MILESTONES FOR MONITORING OF M&E SERVICES & WORK IN NEW BTO PROJECTS

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OBJECTIVE

To share with M&E Consultants on HDB practices for monitoring of M&E services and work in new BTO project for timely delivery and completion

To assist the Supervising Consultants to coordinate timely provision and testing and commissioning of M&E services and work to the block before completion and handover

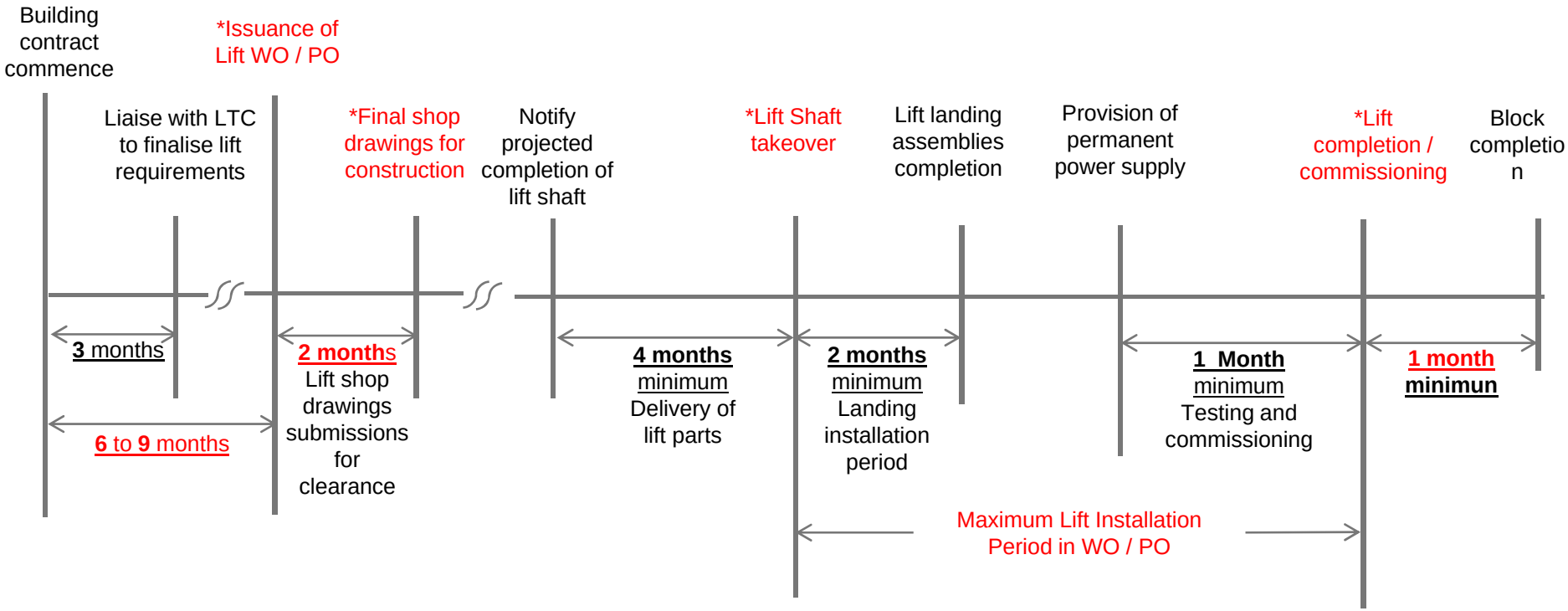
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LIFT SERVICES

Activities	Timeline
Issuance of Purchase Order to Lift Contractor (for lifts supplied by HDB lift term contractor)	6 to 9 months after contract commencement
Coordinate to approve lift shop drawings submitted by lift term contractor (LTC)	2 months after issuance of PO
Monitor lift well cum duct/motor room completion and handover to LTC	Min 5 months before block completion (depend on no. of storey)
Lift Testing and commissioning by LTC	2 months before handing over of block

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NEW DEVELOPMENT LIFT WORKS TIMELINE



* Critical milestone for Consultant to monitor

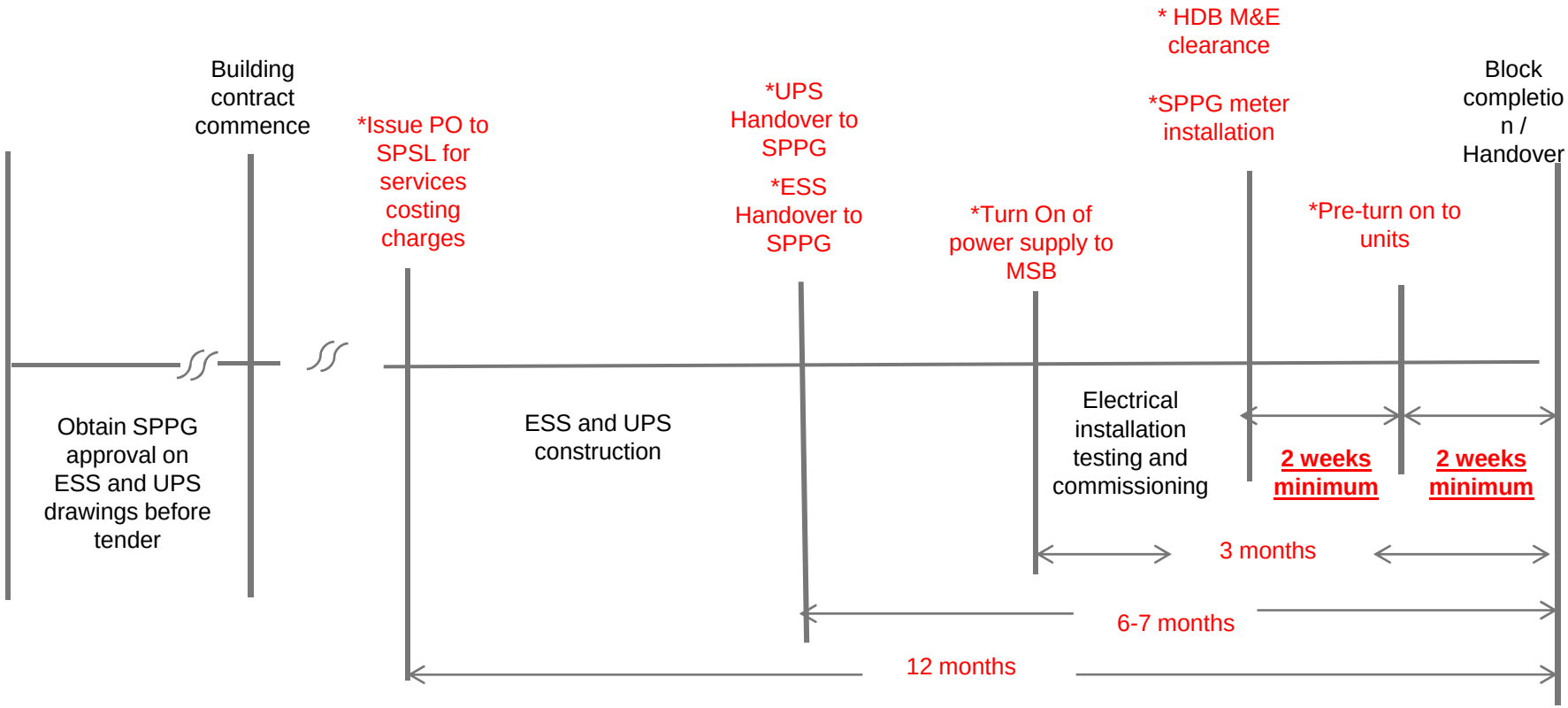
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ELECTRICAL SERVICES

Activities	Timeline
Issuance of Purchase Order to SP Power Grid	12 months before handing over of 1st block
Completion of UPS (handover to SPPG)	7 months before handing over of 1st block
Handover of ESS (to SPPG)	7 months before handing over of 1st block
Turn on electrical supply to the block	2 to 3 months before handing over of 1st block
Power Grid install electrical meter to unit	1 month before 1st BIT
Elect Power supply pre -turn on to unit	2 weeks before 1st BIT

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NEW DEVELOPMENT ELECTRICAL WORKS TIMELINE



* Critical milestone for Consultant to monitor

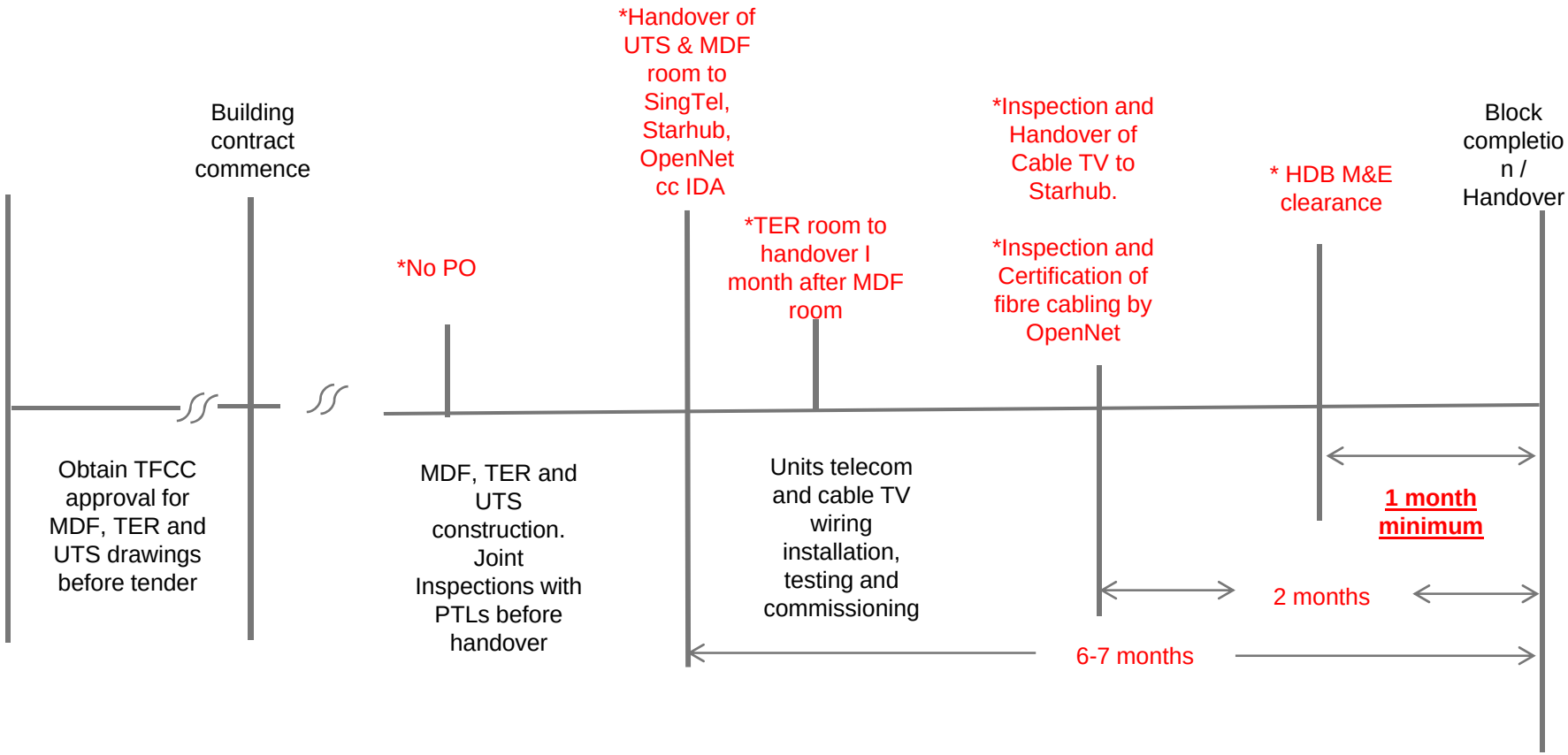
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TELECOM SERVICES

Activities	Timeline
Joint inspection on MDF room with SingTel, Starhub, OpenNet & CityNet	7 months before handing over of 1st block
Handover of MDF room (to SingTel, Starhub) cc IDA	6 months before handing over of 1st block
Handover of TER room (to SingTel, Starhub) cc IDA	1 month after MDF room handover
Completion of UTS (handover to Telecom providers)	6 months before handing over of 1st block
Starhub Cable TV inspection & takeover	1 to 2 months before handing over of block
OpenNet fibre inspection & certification	1 to 2 months before handing over of block

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NEW DEVELOPMENT TELECOM WORKS TIMELINE



* Critical milestone for Consultant to monitor

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WATER SERVICES

Activities	Timeline
Issuance of Purchase Order to PUB (Water)	At least 12 months before handing over of 1st block
Commencement of underground services i.e. electrical, telecom, water and gas	9 months before handing over of 1st block
Turn on of water supply to block	2 to 3 months before handing over of 1st block
Installation of water sub-meter	Install between 1st & 2nd BIT
Read water meter readings before locking up	1 day before block lock up

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GAS SERVICES

Activities	Timeline
Approval of sample unit gas installation by City Gas	12 months after commencement of works
Issuance of Purchase Order to City Gas	12 months after commencement of works
Commencement of underground services i.e. electrical, telecom, water and gas	9 months before handing over of 1st block
Gas charge-in	1 week after 2nd BIT

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OTHERS

Activities	Timeline
M&E testing & commissioning	2 months before handing over of block
RI (M&E) inspections	2 months before handing over of block
Clearance on M&E work completion from TM(M&E)	1 month before handing over of block
Sewer unplug	2 weeks before before handing over of block

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M&E WORK COMPLETION CLEARANCE

S/N	System	Date of Test Report Submitted@	Audit Test / Check	Date Audit Test Passed	Remarks
1	**Electrical installation within dwelling units**				
2	**Main Switch Board**				
3	**Public Lighting System (Excluding Linkway System)**				
4	**Lightning Protection System**				
5	**Final Sub-Circuit (Excluding Linkway System)**				
6	**Telecom**				
7	**CATV**				
8	**Lift**				
9	**Transfer Pumping System**				
10	**Booster Pumping System**				
11	**Refuse Chute Flushing System**				
12	**Refuse Handling Equipment**				
13	**Rain Water Sump Pump**				
14	**Ejector System**				
15	**Dry/Wet Rising Main System**				
16	**Automatic Fire Alarm System**				
17	**Automatic Sprinkler Protection System**				
18	**Hose Reel System**				
19	**Mechanical Ventilation System**				
20	**Integrated Test**				

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MILESTONES - M&E SERVICES WORK FOR COORDINATION

Issuance of Purchase Order to SP Power Grid	**At least 12 months before handing over of 1st block**
Issuance of Purchase Order to PUB (Water)	**At least 12 months before handing over of 1st block**
Issuance of Purchase Order for lifts to LTC	**6 to 9 months after commencement of contract**
Approval of sample unit gas installation by City Gas	**12 months after commencement of works**
Issuance of Purchase Order to City Gas	**12 months after commencement of works**
Commencement of underground services i.e. electrical, telecom, water and gas	**9 months before handing over of 1st block**
Completion of UPS	**6 months before handing over of 1st block**
Completion of UTS	**6 months before handing over of 1st block**
Handover of ESS	**6 months before handing over of 1st block**
Handover of MDF room	**6 months before handing over of 1st block**
Turn on electrical supply and water supply	**2 to 3 months before handing over of 1st block**
Lift testing & commissioning	**2 months before handing over of block**
Starhub cable TV inspection & takeover	**1 to 2 months before handing over of block**
OpenNet fibre inspection & certification	**1 to 2 months before handing over of block**
M&E testing & commissioning	**2 months before handing over of block**
RI (M&E) inspections	**2 months before handing over of block**
Power Grid install electrical meter for unit	**1 month before 1st BIT**
Elect Power supply pre -turn on to unit	**2 weeks before 1st BIT**
Installation of water sub-meter	**Install between 1st & 2nd BIT**
Sewer unplug	**2 weeks before before handing over of block**
Gas charge-in	**1 week after 2nd BIT**
Read water meter readings before locking up	**1 day before block lock up**

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M&E WORK CERTIFICATIONS REQUIRED FOR BCA TOP/CSC

TFC / FSC from FSSD of SCDF

- Obtain RI(M&E) issuance of Form 1 or 2

COS of lightning protection system (including as built-plans and commissioning test report by PE from 1 April 2014)

COS for installation of lift and escalator

COS of mechanical ventilation / airconditioning system

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THANK YOU