Design Management Policy ~~(Scheduling Policy)~~

The goal of the Design team is to ensure 'innovative, value creating design which can be executed in a timely and cost effective manner'. In order to achieve this, one of the key improvements areas for the design team is to ensure orderliness and timeliness of the drawings issued by us. Some of the areas to work on include:

a. Process/rigor of Concept – IDD – FDD – VFC being followed.
b. VFC Design being released in packages (not piecemeal drawings).
c. Getting agreement from consultants on the agreed Project Plan.
d. Tracking of deliverables as per the agreed Project Plan.

In addition, following areas require continuous improvement:

1. **Quality of drawings** – technical content and completeness to ensure understandability of each issued drawing.
2. **Clarity of Specifications** - The material (or workmanship) specifications need to be finalized and released along with the respective FDD package. Design Specifications need to be finalized keeping in mind whether aesthetic or functional part of the material matters. If the aesthetic matters, we should specify both functional as well as aesthetic elements (e.g. Brand, color etc.). If only functional matters, we should restrict ourselves to only specifying the functional specifications / performance outcomes desired and let the detailed specifications be decided by Procurement (without further reference to design). We need to avoid the twin dangers of over-specification (leads to less ability to negotiate) and under-specification (leads to choice of materials which do not serve the desired functional and/or aesthetic goals). We should be prepared to have Design Specifications which are somewhat less 'direct' than Procurement specifications – Procurement Specifications can be finalized by taking Design Specifications, ensuring they are met, and then adding any further constraints, based on negotiation process.

Other Clarifications:

1. Concept plan needs to be shared with:
    a. Construction Management (Level 0 or 1 in-charge of the project) to enable their inputs w.r.to Constructability and allow them to start planning w.r.to site logistics and sequencing.
    b. Marketing – For inputs
    c. Procurement – For inputs & value engineering
    d. Cost Management – For inputs & Value engineering + preparation of Concept budget

e. Planning - For inputs & Value engineering + preparation of Concept Schedule

2. Based on inputs from 3 (and assuming most of them are incorporated), IDD & FDD to proceed ahead. FDD packages to be shared with following to enable reconciliation with plan, appropriate budgeting and value engineering:
   a. Cost Management – For value engineering & FDD budget finalization.
   b. Procurement – For information only.
   c. Planning – For information only.
   d. Construction Management - For information only.
3. The dates mentioned in the project plan are the dates when the said drawing package is to be delivered to site in hard copy, after appropriate checking / verification.
4. It is important to have the Project Consultants aware about the overall construction schedule of the project (and not just the design deliverable schedule). Their knowledge of the overall picture will enable them to suggest changes to the package schedules which may enable better project progress while allowing them to best utilizing their resources. We should be open to this discussion PRIOR to the finalization of the agreed design deliverables schedule.
5. Every wing (and its immediate construction vicinity e.g. up to expansion joint) shall be treated as a separate project for purposes of drawing release and monitoring. All areas outside building line in any given site shall be clubbed together as a project under 'Infrastructure – Name of Project as per Marketing'.
6. All drawings for any given project, can be broken into 6 packages – all drawings are required to be release/incorporated into one of these 6 packages (e.g. Building lighting will form part of the facade package):

   i. Enabling Works (will include all works required to be done prior to start of excavation works e.g. site setup, site protection etc.)
   ii. Civil
   iii. Services
   iv. Façade
   v. Finishing
   vi. Landscape
7. The various types of drawings forming part of the overall requirements for a project are:
   a. Concept (project level)
   b. IDD (project level)
   c. FDD (package level)
   d. Tender drawings / BOQ (package level, maybe further broken down if a package is procured in multiple tenders)
   e. VFC drawings (tender level) / Shop drawings - VFC drawings which are submitted by vendor and vetted by Design team (tender level).

8. Irrespective of any other policy/norm, till date of issue of excavation VFC drawings to site, the Design Deliverables timelines (as per policy) will be the control/governing factors of the schedule ('forward pass'). Thereafter, the timelines of Construction Activities will become the control/governing factors of the schedule ('backward pass').
    a. Till issue of excavation VFC: Design Deliverables → Contract Deliverables → Mobilization Lead time / Material Supply Lead Time → Construction timelines.
    b. Post issue of excavation VFC: Design Deliverables ← Contract Deliverables ← Mobilization Lead time / Material Supply Lead Time ←Construction timelines.
    (In case of conflict between Construction Timelines and Procurement / Design Deliverables, we shall first try to optimize the construction duration to the extent possible without changing the marketing possession date (and ensuring that the construction completion date is no later than marketing possession date – 50% of specified buffer). Thereafter, if the conflict continues, the period required to meet the schedule shall be reduced 2/3rd from the specified Design timelines and 1/3rd from the specified Procurement timelines).
9. All coordinated drawing packages are to be released to any concerned internal stakeholder (site, other operation departments) only the the Project Designer (Architect). Project Engineer will provide all drawings to the Project Designer.

The basic rules governing the preparation of the project plan and setting of drawing deliverable targets are as below:

1. Design Guidelines:

The various projects shall be classified into small, medium, large and very large based on the matrix below

For purposes of classification of the project under the 'project type', please take the construction area of the entire phase (including all wings, parking etc.), not individual wings

Project Type	**Total Construction Area (sq. ft.)**
Small	< 2 L
Medium	2 L – 8 L
Large	8 L - 25 L
Very Large	> 25 L

For Very Large projects, the total construction area shall be taken for 'applicable phases', if any.

In order to achieve the aforesaid goals, the suggested time durations for various sequential *Design Deliverables* is as follows:

i. (all figures in weeks; all figures are period from the previous milestone; Day 0 is the day on which land is in the company's possession)

No.	Project Type / Milestones	Small	Medium	Large	Very Large
1	Land Info	1	1	2	2
2	Concept Design	5	6	8	12
3	IDD	5	6	6	8
4	Excavation VFC	2			
5	Civil FDD (work shall start immediately after IDD)	4	6	8	10
6	Services FDD	6	6	8	8
7	Façade FDD	NA	4	4	4
8	Finishing FDD	8	8	8	8
9	Landscape FDD	As per site requirements, subject to FDD being received minimum of 24 weeks prior to start of landscape-driven construction activities.			

ii. In case of Small projects or buildings with height of 30 m or less, no Façade FDD shall be issued and the relevant details shall be combined with the Finishing FDD.

iii. Marketing Package shall be made available to marketing within 4 weeks of completion of Concept Design or 2 weeks before soft sales launch, whichever is later. Launch can be done at any time after completion of Concept Design, subject to readiness of sales office/sample flat (if applicable) & Marketing Package (as per aforesaid timelines).

iv. Design shall have to coordinate for sales office / sample flat to be ready by Sales launch - dates to be discussed and agreed between marketing and design.

v. Tender drawings + BOQ's + material specifications:
   a. In case of Civil tender, the tender drawings + BOQ's + material specifications are to be made available within 2 weeks from completion of IDD;
   b. In case of the Windows component of the façade, tender drawings + BOQ's + material specifications for the same are to be made available within 6 weeks from completion of Civil FDD;
   c. For All other tender drawings + BOQ's + material specifications for respective packages to be made available within 2 weeks of completion of respective FDD.

vi. Construction (VFC/Shop) drawings:

a. Civil
   - Sub-Structure VFC: 2-4 weeks from Civil FDD. Maybe broken into 2 parts if there is more than one basement.
   - 50% Super-Structure VFC: 6-8 weeks from Sub-Structure VFC (provided VFC drawings are received at site at least 2 weeks prior to scheduled completion of plinth).
   - 100% Super-Structure VFC: 12-14 weeks from 50% Sub-Structure VFC. 100% Super-Structure VFC shall be combined with 50% Super-Structure VFC for Small projects and buildings < 30 m.

b. Services
   - Shop Drawings: 6-8 weeks from award of respective tender.
   - VFC (where applicable): 6-8 weeks from Services FDD.

c. Façade (if not merged with Finishing):
   - Windows VFC (where applicable): 12 weeks from Civil FDD.
   - Shop Drawings: 6-8 weeks from award of respective tender.

d. Finishing
   - VFC: 6-8 weeks from Finishing FDD.

e. Landscape
   - VFC: 6 weeks from Landscape FDD, subject to same being a minimum of 6 weeks prior to start of landscape-driven construction activities.
   - Shop Drawings (where applicable): 6-8 weeks from award of respective tender.

2. Procurement Guidelines:

i. In case of *Contract Deliverables*, following would be the applicable lead times:

(Format a; b where a is period in days for Contract award from date of availability of tender drawings +BOQ; where b is period in days for mobilization of contractor at site with adequate resources from date of Contract award viz. mobilization period):

Project Type / Nature of Contract	Small	Medium	Large	Very Large
Procurement awarded prior to start of Sub-structure civil works (e.g. enabling works, shore piling, excavation)	2-7;2-7	2-7;2-7	2-7;2-7	2-15;2-15
FML Procurement or PML Contract with significant portion of materials (>80% of value) in scope of Contractor	45;30	45;30	75; 30	75; 30
All other Procurement	30;15	30;15	45;15	45;15

ii. In case of Procurement which involved significant off-site production in the scope of the Contractor, following additional norms shall apply post date of Contract Award:

(days from previous milestone)

Contract / Milestone	Elevators	Façade (excluding windows)	Windows	Other such Procurement (eg. DG, Home Automation)
Shop Drawings	42-56	42-56	NA	NA
Major material arrival commencing at site	120-150	120-180	42-56	42-84

iii. In case of electrical procurement, it may be noted that the electrical conduiting works for up to the first 5 slabs (including any basement slabs) may be done by a specialist conduiting agency (and not necessarily the main electrical contractor). While it is preferable to have the main electrical contractor do the electrical conduiting from the 1st slab itself, this exception maybe used in case of the start of electrical conduiting is leading to unsustainable timelines for design and procurement of the services package (or any part thereof).

iv. Materials Procurement:

a) Only key materials (those forming top 80% of the estimated value spent) will be tracked in the Final Schedule.
b) Material Specifications are needed -15 days from date of start of procurement (to Cost Management).
c) Material quantities are needed -3 days from date of start of procurement (from Cost Management).
d) Procurement Lead Times (Period between Start and End of Procurement viz. negotiation and finalization period):

Estimated Value of the said Material for the Project (INR Lacs)	Procurement Lead Time (No. of Days)
< 5	3
5 – 50	7
50 – 500	15
> 500	30

e) Delivery Time (Period between End of Procurement and delivery of material onsite) shall be shall be as per the 'net' lead times defined by Procurement department + a 20% variance buffer.
f) Material Procurement Schedule shall be derived from Indenting Schedule and forwarded to Procurement Dept. in advance for helping them in their Procurement planning & negotiations.
g) For material procurement in Lodha's scope, where material has to be procured from outside the country, min. period of 180 days is to be considered between material specification availability and date of delivery of said material at site. For local procurement, standard lead times to be considered as per "*Procurement Lead Time.doc"* from the Procurement department.