

EIA/023.2/93



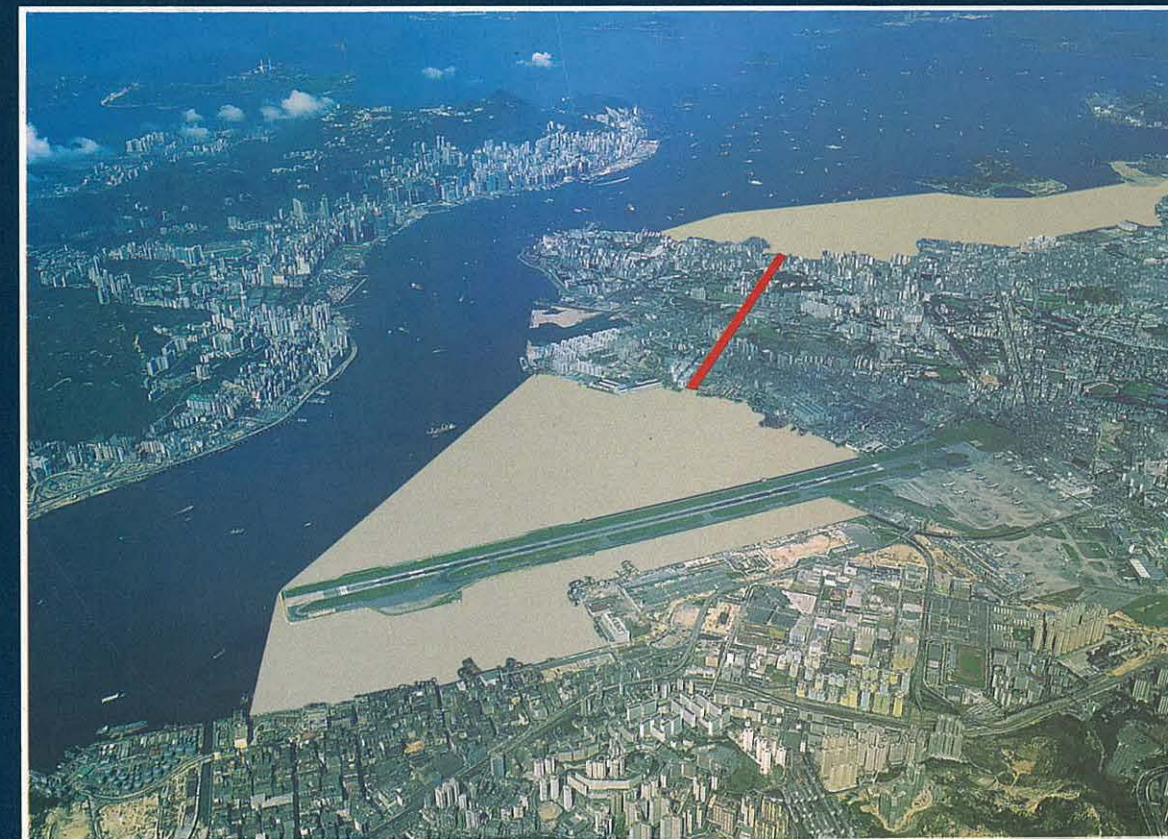
Highways Department - Western Harbour Link Office

Central Kowloon Route Study

Final Report

Volume 2

Preliminary Design Drawings



May 1993

Parsons Brinckerhoff Maunsell Consultants

in association with

MVA Asia · Shankland Cox · CES (Asia) · Chesterton Petty

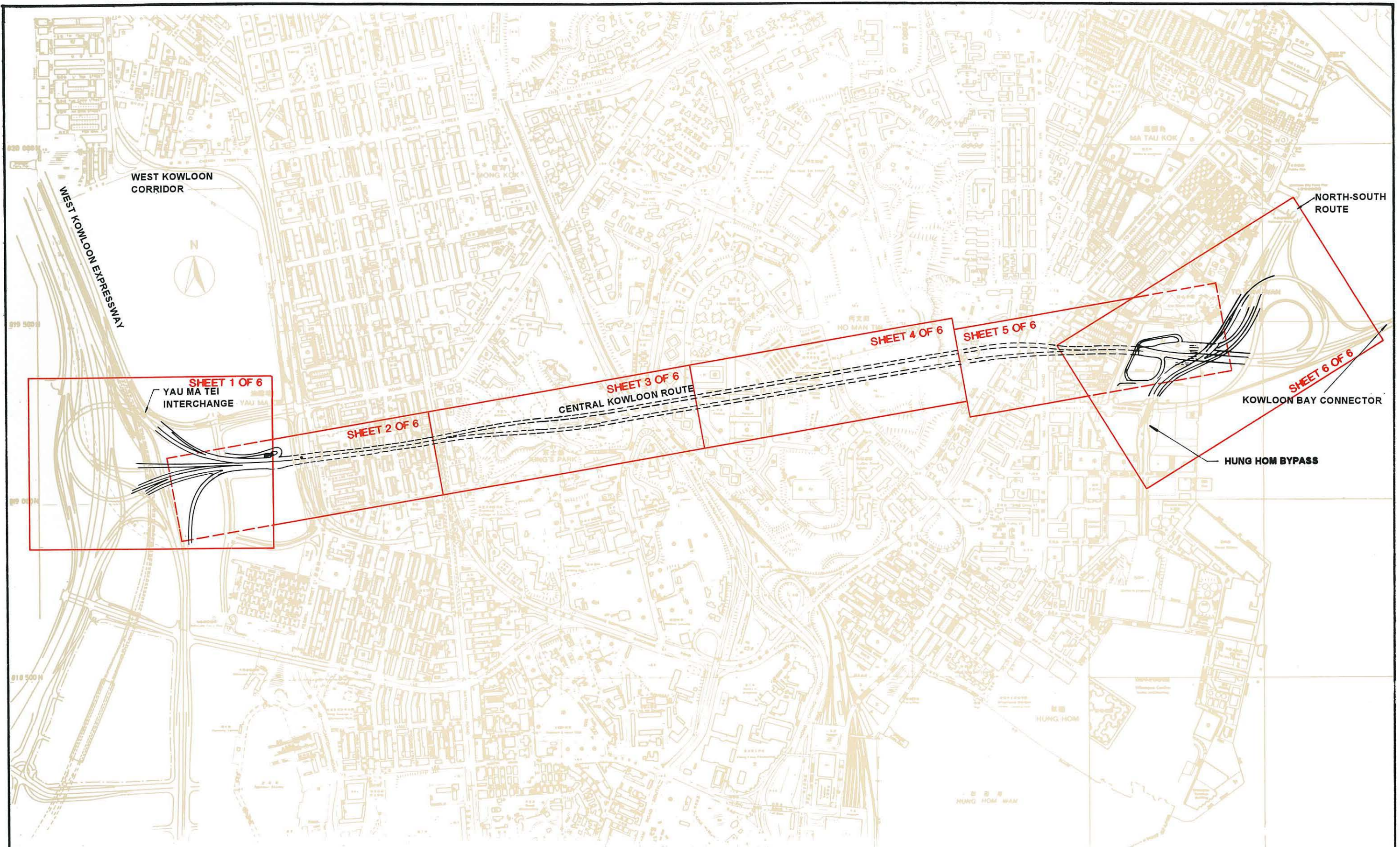
CENTRAL KOWLOON ROUTE STUDY

FINAL REPORT

APRIL 1993

Volume 2 : DRAWINGS

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Central Kowloon Route Study
Key Plan

FIGURE NO

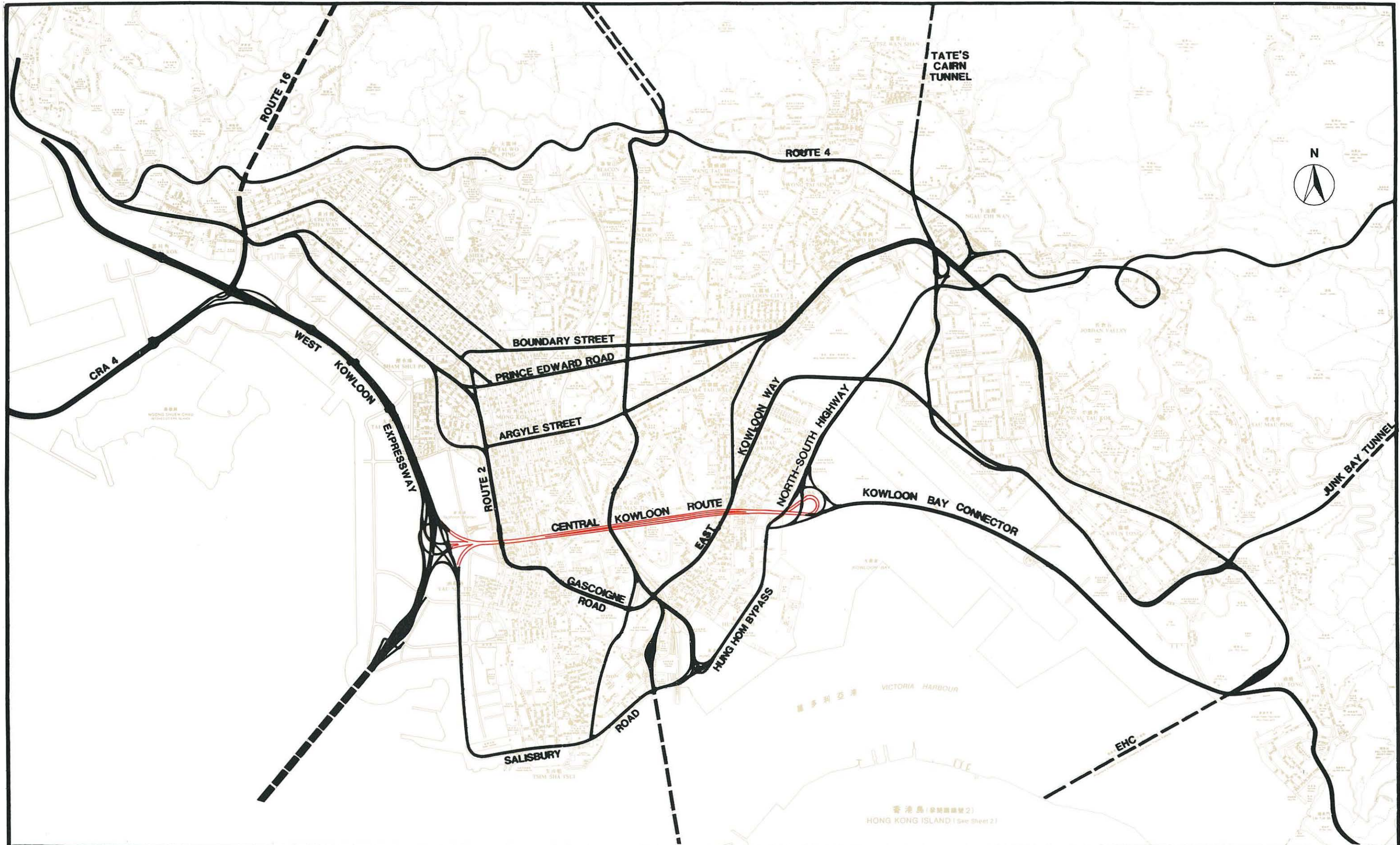
001

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DATE

April 1993



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Central Kowloon Route Study
Kowloon Road Network

FIGURE NO

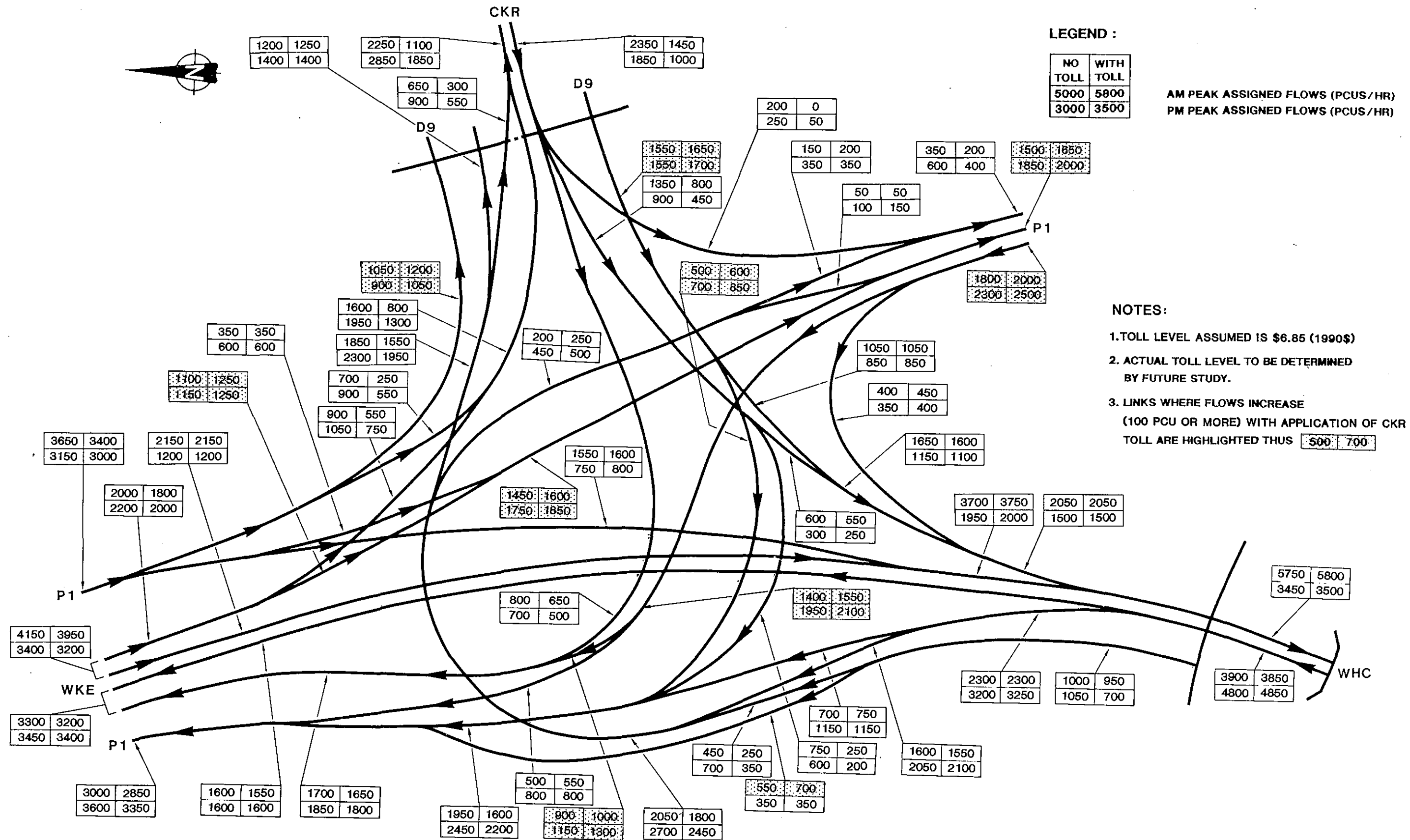
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Central Kowloon Route Study : Yau Ma Tei Interchange
 Year 2006 Traffic Volume at Peak Hour

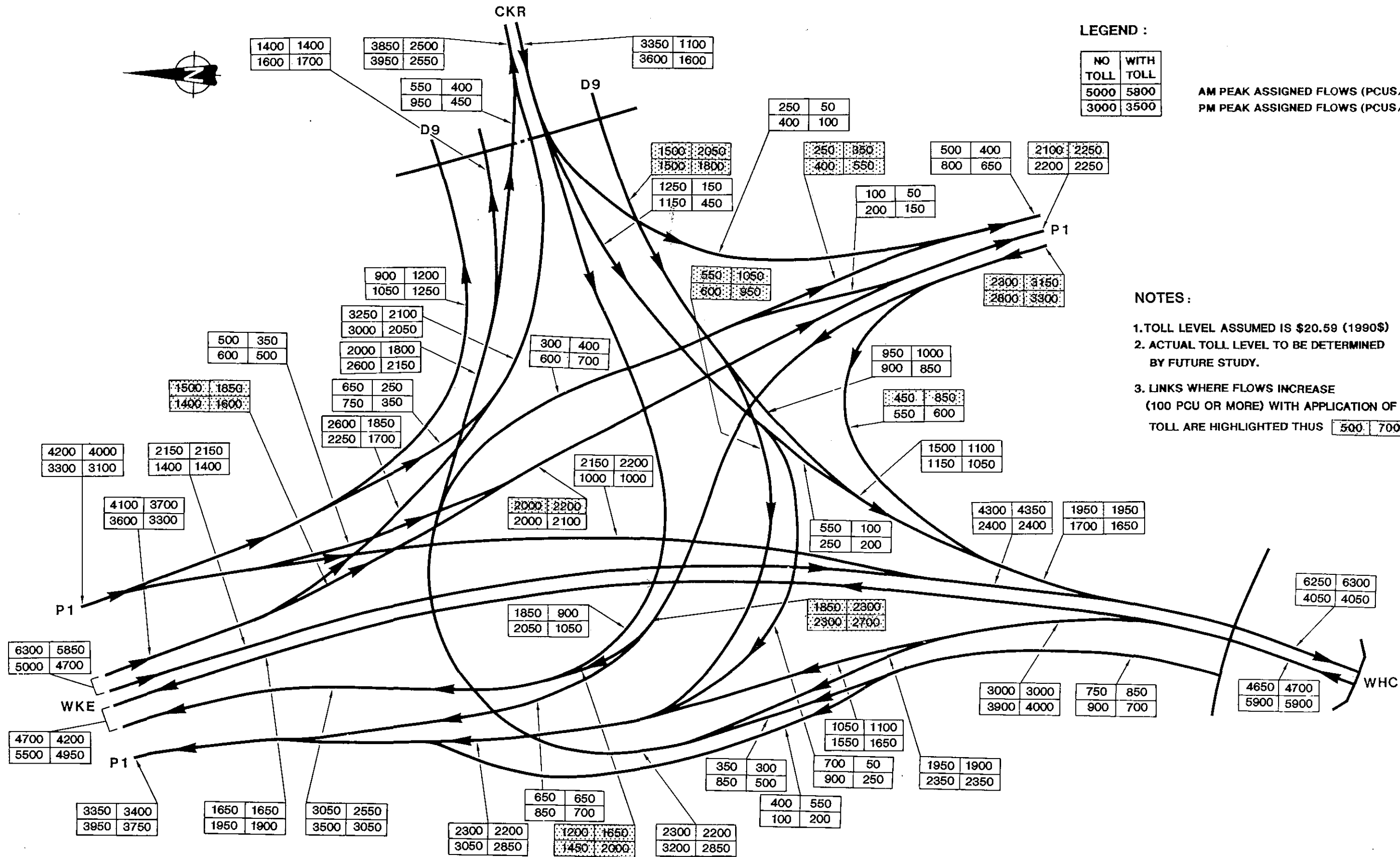
FIGURE NO.

010

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DATE

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Central Kowloon Route Study : Yau Ma Tei Interchange
Year 2011 Traffic Volume at Peak Hour

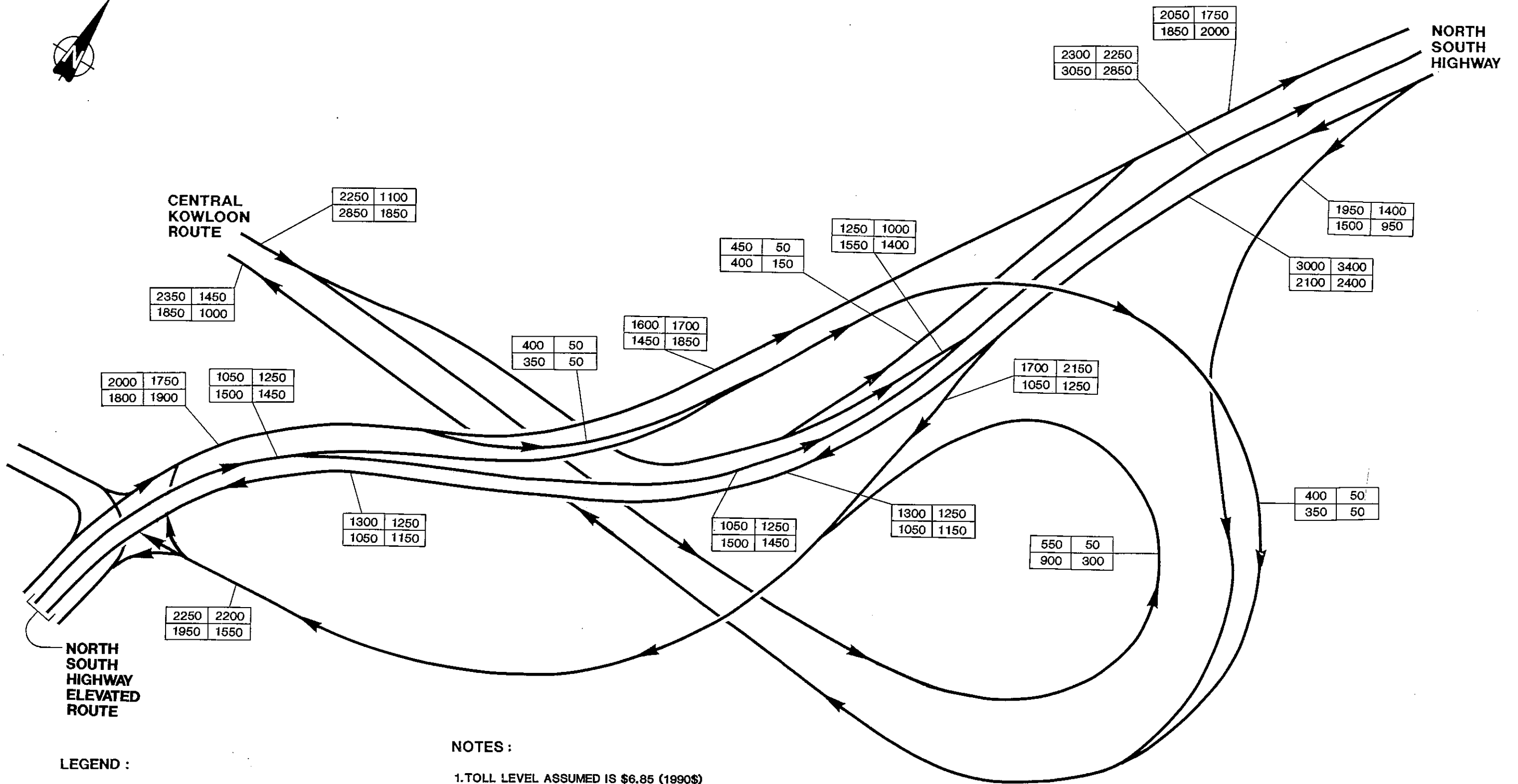
FIGURE NO.

011

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APRIL 93



LEGEND :

NO TOLL	WITH TOLL
5000	5800
3000	3500

AM PEAK ASSIGNED FLOWS (PCUS/HR)
PM PEAK ASSIGNED FLOWS (PCUS/HR)

NOTES :

1. TOLL LEVEL ASSUMED IS \$6.85 (1990\$)
2. ACTUAL TOLL LEVEL TO BE DETERMINED BY FUTURE STUDY.
3. LINKS WHERE FLOWS INCREASE WITH APPLICATION OF CKR TOLL ARE HIGHLIGHTED THUS

500	700
-----	-----

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Central Kowloon Route Study : To Kwa Wan Interchange
Year 2006 Traffic Volume at Peak Hour

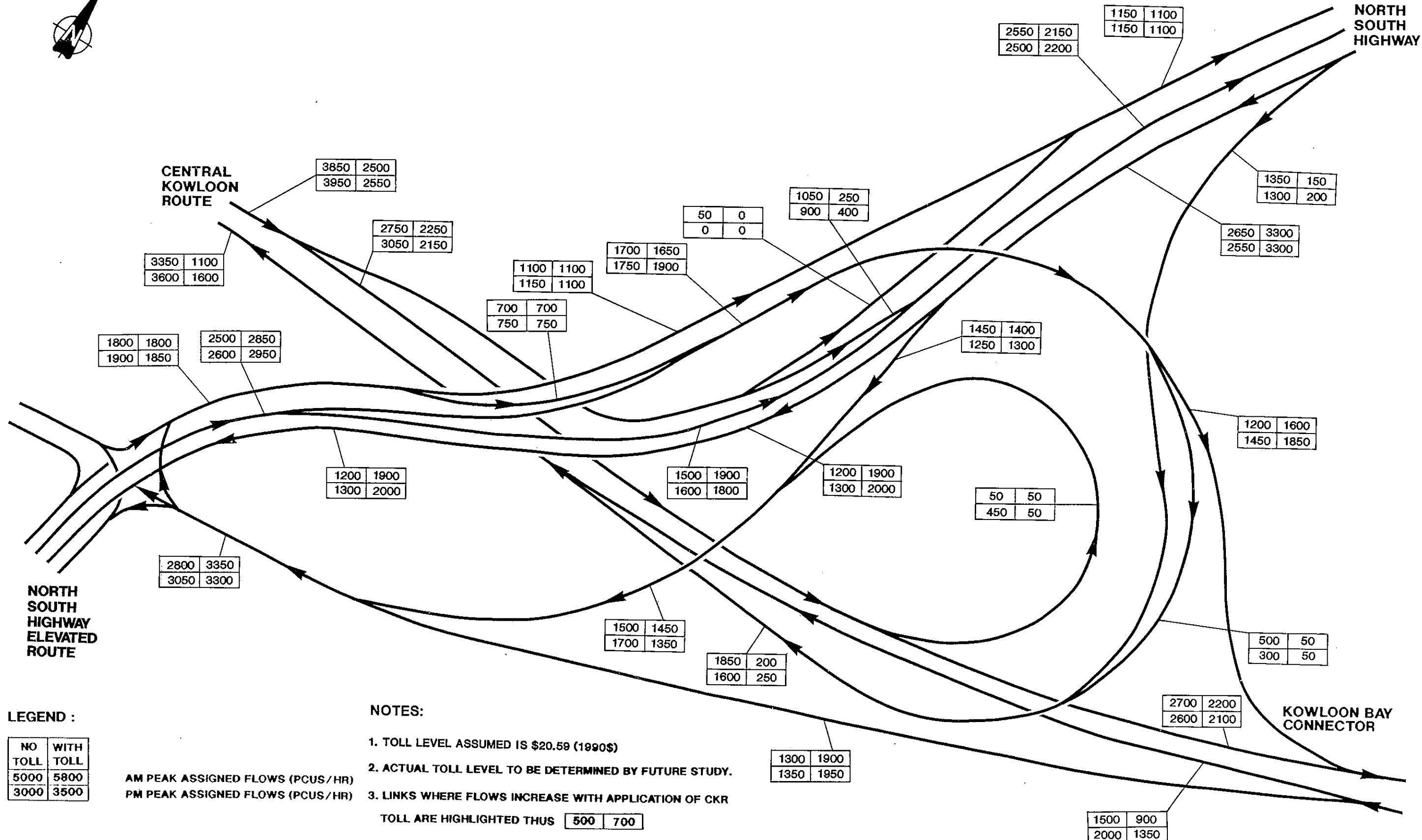
FIGURE NO.

012

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DATE

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Central Kowloon Route Study : To Kwa Wan Interchange
Year 2011 Traffic Volume at Peak Hour

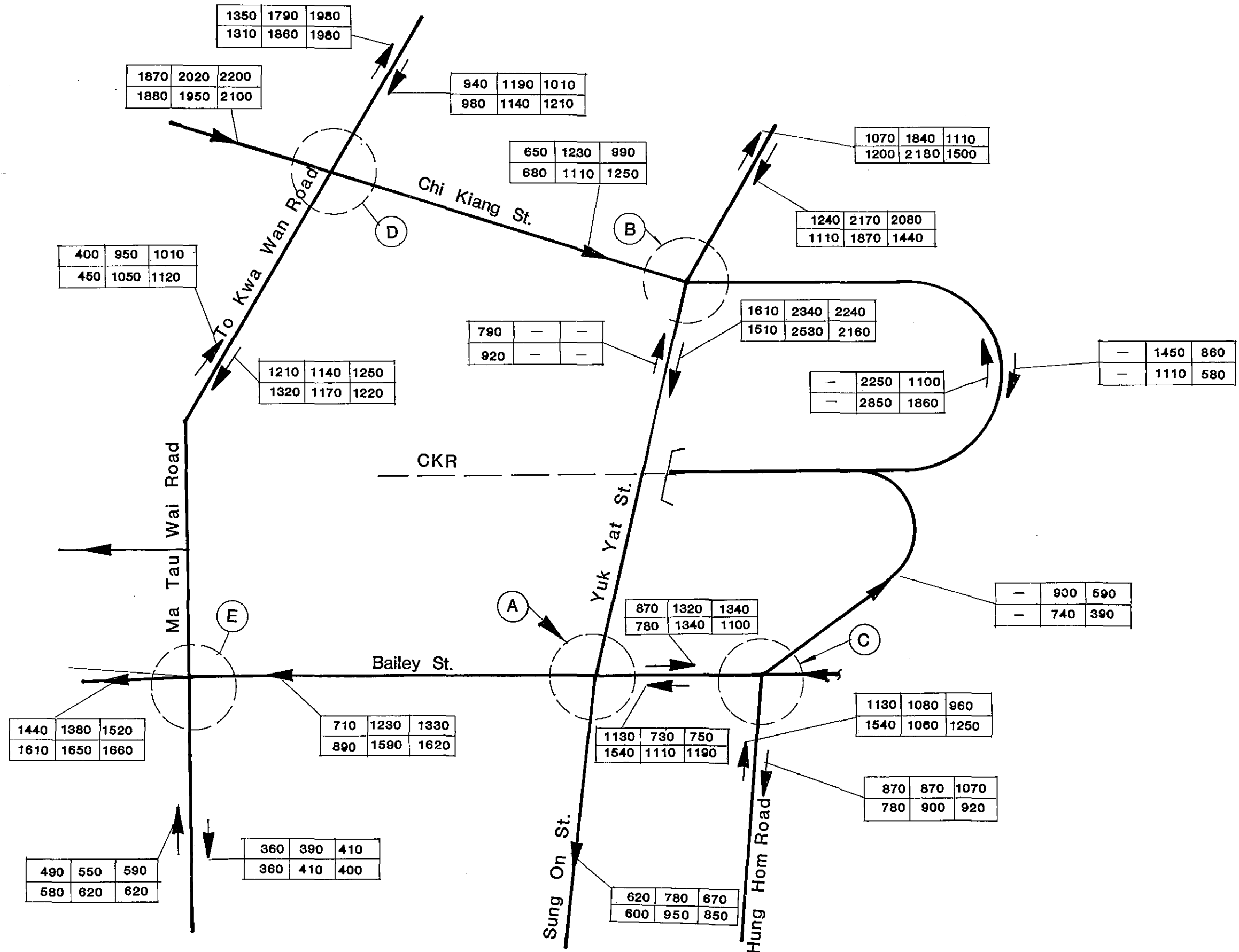
FIGURE NO.

013

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DATE

APRIL 93



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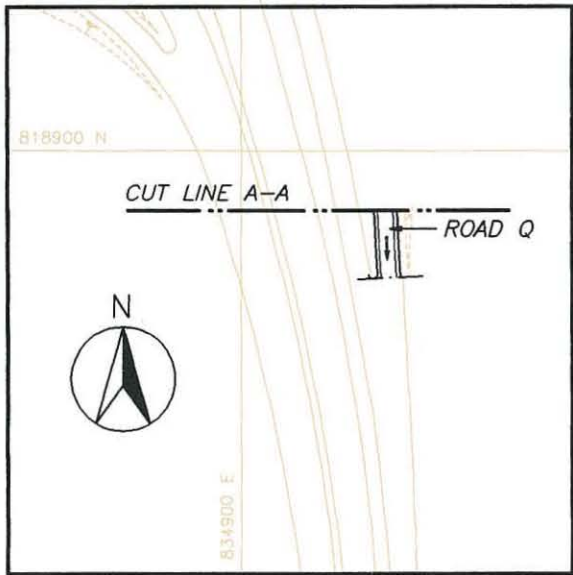
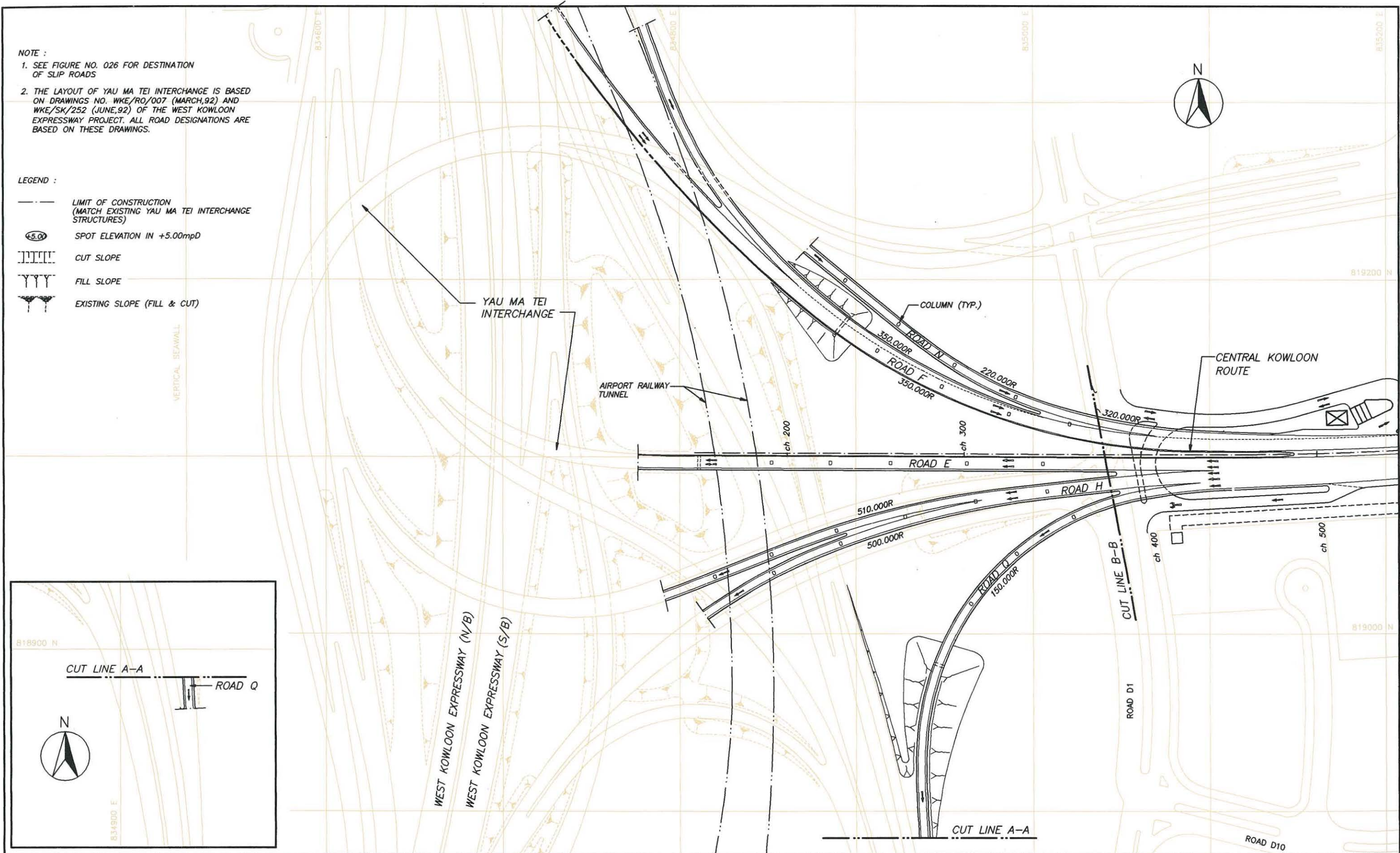
	No	CKR	TOLL
AM		\$ 0.00	\$ 6.85
PM			

○ A Signal Controlled Junction

Parsons Brinckerhoff Maunsell Consultants	Central Kowloon Route Study : To Kwa Wan Interchange Phase 1 : Year 2006 Peak Hour Traffic Volumes	FIGURE NO.	SCALE
		014	DATE APRIL 93

NOTE :
 1. SEE FIGURE NO. 026 FOR DESTINATION OF SLIP ROADS
 2. THE LAYOUT OF YAU MA TEI INTERCHANGE IS BASED ON DRAWINGS NO. WKE/RO/007 (MARCH,92) AND WKE/SK/252 (JUNE,92) OF THE WEST KOWLOON EXPRESSWAY PROJECT. ALL ROAD DESIGNATIONS ARE BASED ON THESE DRAWINGS.

LEGEND :
 --- LIMIT OF CONSTRUCTION (MATCH EXISTING YAU MA TEI INTERCHANGE STRUCTURES)
 (5.00) SPOT ELEVATION IN +5.00mpD
 [|||||] CUT SLOPE
 [YYY] FILL SLOPE
 [---] EXISTING SLOPE (FILL & CUT)



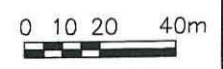
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Central Kowloon Route Study : Preliminary Design
 General Site Layout Plan (Sheet 1 of 6)

FIGURE NO.

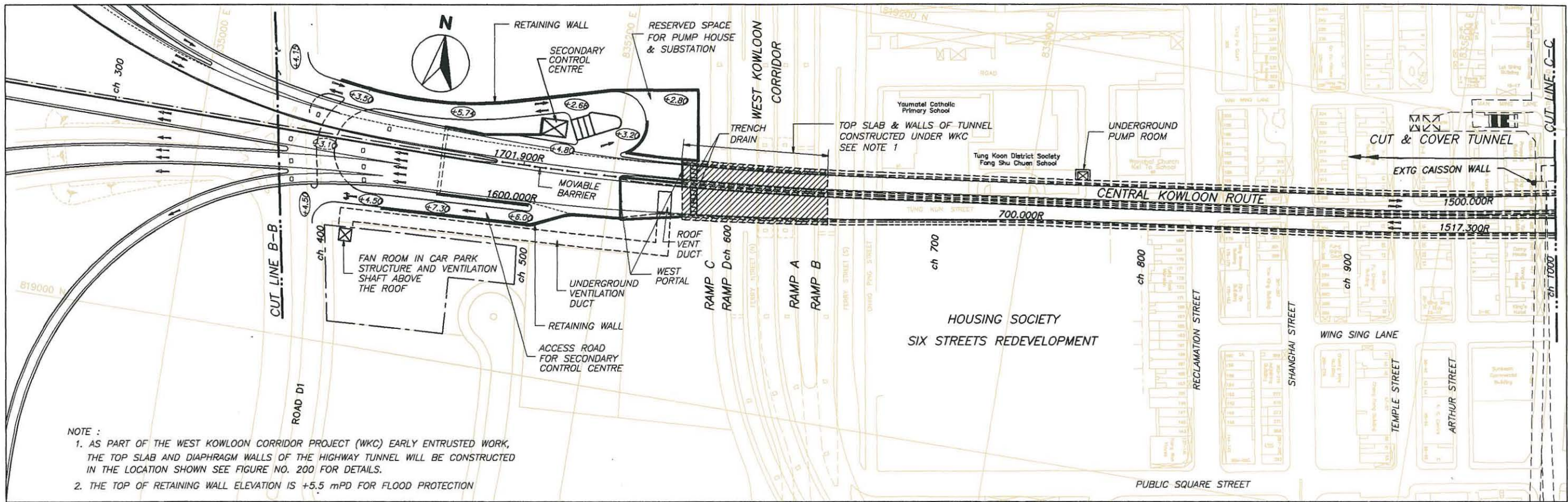
020

SCALE



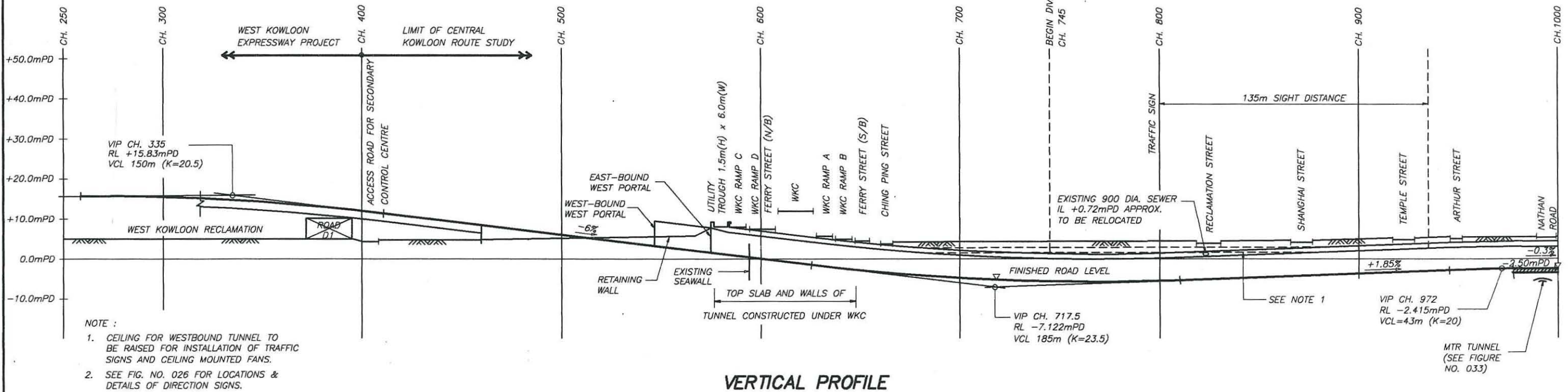
DATE

APRIL 93



NOTE :
 1. AS PART OF THE WEST KOWLOON CORRIDOR PROJECT (WKC) EARLY ENTRUSTED WORK, THE TOP SLAB AND DIAPHRAGM WALLS OF THE HIGHWAY TUNNEL WILL BE CONSTRUCTED IN THE LOCATION SHOWN SEE FIGURE NO. 200 FOR DETAILS.
 2. THE TOP OF RETAINING WALL ELEVATION IS +5.5 mPD FOR FLOOD PROTECTION

PLAN



NOTE :
 1. CEILING FOR WESTBOUND TUNNEL TO BE RAISED FOR INSTALLATION OF TRAFFIC SIGNS AND CEILING MOUNTED FANS.
 2. SEE FIG. NO. 026 FOR LOCATIONS & DETAILS OF DIRECTION SIGNS.

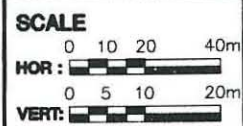
VERTICAL PROFILE

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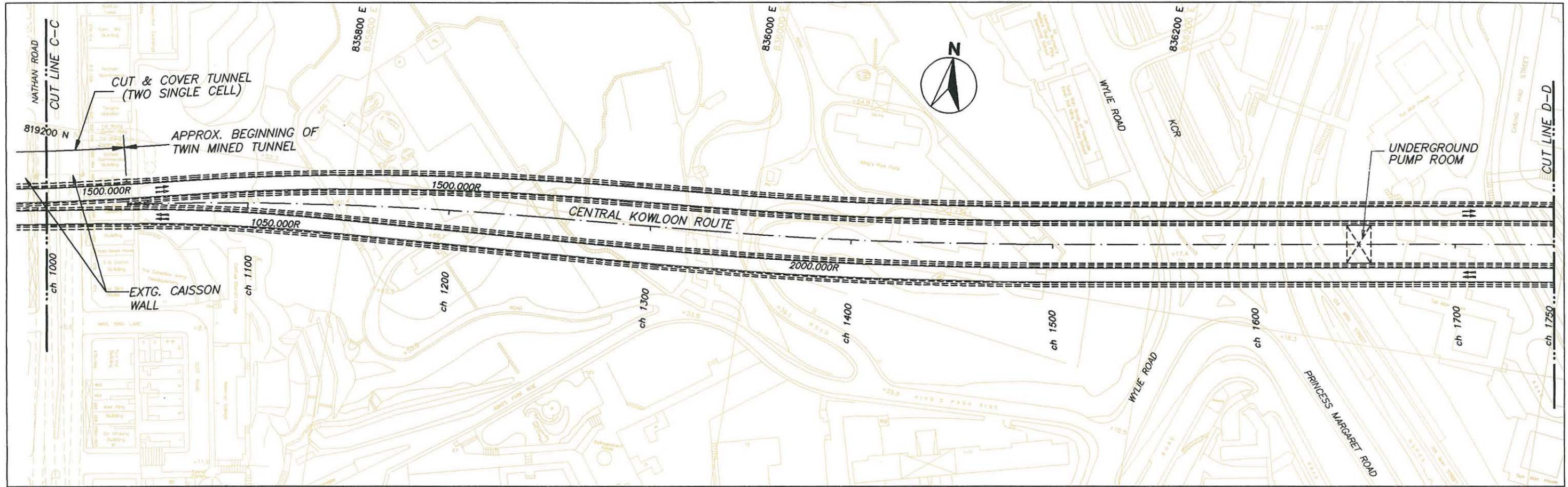
Central Kowloon Route Study : Preliminary Design
 General Site Layout Plan (Sheet 2 of 6)

FIGURE NO.

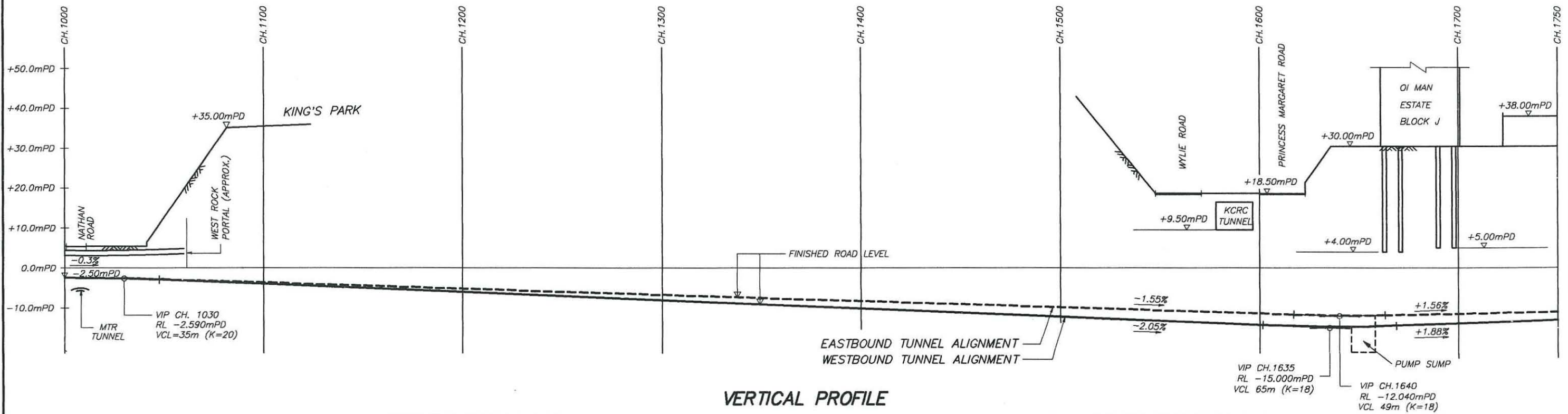
021



DATE
 APRIL 93



PLAN



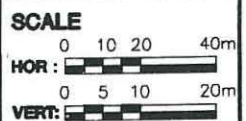
VERTICAL PROFILE

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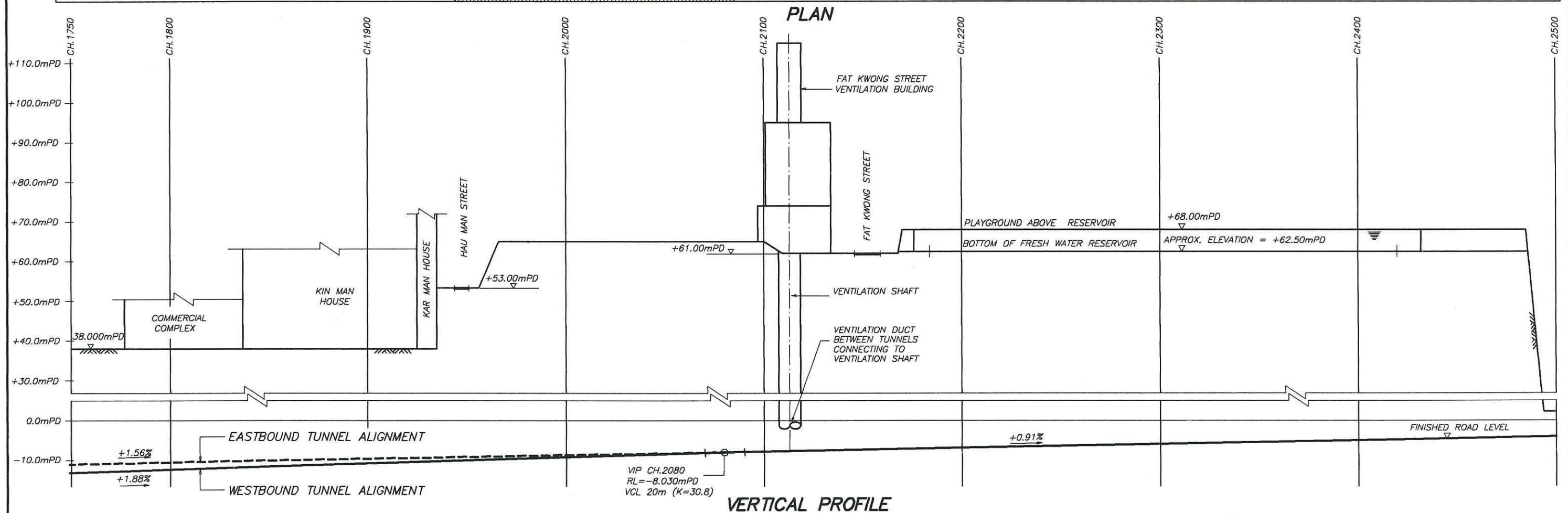
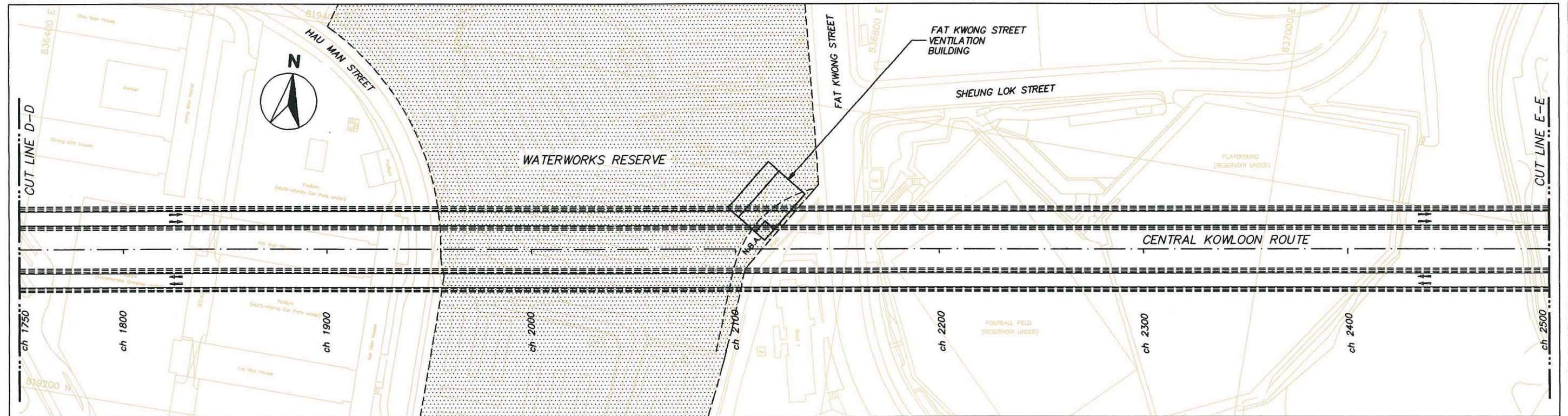
Central Kowloon Route Study : Preliminary Design
General Site Layout Plan (Sheet 3 of 6)

FIGURE NO.

022



DATE
APRIL 93



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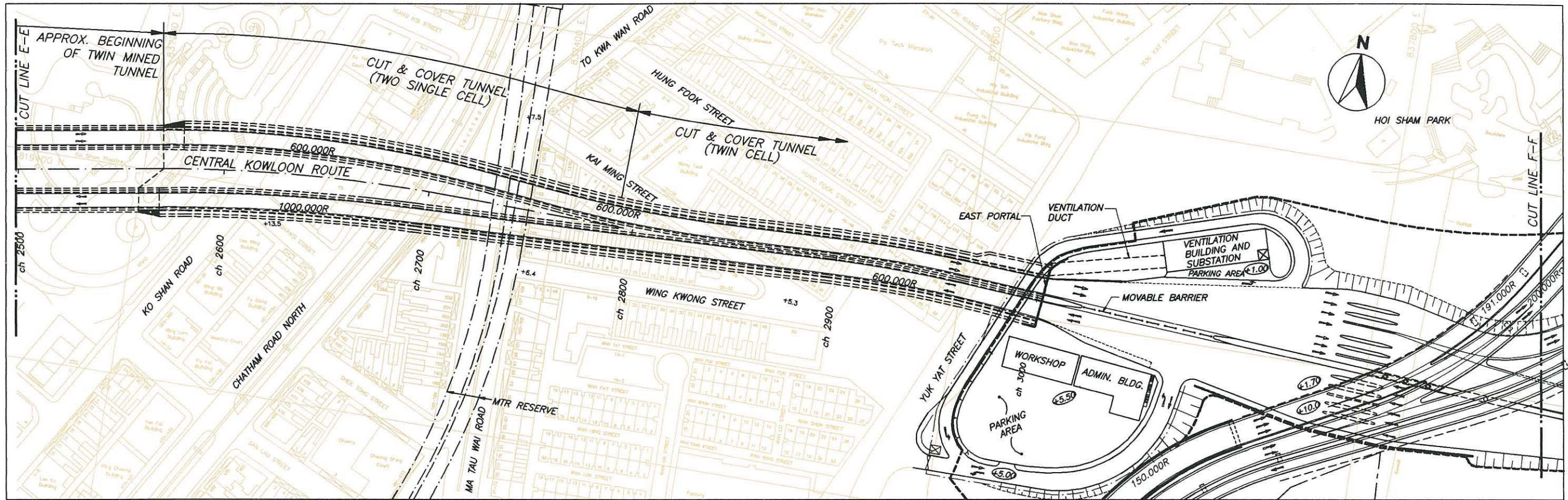
Central Kowloon Route Study : Preliminary Design
General Site Layout Plan (Sheet 4 of 6)

FIGURE NO.

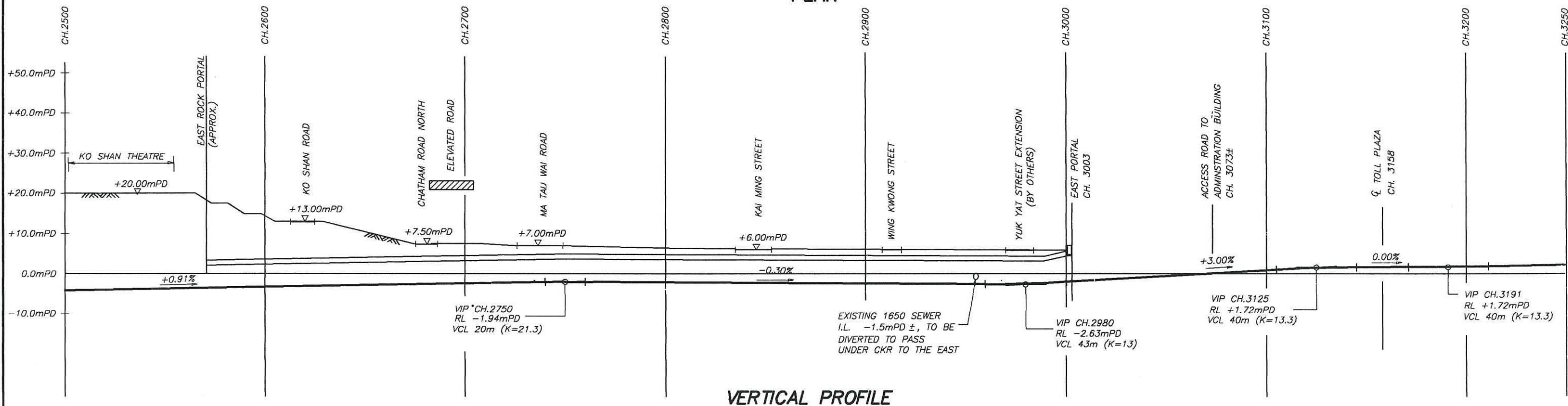
023

SCALE
HOR : 0 10 20 40m
VERT: 0 5 10 20m

DATE
APRIL 93



PLAN



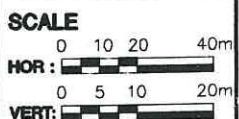
VERTICAL PROFILE

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Central Kowloon Route Study : Preliminary Design
General Site Layout Plan (Sheet 5 of 6)

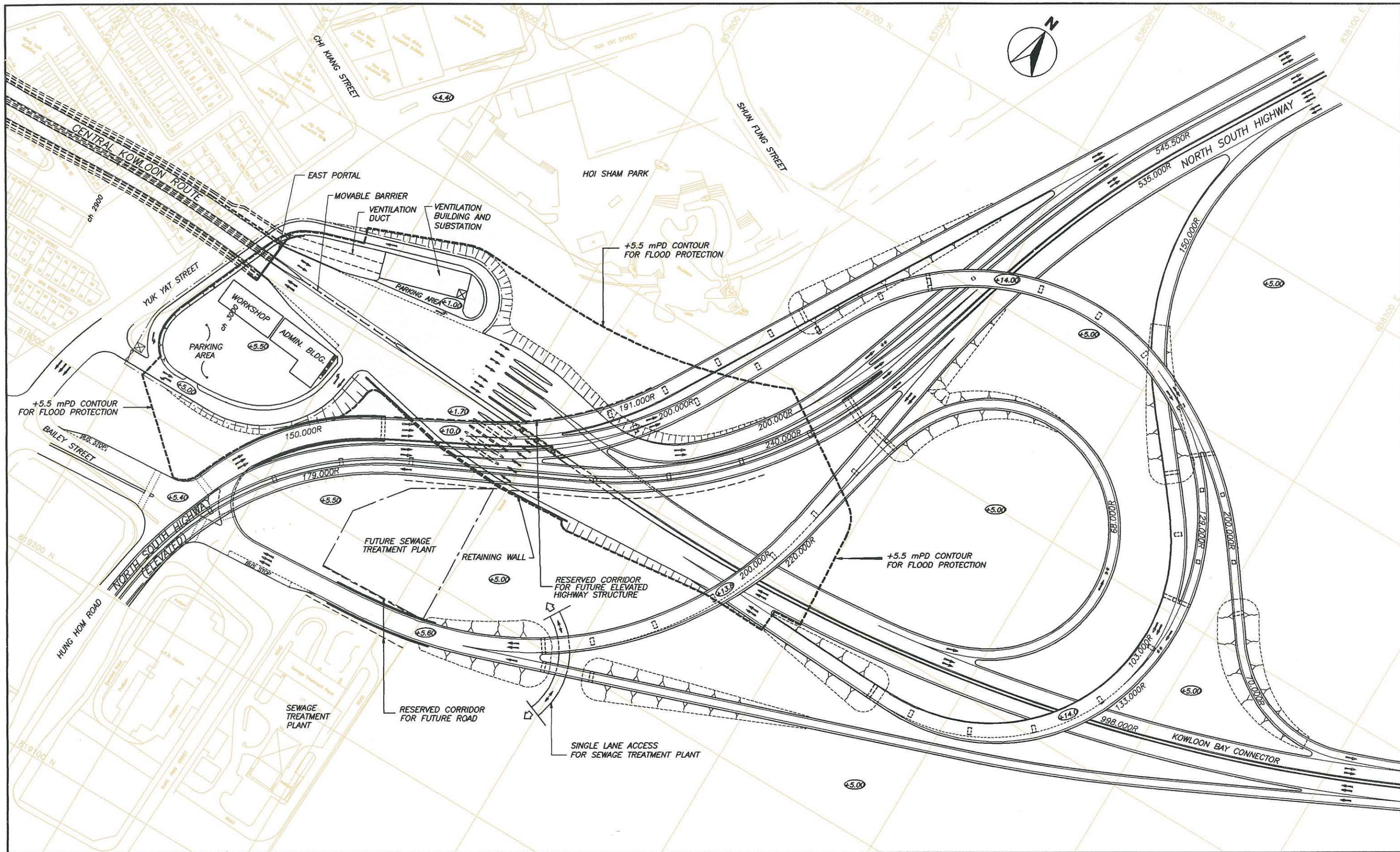
FIGURE NO.

024



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APRIL 93



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Central Kowloon Route Study : Preliminary Design
General Site Layout Plan (Sheet 6 of 6)

FIGURE NO.

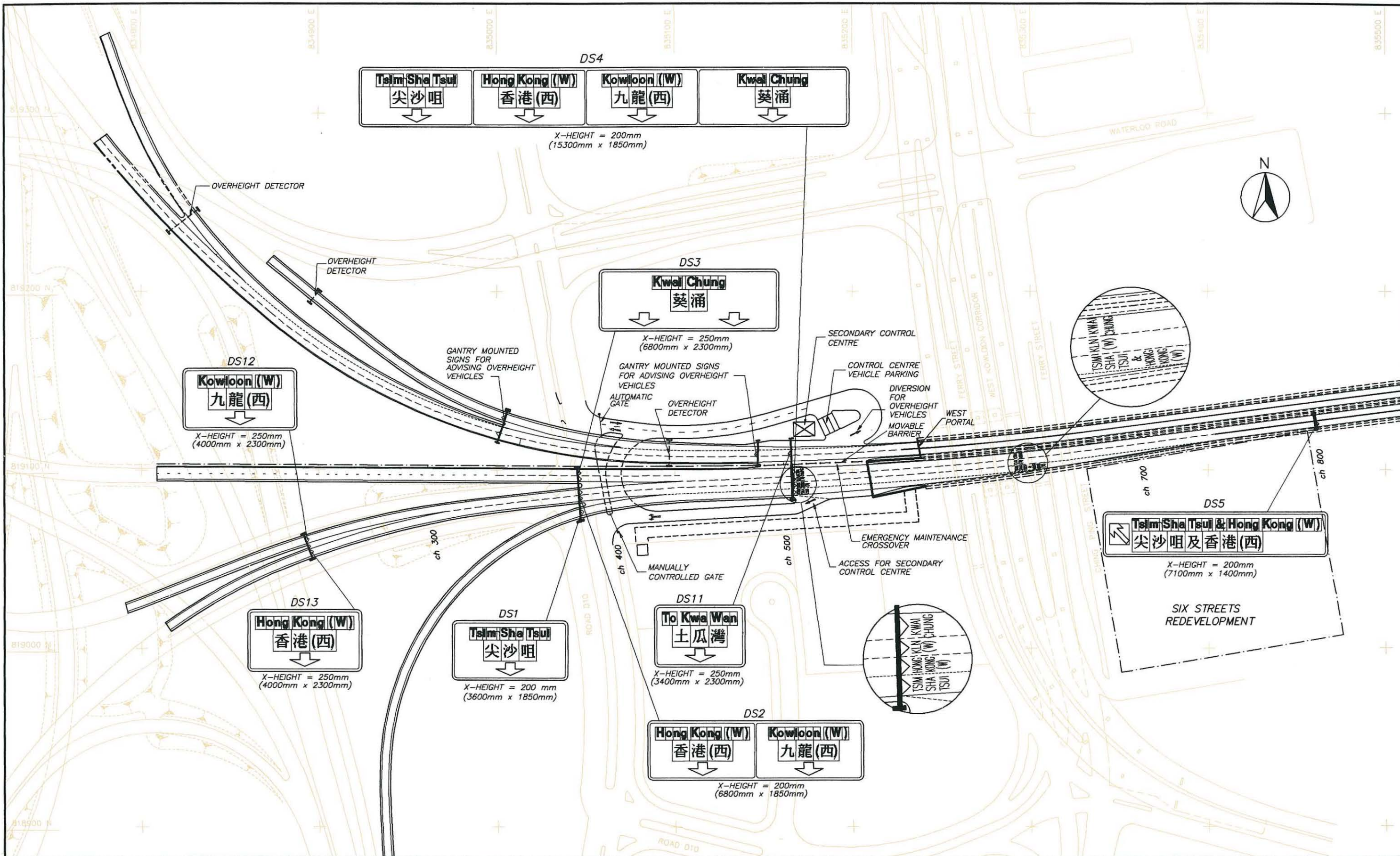
025

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Central Kowloon Route Study : Preliminary Design
Road Signing & Marking Plan - West Portal Area

FIGURE NO.

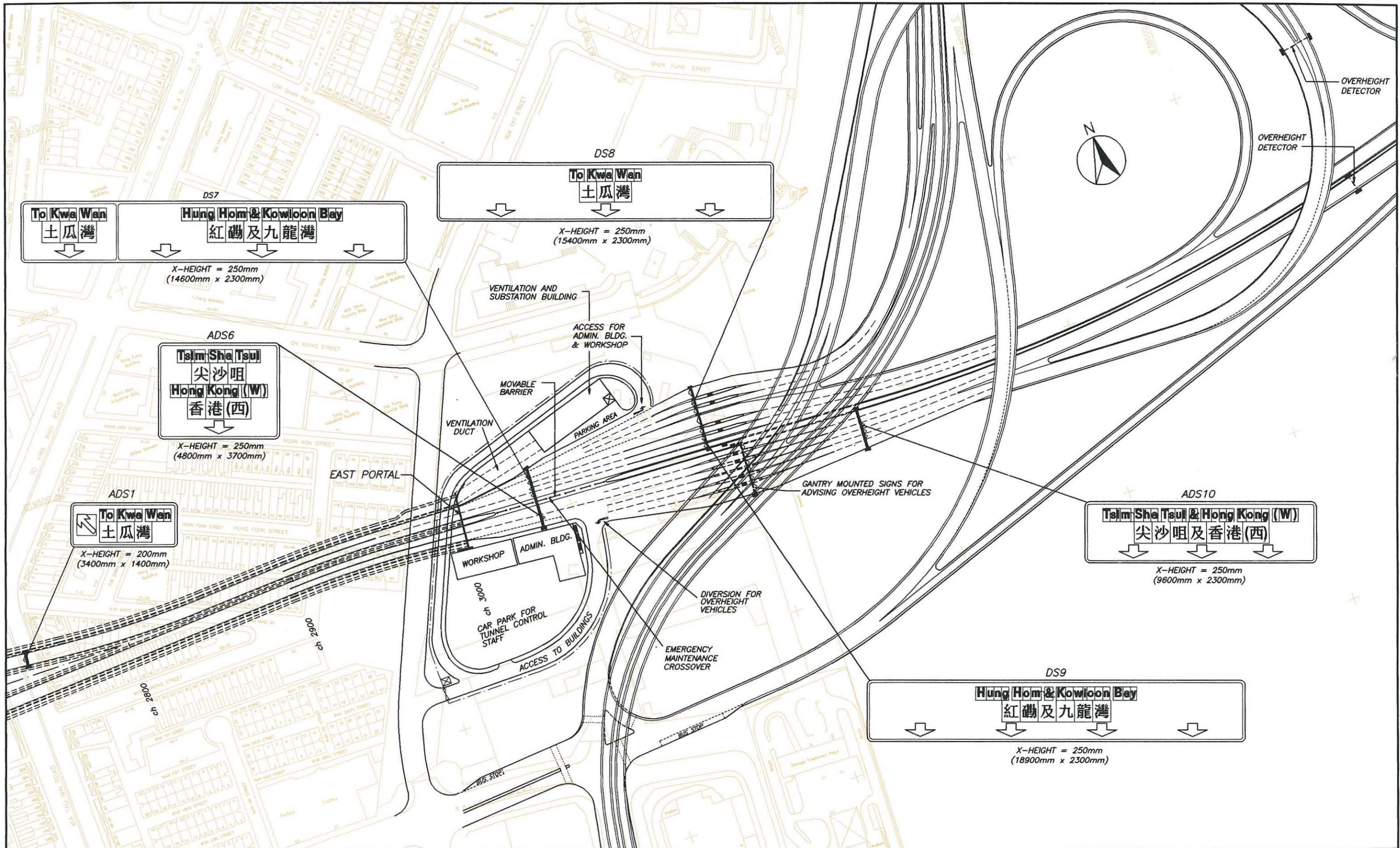
026

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0 10 20 40m

DATE

APRIL 93



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Central Kowloon Route Study : Preliminary Design
Road Signing and Marking Plan - East Portal Area

FIGURE NO.

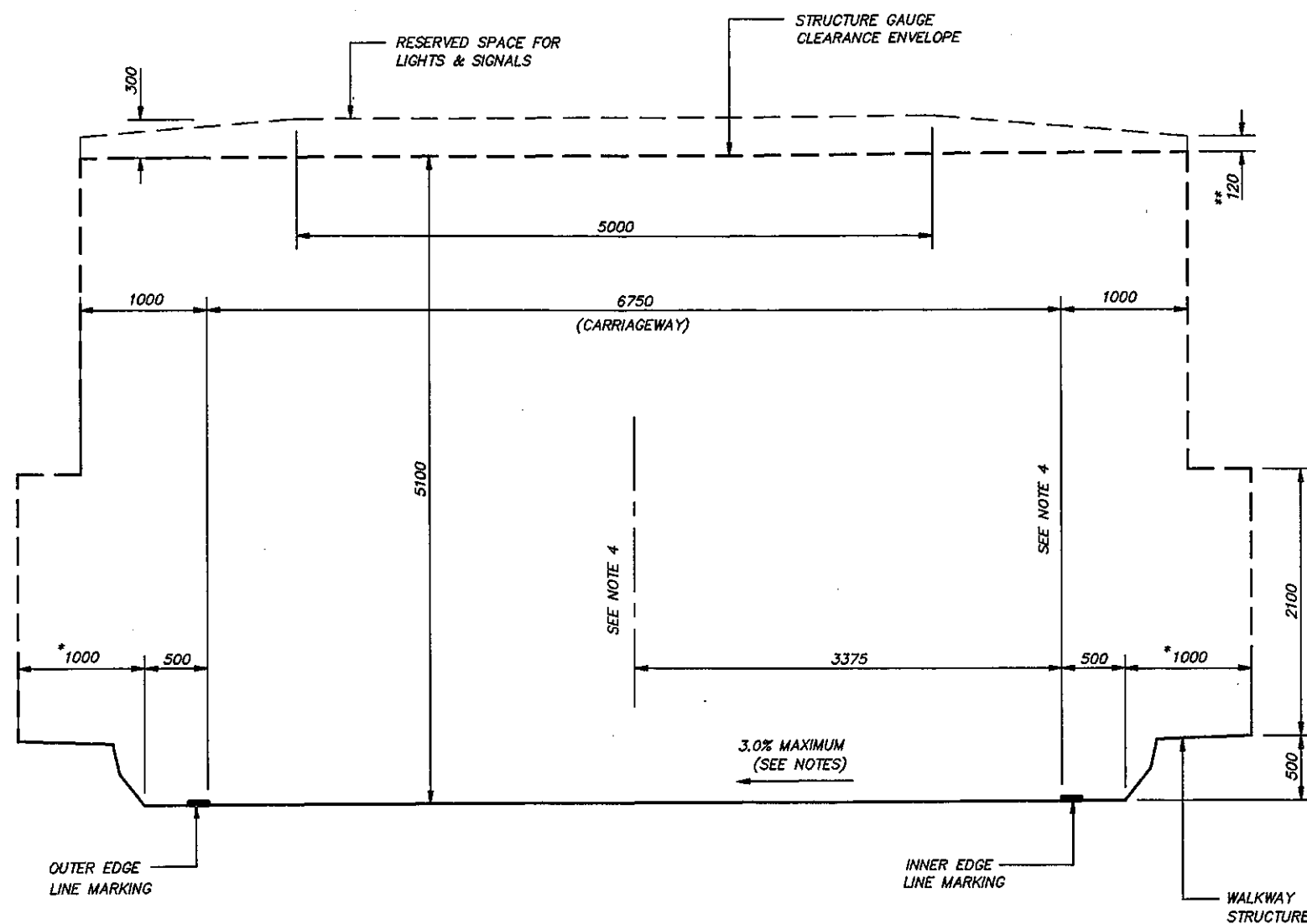
027

SCALE

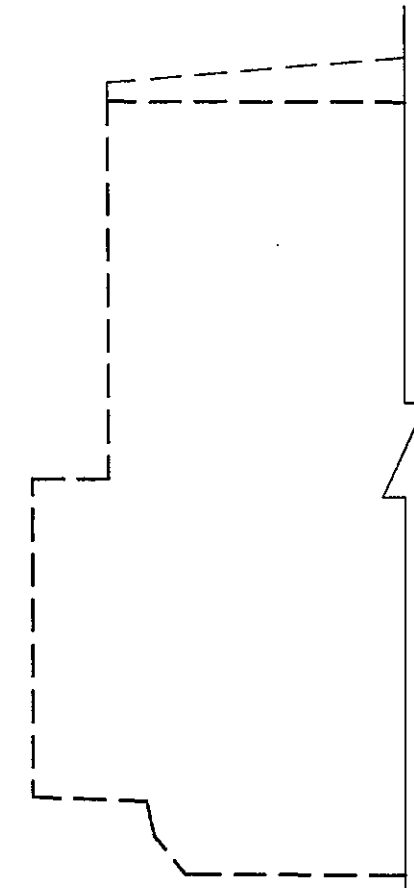
0 10 20 40m

DATE

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☉ CENTRAL KOWLOON ROUTE



2-LANE TUNNEL

- NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETERS.
 - * 2. MINIMUM WIDTH OF WALKWAY STRUCTURE IS 800mm.
 3. MAX. SUPERELEVATION IS :
 - (i) 3.0% FOR HORIZ. CURVES > 600m INSIDE THE CUT-AND-COVER TUNNELS.
 - (ii) 1.75% FOR HORIZ. CURVES > 1000m INSIDE THE MINED TUNNELS.
 4. PROFILE GRADE LINE IS MEASURED FROM :
 - (i) INNER EDGE LINE MARKING FOR CUT-AND-COVER TUNNEL.
 - (ii) 3375mm THE INNER EDGE LINE MARKING FOR THE TUNNELS.
 5. WHERE TRAFFIC SIGNS AND VENTILATION FANS ARE LOCATED, ADDITIONAL SPACE ABOVE STRUCTURE GAUGE MAY BE NEEDED.
 - ** 6. MINIMUM CLEARANCE FOR DUCT SPACE ABOVE STRUCTURE GAUGE IS 90mm.

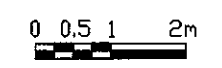
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Central Kowloon Route Study : Preliminary Design
General Tunnel Spatial Requirements and Control Lines

FIGURE NO.

030

SCALE



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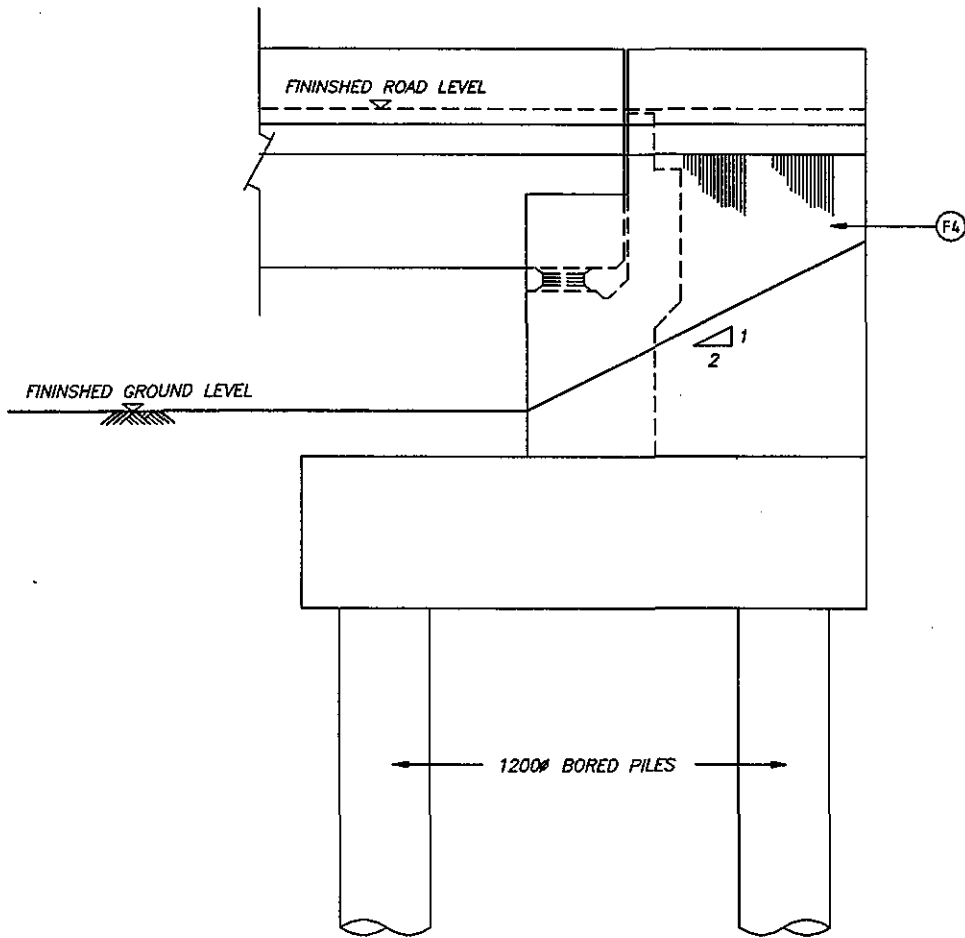
APRIL 93

LEGEND :

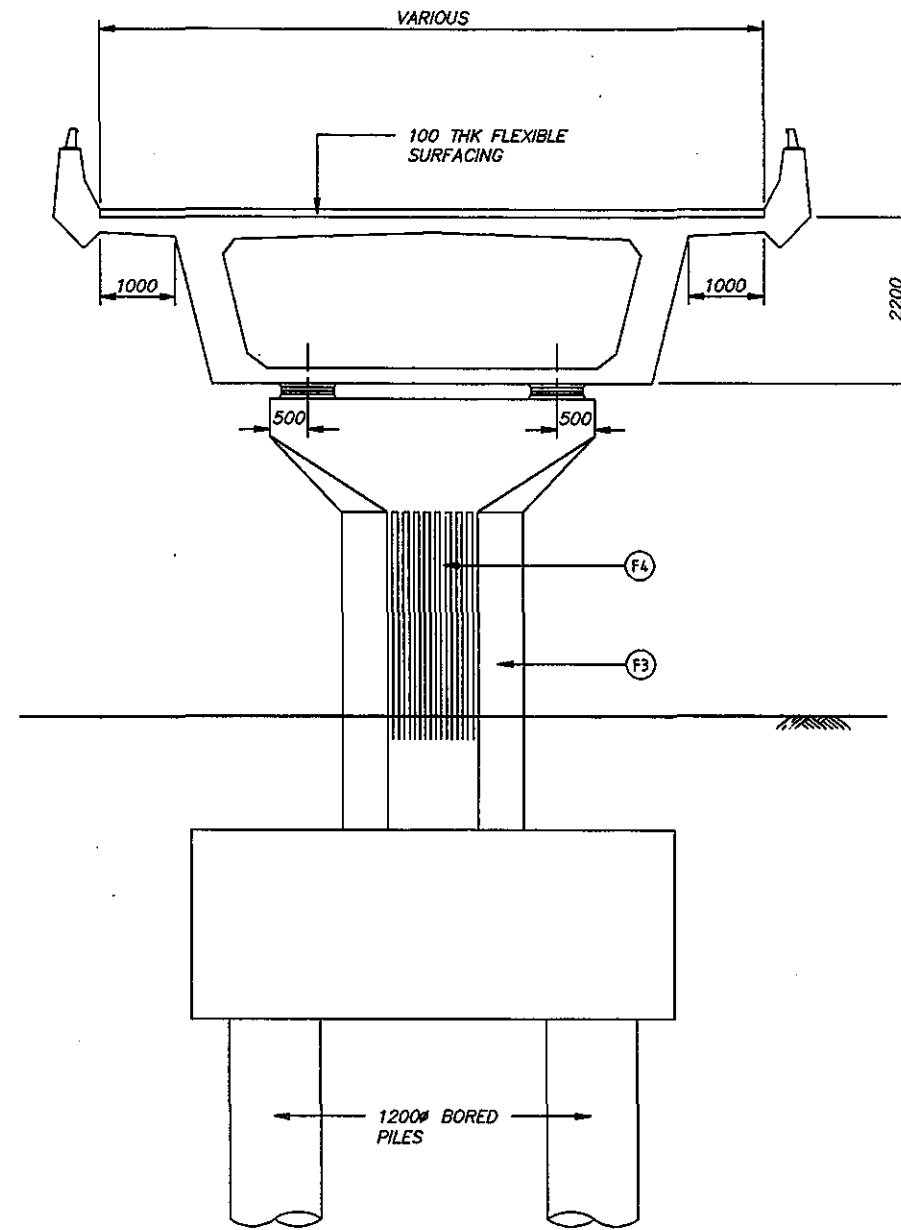
- (F3) CONCRETE FINISH WITH SMOOTH SURFACE
- (F4) CONCRETE FINISH WITH STRIPE PATTERN SURFACE

NOTES :

THE CONFIGURATION OF THE TYPICAL SECTION SHOWN IS BASED ON THE LATEST DESIGN OF WEST KOWLOON EXPRESSWAY PROJECT. DETAILS ARE SUBJECT TO REVISION BY WEST KOWLOON EXPRESSWAY PROJECT.



TYPICAL ELEVATION FOR BRIDGE ABUTMENT



TYPICAL SECTION FOR ELEVATED ROAD STRUCTURE

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Central Kowloon Route Study : Preliminary Design
Western Approach - Structures

FIGURE NO.

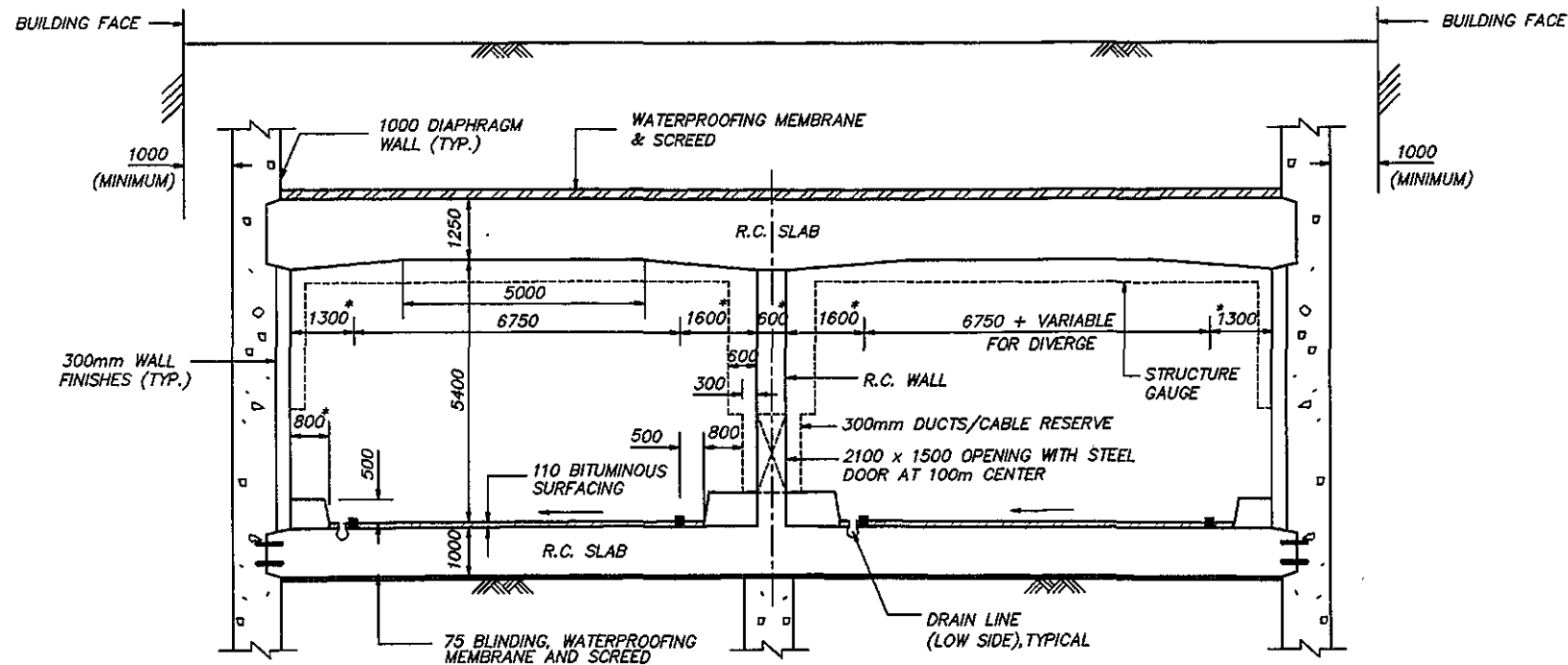
031

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0 5 10 20m

DATE

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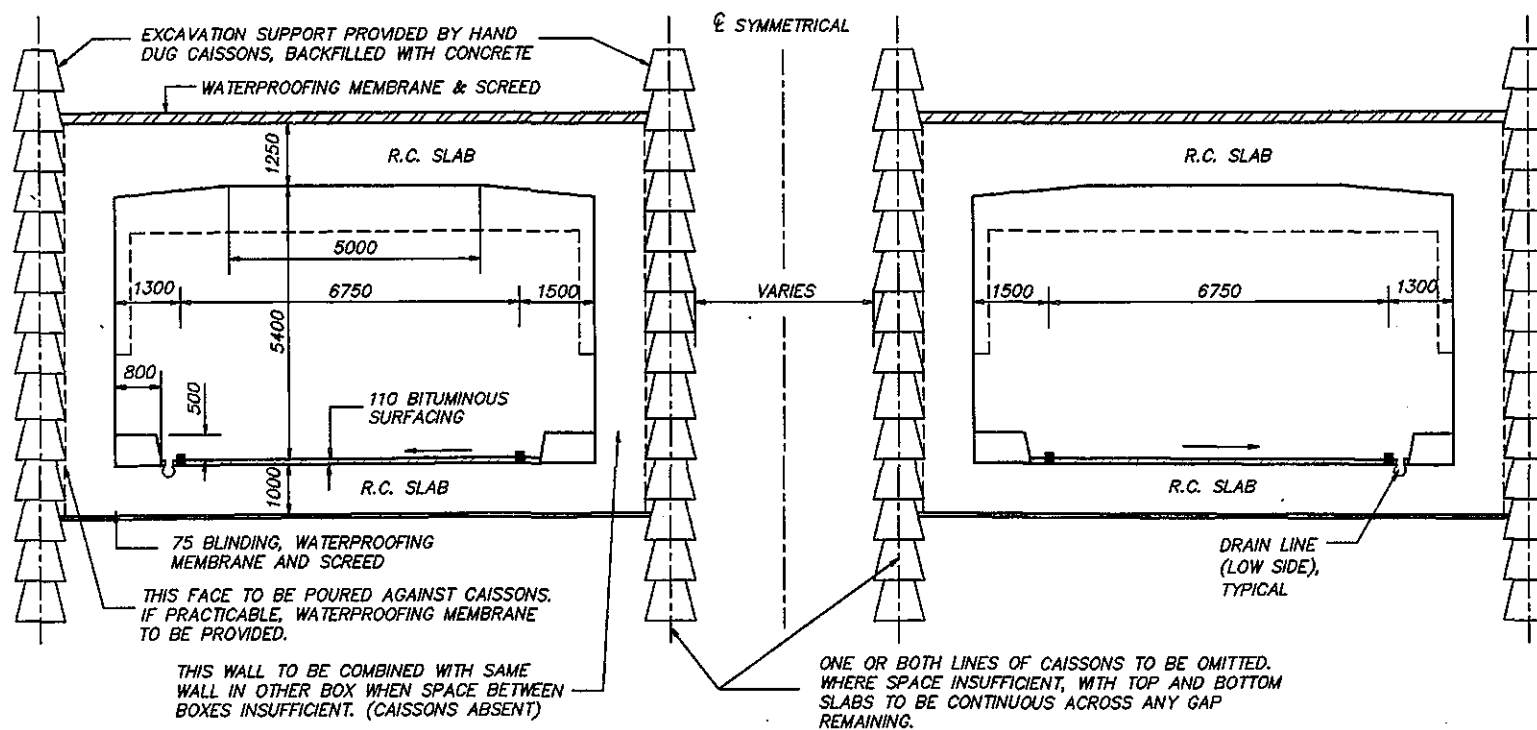


NOTE :
 1. AT SELECTED LOCATIONS, THE HEIGHT WILL BE INCREASED TO PROVIDE FOR TRAFFIC SIGNS AND FANS FOR THE LONGITUDINAL VENTILATION SYSTEM.

CUT-AND-COVER TUNNEL - TYPICAL CROSS SECTION AT WESTERN END (LOOKING EAST)
 (PORTAL TO APPROXIMATELY CHAINAGE 1035)

GENERAL NOTES :

1. SEE DRAWING 94591/031 FOR SPATIAL REQUIREMENTS AND CONTROL LINES.
2. STRUCTURE DIMENSIONS SUBJECT TO CHANGE DURING DETAILED DESIGN
3. ALL DIMENSIONS ARE IN (mm)
- * 4. DESIRABLE DESIGN DIMENSIONS:
 1500mm FROM FACE OF WALL TO EDGE OF CARRIAGEWAY
 1000mm FOR WALKWAY STRUCTURE
 800mm FOR CENTER WALL
- ABSOLUTE MINIMUM DIMENSIONS:
 1300mm FROM FACE OF WALL TO EDGE OF CARRIAGEWAY
 800mm FOR WALKWAY STRUCTURE
 600mm FOR CENTER WALL
5. DRAIN LINE TO BE LOCATED ON THE LOW SIDE OF EACH CARRIAGEWAY, WHERE REVERSE CROSSFALL FROM ONE SIDE TO ANOTHER OCCURS, A DRAIN LINE WILL BE PROVIDED AT THE TRANSITION ACROSS THE CARRIAGEWAY.
6. ACCESS TO THE VENTILATION DUCTS WILL BE PROVIDED AT THE FOLLOWING POSSIBLE LOCATIONS :
 - TRANSITION POINTS FROM MINED TUNNEL TO CUT & COVER TUNNEL
 - CONNECTION TO VERTICAL VENTILATION SHAFT BELOW FAT KWONG STREET VENTILATION BUILDING
 - TUNNEL PORTAL AT THE EASTERN END



NOTE :
 1. EXACT LOCATION OF TRANSITION FROM CUT-AND-COVER TUNNEL TO MINED TUNNEL TO BE DETERMINED DURING DETAILED DESIGN.

CUT-AND-COVER TUNNEL - TYPICAL CROSS SECTION EAST OF NATHAN ROAD
 (APPROXIMATELY CHAINAGE 1035 TO 1060)

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Central Kowloon Route Study : Preliminary Design
 Western Cut-and-Cover Tunnel - Typical Cross Sections

FIGURE NO.

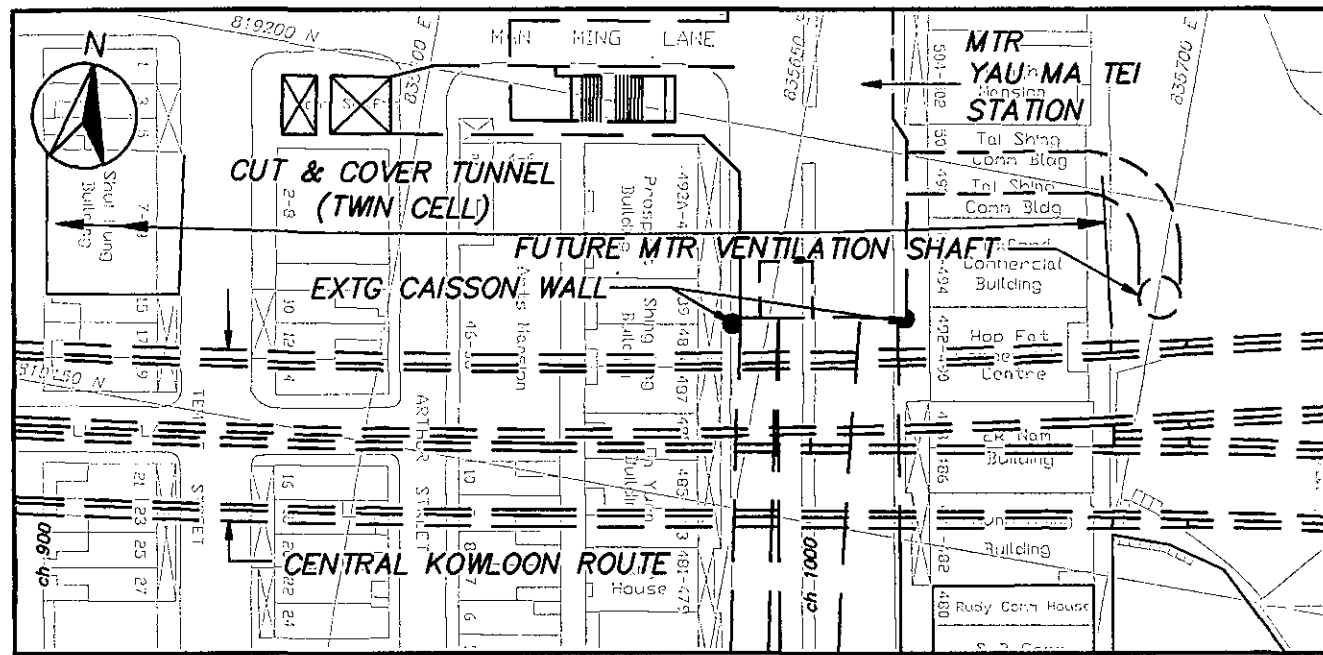
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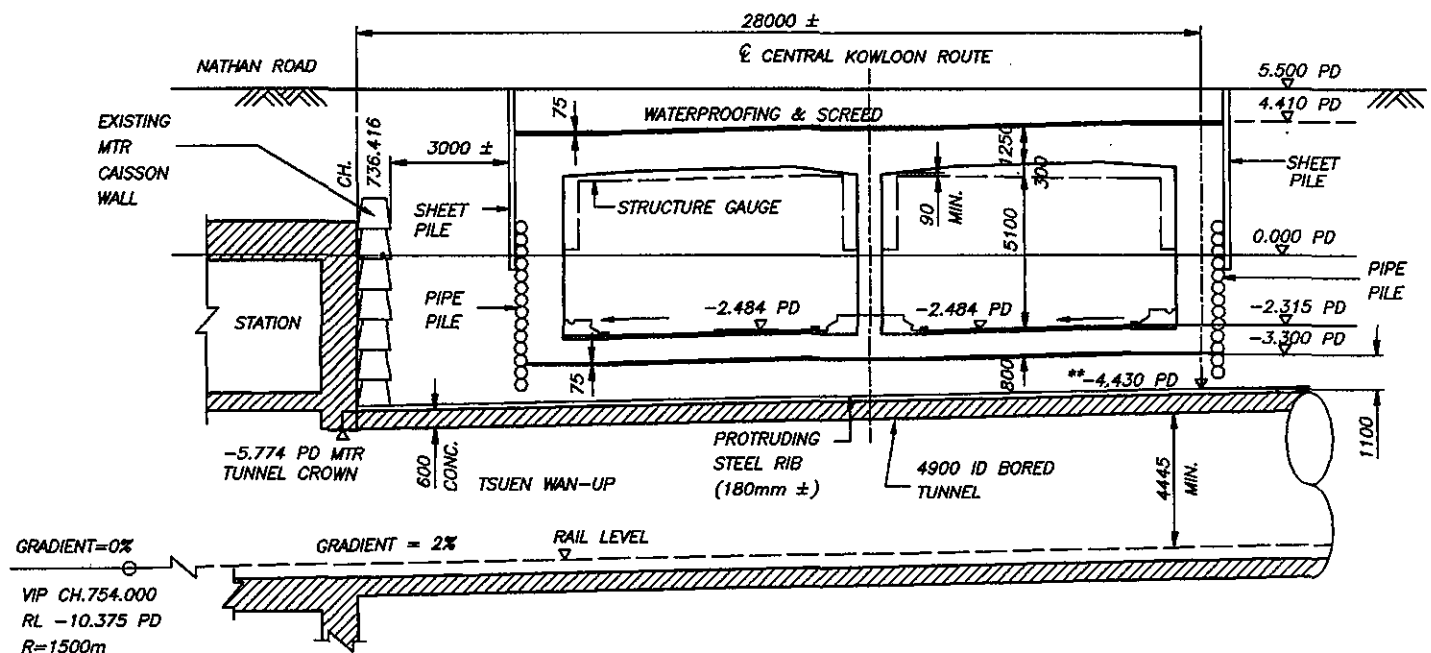
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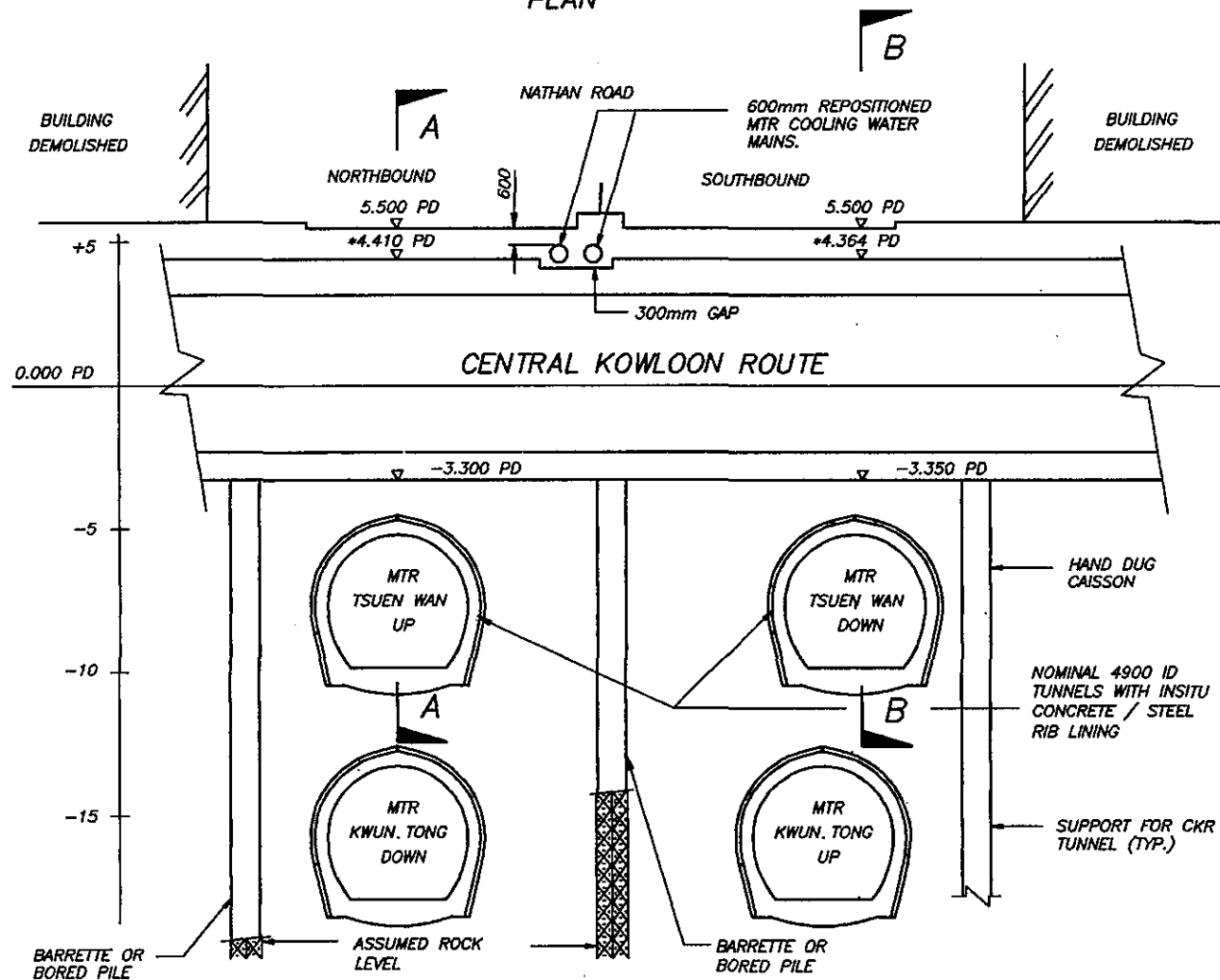
APRIL 93



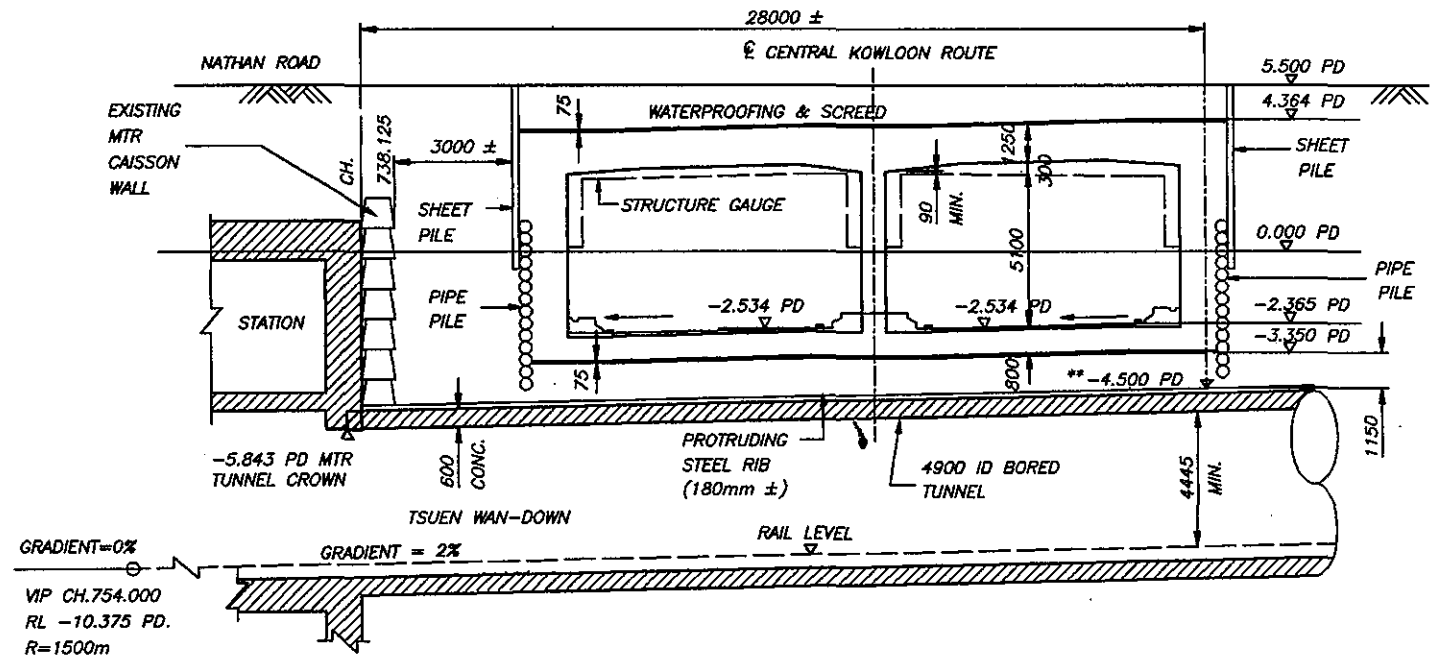
PLAN



SECTION LOOKING EAST A-A



ELEVATION LOOKING NORTH FROM SOUTH OF YAU MA TEI STATION



SECTION LOOKING EAST B-B

GENERAL NOTES FOR SECTIONS :

1. ALL ELEVATIONS IN METRE ABOVE HKPD.
2. ALL DIMENSIONS IN MILLIMETRE.
3. DIMENSIONS & ELEVATIONS MAY BE ADJUSTED DURING FINAL DESIGN.

**4. HEIGHT MAY BE VARIED LOCALLY AS NEEDED.

**5. ELEVATION OF STEEL RIB SHOWN TO BE VERIFIED BY MTRC.

6. MAXIMUM RATE OF SUPERELEVATION ALLOWED IS 2.5%

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Central Kowloon Route Study : Preliminary Design
Tunnel Crossing at Yau Ma Tei MTR Station

FIGURE NO.

033

SCALE

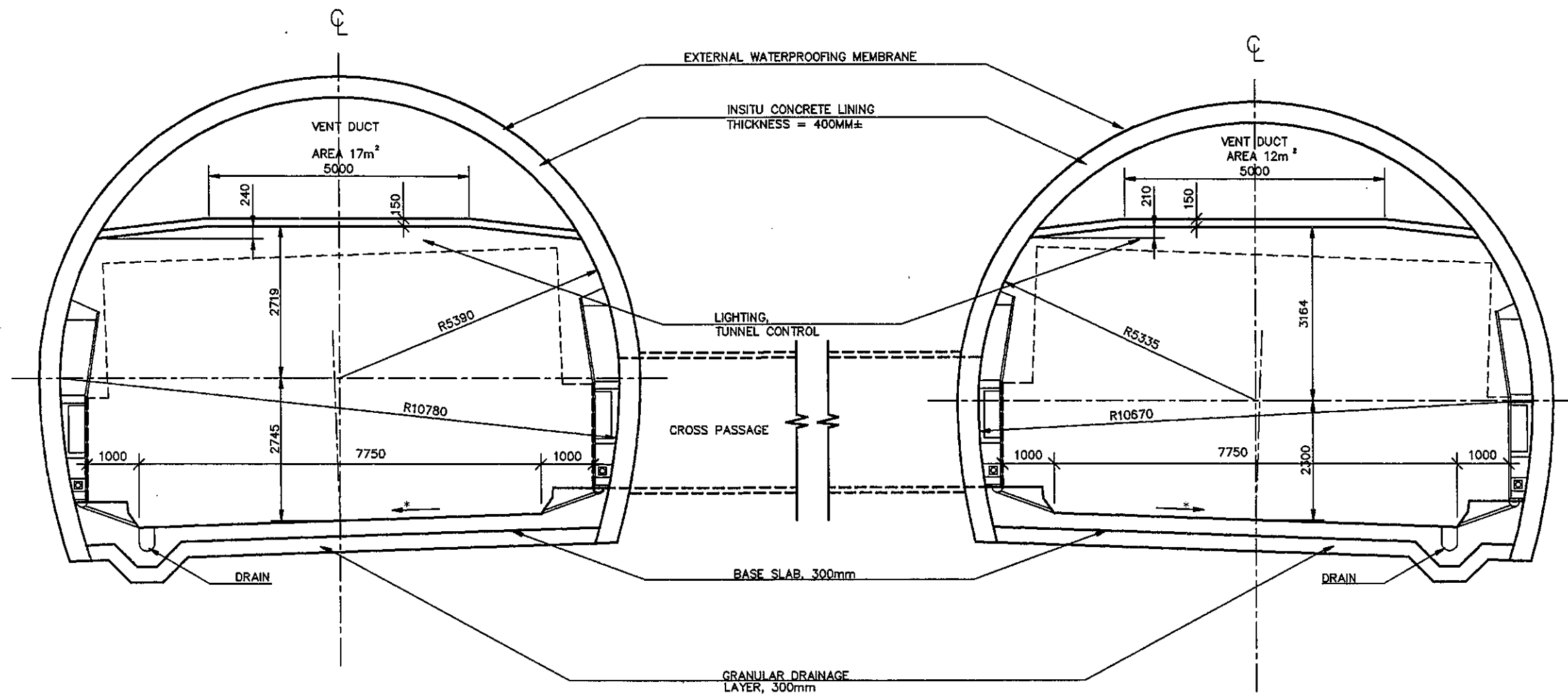
0 10 20 40m

PLAN: 0 2.5 5 10m

SECT: 0 2.5 5 10m

DATE

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TYPICAL ROCK TUNNEL, WEST OF MID-VENTILATION BUILDING

TYPICAL ROCK TUNNEL, EAST OF MID-VENTILATION BUILDING

NOTE :
 * DIRECTION OF CROSSFALL WILL VARY WITH DIRECTION OF HORIZONTAL CURVE.

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Central Kowloon Route Study : Preliminary Design
 Rock Tunnel - Typical Cross Sections

FIGURE NO.

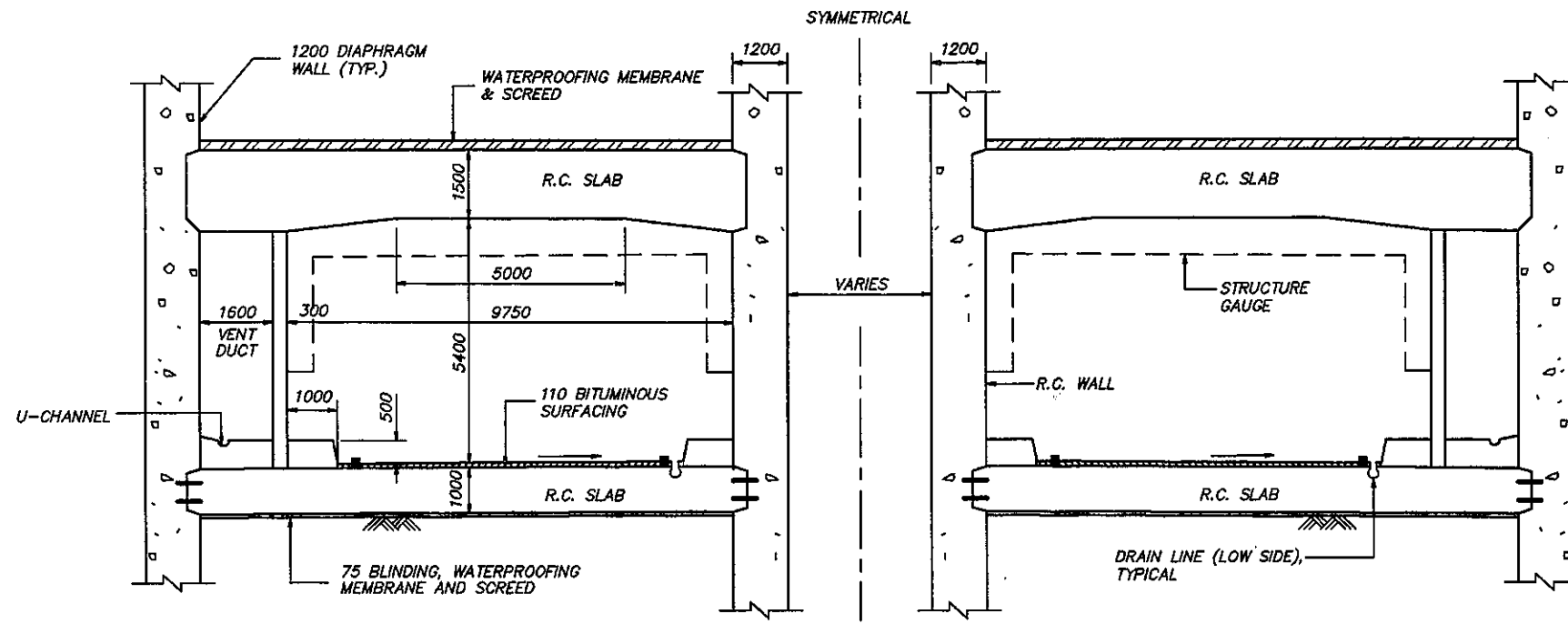
034

SCALE

0 0.5 1 2m

DATE

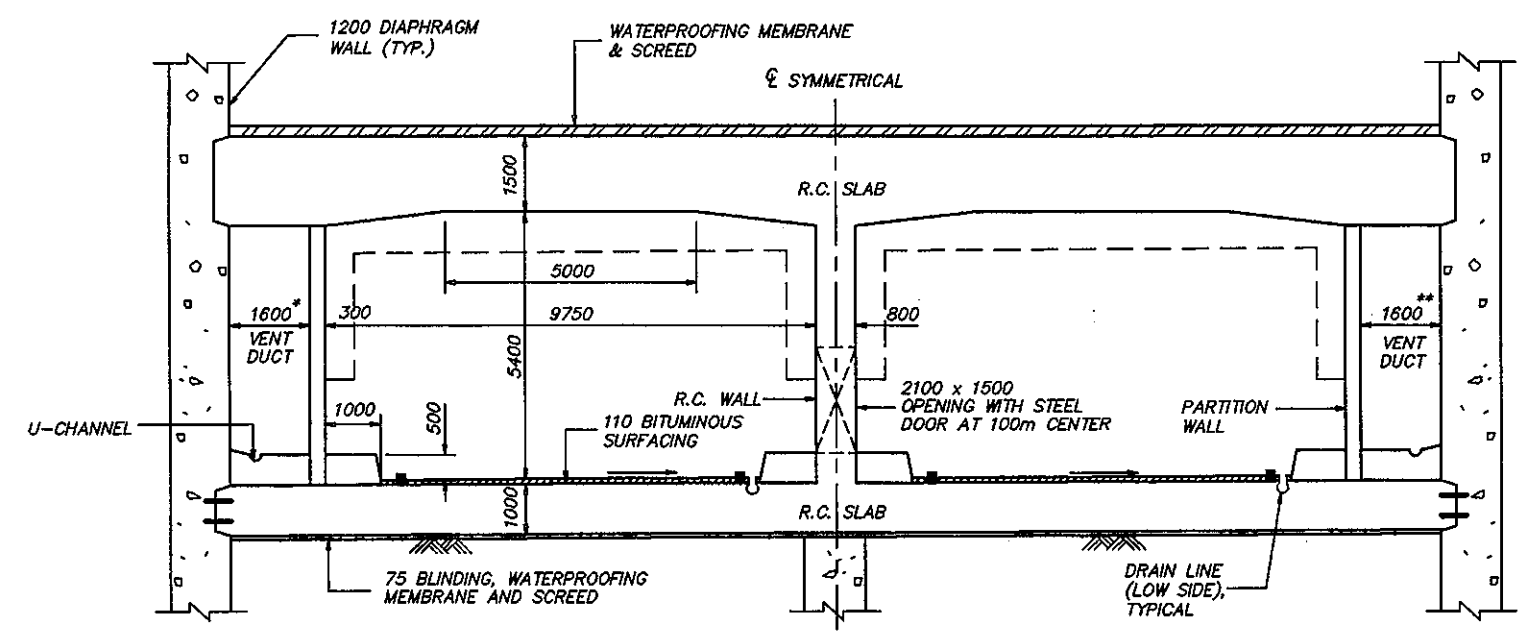
APRIL 93



NOTES :
 1. SEE DRAWING 94591/032 FOR GENERAL NOTES.

NOTES :
 1. EMERGENCY EXIT TO STREET SURFACE TO BE PROVIDED.

CUT-AND-COVER TUNNEL - TYPICAL CROSS SECTION BETWEEN KO SHAN THEATRE AND MA TAU WAI ROAD (LOOKING EAST)
 (APPROXIMATELY CHAINAGE 2580 TO 2780)



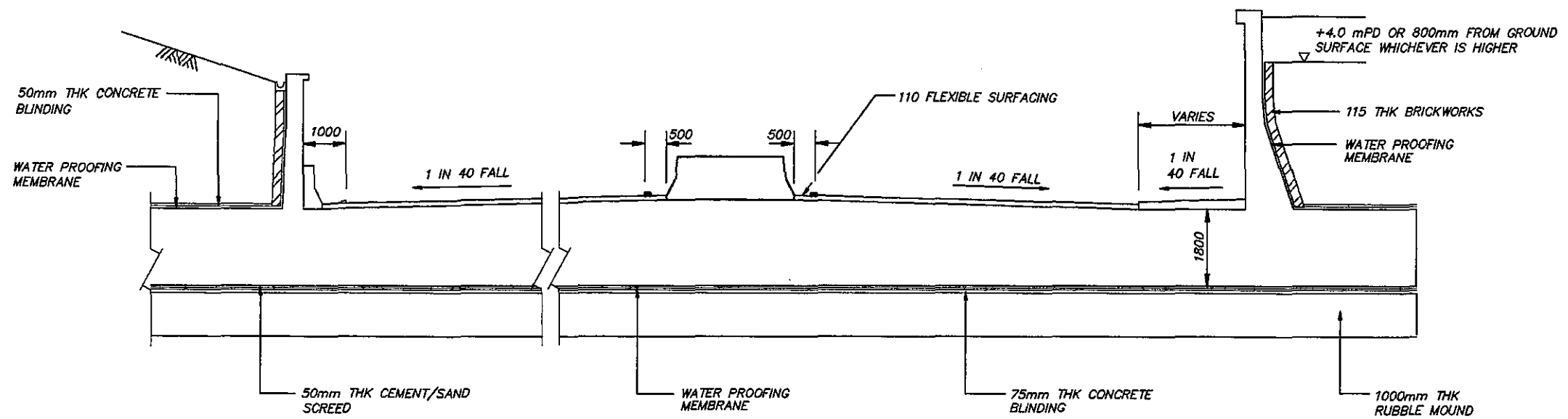
NOTES :
 *1. WITHIN 30 METRES FROM THE PORTAL, THE WIDTH OF THE VENTILATION DUCT WILL BE INCREASED FROM 1.6 METRES TO 4.0 METRES FOR THE EASTBOUND TUNNEL. THE STRUCTURAL SLAB AND PARTITION WALL CONFIGURATIONS WILL BE MODIFIED AS NEEDED.
 **2. BETWEEN CHAINAGE 2910 AND THE PORTAL, THE VENTILATION DUCT FOR THE WESTBOUND TUNNEL CAN BE ELIMINATED AS NEEDED FOR CLEARANCE TO EXISTING STRUCTURES.

CUT-AND-COVER TUNNEL - TYPICAL CROSS SECTION AT EASTERN END (LOOKING EAST)
 (APPROXIMATELY CHAINAGE 2780 TO 3003)

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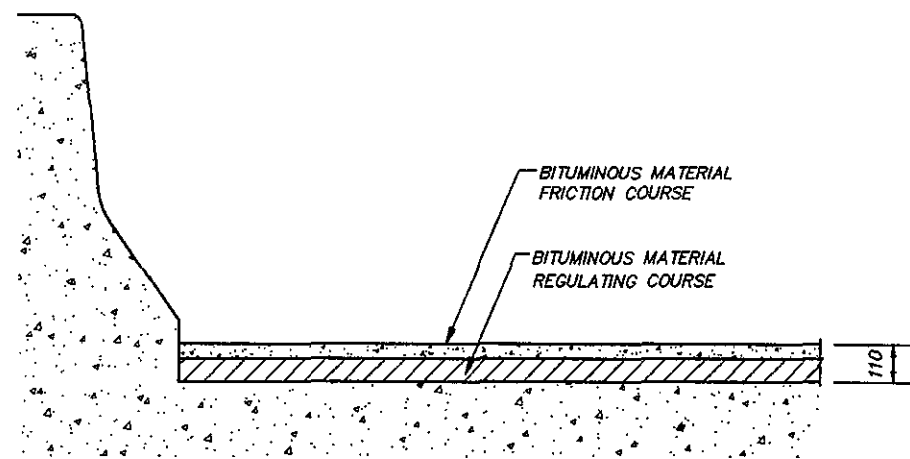
Central Kowloon Route Study : Preliminary Design
 Eastern Cut-and-Cover Tunnel - Typical Cross Sections

FIGURE NO. 035	SCALE NOT TO SCALE
	DATE APRIL 93

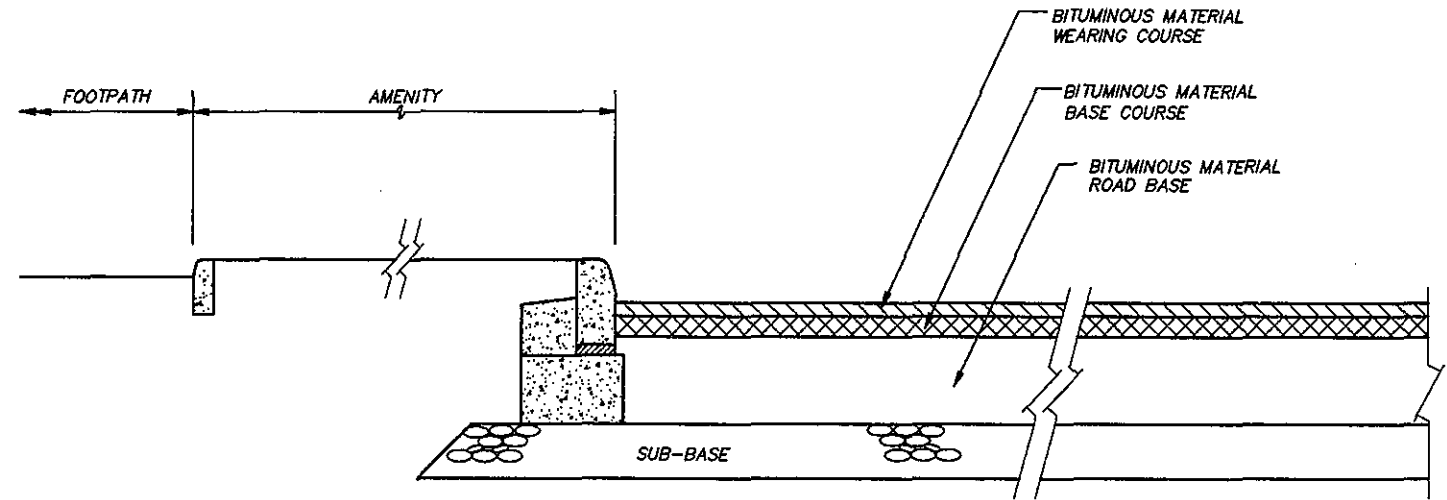


NOTE :
THE TOP OF RETAINING WALL ELEVATION WILL BE VARIED AS NEEDED TO PROVIDE A FLOOD PROTECTION BOUNDARY WITH THE SURROUNDING GROUND SURFACE AT +5.5 mPD.

TYPICAL SECTION FOR OPEN RAMP TROUGH NEAR PORTAL



FLEXIBLE PAVEMENT COMPOSITION
FOR ELEVATED STRUCTURES
AND DEPRESSED ROADS



FLEXIBLE PAVEMENT COMPOSITION
FOR GROUND LEVEL ROADS

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Central Kowloon Route Study : Preliminary Design
Retaining Wall and Pavement - Typical Cross Section

FIGURE NO.

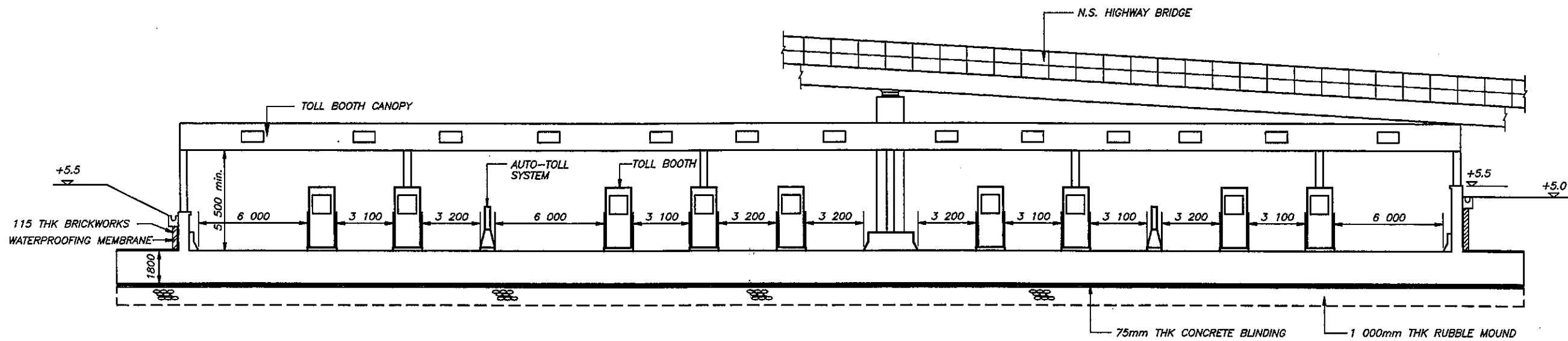
036

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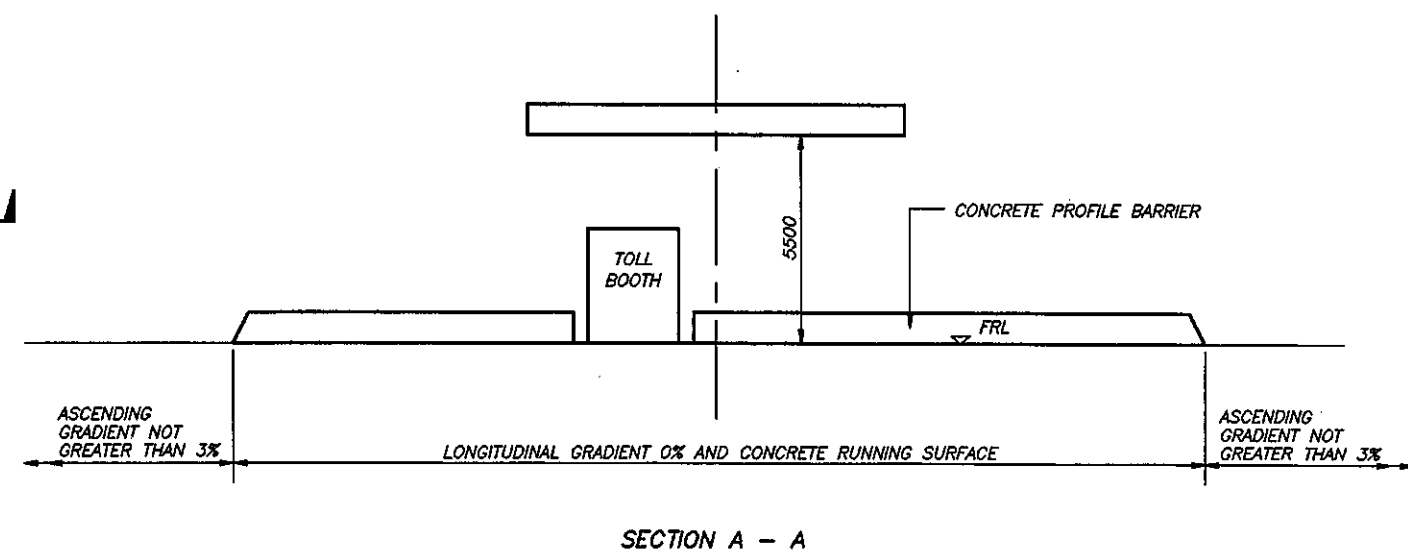
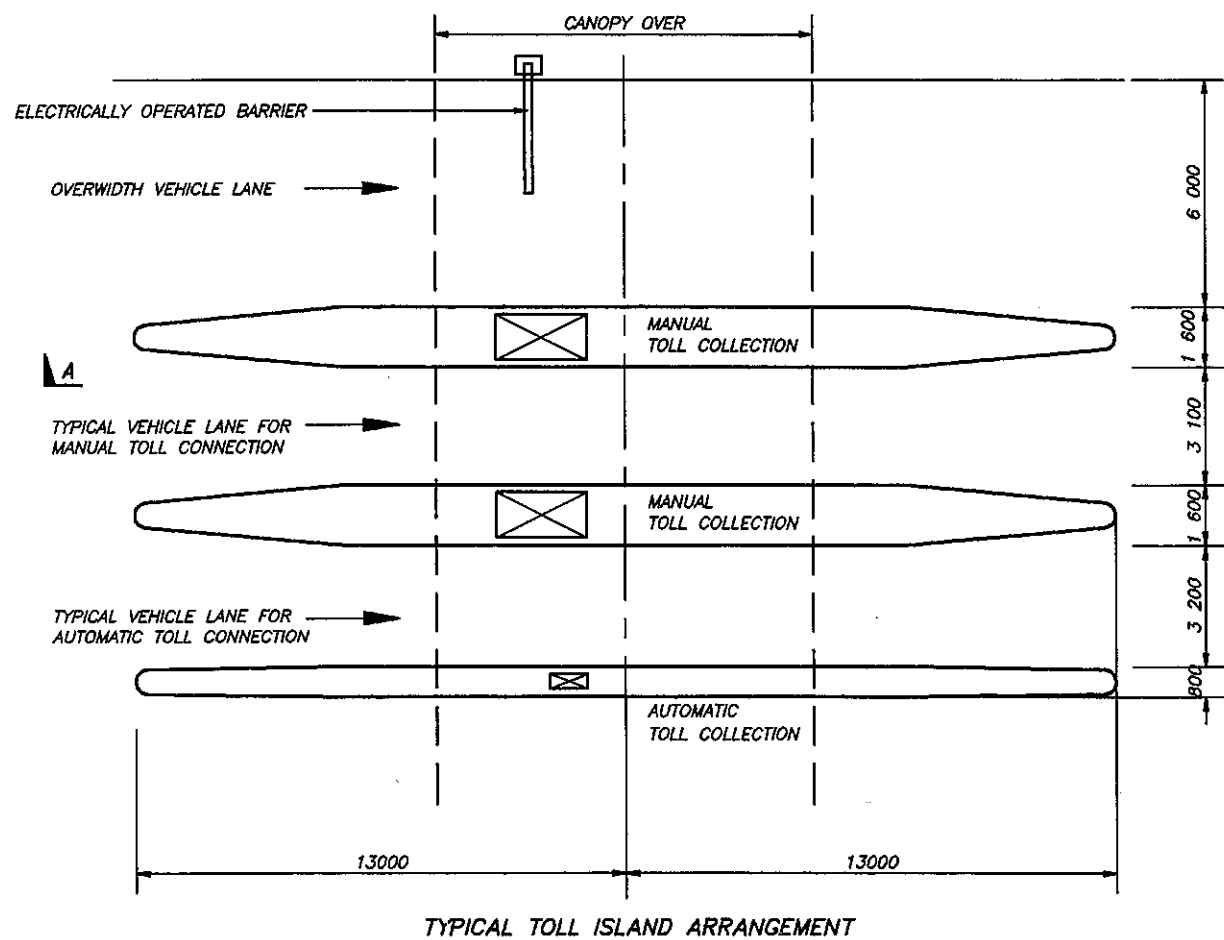
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DATE

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SECTION AT TOLL PLAZA LOOKING EAST



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Central Kowloon Route Study : Preliminary Design
Toll Plaza Details

FIGURE NO.

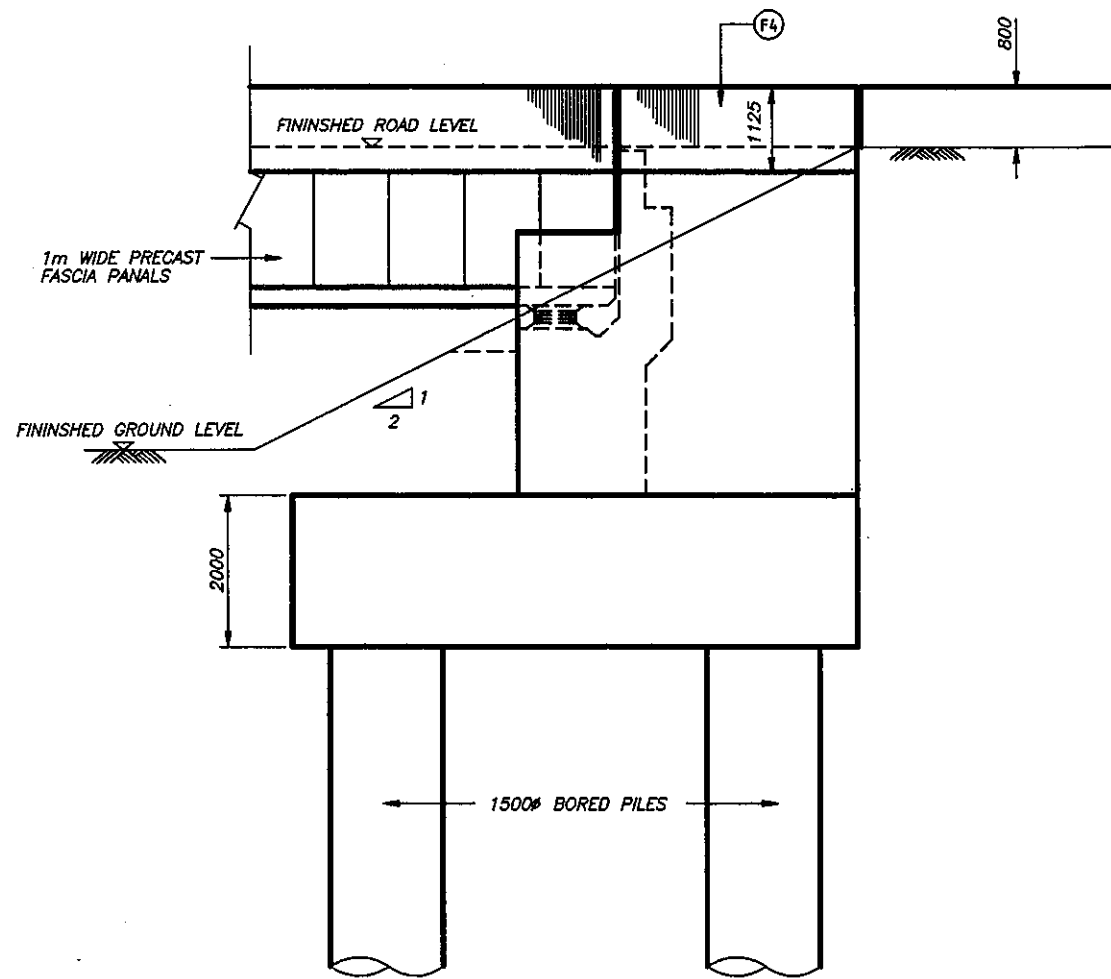
037

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0 1 2 4m
0 1 2 4m

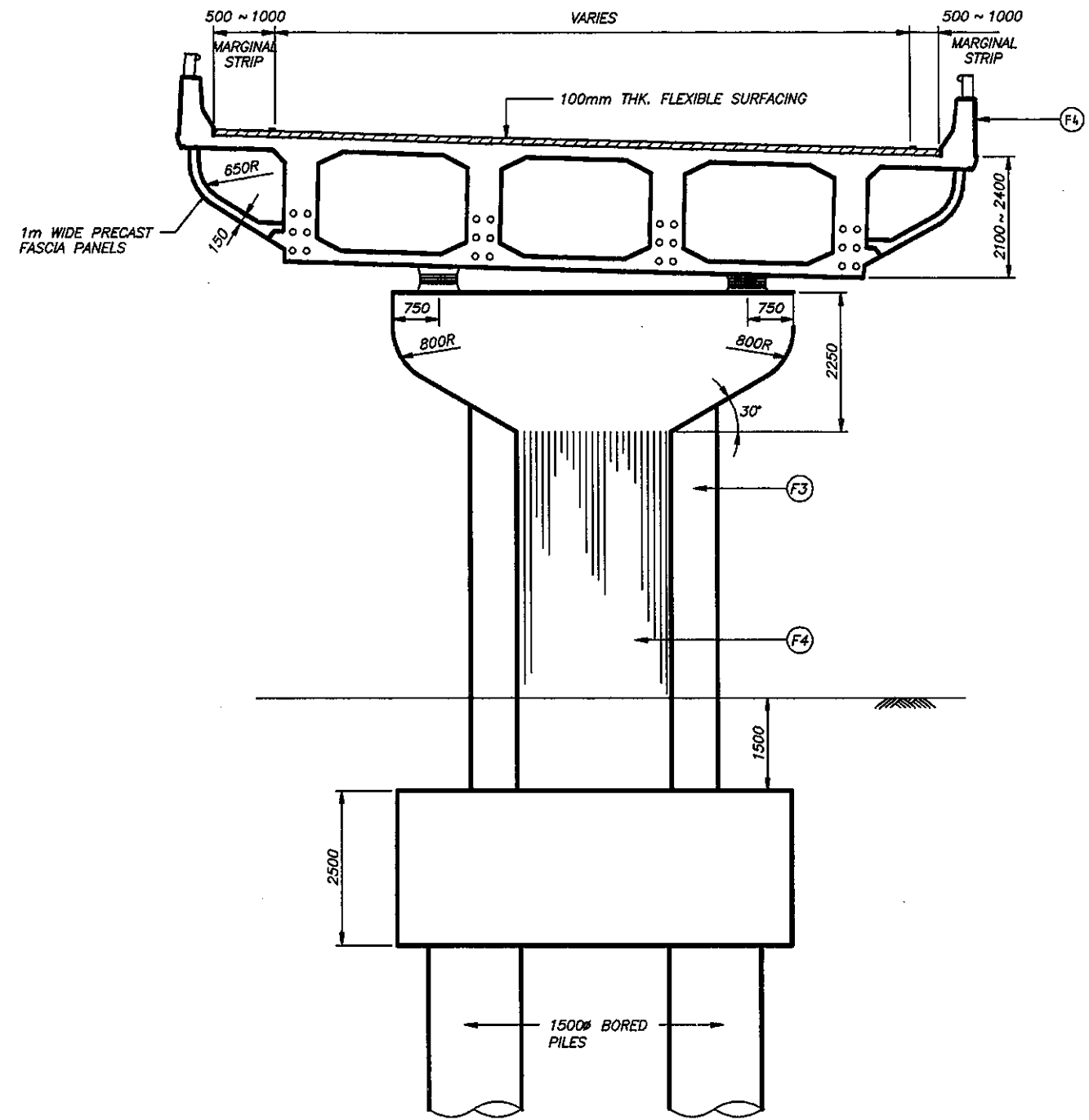
DATE
APRIL 93

LEGENG :

- (F3) CONCRETE FINISH WITH SMOOTH SURFACE
- (F4) CONCRETE FINISH WITH STRIPE PATTERN SURFACE



TYPICAL ELEVATION FOR BRIDGE ABUTMENT



TYPICAL SECTION FOR ELEVATED ROAD STRUCTURE

Parsons Brinckerhoff
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Central Kowloon Route Study : Preliminary Design
Eastern Approach - Structures

FIGURE NO.

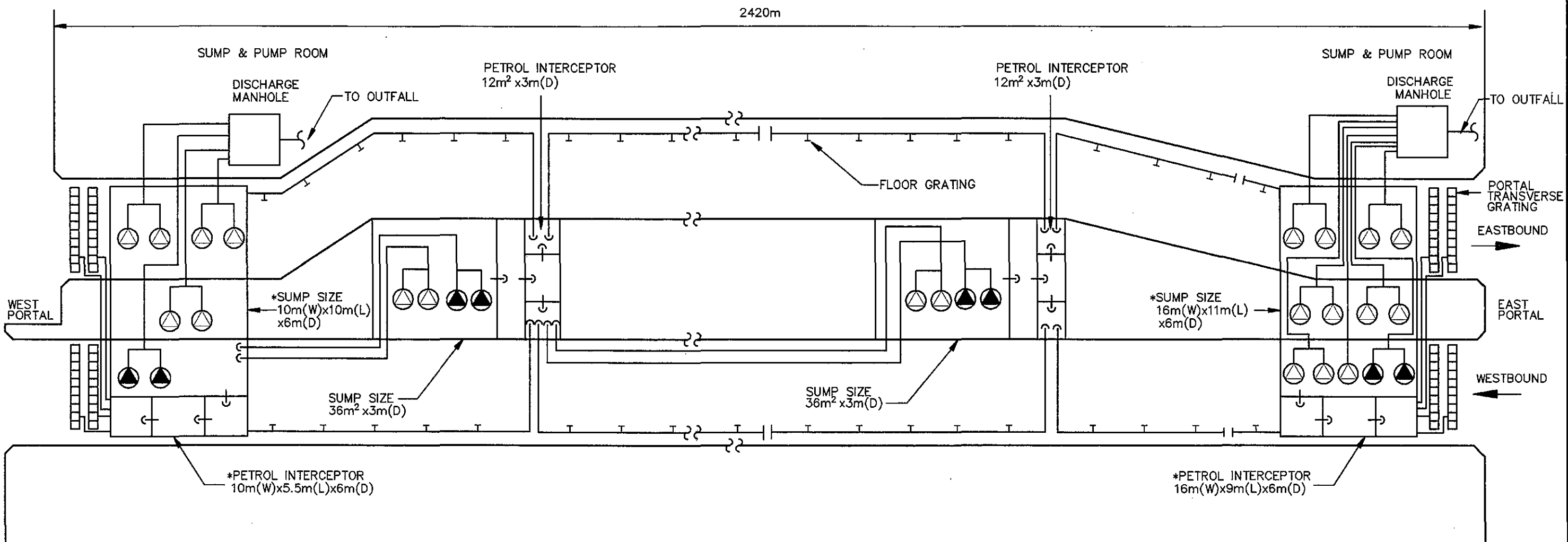
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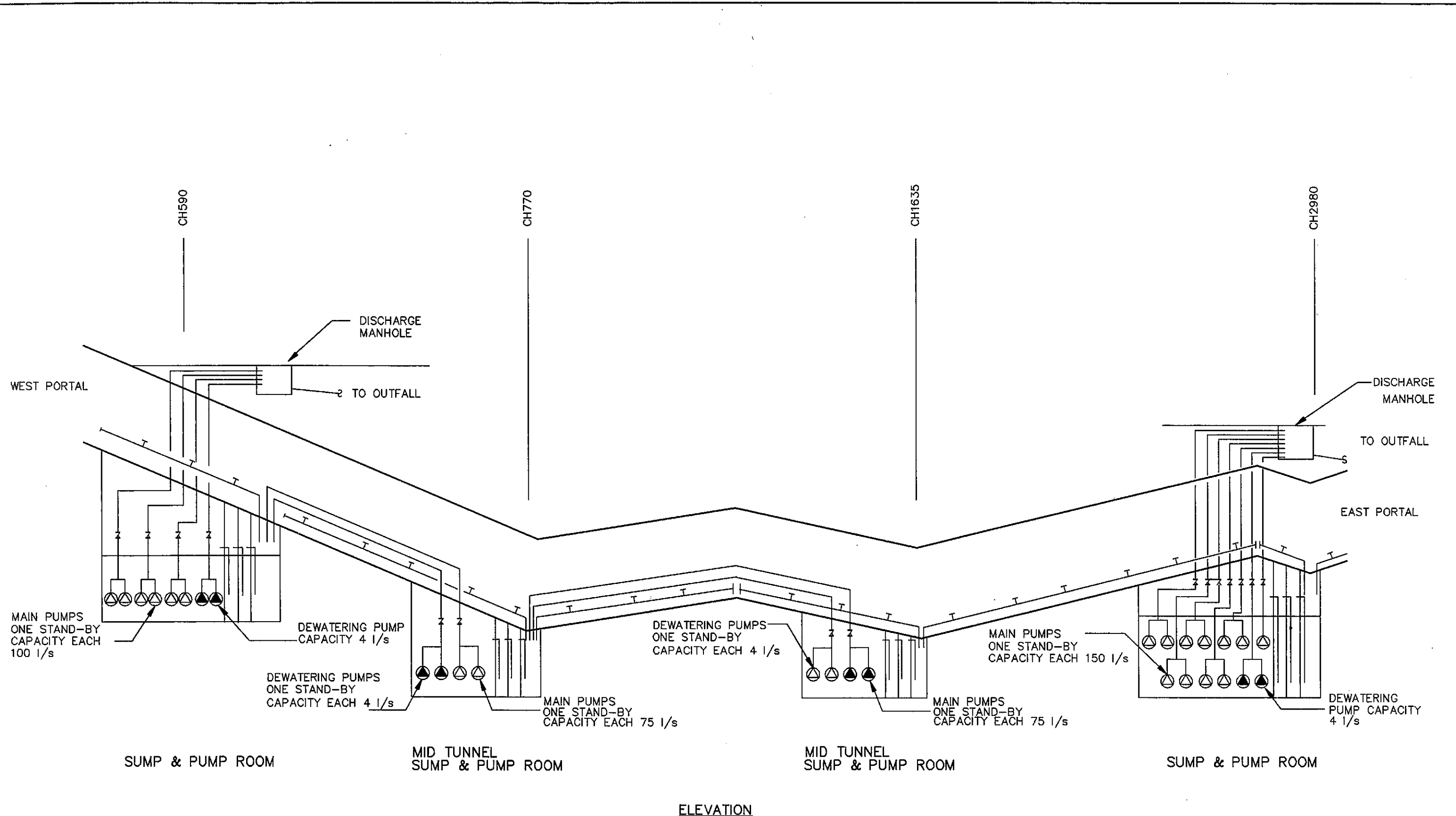
APRIL 93



PLAN

NOTE : * THE 6m DEPTH INCLUDES 3m CLEARANCE FOR THE SUMP PIT AND 3m CLEARANCE FOR THE PLANT ROOM IMMEDIATELY ABOVE IT.
SEE FIGURE 94591/042 & 94591/045 FOR EXACT LOCATION OF DRAINAGE SUMPS.

Parsons Brinckerhoff Maunsell Consultants	Central Kowloon Route Study : Preliminary Design Tunnel Drainage Schematic (Sheet 1 of 2)	FIGURE NO. 040	SCALE NOT TO SCALE
			DATE APRIL 93



ELEVATION

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Central Kowloon Route Study : Preliminary Design
Tunnel Drainage Schematic (Sheet 2 of 2)

FIGURE NO.

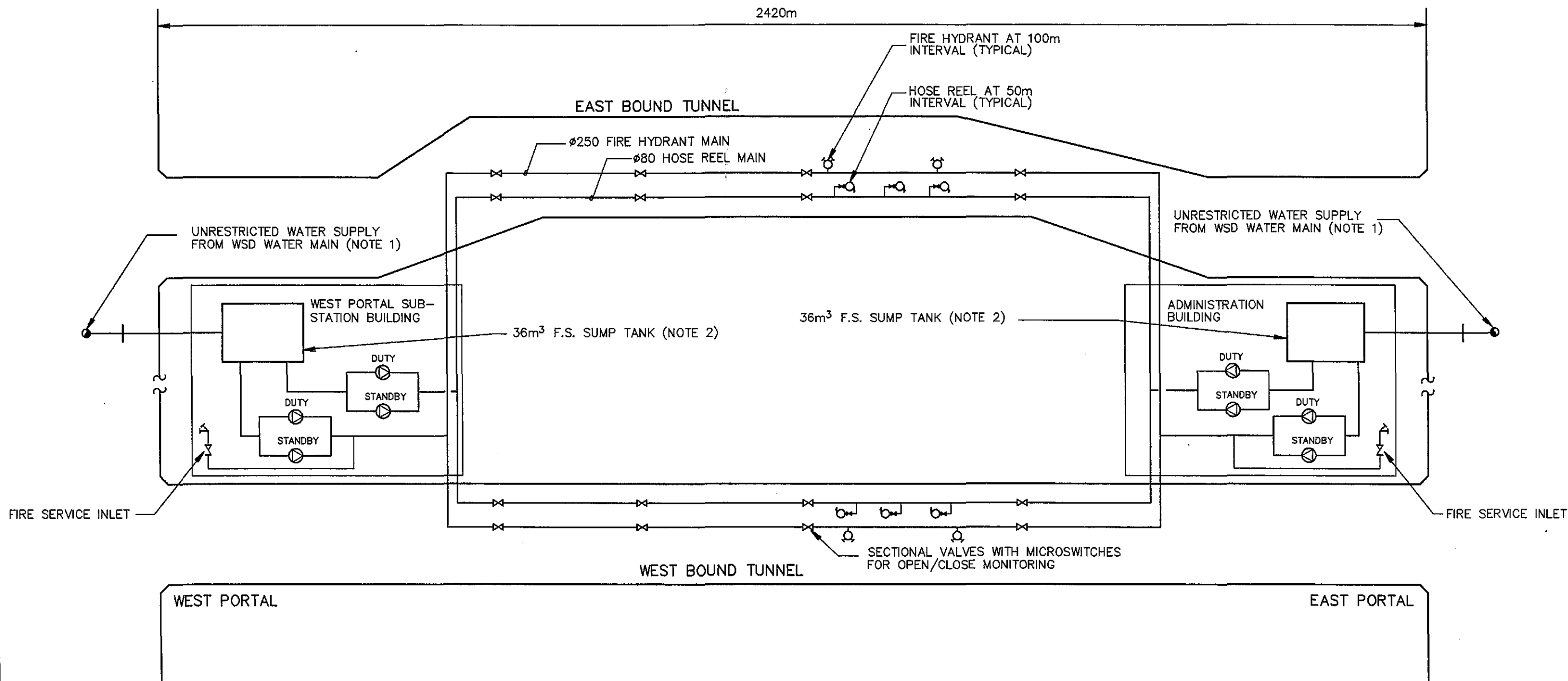
041

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NOTES

1. ONLY ONE UN-RESTRICTED WATER SUPPLY WILL BE REQUIRED AT EITHER WEST OR EAST PORTAL.
2. SIZE OF TANK TO BE INCREASED SHOULD NO UN-RESTRICTED WATER BE AVAILABLE AT BOTH PORTAL AREAS.

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**Central Kowloon Route Study : Preliminary Design
Tunnel Fire Hydrant and Hose Reel Mains Schematic**

FIGURE NO.

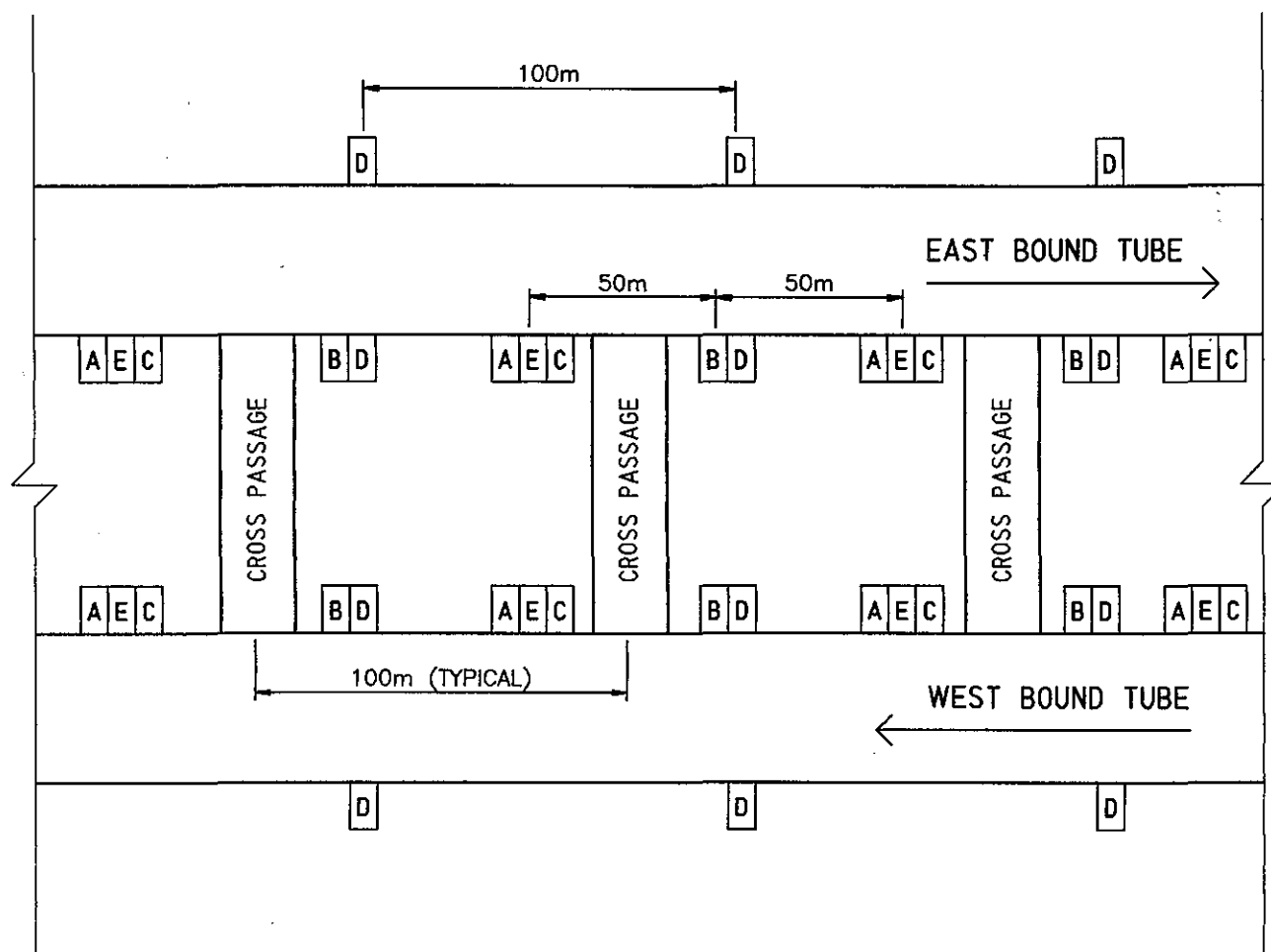
042

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DATE

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NICHE SCHEDULE

LEGEND	DESCRIPTION	SIZE (IN mm)	SPACING
A	ELECTRICAL EQUIPMENT NICHE	1000W x 1800H x 400D	100m
B	FIRE HYDRANT & HOSE REEL NICHE	1000W x 1800H x 400D	100m
C	HOSE REEL & BREAK GLASS NICHE	1000W x 1000H x 400D	100m
D	EMERGENCY TELEPHONE, EMERGENCY POWER SOCKET OUTLET, FIRE EXTINGUISHER & BREAK GLASS NICHE	1100W x 900H x 400D	100m
E	TRAFFIC SURVEILLANCE & CONTROL EQUIPMENT NICHE & POWER SOCKET OUTLET	1100W x 900H x 400D	100m

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Central Kowloon Route Study : Preliminary Design
Typical Niche Arrangement Along Tunnel

FIGURE NO.

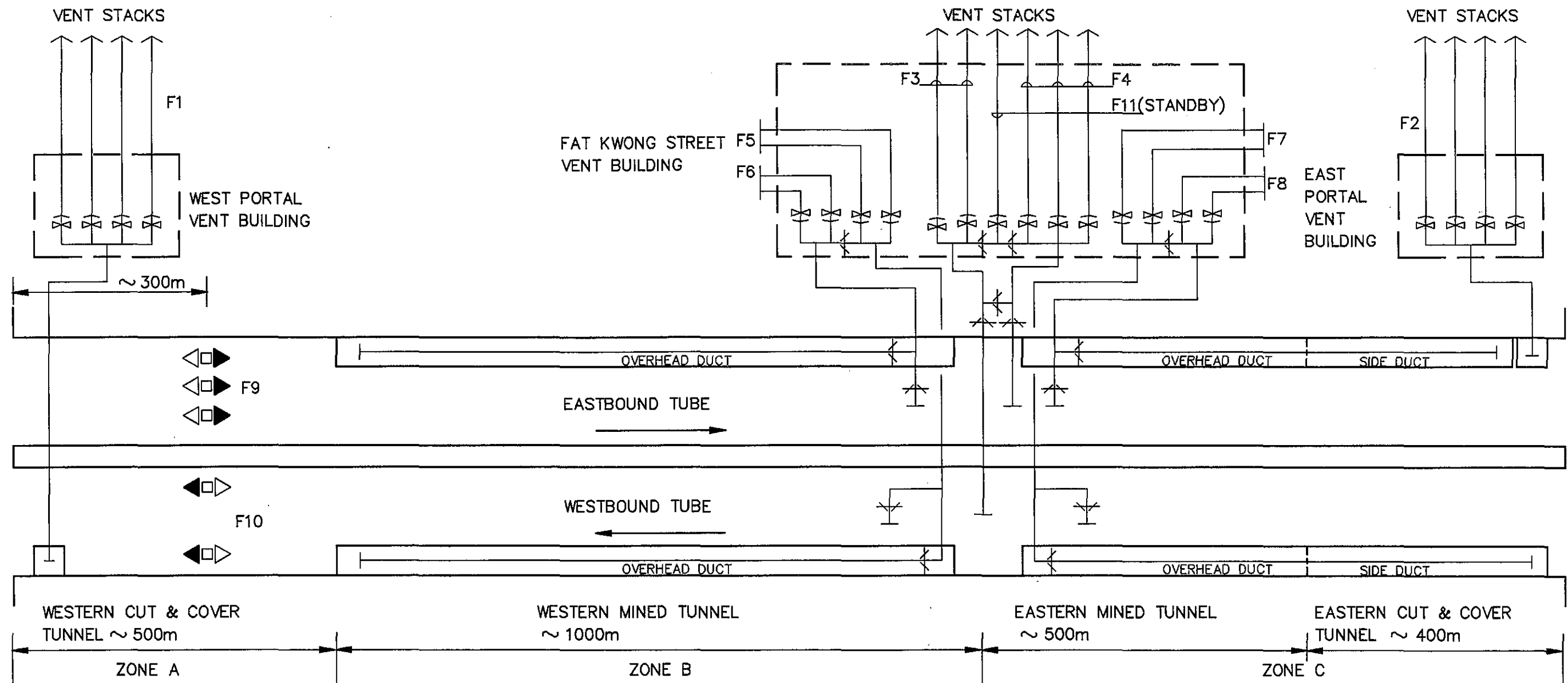
043

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DATE




APRIL 93



VENTILATION FAN SCHEDULE

FAN GROUP	NO. OF FAN	FLOW RATE (m ³ /s) OF EACH FAN	TUBE TO BE SERVED
F1	4	100	WB
F2	4	90	EB
F3	2	75	WB
F4	3	100	EB
F5	2	100	WB
F6	2	100	EB
F7	2	85	WB
F8	2	85	EB
F11	1	100	BOTH

LEGEND

-  TUNNEL VENTILATION FAN (FORWARD AIRFLOW DIRECTION INDICATED BY ARROW)
-  VENT SHAFT DAMPER
-  BI-DIRECTIONAL JET FAN OF ø1000mm (▶ FORWARD DIRECTION)

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Central Kowloon Route Study : Preliminary Design
Tunnel Ventilation Schematic Diagram

FIGURE NO.

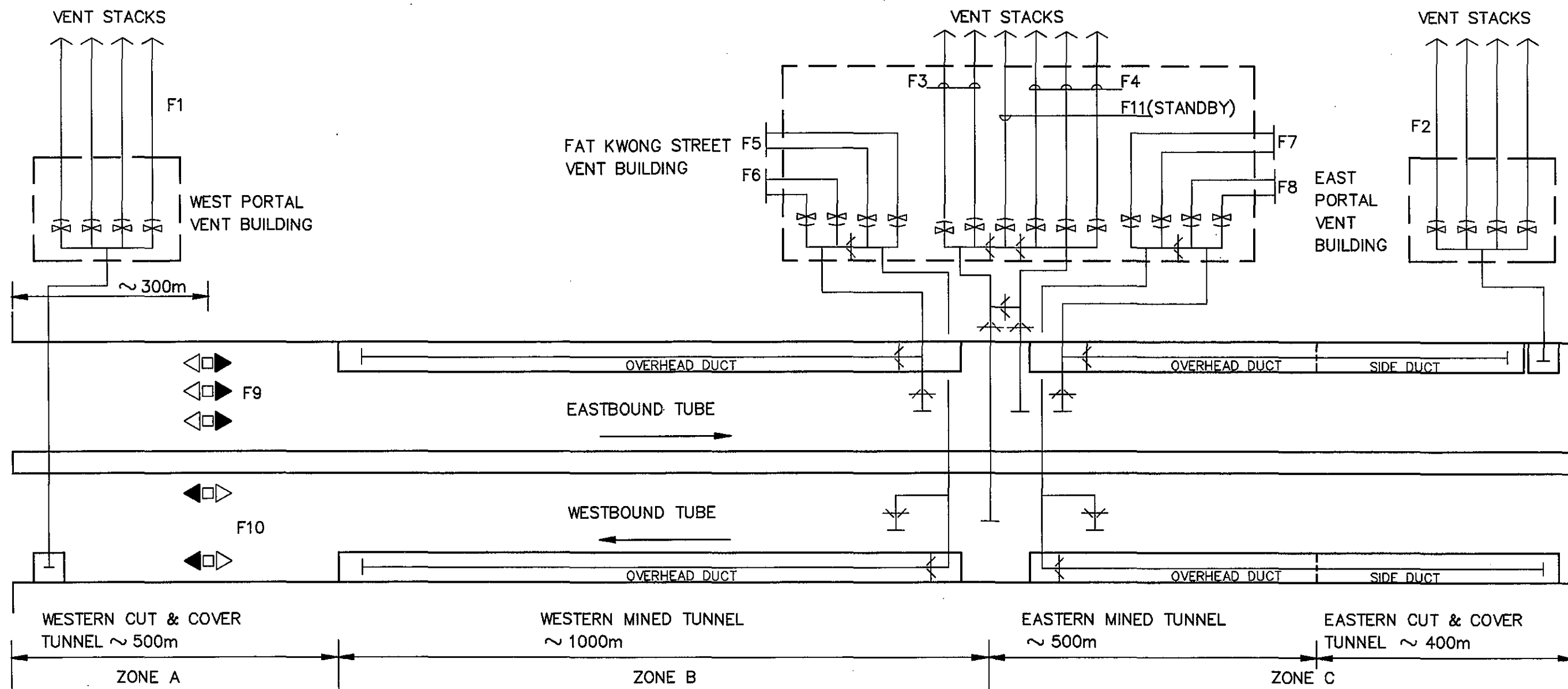
044

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DATE

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EMERGENCY OPERATION MODE FOR WESTBOUND TUBE

FAN GROUP	UNI-DIRECTIONAL TRAFFIC			BI-DIRECTIONAL TRAFFIC			
	A	B	C	A	B	C	
F3	S	S	E	S	E	-	-
F4	S	S	E	S	E	-	-
F5	S	S	E	S	E	E	-
F6	S	S	S	S	S	S	S
F7	S	S	E	S	E	-	E
F8	S	S	S	S	S	S	S
F9	-	-	-	-	-	-	-
F10	F	F	F	F	R	-	-

EMERGENCY OPERATION MODE FOR EASTBOUND TUBE

FAN GROUP	UNI-DIRECTIONAL TRAFFIC			BI-DIRECTIONAL TRAFFIC			
	A	B	C	A	B	C	
F3	E	E	S	S	E	-	-
F4	E	E	S	S	E	-	-
F5	S	S	S	S	S	S	S
F6	E	E	S	S	E	E	-
F7	S	S	S	S	S	S	S
F8	E	E	S	S	E	-	E
F9	F	F	F	R	F	-	-
F10	-	-	-	-	-	-	-

FAN OPERATING STATUS

- S SUPPLY
- E EXHAUST
- F JET FAN FORWARD
- R JET FAN REVERSE
- OFF

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Central Kowloon Route Study : Preliminary Design
Tunnel Ventilation Emergency Mode Table

FIGURE NO.

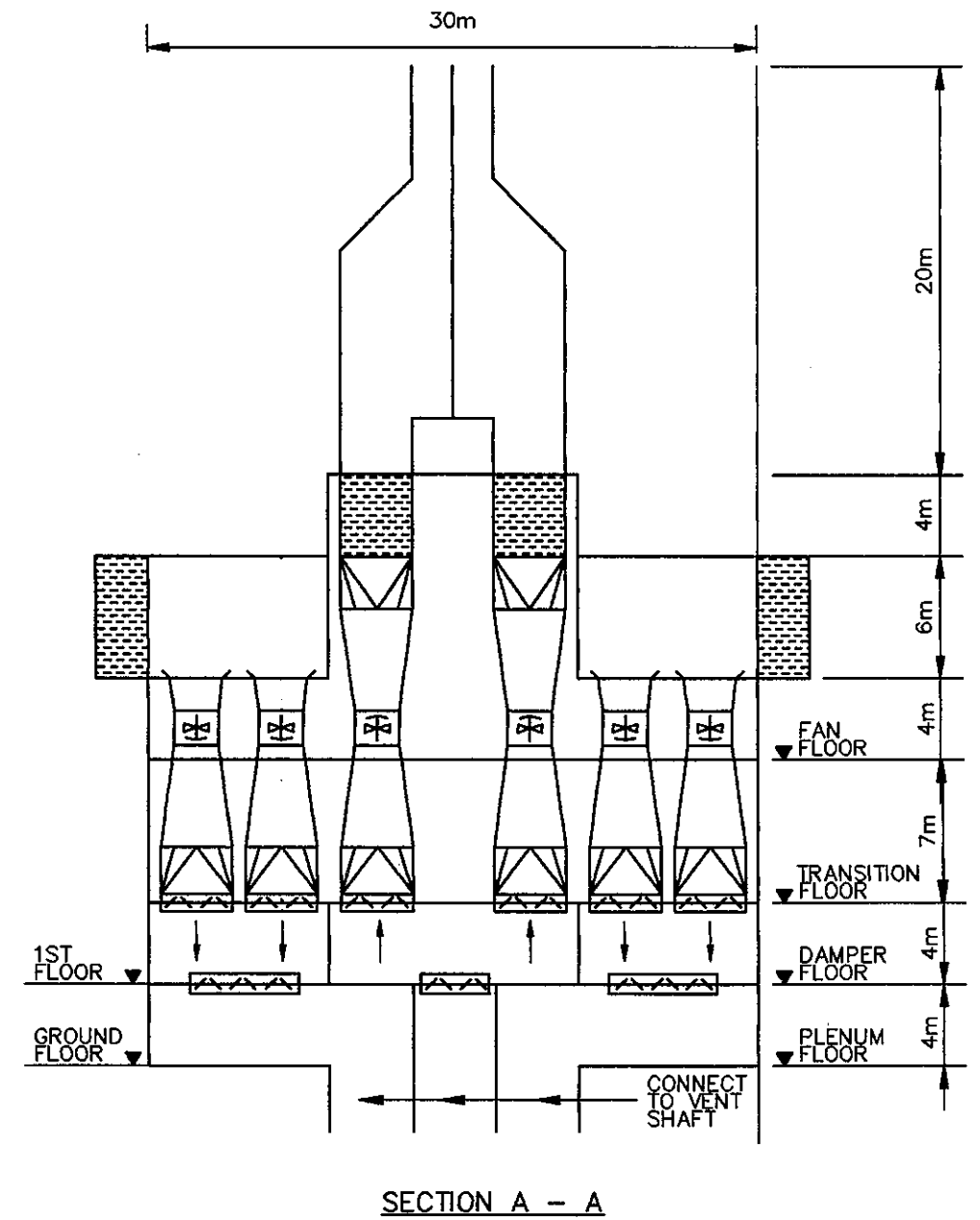
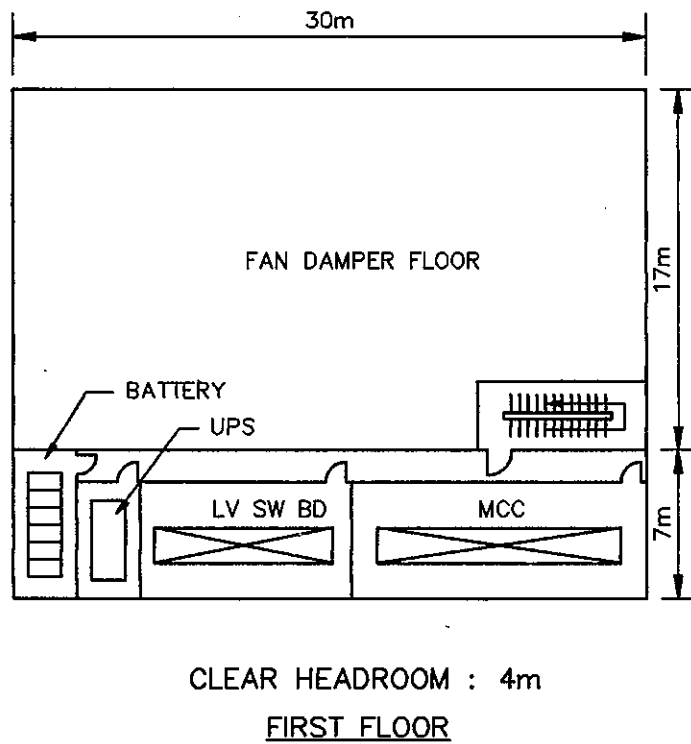
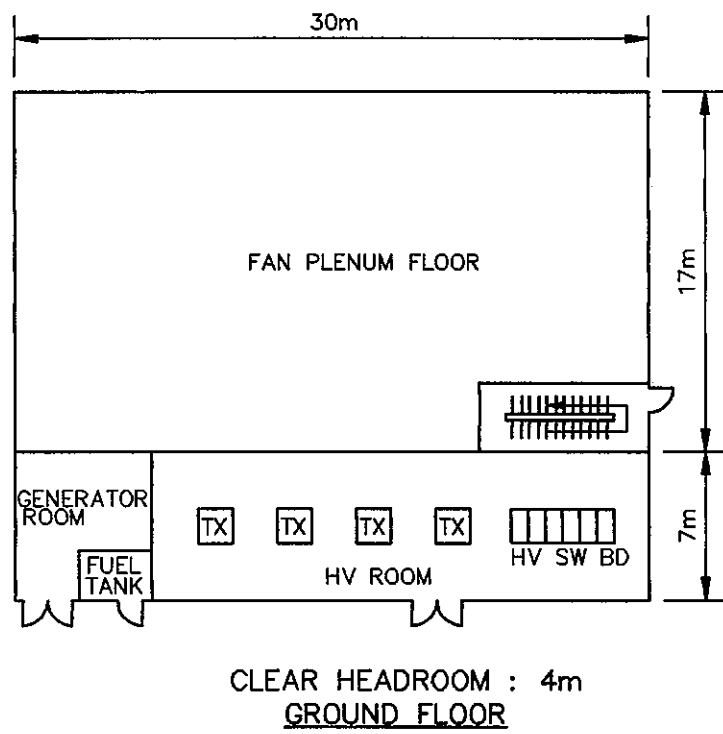
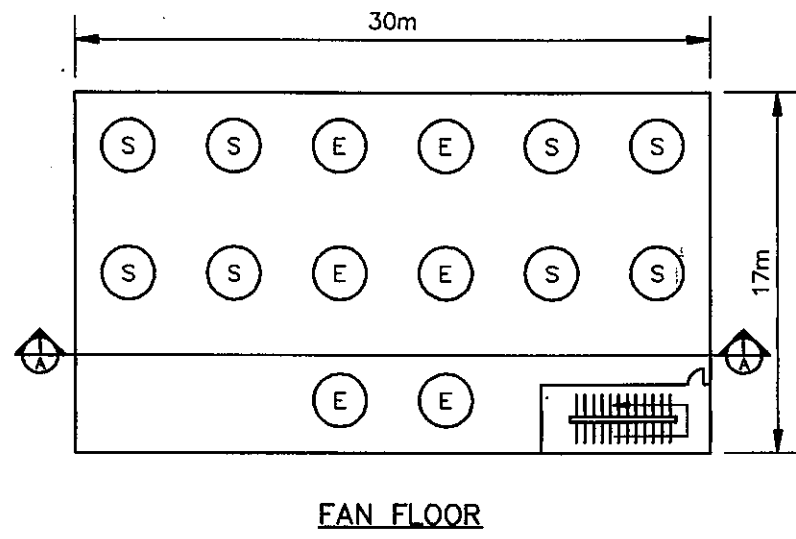
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Central Kowloon Route Study : Preliminary Design
Fat Kwong Street Vent Building Plant Room Layout

FIGURE NO.

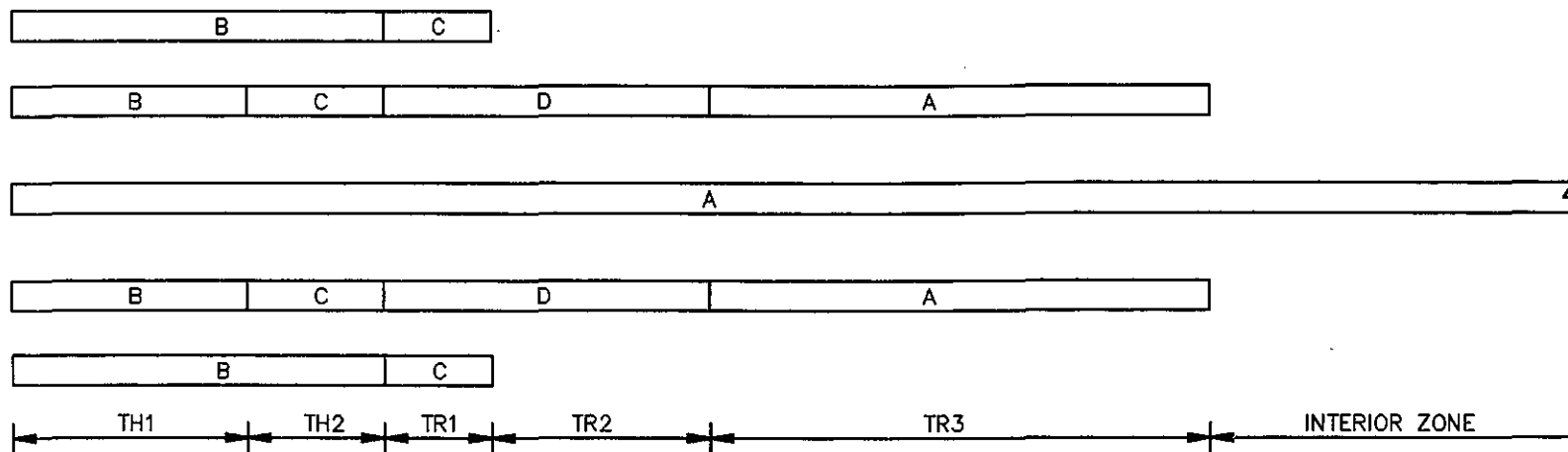
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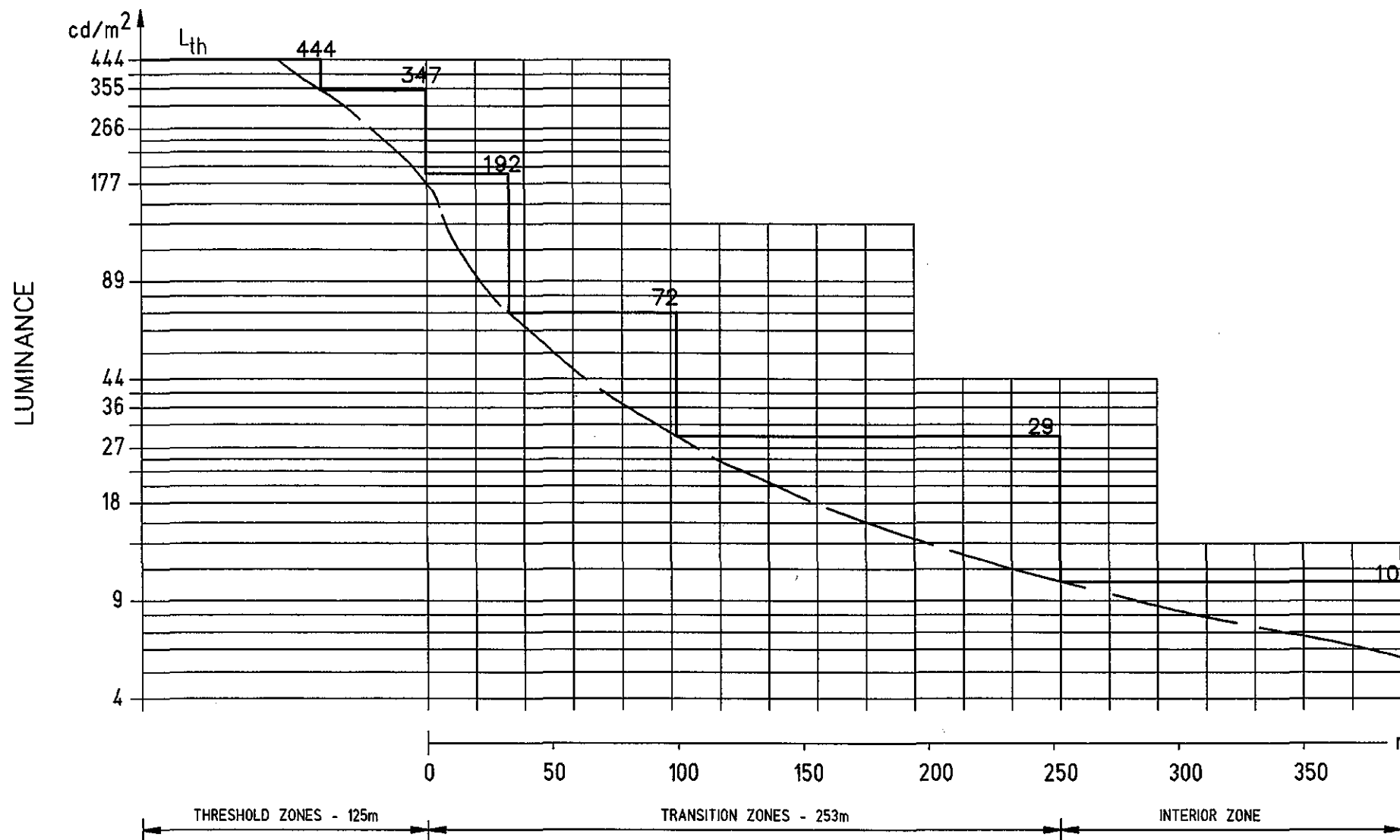
DATE

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	TYPE OF LUMINARE	SPACING
A	2*58W FLUORESCENT TUBE	1.72m
B	2*400W SON LAMP	1.72m
C	2*250W SON LAMP	1.72m
D	2*250W SON LAMP	3.44m

	ZONE	ZONE LENGTH
TH1	THRESHOLD 1	84m
TH2	THRESHOLD 2	41m
TR1	TRANSITION 1	33m
TR2	TRANSITION 2	67m
TR3	TRANSITION 3	153m



NOTES:

1. DOTTED LINES DENOTE THE THEORETICAL LUMINANCE REDUCTION CURVE.
2. SOLID LINES DENOTE THE STEPWISE APPROXIMATION OF THE LUMINANCE REDUCTION CURVE.
3. THE DESIGN SPEED IS 70km/h AND THE MINIMUM STOPPING SIGHT DISTANCE IS 125m.

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Maunsell Consultants

Central Kowloon Route Study : Preliminary Design
Tunnel Lighting Schematic Diagram (at 70km/h)

FIGURE NO.

047

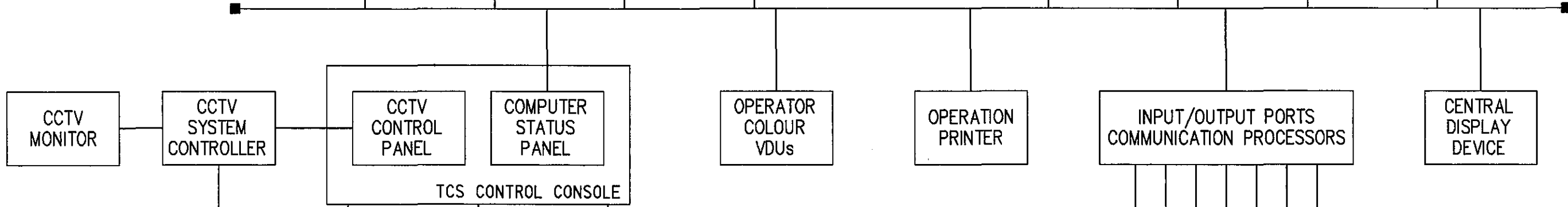
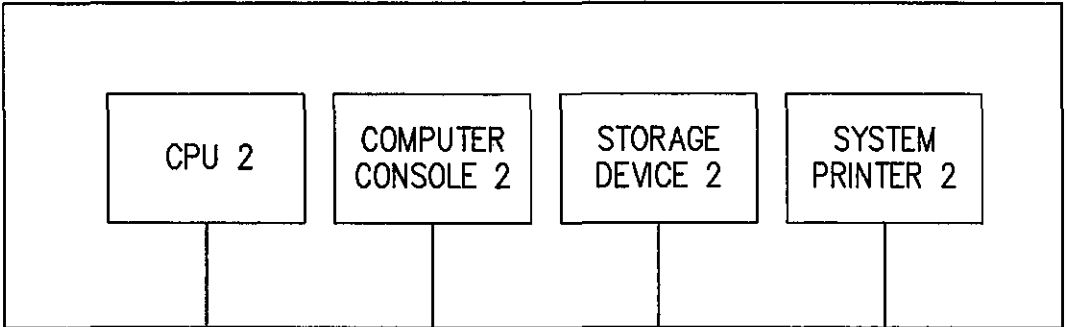
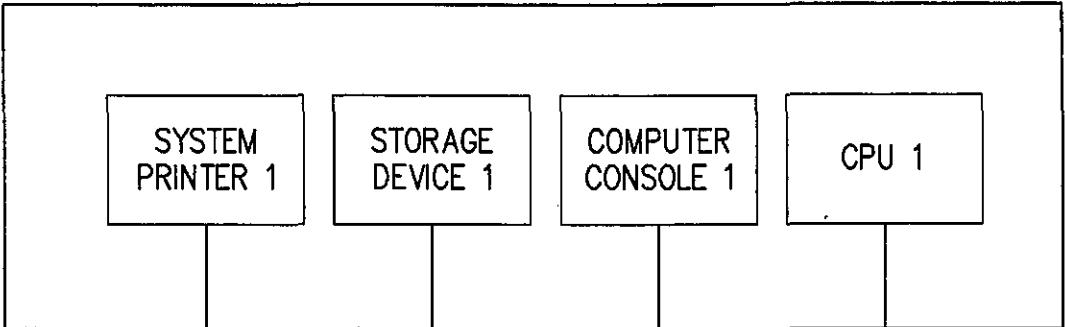
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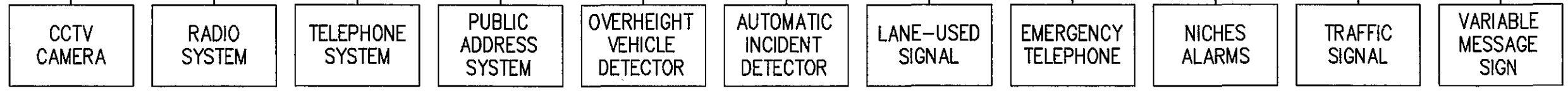
DATE

APRIL 93

ADMINISTRATION BUILDING



FIELD



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Central Kowloon Route Study : Preliminary Design
Traffic Surveillance and Control System Block Diagram

FIGURE NO.

048

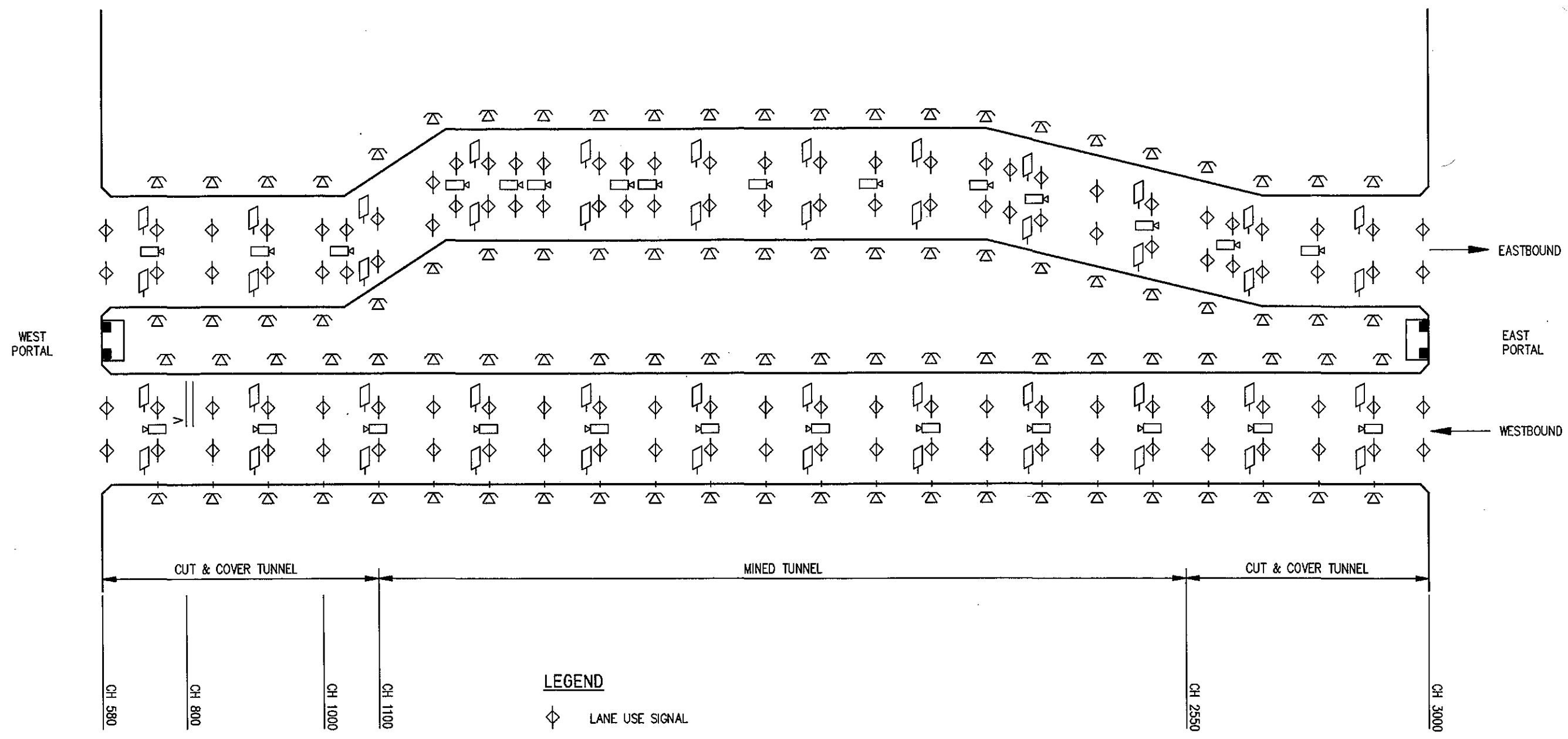
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DATE

APRIL 93

Date: 9/1/1993
Cod Ref: 048
Plot Scale: 1 = 1.00



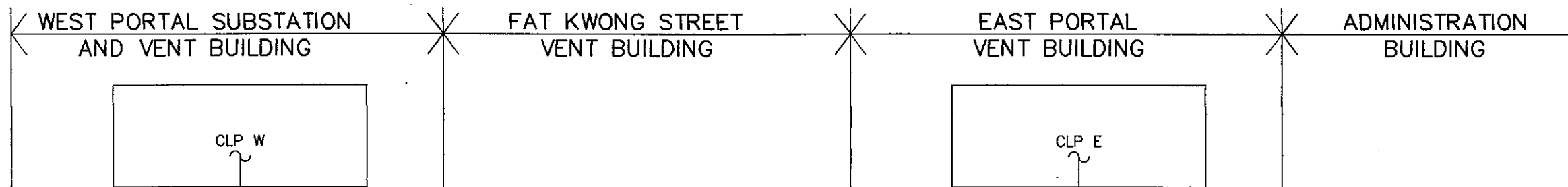
- LEGEND**
- ◇ LANE USE SIGNAL
 - ▭ CCTV CAMERA
 - PSTN TELEPHONE OUTLET
 - ▭ AUTOMATIC INCIDENT DETECTOR
 - △ EMERGENCY TELEPHONE INSIDE PUBLIC NICHE
 - V VARIABLE MESSAGE SIGN

**Parsons Brinckerhoff
Maunsell Consultants**

**Central Kowloon Route Study : Preliminary Design
Traffic Surveillance and Control Equipment Layout Inside Tunnel**

FIGURE NO. 049	SCALE NOT TO SCALE
	DATE APRIL 93

Date: 9/4/1993
Cod Ref.: 049
Plot Scale: 1 = 100.00



ABBREVIATION
 BLDG. BUILDING
 CLP CHINA LIGHT AND POWER COMPANY LIMITED
 HV HIGH VOLTAGE
 LCC LIGHTING CONTROL CENTRE
 LV LOW VOLTAGE
 MCC MOTOR CONTROL CENTRE
 NC NORMALLY CLOSED
 NO NORMALLY OPEN
 RM ROOM

LEGEND

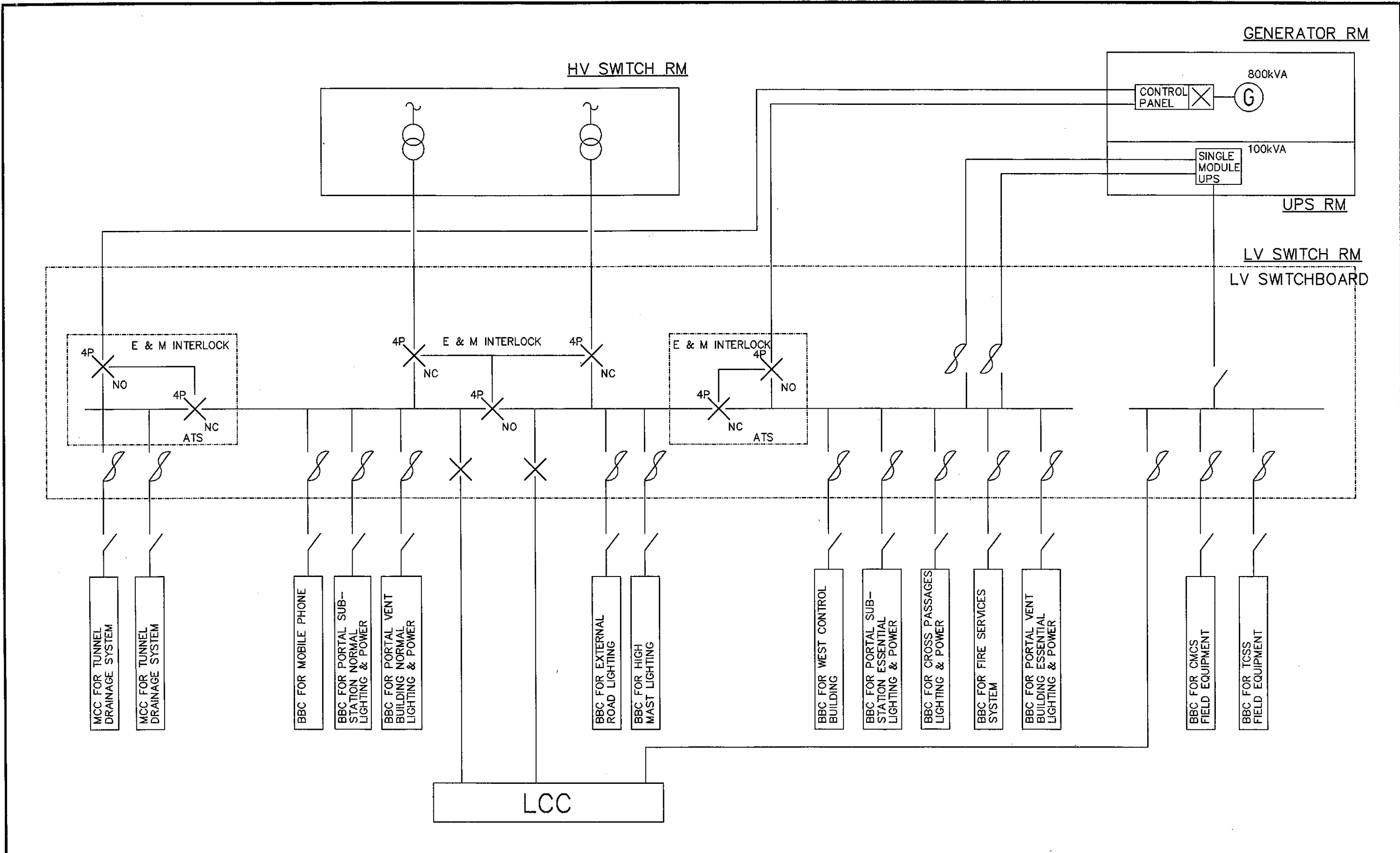
- 11/0.38kV DRY TYPE POWER TRANSFORMER
- HV SWITCHGEAR
- LV SWITCHGEAR
- 11kV CABLE
- 380V CABLE
- KEY INTERLOCKING
- NORMAL POWER LINK

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 Maunsell Consultants**

**Central Kowloon Route Study : Preliminary Design
 High Voltage Power Supply Schematic Diagram**

FIGURE NO. 050	SCALE NOT TO SCALE
	DATE APRIL 93

Date: 9/4/1993
 Code Ref.: 050
 Plot Scale: 1 = 1.00



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Central Kowloon Route Study : Preliminary Design
Typical Low Voltage Power Supply Schematic Diagram For Portal Substations

FIGURE NO.

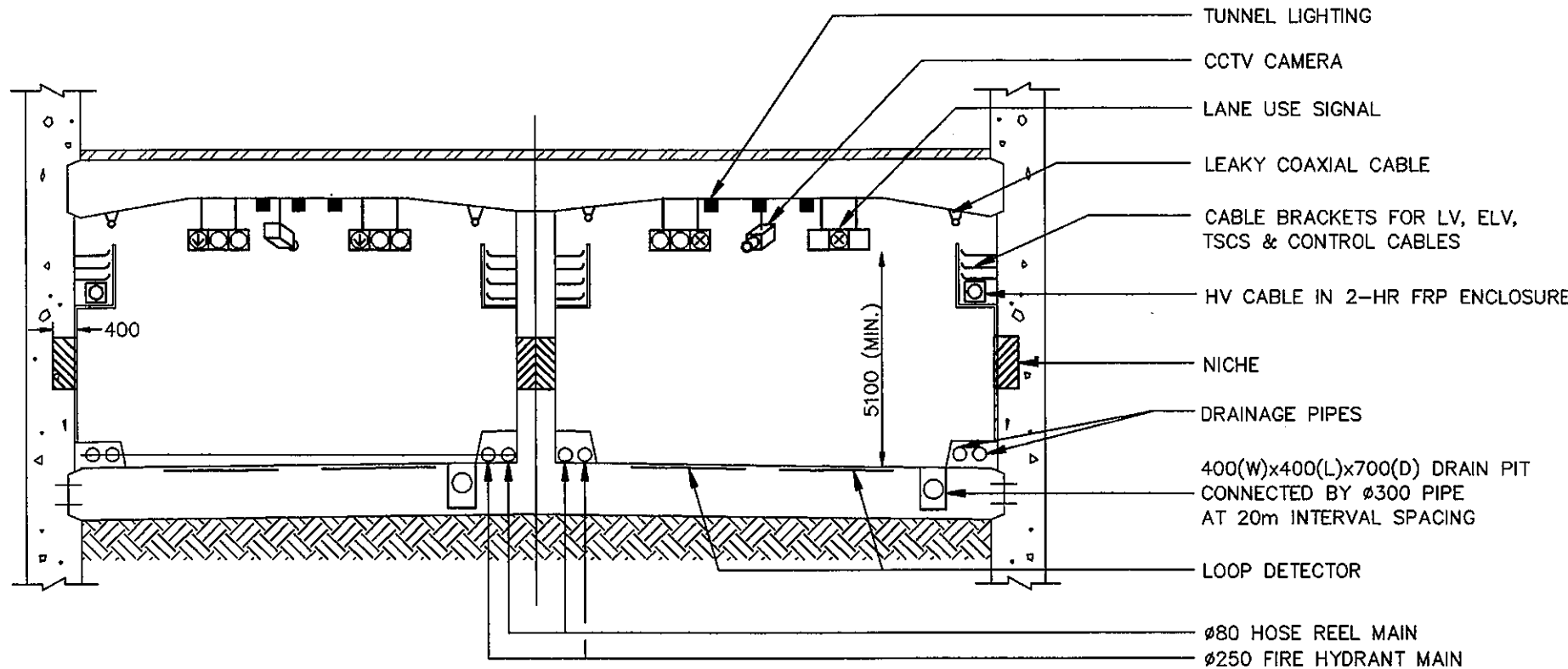
051

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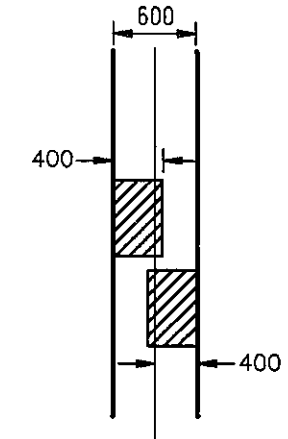
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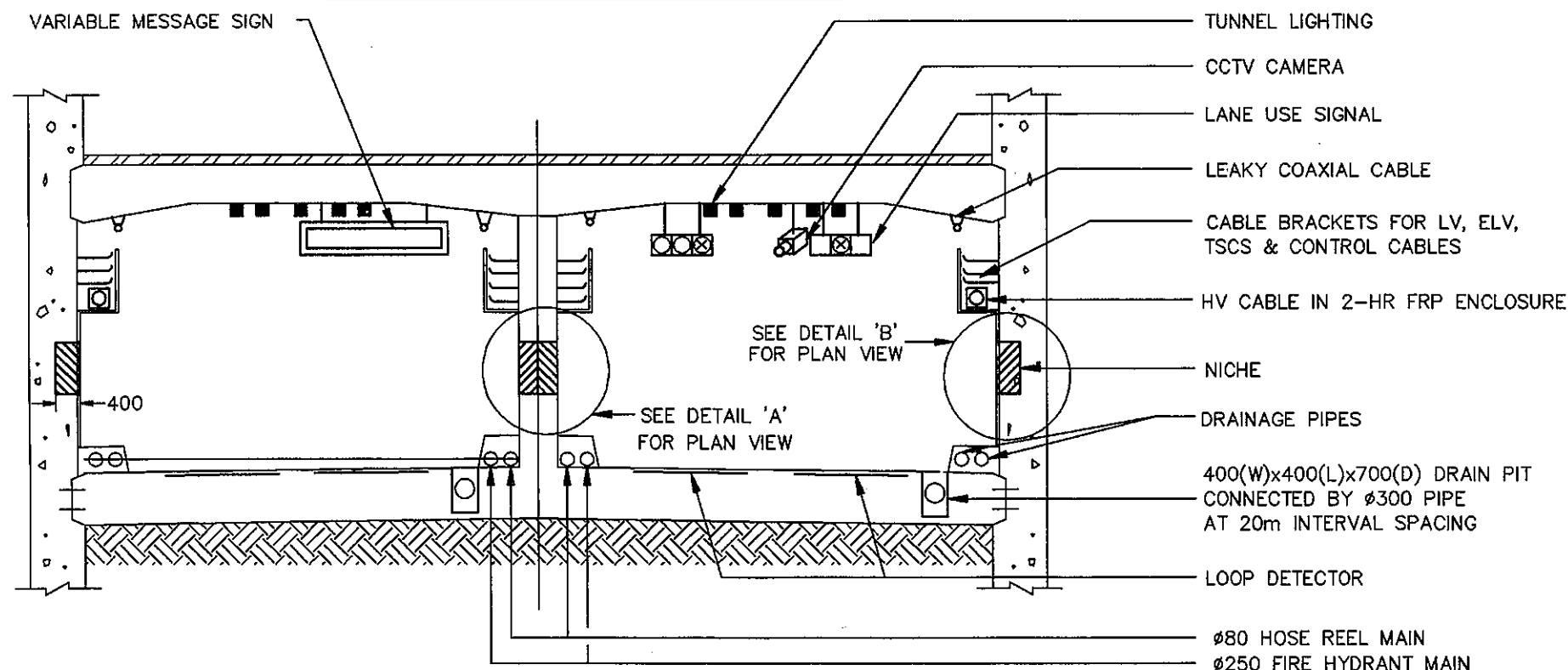
APRIL 93



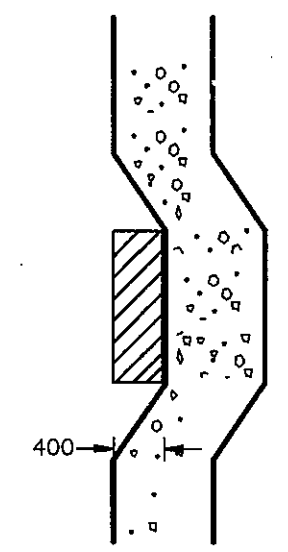
TYPICAL WESTERN CUT & COVER TUNNEL



DETAIL 'A' FOR PLAN VIEW



WESTERN CUT & COVER TUNNEL AT CHAINAGE 800



DETAIL 'B' FOR PLAN VIEW

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Maunsell Consultants

Central Kowloon Route Study : Preliminary Design
Typical E&M Equipment Disposition Inside Tunnel (Sheet 1 Of 2)

FIGURE NO.

052

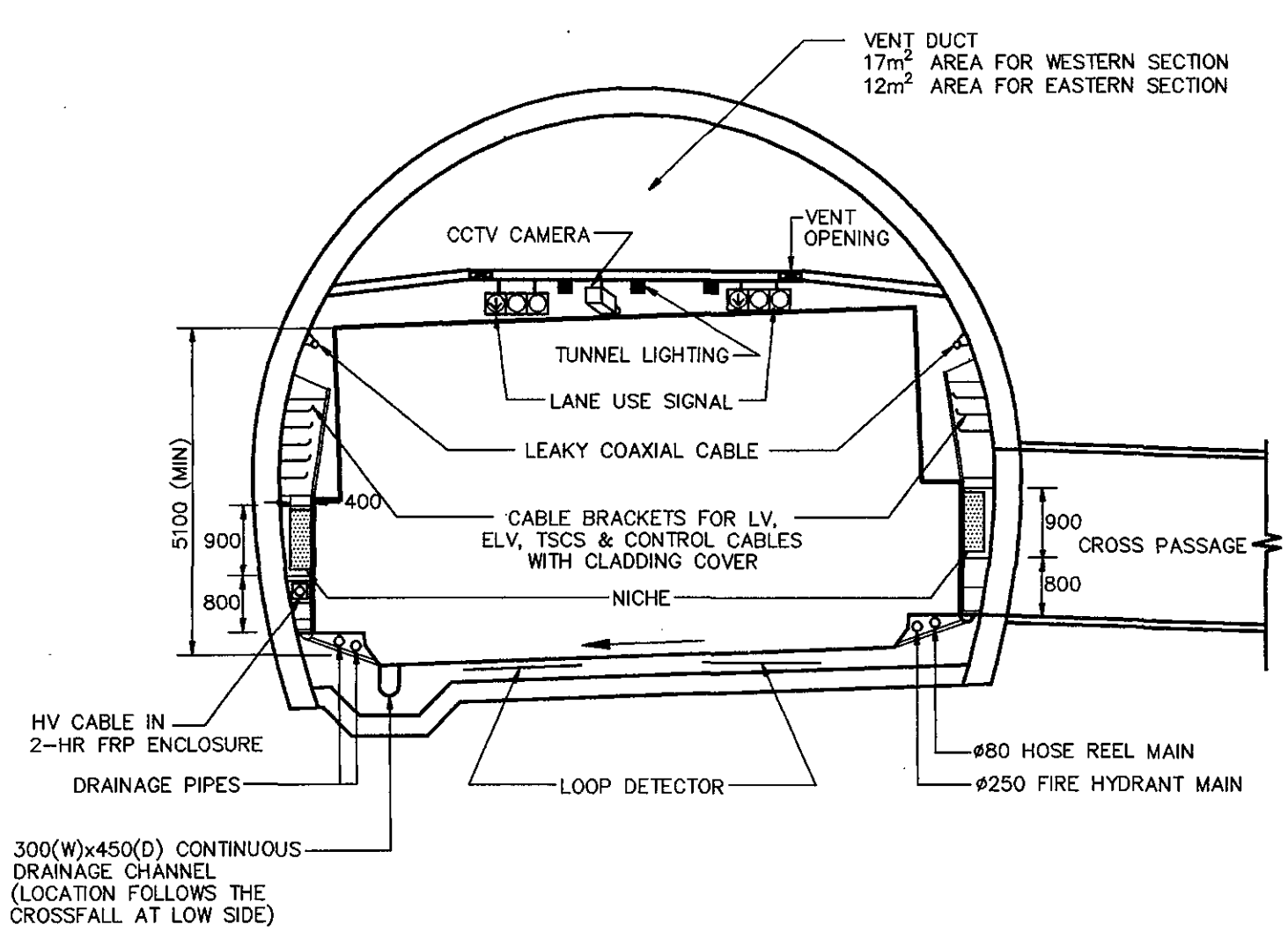
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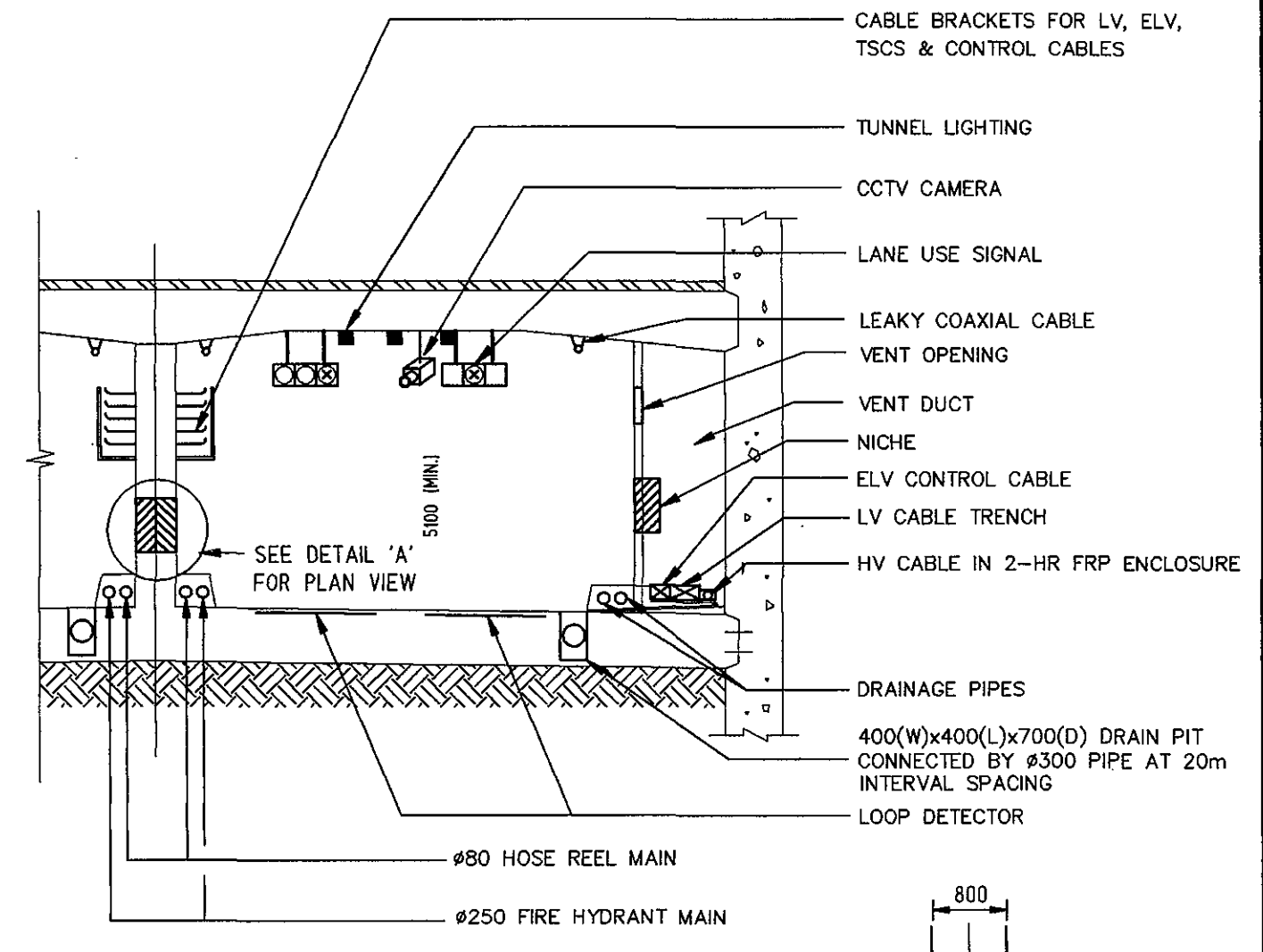
DATE

APRIL 93

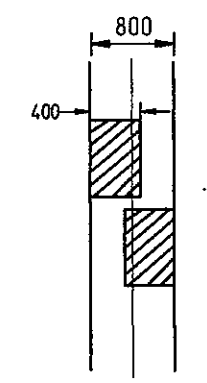
Date: 9/4/1993
Cod Ref.: 052
Plot Scale: 1 = 100.00



TYPICAL MINED TUNNEL
(WESTBOUND & EASTBOUND
TUBES ARE SYMMETRICAL)



TYPICAL EASTERN CUT & COVER TUNNEL
(WESTBOUND & EASTBOUND TUBES ARE
SYMMETRICAL)



DETAIL 'A' FOR PLAN VIEW

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Central Kowloon Route Study : Preliminary Design
Typical E&M Equipment Disposition Inside Tunnel (Sheet 2 Of 2)

FIGURE NO.

053

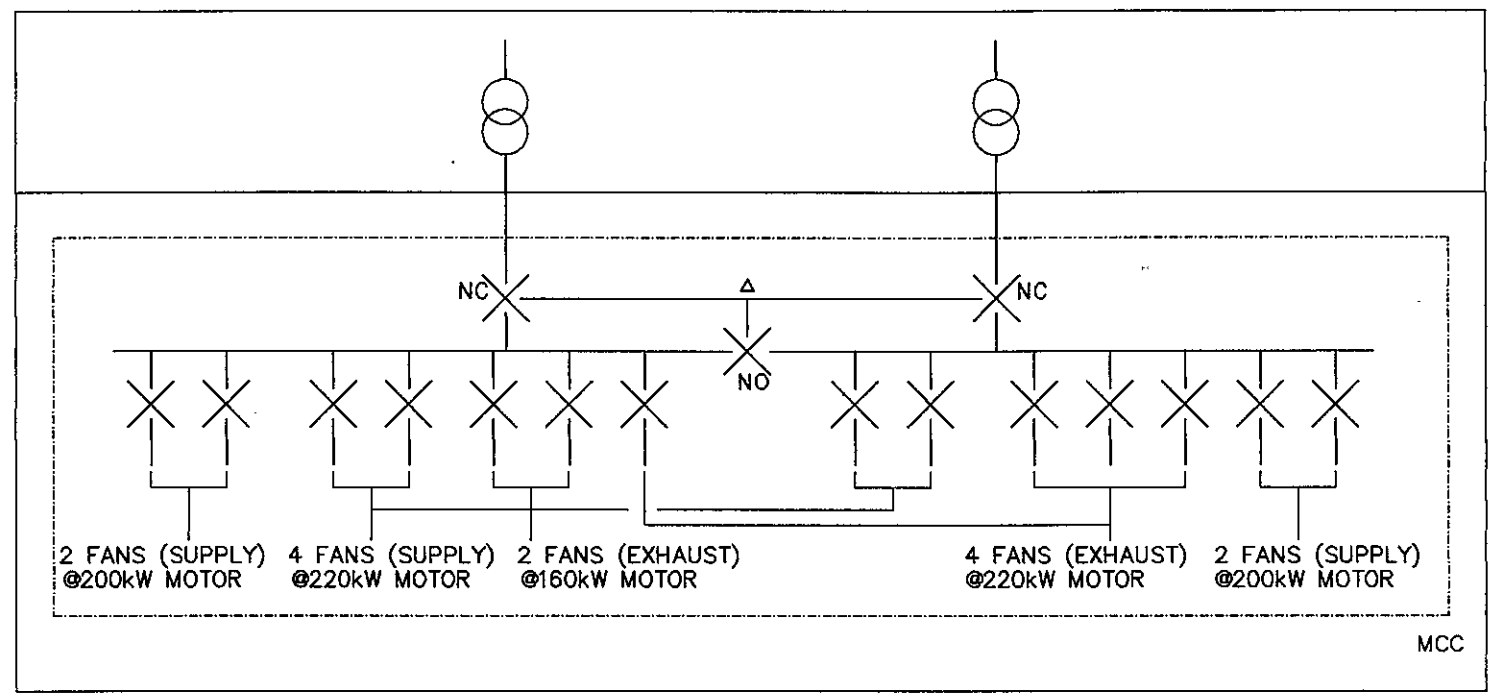
SCALE

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DATE

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FAT KWONG STREET VENT BUILDING



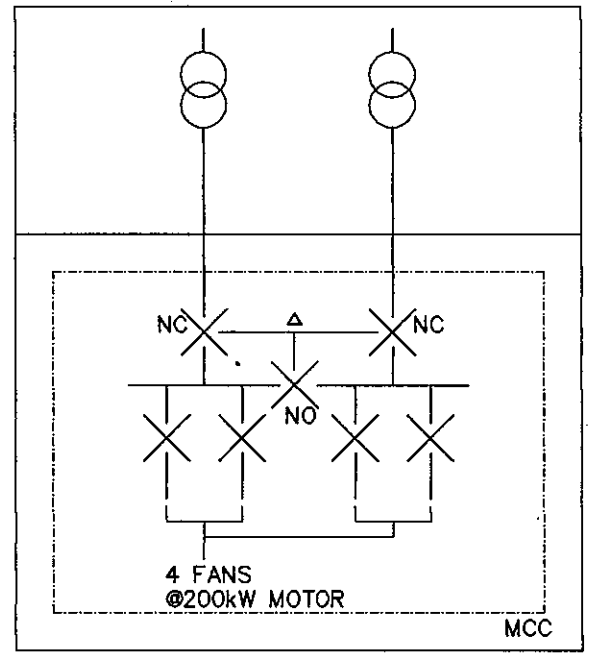
LEGEND

- 11/0.38kV DRY TYPE POWER TRANSFORMER
- LV SWITCHGEAR
- 380V CABLE
- KEY INTERLOCKING

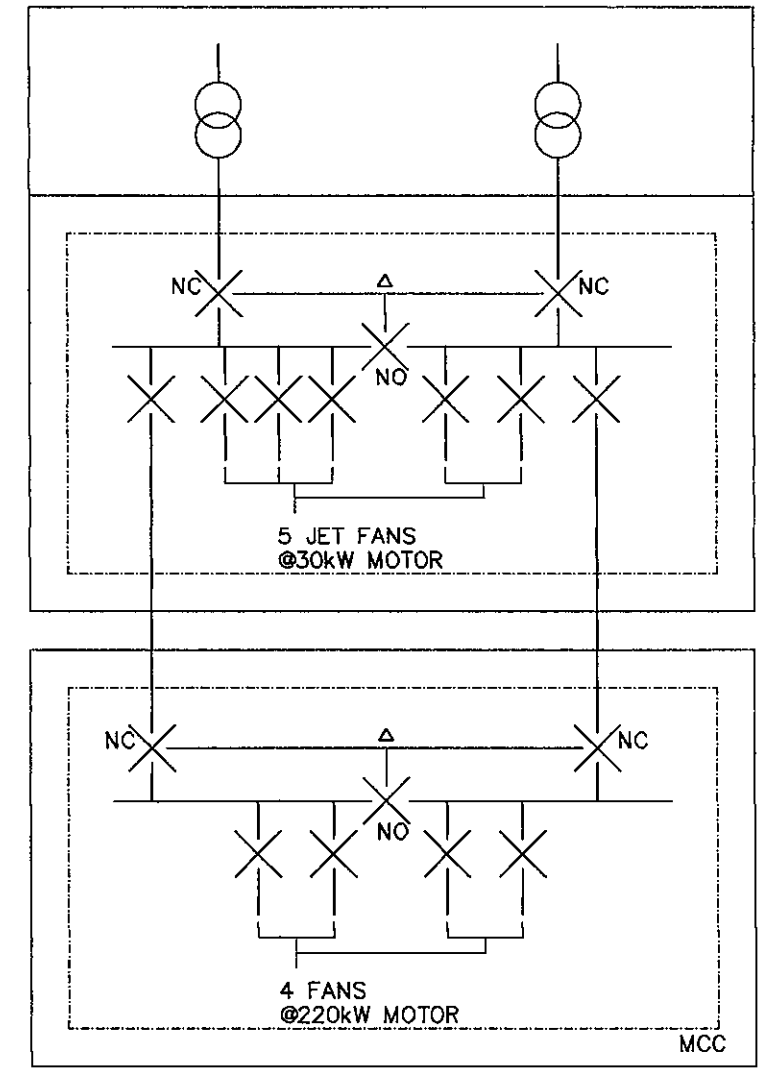
ABBREVIATION

- BLDG. BUILDING
- HV HIGH VOLTAGE
- LCC LIGHTING CONTROL CENTRE
- LV LOW VOLTAGE
- MCC MOTOR CONTROL CENTRE
- NC NORMAL CLOSED
- NO NORMAL OPEN
- RM ROOM

EAST PORTAL VENT BUILDING



WEST PORTAL

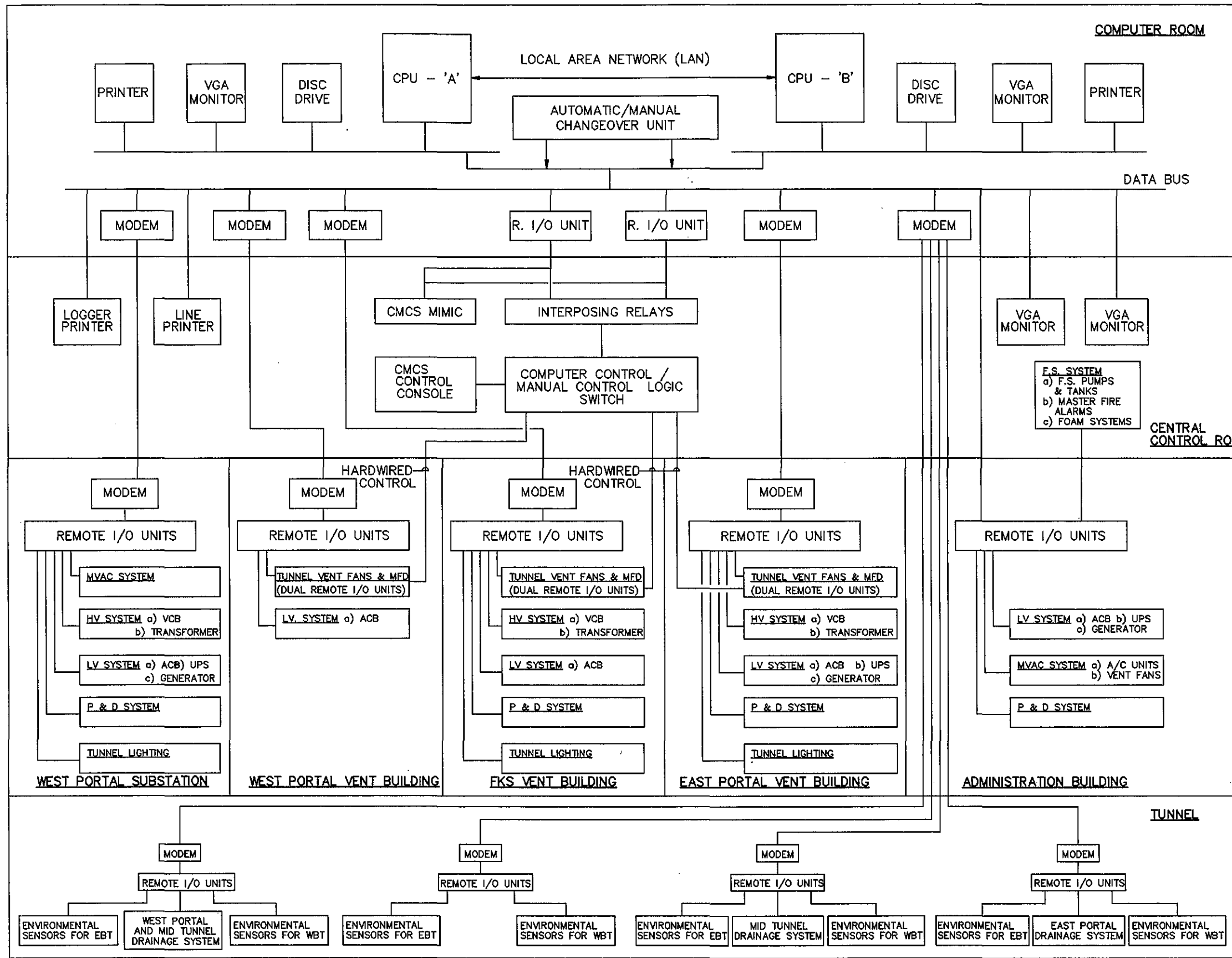


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Central Kowloon Route Study : Preliminary Design
Motor Control Centre Schematic Diagram

FIGURE NO.	SCALE
054	NOT TO SCALE
	DATE
	APRIL 93

Date: 9/4/1993
Cod Ref.: 004
Plot Scale: 1 = 1.00



LEGEND

- DATA BUS
- DATA (SIGNAL) FLOW IN THE DIRECTION SHOWN
- ↔ BI-DIRECTIONAL DATA (SIGNAL) FLOW
- BOUNDARY LINE

NOTES

1. THE ENVIRONMENTAL SENSORS IN THE TUNNEL TUBES WILL INCLUDE THOSE MONITORING
 - (a) CO & NO CONCENTRATION
 - (b) VISIBILITY AND
 - (c) AIR VELOCITY
2. THE FOLLOWING REMOTE CONTROL AND MONITORING FEATURES WILL BE PROVIDED TO ALL PORTAL AND MID-TUNNEL SUMPS:
 - (a) FLOODING ALARMS MONITORING,
 - (b) PUMP STATUS MONITORING, AND
 - (c) REMOTE ON/OFF CONTROL OF SUMP PUMPS.

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**Central Kowloon Route Study : Preliminary Design
Central Monitoring and Control System Schematic Diagram**

FIGURE NO.

055

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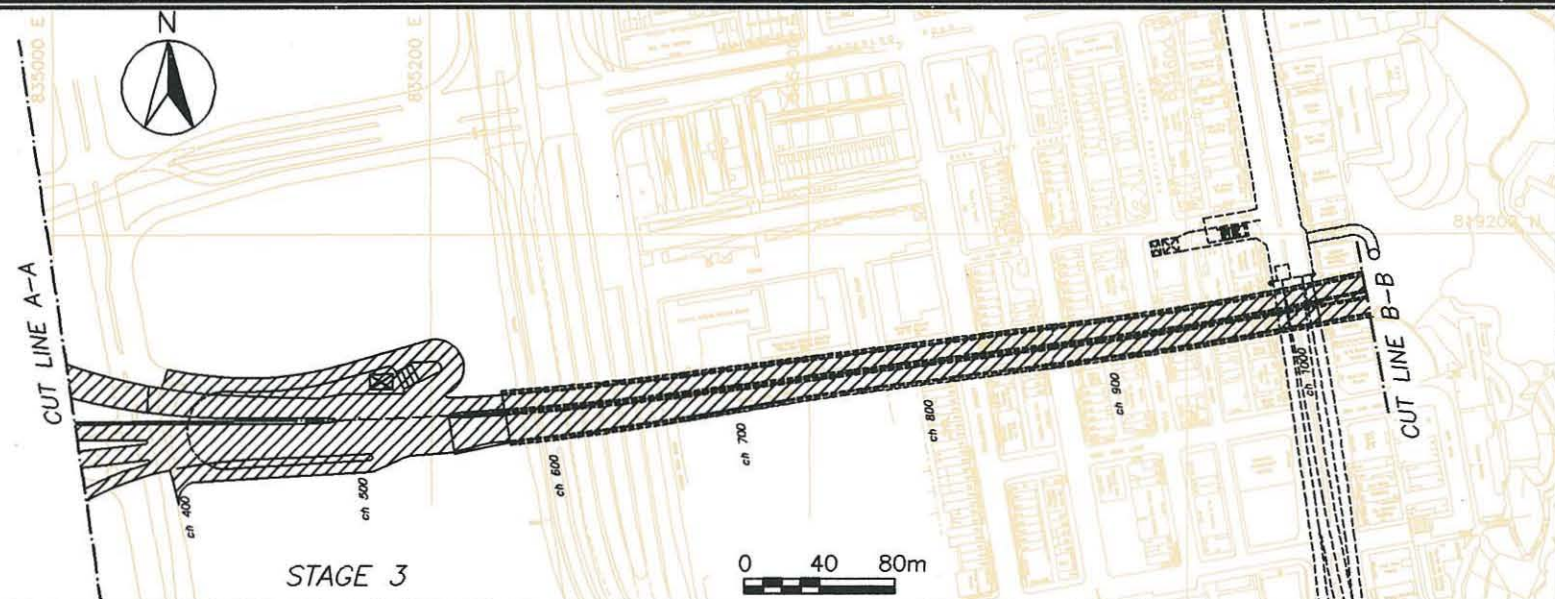
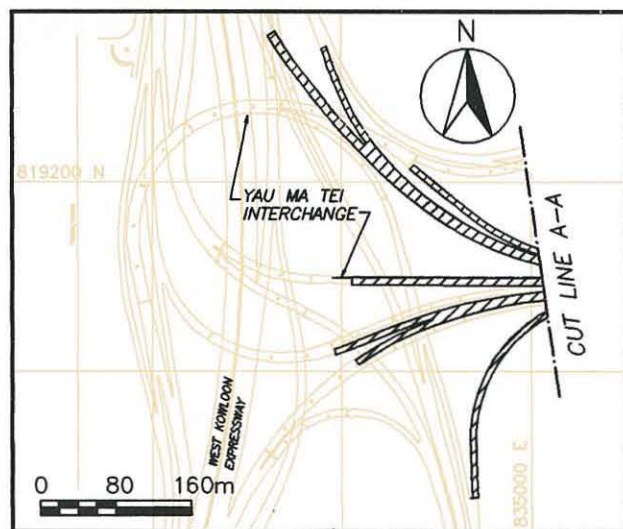
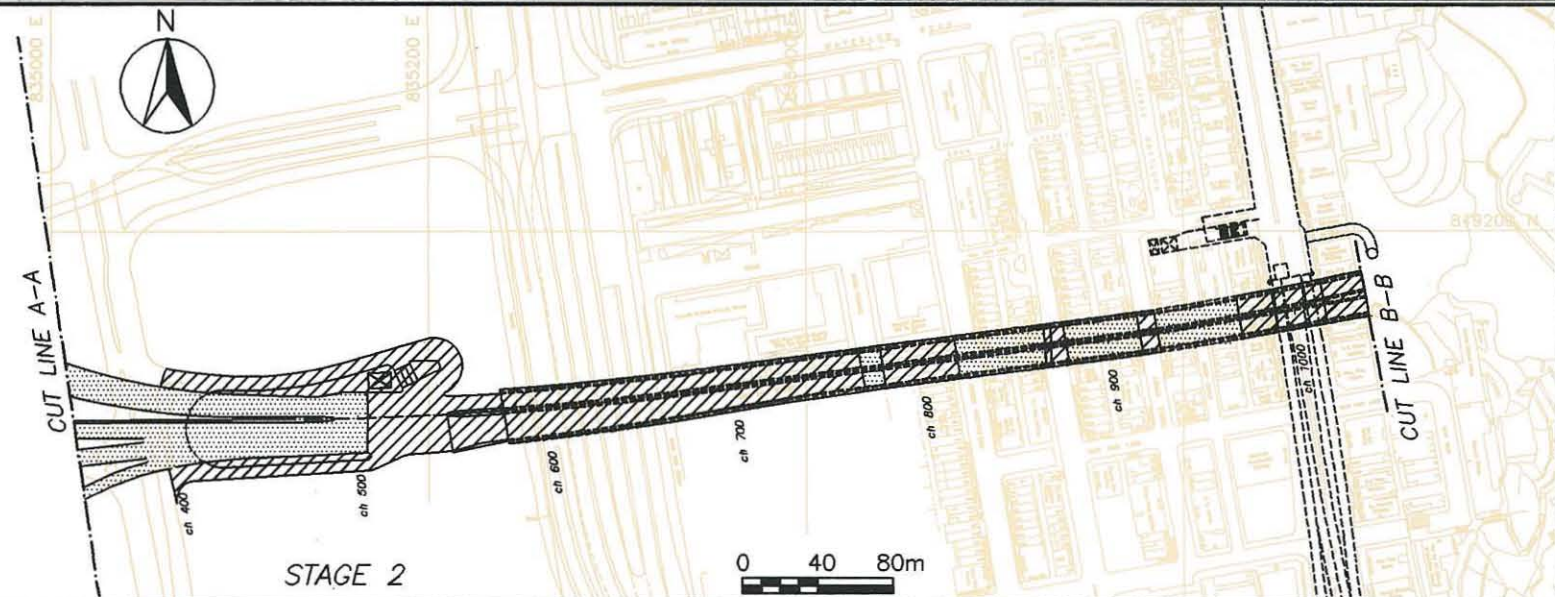
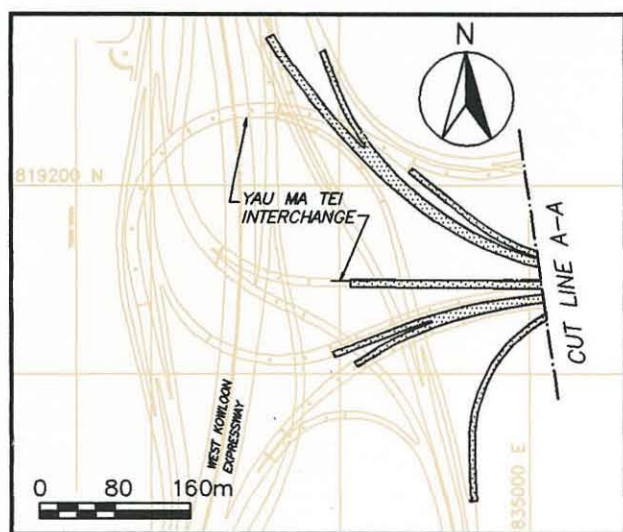
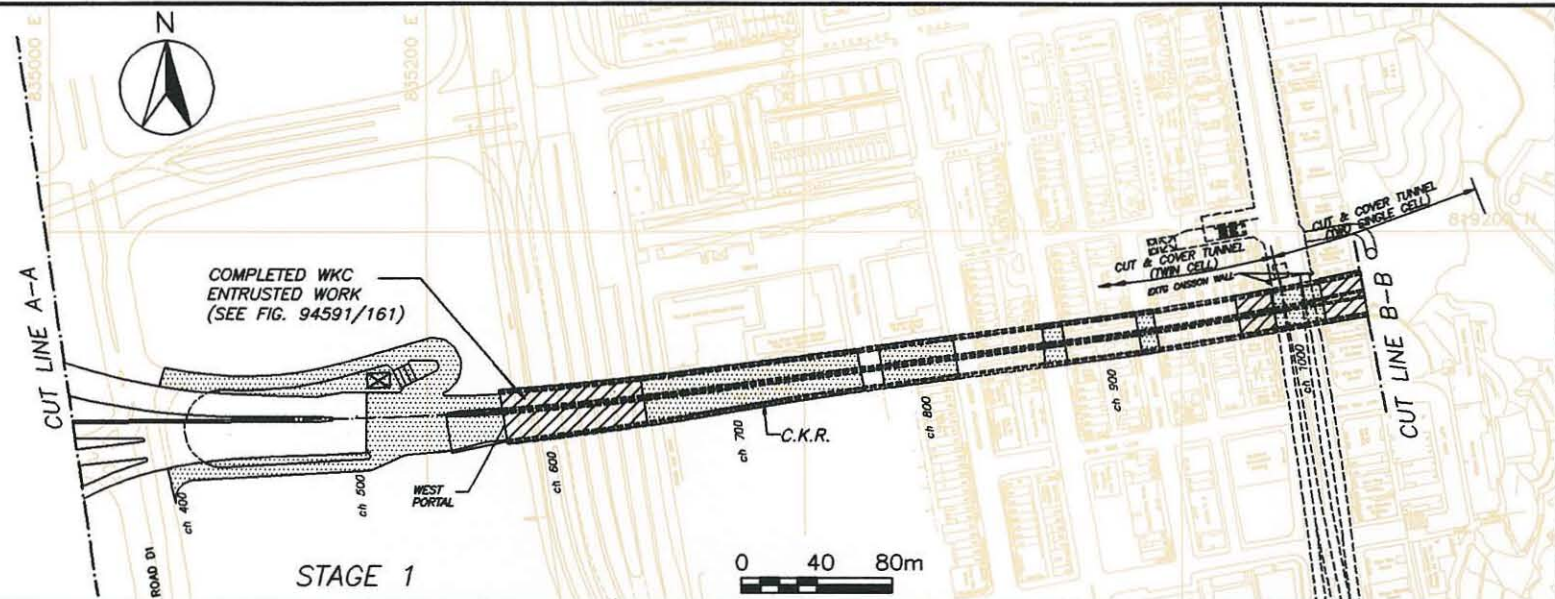
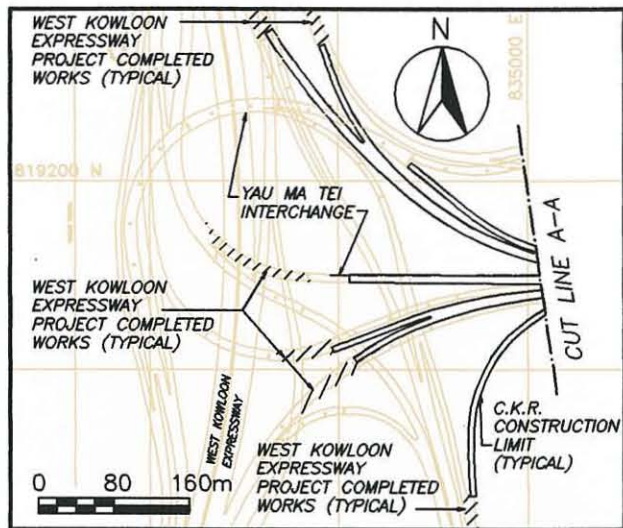
Date: 9/4/1993
Cod Ref.: 055
Plot Scale: 1 = 1.00

NOTE:
SEWER RELOCATION ON RECLAMATION STREET
TO BE DONE IN THIS STAGE.

ABBREVIATION :
C.K.R. : CENTRAL KOWLOON ROUTE

GENERAL LEGEND :

-  PORTION OF CKR TO BE CONSTRUCTED IN CURRENT STAGE
-  PORTION OF CKR CONSTRUCTED IN PREVIOUS STAGE



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Central Kowloon Route Study : Preliminary Design
Phase 1 - Construction Limits & Staging Plan (Sheet 1 of 3)

FIGURE NO.

060

SCALE

AS SHOWN

DATE

APRIL 93



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Central Kowloon Route Study : Preliminary Design
Phase 1 - Construction Limits & Staging Plan (Sheet 2 of 3)

FIGURE NO.

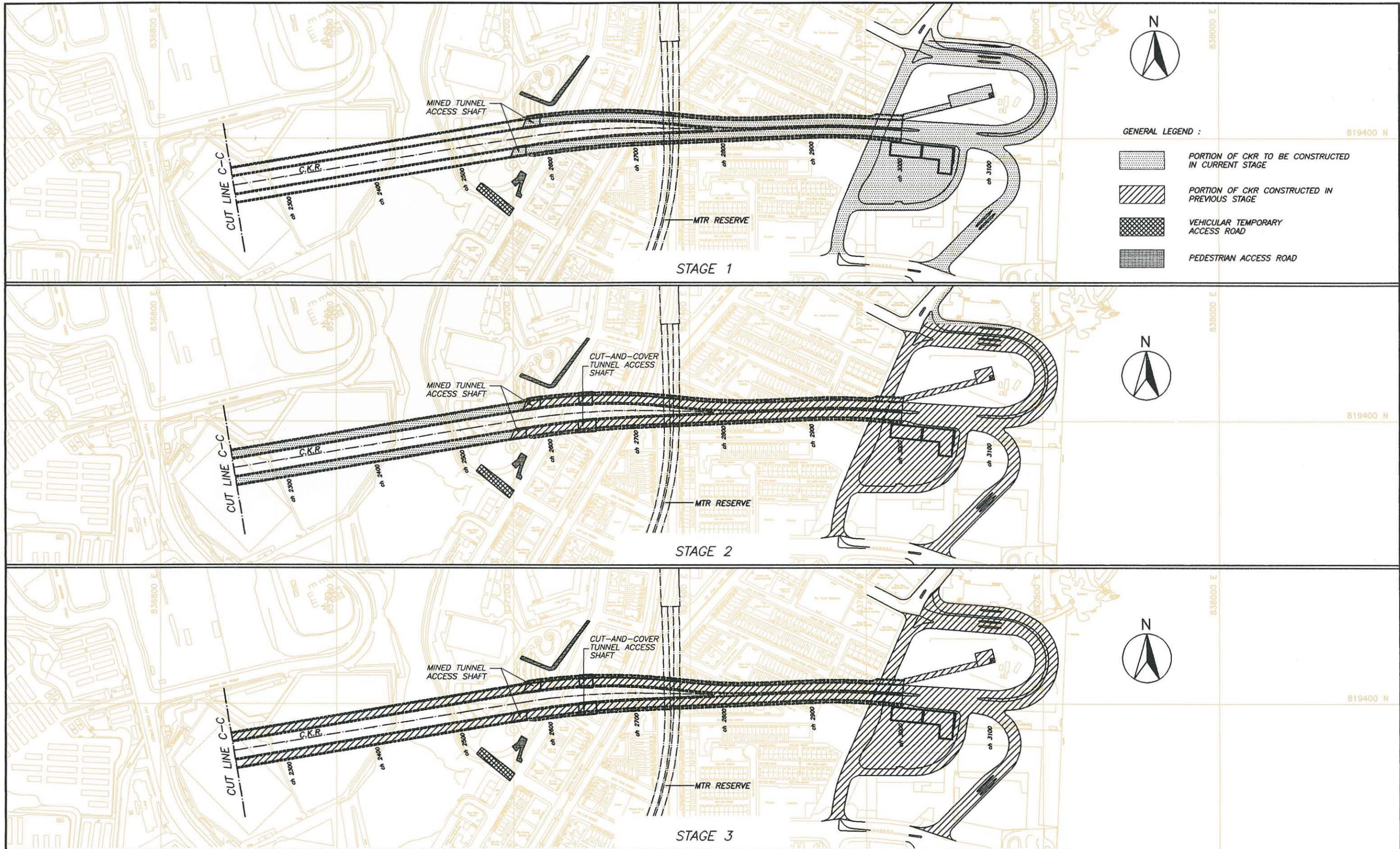
061

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DATE

APRIL 93



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Central Kowloon Route Study : Preliminary Design
Phase 1 - Construction Limits & Staging Plan (Sheet 3 of 3)

FIGURE NO.

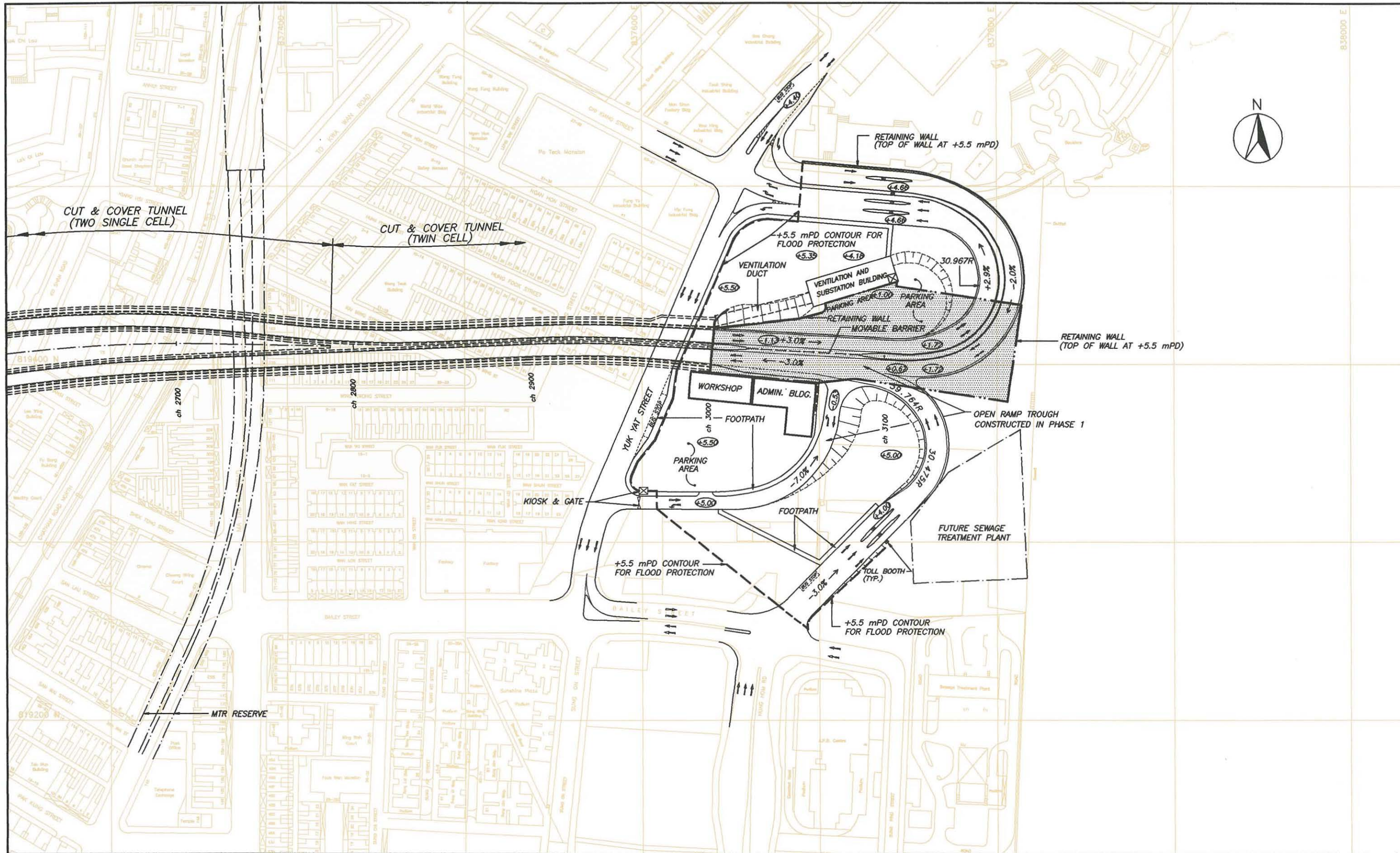
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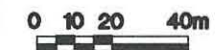
Parsons Brinckerhoff
Maunsell Consultants

Central Kowloon Route Study : Preliminary Design
Phase 1 - General Layout for East Portal Area

FIGURE NO.

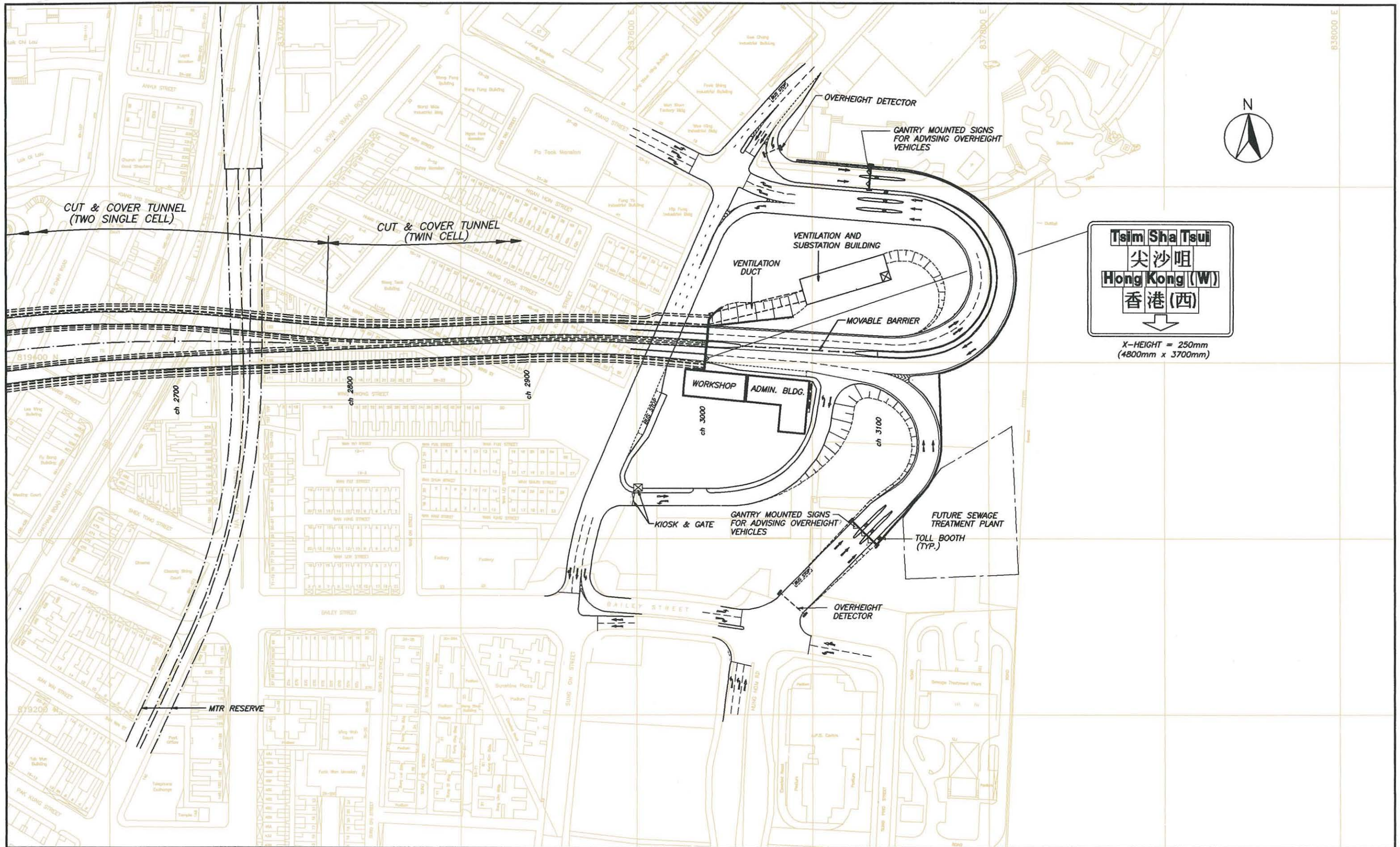
063

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Central Kowloon Route Study : Preliminary Design
Phase 1 - Road Signing and Marking Plan for East Portal Area

FIGURE NO.

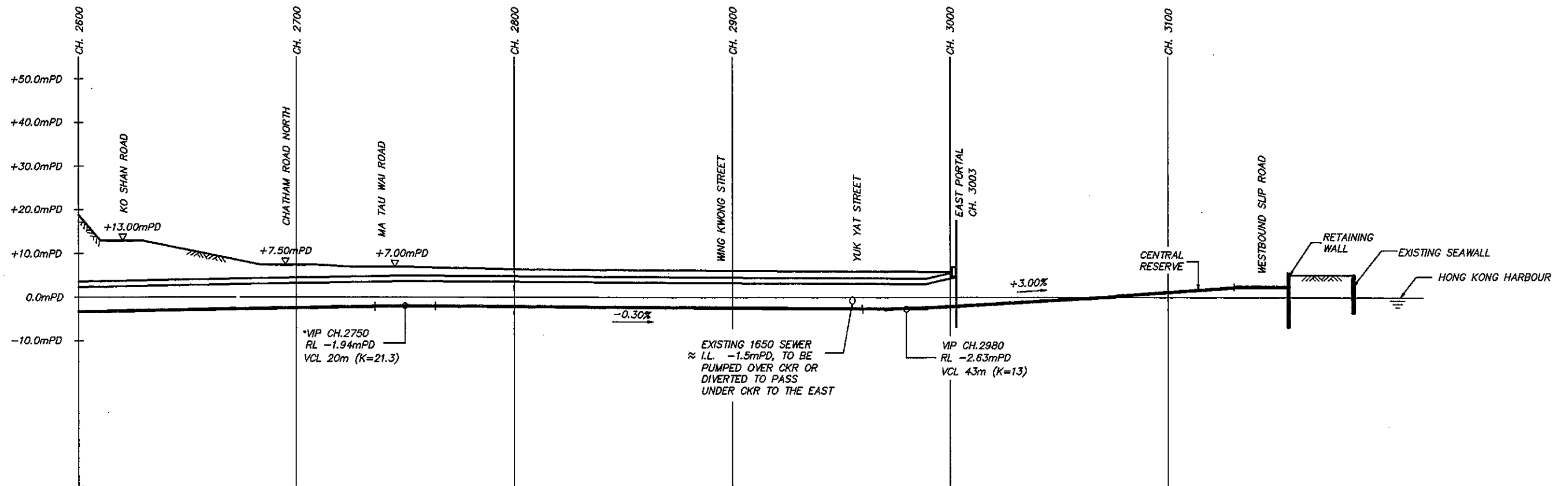
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APRIL 93



Parsons Brinckerhoff
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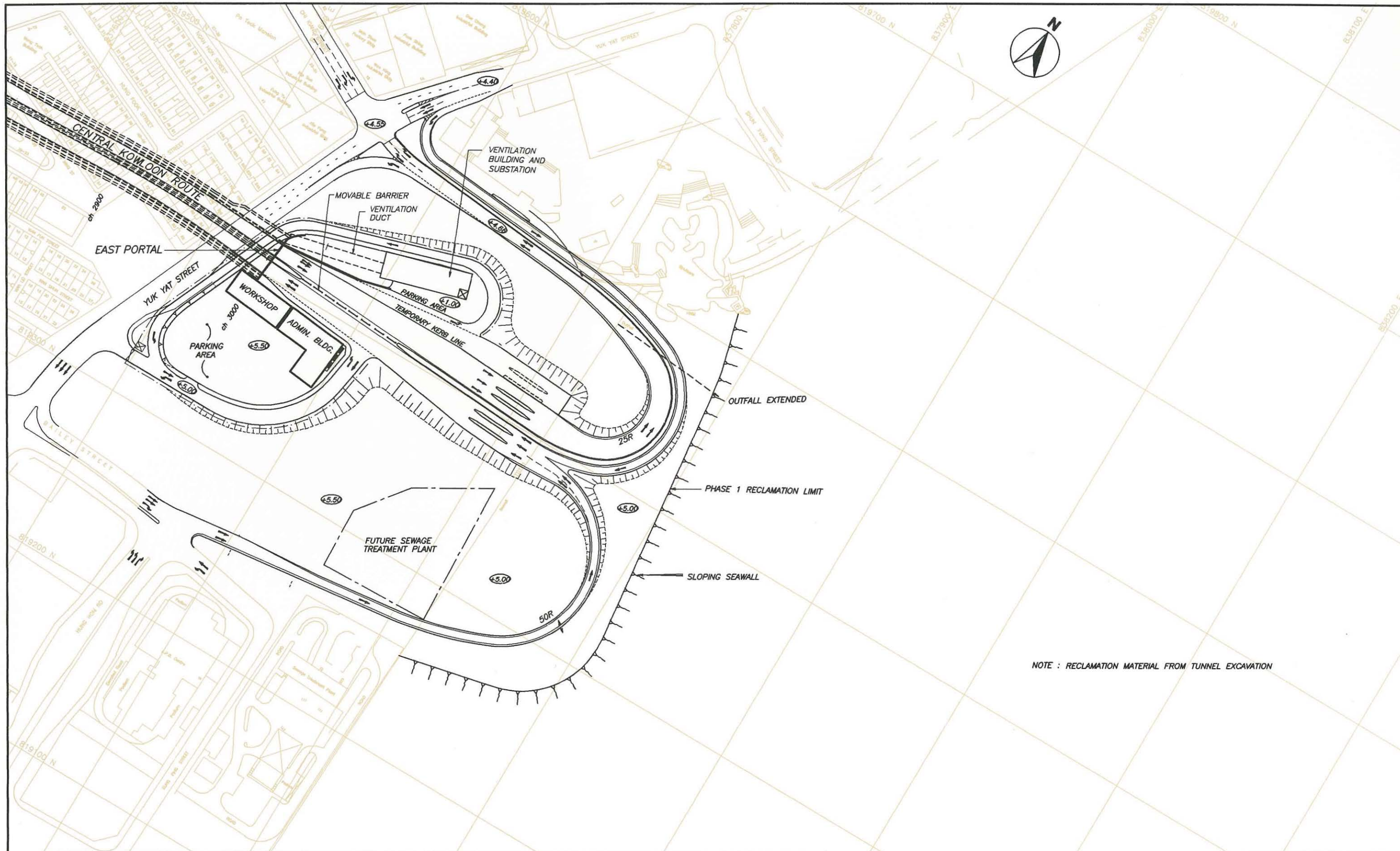
Central Kowloon Route Study : Preliminary Design
Phase 1 - Profile of East Portal Area

FIGURE NO.

065

SCALE
HORIZ: 0 10 20 40m
VERT: 0 5 10 20m

DATE
APRIL 93



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Central Kowloon Route Study : Preliminary Design
TKW Interchange : Interim Layout With Reclamation

FIGURE NO.

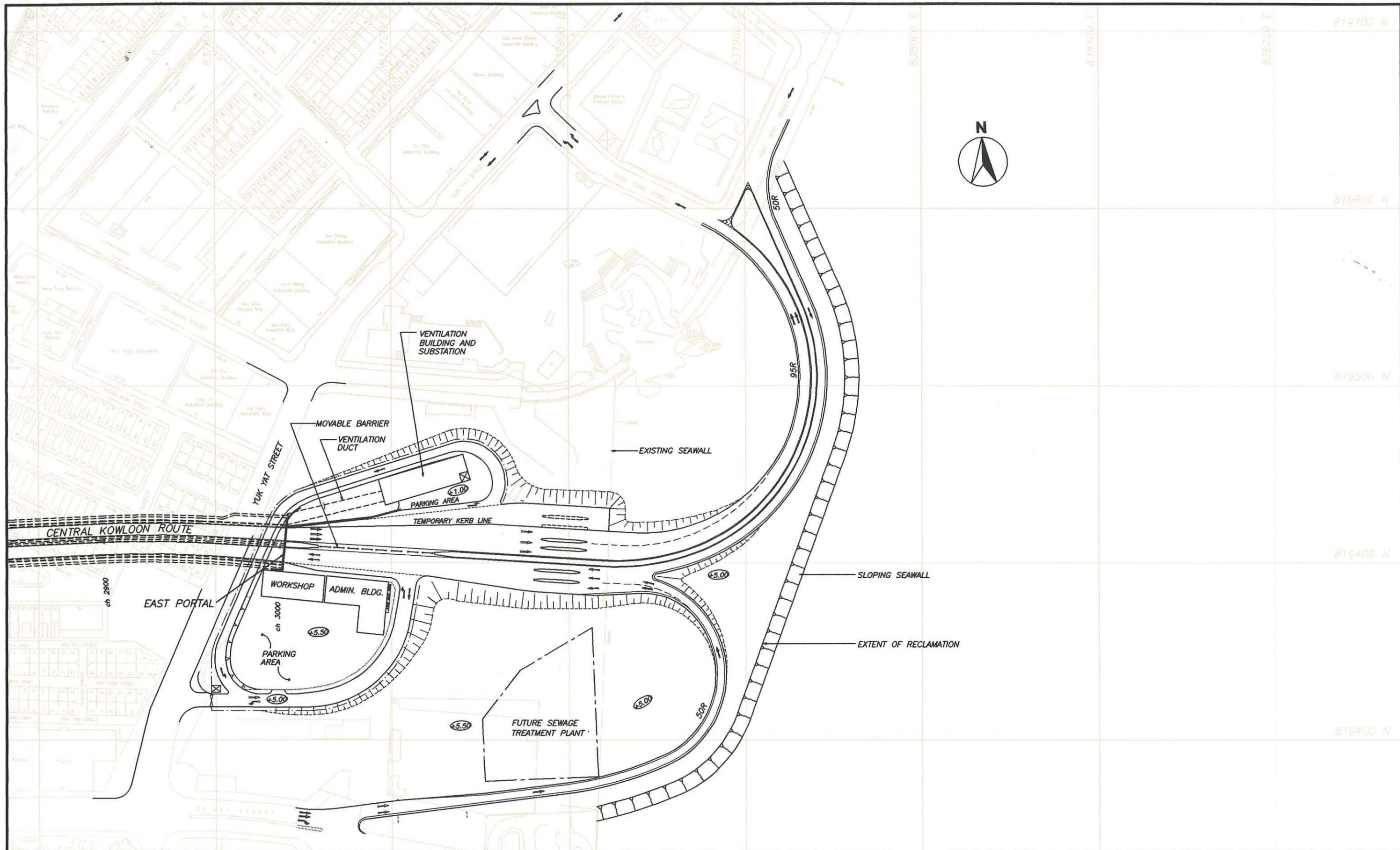
066

SCALE

0 10 20 40m

DATE

APRIL 93



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Central Kowloon Route Study
Phase 1 - Shun Fung Street Option

FIGURE NO.

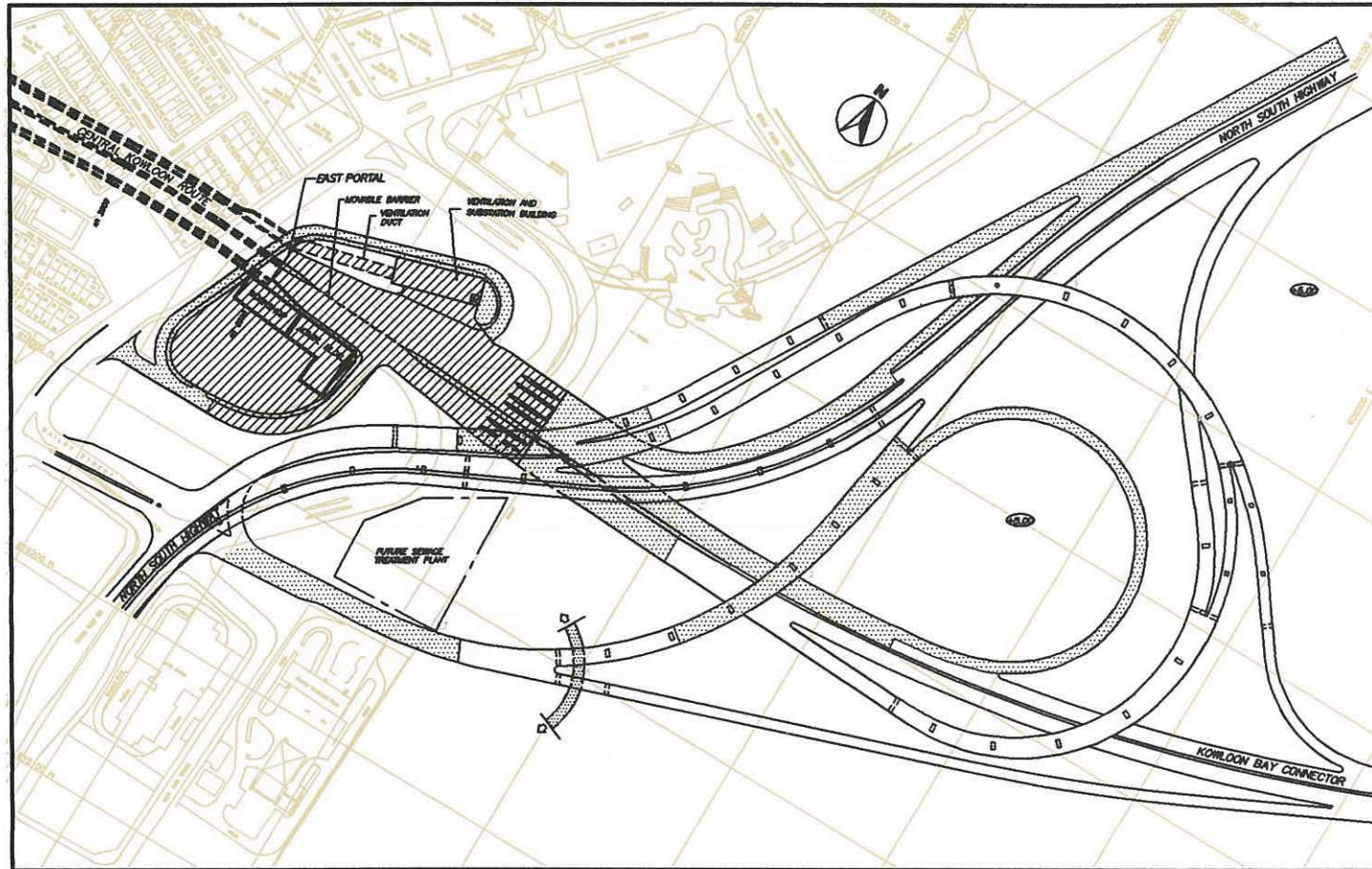
067

SCALE

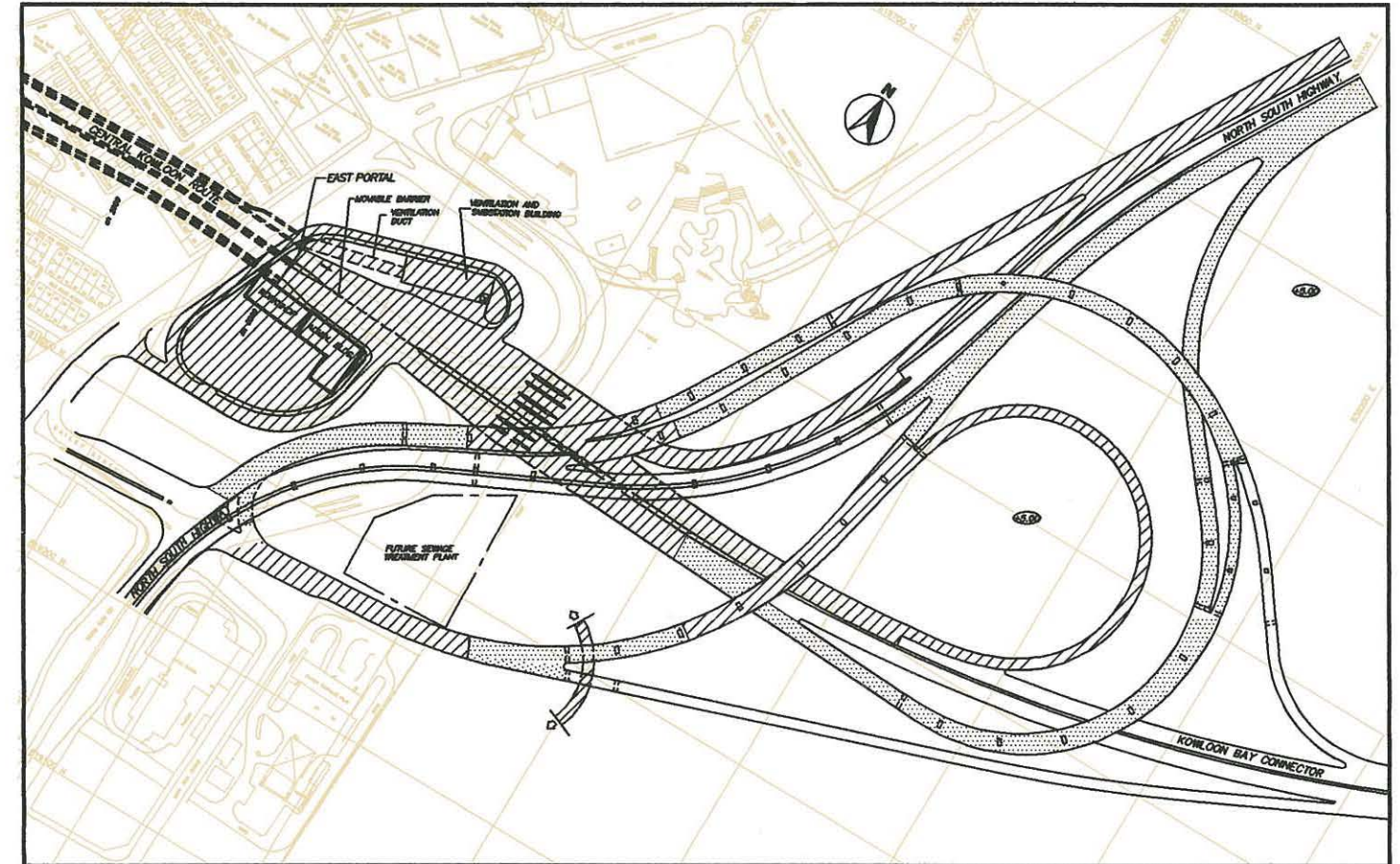
0 5 10 20m

DATE

APRIL 93





STAGE 1



STAGE 2

LEGEND :

-  PORTION OF CKR TO BE CONSTRUCTED IN CURRENT STAGE
-  PORTION OF CKR CONSTRUCTED IN PREVIOUS STAGE

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Central Kowloon Route Study : Preliminary Design
Phase 2 - Construction Limits & Staging Plan

FIGURE NO.

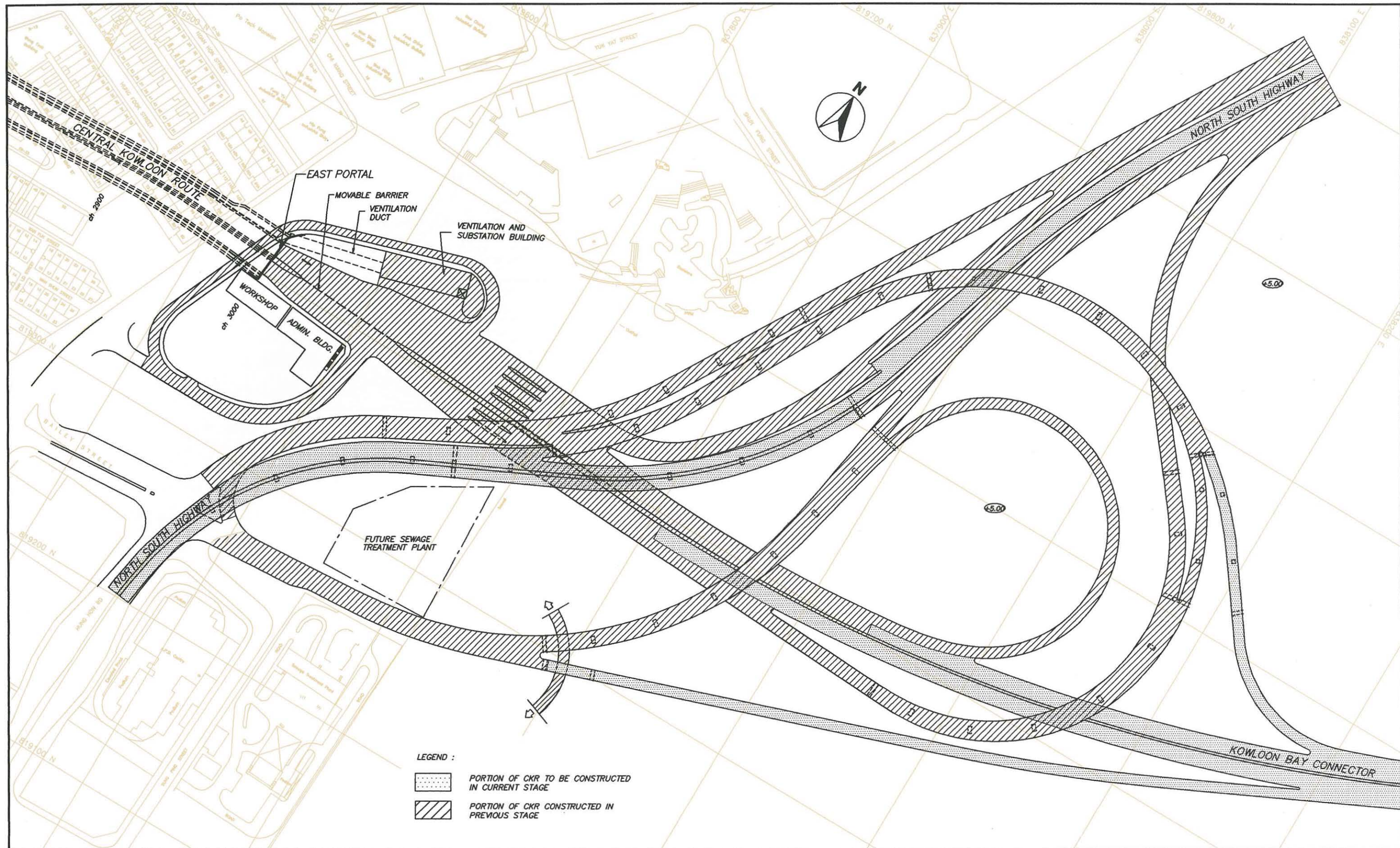
070

SCALE

0 20 40 80m

DATE

APRIL 93



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Central Kowloon Route Study : Preliminary Design
Phase 3 - Construction Limits & Staging Plan

FIGURE NO.

071

SCALE

0 10 20 40m

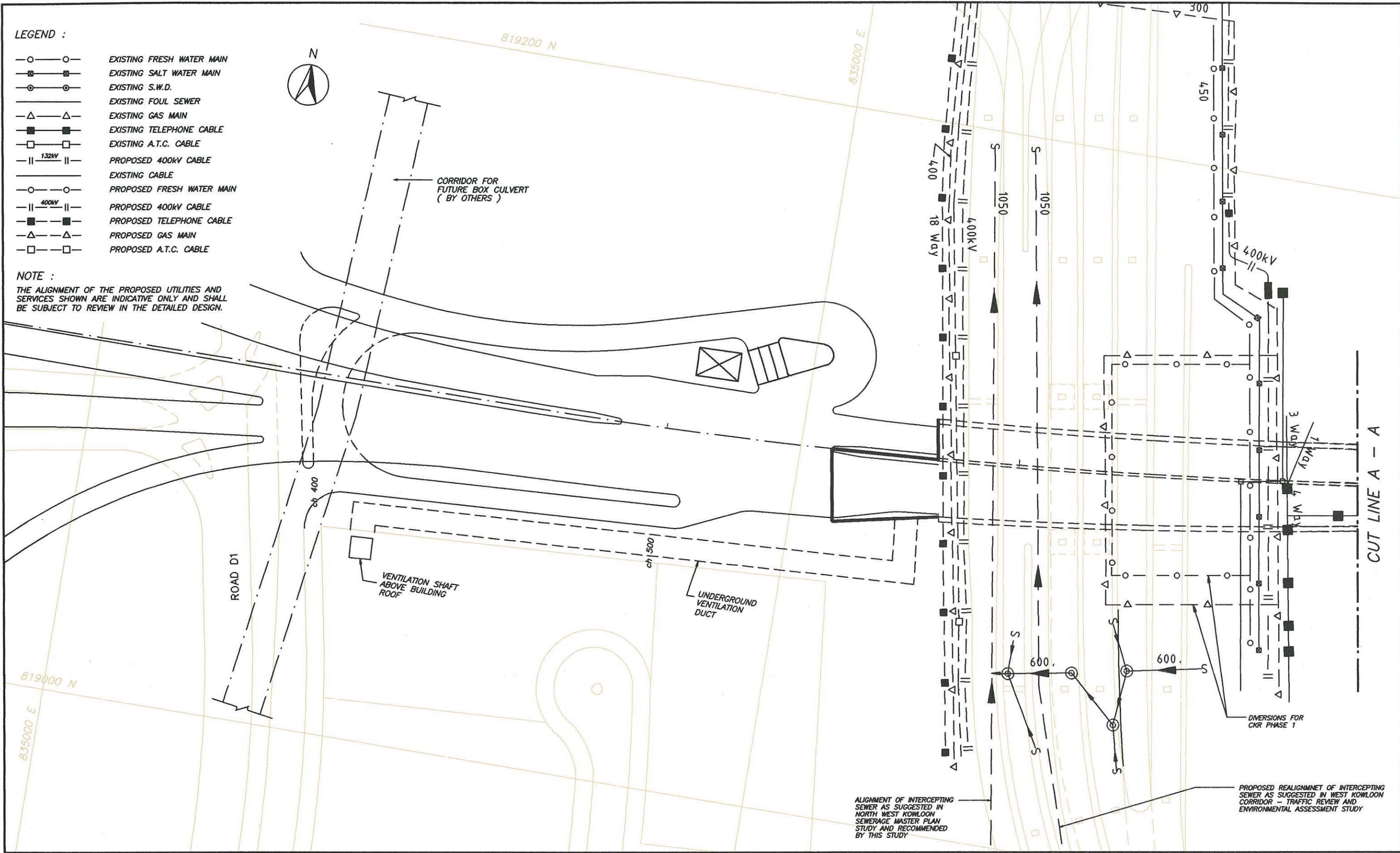
DATE

APRIL 93

LEGEND :

- EXISTING FRESH WATER MAIN
- EXISTING SALT WATER MAIN
- EXISTING S.W.D.
- △—△— EXISTING FOUL SEWER
- ▲—▲— EXISTING GAS MAIN
- EXISTING TELEPHONE CABLE
- EXISTING A.T.C. CABLE
- ||—||— PROPOSED 400KV CABLE
- ||—||— EXISTING CABLE
- PROPOSED FRESH WATER MAIN
- ||—||— PROPOSED 400KV CABLE
- PROPOSED TELEPHONE CABLE
- △—△— PROPOSED GAS MAIN
- PROPOSED A.T.C. CABLE

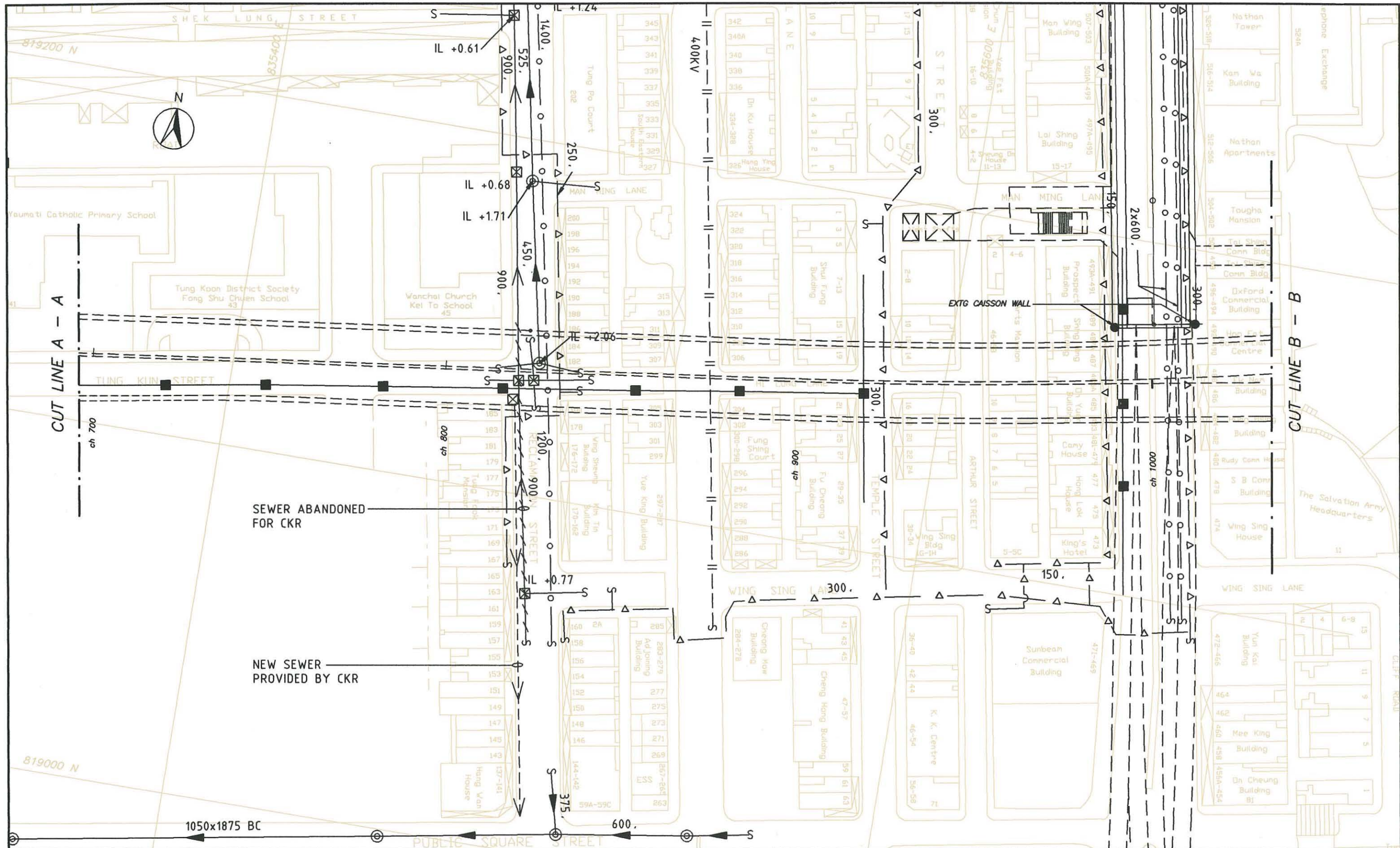
NOTE :
 THE ALIGNMENT OF THE PROPOSED UTILITIES AND SERVICES SHOWN ARE INDICATIVE ONLY AND SHALL BE SUBJECT TO REVIEW IN THE DETAILED DESIGN.



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**Central Kowloon Route Study : Preliminary Design
 Utility Information Plan (Sheet 1 of 6)**

FIGURE NO. 080	SCALE
	0 5 10 20m
	DATE
	APRIL 93



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Central Kowloon Route Study : Preliminary Design
Utility Information Plan (Sheet 2 of 6)

FIGURE NO.

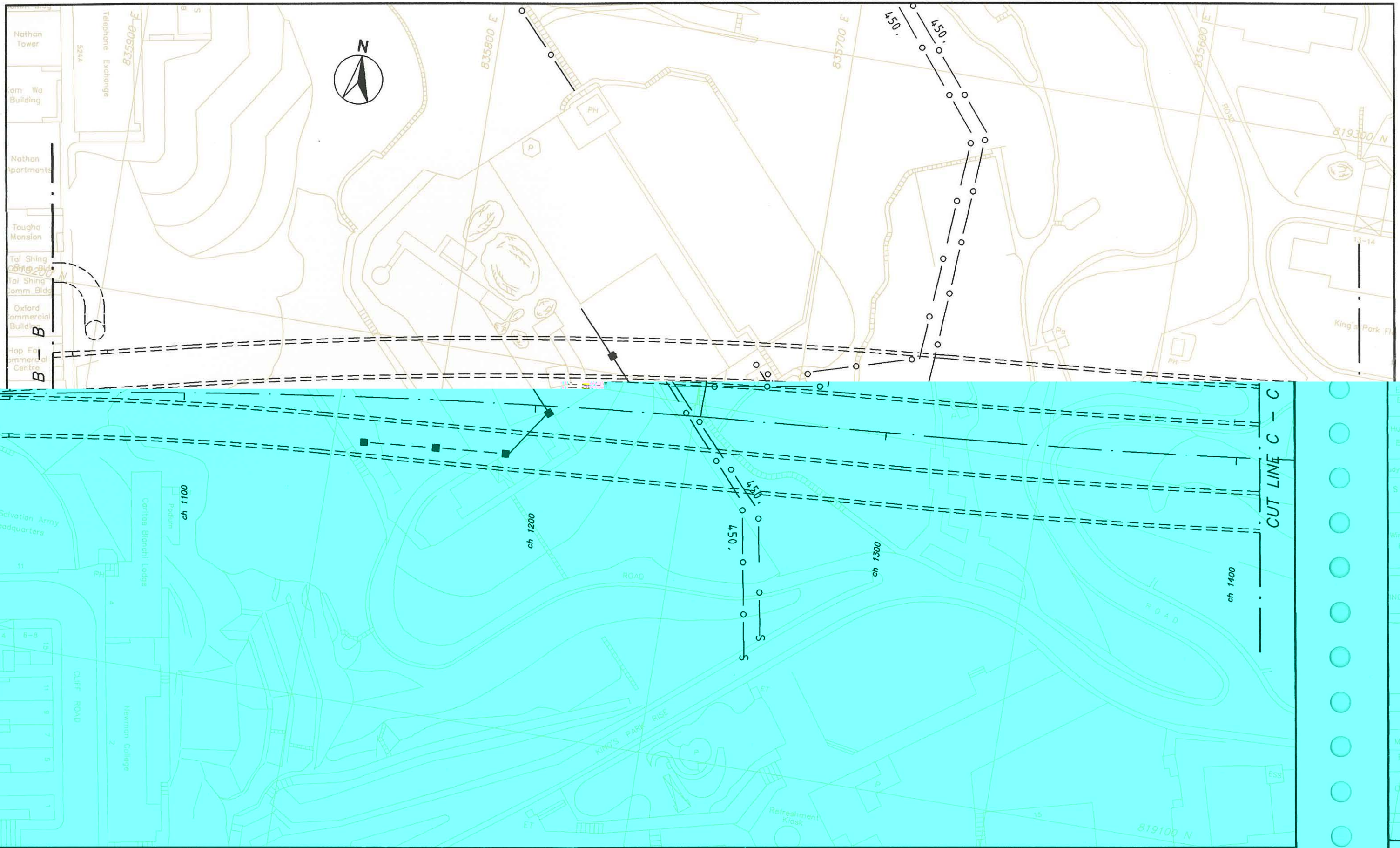
081

SCALE

0 5 10 20m

DATE

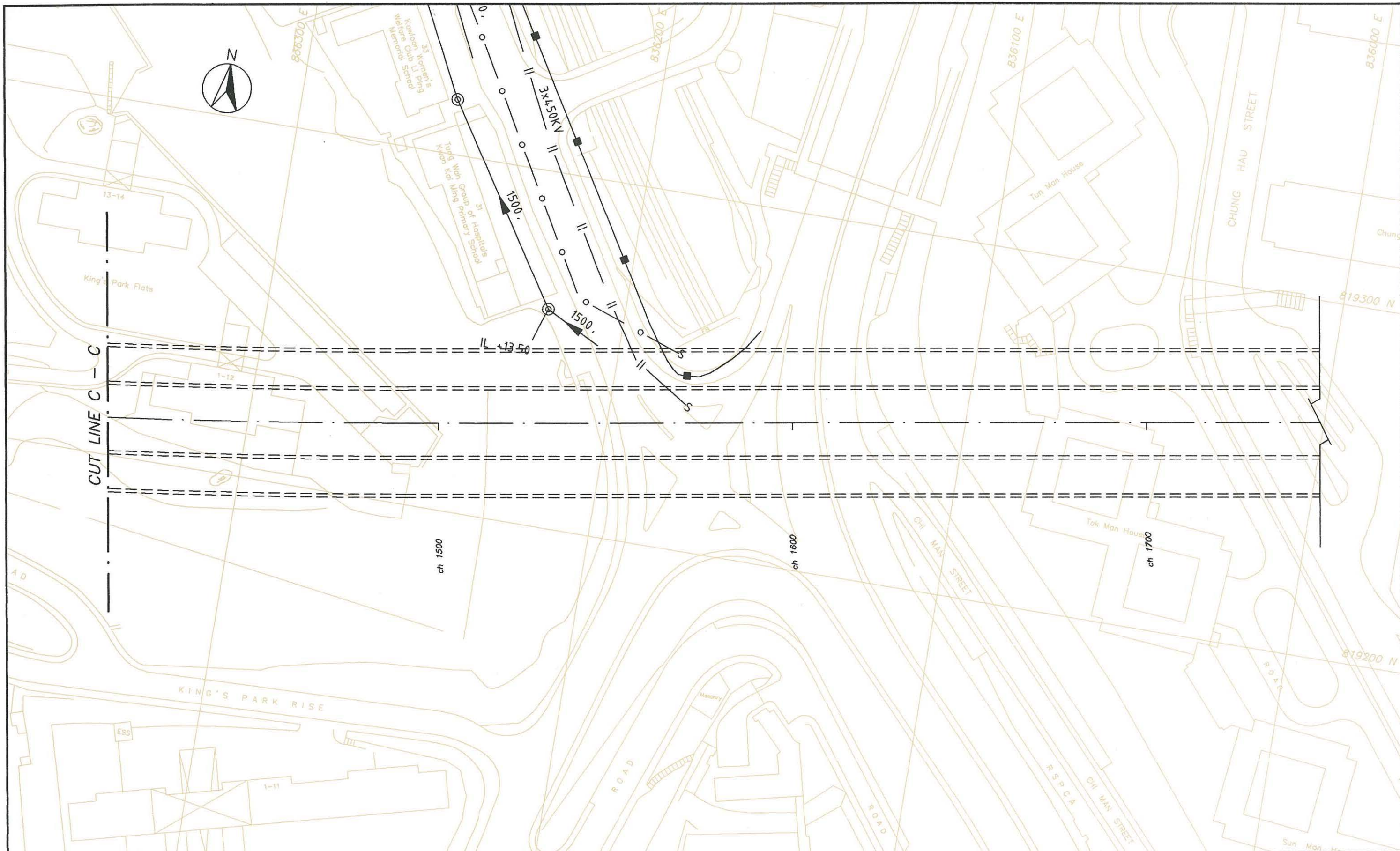
APRIL 93



Central Kowloon Route Study : Preliminary Design
Utility Information Plan (Sheet 3 of 6)

FIGURE NO.
082

SCALE
0 5 10 20m
DATE
APRIL 93



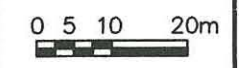
Parsons Brinckerhoff
 Maunsell Consultants

Central Kowloon Route Study : Preliminary Design
 Utility Information Plan (Sheet 4 of 6)

FIGURE NO.

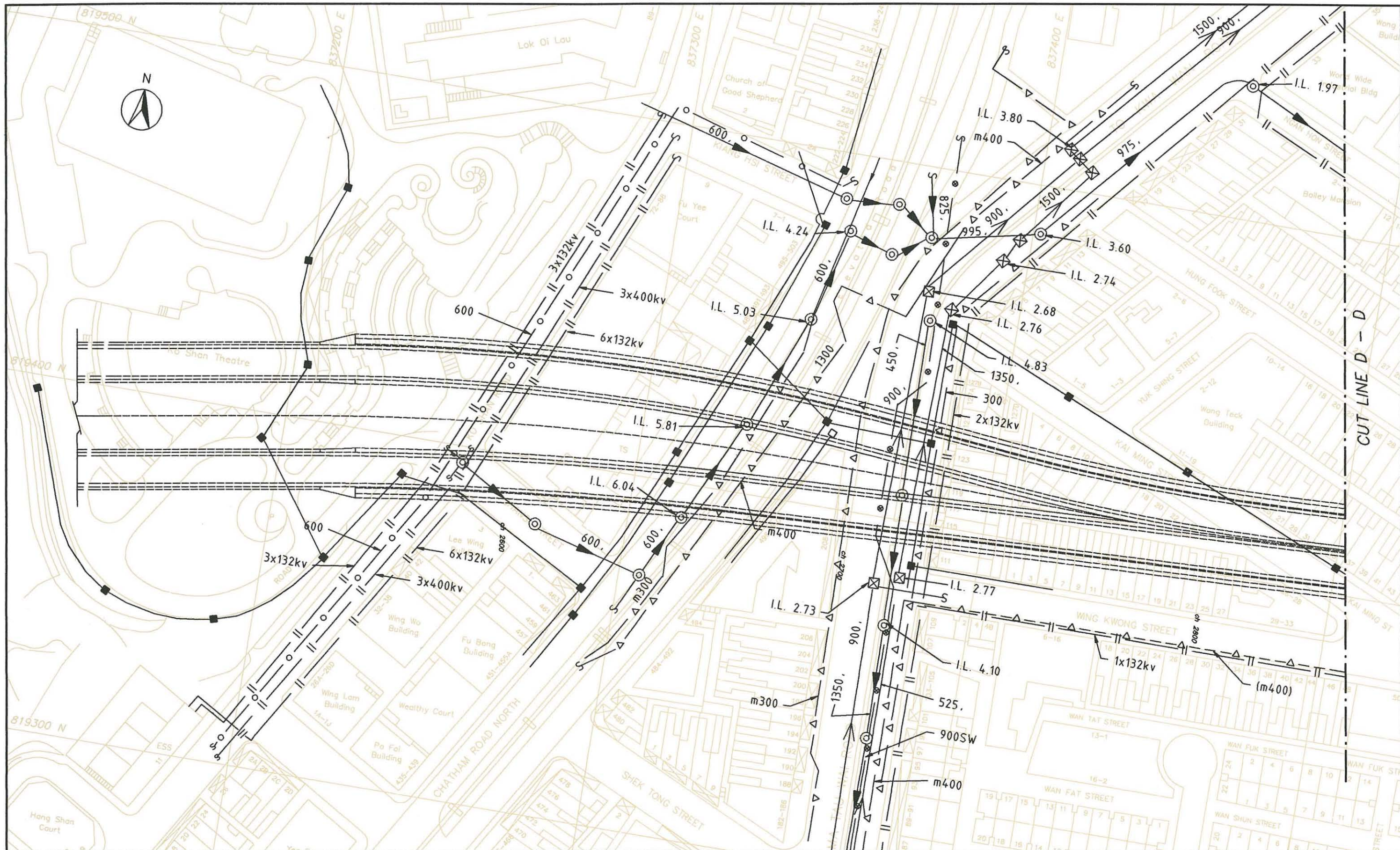
083

SCALE



DATE

APRIL 93



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Central Kowloon Route Study : Preliminary Design
Utility Information Plan (Sheet 5 of 6)

FIGURE NO.

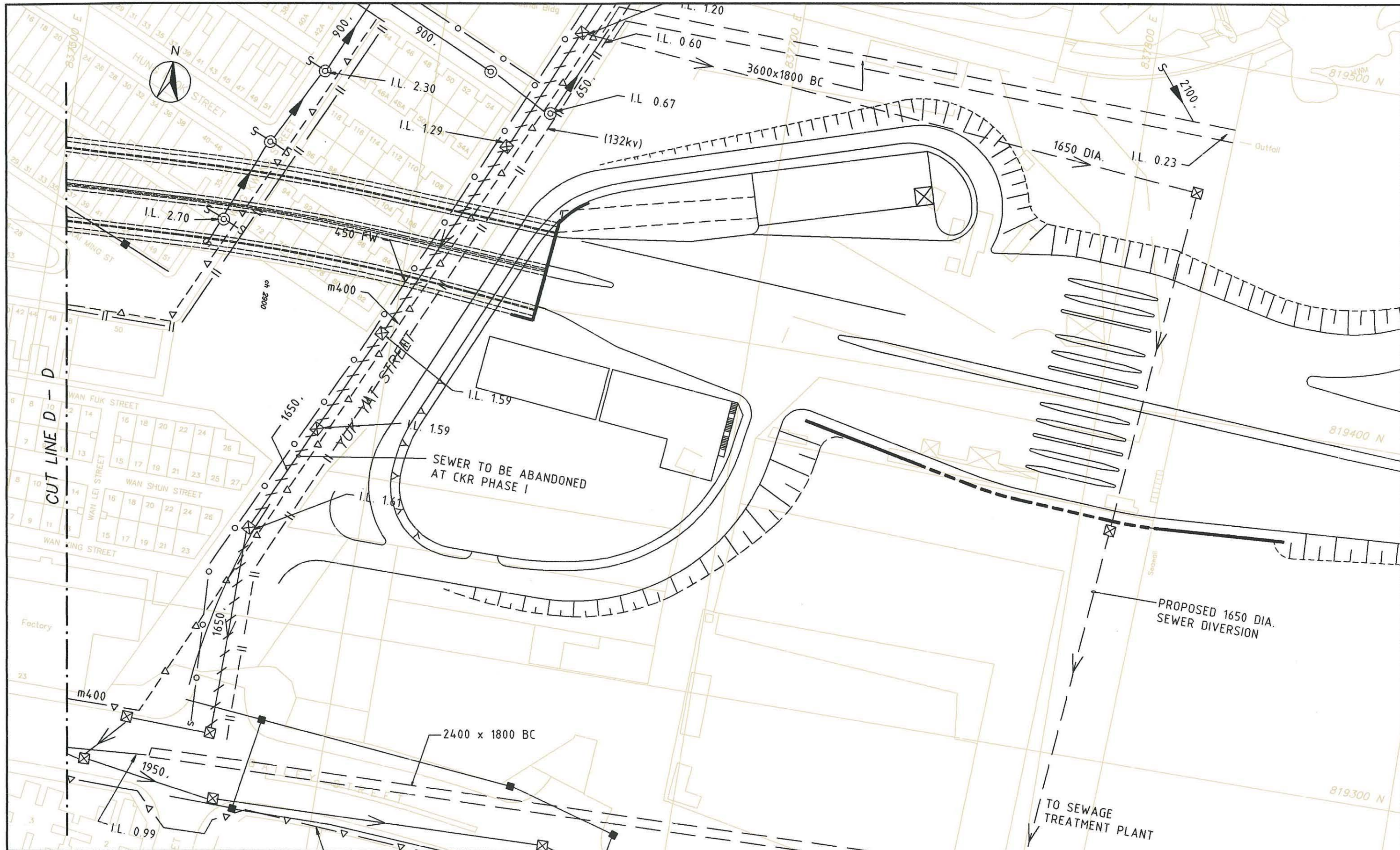
084

SCALE

0 5 10 20m

DATE

APRIL 93



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Central Kowloon Route Study : Preliminary Design
Utility Information Plan (Sheet 6 of 6)

FIGURE NO.

085

SCALE

0 5 10 20m

DATE

APRIL 93



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Central Kowloon Route Study : Preliminary Design
Temporary Traffic Diversion : Nathan Road between Man Ming Lane and Wing Sing Lane

FIGURE NO.

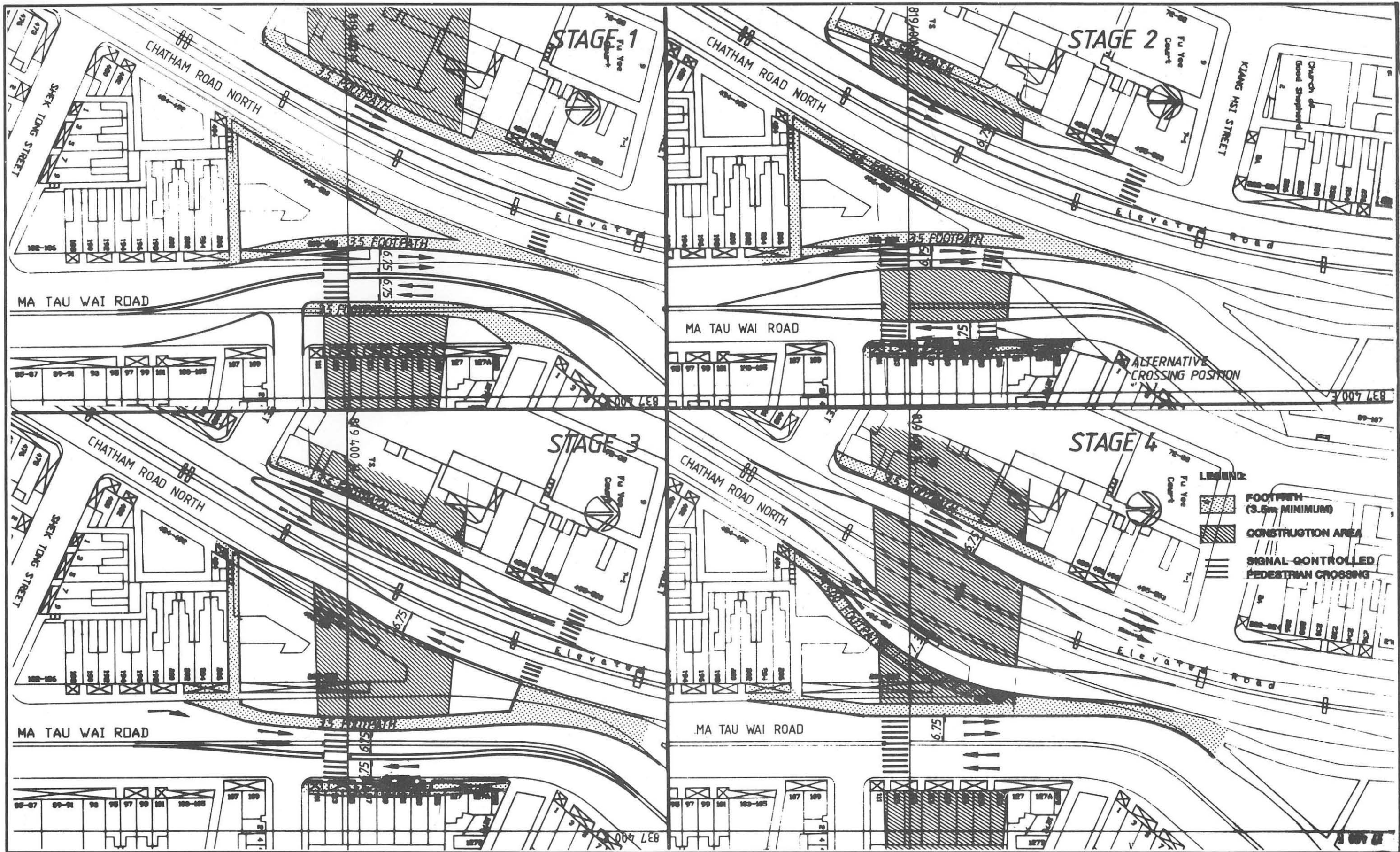
090

SCALE



DATE

APRIL 93



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Maunsell Consultants

Central Kowloon Route Study : Preliminary Design
Temporary Traffic Diversions : Chatham Road North and Ma Tau Wai Road

FIGURE NO.

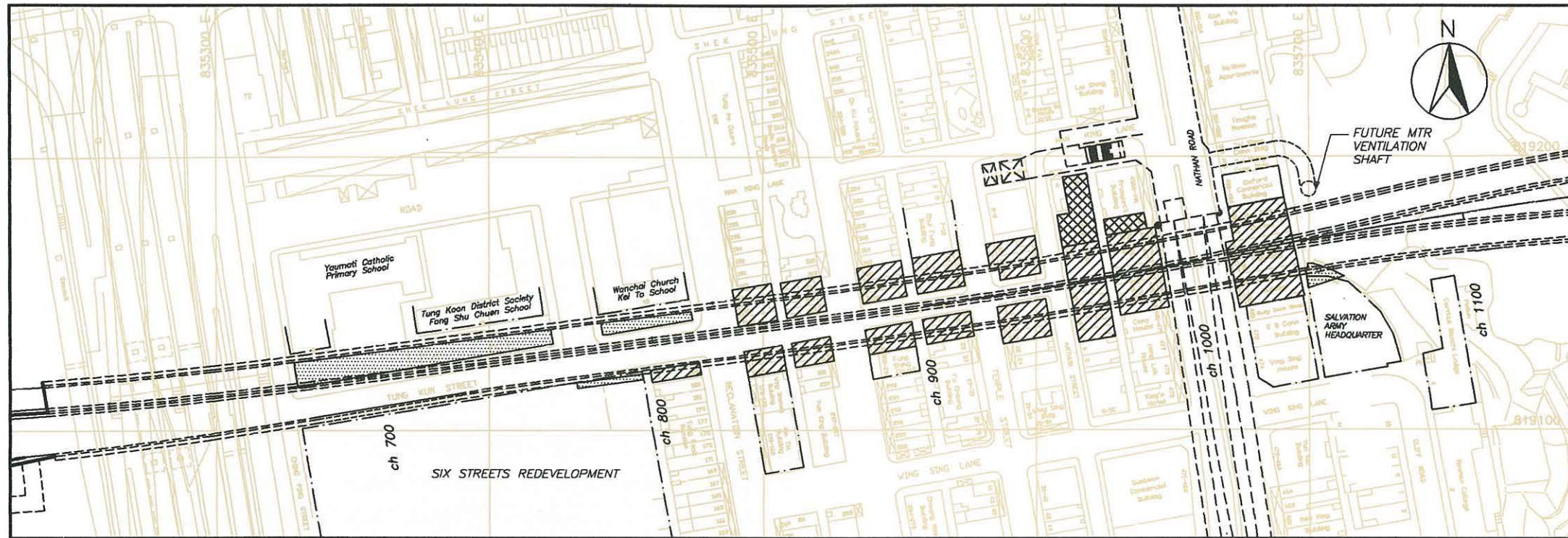
091

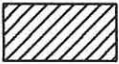



SCALE

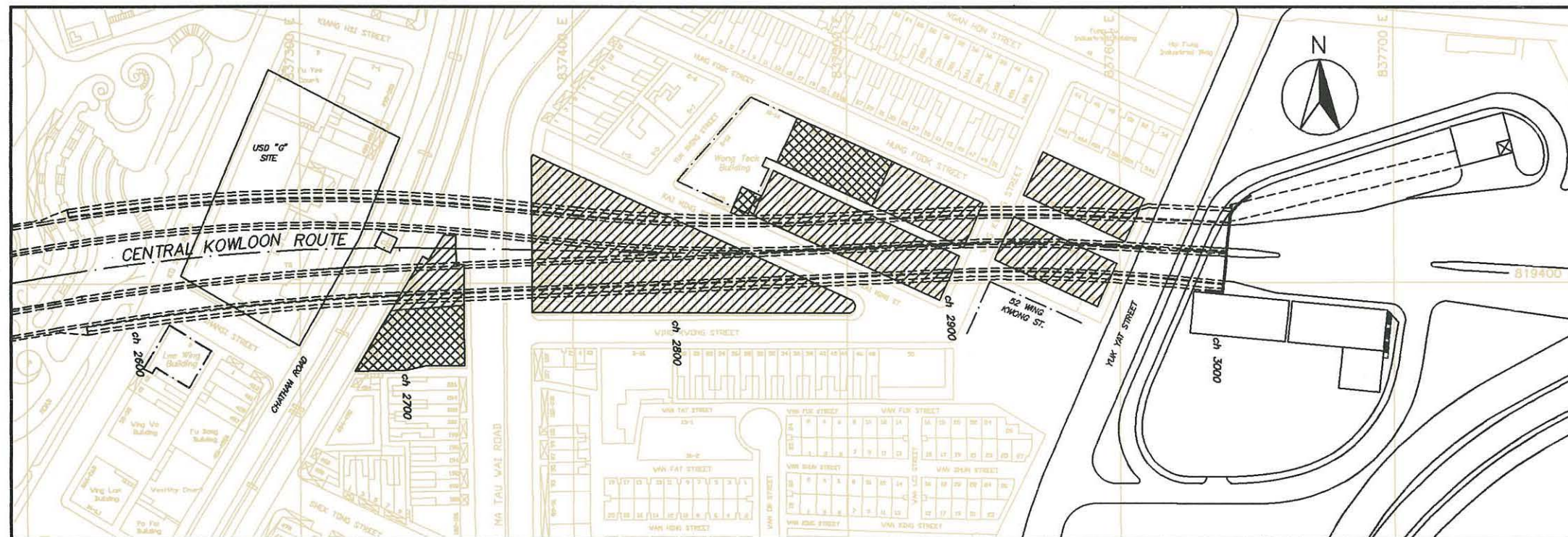
0 5 10 20m

DATE

APRIL 93



- LEGEND :
-  PROPERTY TO BE RESUMED
 -  PROPERTY MAY HAVE TO BE RESUMED (PENDING DETAIL STUDY DURING DETAIL DESIGN)
 -  PROPERTY TO BE RESUMED DURING CONSTRUCTION AND REINSTATED AFTER CONSTRUCTION
 -  PHYSICAL CONSTRAINTS TO HORIZONTAL ALIGNMENT



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Central Kowloon Route Study : Preliminary Design
Property Resumption Limits and Physical Constraints

FIGURE NO.

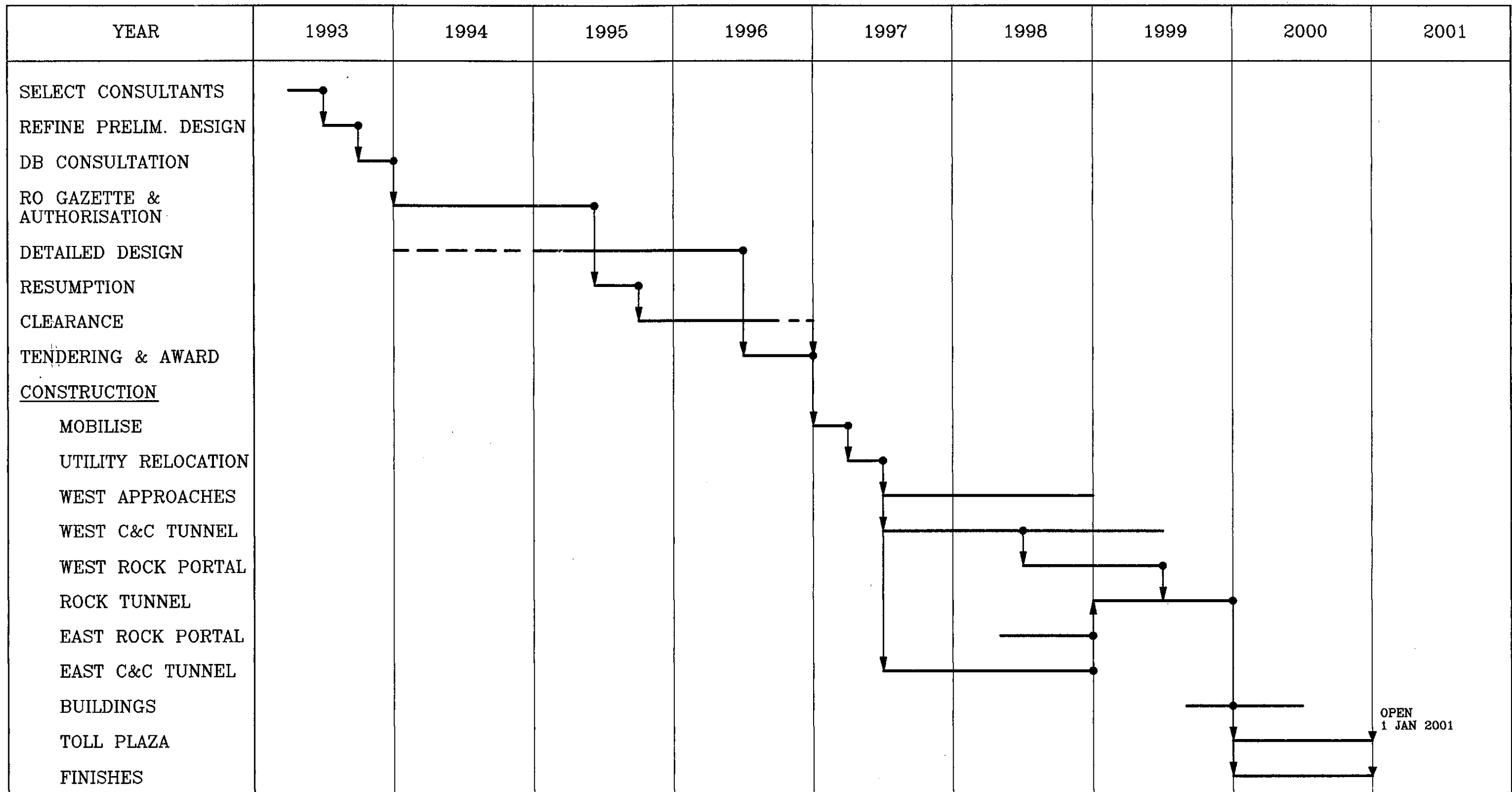
095

SCALE

0 10 20 40m

DATE

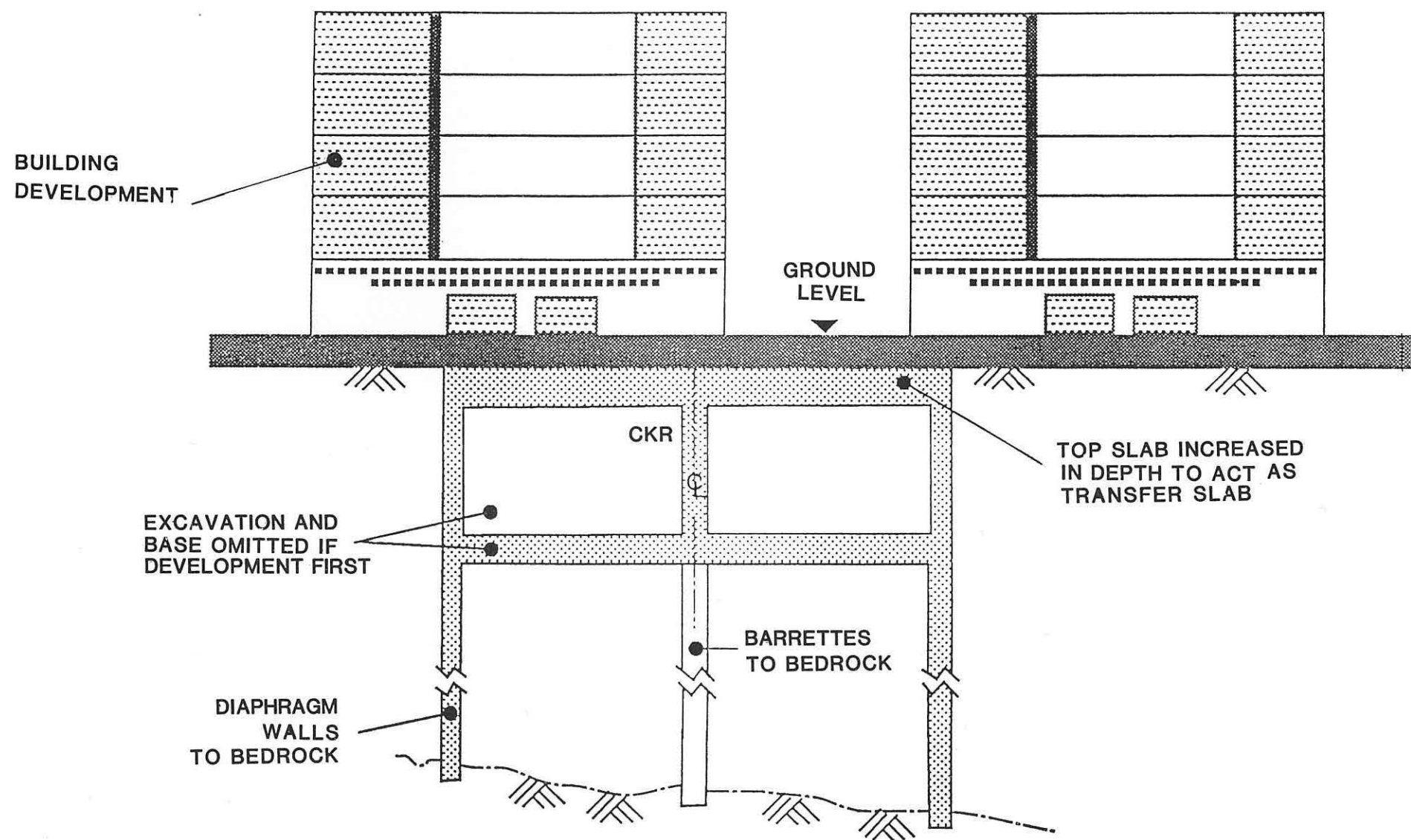
APRIL 93



OPEN
1 JAN 2001

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		100	-
		DATE	APRIL 93

Date: 7/9/1992
 Cod Ref: 100
 Plot Scale: 1 = 1



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Central Kowloon Route Study : Preliminary Design
 Joint Development Structure Concept

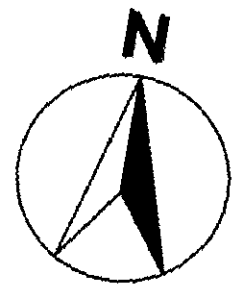
FIGURE NO.

109

SCALE

DATE

APRIL 93



NOTE :
 THE ELEVATIONS OF THE
 SLAB SHOWN IS SUBJECT
 TO AGREEMENT WITH
 HIGHWAY DEPARTMENT.

835307.135 E
 819123.413 N

+4.198 mPD*
 * TOP OF SLAB
 ELEVATION SHOWN

0.600m CENTER WALL

STREET (S/B)

835311.343 E
 819097.365 N
 +4.300 mPD*

FERRY

+8.357 mPD*
 835236.831 E
 819116.864 N

UTILITY TROUGH

835250 E

1.000m DIAPHRAGM WALL

819100 N

ch 577.054

UTILITY TROUGH
 ABOVE CKR
 9.000

ch 600

STREET (N/B)

2.600

ch 647.602

835241.823 E
 819087.032 N
 +8.464 mPD*

UTILITY TROUGH

S.O.L. M009
 (BY STRUCTURES DIVISION)

RAMP C

RAMP D

FERRY

RAMP A

WKC FOUNDATION
 (TYPICAL)

RAMP B

S.O.L. M001
 (BY STRUCTURES DIVISION)

1.000m DIAPHRAGM WALL

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Central Kowloon Route Study : Preliminary Design
 Setting Out Details for West Kowloon Corridor Entrusted Works

FIGURE NO.

200

SCALE
 0 2.5 5m

Date: 8/4/1993
 Cont. Ref.: 200
 Plot Scale: 1" = 0.25

