# **SOLID, INSULATED & ARCHITECTURAL**

When speed, economy and design are a priority, precast wall panels are the solution for your next building project. Proform's precast concrete panels provide economical, functional and aesthetic value for exterior wall systems.

Precast concrete wall systems can be comprised of a variety of shapes and wall types. Typically, precast concrete wall systems fall into three basic categories: solid, sandwich and architectural. These can be panelized and erected in either a horizontal or vertical position and used on all types of structures, from residential to commercial, institutional to industrial. Wall panels can be designed as non-loadbearing or loadbearing, carrying floor and roof loads, as well as lateral loads.

Proform will provide all necessary budget pricing to assist the Architect, Engineer, Contractor or Owner in deciding on the type of panel systems they would like to use.





# **Common Applications May Include:**

- Office Buildings
- Condominiums
- Hotels
- Assisted Living Buildings
- Seniors Residence
- Industrial Buildings

- Sports Facilities
- Commercial Buildings
- Residential Buildings
- Churches
- Education Facilities / Schools

## **ENGINEERING & DESIGN**



Our engineers work diligently to create and hone solutions for the most complete precast and prestressed concrete needs. We strive to create precast concrete designs that result in lower production times and material costs as well as enhanced structural capabilities.

One of the greatest benefits of using Proform's full in-house precast engineering services is the ability to envision and create an unlimited number of designs with complete customization and design flexibility.

Need Help? Contact us today to request a quote or get more information about our products & services.



**HEAD OFFICE** Office: 403-343-6099 Toll Free: 800-859-5541



## **SOLID WALLS**

Solid wall panel refers to walls being made of solid concrete as opposed to including integral insulation. These wall systems require some form of insulation and an interior wall/finishing system to complete the building enclosures.

Typical widths: 8 to 12 ft. Typical heights: 10 to 50 ft. Typical thicknesses: 8 to 12 in.

Finishes: Since wall panels are cast in a flat orientation, the form side is typically the side that will be exposed to view in the final construction. This face can be made with virtually any type of finish. The back face is commonly troweled smooth or may have a light broom finish.

#### **INSULTATED 'SANDWICH' WALLS**

Insulated sandwich wall panels can be strictly architectural, strictly structural, or a combination of both. The difference between typical panels and insulated sandwich wall panels is that the latter are cast with rigid insulation "sandwiched" between two layers, or wythes, of concrete. The insulation thickness can vary to create the desired thermal insulating property ("R" value) for the wall.

#### The structural behavior is either:

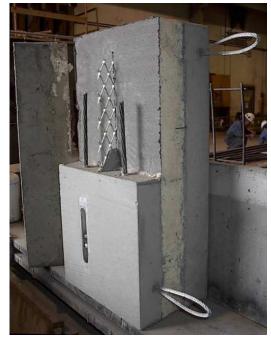
- Composite in which the wythes are connected using ties through the insulation that fully transfer loads. The structural performance is then based on the full thickness of the panel; or
- Non-Composite in which the wythes are connected using ties through the insulation, which limits performance to the individual capacities of each wythe.

Whether the panel is composite or non-composite depends on the configuration and material used for the ties. Insulated sandwich wall panels can be designed to be loadbearing and support floor and roof components. They make an ideal structural element for this purpose, normally by casting a thicker interior wythe to provide the necessary support. They can also be non-loadbearing to complete a façade.

Typical widths: 8 to 12 ft. Typical heights: to 50 ft.

**Typical thicknesses**: 9 to 12 in., including 1 to 6 in. of insulation.

**Finishes:** As with typical wall panels, the panels are cast in a flat orientation, so the form side is regularly the side that will be exposed to view in the final construction. This face can be made with essentially any type of finish. The back face is generally troweled smooth or may have a light broom finish. Frequently, the interior does not need additional furring and drywall to create the finished surface.







## **ARCHITECTURAL**

Architectural wall panels consist of a thin, outer-wythe of concrete typically ranging between 3 to 6 inches in thickness. This is connected to a back-up system, usually constructed of steel framing or studs, or sometimes concrete. The back-up system is what connects the wall panel to the structural system of the building and often provides the furring for interior finishes, such as drywall to be attached. Many of these systems can also incorporate a layer of rigid insulation between the exterior wythe of concrete and the back-up system.

Typical widths: 4 to 15 ft. Typical heights: 8 to 30 ft. Typical thicknesses: 3 to 6 in.

**Finishes:** As with typical wall panels, the panels are cast in a flat orientation, so the form side is generally the side that will be exposed to view in the final construction. This face can be made with virtually any type of finish. The back face is commonly troweled smooth, but is not left exposed. The back-up systems are often used to attach drywall and/or other finish materials.

### **GRADE BEAMS**

When designing the building's foundation precast grade beams are a great option for transmitting the load from a bearing wall into spaced foundations. This is a fast and easy installation process and can be designed to fit any building foundation with excellent load bearing capacity. Concrete is a durable and low-cost way of designing the base of the building as well as adding on to the structural components as you build and develop further.

### INSTALLATION



Proform's team is competitively positioned to include installation options including grouting and caulking services if desired.

Proform's precast specialists are aware of these potential issues, so we strive to deliver industry leading precast installation and erection services as a major part of our complete precast and prestressed concrete offerings.

Need Help? Contact us today to request a quote or get more information about our products & services.