For discussion
on 15 March 2002

Legislative Council Panel on Transport

Provision of Escalator Link/ Elevator System

PURPOSE

This paper informs Members of the criteria for the provision of escalator links/elevator systems, and two proposed schemes for Hong Kong Island.

BACKGROUND

2. At present, the following criteria are used in providing escalators at footbridges and elevated walkways -

(a) when both stairs and ramps/lifts are provided, escalators should only be considered if the estimated number of pedestrians using the footbridge in both directions is at least 3,000 pedestrians per hour for at least one hour on a weekday;

(b) when stairs alone are provided, escalators should be considered where the average of the estimated three highest hourly flows in both directions on a typical weekday exceeds 1,500 pedestrians per hour; and

(c) both up and down escalators should be provided at footbridges and elevated walkways fulfilling these criteria.

3. However, the above criteria do not govern the provision of an escalator link system like the Central Mid-Level Escalator Link, or an elevator system which is more appropriate for areas where vertical movement is involved.

Central Mid-Levels Escalator Link

4. The Central Mid-Levels Escalator Link between Central and the Mid-Levels is the first of its kind in Hong Kong. The purpose of providing the link was to encourage walking with a view to reducing vehicular demand in the

Mid-Levels. The Escalator Link was built as a pilot scheme to enable the cost-effectiveness of mechanised walkway system to be properly assessed.

5. A "Before and After" Study of the Escalator Link was carried out after the completion of the Link in 1994. It concluded that the Escalator Link had promoted walking and relieved the pressure on public transport services, but had not persuaded motorists to give up driving to the extent of reducing traffic congestion in the area.

6. In 1996, the Public Accounts Committee raised the need for an assessment of the cost-effectiveness of the Escalator Link. The Administration subsequently conducted such a study in 1997. The Study results indicated that it was difficult to quantify the social benefits of the Escalator Link, hence its economic return. The rough calculations showed that the economic return of the Escalator Link in year 1997 was low. Moreover, the economic return was expected to diminish further over time. As such, the Escalator Link could not be considered as cost-effective in this respect. Nevertheless, the Escalator Link directly benefited over 35,000 people a day in 1999. It also indirectly benefited other road users by providing some relief in terms of road space, although the reality of the situation was that roads had become more congested as a result of intensified housing development in the Mid-Levels. The Escalator Link had also stimulated development along its catchment area – the "SOHO" area is now a popular spot for dining and entertainment.

CRITERIA FOR THE PROVISION OF ESCALATOR LINK SYSTEMS

7. An investigation conducted by the Planning Department in 1999 further identified the following benefits of escalator links –

(a) improve pedestrian accessibility to the uphill areas;

(b) encourage the travelling habit of walking which is environmentally friendly and would reduce the reliance on vehicular transport. This is particularly relevant for hillside areas with severe physical constraints for building additional road links;

(c) if the system is located near a railway station, it would widen the catchment area of the station; and

(d) allow grade separation to minimise potential conflicts between vehicular and pedestrian traffic, thus enhance the safety, convenience and comfort of pedestrians.

8. In view of the above benefits, we consider it desirable to embark on new escalator links/elevator systems as an initiative to contribute to the development of an environmentally friendly and sustainable system of pedestrian facilities as advocated in the Chief Executive's 1999 Policy Address and the Third Comprehensive Transport Study. In identifying the locations for the provision of escalator links and elevators, the following criteria would be adopted –

(a) the catchment area of the system should either be reasonably populated, or there exists a commercial element which could be further enhanced to attract users;

(b) there should be a steady flow of users throughout the day. Areas where usage is confined to certain short periods of the day, such as school area, do not alone justify the provision of the system;

(c) the gradient of the area should be steep. Escalator link system would be suitable for streets with steep gradient whereas elevator system would be for linking areas with large drop in vertical level; and

(d) priority should be given to systems that can connect to railway stations.

The above should serve as general guidelines and each case would be considered on its individual merits. Resource constraints would also be a relevant factor for consideration.

9. Using the criteria set out above, we have initially identified Centre Street in the Western District and Fortress Hill in the Eastern District as two potential locations for the installation of escalator/elevator links, for the reasons set out below.

Centre Street

10. Centre Street is a steeply graded street with stairways/footpath provided on both sides. Walking is discouraged by the steep gradient. There are stalls and a supermarket along the street which has generated a large number of pedestrians. The area comprises a diversity of developments including residential developments, retail shops, schools and university. An escalator link would provide a convenient, comfortable and safe pedestrian link for residents and students attending schools and university. It would encourage them to travel by walking and hence reduce demand on public and private transport in the Mid-Levels. The system could also link up the future Sai Ying

Pun MTR Station of the West Hong Kong Island Line with the Mid-Levels. It is expected that the link could attract about 20,000 users a day. A site plan is at Annex A.

Fortress Hill

11. At present, pedestrians from Fortress Hill MTR Station going to the upper section of Fortress Hill Road have to make use of a staricase on the vertical cliff outside the MTR station. There is a vertical height of about 27 m from the MTR station to the upper Fortress Hill road level. The upper Fortress Hill Road area has a resident population of about 6,600 and a student population of 2,800. Commuters are often discouraged to use the staircase in view of the height of the cliff. We consider that the provision of an elevator at this location would provide a more comfortable and convenient route. There will be greater enhancement of pedestrian safety, higher usage of railway and saving in walking journey time. An elevator is more appropriate than an escalator in this case as vertical movement is primarily involved. It is estimated that the elevator would attract a daily pedestrian flow of 14,000. A site plan is at Annex B.

Public Consultation

12. We consulted the Eastern District Council on the proposed elevator system at Fortress Hill in February 2002. Members generally welcomed the initiative. We plan to consult the Central and Western District Council in mid 2002 on the proposed Centre Street escalator link.

WAY FORWARD

13. We would proceed with the technical feasibility assessment of the escalator and elevator system at Centre Street and Fortress Hill respectively. We would further brief the relevant District Councils when the technical feasibility is confirmed. Proposals to implement the system at other locations will be considered on a case by case basis.

ADVICE SOUGHT

14. Members are invited to note the content of this paper.

Transport Department
March 2002

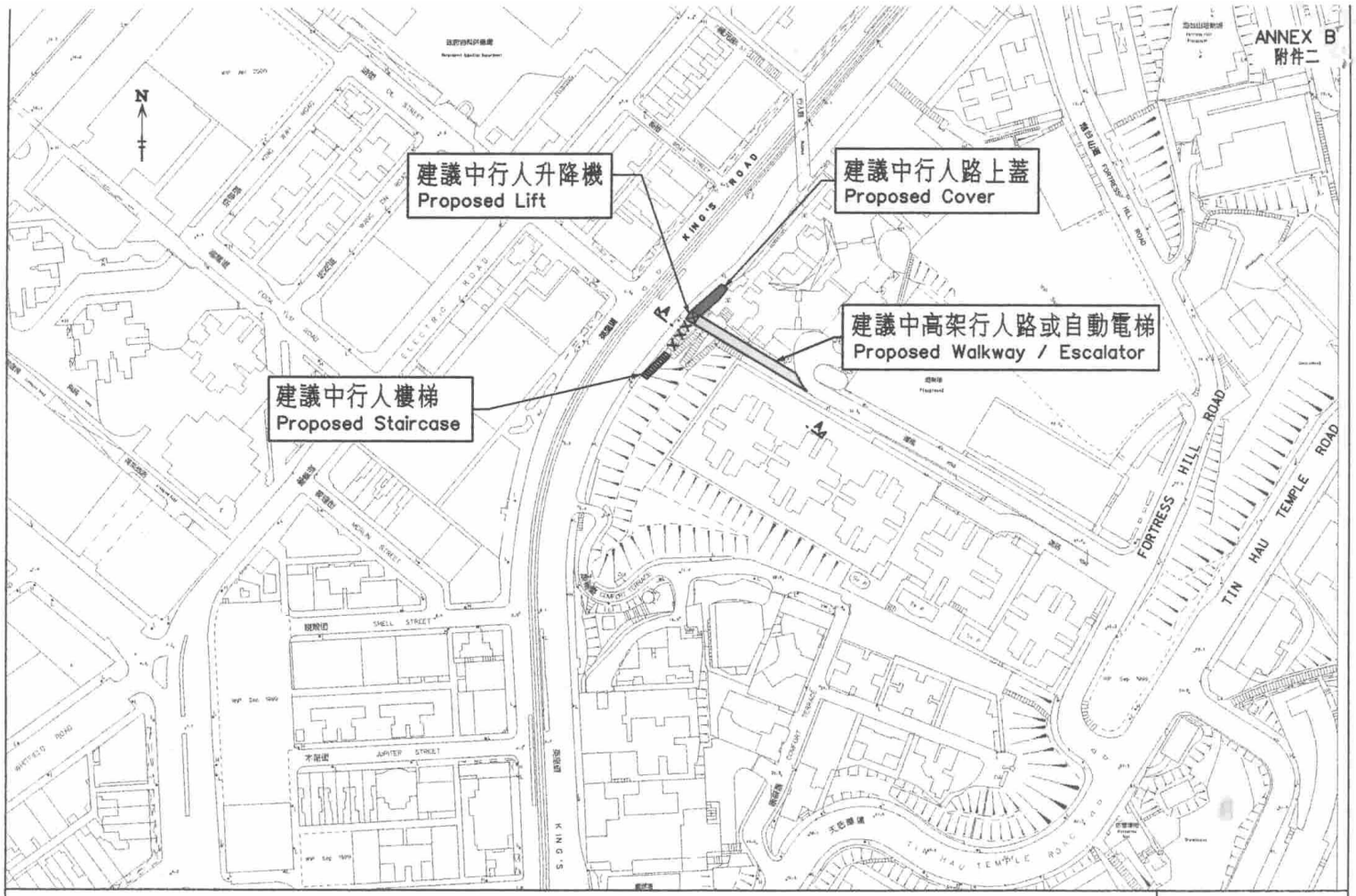
ANNEX A
附件一

drawing title

建議中正街行人扶手電梯
Proposed Centre Street Escalator Link

drawn by	date	drawing no.	scale
TS WONG	06.02.02	HT7533	N.T.S.
approved by	date		
Chief Traffic Engineer			
office: Traffic Engineering (H.K.) Division		TRANSPORT DEPARTMENT HONG KONG	

ANNEX B
附件二



建議中炮台山行人電梯
PROPOSED FORTRESS HILL PEDESTRIAN LINK

TRANSPORT DEPARTMENT
HONG KONG