAYS DEPARTMENT</b>		
REFERENCE	DRAWING No.	
SCALE	DIAGRAMMATIC	
	<b>H 3028/4</b>	

NOTES :-  
SEE H 3028/1 FOR GENERAL NOTES

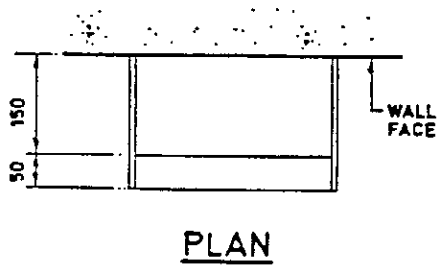


SECTION C-C

NEW ISSUE		NL	7/91
HIGHWAYS DEPARTMENT			
REFERENCE		DRAWING No.	
SCALE		H 3028/5	
1 : 25			

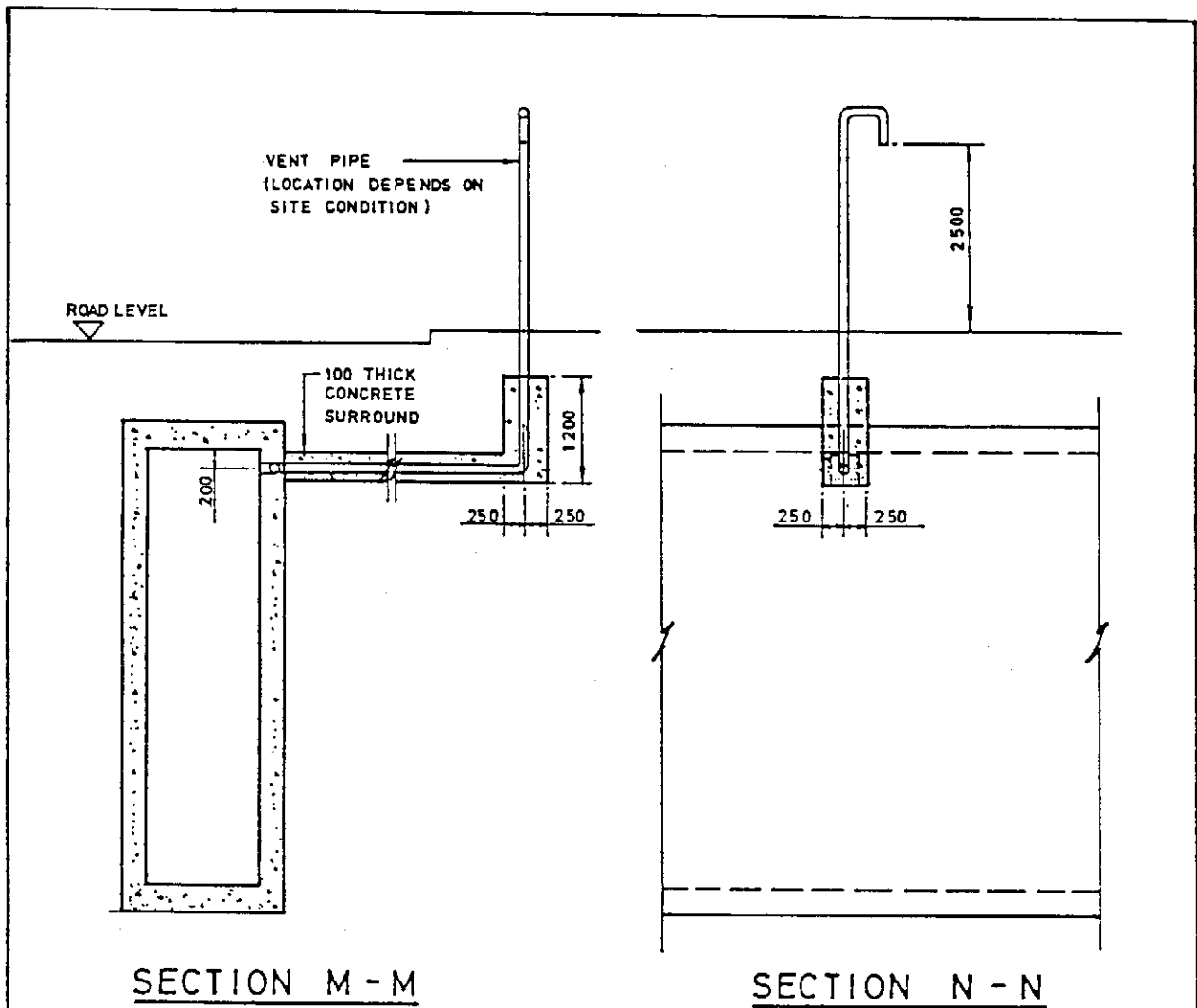


NOTES:-  
SEE H 3028/1 FOR GENERAL NOTES



**ACCESS LADDER**

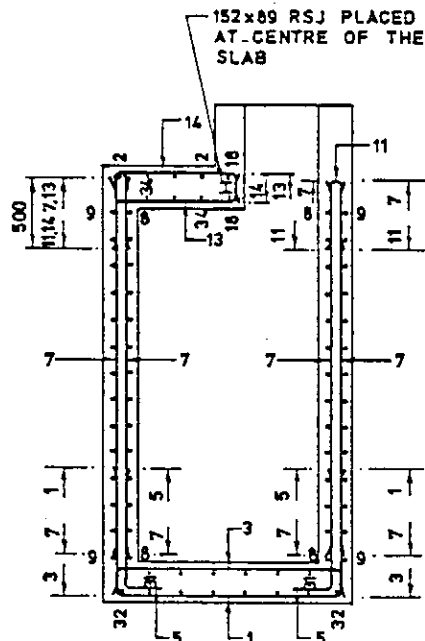
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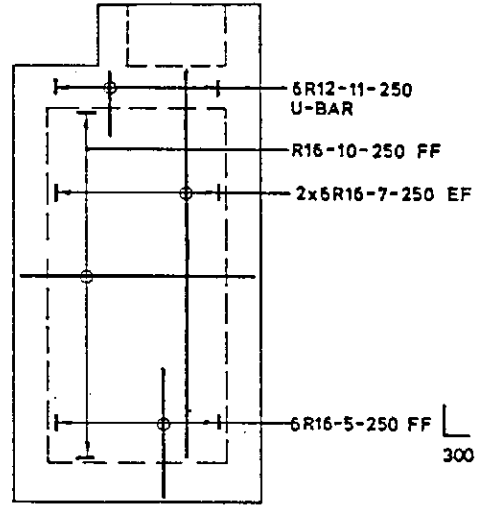
NOTES:-  
SEE H3028/1 FOR GENERAL NOTES

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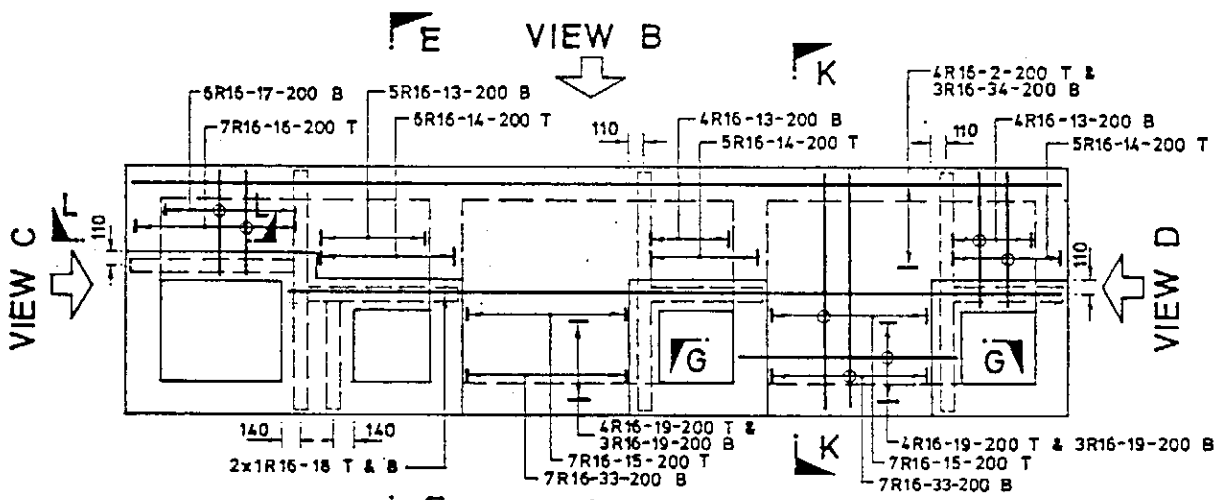
NOTES :-  
SEE H 3028/1 FOR GENERAL NOTES



SECTION E-E

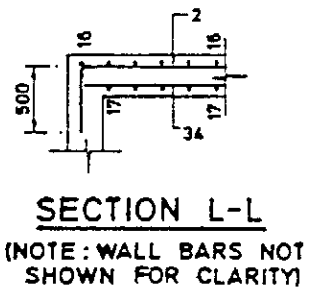


VIEW C  
(VIEW D SIMILAR  
BUT OPP. HANDED)



VIEW A  
PLAN

PETROL INTERCEPTOR  
R.C. DETAIL

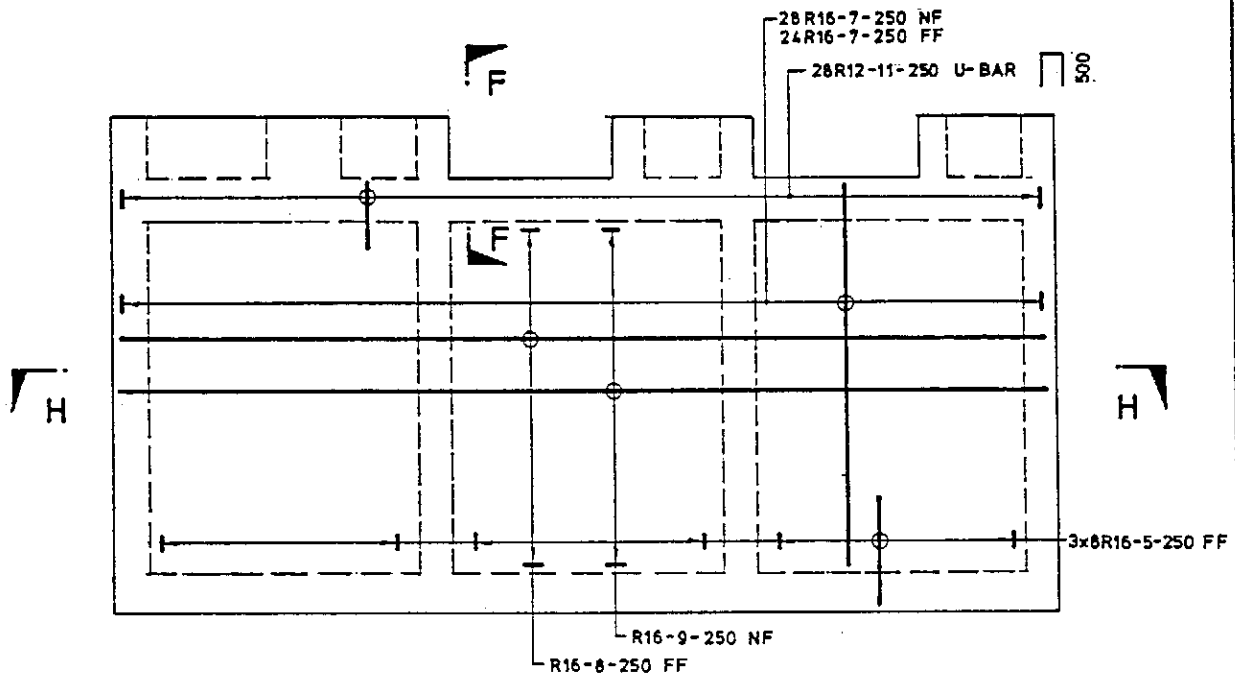


SECTION L-L

(NOTE: WALL BARS NOT SHOWN FOR CLARITY)

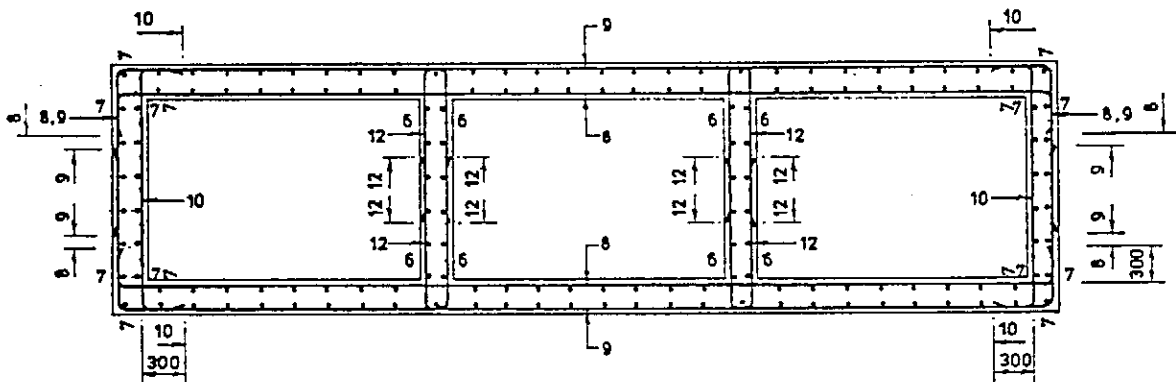
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SCALE	H 3028/ 8		
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NOTES :-  
SEE H 3028/1 FOR GENERAL NOTES

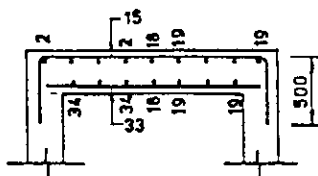


**VIEW A**

(VIEW B SIMILAR  
BUT OPP. HANDED)



**SECTION H-H**



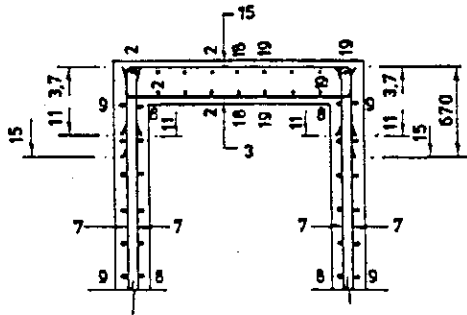
**SECTION K-K**

(NOTE: WALL BARS NOT  
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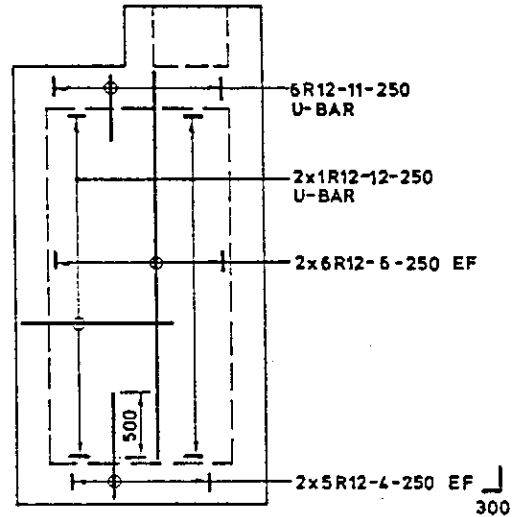
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SCALE		H 3028/9	
1:50			



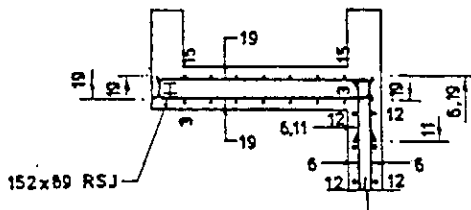
NOTES :-  
SEE H3028/1 FOR GENERAL NOTES



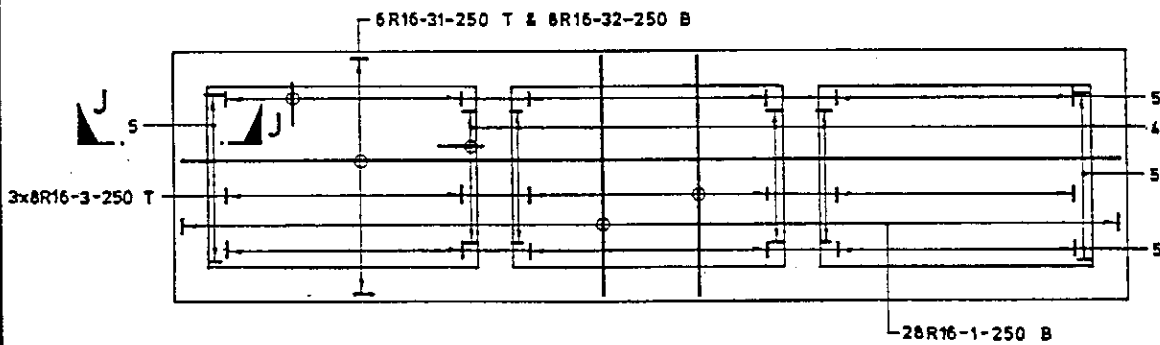
**SECTION F-F**



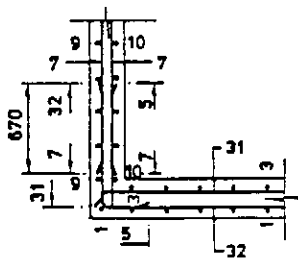
**INTERNAL WALL**



**SECTION G-G**

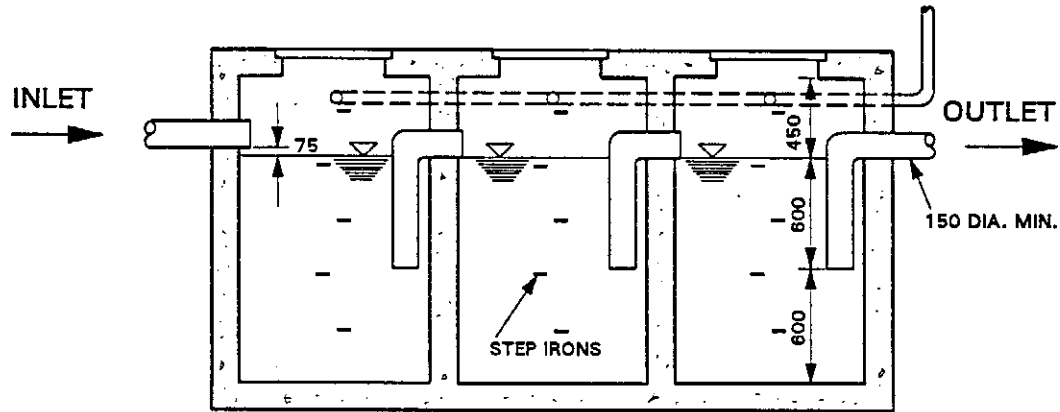


**BASE SLAB**

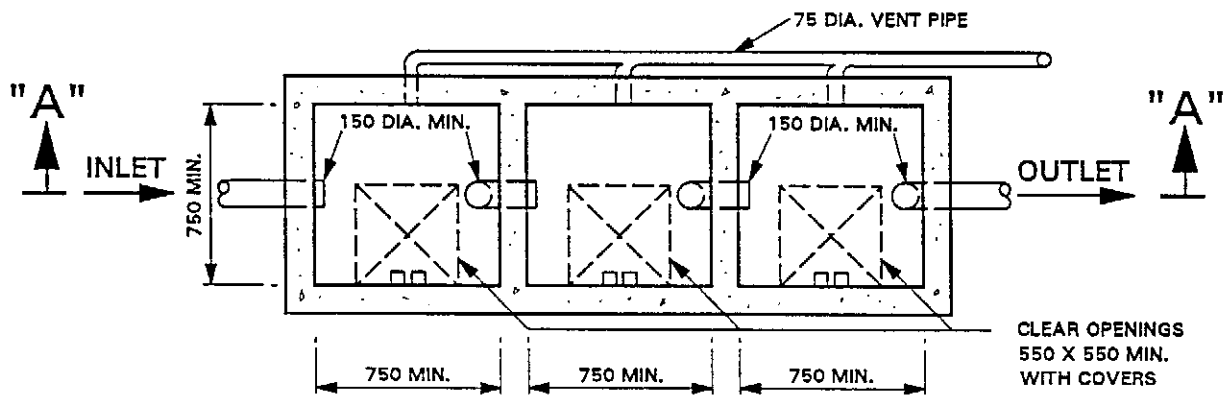


**SECTION J-J**

NEW ISSUE		N/L	7/91
HIGHWAYS DEPARTMENT			
REFERENCE		DRAWING No.	
SCALE		H 3028/10	
1:50			



**SECTION A - A**



**PLAN**

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES

**TYPICAL DETAILS OF  
A PETROL INTERCEPTOR**

drawing no.  
EP 50/D1/1/01

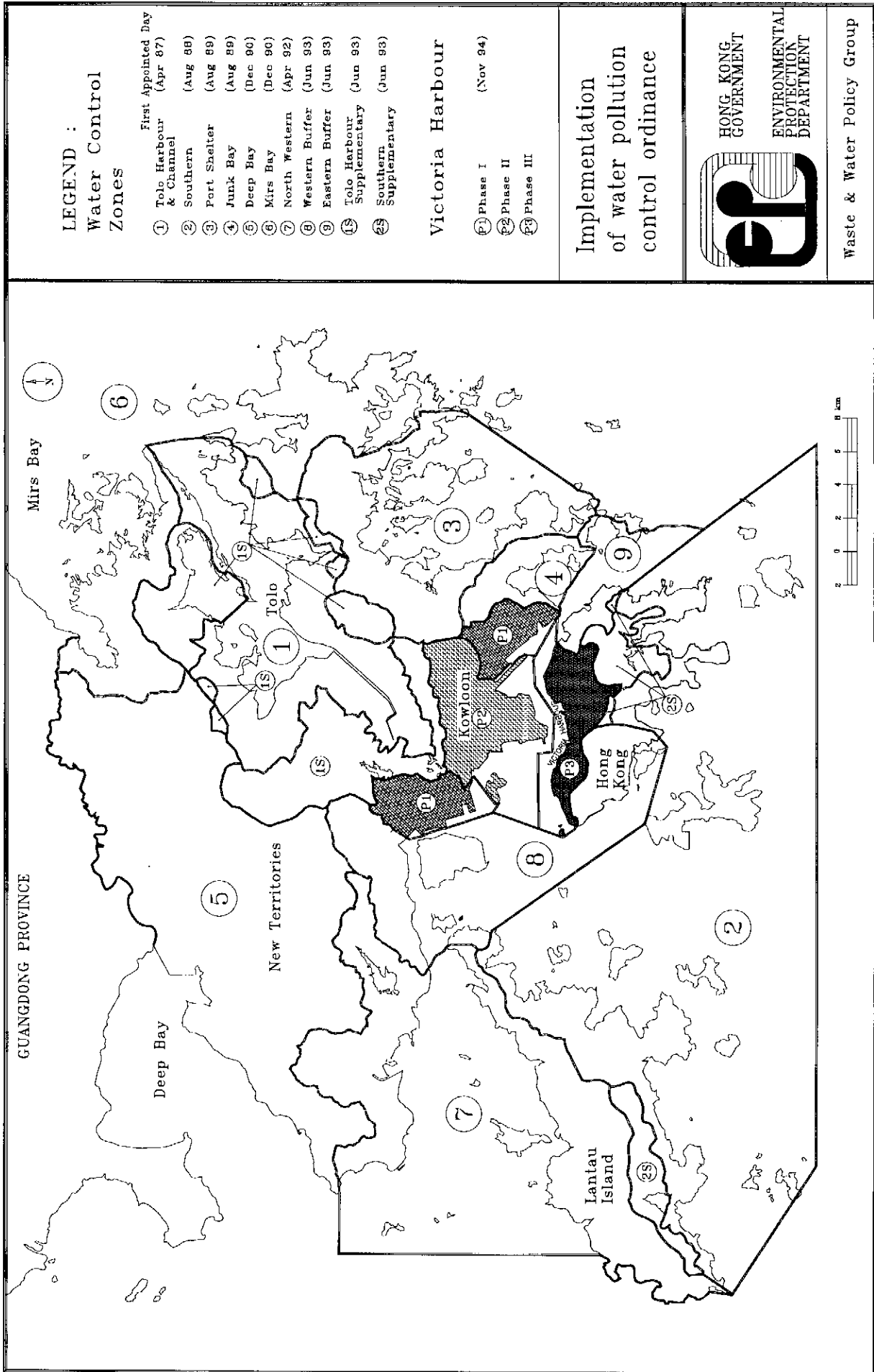
group  
Liquid Waste Projects

date  
5/93

scale  
NTS

ENVIRONMENTAL  
PROTECTION  
DEPARTMENT  
HONG KONG





**Pollution from Industrial Buildings**  
**Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulation 90**

Buildings Ordinance sections 24 and 28 and Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulation 90 contain provisions which may be invoked by the Building Authority to tackle the problem of water pollution caused by the discharge of effluent from industrial buildings.

2. Following the issue of the first practice note on this subject in May 1987, more stringent measures have been taken in order to minimize the effects of untreated noxious effluent getting into drainage systems and causing pollution to water-courses and the sea. Such effluent can also seriously impair sewage treatment facilities or damage private or public drains and sewers. There is also the possibility of Government's drains and sewers being overloaded by industrial discharge or of workers being injured while repairing or maintaining drainage systems.

3. In addition to consulting the Environmental Protection Department in cases involving a single occupancy specialized industrial building where the industrial processes to be pursued are known and specific facilities can therefore be allowed for beforehand, the Building Authority will also pay particular attention to plans for 'flatted factory' development regarding general effluent treatment provisions.

4. It is therefore desirable for all authorized persons and registered structural engineers to seek from their clients information on the proposed industrial processes which the intended building occupants will pursue, and ensure that at drainage plan submission stage building uses are clearly stated and adequate provisions are made to treat any noxious effluent. Failure to provide this information may result in rejection of the drainage proposals under Buildings Ordinance section 16(1)(i).

5. In the case of 'flatted factory' development where multi-occupancy is to be expected, the assumption will be made that the industrial undertakings and places of work will normally discharge effluent of such volume or chemical composition as to call for the provision of drainage facilities other than those required under Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulation 5(1). Failure to make provision for future effluent discharge may lead to disapproval of the plans under Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulation 90.

6. For 'flatted factory' development, unless specific facilities are provided, each industrial unit should have an individual drainage outlet, adequately trapped, to receive treated trade effluent from that unit. This outlet must be connected to the foul water system and be of a size indicated below:

Factory usable floor area	Size of outlet
less than 1,000 m <sup>2</sup>	100 mm diameter
more than 1,000 m <sup>2</sup>	150 mm diameter minimum

The size of the vertical foul water down pipe will depend upon the number of floors served and should generally be within the range of 150 - 300 mm diameter. These outlets must not be connected to any storm-water drainage system. The outlets can be temporarily sealed at floor level until required by occupants of the unit for the purpose of discharging treated effluent, the assumption being that any effluent identified in Building (Standards of Sanitary Fittings, Plumbing, Drainage Works and Latrines) Regulation 90 will be treated by the occupants of the unit prior to being discharged into the outlet.

7. The need to provide a petrol interceptor in areas used for the servicing and parking of vehicles is well known. Standard details of the petrol interceptor are attached for general information. The preferred contemporary practice regarding other types of industrial effluent and appropriate methods of treatment is not so standardized or so clear. In case of doubt it may be necessary to obtain the advice of consultants.

8. In addition to tackling the pollution problem at plans submission stage, it is also worth mentioning that more attention will be focused on illegal, insanitary and polluting drains and sewers in future. To this end a unit has already been set up in the Buildings Ordinance Office with specific responsibility for seeking out and dealing with polluting factories. It is in the interest of all concerned that timely steps are taken to protect our environment.

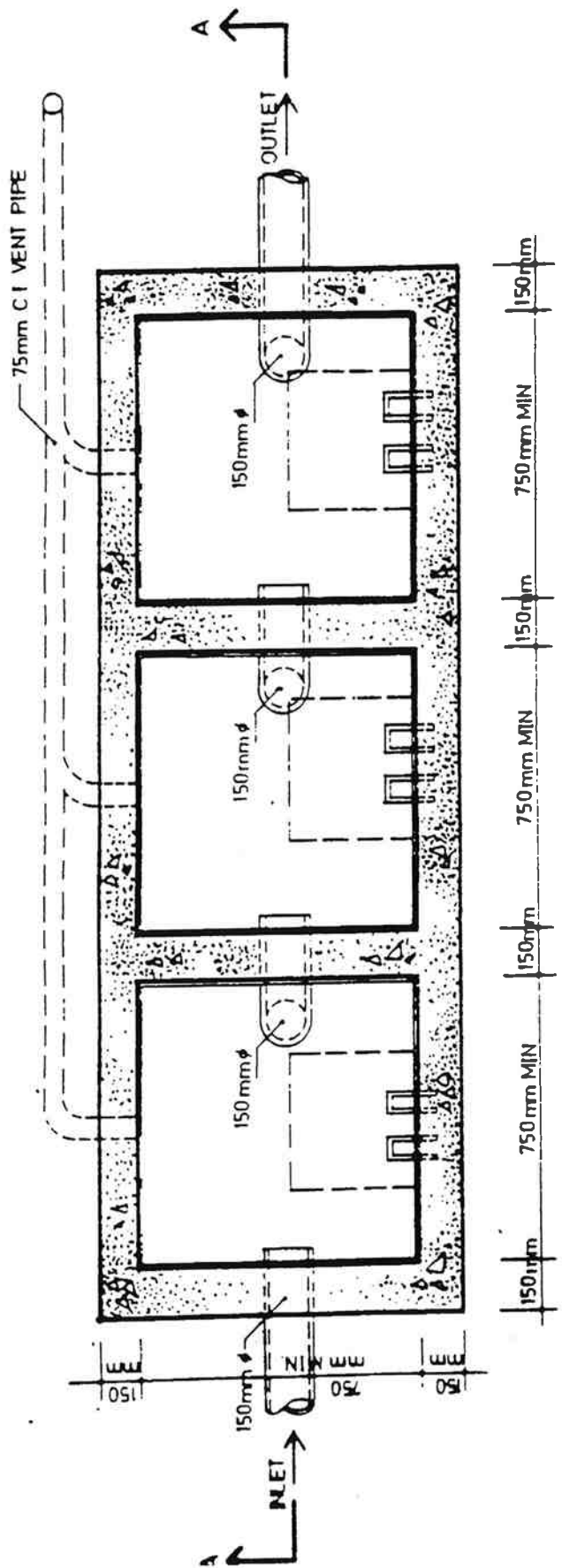
(A.W. Samson)  
Building Authority

Ref: BLD(B) GR/BREG/SF/2

First issued May 1987

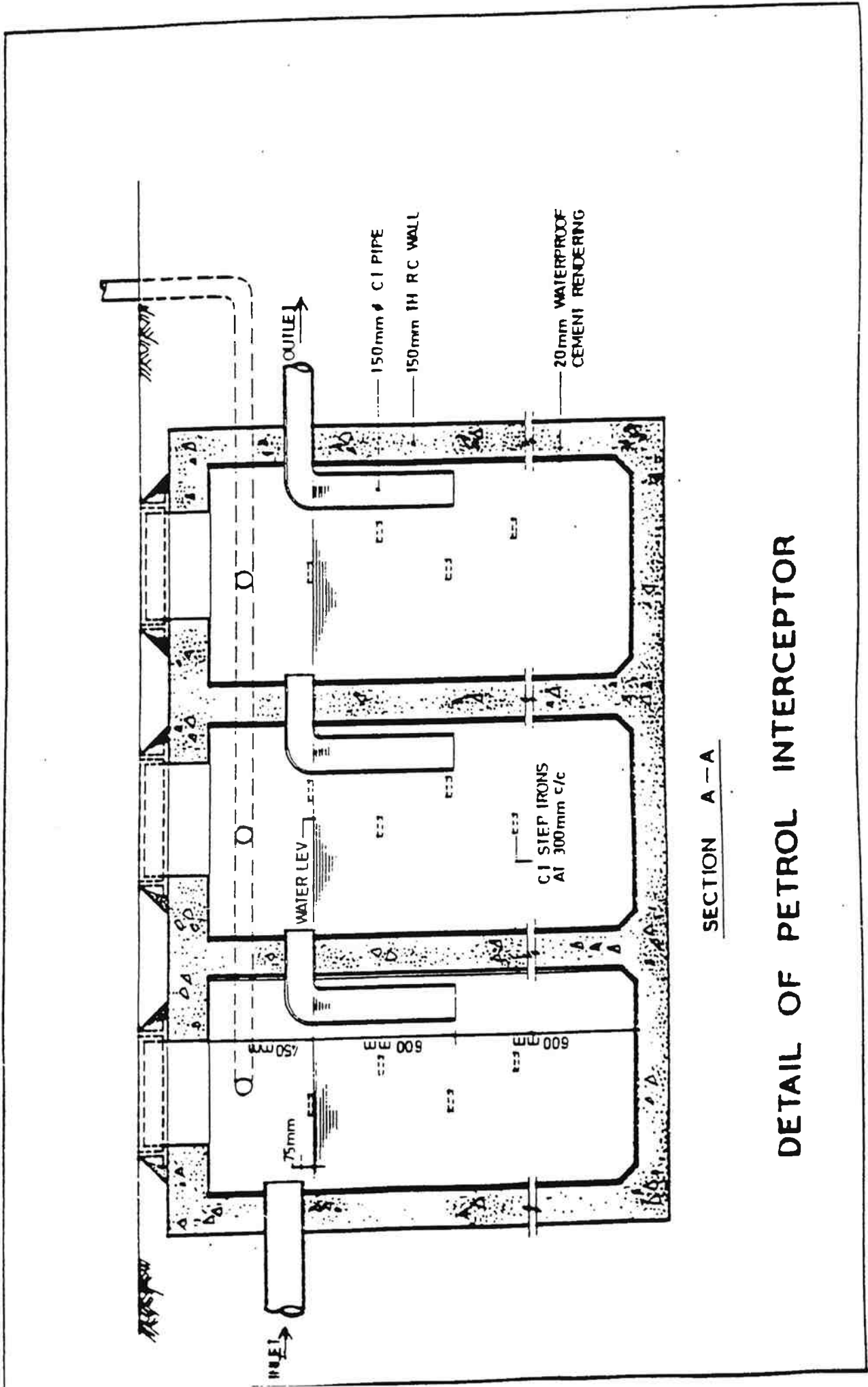
This update March 1992 (GBS/D) (para. 7 amended and grease trap details deleted)

Index under : B(SSFPDW&L)R 90 - Pollution from Industrial Buildings  
Effluent - noxious  
Pollution from Industrial Buildings



PLAN

# DETAIL OF PETROL INTERCEPTOR



SECTION A-A

DETAIL OF PETROL INTERCEPTOR