

Appendix B

Construction Programme

CONTRACT NO. HY2017/10

NORTHERN TUNNEL CONNECTION BUILDING E&M WORKS

THREE MONTHLY PROGRAMME AS OF 20 Dec 2019

P 1	Date	Revision	Checked	Approved
	20-Dec-19			

ID	Activity	Duration (Days)	Duration % Complete	Start	Finish	Total Float	2018												2019												2020															
							May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec								
ADB-EMD115	Authorities Review and Comment of Electrical Loading Demand Calculation	56	50%	27-Aug-18 A																																										
ADB-EMD1135	Authorities Review and Comment of Generator Calculation	56	50%	09-Aug-18 A																																										
Fire Service System																																														
ADB-EMD1155	Authorities Review and Comment of FS Pump Head Calculation	56	50%	13-Aug-18 A																																										
ADB-EMD1175	Authorities Review and Comment of Sprinkler Pump Head Calculation	56	50%	13-Aug-18 A																																										
ADB-EMD1195	Authorities Review and Comment of FM200 System Design Calculation	56	50%	13-Aug-18 A																																										
Plumbing & Drainage System																																														
ADB-EMD1215	Authorities Review and Comment of Pump Head Calculation	56	50%	25-Aug-18 A																																										
ADB-EMD1235	Authorities Review and Comment of Pressure Vessel Calculation	56	50%	25-Aug-18 A																																										
ADB-EMD1255	Authorities Review and Comment of Hot water system capacity calculation	56	50%	25-Aug-18 A																																										
North Ventilation Building																																														
MVAC System																																														
NVB-EMD1035	Authorities Review and Comment of Mechanical Ventilation Capacity Calculation	56	50%	26-Sep-18 A																																										
Electrical System																																														
NVB-EMD1055	Authorities Review and Comment of HV Electrical Loading Calculation	56	50%	26-Sep-18 A																																										
NVB-EMD1075	Authorities Review and Comment of UPS and Battery Capacity Calculations	56	50%	17-Aug-18 A																																										
NVB-EMD1095	Authorities Review and Comment of Electrical Loading Demand Calculation	56	50%	03-Sep-18 A																																										
NVB-EMD1115	Authorities Review and Comment of Generator Calculation	56	50%	17-Aug-18 A																																										
Fire Service System																																														
NVB-EMD1135	Authorities Review and Comment of FS Pump Head Calculation	56	50%	01-Aug-18 A																																										
NVB-EMD1155	Authorities Review and Comment of Sprinkler Pump Head Calculation	56	50%	14-Aug-18 A																																										
NVB-EMD1175	Authorities Review and Comment of FM200 System Design Calculation	28	50%	13-Aug-18 A																																										
Plumbing & Drainage System																																														
NVB-EMD1305	Authorities Review and Comment of Drainage Sump Pumps and Pump Pits Calculation	56	50%	07-Aug-18 A																																										
Maintenance Depot																																														
MVAC System																																														
MD-EMD1015	Authorities Review and Comment of AC Cooling Capacity Calculation	56	50%	17-Aug-18 A																																										
Electrical System																																														
MD-EMD1075	Authorities Review and Comment of Electrical Loading Demand Calculation	56	50%	27-Aug-18 A																																										
MD-EMD1095	Authorities Review and Comment of Generator Calculation	56	50%	06-Oct-18 A																																										
Fire Service System																																														

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THREE MONTHLY PROGRAMME AS OF 20 Dec 2019

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VU-EMD1025	Authorities Review and Comment of Foam system design calculation	56	50%	09-Aug-18 A																																								
Plumbing & Drainage System																																												
VU-EMD1045	Authorities Review and Comment of Pump Head Calculation	56	50%	27-Sep-18 A																																								
Tunnel Lighting System																																												
VU-EMD1145	Authorities Review and Comment of Design Proposal of Tunnel Lighting System (TLS)	56	50%	29-Aug-18 A																																								
VU-EMD1165	Authorities Review and Comment of Tunnel Lighting Lux Calculation	56	50%	31-Dec-18 A																																								
Tunnel																																												
Fire Service System																																												
TUN-EMD1035	Authorities Review and Comment of Foam system design calculation	56	50%	09-Aug-18 A																																								
TUN-EMD1115	Authorities Review and Comment of FS Pump Head Calculation	56	50%	11-Jan-19 A																																								
TUN-EMD1135	Authorities Review and Comment of Sprinkler Pump Head Calculation	56	50%	25-Jan-19 A																																								
Plumbing & Drainage System																																												
TUN-EMD1185	Authorities Review and Comment of Drainage Sump Pumps and Pump Pits Calculation	56	50%	27-Sep-18 A																																								
CCMS, TCS and ELV System																																												
ELV-EMD1015	Authorities Review and Comment of System Design for Toll Control system	56	50%	27-Jul-18 A																																								
ELV-EMD1035	Authorities Review and Comment of System Design for CMCS	56	50%	26-Sep-18 A																																								
ELV-EMD1055	Authorities Review and Comment of System Design for other ELV systems	56	50%	02-Oct-18 A																																								
Major Material Submission & Approval																																												
GEN-EMM1020	Authorities Review and Comment of Technical Info. - Miscellaneous 1st fix Materials/ Equipment	28	50%	31-May-18 A																																								
GEN-EMM1050	Authorities Review and Comment of Technical Info. - Miscellaneous 2nd fix Materials/ Equipment	28	50%	20-May-18 A																																								
GEN-EMM1080	Authorities Review and Comment of Technical Info. - Miscellaneous final fix Materials/ Equipment	28	50%	02-Jul-18 A																																								
MVAC System																																												
MVAC-EMM1015	Authorities Review and Comment of Technical Info. - Chiller	56	50%	14-Jun-18 A																																								
MVAC-EMM1035	Authorities Review and Comment of Technical Info. - Chilled Water Pump	56	50%	12-Jun-18 A																																								
MVAC-EMM1075	Authorities Review and Comment of Technical Info. - Computer Room AC (CRAC) Unit	56	50%	19-Jul-18 A																																								
MVAC-EMM1095	Authorities Review and Comment of Technical Info. - AHU & PAU	56	50%	10-Sep-18 A																																								
MVAC-EMM1115	Authorities Review and Comment of Technical Info. - Staircase Pressurization Fan	56	50%	17-Jul-18 A																																								
Electrical System																																												
ELE-EMM1075	Authorities Review and Comment of Technical Info. - HV Cables	56	50%	17-Sep-18 A																																								
ELE-EMM1155	Authorities Review and Comment of Technical Info. - UPS and Battery	28	50%	26-Nov-18 A																																								
ELE-EMM1175	Authorities Review and Comment of Technical Info. - MCB & MCCB & Distribution Board	28	50%	04-Dec-18 A																																								
ELE-EMM1225	Authorities Review and Comment of Technical Info. - PV System	56	50%	05-Mar-19 A																																								

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P 5	Date	Revision	Checked	Approved
20-Dec-19				

ID	Activity	Duration (Days)	Duration % Complete	Start	Finish	Total Float	2018												2019												2020																		
							May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep														
	CCMS and ELV System																																																
	SCB-MD1155	Shipping to HK - CMCS Equipment	14	100%	30-Oct-19 A																																												
	SCB-MD1160	Manufacture & Delivery to HK - other ELV Equipment	83	93.98%	27-Jun-19 A																																												
	Custom & Excise Department Building																																																
	Electrical System																																																
	CEDB-MD1025	Shipping to HK - Generator	28	100%	11-Nov-19 A																																												
	CEDB-MD1035	Shipping to HK - UPS and Battery	42	35%	21-Aug-19 A																																												
	CEDB-MD1045	Shipping to HK - LV Switchboard	14	0%	09-Nov-19 A																																												
	CEDB-MD1050	Manufacture & Delivery to HK - LV Cables	120	100%	20-Nov-18 A																																												
	CEDB-MD1060	Manufacture & Delivery to HK - MCB & MCCB and Distribution Board	38	81.58%	20-Jun-19 A																																												
	MVAC System																																																
	CEDB-MD1010	Manufacture & Delivery to HK - AHU & PAU	60	28.33%	20-Jul-19 A																																												
	Fire Service System																																																
	CEDB-MD1090	Manufacture & Delivery to HK - FM200	120	65%	20-Jul-19 A																																												
	CEDB-MD1120	Manufacture & Delivery to HK - LMCP (FS)	51	49.02%	20-Jun-19 A																																												
	Plumbing & Drainage System																																																
	CEDB-MD1080	Manufacture & Delivery to HK - Water Pump	90	71.11%	29-Mar-19 A																																												
	CCMS and ELV System																																																
	CEDB-MD1175	Shipping to HK - CMCS Equipment	14	50%	30-Oct-19 A																																												
	CEDB-MD1180	Manufacture & Delivery to HK - other ELV Equipment	83	93.98%	21-Sep-19 A																																												
	Lift System																																																
	CEDB-MD1000	Manufacture & Delivery to HK - Lift System	124	88.71%	20-Jul-19 A																																												
	Fire Services Department Building																																																
	Electrical System																																																
	FSDB-MD1005	Shipping to HK - Generator	28	100%	12-Nov-19 A																																												
	FSDB-MD1015	Shipping to HK - UPS and Battery	42	57.14%	21-Nov-19 A																																												
	FSDB-MD1020	Manufacture - LV Switchboard	86	100%	17-Apr-19 A																																												
	FSDB-MD1022	FAT - LV Switchboard	10	100%	09-Dec-19 A																																												
	FSDB-MD1025	Shipping to HK - LV Switchboard	14	50%	10-Dec-19 A																																												
	FSDB-MD1030	Manufacture & Delivery to HK - LV Cables	120	100%	20-Nov-18 A																																												
	FSDB-MD1040	Manufacture & Delivery to HK - MCB & MCCB and Distribution Board	60																																														

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P 7	Date	Revision	Checked	Approved
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P 8	Date	Revision	Checked	Approved
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P 10	Date	Revision	Checked	Approved
	20-Dec-19			

ID	Activity	Duration (Days)	Duration % Complete	Start	Finish	Total Float	2018						2019						2020																
							May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
EU130	Equipment Start-up T&C for FSI	12	0%	05-Feb-20																															
EU135	Individual E&M System T&C for FSI	42	0%	19-Feb-20																															
VU110	Jet Fans installation	24	80%	26-Sep-19 A																															
VU140	Dampers installation	24	0%	27-Dec-19																															
VU180	Cladding Works	25	75%	16-Aug-19 A																															
Plant Room																																			
E&M Works																																			
EPR130	E&M Installation	90	90%	03-Jan-19 A																															
EPR150	Equipment Start-up T&C for FSI	6	0%	12-Feb-20																															
EPR153	Individual E&M System T&C for FSI	18	0%	19-Feb-20																															
EPR155	Integrated T&C for FSI	6	0%	11-Mar-20																															
EPR160	Non-Essential T&C	30	0%	18-Mar-20																															
VU160	Pressurization Fans Installation	24	80%	02-Oct-19 A																															
Deck Void																																			
Bridge H1, G1, G2																																			
DV120	Electrical Installation - Bridge H1	20	100%	31-Oct-19 A																															
DV130	Electrical Installation - Bridge G1	20	100%	31-Oct-19 A																															
DV140	Electrical Installation - Bridge G2	20	100%	31-Oct-19 A																															
DV150	T&C for Electrical Installation	12	50%	28-Nov-19 A																															
TD1, TD2, RB_W																																			
DV190	Electrical Installation - Bridge TD1	20	100%	19-Oct-19 A																															
DV200	Electrical Installation - Bridge TD2	20	100%	12-Sep-19 A																															
DV210	Electrical Installation - Bridge RB_W	20	90%	07-Nov-19 A																															
DV220	T&C for Electrical Installation	12	50%	28-Nov-19 A																															
Approach Roads																																			
Under Portions IX, XI, XX																																			
AR130	Cabling works - Portion IX	40	45%	03-Oct-19 A																															
AR140	Road lighting installation & termination - Portion IX	25	45%	31-Oct-19 A																															
AR150	T&C of Roading Lighting	30	0%	31-Dec-19																															
Under Portion X																																			
AR190	Road lighting installation & termination in portion X	90	90%	27-Aug-19 A																															
AR200	T&C of Roading Lighting in portion X	30	0%	20-Dec-19																															
Key Date 6B - E&M Works for South Vent Duct, Tunnel, and Approach Roads																																			
E&M Works																																			
SVD135	Access to Portions IVa (ML03)	0	100%	30-Nov-19 A																															
SVD140	Access to Portions Vd	0	0%	06-Feb-20																															
Ventilation Ducts																																			
SVD-1000	Cable Containment Installation	8	0%	20-Dec-19																															
SVD-1010	Damper Installation	8	0%	20																															

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P 13	Date	Revision	Checked	Approved
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NORTHERN TUNNEL CONNECTION BUILDING E&M WORKS

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P 14	Date	Revision	Checked	Approved
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NORTHERN TUNNEL CONNECTION BUILDING E&M WORKS

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NORTHERN TUNNEL CONNECTION BUILDING E&M WORKS

THREE MONTHLY PROGRAMME AS OF 20 Dec 2019

P 16	Date	Revision	Checked	Approved
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NORTHERN TUNNEL CONNECTION BUILDING E&M WORKS

THREE MONTHLY PROGRAMME AS OF 20 Dec 2019

P 17	Date	Revision	Checked	Approved
	20-Dec-19			

ID	Activity	Duration (Days)	Duration % Complete	Start	Finish	Total Float	2018												2019												2020												
							May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep								
Key Date 10 - FSD Building Structure & E&M Works																																											
ABWF Works																																											
AFSD1010	Door and Window Frames	19	52%	21-Oct-19 A																																							
AFSD1020	ABWF Works to Plant Rooms G/F	56	90%	10-Sep-19 A																																							
AFSD1021	ABWF Works to Plant Rooms 1/F	56	90%	21-Oct-19 A																																							
AFSD1030	ABWF Works to Office and Corridors G/F	124	90%	10-Sep-19 A																																							
AFSD1031	ABWF Works to Office and Corridors 1/F	124	90%	21-Oct-19 A																																							
AFSD1040	ABWF Works to Toilets G/F	136	90%	10-Sep-19 A																																							
AFSD1050	Waterproofing and Roofing	52	100%	21-Oct-19 A																																							
AFSD1060	External Cladding and Wall Plastering	101	60%	02-Oct-19 A																																							
E&M Works																																											
Installation																																											
G/F																																											
FSDB-EMGF1010	E&M Installation - 1st fix - G/F	40	40%	04-Nov-19 A																																							
FSDB-EMGF1020	E&M Installation - 2nd fix - G/F	40	5%	02-Dec-19 A																																							
FSDB-EMGF1030	E&M Installation - Final fix - G/F	30	0%	09-Mar-20																																							
FSDB-EMGF1040	ABWF Works ready for E&M Mobilization to CLP TX Room - G/F	0	0%	20-Dec-19																																							
FSDB-EMGF1050	E&M Installation - CLP Tx Room - G/F	18	80%	04-Nov-19 A																																							
FSDB-EMGF1060	Inspection & Handover to CLP	6	0%	24-Dec-19																																							
FSDB-EMGF1070	Installation by CLP - CLP Tx Room - G/F	82	0%	03-Jan-20																																							
FSDB-EMGF1120	E&M Installation - Electrical Plant Rooms - G/F	60	15%	18-Nov-19 A																																							
FSDB-EMGF1140	E&M Installation - FS Plant Rooms - G/F	50	15%	18-Nov-19 A																																							
FSDB-EMGF1150	ABWF Works ready for E&M Mobilization to Elv Plant Rooms - G/F	0	100%	02-Dec-19 A																																							
FSDB-EMGF1160	E&M Installation - Elv Plant Rooms - G/F	50	5%	02-Dec-19 A																																							
1/F																																											
FSDB-EM1F1000	ABWF Works ready for E&M Mobilization to General Areas - 1/F	0	0%	24-Dec-19																																							
FSDB-EM1F1010	E&M Installation - 1st fix - 1/F	40	0%	24-Dec-19																																							
FSDB-EM1F1020	E&M Installation - 2nd fix - 1/F	39	0%	15-Feb-20																																							
FSDB-EM1F1040	ABWF Works ready for E&M Mobilization to Emergency Generator & Fuel Tank Rooms - 1/F	0	0%	24-Dec-19																																							
FSDB-EM1F1050	E&M Installation - Emergency Generator & Fuel Tank Rooms - 1/F	60	0%	24-Dec-19																																							
FSDB-EM1F1060	ABWF Works ready for E&M Mobilization to LV Switch Room - 1/F	0	0%	24-Dec-19																																							
FSDB-EM1F1070	E&M Installation - LV Switch Room - 1/F	55	0%	27-Dec-19																																							
FSDB-EM1F1080	Cable laying - LV Switch Room - from 1/F	41	0%	05-Mar-20																																							
FSDB-EM1F1110	ABWF Works ready for E&M Mobilization to FS Plant Rooms - 1/F	0	0%	24-Dec-19																																							

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P 19	Date	Revision	Checked	Approved
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NORTHERN TUNNEL CONNECTION BUILDING E&M WORKS

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P 20	Date	Revision	Checked	Approved
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NORTHERN TUNNEL CONNECTION BUILDING E&M WORKS

THREE MONTHLY PROGRAMME AS OF 20 Dec 2019

P 21	Date	Revision	Checked	Approved
	20-Dec-19			