

Immaculate Conception Catholic Church



2010 1st Runner Up Heavy Commercial

The Immaculate Conception Parish in Cottonwood, AZ was established in 1930. As it has continued to flourish, Immaculate Conception recently made the decision to build a bigger and better church to host its growing parish. Ground breaking began in the latter part of 2008 and with a steadfast crew working with Quad-Lock's insulating concrete forms, the new church was dedicated on December 8th, 2009.



Why Quad-Lock was Chosen

Original designs for this monumental project utilized a masonry wall system, but the decision was made to favor Quad-Lock's superior ICF system for the following reasons:

- ▶ Height of the building
- ▶ Improved insulation value
- ▶ Increased construction speed
- ▶ Reduction of project costs
- ▶ Ease of pilaster construction (including double corner pilaster fabrication)
- ▶ Better sound attenuation
- ▶ Higher energy efficiencies & cost savings for the congregation

Interesting Facts

Location:	Cottonwood, AZ
Completion Date:	December 2009
Building Size (Total):	30,115 sqft
Quad-Lock Walls:	58,664 sqft
Interior Walls:	19,000 sqft
ICF Installation Time:	210 days
Total Construction Time:	440 days
Wall Bracing:	Panel Jack, Uniscaffold
Floor Joists:	None
Exterior:	Stucco
Waterproofing:	Soprema Colphene LM300



Quad-Lock Project Profile - Immaculate Conception

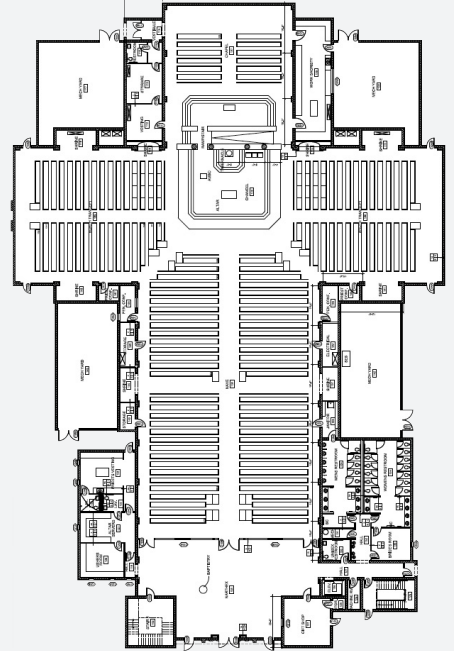
The Design Vision ▸

The design concept envisioned the use of large supporting columns and expansive ceiling spans integral to Church construction in the early 1500's.

To fulfill this vision, the building incorporated a total of 38 pilaster columns in five different designs, perfected by Quad-Lock for tall-wall applications. This provided the desired Cathedral appearance essential to the Catholic Church in this expansive project.

The floor plan illustrates the project complexity, including the corner details associated with the pilaster columns, wall height and the absence of internal supporting walls.

Integral to the design was the under-floor air ducting. Using Quad-Lock enabled forcing of air under the pews and recycling the conditioned air 14 feet off the floor, resulting in long term comfort and cost benefits for the Parish.



“This project demonstrates Quad-Lock’s adaptability to complete large tall wall projects without internal floor support required in the open design of these types of facilities.” states Hannis Latham of Arizona Radiant Heat Barrier.

Challenges Addressed with Quad-Lock ▸

The many challenges of this 30,000+ sq ft project were surpassed by utilizing the flexibility of the Quad-Lock System to its best advantage.

- Construction of walls on rough placed and unlevelled, trenched, footings.
- Variable concrete consistency, truck to truck, from project beginning to end.
- Scaffolding limitations when plumbing walls and erecting the extensive wall runs.
- Only 277' of wall that was less than 8' tall.
- Wall above grade varying from 31' along the Nave, to 42' at the main entry and 49' on the two bell towers.

Project Partners ▸

General Contractor: Redden Construction Inc., Phoenix, AZ
Architect: CCBG Architects Inc., Phoenix, AZ
Engineer: A.V. Schwan & Assoc. Inc., Phoenix, AZ
ICF Installer: ICWalls, Gilbert, AZ
Quad-Lock Dealer: Arizona Radiant Heat Barrier, Vail, AZ

