

ADVANTAGES

COST

The use of prefabricated panels helps avoid costly delays due to adverse weather conditions.

QUALITY

Quality is increased by constructing these building components in a controlled factory environment.

SPEED

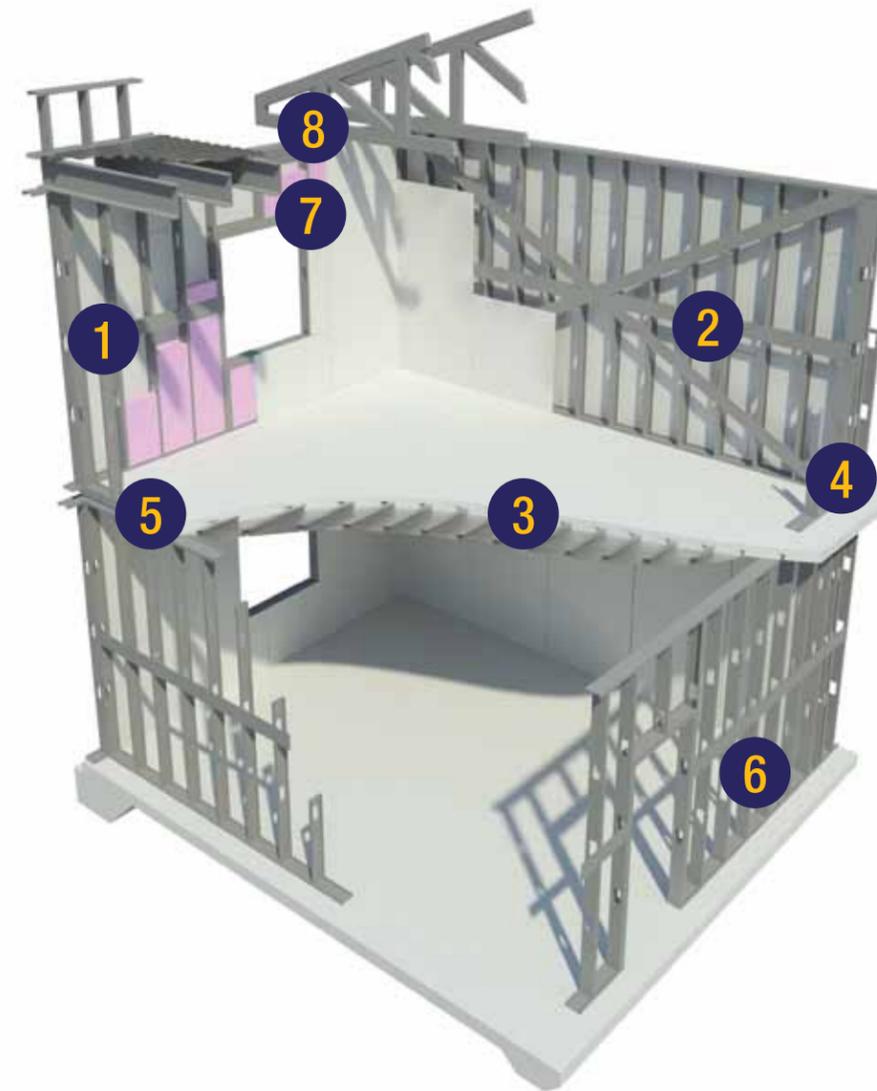
Load bearing walls and superstructure are installed twice as fast when compared to stick framing in the field.

Prefabrication has always been a part of the construction industry. However, a vertically integrated construction company that designs, manufactures, erects and constructs projects utilizing prefabricated panels is unique. Purcell Construction Corp. offers a full-service alternative for prefabrication of construction projects providing services to Architects, Engineers, Owners, and Contractors.

We design, manufacture, erect and construct a structural system comprised of light-gauge steel studs and composite decking and is best utilized for repetitive projects such as:

- Dormitories
- Apartments
- Adult Care Facilities
- Skilled Nursing Facilities
- Hotels
- Military Housing

We utilize the SigmaStud® framing system which is a product of The Steel Network, Inc.



- Exterior Walls**
Pre-sheathed, galvanized cold form stud panels individually designed to meet local wind, seismic, and snow loads. Panelized construction assists in reducing construction time and material waste.
- Shear Walls / Interior Walls**
Interior load-bearing walls may be panelized as well and sheathed with various finishes. Shear wall panels consist of pre-installed diagonal sheet steel sheathing straps specifically designed for local building code requirements.
- Floor Assembly**
Using a dovetail composite deck system with concrete topping, greater floor spans can be achieved while assisting in IIC ratings. By staggering the deck, it eliminates the need for fire-stopping.
- Wall/Slab Connection**
- Edge of Deck**
Various pour stops are designed and installed on-site to facilitate load transfer and expedite construction.
- MEP Systems**
The metal studs have knockouts, which allow for MEP rough-ins and running of wires and piping within the wall.
- Window/Door Header**
Exterior and interior panels are shop panelized with properly sized openings to receive windows, doors, and louvers. This eliminates on-site framing, reducing cost and improving construction schedule.
- Roof Connection**
Cold formed trusses are non-combustible, which allows for a Type IIB building, reducing the need for additional fire resistance rated protection. In addition, a clean wall-to-roof connection is provided, allowing for a cold roof design to eliminate snow and ice build-up at the perimeter.

CONVENTIONAL CONSTRUCTION	PRECONSTRUCTION	SITE DEVELOPMENT	CONSTRUCTION	
CONSTRUCTION USING PREFABRICATED PANELS	PRECONSTRUCTION	SITE DEVELOPMENT	DELIVERY & INSTALLATION	EARLIER OCCUPANCY
		FACTORY WORK	FIELD WORK	

The wall panels are being manufactured at the same time foundations are being installed on site, accelerating construction.



Fire Resistance Rating

- Floors: UL ratings for the dovetail composite deck system range from 1 hour to 3 hours per UL #D904. This UL design does not require deck protection or an additional fire-rated ceiling assembly.
- Walls: Metal studs, with a Type X gypsum wallboard, will provide 1 hour to 4 hour fire-resistance ratings.

LEED v3.0 Credits

- MR Credit 2 - Construction Waste Management: Steel is 100% recyclable material.
- MR Credit 4 - Recycled Content: Steel has a high pre-consumer and post-consumer recycled material value.
- MR Credit 5 - Regional Materials: Materials are harvested and manufactured within a 500 mile radius of project site.

Advantages Over Wood

- Fire Resistance: Metal does not burn, wood does.
- Convenience: Lighter weight construction.
- Stability: Metal is not prone to twisting and warping like wood; wood also absorbs moisture, which can lead to mold growth.
- Resistance to Insects: Termites and carpenter ants can damage wood construction.

Sound Transmission Rating:

- IIC Rating (Floors):
 - Composite deck with no finish: IIC 28
 - Composite deck with vinyl flooring finish: IIC 35 - 40
 - Composite deck with carpet and underlay: IIC 75 - 85
 - Composite deck with isolation hangers: IIC 60 - 65