LadderBlock System

A Step up from Tiltwall

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LadderBlock™ – a step up from **Tilt-wall**

The best way to compare LadderBlock to tilt-wall construction is to first describe the two construction processes:

Tilt-wall construction of quality to carry one or more stories generally progresses as follows:

1. Grade site to build up to an elevated building pad for a slab-on-grade.
2. Remove unsuitable soils within the building pad as required by geotechnical engineer, and build compacted structural fill pad.
3. Build footings or piers where required to support tilt-wall panels and steel columns.
4. Trench (previously) compacted pad to install under-slab plumbing, electrical, etc.
5. Treat pad for termite control.
6. Lay vapor barrier and place slab reinforcing steel.
7. Cast slab-on-grade with edges held back to form leave-out strips where tilt-wall panels will bear on their foundations.
8. Set forms for tilt-wall panels on recently cast slab-on-grade (and on "waste slabs" in cases where the area of tilt-wall exceeds the slab area).
9. Place internal forms for permanent door and window placement in each wall panel.
10. Apply debonding agent to slab and place reinforcing steel per engineer's specifications
11. Place all of the studded steel assemblies and/or reinforced pockets required to lift panels and to connect them to foundations, adjacent panels, floor framing members, and roof framing members. Hope you got it all right.
12. Cast each tilt-wall panel
13. After curing, strip forms and order the crane
14. Use the crane to break casting suction on each panel, then rotate it to vertical and set it on its foundation. Hold the panel with the crane until tilt-wall braces are connected to the slab and panel base connection welds are made
15. Erect structural steel beams, joist, and metal deck at each level. Remove tilt-wall braces when engineer deems it safe to do so.
16. Field-weld all panel to panel and framing to panel connections.
17. Cast toppings where required at floor and roof surfaces.
18. Cast leave-out slab (can be temporarily left open to allow routing of additional underslab lines along perimeter)

…the structure is now ready to receive insulation, roof, window wall systems, infill walls, and weather-proofing.

LadderBlock construction of quality to carry one or more stories generally progresses as follows:

1. Build footings or piers where required to support LadderBlock, and order the crane.
2. Erect LadderBlock framework and Sculpted Floor Blocks.

…the structure is now ready to receive insulation, roof, window wall systems, infill walls, and weather-proofing.

LadderBlock Advantages over Tilt Wall

1. LadderBlock is unequalled in speed of construction.
2. LadderBlock eliminates the need for a slab on grade foundation (although it can be set in trenches and built into a slab-on grade project).
3. LadderBlock modular design allows construction of a variety of building shapes and sizes using an amazingly small number of unique parts.
4. LadderBlock construction enables building over variable terrain.
5. LadderBlock provides greater structural redundancy and stability.
6. LadderBlock structure is demountable; it can be reconfigured or moved to a different location and reassembled. No waste.
7. LadderBlock's open framework and interlocking sculpted floor block system enables the construction of multi-story structures in a fraction of the time.
8. LadderBlock builds parking structures without the visual obstructions of tilt-wall.
9. LadderBlock presents structurally stable modules as it is erected. Only the starter block in a LadderBlock Structure requires temporary bracing, and that brace can be removed as soon as the first spacer blocks have been connected. This leaves your construction space free of obstructions.
10. LadderBlock is built to offer a supporting platform for every style of architectural wall, including stud wall systems, window wall, masonry, precast, and an increasing variety of insulated panel and proprietary wall systems.
11. LadderBlock structure reduces waste. Precision casting eliminates waste during production and LadderBlock never requires a waste slab on a construction site.
12. LadderBlock is precision preengineered
13. Ladderblock offers an exceptional solution for elevated construction in flood-prone areas.
14. LadderBlock's structural features, demountability, and replacement-part capability make it an exceptional product for military installations.
15. LadderBlock provides superior value in terms of cost of construction and life cycle maintenance, operating and ownership costs.
16. LadderBlock framework can grow in every direction. Tilt-wall is permanent construction that is interlaced with other trades (i.e. structural steel), and is not designed to facilitate change.
17. LadderBlock precision casting ensures fit-up in a way that field-built tilt-wall casting beds cannot.
18. LadderBlock can be built year round in a controlled factory environment.
19. LadderBlock finishes are suitable or architectural exposure, and LadderBlock framework can serve as the platform for any architecture.
20. LadderBlock enhances safety through factory production at ground level and by enabling a great deal of work to be accomplished by a small erection crew.
21. LadderBlock can be used on small confined sites that could not accommodate tilt-wall casting.