LIFT INSTALLATION ISSUES IN NEW DEVELOPMENT PROJECTS

09 Apr 2014
SE Samson Johari
Development & Construction Productivity Department
Building Quality Group
Housing & Development Board



Copyright © 2014 Housing & Development Board

Lift Installation Issues In New Development Projects

Contents

a) Lift Well Handover Issues

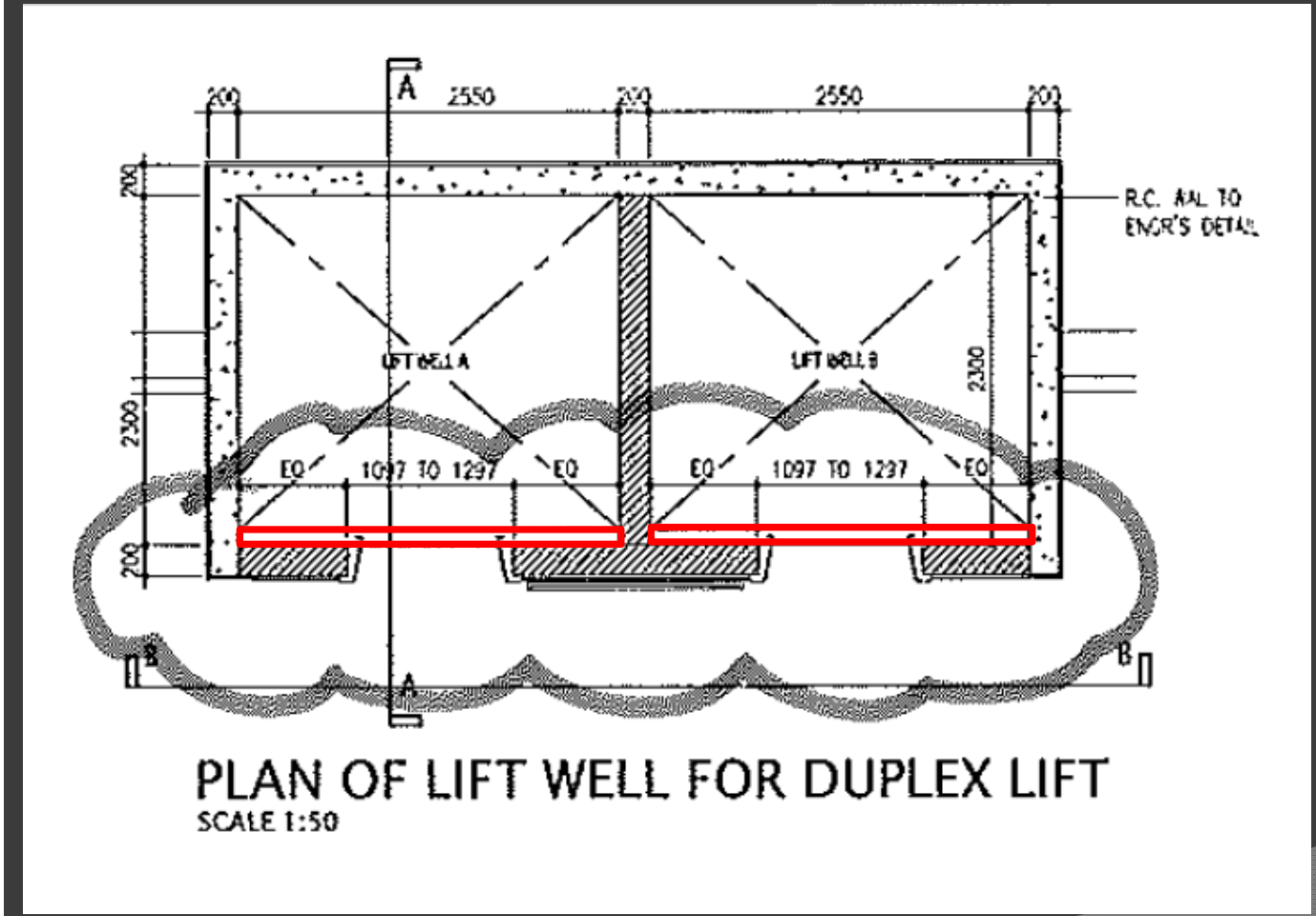
b) Lift Completion Dates in Lift Purchase Order

c) Lift Provision and Related Requirements At MSCP

Copyright © 2014 Housing & Development Board

A. Lift Well Handover Issues

i. Lift landing door sill concrete nib



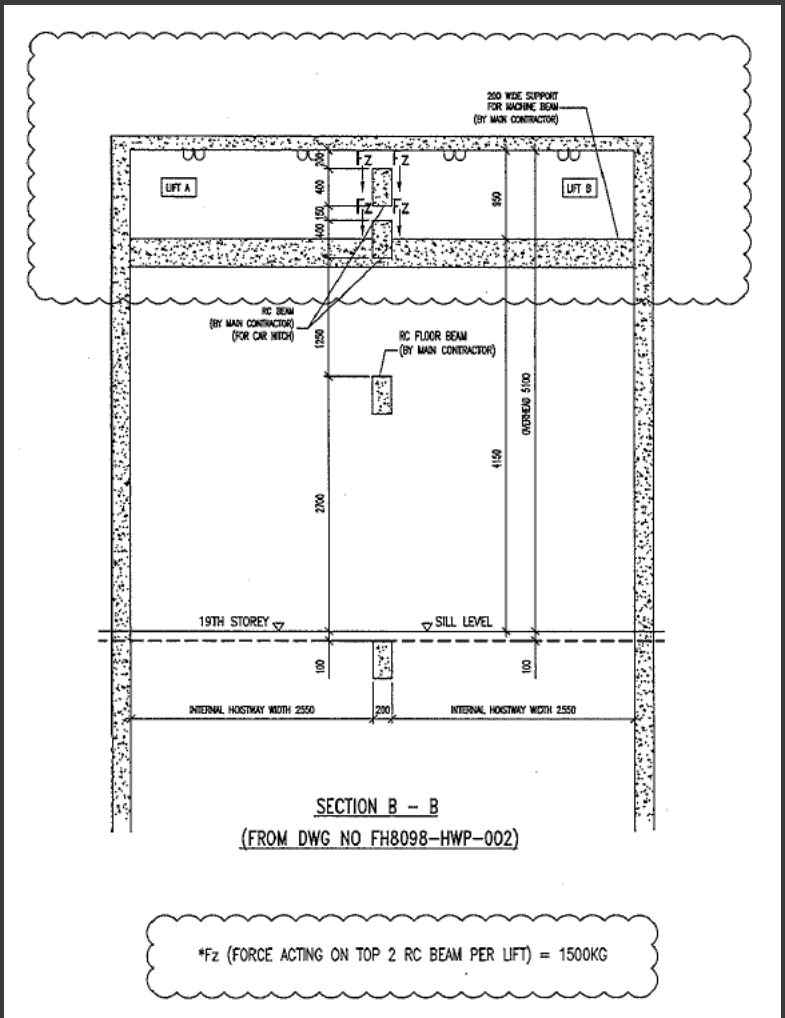
PLAN OF LIFT WELL FOR DUPLEX LIFT
SCALE 1:50

- To ensure full length of concrete nib for lift landing door sill

Copyright © 2014 Housing & Development Board

a. Lift Well Handover Issues

ii. Lift hitch terminal RC support beams

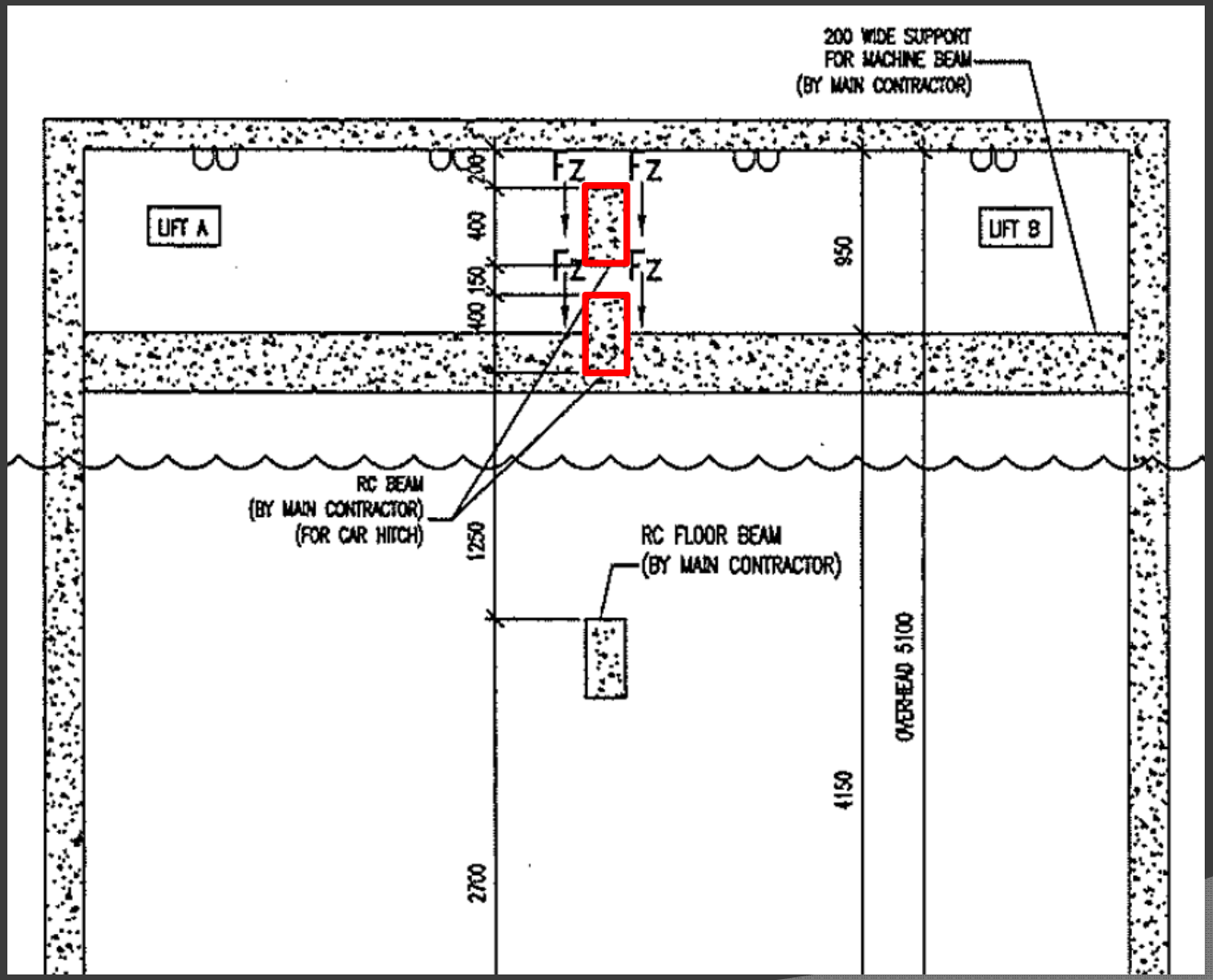


- To coordinate provision with main contractor during base/shop/master lift drawings submissions
- Applicable for machine room-less lift wells only
- Up to 25 storeys and below
- 90 to 120 m/min lift speed
  (lift speed depends on no. of storeys)

Copyright © 2014 Housing & Development Board

a. Lift Well Handover Issues

ii. Lift hitch terminal RC support beams

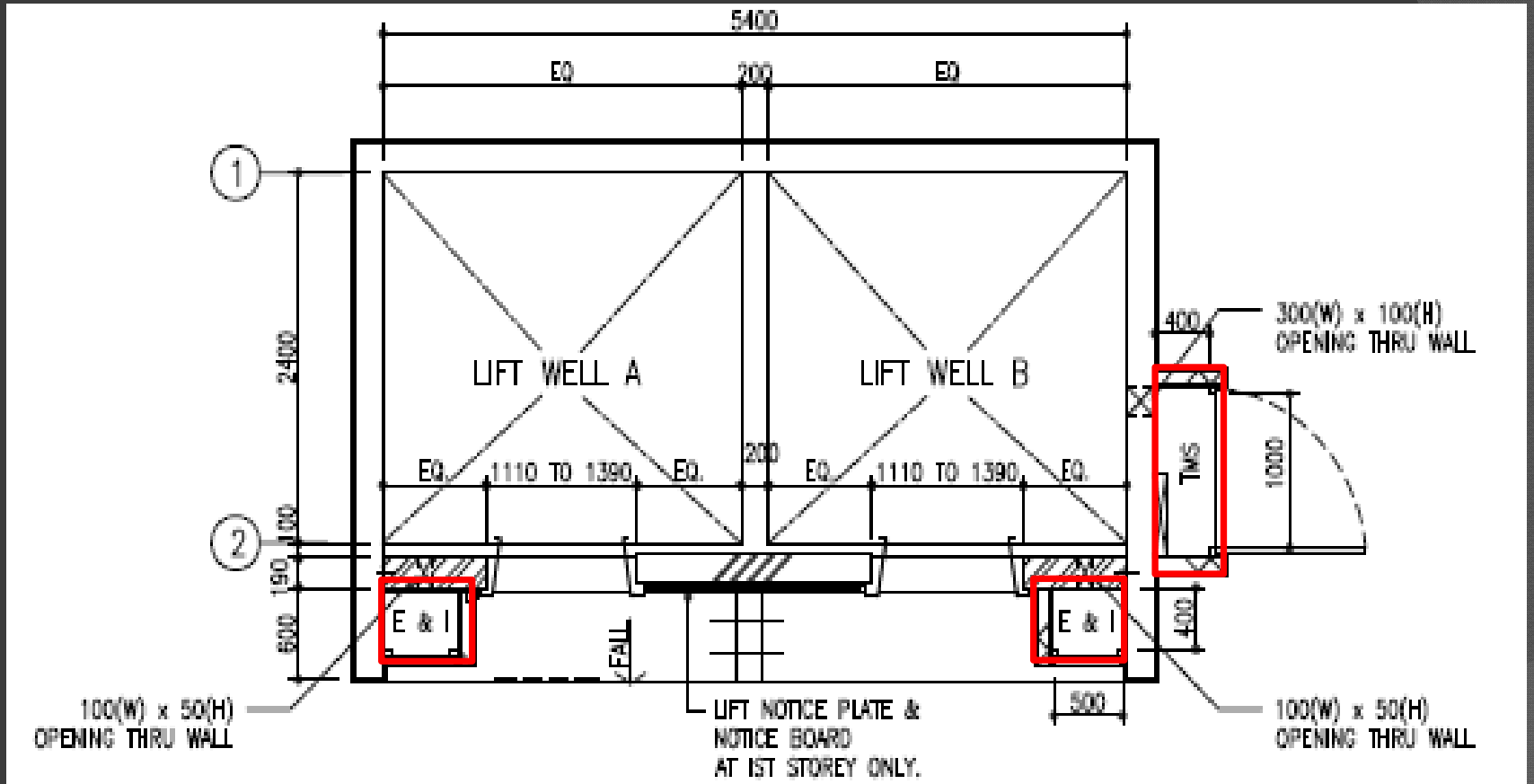


- Force acting on hitch terminal RC support beams, Fz = 1500kg

Copyright © 2014 Housing & Development Board

a. Lift Well Handover Issues

iii. Lift E&I and TMS Closets

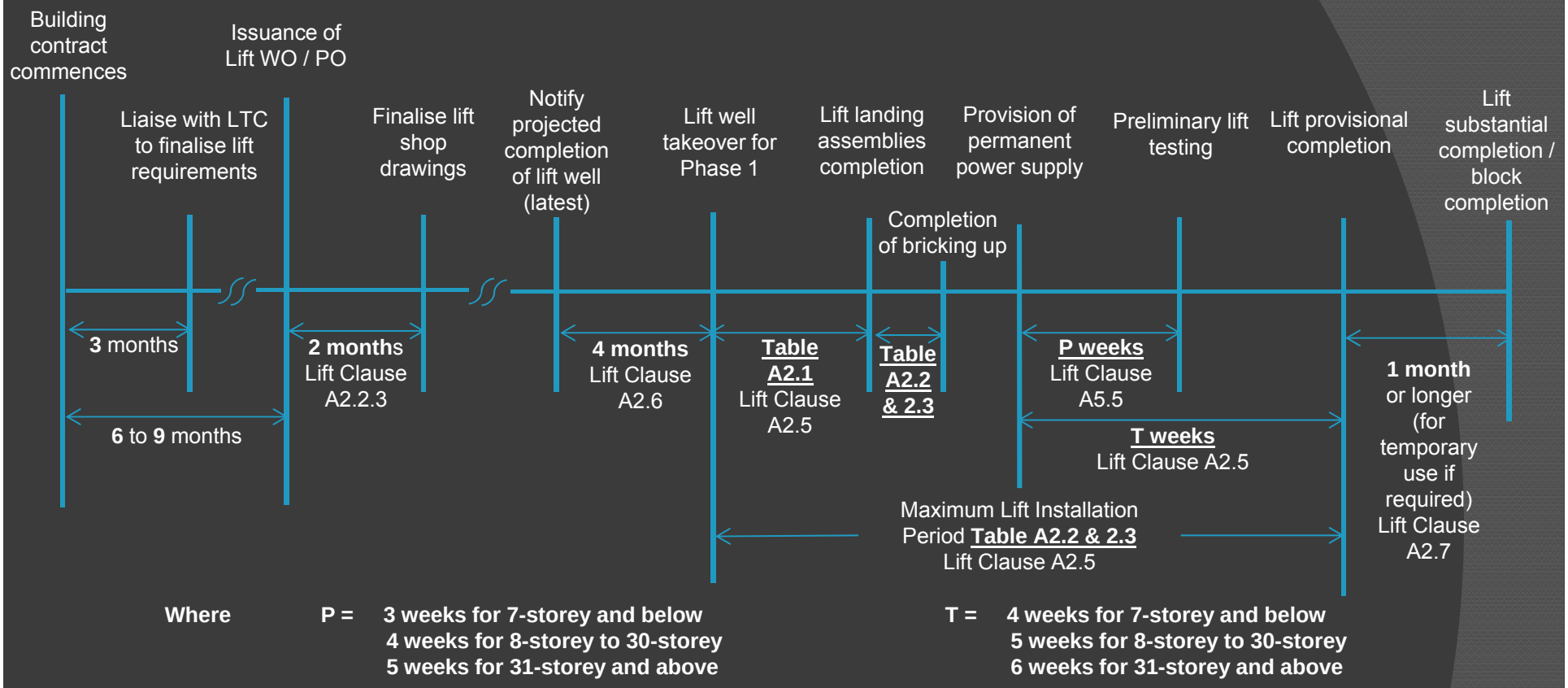


PLAN OF LIFT WELL FOR DUPLEX LIFT

SCALE 1 : 50

Copyright © 2014 Housing & Development Board

Timeline for Lift Works (New Development)



Where **P =** **3 weeks for 7-storey and below**
4 weeks for 8-storey to 30-storey
5 weeks for 31-storey and above

T = **4 weeks for 7-storey and below**
5 weeks for 8-storey to 30-storey
6 weeks for 31-storey and above

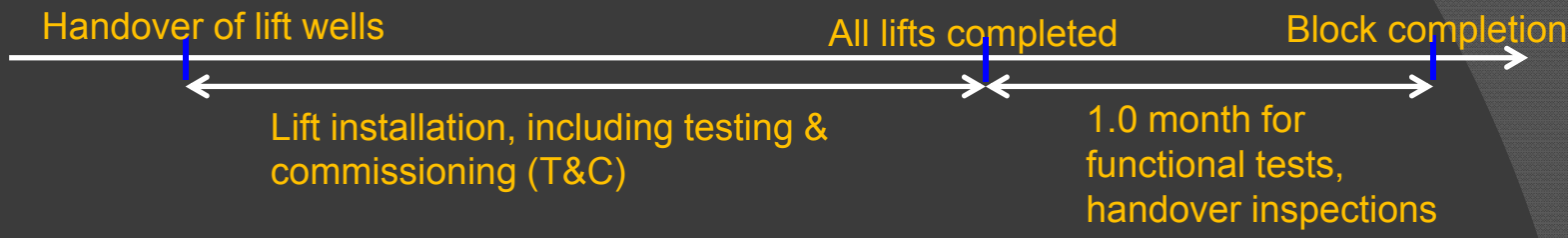
Lift Working Schedule

Table A2.1	
Storeys	Weeks
< 19	7
19 to 25	9
26 to 30	10
31 to 40	11
41 to 50	12

Table A2.2 & 2.3 (Including building works i.e. bricking up period)		
Storeys	Maximum Lift Installation Period (weeks)	
	First lift in the block	Remaining lifts in the block
< 4	11	12
4 to 7	13	15
8 to 12	13	16
13 to 16	14	17
17 to 20	15.5	18.5
21 to 25	16.5	19.5
26 to 30	18	21
31 to 40	20.5	24.5
41 to 50	22	26

Table A2.2 & 2.3	
Maximum bricking up period for lift landings by builder	
Storeys	Weeks
≤ 30	2
> 30	2.6

b. Lift Completion Dates in Lift Purchase Order



Height of Building In No. of Storeys	Specified Time Period in Building Specs for Lift Installation including T&C of lifts
	Lift stopping at every storey
7 and below	4.50 months (i.e. 3.50 months + 1 month*)
8 to 12	4.75 months (i.e. 3.75 months + 1 month*)
13 to 16	5.00 months (i.e. 4.00 months + 1 month*)
17 to 20	5.25 months (i.e. 4.25 months + 1 month*)
21 to 25	5.50 months (i.e. 4.50 months + 1 month*)
26 to 30	6.00 months (i.e. 5.00 months + 1 month*)
31 to 40	6.65 months (i.e. 5.65 months + 1 month*)

* Where the Contractor requires and undertakes the temporary use of completed and tested lifts (installed by others engaged by Employer) to facilitate the completion of building works, and testing and commissioning of other building related works prior to the Certification of Substantial Completion of the building.

Copyright © 2014 Housing & Development Board

b. Lift Completion Dates in Lift Purchase Order

1. The consultant shall make reference to the building completion dates in deciding on the lift completion dates.

2. If a lift at a block is to be completed earlier than other lifts at the same block (varies from 1 week to 4.5 weeks depending on the building height), the consultant has to state the date accordingly.

3. In general, the lifts should be completed before the completion of the building with a minimum of one month for the building contractor to undertake the temporary use of the completed and tested lifts to facilitate the completion of building works, and testing and commissioning of the other building related works prior to the certification of substantial completion of the building.

Copyright © 2014 Housing & Development Board

c. Lift Provision & Related Requirements at MSCP

1. Signal cables from Fire Alarm System to be provided for connection to the lift controller for lift homing purposes.

    - Lift shall be brought to designated floor (usually 1st sty) if fire alarm activated at zone other than the zone covering lift lobby at designated floor.
    - Lift shall be brought to alternative designated floor if fire alarm activated at zone covering lift lobby at designated floor.

2. Telephone Block Terminal (BT) and Fibre Termination Point (FTP) NEED NOT be provided in the Lift Machine Room (conventional lift) or TMS closet (for machine room-less lift).

    - Signals from Lift Tele-Monitoring System will be sent via General Packet Radio Service (GPRS) instead of wired telephone line.

3. Cat 6 cables to be provided to link Lift Monitoring Devices (LMD) located in all lift machine rooms and /or TMS closets at the same block.

Copyright © 2014 Housing & Development Board

c. Lift Provision & Related Requirements at MSCP

4. For blocks with multiple access entrances (link-bridges) on lower storeys to MSCPs, the time spent for stopping at these entrances/lobbies, other than the main lobby, shall be considered in the lift traffic analysis.
    - E.g. car park decks and roof garden at MSCP are linked to lower storeys (with lift landings) of residential block.
5. Minimum 8% for '5-minute Handling Capacity' for lifts at residential block with multiple access entrances to MSCP or commercial block.
6. Two (2) lifts shall be provided at the MSCP if the height of the MSCP is 5 storeys or more.
7. Lift shall be machine room-less type of rated capacity of not less than 13-person (885 kg).
    - Lift of bigger rated capacity shall be provided if there are commercial components.

Copyright © 2014 Housing & Development Board

Thank You

Copyright © 2014 Housing & Development Board