Workmanship Control Unit

1. Construction Management will identify one unit as Workmanship Control Unit (WCU) in each cluster. WCU & Lobby shall generally be done on 1st habitable floor of the building (or max. 3rd habitable floors if the first 2 floors are being used for construction related purposes eg. Stores).
2. Start of workmanship control unit – Start date of date of start of internal partitions in the building; Completion of the workmanship control unit should be within 6 months (4 months in case of buildings <=30 m) from the date of start of internal partitions in the building.
3. The goal would be to understand the acceptable level of execution of trades, constructability and compatibility as well as wastage and other relevant factors, prior to implementation across the entire wing/building.
4. The work inside WCU will be done by the actual contractors for the wing/building (not a specialized contractor only for the WCU). The contractor's scope in the WCU is to be done post design finalization + tender award.
5. Each contractor shall be made to complete its scope of work in this unit first (before they start work in other units) and all issues wrt acceptable standards/workmanship will be identified and finalized by Const Mgmt in this unit. Design wastage will be verified and optimized at this stage.
6. WCU can be used to reconfirm budgeted and BOQ quantities to avoid amendments or incorrect quantities being ordered at later stage.
7. The standard agreed to in this unit would become the control standard for the wing/building. Contractor will be held responsible for achieving this agreed upon standard in all units and any rework/deviation from the agreed standard shall be debited entirely (including cost of all materials) to the contractor as per debit policy (cost x 125%).
8. Const Mgmt shall be responsible for ensuring that the WCU sign off occurs (including from QE or Design + concerned CM team) for each contractor. The said contractor should start on any unit outside the WCU only after getting approval of his trade in the WCU. Final sign-off of WCU (all trades completed) must include – Cluster Head, Project Head, Design Lead.
9. All key learning's must be documented and shared across contractors / clusters – Project Office; A copy of the learning's to be shared with Ops strategy for circulation across HO teams.

Design Control Unit (DCU)

Further, the WCU is not to test/confirm design but to ensure adequate understanding of workmanship/execution related issues. It may be noted that a WCU is different from a DCU (Design Control Unit) –

a. One DCU shall be done for each typology in a given marketing project
b. DCU shall be done prior to ordering of finishing materials and is to be completed within 4 months of the casting of slab on which the DCU is to be located.
c. It should be borne in mind that DCU shall be converted into sample flat for that typology.The DCU unit should be marked on allotment list as being 'to be sold with furniture and furnishing' and possession date should be stated as possession date of the last building in that project having that the said unit typology.
d. Generally to be done by one contractor, rather than separately by each trade contractor.
e. DCU shall generally be done only once per typology in a given marketing project (or more than one if finishes are drastically different from the first DCU).
f. DCU review is to be done by HOD-Design and the head of CM-Finishing working on that project **prior to ordering of finishing materials for that project**. Wastages for flooring & dado needs to be reviewed and signed off with Design & CM Head in the following format:

Sr. No.	Area Description	Tile Size (mm x mm)	Tile Name (eg.)	No. of tiles	Actual Area (Sqm)	Estimated area as per QS (Sqm)	Wastage (%)
Flat #							
1	Living Room & Passage	800 X 800	A	41	26.24	23.23	**12.96**
2	Kitchen & Store	600 X 600	B	24	8.64	7.28	**18.68**
3	Kitchen dado	600 X 600	C	11	3.96	3.75	**5.60**
4	Toilet dado						
5	Utility	300 X 300	D	23	2.07	2.03	**1.97**
6	Utility Skirting	300 X 75	E	4	0.36		
7	Deck Area	148 X 600	F	54	4.7952	4.52	**6.09**
8	Deck Area skirting	148 X 600	G	16	1.4208		

During the Final DCU review with all key stakeholders, the above flooring/dado wastage details, must be printed and put up in each respective areas of the flat for ready reference, discussion and bringing wastage in line with internal norms

Finishing Vendor's contract to be updated with the finalized actual permissible wastage, also to be captured by DCO team in the budget.

g. While conducting final review of DCU, key furniture (carcass only eg. Beds, wardrobe, sofas, dining table) and key appliances (carcass only / may be non-functional eg. Refrigerator, washing machine) should be placed (only at time of review, can be removed later) so that one can look at functionality issues in full detail.
h. While doing DCU adjacent common areas eg. Lift lobby are also to be done.
i. Even if DCU is built, WCU shall still be done for each cluster.

Ideal sequencing of works starts for WCU and generally, for building

Unit

1. Structure (including civil upstand and cast-in channels for façade (if applicable))
2. Internal Partition (including Treating joints between RCC & masonary)
3. MS Railing installation (if applicable) with primer, one coat of paint and appropriate protection
4. Concealed Conduiting
5. Waterproofing (base coat in wet areas)
6. Concealed Plumbing and ledge walls
7. Waterproofing (filling and top coat)
8. Door Subframes (if applicable)
9. Window subframes / sills
10. Internal Plaster / Gypsum
11. AC piping
12. Ceiling grinding and ceiling gypsum
13. Kitchen platform (if not modular), flooring, Dado & Skirting
14. Jud Finish & finishing of edges (Internal Plaster)
15. Windows installation
16. Entrance Door

17. Preparatory work for painting (primer and palti)
18. Electrical wiring
19. Floor polishing (except final coat)
20. Fixing of door frames & polishing (1st coat)
21. Final coat of wet floor polish (0 no)
22. Installation of door shutters & hardware
23. Protection on floor
24. Fixing of CP & Sanitary + modular kitchen (if applicable)
25. Water Testing
26. AC Installation
27. Floor polishing final tinex dry coat
28. Final coat of painting
29. Touch up of MS Railing
30. Wooden Flooring

Other:

a. For glass railing, balusters to be installed as soon as external plaster for building is done OR if no external plaster, then immediately after terrace slab (for tall buildings, it can start when RCC is 10 floors above viz when you know that the balusters will not be disturbed).
b. Façade installation (classing/glazing) can be done once external plaster for building is done OR is no external plaster, then immediately after terrace slab (for tall buildings, it can start when RCC is 10 floors above viz when you know that the facade will not be disturbed).
c. External painting can be started once external plaster for building is done OR is no external plaster, then immediately after terrace slab and parapets.

Typical Floor Lobby

1. Services on ceiling (cable trays , electrical conduits / cables ,sprinklers, wiring for fire alarms and ELV , AC ducting, etc as applicable)
2. Door Subframes (if applicable)
3. Window subframes / sills
4. Internal Plaster / Gypsum
5. Lift door frame (Shutters can move later)
6. Flooring & Dado
7. Jud Finish & finishing of edges (Internal Plaster)
8. Door frames and Windows installation
9. False Ceiling
10. Painting (1st& 2nd coat)
11. Floor polishing (except final coat)
12. Floor polishing – final coat
13. Final coat of painting
14. Fixing of fitments eg. smoke detector, lights etc.
15. Signage