Alpha
Consulting Engineers Pte Ltd

PROJECT QUALITY PLAN

PROPOSED DEVELOPMENT OF A NURSING HOME AT BUKIT BATOK WEST AVENUE 9, SINGAPORE

For

MOH HOLDINGS PTE LTD

Copy No.	1

Prepared By: Chuan Kian Heng/Kristian Tung/ Goh Tien Ying

Authorised By: Loh Fook Yuen

Date: 8 November 2019

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SECTION 1

QUALITY PLAN CONTROL AND DISTRIBUTION

1.1 List of Copy Holders

Copy No.	Copy Holder	Date of Issue
1	6234-PQP	8 November 2019

1.2 Revision Record

Revision	Date of Issue	Section Reference	Page(s)	Remarks
0	3 January 2017	1 to 11	30	+ 2 pgs (Section 4.1 – Overall Programme)
1	13 November 2017	1 to 11	30	+ 12 pgs (Section 4.1 – Master Programme & Schedule for precast components)
2	8 November 2019	1 to 11	30	+ 12 pgs (Section 4.1 – Overall Programme & Schedule for precast components)

SECTION 2

PROJECT INFORMATION

2.1 Project Description

Type of Development	Nursing Home

Statistics of Development	
Site Area, m²	2,800
Nett Floor Area, m²	
Gross Floor Area, m²	8,400
Covered Carpark, m²	555.47
No. of Covered Carpark Lots	14
No. of Apartments/Houses	-
No. of Beds (for Hospitals)	220
No. of Guestroom (for Hotels)	-
No. of Blocks / No. of Storeys	1 Block / 9 Storey
Green Mark Category	Certified
No. of Phases	1

2.2 Project Cost

M&E Services Cost Plan (S$ x 1M)									
Services	EI	ACVI	LEI	FFAI	PSI	SPFI			
Estimate	2.6	0.85	0.5	0.6	1.05	-			
Awarded	2.156	0.6468	0.5114	0.63157	1.487567	-			

Total Project Construction Cost (S$ x1M)			
	Site Clearance	Piling Works	Main Contract
Estimate	-	-	-
Awarded	-	-	19.38

Site Clearance shall include earth work, soil improvement, service diversion and termination.

2.3 Scope of Works

2.3.1 Scope of Consultancy Services

Conceptual/Schematic Design	✓
Detailed Design	✓
Tender Documentation	✓
Tender Evaluation	✓
Contract Supervision	✓
M&E Costing	✓
Submissions to Authority	✓

(✓*where applicable*)

2.3.2 Scope of M&E Services

ELECTRICAL	√	AIR CONDITIONING	✓	SPRINKLER	✓	SANITARY	✓	SWIMMING POOL	
LIFT	√	MECHANICAL VENTILATION	✓	FIRE ALARM	✓	COLD WATER	✓	STEAM BOILER	
ESCALATOR		MECHANICAL SMOKE EXTRACT		HOSEREEL	✓	HOT WATER	✓	FUEL STORAGE	
PABX		COMPUTER A/C		WET RISER		TOWN GAS	✓		
SECURITY	✓	BST CARPARK EXH		DRY RISER	✓	LPG GAS			
TELELIFT		HEATING				MEDICAL GAS			
DATA COMM.	✓								
FLUSHFLOOR TRUNKING									

(✓*where applicable*)

2.3.3 Submission to Relevant Authorities by Others

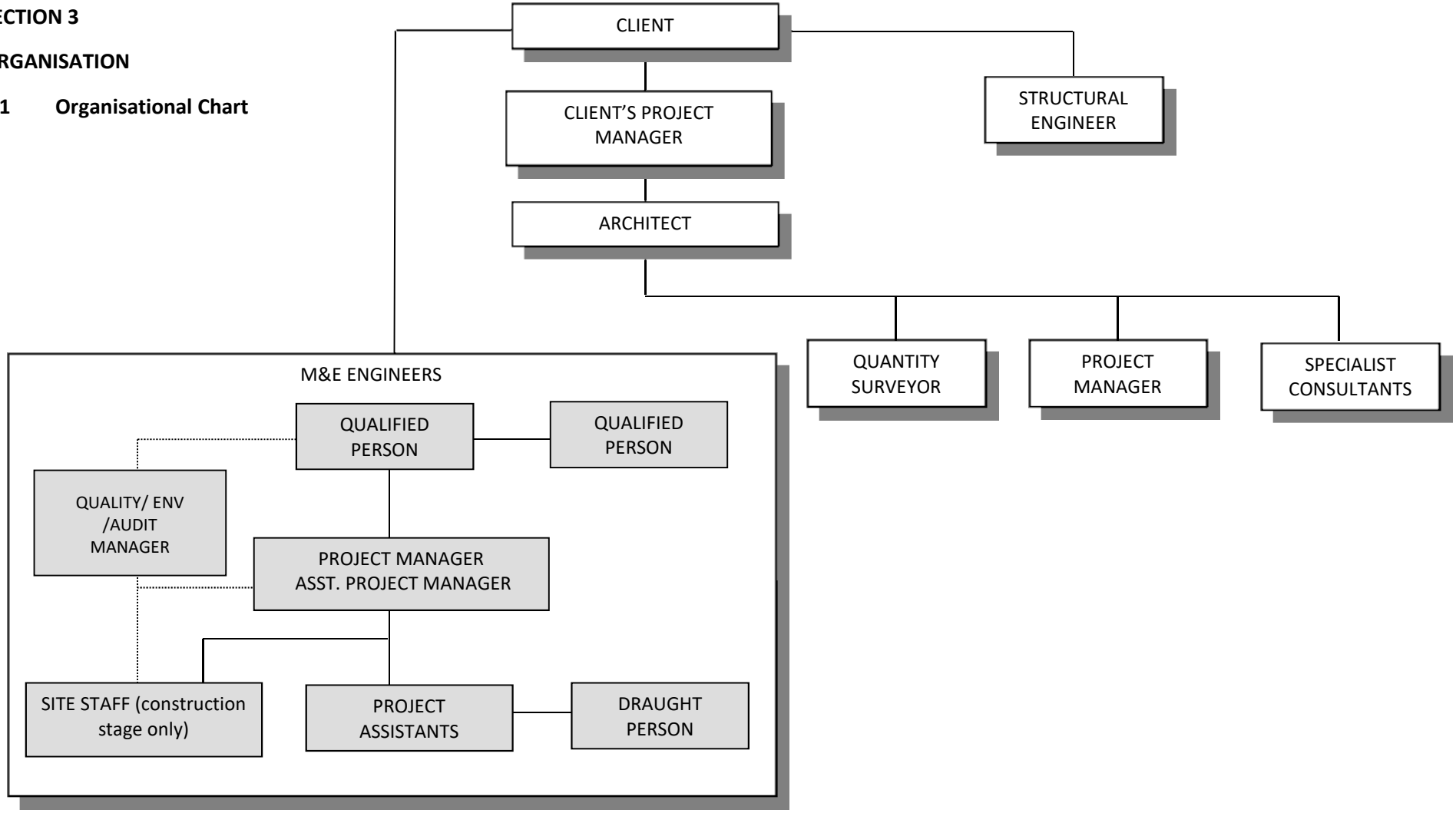
EJECTOR & DIVERTER	√	SUMP PUMP	√	FUEL OIL TANK		LIFT & ESCALATOR	√	PRESSURE VESSEL		HOISTS		FOAM	
SMOKE CONTROL JET FAN	√												

(✓*where applicable*)

SECTION 3

ORGANISATION

3.1 Organisational Chart



SECTION 3

ORGANISATION

3.2 ACEPL's Project Team Member

TITLE		NAME
Project Director		Loh Fook Yuen (LFY)
Qualified Person	Mechanical	Choong Choon Guan (CCG)
	Electrical	Loh Fook Yuen (LFY)
Project Manager		Chuan Kian Heng (CKH)
Assistant Project Manager		Lim Chai Hoon (LCY)
Project Assistant (Mech)		Kristian Tung (TJY)
Project Assistant (Elect)		Goh Tien Ying (GTY)
Draughtsperson		Common Pool
Resident Engineer (M&E)		
Assistant Resident Engineer (M&E)		
Clerk-of-Work (M&E)		Ho Tuck Seng

3.3 Client/Client's Representatives

Client: MOH Holdings Pte Ltd

Address: 1 Maritime Pte Ltd (Lobby C)
#11-25 Harbourfront Centre
Singapore 099253

Tel: 6622 0980

Fax: 6720 0980

Client's Representatives:

Name of Company	Contact Person	Contact
MOH Holdings Pte Ltd	Name: Mr Brian Lim Position: Assistant Director Name: Ms Lai Swee Leng Position: Senior Manager	Tel: 6818 1238 Fax: Handphone: 8500 2150 Email: brian.lim@mohh.com.sg Tel: 6818 1244 Fax: 6720 6380 Handphone: 8100 3487 Email: sweeleng.lai@mohh.com.sg
	Name: Position:	Tel: Fax: Handphone: Email:
	Name: Position:	Tel: Fax: Handphone: Email:
	Name: Position:	Tel: Fax: Handphone: Email:
	Name: Position:	Tel: Fax: Handphone: Email:

3.4 **Other Consultants** (Local)

Function / Name of Company	Contact Person	Contact
Architect MKPL Architects Pte Ltd	Name: Mr Siew Man Kok Position: Director Name: Ms Catharina Bonang Position: Senior Associate Name: Mr Michael Pedrogosa Position: Architectural Executive	Tel: 6202 4208 Fax: Handphone: 8222 3556 Email: nursinghome1604@mkpl.com.sg Tel: 6202 4212 Fax: Handphone: 9090 6343 Email: nursinghome1604@mkpl.com.sg DID: 6202-4257 Email: nursinghome1604@mkpl.com.sg
Quantity Surveyor Rider Levett Bucknall LLP	Name: Mr Lam Chye Sing Position: Director Name: Mr Uh Chee Yuan Position: Senior Quantity Surveyor	Tel: 6339 1500 Fax: 6339 1521 Handphone: 9637 8866 Email: cs.lam@sg.rlb.com Email: cy.uh@sg.rlb.com
Structural Engineer KTP Consultants Pte Ltd	Name: Mr Foong Kit Kuen Aaron Position: Director Name: Mr Gan Jinn Hao Position: Principal Engineer	Tel: 6412 0348 Fax: 6273 8454 Handphone: 8228 4938 Email: aaronfoong@ktp.com.sg DID: 6839 7470 Handphone: 9386 6980 Email: jinnhao.gan@ktpworld.com
Planning and Construction Manager Arcadis Project Management Pte Ltd	Name: Mr Yu Bing Position: Senior Project Manager	Tel: 6239 8516 Fax: 6224 7089 Handphone: 9892 0507 Email: yu.bing@arcadis.sg
Active Beautiful Clean (ABC) & Environmentally Sustainable Design (ESD) Consultant Web Earth Pte Ltd	Name: Mr Richard Outhwaithe Position: Project Director	Tel: 6223 9208 Fax: 6220 7928 Handphone: 9675 4584 Email: richard@webearth.com.sg

3.4 Other Consultants (Local) (Cont'd)

Function / Name of Company	Contact Person	Contact
Acoustic Consultant Acviron Acoustics Consultants Pte Ltd	Name: Dr Lim Chiak Hwee Position: Principal Consultant	Tel: 6270 5426 Fax: 6270 5700 Handphone: 9689 3946 Email: acviron@singnet.com.sg
Design For Safety Professional PH Consulting Pte Ltd	Name: Mr Lim Peng Hong Position: Managing Director	Tel: 6353 3392 Fax: 6354 3639 Handphone: 9111 9100 Email: penghong@phconsult.com.sg
Kitchen & Laundry Consultant Artizen Pte Ltd	Name: Mr Winston Tan Position: Service Manager	Tel: 6749 6880 Fax: Handphone: 9006 0389 Email: winston.tan@artizen.com.sg
Landscape Consultant Salad Pte Ltd	Name: Mr Tiong See Kee Position: Landscape Architect	Tel: Fax: Handphone: 9688 7302 Email: seekee.tiong@saladlandscape.com

3.4 Other Consultants (Overseas) – **Not Applicable**

Function / Name of Company	Contact Person	Contact
Architect	Name: Position:	Tel: Fax: Handphone: Email:
M&E Consultant	Name: Position:	Tel: Fax: Handphone: Email:
Quantity Surveyor	Name: Position:	Tel: Fax: Handphone: Email:
Structural Engineer	Name: Position:	Tel: Fax: Handphone: Email:
Interior Designer	Name: Position:	Tel: Fax: Handphone: Email:
Lighting Consultant	Name: Position:	Tel: Fax: Handphone: Email:
Acoustic Consultant	Name: Position:	Tel: Fax: Handphone: Email:
	Name: Position:	Tel: Fax: Handphone: Email:

3.5 Contractors/Sub-Contractors

Function / Name of Company	Contract *	Contact Person	Contact
Main Contractor Guan Ho Construction Co (Pte) Ltd		Name: Mr Ang Chai Beng Position: Project Manager	Tel:+65 6472 3885 Fax:+65 6472 4066 Handphone: - Email: bbnh@guanho.com
Air Conditioning & Ventilation Installation Sub-Contractor Kin Xin Engineering Pte Ltd	DSC	Name: Mr Qiu Qiao Position: Project Manager	Tel: 6844 2683 Fax: - Handphone: 9176 8912 Email: qiuqiao@kinxin.com.sg
Plumbing & Sanitary Installation Sub-Contractor Trade Entrepreneur Engr'g Pte Ltd	DSC	Name: Mr Vincent Seng Position: Project Director	Tel: 6543 2323 Fax: - Handphone: 9002 3043 Email: te1990@singnet.com.sg
Electrical Installation Sub-Contractor HEC Electrical & Construction Pte Ltd	DSC	Name: Mr Soh Chiang Ting, Juvi Position: Contract Manager	Tel: - Fax: - Handphone: 9780 1531 Email: juvi@hec.com.sg
Lift & Escalator Installation Sub-Contractor Kone Pte Ltd	DSC	Name: Mr Chong Ka Hin Position: Sales Engineer	Tel: - Fax: - Handphone: 8382 6303 Email: kahin.chong@kone.com
Fire Fighting & Alarm Installation Sub-Contractor Deluge Fire Protection (S.E.A.) Pte Ltd	DSC	Name: Mr Steven Yeo Position: Project Manager	Tel: 6862 3688 Fax: - Handphone: 9831 8432 Email: steven.yeo@deluge.com.sg
		Name: Position:	Tel: Fax: Handphone: Email:
		Name: Position:	Tel: Fax: Handphone: Email:
		Name: Position:	Tel: Fax: Handphone: Email:

** Type of Contract*
- *NSC (Nominated Sub-Contract)*
- *DSC (Domesticated Sub-Contract)*
- *DC (Direct Contract)*
- *NS (Nominated Supplier)*

3.6 Authorities

Authorities/Department	Contact Person	Tel/Fax Nos./E-mail
SP PowerGrid:		
(a) Sub-Station	Mr Goh Li Qing	+65 6916 8888 / liqing@spgroup.com.sg
(b) Diversion		
SP Services:		
(a) Customer Supply		
(b) Installation	Mr Zheng Li Ren	+65 6916 7231 / contracts@spgroup.com.sg
(c) Meter Section		
(d) Road Lighting		
TFCC:		
(a) SCV		
(b) SingTel		
(d) IMDA	Mr Seah Koon Chye	+65 6211 1751/ SEAH_Koon_Chye@imda.gov.sg
BCA:		
(a) Building Plan		
(b) Green Mark		
FSSD:		
(a) Building Plan		
(b) M&E Plan	ACMV/ EVC: Nancy Ang FFAI: Tan Chiew Sia	+65 6848 1729/ Nancy_ANG@scdf.gov.sg +65 6848 1729/ TAN_Chiew_Sia@scdf.gov.sg
PUB (Water Supply) Network Dept:		
(a) Water Conservation		
(b) Plumbing Plan		
(c) Diversion		
(d) NEWater		
(e) Water Supply Network	Ms Neshitra Nair Mr Sidek Said	+65 6731 3552 / Neshitra_NAIR@pub.gov.sg +65 6885 2404 / Sidek_SAID@pub.gov.sg
PUB Water Reclamation (Network) Dept:		
(a) Building Plan/CBPU		
(b) M&E Plan	Ms Nurfarahin Kamsir	+65 6731 3140/ nurfarahin_kamsir@pub.gov.sg
(c) Diversion		
City Gas Pte Ltd:		
(a) Planning/Submission	Mr E Kien Mun	+65 6578 7617
(b) Installation/Inspection	Mr A. Rajenthiran	+65 6578 7817/ rajenthiran@citygas.com.sg
PowerGas Pte Ltd		
(a) Diversion		
NEA (Pollution Control)		
(a) Planning/Submission		
(b) Inspection		

SECTION 4

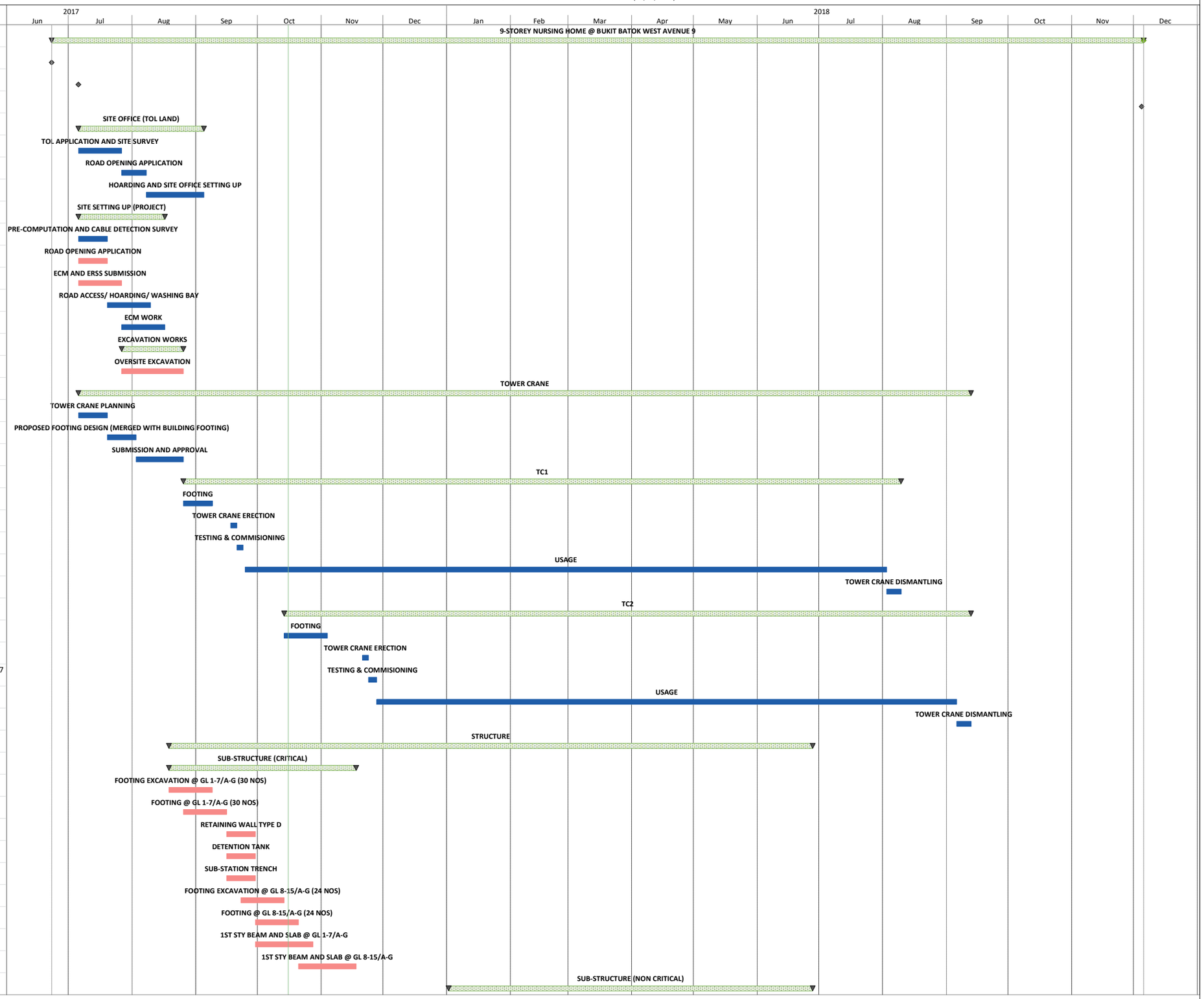
PROGRAMME

4.1 Overall Programme (Refer to attachment)

ID	TASK NAME	MONTHS	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1.	Preliminary Planning																									
2.	Planning Submission																									
3.	Detail Design																									
4.	BP Submission																									
5.	BP Submission (Amendments)																									
6.	Tender Period for Piling																									
7.	Tender Period for Sub-Structure																									
8.	Tender Period for Super-Structure																									
9.	Piling Period																									
10.	Sub-Structure Construction Period																									
11.	Super-Structure Construction Period																									
12.	TOP																									
13.	CSC																									

PROPOSED ERECTION OF A NEW 9-STOREY NURSING HOME ON LOT 05046T MK 10 AT BUKIT BATOK WEST AVENUE 9 - MASTER PROGRAMME REV 04 (16/10/2017)

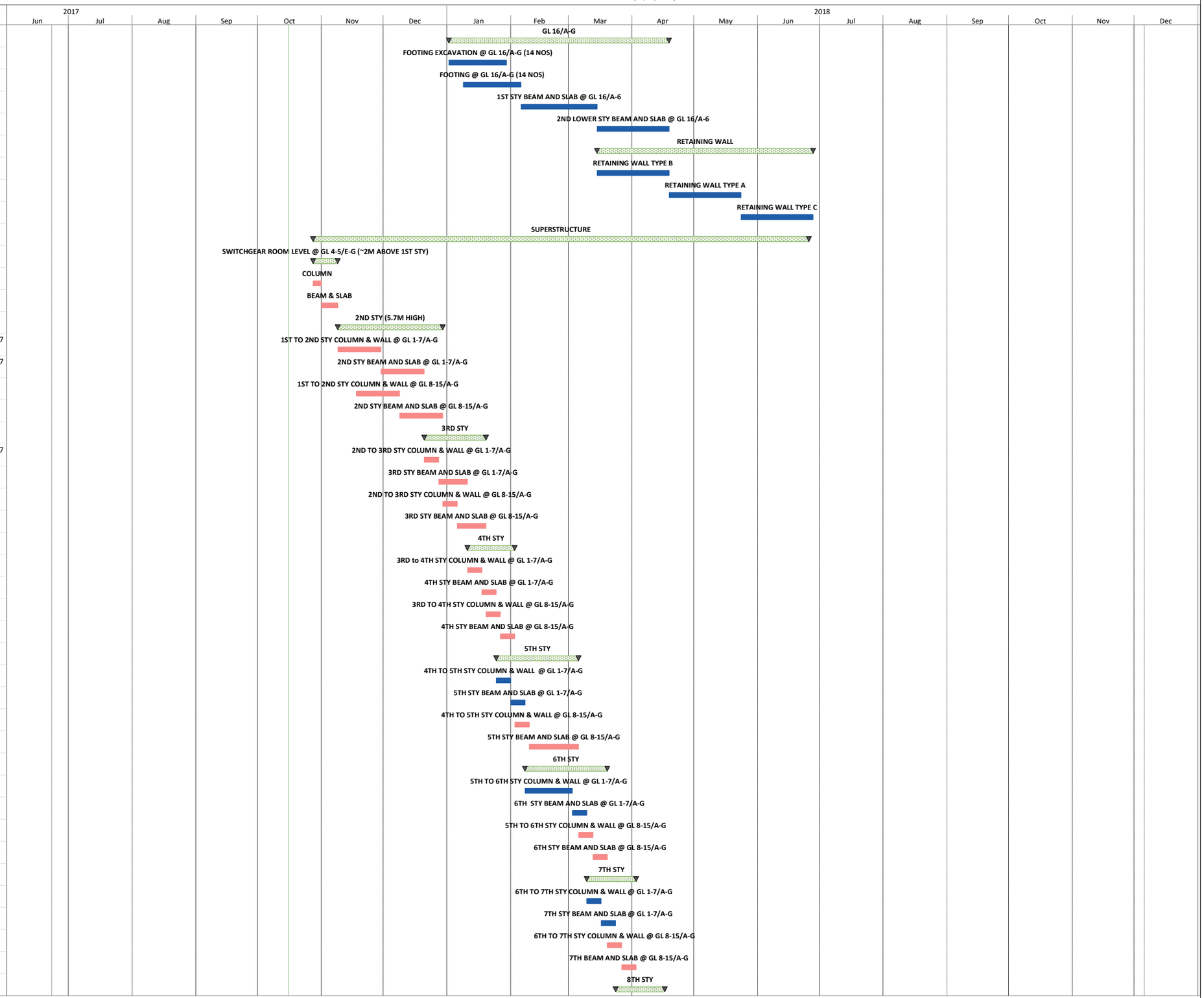
ID	Task Name	Duration	Start	Finish
1	**9-STOREY NURSING HOME @ BUKIT BATOK WEST AVENUE 9**	**447 days**	**Fri 23/6/17**	**Wed 5/12/18**
2	SITE POSSESSION	0 days	Fri 23/6/17	Fri 23/6/17
3	CONTRACT COMMENCEMENT DATE	0 days	Thu 6/7/17	Thu 6/7/17
4	CONTRACT SUBSTANTIAL COMPLETION DATE	0 days	Wed 5/12/18	Wed 5/12/18
5	**SITE OFFICE (TOL LAND)**	**52 days**	**Thu 6/7/17**	**Mon 4/9/17**
6	TOL APPLICATION AND SITE SURVEY	18 days	Thu 6/7/17	Wed 26/7/17
7	ROAD OPENING APPLICATION	10 days	Thu 27/7/17	Mon 7/8/17
8	HOARDING AND SITE OFFICE SETTING UP	24 days	Tue 8/8/17	Mon 4/9/17
9	**SITE SETTING UP (PROJECT)**	**36 days**	**Thu 6/7/17**	**Wed 16/8/17**
10	PRE-COMPUTATION AND CABLE DETECTION SURVEY	12 days	Thu 6/7/17	Wed 19/7/17
11	ROAD OPENING APPLICATION	12 days	Thu 6/7/17	Wed 19/7/17
12	ECM AND ERSS SUBMISSION	18 days	Thu 6/7/17	Wed 26/7/17
13	ROAD ACCESS/ HOARDING/ WASHING BAY	18 days	Thu 20/7/17	Wed 9/8/17
14	ECM WORK	18 days	Thu 27/7/17	Wed 16/8/17
15	**EXCAVATION WORKS**	**26 days**	**Thu 27/7/17**	**Fri 25/8/17**
16	OVERSITE EXCAVATION	26 days	Thu 27/7/17	Fri 25/8/17
17	**TOWER CRANE**	**364 days**	**Thu 6/7/17**	**Wed 12/9/18**
18	TOWER CRANE PLANNING	12 days	Thu 6/7/17	Wed 19/7/17
19	PROPOSED FOOTING DESIGN (MERGED WITH BUILDING FOOTING)	12 days	Thu 20/7/17	Wed 2/8/17
20	SUBMISSION AND APPROVAL	20 days	Thu 3/8/17	Fri 25/8/17
21	**TC1**	**291 days**	**Sat 26/8/17**	**Thu 9/8/18**
22	FOOTING	12 days	Sat 26/8/17	Fri 8/9/17
23	TOWER CRANE ERECTION	3 days	Mon 18/9/17	Wed 20/9/17
24	TESTING & COMMISIONING	3 days	Thu 21/9/17	Sat 23/9/17
25	USAGE	260 days	Mon 25/9/17	Thu 2/8/18
26	TOWER CRANE DISMANTLING	6 days	Fri 3/8/18	Thu 9/8/18
27	**TC2**	**278 days**	**Sat 14/10/17**	**Wed 12/9/18**
28	FOOTING	18 days	Sat 14/10/17	Fri 3/11/17
29	TOWER CRANE ERECTION	3 days	Tue 21/11/17	Thu 23/11/17
30	TESTING & COMMISIONING	3 days	Fri 24/11/17	Mon 27/11/17
31	USAGE	234 days	Tue 28/11/17	Wed 5/9/18
32	TOWER CRANE DISMANTLING	6 days	Thu 6/9/18	Wed 12/9/18
33	**STRUCTURE**	**260 days**	**Sat 19/8/17**	**Wed 27/6/18**
34	**SUB-STRUCTURE (CRITICAL)**	**78 days**	**Sat 19/8/17**	**Fri 17/11/17**
35	FOOTING EXCAVATION @ GL 1-7/A-G (30 NOS)	18 days	Sat 19/8/17	Fri 8/9/17
36	FOOTING @ GL 1-7/A-G (30 NOS)	18 days	Sat 26/8/17	Fri 15/9/17
37	RETAINING WALL TYPE D	12 days	Sat 16/9/17	Fri 29/9/17
38	DETENTION TANK	12 days	Sat 16/9/17	Fri 29/9/17
39	SUB-STATION TRENCH	12 days	Sat 16/9/17	Fri 29/9/17
40	FOOTING EXCAVATION @ GL 8-15/A-G (24 NOS)	18 days	Sat 23/9/17	Fri 13/10/17
41	FOOTING @ GL 8-15/A-G (24 NOS)	18 days	Sat 30/9/17	Fri 20/10/17
42	1ST STY BEAM AND SLAB @ GL 1-7/A-G	24 days	Sat 30/9/17	Fri 27/10/17
43	1ST STY BEAM AND SLAB @ GL 8-15/A-G	24 days	Sat 21/10/17	Fri 17/11/17
44	**SUB-STRUCTURE (NON CRITICAL)**	**144 days**	**Tue 2/1/18**	**Wed 27/6/18**



Project: Nursing Nome @ Bukit Batok West Ave 9
Date: 16/10/2017
Company: Guan Ho Construction Co (Pte) Ltd

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only	Critical Split
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline	Progress
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Critical	

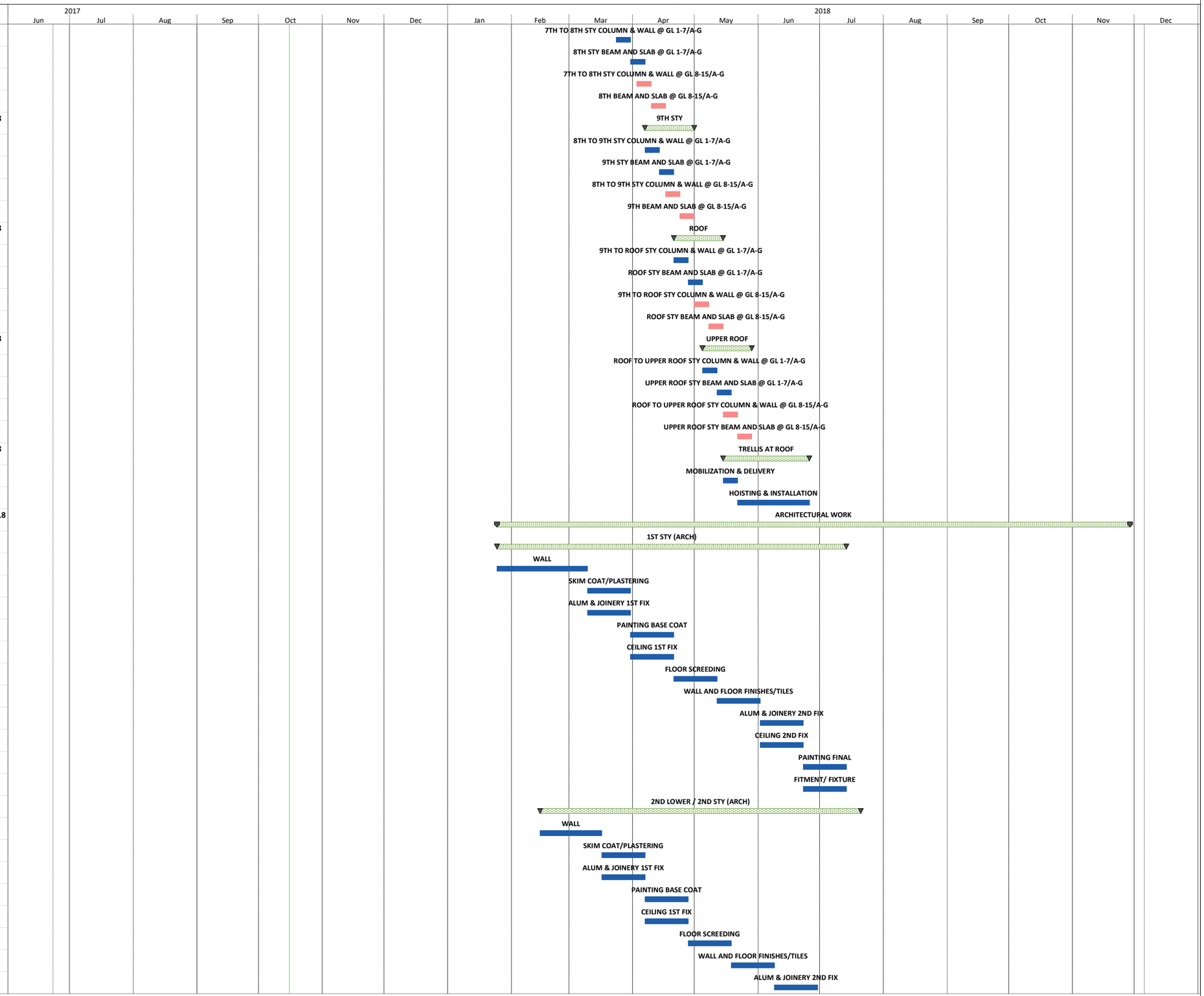
ID	Task Name	Duration	Start	Finish
45	**GL 16/A-G**	**84 days**	**Tue 2/1/18**	**Wed 18/4/18**
46	FOOTING EXCAVATION @ GL 16/A-G (14 NOS)	24 days	Tue 2/1/18	Mon 29/1/18
47	FOOTING @ GL 16/A-G (14 NOS)	24 days	Tue 9/1/18	Mon 5/2/18
48	1ST STY BEAM AND SLAB @ GL 16/A-6	24 days	Tue 6/2/18	Wed 14/3/18
49	2ND LOWER STY BEAM AND SLAB @ GL 16/A-6	30 days	Thu 15/3/18	Wed 18/4/18
50	**RETAINING WALL**	**90 days**	**Thu 15/3/18**	**Wed 27/6/18**
51	RETAINING WALL TYPE B	30 days	Thu 15/3/18	Wed 18/4/18
52	RETAINING WALL TYPE A	30 days	Thu 19/4/18	Wed 23/5/18
53	RETAINING WALL TYPE C	30 days	Thu 24/5/18	Wed 27/6/18
54	**SUPERSTRUCTURE**	**198 days**	**Sat 28/10/17**	**Mon 25/6/18**
55	**SWITCHGEAR ROOM LEVEL @ GL 4-5/E-G (~2M ABOVE 1ST STY)**	**10 days**	**Sat 28/10/17**	**Wed 8/11/17**
56	COLUMN	3 days	Sat 28/10/17	Tue 31/10/17
57	BEAM & SLAB	7 days	Wed 1/11/17	Wed 8/11/17
58	**2ND STY (5.7M HIGH)**	**44 days**	**Thu 9/11/17**	**Fri 29/12/17**
59	1ST TO 2ND STY COLUMN & WALL @ GL 1-7/A-G	18 days	Thu 9/11/17	Wed 29/11/17
60	2ND STY BEAM AND SLAB @ GL 1-7/A-G	18 days	Thu 30/11/17	Wed 20/12/17
61	1ST TO 2ND STY COLUMN & WALL @ GL 8-15/A-G	18 days	Sat 18/11/17	Fri 8/12/17
62	2ND STY BEAM AND SLAB @ GL 8-15/A-G	18 days	Sat 9/12/17	Fri 29/12/17
63	**3RD STY**	**26 days**	**Thu 21/12/17**	**Fri 19/1/18**
64	2ND TO 3RD STY COLUMN & WALL @ GL 1-7/A-G	6 days	Thu 21/12/17	Wed 27/12/17
65	3RD STY BEAM AND SLAB @ GL 1-7/A-G	12 days	Thu 28/12/17	Wed 10/1/18
66	2ND TO 3RD STY COLUMN & WALL @ GL 8-15/A-G	6 days	Sat 30/12/17	Fri 5/1/18
67	3RD STY BEAM AND SLAB @ GL 8-15/A-G	12 days	Sat 6/1/18	Fri 19/1/18
68	**4TH STY**	**20 days**	**Thu 11/1/18**	**Fri 2/2/18**
69	3RD to 4TH STY COLUMN & WALL @ GL 1-7/A-G	6 days	Thu 11/1/18	Wed 17/1/18
70	4TH STY BEAM AND SLAB @ GL 1-7/A-G	6 days	Thu 18/1/18	Wed 24/1/18
71	3RD TO 4TH STY COLUMN & WALL @ GL 8-15/A-G	6 days	Sat 20/1/18	Fri 26/1/18
72	4TH STY BEAM AND SLAB @ GL 8-15/A-G	6 days	Sat 27/1/18	Fri 2/2/18
73	**5TH STY**	**26 days**	**Thu 25/1/18**	**Mon 5/3/18**
74	4TH TO 5TH STY COLUMN & WALL @ GL 1-7/A-G	6 days	Thu 25/1/18	Wed 31/1/18
75	5TH STY BEAM AND SLAB @ GL 1-7/A-G	6 days	Thu 1/2/18	Wed 7/2/18
76	4TH TO 5TH STY COLUMN & WALL @ GL 8-15/A-G	6 days	Sat 3/2/18	Fri 9/2/18
77	5TH STY BEAM AND SLAB @ GL 8-15/A-G	12 days	Sat 10/2/18	Mon 5/3/18
78	**6TH STY**	**26 days**	**Thu 8/2/18**	**Mon 19/3/18**
79	5TH TO 6TH STY COLUMN & WALL @ GL 1-7/A-G	12 days	Thu 8/2/18	Fri 2/3/18
80	6TH STY BEAM AND SLAB @ GL 1-7/A-G	6 days	Sat 3/3/18	Fri 9/3/18
81	5TH TO 6TH STY COLUMN & WALL @ GL 8-15/A-G	6 days	Tue 6/3/18	Mon 12/3/18
82	6TH STY BEAM AND SLAB @ GL 8-15/A-G	6 days	Tue 13/3/18	Mon 19/3/18
83	**7TH STY**	**20 days**	**Sat 10/3/18**	**Mon 2/4/18**
84	6TH TO 7TH STY COLUMN & WALL @ GL 1-7/A-G	6 days	Sat 10/3/18	Fri 16/3/18
85	7TH STY BEAM AND SLAB @ GL 1-7/A-G	6 days	Sat 17/3/18	Fri 23/3/18
86	6TH TO 7TH STY COLUMN & WALL @ GL 8-15/A-G	6 days	Tue 20/3/18	Mon 26/3/18
87	7TH BEAM AND SLAB @ GL 8-15/A-G	6 days	Tue 27/3/18	Mon 2/4/18
88	**8TH STY**	**20 days**	**Sat 24/3/18**	**Mon 16/4/18**



Project: Nursing Nome @ Bukit Batok West Ave 9
Date: 16/10/2017
Company: Guan Ho Construction Co (Pte) Ltd

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only	Critical Split
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline	Progress
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Critical	

ID	Task Name	Duration	Start	Finish
89	7TH TO 8TH STY COLUMN & WALL @ GL 1-7/A-G	6 days	Sat 24/3/18	Fri 30/3/18
90	8TH STY BEAM AND SLAB @ GL 1-7/A-G	6 days	Sat 31/3/18	Fri 6/4/18
91	7TH TO 8TH STY COLUMN & WALL @ GL 8-15/A-G	6 days	Tue 3/4/18	Mon 9/4/18
92	8TH BEAM AND SLAB @ GL 8-15/A-G	6 days	Tue 10/4/18	Mon 16/4/18
93	**9TH STY**	**20 days**	**Sat 7/4/18**	**Mon 30/4/18**
94	8TH TO 9TH STY COLUMN & WALL @ GL 1-7/A-G	6 days	Sat 7/4/18	Fri 13/4/18
95	9TH STY BEAM AND SLAB @ GL 1-7/A-G	6 days	Sat 14/4/18	Fri 20/4/18
96	8TH TO 9TH STY COLUMN & WALL @ GL 8-15/A-G	6 days	Tue 17/4/18	Mon 23/4/18
97	9TH BEAM AND SLAB @ GL 8-15/A-G	6 days	Tue 24/4/18	Mon 30/4/18
98	**ROOF**	**20 days**	**Sat 21/4/18**	**Mon 14/5/18**
99	9TH TO ROOF STY COLUMN & WALL @ GL 1-7/A-G	6 days	Sat 21/4/18	Fri 27/4/18
100	ROOF STY BEAM AND SLAB @ GL 1-7/A-G	6 days	Sat 28/4/18	Fri 4/5/18
101	9TH TO ROOF STY COLUMN & WALL @ GL 8-15/A-G	6 days	Tue 1/5/18	Mon 7/5/18
102	ROOF STY BEAM AND SLAB @ GL 8-15/A-G	6 days	Tue 8/5/18	Mon 14/5/18
103	**UPPER ROOF**	**20 days**	**Sat 5/5/18**	**Mon 28/5/18**
104	ROOF TO UPPER ROOF STY COLUMN & WALL @ GL 1-7/A-G	6 days	Sat 5/5/18	Fri 11/5/18
105	UPPER ROOF STY BEAM AND SLAB @ GL 1-7/A-G	6 days	Sat 12/5/18	Fri 18/5/18
106	ROOF TO UPPER ROOF STY COLUMN & WALL @ GL 8-15/A-G	6 days	Tue 15/5/18	Mon 21/5/18
107	UPPER ROOF STY BEAM AND SLAB @ GL 8-15/A-G	6 days	Tue 22/5/18	Mon 28/5/18
108	**TRELLIS AT ROOF**	**36 days**	**Tue 15/5/18**	**Mon 25/6/18**
109	MOBILIZATION & DELIVERY	6 days	Tue 15/5/18	Mon 21/5/18
110	HOISTING & INSTALLATION	30 days	Tue 22/5/18	Mon 25/6/18
111	**ARCHITECTURAL WORK**	**256 days**	**Thu 25/1/18**	**Wed 28/11/18**
112	**1ST STY (ARCH)**	**138 days**	**Thu 25/1/18**	**Fri 13/7/18**
113	WALL	30 days	Thu 25/1/18	Fri 9/3/18
114	SKIM COAT/PLASTERING	18 days	Sat 10/3/18	Fri 30/3/18
115	ALUM & JOINERY 1ST FIX	18 days	Sat 10/3/18	Fri 30/3/18
116	PAINTING BASE COAT	18 days	Sat 31/3/18	Fri 20/4/18
117	CEILING 1ST FIX	18 days	Sat 31/3/18	Fri 20/4/18
118	FLOOR SCREEDING	18 days	Sat 21/4/18	Fri 11/5/18
119	WALL AND FLOOR FINISHES/TILES	18 days	Sat 12/5/18	Fri 1/6/18
120	ALUM & JOINERY 2ND FIX	18 days	Sat 2/6/18	Fri 22/6/18
121	CEILING 2ND FIX	18 days	Sat 2/6/18	Fri 22/6/18
122	PAINTING FINAL	18 days	Sat 23/6/18	Fri 13/7/18
123	FITMENT/ FIXTURE	18 days	Sat 23/6/18	Fri 13/7/18
124	**2ND LOWER / 2ND STY (ARCH)**	**126 days**	**Thu 15/2/18**	**Fri 20/7/18**
125	WALL	18 days	Thu 15/2/18	Fri 16/3/18
126	SKIM COAT/PLASTERING	18 days	Sat 17/3/18	Fri 6/4/18
127	ALUM & JOINERY 1ST FIX	18 days	Sat 17/3/18	Fri 6/4/18
128	PAINTING BASE COAT	18 days	Sat 7/4/18	Fri 27/4/18
129	CEILING 1ST FIX	18 days	Sat 7/4/18	Fri 27/4/18
130	FLOOR SCREEDING	18 days	Sat 28/4/18	Fri 18/5/18
131	WALL AND FLOOR FINISHES/TILES	18 days	Sat 19/5/18	Fri 8/6/18
132	ALUM & JOINERY 2ND FIX	18 days	Sat 9/6/18	Fri 29/6/18

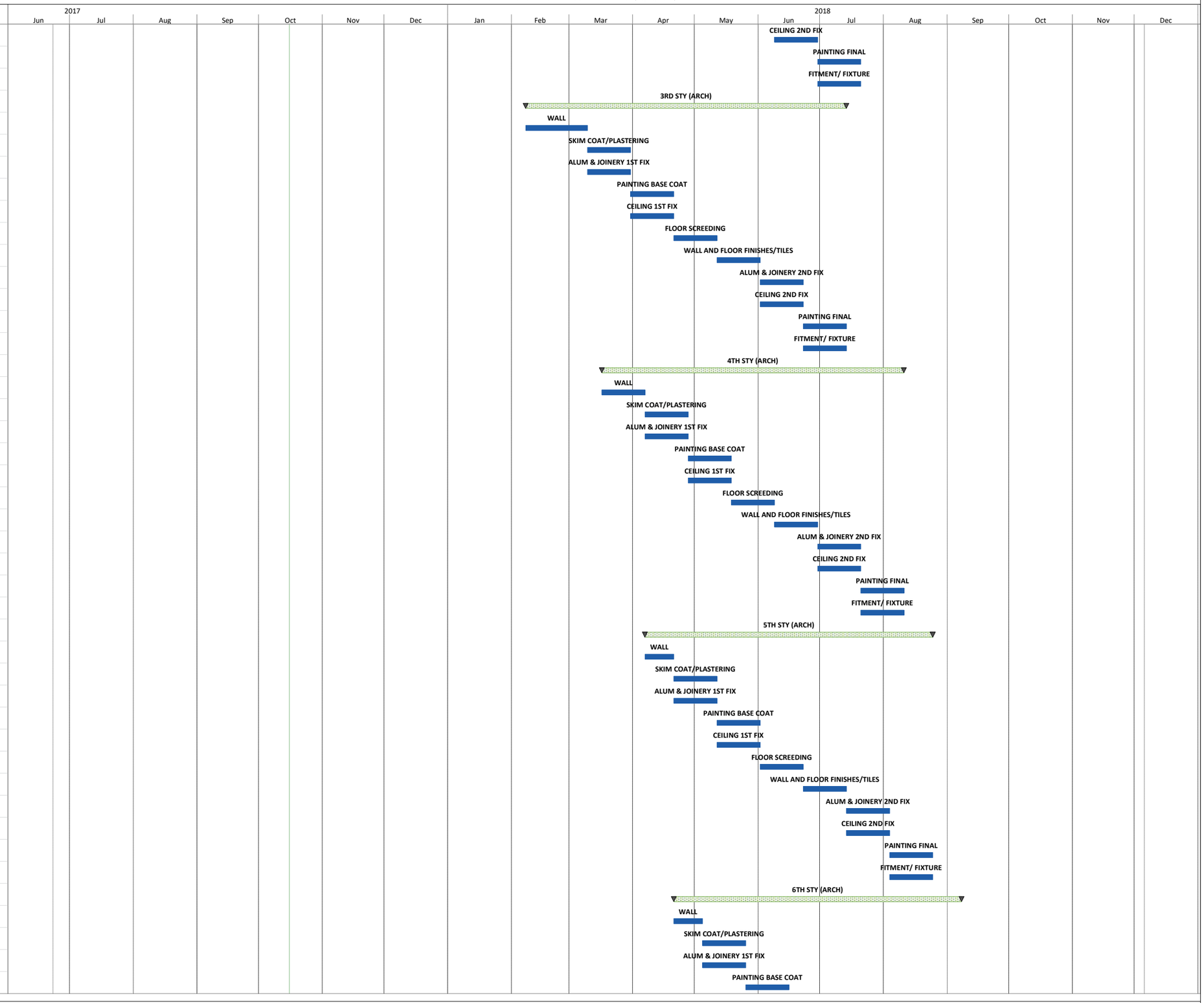


Project: Nursing Nome @ Bukit Batok West Ave 9
Date: 16/10/2017
Company: Guan Ho Construction Co (Pte) Ltd

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only	Critical Split
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline	Progress
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Critical	

PROPOSED ERECTION OF A NEW 9-STOREY NURSING HOME ON LOT 05046T MK 10 AT BUKIT BATOK WEST AVENUE 9 - MASTER PROGRAMME REV 04 (16/10/2017)

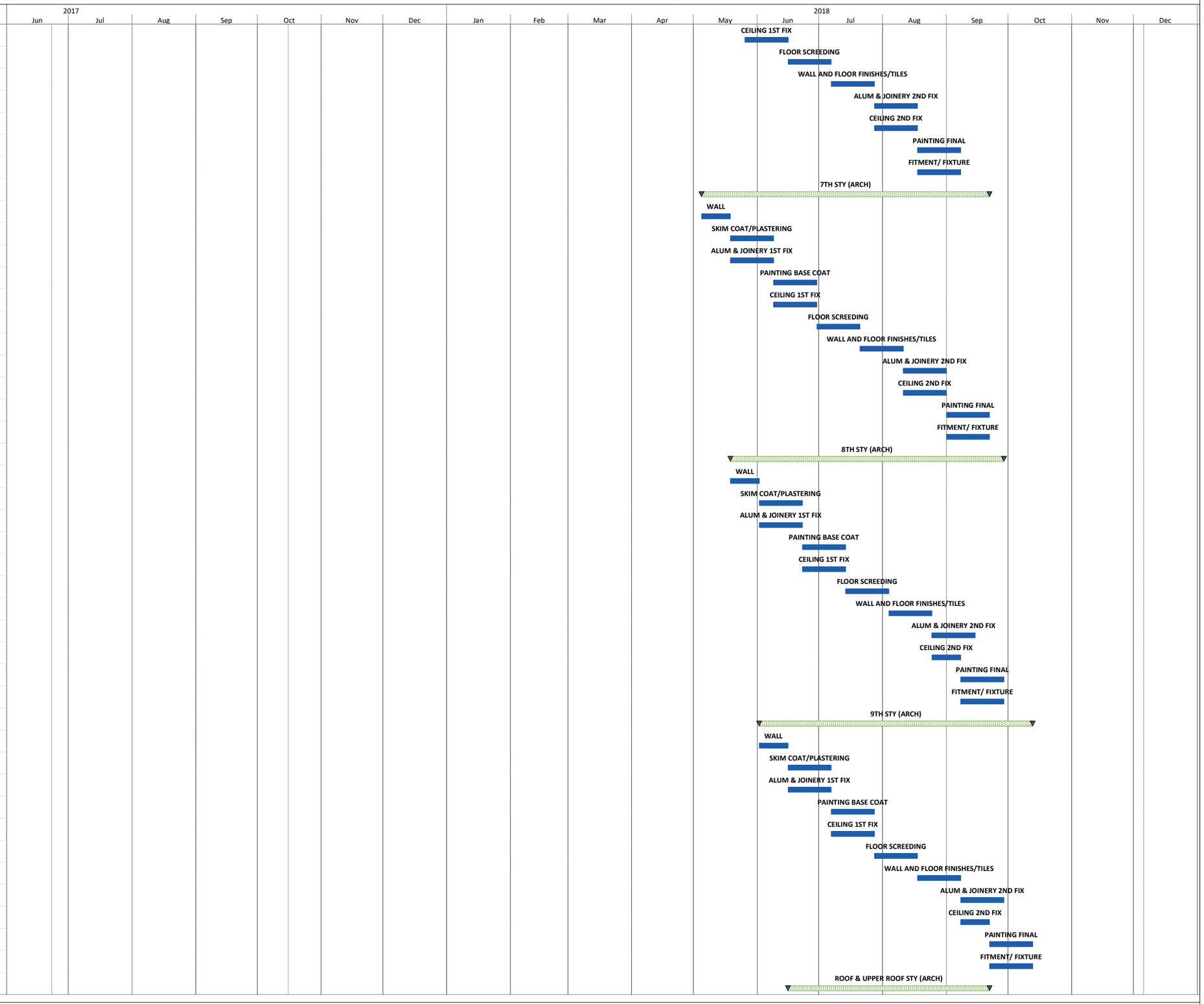
ID	Task Name	Duration	Start	Finish
133	CEILING 2ND FIX	18 days	Sat 9/6/18	Fri 29/6/18
134	PAINTING FINAL	18 days	Sat 30/6/18	Fri 20/7/18
135	FITMENT/ FIXTURE	18 days	Sat 30/6/18	Fri 20/7/18
136	**3RD STY (ARCH)**	**126 days**	**Thu 8/2/18**	**Fri 13/7/18**
137	WALL	18 days	Thu 8/2/18	Fri 9/3/18
138	SKIM COAT/PLASTERING	18 days	Sat 10/3/18	Fri 30/3/18
139	ALUM & JOINERY 1ST FIX	18 days	Sat 10/3/18	Fri 30/3/18
140	PAINTING BASE COAT	18 days	Sat 31/3/18	Fri 20/4/18
141	CEILING 1ST FIX	18 days	Sat 31/3/18	Fri 20/4/18
142	FLOOR SCREEDING	18 days	Sat 21/4/18	Fri 11/5/18
143	WALL AND FLOOR FINISHES/TILES	18 days	Sat 12/5/18	Fri 1/6/18
144	ALUM & JOINERY 2ND FIX	18 days	Sat 2/6/18	Fri 22/6/18
145	CEILING 2ND FIX	18 days	Sat 2/6/18	Fri 22/6/18
146	PAINTING FINAL	18 days	Sat 23/6/18	Fri 13/7/18
147	FITMENT/ FIXTURE	18 days	Sat 23/6/18	Fri 13/7/18
148	**4TH STY (ARCH)**	**126 days**	**Sat 17/3/18**	**Fri 10/8/18**
149	WALL	18 days	Sat 17/3/18	Fri 6/4/18
150	SKIM COAT/PLASTERING	18 days	Sat 7/4/18	Fri 27/4/18
151	ALUM & JOINERY 1ST FIX	18 days	Sat 7/4/18	Fri 27/4/18
152	PAINTING BASE COAT	18 days	Sat 28/4/18	Fri 18/5/18
153	CEILING 1ST FIX	18 days	Sat 28/4/18	Fri 18/5/18
154	FLOOR SCREEDING	18 days	Sat 19/5/18	Fri 8/6/18
155	WALL AND FLOOR FINISHES/TILES	18 days	Sat 9/6/18	Fri 29/6/18
156	ALUM & JOINERY 2ND FIX	18 days	Sat 30/6/18	Fri 20/7/18
157	CEILING 2ND FIX	18 days	Sat 30/6/18	Fri 20/7/18
158	PAINTING FINAL	18 days	Sat 21/7/18	Fri 10/8/18
159	FITMENT/ FIXTURE	18 days	Sat 21/7/18	Fri 10/8/18
160	**5TH STY (ARCH)**	**120 days**	**Sat 7/4/18**	**Fri 24/8/18**
161	WALL	12 days	Sat 7/4/18	Fri 20/4/18
162	SKIM COAT/PLASTERING	18 days	Sat 21/4/18	Fri 11/5/18
163	ALUM & JOINERY 1ST FIX	18 days	Sat 21/4/18	Fri 11/5/18
164	PAINTING BASE COAT	18 days	Sat 12/5/18	Fri 1/6/18
165	CEILING 1ST FIX	18 days	Sat 12/5/18	Fri 1/6/18
166	FLOOR SCREEDING	18 days	Sat 2/6/18	Fri 22/6/18
167	WALL AND FLOOR FINISHES/TILES	18 days	Sat 23/6/18	Fri 13/7/18
168	ALUM & JOINERY 2ND FIX	18 days	Sat 14/7/18	Fri 3/8/18
169	CEILING 2ND FIX	18 days	Sat 14/7/18	Fri 3/8/18
170	PAINTING FINAL	18 days	Sat 4/8/18	Fri 24/8/18
171	FITMENT/ FIXTURE	18 days	Sat 4/8/18	Fri 24/8/18
172	**6TH STY (ARCH)**	**120 days**	**Sat 21/4/18**	**Fri 7/9/18**
173	WALL	12 days	Sat 21/4/18	Fri 4/5/18
174	SKIM COAT/PLASTERING	18 days	Sat 5/5/18	Fri 25/5/18
175	ALUM & JOINERY 1ST FIX	18 days	Sat 5/5/18	Fri 25/5/18
176	PAINTING BASE COAT	18 days	Sat 26/5/18	Fri 15/6/18



Project: Nursing Nome @ Bukit Batok West Ave 9
Date: 16/10/2017
Company: Guan Ho Construction Co (Pte) Ltd

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only	Critical Split
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline	Progress
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Critical	

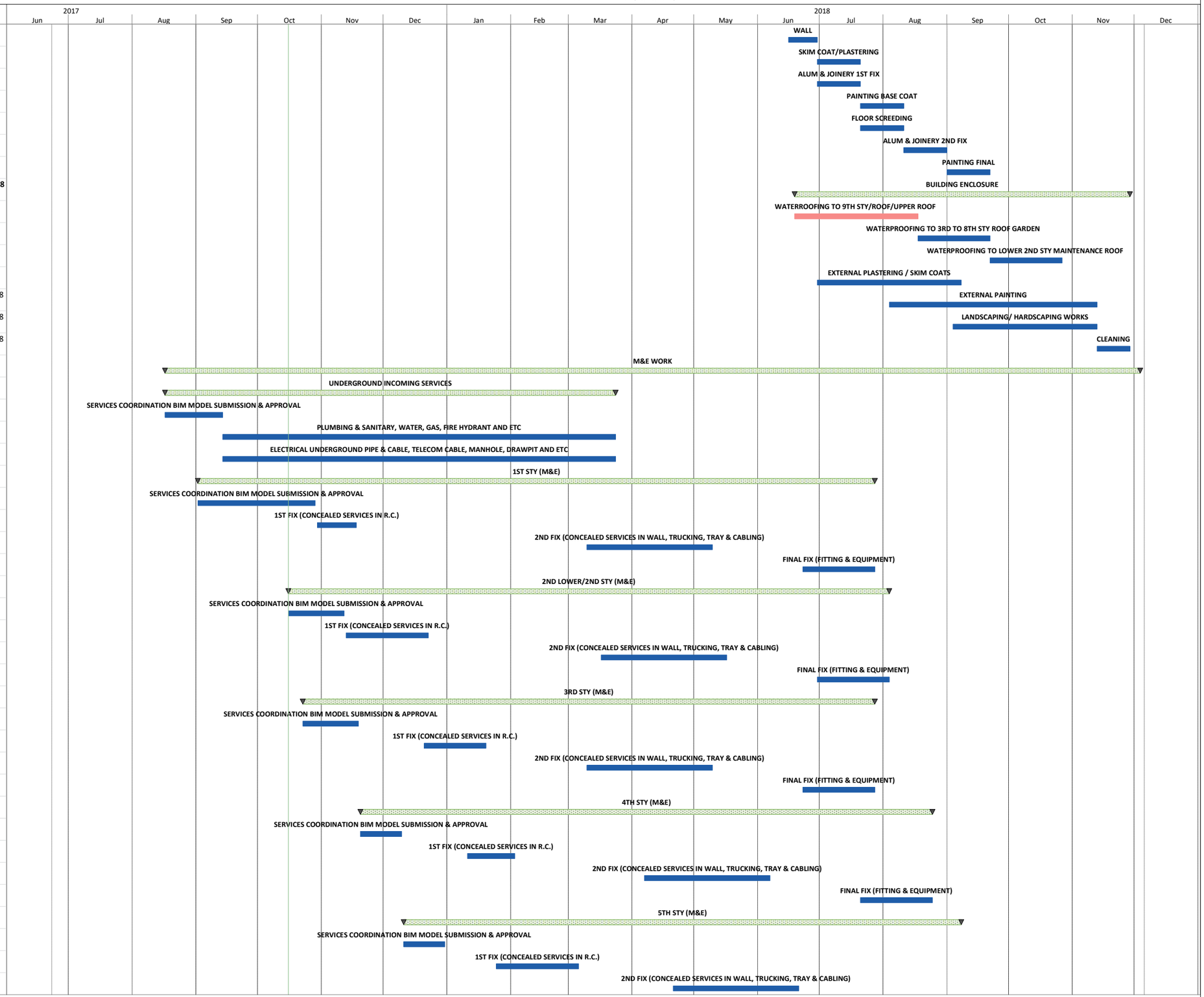
ID	Task Name	Duration	Start	Finish
177	CEILING 1ST FIX	18 days	Sat 26/5/18	Fri 15/6/18
178	FLOOR SCREEDING	18 days	Sat 16/6/18	Fri 6/7/18
179	WALL AND FLOOR FINISHES/TILES	18 days	Sat 7/7/18	Fri 27/7/18
180	ALUM & JOINERY 2ND FIX	18 days	Sat 28/7/18	Fri 17/8/18
181	CEILING 2ND FIX	18 days	Sat 28/7/18	Fri 17/8/18
182	PAINTING FINAL	18 days	Sat 18/8/18	Fri 7/9/18
183	FITMENT/ FIXTURE	18 days	Sat 18/8/18	Fri 7/9/18
184	**7TH STY (ARCH)**	**120 days**	**Sat 5/5/18**	**Fri 21/9/18**
185	WALL	12 days	Sat 5/5/18	Fri 18/5/18
186	SKIM COAT/PLASTERING	18 days	Sat 19/5/18	Fri 8/6/18
187	ALUM & JOINERY 1ST FIX	18 days	Sat 19/5/18	Fri 8/6/18
188	PAINTING BASE COAT	18 days	Sat 9/6/18	Fri 29/6/18
189	CEILING 1ST FIX	18 days	Sat 9/6/18	Fri 29/6/18
190	FLOOR SCREEDING	18 days	Sat 30/6/18	Fri 20/7/18
191	WALL AND FLOOR FINISHES/TILES	18 days	Sat 21/7/18	Fri 10/8/18
192	ALUM & JOINERY 2ND FIX	18 days	Sat 11/8/18	Fri 31/8/18
193	CEILING 2ND FIX	18 days	Sat 11/8/18	Fri 31/8/18
194	PAINTING FINAL	18 days	Sat 1/9/18	Fri 21/9/18
195	FITMENT/ FIXTURE	18 days	Sat 1/9/18	Fri 21/9/18
196	**8TH STY (ARCH)**	**114 days**	**Sat 19/5/18**	**Fri 28/9/18**
197	WALL	12 days	Sat 19/5/18	Fri 1/6/18
198	SKIM COAT/PLASTERING	18 days	Sat 2/6/18	Fri 22/6/18
199	ALUM & JOINERY 1ST FIX	18 days	Sat 2/6/18	Fri 22/6/18
200	PAINTING BASE COAT	18 days	Sat 23/6/18	Fri 13/7/18
201	CEILING 1ST FIX	18 days	Sat 23/6/18	Fri 13/7/18
202	FLOOR SCREEDING	18 days	Sat 14/7/18	Fri 3/8/18
203	WALL AND FLOOR FINISHES/TILES	18 days	Sat 4/8/18	Fri 24/8/18
204	ALUM & JOINERY 2ND FIX	18 days	Sat 25/8/18	Fri 14/9/18
205	CEILING 2ND FIX	12 days	Sat 25/8/18	Fri 7/9/18
206	PAINTING FINAL	18 days	Sat 8/9/18	Fri 28/9/18
207	FITMENT/ FIXTURE	18 days	Sat 8/9/18	Fri 28/9/18
208	**9TH STY (ARCH)**	**114 days**	**Sat 2/6/18**	**Fri 12/10/18**
209	WALL	12 days	Sat 2/6/18	Fri 15/6/18
210	SKIM COAT/PLASTERING	18 days	Sat 16/6/18	Fri 6/7/18
211	ALUM & JOINERY 1ST FIX	18 days	Sat 16/6/18	Fri 6/7/18
212	PAINTING BASE COAT	18 days	Sat 7/7/18	Fri 27/7/18
213	CEILING 1ST FIX	18 days	Sat 7/7/18	Fri 27/7/18
214	FLOOR SCREEDING	18 days	Sat 28/7/18	Fri 17/8/18
215	WALL AND FLOOR FINISHES/TILES	18 days	Sat 18/8/18	Fri 7/9/18
216	ALUM & JOINERY 2ND FIX	18 days	Sat 8/9/18	Fri 28/9/18
217	CEILING 2ND FIX	12 days	Sat 8/9/18	Fri 21/9/18
218	PAINTING FINAL	18 days	Sat 22/9/18	Fri 12/10/18
219	FITMENT/ FIXTURE	18 days	Sat 22/9/18	Fri 12/10/18
220	**ROOF & UPPER ROOF STY (ARCH)**	**84 days**	**Sat 16/6/18**	**Fri 21/9/18**



Project: Nursing Nome @ Bukit Batok West Ave 9
Date: 16/10/2017
Company: Guan Ho Construction Co (Pte) Ltd

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only	Critical Split
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline	Progress
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Critical	

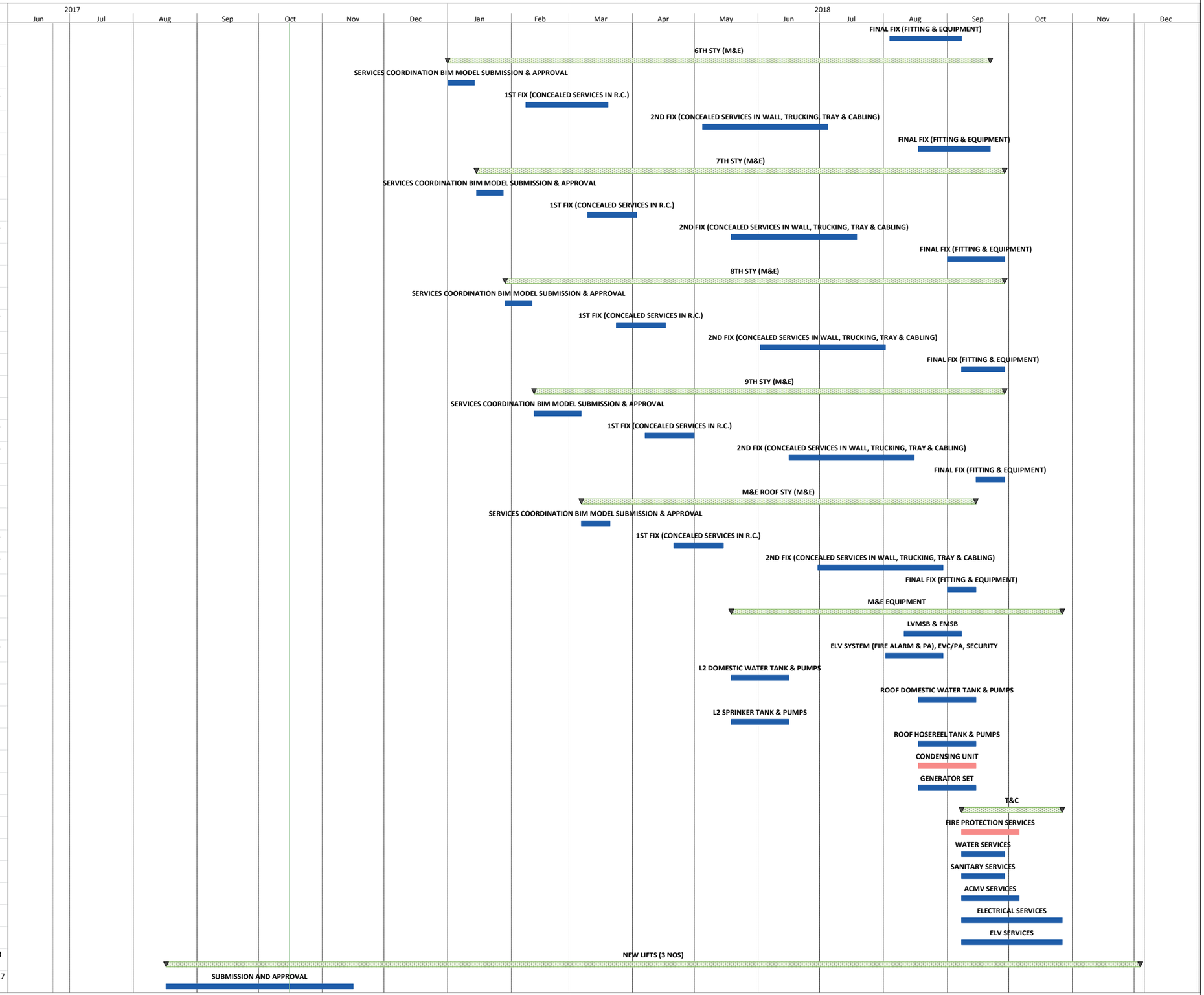
ID	Task Name	Duration	Start	Finish
221	WALL	12 days	Sat 16/6/18	Fri 29/6/18
222	SKIM COAT/PLASTERING	18 days	Sat 30/6/18	Fri 20/7/18
223	ALUM & JOINERY 1ST FIX	18 days	Sat 30/6/18	Fri 20/7/18
224	PAINTING BASE COAT	18 days	Sat 21/7/18	Fri 10/8/18
225	FLOOR SCREEDING	18 days	Sat 21/7/18	Fri 10/8/18
226	ALUM & JOINERY 2ND FIX	18 days	Sat 11/8/18	Fri 31/8/18
227	PAINTING FINAL	18 days	Sat 1/9/18	Fri 21/9/18
228	**BUILDING ENCLOSURE**	**140 days**	**Tue 19/6/18**	**Wed 28/11/18**
229	WATERROOFING TO 9TH STY/ROOF/UPPER ROOF	52 days	Tue 19/6/18	Fri 17/8/18
230	WATERPROOFING TO 3RD TO 8TH STY ROOF GARDEN	30 days	Sat 18/8/18	Fri 21/9/18
231	WATERPROOFING TO LOWER 2ND STY MAINTENANCE ROOF	30 days	Sat 22/9/18	Fri 26/10/18
232	EXTERNAL PLASTERING / SKIM COATS	60 days	Sat 30/6/18	Fri 7/9/18
233	EXTERNAL PAINTING	86 days	Sat 4/8/18	Mon 12/11/18
234	LANDSCAPING/ HARDSCAPING WORKS	60 days	Tue 4/9/18	Mon 12/11/18
235	CLEANING	14 days	Tue 13/11/18	Wed 28/11/18
236	**M&E WORK**	**398 days**	**Thu 17/8/17**	**Mon 3/12/18**
237	**UNDERGROUND INCOMING SERVICES**	**180 days**	**Thu 17/8/17**	**Fri 23/3/18**
238	SERVICES COORDINATION BIM MODEL SUBMISSION & APPROVAL	24 days	Thu 17/8/17	Wed 13/9/17
239	PLUMBING & SANITARY, WATER, GAS, FIRE HYDRANT AND ETC	156 days	Thu 14/9/17	Fri 23/3/18
240	ELECTRICAL UNDERGROUND PIPE & CABLE, TELECOM CABLE, MANHOLE, DRAWPIT AND ETC	156 days	Thu 14/9/17	Fri 23/3/18
241	**1ST STY (M&E)**	**274 days**	**Sat 2/9/17**	**Fri 27/7/18**
242	SERVICES COORDINATION BIM MODEL SUBMISSION & APPROVAL	49 days	Sat 2/9/17	Sat 28/10/17
243	1ST FIX (CONCEALED SERVICES IN R.C.)	17 days	Mon 30/10/17	Fri 17/11/17
244	2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	52 days	Sat 10/3/18	Wed 9/5/18
245	FINAL FIX (FITTING & EQUIPMENT)	30 days	Sat 23/6/18	Fri 27/7/18
246	**2ND LOWER/2ND STY (M&E)**	**243 days**	**Mon 16/10/17**	**Fri 3/8/18**
247	SERVICES COORDINATION BIM MODEL SUBMISSION & APPROVAL	24 days	Mon 16/10/17	Sat 11/11/17
248	1ST FIX (CONCEALED SERVICES IN R.C.)	35 days	Mon 13/11/17	Fri 22/12/17
249	2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	52 days	Sat 17/3/18	Wed 16/5/18
250	FINAL FIX (FITTING & EQUIPMENT)	30 days	Sat 30/6/18	Fri 3/8/18
251	**3RD STY (M&E)**	**231 days**	**Mon 23/10/17**	**Fri 27/7/18**
252	SERVICES COORDINATION BIM MODEL SUBMISSION & APPROVAL	24 days	Mon 23/10/17	Sat 18/11/17
253	1ST FIX (CONCEALED SERVICES IN R.C.)	26 days	Thu 21/12/17	Fri 19/1/18
254	2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	52 days	Sat 10/3/18	Wed 9/5/18
255	FINAL FIX (FITTING & EQUIPMENT)	30 days	Sat 23/6/18	Fri 27/7/18
256	**4TH STY (M&E)**	**231 days**	**Mon 20/11/17**	**Fri 24/8/18**
257	SERVICES COORDINATION BIM MODEL SUBMISSION & APPROVAL	18 days	Mon 20/11/17	Sat 9/12/17
258	1ST FIX (CONCEALED SERVICES IN R.C.)	20 days	Thu 11/1/18	Fri 2/2/18
259	2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	52 days	Sat 7/4/18	Wed 6/6/18
260	FINAL FIX (FITTING & EQUIPMENT)	30 days	Sat 21/7/18	Fri 24/8/18
261	**5TH STY (M&E)**	**225 days**	**Mon 11/12/17**	**Fri 7/9/18**
262	SERVICES COORDINATION BIM MODEL SUBMISSION & APPROVAL	18 days	Mon 11/12/17	Sat 30/12/17
263	1ST FIX (CONCEALED SERVICES IN R.C.)	26 days	Thu 25/1/18	Mon 5/3/18
264	2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	52 days	Sat 21/4/18	Wed 20/6/18



Project: Nursing Nome @ Bukit Batok West Ave 9
Date: 16/10/2017
Company: Guan Ho Construction Co (Pte) Ltd

Task · Split · Milestone · Summary · Project Summary · External Tasks · External Milestone · Inactive Task · Inactive Milestone · Inactive Summary · Manual Task · Duration-only · Manual Summary Rollup · Manual Summary · Start-only · Finish-only · Deadline · Critical · Critical Split · Progress

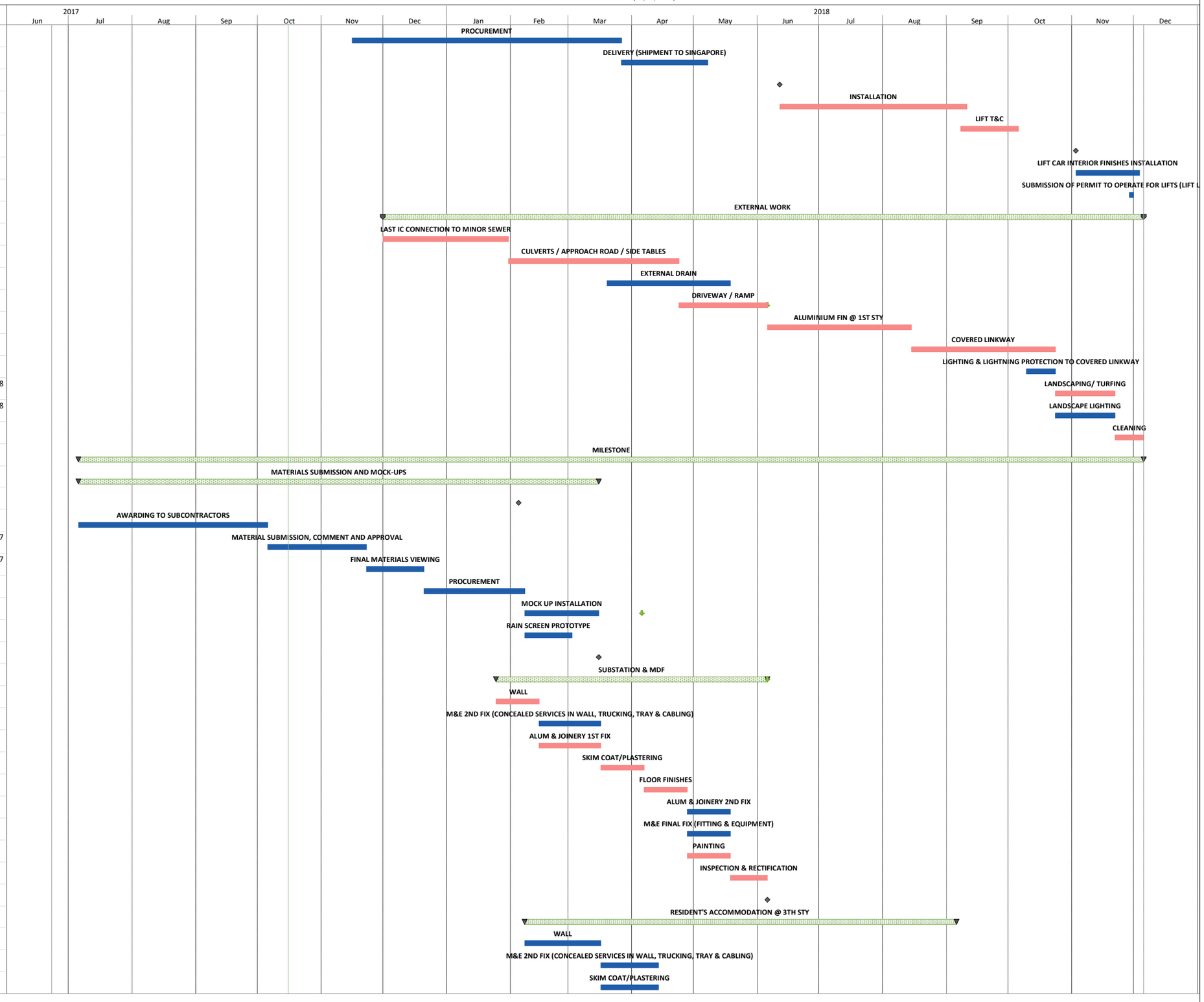
ID	Task Name	Duration	Start	Finish
265	FINAL FIX (FITTING & EQUIPMENT)	30 days	Sat 4/8/18	Fri 7/9/18
266	**6TH STY (M&E)**	**219 days**	**Mon 1/1/18**	**Fri 21/9/18**
267	SERVICES COORDINATION BIM MODEL SUBMISSION & APPROVAL	12 days	Mon 1/1/18	Sat 13/1/18
268	1ST FIX (CONCEALED SERVICES IN R.C.)	26 days	Thu 8/2/18	Mon 19/3/18
269	2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	52 days	Sat 5/5/18	Wed 4/7/18
270	FINAL FIX (FITTING & EQUIPMENT)	30 days	Sat 18/8/18	Fri 21/9/18
271	**7TH STY (M&E)**	**213 days**	**Mon 15/1/18**	**Fri 28/9/18**
272	SERVICES COORDINATION BIM MODEL SUBMISSION & APPROVAL	12 days	Mon 15/1/18	Sat 27/1/18
273	1ST FIX (CONCEALED SERVICES IN R.C.)	20 days	Sat 10/3/18	Mon 2/4/18
274	2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	52 days	Sat 19/5/18	Wed 18/7/18
275	FINAL FIX (FITTING & EQUIPMENT)	24 days	Sat 1/9/18	Fri 28/9/18
276	**8TH STY (M&E)**	**201 days**	**Mon 29/1/18**	**Fri 28/9/18**
277	SERVICES COORDINATION BIM MODEL SUBMISSION & APPROVAL	12 days	Mon 29/1/18	Sat 10/2/18
278	1ST FIX (CONCEALED SERVICES IN R.C.)	20 days	Sat 24/3/18	Mon 16/4/18
279	2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	52 days	Sat 2/6/18	Wed 1/8/18
280	FINAL FIX (FITTING & EQUIPMENT)	18 days	Sat 8/9/18	Fri 28/9/18
281	**9TH STY (M&E)**	**189 days**	**Mon 12/2/18**	**Fri 28/9/18**
282	SERVICES COORDINATION BIM MODEL SUBMISSION & APPROVAL	12 days	Mon 12/2/18	Tue 6/3/18
283	1ST FIX (CONCEALED SERVICES IN R.C.)	20 days	Sat 7/4/18	Mon 30/4/18
284	2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	52 days	Sat 16/6/18	Wed 15/8/18
285	FINAL FIX (FITTING & EQUIPMENT)	12 days	Sat 15/9/18	Fri 28/9/18
286	**M&E ROOF STY (M&E)**	**165 days**	**Wed 7/3/18**	**Fri 14/9/18**
287	SERVICES COORDINATION BIM MODEL SUBMISSION & APPROVAL	12 days	Wed 7/3/18	Tue 20/3/18
288	1ST FIX (CONCEALED SERVICES IN R.C.)	20 days	Sat 21/4/18	Mon 14/5/18
289	2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	52 days	Sat 30/6/18	Wed 29/8/18
290	FINAL FIX (FITTING & EQUIPMENT)	12 days	Sat 1/9/18	Fri 14/9/18
291	**M&E EQUIPMENT**	**138 days**	**Sat 19/5/18**	**Fri 26/10/18**
292	LVMSB & EMSB	24 days	Sat 11/8/18	Fri 7/9/18
293	ELV SYSTEM (FIRE ALARM & PA), EVC/PA, SECURITY	24 days	Thu 2/8/18	Wed 29/8/18
294	L2 DOMESTIC WATER TANK & PUMPS	24 days	Sat 19/5/18	Fri 15/6/18
295	ROOF DOMESTIC WATER TANK & PUMPS	24 days	Sat 18/8/18	Fri 14/9/18
296	L2 SPRINKER TANK & PUMPS	24 days	Sat 19/5/18	Fri 15/6/18
297	ROOF HOSEREEL TANK & PUMPS	24 days	Sat 18/8/18	Fri 14/9/18
298	CONDENSING UNIT	24 days	Sat 18/8/18	Fri 14/9/18
299	GENERATOR SET	24 days	Sat 18/8/18	Fri 14/9/18
300	**T&C**	**42 days**	**Sat 8/9/18**	**Fri 26/10/18**
301	FIRE PROTECTION SERVICES	24 days	Sat 8/9/18	Fri 5/10/18
302	WATER SERVICES	18 days	Sat 8/9/18	Fri 28/9/18
303	SANITARY SERVICES	18 days	Sat 8/9/18	Fri 28/9/18
304	ACMV SERVICES	24 days	Sat 8/9/18	Fri 5/10/18
305	ELECTRICAL SERVICES	42 days	Sat 8/9/18	Fri 26/10/18
306	ELV SERVICES	42 days	Sat 8/9/18	Fri 26/10/18
307	**NEW LIFTS (3 NOS)**	**398 days**	**Thu 17/8/17**	**Mon 3/12/18**
308	SUBMISSION AND APPROVAL	78 days	Thu 17/8/17	Wed 15/11/17



Project: Nursing Nome @ Bukit Batok West Ave 9
Date: 16/10/2017
Company: Guan Ho Construction Co (Pte) Ltd

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only	Critical Split
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline	Progress
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Critical	

ID	Task Name	Duration	Start	Finish
309	PROCUREMENT	104 days	Thu 16/11/17	Mon 26/3/18
310	DELIVERY (SHIPMENT TO SINGAPORE)	36 days	Tue 27/3/18	Mon 7/5/18
311	LIFT SHAFT HANDOVER	0 days	Mon 11/6/18	Mon 11/6/18
312	INSTALLATION	78 days	Tue 12/6/18	Mon 10/9/18
313	LIFT T&C	24 days	Sat 8/9/18	Fri 5/10/18
314	ISSUANCE OF COS, MAINTENANCE AND TESTING	0 days	Fri 2/11/18	Fri 2/11/18
315	LIFT CAR INTERIOR FINISHES INSTALLATION	26 days	Sat 3/11/18	Mon 3/12/18
316	SUBMISSION OF PERMIT TO OPERATE FOR LIFTS (LIFT LODGEMENT)	2 days	Thu 29/11/18	Fri 30/11/18
317	**EXTERNAL WORK**	**309 days**	**Fri 1/12/17**	**Wed 5/12/18**
318	LAST IC CONNECTION TO MINOR SEWER	52 days	Fri 1/12/17	Tue 30/1/18
319	CULVERTS / APPROACH ROAD / SIDE TABLES	63 days	Wed 31/1/18	Mon 23/4/18
320	EXTERNAL DRAIN	52 days	Tue 20/3/18	Fri 18/5/18
321	DRIVEWAY / RAMP	37 days	Tue 24/4/18	Tue 5/6/18
322	ALUMINIUM FIN @ 1ST STY	60 days	Wed 6/6/18	Tue 14/8/18
323	COVERED LINKWAY	60 days	Wed 15/8/18	Tue 23/10/18
324	LIGHTING & LIGHTNING PROTECTION TO COVERED LINKWAY	12 days	Wed 10/10/18	Tue 23/10/18
325	LANDSCAPING/ TURFING	25 days	Wed 24/10/18	Wed 21/11/18
326	LANDSCAPE LIGHTING	25 days	Wed 24/10/18	Wed 21/11/18
327	CLEANING	12 days	Thu 22/11/18	Wed 5/12/18
328	**MILESTONE**	**436 days**	**Thu 6/7/17**	**Wed 5/12/18**
329	**MATERIALS SUBMISSION AND MOCK-UPS**	**209 days**	**Thu 6/7/17**	**Thu 15/3/18**
330	CONTRACT MOCK UP COMPLETION DATE	0 days	Mon 5/2/18	Mon 5/2/18
331	AWARDING TO SUBCONTRACTORS	79 days	Thu 6/7/17	Thu 5/10/17
332	MATERIAL SUBMISSION, COMMENT AND APPROVAL	41 days	Fri 6/10/17	Wed 22/11/17
333	FINAL MATERIALS VIEWING	24 days	Thu 23/11/17	Wed 20/12/17
334	PROCUREMENT	42 days	Thu 21/12/17	Wed 7/2/18
335	MOCK UP INSTALLATION	23 days	Thu 8/2/18	Thu 15/3/18
336	RAIN SCREEN PROTOTYPE	12 days	Thu 8/2/18	Fri 2/3/18
337	MOCK UP VIEWING & APPROVAL	0 days	Thu 15/3/18	Thu 15/3/18
338	**SUBSTATION & MDF**	**105 days**	**Thu 25/1/18**	**Tue 5/6/18**
339	WALL	18 days	Thu 25/1/18	Wed 14/2/18
340	M&E 2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	18 days	Thu 15/2/18	Fri 16/3/18
341	ALUM & JOINERY 1ST FIX	18 days	Thu 15/2/18	Fri 16/3/18
342	SKIM COAT/PLASTERING	18 days	Sat 17/3/18	Fri 6/4/18
343	FLOOR FINISHES	18 days	Sat 7/4/18	Fri 27/4/18
344	ALUM & JOINERY 2ND FIX	18 days	Sat 28/4/18	Fri 18/5/18
345	M&E FINAL FIX (FITTING & EQUIPMENT)	18 days	Sat 28/4/18	Fri 18/5/18
346	PAINTING	18 days	Sat 28/4/18	Fri 18/5/18
347	INSPECTION & RECTIFICATION	15 days	Sat 19/5/18	Tue 5/6/18
348	HANDOVER	0 days	Tue 5/6/18	Tue 5/6/18
349	**RESIDENT'S ACCOMMODATION @ 3TH STY**	**172 days**	**Thu 8/2/18**	**Wed 5/9/18**
350	WALL	24 days	Thu 8/2/18	Fri 16/3/18
351	M&E 2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	24 days	Sat 17/3/18	Fri 13/4/18
352	SKIM COAT/PLASTERING	24 days	Sat 17/3/18	Fri 13/4/18

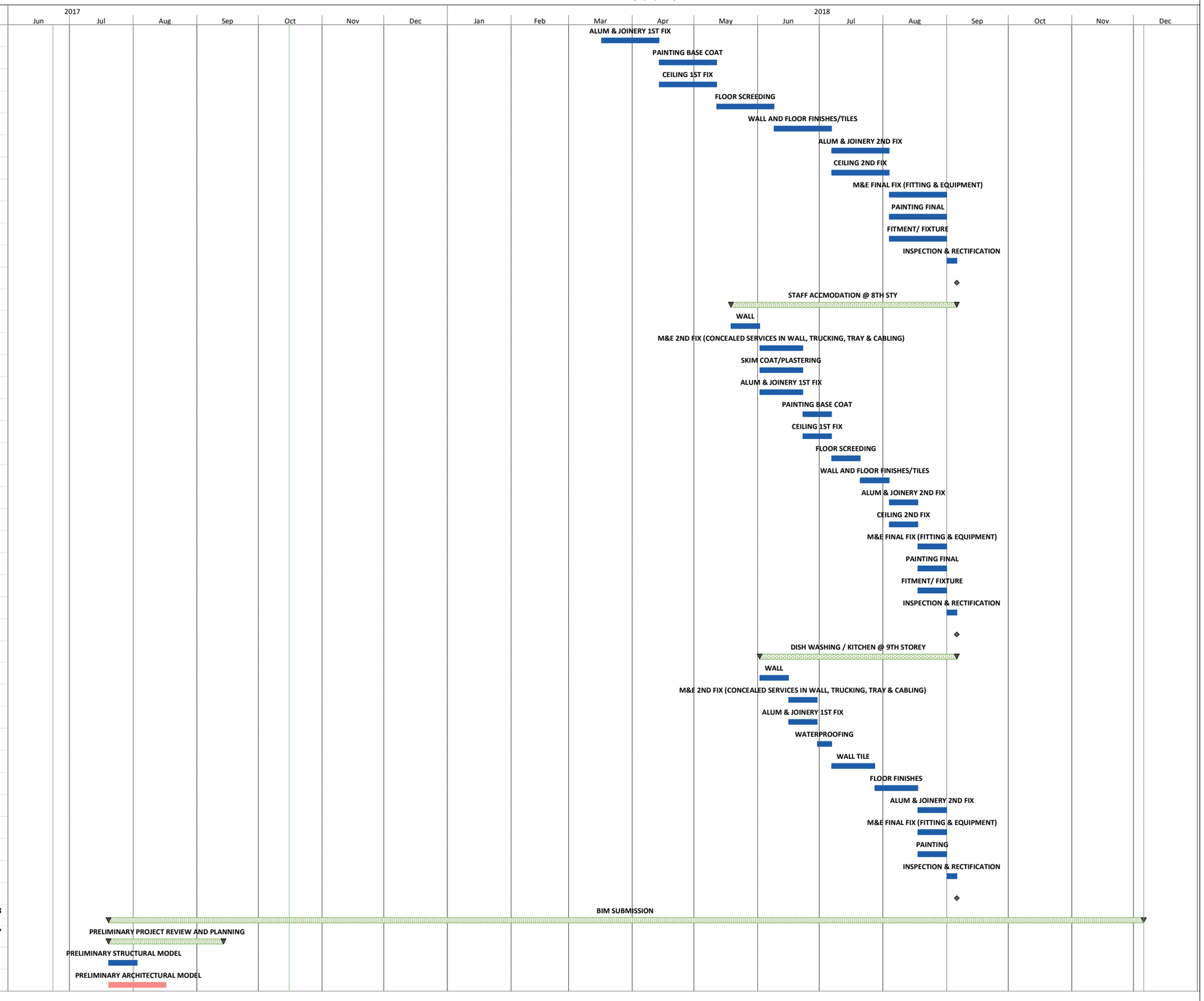


Project: Nursing Nome @ Bukit Batok West Ave 9
Date: 16/10/2017
Company: Guan Ho Construction Co (Pte) Ltd

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only	Critical Split
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline	Progress
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Critical	

PROPOSED ERECTION OF A NEW 9-STOREY NURSING HOME ON LOT 05046T MK 10 AT BUKIT BATOK WEST AVENUE 9 - MASTER PROGRAMME REV 04 (16/10/2017)

ID	Task Name	Duration	Start	Finish
353	ALUM & JOINERY 1ST FIX	24 days	Sat 17/3/18	Fri 13/4/18
354	PAINTING BASE COAT	24 days	Sat 14/4/18	Fri 11/5/18
355	CEILING 1ST FIX	24 days	Sat 14/4/18	Fri 11/5/18
356	FLOOR SCREEDING	24 days	Sat 12/5/18	Fri 8/6/18
357	WALL AND FLOOR FINISHES/TILES	24 days	Sat 9/6/18	Fri 6/7/18
358	ALUM & JOINERY 2ND FIX	24 days	Sat 7/7/18	Fri 3/8/18
359	CEILING 2ND FIX	24 days	Sat 7/7/18	Fri 3/8/18
360	M&E FINAL FIX (FITTING & EQUIPMENT)	24 days	Sat 4/8/18	Fri 31/8/18
361	PAINTING FINAL	24 days	Sat 4/8/18	Fri 31/8/18
362	FITMENT/ FIXTURE	24 days	Sat 4/8/18	Fri 31/8/18
363	INSPECTION & RECTIFICATION	4 days	Sat 1/9/18	Wed 5/9/18
364	HANDOVER	0 days	Wed 5/9/18	Wed 5/9/18
365	**STAFF ACCMODATION @ 8TH STY**	**94 days**	**Sat 19/5/18**	**Wed 5/9/18**
366	WALL	12 days	Sat 19/5/18	Fri 1/6/18
367	M&E 2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	18 days	Sat 2/6/18	Fri 22/6/18
368	SKIM COAT/PLASTERING	18 days	Sat 2/6/18	Fri 22/6/18
369	ALUM & JOINERY 1ST FIX	18 days	Sat 2/6/18	Fri 22/6/18
370	PAINTING BASE COAT	12 days	Sat 23/6/18	Fri 6/7/18
371	CEILING 1ST FIX	12 days	Sat 23/6/18	Fri 6/7/18
372	FLOOR SCREEDING	12 days	Sat 7/7/18	Fri 20/7/18
373	WALL AND FLOOR FINISHES/TILES	12 days	Sat 21/7/18	Fri 3/8/18
374	ALUM & JOINERY 2ND FIX	12 days	Sat 4/8/18	Fri 17/8/18
375	CEILING 2ND FIX	12 days	Sat 4/8/18	Fri 17/8/18
376	M&E FINAL FIX (FITTING & EQUIPMENT)	12 days	Sat 18/8/18	Fri 31/8/18
377	PAINTING FINAL	12 days	Sat 18/8/18	Fri 31/8/18
378	FITMENT/ FIXTURE	12 days	Sat 18/8/18	Fri 31/8/18
379	INSPECTION & RECTIFICATION	4 days	Sat 1/9/18	Wed 5/9/18
380	HANDOVER	0 days	Wed 5/9/18	Wed 5/9/18
381	**DISH WASHING / KITCHEN @ 9TH STOREY**	**82 days**	**Sat 2/6/18**	**Wed 5/9/18**
382	WALL	12 days	Sat 2/6/18	Fri 15/6/18
383	M&E 2ND FIX (CONCEALED SERVICES IN WALL, TRUCKING, TRAY & CABLING)	12 days	Sat 16/6/18	Fri 29/6/18
384	ALUM & JOINERY 1ST FIX	12 days	Sat 16/6/18	Fri 29/6/18
385	WATERPROOFING	6 days	Sat 30/6/18	Fri 6/7/18
386	WALL TILE	18 days	Sat 7/7/18	Fri 27/7/18
387	FLOOR FINISHES	18 days	Sat 28/7/18	Fri 17/8/18
388	ALUM & JOINERY 2ND FIX	12 days	Sat 18/8/18	Fri 31/8/18
389	M&E FINAL FIX (FITTING & EQUIPMENT)	12 days	Sat 18/8/18	Fri 31/8/18
390	PAINTING	12 days	Sat 18/8/18	Fri 31/8/18
391	INSPECTION & RECTIFICATION	4 days	Sat 1/9/18	Wed 5/9/18
392	HANDOVER	0 days	Wed 5/9/18	Wed 5/9/18
393	**BIM SUBMISSION**	**424 days**	**Thu 20/7/17**	**Wed 5/12/18**
394	**PRELIMINARY PROJECT REVIEW AND PLANNING**	**48 days**	**Thu 20/7/17**	**Wed 13/9/17**
395	PRELIMINARY STRUCTURAL MODEL	12 days	Thu 20/7/17	Wed 2/8/17
396	PRELIMINARY ARCHITECTURAL MODEL	24 days	Thu 20/7/17	Wed 16/8/17

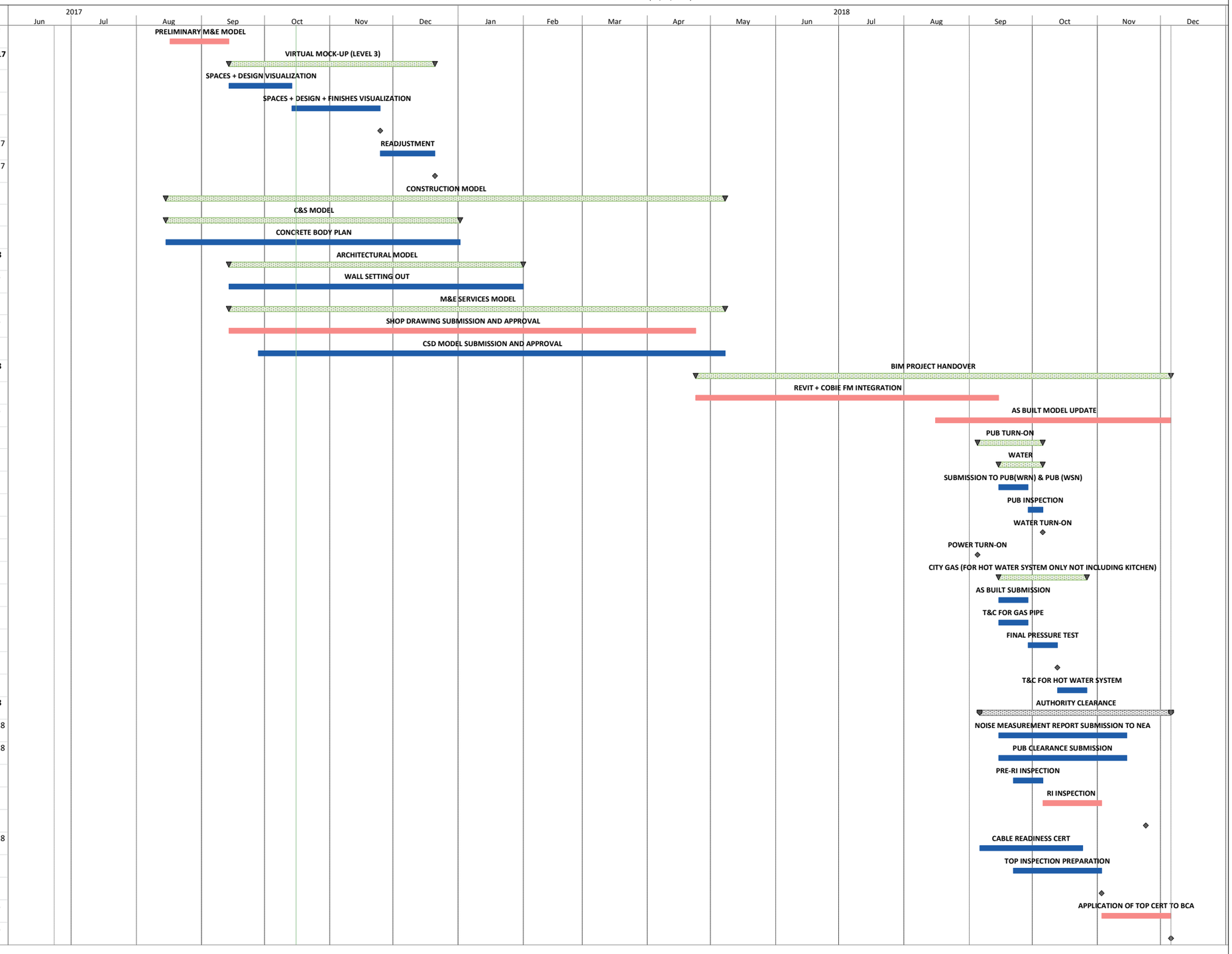


Project: Nursing Nome @ Bukit Batok West Ave 9
Date: 16/10/2017
Company: Guan Ho Construction Co (Pte) Ltd

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only	Critical Split
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline	Progress
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Critical	

PROPOSED ERECTION OF A NEW 9-STOREY NURSING HOME ON LOT 05046T MK 10 AT BUKIT BATOK WEST AVENUE 9 - MASTER PROGRAMME REV 04 (16/10/2017)

ID	Task Name	Duration	Start	Finish
397	PRELIMINARY M&E MODEL	24 days	Thu 17/8/17	Wed 13/9/17
398	**VIRTUAL MOCK-UP (LEVEL 3)**	**84 days**	**Thu 14/9/17**	**Wed 20/12/17**
399	SPACES + DESIGN VISUALIZATION	26 days	Thu 14/9/17	Fri 13/10/17
400	SPACES + DESIGN + FINISHES VISUALIZATION	36 days	Sat 14/10/17	Fri 24/11/17
401	VIRTUAL MOCK UP WITH CONSULTANT	0 days	Fri 24/11/17	Fri 24/11/17
402	READJUSTMENT	22 days	Sat 25/11/17	Wed 20/12/17
403	FINAL VIRTUAL MOCK UP WITH CLIENT	0 days	Wed 20/12/17	Wed 20/12/17
404	**CONSTRUCTION MODEL**	**220 days**	**Tue 15/8/17**	**Mon 7/5/18**
405	**C&S MODEL**	**120 days**	**Tue 15/8/17**	**Mon 1/1/18**
406	CONCRETE BODY PLAN	120 days	Tue 15/8/17	Mon 1/1/18
407	**ARCHITECTURAL MODEL**	**120 days**	**Thu 14/9/17**	**Wed 31/1/18**
408	WALL SETTING OUT	120 days	Thu 14/9/17	Wed 31/1/18
409	**M&E SERVICES MODEL**	**194 days**	**Thu 14/9/17**	**Mon 7/5/18**
410	SHOP DRAWING SUBMISSION AND APPROVAL	182 days	Thu 14/9/17	Mon 23/4/18
411	CSD MODEL SUBMISSION AND APPROVAL	182 days	Thu 28/9/17	Mon 7/5/18
412	**BIM PROJECT HANDOVER**	**194 days**	**Tue 24/4/18**	**Wed 5/12/18**
413	REVIT + COBIE FM INTEGRATION	124 days	Tue 24/4/18	Fri 14/9/18
414	AS BUILT MODEL UPDATE	96 days	Thu 16/8/18	Wed 5/12/18
415	**PUB TURN-ON**	**27 days**	**Tue 4/9/18**	**Fri 5/10/18**
416	**WATER**	**18 days**	**Sat 15/9/18**	**Fri 5/10/18**
417	SUBMISSION TO PUB(WRN) & PUB (WSN)	12 days	Sat 15/9/18	Fri 28/9/18
418	PUB INSPECTION	6 days	Sat 29/9/18	Fri 5/10/18
419	WATER TURN-ON	0 days	Fri 5/10/18	Fri 5/10/18
420	POWER TURN-ON	0 days	Tue 4/9/18	Tue 4/9/18
421	**CITY GAS (FOR HOT WATER SYSTEM ONLY NOT INCLUDING KITCHEN)**	**36 days**	**Sat 15/9/18**	**Fri 26/10/18**
422	AS BUILT SUBMISSION	12 days	Sat 15/9/18	Fri 28/9/18
423	T&C FOR GAS PIPE	12 days	Sat 15/9/18	Fri 28/9/18
424	FINAL PRESSURE TEST	12 days	Sat 29/9/18	Fri 12/10/18
425	GAS TURN ON	0 days	Fri 12/10/18	Fri 12/10/18
426	T&C FOR HOT WATER SYSTEM	12 days	Sat 13/10/18	Fri 26/10/18
427	**AUTHORITY CLEARANCE**	**78 days**	**Thu 6/9/18**	**Wed 5/12/18**
428	NOISE MEASUREMENT REPORT SUBMISSION TO NEA	52 days	Sat 15/9/18	Wed 14/11/18
429	PUB CLEARANCE SUBMISSION	52 days	Sat 15/9/18	Wed 14/11/18
430	PRE-RI INSPECTION	12 days	Sat 22/9/18	Fri 5/10/18
431	RI INSPECTION	24 days	Sat 6/10/18	Fri 2/11/18
432	FSSD INSPECTION	0 days	Fri 23/11/18	Fri 23/11/18
433	CABLE READINESS CERT	42 days	Thu 6/9/18	Wed 24/10/18
434	TOP INSPECTION PREPARATION	36 days	Sat 22/9/18	Fri 2/11/18
435	TOP INSPECTION	0 days	Fri 2/11/18	Fri 2/11/18
436	APPLICATION OF TOP CERT TO BCA	28 days	Sat 3/11/18	Wed 5/12/18
437	SUBSTANTIAL COMPLETION	0 days	Wed 5/12/18	Wed 5/12/18

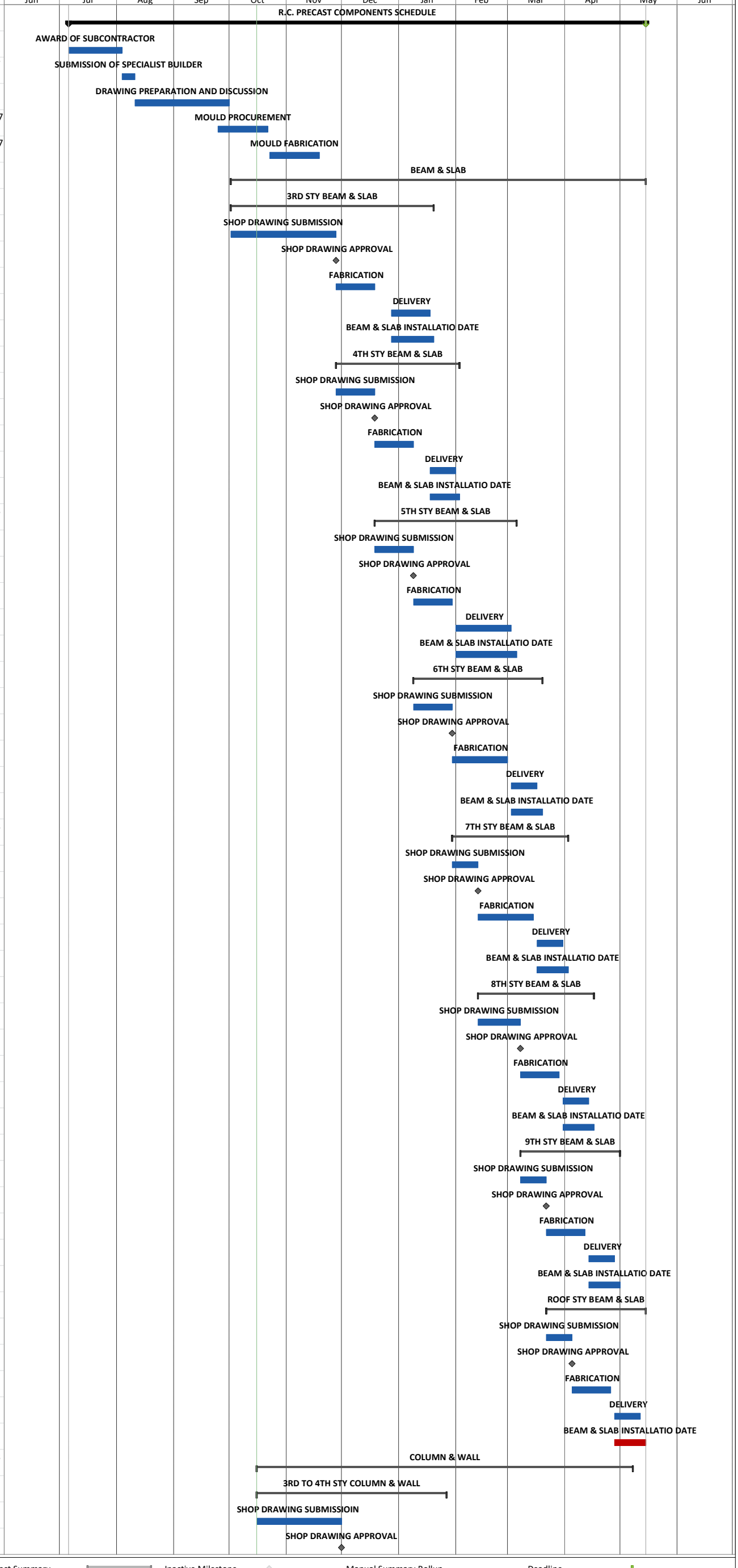


Project: Nursing Nome @ Bukit Batok West Ave 9
Date: 16/10/2017
Company: Guan Ho Construction Co (Pte) Ltd

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only	Critical Split
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline	Progress
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Critical	

BUKIT BATOK WEST NURSING HOME - MICRO SCHEDULE FOR R.C. PRECAST COMPONENTS REV02 (16/10/2017)

ID	Task Name	Duration	Start	Finish
1	**R.C. PRECAST COMPONENTS SCHEDULE**	**260 days**	**Thu 6/7/17**	**Mon 14/5/18**
2	AWARD OF SUBCONTRACTOR	25 days	Thu 6/7/17	Thu 3/8/17
3	SUBMISSION OF SPECIALIST BUILDER	6 days	Fri 4/8/17	Thu 10/8/17
4	DRAWING PREPARATION AND DISCUSSION	44 days	Fri 11/8/17	Sat 30/9/17
5	MOULD PROCUREMENT	24 days	Mon 25/9/17	Sat 21/10/17
6	MOULD FABRICATION	24 days	Mon 23/10/17	Sat 18/11/17
7	**BEAM & SLAB**	**185 days**	**Mon 2/10/17**	**Mon 14/5/18**
8	**3RD STY BEAM & SLAB**	**95 days**	**Mon 2/10/17**	**Fri 19/1/18**
9	SHOP DRAWING SUBMISSION	49 days	Mon 2/10/17	Mon 27/11/17
10	SHOP DRAWING APPROVAL	0 days	Mon 27/11/17	Mon 27/11/17
11	FABRICATION	18 days	Tue 28/11/17	Mon 18/12/17
12	DELIVERY	18 days	Thu 28/12/17	Wed 17/1/18
13	BEAM & SLAB INSTALLATIO DATE	20 days	Thu 28/12/17	Fri 19/1/18
14	**4TH STY BEAM & SLAB**	**58 days**	**Tue 28/11/17**	**Fri 2/2/18**
15	SHOP DRAWING SUBMISSION	18 days	Tue 28/11/17	Mon 18/12/17
16	SHOP DRAWING APPROVAL	0 days	Mon 18/12/17	Mon 18/12/17
17	FABRICATION	18 days	Tue 19/12/17	Mon 8/1/18
18	DELIVERY	12 days	Thu 18/1/18	Wed 31/1/18
19	BEAM & SLAB INSTALLATIO DATE	14 days	Thu 18/1/18	Fri 2/2/18
20	**5TH STY BEAM & SLAB**	**58 days**	**Tue 19/12/17**	**Mon 5/3/18**
21	SHOP DRAWING SUBMISSION	18 days	Tue 19/12/17	Mon 8/1/18
22	SHOP DRAWING APPROVAL	0 days	Mon 8/1/18	Mon 8/1/18
23	FABRICATION	18 days	Tue 9/1/18	Mon 29/1/18
24	DELIVERY	18 days	Thu 1/2/18	Fri 2/3/18
25	BEAM & SLAB INSTALLATIO DATE	20 days	Thu 1/2/18	Mon 5/3/18
26	**6TH STY BEAM & SLAB**	**52 days**	**Tue 9/1/18**	**Mon 19/3/18**
27	SHOP DRAWING SUBMISSION	18 days	Tue 9/1/18	Mon 29/1/18
28	SHOP DRAWING APPROVAL	0 days	Mon 29/1/18	Mon 29/1/18
29	FABRICATION	18 days	Tue 30/1/18	Wed 28/2/18
30	DELIVERY	12 days	Sat 3/3/18	Fri 16/3/18
31	BEAM & SLAB INSTALLATIO DATE	14 days	Sat 3/3/18	Mon 19/3/18
32	**7TH STY BEAM & SLAB**	**46 days**	**Tue 30/1/18**	**Mon 2/4/18**
33	SHOP DRAWING SUBMISSION	12 days	Tue 30/1/18	Mon 12/2/18
34	SHOP DRAWING APPROVAL	0 days	Mon 12/2/18	Mon 12/2/18
35	FABRICATION	18 days	Tue 13/2/18	Wed 14/3/18
36	DELIVERY	12 days	Sat 17/3/18	Fri 30/3/18
37	BEAM & SLAB INSTALLATIO DATE	14 days	Sat 17/3/18	Mon 2/4/18
38	**8TH STY BEAM & SLAB**	**46 days**	**Tue 13/2/18**	**Mon 16/4/18**
39	SHOP DRAWING SUBMISSION	12 days	Tue 13/2/18	Wed 7/3/18
40	SHOP DRAWING APPROVAL	0 days	Wed 7/3/18	Wed 7/3/18
41	FABRICATION	18 days	Thu 8/3/18	Wed 28/3/18
42	DELIVERY	12 days	Sat 31/3/18	Fri 13/4/18
43	BEAM & SLAB INSTALLATIO DATE	14 days	Sat 31/3/18	Mon 16/4/18
44	**9TH STY BEAM & SLAB**	**46 days**	**Thu 8/3/18**	**Mon 30/4/18**
45	SHOP DRAWING SUBMISSION	12 days	Thu 8/3/18	Wed 21/3/18
46	SHOP DRAWING APPROVAL	0 days	Wed 21/3/18	Wed 21/3/18
47	FABRICATION	18 days	Thu 22/3/18	Wed 11/4/18
48	DELIVERY	12 days	Sat 14/4/18	Fri 27/4/18
49	BEAM & SLAB INSTALLATIO DATE	14 days	Sat 14/4/18	Mon 30/4/18
50	**ROOF STY BEAM & SLAB**	**46 days**	**Thu 22/3/18**	**Mon 14/5/18**
51	SHOP DRAWING SUBMISSION	12 days	Thu 22/3/18	Wed 4/4/18
52	SHOP DRAWING APPROVAL	0 days	Wed 4/4/18	Wed 4/4/18
53	FABRICATION	18 days	Thu 5/4/18	Wed 25/4/18
54	DELIVERY	12 days	Sat 28/4/18	Fri 11/5/18
55	BEAM & SLAB INSTALLATIO DATE	14 days	Sat 28/4/18	Mon 14/5/18
56	**COLUMN & WALL**	**167 days**	**Mon 16/10/17**	**Mon 7/5/18**
57	**3RD TO 4TH STY COLUMN & WALL**	**89 days**	**Mon 16/10/17**	**Fri 26/1/18**
58	SHOP DRAWING SUBMISSIOIN	40 days	Mon 16/10/17	Thu 30/11/17
59	SHOP DRAWING APPROVAL	0 days	Thu 30/11/17	Thu 30/11/17

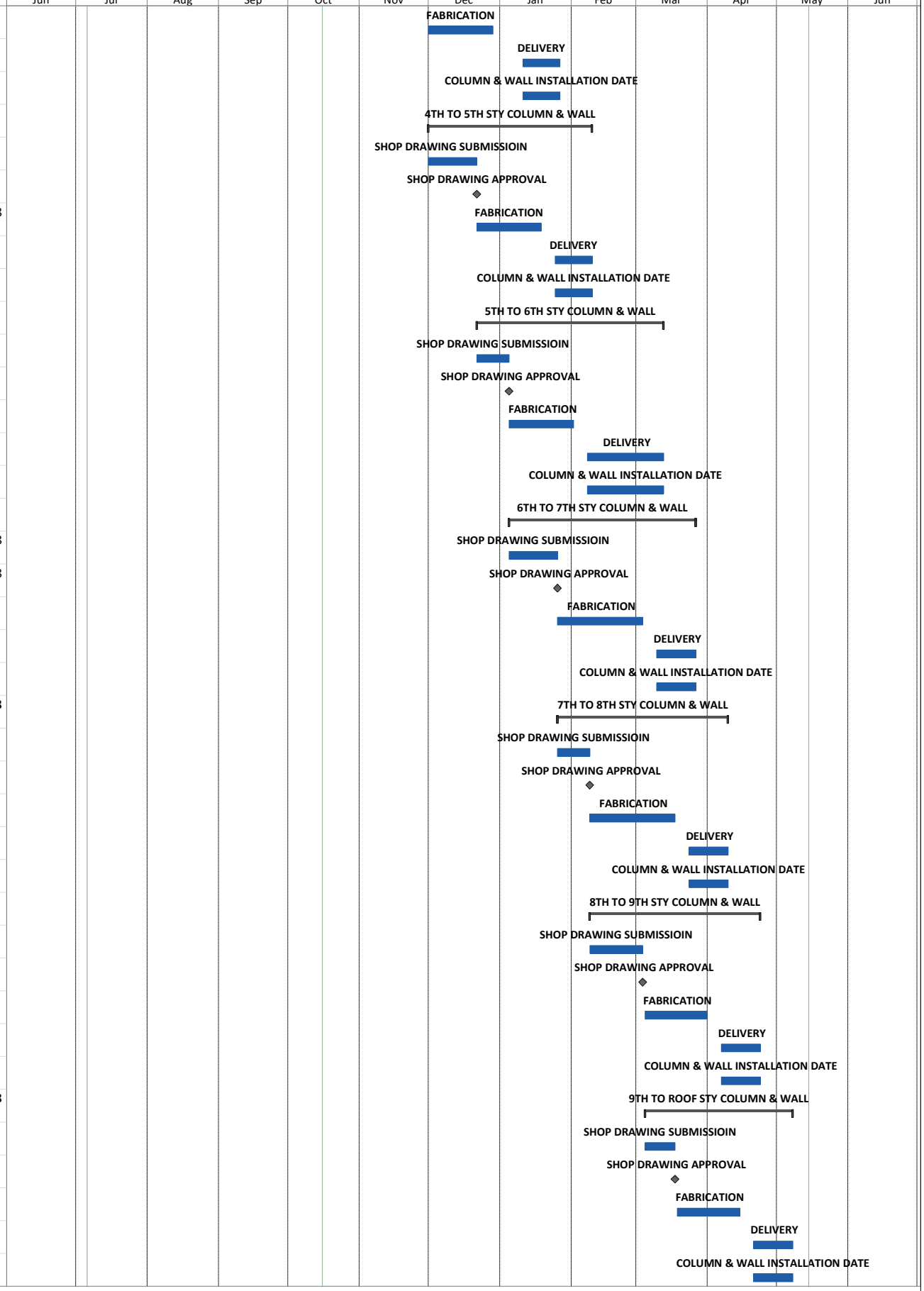


Project: Bukit Batok West Nursing Home
Date: 16/10/2017
Prepared By: Guan Ho Construction Co (Pte) Ltd

Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Deadline	
Split	External Tasks	Inactive Summary	Manual Summary	Critical	
Milestone	External Milestone	Manual Task	Start-only	Critical Split	
Summary	Inactive Task	Duration-only	Finish-only	Progress	

BUKIT BATOK WEST NURSING HOME - MICRO SCHEDULE FOR R.C. PRECAST COMPONENTS REV02 (16/10/2017)

ID	Task Name	Duration	Start	Finish
60	FABRICATION	24 days	Fri 1/12/17	Thu 28/12/17
61	DELIVERY	14 days	Thu 11/1/18	Fri 26/1/18
62	COLUMN & WALL INSTALLATION DATE	14 days	Thu 11/1/18	Fri 26/1/18
63	**4TH TO 5TH STY COLUMN & WALL**	**61 days**	**Fri 1/12/17**	**Fri 9/2/18**
64	SHOP DRAWING SUBMISSIOIN	18 days	Fri 1/12/17	Thu 21/12/17
65	SHOP DRAWING APPROVAL	0 days	Thu 21/12/17	Thu 21/12/17
66	FABRICATION	24 days	Fri 22/12/17	Thu 18/1/18
67	DELIVERY	14 days	Thu 25/1/18	Fri 9/2/18
68	COLUMN & WALL INSTALLATION DATE	14 days	Thu 25/1/18	Fri 9/2/18
69	**5TH TO 6TH STY COLUMN & WALL**	**61 days**	**Fri 22/12/17**	**Mon 12/3/18**
70	SHOP DRAWING SUBMISSIOIN	12 days	Fri 22/12/17	Thu 4/1/18
71	SHOP DRAWING APPROVAL	0 days	Thu 4/1/18	Thu 4/1/18
72	FABRICATION	24 days	Fri 5/1/18	Thu 1/2/18
73	DELIVERY	20 days	Thu 8/2/18	Mon 12/3/18
74	COLUMN & WALL INSTALLATION DATE	20 days	Thu 8/2/18	Mon 12/3/18
75	**6TH TO 7TH STY COLUMN & WALL**	**61 days**	**Fri 5/1/18**	**Mon 26/3/18**
76	SHOP DRAWING SUBMISSIOIN	18 days	Fri 5/1/18	Thu 25/1/18
77	SHOP DRAWING APPROVAL	0 days	Thu 25/1/18	Thu 25/1/18
78	FABRICATION	24 days	Fri 26/1/18	Sat 3/3/18
79	DELIVERY	14 days	Sat 10/3/18	Mon 26/3/18
80	COLUMN & WALL INSTALLATION DATE	14 days	Sat 10/3/18	Mon 26/3/18
81	**7TH TO 8TH STY COLUMN & WALL**	**55 days**	**Fri 26/1/18**	**Mon 9/4/18**
82	SHOP DRAWING SUBMISSIOIN	12 days	Fri 26/1/18	Thu 8/2/18
83	SHOP DRAWING APPROVAL	0 days	Thu 8/2/18	Thu 8/2/18
84	FABRICATION	24 days	Fri 9/2/18	Sat 17/3/18
85	DELIVERY	14 days	Sat 24/3/18	Mon 9/4/18
86	COLUMN & WALL INSTALLATION DATE	14 days	Sat 24/3/18	Mon 9/4/18
87	**8TH TO 9TH STY COLUMN & WALL**	**55 days**	**Fri 9/2/18**	**Mon 23/4/18**
88	SHOP DRAWING SUBMISSIOIN	12 days	Fri 9/2/18	Sat 3/3/18
89	SHOP DRAWING APPROVAL	0 days	Sat 3/3/18	Sat 3/3/18
90	FABRICATION	24 days	Mon 5/3/18	Sat 31/3/18
91	DELIVERY	14 days	Sat 7/4/18	Mon 23/4/18
92	COLUMN & WALL INSTALLATION DATE	14 days	Sat 7/4/18	Mon 23/4/18
93	**9TH TO ROOF STY COLUMN & WALL**	**55 days**	**Mon 5/3/18**	**Mon 7/5/18**
94	SHOP DRAWING SUBMISSIOIN	12 days	Mon 5/3/18	Sat 17/3/18
95	SHOP DRAWING APPROVAL	0 days	Sat 17/3/18	Sat 17/3/18
96	FABRICATION	24 days	Mon 19/3/18	Sat 14/4/18
97	DELIVERY	14 days	Sat 21/4/18	Mon 7/5/18
98	COLUMN & WALL INSTALLATION DATE	14 days	Sat 21/4/18	Mon 7/5/18



Project: Bukit Batok West Nursing Home
Date: 16/10/2017
Prepared By: Guan Ho Construction Co (Pte) Ltd

Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Deadline
Split	External Tasks	Inactive Summary	Manual Summary	Critical
Milestone	External Milestone	Manual Task	Start-only	Critical Split
Summary	Inactive Task	Duration-only	Finish-only	Progress

SECTION 4

PROGRAMME

4.2 Authority Submission Status for M&E Services – 1st Submission

Service	Authority	Original Submission		Comments/Resubmission				Approval/
		Scheduled	Actual	Comment	Resubmit	Comment	Resubmit	Clearance
Application for Electricity Supply	SP Group	23/05 2017	23/05/2017					25/05/2017
Power Supply Substation	SP Group	01/07/2017	12/07/2017	18/08/2017	04/09/2017			30/10/2017
Sanitary Installation	PUB Water Reclamation (Network) Dept	21/11/2017	04/12/2017					12/12/2017
Domestic Water Supply	PUB (Water Supply) Network Dept	04/07/2017	04/07/2017	20/07/2017	24/08/2017	13/10/2017	25/10/2017	22/11/2017
Gas Supply Installation	City Gas Pte Ltd	21/07/2017	21/07/2017	28/07/2017	11/09/2017	14/09/2017	28/09/2017	10/10/2017
Air Conditioning & Ventilation Inst.	FSSD	16/08/2018	16/08/2018					30/08/2018
Fire Fighting & Alarm Installation	FSSD	22/06/2018	22/06/2018					24/07/2018
Emergency Voice Communication System	FSSD	03/08/2018	03/08/2018					14/08/2018
Telephone Installation	TFCC	01/07/2017	24/07/2017					31/07/2017
Broadband Co-axial Cable System (BCS)	TFCC	01/07/2017	24/07/2017					31/07/2017
Fuel Storage	FSSD							
	NEA (Pollution Control)							

SECTION 4

PROGRAMME

4.3 Authority Submission Status for M&E Services (Amendments) – 2nd Submission

Service	Authority	Original Submission		Comments/Resubmission						Approval/
		Scheduled	Actual	Comment	Resubmit	Comment	Resubmit	Comment	Resubmit	Clearance
Application for Electricity Supply	SP Services Ltd									
Power Supply Substation	SP PowerGrid Ltd									
Metering Layout	SP Services Ltd									
Sanitary Installation	PUB Water Reclamation (Network) Dept	28/09/2018	10/10/2018	17/10/2018	05/11/2018					12/11/2018
Domestic Water Supply	PUB (Water Supply) Network Dept	15/09/2018	03/09/2018							10/10/2018
Gas Supply Installation	City Gas Pte Ltd									
Air Conditioning & Ventilation Inst.	FSSD	22/03/2019	22/03/2019							02/04/2019
Fire Fighting & Alarm Installation	FSSD	29/05/2019	29/05/2019							06/06/2019
Telephone Installation	TFCC									
Broadband Co-axial Cable System (BCS)	Starhub Cable Vision									
Fuel Storage	FSSD									
	NEA (Pollution Control)									

SECTION 5

PROJECT RECORDS

5.1 List of Internal Files

Standard Files

File Ref:		File Ref:	
- Owner	✓	- Architect	
- Authorities	✓	- Other Consultants	
- Contractors	✓	- CC	✓
- CF	✓	- PQP/QSP	✓

Project Files to be initiated by PM as and when required

File Ref:		File Ref:		File Ref:	
MC/EC	✓				

(✓*where applicable*)

SECTION 5

PROJECT RECORDS

5.2 Filing of Drawings

The following team members shall take charge of filing of drawings, stamping "SUPERSEDED" drawings, etc.

Description	Team Member
Incoming Architectural Floor Plans	Kristian Tung/ Goh Tien Ying All project drawings in softcopy to be saved in server
Incoming Architectural Sketches/Details	
Incoming Structural Drawings	
M&E Drawings - Electrical Installation - Lift & Escalator Installation - Air Conditioning & Ventilation Installation - Fire Fighting & Alarm Installation - Plumbing & Sanitary Installation	
Other Drawings	

SECTION 6

INTERFACING

6.1 Method of Interface

Description	Method of Interface	
Client's Review & Approval	M&E Design Report	✓
	Pre-planned meeting at fixed intervals	✓
	Telefax, letter and telephone	✓
	Email	✓
Interface With External Design Teams	M&E Design Report	✓
	Pre-planned meeting at fixed intervals	✓
	Telefax, letter and telephone	✓
	Email	✓
Interface Between Internal Design Teams	Telephone	✓
	Email	✓
	Internal Project Team Meeting	✓
	Circulation of Information	✓

(✓*where applicable*)

SECTION 6

INTERFACING

6.2 Internal Design Interface

Item No.	Description*	Required From	Required By	Date Required	Remarks
1	Equipment Load	TEL	LCY	Jan 2017	

** Information required by INTERNAL DESIGN TEAM MEMBERS*

SECTION 6

INTERFACING

6.3 Circulation of Documents to External Parties

	Code: A - Approval Required C - For Comments I - For Information Only	Client/ Client Rep.	Client's Project Manager	Architect	Structural Engineer	Quantity Surveyor	
1.	**Letters/Fax:**						
a.	Project Design	A	I	C	C	I	
b.	Project Administration	A	I	I	I	I	
c.	Project Cost Estimate/Contract Cost	A	I	I	-	C	
2.	**Drawings**						
a.	Outline Design Drgs.	A	I	C	I	-	
b.	Sketch Design Drgs.	A	I	C	I	-	
c.	Final Design Drgs.	A	I	C	C	I	
d.	Shop Drawings	C	I	C	I	-	
e.	As Built Drgs.	I	I	I	I	I	
3.	**Other Document**						
a.	Specification	A	I	I	-	I	
b.	Tender Document	A	I	I	-	I	
c.	Tender Evaluation Report	A	I	I	-	I	
d.	Design Report	A	I	I	I	-	
e.	Progress Report	I	I	I	-	I	
f.	Financial Report	A	I	I	-	I	
g.	Minutes of Meeting	I	I	I	-	I	
h.	Inspection Report	I	I	I	-	-	
i.	Testing & Comm. Report	I	I	-	-	-	
j.	O & M Manual	I	I	-	-	-	

SECTION 7

WORK AUTHORISATION

Activity \ Authorised Signatories	PD	QP	PM	AE	SS
General Correspondences with Client			✓		
General Correspondences with Other Consultants			✓	✓	
M&E Cost Estimate Report	✓		✓		
M&E Design Report	✓		✓		
Check Prints		✓	✓		
Tender Drawing Approval		✓	✓		
Tender Specification Approval		✓	✓		
List of Tenderers	✓		✓		
Tender Questionnaires	✓		✓		
Tender Reports	✓		✓		
Draft Letter of Award	✓		✓		
Review of Contractor's Shop Drawing			✓	✓	✓
Review of Contractor's Technical Submittal			✓	✓	✓
Review of Contractor's Sample Submittal			✓	✓	✓
Contractor's Request for Deviation	✓	✓	✓		
Progress Payment Valuation Form			✓		
Final Account Valuation	✓		✓		
Draft Variation Order			✓		
Engineer/Architect's Instruction/Direction			✓		
Site Instruction/Direction			✓		✓
Correspondence/Submission to Authorities		✓	✓		

(✓*where authorised*)

Key to abbreviations:-

PD : Project Director
QP : Qualified Person
PM : Project Manager/Assistant Project Manager
AE : Assistant Engineer
SS : ACEPL Site Staff

SECTION 8

DESIGN INPUT & METHODOLOGY

8.1 List of Client's Standards, Reference Documents or Brief

ITEM	KEPT BY
Facility Guidelines for Nursing Homes	Saved in project folder in the server
IT Infrastructure Guidelines for Nursing Homes	
IT Insfrastructure Checklist (Design Requirement)	
IT Insfrastructure Checklist (Infrastructure Requirement)	
MOH Licensing Requirements for Nursing Homes	
MEP Guidelines Checklists for Nursing Homes	
Precast Guidelines for Nursing Homes	
Design for Maintainability Checklist	
Project Brief (MEP Design Guide)	
SCC Design Brief	
Request for Approval to Order Variation	

8.2 List of Applicable Code of Practice and Regulations

Services	Title of Code of Practice/Standard
Electrical Wiring	CP 5: 1998
Lightning Protection System	SS 555: 2010
Emergency Voice Communication System	SS 546: 2009
Air Conditioning & Ventilation Installation	SS 553: 2016
Lift & Escalator Installation	SS 550: 2009
Sprinkler System	SS CP 52: 2004
Dry Riser & Hosereel System	SS 575: 2012
Automatic Fire Alarm System	CP 10: 2005
Sanitary System	Code of Practice on Sewerage and Sanitary Works – March 2000 with Addendum No.2 – Nov 2004
Plumbing System	CP 48: 2005
Town Gas Supply System	SS 608: 2015 (Formerly CP 51)

SECTION 8

DESIGN INPUT & METHODOLOGY

8.3 List of Design Guide or Handbook Used

Carrier's Handbook of Air Conditioning System Design

ASHRAE Handbooks

Institute of Plumbing's Plumbing Services Design Guide

8.4 List of Pre-Consultation and Waiver – Not Applicable

S/N	Description	Date of Application	Date of Approval	Remarks
1	*Clause number in Code of Practice for (Services) which require clarification or waiver. Consultation Ref No. Waiver Ref. No.			
2	*Clause number in Code of Practice for (Services) which require clarification or waiver. Consultation Ref No. Waiver Ref. No.			
3	*Clause number in Code of Practice for (Services) which require clarification or waiver. Consultation Ref No. Waiver Ref. No.			

*To fill in actual information

8.5 List of Applicable Quality System Procedures

Alpha Consulting Engineers Pte Ltd's Quality Management System Procedures

Section	Title	✓ where applicable
M1	Preparation of Consultancy Offer	✓
M2	Project Commissioning and Service Agreement	✓
M3	Design Control	✓
M4	Design Change Control	✓
M5	Tender Process and Evaluation	✓
M6	Authority Submission	✓
M7	Construction Process Control	✓
M8	Testing and Commissioning	✓
S1	Document Control	✓
S2	Documentation of Quality & Environmental Management System Procedure	✓
S3	Documentation of Project Quality Plan	✓
S4	Specification Control	✓
S5	Library Control	✓
S6	Archive Control	✓
S7	Filing Control	✓
S8	Drawing Control	✓
S9	Administration Control	✓
S10	Purchasing Control	
S11	Training Control	
S12	Computer Control	✓
S13	Non-Conformity & Corrective Action Procedures	✓
S14	Quality & Environmental System Audit	✓
S15	Feedback Reporting	✓
S16	Clients Feedback	✓
S17	Management Review	✓
S18	Risk Identification, Assessment & Control	✓

8.6 List of Software Used For Design/Analysis

DESCRIPTION/ PACKAGE NAME	VERSION	SUPPLIER/ SOURCE	PURPOSE	
Calculux	2.30	Philips	Lighting design	
Cophos	3.31	Zumtobel	Lighting design	
Carrier E20-II	3.21	Carrier	Programme for determination of heat load, duct size and its losses, etc.	✓
Gensize 2	2.1	Onan	Generator sizing	
Lift Traffic	-	Alpha Consulting Engineers Pte Ltd	Lift traffic calculation	✓
Econdial	2.5	Merlin Gerlin	Design for low voltage network	
Hyena	4.00.1	ACADS-BSG	Fire Sprinkler & Hydrant Analysis	
Fault Level Calculation	-	Alpha Consulting Engineers Pte Ltd	Calculation of voltage drop and fault level	

(✓*where applicable*)

SECTION 9

ENVIRONMENTAL CONSIDERATIONS

9.1 Sustainable Design Features / Criteria – Not Applicable

Item	Remarks
Green Mark criteria	Green Mark Certified
Green Design Features	-

9.2 Site PPE Requirement

The necessary Personal Protective Equipment (detailed below) shall be provided by the main contractor / Company in accordance to the site EHS requirements prior to the site monitoring.

PPE	✓ where applicable
Safety Helmet	✓
Safety Shoes	✓
Eye Protection	-
Ear Protection	-
Safety Harness / Belt	-
Others:	-

9.3 Site Emergency Preparedness – Not Applicable

Site staff shall comply with the site emergency preparedness and response procedure, established by the main contractor / owner, which shall include the following details.

Items	✓ where applicable
Evacuation Route	
Emergency Exit	
Assembly Point	
Emergency Contact List / Person	
Alarm system / methods	

SECTION 9

ENVIRONMENTAL CONSIDERATIONS

9.4 Reporting of Environmental Non-conformances

When encountering environmental non-conformances, Site Staff shall be responsible to feedback to the main contractor.

9.5 List of Applicable Environmental management system Procedures – Not Applicable

Alpha Consulting Engineers Pte Ltd's Environmental Management System Procedures

Section	Title	✓ where applicable
E1	Aspect / Impact Identification, Risk Assessment & Risk Control	
E2	Identifying Legal & Other Requirements	
E3	Objectives, Targets & Programmes	
E4	Communication	
E5	Emergency Preparedness & Response	
E6	Monitoring & Measurement	
E7	Control of Air & Noise Pollution	
E8	Management of Wastes	

SECTION 10

CLIENT'S REQUIREMENTS

10.1 List of Output Required by Client:-

Item	* Remarks
M&E Design Report	A
M&E Cost Estimate Report	A
Pre-Qualification of Tenderers	-
Tender Documents	A
Tender Report	A
Payment Valuation for QS	A
Certificates of Supervision for TOP/CSC	I

* *Remarks*

A: for approval *C: for comment* *I: for Information* *Re: for record*

Other purposes and for action: please specify.

10.2 Specific Procedures Required By Client *(If applicable)*

Not Applicable

SECTION 11

LIST OF SUB-JOB

11.1 List of Sub-Job Numbers – Not Applicable

Sub Job No	Description	Allocation Details