

Technical Challenges of Recent Highway Projects in Hong Kong

Speaker: Raymond Wong

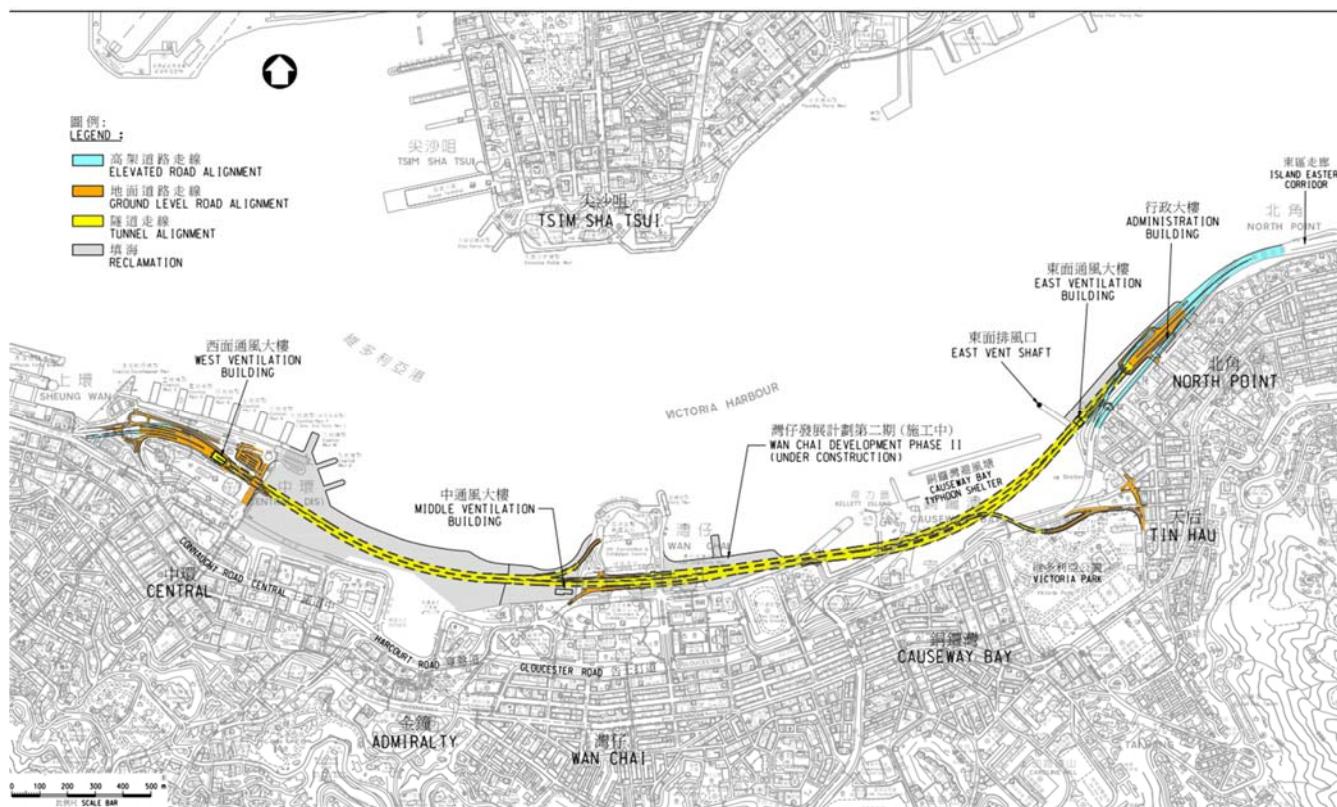
(City University of HK, bswmwong@cityu.edu.hk)

Organizing Institution: Chartered Institute of Highway & Transportation

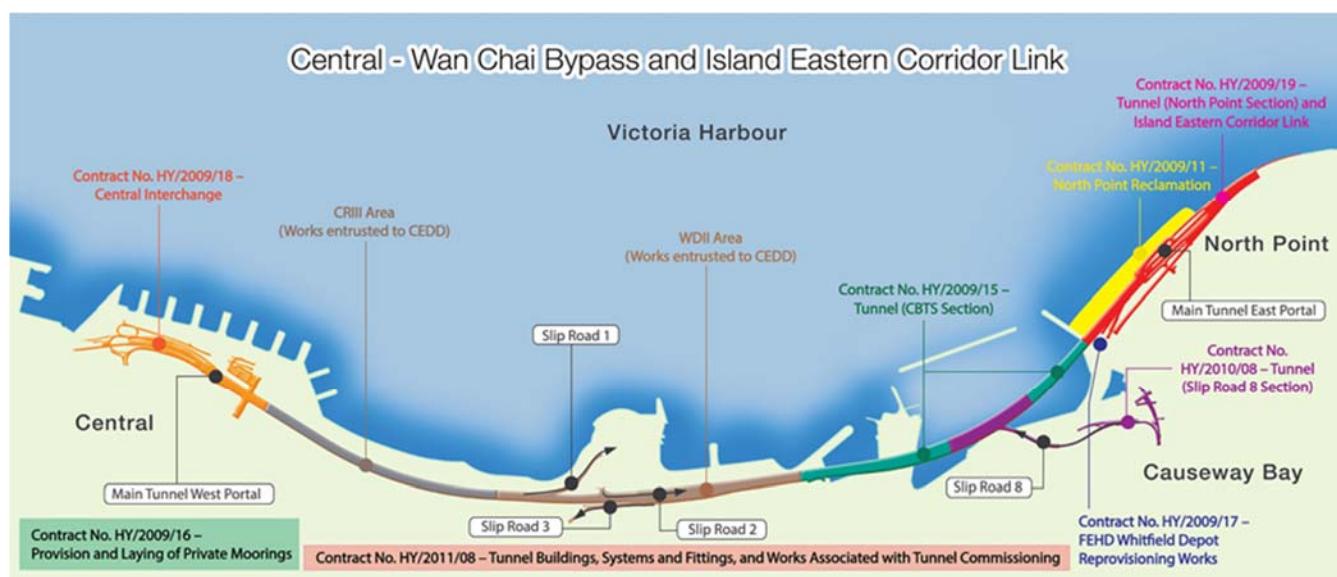
Date of talk: 19 February, 2016

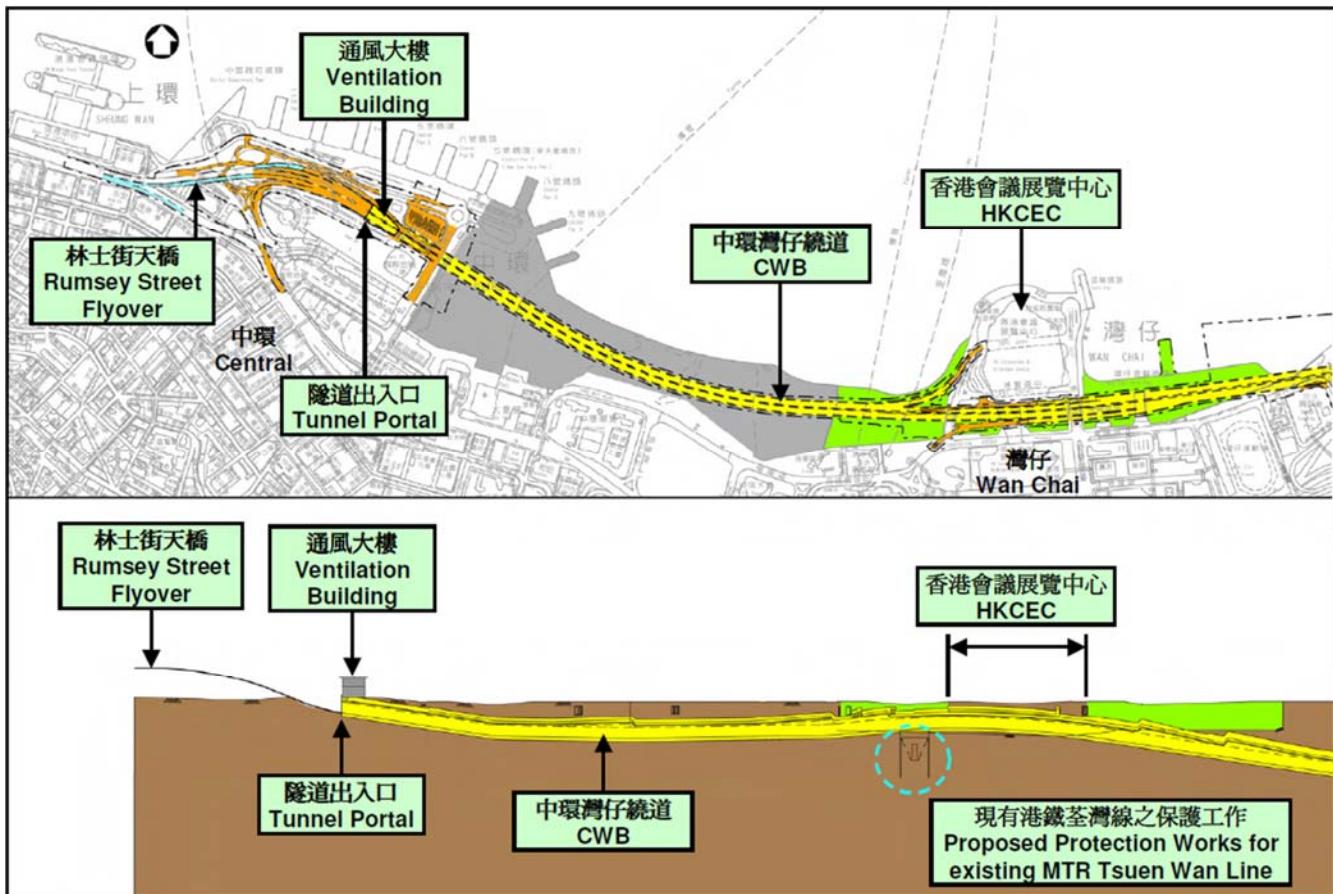
Other highway projects to discuss :

The Central-Wanchai Bypass, (2008 to 2017)

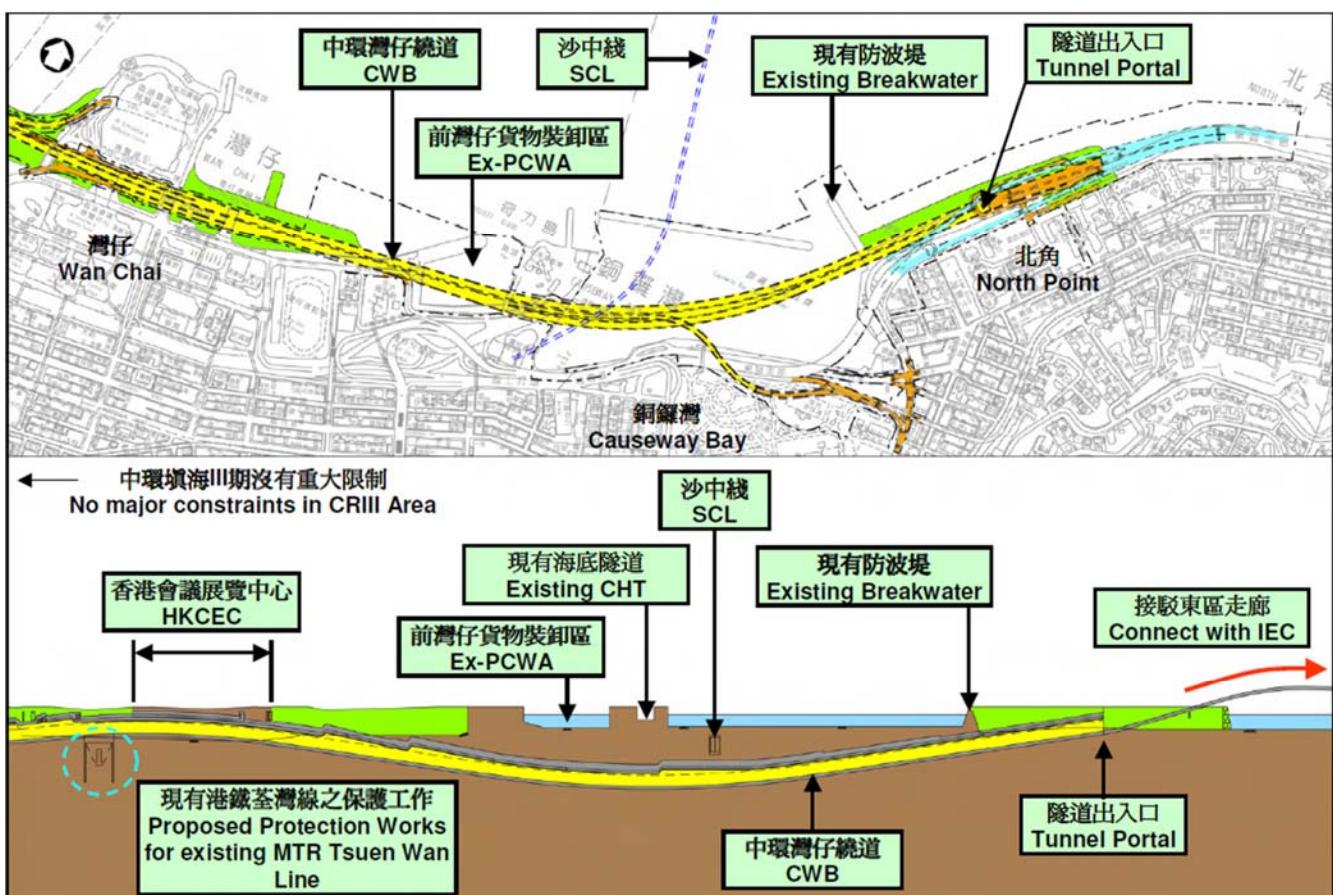


Project overview of the Central Wanchai Bypass and Island Eastern Corridor Link

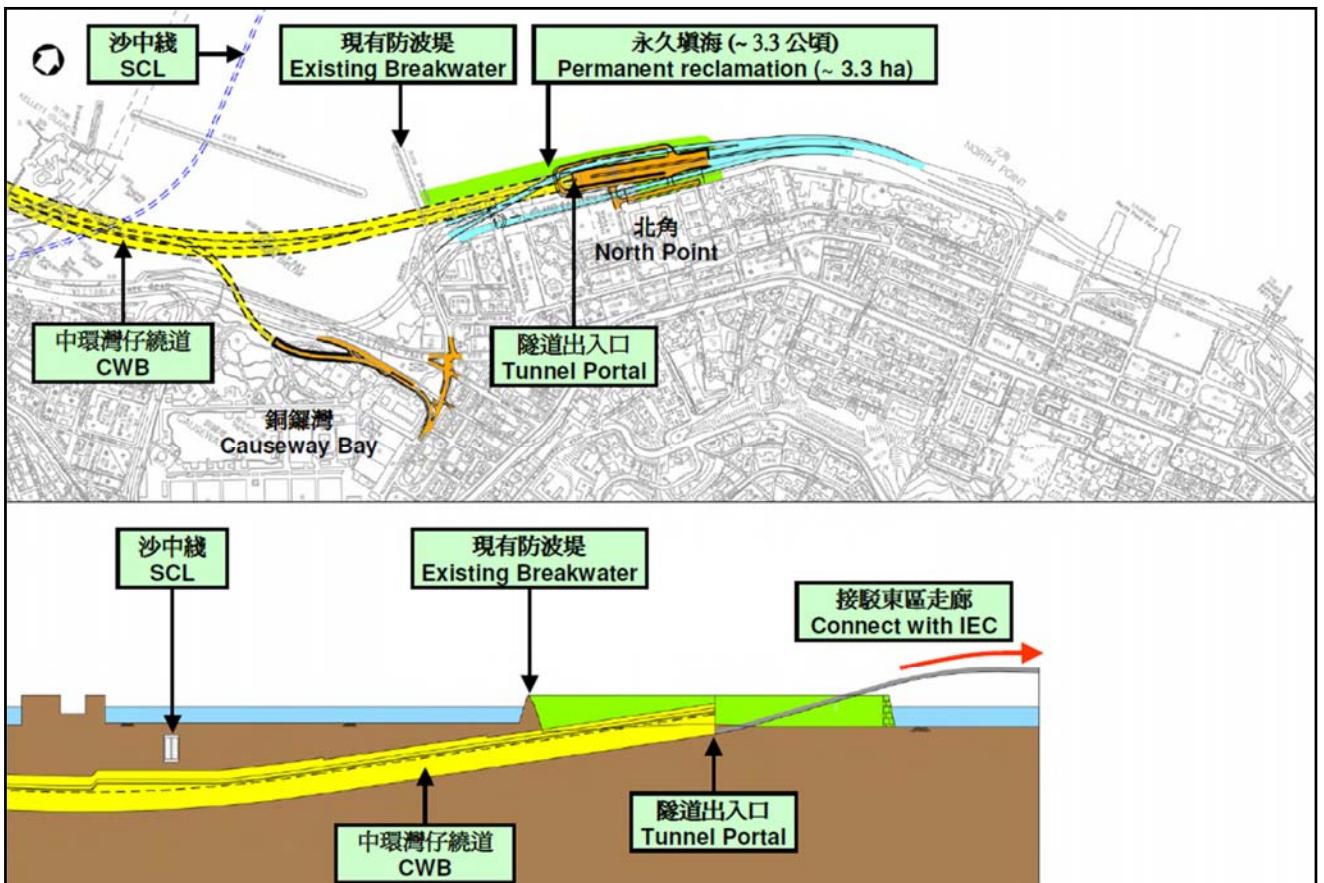




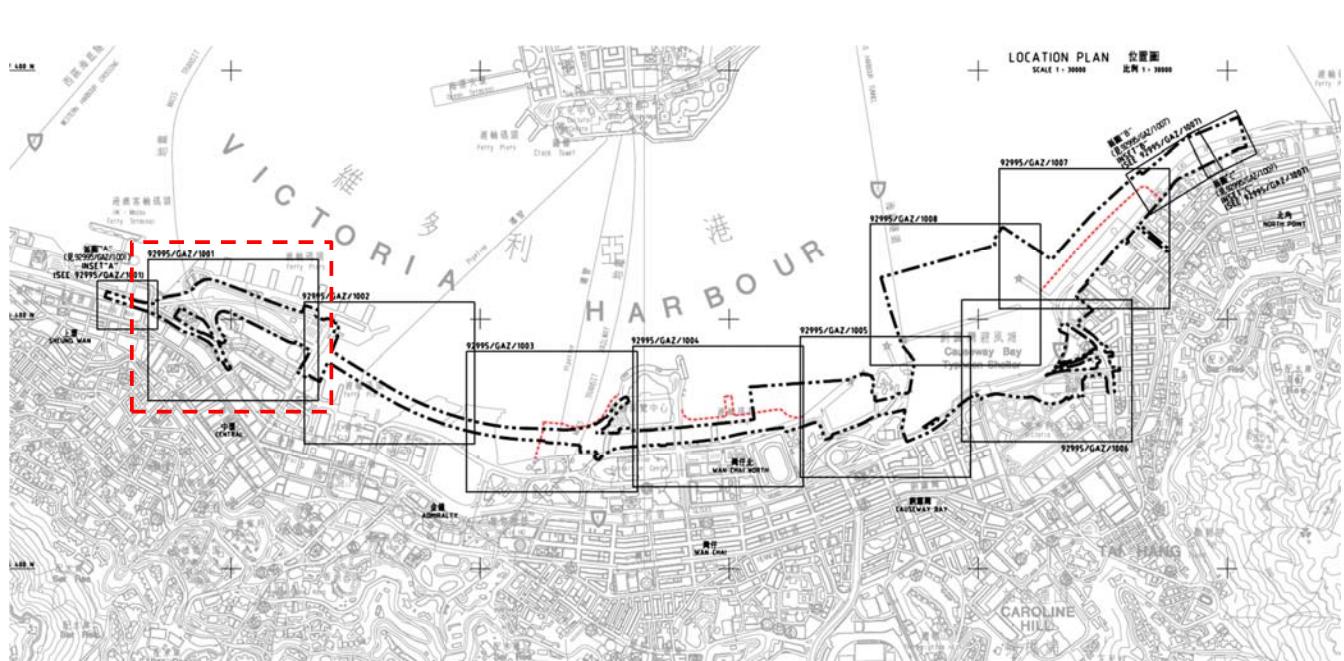
Longitudinal profile of the Central Wanchai Bypass (Central to Wanchai)



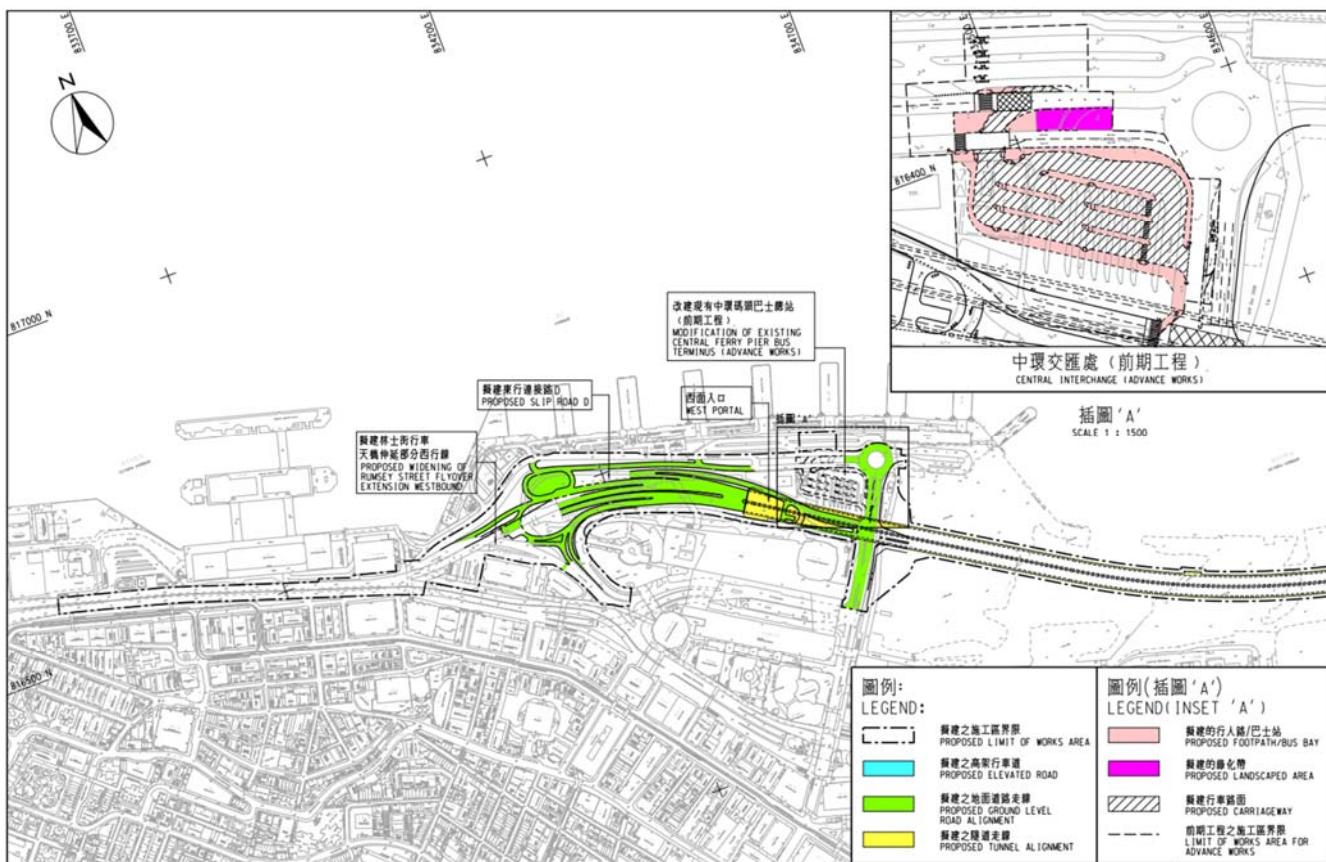
Longitudinal profile of the Central Wanchai Bypass (Wanchai to CBTS)



Longitudinal profile of the Central Wanchai Bypass (CBTS to North Point)



The Central Interchange



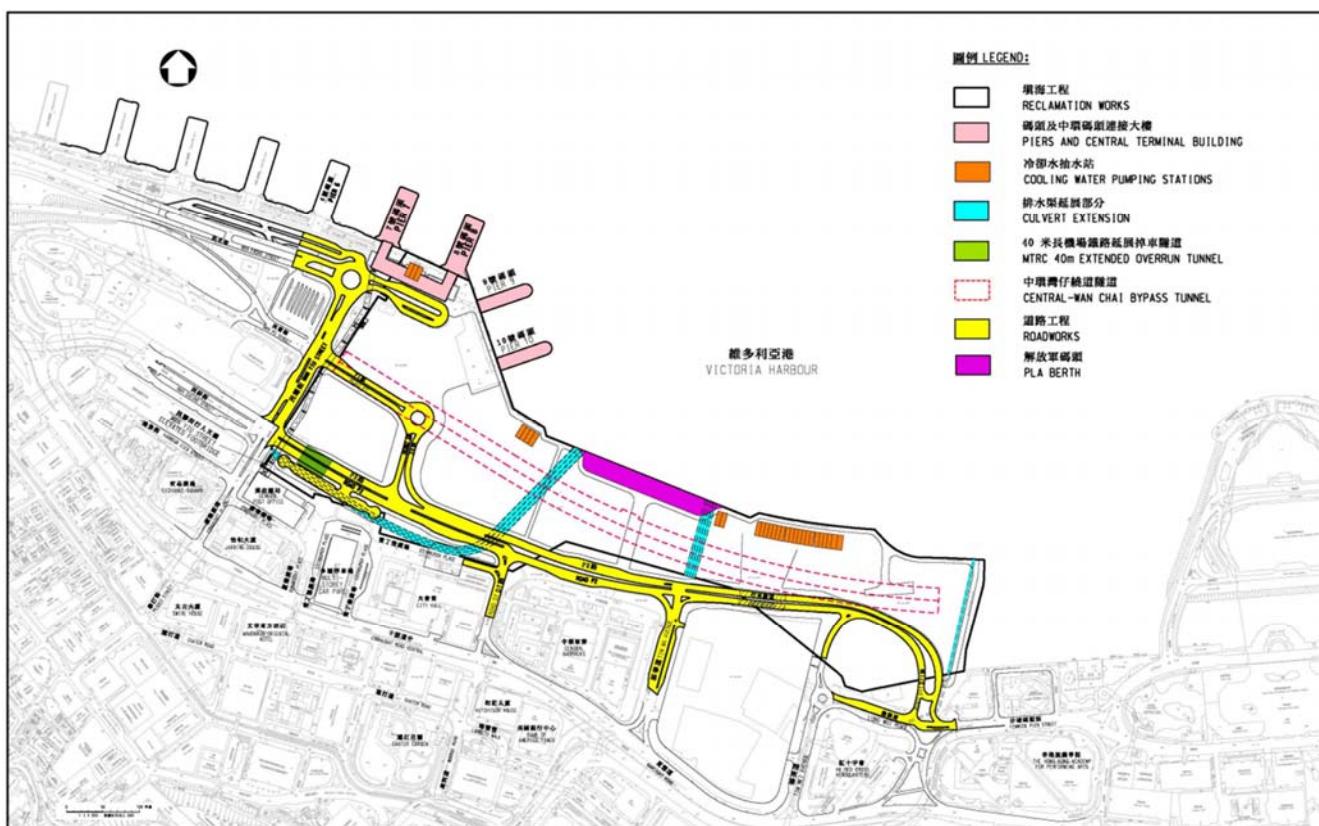
The Central Interchange

2010

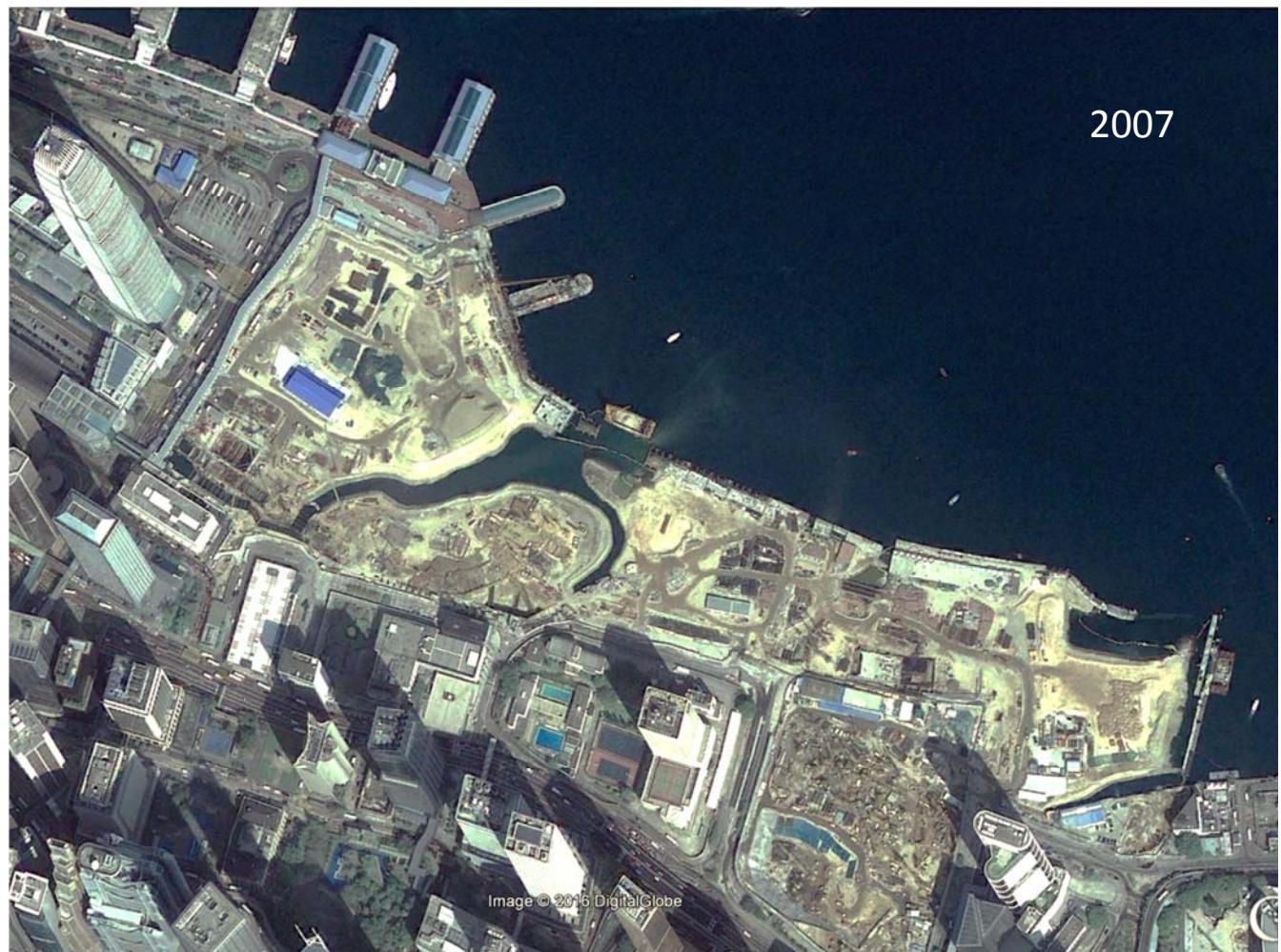
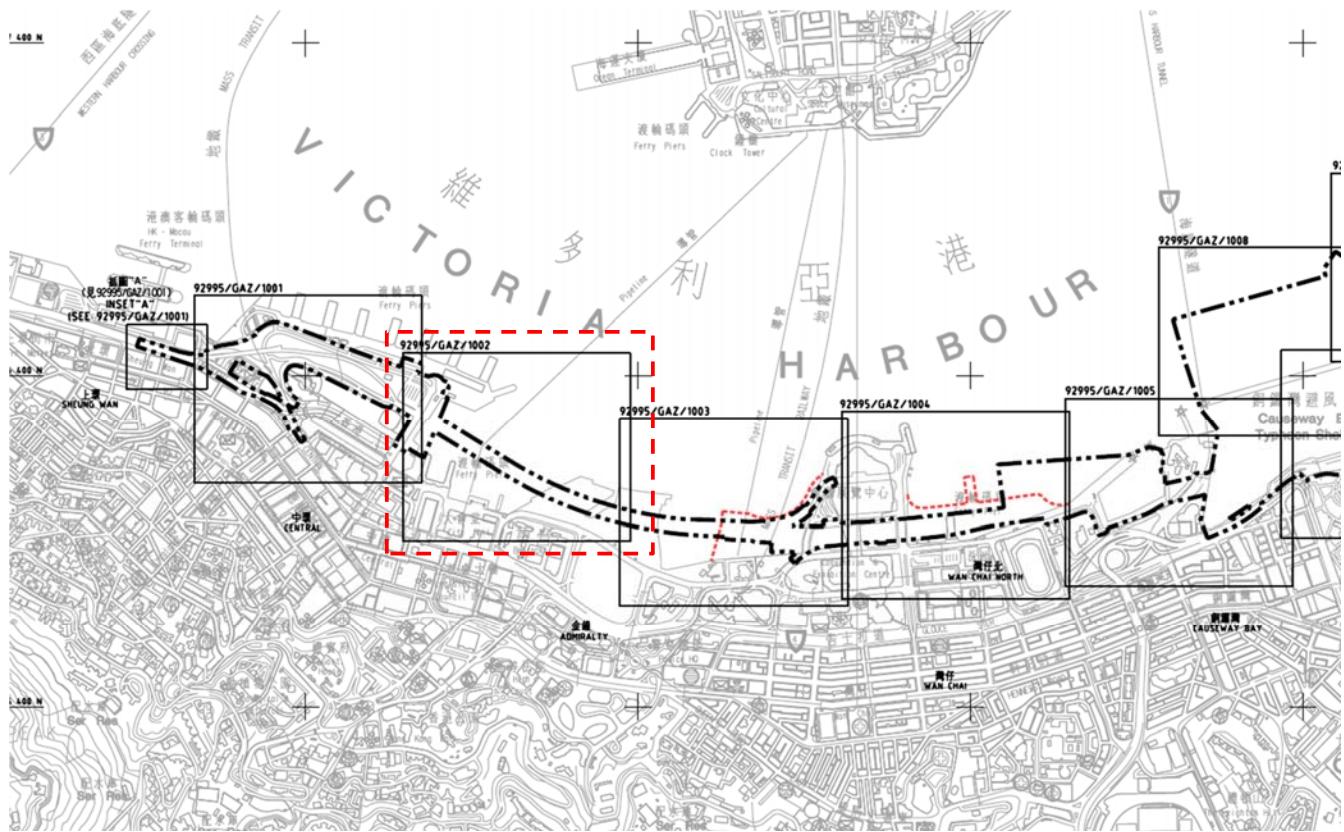


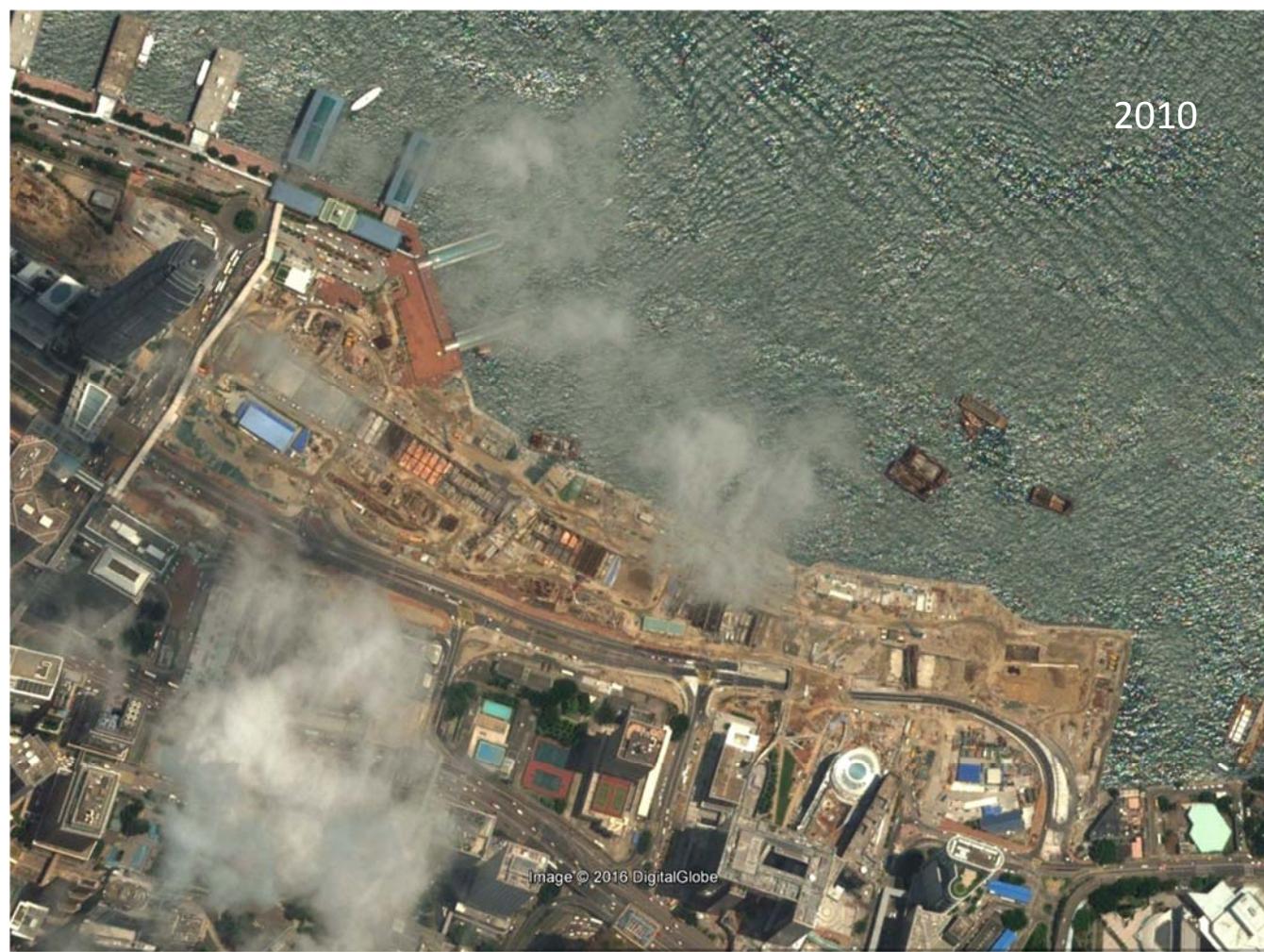


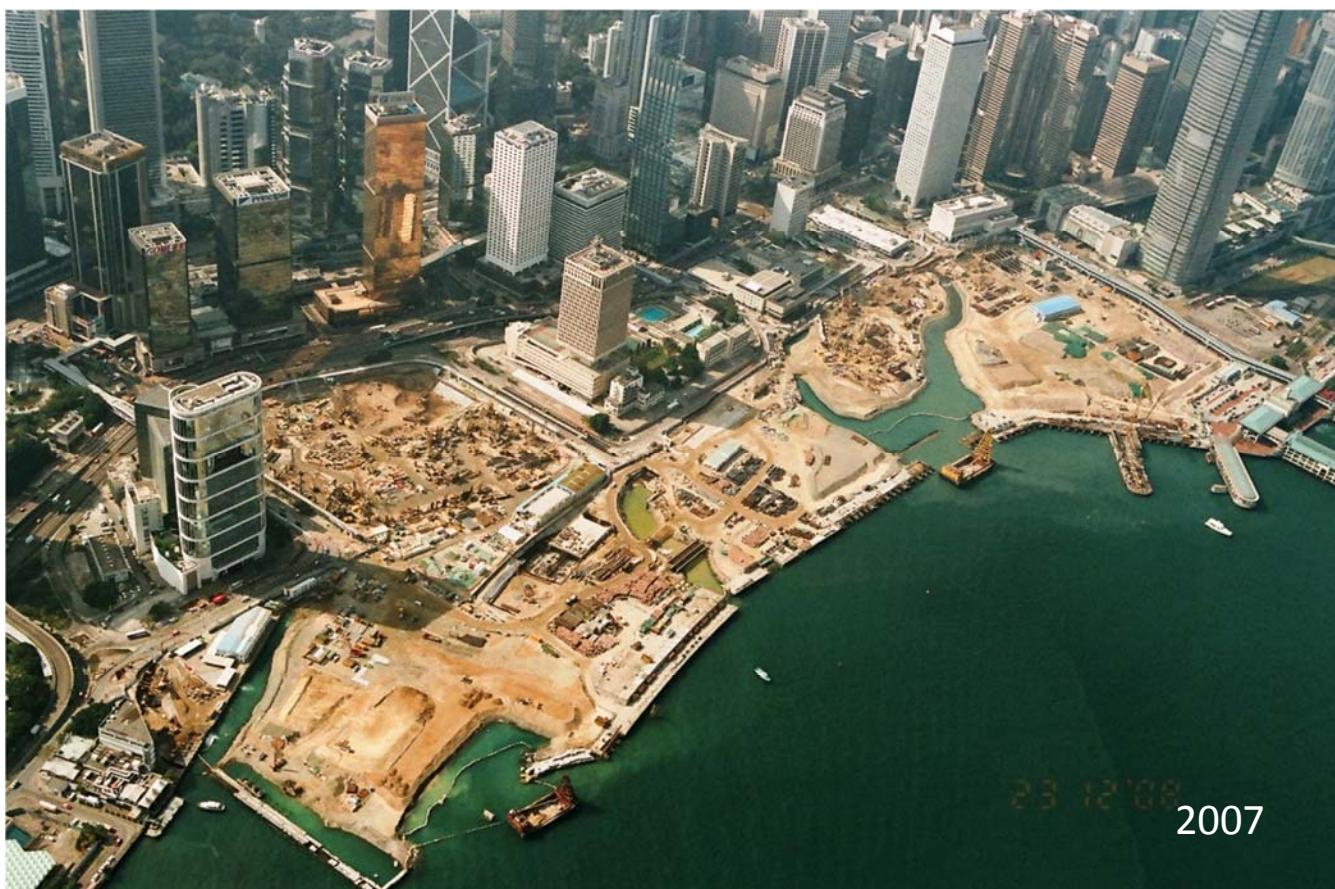
Section within the Central Reclamation Phase 3



Central Reclamation Phase 3 and the Central Wanchai Bypass





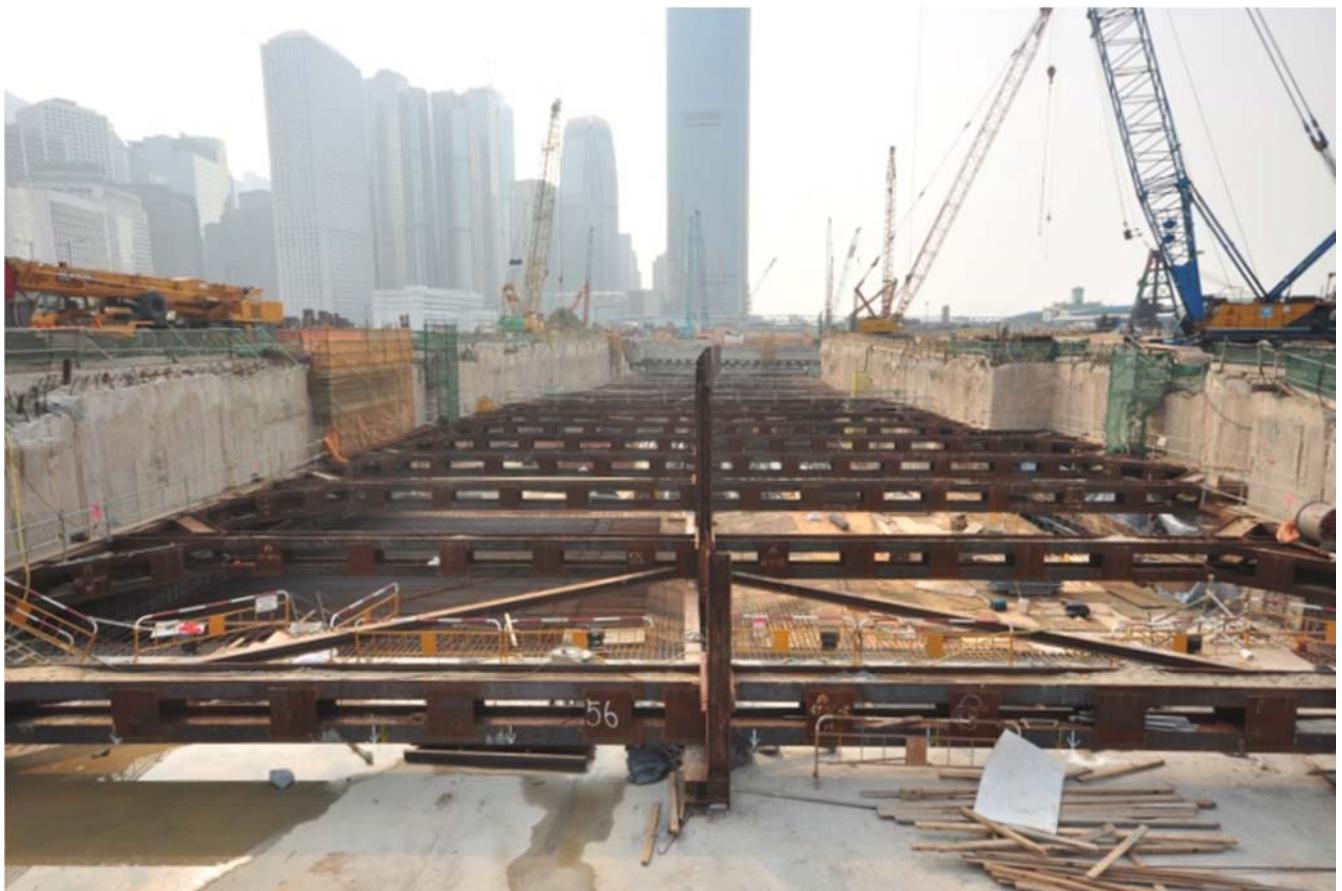
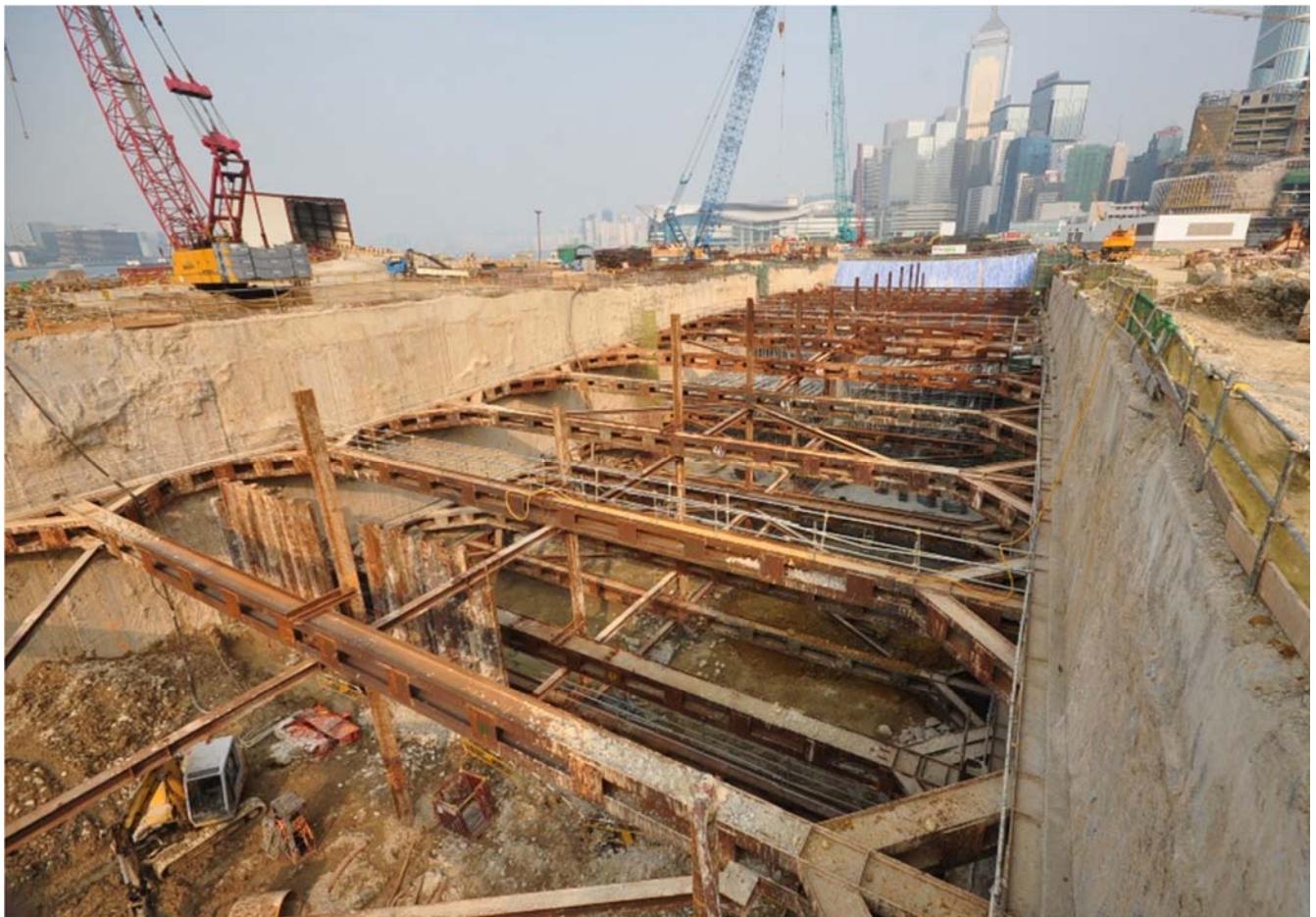


2010



2011





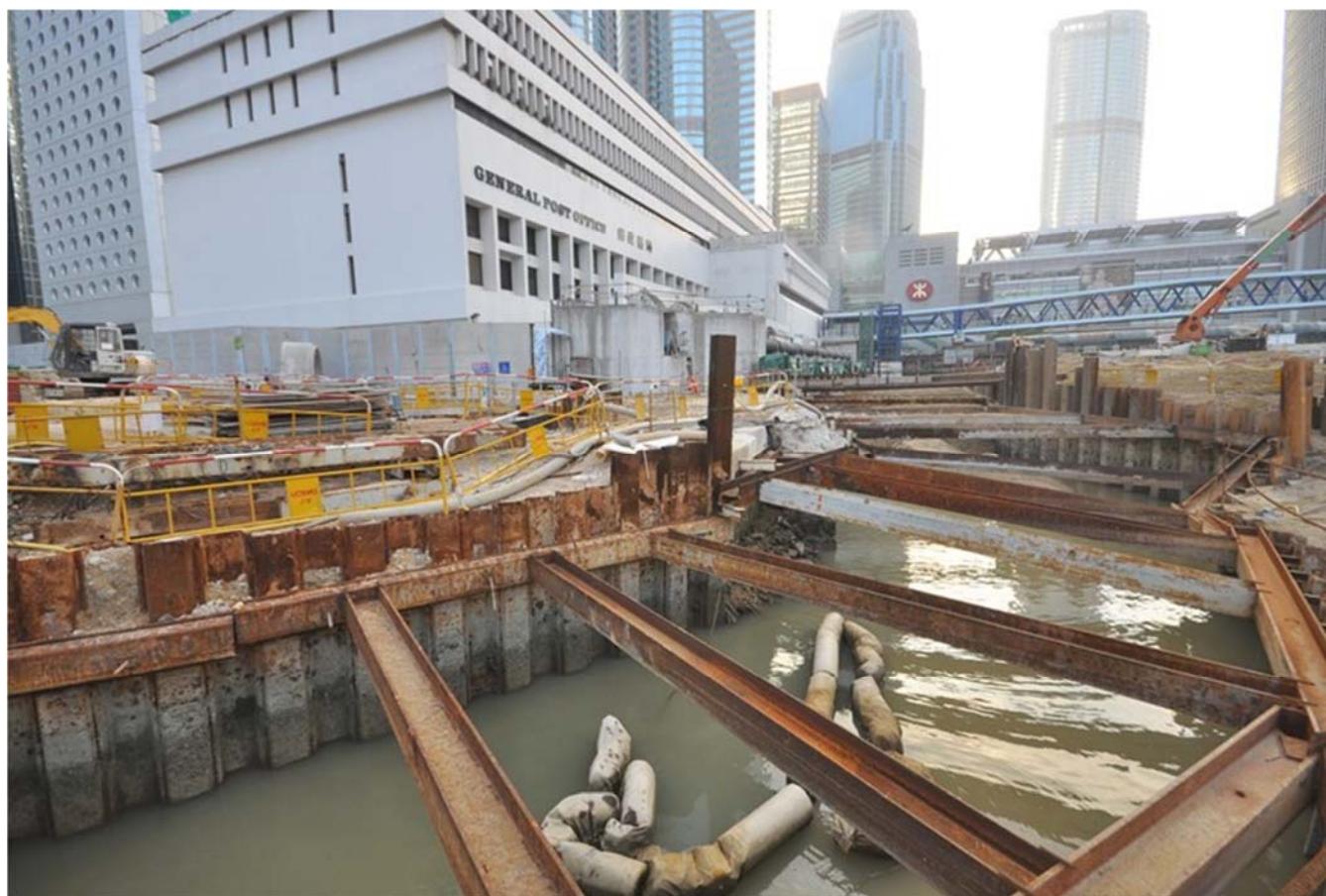


Diversion/Protection of the buried utilities





One of the most difficult work for reclamation work – diversion and extension of the storm water discharge culvert.



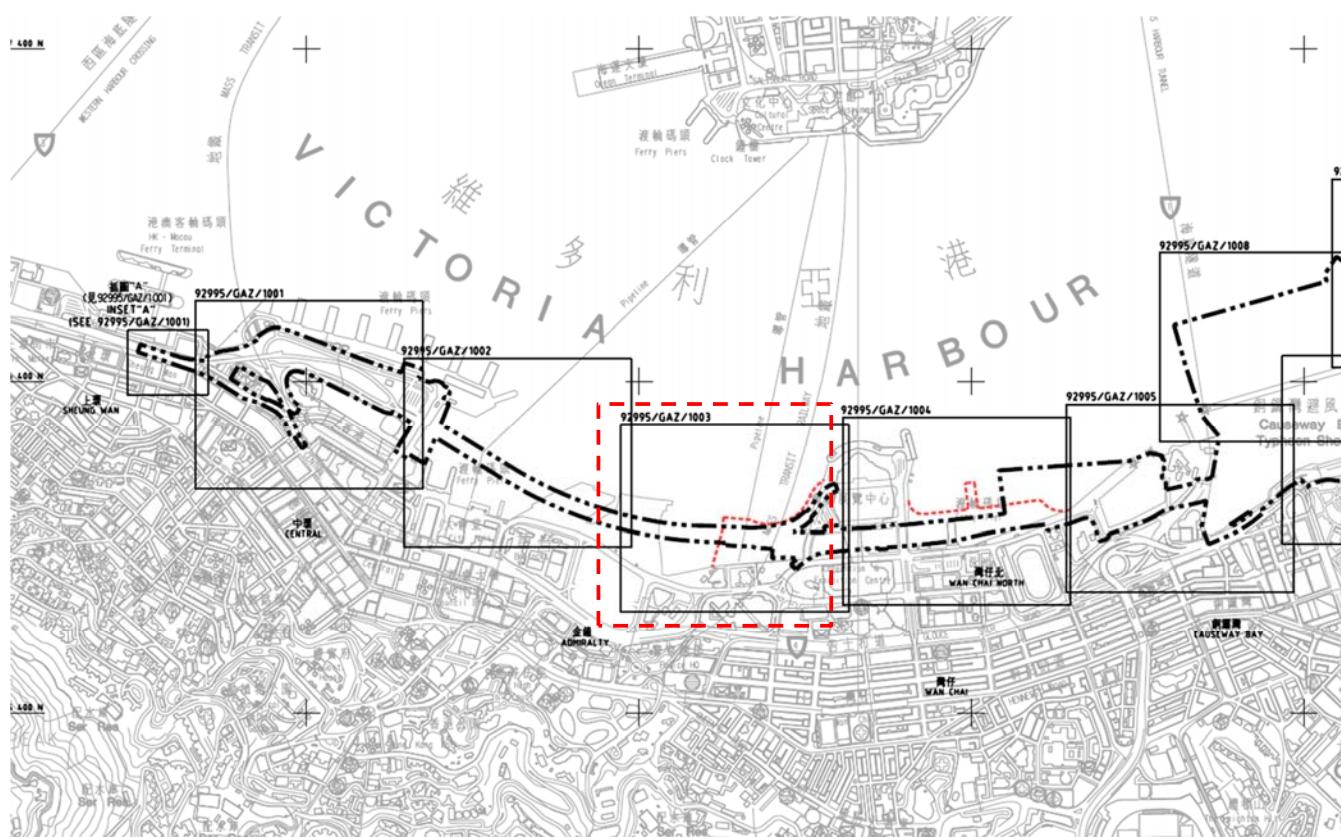


Precast chamber for
water cooling plant



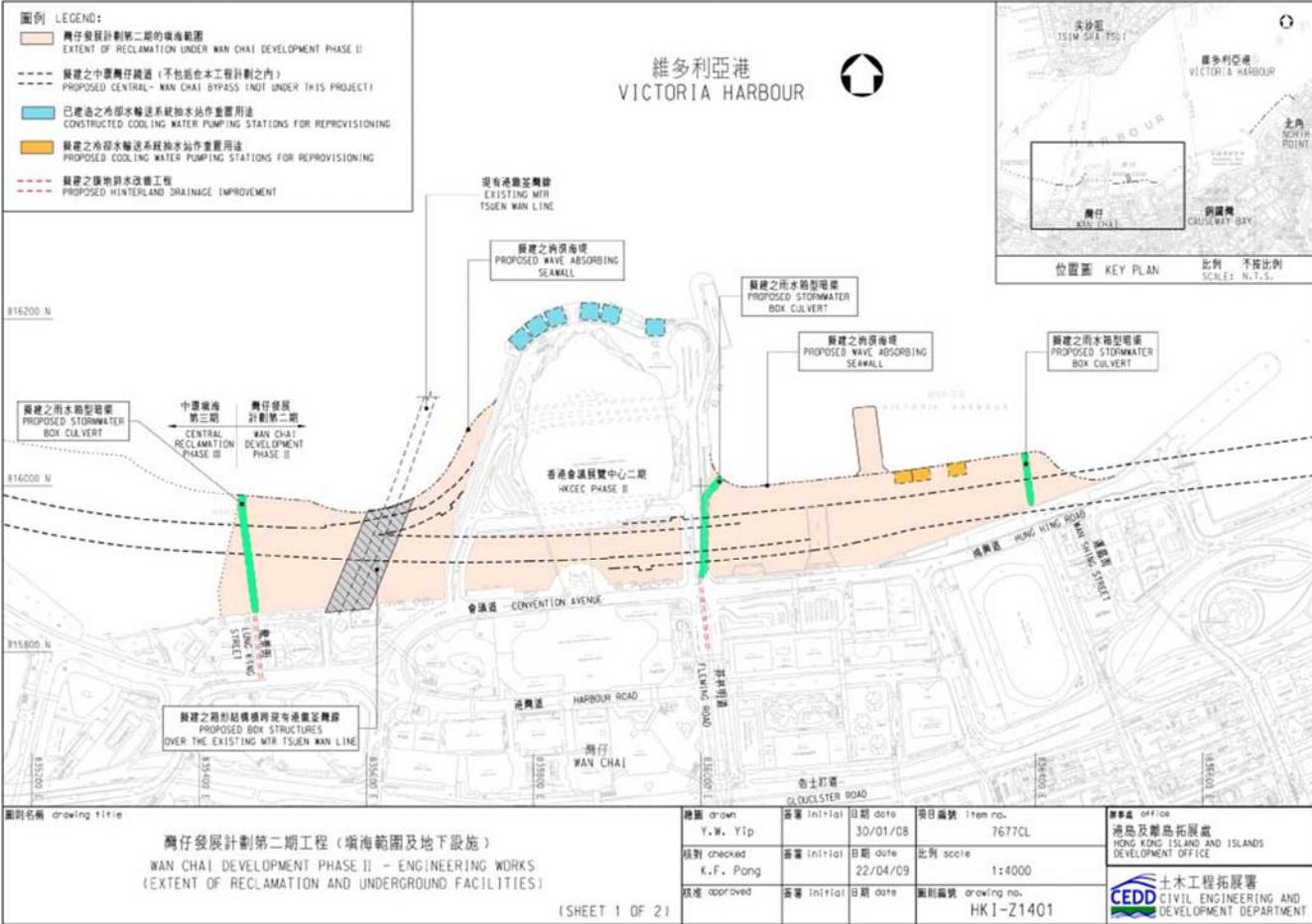
Construction of
the public piers

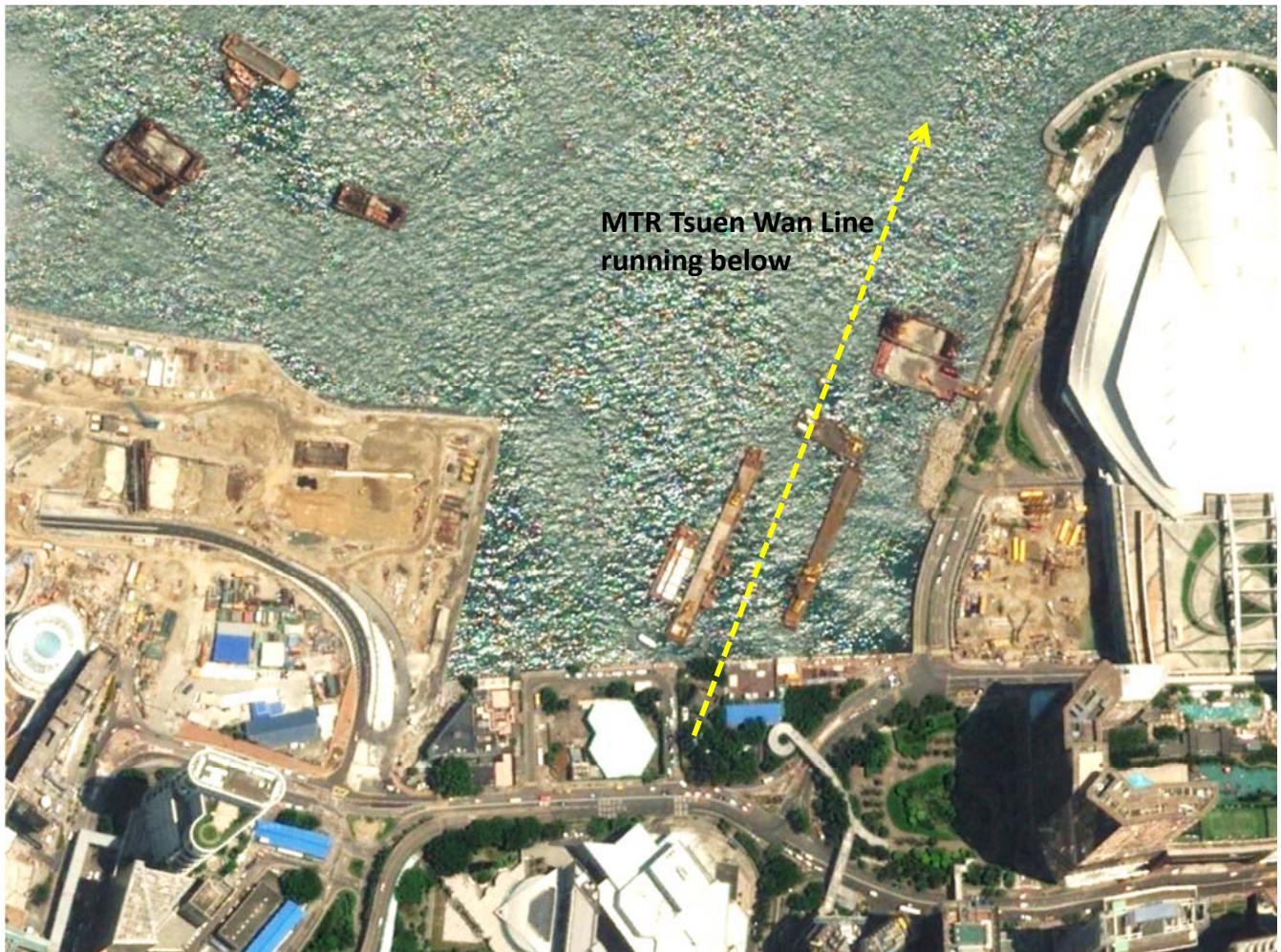
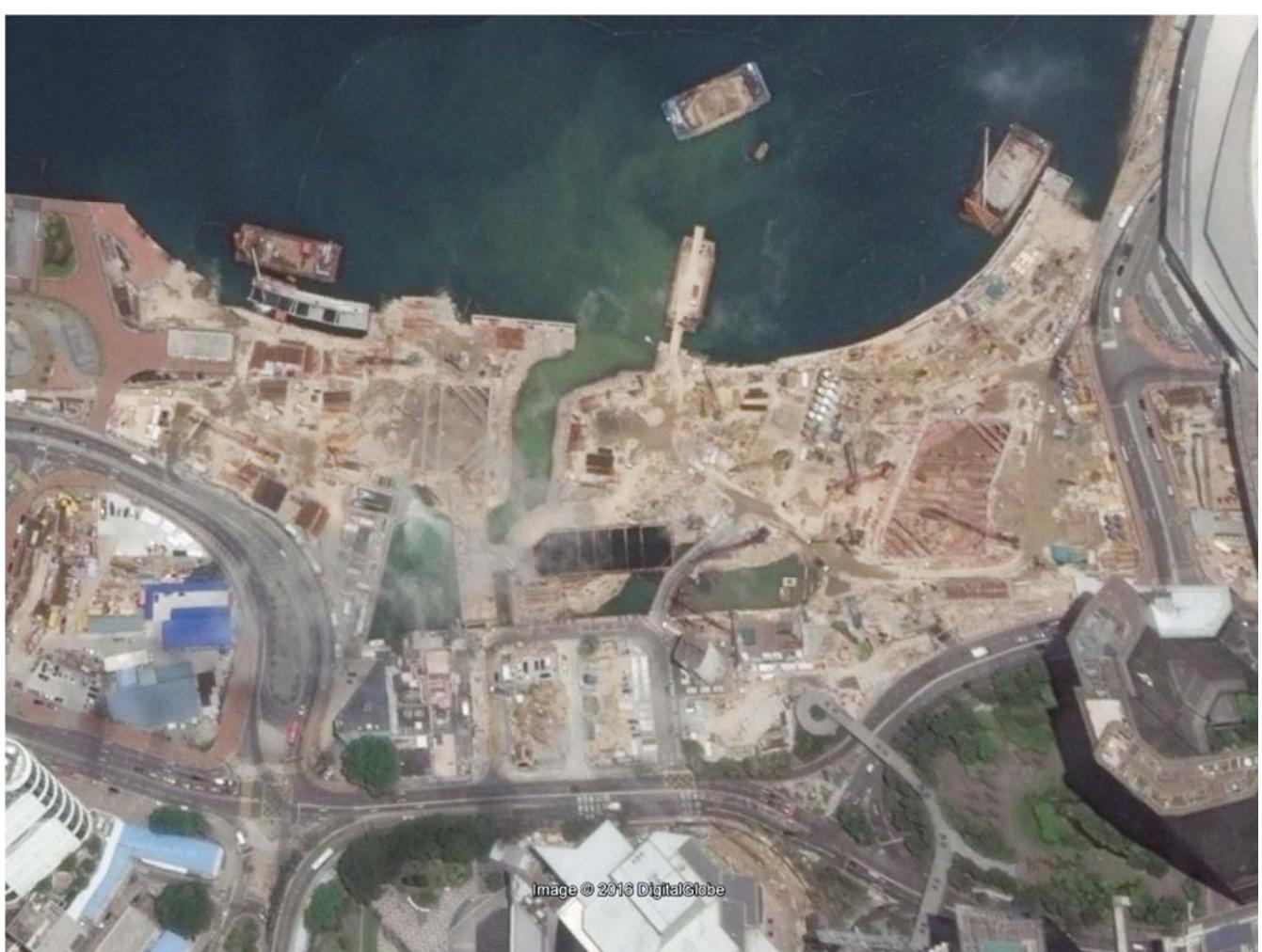
Section nearby the HK Convention & Exhibition Centre (part of Wanchai Redevelopment Phase 2)



圖例 LEGEND:	
	灣仔發展計劃第二期的填海範圍 EXTENT RECLAMATION UNDER WAN CHAI DEVELOPMENT PHASE II
	擬建之中環灣仔繞道 (不包括本工程計劃之內) PROPOSED CENTRAL - WAN CHAI BYPASS (NOT UNDER THIS PROJECT)
	已建造之冷卻水輸送系統抽水站作重置用途 CONSTRUCTED COOLING WATER PUMPING STATIONS FOR REPROVISIONING
	擬建之冷卻水輸送系統抽水站作重要用途 PROPOSED COOLING WATER PUMPING STATIONS FOR REPROVISIONING
	擬建之濱地排水改善工程 PROPOSED HINTERLAND DRAINAGE IMPROVEMENT

維多利亞港 VICTORIA HARBOUR





MTR Tsuen Wan Line
running below

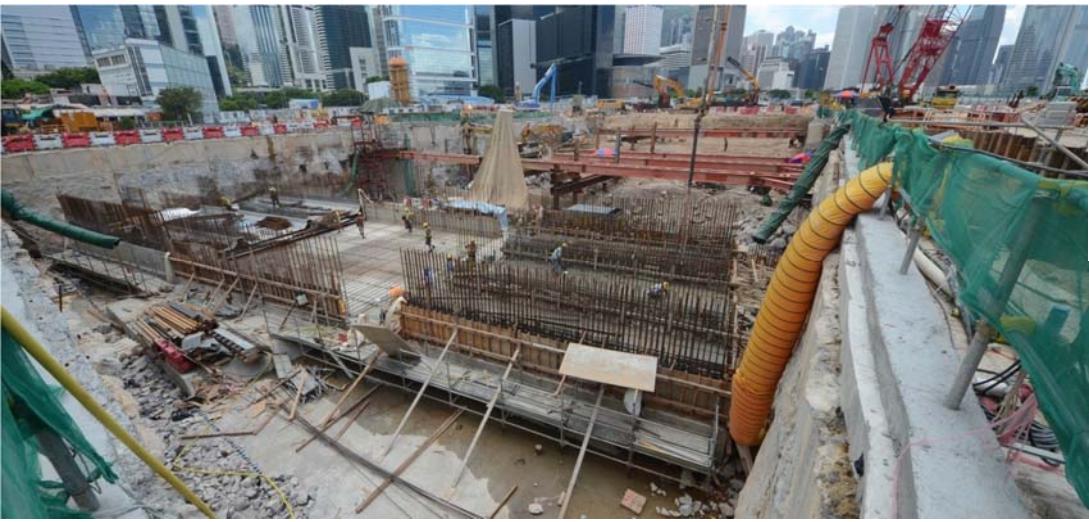


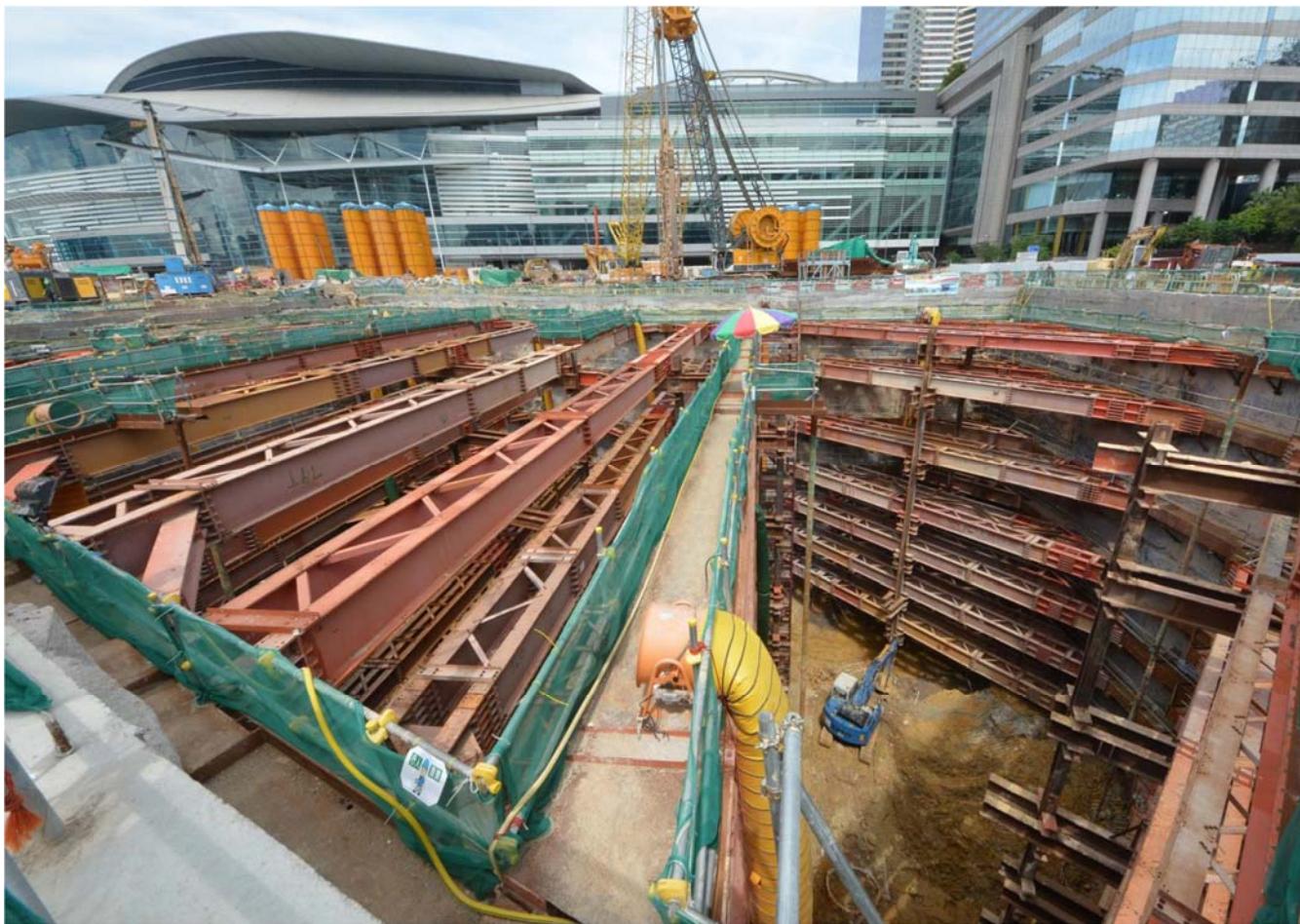


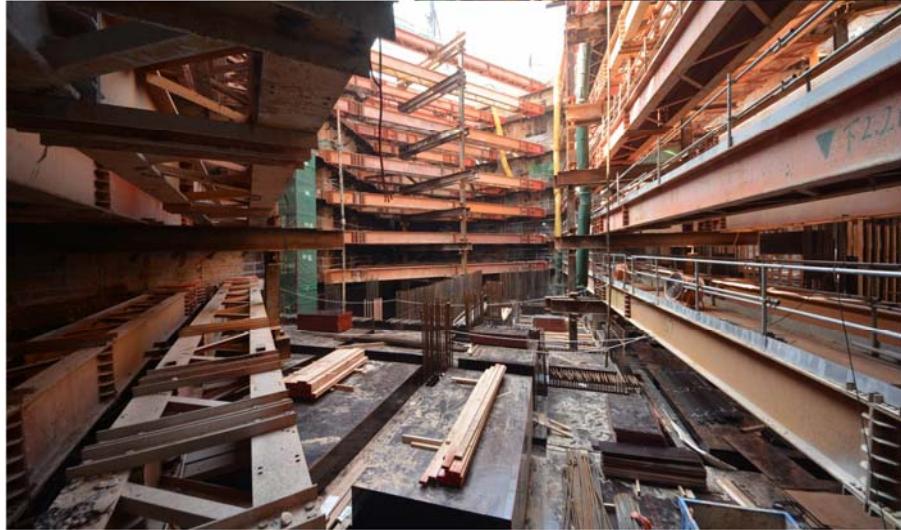
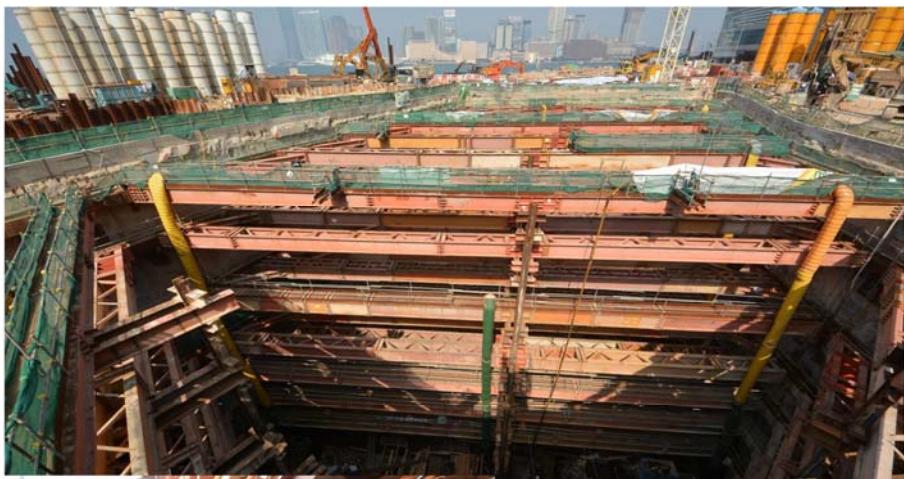
Forming caisson wall to protect
the MTR Tsuen Wan Line

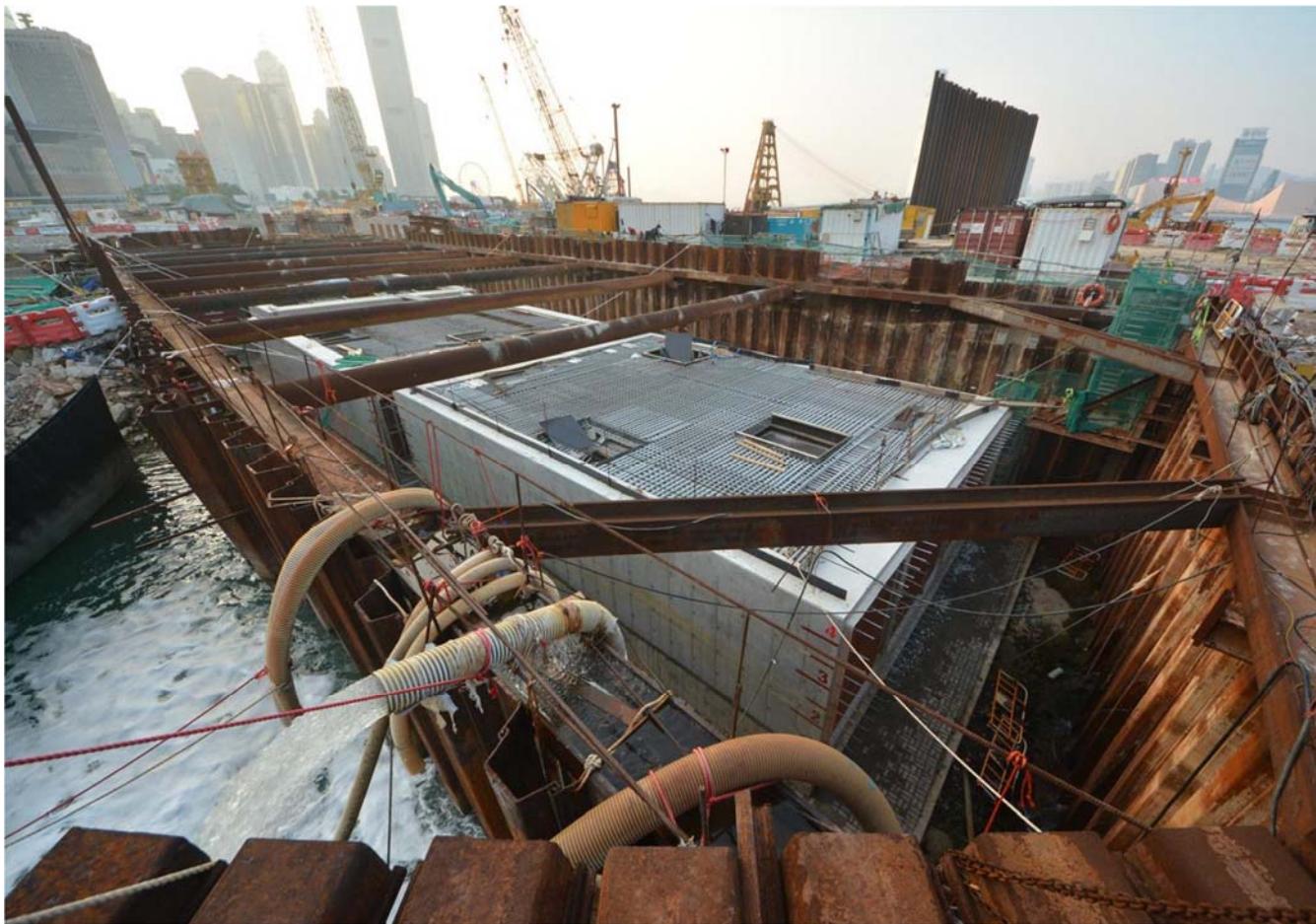


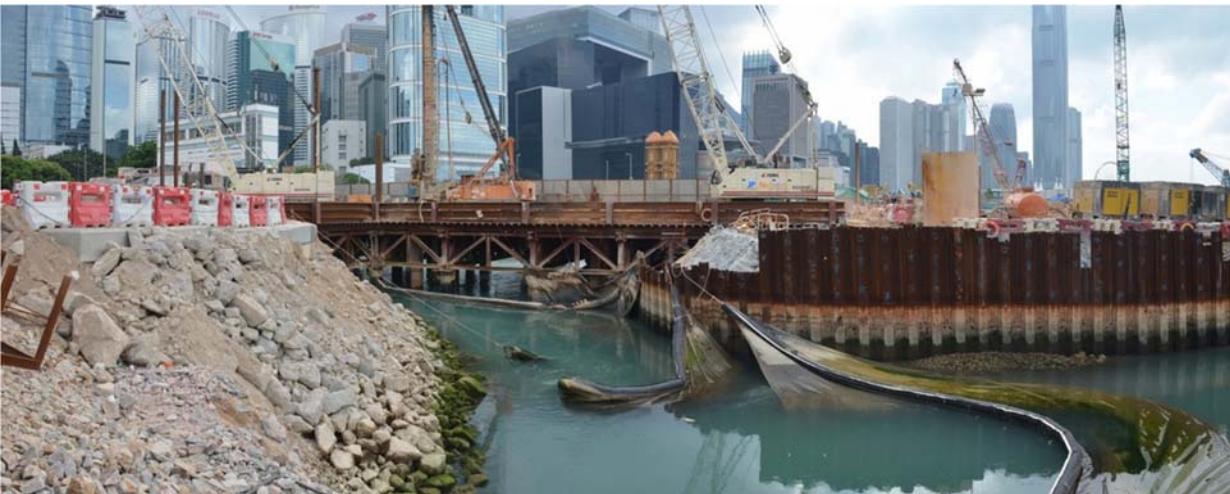


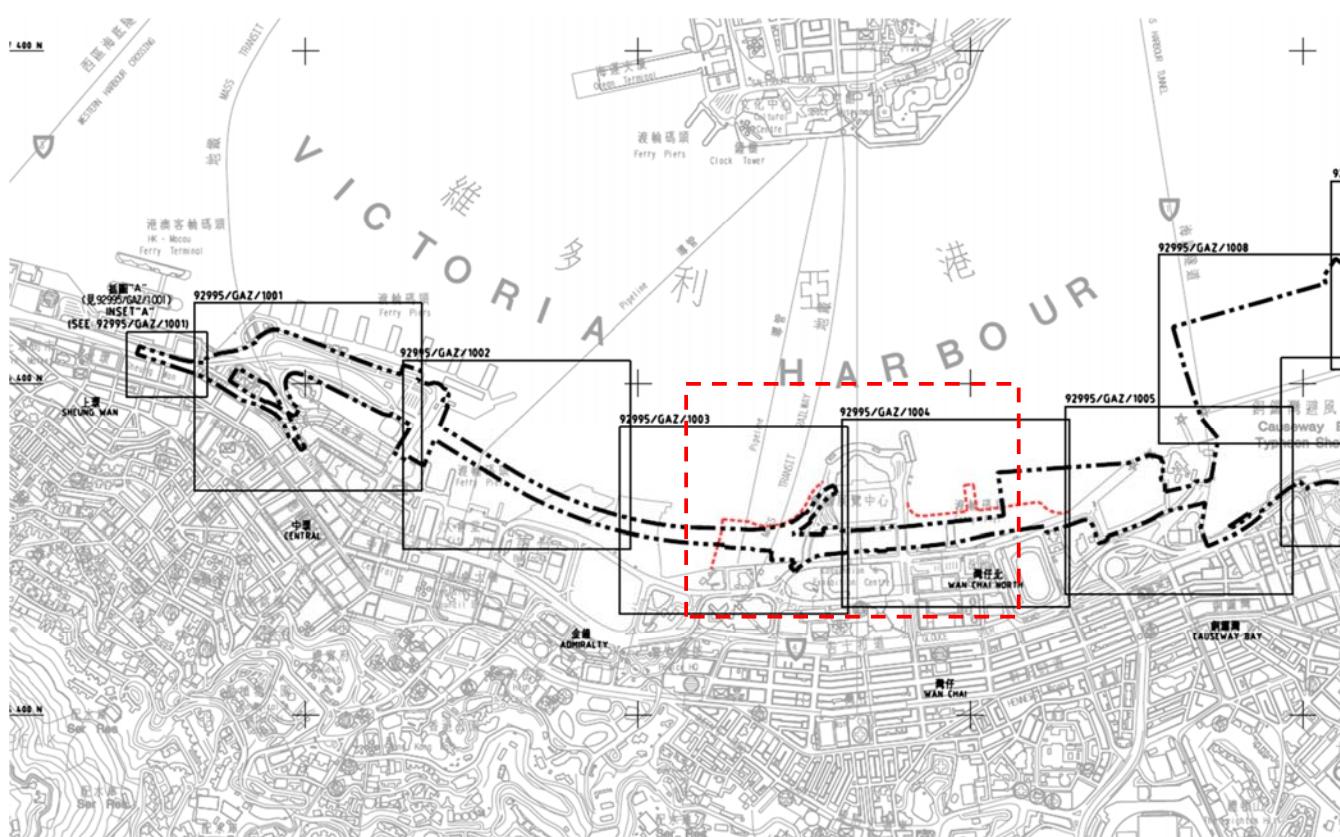


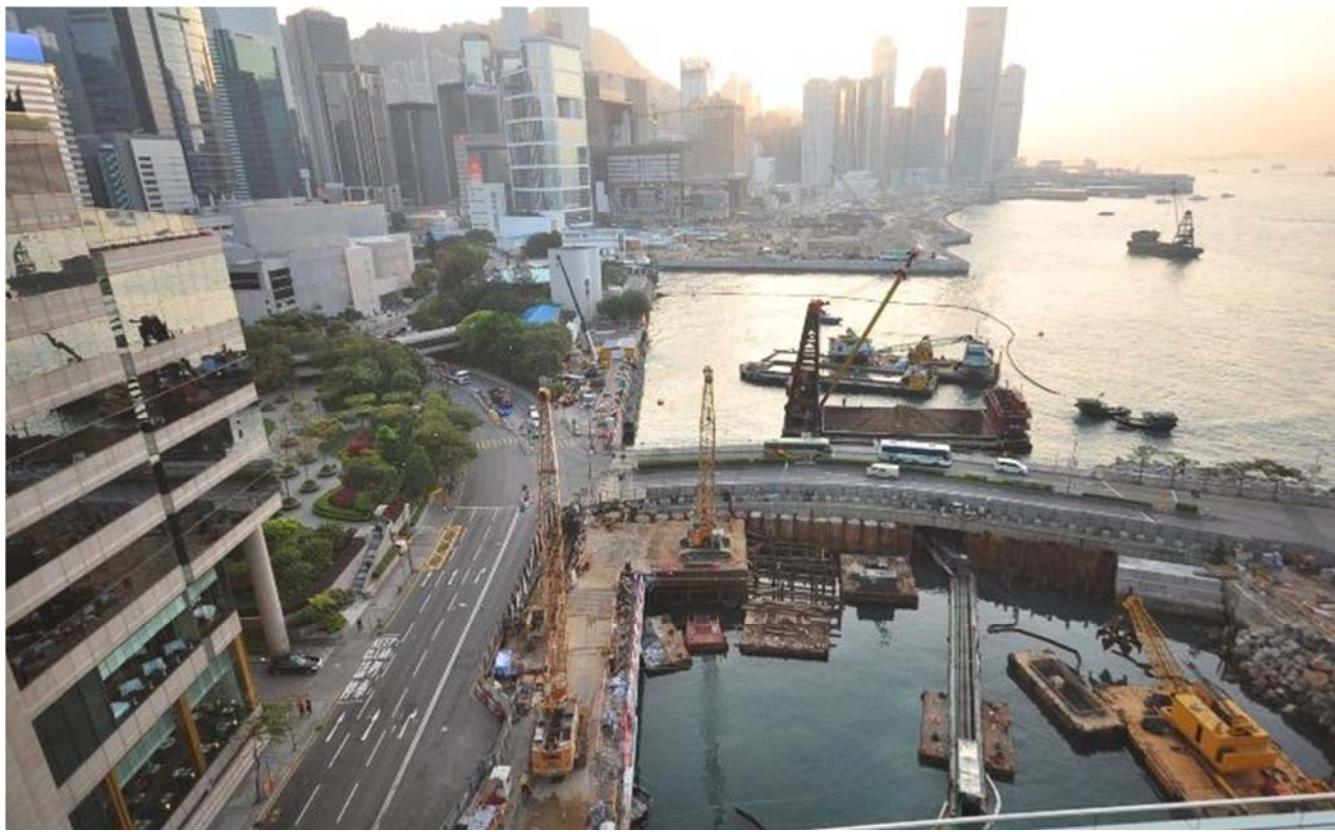








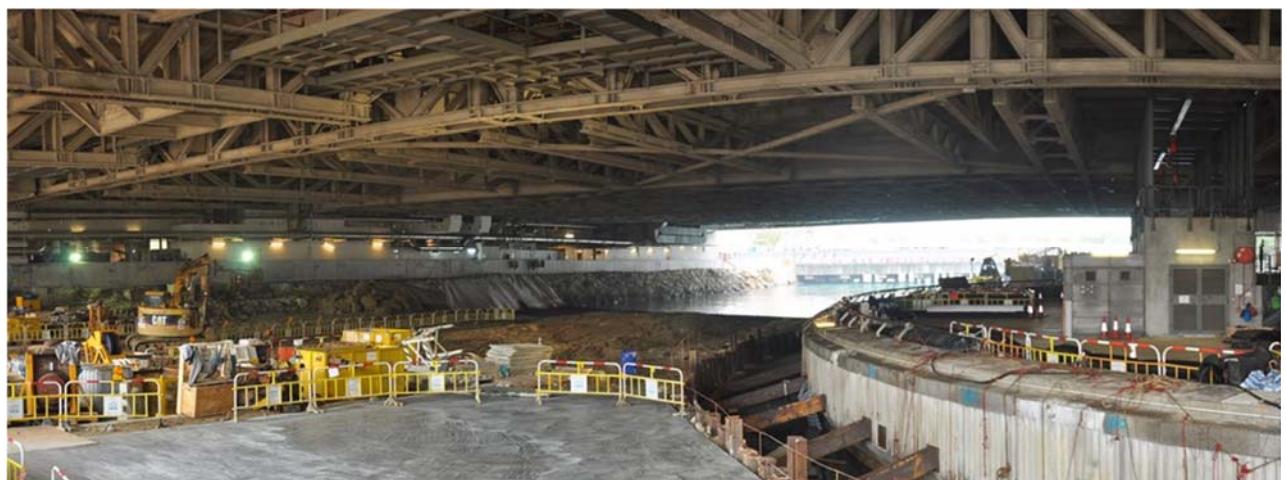
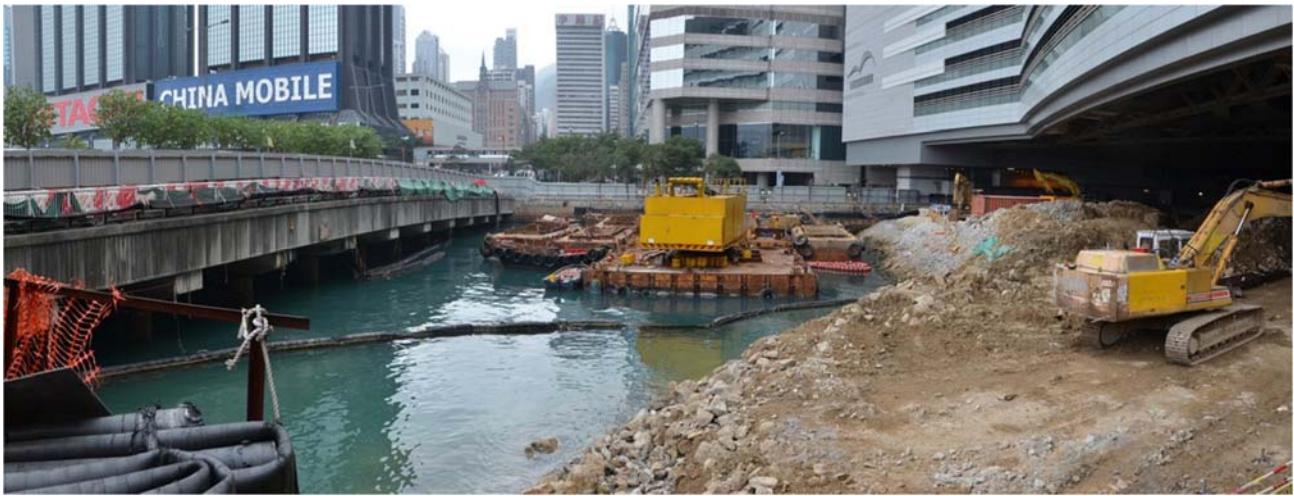




2010

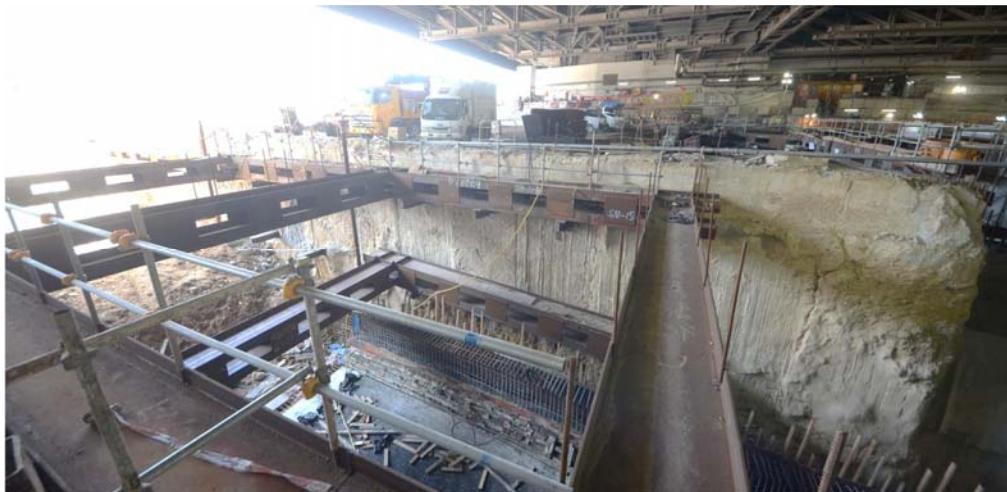
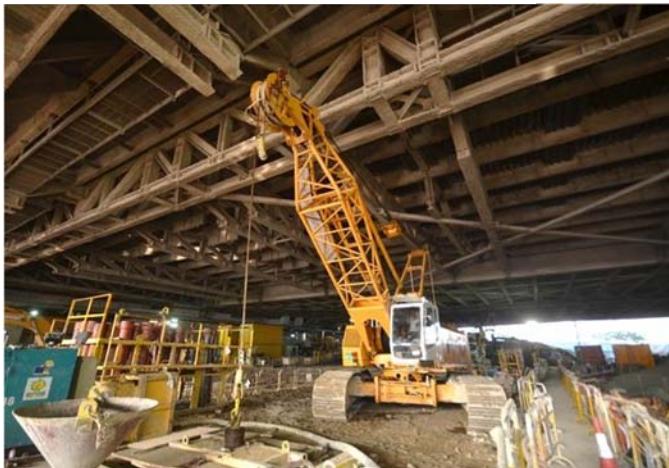








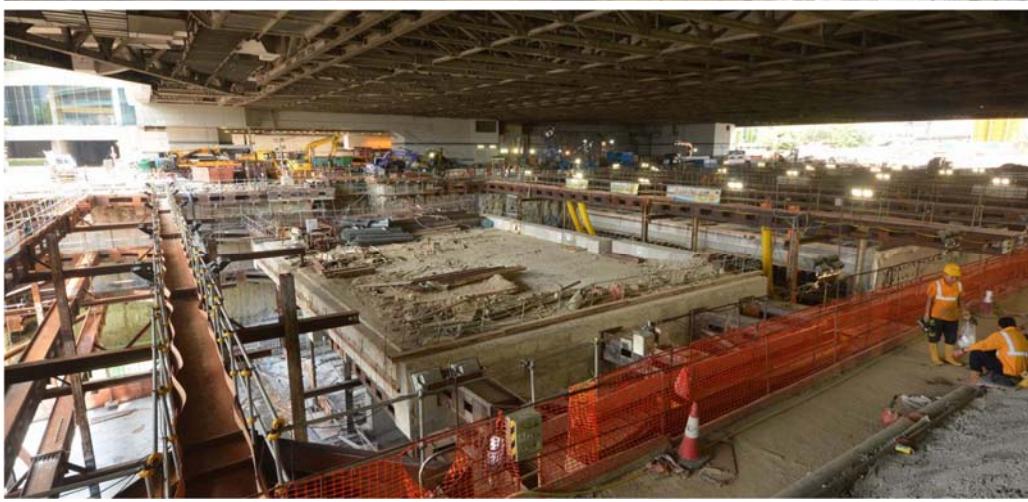
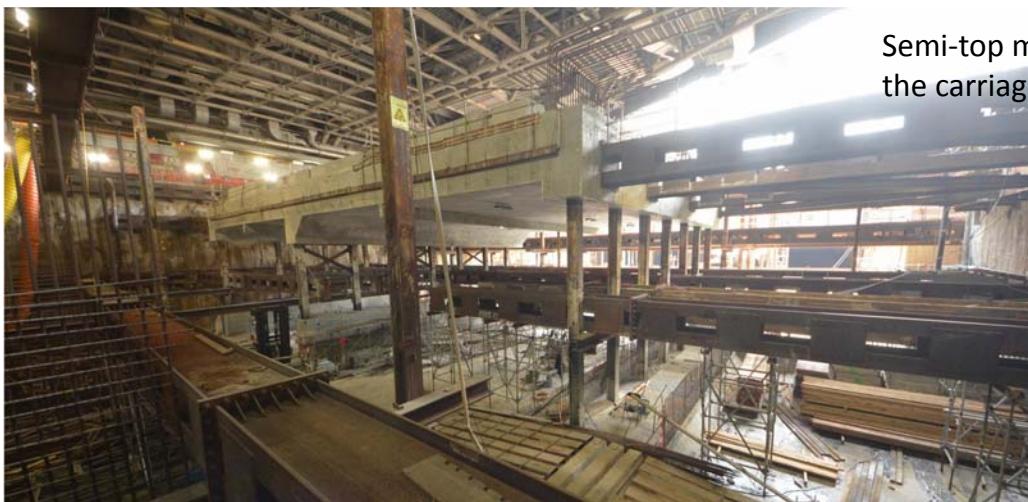
Machine with shorter working height was used to construct the diaphragm wall

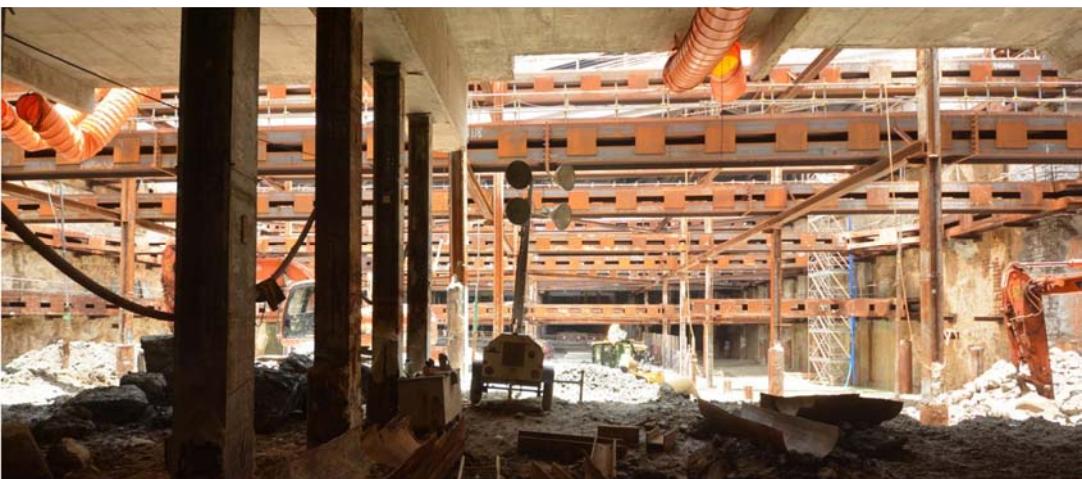


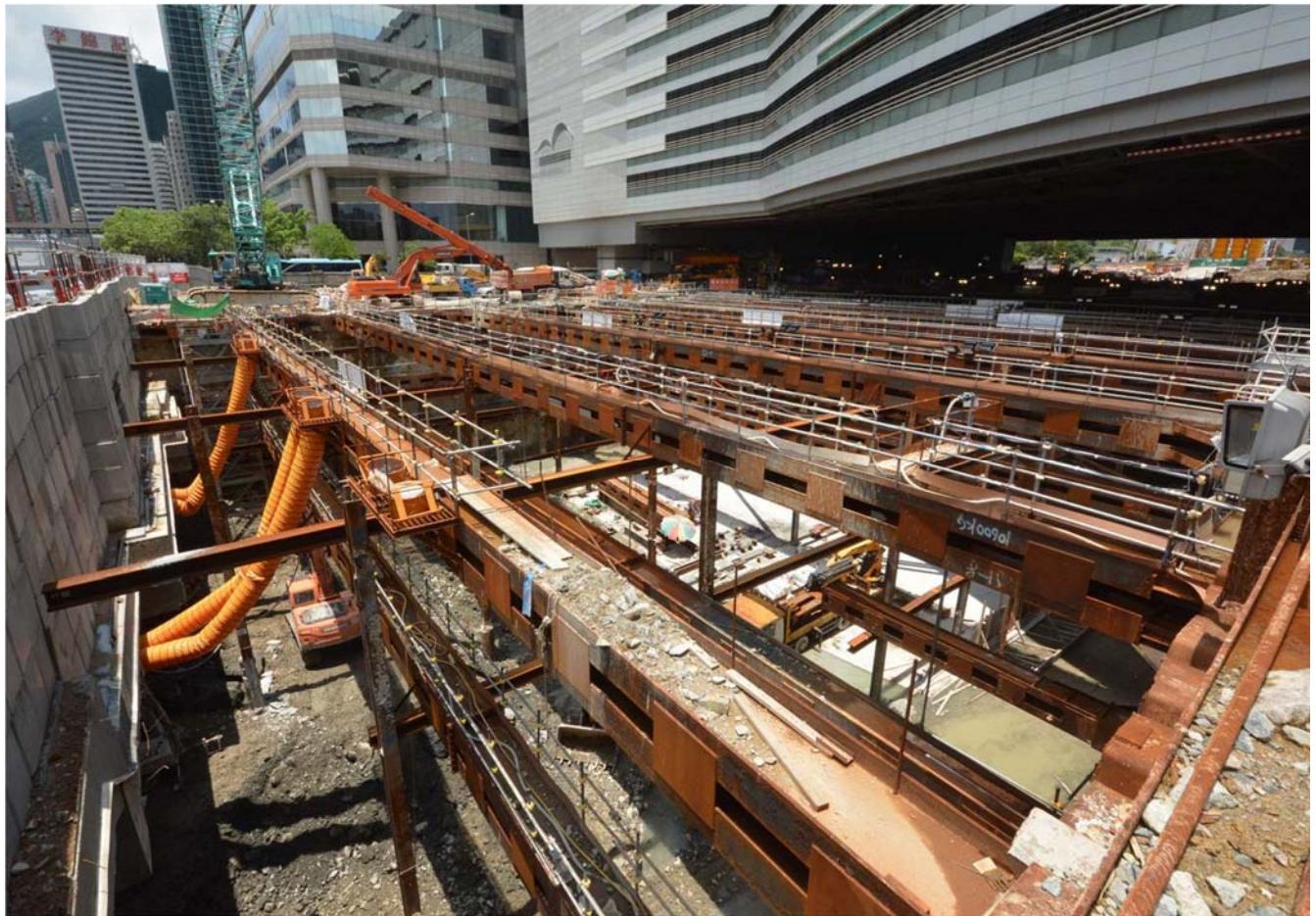
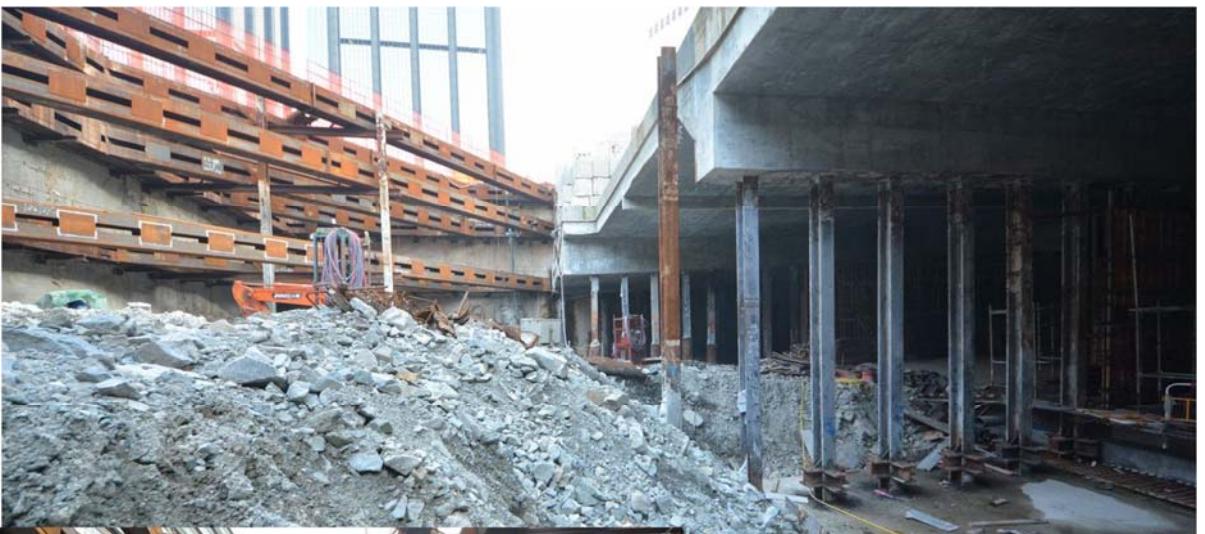
Semi-top method to construct the carriageway tube

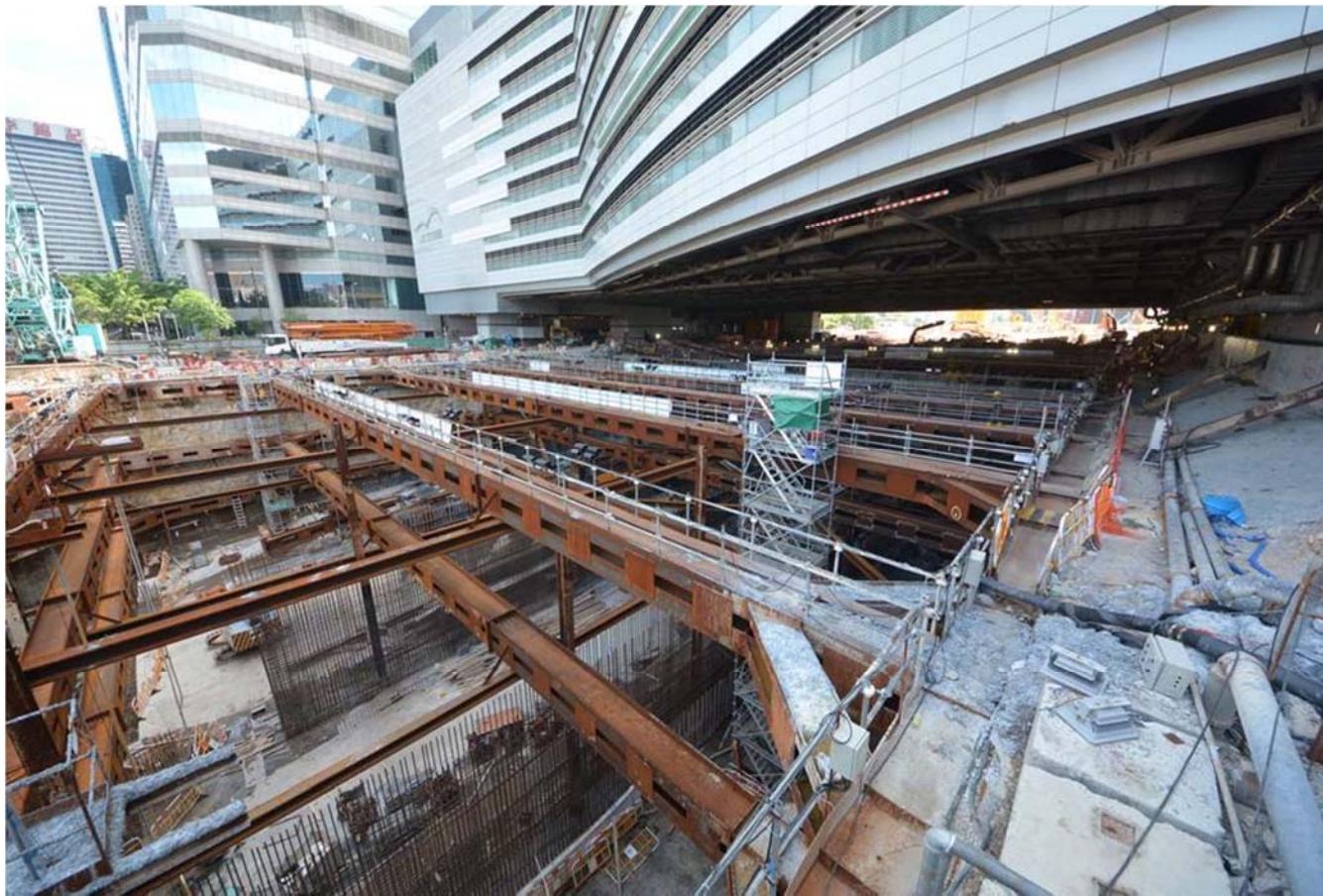


Semi-top method to construct
the carriageway tube

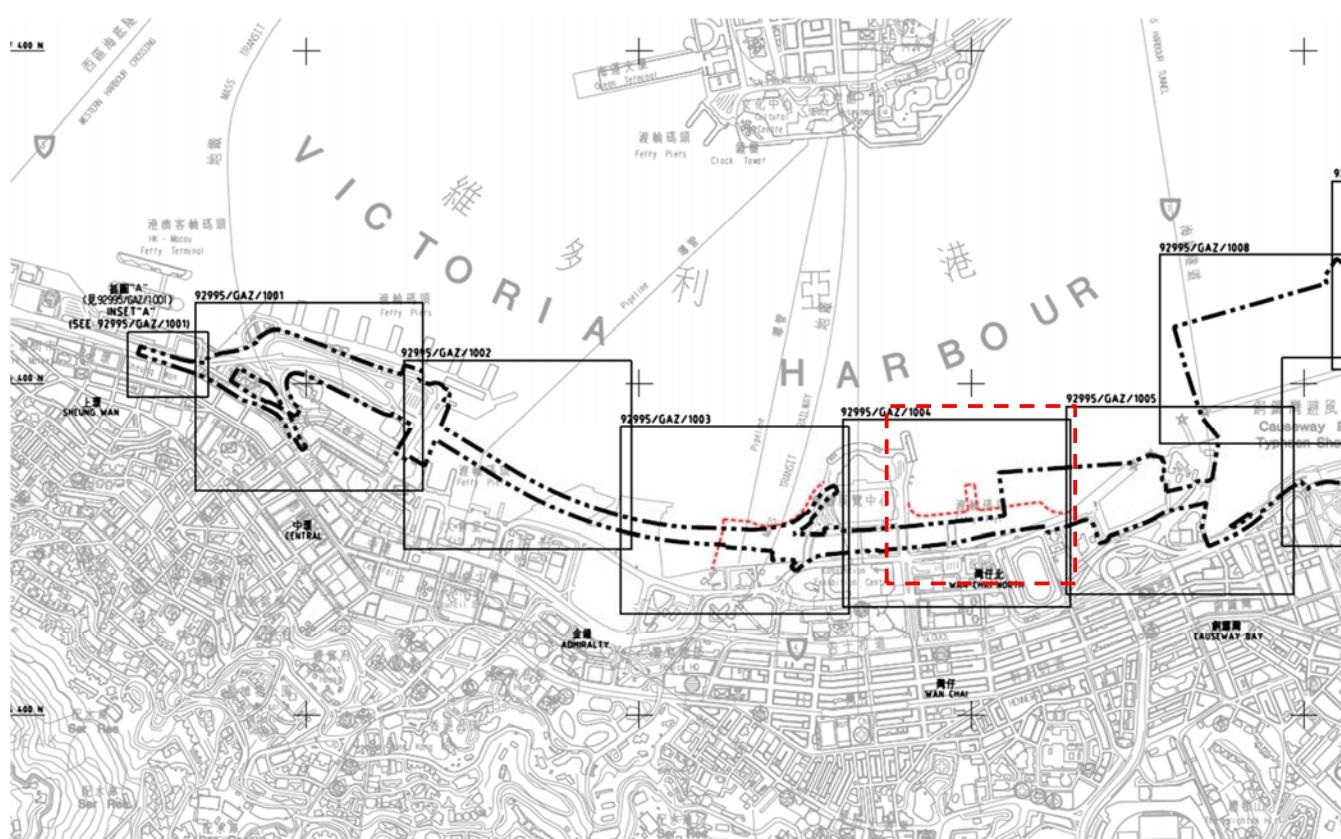




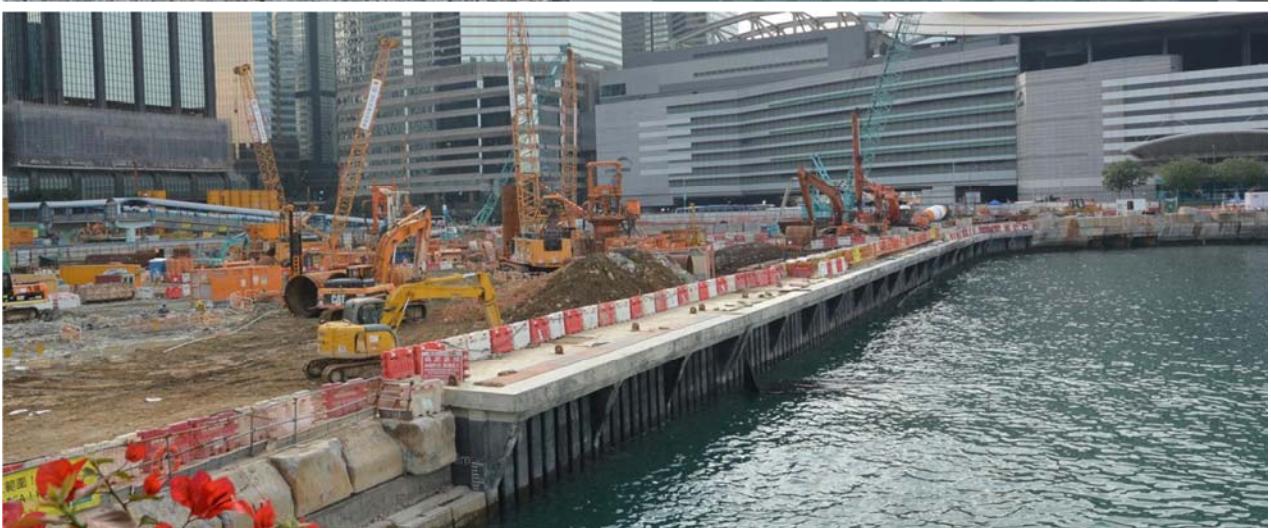


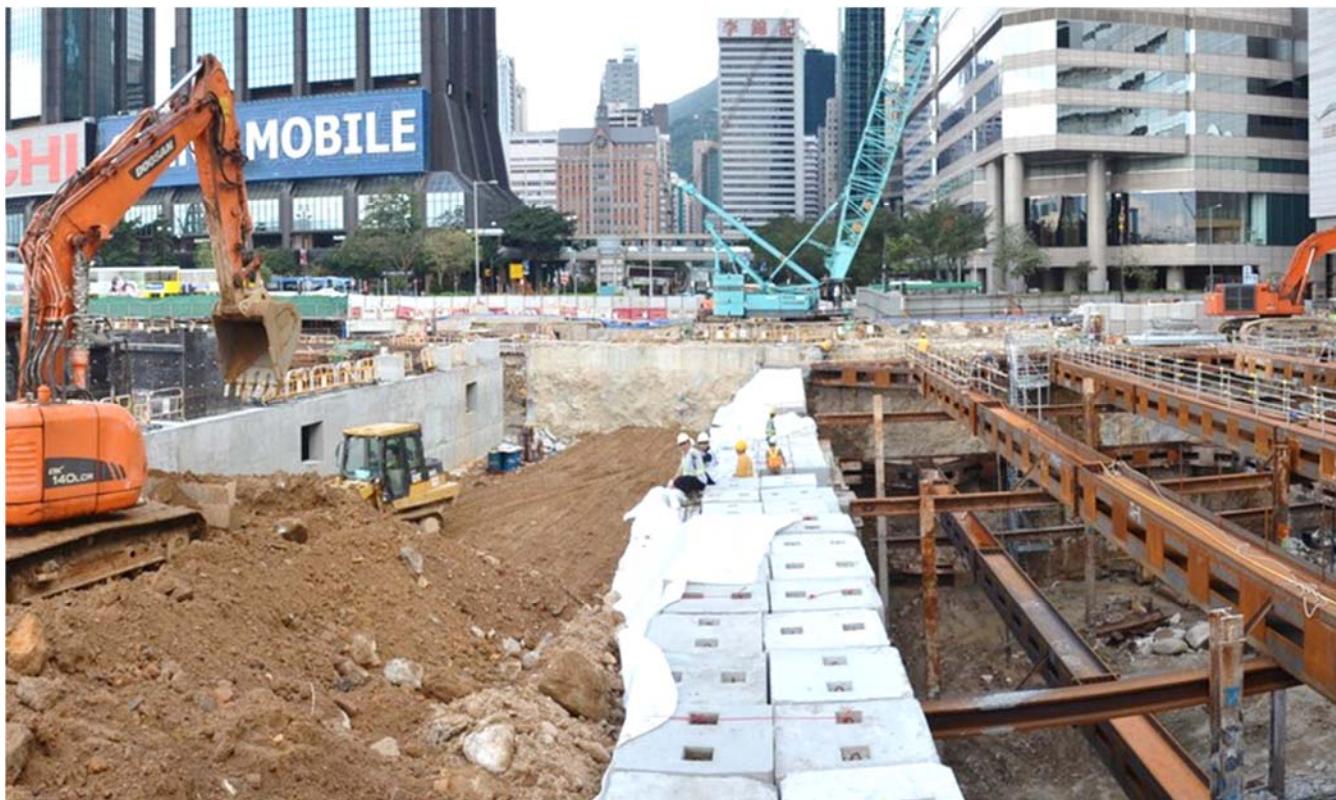


Section between Convention Centre and Wanchai Public Pier





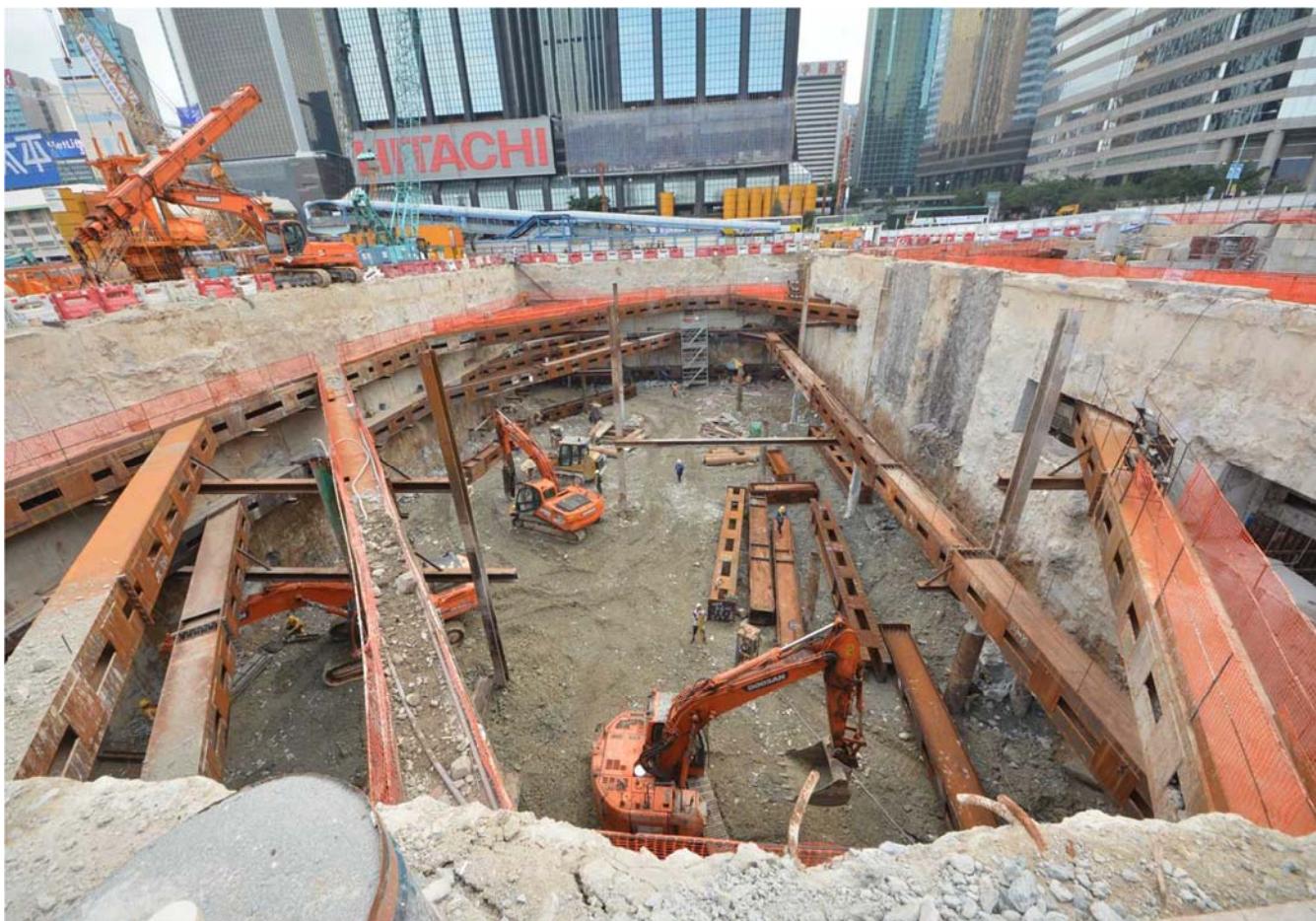


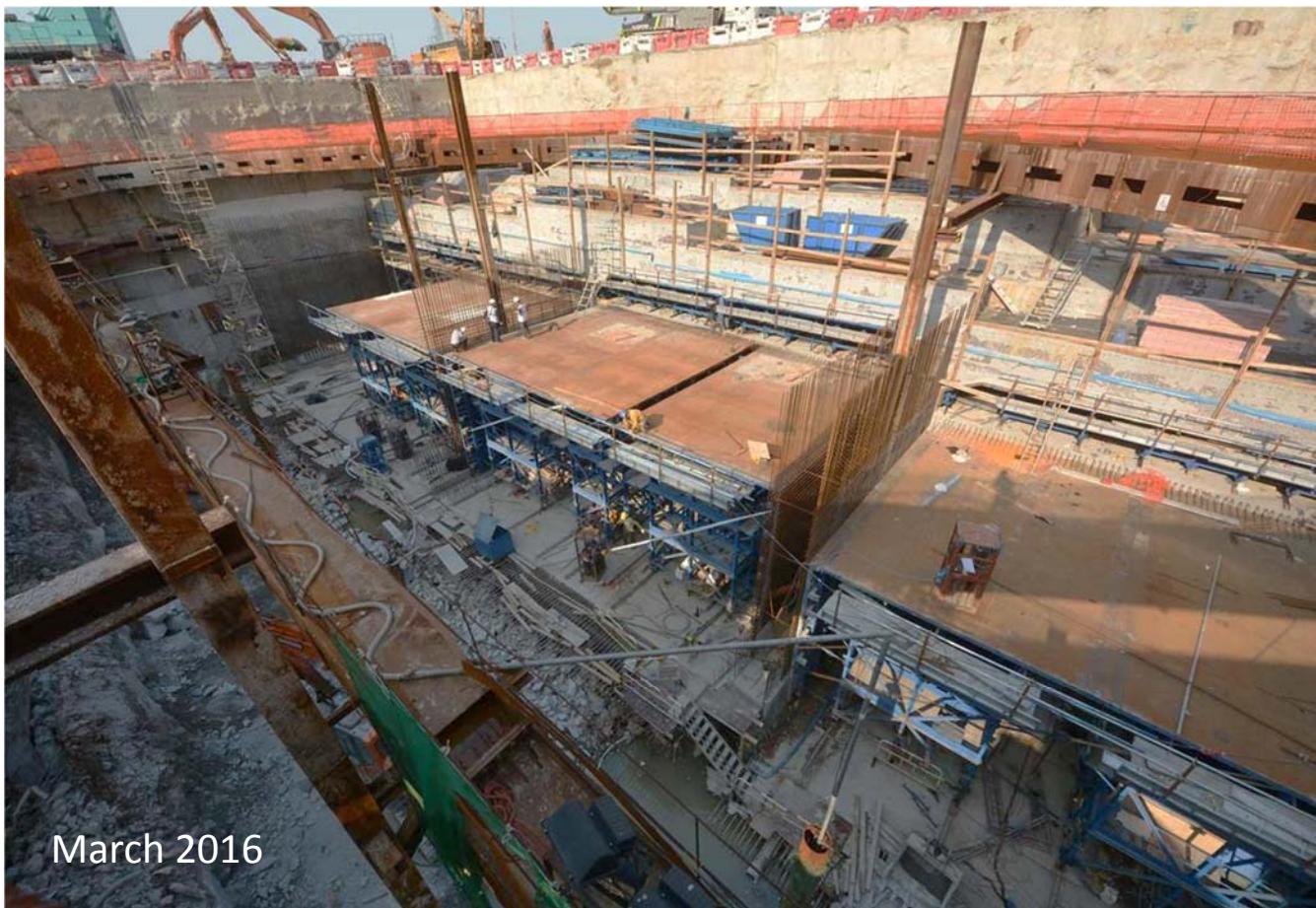


December 2015

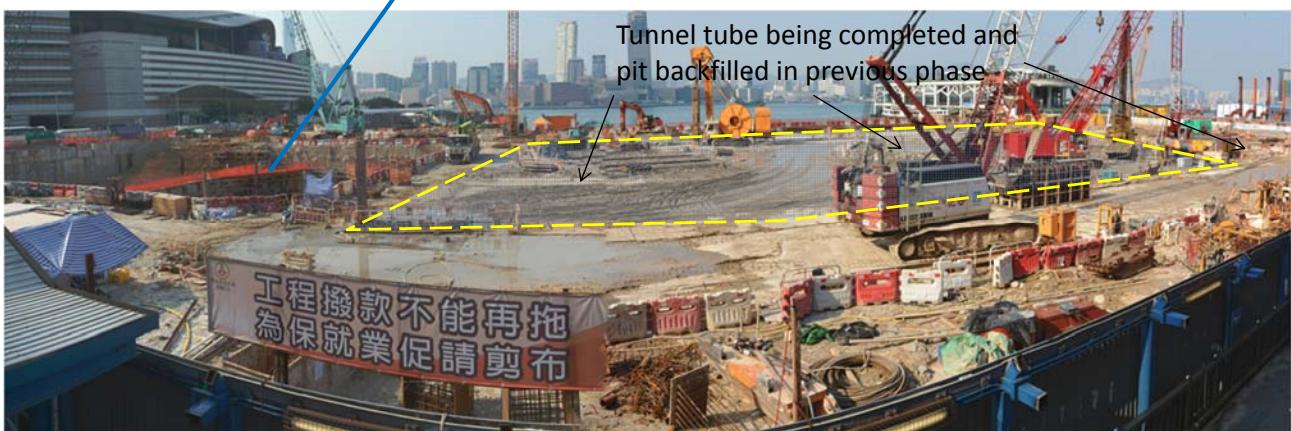


Forming the excavation pit outside the previous Wanchai Bus Terminus



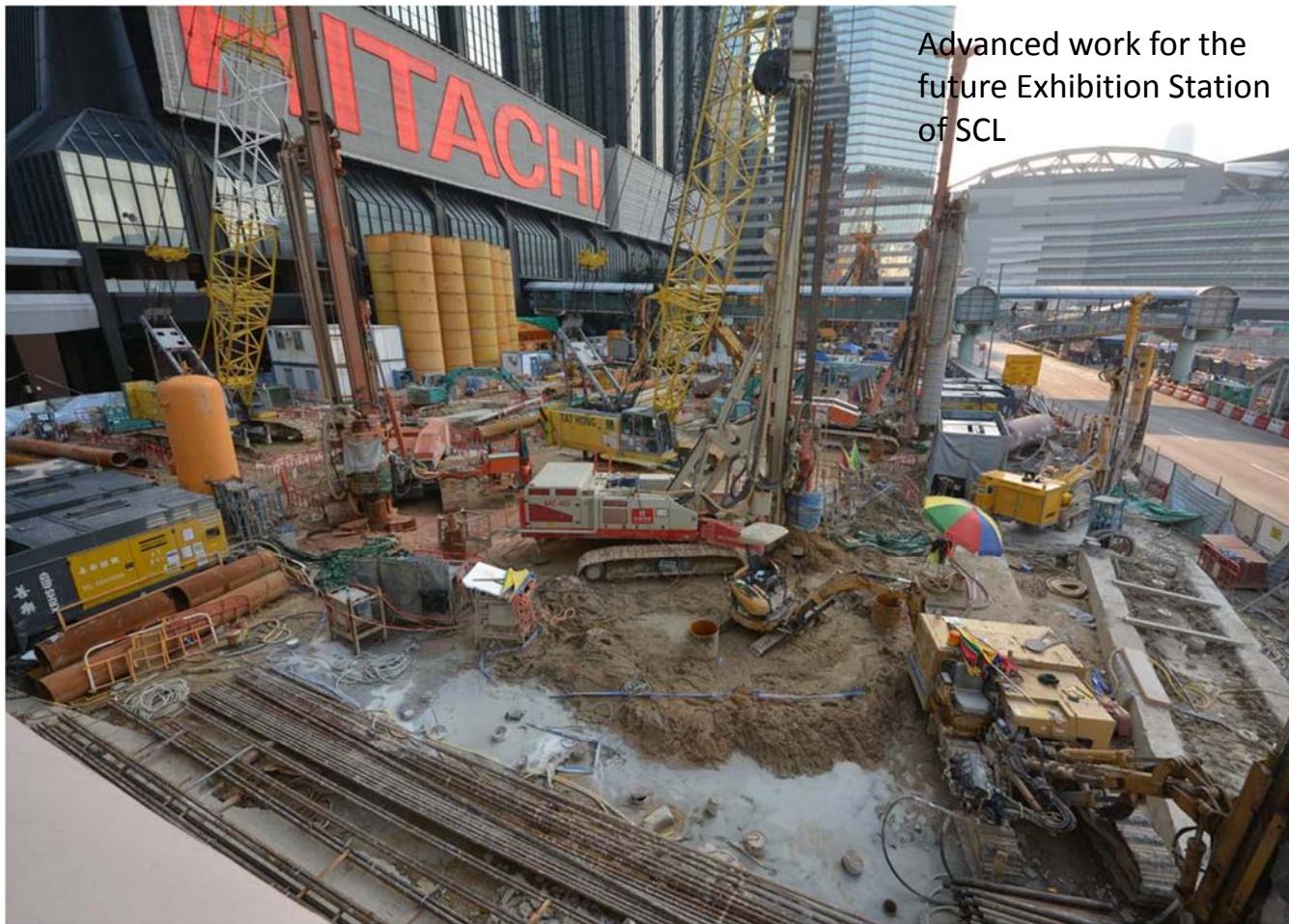
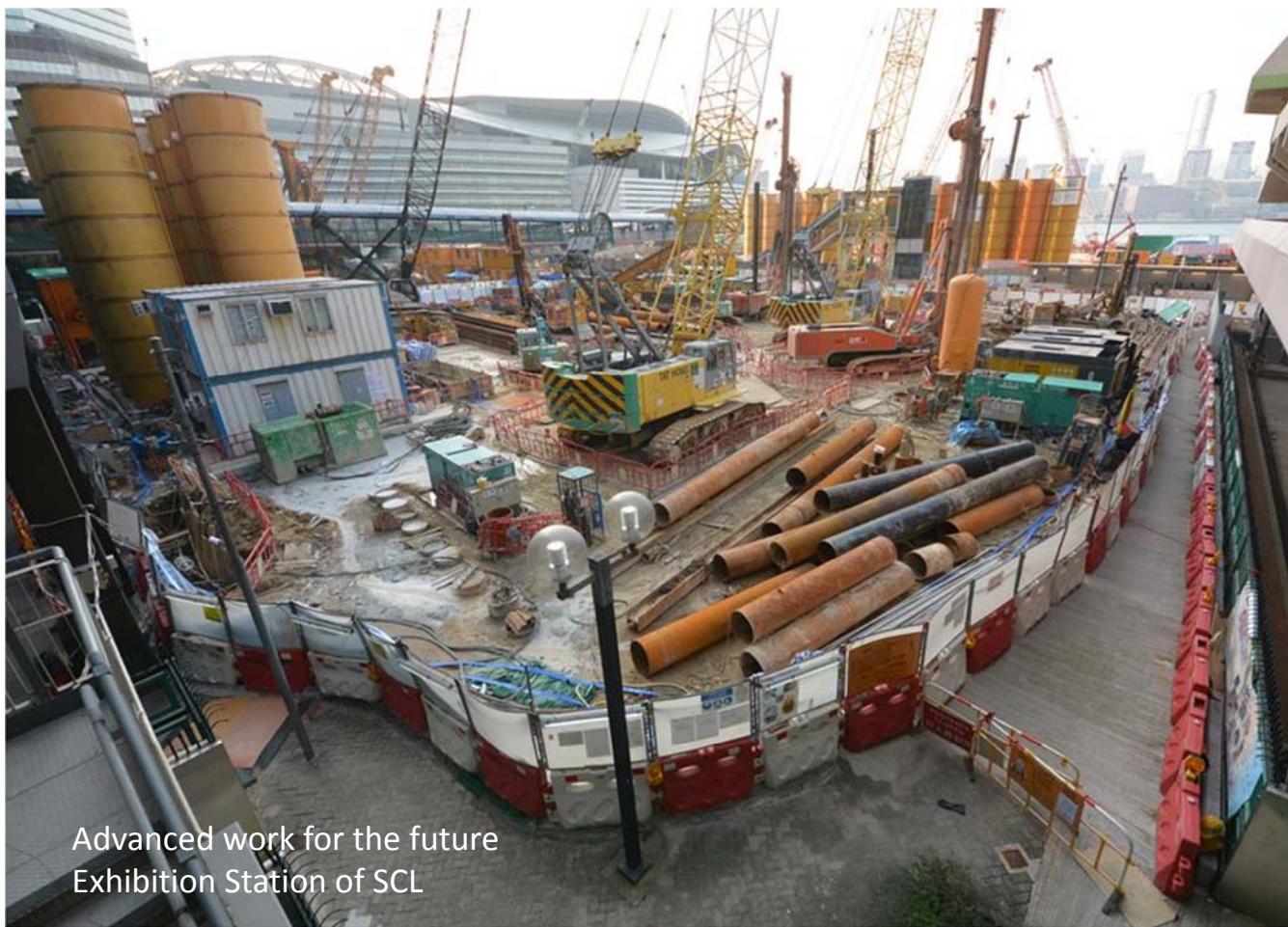


Constructing the tunnel tube inside the excavation pit

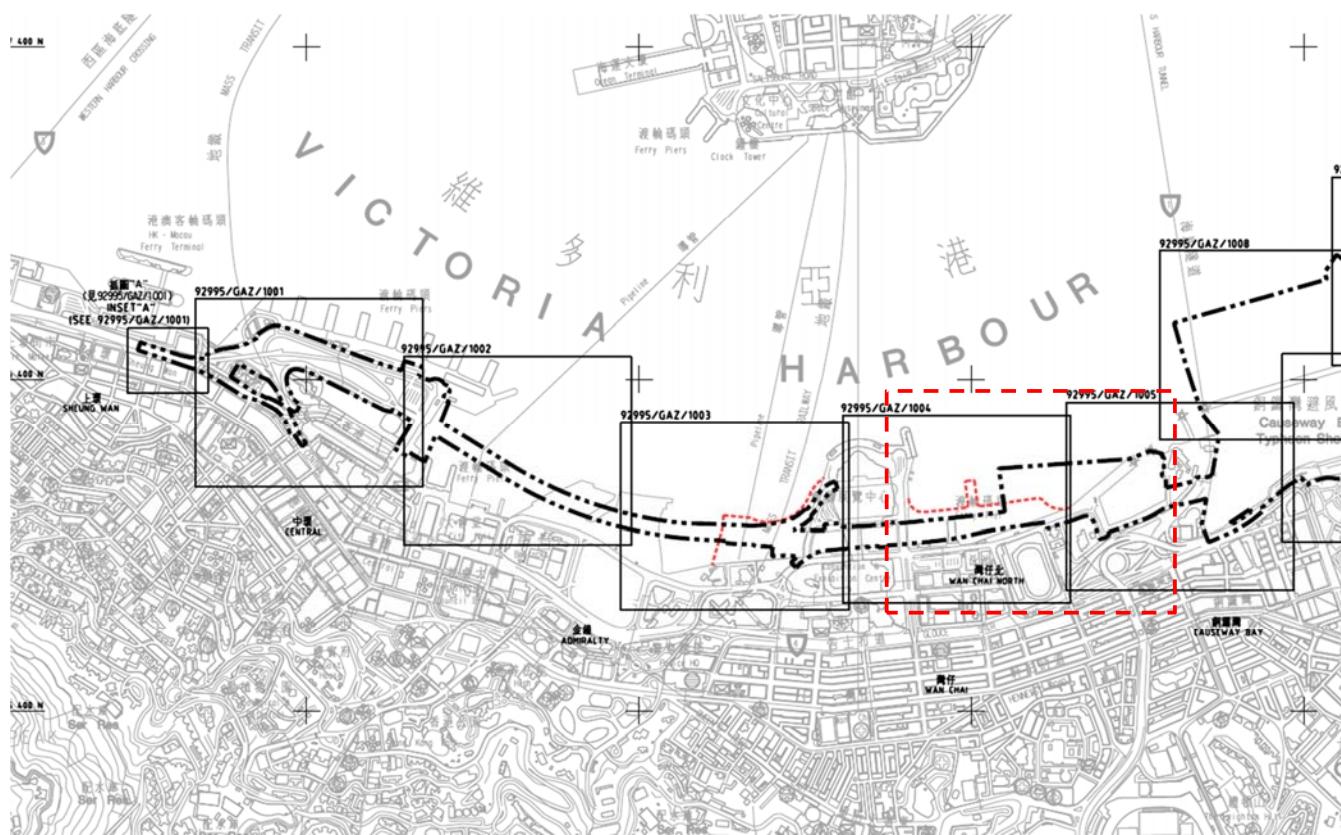


Tunnel tube being completed and pit backfilled in previous phase

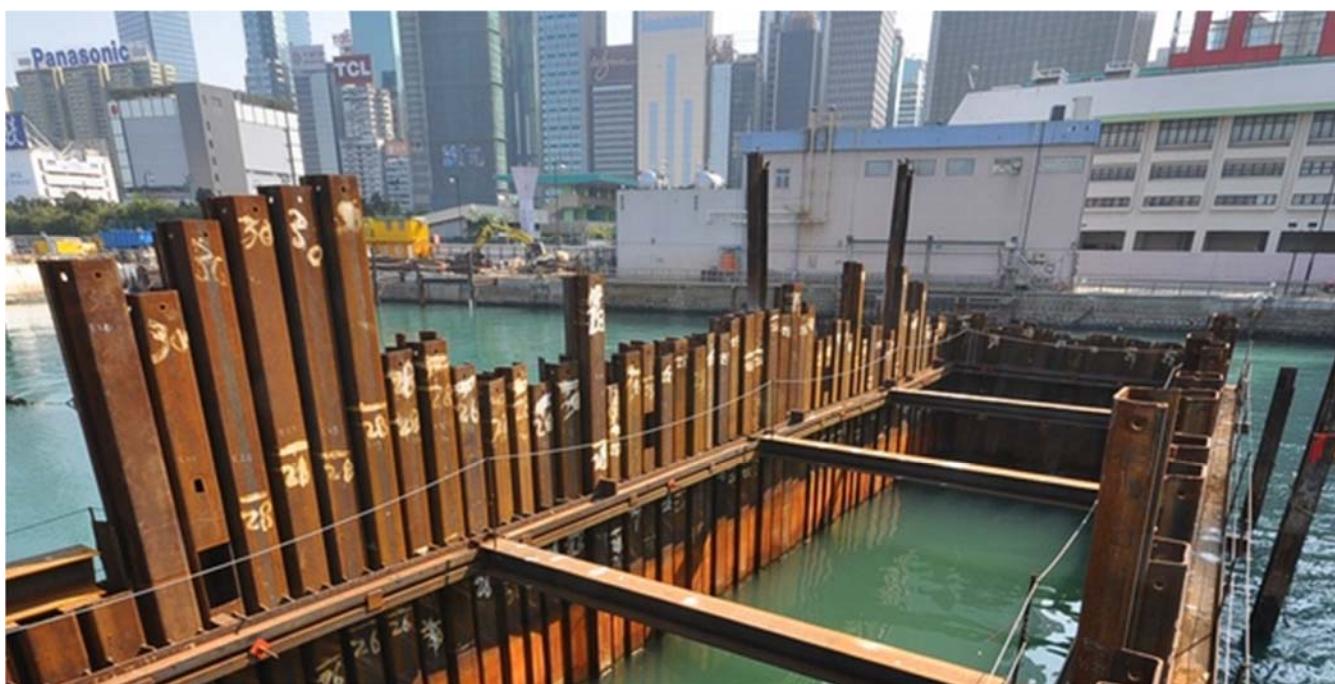
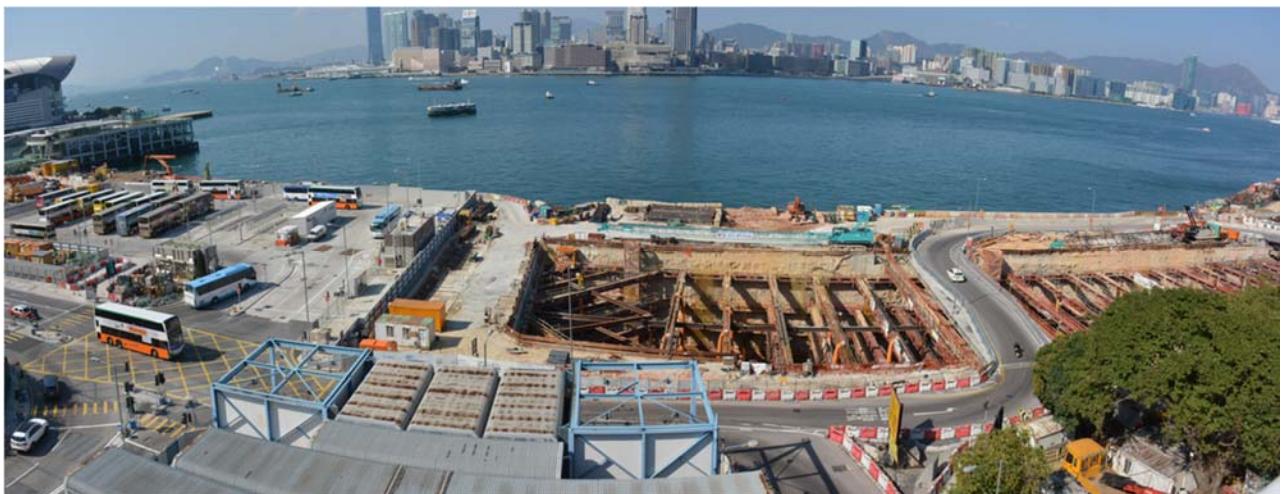
工程撥款不能再拖
為保就業促請剪布

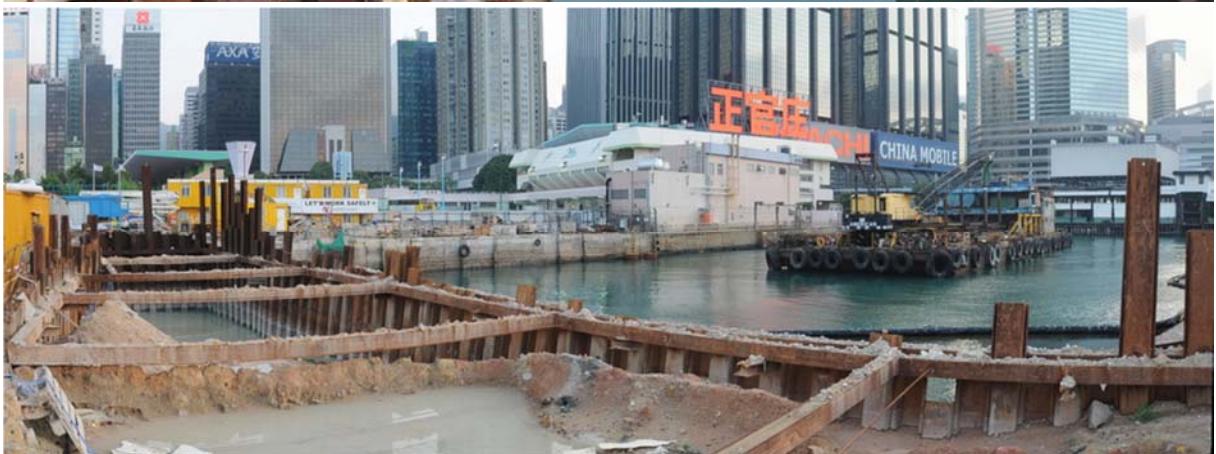


Section between Wanchai Public Pier up to Causeway Bay Typhoon Shelter

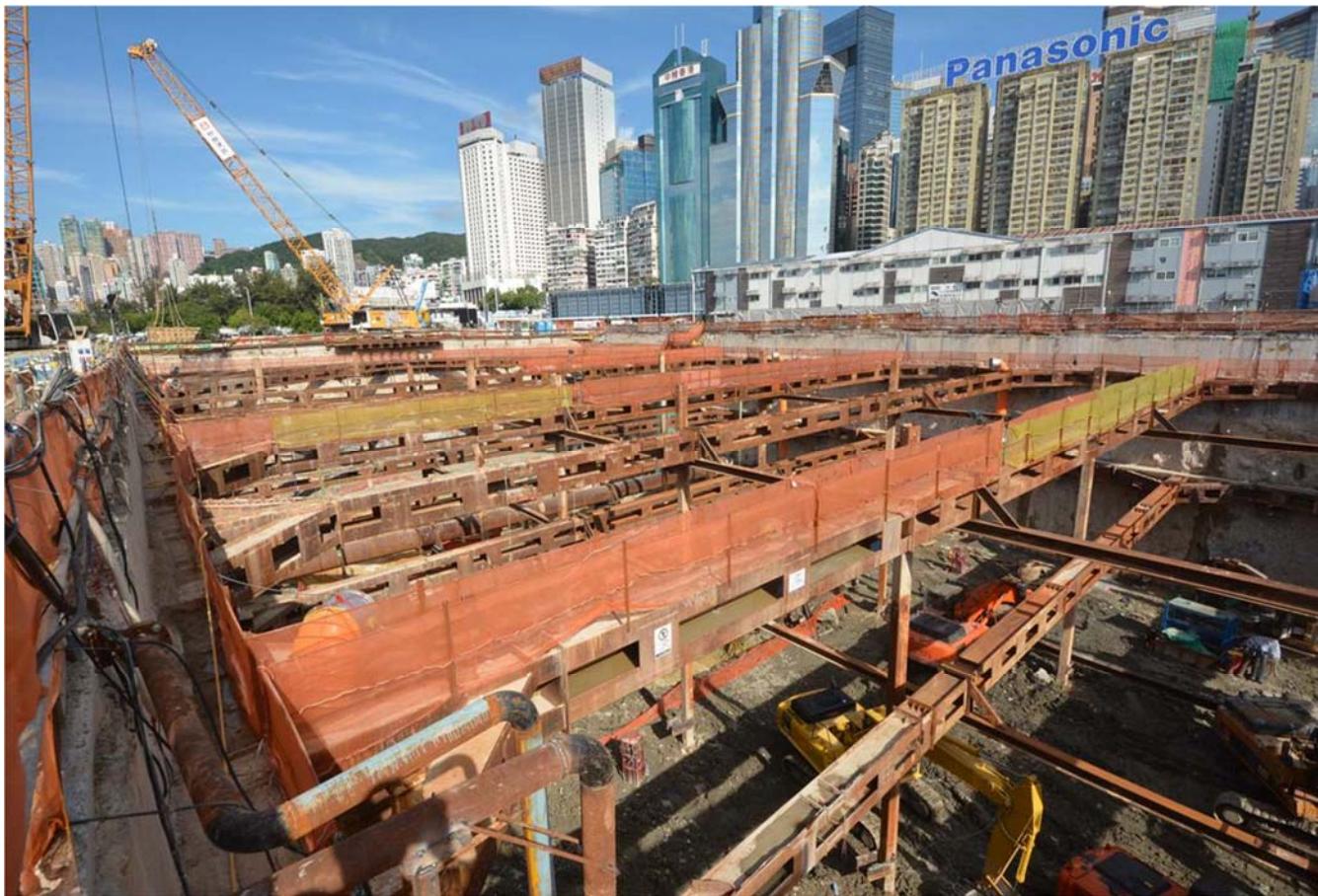
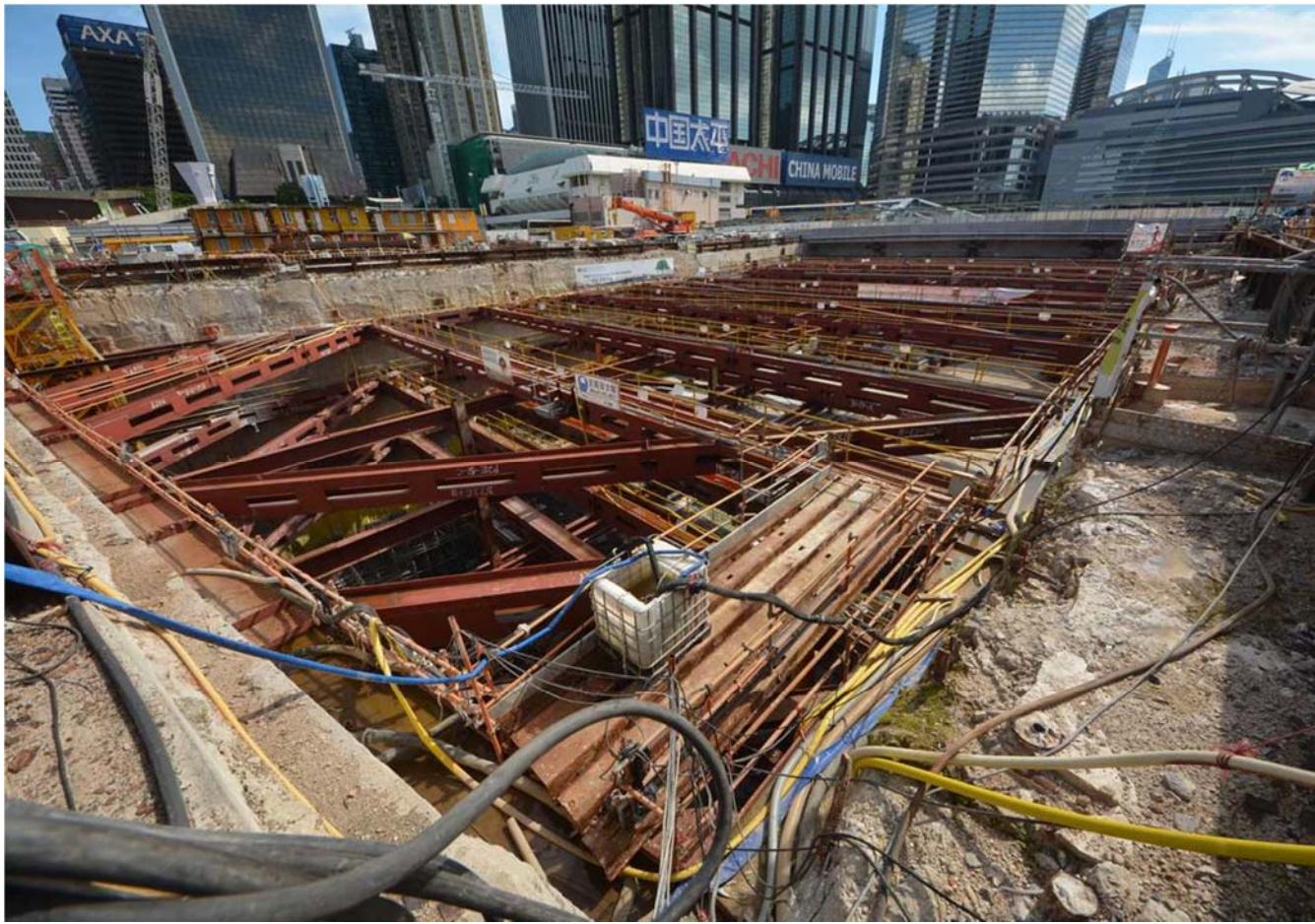




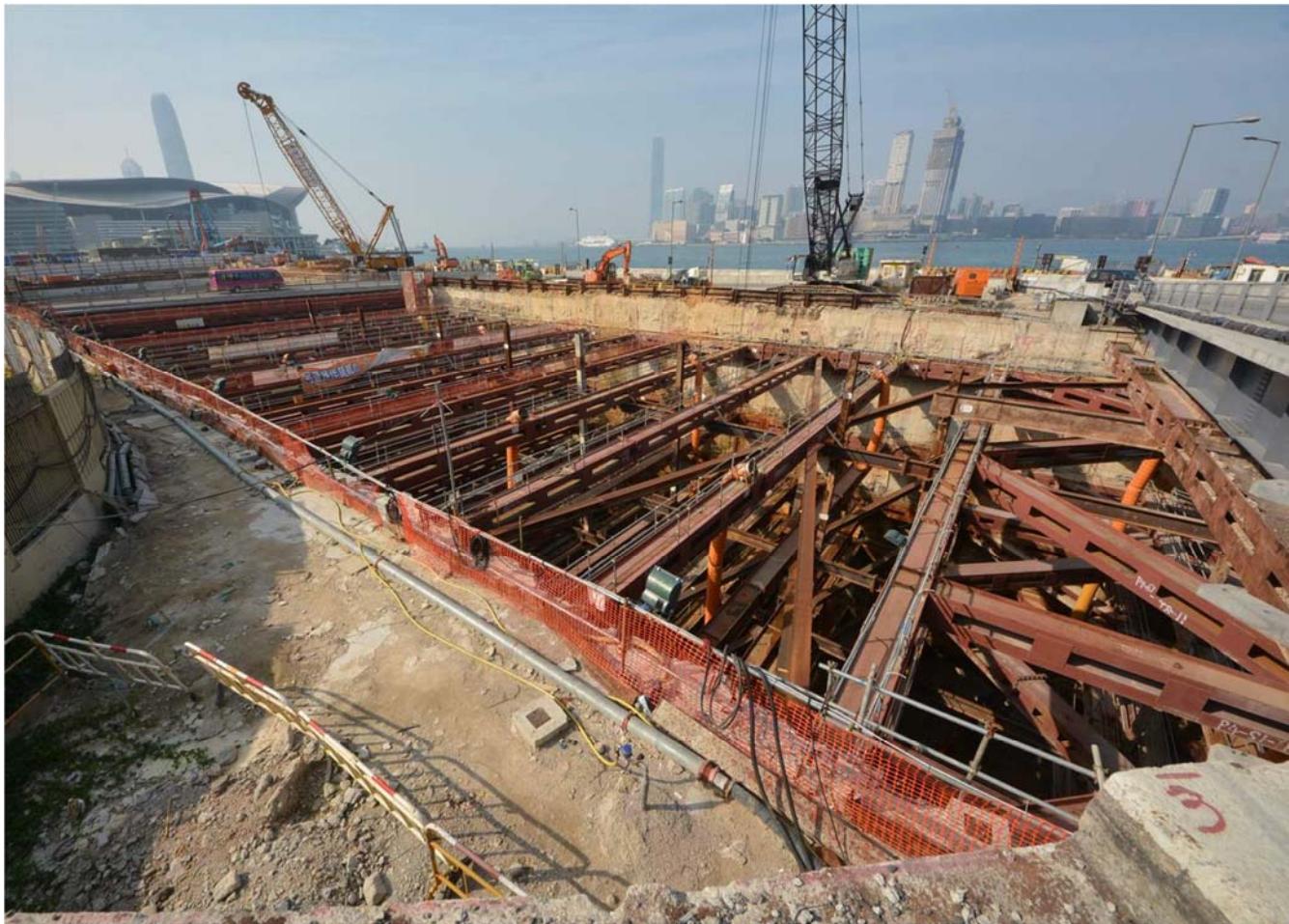








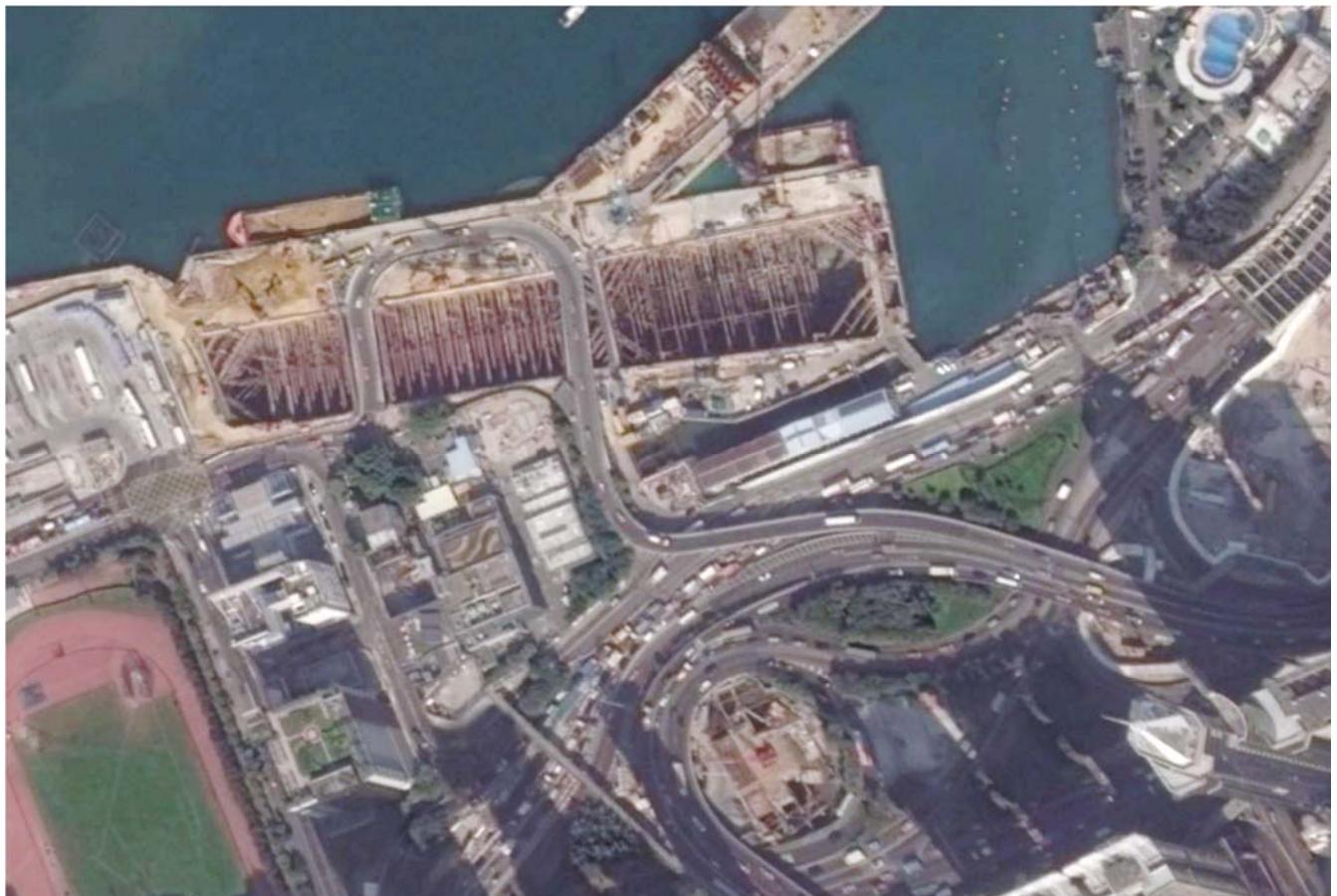




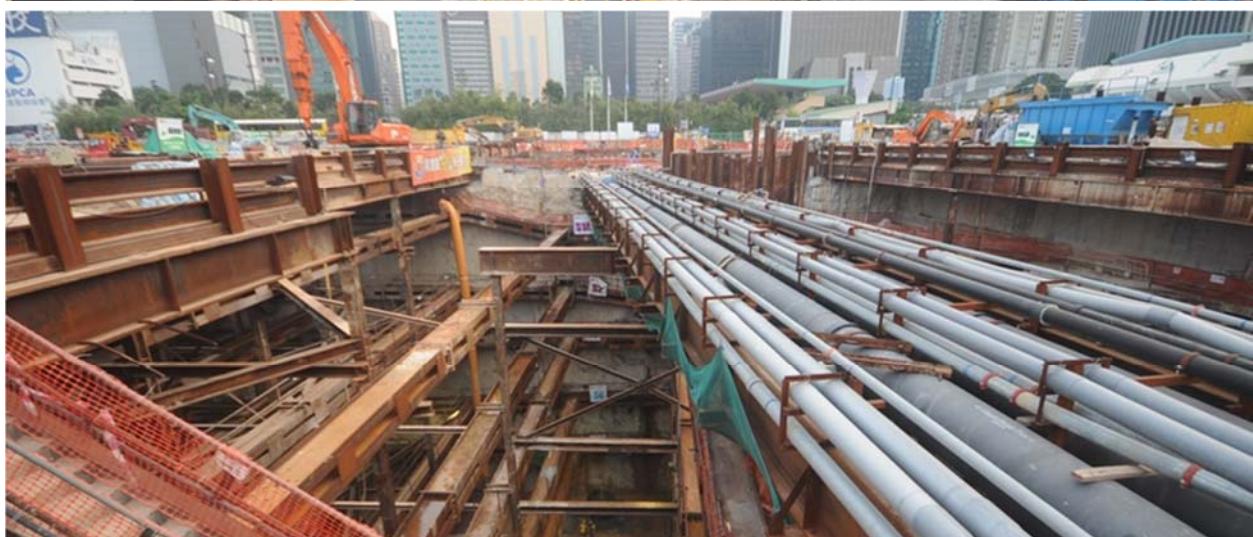
Construction of the new Wanchai public pier

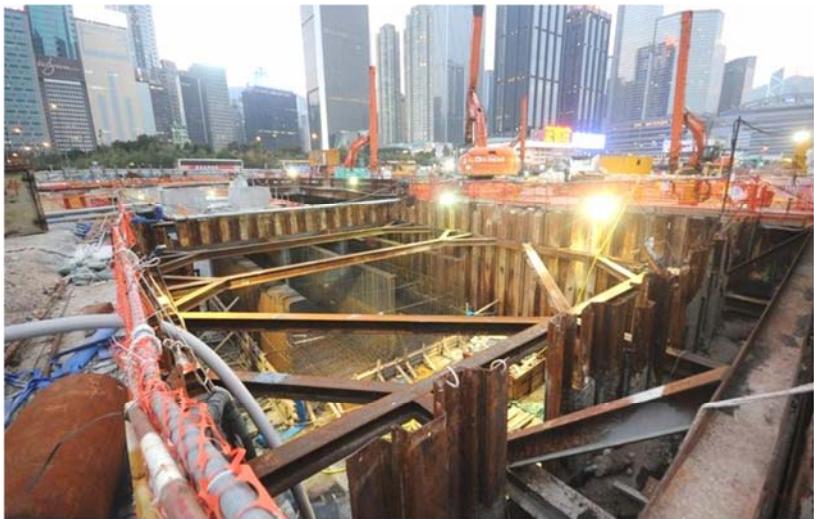


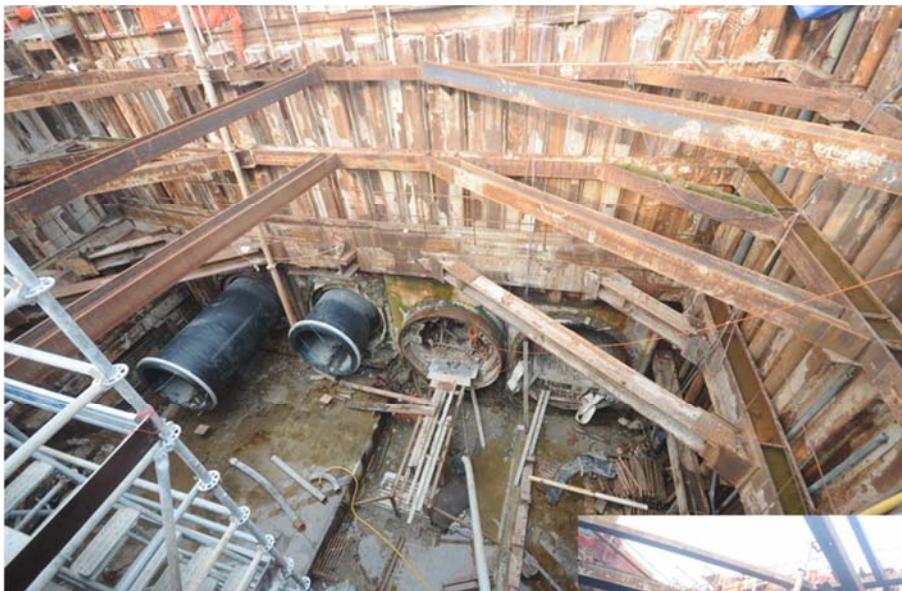
Temporary Road diversion



Diversion/Protection of
underground utilities

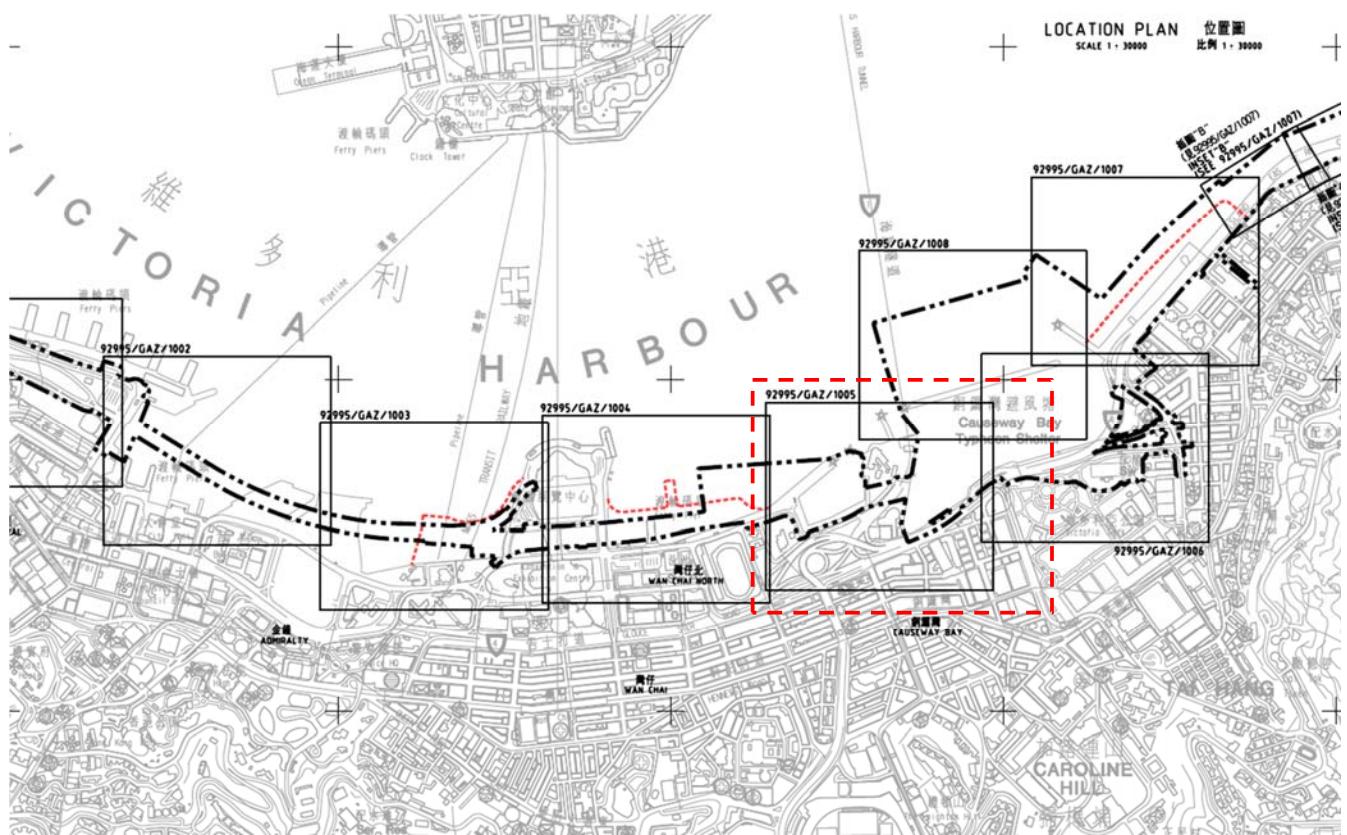




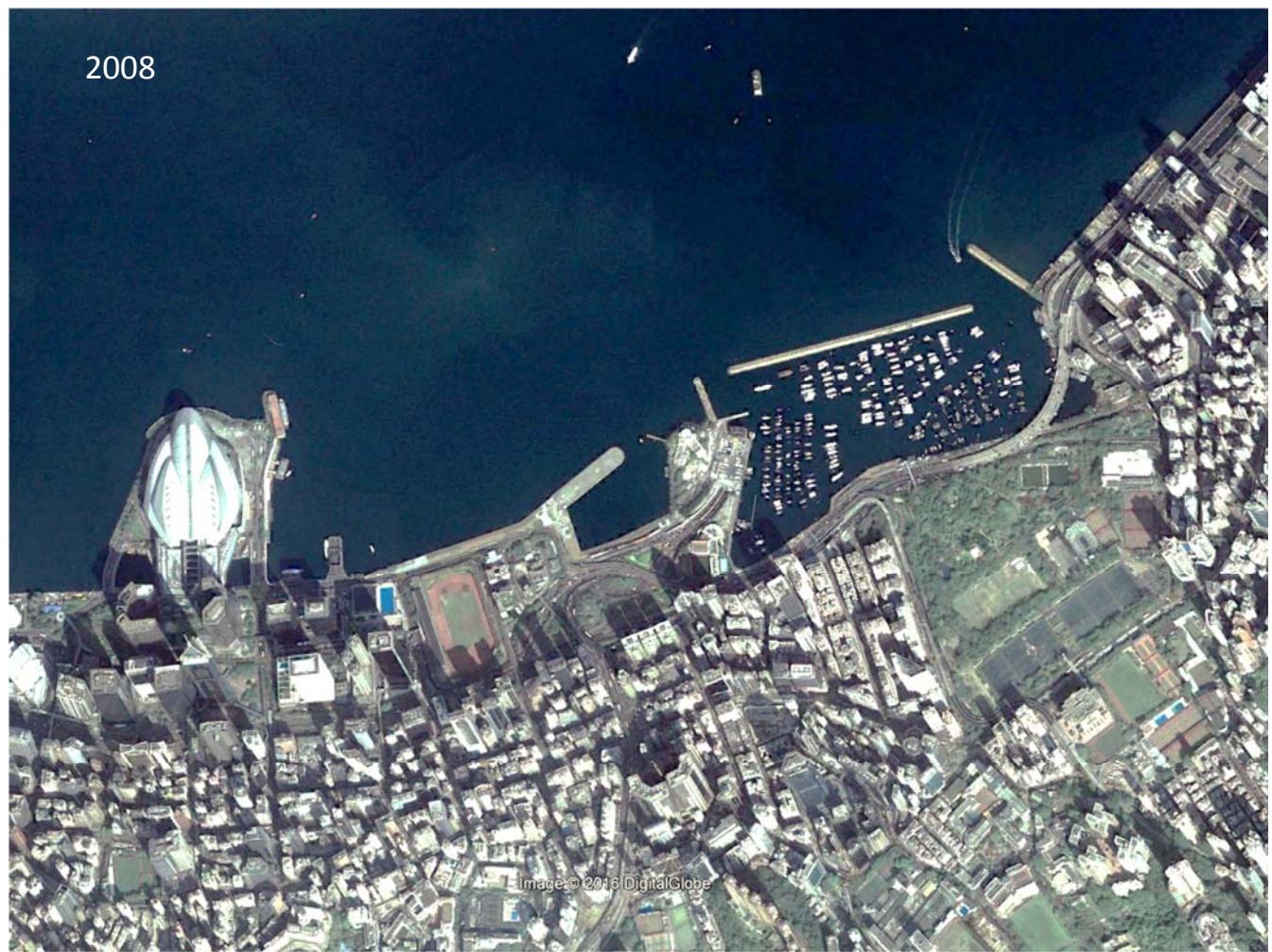


Part of sewage diversion works
taking place re-aligning drain pipes
from the nearby treatment facility

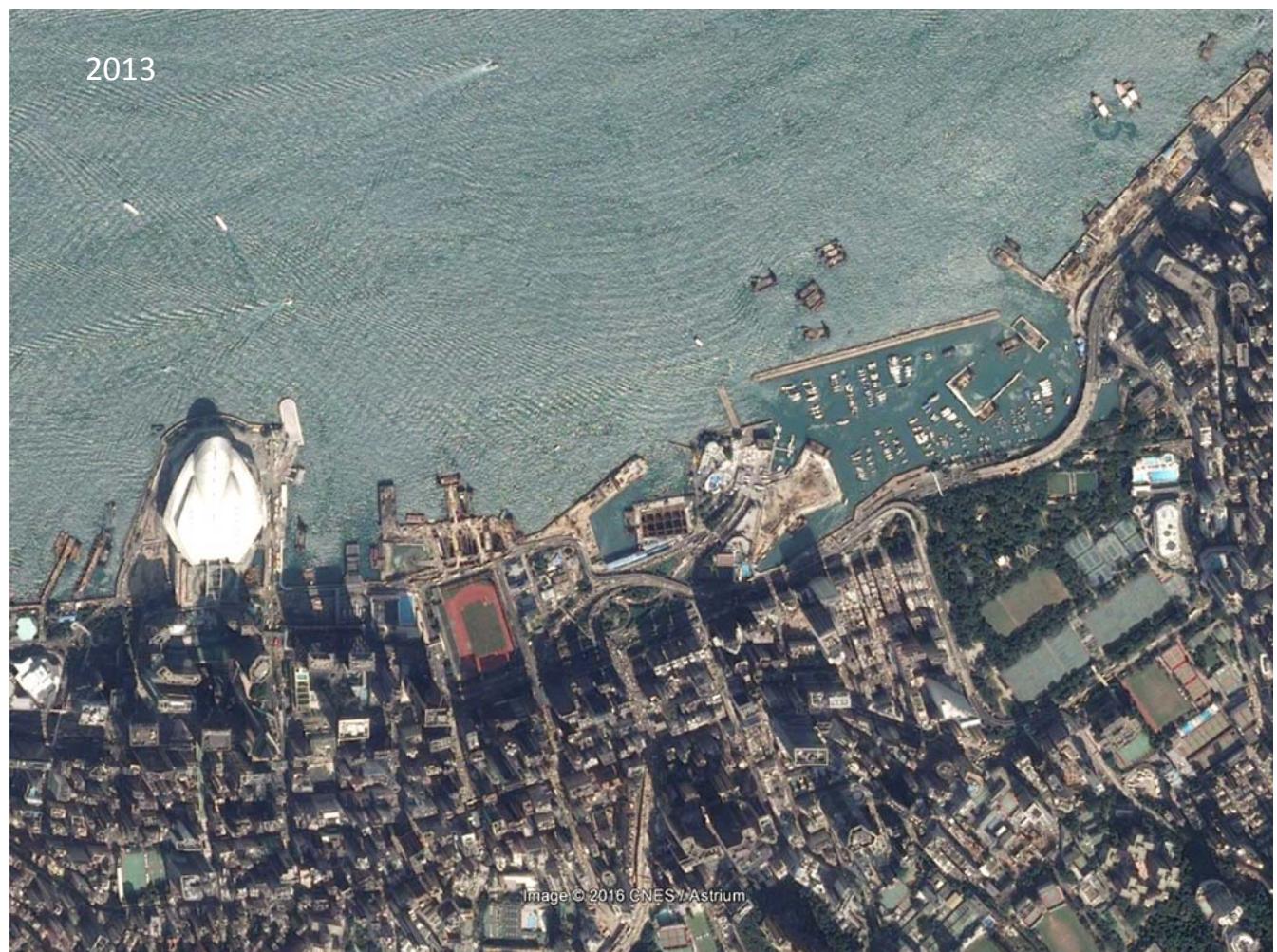
Section within the Causeway Bay
Typhoon Shelter
(part of MTR Shatin Central Link)



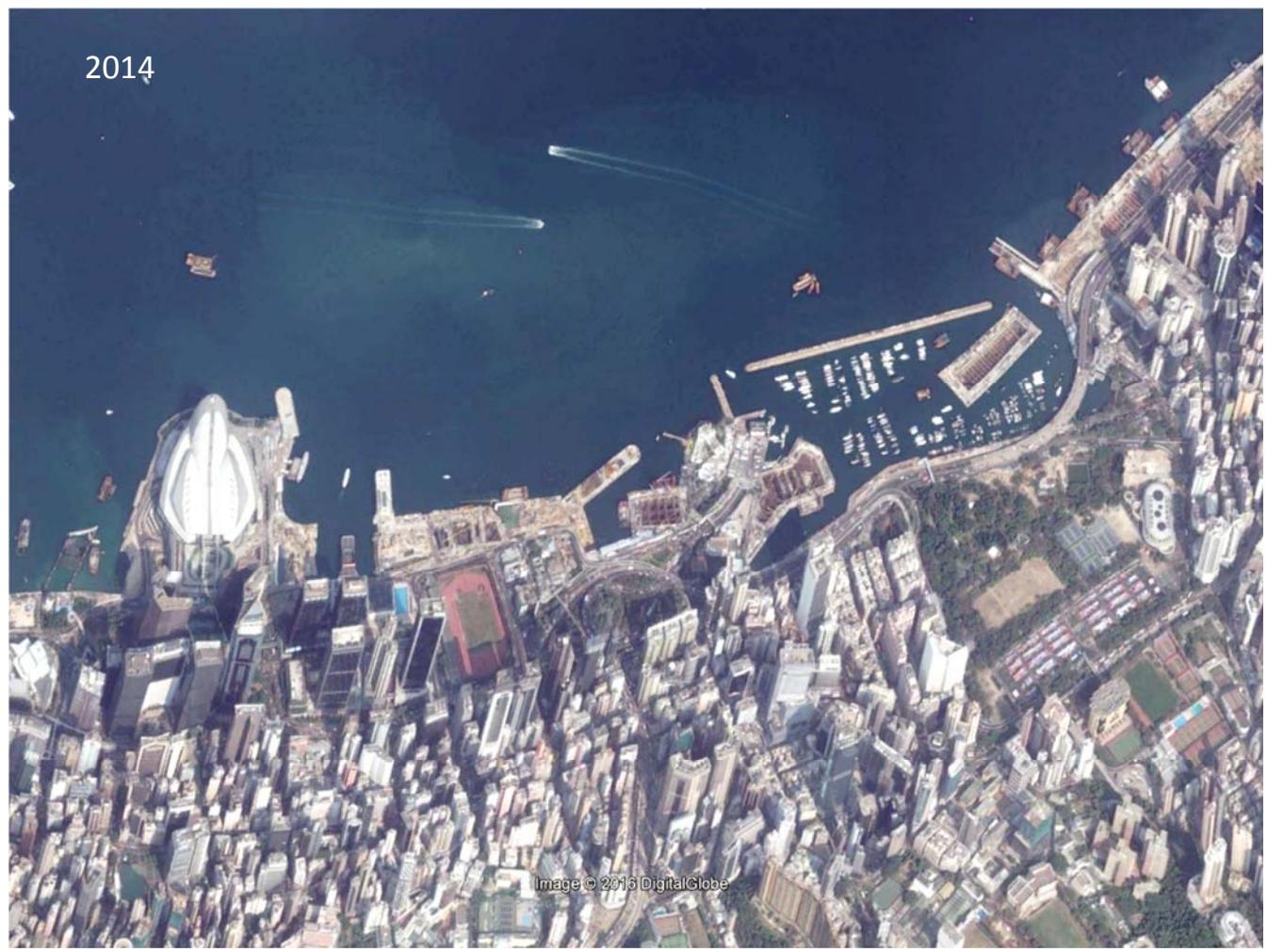
2008



2013



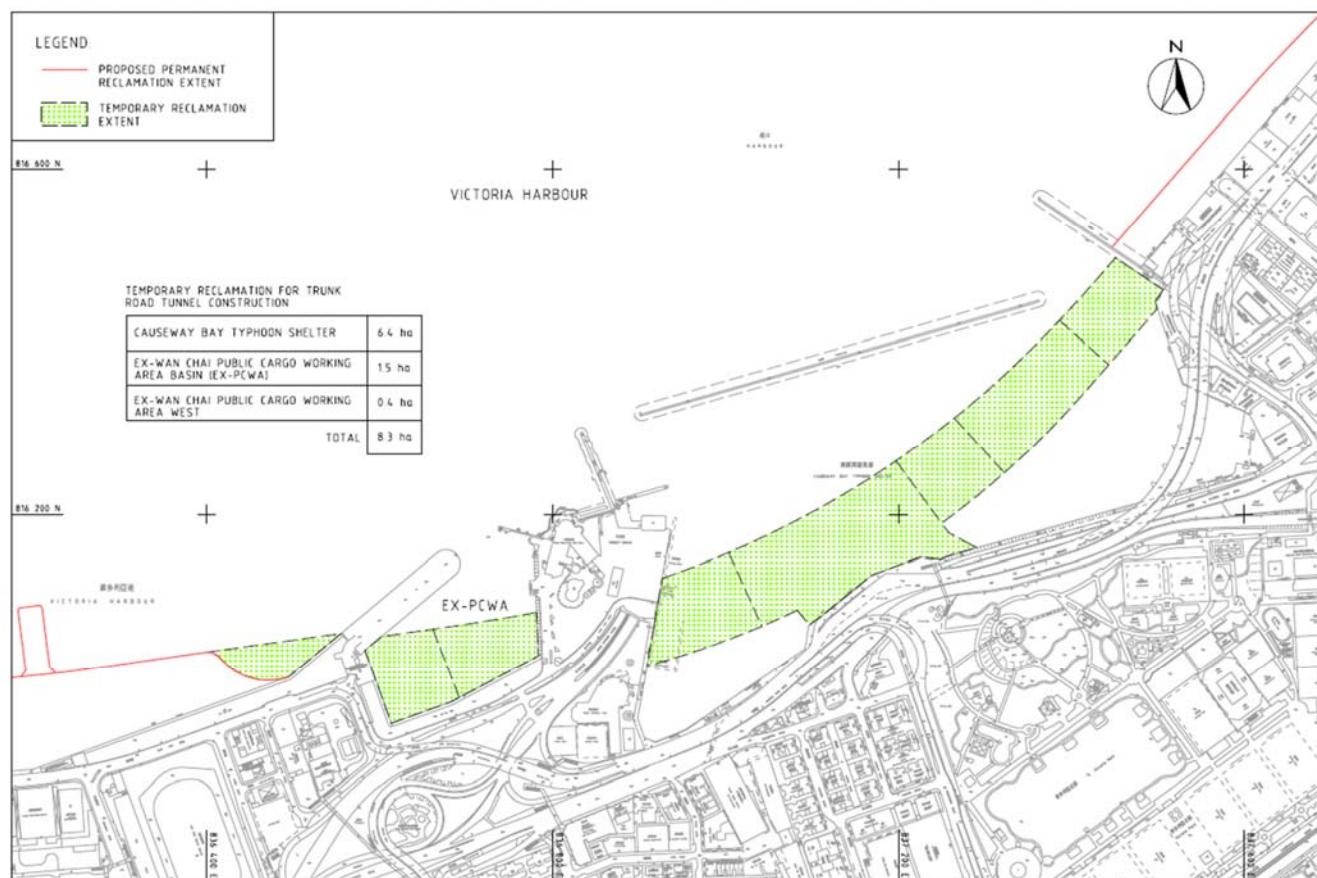
2014



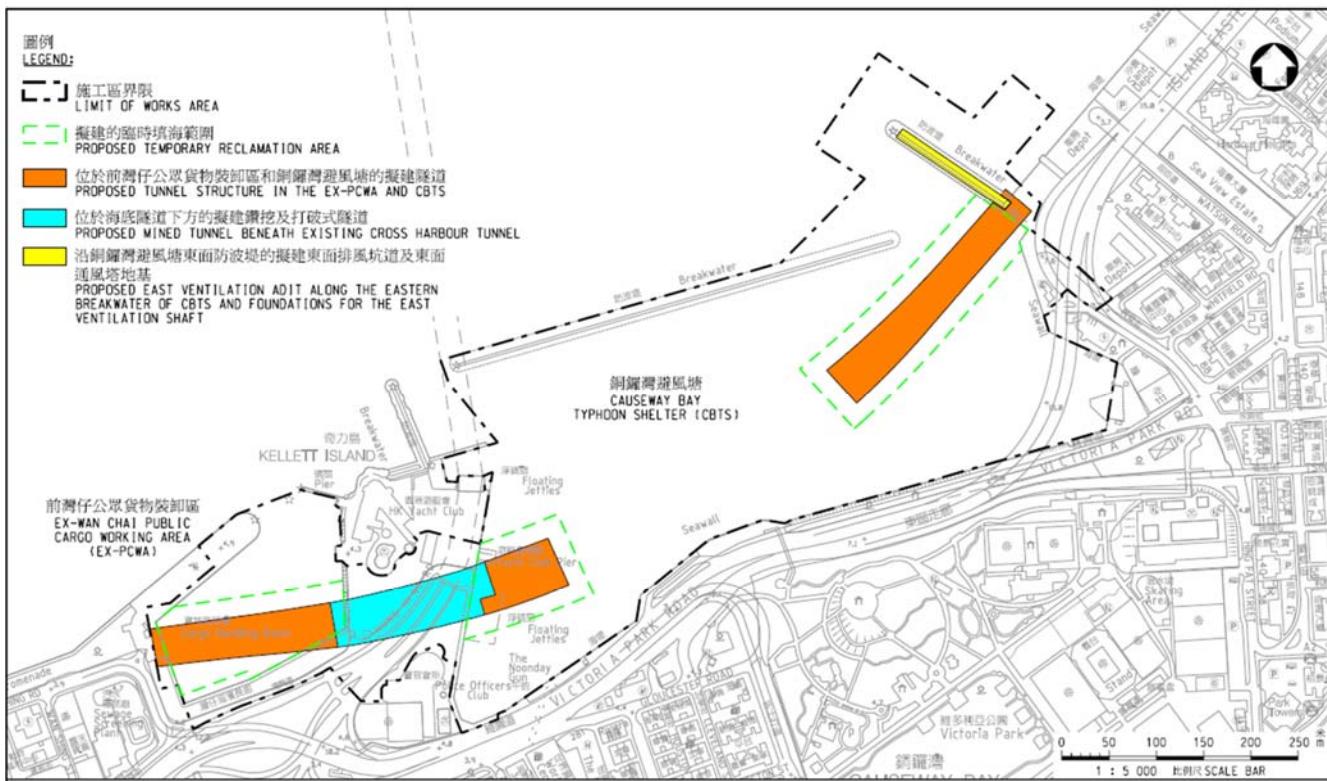
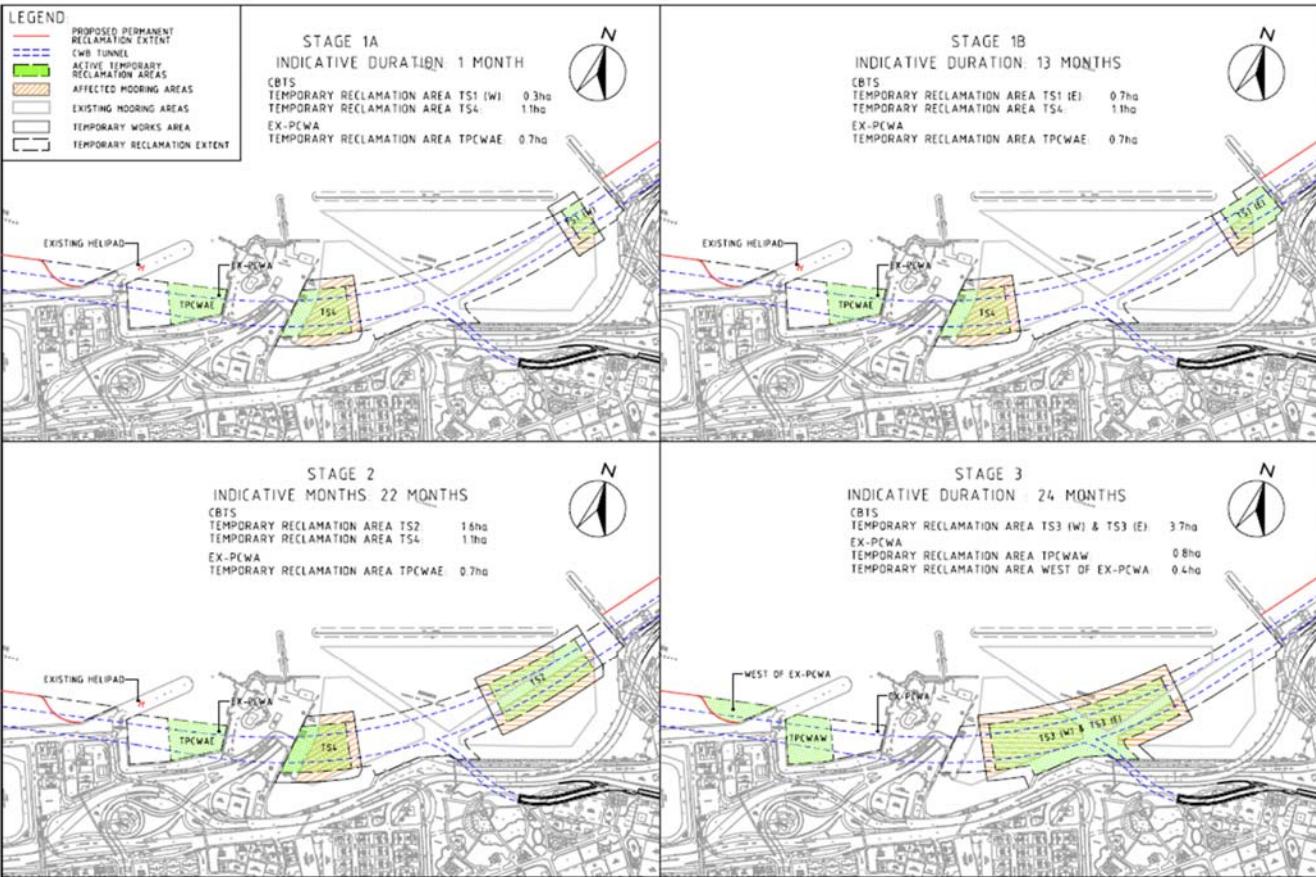
2015

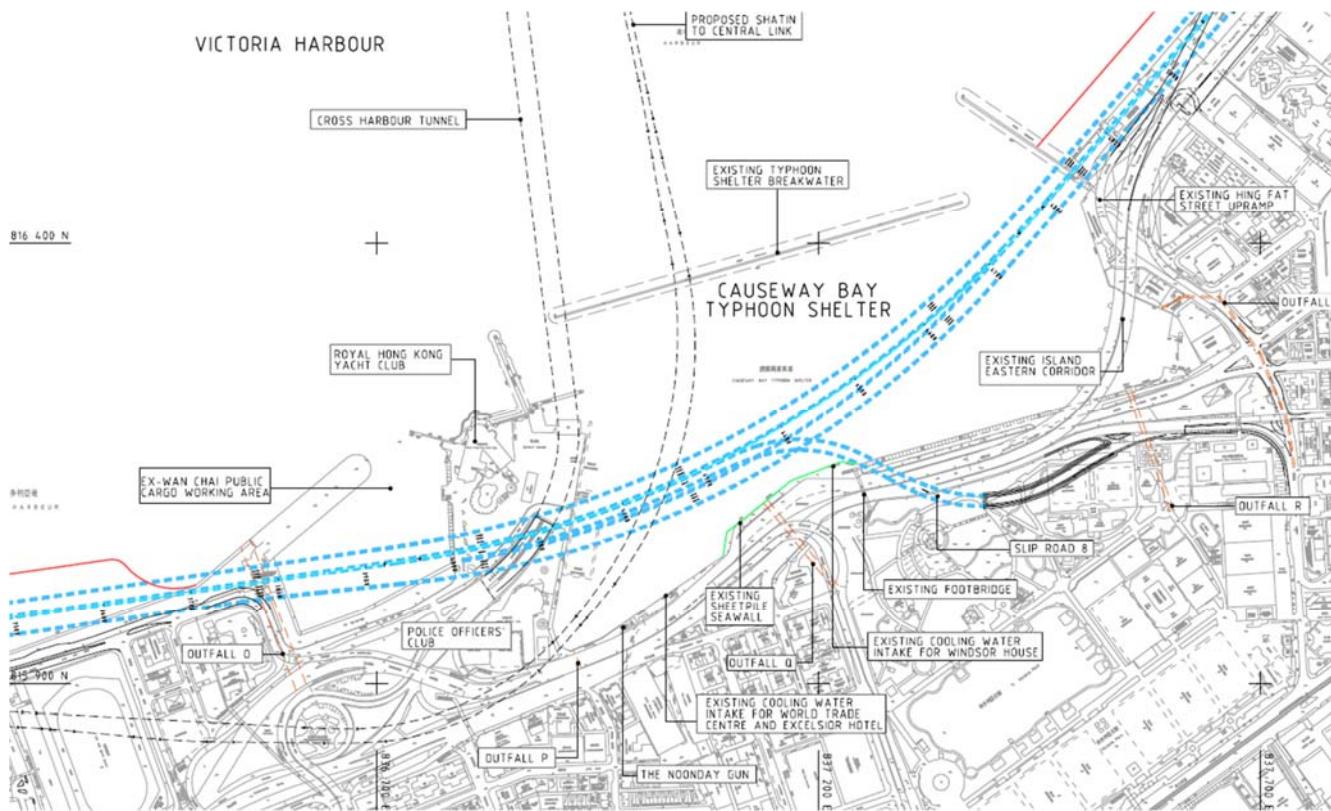


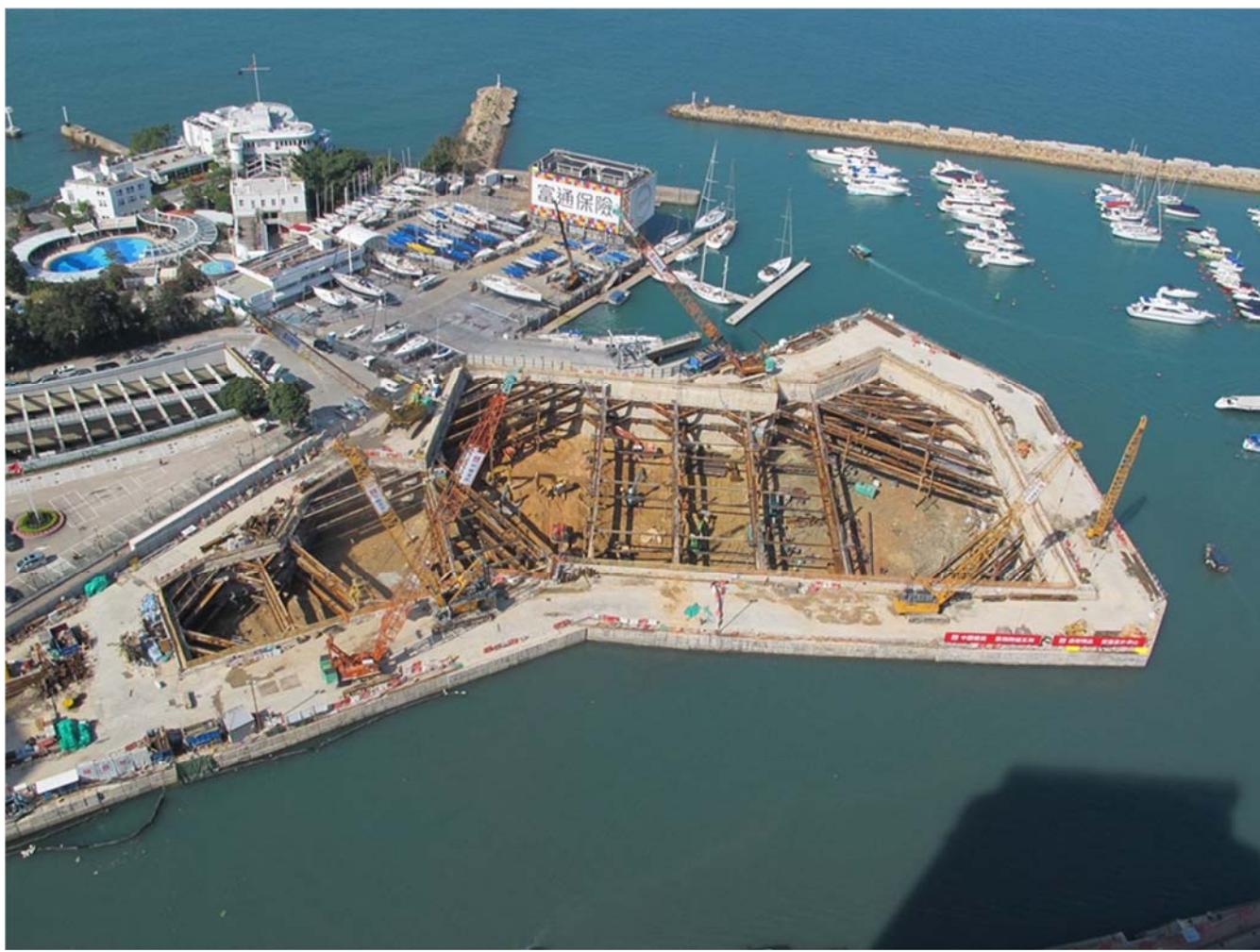




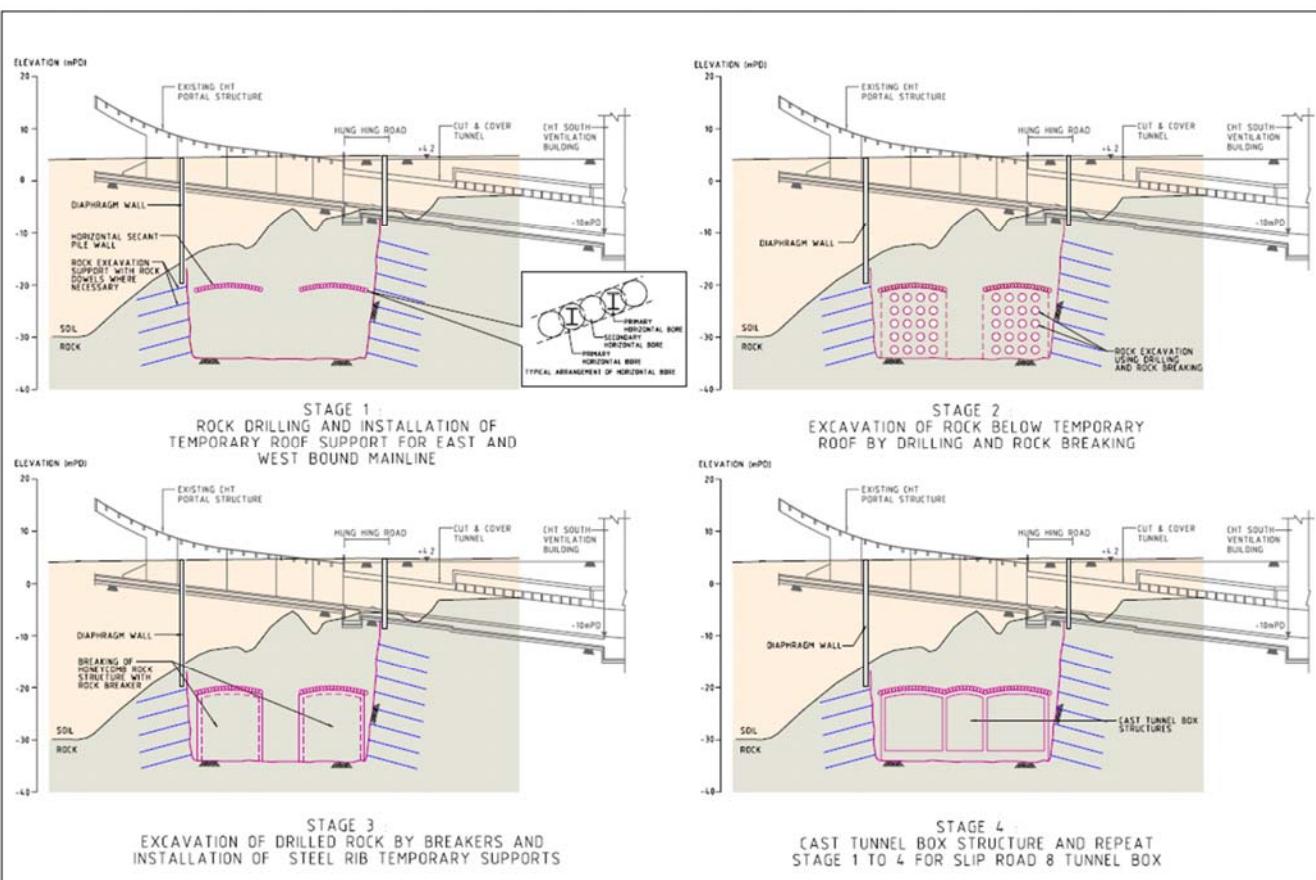
Layout plan for temporary reclamation







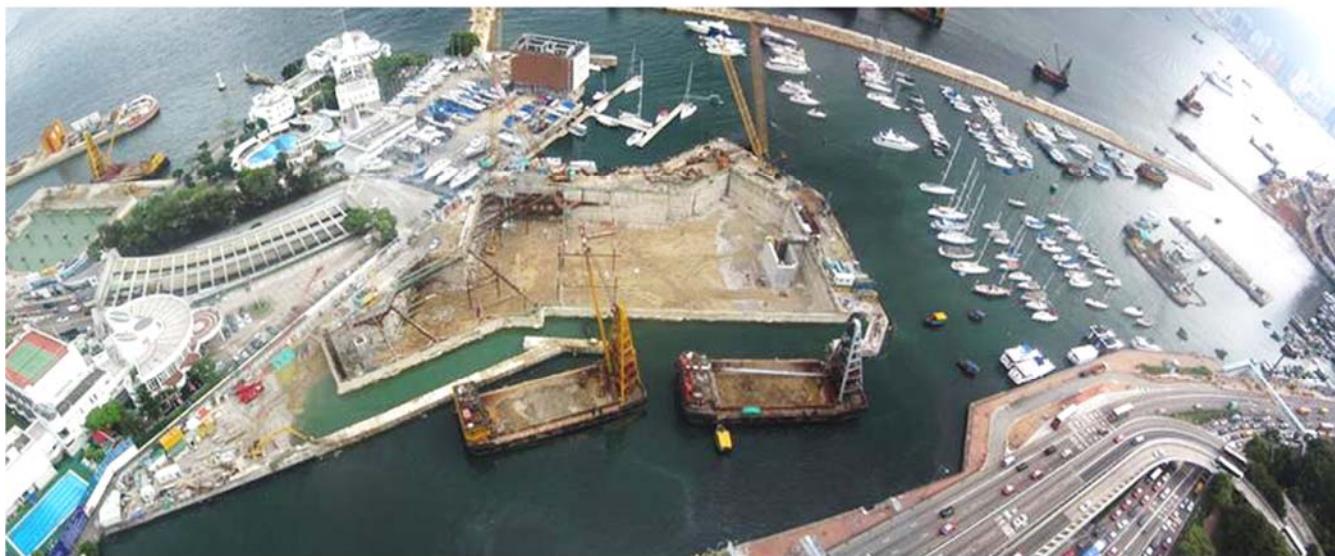
18/10/2013 09:55



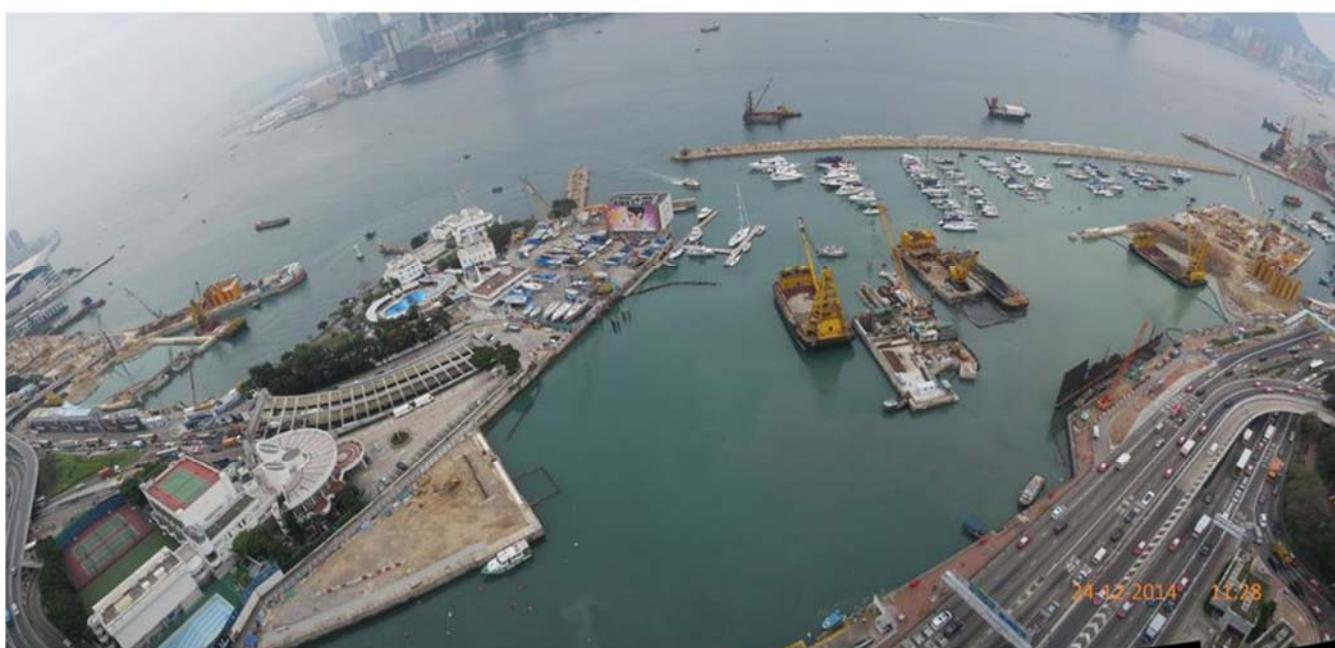




April 2014



July 2014



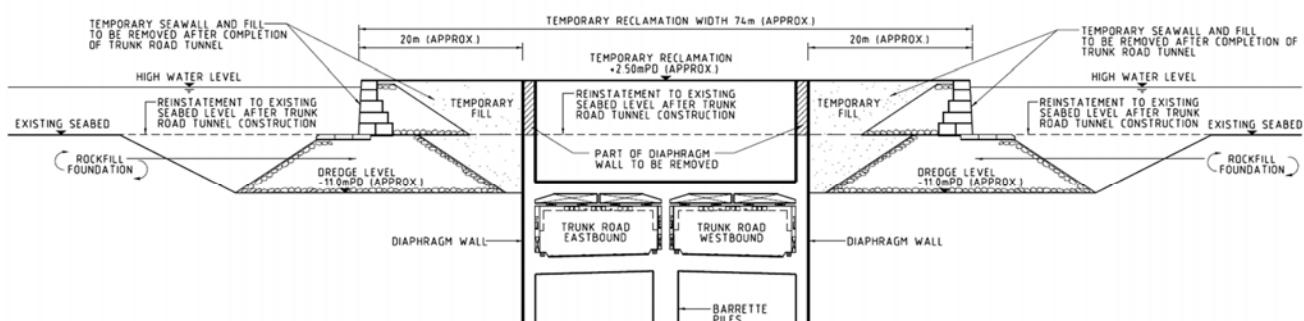
December 2014



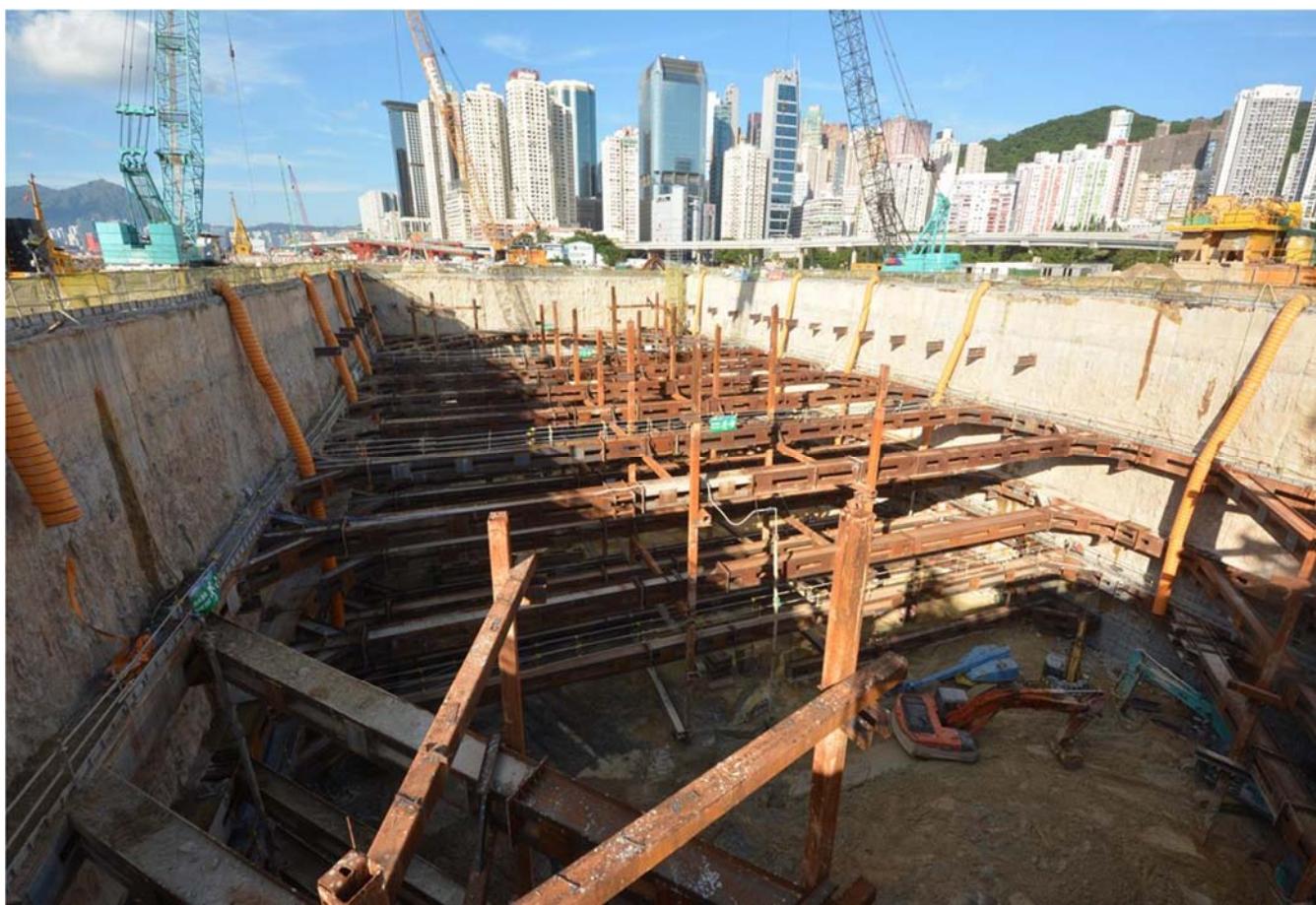
May 2015

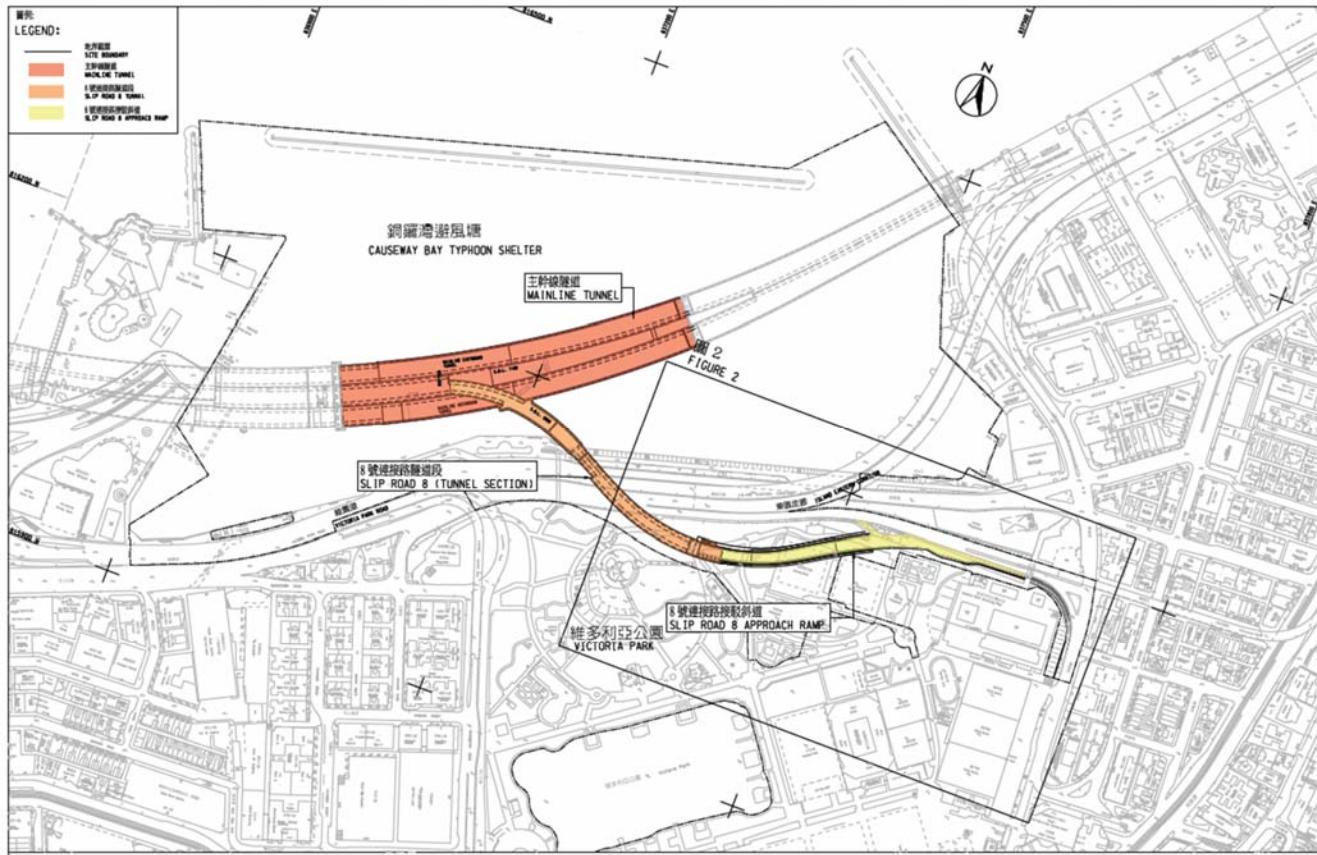


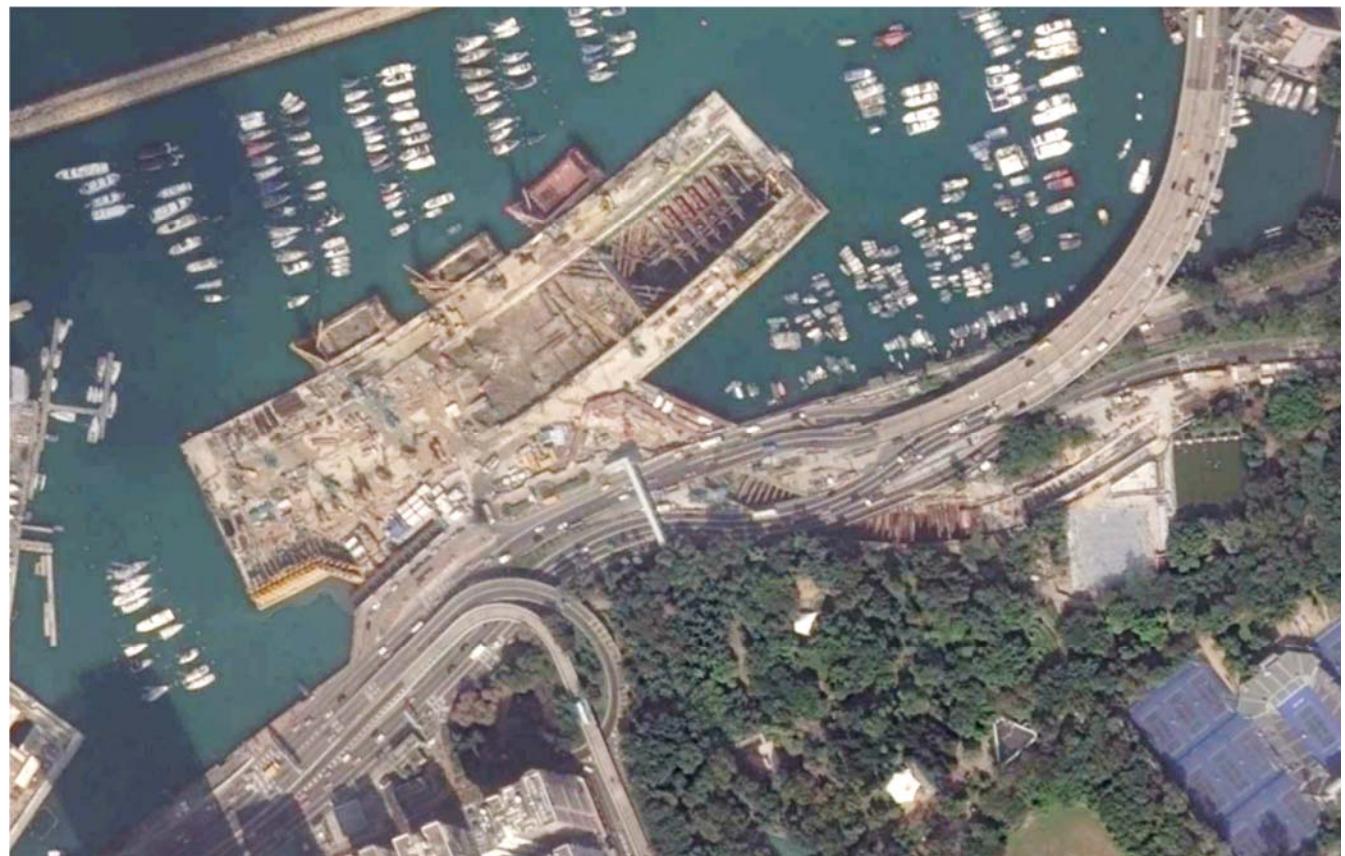
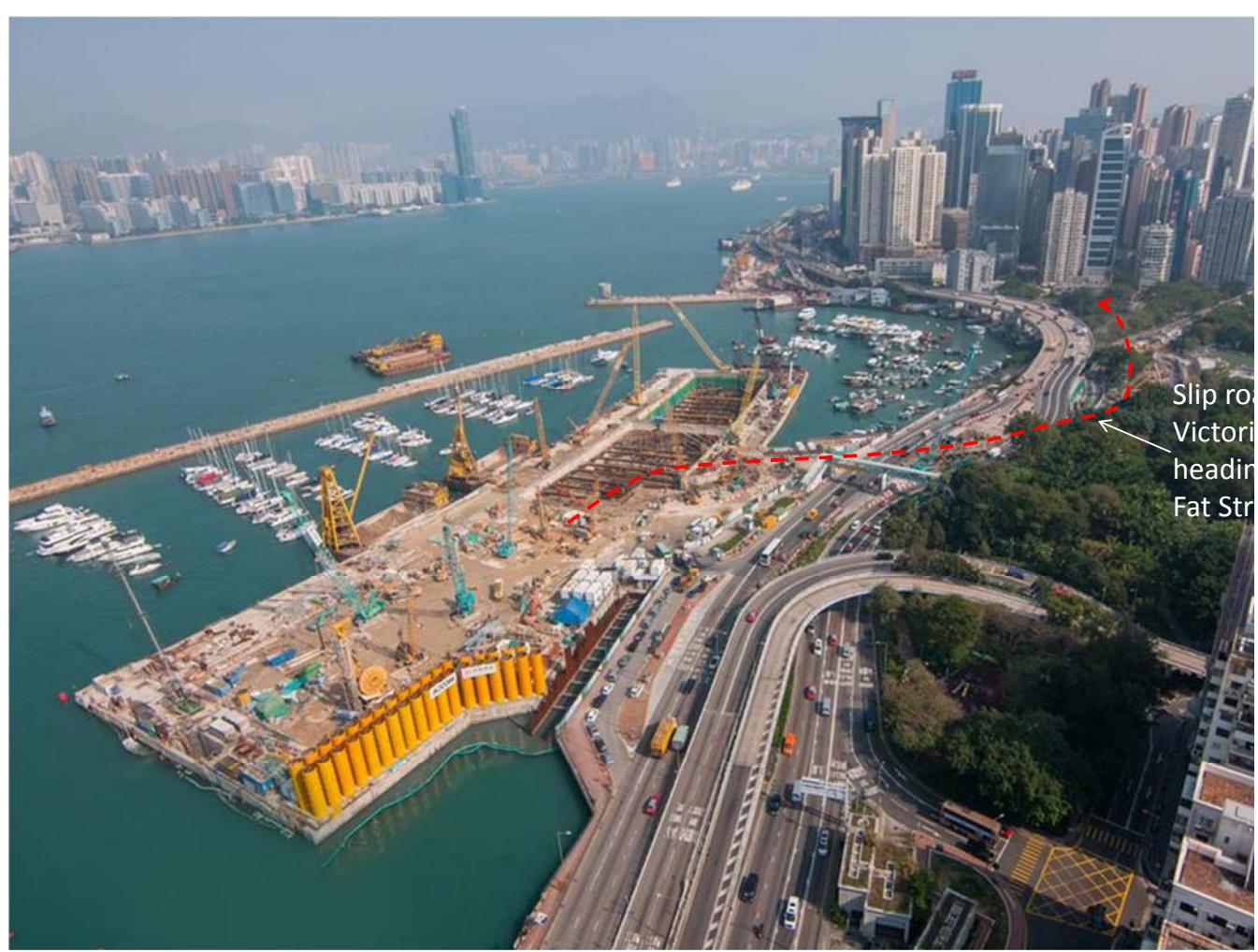
December 2015

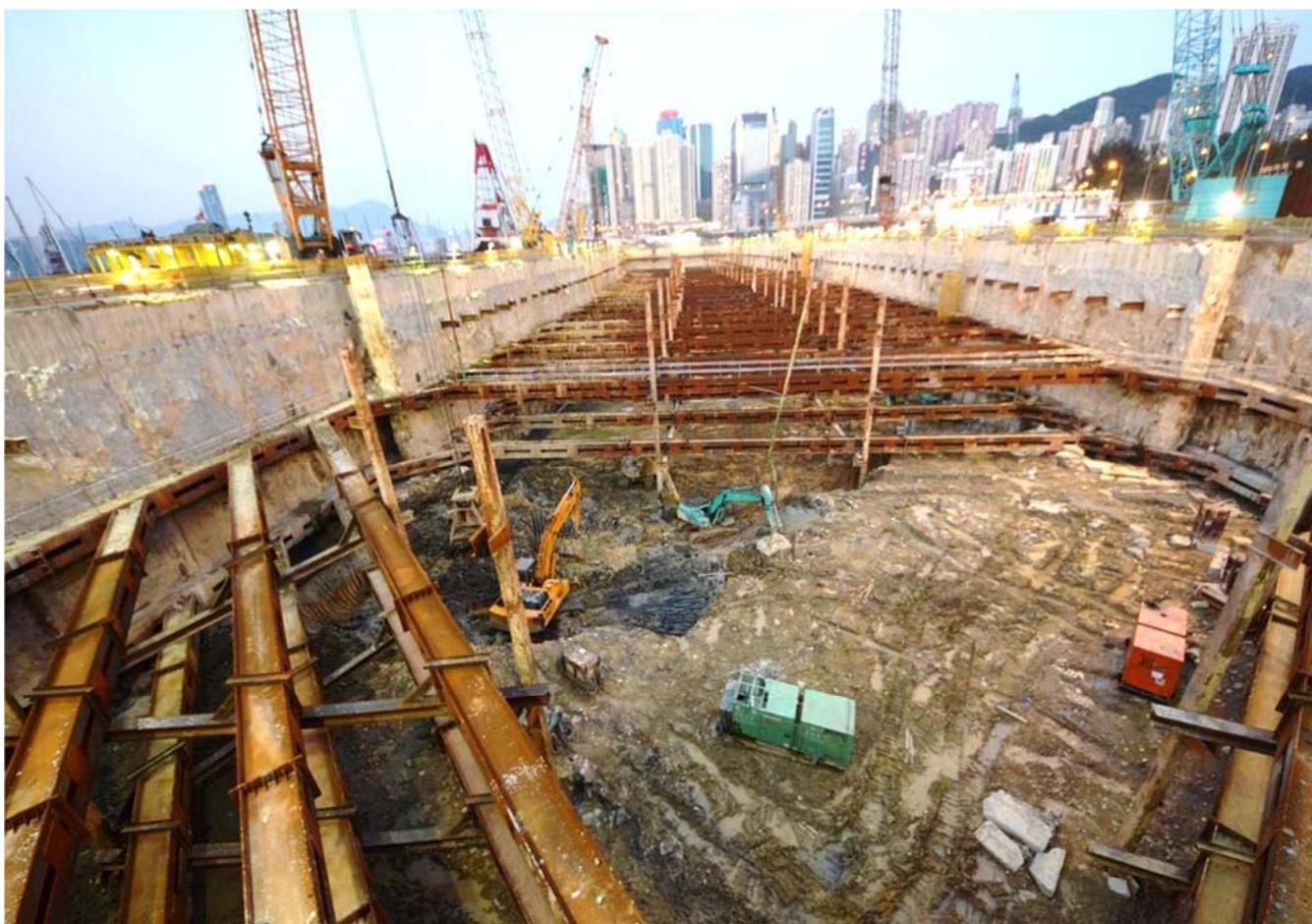


TYPICAL SECTION FOR DUAL 3-LANE MAINLINE

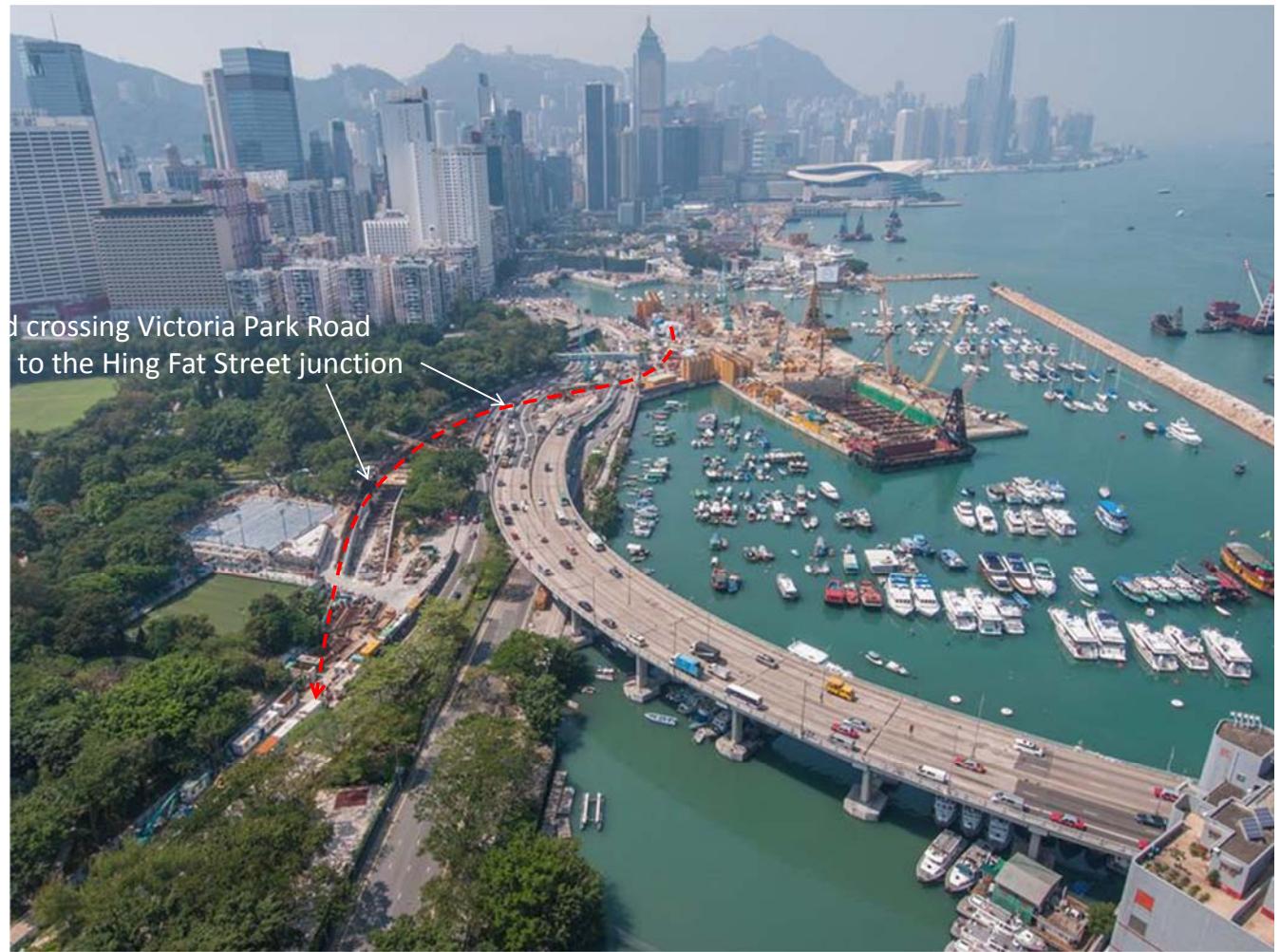
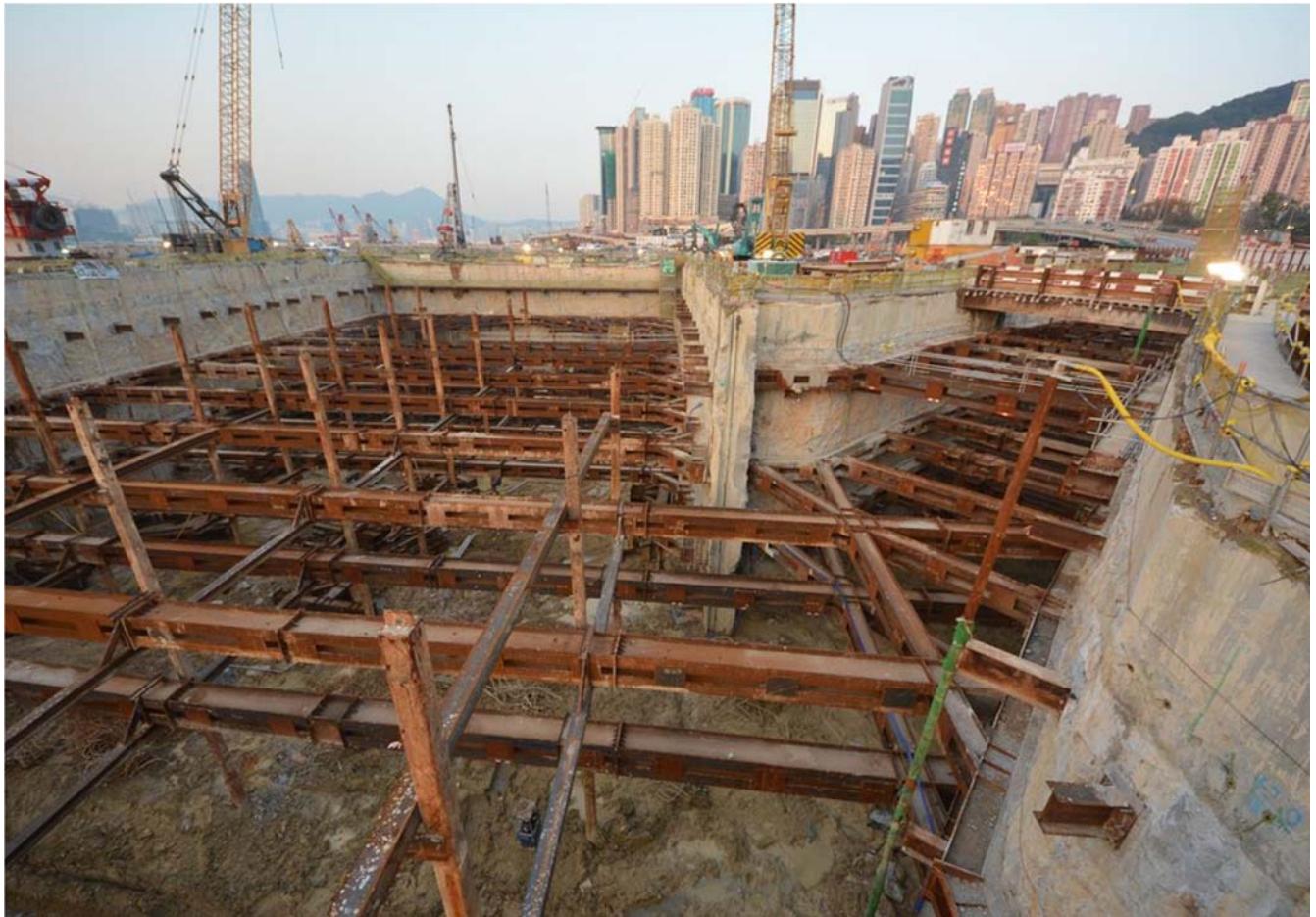




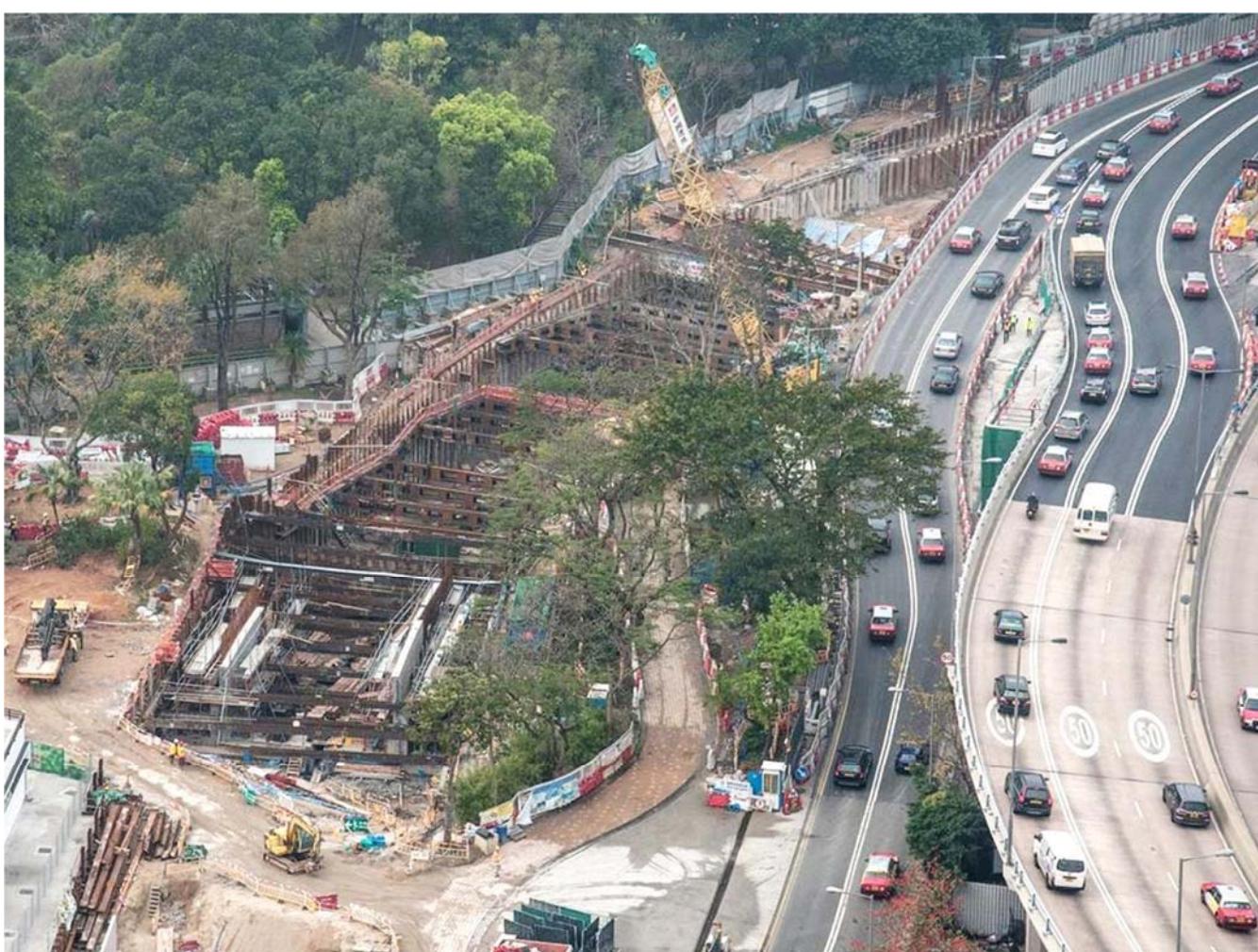




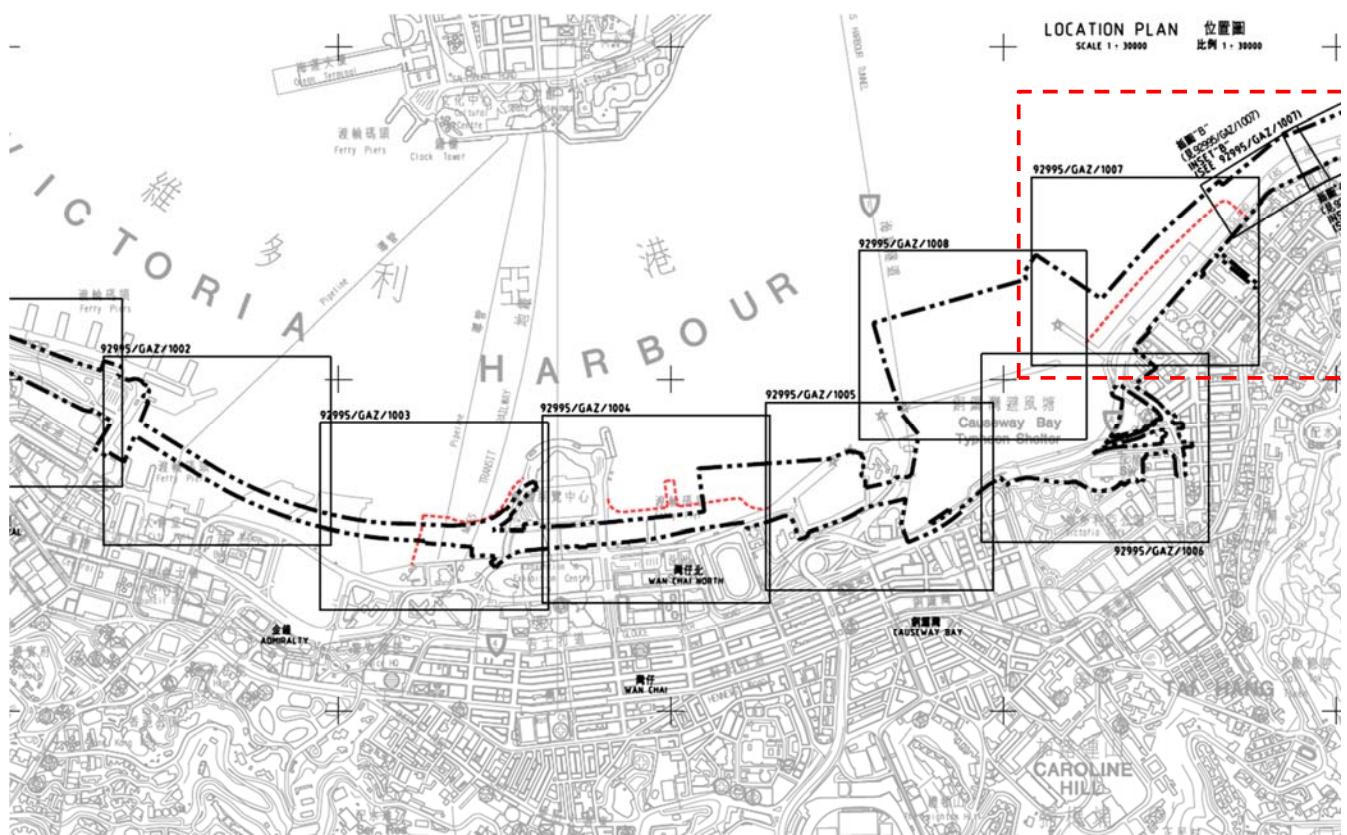


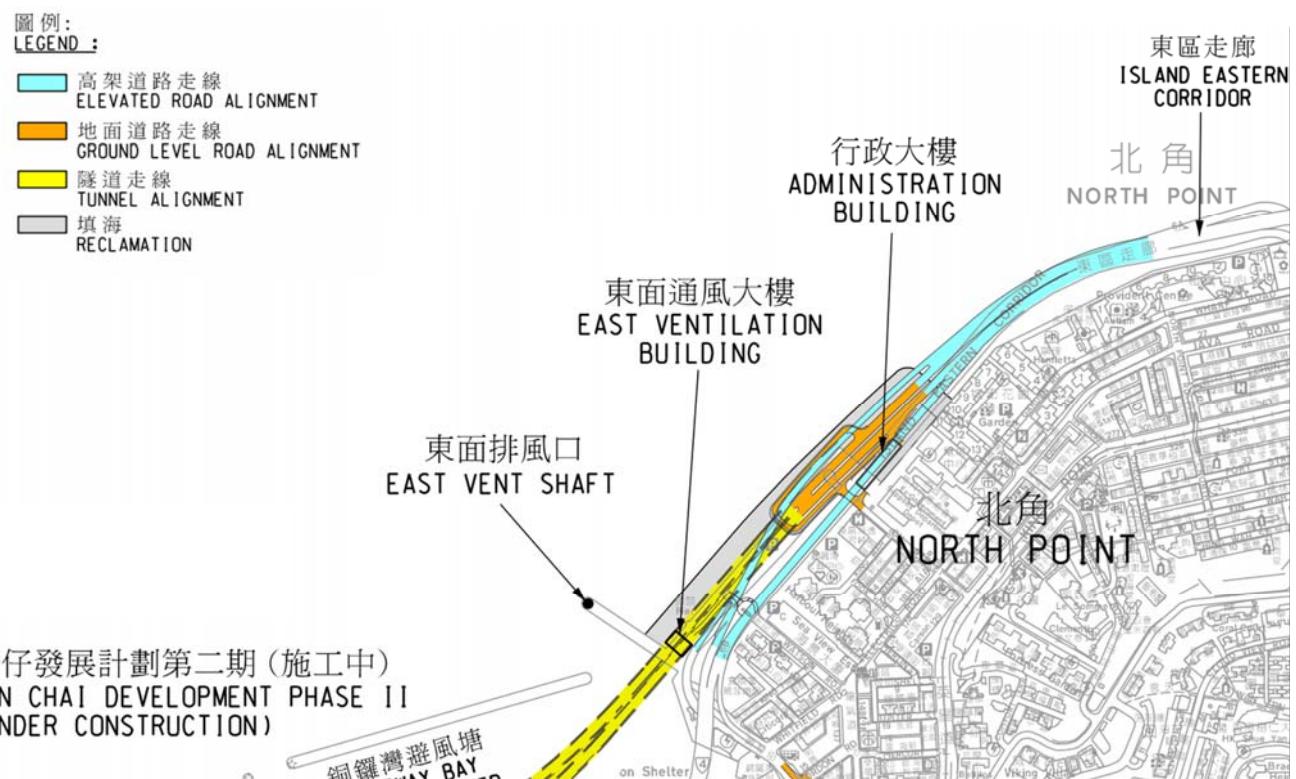
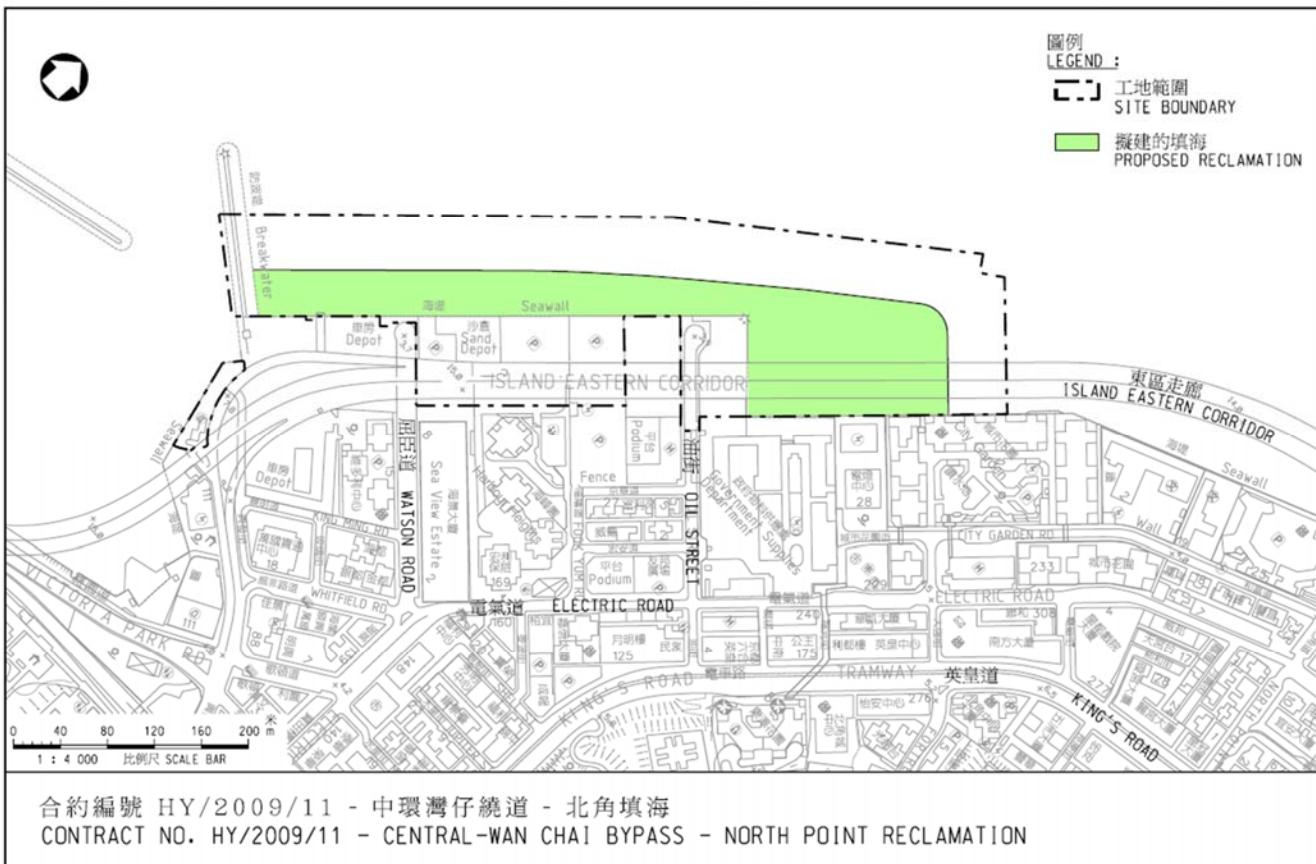




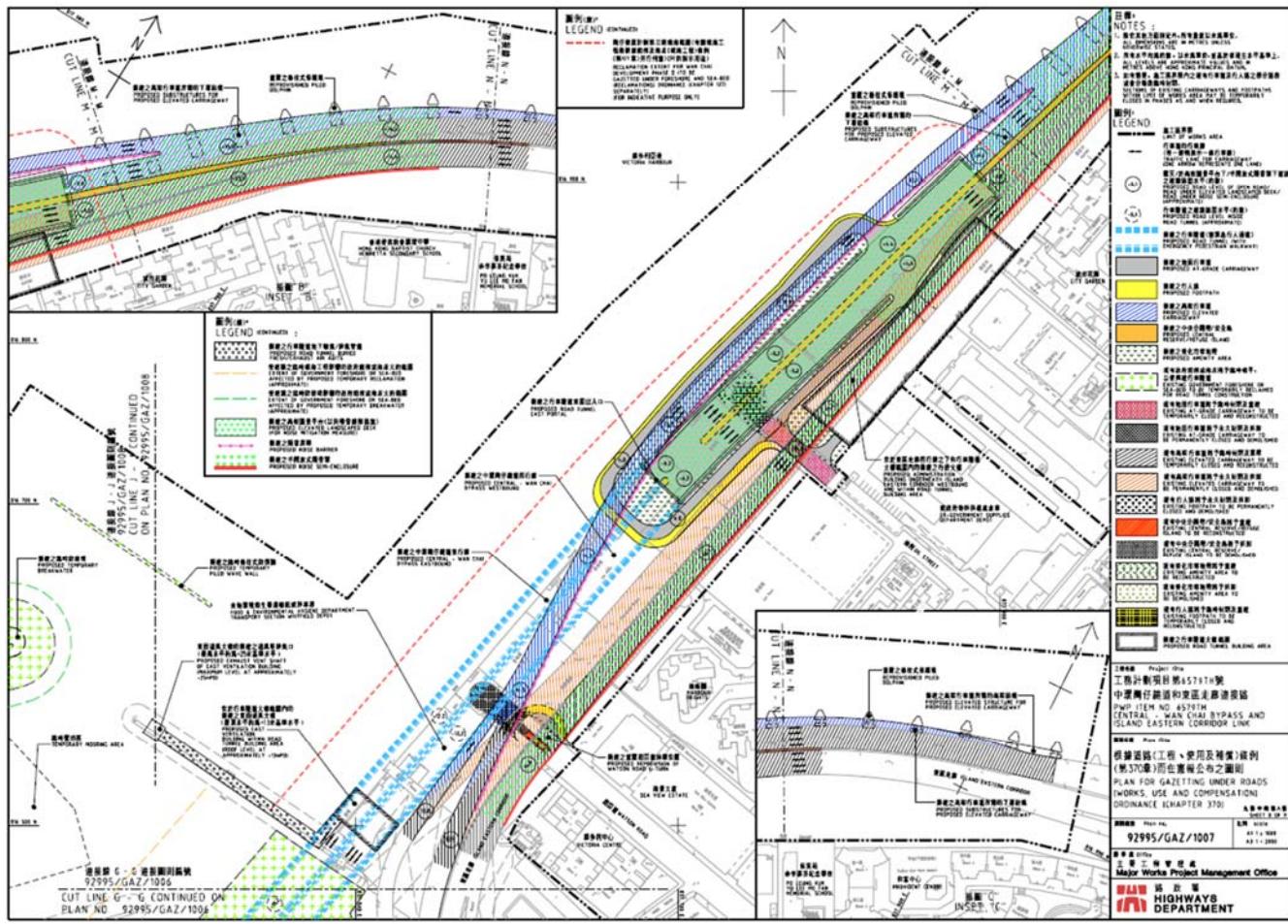


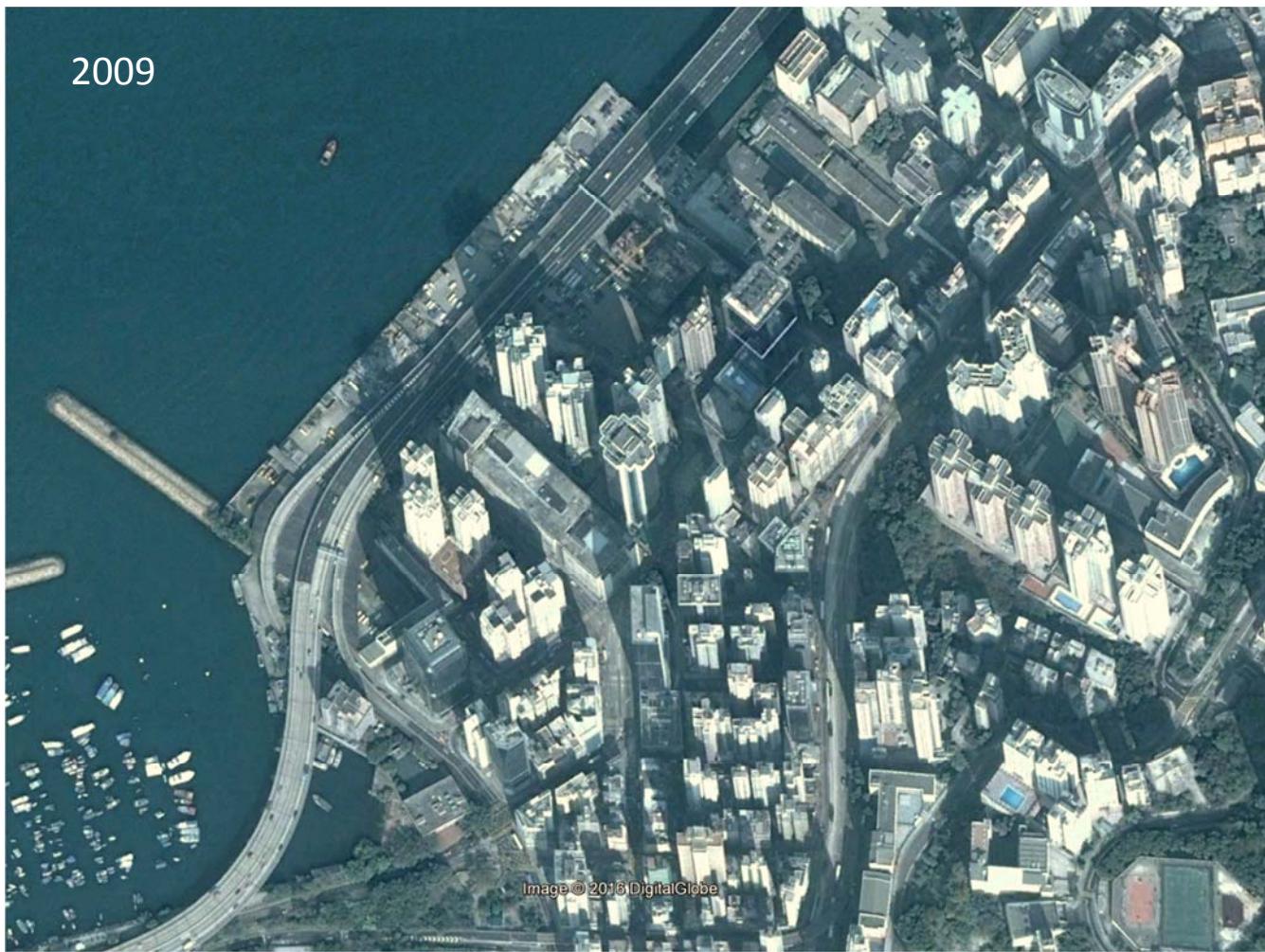
Section from Causeway Bay Typhoon Shelter to North Point Junction





Connection of the bypass to the Island Eastern Corridor and local interchange





2012



Image © 2016 DigitalGlobe

2013



Image © 2016 DigitalGlobe

2014

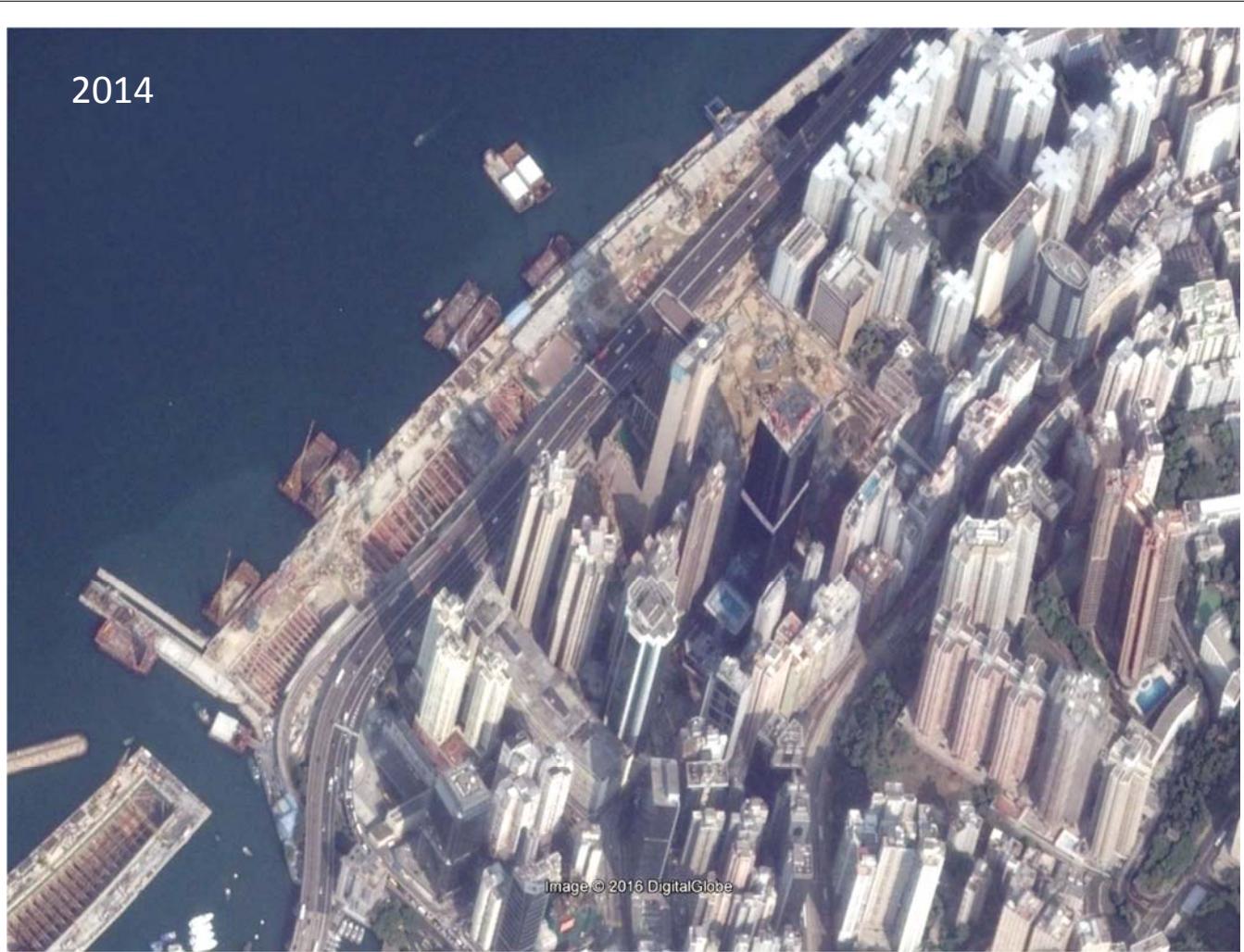
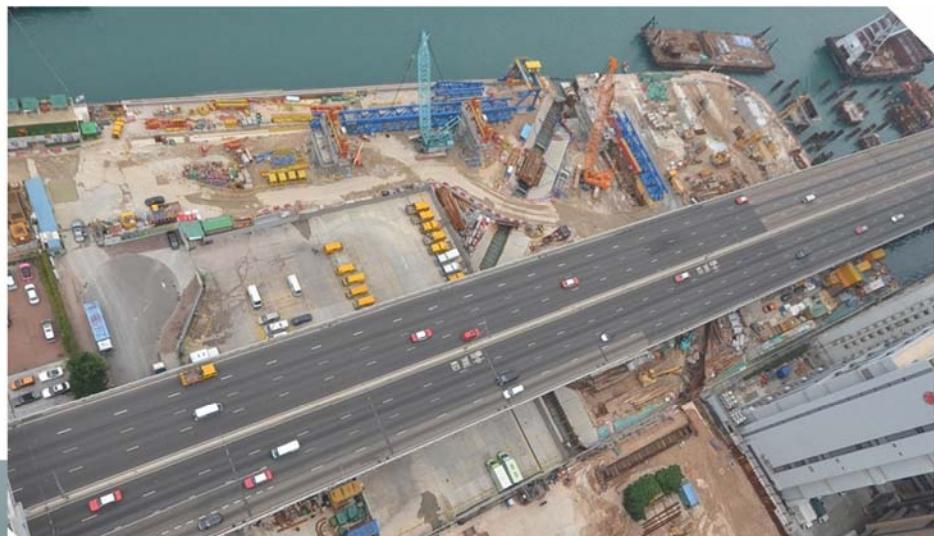


Image © 2016 DigitalGlobe

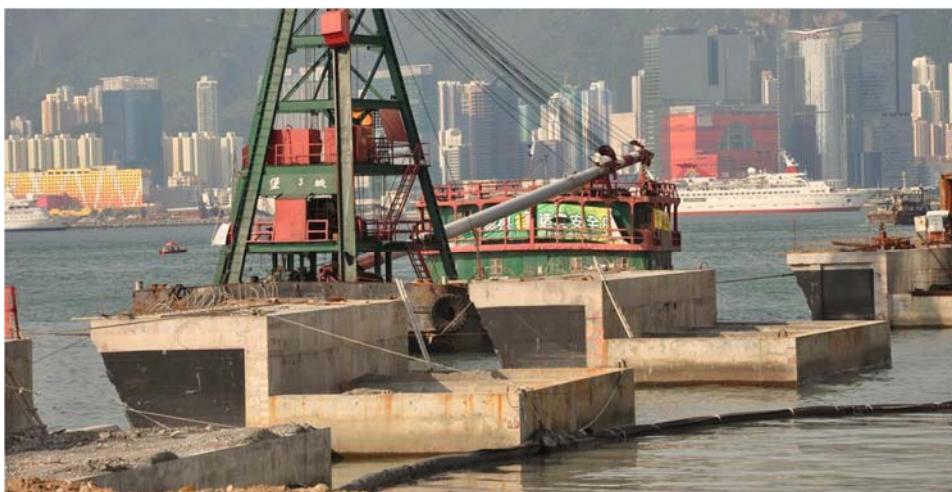
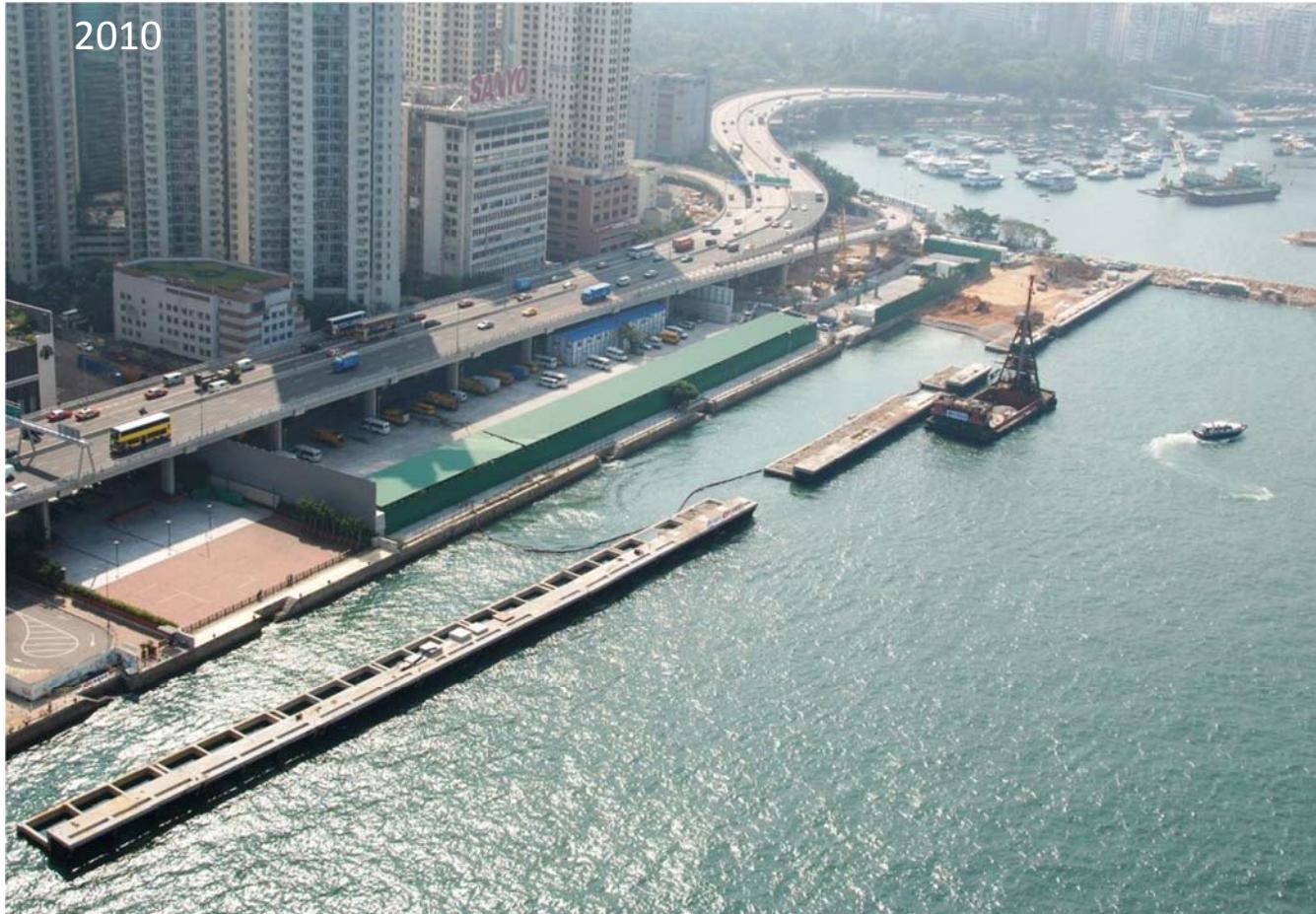
2015



Image © 2016 DigitalGlobe



2010

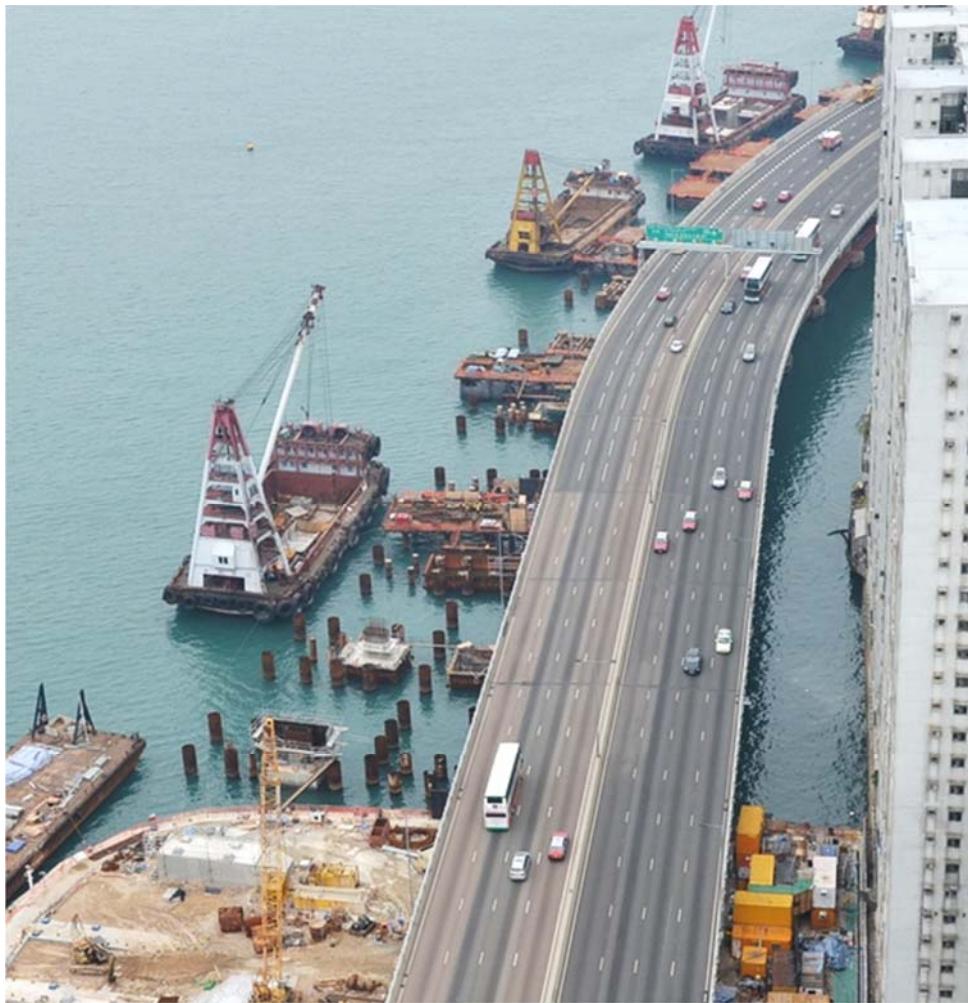


2010

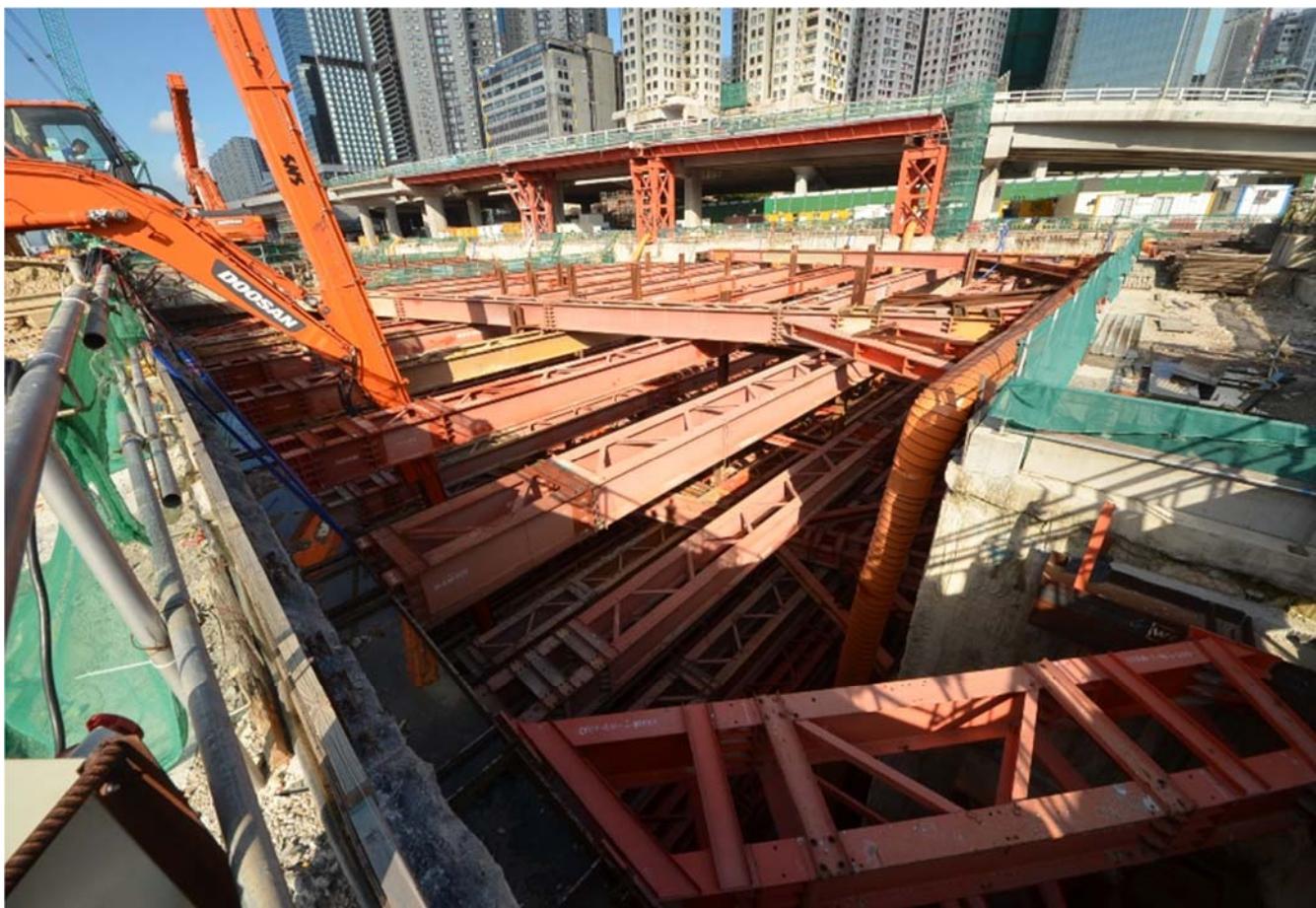


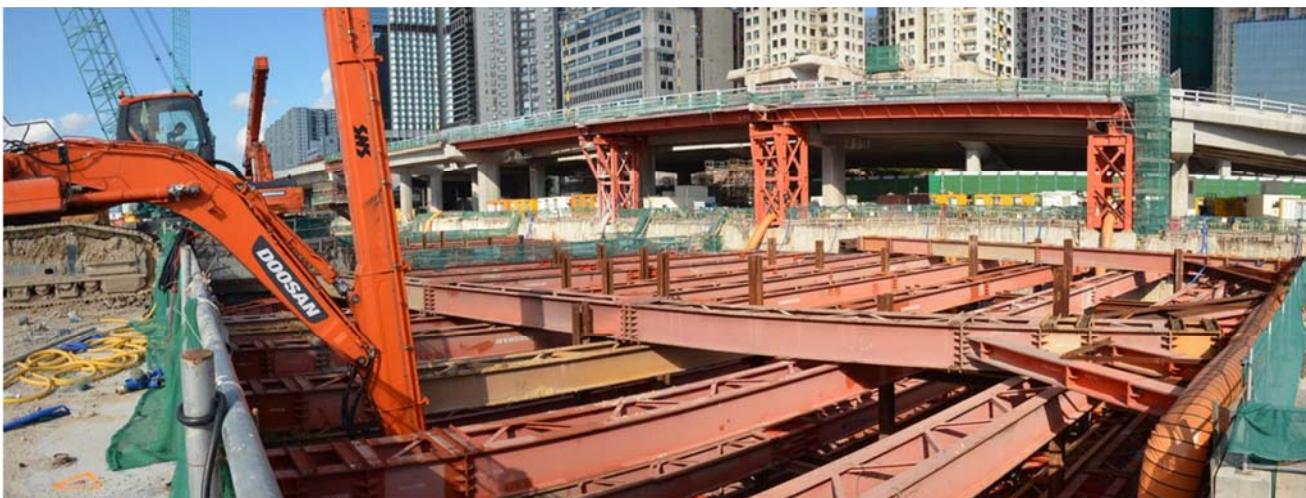
2011

















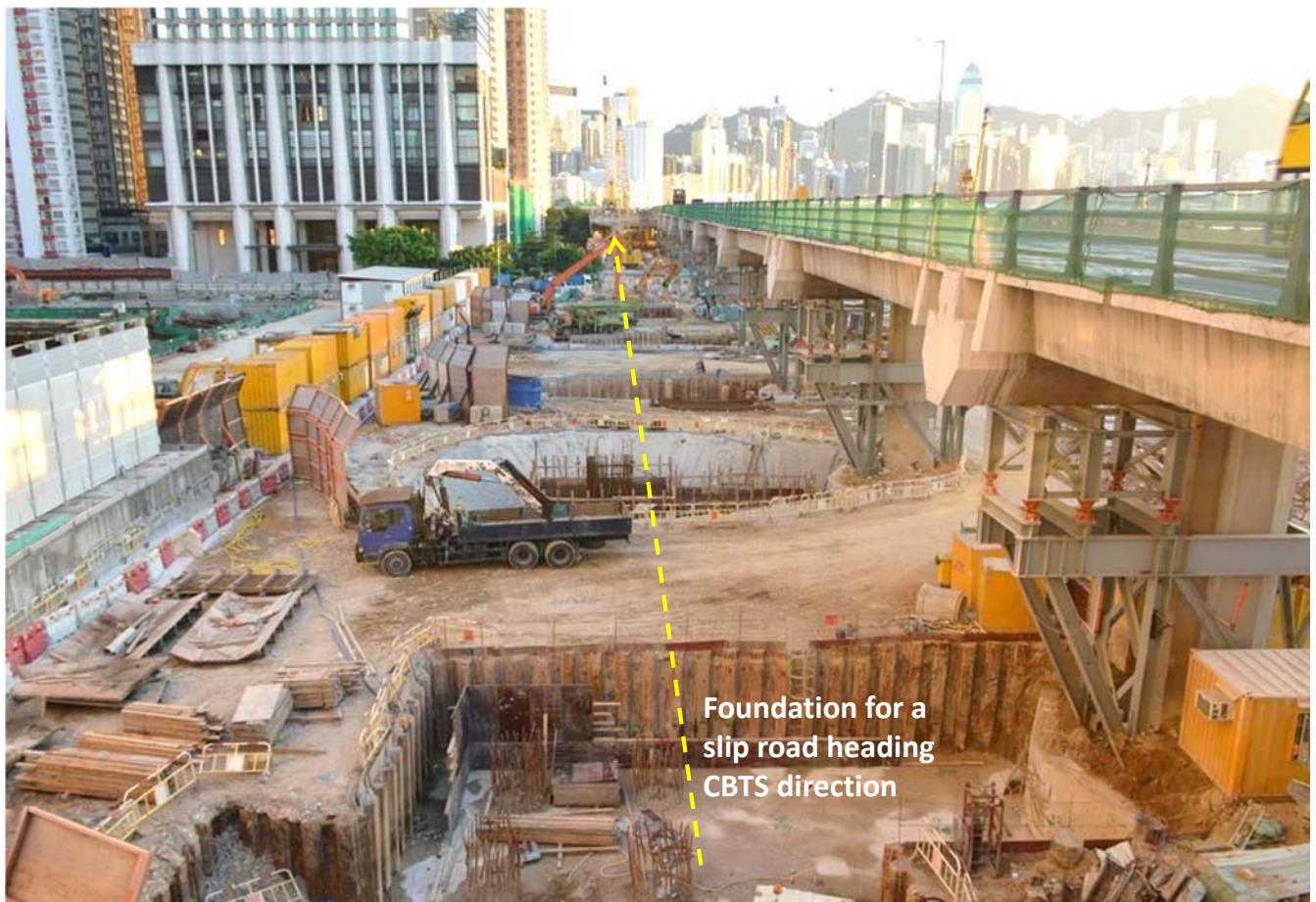
Temporary support for the re-aligned pier head for the servicing Island Eastern Corridor

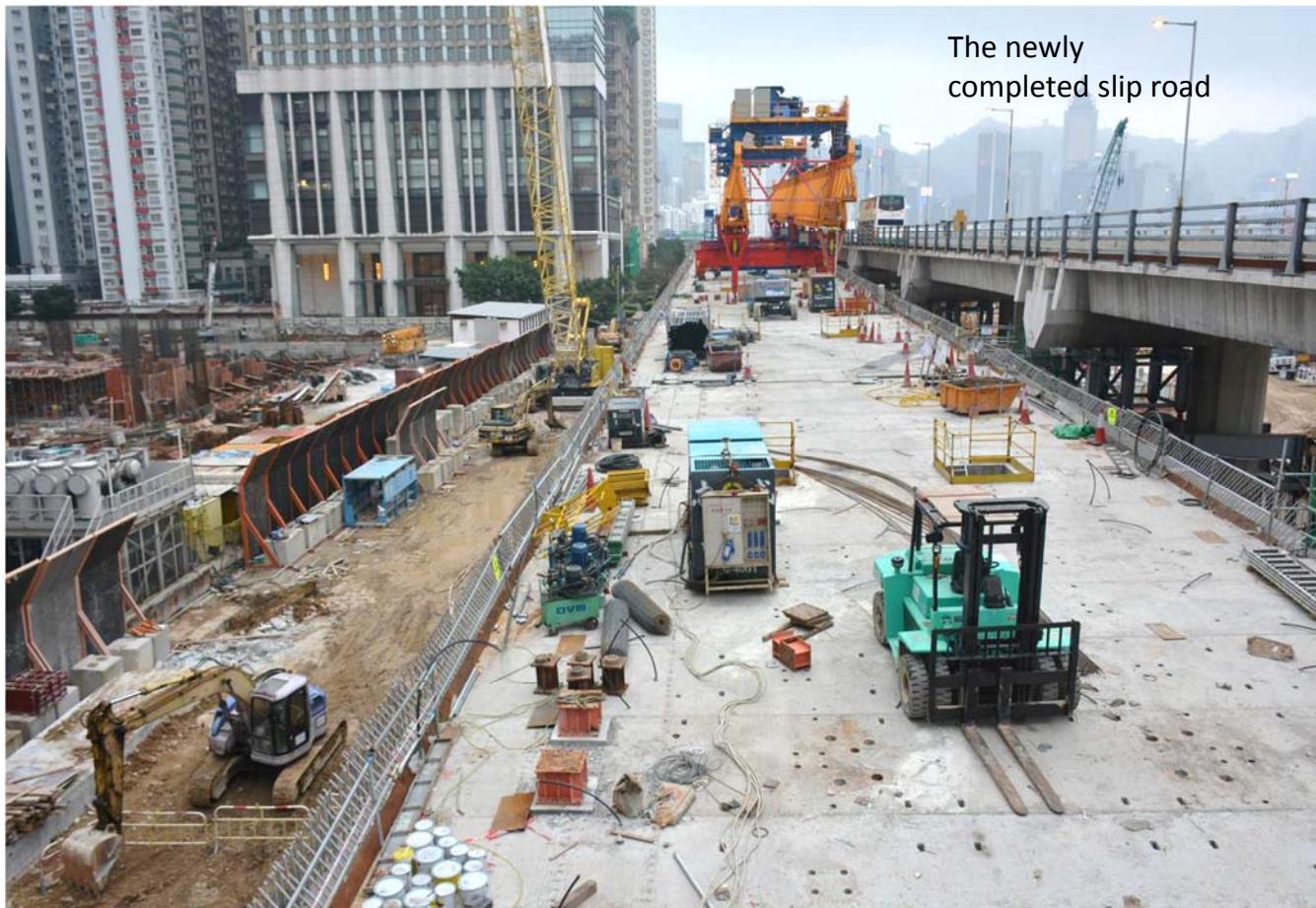


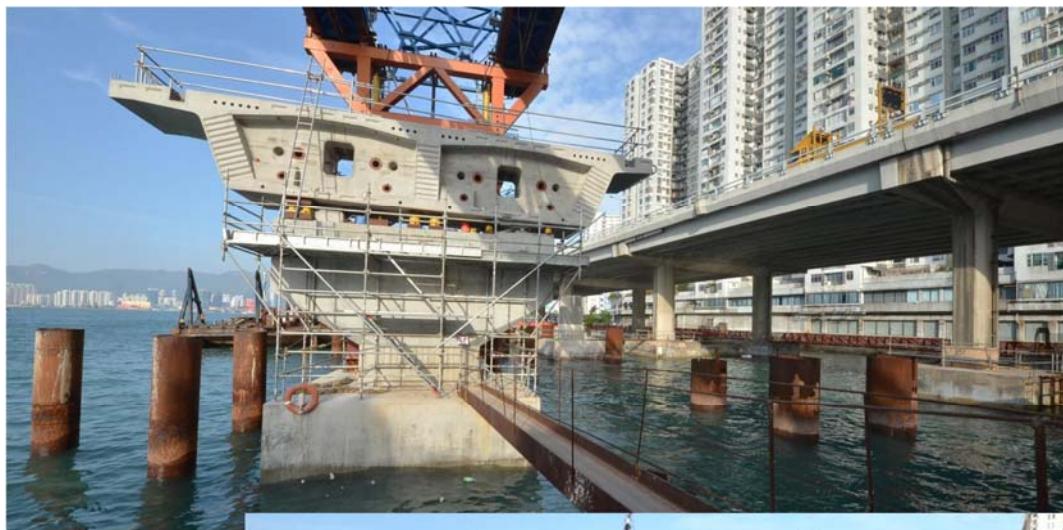




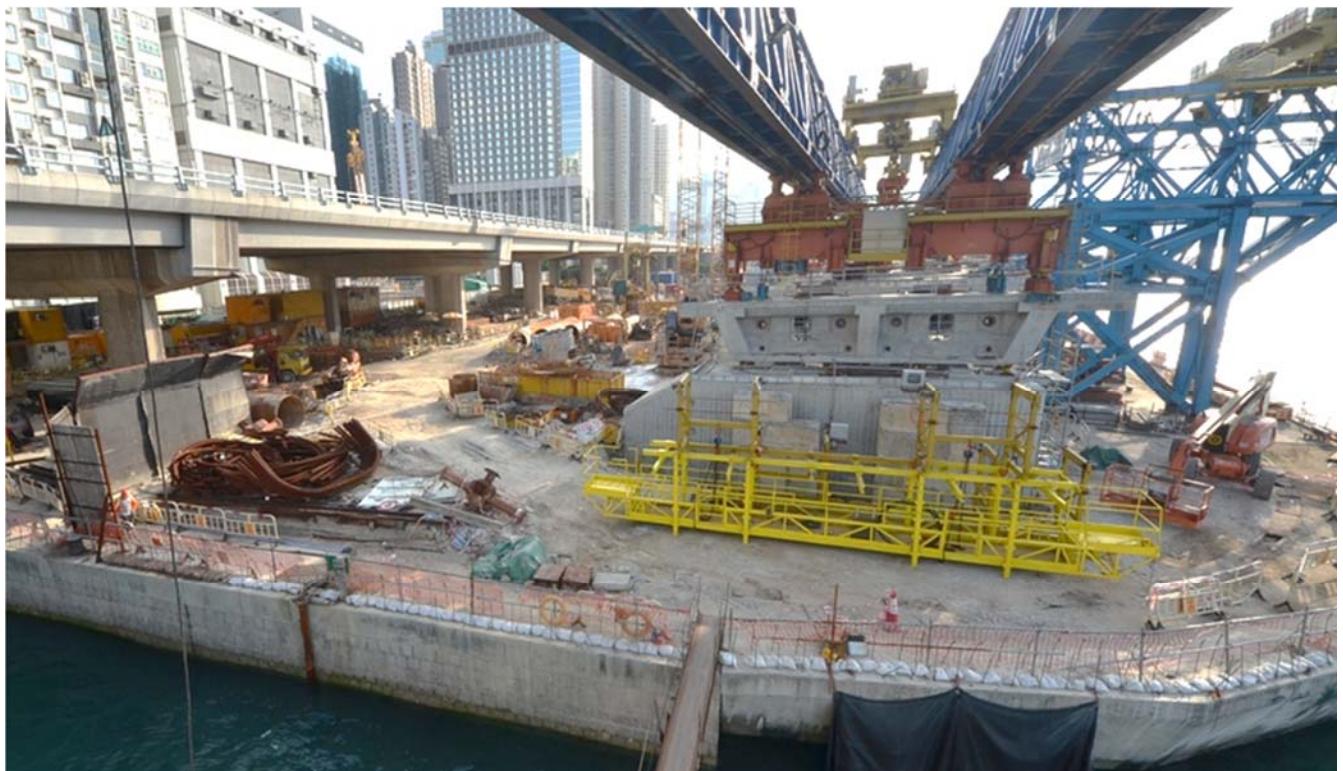
The two sets of launching gantry used in the North Point Interchange section







Construct the section of carriageway inside the harbor

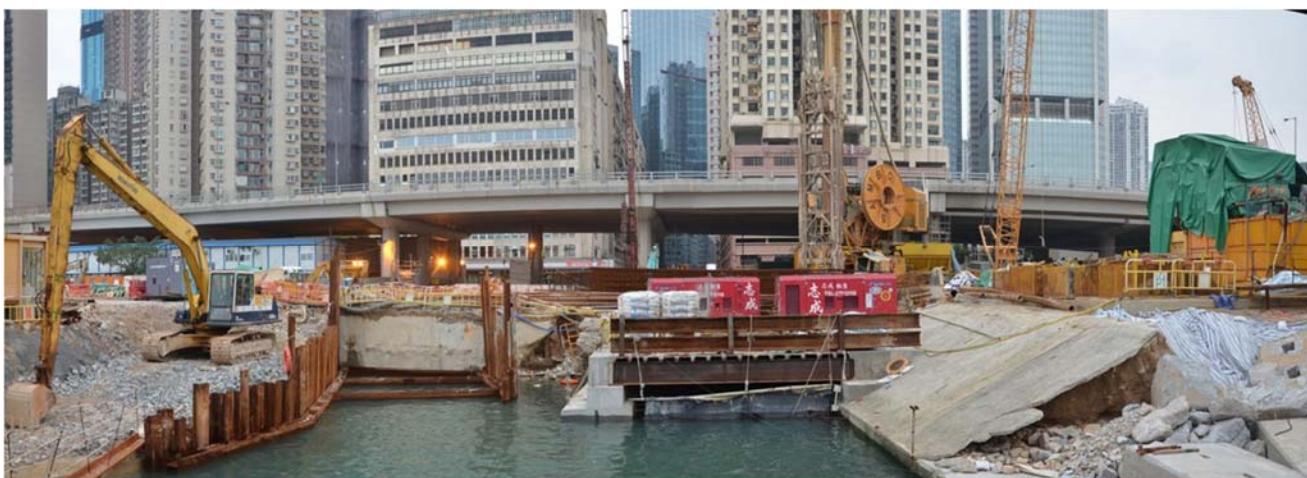


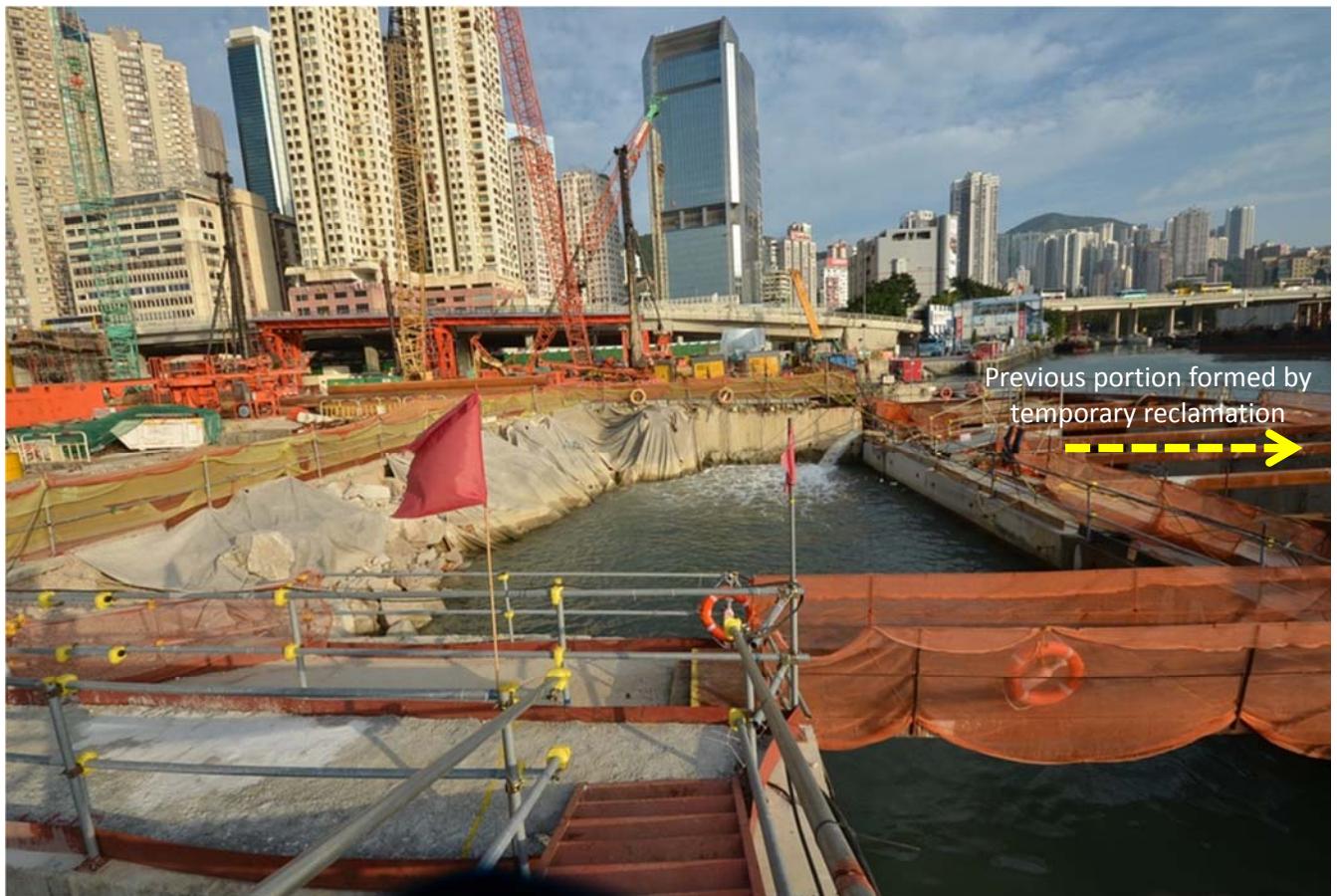
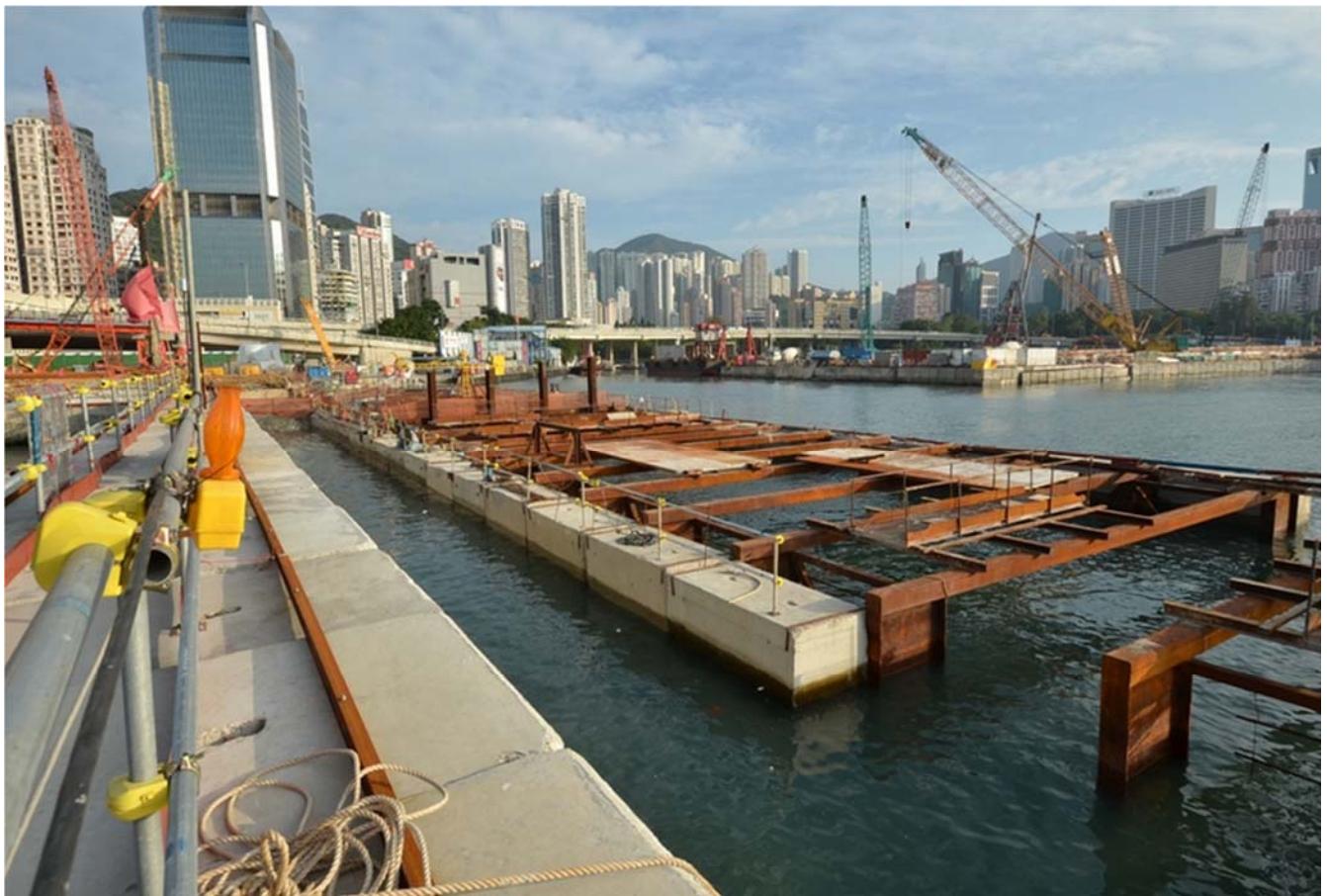
The boundary of North Point Reclamation for the Central-Wanchai Bypass



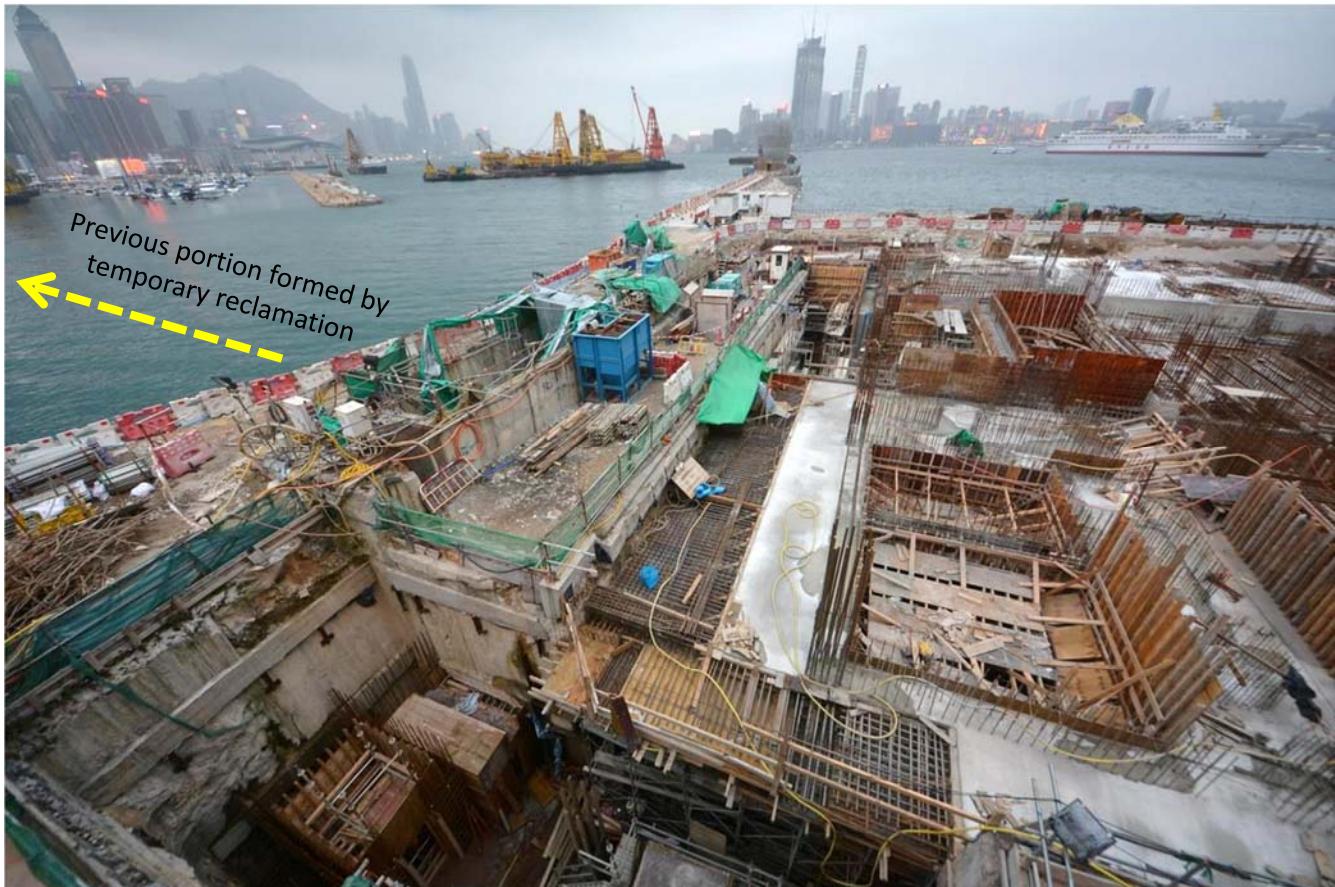


Work with the extension
of the storm water outfall





The connecting portion between two phases of tunnel construction



The connecting portion between two phases of tunnel construction

End of Presentation