For discussion on 20 December 2019

Legislative Council Panel on Transport

850TH – New Wang Tong River Bridge and 190TB - Retrofitting of Escalators for Footbridge across Castle Peak Road – Kwai Chung near MTR Tai Wo Hau Station Exit B

PURPOSE

This paper seeks Members' views on the funding application for the following two projects to enhance road safety and create a pleasant walking environment –

- (a) 850TH New Wang Tong River Bridge; and
- (b) 190TB Retrofitting of Escalators for Footbridge across Castle Peak Road Kwai Chung near MTR Tai Wo Hau Station Exit B.

RECOMMENDATION

- (a) <u>New Wang Tong River Bridge</u>
- 2. The proposed works comprise the construction of a new twin-bridge with a footbridge and a cycle bridge to replace the existing Wang Tong River Bridge in Mui Wo, approach footpaths and cycle tracks at the two ends, and a cycle parking area at the northern end of the proposed twin-bridge. Due to the narrow deck width of the existing Wang Tong River Bridge, pedestrians and cyclists often come into conflict with each other on the bridge, particularly during peak hours and holidays. project will enhance road safety by widening the river crossing and segregating pedestrians from cyclists. Together with the completed works under the "Improvement works at Mui Wo", the project will also provide more comprehensive cycle track and footpath networks connecting Mui Wo Ferry Pier to Wang Tong and Silver Mine Bay Beach areas to meet the needs of local residents and tourists. We estimate the capital cost of the Project to be \$99.7 million in money-of-the-day (MOD) prices. Details of this project are at Enclosure 1.

- (b) Retrofitting of Escalators for Footbridge across Castle Peak Road Kwai Chung near MTR Tai Wo Hau Station Exit B
- 3. It is proposed that escalators be retrofitted for the footbridge across Castle Peak Road Kwai Chung near MTR Tai Wo Hau Station Exit B. At present, the footbridge connects Tai Wo Hau Estate and the nearby Kwai Chung Estate, schools and other community / recreational / commercial facilities to MTR Tai Wo Hau Station and a major bus stop nearby. The estimated pedestrian flow in both directions during peak hours on weekdays is close to 7 000 per hour. Although the lift at the footbridge leads to the footpath at ground level and the concourse of the MTR Station, it is provided mainly for access to the MTR Station by those who are disabled or in need with limited capacity. As such, the Government proposes to retrofit escalators for the footbridge to facilitate access by the public. We estimate the capital cost of the Project to be \$49.0 million in MOD prices. Details of the project are at **Enclosure 2**.

WAY FORWARD

4. After consulting the Panel on Transport, we plan to submit the proposal for upgrading the two projects to Category A to the Public Works Subcommittee to seek its support, and to seek funding approval from the Finance Committee during the current legislative session.

Transport and Housing Bureau Highways Department December 2019

For discussion on 20 December 2019

Legislative Council Panel on Transport

850TH – New Wang Tong River Bridge

PURPOSE

This paper seeks Members' views on the funding application for upgrading **850TH** "New Wang Tong River Bridge" (the Project) to Category A.

PROJECT SCOPE AND NATURE

- 2. The proposed scope of works under the Project includes
 - (a) construction of a twin-bridge of approximately 35 metres (m) in length comprising a footbridge and a cycle bridge with clear widths of 2m and 3.5m respectively across Wang Tong River in Mui Wo, and demolition of the existing Wang Tong River Bridge;
 - (b) construction of approach footpaths and cycle tracks at the two ends of the proposed twin-bridge to connect with existing roads;
 - (c) construction of a cycle parking area at the northern end of the proposed twin-bridge;
 - (d) ancillary works including associated demolition, geotechnical, drainage, public utilities, public lighting and landscaping works, etc.; and
 - (e) implementation of an environmental monitoring and audit (EM&A) programme for the works mentioned in the above items 2 (a) to (d).
- 3. A layout plan and artist's impression of the Project are at **Annex 1**.

4. Subject to funding approval of the Finance Committee (FC) by the first quarter of 2020, we plan to commence the construction works in the second quarter of 2020 for completion in the fourth quarter of 2023. To meet the programme, the Highways Department (HyD) has initiated parallel tendering for the works contract in October 2019 in order to start the construction works as soon as possible. The contract will only be awarded after obtaining funding approval from the FC.

JUSTIFICATIONS

- 5. The existing Wang Tong River Bridge serves as an essential public access between Wang Tong and Silver Mine Bay Beach in Mui Wo and the area to the south of Wang Tong River. The existing Wang Tong River Bridge is only about 1.8m in clear width. Such narrow deck width gives rise to road safety concerns as pedestrians and cyclists often come into conflict with each other particularly during peak hours and holidays.
- 6. Besides, the Civil Engineering and Development Department (CEDD) has commenced the project "Improvement works at Mui Wo" since 2014 to improve the environment and facilities in the area, and enhance the attractiveness of Mui Wo to tourists and visitors. The CEDD has completed phase 1 of "Improvement works at Mui Wo" in June 2017, which comprises the construction of a 230m-long segregated pedestrian walkway and cycle track along the waterfront between Mui Wo Cooked Food Market and River Silver, and a 35m-long footbridge across River Silver to segregate pedestrians from cyclists. The Project will complement the improvement works at Mui Wo to provide safer and more comprehensive cycle track and footpath networks connecting Mui Wo Ferry Pier to Wang Tong and Silver Mine Bay Beach areas to meet the needs of local residents and tourists.
- 7. The Project will replace the existing Wang Tong River Bridge with a new twin-bridge to widen the river crossing to accommodate a new footpath cum cycle track and for segregating pedestrians from cyclists, so as to enhance road safety. We expect that the hourly usage rate of the proposed twin-bridge will be about 650 pedestrian trips and 250 cyclist trips during peak hours.

FINANCIAL IMPLICATIONS

8. We estimate the capital cost of the Project to be \$99.7 million in money-of-the-day (MOD) prices.

PUBLIC CONSULTATION

- 9. The HyD consulted the Traffic and Transport Committee of the Islands District Council on the Project on 22 May 2017. The Committee expressed support for the implementation of the Project.
- 10. We gazetted the scheme and plan of the Project under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) on 23 and 30 November 2018. During the statutory period, no objection was received and the scheme was subsequently authorised. The relevant authorisation notice was gazetted on 22 February and 1 March 2019.
- 11. The HyD has consulted the Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS)¹ on the aesthetic design of the twin-bridge of the Project. The Committee accepted the proposed aesthetic design.

ENVIRONMENTAL IMPLICATIONS

- 12. The Project is a designated project under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) and an Environmental Permit (EP) is required for the construction of the Project. The EIA report for the Project was approved on 23 September 2016 and an EP was issued on 23 March 2018 under the EIA Ordinance. The EIA report concluded that with the implementation of the recommended mitigation measures, the environmental impact of the Project could be controlled to within the criteria under the EIA Ordinance and the Technical Memorandum on the EIA Process.
- 13. The HyD shall implement the mitigation measures and EM&A programme during the construction phase, which include the adoption of quality powered mechanical equipment and movable temporary noise barriers to minimise the noise impact brought about by the construction; regular water spraying for dust control; and the installation of temporary cofferdams to minimise impact on the water quality when carrying out excavation or dredging works, and demolition of piers and abutments of existing bridge within Wang Tong River. The HyD has included the cost for the

ACABAS, comprising representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, the Hong Kong Institute of Planners, the Architectural Services Department, the HyD, the Housing Department, the CEDD and a representative from an architectural or relevant faculty from a local academic institution, is responsible for vetting the design of bridges and other structures associated with the public highway system, including noise barriers and enclosures, from the aesthetic and visual impact points of view.

implementation of the necessary environmental mitigation measures and the EM&A programme in the project estimate.

- 14. During the planning and design stages, the HyD has considered all the proposed works and construction procedures to reduce generation of construction waste as far as possible. In addition, the HyD will require the contractor to reuse inert construction waste (e.g. use of excavated materials for backfilling) on site or in other suitable construction sites as far as possible in order to minimise the disposal of inert construction waste at public fill reception facilities². The HyD will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.
- During the construction stage, the HyD will require the contractor to submit for the Government's approval a plan setting out the waste management measures, which will include appropriate mitigation measures to avoid, reduce, reuse and recycle inert construction waste. The HyD will ensure that the day-to-day operations on site comply with the approved plan and will require the contractor to separate the inert portion from the non-inert portion of construction waste on site for disposal at appropriate facilities. The HyD will control the disposal of inert construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.
- 16. The HyD estimates that the Project will generate a total of about 2 302 tonnes of construction waste. Of these, we will reuse about 806 tonnes (35.0%) of inert construction waste on site and deliver about 1 332 tonnes (57.9%) of inert construction waste to public fill reception facilities for subsequent reuse. The HyD will dispose of the remaining about 164 tonnes (7.1%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be about \$127 000 for the Project (based on a unit charge rate of \$71 per tonne for disposal at public fill reception facilities and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).
- 17. In addition, we estimate that the proposed works will generate about 87 m³ of marine sediment to be disposed of at designated site allocated by the Marine Fill Committee (MFC) or other disposal sites agreed by the MFC and the Environmental Protection Department.

Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap 354N). Disposal of inert construction waste in public fill reception facilities requires a license issued by the Director of Civil Engineering and Development.

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HERITAGE IMPLICATIONS

18. The Project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interest and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

19. The Project does not require acquisition of private land.

TREE IMPLICATIONS

20. There are about 24 trees within the project boundary. Among them, 17 trees will be preserved. In order to make way for the proposed facilities, the Project will require the removal of about 7 trees. According to the established guidelines, tree preservation and removal proposal will be submitted to the Lands Department for approval. All trees to be removed are not important trees³. The HyD will incorporate planting proposals into the Project, including the compensatory planting of about 7 new trees.

TRAFFIC IMPLICATIONS

21. The Project will not cause significant traffic impact during construction. To facilitate the related construction works, the HyD will implement appropriate temporary traffic arrangements (TTA) and set up a traffic management liaison group to discuss and vet the TTA. This group comprises representatives from the contractor, the Hong Kong Police Force, the Transport Department and other concerned government departments. The HyD will specify requirements for implementing the TTA in the works contracts to minimise the traffic impacts during construction. The HyD will also display publicity boards on site, providing details of the TTA and the

"Important trees" refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (b) trees of cultural, historical or memorable significance e.g. Fung Shui trees, trees as landmark of monastery or heritage monument, and trees in memory of important persons or events;
- (c) trees of precious or rare species;
- (d) trees of outstanding forms (taking account of overall tree sizes, shapes and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitats; or
- (e) trees with trunk diameter equal or exceeding 1.0 m (measured at 1.3 m above ground level), or with height/canopy spread equal or exceeding 25 m.

⁽a) trees of 100 years old or above;

anticipated completion dates of individual sections of works. In addition, the HyD will set up a telephone hotline for public enquiries or complaints.

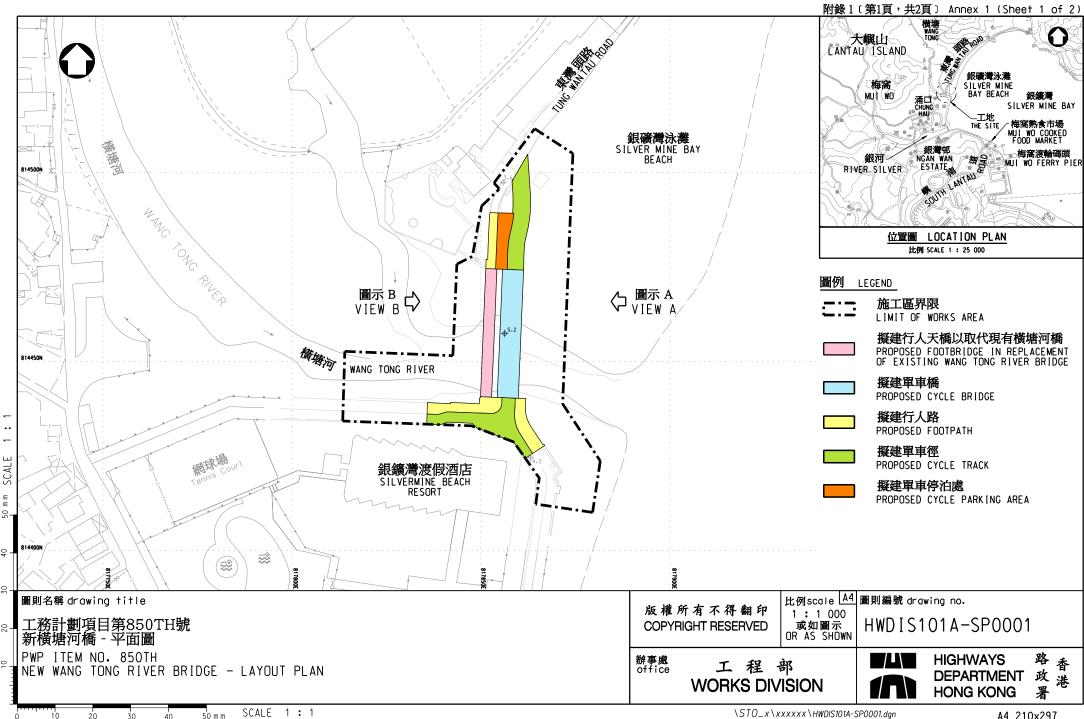
BACKGROUND

- We upgraded the Project to Category B in September 2011, and engaged a term contractor in December 2012 to undertake the ground investigation works. The total cost of the investigation works was about \$0.27 million and was funded by block allocation **Subhead 6100TX** "Highway works, studies and investigations for items in Category D of the Public Works Programme". The investigation works have been completed.
- 23. We engaged engineering consultants in June 2014 to undertake the environmental and drainage impact assessment studies. The total cost of the above consultancy service was about \$2.2 million and was funded by block allocation **Subhead 6100TX** "Highway works, studies and investigations for items in Category D of the Public Works Programme". The consultancy service has been completed.

WAY FORWARD

24. After consulting the Panel on Transport, we plan to submit the proposal for upgrading the project of **850TH** as mentioned in paragraph 2 above to Category A to the Public Works Subcommittee to seek its support, and to seek funding approval from the FC during the current legislative session.

Transport and Housing Bureau Highways Department December 2019





圖示 A VIEW A



圖示 B VIEW B

圖則名稱 drawing title

SCALE

工務計劃項目第850TH號 新橫塘河橋 - 構思圖

PWP ITEM NO. 850TH NEW WANG TONG RIVER BRIDGE - ARTIST'S IMPRESSION

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或如圖示 N/A

圖則編號 drawing no.

HWD I S101A-SP0002

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工程部 **WORKS DIVISION**



HIGHWAYS DEPARTMENT 政港 HONG KONG 署

Legislative Council Panel on Transport

190TB – Retrofitting of Escalators for Footbridge across Castle Peak Road – Kwai Chung near MTR Tai Wo Hau Station Exit B

PURPOSE

This paper seeks Members' views on the funding application for upgrading **190TB** "Retrofitting of Escalators for Footbridge across Castle Peak Road – Kwai Chung near MTR Tai Wo Hau Station Exit B" (the Project) to Category A.

PROJECT SCOPE AND NATURE

- 2. The proposed scope of works under the Project includes
 - (a) construction of covered two-way escalators of approximately 1 metre in clear width at the existing footbridge No. NF77 across Castle Peak Road Kwai Chung near MTR Tai Wo Hau Station Exit B;
 - (b) construction of a covered staircase, walkway cover and footpath;
 - (c) demolition of an existing covered staircase;
 - (d) demolition of a section of the existing walkway cover; and
 - (e) ancillary works including drainage, utilities, landscaping, public lighting and electrical and mechanical works, as well as installation of street furniture and traffic aids.
- 3. A layout plan and artist's impression of the Project are at **Annex 2**.
- 4. Subject to funding approval of the Finance Committee (FC) by the first quarter of 2020, we plan to commence the construction works in the second quarter of 2020 for completion in the third quarter of 2022. To meet

the programme, the Highways Department (HyD) has initiated parallel tendering of the works contract in September 2019 in order to start the construction works as soon as possible. The contract will only be awarded after obtaining funding approval from the FC.

JUSTIFICATIONS

- 5. Footbridge No. NF77 spans across Castle Peak Road Kwai Chung. At present, the northern side of the footbridge has a staircase linking to the footpath at ground level (near MTR Tai Wo Hau Station Exit B) and a lift for commuting to the footpath at ground level as well as the concourse of MTR Tai Wo Hau Station. There is also a major bus stop of more than 10 bus routes nearby. The southern side of the footbridge links to Tai Wo Hau Estate and connects to the nearby Kwai Chung Estate, schools and other community / recreational / commercial facilities.
- 6. According to a survey conducted by the Transport Department in January 2019, the estimated pedestrian flow in both directions during peak hours on weekdays at Footbridge No. NF77 was close to 7 000 per hour. Although the lift at the northern side of the footbridge can lead to the footbridge, the footpath at ground level and the concourse of MTR Tai Wo Hau Station, it is provided mainly for access to MTR Tai Wo Hau Station by those who are disabled or in need. Due to its limited capacity, the waiting time of the lift is relatively long. Most people would therefore opt to take the staircase to commute between the footbridge and the footpath, and this has made the staircase congested. In order to mitigate the congested condition, the Government proposes to retrofit escalators for the footbridge to facilitate access by the public.
- 7. The Project will provide covered two-way escalators at the northern side of Footbridge No. NF77 to provide a more comfortable route for pedestrians accessing the MTR station and bus stop via the footbridge, including residents in Tai Wo Hau Estate and Kwai Chung Estate. We estimate that the proposed escalators can attract about 29 000 users a day.

FINANCIAL IMPLICATIONS

8. We estimate the capital cost of the Project to be \$49.0 million in money-of-the-day (MOD) prices.

PUBLIC CONSULTATION

- 9. The HyD consulted the Traffic and Transport Committees of the Tsuen Wan and Kwai Tsing District Councils on the Project on 6 November and 14 December 2017 respectively. Both Committees expressed support for the early implementation of the Project.
- 10. We gazetted the scheme and plan of the Project under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) (the Ordinance) on 21 and 28 September 2018. During the statutory period, one objection was received. The objection was about the need of the project and the inconvenience that would cause during the construction period. HyD met the objector on 13 January 2019 and explained the need of the Project and the temporary detouring arrangement during the construction period. As the objection was unresolved, we have submitted the Project to the Executive Council. The Chief Executive in Council has, after considering the objection, authorised the project in accordance with Cap. 370 on 14 May 2019. The relevant Authorisation Notice was gazetted on 31 May and 6 June 2019.
- 11. The HyD has consulted the Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS)¹ on the aesthetic design of the covered two-way escalators, the covered staircase and the covered walkway of the Project. The Committee accepted the proposed aesthetic design.

ENVIRONMENTAL IMPLICATIONS

12. The Project is not a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance (Cap 499). It will not cause long-term environmental impact. The HyD will control construction noise, dust and site run-off nuisances to levels within established standards and guidelines through the implementation of appropriate mitigation measures. The expenses required for implementing the environmental mitigation measures have been included in the project estimates.

ACABAS, comprising representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, the Hong Kong Institute of Planners, the Architectural Services Department, the HyD, the Housing Department, the Civil Engineering and Development Department, and a representative from an architectural or relevant faculty from a local academic institution, is responsible for vetting the design of bridges and other structures associated with the public highway system, including noise barriers and enclosures, from the aesthetic and visual impact points of view.

- During the planning and design stages, the HyD has considered optimizing the alignment of the proposed Project and adjusting the method of construction to reduce the generation of construction waste as far as possible. In addition, the HyD will require the contractor to reuse inert construction waste (e.g. excavated materials for backfilling) on site or in other suitable construction sites as far as possible in order to minimise the disposal of inert construction waste at public fill reception facilities². The HyD will encourage the contractor to maximise the use of recycled / recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.
- 14. During the construction stage, the HyD will require the contractor to submit for the Government's approval a plan setting out the waste management measures, which will include appropriate mitigation measures to avoid, reduce, reuse and recycle inert construction waste. The HyD will ensure that the day-to-day operations on site comply with the approved plan and will require the contractor to separate the inert portion from the noninert portion of construction waste on site for disposal at appropriate facilities. The HyD will control the disposal of inert construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.
- 15. The HyD estimates that the Project will generate a total of 2 115 tonnes of construction waste. Of these, we will reuse 520 tonnes (24.6%) of inert construction waste on site and deliver 1 390 tonnes (65.7%) of inert construction waste to public fill reception facilities for subsequent reuse. The HyD will dispose the remaining 205 tonnes (9.7%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be about \$139 690 for the Project (based on a unit charge rate of \$71 per tonne for disposal at public fill reception facilities and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap 354N)).

Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap 354N). Disposal of inert construction waste in public fill reception facilities requires a license issued by the Director of Civil Engineering and Development.

HERITAGE IMPLICATIONS

16. The Project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites or buildings, sites of archaeological interest and Government historic sites identified by the Antiquities and Monuments Office.

TREE IMPLICATIONS

17. The Project does not require tree removal.

LAND ACQUISITION

18. The Project does not require acquisition of private land.

TRAFFIC IMPLICATIONS

19. The Project will not cause any significant traffic impact during construction. To facilitate the related construction works, the HyD will implement temporary traffic arrangements (TTA) and set up a traffic management liaison group to discuss and vet the TTA. This group comprises representatives from the contractor, the Hong Kong Police Force, the Transport Department, public transport operators and other concerned government departments. The HyD will specify requirements for implementing the TTA in the works contracts to minimise the traffic impacts during construction. The HyD will also display publicity boards on site, providing details of the TTA and the anticipated completion dates of individual sections of works. In addition, the HyD will set up a telephone hotline for public enquiries or complaints.

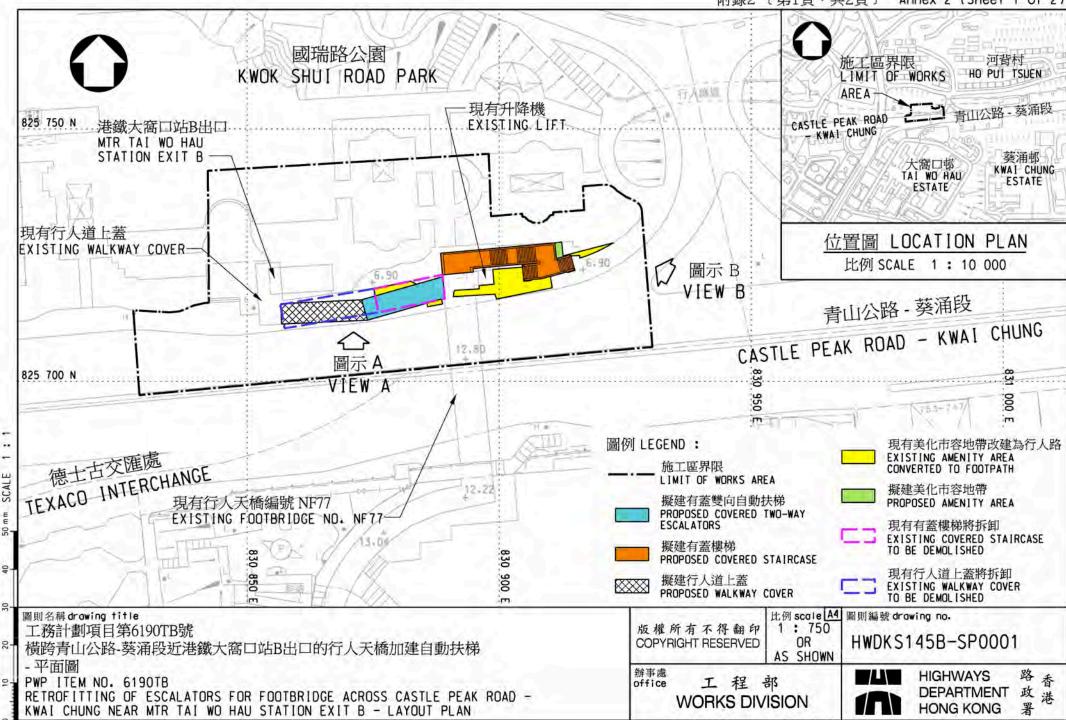
BACKGROUND

20. We upgraded the Project to Category B in September 2016. We engaged a term contractor to undertake the ground investigation works in April 2017. The total cost of the above investigation works was about \$0.15 million and was funded by block allocation **Subhead 6100TX** "Highway works, studies and investigations for items in Category D of the Public Works Programme". The investigation works have been completed.

WAY FORWARD

21. After consulting the Panel on Transport, we plan to submit the proposal for upgrading the project of **190TB** as mentioned in paragraph 2 above to Category A to the Public Works Subcommittee to seek its support, and to seek funding approval from the FC during the current legislative session.

Transport and Housing Bureau Highways Department December 2019



50 mm SCALE 1 : 1



擬建行人道上蓋 PROPOSED WALKWAY COVER

現有行人天橋編號 NF77 EXISTING FOOTBRIDGE NO.NF77

擬建有蓋雙向自動扶梯 PROPOSED COVERED TWO-WAY **ESCALATORS**

圖示A VIEW A

現有行人天橋編號 NF77 EXISTING FOOTBRIDGE NO. NF 77-



圖示B VIEW B

擬建有蓋樓梯 PROPOSED COVERED STAIRCASE

圖則名稱drawing title

工務計劃項目第6190TB號

横跨青山公路-葵涌段近港鐵大窩口站B出口的行人天橋加建自動扶梯

50 mm SCALE 1:1

- 構思圖

SCALE

PWP ITEM NO. 6190TB

RETROFITTING OF ESCALATORS FOR FOOTBRIDGE ACROSS CASTLE PEAK ROAD - KWAI CHUNG NEAR MTR TAI WO HAU STATION EXIT B - ARTIST'S IMPRESSION

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不適用 NA

比例 scale A4 圖則編號 drawing no.

HWDKS145B-SP0002

辦事處 office

工程部 **WORKS DIVISION**



HIGHWAYS DEPARTMENT 政港

HONG KONG