

## **Legislative Council Panel on Transport**

### **Renewal of Hong Kong Area Traffic Control and Closed Circuit Television Systems**

#### **PURPOSE**

This paper sets out the proposal to renew the Area Traffic Control and Closed Circuit Television systems on Hong Kong Island.

#### **BACKGROUND**

2. ATC system provides real-time coordination and adjustment of traffic control signals within an area by computers having regard to changes in traffic flow level. The objectives are to maximise the use of road capacities and to minimise delay to traffic. Whereas the CCTV system provides traffic operators at the control centre of the Transport Department with real time traffic information from CCTV cameras installed at strategic locations thus allowing quick remedial actions to be taken when necessary to cope with the abnormal traffic conditions and/or traffic incidents.

3. At present, the ATC system on the Hong Kong Island covers 322 junctions which are located primarily along the north shore of Hong Kong Island and scattered sparingly in other parts of the Island whereas the CCTV system, consisting of 42 CCTV cameras, covers strategic locations on the north shore of the Island. The two systems have been in operation since 1989 and 1993 respectively.

4. The ATC system and CCTV system both have an estimated economic life of 10 years. The ATC system for the Hong Kong Island has reached the end of its serviceable life while the CCTV system is approaching the end of its useful life. Maintenance of these systems is becoming a problem owing to obsolete spare parts and outdated software, rendering repair work difficult and costly. To avoid potential road safety problems due to faults of the ATC and CCTV systems and to ensure the efficient use of the road network, it is necessary to renew both systems.

5. Compared with the existing system, the new ATC system provides more flexible real-time co-ordination and adjustment of traffic signal timing for managing traffic movement across signalised junctions. The state-of-the-art technology in the new systems also enables more efficient identification of equipment faults, so that more speedy repairs of the ATC system could be achieved, minimising the down time of the operation of the signalised junctions.

## **PROPOSAL**

6. We propose to renew the ATC and CCTV systems on Hong Kong Island, at an estimated cost of \$128.4 million.

7. The scope of the project comprises –

- (a) replacement of 280 traffic signal controllers with associated vehicle detectors at 322 junctions;
- (b) replacement of 42 CCTV cameras at strategic locations;
- (c) replacement of the existing ATC and CCTV systems comprising in-station computer systems and associated equipment and software located in the Transport Department, the Hong Kong Police Force, the Fire Services Department and the Highways Department; and
- (d) enhancement of communication networks.

Site plans are at **Enclosure 1**.

8. Subject to funding approval, we plan to commence the proposed works in September 2003 for completion by November 2005.

## **FINANCIAL IMPLICATIONS**

9. We estimate the cost of this project to be \$128.4 million in MOD prices, made up as follows –

		<b>\$ million</b>
(a)	Traffic Control System and Equipment	<b>109.6</b>
	(i) ATC controllers and detectors	53.9
	(ii) computer hardware and software (including installation)	33.5
	(iii) CCTV cameras and other roadside equipment	10.6
	(iv) CCTV control hardware and software (including installation)	7.6
	(v) aspect cable repair works	4.0
(b)	Other miscellaneous works including furnishing of the control centre and minor building services works	<b>1.7</b>
(c)	Hired Services Costs	<b>8.6</b>
(d)	(i) Resident site staff	6.5
	(ii) Consultants' fee for construction and completion phase	2.1
(e)	Contingencies	<b>9.6</b>
	Sub-total	129.5 (in September 2002 prices)
	Provision for price adjustment	<u>(1.1)</u>
	Total	<u>128.4</u> (in MOD prices)

10. Subject to approval, we will phase the expenditure as follows –

<b>Year</b>	<b>\$ million (Sep 2002)</b>	<b>Price adjustment factor</b>	<b>\$ million (MOD)</b>
2003 – 2004	34.7	0.99250	34.4
2004 – 2005	50.3	0.99250	49.9
2005 – 2006	34.9	0.99250	34.6
2006 – 2007	9.6	0.99250	9.5
	<hr/>		<hr/>
	129.5		128.4
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11. We have derived the MOD estimate on the basis of the Government's latest forecast of trend labour and construction prices for the period between 2003 to 2007. We will tender the electrical works as lump-sum contracts. We will allow for adjustment in the contract for inflation as the construction period will exceed 21 months.

12. We estimate that there is no additional annual recurrent expenditure arising from the project.

## **PUBLIC CONSULTATION**

13. We consulted the Traffic and Transport Committees of the Central and Western District Council, Eastern District Council, Southern District Council and Wan Chai District Council on 20 June 2002, 4 July 2002, 29 July 2002 and 30 July 2002 respectively. Members of the above Committees supported the project.

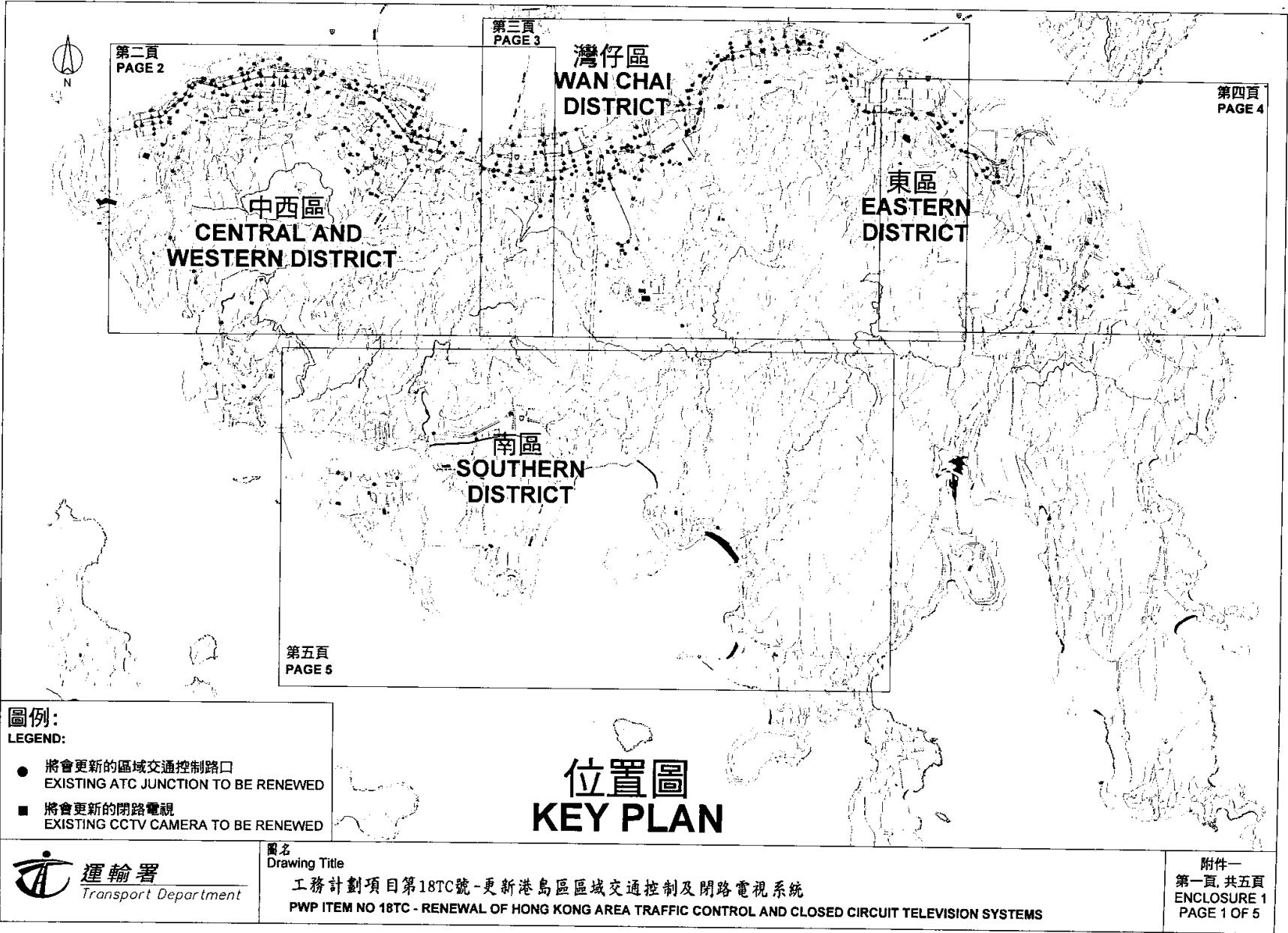
## **WAY FORWARD**

14. We plan to consult the Public Works Sub-committee at its meeting on 13 November 2002 and will seek the approval of the Finance Committee on 6 December 2002 on funding for implementation of the projects.

## **ADVICE SOUGHT**

15. Members are invited to provide comments on the proposal.

ETWB(T) 3/11/94  
23 October 2002



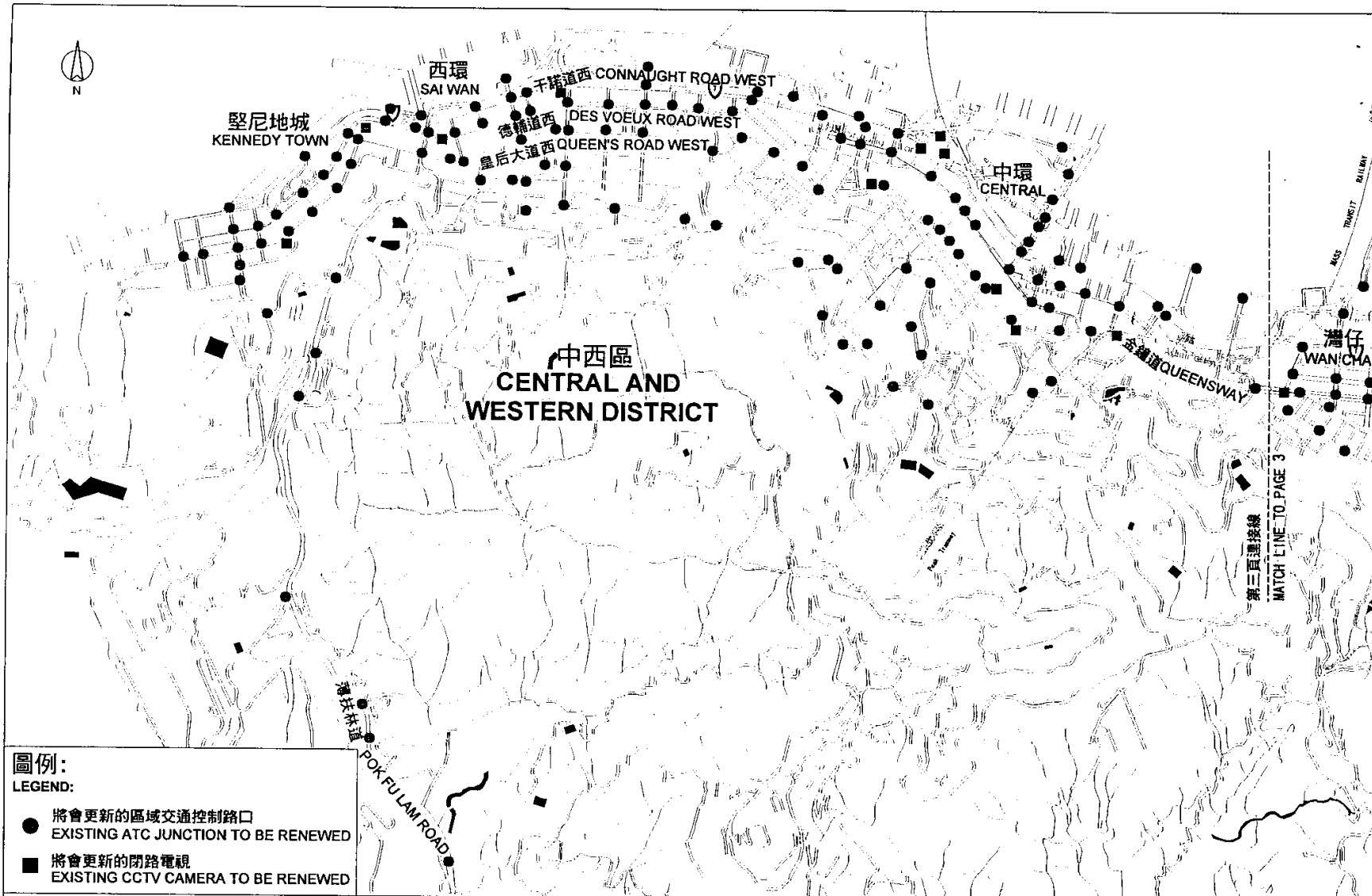
- 圖例:**  
**LEGEND:**
- 將會更新的區域交通控制路口  
 EXISTING ATC JUNCTION TO BE RENEWED
  - 將會更新的閉路電視  
 EXISTING CCTV CAMERA TO BE RENEWED

**位置圖**  
**KEY PLAN**



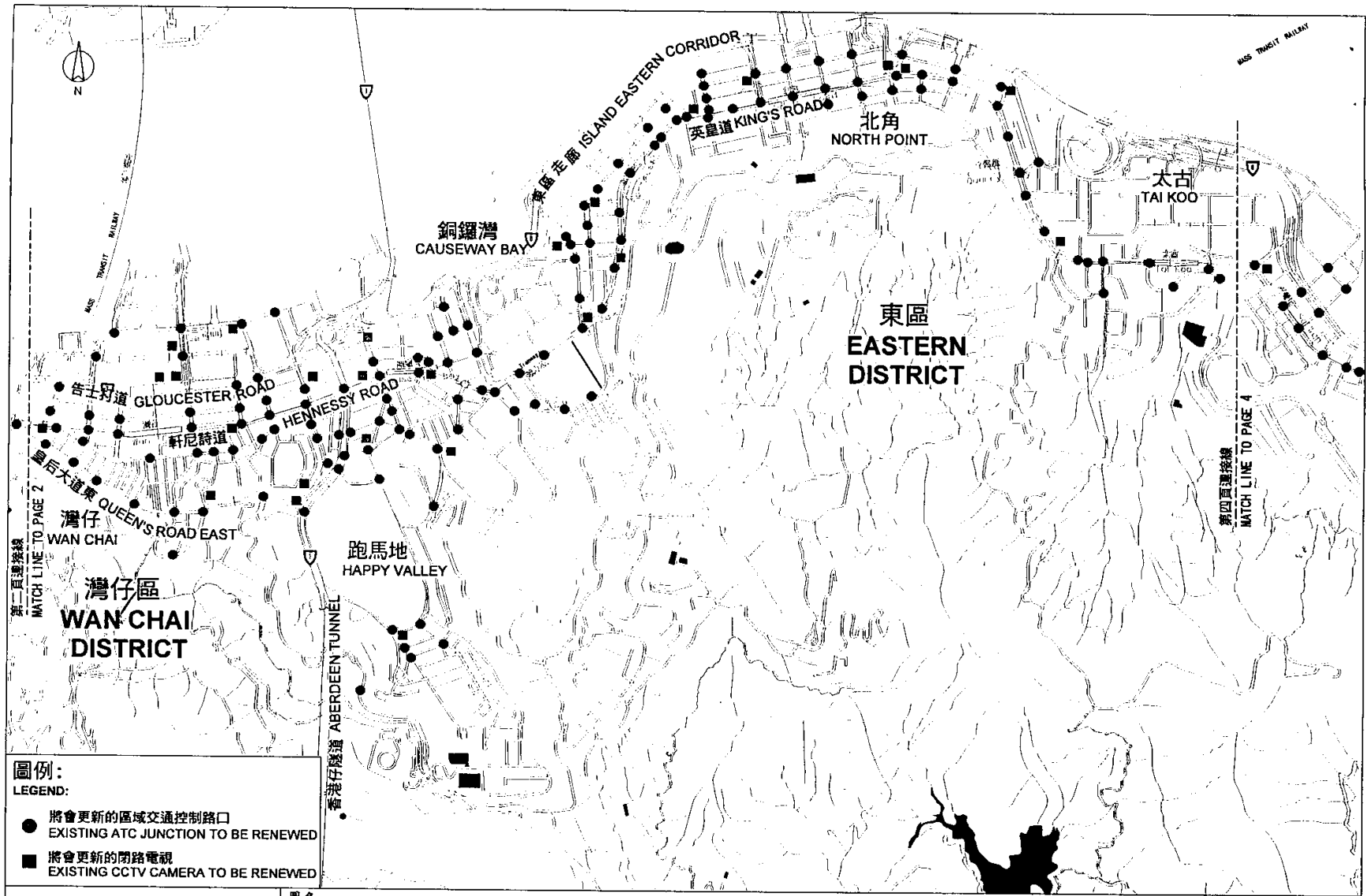
圖名  
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 工務計劃項目第18TC號-更新港島區區域交通控制及閉路電視系統  
 PWP ITEM NO 18TC - RENEWAL OF HONG KONG AREA TRAFFIC CONTROL AND CLOSED CIRCUIT TELEVISION SYSTEMS

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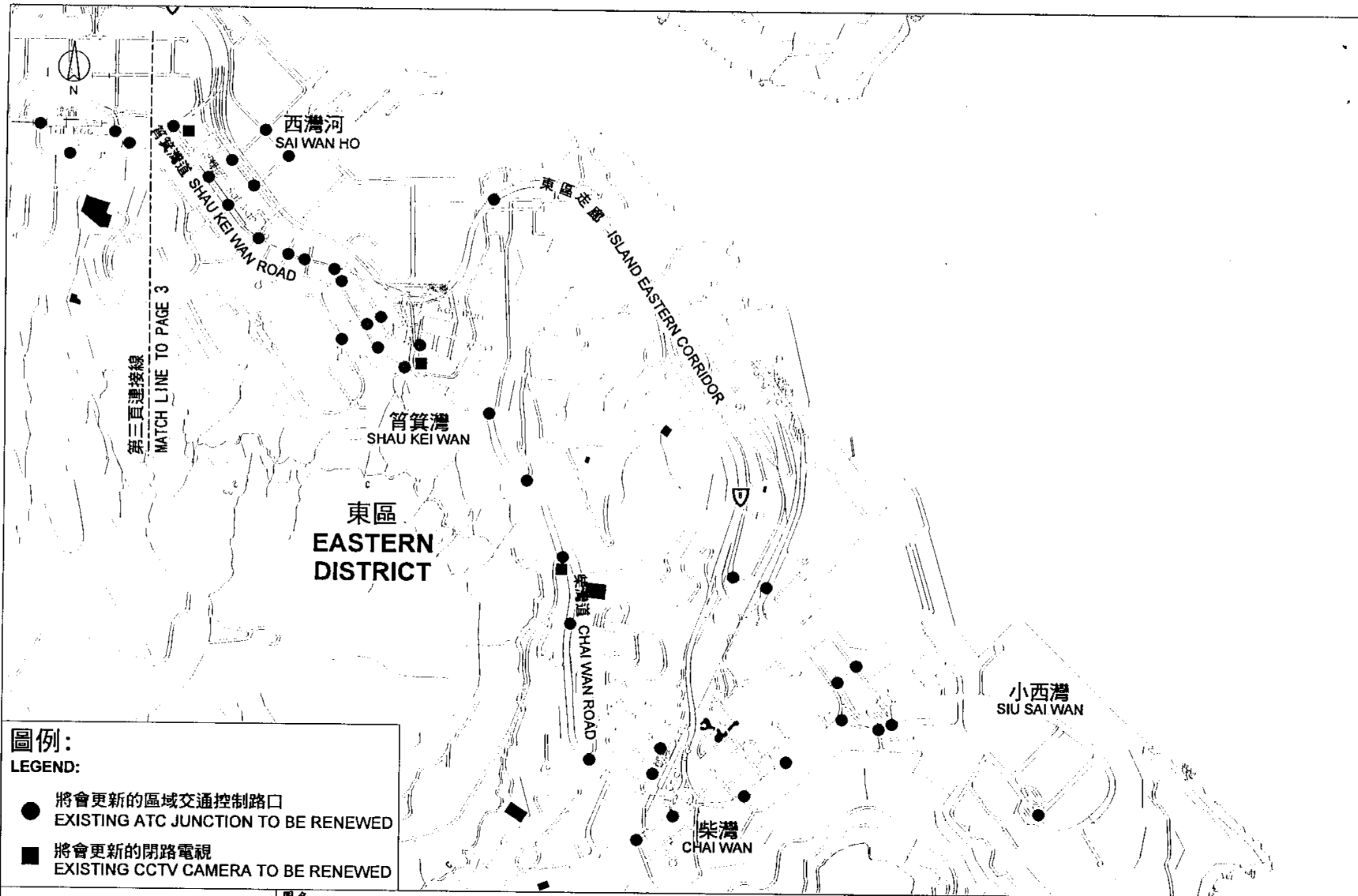


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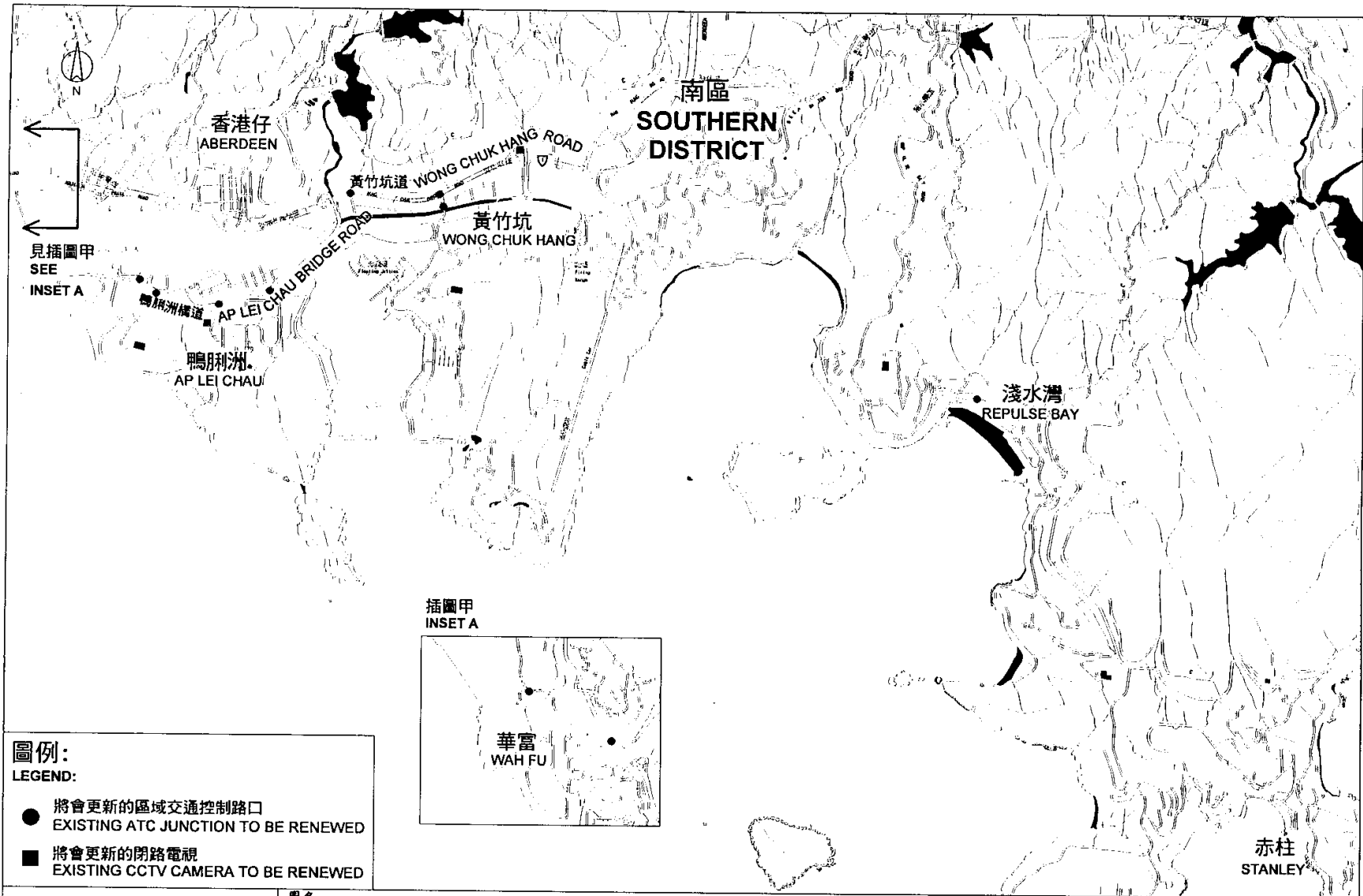


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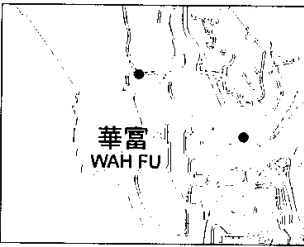


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插圖甲  
INSET A



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