AECOM

Environmental Protection Department

Contract No. HY/2012/06

Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange

Quarterly EM&A Report for February 2014 to April 2014

[05/2014]

	Name	Signature
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47/F Hopewell Centre
183 Queen's Road East
Wanchai, Hong Kong

14 May 2014
By Fax (2805 5028) & Post

Dear Sir,

Attn: Mr. James Penny

EM&A for Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling Stage 2 (between Tai Hang to Wo Hop Shek Interchange)
Environmental Permit No. EP-324/2008/B
Quarterly EM&A Summary Report for February 2014 to April 2014 for the portion of Stage 2 works under Contract No. HY/2012/06

We refer to the Quarterly EM&A Summary Report for February 2014 to April 2014 for the Project received on 12, 13 and 14 May 2014 submitted by ET via email. We confirm we have no comment.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED

Terence Kong
Independent Environmental Checker

c.c. HyD – Mr. Chung Lok Chin (Fax: 2714 5198) / Ms. Jackei Yin (Fax: 2761 4864)
AECOM – Mr. Y W Fung (Fax:2891 0305)

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EXECUTIVE SUMMARY

The proposed widening of Tolo Highway and Fanling Highway between Island House Interchange and Fanling (the Project) is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). An Environmental Impact Assessment (EIA) Report (the approved EIA Report) together with an Environmental Monitoring and Audit (EM&A) Manual (the approved EM&A Manual) were completed and approved under the EIAO on 14 July 2000 (Register Number: EIA-043/2000).

The objective of the Project "Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling" is to widen Tolo Highway and Fanling Highway to dual 4-lane carriageway in order to alleviate the current traffic congestion problems and to cope with the increasing transport demands to and from the urban areas and also cross boundary traffic.

The construction works for this Project will be delivered in 2 stages i.e. Stage 1 (between Island House Interchange and Tai Hang) and Stage 2 (between Tai Hang and Wo Hop Shek Interchange). Stage 2 would be implemented under two works contracts. Contract No. HY2012/06 "Widening of Fanling Highway – Tai Hang to Wo Hop Shek Interchange" and the entrusted portion to CEDD under Contract No. CV/2012/09 "Liantang/Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 3". This report focuses on Contract No. HY2012/06 "Widening of Fanling Highway – Tai Hang to Wo Hop Shek Interchange" in Stage 2 of the Project only.

Pursuant to the EP (EP-324/2008/A) Condition 2.7, the Capture Survey Trip Report for Ma Wat River Northern Meander (Version 2) for the Project was submitted on 24 December 2013 by the Environmental Team (ET) and verified by the Independent Environmental Checker (IEC) on 6 January 2014.

The construction phase of the Contract under the EP and the Environmental Monitoring and Audit (EM&A) programme of the contract commenced on 21 November 2013. The impact environmental monitoring and audit includes air quality and noise monitoring.

This report documents the findings of EM&A works conducted in the period between 1 February 2014 and 30 April 2014. As informed by the Contractor, construction activities in the reporting period were:-

- Site clearance;
- Ground investigation;
- Tree felling and transplantation;
- Piling works;
- Backfilling;
- Excavation;
- Pipe laying; and
- Retaining wall construction.

Reporting Change

There was no reporting change required in the reporting month.

Breaches of Action and Limit Levels for Air Quality

No exceedance of Action and Limit Level was recorded for 1-hour and 24-hour TSP monitoring in the reporting month.

Breaches of Action and Limit Levels for Noise

No Action Level exceedance of construction noise was recorded in the reporting month since no noise complaints related to 0700 – 1900 hours on normal weekdays was received and followed by the Environmental Team in the reporting month. No Limit Level exceedance of construction noise was recorded in the reporting month.

1 INTRODUCTION

1.1 Project Organization and Contacts of Key Management

1.1.1 The project organization structure is shown in Appendix A. The key personnel contact names and numbers are summarized in Table 1.1.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
ER (Hyder-Arup-Black & Veatch Joint Venture)	Chief Resident Engineer	Edwin Chung	6115 0818	2638 0950
IEC (Mott MacDonald Hong Kong Limited)	Independent Environmental Checker	Terence Kong	2828 5919	2827 1823
Contractor (China State Construction Engineering (Hong Kong) Limited)	Environmental Officer	Michael Tsang	9277 4956	2672 2501
		C C Chow	9679 6315	2672 2501
ET (AECOM Asia Company Limited)	ET Leader	Y W Fung	3922 9393	3922 9797

1.2 Programme

1.2.1 The Construction Programme is shown in Appendix B.

1.3 Summary of Construction Works

1.3.1 Details of the construction works carried out by the Contractor in this reporting period are listed below:-

- Site clearance;
- Ground investigation;
- Tree felling and transplantation;
- Piling works;
- Backfilling;
- Excavation;
- Pipe laying; and
- Retaining wall construction.

1.3.2 The general layout plan of the Project site showing the contract areas is shown in Figure 1.1.

1.3.3 The environmental mitigation measures implementation schedule are presented in Appendix C.

2 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

2.1 Monitoring Parameters

2.1.1 The updated EM&A Manual has designated 1 air quality monitoring station and 2 noise monitoring stations to monitor environmental impacts on air quality and noise due to Stage 2 of the Project.

2.1.2 The updated EM&A Manual also requires environmental site inspections for air quality, noise, water quality, chemical, waste management, ecology and landscape and visual impacts.

2.2 Monitoring Locations

2.2.1 For air quality monitoring, the monitoring station was set up at Fanling Government Secondary School, in accordance with updated EM&A Manual. The location is shown in Figure 1.2a.

2.2.2 For noise monitoring, the monitoring stations M2 and M3 were set up at West Tai Wo and Fanling Government Secondary School respectively in accordance with updated EM&A Manual. Figure 1.2a-b shows the locations of the monitoring stations.

2.3 Environmental Quality Performance Limits (Action/Limit Levels)

2.3.1 The environmental quality performance limits (i.e. Action/Limit Levels) of air quality monitoring were derived from the baseline air quality monitoring results at the monitoring station (AM2); while the environmental quality performance limits of noise monitoring were defined in the EM&A Manual.

2.3.2 The environmental quality performance limits are given in Appendix D.

2.4 Environmental Mitigation Measures

2.4.1 Relevant environmental mitigation measures were stipulated in the Particular Specification and EP for the Contractor to adopt. A list of environmental mitigation measures and their implementation statuses are given in Appendix C.

3 AIR QUALITY MONITORING

3.1.1 In accordance with the updated EM&A Manual, baseline 1-hour and 24-hour TSP levels at one air quality monitoring station was established. Impact 1-hour TSP monitoring was conducted for at least three times every 6 days, while impact 24-hour TSP monitoring was carried out for at least once every 6 days.

3.1.2 The weather was mostly sunny, with several fine, cloudy and rainy days in the reporting quarter. Weather information including the wind speed and wind direction is annexed in Appendix F. The information was obtained from the Hong Kong Observatory Tai Po and Tai Mei Tuk Automatic Weather Stations.

3.1.3 The monitoring results for 1-hour TSP and 24-hour TSP monitoring are summarized in Tables 3.1 and 3.2 respectively. Detailed impact air quality monitoring results are presented in Appendix E.

Table 3.1 Summary of 1-hour TSP Monitoring Results in the Reporting Period

Location	Average ($\mu g/m^3$)	Range ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
AM2 (Fanling Government Secondary School)	77.1	68.6 – 85.5	317.8	500

Table 3.2 Summary of 24-hour TSP Monitoring Results in the Reporting Period

Location	Average ($\mu g/m^3$)	Range ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
AM2 (Fanling Government Secondary School)	45.8	25.2 – 82.3	200.7	260

3.1.4 The major dust sources in the reporting period included construction activities from Stage 2 of the Project, as well as nearby traffic emissions.

3.1.5 All 1-hour and 24-hour TSP results were below the Action and Limit Level in the reporting quarter.

3.1.6 Detailed impact air quality monitoring results are presented in Appendix E.

4 NOISE MONITORING

4.1.1 In accordance with the EM&A Manual, impact noise monitoring was conducted for at least once per week during the construction phase of the Contract.

4.1.2 The monitoring results for construction noise are summarized in Table 4.1 and the monitoring data are provided in Appendix G.

Table 4.1 Summary of Construction Noise Monitoring Results in the Reporting Period

	Average (dB(A)) $L_{eq\ (30\ mins)}$	Range (dB(A)) $L_{eq\ (30\ mins)}$	Limit Level (dB(A)) $L_{eq\ (30\ mins)}$
M2*	68.3	64.9 – 69.8	75
M3#	65.2	62.1 – 69.6	65/70

*+3dB(A) Façade correction included
Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.

4.1.3 The major noise sources during the noise monitoring included nearby road traffic noise.

4.1.4 There was no noise complaint related to 0700 – 1900 hours on normal weekdays received and followed up by the ET in the reporting quarter. Hence, no Action Level exceedance was recorded.

4.1.5 No noise monitoring result exceeding the Limit Level was recorded at all monitoring stations in the reporting quarter.

4.1.6 The graphical plots of the trends of the monitoring results are provided in Appendix G.

5 ADVICE ON THE SOLID AND LIQUID WASTE MANAGEMENT STATUS

5.1.1 As advised by the Contractor, $80m^3$ of inert C&D material was disposed of as public fill to Tuen Mun 38 (of which $0m^3$ was broken concrete), while $315m^3$ of general refuse was disposed of at NENT landfill. 143kg of paper/cardboard packaging, 0kg of plastics and 0kg of metals were collected by recycling contractors in the reporting month. $80m^3$ and $19m^3$ of inert C&D materials were reused on site and reused in NENT for backfilling purpose respectively. 0kg of chemical wastes was collected by licensed contractors in the reporting period.

5.1.2 The actual amounts of different types of waste generated by the activities of the Project in the reporting quarter are shown in Table 5.1.

Table 5.1 Summary of Waste Flow Table

Waste Type	Actual Amount	Disposal/Reuse Locations
Inert C&D materials	80m^3 (of which 0m^3 was broken concrete)	Tuen Mun 38
General refuse	315m^3	NENT Landfill
Paper/cardboard packaging	143kg	Recycling Contractors
Plastics	0kg	Recycling Contractors
Metals	0kg	Recycling Contractors
C&D materials reused on site	80m^3	Site Area
C&D materials reused in NENT for backfilling	19m^3	NENT Landfill
Chemical wastes	0kg	Licensed Contractors

6 SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMIT

6.1.1 All 1-hour and 24-hour TSP monitoring results complied with the Action / Limit Levels in the reporting quarter.

6.1.2 For construction noise, no Action and Limit Level exceedance was recorded at all monitoring stations in the reporting quarter.

7 SUMMARY OF COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

7.1.1 One (1) air-and-odour-related complaint was received on 24 February 2014 and followed up by the Environmental Team in February 2014.

7.1.2 No notification of summons and successful prosecution was received in the reporting month.

7.1.3 The statistics on complaints, notifications of summons and successful prosecutions are summarized in Appendix H.

7.1.4 EPD referred an air-and-odour complaint on 24 February 2014. The complainant complained about the construction site located near the bus stop in Fui Sha Wai, Tai Hang, Tai Wo Service Road West. When construction works were carried out, odour, white smoke and dust were generated. The complainant asked for follow-up actions.

7.1.5 The investigation and findings, and the recommended mitigation measures of the complaint are annexed in Appendix I.

7.1.6 A 24-hour complaint hotline at 6628 8366 has been established for the Project. The hotline number is displayed at the site entrances, fencings and project signboards, as well as printed on publications such as newsletters for the public.

8 COMMENTS, RECOMMENDATIONS AND CONCLUSIONS

8.1 Comments

8.1.1 According to the environmental site inspections performed in the reporting quarter, the following comments are made to the Contractor for precautionary and rectification purposes:

Air Quality Impact

- All vehicles should be washed to remove any dusty materials before leaving the site.

- Wheel washing facilities should be properly maintained to ensure properly functioning.
- Open stockpiles should be covered.

Construction Noise Impact

- Noisy operations should be oriented to a direction away from sensitive receivers as far as possible.

Water Quality Impact

- Stagnant water accumulated should be removed.

Chemical and Waste Management

- Empty chemical containers should be cleared and disposed of as chemical wastes.
- Drip trays should be provided to chemical containers.
- Chemicals should be labeled.

Landscape and Visual Impact

- Nil.

8.2 Recommendations

8.2.1 The impact air quality and noise monitoring programme ensures that any deterioration in environmental condition is readily detected and timely actions are taken to rectify any non-compliances. Assessment and analysis of monitoring results collected demonstrated the environmental acceptability of the Project. The weekly environmental site inspections ensure that all the environmental mitigation measures recommended in the ERR are effectively implemented.

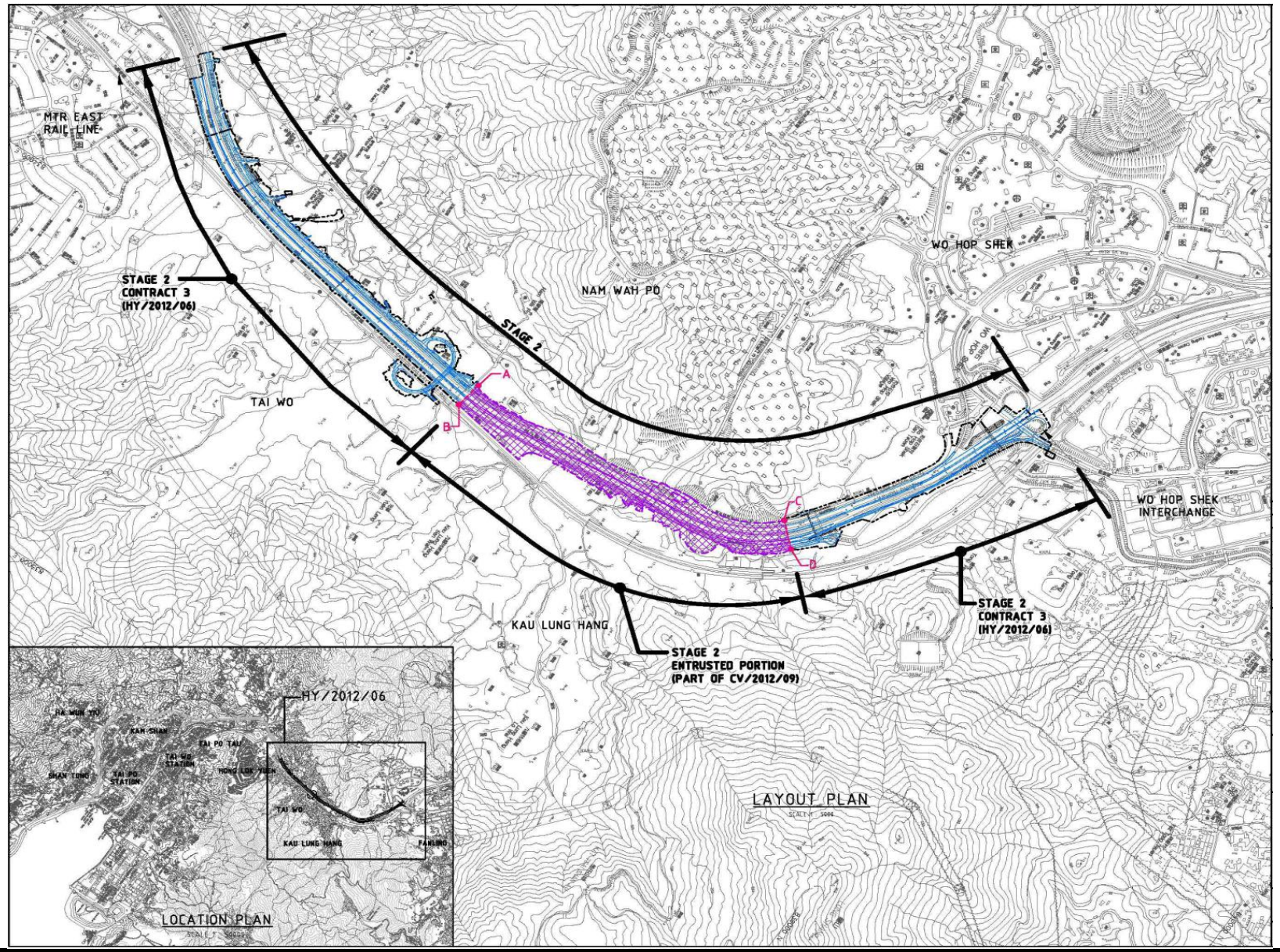
8.2.2 The EM&A programme effectively monitored the environmental impacts from the construction activities and no particular recommendations were advised for the improvement of the programme.

8.3 Conclusions

8.3.1 All 1-hour and 24-hour TSP monitoring results complied with the Action / Limit Levels in the reporting quarter. No Action and Limit Level exceedances for construction noise were recorded at all monitoring stations in the reporting quarter.

8.3.2 One (1) air-and-odour-related complaint was received, and no notification of summons and successful prosecution was received in the reporting month.

FIGURES



	EASTING	NORTHING
A	833867.6259	837386.5638
B	833945.6833	837375.1412
C	833721.8117	838310.5250
D	833782.3083	838375.1303

CONTRACT NO. HY/2012/06

WIDENING OF FANLING HIGHWAY

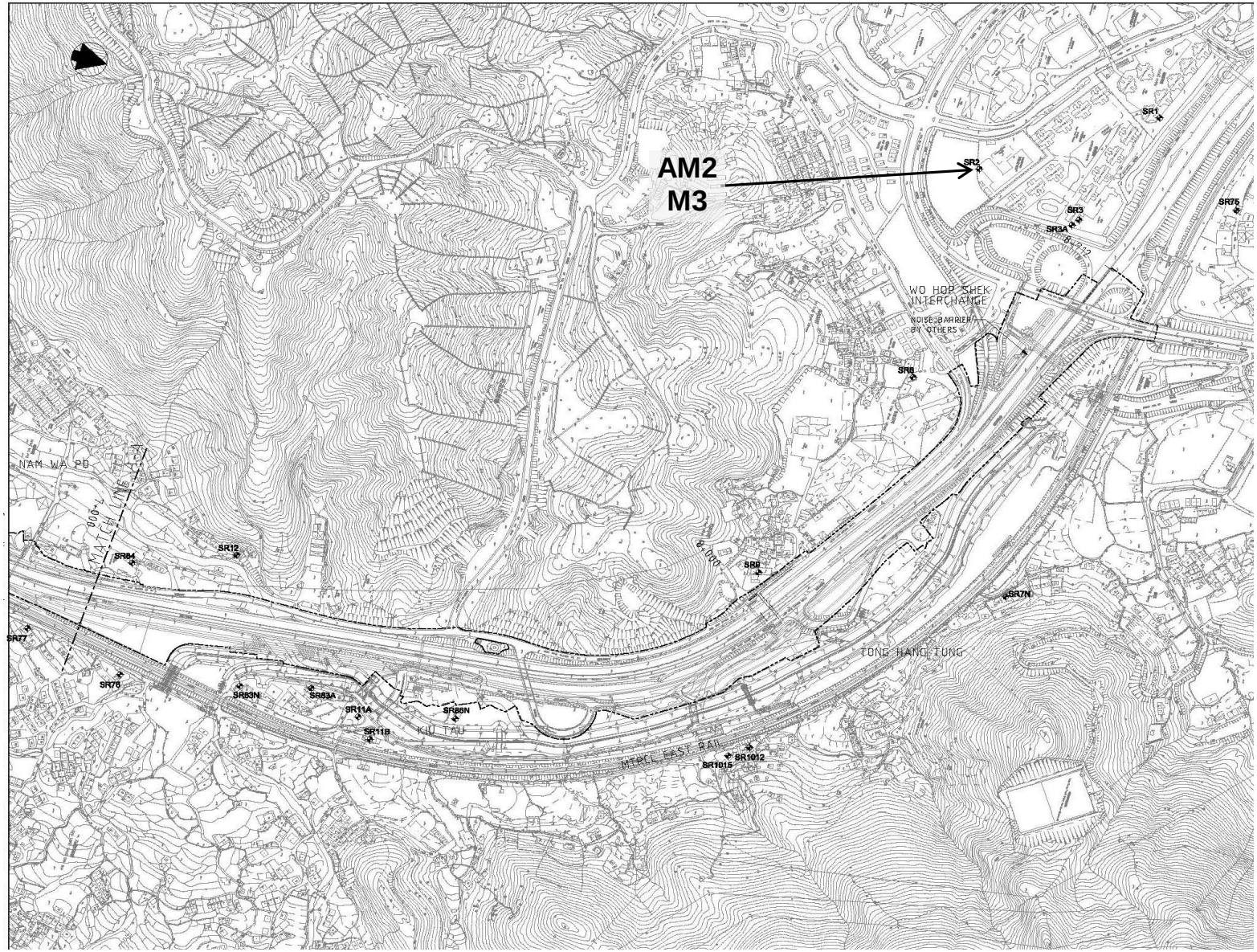
- TAI HANG TO WO HOP SHEK INTERCHANGE

AECOM

Layout Plan

Date: Dec 2013

Figure 1.1



CONTRACT NO. HY/2012/06

WIDENING OF FANLING HIGHWAY

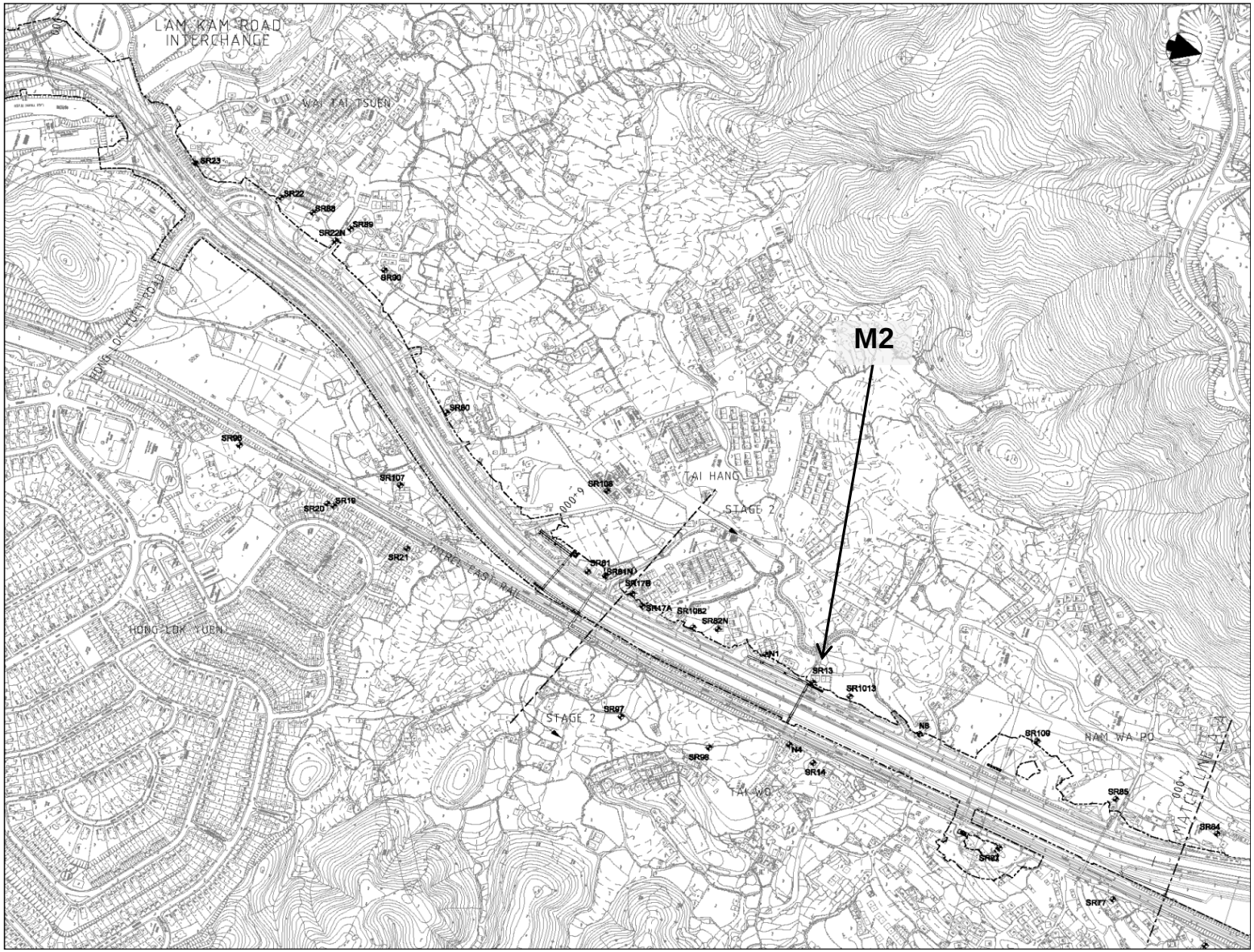
- TAI HANG TO WO HOP SHEK INTERCHANGE

AECOM

Locations of Monitoring Station

Date: Dec 2013

Figure 1.2a



CONTRACT NO. HY/2012/06

WIDENING OF FANLING HIGHWAY

- TAI HANG TO WO HOP SHEK INTERCHANGE

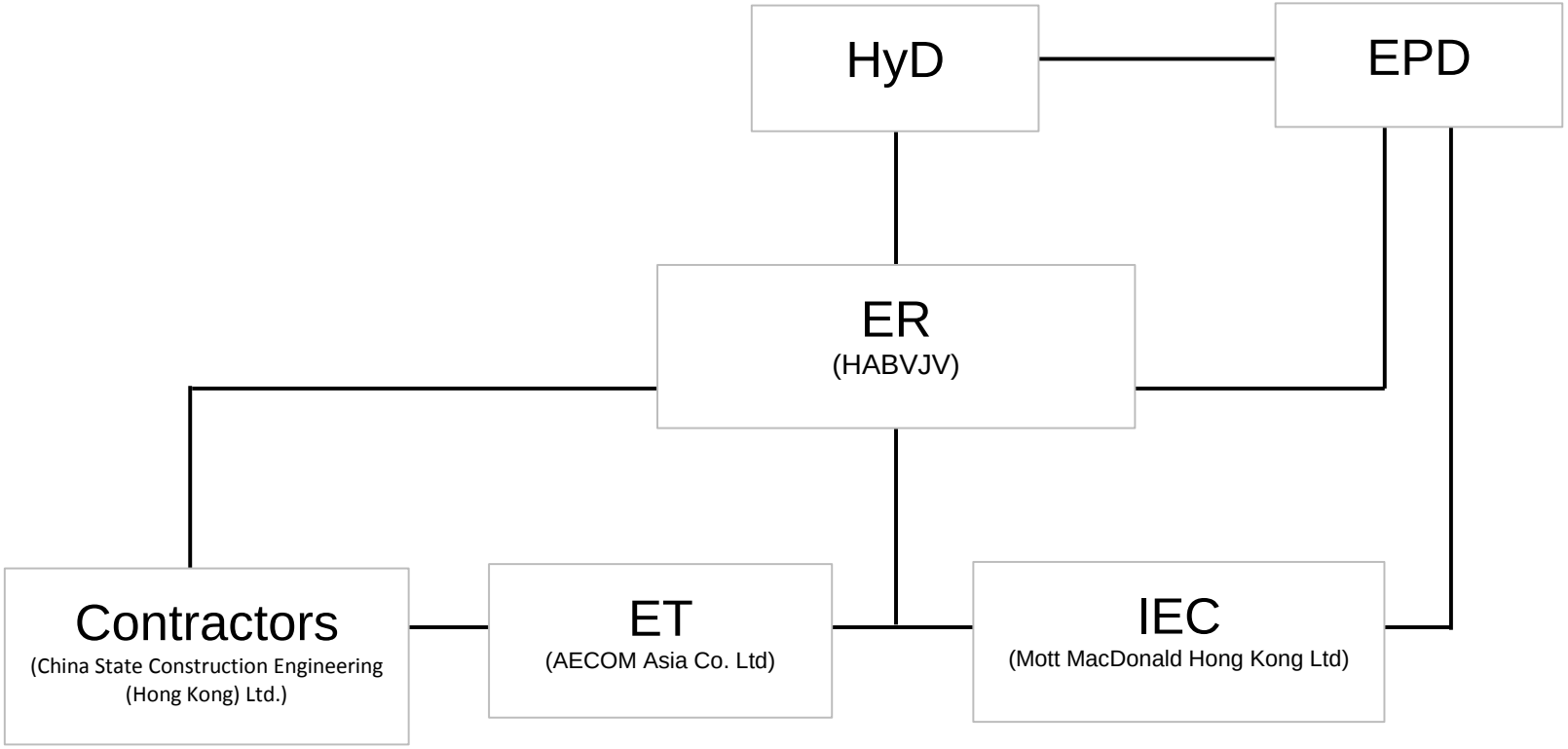
AECOM

Locations of Monitoring Station

Date: Dec 2013

Figure 1.2b

APPENDIX A
PROJECT ORGANIZATION STRUCTURE



CONTRACT NO. HY/2012/06
WIDENING OF FANLING HIGHWAY
- TAI HANG TO WO HOP SHEK INTERCHANGE

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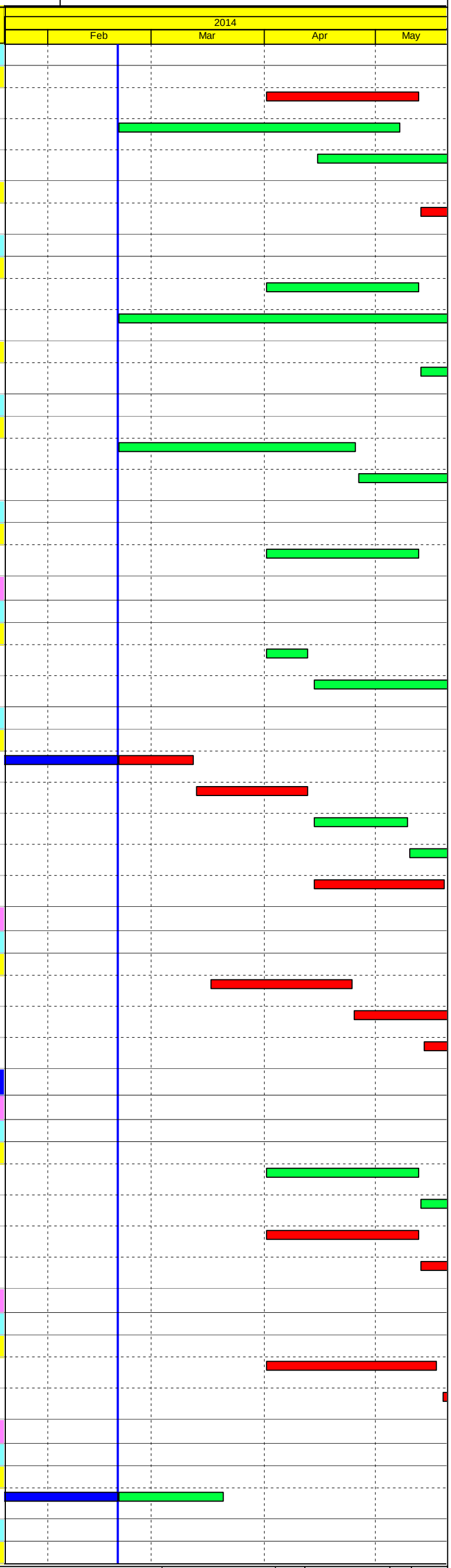
Project Organization Structure

Project No.: 60307376 **Date: Dec 2013** **Appendix A**

APPENDIX B
CONSTRUCTION PROGRAMMES

Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
Contract Condition							
General							
Contract Condition							
Contract Condition							
POSSA320	Site Area SA320 (0d)	0%	0	0	01-Apr-14*		0
POSSA320A	Site Area SA320A (120d)	0%	0	0	01-Apr-14*		0
POSSA320B	Site Area SA320B (0d)	0%	0	0	01-Apr-14*		0
POSSA322	Site Area SA322 (120d)	0%	0	0	01-Apr-14*		0
POSSA324	Site Area SA324 (180d)	0%	0	0	01-Apr-14*		0
POSSA325	Site Area SA325 (180d)	0%	0	0	01-Apr-14*		0
POSSA326	Site Area SA326 (180d)	0%	0	0	01-Apr-14*		0
POSSA327	Site Area SA327 (180d)	0%	0	0	01-Apr-14*		0
POSSA328	Site Area SA328 (90d)	0%	0	0	01-Apr-14*		0
POSSA329	Site Area SA329 (90d)	0%	0	0	01-Apr-14*		0
POSSA340	Site Area SA340 (0d)	0%	0	0	27-Feb-14*		0
POSSA343	Site Area SA343 (180d)	0%	0	0	27-Feb-14*		0
POSSA343A	Site Area SA343A (180d)	0%	0	0	27-Feb-14*		0
POSSA345	Site Area SA345 (0d)	0%	0	0	28-Feb-14*		0
ZONE 2 (Ch. 5880 to 6930)							
Noise Barrier Along TWSR-West and Laying New Utilities							
Site Clearance & Demolition of Existing Structure							
Demolition Work							
Z2.P2N.1242	Pending for design brief from Villager/ Engineer	40%	18	30	01-Jan-14 A	12-Mar-14	-10
Z2.P2N.1245	Method statement submission/ approval	0%	60	60	13-Mar-14	28-May-14	-10
NB47 (Ch.5880-5930)-TWSR West Side							
DSD Southern Trunk Sewer, Water Main Fire Main Works							
TSZ10250	Sheet Piling & Excavation(~6m below ground) (along NB47)	0%	18	18	01-Apr-14	25-Apr-14	-94
TSZ10260	DSD Trunk Sewer laying (along NB47)	0%	18	18	26-Apr-14	19-May-14	-94
NB48 (Ch.5995-6120)-TWSR West Side							
Noise Barrier Works							
NB00355	NB48 - Pre-drilling	0%	27	27	01-Apr-14	08-May-14	9
NB00360	NB48 (NB48/1-5 up to THFB) piling (0.19m -54no)	0%	81	81	09-May-14	13-Aug-14	9
NB49B (Ch.6215-6235)-TWSR West Side							
Noise Barrier Works							
NB00545	NB49B - Pre-drilling	0%	22	22	01-Apr-14	30-Apr-14	-21
NB00550	NB49B piling (0.19m -22no)	0%	33	33	02-May-14	11-Jun-14	-21
NB54 (Ch.6240-6280)-TWSR West Side							
Noise Barrier Works							
NB00605	NB54 - ID2-1 Pre-drilling	0%	18	18	02-May-14	23-May-14	-6
NB57 (Ch.6365-6445)-TWSR West Side							
Noise Barrier Works							
NB00800	NB57 -Pre-drilling	0%	40	40	01-Apr-14	23-May-14	-55
NB59 (Ch.6490-6590)-TWSR West Side							
Noise Barrier Works							
NB00940	NB59 -Pre-drilling	0%	47	47	01-Apr-14	31-May-14	-42
NB63 (Ch.6610-6700)-TWSR West Side							
Noise Barrier Works							
NB4550	NB63 - ID3-1 piling (0.19m -18no)-1 rigs	0%	27	27	20-Feb-14	22-Mar-14	-31
NB4560	NB63 - ID3-1 Footing & Wall Structure	0%	60	60	24-Mar-14	09-Jun-14	52
DSD Southern Trunk Sewer, Water Main Fire Main Works							
TSZ10300	Sheet Piling & Excavation(~7m below ground) (along NB63)	0%	21	21	01-Apr-14	29-Apr-14	-38
TSZ10310	DSD Trunk Sewer laying (along NB63)	0%	18	18	30-Apr-14	22-May-14	-38
DSD Southern Trunk Sewer - Trenchless Construction							
TSZ10950	Construct Pipe jacking pits	0%	60	60	30-Apr-14	12-Jul-14	175
Bridge Construction							

Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
New Tai Hang Footbridge							
General							
THBF0100	Site Clearance	0%	30	30	01-Apr-14	12-May-14	-89
THBF0330	Structure steel Shop drawing submission (THFB)	0%	60	60	20-Feb-14	07-May-14	802
THBF0335	Structure steel Shop drawing approval (THFB)	0%	30	30	15-Apr-14	24-May-14	802
TWSR-East FL Highway S/B Side Section							
THBF0430	Precautionary work for MTRC I&P area	0%	45	45	13-May-14	05-Jul-14	-89
New Tai Wo Footbridge							
General							
TWFB1010	Site Clearance	0%	30	30	01-Apr-14	12-May-14	15
TWFB1020	Structure steel Shop drawing submission (TWFB)	0%	90	90	20-Feb-14	12-Jun-14	989
TWSR-West/ FL Highway N/B Side Section							
TWFB1310	TWAB1 - Predrilling	0%	27	27	13-May-14	13-Jun-14	15
Temporary Tai Wo Footbridge							
Design Works							
TWFB-T1000	Procurement of Temporary bridge Design consultant	0%	52	52	20-Feb-14	25-Apr-14	368
TWFB-T1010	Design preparation	0%	90	90	26-Apr-14	13-Aug-14	368
Demolition of Existing Tai Wo Footbridge							
TWSR-West/ FL Highway N/B Side Section							
TWFB-DE0900	Site Clearance	0%	30	30	01-Apr-14	12-May-14	773
Noise Barrier Along Fanling Highway S/B							
NB51 (Ch.5935-6055)-FH S/B Side							
Noise Barrier Works							
NB02250	NB51 ID1-3 (0-25m), 18nos Predrilling	0%	10	10	01-Apr-14	12-Apr-14	484
NB02260	NB51 ID1-3 (0-25m) 18nos Piling- 1 rigs	0%	27	27	14-Apr-14	20-May-14	484
NB61A (Ch.6560-6745)-FH S/B Side (MTRC I&P Area)							
Noise Barrier Works							
NB02870	Coordinate with MTRC for Precautionary Measure	70%	18	60	13-Nov-13 A	12-Mar-14	-116
NB02880	Precautionary Measure installation	0%	26	26	13-Mar-14	12-Apr-14	-116
NB02940	NB61A ID 2-3 (50-75m), 18nos Predrilling	0%	18	18	14-Apr-14	09-May-14	24
NB02950	NB61A ID 2-3 (50-75m) 18nos Piling- 1 rigs	0%	18	18	10-May-14	30-May-14	24
NB03010	NB61A (75-190m) - Sheet piling & Excavation	0%	26	26	14-Apr-14	19-May-14	-116
Other Works							
Site Clearance & Demolition of Existing Structure							
General							
Z2.P2N.1000	Liaison with relevant villages houses's owner and related parties	0%	30	30	17-Mar-14	24-Apr-14	-110
Z2.P2N.1010	Submission of contractor's design for site formation	0%	28	28	25-Apr-14	29-May-14	-110
Z2.P2N.1030	Submission of DIA & SIA report to DSD	0%	14	14	14-May-14	29-May-14	-110
South Buffer Zone 1 (SBZ1) (within Zone 2)(Ch.6740 to 6930)							
General							
General							
General							
POSSA328a	Tree Felling/Transplant	0%	30	30	01-Apr-14	12-May-14	11
POSSA328a10	Site Clearance/ Trip Pit etc	0%	30	30	13-May-14	17-Jun-14	11
POSSA329a	Tree Felling/Transplant	0%	30	30	01-Apr-14	12-May-14	-116
POSSA329a10	Site Clearance/ Trip Pit etc	0%	30	30	13-May-14	17-Jun-14	-116
Noise Barrier Along TWSR-West and Laying New Utilities							
NB64 (Ch.6860-6920)-TWSR West Side							
Noise Barrier Works							
NB001000	NB64 -Pre-drilling	0%	35	35	01-Apr-14	17-May-14	-128
NB001010	NB64 -piling (0.19m -78no)	0%	90	90	19-May-14	02-Sep-14	-128
Bridge Construction							
Kau Lung Hang Vehicular Bridge							
General							
Z2.KLH.1070	Consent from Engineer	10.71%	25	28	28-Nov-13 A	20-Mar-14	19
Demolition of Existing Nam Wa Po Footbridge							
General							



Remaining Level o...
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining ...
Milestone
Crit. Milestone

Project File: HY/2012/06: IWP Rev. 5 (1402)

Layout: 3 Month Rolling Program

Page 2 of 4

Primavera Systems, Inc.

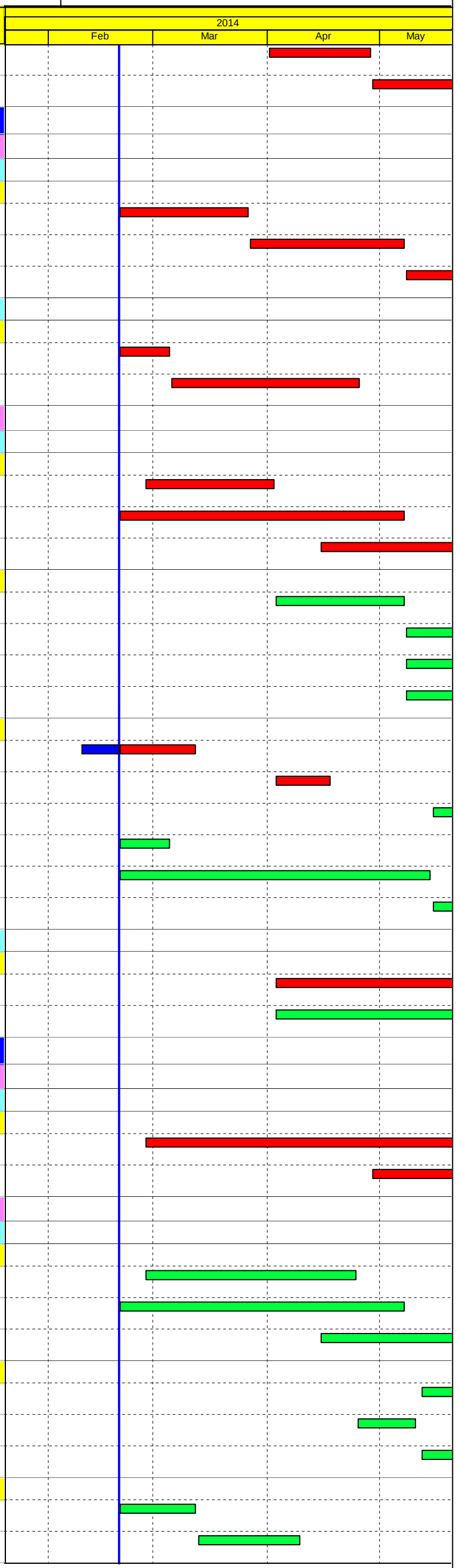
Contract No. HY/2012/06

Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange

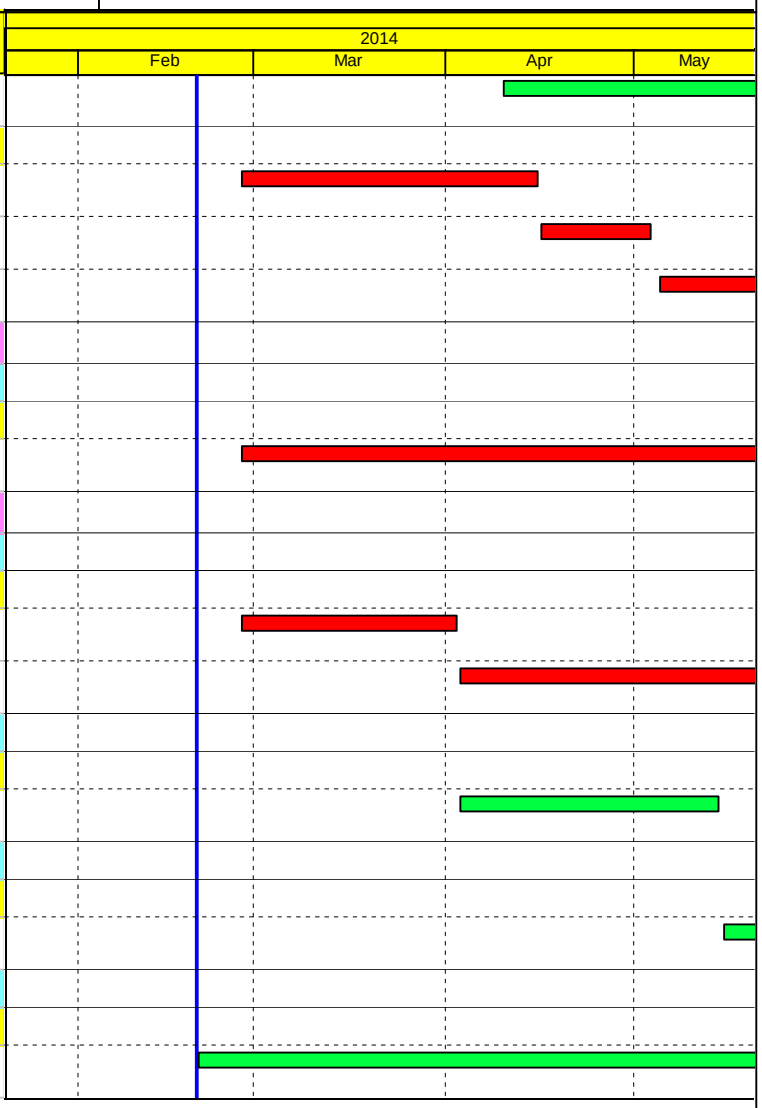
3 Month Rolling Program(20-Feb-14)

Date	Revision	C..	Ap...
07...	IWP Rev 4		
28...	IWP Rev 5		

Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
Z2.NWP.0500	Site Clearance	0%	20	20	01-Apr-14	28-Apr-14	-79
Z2.NWP.1000	Modification of Existing Planter for Pier of Temporary Footbridge	0%	25	25	29-Apr-14	29-May-14	-79
North Buffer Zone 2 (NBZ2) (within Zone 4) (Ch. 7925 to 8100)							
Site Formation							
Site Formation Works							
Site Formation Work							
Z4SF1060	Backfilling up to formation level for Drainage work	0%	30	30	20-Feb-14	26-Mar-14	-100
Z4SF1065	Drainage Work	0%	30	30	27-Mar-14	07-May-14	-100
Z4SF1070	Backfilling (~20000m3)	0%	180	180	08-May-14	09-Dec-14	-100
Retaining Wall W76							
Structure Works							
RW761080	Base slab - W76 (~7m high)	0%	12	12	20-Feb-14	05-Mar-14	-92
RW761085	Wall construction - W76 (~7m high)	0%	40	40	06-Mar-14	25-Apr-14	-92
Bridge Construction							
New Ho Ka Yuen Footbridge							
General							
HKY1020	Site Clearance (TWSR-W side)	0%	30	30	27-Feb-14	02-Apr-14	-68
HKY1030	Structure steel Shop drawing submission (HKYB)	0%	60	60	20-Feb-14	07-May-14	-11
HKY1040	Structure steel Shop drawing approval (HKYB)	0%	30	30	15-Apr-14	24-May-14	-11
TWSR-West/ FL Highway N/B Side Section							
HKY1140	HKYP6 - Predrilling	0%	24	24	03-Apr-14	07-May-14	126
HKY1150	HKYP6 - Pre-bored H pile (8 nos)	0%	24	24	08-May-14	05-Jun-14	126
HKY1172	HKYP1 - Predrilling	0%	12	12	08-May-14	21-May-14	147
HKY1220	HKYAB3 - Predrilling	0%	12	12	08-May-14	21-May-14	180
TWSR-East FL Highway S/B Side Section							
HKY1490	Temp Access formation	60%	18	45	10-Feb-14 A	12-Mar-14	-50
HKY1500	HKYAB1 - Predrilling	0%	12	12	03-Apr-14	17-Apr-14	-68
HKY1510	HKYAB1 - Pre-bored H pile (4 nos)	0%	12	12	15-May-14	28-May-14	19
HKY1770	HKYP5 - Predrilling	0%	12	12	20-Feb-14	05-Mar-14	165
HKY1820	HKYAB2 - Pre-bored H pile (22 nos)	0%	66	66	20-Feb-14	14-May-14	19
HKY1830	HKYAB2 - Pile Test	0%	28	28	15-May-14	11-Jun-14	98
Demolition of Existing Ho Ka Yuen Footbridge							
TWSR-West/ FL Highway N/B Side Section							
HKY1880	Construct Temp Ramp for existing HKY footbridge	0%	90	90	03-Apr-14	25-Jul-14	-28
HKY1900	Erect temp platform for demolishing Ramp & staircase at TWSR-W	0%	45	45	03-Apr-14	31-May-14	18
ZONE 4 (Ch. 7925 to 8700)							
Noise Barrier Along TWSR-West and Laying New Utilities							
NB77 (Ch.8090-8450)-FH N/B Side							
Noise Barrier Works							
NB4290	NB77 -Pre-drilling (Ch8090-8190)	0%	96	96	27-Feb-14	26-Jun-14	-35
NB4300	NB77 - piling (NB77/01-08, 0.19m -64no)	0%	96	96	29-Apr-14	22-Aug-14	-29
Bridge Construction							
New Wo Hop Shek Pedstrian & Cycle Bridge							
General							
WHS1010	Site Clearance & Temp Platform erection (SA340)	0%	45	45	27-Feb-14	24-Apr-14	426
WHS1020	Structure steel Shop drawing submission (WHSB)	0%	60	60	20-Feb-14	07-May-14	461
WHS1030	Structure steel Shop drawing approval (WHSB)	0%	30	30	15-Apr-14	24-May-14	461
TWSR-West/ FL Highway N/B Side Section							
WHS1150	WHSP2 - Predrilling	0%	24	24	12-May-14	09-Jun-14	426
WHS1230	WHSAB1 - Predrilling	0%	12	12	25-Apr-14	10-May-14	426
WHS1240	WHSAB1 - Pre-bored H pile (4 nos)	0%	12	12	12-May-14	24-May-14	453
Crossing Fanling Highway Section							
WHS1450	WHSP1 - Pre-bored H pile (6 nos)	0%	18	18	20-Feb-14	12-Mar-14	875
WHS1460	WHSP1 - Pile Test	0%	28	28	13-Mar-14	09-Apr-14	1094



Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
WHS1470	WHSP1 - Pile cap, Pier and Pier Head	0%	52	52	10-Apr-14	16-Jun-14	875
TWSR-East FL Highway S/B Side Section							
WHS2045	Temp footbridge construction for pedestrian diversion	0%	40	40	27-Feb-14	15-Apr-14	-111
WHS2050	North Abutment Wall (AW1) - Predrilling	0%	12	12	16-Apr-14	03-May-14	-111
WHS2060	North Abutment Wall (AW1) - Pre-bored H pile (4 nos)	0%	16	16	05-May-14	23-May-14	-111
Fanling Highway Construction							
Drainage & Road Works							
TWSR-East FL Highway S/B Side Section							
RDZ41004	Site Clearance & Tree Felling	0%	70	70	27-Feb-14	26-May-14	-104
Other Works							
Retaining Wall W77A							
TWSR-East FL Highway S/B Side Section							
RWZ4.1050	Site Clearance	0%	30	30	27-Feb-14	02-Apr-14	-43
RWZ4.1060	Base slab & Wall (0-3m high)- RW77A (Ch.50-130)	0%	60	60	03-Apr-14	19-Jun-14	-43
Retaining Wall W77B							
TWSR-East FL Highway S/B Side Section							
RWZ4.1092	Site Clearance	0%	30	30	03-Apr-14	14-May-14	62
Retaining Wall W78							
TWSR-East FL Highway S/B Side Section							
RWZ4.0900	Site Clearance	0%	30	30	15-May-14	19-Jun-14	92
TCSS Works							
TCSS Pre-Construction Works							
TCSS0100	Acquire Design Criteria from Drawing & procurement	0%	180	180	20-Feb-14	27-Sep-14	582



Remaining Level o...
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining ...
Milestone
Crit. Milestone

Project File: HY/2012/06: IWP Rev. 5 (1402)

Layout: 3 Month Rolling Program

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Primavera Systems, Inc.

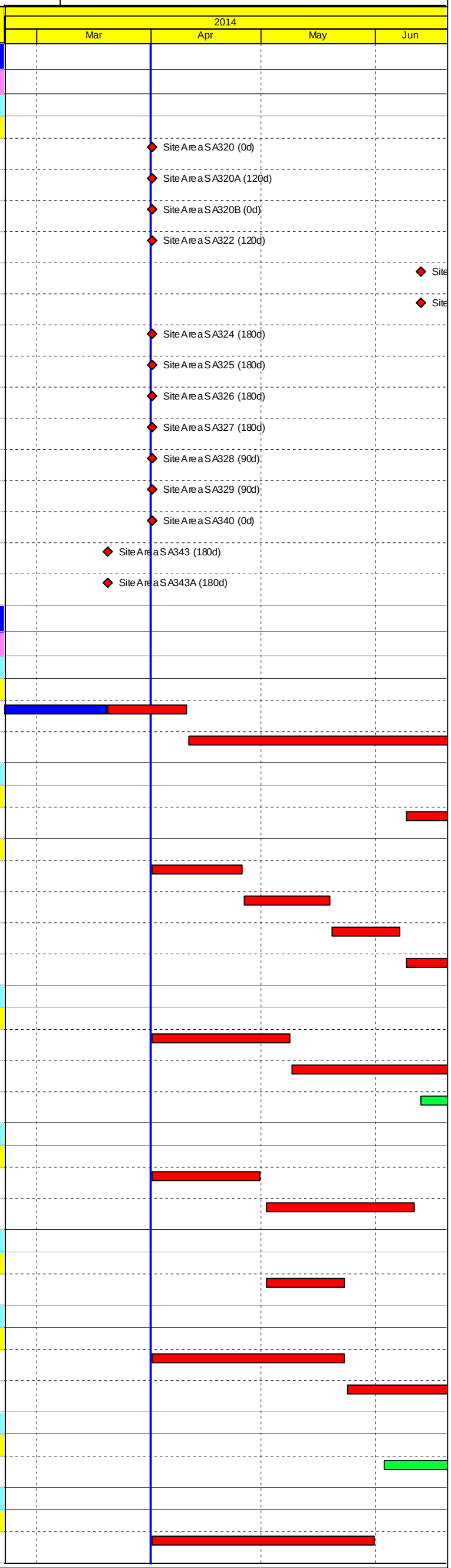
Contract No. HY/2012/06

Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange

3 Month Rolling Program(20-Feb-14)

Date	Revision	C..	Ap...
07...	IWP Rev 4		
28...	IWP Rev 5		

Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
Contract Condition							
General							
Contract Condition							
Contract Condition							
POSSA320	Site Area SA320 (0d)	0%	0	0	01-Apr-14*		0
POSSA320A	Site Area SA320A (120d)	0%	0	0	01-Apr-14*		0
POSSA320B	Site Area SA320B (0d)	0%	0	0	01-Apr-14*		0
POSSA322	Site Area SA322 (120d)	0%	0	0	01-Apr-14*		0
POSSA322A	Site Area SA322A (180d)	0%	0	0	13-Jun-14*		0
POSSA322B	Site Area SA322B (180d)	0%	0	0	13-Jun-14*		0
POSSA324	Site Area SA324 (180d)	0%	0	0	01-Apr-14*		0
POSSA325	Site Area SA325 (180d)	0%	0	0	01-Apr-14*		0
POSSA326	Site Area SA326 (180d)	0%	0	0	01-Apr-14*		0
POSSA327	Site Area SA327 (180d)	0%	0	0	01-Apr-14*		0
POSSA328	Site Area SA328 (90d)	0%	0	0	01-Apr-14*		0
POSSA329	Site Area SA329 (90d)	0%	0	0	01-Apr-14*		0
POSSA340	Site Area SA340 (0d)	0%	0	0	01-Apr-14*		0
POSSA343	Site Area SA343 (180d)	0%	0	0	20-Mar-14*		-16
POSSA343A	Site Area SA343A (180d)	0%	0	0	20-Mar-14*		-16
ZONE 2 (Ch. 5880 to 6930)							
Noise Barrier Along TWSR-West and Laying New Utilities							
Site Clearance & Demolition of Existing Structure							
Demolition Work							
Z2.P2N.1242	Pending for design brief from Villager/ Engineer	40%	18	30	01-Jan-14 A	10-Apr-14	-34
Z2.P2N.1245	Method statement submission/ approval	0%	60	60	11-Apr-14	26-Jun-14	-34
NB47 (Ch.5880-5930)-TWSR West Side							
Noise Barrier Works							
NB00270	NB47 (Ch5880-5930)- Footing & Wall Structure	0%	30	30	09-Jun-14	14-Jul-14	-94
DSD Southern Trunk Sewer, Water Main Fire Main Works							
TSZ10250	Sheet Piling & Excavation(~6m below ground) (along NB47)	0%	18	18	01-Apr-14	25-Apr-14	-94
TSZ10260	DSD Trunk Sewer laying (along NB47)	0%	18	18	26-Apr-14	19-May-14	-94
TSZ10270	Backfill up to NB47 footing level	0%	16	16	20-May-14	07-Jun-14	-94
TSZ10280	Watermain installation (along NB47)	0%	26	26	09-Jun-14	09-Jul-14	-92
NB48 (Ch.5995-6120)-TWSR West Side							
Noise Barrier Works							
NB00355	NB48 - Pre-drilling	0%	27	27	01-Apr-14	08-May-14	9
NB00360	NB48 (NB48/1-5 up to THFB) piling (0.19m -54no)	0%	81	81	09-May-14	13-Aug-14	9
NB00415	NB48 (NB48/5-10) Pre-drilling	0%	64	64	13-Jun-14	27-Aug-14	76
NB49B (Ch.6215-6235)-TWSR West Side							
Noise Barrier Works							
NB00545	NB49B - Pre-drilling	0%	22	22	01-Apr-14	30-Apr-14	-21
NB00550	NB49B piling (0.19m -22no)	0%	33	33	02-May-14	11-Jun-14	-21
NB54 (Ch.6240-6280)-TWSR West Side							
Noise Barrier Works							
NB00605	NB54 - ID2-1 Pre-drilling	0%	18	18	02-May-14	23-May-14	-6
NB57 (Ch.6365-6445)-TWSR West Side							
Noise Barrier Works							
NB00800	NB57 -Pre-drilling	0%	40	40	01-Apr-14	23-May-14	-55
NB00810	NB57 piling (0.19m -82no)	0%	123	123	24-May-14	20-Oct-14	-55
NB58 (Ch.6445-6480)-TWSR West Side							
Noise Barrier Works							
NB00870	NB58 -Pre-drilling	0%	22	22	03-Jun-14	27-Jun-14	184
NB59 (Ch.6490-6590)-TWSR West Side							
Noise Barrier Works							
NB00940	NB59 -Pre-drilling	0%	47	47	01-Apr-14	31-May-14	-42



Remaining Level o...
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining ...
Milestone
Crit. Milestone

Project File: HY/2012/06: IWP Rev. 5 (1403)

Layout: 3 Month Rolling Program

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Primavera Systems, Inc.

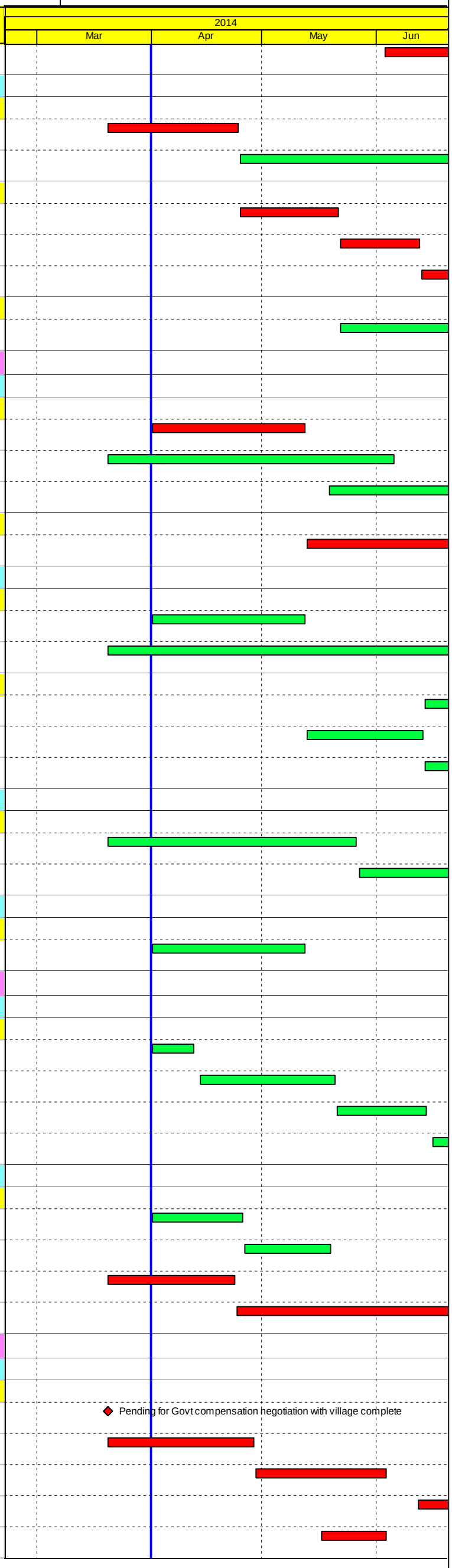
Contract No. HY/2012/06

Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange

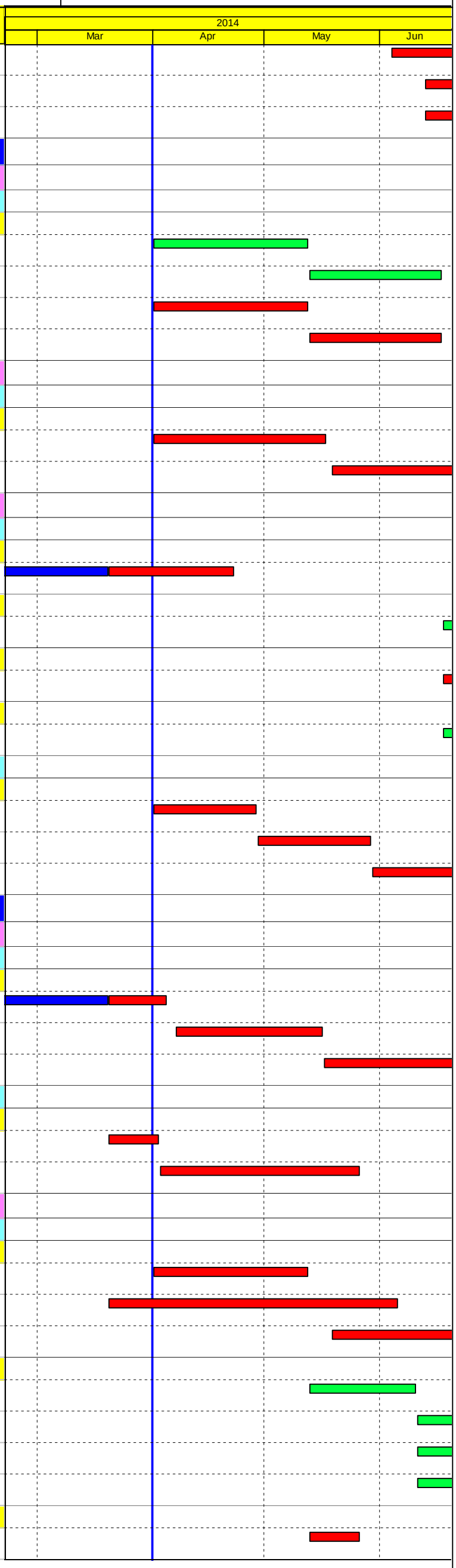
3 Month Rolling Program(20-Mar-14)

Date	Revision	C..	Ap...
07...	IWP Rev 4		
28...	IWP Rev 5		

Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
NB00950	NB59 - piling (0.19m -94no)	0%	144	144	03-Jun-14	21-Nov-14	-42
NB63 (Ch.6610-6700)-TWSR West Side							
Noise Barrier Works							
NB4550	NB63 - ID3-1 piling (0.19m -18no)-1 rigs	0%	27	27	20-Mar-14	24-Apr-14	-55
NB4560	NB63 - ID3-1 Footing & Wall Structure	0%	60	60	25-Apr-14	08-Jul-14	28
DSD Southern Trunk Sewer, Water Main Fire Main Works							
TSZ10300	Sheet Piling & Excavation(~7m below ground) (along NB63)	0%	21	21	25-Apr-14	21-May-14	-55
TSZ10310	DSD Trunk Sewer laying (along NB63)	0%	18	18	22-May-14	12-Jun-14	-55
TSZ10320	Backfill up to NB63 footing level	0%	34	34	13-Jun-14	23-Jul-14	-55
DSD Southern Trunk Sewer - Trenchless Construction							
TSZ10950	Construct Pipe jacking pits	0%	60	60	22-May-14	01-Aug-14	158
Bridge Construction							
New Tai Hang Footbridge							
General							
THBF0100	Site Clearance	0%	30	30	01-Apr-14	12-May-14	-89
THBF0330	Structure steel Shop drawing submission (THFB)	0%	60	60	20-Mar-14	05-Jun-14	778
THBF0335	Structure steel Shop drawing approval (THFB)	0%	30	30	19-May-14	23-Jun-14	778
TWSR-East FL Highway S/B Side Section							
THBF0430	Precautionary work for MTRC I&P area	0%	45	45	13-May-14	05-Jul-14	-89
New Tai Wo Footbridge							
General							
TWFB1010	Site Clearance	0%	30	30	01-Apr-14	12-May-14	15
TWFB1020	Structure steel Shop drawing submission (TWFB)	0%	90	90	20-Mar-14	11-Jul-14	965
TWSR-West/ FL Highway N/B Side Section							
TWFB1270	TWP4, TWP5 - Predrilling	0%	24	24	14-Jun-14	12-Jul-14	62
TWFB1310	TWAB1 - Predrilling	0%	27	27	13-May-14	13-Jun-14	15
TWFB1320	TWAB1 - Pre-bored H pile (18 nos)	0%	54	54	14-Jun-14	16-Aug-14	15
Temporary Tai Wo Footbridge							
Design Works							
TWFB-T1000	Procurement of Temporary bridge Design consultant	0%	52	52	20-Mar-14	26-May-14	344
TWFB-T1010	Design preparation	0%	90	90	27-May-14	11-Sep-14	344
Demolition of Existing Tai Wo Footbridge							
TWSR-West/ FL Highway N/B Side Section							
TWFB-DE0900	Site Clearance	0%	30	30	01-Apr-14	12-May-14	773
Noise Barrier Along Fanling Highway S/B							
NB51 (Ch.5935-6055)-FH S/B Side							
Noise Barrier Works							
NB02250	NB51 ID1-3 (0-25m), 18nos Predrilling	0%	10	10	01-Apr-14	12-Apr-14	484
NB02260	NB51 ID1-3 (0-25m) 18nos Piling- 1 rigs	0%	27	27	14-Apr-14	20-May-14	484
NB02270	NB51 ID1-3 (0-25m) - Sheet piling & Excavation	0%	21	21	21-May-14	14-Jun-14	484
NB02280	NB51 ID1-3 (0-25m) - Footing & Wall Structure	0%	90	90	16-Jun-14	30-Sep-14	484
NB61A (Ch.6560-6745)-FH S/B Side (MTRC I&P Area)							
Noise Barrier Works							
NB02940	NB61A ID 2-3 (50-75m), 18nos Predrilling	0%	18	18	01-Apr-14	25-Apr-14	34
NB02950	NB61A ID 2-3 (50-75m) 18nos Piling- 1 rigs	0%	18	18	26-Apr-14	19-May-14	34
NB03010	NB61A (75-190m) - Sheet piling & Excavation	0%	26	26	20-Mar-14	23-Apr-14	-96
NB03020	NB61A (75-190m) - Footing & Wall Structure	0%	70	70	24-Apr-14	18-Jul-14	-96
Other Works							
Site Clearance & Demolition of Existing Structure							
General							
Z2.P2N.0990	Pending for Govt compensation negotiation with village complete	0%	0	0	20-Mar-14		-113
Z2.P2N.1000	Liaison with relevant villages houses's owner and related parties	0%	30	30	20-Mar-14	28-Apr-14	-113
Z2.P2N.1010	Submission of contractor's design for site formation	0%	28	28	29-Apr-14	03-Jun-14	-113
Z2.P2N.1020	Approval of contractor's Design by Engineer	0%	14	14	12-Jun-14	27-Jun-14	-113
Z2.P2N.1030	Submission of DIA & SIA report to DSD	0%	14	14	17-May-14	03-Jun-14	-113



Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
Z2.P2N.1040	Consent from DSD	0%	21	21	04-Jun-14	27-Jun-14	-113
Z2.P2N.1050	Temporary access road construction	0%	21	21	13-Jun-14	08-Jul-14	-110
Z2.P2N.1060	Site clearance	0%	10	10	13-Jun-14	24-Jun-14	-110
South Buffer Zone 1 (SBZ1) (within Zone 2)(Ch.6740 to 6930)							
General							
General							
General							
POSSA328a	Tree Felling/Transplant	0%	30	30	01-Apr-14	12-May-14	11
POSSA328a10	Site Clearance/ Trip Pit etc	0%	30	30	13-May-14	17-Jun-14	11
POSSA329a	Tree Felling/Transplant	0%	30	30	01-Apr-14	12-May-14	-116
POSSA329a10	Site Clearance/ Trip Pit etc	0%	30	30	13-May-14	17-Jun-14	-116
Noise Barrier Along TWSR-West and Laying New Utilities							
NB64 (Ch.6860-6920)-TWSR West Side							
Noise Barrier Works							
NB001000	NB64 -Pre-drilling	0%	35	35	01-Apr-14	17-May-14	-128
NB001010	NB64 -piling (0.19m -78no)	0%	90	90	19-May-14	02-Sep-14	-128
Bridge Construction							
Kau Lung Hang Vehicular Bridge							
General							
Z2.KLH.1070	Consent from Engineer	10.71%	25	28	28-Nov-13 A	22-Apr-14	-5
KLH Bridge - West Ramp							
Z2.KLH.0900	WestAbutment- Pre-drilling work	0%	20	20	18-Jun-14	11-Jul-14	11
KLH Bridge - Deck 3							
Z2.KLH.1325	Construct Temp Road - For diversion of existing TWR east	0%	20	20	18-Jun-14	11-Jul-14	-116
KLH Bridge - Deck 2							
Z2.KLH.1190	Temp road diversion at TWSR-W for TTA for VBP5 works	0%	45	45	18-Jun-14	09-Aug-14	37
Demolition of Existing Nam Wa Po Footbridge							
General							
Z2.NWP.0500	Site Clearance	0%	20	20	01-Apr-14	28-Apr-14	-79
Z2.NWP.1000	Modification of Existing Planter for Pier of Temporary Footbridge	0%	25	25	29-Apr-14	29-May-14	-79
Z2.NWP.1010	Removal of Existing Staircase Portion	0%	26	26	30-May-14	30-Jun-14	-79
North Buffer Zone 2 (NBZ2) (within Zone 4) (Ch. 7925 to 8100)							
Site Formation							
Site Formation Works							
Site Formation Work							
Z4SF1060	Backfilling up to formation level for Drainage work	53.33%	14	30	20-Feb-14 A	04-Apr-14	-108
Z4SF1065	Drainage Work	0%	30	30	07-Apr-14	16-May-14	-108
Z4SF1070	Backfilling (~20000m3)	0%	180	180	17-May-14	18-Dec-14	-108
Retaining Wall W76							
Structure Works							
RW761080	Base slab - W76 (~7m high)	0%	12	12	20-Mar-14	02-Apr-14	4
RW761085	Wall construction - W76 (~7m high)	0%	40	40	03-Apr-14	26-May-14	4
Bridge Construction							
New Ho Ka Yuen Footbridge							
General							
HKY1020	Site Clearance (TWSR-W side)	0%	30	30	01-Apr-14	12-May-14	-96
HKY1030	Structure steel Shop drawing submission (HKYB)	0%	60	60	20-Mar-14	05-Jun-14	-35
HKY1040	Structure steel Shop drawing approval (HKYB)	0%	30	30	19-May-14	23-Jun-14	-35
TWSR-West/ FL Highway N/B Side Section							
HKY1140	HKYP6 - Predrilling	0%	24	24	13-May-14	10-Jun-14	98
HKY1150	HKYP6 - Pre-bored H pile (8 nos)	0%	24	24	11-Jun-14	09-Jul-14	98
HKY1172	HKYP1 - Predrilling	0%	12	12	11-Jun-14	24-Jun-14	119
HKY1220	HKYAB3 - Predrilling	0%	12	12	11-Jun-14	24-Jun-14	152
TWSR-East FL Highway S/B Side Section							
HKY1500	HKYAB1 - Predrilling	0%	12	12	13-May-14	26-May-14	-96



Remaining Level o...
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining ...
Milestone
Crit. Milestone

Project File: HY/2012/06: IWP Rev. 5 (1403)

Layout: 3 Month Rolling Program

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Primavera Systems, Inc.

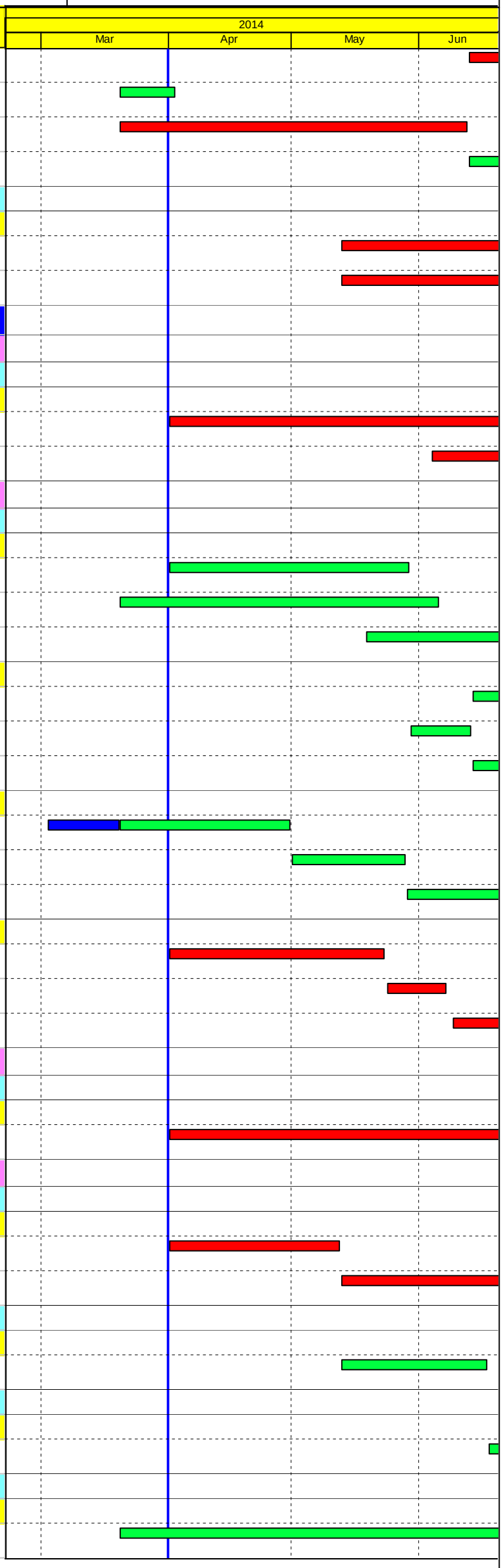
Contract No. HY/2012/06

Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange

3 Month Rolling Program(20-Mar-14)

Date	Revision	C..	Ap...
07...	IWP Rev 4		
28...	IWP Rev 5		

Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
HKY1510	HKYAB1 - Pre-bored H pile (4 nos)	0%	12	12	13-Jun-14	26-Jun-14	-5
HKY1770	HKYP5 - Predrilling	0%	12	12	20-Mar-14	02-Apr-14	141
HKY1820	HKYAB2 - Pre-bored H pile (22 nos)	0%	66	66	20-Mar-14	12-Jun-14	-5
HKY1830	HKYAB2 - Pile Test	0%	28	28	13-Jun-14	10-Jul-14	69
Demolition of Existing Ho Ka Yuen Footbridge							
TWSR-West/ FL Highway N/B Side Section							
HKY1880	Construct Temp Ramp for existing HKY footbridge	0%	90	90	13-May-14	27-Aug-14	-56
HKY1900	Erect temp platform for demolishing Ramp & staircase at TWSR-W	0%	45	45	13-May-14	05-Jul-14	-10
ZONE 4 (Ch. 7925 to 8700)							
Noise Barrier Along TWSR-West and Laying New Utilities							
NB77 (Ch.8090-8450)-FH N/B Side							
Noise Barrier Works							
NB4290	NB77 -Pre-drilling (Ch8090-8190)	0%	96	96	01-Apr-14	30-Jul-14	-63
NB4300	NB77 - piling (NB77/01-08, 0.19m -64no)	0%	96	96	04-Jun-14	25-Sep-14	-57
Bridge Construction							
New Wo Hop Shek Pedstrian & Cycle Bridge							
General							
WHS1010	Site Clearance & Temp Platform erection (SA340)	0%	45	45	01-Apr-14	29-May-14	398
WHS1020	Structure steel Shop drawing submission (WHSB)	0%	60	60	20-Mar-14	05-Jun-14	437
WHS1030	Structure steel Shop drawing approval (WHSB)	0%	30	30	19-May-14	23-Jun-14	437
TWSR-West/ FL Highway N/B Side Section							
WHS1150	WHSP2 - Predrilling	0%	24	24	14-Jun-14	12-Jul-14	398
WHS1230	WHSAB1 - Predrilling	0%	12	12	30-May-14	13-Jun-14	398
WHS1240	WHSAB1 - Pre-bored H pile (4 nos)	0%	12	12	14-Jun-14	27-Jun-14	425
Crossing Fanling Highway Section							
WHS1450	WHSP1 - Pre-bored H pile (6 nos)	0%	32	18	03-Mar-14 A	30-Apr-14	837
WHS1460	WHSP1 - Pile Test	0%	28	28	01-May-14	28-May-14	1045
WHS1470	WHSP1 - Pile cap, Pier and Pier Head	0%	52	52	29-May-14	30-Jul-14	838
TWSR-East FL Highway S/B Side Section							
WHS2045	Temp footbridge construction for pedestrian diversion	0%	40	40	01-Apr-14	23-May-14	-139
WHS2050	North Abutment Wall (AW1) - Predrilling	0%	12	12	24-May-14	07-Jun-14	-139
WHS2060	North Abutment Wall (AW1) - Pre-bored H pile (4 nos)	0%	16	16	09-Jun-14	26-Jun-14	-139
Fanling Highway Construction							
Drainage & Road Works							
TWSR-East FL Highway S/B Side Section							
RDZ41004	Site Clearance & Tree Felling	0%	70	70	01-Apr-14	28-Jun-14	-132
Other Works							
Retaining Wall W77A							
TWSR-East FL Highway S/B Side Section							
RWZ4.1050	Site Clearance	0%	30	30	01-Apr-14	12-May-14	-71
RWZ4.1060	Base slab & Wall (0-3m high)- RW77A (Ch.50-130)	0%	60	60	13-May-14	23-Jul-14	-71
Retaining Wall W77B							
TWSR-East FL Highway S/B Side Section							
RWZ4.1092	Site Clearance	0%	30	30	13-May-14	17-Jun-14	34
Retaining Wall W78							
TWSR-East FL Highway S/B Side Section							
RWZ4.0900	Site Clearance	0%	30	30	18-Jun-14	23-Jul-14	64
TCSS Works							
TCSS Pre-Construction Works							
TCSS0100	Acquire Design Criteria from Drawing & procurement	0%	180	180	20-Mar-14	28-Oct-14	558



Remaining Level o...
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining ...
Milestone
Crit. Milestone

Project File: HY/2012/06: IWP Rev. 5 (1403)

Layout: 3 Month Rolling Program

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Primavera Systems, Inc.

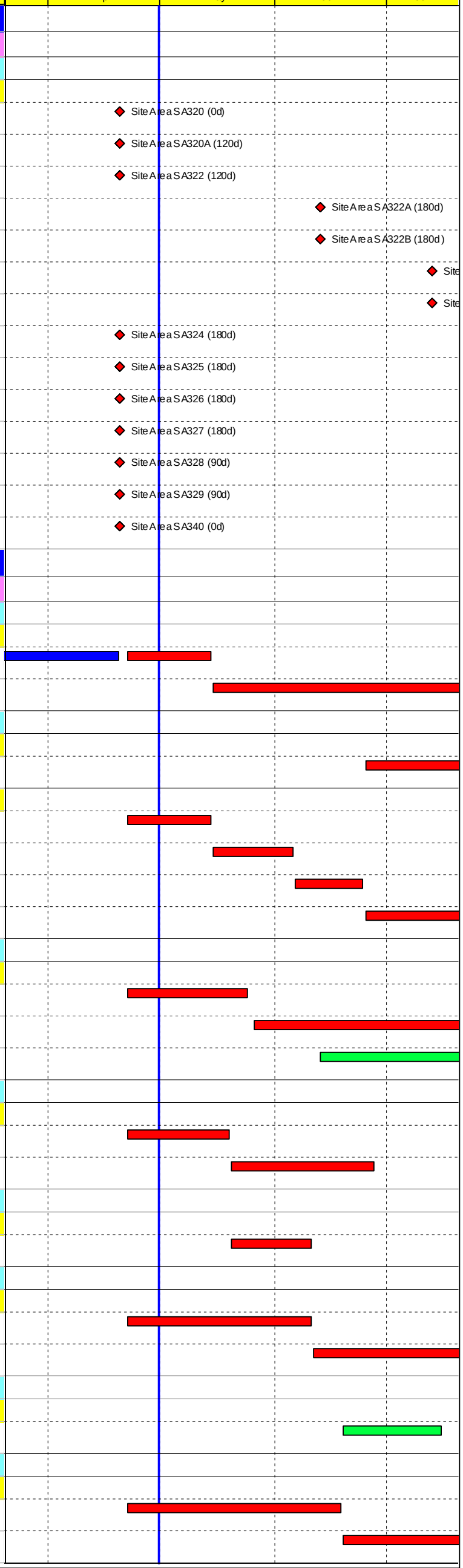
Contract No. HY/2012/06

Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange

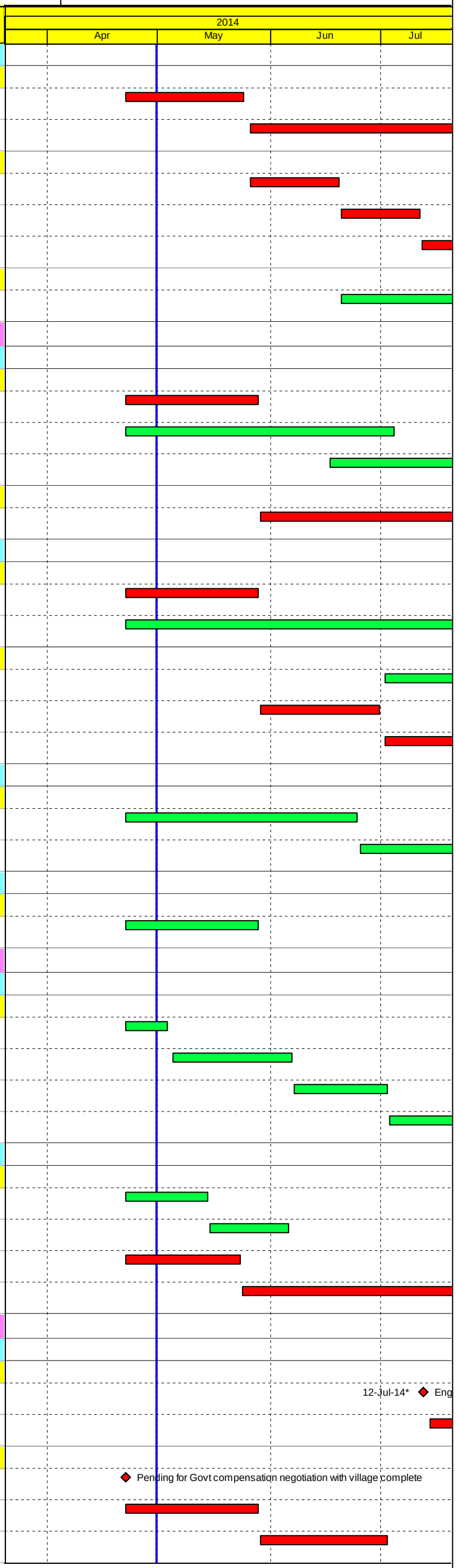
3 Month Rolling Program(20-Mar-14)

Date	Revision	C..	Ap...
07...	IWP Rev 4		
28...	IWP Rev 5		

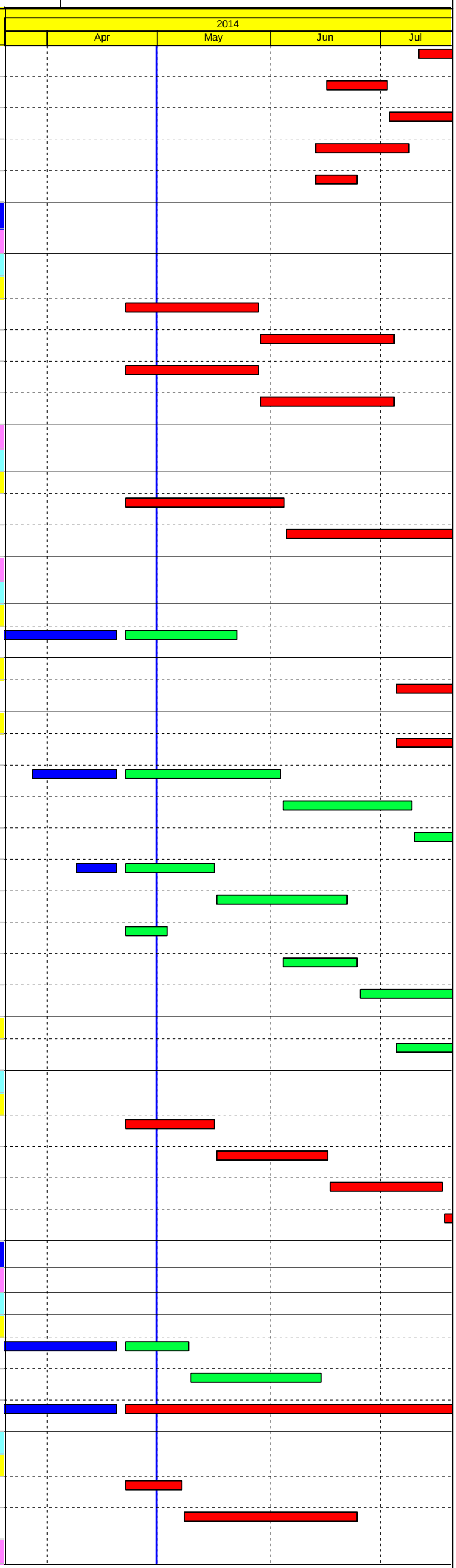
Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
Contract Condition							
General							
Contract Condition							
Contract Condition							
POSSA320	Site Area SA320 (0d)	0%	0	0	20-Apr-14*		-19
POSSA320A	Site Area SA320A (120d)	0%	0	0	20-Apr-14*		-19
POSSA322	Site Area SA322 (120d)	0%	0	0	20-Apr-14*		-19
POSSA322A	Site Area SA322A (180d)	0%	0	0	13-Jun-14*		0
POSSA322B	Site Area SA322B (180d)	0%	0	0	13-Jun-14*		0
POSSA323A	Site Area SA323A (360d)	0%	0	0	13-Jul-14*		0
POSSA323B	Site Area SA323B (360d)	0%	0	0	13-Jul-14*		0
POSSA324	Site Area SA324 (180d)	0%	0	0	20-Apr-14*		-19
POSSA325	Site Area SA325 (180d)	0%	0	0	20-Apr-14*		-19
POSSA326	Site Area SA326 (180d)	0%	0	0	20-Apr-14*		-19
POSSA327	Site Area SA327 (180d)	0%	0	0	20-Apr-14*		-19
POSSA328	Site Area SA328 (90d)	0%	0	0	20-Apr-14*		-19
POSSA329	Site Area SA329 (90d)	0%	0	0	20-Apr-14*		-19
POSSA340	Site Area SA340 (0d)	0%	0	0	20-Apr-14*		-19
ZONE 2 (Ch. 5880 to 6930)							
Noise Barrier Along TWSR-West and Laying New Utilities							
Site Clearance & Demolition of Existing Structure							
Demolition Work							
Z2.P2N.1242	Pending for design brief from Villager/ Engineer	40%	18	30	01-Jan-14 A	14-May-14	-58
Z2.P2N.1245	Method statement submission/ approval	0%	60	60	15-May-14	25-Jul-14	-58
NB47 (Ch.5880-5930)-TWSR West Side							
Noise Barrier Works							
NB00270	NB47 (Ch5880-5930)- Footing & Wall Structure	0%	30	30	25-Jun-14	30-Jul-14	-108
DSD Southern Trunk Sewer, Water Main Fire Main Works							
TSZ10250	Sheet Piling & Excavation(~6m below ground) (along NB47)	0%	18	18	22-Apr-14	14-May-14	-108
TSZ10260	DSD Trunk Sewer laying (along NB47)	0%	18	18	15-May-14	05-Jun-14	-108
TSZ10270	Backfill up to NB47 footing level	0%	16	16	06-Jun-14	24-Jun-14	-108
TSZ10280	Watermain installation (along NB47)	0%	26	26	25-Jun-14	25-Jul-14	-106
NB48 (Ch.5995-6120)-TWSR West Side							
Noise Barrier Works							
NB00355	NB48 - Pre-drilling	0%	27	27	22-Apr-14	24-May-14	-5
NB00360	NB48 (NB48/1-5 up to THFB) piling (0.19m -54no)	0%	81	81	26-May-14	29-Aug-14	-5
NB00415	NB48 (NB48/5-10) Pre-drilling	0%	64	64	13-Jun-14	27-Aug-14	76
NB49B (Ch.6215-6235)-TWSR West Side							
Noise Barrier Works							
NB00545	NB49B - Pre-drilling	0%	22	22	22-Apr-14	19-May-14	-35
NB00550	NB49B piling (0.19m -22no)	0%	33	33	20-May-14	27-Jun-14	-35
NB54 (Ch.6240-6280)-TWSR West Side							
Noise Barrier Works							
NB00605	NB54 - ID2-1 Pre-drilling	0%	18	18	20-May-14	10-Jun-14	-20
NB57 (Ch.6365-6445)-TWSR West Side							
Noise Barrier Works							
NB00800	NB57 -Pre-drilling	0%	40	40	22-Apr-14	10-Jun-14	-69
NB00810	NB57 piling (0.19m -82no)	0%	123	123	11-Jun-14	05-Nov-14	-69
NB58 (Ch.6445-6480)-TWSR West Side							
Noise Barrier Works							
NB00870	NB58 -Pre-drilling	0%	22	22	19-Jun-14	15-Jul-14	170
NB59 (Ch.6490-6590)-TWSR West Side							
Noise Barrier Works							
NB00940	NB59 -Pre-drilling	0%	47	47	22-Apr-14	18-Jun-14	-56
NB00950	NB59 - piling (0.19m -94no)	0%	144	144	19-Jun-14	08-Dec-14	-56



Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
NB63 (Ch.6610-6700)-TWSR West Side							
Noise Barrier Works							
NB4550	NB63 - ID3-1 piling (0.19m -18no)-1 rigs	0%	27	27	22-Apr-14	24-May-14	-79
NB4560	NB63 - ID3-1 Footing & Wall Structure	0%	60	60	26-May-14	05-Aug-14	4
DSD Southern Trunk Sewer, Water Main Fire Main Works							
TSZ10300	Sheet Piling & Excavation(~7m below ground) (along NB63)	0%	21	21	26-May-14	19-Jun-14	-79
TSZ10310	DSD Trunk Sewer laying (along NB63)	0%	18	18	20-Jun-14	11-Jul-14	-79
TSZ10320	Backfill up to NB63 footing level	0%	34	34	12-Jul-14	20-Aug-14	-79
DSD Southern Trunk Sewer - Trenchless Construction							
TSZ10950	Construct Pipe jacking pits	0%	60	60	20-Jun-14	29-Aug-14	134
Bridge Construction							
New Tai Hang Footbridge							
General							
THBF0100	Site Clearance	0%	30	30	22-Apr-14	28-May-14	-103
THBF0330	Structure steel Shop drawing submission (THFB)	0%	60	60	22-Apr-14	04-Jul-14	754
THBF0335	Structure steel Shop drawing approval (THFB)	0%	30	30	17-Jun-14	22-Jul-14	754
TWSR-East FL Highway S/B Side Section							
THBF0430	Precautionary work for MTRC I&P area	0%	45	45	29-May-14	22-Jul-14	-103
New Tai Wo Footbridge							
General							
TWFB1010	Site Clearance	0%	30	30	22-Apr-14	28-May-14	1
TWFB1020	Structure steel Shop drawing submission (TWFB)	0%	90	90	22-Apr-14	08-Aug-14	941
TWSR-West/ FL Highway N/B Side Section							
TWFB1270	TWP4, TWP5 - Predrilling	0%	24	24	02-Jul-14	29-Jul-14	48
TWFB1310	TWAB1 - Predrilling	0%	27	27	29-May-14	30-Jun-14	1
TWFB1320	TWAB1 - Pre-bored H pile (18 nos)	0%	54	54	02-Jul-14	02-Sep-14	1
Temporary Tai Wo Footbridge							
Design Works							
TWFB-T1000	Procurement of Temporary bridge Design consultant	0%	52	52	22-Apr-14	24-Jun-14	320
TWFB-T1010	Design preparation	0%	90	90	25-Jun-14	11-Oct-14	320
Demolition of Existing Tai Wo Footbridge							
TWSR-West/ FL Highway N/B Side Section							
TWFB-DE0900	Site Clearance	0%	30	30	22-Apr-14	28-May-14	759
Noise Barrier Along Fanling Highway S/B							
NB51 (Ch.5935-6055)-FH S/B Side							
Noise Barrier Works							
NB02250	NB51 ID1-3 (0-25m), 18nos Predrilling	0%	10	10	22-Apr-14	03-May-14	470
NB02260	NB51 ID1-3 (0-25m) 18nos Piling- 1 rigs	0%	27	27	05-May-14	06-Jun-14	470
NB02270	NB51 ID1-3 (0-25m) - Sheet piling & Excavation	0%	21	21	07-Jun-14	02-Jul-14	470
NB02280	NB51 ID1-3 (0-25m) - Footing & Wall Structure	0%	90	90	03-Jul-14	18-Oct-14	470
NB61A (Ch.6560-6745)-FH S/B Side (MTRC I&P Area)							
Noise Barrier Works							
NB02940	NB61A ID 2-3 (50-75m), 18nos Predrilling	0%	18	18	22-Apr-14	14-May-14	20
NB02950	NB61A ID 2-3 (50-75m) 18nos Piling- 1 rigs	0%	18	18	15-May-14	05-Jun-14	20
NB03010	NB61A (75-190m) - Sheet piling & Excavation	0%	26	26	22-Apr-14	23-May-14	-120
NB03020	NB61A (75-190m) - Footing & Wall Structure	0%	70	70	24-May-14	15-Aug-14	-120
Other Works							
Site Clearance & Demolition of Existing Structure							
Contract Condition							
MCLT1000	Engineer Excise Section 3b Option	0%	0	0		12-Jul-14*	0
Z2.P2N.1280	Re-provision of Man Ching Lung Tong	0%	150	150	14-Jul-14	10-Jan-15	6
General							
Z2.P2N.0990	Pending for Govt compensation negotiation with village complete	0%	0	0	22-Apr-14		-137
Z2.P2N.1000	Liaison with relevant villages houses's owner and related parties	0%	30	30	22-Apr-14	28-May-14	-137
Z2.P2N.1010	Submission of contractor's design for site formation	0%	28	28	29-May-14	02-Jul-14	-137



Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
Z2.P2N.1020	Approval of contractor's Design by Engineer	0%	14	14	11-Jul-14	26-Jul-14	-137
Z2.P2N.1030	Submission of DIA & SIA report to DSD	0%	14	14	16-Jun-14	02-Jul-14	-137
Z2.P2N.1040	Consent from DSD	0%	21	21	03-Jul-14	26-Jul-14	-137
Z2.P2N.1050	Temporary access road construction	0%	21	21	13-Jun-14	08-Jul-14	-110
Z2.P2N.1060	Site clearance	0%	10	10	13-Jun-14	24-Jun-14	-110
South Buffer Zone 1 (SBZ1) (within Zone 2)(Ch.6740 to 6930)							
General							
General							
General							
POSSA328a	Tree Felling/Transplant	0%	30	30	22-Apr-14	28-May-14	-3
POSSA328a10	Site Clearance/ Trip Pit etc	0%	30	30	29-May-14	04-Jul-14	-3
POSSA329a	Tree Felling/Transplant	0%	30	30	22-Apr-14	28-May-14	-20
POSSA329a10	Site Clearance/ Trip Pit etc	0%	30	30	29-May-14	04-Jul-14	-20
Noise Barrier Along TWSR-West and Laying New Utilities							
NB64 (Ch.6860-6920)-TWSR West Side							
Noise Barrier Works							
NB001000	NB64 -Pre-drilling	0%	35	35	22-Apr-14	04-Jun-14	-142
NB001010	NB64 -piling (0.19m -78no)	0%	90	90	05-Jun-14	19-Sep-14	-142
Bridge Construction							
Kau Lung Hang Vehicular Bridge							
General							
Z2.KLH.1070	Consent from Engineer	10.71%	25	28	28-Nov-13 A	22-May-14	32
KLH Bridge - West Ramp							
Z2.KLH.0900	West Abutment- Pre-drilling work	0%	20	20	05-Jul-14	28-Jul-14	-3
KLH Bridge - Deck 3							
Z2.KLH.1325	Construct Temp Road - For diversion of existing TWR east	0%	20	20	05-Jul-14	28-Jul-14	-20
Z2.KLH.1790	East Abutment - Pre-bored H-pile piling works (13 Nos.)	12.82%	34	39	28-Mar-14 A	03-Jun-14	21
Z2.KLH.1800	East Abutment - Pile testing	0%	30	30	04-Jun-14	09-Jul-14	21
Z2.KLH.1810	East Abutment - Pile caps, abutment wall construction	0%	75	75	10-Jul-14	08-Oct-14	21
Z2.KLH.1830	VBP7 - Pre-bored H-pile piling works (7 Nos.)	4.76%	20	21	09-Apr-14 A	16-May-14	200
Z2.KLH.1840	VBP7- Pile testing	0%	30	30	17-May-14	21-Jun-14	200
Z2.KLH.1860	VBP8 - Pre-drilling work	0%	10	10	22-Apr-14	03-May-14	102
Z2.KLH.1870	VBP8 - Pre-bored H-pile piling works (6 Nos.)	0%	18	18	04-Jun-14	24-Jun-14	78
Z2.KLH.1880	VBP8 - Pile testing	0%	30	30	25-Jun-14	30-Jul-14	78
KLH Bridge - Deck 2							
Z2.KLH.1190	Temp road diversion at TWSR-W for TTA for VBP5 works	0%	45	45	05-Jul-14	26-Aug-14	23
Demolition of Existing Nam Wa Po Footbridge							
General							
Z2.NWP.0500	Site Clearance	0%	20	20	22-Apr-14	16-May-14	-93
Z2.NWP.1000	Modification of Existing Planter for Pier of Temporary Footbridge	0%	25	25	17-May-14	16-Jun-14	-93
Z2.NWP.1010	Removal of Existing Staircase Portion	0%	26	26	17-Jun-14	17-Jul-14	-93
Z2.NWP.1020	Temp. Steel Ramp, Pier, Deck Construction	0%	45	45	18-Jul-14	08-Sep-14	-93
North Buffer Zone 2 (NBZ2) (within Zone 4) (Ch. 7925 to 8100)							
Site Formation							
Site Formation Works							
Site Formation Work							
Z4SF1060	Backfilling up to formation level for Drainage work	53.33%	14	30	20-Feb-14 A	09-May-14	18
Z4SF1065	Drainage Work	0%	30	30	10-May-14	14-Jun-14	18
Z4SF1070	Backfilling (~20000m3)	0%	180	180	11-Mar-14 A	25-Nov-14	-88
Retaining Wall W76							
Structure Works							
RW761080	Base slab - W76 (~7m high)	0%	12	12	22-Apr-14	07-May-14	-20
RW761085	Wall construction - W76 (~7m high)	0%	40	40	08-May-14	24-Jun-14	-20
Bridge Construction							



Remaining Level o...
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining ...
Milestone
Crit. Milestone

Project File: HY/2012/06: IWP Rev. 5 (1404)

Layout: 3 Month Rolling Program

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Primavera Systems, Inc.

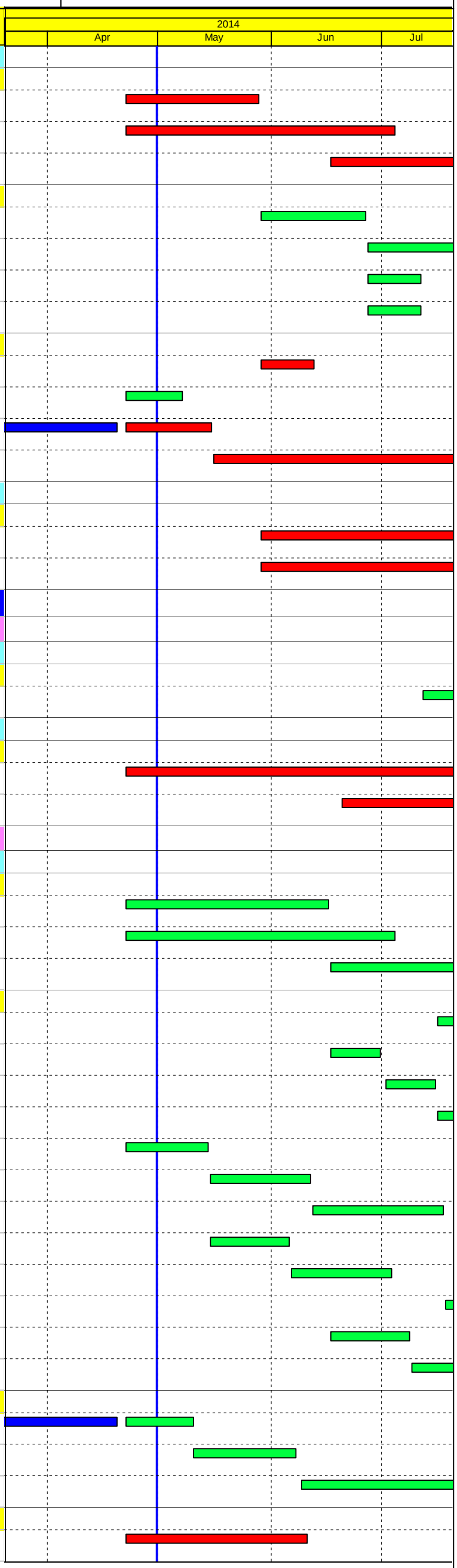
Contract No. HY/2012/06

Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange

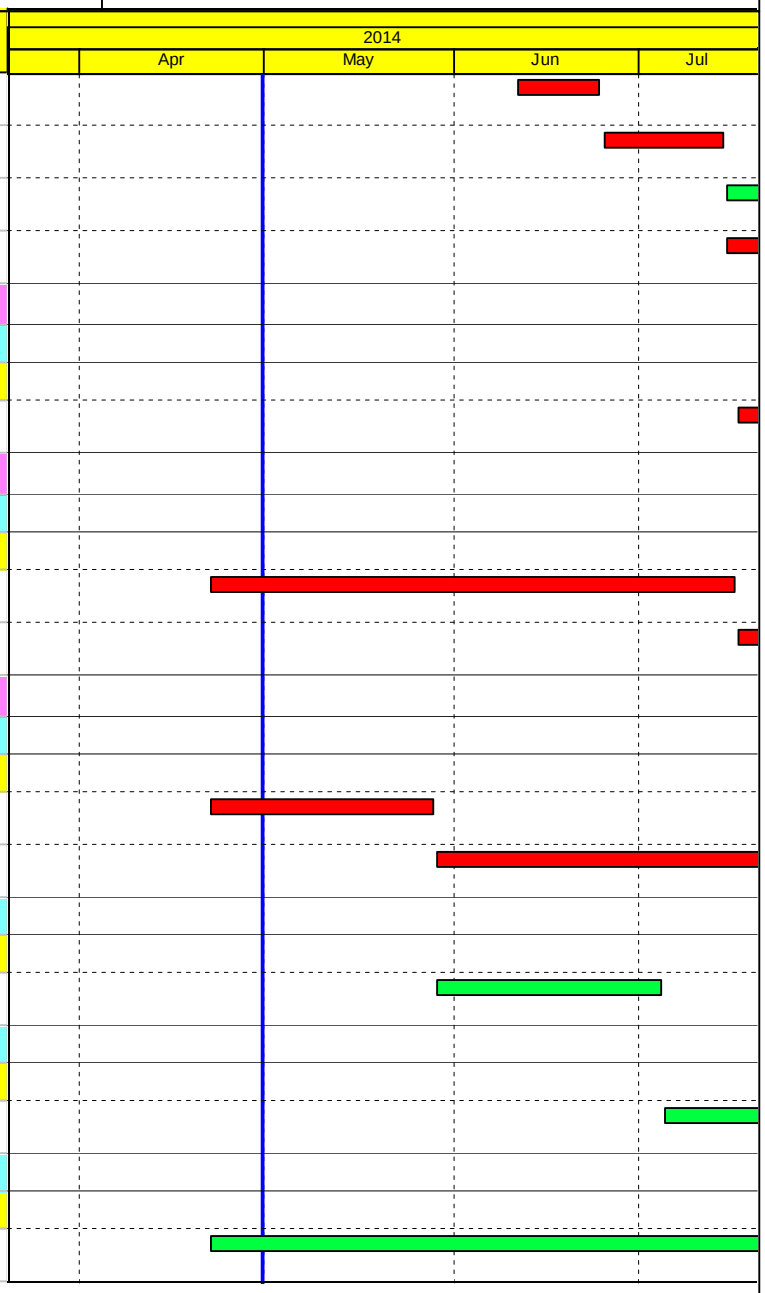
3 Month Rolling Program(20-Apr-14)

Date	Revision	C..	Ap...
07...	IWP Rev 4		
28...	IWP Rev 5		

Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
New Ho Ka Yuen Footbridge							
General							
HKY1020	Site Clearance (TWSR-W side)	0%	30	30	22-Apr-14	28-May-14	-70
HKY1030	Structure steel Shop drawing submission (HKYB)	0%	60	60	22-Apr-14	04-Jul-14	-59
HKY1040	Structure steel Shop drawing approval (HKYB)	0%	30	30	17-Jun-14	22-Jul-14	-59
TWSR-West/ FL Highway N/B Side Section							
HKY1140	HKYP6 - Predrilling	0%	24	24	29-May-14	26-Jun-14	84
HKY1150	HKYP6 - Pre-bored H pile (8 nos)	0%	24	24	27-Jun-14	25-Jul-14	84
HKY1172	HKYP1 - Predrilling	0%	12	12	27-Jun-14	11-Jul-14	105
HKY1220	HKYAB3 - Predrilling	0%	12	12	27-Jun-14	11-Jul-14	138
TWSR-East FL Highway S/B Side Section							
HKY1500	HKYAB1 - Predrilling	0%	12	12	29-May-14	12-Jun-14	-5
HKY1770	HKYP5 - Predrilling	0%	12	12	22-Apr-14	07-May-14	117
HKY1810	HKYAB2 - Predrilling	42.42%	19	33	14-Jan-14 A	15-May-14	-48
HKY1820	HKYAB2 - Pre-bored H pile (22 nos)	0%	66	66	16-May-14	02-Aug-14	-48
Demolition of Existing Ho Ka Yuen Footbridge							
TWSR-West/ FL Highway N/B Side Section							
HKY1880	Construct Temp Ramp for existing HKY footbridge	0%	90	90	29-May-14	13-Sep-14	-70
HKY1900	Erect temp platform for demolishing Ramp & staircase at TWSR-W	0%	45	45	29-May-14	22-Jul-14	-24
ZONE 4 (Ch. 7925 to 8700)							
Noise Barrier Along TWSR-West and Laying New Utilities							
NB75 (Ch.7930-8090)-FH N/B Side							
Noise Barrier Works							
NB4100	NB75 -Pre-drilling (Ch7990-8000)-(HKY-P1)	0%	24	24	12-Jul-14	08-Aug-14	105
NB77 (Ch.8090-8450)-FH N/B Side							
Noise Barrier Works							
NB4290	NB77 -Pre-drilling (Ch8090-8190)	0%	96	96	22-Apr-14	15-Aug-14	-77
NB4300	NB77 - piling (NB77/01-08, 0.19m -64no)	0%	96	96	20-Jun-14	14-Oct-14	-71
Bridge Construction							
New Wo Hop Shek Pedstrian & Cycle Bridge							
General							
WHS1010	Site Clearance & Temp Platform erection (SA340)	0%	45	45	22-Apr-14	16-Jun-14	411
WHS1020	Structure steel Shop drawing submission (WHSB)	0%	60	60	22-Apr-14	04-Jul-14	413
WHS1030	Structure steel Shop drawing approval (WHSB)	0%	30	30	17-Jun-14	22-Jul-14	413
TWSR-West/ FL Highway N/B Side Section							
WHS1160	WHSP2 - Pre-bored H pile (8 nos)	0%	24	24	16-Jul-14	12-Aug-14	411
WHS1230	WHSAB1 - Predrilling	0%	12	12	17-Jun-14	30-Jun-14	411
WHS1240	WHSAB1 - Pre-bored H pile (4 nos)	0%	12	12	02-Jul-14	15-Jul-14	411
WHS1250	WHSAB1 - Pile Test	0%	28	28	16-Jul-14	12-Aug-14	1091
WHS1894	WHSP3 - Pre-bored H pile (6 nos)	0%	18	18	22-Apr-14	14-May-14	519
WHS1896	WHSP3 - Pile Test	0%	28	28	15-May-14	11-Jun-14	648
WHS1898	WHSP3 - Pile cap, Pier and Pier Head	0%	30	30	12-Jun-14	17-Jul-14	520
WHS1910	WHSP4 - Pre-bored H pile (6 nos)	0%	18	18	15-May-14	05-Jun-14	543
WHS1920	WHSP4 - Pile Test	0%	28	28	06-Jun-14	03-Jul-14	679
WHS1930	WHSP4 - Pile cap, Pier and Pier Head	0%	30	30	18-Jul-14	21-Aug-14	520
WHS1940	WHSP5 - Predrilling	0%	18	18	17-Jun-14	08-Jul-14	528
WHS1950	WHSP5 - Pre-bored H pile (6 nos)	0%	18	18	09-Jul-14	29-Jul-14	528
Crossing Fanling Highway Section							
WHS1450	WHSP1 - Pre-bored H pile (6 nos)	16.67%	15	18	03-Mar-14 A	10-May-14	830
WHS1460	WHSP1 - Pile Test	0%	28	28	10-May-14	07-Jun-14	1035
WHS1470	WHSP1 - Pile cap, Pier and Pier Head	0%	52	52	09-Jun-14	08-Aug-14	830
TWSR-East FL Highway S/B Side Section							
WHS2045	Temp footbridge construction for pedestrian diversion	0%	40	40	22-Apr-14	10-Jun-14	-153



Activity ID	Activity Name	Duration % Complete	Remaining Duration	Original Duration	Start	Finish	Total Float
WHS2050	North Abutment Wall (AW1) - Predrilling	0%	12	12	11-Jun-14	24-Jun-14	-153
WHS2060	North Abutment Wall (AW1) - Pre-bored H pile (4 nos)	0%	16	16	25-Jun-14	14-Jul-14	-153
WHS2070	North Abutment Wall (AW1) - Pile Test	0%	28	28	15-Jul-14	11-Aug-14	896
WHS2075	North Abutment Wall (AW1) - Temp Shoring	0%	45	45	15-Jul-14	04-Sep-14	-153
Slip Road Y Construction							
Drainage & Road Works							
TWSR-East FL Highway S/B Side Section							
RDZ41000	Construct Slip Rd Y (Ch8250-8370)(SA340) (Z4 TTA-Stage 1)	0%	130	130	17-Jul-14	18-Dec-14	-146
Fanling Highway Construction							
Drainage & Road Works							
TWSR-East FL Highway S/B Side Section							
RDZ41004	Site Clearance & Tree Felling	0%	70	70	22-Apr-14	16-Jul-14	-146
RDZ41005	Construct FH S/B Lane 1,2 (Ch8250-8370)(SA340) (Z4 TTA-Stage 1)	0%	130	130	17-Jul-14	18-Dec-14	-146
Other Works							
Retaining Wall W77A							
TWSR-East FL Highway S/B Side Section							
RWZ4.1050	Site Clearance	0%	30	30	22-Apr-14	28-May-14	-85
RWZ4.1060	Base slab & Wall (0-3m high)- RW77A (Ch.50-130)	0%	60	60	29-May-14	08-Aug-14	-85
Retaining Wall W77B							
TWSR-East FL Highway S/B Side Section							
RWZ4.1092	Site Clearance	0%	30	30	29-May-14	04-Jul-14	20
Retaining Wall W78							
TWSR-East FL Highway S/B Side Section							
RWZ4.0900	Site Clearance	0%	30	30	05-Jul-14	08-Aug-14	50
TCSS Works							
TCSS Pre-Construction Works							
TCSS0100	Acquire Design Criteria from Drawing & procurement	0%	180	180	22-Apr-14	25-Nov-14	534



Remaining Level o...
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining ...
Milestone
Crit. Milestone

Project File: HY/2012/06: IWP Rev. 5 (1404)

Layout: 3 Month Rolling Program

Page 5 of 5

Primavera Systems, Inc.

Contract No. HY/2012/06

Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange

3 Month Rolling Program(20-Apr-14)

Date	Revision	C..	Ap...
07...	IWP Rev 4		
28...	IWP Rev 5		

APPENDIX C
IMPLEMENTATION SCHEDULE OF ENVIRONMENTAL MITIGATION MEASURES (EMIS)

Appendix C - Implementation Schedule of Environmental Mitigation Measures (EMIS)

Air Quality – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status		
			Feb 14	Mar 14	Apr 14
Air Quality during construction	Restricting heights from which materials are dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading.	During construction	V	V	V
	All stockpiles of excavated materials or spoil of more than $50m^3$ shall be enclosed, covered or dampened during dry or windy conditions.		V	V	@
	Effective water sprays shall be used to control potential dust emission sources such as unpaved haul roads and active construction areas.		V	V	@
	All spraying of materials and surfaces shall avoid excessive water usage.		V	V	V
	Vehicles that have the potential to create dust while transporting materials shall be covered, with the cover properly secured and extended over the edges of the side and tail boards.		V	V	V
	Materials shall be dampened, if necessary, before transportation.		V	V	V
	Travelling speeds shall be controlled to reduce traffic induced dust dispersion and re-suspension within the site from the operating haul trucks.		V	V	V
	Vehicle washing facilities shall be provided to minimize the quantity of material deposited on public roads.		V	V	@

Noise – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status		
			Feb 14	Mar 14	Apr 14
Noise during construction	Use of silenced plant or plant equipped with mufflers or dampers in substitute of ordinary plant.	During construction	#	#	V
	Reduce the number of equipment and their percentage on-time.		#	#	V
	3.5 m and 5.5 m high temporary noise barrier at culvert construction work area (Figure 2a of the Environmental Permit).		#	#	#
	3 m high temporary noise barrier along the northern edge of Bridge 12 at ground level (Figure 2b of the Environmental Permit).		#	#	#
	2 m high temporary noise barrier along the northern edge of Bridge 12 at bridge level (Figure 2b of the Environmental Permit).		#	#	#
	2.5 m high temporary noise barrier along Tai Wo Service Road West (Figure 2c of the Environmental Permit).		#	#	#
	3.5m and 7m high temporary noise barrier along Tai Wo Services Road West near Tai Hang (Figure 2c of the Environmental Permit).		#	#	#
	7 m high temporary noise barrier along Tai Wo Service Road West near Tai Wo Footbridge work area (Figure 2d of the Environmental Permit).		#	#	#
	7 m high temporary noise barrier near Kiu Tau Footbridge work area (Figure 2d of the Environmental Permit).		#	#	#
	2.5 m high temporary noise barrier near river diversion work area (Figure 2e of the Environmental Permit).		#	#	#

Water Quality – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status		
			Feb 14	Mar 14	Apr 14
Water quality during construction	Demolition and reconstruction of bridges - Prevent off-site migration through use of sheet piles. - Minimise duration of works as far as practical. - All sewer and drainage connections should be sealed to prevent debris, soil, sand, etc, from entering public sewers/drains. - Site surface runoff should be settled to remove sand/silt before it is discharged into the existing storm drains.	During construction	#	#	#
	Road Widening Works, Earthworks and Culvert Extension Works - Wastewater generated from any concrete batching washdown of equipment or similar activities should be discharged into foul sewers, after the removal of settable solids, and pH adjustment as necessary. All sewage discharges from the study area should meet the TM standards and approval from EPD through the licensing process is required. - Sand traps, oil interceptors and other pollution prevention installations should be provided, properly cleaned and maintained. - Runoff from exposed working areas, unfinished slopes and from unlined temporary channels should be directed to stilling basins and/or silt traps before discharging to the drainage outfalls. - Regular inspections of stilling basins and/or silt traps is required to ensure that sediment is not conveyed into the existing drainage system. - Open stockpiles should be covered with a tarpaulin cover. - During the wet season, any exposed top soils should be covered with a tarpaulin, shotcreted or hydroseeded. - Sand and silt from wash-water from vehicle washing should be settled out before discharging into storm drains. - Fuels should be stored in bunded areas such that spillage can be easily collected.		V	V	V

Waste – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status		
			Feb 14	Mar 14	Apr 14
Waste management during construction	General Waste - Transport of wastes off site as soon as possible. - Maintenance of accurate waste records. - Minimisation of waste generation for disposal (via reduction/recycling/re-use). - No on-site burning will be permitted. - Use of re-useable metal hoardings/signboards.	During construction	V	V	V
	Vegetation from site clearance - Segregation of materials to facilitate disposal. - Mulching to reduce bulk and where possible review opportunities for the possible beneficial use within landscaping areas.		V	V	V
	Demolition Wastes - Segregation of materials to facilitate disposal. - Appropriate stockpile management.		V	V	V
	Excavated Materials - Segregation of materials to facilitate disposal / reuse. - Appropriate stockpile management. - Re-use of excavated material on or off site (where possible). - Special handling and disposal procedures in the event that contaminated materials are excavated.		V	V	V
	Construction Wastes - Segregation of materials to facilitate recycling/reuse (within designated area in appropriate containers/stockpiles). - Appropriate stockpile management. - Planning to reduce over ordering and waste generation. - Recycling and re-use of materials where possible (e.g. metal, wood from formwork) - For material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal.		V	V	V
	Bentonite Slurries - Bentonite slurries should be reused as far as possible. - Disposal in accordance with Practice Note For Professional Persons ProPECC PN 1/94.		#	#	#

	Chemical Wastes - Storage within locked, covered and bunded area. - The storage area shall not be located adjacent to sensitive receivers e.g. drains. - Minimise waste production and recycle oils/solvents where possible. - A spill response procedure shall be in place and absorption material available for minor spillages. - Use appropriate and labelled containers. - Educate site workers on site cleanliness/waste management procedures. - If chemical wastes are to be generated, the contractor must register with EPD as a chemical waste producer. - The chemical wastes shall be collected by a licensed chemical waste collector.		@	@	@
	Municipal Wastes - Waste shall be stored within a temporary refuse collection facility, in appropriate containers prior to collection and disposal. - Regular, daily collections are required by an approved waste collector.		V	V	V

Ecology – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status		
			Feb 14	Mar 14	Apr 14
Ecology during construction	Accurate Delineation of Works Area - Boundaries of proposed works areas shall be clearly identified and separated from external areas by a physical barrier to prevent encroachment of adjacent habitats. - Individual trees which fall within the works areas but which work plans do not require removal are to be retained and fenced off to maximize protection.	During construction	V	V	V
	Vegetation Clearance - No fires shall be lit within the works area for the purpose of burning cleared vegetation. - The Contractor shall give consideration to mulching the cleared vegetation for recycling within the works area / adjacent land.		V	V	V
	Dust generation There are a number of measures which shall be taken as specified in the Air Pollution Control (Construction Dust) Regulation on 'Dust Control Requirements, including the following key measures to be applied during construction: - Vehicle washing facilities to be provided at every discernible or designated vehicle exit point; - All temporary site access roads shall be sprayed with water to suppress dust as necessary; - All dusty materials should be sprayed with water immediately prior to any handling; and - All debris should be covered entirely by impervious sheeting or stored in a sheltered debris collection area.		V	V	V
	Surface Run-off In general, mitigation measures shall be in accordance with ProPECC PN1/94 on 'Construction Site Drainage'. Key measures include: - Bund and cover stock piles to avoid run-off; - Channel any run-off through a system of oil, grease and sediment / silt traps and reuse water on site where ever practical; - All vehicle maintenance to be undertaken within a bunded area; and - Maximise vegetation retention on-site to maximise absorption (minimise transport).		V	V	V

Landscape and Visual Impact – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Responsibility		
			Feb 14	Mar 14	Apr 14
Landscape & Visual during construction	Preservation of Existing Vegetation - Trees identified for retention within the project limit would be protected during the works; - The tree transplanting and planting works shall be implemented by approved Landscape Contractors.	During construction	V	V	V
	Temporary Works Areas - Where feasible the works areas would be screened using hoarding and existing vegetation would be retained where possible to reduce the landscape and visual impacts arising from the construction activity. The landscape of these works areas would be restored following the completion of the construction phase.		V	V	V
	Hoarding - A hoarding would be erected where practicable in the most visually sensitive locations to screen the temporary construction works from the local VSRs.		V	V	V
	Top Soils - The works will result in disturbance to extensive areas of topsoil. Topsoil worthy of retention should be stockpiled for use following completion of the civil engineering works. It should either be temporarily vegetated with hydroseeded grass or turned over on a regular basis.		#	#	#
	Protection of Important Landscape Features - Important features such as temples, Island House and kilns within the study area, although remote from the proposed works retained and adequately protected.		#	#	#

Legend:
V = implemented;
x = not implemented;
@ = partially implemented;
N/A = not applicable - No such work was undertaken or no such material was used on site;
= to be implemented.

APPENDIX D
SUMMARY OF ACTION AND LIMIT LEVELS

Appendix D - Summary of Action and Limit Levels

Table 1 – Action and Limit Levels for 1-hour TSP

Location	Action Level	Limit Level
AM2	317.8 μg/m3	500 μg/m3

Table 2 – Action and Limit Levels for 24-hour TSP

Location	Action Level	Limit Level
AM2	200.7 μg/m3	260 μg/m3

Table 3 – Action and Limit Levels for Construction Noise (0700-1900 hrs of normal weekdays)

Location	Action Level	Limit Level
M2	When one documented complaint, related to 0700 – 1900 hours on normal weekdays, is received from any one of the sensitive receivers	75 dB(A)
M3*		65/70 dB(A)

*Daytime noise Limit Level of 70 dB(A) applies to education institutions, while 65dB(A) applies during school examination period

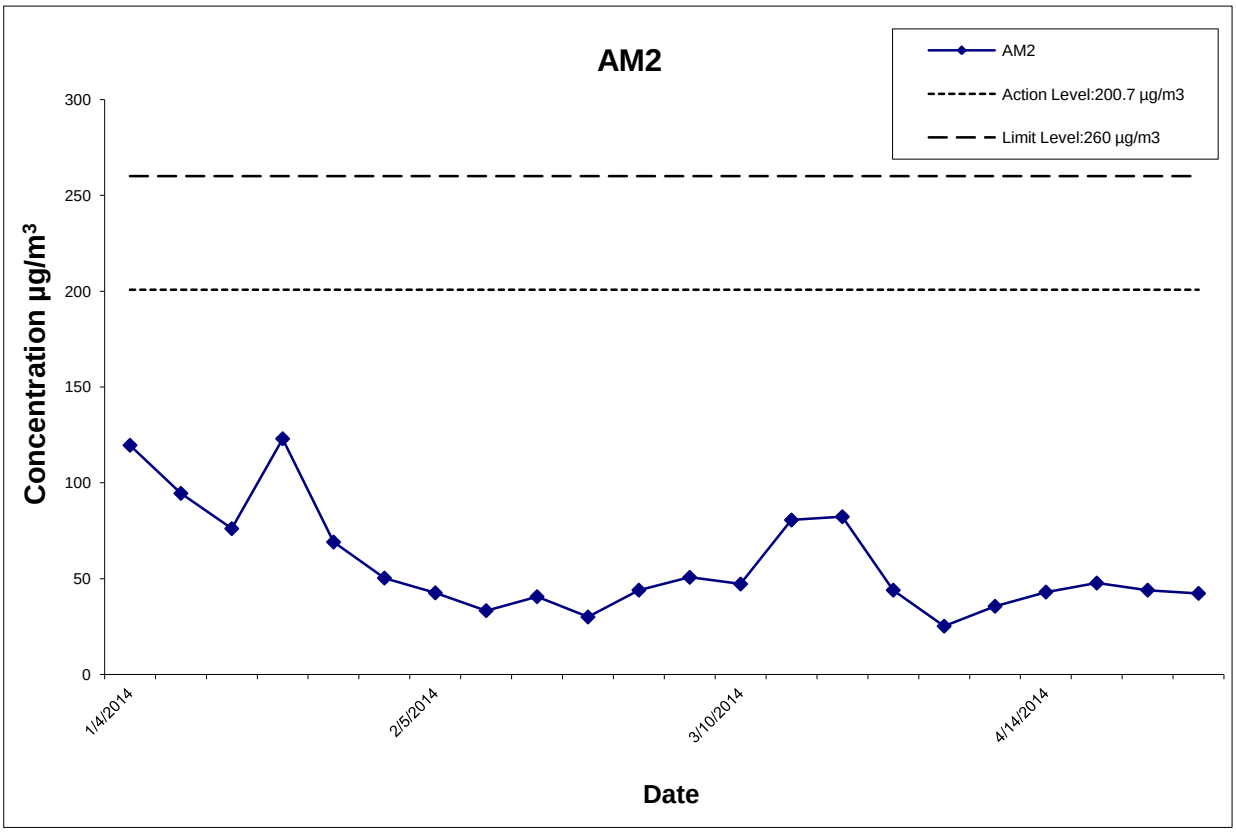
APPENDIX E
IMPACT AIR QUALITY MONITORING RESULTS AND THEIR GRAPHICAL PRESENTATION

Impact Air Quality Monitoring Results

24-hour TSP Monitoring Results at Station AM2 (Fanling Government Secondary School)

Date	Weather Condition	Air Temp. (^{o}C)	Atmospheric Pressure(hPa)	Flow Rate (m^3/min.) Initial	Flow Rate (m^3/min.) Final	Av. flow (m^3/min)	Total vol. (m^3)	Filter Weight (g) Initial	Filter Weight (g) Final	Particulate weight(g)	Elapse Time Initial	Elapse Time Final	Sampling Time(hrs.)	Conc. ($\mu g/m^3$)	Actino Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
4-Jan-14	Sunny	18.8	1017.8	1.314	1.314	1.314	1892.2	2.7387	2.9650	0.2263	3369.02	3393.02	24.00	119.6	200.7	260
9-Jan-14	Fine	15.5	1022.9	1.314	1.314	1.314	1892.2	2.7104	2.8893	0.1789	3393.02	3417.02	24.00	94.5	200.7	260
15-Jan-14	Fine	13.2	1025.6	1.314	1.314	1.314	1892.2	2.7211	2.8651	0.1440	3417.02	3441.02	24.00	76.1	200.7	260
21-Jan-14	Sunny	14.9	1024.5	1.314	1.314	1.314	1892.2	2.6852	2.9179	0.2327	3441.02	3465.02	24.00	123.0	200.7	260
27-Jan-14	Sunny	16.4	1021.3	1.314	1.314	1.314	1892.2	2.6550	2.7857	0.1307	3465.02	3489.02	24.00	69.1	200.7	260
30-Jan-14	Sunny	18.9	1019.3	1.314	1.314	1.314	1892.2	2.6818	2.7770	0.0952	3489.02	3513.02	24.00	50.3	200.7	260
5-Feb-14	Sunny	17.1	1013.9	1.314	1.314	1.314	1892.2	2.6918	2.7725	0.0807	3513.02	3537.02	24.00	42.6	200.7	260
8-Feb-14	Rainy	16.6	1011.4	1.314	1.314	1.314	1892.2	2.7252	2.7883	0.0631	3537.02	3561.02	24.00	33.3	200.7	260
14-Feb-14	Fine	10.6	1022.1	1.314	1.314	1.314	1892.2	2.6647	2.7415	0.0768	3561.02	3585.02	24.00	40.6	200.7	260
20-Feb-14	Fine	12.3	1024.8	1.314	1.314	1.314	1892.2	2.6785	2.7352	0.0567	3585.02	3609.02	24.00	30.0	200.7	260
26-Feb-14	Sunny	20.2	1018.0	1.314	1.314	1.314	1892.2	2.7061	2.7893	0.0832	3609.02	3633.02	24.00	44.0	200.7	260
4-Mar-14	Sunny	16.8	1017.5	1.314	1.314	1.314	1892.2	2.6471	2.7431	0.0960	3633.02	3657.02	24.00	50.7	200.7	260
10-Mar-14	Fine	14.4	1022.1	1.314	1.314	1.314	1892.2	2.7341	2.8234	0.0893	3657.02	3681.02	24.00	47.2	200.7	260
15-Mar-14	Sunny	16.0	1022.1	1.314	1.314	1.314	1892.2	2.9393	3.0919	0.1526	3681.02	3705.02	24.00	80.6	200.7	260
21-Mar-14	Sunny	16.5	1020.4	1.314	1.314	1.314	1892.2	2.7468	2.9025	0.1557	3705.02	3729.02	24.00	82.3	200.7	260
27-Mar-14	Sunny	23.5	1012.7	1.314	1.314	1.314	1892.2	2.7061	2.7893	0.0832	3609.02	3633.02	24.00	44.0	200.7	260
2-Apr-14	Rainy	19.4	1011.9	1.314	1.314	1.314	1892.2	2.7261	2.7737	0.0476	3753.02	3777.02	24.00	25.2	200.7	260
8-Apr-14	Fine	19.9	1014.6	1.314	1.314	1.314	1892.2	2.7022	2.7696	0.0674	3777.02	3801.02	24.00	35.6	200.7	260
14-Apr-14	Sunny	22.8	1014.7	1.314	1.314	1.314	1892.2	2.6934	2.7748	0.0814	3801.02	3825.02	24.00	43.0	200.7	260
17-Apr-14	Fine	24.1	1012.0	1.314	1.314	1.314	1892.2	2.7491	2.8394	0.0903	3825.02	3849.02	24.00	47.7	200.7	260
23-Apr-14	Cloudy	22.4	1012.3	1.314	1.314	1.314	1892.2	2.7202	2.8035	0.0833	3849.02	3873.02	24.00	44.0	200.7	260
29-Apr-14	Sunny	23.9	1013.1	1.314	1.314	1.314	1892.2	2.7230	2.8031	0.0801	3873.02	3897.02	24.00	42.3	200.7	260

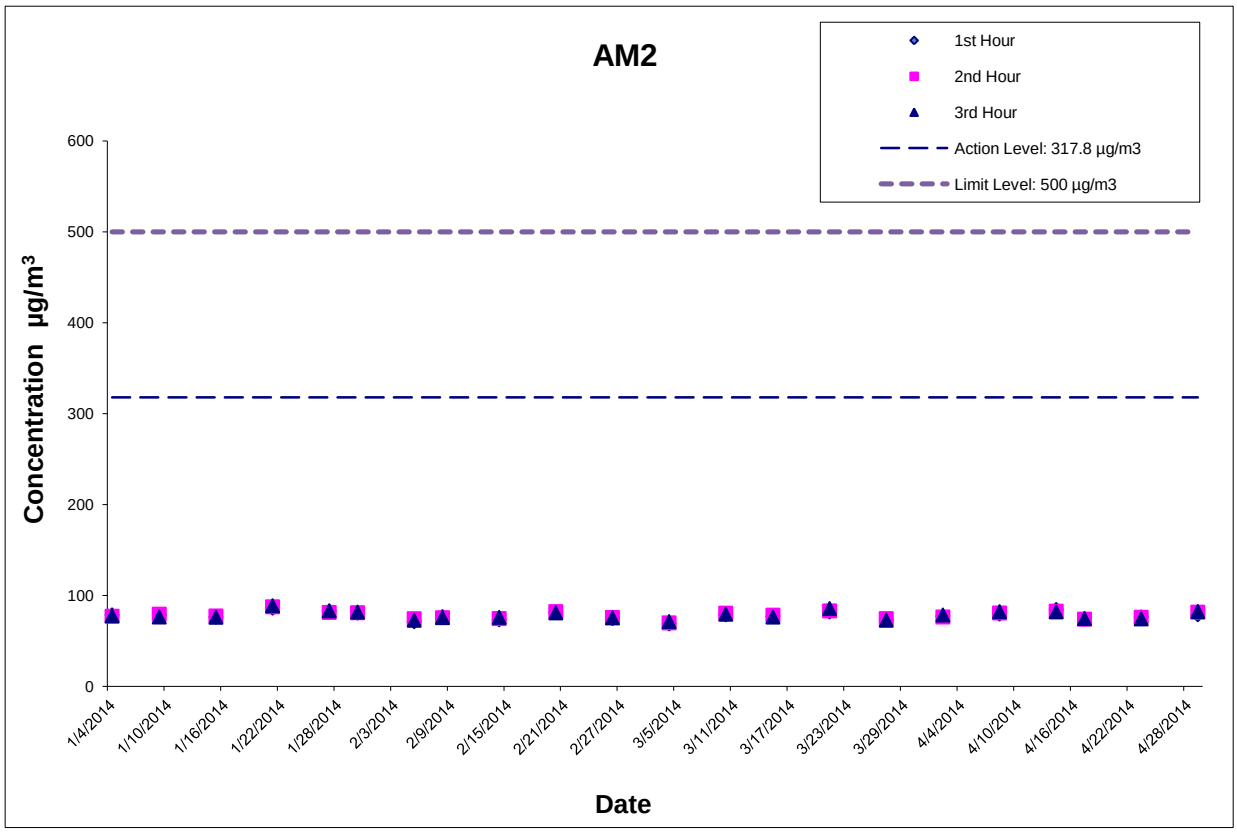
Average for the reporting quarter (Feb 14 to Apr 1	45.8
Minimum for the reporting quarter (Feb 14 to Apr	25.2
Maximum for the reporting quarter (Feb 14 to Apr	82.3



Impact Air Quality Monitoring Results

1-hour TSP Monitoring Results at Station AM2
(Fanling Government Secondary School)

Date	Start Time (hh:mm)	1st Hour Conc. ($\mu g/m^3$)	2nd Hour Conc. ($\mu g/m^3$)	3rd Hour Conc. ($\mu g/m^3$)
4-Jan-14	13:05	78.5	77.0	77.5
9-Jan-14	14:08	78.6	79.3	76.2
15-Jan-14	13:49	76.2	77.3	75.9
21-Jan-14	9:45	85.9	87.4	88.6
27-Jan-14	15:20	82.6	81.2	83.0
30-Jan-14	11:00	80.5	80.9	81.6
5-Feb-14	10:00	71.0	74.3	72.6
8-Feb-14	13:05	76.6	75.4	75.7
14-Feb-14	13:40	73.1	74.5	75.8
20-Feb-14	15:05	81.4	82.1	80.7
26-Feb-14	13:10	74.6	75.7	75.2
4-Mar-14	13:45	68.6	69.7	71.2
10-Mar-14	11:45	78.6	80.4	79.2
15-Mar-14	10:50	77.1	78.2	76.1
21-Mar-14	13:00	81.7	82.9	85.5
27-Mar-14	13:30	73.1	74.4	72.6
2-Apr-14	13:31	77.2	76.2	78.4
8-Apr-14	11:30	79.4	80.6	82.1
14-Apr-14	12:15	84.4	82.6	81.8
17-Apr-14	12:16	74.1	73.8	74.4
23-Apr-14	12:20	76.2	75.9	74.1
29-Apr-14	13:35	78.7	81.5	82.2
Average for the reporting quarter (Feb 14 to Apr 14)				77.1
Minimum for the reporting quarter (Feb 14 to Apr 14)				68.6
Maximum for the reporting quarter (Feb 14 to Apr 14)				85.5



CONTRACT NO. HY/2012/06

WIDENING OF FANLING HIGHWAY

- TAI HANG TO WO HOP SHEK INTERCHANGE

AECOM

Graphical Presentation of Impact 1-hour TSP Monitoring Results

APPENDIX F
METEROLOGICAL DATA

Extract of Meteorological Observations for Tai Po Automatic Weather Station, February 2014

Date	Mean Pressure at M.S.L. (hPa)	Air Temperature			Mean Dew Point Temperature (deg C)	Relative Humidity		
		Max. (deg C)	Mean (deg C)	Min. (deg C)		Max. (%)	Mean (%)	Min. (%)
1-Feb	1015.4	23.2	19.1	16.2	15.8	96	82	64
2-Feb	1011.4	24.5	19.3	15	14.8	95	77	52
3-Feb	1009.9	27.6	20.1	15.3	14	88	70	40
4-Feb	1013.4	19.8	17.6	16.4	14.2	92	80	69
5-Feb	1013.9	18.7	17.2	16.1	13.4	91	79	71
6-Feb	1012.1	20.9	18.2	16.4	16	94	87	76
7-Feb	1010.9	21.3	19.3	17.8	17.4	93	89	82
8-Feb	1011.7	19.3	15.2	13.6	13	97	87	72
9-Feb	1012.8	16.4	13.4	8.0	12.1	96	92	83
10-Feb	1019.8	8.6	7.7	6.6	2.6	93	70	58
11-Feb	1020.6	7.8	6.7	5.9	-0.2	68	61	53
12-Feb	1019.4	8.0	6.6	4.9	3.8	94	83	64
13-Feb	1022.2	8.0	6.8	5.9	4.6	94	86	65
14-Feb	1022.6	13.9	9.5	6.7	2.6	75	62	45
15-Feb	1020.9	13.9	10.7	7.6	5.8	82	72	65
16-Feb	1018.6	15.7	14.5	13.7	11.9	92	85	74
17-Feb	1018.1	19.6	17.2	15.2	16.1	97	93	84
18-Feb	1016.7	22	16.3	10.8	14.4	98	89	70
19-Feb	1022.4	11	8.9	7.0	3.6	94	70	53
20-Feb	1025.2	17.6	10.6	4.4	2.7	84	61	26
21-Feb	1024.8	15.4	12.9	8.9	7.8	93	72	54
22-Feb	1023.4	17.1	14.6	13	8.7	81	68	48
23-Feb	1022.9	18.7	16.2	14.5	11.3	86	73	53
24-Feb	1020.7	20.5	17.1	14	13	90	77	59
25-Feb	1018.6	19.7	18	16.5	15.7	94	86	77
26-Feb	1018.1	23.4	19.5	17.5	17.6	97	89	69
27-Feb	1019	21.5	19.1	17.9	16.9	96	88	78
28-Feb	1017.1	19.3	18.2	17.5	15.7	91	86	80
Mean	1017.9	17.6	14.7	12.3	10.9	91	79	64
Maximum	1025.2	27.6	20.1	17.9	17.6	98	93	84
Minimum	1009.9	7.8	6.6	4.4	-0.2	68	61	26

Extract of Meteorological Observations for Tai Po Automatic Weather Station, February 2014

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
1-Feb	*****	***	*****
2-Feb	*****	***	*****
3-Feb	*****	***	*****
4-Feb	*****	***	*****
5-Feb	*****	***	*****
6-Feb	*****	***	*****
7-Feb	*****	***	*****
8-Feb	*****	***	*****
9-Feb	*****	***	*****
10-Feb	*****	***	*****
11-Feb	*****	***	*****
12-Feb	*****	***	*****
13-Feb	*****	***	*****
14-Feb	*****	***	*****
15-Feb	*****	***	*****
16-Feb	*****	***	*****
17-Feb	*****	***	*****
18-Feb	*****	***	*****
19-Feb	*****	***	*****
20-Feb	*****	***	*****
21-Feb	*****	***	*****
22-Feb	*****	***	*****
23-Feb	*****	***	*****
24-Feb	*****	***	*****
25-Feb	*****	***	*****
26-Feb	*****	***	*****
27-Feb	*****	***	*****
28-Feb	*****	***	*****
Mean	-----	***	*****
Total	*****	---	-----
Maximum	*****	---	*****
Minimum	*****	---	*****

*** unavailable

missing (less than 24 hourly observations a day)

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station, February 2014

Date	Mean Pressure at M.S.L. (hPa)	Air Temperature			Mean Dew Point Temperature (deg C)	Relative Humidity		
		Max. (deg C)	Mean (deg C)	Min. (deg C)		Max. (%)	Mean (%)	Min. (%)
1-Feb	******	26.2	20.2	16.9	****	***	***	***
2-Feb	******	27.2	20.3	15.8	****	***	***	***
3-Feb	******	29.1	20.9	15.8	****	***	***	***
4-Feb	******	19.8	17.6	16.2	****	***	***	***
5-Feb	******	22.3	17.6	15.9	****	***	***	***
6-Feb	******	23.5	18.7	15.9	****	***	***	***
7-Feb	******	23.9	20.2	17.9	****	***	***	***
8-Feb	******	19.4	15.5	14.4	****	***	***	***
9-Feb	******	16.2	13.5	8.2	****	***	***	***
10-Feb	******	9.1	7.8	6.9	****	***	***	***
11-Feb	******	9.4	7.1	6.1	****	***	***	***
12-Feb	******	9.4	7.6	5.9	****	***	***	***
13-Feb	******	9.0	7.7	6.8	****	***	***	***
14-Feb	******	14.8	10	7.2	****	***	***	***
15-Feb	******	13.5	11.1	7.7	****	***	***	***
16-Feb	******	15.5	14.5	13.3	****	***	***	***
17-Feb	******	22.9	18	15.1	****	***	***	***
18-Feb	******	23.1	17	10.5	****	***	***	***
19-Feb	******	11.4	8.8	5.9	****	***	***	***
20-Feb	******	18.6	11.5	5.3	****	***	***	***
21-Feb	******	16.7	13.5	9.6	****	***	***	***
22-Feb	******	21	14.8	12	****	***	***	***
23-Feb	******	20.9	16.3	13.7	****	***	***	***
24-Feb	******	23.1	17.9	14.1	****	***	***	***
25-Feb	******	23.2	18.8	17.1	****	***	***	***
26-Feb	******	25.4	20.2	17.8	****	***	***	***
27-Feb	******	23.1	19.4	18	****	***	***	***
28-Feb	******	18.8	18	16.9	****	***	***	***
Mean	******	19.2	15.2	12.4	****	***	***	***
Maximum	******	29.1	20.9	18	****	***	***	***
Minimum	******	9.0	7.1	5.3	****	***	***	***

Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station, February 2014

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
1-Feb	0.0	70	5.3
2-Feb	0.0	260	4.6
3-Feb	0.0	150	4.8
4-Feb	0.0	90	20.5
5-Feb	0.0	90	12.5
6-Feb	0.0	60	8.5
7-Feb	0.0	60	6.3
8-Feb	0.5	50	9.6
9-Feb	6.0	40	16.0
10-Feb	1.0	30	14.3
11-Feb	0.0	40	10.9
12-Feb	1.5	50	8.6
13-Feb	10.0	30	7.9
14-Feb	0.0	20	11.4
15-Feb	0.0	40	10.4
16-Feb	0.0	80	13.5
17-Feb	0.0	60	6.3
18-Feb	0.0	260	9.3
19-Feb	6.5	20	17.7
20-Feb	0.0	110	6.2
21-Feb	0.0	90	18.3
22-Feb	0.0	50	16.2
23-Feb	0.0	70	16.3
24-Feb	0.0	50	12.6
25-Feb	0.0	70	9.5
26-Feb	0.0	60	4.5
27-Feb	0.0	70	14.0
28-Feb	0.0	90	12.5
Mean	-----	50	11.0
Total	25.5	---	-----
Maximum	10.0	---	20.5
Minimum	0.0	---	4.5

*** unavailable

missing (less than 24 hourly observations a day)

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

Extract of Meteorological Observations for Tai Po Automatic Weather Station, March 2014

Date	Mean Pressure at M.S.L. (hPa)	Air Temperature			Mean Dew Point Temperature (deg C)	Relative Humidity		
		Max. (deg C)	Mean (deg C)	Min. (deg C)		Max. (%)	Mean (%)	Min. (%)
1-Mar	1014.6	21.8	19.6	18.3	17.6	96	88	81
2-Mar	1014.8	20.6	18.1	15.3	16.3	98	90	72
3-Mar	1017.2	16.2	15.6	14.8	13	96	85	77
4-Mar	1017.7	17.3	16.4	15.2	14.8	97	90	84
5-Mar	1018.9	16.9	16	15.1	13	96	83	69
6-Mar	1018.5	16	15.2	14.5	12.2	91	82	67
7-Mar	1020.7	15.1	14.6	14.3	11.9	90	84	78
8-Mar	1019	15.3	14.5	14	13.4	98	93	84
9-Mar	1021.3	14.4	13.4	12.4	11.5	97	88	81
10-Mar	1022.6	14.6	13.9	12.4	10.5	91	80	69
11-Mar	1020.5	15.7	15	14.1	12.2	94	83	76
12-Mar	1014.7	18.4	17	15.4	16.4	98	96	93
13-Mar	1016.4	22.6	20	17.5	14.6	99	73	52
14-Mar	1022.3	18.6	16.6	15.2	8.8	76	60	46
15-Mar	1022.3	16.9	15.7	14.9	8.7	79	64	47
16-Mar	1021.1	18.9	17.5	15.7	12.1	88	71	58
17-Mar	1018.9	21.8	19.4	17.4	17.5	96	89	80
18-Mar	1015.9	23.7	20.9	18.9	19.2	98	90	74
19-Mar	1013.5	24.9	21.9	19.4	19.6	97	87	69
20-Mar	1014.1	28.1	21	17.5	17.7	99	83	58
21-Mar	1020.7	17.5	15.9	15.1	8.9	72	64	57
22-Mar	1021.2	20.9	16.7	14.5	9.9	79	65	41
23-Mar	1022.1	21.2	18.1	15.8	11.1	82	65	45
24-Mar	1019.3	22.3	19.3	15.4	13.2	83	68	54
25-Mar	1015.5	24.6	21.1	17.8	16.5	89	75	59
26-Mar	1013.6	25.9	22.4	19.2	19	92	82	65
27-Mar	1012.5	27.2	22.8	19.2	19.8	95	84	68
28-Mar	1012	23	21.9	20.8	20.6	96	92	86
29-Mar	1011.1	22.8	21.7	20.8	20.7	98	94	82
30-Mar	1010.5	23.9	21.5	19.2	20.3	98	93	81
31-Mar	1009.6	20.3	19.5	18.5	19	99	97	92
Mean	1017.2	20.2	18.2	16.4	14.8	92	82	69
Maximum	1022.6	28.1	22.8	20.8	20.7	99	97	93
Minimum	1009.6	14.4	13.4	12.4	8.7	72	60	41

Extract of Meteorological Observations for Tai Po Automatic Weather Station, March 2014

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
1-Mar	*****	***	*****
2-Mar	*****	***	*****
3-Mar	*****	***	*****
4-Mar	*****	***	*****
5-Mar	*****	***	*****
6-Mar	*****	***	*****
7-Mar	*****	***	*****
8-Mar	*****	***	*****
9-Mar	*****	***	*****
10-Mar	*****	***	*****
11-Mar	*****	***	*****
12-Mar	*****	***	*****
13-Mar	*****	***	*****
14-Mar	*****	***	*****
15-Mar	*****	***	*****
16-Mar	*****	***	*****
17-Mar	*****	***	*****
18-Mar	*****	***	*****
19-Mar	*****	***	*****
20-Mar	*****	***	*****
21-Mar	*****	***	*****
22-Mar	*****	***	*****
23-Mar	*****	***	*****
24-Mar	*****	***	*****
25-Mar	*****	***	*****
26-Mar	*****	***	*****
27-Mar	*****	***	*****
28-Mar	*****	***	*****
29-Mar	*****	***	*****
30-Mar	*****	***	*****
31-Mar	*****	***	*****
Mean	-----	***	*****
Total	*****	---	-----
Maximum	*****	---	*****
Minimum	*****	---	*****

*** unavailable

missing (less than 24 hourly observations a day)

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station, March 2014

Date	Mean Pressure at M.S.L. (hPa)	Air Temperature			Mean Dew Point Temperature (deg C)	Relative Humidity		
		Max. (deg C)	Mean (deg C)	Min. (deg C)		Max. (%)	Mean (%)	Min. (%)
1-Mar	******	24.4	20.5	18	****	***	***	***
2-Mar	******	21.9	18.2	14.7	****	***	***	***
3-Mar	******	15.7	15.2	14.5	****	***	***	***
4-Mar	******	18.6	16.7	15.4	****	***	***	***
5-Mar	******	17.1	16	14.8	****	***	***	***
6-Mar	******	15.8	15.1	14.6	****	***	***	***
7-Mar	******	14.8	14.3	13	****	***	***	***
8-Mar	******	16.2	14.8	13.9	****	***	***	***
9-Mar	******	15	13.5	11.8	****	***	***	***
10-Mar	******	15.8	13.7	11.8	****	***	***	***
11-Mar	******	16	15.1	13.9	****	***	***	***
12-Mar	******	18.9	17.4	15.2	****	***	***	***
13-Mar	******	24.7	20.6	18.1	****	***	***	***
14-Mar	******	20.9	16.9	14.8	****	***	***	***
15-Mar	******	18.2	15.7	14.7	****	***	***	***
16-Mar	******	21.9	18.4	15.3	****	***	***	***
17-Mar	******	25.5	21	18	****	***	***	***
18-Mar	******	28	22.4	19.4	****	***	***	***
19-Mar	******	28.7	23.2	19.4	****	***	***	***
20-Mar	******	28	21.4	16.6	****	***	***	***
21-Mar	******	17	15.4	14.1	****	***	***	***
22-Mar	******	22.6	17.1	14.2	****	***	***	***
23-Mar	******	25	18.7	14.9	****	***	***	***
24-Mar	******	25.5	20.1	15.3	****	***	***	***
25-Mar	******	28.7	22.1	18	****	***	***	***
26-Mar	******	29.8	23.6	19.7	****	***	***	***
27-Mar	******	30.9	23.9	20	****	***	***	***
28-Mar	******	24.2	22.3	21	****	***	***	***
29-Mar	******	23.2	22	21	****	***	***	***
30-Mar	******	24	21.5	18.5	****	***	***	***
31-Mar	******	20.1	19.5	18.5	****	***	***	***
Mean	******	21.8	18.6	16.2	****	***	***	***
Maximum	******	30.9	23.9	21	****	***	***	***
Minimum	******	14.8	13.5	11.8	****	***	***	***

Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station, March 2014

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
1-Mar	0.0	60	6.5
2-Mar	1.0	80	11.6
3-Mar	0.0	100	19.8
4-Mar	0.0	110	6.9
5-Mar	0.5	50	12.7
6-Mar	0.0	100	21.7
7-Mar	0.5	100	20.1
8-Mar	0.5	90	14.2
9-Mar	0.5	50	12.8
10-Mar	1.5	80	19.5
11-Mar	0.0	100	17.0
12-Mar	0.0	60	5.5
13-Mar	0.0	40	15.5
14-Mar	0.0	40	18.0
15-Mar	0.0	60	11.9
16-Mar	0.0	60	8.3
17-Mar	0.0	80	6.3
18-Mar	0.0	80	4.8
19-Mar	0.0	70	5.7
20-Mar	0.0	50	10.8
21-Mar	0.0	40	18.8
22-Mar	0.0	40	14.1
23-Mar	0.0	90	16.2
24-Mar	0.0	60	11.7
25-Mar	0.0	130	7.4
26-Mar	0.0	140	4.6
27-Mar	0.0	140	7.5
28-Mar	0.0	60	10.5
29-Mar	12.0	60	6.6
30-Mar	106	50	13.0
31-Mar	114.5	70	10.4
Mean	-----	60	12.0
Total	237	---	-----
Maximum	114.5	---	21.7
Minimum	0.0	---	4.6

*** unavailable

missing (less than 24 hourly observations a day)

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

Extract of Meteorological Observations for Tai Po Automatic Weather Station, April 2014

Date	Mean Pressure at M.S.L. (hPa)	Air Temperature			Mean Dew Point Temperature (deg C)	Relative Humidity		
		Max. (deg C)	Mean (deg C)	Min. (deg C)		Max. (%)	Mean (%)	Min. (%)
1-Apr	1011	20.5	19.6	19	19	99	96	91
2-Apr	1011.7	20.2	19.3	18.1	18.3	98	94	85
3-Apr	1013.5	20.1	19.3	18.4	18.5	98	95	85
4-Apr	1016.6	21.9	19.9	17.9	16.2	97	80	61
5-Apr	1016.4	23.4	20.3	16.4	13.9	92	69	38
6-Apr	1017.2	21.1	19.2	17.3	16.6	97	85	64
7-Apr	1016.5	20	19.2	17.4	16.4	95	84	78
8-Apr	1014.7	20.5	19.8	19.1	18.6	98	93	84
9-Apr	1014	26.6	22.1	18.8	19.8	99	88	70
10-Apr	1015	23.9	22.1	21	18.6	91	81	66
11-Apr	1013.6	24.5	22.5	20.9	19.6	92	84	72
12-Apr	1012	27.3	24	21.8	20.4	91	81	65
13-Apr	1011.6	30.4	25.6	21.7	21.7	93	80	57
14-Apr	1014.7	24.4	22.8	21.9	19.7	95	83	67
15-Apr	1015.8	23.1	21.8	20.5	16.9	87	74	54
16-Apr	1013.1	23.7	22	21	19	89	83	74
17-Apr	1011.7	28	24	21.7	21	94	84	65
18-Apr	1011.9	27.9	24.2	21.1	21	94	83	67
19-Apr	1011.5	27.1	24.3	21.6	21.7	95	86	74
20-Apr	1010.8	28.8	25	22.5	22.7	95	87	74
21-Apr	1012.4	24.4	23.3	22.7	21.7	94	91	88
22-Apr	1012.4	28.2	24.5	22.5	22.3	94	88	71
23-Apr	1012.2	24.2	22	20.9	21	96	94	90
24-Apr	1011.5	22.4	21.7	21.2	20.2	95	92	86
25-Apr	1012	23.7	22.6	21.6	21.3	96	93	87
26-Apr	1012.8	24.4	22.5	21.4	20.9	98	91	79
27-Apr	1013.1	30.2	25.3	20.4	20.3	95	76	54
28-Apr	1013.4	26.7	24.5	22.3	18.3	87	69	53
29-Apr	1012.9	26	23.5	21.6	20.1	93	82	69
30-Apr	1011.6	24	22.3	20.4	20.1	97	88	79
Mean	1013.2	24.6	22.3	20.4	19.5	94	85	72
Maximum	1017.2	30.4	25.6	22.7	22.7	99	96	91
Minimum	1010.8	20	19.2	16.4	13.9	87	69	38

Extract of Meteorological Observations for Tai Po Automatic Weather Station, April 2014

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
1-Apr	*****	***	*****
2-Apr	*****	***	*****
3-Apr	*****	***	*****
4-Apr	*****	***	*****
5-Apr	*****	***	*****
6-Apr	*****	***	*****
7-Apr	*****	***	*****
8-Apr	*****	***	*****
9-Apr	*****	***	*****
10-Apr	*****	***	*****
11-Apr	*****	***	*****
12-Apr	*****	***	*****
13-Apr	*****	***	*****
14-Apr	*****	***	*****
15-Apr	*****	***	*****
16-Apr	*****	***	*****
17-Apr	*****	***	*****
18-Apr	*****	***	*****
19-Apr	*****	***	*****
20-Apr	*****	***	*****
21-Apr	*****	***	*****
22-Apr	*****	***	*****
23-Apr	*****	***	*****
24-Apr	*****	***	*****
25-Apr	*****	***	*****
26-Apr	*****	***	*****
27-Apr	*****	***	*****
28-Apr	*****	***	*****
29-Apr	*****	***	*****
30-Apr	*****	***	*****
Mean	-----	***	*****
Total	*****	---	-----
Maximum	*****	---	*****
Minimum	*****	---	*****

*** unavailable
# missing (less than 24 hourly observations a day)
Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station, April 2014

Date	Mean Pressure at M.S.L. (hPa)	Air Temperature			Mean Dew Point Temperature (deg C)	Relative Humidity		
		Max. (deg C)	Mean (deg C)	Min. (deg C)		Max. (%)	Mean (%)	Min. (%)
1-Apr	******	21	19.8	19	****	***	***	***
2-Apr	******	20.6	19.3	18	****	***	***	***
3-Apr	******	20.8	19.4	18.5	****	***	***	***
4-Apr	******	23.3	20.2	18.2	****	***	***	***
5-Apr	******	25.5	20.8	16.8	****	***	***	***
6-Apr	******	22.4	19.1	17.3	****	***	***	***
7-Apr	******	20.3	19	17.5	****	***	***	***
8-Apr	******	21.5	20	19.2	****	***	***	***
9-Apr	******	27.4	22.3	19.4	****	***	***	***
10-Apr	******	25.6	22	20.2	****	***	***	***
11-Apr	******	27.6	23.1	20.8	****	***	***	***
12-Apr	******	30.3	24.8	21.5	****	***	***	***
13-Apr	******	32.4	26.4	22.1	****	***	***	***
14-Apr	******	24.7	22.7	21	****	***	***	***
15-Apr	******	25.1	22.1	19.9	****	***	***	***
16-Apr	******	25.9	22.3	20.9	****	***	***	***
17-Apr	******	30.1	24.7	21.9	****	***	***	***
18-Apr	******	30.7	25.1	21.9	****	***	***	***
19-Apr	******	30.9	25.4	22.5	****	***	***	***
20-Apr	******	30.2	25.7	22.9	****	***	***	***
21-Apr	******	24.3	23.2	22.5	****	***	***	***
22-Apr	******	29.5	25.2	22.4	****	***	***	***
23-Apr	******	24.4	21.8	20.7	****	***	***	***
24-Apr	******	22.2	21.4	20.8	****	***	***	***
25-Apr	******	24.2	22.8	21.8	****	***	***	***
26-Apr	******	25.7	22.7	21.5	****	***	***	***
27-Apr	******	31.3	25.9	20.6	****	***	***	***
28-Apr	******	29.6	25.2	22.4	****	***	***	***
29-Apr	******	27.9	23.9	21.9	****	***	***	***
30-Apr	******	25	22.6	20.5	****	***	***	***
Mean	******	26	22.6	20.5	****	***	***	***
Maximum	******	32.4	26.4	22.9	****	***	***	***
Minimum	******	20.3	19	16.8	****	***	***	***

Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station, April 2014

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
1-Apr	10.0	60	10.0
2-Apr	35.0	60	12.4
3-Apr	39.5	60	9.8
4-Apr	0.0	80	15.7
5-Apr	0.0	60	13.2
6-Apr	12.5	50	17.8
7-Apr	2.5	60	13.0
8-Apr	16.5	70	6.7
9-Apr	0.0	90	8.2
10-Apr	0.0	80	17.3
11-Apr	0.0	70	11.8
12-Apr	0.0	60	8.4
13-Apr	0.0	270	4.8
14-Apr	0.0	90	15.9
15-Apr	0.0	90	19.7
16-Apr	0.0	70	9.4
17-Apr	0.0	60	6.6
18-Apr	0.0	120	5.2
19-Apr	0.0	60	6.4
20-Apr	0.0	60	3.8
21-Apr	0.0	80	13.8
22-Apr	0.0	60	4.3
23-Apr	5.0	80	20.5
24-Apr	0.5	90	18.5
25-Apr	0.0	90	12.2
26-Apr	1.5	50	10.9
27-Apr	0.0	270	6.0
28-Apr	0.0	140	9.7
29-Apr	0.0	80	12.6
30-Apr	4.0	50	9.6
Mean	-----	60	11.1
Total	127	---	-----
Maximum	39.5	---	20.5
Minimum	0.0	---	3.8

*** unavailable
# missing (less than 24 hourly observations a day)
Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

APPENDIX G
IMPACT DAYTIME CONSTRUCTION NOISE MONITORING RESULTS AND THEIR GRAPHICAL PRESENTATION

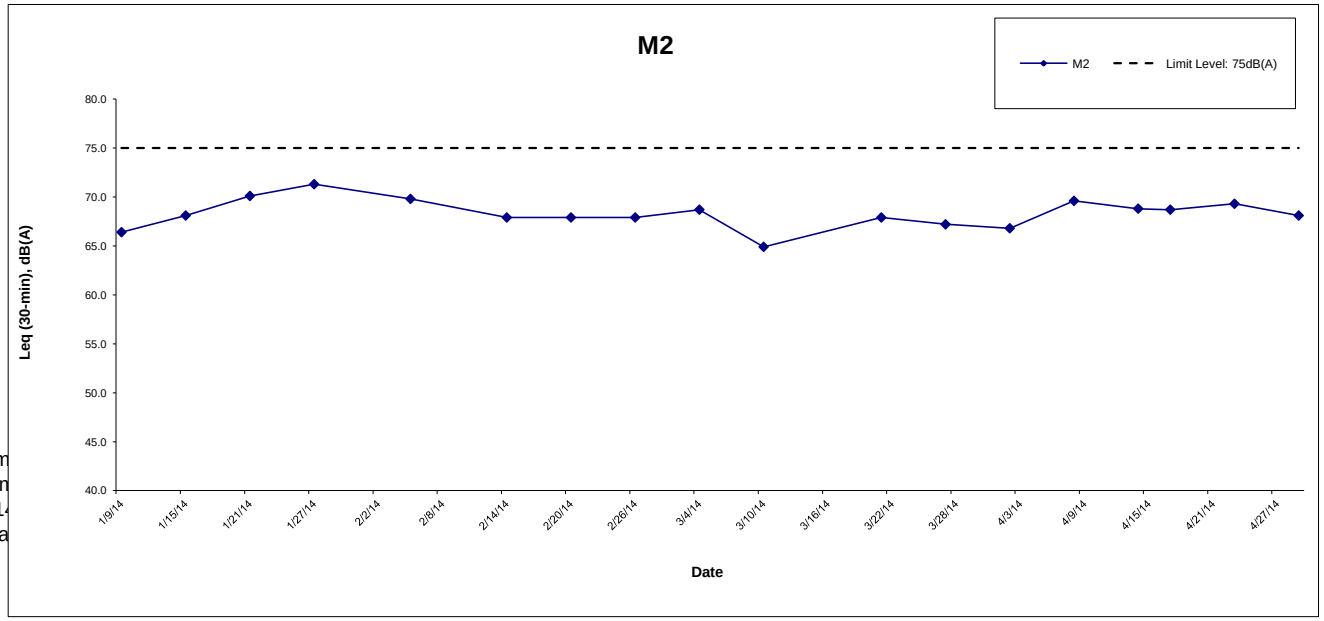
Location : M2 (West Tai Wo - Free Field)
Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

Date	Measured Noise Level for 30-min, dB(A)				Limit Level, dB(A)	Exceedance (Y/N)
	Start Time	Leq*	L10*	L90*		
9-Jan-14	15:07	66.4	68.7	64.1	75	N
15-Jan-14	14:20	68.1	70.1	65.7	75	N
21-Jan-14	10:15	70.1	72.2	68.0	75	N
27-Jan-14	15:45	71.3	73.0	69.0	75	N
5-Feb-14	13:30	69.8	71.5	65.0	75	N
14-Feb-14	14:30	67.9	69.0	64.3	75	N
20-Feb-14	15:50	67.9	69.6	65.5	75	N
26-Feb-14	13:21	67.9	70.1	64.5	75	N
4-Mar-14	14:30	68.7	70.0	66.6	75	N
10-Mar-14	14:50	64.9	68.3	61.2	75	N
21-Mar-14	14:00	67.9	69.6	64.3	75	N
27-Mar-14	14:30	67.2	69.6	64.5	75	N
2-Apr-14	14:01	66.8	69.5	62.2	75	N
8-Apr-14	10:40	69.6	71.9	66.8	75	N
14-Apr-14	13:15	68.8	71.2	66.9	75	N
17-Apr-14	15:27	68.7	70.3	66.2	75	N
23-Apr-14	15:37	69.3	71.6	67.2	75	N
29-Apr-14	14:22	68.1	69.8	65.8	75	N
Minimum for Feb 14 to Apr 14		64.9	68.3	61.2		
Maximum for Feb 14 to Apr 14		69.8	71.9	67.2		
Average for Feb 14 to Apr 14		68.3	70.3	65.4		

Location : M3 (Fanling Government Secondary School- Façade)
Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

Date	Measured Noise Level for 30-min, dB(A)				Limit Level, dB(A)^	Exceedance (Y/N)
	Start Time	Leq	L10	L90		
9-Jan-14	14:12	64.2	65.9	62.3	65	N
15-Jan-14	13:52	64.1	66.4	61.2	65	N
21-Jan-14	9:50	63.3	64.8	60.1	70	N
27-Jan-14	15:25	62.9	64.0	59.5	70	N
5-Feb-14	14:30	62.3	64.0	59.5	70	N
14-Feb-14	13:45	62.1	63.6	60.2	65	N
20-Feb-14	15:10	63.7	65.3	60.9	65	N
26-Feb-14	13:02	63.8	65.1	61.1	65	N
4-Mar-14	13:40	62.9	64.0	59.0	70	N
10-Mar-14	14:00	69.6	72.4	66.5	70	N
21-Mar-14	13:05	64.1	66.0	60.0	70	N
27-Mar-14	13:35	63.6	64.9	60.0	70	N
2-Apr-14	15:06	64.6	67.0	61.2	70	N
8-Apr-14	11:30	66.6	68.2	64.0	70	N
17-Apr-14	16:32	65.2	67.4	62.5	70	N
14-Apr-14	13:55	66.4	69.2	62.6	70	N
23-Apr-14	16:27	66.4	68.1	64.5	70	N
29-Apr-14	13:38	63.8	65.5	61.1	70	N
Minimum for Feb 14 to Apr 14		62.1	63.6	59.0		
Maximum for Feb 14 to Apr 14		69.6	72.4	66.5		
Average for Feb 14 to Apr 14		65.2	67.2	62.2		

* +3dB(A) Façade effect correction included
^ Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.



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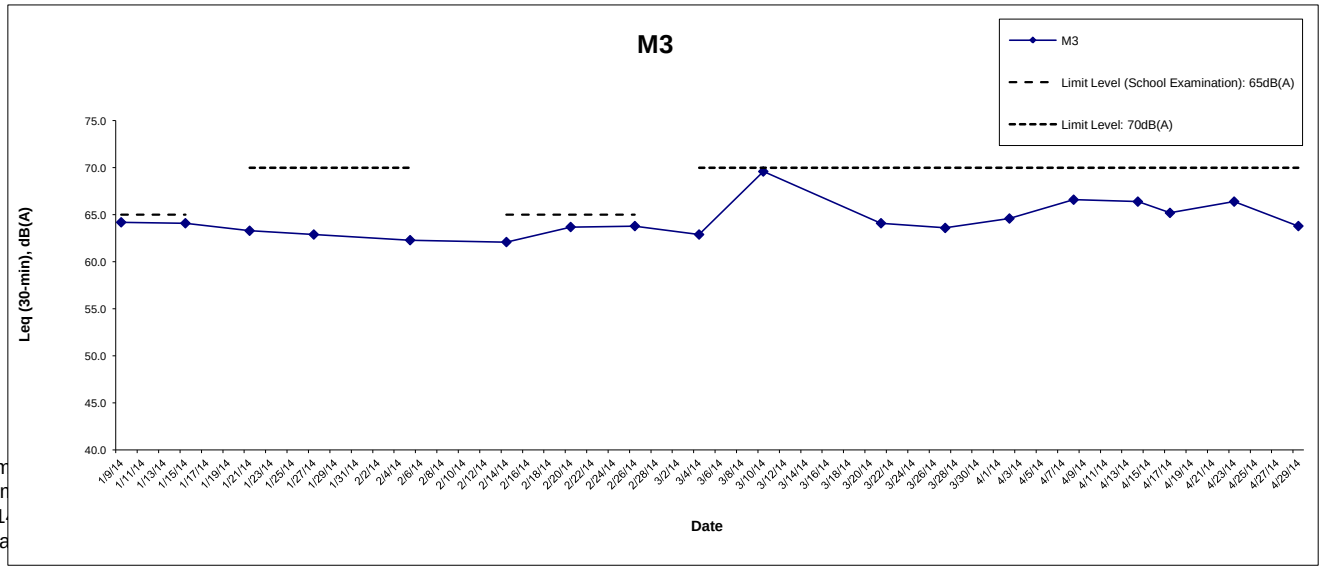

Minim
Maxin
Apr 1
Avera

Remark:
^ Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.

CONTRACT NO. HY/2012/06
WIDENING OF FANLING HIGHWAY
- TAI HANG TO WO HOP SHEK INTERCHANGE

AECOM

Graphical Presentation of Impact Daytime Construction Noise Monitoring Results

APPENDIX H
STATISTICS ON COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

Appendix H

Statistics on Complaints, Notifications of Summons and Successful Prosecutions

	Date Received	Subject	Status	Total no. followed up by the ET this month	Total no. followed up by the ET since project commencement
Environmental complaints	19 December 2013	EPD referred a complaint from Lot no. 116 of Fui Sha Wai at Tai Hang of Tai Po which is concerned about the construction noise and diesel-like smell generated from construction activities nearby which caused nuisance and health problems on 19 December 2013 morning.	Closed	1	2
	24 February 2014	EPD referred an air-and-odour complaint on 24 February 2014. The complainant complained about the construction site located near the bus stop in Fui Sha Wai, Tai Hang, Tai Wo Service Road West. When construction works were carried out, odour, white smoke and dust were generated. The complainant asked for follow-up actions.	Closed		
Notification of summons	-	-	-	0	0
Successful Prosecutions	-	-	-	0	0

APPENDIX I
COMPLAINT INVESTIGATION REPORT

CONTRACT NO. HY/2012/06

Widening of Fanling Highway

Between Tai Hang and Wo Hop Shek Interchange (Stage 2)

ENVIRONMENTAL COMPLAINT ACTION FORM

Environmental Enquiry No.: EC-02

(Related Previous Enquiry NO.: --)

COMPLAINT DETAILS

Date Received	24 February 2014
Parameter	* Air and Odour nuisance / ~~Noise~~/ ~~Water / Waste / Landscape~~
Enquirer's Details	
Name	Not disclosed
Contact Tel No.	Not disclosed
Address	Not disclosed

FOLLOW-UP ACTION

First Contact with the Complaint by	* ~~Telephone~~ / ~~Site Visit~~ / Referral from EPD (ref. N05/RN/00003924-14)
Date of the First Contact	24 February 2014

Details of Complaint:

EPD referred an air-and-odour complaint on 24 February 2014. The complainant complained about the construction site located near the bus stop in Fui Sha Wai, Tai Hang, Tai Wo Service Road West. When construction works were carried out, odour, white smoke and dust were generated. The complainant asked for follow-up actions.

Investigation and Findings :

According to the information of the Contractor (China State Construction Engineering (HK) Ltd.), pre-drilling works for ground investigation were carried out at the construction site in Fui Sha Wai at Tai Hang on 24 February 2014. The odour was likely generated from the exhaust of drill rig during operation (Figure 1A).

Upon receiving the complaint notification from the EPD on 24 February 2014, the Contractor shut down the diesel water pump at once. Since a similar complaint received on 19 December 2013, the Contractor has subsequently extended the exhaust duct of the drill rig to a higher position to achieve better gas dispersion, intending to reduce the impact to the public (Figure 2). As the exit

of the exhaust duct is facing the bridge, it cannot be extended too high; otherwise, the bridge users will be affected by the exhaust. In order to further reduce the impacts, a screen was erected to prevent the exhaust of the drill rig from affecting the bridge users. Both the drill rig and diesel water pump were relocated about 30 meters away from the original position on 25 February 2014. Furthermore, the Contractor was reminded to shorten the operation time of the drill rig to minimize the impacts caused to the public.

To the judgment of Mr Michael Tsang, the Environmental Officer of the Contractor, it has been affirmed that the machinery exhaust did not exceed the statutory standards. The notification letter from the EPD justifying his qualification of dark smoke reporter is indicated in Figure 3. However, the Contractor was reminded to maintain and change the filters of the machines regularly to minimize the emission of smoke.

During the construction works, the Contractor has sprayed water in case there was any fugitive dust emission. Thus, it is believed that the ground investigation works did not involve dusty processes. As seen from Figures 2 and 4, no dust emission was observed.

The complaint is considered project-related.

The Contractor is advised to implement the mitigation measures as stated in "Recommended Mitigation Measures".

Exceedance Associated with Site Activity to	* No Exceedance / ~~Action / Limit~~

Recommended Mitigation Measures:

1) Extend the exhaust duct of drill rig to a higher position to achieve better gas dispersion to reduce the impact to the residents;
2) Reschedule works to minimize disturbance to the residents;
3) Inspect the machines regularly to ensure that they are operating efficiently and that exhaust emissions are not causing nuisance;
4) Inform residents nearby in advance of any similar works;
5) Confirm the implementation of dust mitigation measures during all construction and dusty activities to minimize fugitive dust generation;
6) Maintain the frequency of environmental supervision (by the Contractor) to regularly review the adequacy and effectiveness of dust suppression measures to suit the construction progress;
7) Inform the complainant before dusty activities are carried out; and
8) Foster better public relations with the sensitive receivers and complainants nearby.

* Delete where inappropriate

MONITORING

Ad hoc Monitoring undertaken	* ~~Yes~~ / No

* Delete where inappropriate

Prepared by: *Y W Fung*

Designation: *Environmental Team Leader*

Signature: Y

Date: 7-Mar-14

Figure 1A – The concerned drill rig and diesel water pump

Figure 1B – The concerned drill rig and diesel water pump

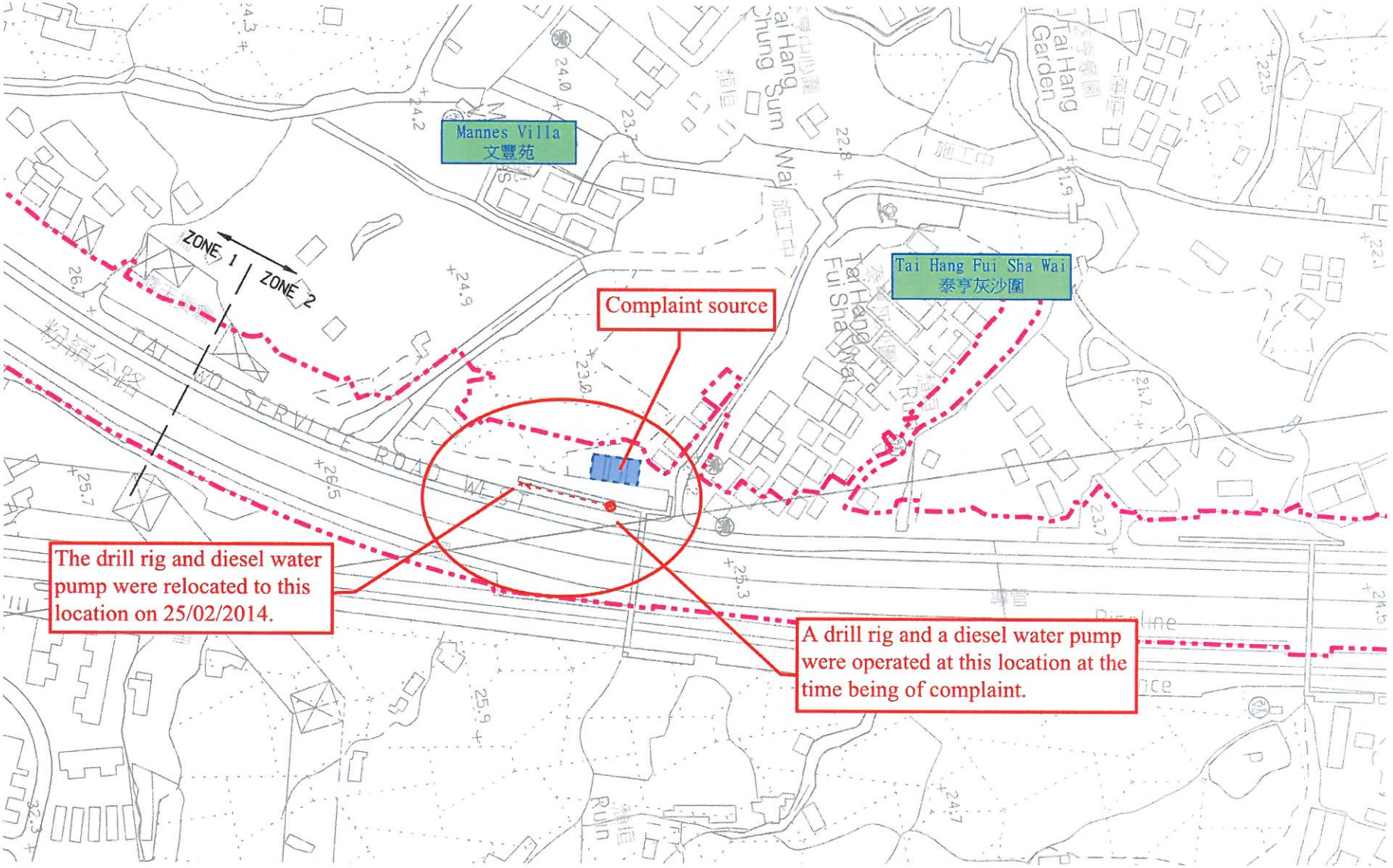

Figure 2 – Extension of the exhaust duct of drill rig

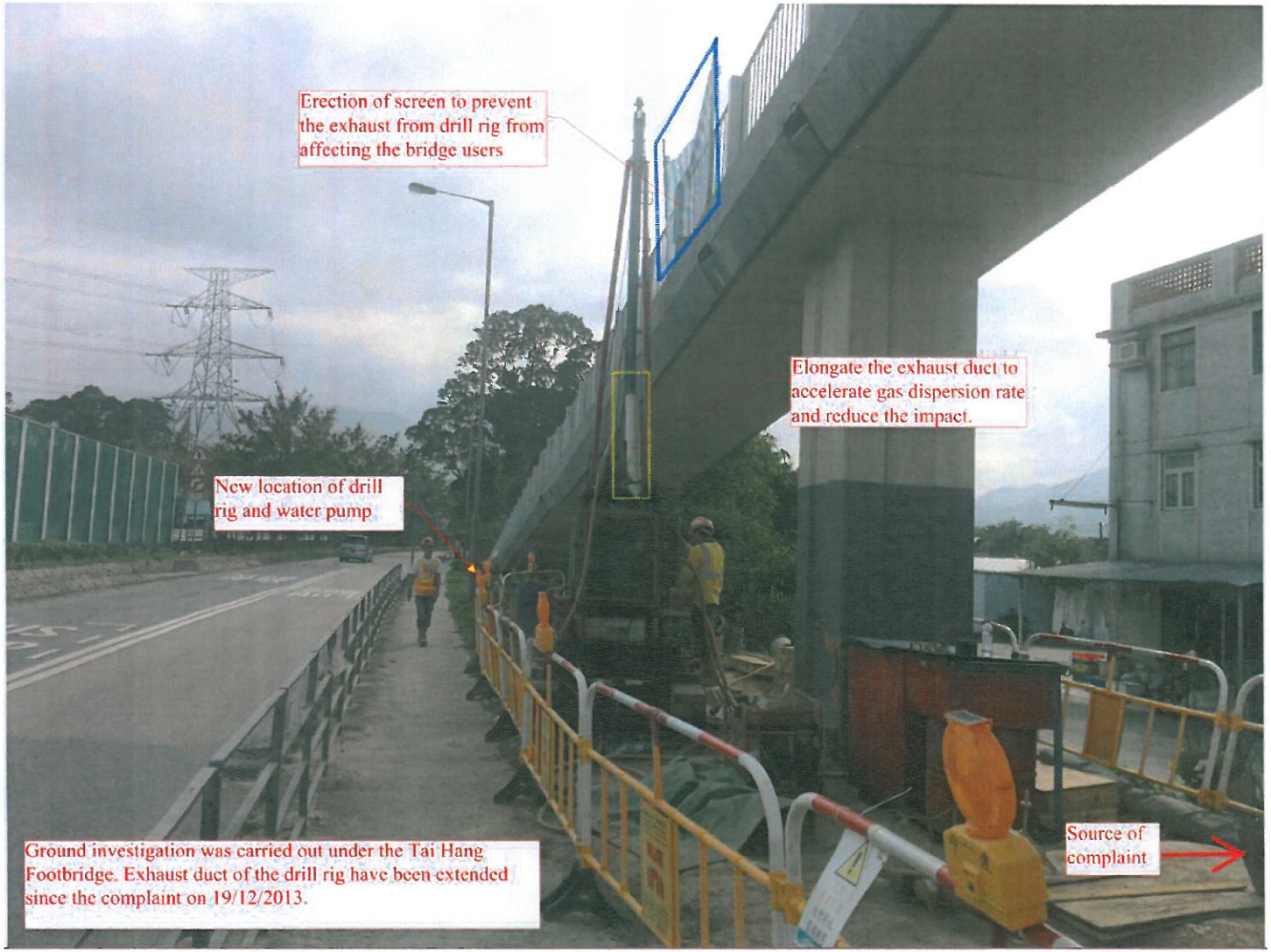

Figure 3 – Notification letter from the EPD justifying Mr Michael Tsang's qualification of dark smoke reporter

本署檔號 OUR REF.: (23) EP11/V1/56 Pt.25 in L/M(2)
來函檔號 YOUR REF.:
電話 TEL. NO.: 2594 6468
圖文傳真 FAX NO.: 2827 8230

Environmental Protection Department
Mobile Source Control Section(1)
34/F, Revenue Tower
5 Gloucester Road
Wan Chai, Hong Kong
Homepage (網址) : http://www.epd.gov.hk

環境保護署
流動污染源管制課(1)
香港灣仔
告士打道5號
稅務大樓34樓

新界馬鞍山
錦豐苑錦蕙樓 3511 室
曾川銘先生

曾先生:

車輛黑煙管制計劃

多謝你在 2008 年 4 月 26 日參加本署舉辦的檢舉員訓練課程,當日你已完成了全部課程並順利考試合格,並從本信的簽發日期起,成爲本計劃下的認可檢舉員。 歡迎你加入本計劃,你的檢舉員編號爲 8286。請在遞交冒煙車輛報告表時確保此編號已註明在報告表上。

現隨信夾附傳真版的冒煙車輛報告表乙份,報告表上已印有你的姓名及檢舉員編號,專供你個人使用。你可將上述冒煙車輛報告表複印使用, 如有查詢或索取報告表,請致電 2594 6476 與本署聯絡。

由於我們需根據你提供的資料採取行動,所以,請以慎重的態度來執行檢舉黑煙車輛的工作。在有爭議時,你將會是關鍵證人。正如我們在課堂上所強調的,你應該在肯定車輛持續地冒出過量黑煙的情況下才作出檢舉。 謹此再次多謝你出席訓練課程,並期待你能積極參與本計劃。

環境保護署署長
(黃柏興 代行)

2008 年 5 月 16 日

Figure 4 – No observed dust emission from the diesel water pump