For discussion
on 30 March 2010

Legislative Council Panel on Transport

Proposed retention of two supernumerary posts and extension of redeployment of one permanent post in the Hong Kong-Zhuhai-Macao Bridge Hong Kong Project Management Office of Highways Department

PURPOSE

This paper briefs Members on our proposal to retain two supernumerary posts (one Principal Government Engineer (PGE) (D3) and one Chief Engineer (CE) (D1)) and to extend the redeployment of one permanent CE post in the Hong Kong-Zhuhai-Macao Bridge (HZMB) Hong Kong Project Management Office (HKPMO) of the Highways Department (HyD) to sustain the implementation of the HZMB and related highway infrastructure projects.

2. We plan to submit the proposal to the Establishment Subcommittee (ESC) of the Finance Committee (FC) for consideration at its meeting on 28 April 2010 and for FC's approval on 14 May 2010.

PROPOSAL

3. The existing supernumerary posts of one PGE and one CE in the HZMB HKPMO of HyD will lapse on 1 July 2010. The time-limited redeployment of one permanent CE post will also expire on the same date. HyD needs the continued support of the above directorate posts to sustain the implementation of the HZMB and related highway infrastructure projects.

4. We propose to –

(a) retain two supernumerary posts of one PGE and one CE; and

(b) extend the redeployment of one permanent CE post from the Major Works Project Management Office

for a period of four years with effect from 1 July 2010.

JUSTIFICATION

Existing Directorate Staffing in HZMB HKPMO

5. The FC approved on 15 May 2004, vide EC(2004-05)4, the creation of two supernumerary posts (i.e. one PGE and one CE) and the redeployment of one permanent CE post in HyD as listed in paragraph 1 above with effect from 1 July 2004 for a period of six years for establishing the HZMB HKPMO, which was a dedicated office for overseeing the planning and implementation of the HZMB and related highway infrastructure projects[1]. On 13 February 2009, the FC further approved vide EC(2008-09)16 the creation of one supernumerary post of CE to lead a new division in the HZMB HKPMO to undertake the planning and implementation of the HZMB Hong Kong Boundary Crossing Facilities (HKBCF) for a period of five years up to 31 March 2014.

6. The supernumerary PGE post, designated as Project Manager/Hong Kong-Zhuhai-Macao Bridge (PM/HZMB), heads the HZMB HKPMO and is underpinned by the three CEs described in paragraph 5 above. The three CEs are responsible for the following projects –

(a) CE/HZMB HK[2] is responsible for the HZMB Main Bridge and Hong Kong Link Road (HKLR);

(b) CE/NWNT[3] is responsible for the Tuen Mun-Chek Lap Kok Link (TM-CLKL), Tuen Mun Western Bypass (TMWB) and planning for highways infrastructure for Northwest New Territories (NWNT); and

(c) CE/HKBCF[4] is responsible for the HKBCF.

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[1] Including the HZMB Main Bridge, Hong Kong Link Road (HKLR), Hong Kong Boundary Crossing Facilities (HKBCF), Tuen Mun-Chek Lap Kok Link (TM-CLKL) and Tuen Mun Western Bypass (TMWB). The HKBCF will be a multi-modal transportation hub integrating passenger and cargo facilities, and linking the HKLR and the Hong Kong International Airport. The HKLR will be the part of the HZMB in Hong Kong waters linking the Main Bridge of the HZMB to the HKBCF. The TM-CLKL and TMWB are planned to provide a direct route between the Northwest New Territories (NWNT) and Lantau, linking the Kong Sham Western Highway, the port back-up areas in the NWNT, the Tuen Mun River Trade Terminal, the Ecopark, the HZMB Main Bridge via HKBCF and HKLR, the Airport and various North Lantau developments.

[2] The supernumerary CE post seeking extension in this paper.

[3] The redeployed permanent CE post seeking extension of the redeployment in this paper.

[4] The supernumerary CE post created for five years up to 31 March 2014 vide EC(2008-09)16.

Encl. 1 The existing organisation chart of the HZMB HKPMO is at Enclosure 1.

Recent Development of the HZMB and Related Highway Infrastructure Projects

HZMB Main Bridge

7. With the approval of the Feasibility Study report of the HZMB Project by the State Council of the Central People's Government, the governments of the Mainland, the Hong Kong Special Administrative Region (HKSAR), and the Macao SAR (the three governments) have commenced the construction works of the HZMB Main Bridge in the Mainland waters on 15 December 2009. The three governments are also setting up the HZMB Authority within the Mainland in accordance with Mainland laws to take forward the construction, operation, maintenance and management of the HZMB Main Bridge. The three governments will play a supervisory role over the HZMB Authority.

HKLR and HKBCF

8. The HKSAR Government has gazetted the two projects under various ordinances. Subject to funding approval and necessary authorisations required under the various ordinances, HyD will invite tenders for the reclamation works of the HKBCF and for the detailed design and construction of the HKLR projects. The completion of the projects will need to tie in with the planned commissioning of the Main Bridge in 2016.

TM-CLKL and TMWB

9. The Investigation and Preliminary Design Study of the two projects are in progress. The HKSAR Government has gazetted the TM-CLKL project under the Roads (Works, Use and Compensation) Ordinance (Cap. 370). Subject to funding approval and necessary authorization, HyD plans to commence the advance works for the TM-CLKL to tie in with the tight schedule of the HKBCF project, and to facilitate the interface of the two projects. As regards the TMWB project, HyD is actively considering various alignment options taking into account comments received from local residents, relevant District Councils as well as Rural Committees and Heung Yee Kuk with a view to further consulting the local community on the way forward.

Need for Retention of the Directorate Establishment in HZMB HKPMO

10. We have critically reviewed the directorate complement of the HZMB HKPMO in the light of the recent development and the construction works in the pipelines as described above. Since the HZMB project has already entered into a full-fledged implementation stage, and given the scale, complexity and volume of works still required to sustain the implementation of the HZMB and related highway projects, we consider it critical to maintain operational continuity and supervision at the directorate level by retaining the two supernumerary posts of PGE (PM/HZMB) and CE (CE/HZMB HK) and extending the redeployment of one permanent CE post (CE/NWNT). Detailed justifications for the continual service of these three directorate posts are given in the following paragraphs.

PM/HZMB (PGE)

11. PM/HZMB will continue to head the HZMB HKPMO and oversee all the projects mentioned above. He has to take charge of all the professional, technical, contractual and interface issues, and to steer the resolution of the whole range of matters related to the smooth and timely implementation of these projects. He is also responsible for providing expert advice and technical support to the Transport and Housing Bureau in overseeing the projects from a policy perspective.

12. At the inter-governmental level, PM/HZMB has to attend high-level meetings on a frequent basis with representatives of the Mainland Government (at both the Central People's Government as well as provincial levels) and the Macao SAR Government, to provide strategic steer as well as impetus to the projects. In particular, for taking forward the HZMB Main Bridge, the three governments have agreed to set up the HZMB Authority in the Mainland, which will be supervised by a Joint Works Committee to be set up by the three governments. These new establishments will be in place in the next few months. PM/HZMB will play an important role in steering and supervising the work of this HZMB Authority through regular meetings with the key staff in the HZMB Authority and in providing senior directorate support to the Transport and Housing Bureau in the Joint Works Committee for vetting and approval of the HZMB Authority's submissions. The support of a senior directorate officer with strong professional expertise as well as sound management skills is especially important given the scale of the project, technical complications of the works anticipated and the high level of coordination between the three governments required for taking forward the construction of this mega cross-boundary project.

13. Internally, PM/HZMB is responsible for spearheading and supervising the development of the HZMB-related Hong Kong highway infrastructure projects, including the HKBCF, the HKLR, the TM-CLKL and the TMWB, as well as other highway projects in Northwest New Territories under planning. Each being a major works project on its own, the taking-forward of these various projects at the same time under a tight timeline requires careful coordination and close supervision at a high level to ensure smooth handling and timely completion. In this regard, the expertise of PM/HZMB, as a senior directorate officer at D3 level, is essential in providing expert advice and steer to the three Chief Engineers throughout – from planning and design to tender and then construction – and, more importantly, ensuring a high level oversight to these various projects in the overall.

14. Taking into account the scale, complexity and importance of the various local projects undertaken by the HZMB HKPMO, as well as the frequent high-level contacts with Mainland as well as Macao SAR government officials and the key staff in the HZMB Authority regarding the HZMB Bridge project and the coordination among local related projects undertaken by the three governments in the construction phase of the HZMB project, the Office Head of HZMB HKPMO should be maintained at D3 level.

CE/HZMB HK (CE)

15. CE/HZMB HK will continue to oversee all the technical, design, construction and environmental issues for the works of the HZMB Main Bridge within Mainland waters and the HKLR within Hong Kong territory. The HZMB Main Bridge will be in the form of bridge-cum-tunnel with a total length of about 30 km – consisting of a 23 km sea-crossing bridge with three long span bridges and a 6.7 km long submerged sea tunnel – crossing several major navigation channels in the Pearl River Delta. Upon completion, the HZMB Main Bridge will be one of the world's longest sea-crossing bridge-cum-tunnel road with dual three lanes.

16. Apart from dealing with the technical aspect of the HZMB Main Bridge, CE/HZMB HK also oversees HKSAR Government's participation in the financial, legal and institutional arrangement matters regarding the Main Bridge project. CE/HZMB HK has to work closely with the other two governments on these matters, including but not limited to the arrangement of syndicated bank loan for financing the project and negotiation of the loan agreement, and the drafting and subsequent implementation of the

Inter-governmental Agreement on the construction, operation, maintenance and management of the Main Bridge. CE/HZMB HK also needs to work with the two governments on the preparation of the Articles of Association for the HZMB Authority and the vetting of its internal office procedures for proper corporate governance.

17. CE/HZMB HK also assists in taking forward the local HKLR. The 12 km long HKLR consists of a dual three-lane carriageway connecting the proposed HZMB at the HKSAR boundary with the HKBCF and associated ancillary works[5]. CE/HZMB HK is required to conduct intensive discussions with various policy bureaux, and departments within HKSAR government, and to organize public consultation with different stakeholders, including environmental concern groups and the Islands District Council in taking forward the project, having regard to concerns on air quality, noise, shorelines, preservation of Chinese White Dolphins, etc.. In particular, it is envisaged that as the project progresses to the construction stage in time, coordination by an experienced officer with different interested departments and parties is even more important to ensure that the project could be taken forward smoothly and in a timely manner.

18. Given the complex and sensitive nature of the HZMB Main Bridge and HKLR projects, the continued service of CE/HZMB HK is required to closely monitor the projects before and during the whole construction period and to ensure the HKLR could be completed in time to tie in with the delivery of the Main Bridge in 2016. With the heavy workload as mentioned above, a dedicated CE is required.

CE/NWNT (CE)

19. Apart from providing technical support to long-term NWNT road infrastructure projects such as the Tuen Mun Eastern Bypass and the Tsing Yi Lantau Link and taking forward these projects when the traffic condition warrants their implementation, CE/NWNT[6] will continue to be mainly responsible for two highway projects, the TM-CLKL and TMWB.

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[5] Ancillary works include civil, structural, geotechnical, marine, environmental protection, landscaping and drainage works, street lighting, traffic aids (including sign gantries), water mains and fire hydrants, traffic control and surveillance system and electrical & mechanical works. There is also a tunnel section which will pass under the Scenic Hill and Airport Railway, and connect to the proposed at-grade road along the eastern coast of Airport Island so as to reduce the environmental and visual impact to Tung Chung.

[6] Retitled from CE/HZMB2 as endorsed vide EC(2008-09)16.

20. The two projects will involve the construction of two longest road tunnels, one undersea and one on land, in Hong Kong. There is a wide spectrum of complicated and challenging administrative and engineering issues associated with the construction of these tunnels. The sub-sea road tunnel for the TM-CLKL will be constructed using a tunnel boring machine, the first time such a technique is to be adopted in Hong Kong for the construction of sub-sea tunnel, and will present an engineering challenge[7]. Moreover, the reclamation for the tunnel will require careful handling to mitigate impact on the Urmston Road Channel, which is a very busy marine navigation channel in Hong Kong, and nearby marine life. As for the TMWB, some of the alignment options currently being evaluated also involve long road tunnels of over 8 km (which will be the longest in Hong Kong) with merging and diverging traffic inside the tunnel (an arrangement without precedent locally). Complicated considerations in engineering design as well as traffic and incident management are hence required.

21. To smoothly take forward these projects, the personal and dedicated attention of CE/NWNT is required to develop innovative engineering designs, devise complex traffic and incident management schemes, resolve sensitive environmental issues, and liaise with and consult the local communities. In view of the complexity of projects handled by him, it is not practicable for CE/NWNT to take up other duties related to the HZMB Project.

CE/HKBCF (CE)

22. CE/HKBCF is heavily engaged in pushing forward the design and construction of the HKBCF[8]. Currently, he is involved in the preparation for the tendering to facilitate early commencement of the reclamation works. We expect that from now until the commissioning of the HZMB (and hence the HKBCF), CE/HKBCF will be busily engaged in preparing the commencement of the detailed design for the superstructure works with a view to starting construction, drawing reference from the winning entries of a

[7] The sub-sea tunnel for the TM-CLKL will be a large diameter road tunnel bored through mixed soil and rock layers at a depth of about 51 m below sea level under a maximum water pressure of about 5 bars, leading to challenges in construction technique as well as extra safety and rescue precautions during construction.

[8] According to our latest planning, the HKBCF will be built on an artificial island of about 130 ha at northeast of the Airport. It will accommodate the necessary Customs, Immigration & Quarantine facilities including a Passenger Clearance Building of about 100 000m^2 construction floor area, 13 clearance and examination buildings, 10 office and ancillary facility buildings together with the coaches/private cars/goods vehicles clearance areas, public transport interchange and the necessary internal and peripheral road systems that link up the HKLR, TM-CLKL and the access to and from the Airport.

currently ongoing international design ideas competition for the HKBCF; liaising with the various users and stakeholders of the BCF and the Mainland and Macao authorities on the requirement and future operation of the various facilities on the BCF; and supervising the various construction works on the BCF covering reclamation, roads and bridges, buildings, electrical and mechanical works, sewerage, etc..

23. In particular, given the concern expressed by some members of the public and green groups regarding the environmental impact of the large scale reclamation works involved in this project, particular effort is required to handle and minimise the amount of dredging and dumping of marine sediments in an environmentally friendly and effective manner. Apart from the need to develop various mitigation and preventive measures in this regard, CE/HKBCF will need to implement a comprehensive environmental monitoring and auditing programme. As regards the works on the superstructures, there will be about 10 users departments and 10 maintenance and utility agents involved in the design and construction of the various facilities, and close liaison and complex interface and coordination are required between HyD, the consultants, contractors and these stakeholders, to ensure the timely implementation of the different facilities under the tight programme. Furthermore, as the HKBCF is located in the vicinity of the Airport, careful planning and close collaboration with the Airport Authority and Civil Aviation Department by a sufficiently experienced officer are required to provide efficient road connections that enhance the synergy between the two major infrastructures and at the same time minimise any interface issue that may affect the safe and efficient operation of theAirport.

24. Having regard to the sensitivity and complexity of the tasks to be undertaken, the HZMB HKPMO requires the support of CE/HKBCF on a full time basis in taking forward the above work initiatives, and it is impossible for him to share out the work of other CEs in the team.

Duration of the Proposed Extension

25. The HZMB project is planned to be completed by the end of 2016. The HZMB Main Bridge, HKBCF, HKLR and TM-CLKL would be in full swing from design, tender to construction from now up to 2014. After then, some components of the projects such as the reclamation works of HKBCF and HKLR, the bridge foundation works of HKLR and TM-CLKL, etc. would be completed in phases while the superstructure works would continue to be actively under construction. We therefore need to retain the three posts (1 PGE and 2 CEs) in HZMB HKPMO for four years until

30 June 2014 to provide the required directorate support to implement these projects. We will review the continued need of these three posts together with the CE/HKBCF post (due to lapse in April 2014) in the second half of 2013, taking into account the progress of the projects (such as the construction of the superstructure and the time required to manage claims resolution and contract finalisation work of the reclamation contracts), as well as the target commissioning date of the HZMB, and the overall staffing situation in HyD by that time. The job descriptions of PM/HZMB and the three CEs are at Enclosure 2.

Encl. 2

Alternatives Considered

26. We have critically examined the possible redeployment of existing directorate officers in other offices within HyD to take on the work of the proposed posts. As all other directorate officers are fully engaged in their respective duties, it is operationally not possible for them to take up the tasks without adversely affecting the discharge of their current duties. The key portfolios of the existing PGE and CE posts and our assessment of the possibility for them to take up additional responsibilities are detailed in the ensuing paragraphs.

Headquarters (HQs) and Regional Offices (ROs)

27. Deputy Director of Highways (DDHy) (at PGE rank) currently oversees the HQs and two ROs (i.e. Urban and New Territorities). At the HQs, DDHy is assisted by two Government Engineers (GEs) (at D2 rank) (Assistant Director/ Technical (AD/T) and Assistant Director/ Development (AD/D)[9]) and four CEs to manage seven Divisions and ten Units. As regards the ROs, each office is led by one GE and two CEs.

28. DDHy has to deputise Director of Highways in the overall management of the Department, including formulation of departmental policies, overseeing staff matters of all professional and technical grades, and monitoring expenditures. He is the internal departmental administrative head and also has to oversee the work of HQs and the two ROs. In view that DDHy already has a wide span of responsibilities and is fully engaged, he

[9] AD/T is responsible for formulating technical and administrative policies, standards, techniques and guidelines on highway engineering, landscaping, surveying, quality management, environmental matters etc. and administering the public relation and training matters for the department, as well as personnel matters (including staff deployment, grade management as well as appointments). For AD/D, he is tasked to manage minor to medium size capital works projects, public lighting and road maintenance in two legally designated Control Areas, oversee the selection, employment and supervision of consultants and contractors, negotiate fees and agreements, and supervise the consultants and contractors when necessary.

cannot take on the responsibilities of PM/HZMB on top of his own schedule.

29. As for the four CEs in the HQs, we have also assessed their current and anticipated workload, and concluded that they have no spare capacity to share out duties of the HZMB-related projects. Their duties are as follows –

(i) Chief Highway Engineer/Works oversees capital works other than major works in the territory. Currently, there are about 80 projects under construction which would be completed in 2014, while 20 of the 75 projects under planning or study would be completed between 2017 and 2020. Each year there are new road improvement projects arising from local traffic needs to be added to the list.

(ii) Chief Highway Engineer/Bridges and Structures (CHE/B&S) is responsible for bridge and highways design and standard setting, retrofitting of disabled facilities (involving over 200 existing footbridges and subways), supervision of structural design for in-house highway projects (over 20 every year) plus technical support for ongoing construction works of in-house designs. Furthermore, CHE/B&S also supervises the maintenance of major bridges and roads within the Tsing Ma and Tsing Sha Control Areas[10].

(iii) Chief Engineer/Lighting (CE/Ltg) oversees some 220 000 units of public lighting in the territory, and provides lighting design and input to the impending major works. CE/Ltg is also studying and reviewing the standard of public lighting from the energy saving perspective which requires his dedicated attention in the short to medium term.

(iv) Chief Highway Engineer/Research and Development (CHE/R&D) conducts research in setting and upgrading highway design, construction, maintenance and material specifications and standards. CHE/R&D also oversees the Division's work in formulating and reviewing the departmental Information Technology Strategies, coordinating the

[10] Highway facilities within the two Control Areas comprise four long span cable-supported bridges, four dual 3-lane tunnels, viaducts and roads all lying along strategic routes linking to the Airport. Three major cable bridges within the Tsing Ma Control Area, built in the 1990s, now require more attention due to their normal wear and tear. Apart from the regular repairs of road surfacing, the essential structural elements require frequent inspection and maintenance.

management of road excavations, and supervising centralised audit inspection teams on road opening works.

30. As regards the two ROs (each led by one GE and supported by two CEs), they are responsible for district administration of highway infrastructure and maintenance works in their respective geographic area. They provide comments on public and private developments affecting public roads and technical advice on new highway projects (including gazettal-processing and objection-handling for road works initiated by the ROs and the private sector), and plan, design and supervise maintenance and upgrading works for about 2 000 km of roads, 2 500 highways structures and 12 800 road side slopes. They also oversee the processing of road excavation permits, resolve road opening coordination matters, and monitor the performance of utility undertakers in their excavation works. In the light of these ongoing and heavy duties, the directorate officers of the two ROs cannot be spared / redeployed for taking on additional duties.

Major Works Project Management Office (MWPMO)

31. There are eight directorate officers in the MWPMO, including one PGE (designated as Project Manager/Major Works (PM/MW)), two GEs and five CEs. PM/MW heads the MWPMO and is responsible for the planning, design and implementation of major highways infrastructure projects. With an average expenditure for projects handled by the MWPMO for the coming five years (from 2010-11 to 2014-15) amounting to about $6 billion per year, PM/MW has a very heavy workload in liaison work at the senior level and decision-making on major technical and funding issues. It is not practicable for him to take on the responsibilities of PM/HZMB on top of his own schedule.

32. We have also assessed the current and anticipated workload of the five CEs under the two major works project management teams. The outcome is that all of them do not have spare capacity in the short to medium term to take on additional work, as follows –

(i) CE1/MW is mainly responsible for the planning and implementation of a number of mega projects[11]. The total estimated expenditure in the coming five financial years is $4 billion. In the next five years, CE1/MW will be heavily involved

[11] Including the widening of Tolo Highway and Fanling Highway; retrofitting of noise barriers for existing roads including Tseung Kwan O Road, Kwun Tong Bypass, New Clear Water Bay Road, Hoi On Road, Tsing Tsuen Bridge and Tsuen Wan Approaches; and feasibility studies on proposed improvement to Fan Kam Road and proposed road improvement works for West Kowloon Reclamation Developments.

in the multi-billion Tolo Highway and Fanling Highway widening project, which involves extensive public consultation and intensive temporary traffic management measures. With Stage 2 of the project targeted for completion in end 2018, it is unlikely that CE1/MW would have spare capacity to take on additional duties in the interim.

(ii) CE2/MW is mainly responsible for the planning and implementation of Central Kowloon Route (CKR) linking West Kowloon with Kai Tak Development as well as retrofitting of noise barriers for existing roads[12]. The total estimated expenditure for projects under planning, construction and finalisation in the coming five financial years is about $3.5 billion. In particular, the planning and preliminary design of CKR, which requires wide public consultation and detailed assessment on different aspects, are in progress and the works are expected to be in full swing in the next 7 years.

(iii) CE3/MW and CE4/MW are responsible for the planning and implementation of Central–Wanchai Bypass and Island Eastern Corridor Link (CWB) at a total estimated cost of over $28 billion[13]. The construction of this mega CWB project has just commenced. Complexity of the works aside, the likely impact of the works on traffic and the environment (hence strong interest of relevant District Councils in the works, and careful monitoring and extensive public consultation required) demands high level involvement of the two CEs throughout till its completion and commissioning in 2017.

(iv) CE5/MW is mainly responsible for the planning and implementation of the Tuen Mun Road Improvement Project and Hiram's Highway Improvement Project as well as the outstanding works and the finalisation of the Tung Chung Road Improvement Project. The total estimated expenditure in the

[12] Including Tai Po Tai Wo Road, Sha Tin Road, Wong Uk Tsuen, Tai Po Road, Yuen Wo Road, Fanling Highway, Po Shek Wu Road, Po Lam Road North, Po Ning Road, Ma Wang Road, Chai Wan Road, Tuen Mun Road, Long Tin Road and Castle Peak Road.

[13] The CWB consists of a 4.5 km dual three-lane trunk road with 3.7 km in tunnel between Central and North Point, 3 km of the approach roads and slip roads, and associated of 0.8 km Island Eastern Corridor between Hing Fat Street and Po Leung Kuk Yu Lee Mo Fan Memorial School. It is the last missing link of the strategic highway along the north shore of the Hong Kong Island and there is strong public expectation for its completion to help relieve traffic congestion along the Connaught Road/Harcourt Road/Gloucester Road corridor.

coming five financial years is about $6.3 billion. The large scale of the above projects aside, given the traffic, engineering, environmental and cultural heritage impacts of the Hiram's Highway project and hence very diverse views of the public, CE5/MW and his team have to carefully handle and address public concern in working out a preferred improvement option.

Railway Development Office (RDO)

33. The RDO, headed by the PGE/RD (D3), is responsible for the planning and implementation of new railway projects. PGE/RD is supported by two GEs who are underpinned by six CEs and a supporting team.

34. We have assessed the responsibilities of the office. As the majority of the railway projects under implementation and planning have their construction commencing in early 2010's for completion during the period from 2014 to around 2020, PGE/RD and other directorate staff are also fully committed to the tasks as mentioned above and will not have spare capacity to share other offices' duties. The key duties of the CEs are set out below –

(i) CE/RD1-1 is responsible for the planning of the South Island Line East, the construction of which will commence in 2011 for completion no later than 2015. He is also responsible for the engineering planning of the Northern Link, which will allow the existing East Rail to connect with the existing West Rail at the NWNT.

(ii) CE/RD1-2 is responsible for the planning and implementation of the North-South Line of the Shatin to Central Link (SCL), which involves the planning of a railway crossing the Victoria Harbour and hence complex interface with other projects in the North Wanchai / Causeway Bay waterfront[14], as well as robust public engagement processes to ensure comprehensive assessment of public concerns and impacts on different aspects.

(iii) CE/RD1-3 [15] is mainly responsible for planning and implementation of the East-West Line of SCL and the Kwun Tong Line Extension. Currently under active planning, both

[14] Including the CWB and the Wanchai Development II projects.

[15] Occupying a supernumerary post created in April 2009 with the approval of FC for a period of seven years.

projects have very complicated interface issues and hence CE/RD1-3 has to work closely with the railway corporation in conducting the public engagement exercises.

(iv) Apart from finalisation work of Kowloon Southern Link, CE/RD2-1 is responsible for the implementation of the West Island Line which commenced in July 2009. As WIL works are carried out in the highly urbanized Central and Western District, negotiation with affected parties on careful engineering planning, sophisticated building monitoring, as well as land and reprovisioning issues require close professional and directorate attention.

(v) CE/RD2-2 is responsible for administering the railway transport model, which involves the maintenance of a comprehensive database of transport statistics, and collation of key planning and land use information to generate forecasts on rail patronage and revenue for different railway network configuration with different socio-economic and developments assumptions. Apart from regular validation and verification of the model, he also has to examine all public and private development proposals, about 150 per annum, near the existing and planned railway lines so that these railway lines would be properly protected. He is also required to take part in the various planning and development studies, about ten per annum in the last few years, so that the railway perspective can be fully taken into account.

(vi) CE/RD2-3[16] is responsible for the implementation of the Hong Kong Section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link. Construction of the project started in January 2010 for completion in 2015. The works are complicated and require proper attention to the complicated interfaces with the other public works projects in the vicinity.

35. In the light of the upcoming workload in HyD mentioned above, we consider that the proposed retention of the two supernumerary posts (PM/HZMB and CE/HZMB HK) and extension of redeployment of the one permanent post (CE/NWNT) in question is the only viable arrangement to sustain the implementation of the HZMB and related highway infrastructure projects. The existing organisation charts of HyD are at Enclosure 3.

Encl. 3

[16] Occupying a supernumerary post created in July 2008 with the approval of FC for a period of seven years.

FINANCIAL IMPLICATIONS

36. The proposed retention of two supernumerary directorate posts will bring about an additional notional annual salary cost at mid-point of $2,962,440 as follows –

Rank	Notional annual salary cost at mid-point ($)	No. of Posts
Supernumerary Posts		
Principal Government Engineer (D3)	1,716,840	1
Chief Engineer (D1)	1,245,600	1
Total	2,962,440	2

The additional cost expressed in terms of full annual average staff cost, including salaries and staff on-costs, amounts to $4,265,784. The proposed extension of redeployment of the CE post within HyD is cost neutral. We will include sufficient provision in the 2010-11 draft Estimates under Head 60 – HyD to meet the cost of this proposal.

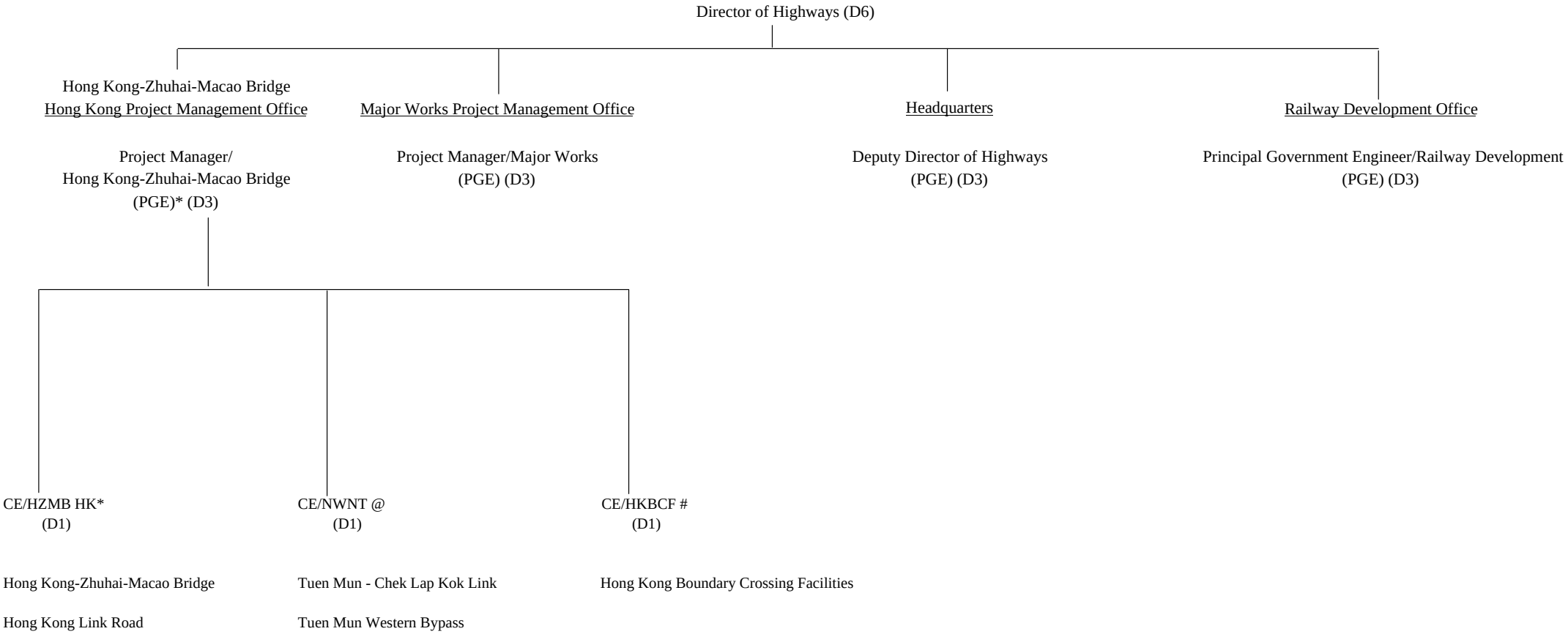
ADVICE SOUGHT

37. Members are invited to give their views on this paper and indicate support for the staffing proposal.

Transport and Housing Bureau
March 2010

Enclosure 1

Existing Organisation Chart of Hong Kong-Zhuhai-Macao Bridge Hong Kong Project Management Office of Highways Department



Legend

PGE	- Principal Government Engineer	*	-	Supernumerary posts (1 PGE and 1 CE) to lapse on 1 July 2010
CE	- Chief Engineer	@	-	1 CE post redeployed from Major Works Project Management Office to Hong Kong-Zhuhai-Macao Bridge Hong Kong Project Management Office on a time-limited basis up to 30 June 2010
HK	- Hong Kong			
HZMB	- Hong Kong-Zhuhai-Macao Bridge			
NWNT	- North West New Territories			
HKBCF	- Hong Kong Boundary Crossing Facilities	#	-	Supernumerary CE post to lapse on 1 April 2014

Job Description for
Project Manager / Hong Kong-Zhuhai-Macao Bridge

Rank : Principal Government Engineer (D3)

Responsible to : Director of Highways (D6)

Main Duties and Responsibilities –

1. Planning, administering and directing the work of the Hong Kong-Zhuhai-Macao Bridge (HZMB) Hong Kong Project Management Office to ensure that the HZMB and related highway infrastructure projects are completed on time and within budget.

2. Providing expert advice and professional support to the policy bureau on the implementation of the HZMB and related highway infrastructure projects, including the pre-construction planning and technical studies, negotiations for various agreements among the three governments, and the monitoring of technical standards and expenditure during construction for the HZMB Main Bridge in the Mainland.

3. Engaging in high-level discussion and liaising with the governments of the Mainland and the Macao SAR, including liaison with the Mainland and Macao authorities and consultants engaged on matters relating to the planning, design and implementation of the HZMB project and leading the HKSAR team in any technical groups to be formed with the Mainland and Macao authorities for the HZMB project.

4. Giving support to and, where necessary, deputising for the Director of Highways in inter-governmental committees (e.g. the HZMB Advance Work Co-ordination Group or the Joint Works Committee to be established) and those committees within the HKSAR Government (e.g. the Steering Committee on the HZMB and Related Hong Kong Infrastructure Projects and Works Progress Sub-committee).

5. Implementing the planning, design, tender and construction of the related infrastructure within Hong Kong to support the HZMB (including the Hong Kong Boundary Crossing Facilities and Hong Kong Link Road) and the Tuen Mun-Chek Lap Kok Link and

Tuen Mun Western Bypass projects to meet the traffic growth in Northwest New Territories, including the public engagements for the projects.

6. Formulating strategies and procedures in respect of the HZMB and related highway infrastructure projects.

7. Recommending the selection of consultants, overseeing the consultants engaged in the project studies, evaluating and advising on the selection of schemes for the HZMB related highway infrastructure projects and acting as the Director's Representative under the consultancy agreements.

8. Chairing the technical assessment panels on tender submissions and the assessment panels for consultants selection, and recommending the tenders for construction of projects.

9. Overseeing the construction contracts and acting as the Employer's Representative under the contracts.

Job Description for
Chief Engineer / Hong Kong – Zhuhai – Macao Bridge Hong Kong

Rank : Chief Engineer (D1)

Responsible to : Project Manager/Hong Kong-Zhuhai-Macao Bridge (PM/HZMB) (D3)

Main Duties and Responsibilities –

1. Executing the strategies and procedures as formulated by the PM/HZMB in respect of the HZMB Main Bridge and Hong Kong Link Road (HKLR) projects.

2. Leading and directing his/her subordinates in providing technical support and professional advice relating to the planning, feasibility studies, Environmental Impact Assessment studies, design, construction, financial and legal matters for the implementation of the HZMB Main Bridge and HKLR projects, including the public engagement and consultation exercises for HKLR project.

3. Liaising with the Mainland and Macao officials and consultants engaged on the HZMB Main Bridge project and attending meetings as and when required for the financial, legal and institutional arrangement matters, including selection of loan bank and negotiation of loan agreement, and the drafting of the Inter-government Agreement and the Articles of Association for the HZMB Authority, for the implementation of the HZMB Main Bridge project.

4. Vetting studies and reports from the Mainland authorities and consultants engaged in relation to the HZMB Main Bridge project (including design, construction, maintenance and operation standards, physical modeling study on the hydrology and flood control in the Pearl River Delta, etc.) and attending the Mainland's expert meetings as required.

5. Handling statutory process in respect of the environmental impact assessment study and carrying out the required statutory procedures under Environmental Impact Assessment Ordinance and Roads (Works, Use and Compensation) Ordinance.

6. Consulting and coordinating with the policy bureau and other departments in preparing the project briefs for studies as well as the documents for the construction contracts in connection with the HZMB Main Bridge and HKLR projects.

7. Procuring and administering consultancies and construction contracts for the delivery of the HKLR project, including the resolving of claims and disputes raised by the contractors. Assuming overall responsibility for the control of project scope, cost and programme for the HKLR project.

8. Managing the professional and technical staff in the project team and overseeing the general administration of the HZMB Drawing Office.

Job Description for
Chief Engineer / North West New Territories

Rank : Chief Engineer (D1)

Responsible to : Project Manager/Hong Kong-Zhuhai-Macao Bridge (PM/HZMB) (D3)

Main Duties and Responsibilities –

1. Executing the strategies and procedures as formulated by the PM/HZMB in respect of the Tuen Mun-Chek Lap Kok Link (TM-CLKL) and Tuen Mun Western Bypass (TMWB) projects and highway infrastructure projects identified in the North West New Territories Traffic and Infrastructure Review (the projects).

2. Leading and directing his/her subordinates in providing technical support and professional advice relating to the planning, feasibility studies, Environmental Impact Assessment studies, design, construction, financial and legal matters for the implementation of the above projects, including the public engagement and consultation exercises for the TM-CLKL and TMWB projects.

3. Handling statutory process in respect of the environmental impact assessment study and carrying out the required statutory procedures under Environmental Impact Assessment Ordinance and Roads (Works, Use and Compensation) Ordinance.

4. Consulting and co-ordinating with the policy bureau and other departments in preparing the project briefs for studies, as well as the documents for the construction contracts in connection with the projects above.

5. Procuring and administering consultancies and construction contracts for the delivery of the projects, including the resolving of claims and disputes raised by the contractors. Assuming overall responsibility for the control of project scope, cost and programme.

6. Co-ordinating land matters and resolving interface issues arising from the HZMB and related highway infrastructure projects.

7. Managing the professional and technical staff in the project team.

Job Description
Chief Engineer/Hong Kong Boundary Crossing Facilities

Rank : Chief Engineer (D1)

Responsible to : Project Manager/Hong Kong-Zhuhai-Macao Bridge (PM/HZMB) (D3)

Major Duties and Responsibilities –

1. Executing the strategies and procedures as formulated by PM/HZMB in respect of the Hong Kong Boundary Crossing Facilities (HKBCF) project.

2. Leading and directing his/her subordinates in providing technical support and professional advice relating to the planning, feasibility studies, EIA studies, design, construction, financial and legal matters for the implementation of the HKBCF project, including the public engagement and consultation exercises.

3. Managing the performance of contractors engaged in all consultancy services and contract works for the site formation / reclamation, civil and building works of HKBCF, award of construction contracts and the subsequent contract administration, including the resolving of claims and disputes raised by the contractors. Assuming overall responsibility for the control of project scope, cost and programme of the HKBCF project.

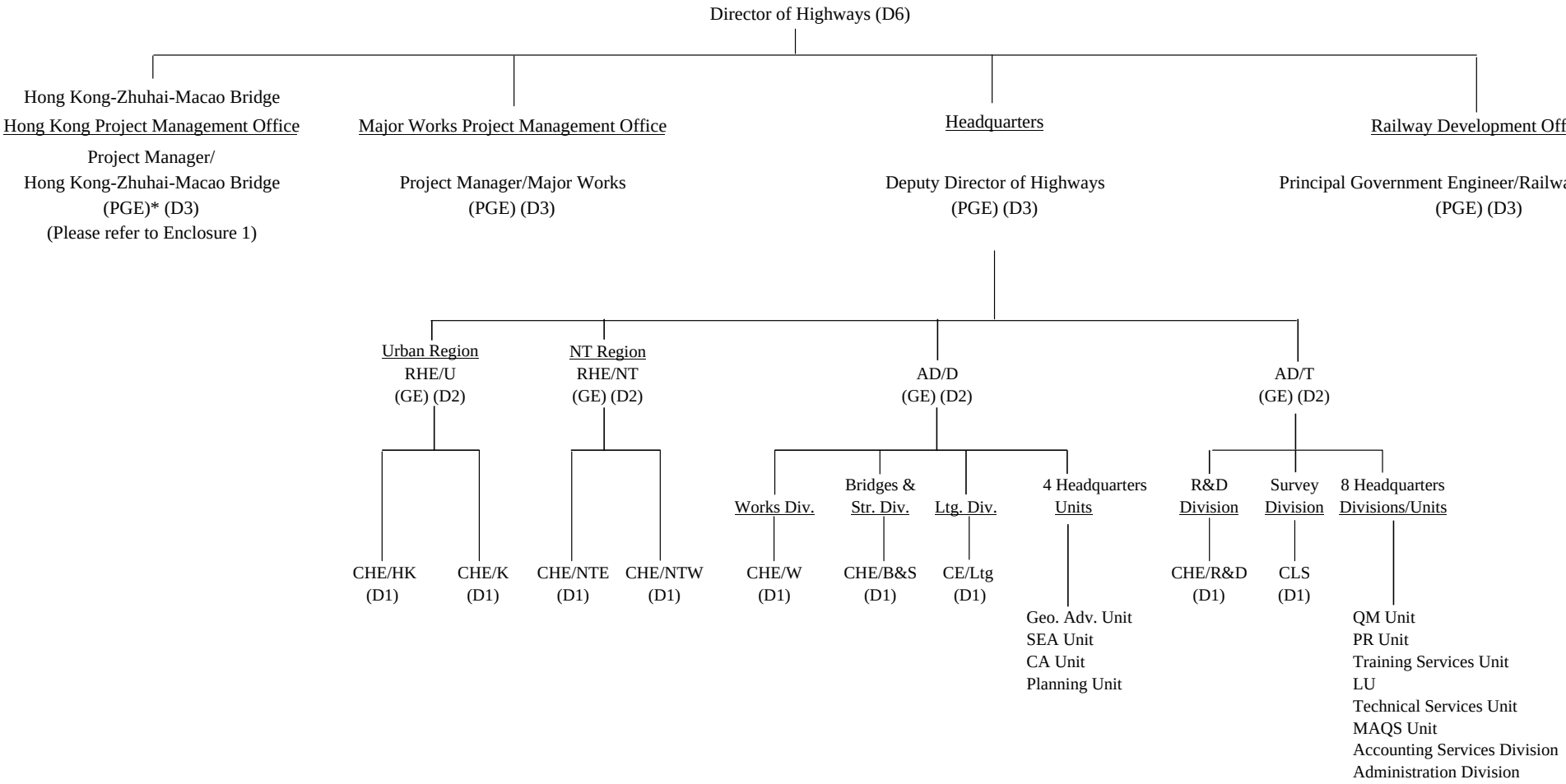
4. Handling statutory process in respect of the environmental impact assessment study and carrying out the required statutory procedures under Environmental Impact Assessment Ordinance, Roads (Works, Use and Compensation) Ordinance, Foreshore and Seabed (Reclamations) Ordinance and Town Planning Ordinance.

5. Consulting and coordinating with bureaux/departments, Airport Authority Hong Kong, the Mainland and Macao SAR authorities and any other relevant stakeholders to resolve cross-boundary and interface issues for the timely implementation of the HKBCF project.

6. Consulting and co-ordinating with the policy bureau and other departments in preparing the project briefs for studies, as well as the documents for the construction contracts in connection with the HKBCF project.

7. Managing the professional and technical staff in the project team.

Existing Organisation Chart of Headquarters of Highways Department



Legend

AD/D	- Assistant Director/Development	
AD/T	- Assistant Director/Technical	
CA	- Contract Advisory	
CE	- Chief Engineer	
CHE	- Chief Highway Engineer	
CLS	- Chief Land Surveyor	
Div.	- Division	
Geo. Adv.	- Geotechnical Advisory	
GE	- Government Engineer	
HK	- Hong Kong	
K	- Kowloon	
Ltg.	- Lighting	
LU	- Landscape Unit	
MAQS	- Maintenance Accounts & Quantity Surveying	
NT	- New Territories	
NTE	- New Territories East	
NTW	- New Territories West	
PGE	- Principal Government Engineer	
PR	- Public Relations	
QM	- Quality Management	
R&D	- Research and Development	
B&S	- Bridges and Strutures	
RHE	- Regional Highway Engineer	
SEA	- Safety and Environmental Advisory	
Str.	- Structures	
U	- Urban	
W	- Works	
*	- Supernumerary PGE post to lapse on 1 July 2010	

Existing Organisation Chart of Major Works Project Management Office of Highways Department

Director of Highways (D6)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Project Management Office

Project Manager/
Hong Kong-Zhuhai-Macao Bridge
(PGE)* (D3)

Major Works Project Management Office

Project Manager/Major Works
(PGE) (D3)

Headquarters

Deputy Director of Highways
(PGE) (D3)

Railway Development Office

cipal Government Engin
Railway Development
(PGE) (D3)

Major Works Office (1)

DPM/MW(1)
(GE) (D2)

Major Works Office (2)

DPM/MW(2)
(GE) (D2)

Division 1

CE1/MW
(CE) (D1)

- Retrofitting of Noise Barriers on existing roads
- Widening of Tolo/Fanling Highway between Island House Interchange and Fanling
- Improvement to Fan Kam Road
- Finalisation of Shenzhen Bay Bridge
- Finalisation of Deep Bay Link
- Finalisation of Widening of Yuen Long Highway between Lam Tei and Shap Pat Heung Interchange
- Contract Advisory Unit

Division 2

CE2/MW
(CE) (D1)

- Route 8 between Tsing Yi and Cheung Sha Wan
- Route 8 between Cheung Sha Wan and Sha Tin
- Preliminary design and study of an extensive elevated walkway system in Yuen Long
- Technical Support Unit
- Programme, Planning and Control Unit
- Retrofitting of Noise Barriers on existing roads
- Central Kowloon Route
- Widening of Gascoigne Road Flyover
- Low Noise Surfacing on local roads and noise mitigation
- Tamar Development Project - Footbridges over Harcourt Road and Tim Mei Avenue

Division 3

CE3/MW
(CE) (D1)

- Central - Wan Chai Bypass:
- Causeway Bay Shelter Tunnel
- Slip Road 8 Tunnel
- Provision and Laying of private moorings
- Central Interchange
- Electrical and Mechanical Engineering Coordination Unit

Division 4

CE4/MW
(CE) (D1)

- Central-Wan Chai Bypass:
- Island Eastern Corridor Link
- North Point Reclamation
- FEHD Whitfield Depot Reprovisioning Works
- E&M and Buildings
- Traffic Control Surveillance System
- Castle Peak Road Improvement between Area 2 and Sham Tseng, Tsuen Wan
- Castle Peak Road Improvement between Sham Tseng and Ka Loon Tsuen and Siu Lam

Division 5

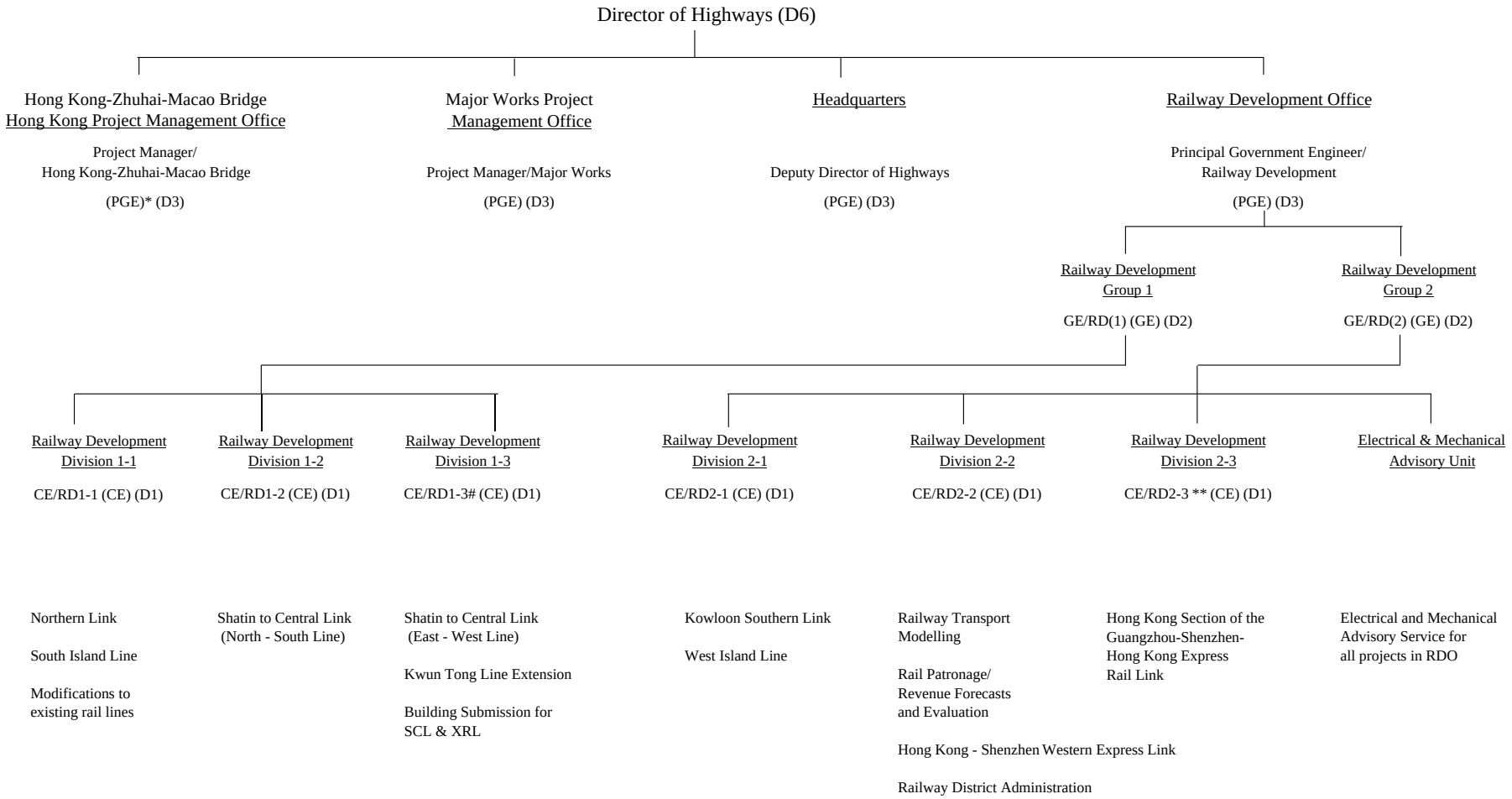
CE5/MW
(CE) (D1)

- Reconstruction and Improvement of Tuen Mun Road
- Traffic Improvement to Tuen Mun Road Town Centre Section
- Dualing of Hiram's Highway from Marina Cove to Sai Kung Town
- Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha

Legend

PGE	-	Principal Government Engineer
CE	-	Chief Engineer
DPM	-	Deputy Project Manager
GE	-	Government Engineer
MW	-	Major Works
*	-	Supernumerary PGE post to lapse on 1 July 2010

Existing Oganisation Chart of Railway Development Office of Highways Department



Legend

CE	- Chief Engineer	RD	- Railway Development	*	- Supernumerary PGE post to lapse on 1 July 2010
E/AE	- Engineer/Assistant Engineer	RP	- Railway Planning	**	- Supernumerary CE post to lapse on 6 July 2015
GE	- Government Engineer	SE	- Senior Engineer	#	- Supernumerary CE post to lapse on 1 April 2016
PGE	- Principal Government Engineer	TS	- Technical Services		
R	- Railway				