

## PRECAST VS. SITE-CAST TILT-UP CONCRETE PANELS

When all attributes and true expenses are considered, precast concrete panels offer significant benefits in quality, speed and cost savings over site-cast tilt-up concrete panels. The advantages of using precast concrete panels result from factory-controlled conditions under which they are manufactured and the speed with which they can be delivered and erected.

### PRECAST CONCRETE PANEL BENEFITS

#### BETTER QUALITY

- Higher quality precast concrete panels are produced in factory-controlled PCI-Certified plants vs. site-casting on the jobsite. Site-cast tilt-up concrete panels are exposed to adverse weather conditions and jobsite congestion.
- Superior engineering support and the inclusion of shop drawings are standard when precast concrete panels are used.
- There are a wide variety of precast concrete panel finishes available including sand-blasted, exposed aggregate, acid-etched, thin brick and stone veneers.
- Precast concrete panels are often prestressed which provides better crack control and durability compared to conventionally reinforced tilt-up concrete panels.
- Precast concrete sandwich panels with integral insulation provide inherent fire-resistance compared to tilt-up concrete panels that utilize glue-applied insulation to the inside of panel faces.
- Precast concrete insulated sandwich panels provide a highly durable interior concrete finish ideal for manufacturing or warehouse facilities.

#### FASTER SPEED

- Precast concrete panel shop drawings and production can commence during the permitting phase which improves the overall project speed of construction.
- Year-round construction of factory-produced precast concrete panels allow for erection in almost any weather condition.
- Finish speeds with precast concrete insulated sandwich panels are better compared to tilt-up panels that often require furring, insulating and drywalling on interior faces.

#### LOWER COSTS

- Precast concrete panels are cast off-site which minimizes jobsite risks.
- Precast concrete panels allow year-round construction which shortens project schedules and reduces project general conditions.
- Crane costs are less for precast concrete than for tilt-up concrete panel construction.
- First costs are lower with precast concrete panels due to faster speed of construction, which enables earlier project completion and faster generation of revenue.
- The long-term durability of precast concrete panels is greater than tilt-up concrete panels due to prestressing and the use of 5,000 to 6,000 psi concrete mixes vs. the 4,000 psi concrete mixes that are generally used for tilt-up concrete panels.
- Precast concrete panels are more durable than tilt-up concrete panels and often require less maintenance which increases their long-term value.
- Precast concrete panels allow the building superstructure and roof to be installed before the floor slab is cast which eliminates weather and casting-related damage to floor slabs.

Precast concrete panels produced in PCI-Certified factory-controlled conditions offer a much greater variety of architectural finishes and quality control benefits that are unmatched by site-cast tilt-up concrete panels. The unbeatable speed with which precast panels can be designed, fabricated and erected to close tolerances and uniform consistency produces time savings that can be critical to a project's success. Precast concrete panels provide numerous long-term cost advantages with exceptional durability, lower energy costs and lower maintenance costs when compared to site-cast tilt-up concrete panels.