

Project #22 – Classic



Patterson Apartments

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Participant Information:

Big Sky R-Control
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Category: Affordable Housing

Project Information:

Patterson Apartments
2814 Patterson
Grand Junction, CO 81506

Total sq.ft.: 61,320 (60 Units)

Built by:

Shaw Construction
Cory Amick
60 Horizon Drive #201
Grand Junction, CO 81506
303-350-1359

Panels Manufactured by: Big Sky R-Control

Designed by:

OZ Architecture
Dain Carlson
3003 Larimer St
Denver, CO 80205
303-861-5704

Building use: Multifamily - 60 Units



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SIP benefits for this job:

For our Builder we knew the use of SIPs would shortened construction time by two to three times. SIPs would require less supervision on the building site. No specialized tools would be required. Estimating costs was a simple, more accurate process. Easy and quick to construct, nice conditioned space early on making for more comfortable working conditions, cost reduction - especially with waste. For our Architects, SIPs would offer more creative freedom without the constraints of conventional building materials. It was easier to create full CAD drawings.

SIP wall thickness: 6 1/2" R-29

SIP roof thickness: na

Comments on labor saving, construction time, construction costs and energy savings:

Using SIPs for the walls shaved at least two months off the construction time line. Wall panels were delivered with pre-installed lumber wherever possible, and the entire three-story package was delivered and installed in 14 business days. The entire framing phase including non-SIP interior walls and roof framing was completed in 5 weeks. The delivery and installation process was finely tuned to minimize the size of the staging area by staggering the delivery sequence. The construction costs as well as the energy savings were massive.

Innovative design elements:

Structural engineering was key as every spline, opening and ledger was specified with a maximum efficiency mindset. Both perforated shear wall theory and Force-Transfer-Around-Opening theory were used to eliminate all holddown straps. The only custom detail was for a few steel headers on the top story where the header depth was limited to 7-inches.

Certifications awarded:

Green Community Standards

Energy Star advanced lighting package

Energy Star rated appliance package

Additional energy efficient products or features:

Individually metered apartment units, Energy Star advanced lighting package, Energy Star rated appliance package, Integrated Piping System mechanical design utilizing high efficiency boilers/chiller, Ceiling fans in bedroom/living room locations, low flow water fixtures, resident recycling on each floor, upgraded low U-value glazing system, solar-powered attic ventilations system, untreated, low embodied energy - irrigation ditch water for landscaping, Passive Radon venting systems and regional material used.

Solar:

Solar-powered attic ventilations system

Additional comments:

This SIP build was truly airtight and free of drafts and cold...something we have six months out of the year. The energy bills are expected to be 50 to 60 percent less and the homes are considerably quieter because the SIPs have proven to be an important element in soundproofing...which in apartment living is a BIG benefit.

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