Guidelines for optimal utilization of formwork

Background: Company purchases large volume of formwork (aluminium, jump form etc.). However, due to lack of focus in upstream design and poor handling at sites, the utilization of formwork has been much lower than anticipated leading to increased costs for the company.

Guidelines

1. HoC – Structural Design will be responsible for ensuring highest level of utilization of formwork such that its cost is fully recovered.
2. Assumed (target) costs:
    a. Per slab / level: 1.25% of the original cost of the formwork (implying 72 repetitions on average + 10% of original cost as minimum salvage value for this calculation purpose).
    b. It is to be assumed that there is 50% loss of value for the relevant formwork area if it is remade (involving cutting) i.e. if 200 sqm is remade and cost is Rs. 20,000 per sm, loss is assumed to be 200 x 20,000 x 50% = Rs. 20 L. Additional or deletion of footprint can be assumed to be lead to 25% loss of value (since no cutting). This cost(s) is to be additionally attributed to the wing for which the change is being made. **This cost is to be avoided/minimized as far as possible.**
    c. Ultimately, it is to be ensured that 100% of the cost of the formwork is recovered. Any under-recovery at time of last utilization / scrap sale is to be informed by Head of DCO to Financial Controller.
3. In order to achieve target costs, following guidelines shall be followed:
    a. **Floor to floor height policy shall be strictly adhered to**. Any deviations are permitted only for significant benefit (eg. height limit and the additional FSI consumed by reducing FTF height should result in min. 3x additional PBT compared to the cost of reduced utilization of the formwork – see 2 b. above). Written approval of Head of Architecture for the BU to be taken in such instances.
    b. Maximum buildings will be designed as repetitions:
        i. Core: repeat to the highest extent feasible. Changes in core add very limited value and should only be done in case of significant benefit to floor efficiency or approvals.
        ii. Unit: While there is always the attraction of doing changes to the unit plan, changes, if any, to the unit's design shall be done only if the RERA net area changes by > 10% - changes lower than this (tinkering) should be avoided.
        iii. Design details to be standardized by segment (Structural design to lead and Architecture to assist). Items to be standardized include slab thicknesses, concealed conduiting, toilet sunks, Chajja slope/span, deck balcony slab thickness and sunk, Beam width/depths, elevation groove sizes, external & internal wall thickness. Architectural objects should be maintained as far as

possible (i.e. facade, cornice, groove, elevation band). This is to be completed no later than 15th June 2021 and implemented as soon as practical.

c. COOs, CM-Heads as well as Structural design associates will continuously emphasize good handling, cleaning and good storage of formwork to all CM and MM associates.
d. HoC-Structural Design will evaluate setting up of formwork modification yard and if same is decided to be setup, the setup shall be overseen by HoC-Structural Design with a specialist team under him. The COO of the region where the yard is located will be accountable for the efficient operations of the yard and ensuring that theft is kept to nil and scrap sales happen as per norms and in timely manner.