

Project:
Palo Alto High Rise

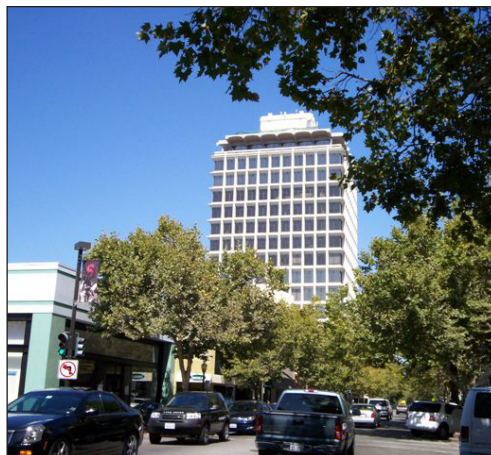
Location:
Palo Alto, CA

Completed:
2006

Manufacturer:
IB Roof Systems

System:
*Fully Adhered 80 Mil
White Membrane*

PALO ALTO HIGH RISE



A “cool” roof can be safe to install and durable, even on a telescoping roof top in sunny downtown Palo Alto.

In the heart of the county’s largest venture capital Mecca, the building slightly north of Silicon Valley and its multi-level roof extend 260 feet into the blue sky.

The roof on the building was leaking and maintenance costs had risen to nearly \$10,000 per year. The building management team needed a roofing contractor with the expertise to ensure important safety procedures were followed, the roof system complied with California’s Title 24 energy requirements, and the project was completed with the least amount of disruption to the building tenants.

“We also wanted a roofing system that had a good warranty for 20 or more years,” said a representative from C.B. Richard Ellis, the property management company. “We researched several high performance roofing products, including our final choice: IB Roof Systems,” he said.

State Roofing Systems of San Leandro, California, was awarded the project because they are trained and certified by IB Roof Systems to install the product and the building team knew they could rely on the contractor for the job to be done right the first time.

“State Roofing noticed problem areas on our roof that none of the other contractors who bid on the project had detailed in their

proposals,” the property manager said. “We also liked that State Roofing was certified to install an IB roof as the manufacturer has a reputation for quality products and service.”

State Roofing installed an IB Roof Systems 80 mil white PVC membrane above a two inch layer of polyiso insulation, which was the roofing system specified in order to be in compliance with the Title 24 energy code prescriptive requirement for reroofing commercial buildings. The re-roofing team chose not to pursue the whole building or building envelope approach to compliance, saving potentially costly alterations to building elements effecting energy consumption.

Jack White superintendent at State Roofing oversaw the work starting with the initial tearing off of the existing roof. Other site preparation work included setting up a railing system at the perimeter for the safety of the workers. A mesh screen was also attached to the railing system to contain potential debris from falling off the building.

“We took all the steps and precautions necessary to ensure the project site would be accident free,” White said. “We also planned the coordination of the job on a tight urban job site for the least amount of disturbance to the client and their tenants,” he added.

“We then used laser levels to make sure the slopes were positive to the drainage system,” White explained.

The next step was to install by fully adhering the 2 inch polyiso roofing insulation to maintain current insulation standards, as required by the City of Palo Alto and the state energy code. The white CPA (Copolymer Alloy) single-ply roof system features IB Roof Systems’s innovative Wind Ballast System, which eliminates the need for expensive fasteners. In fact, the harder the wind blows, the tighter the roof is held fast. The secret is a unique one-way air release valve that channels air out from under the membrane, thus creating a vacuum and pulling the membrane tight against the roof deck.

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The membrane, which has a UL Class A rating for flame resistance, was installed over a protective slip-sheet. The membrane seams were heat welded, which allowed for faster installation, saving both time and labor dollars.

The exterior metal caps on the main roof were fully sealed. The walk pads were attached from exit doors to all equipment and circling the entire equipment building. Also, pads were placed along the entire perimeter, immediately inside the window washer rails, in order to designate caution areas.

During the decision to select the IB Roof Systems products, the manufacturer had met with the project team to go over the product specifications and explained how the product complies with Title 24 and could qualify for points toward the US Green Building Council's LEED Green Building Rating System. The USGBC's (Leadership in Energy Efficiency Design) LEED rating system can provide points certification of a commercial building if the roof is a "cool" roof.



On a hot day, the white membrane will measure only 91° F compared to a black roof that reaches 172° F. This is possible because the IB roof membrane can reflect up to 90 percent of the heat from the sun which would otherwise enter the building. Additional savings to the building manager can be achieved as new air conditioning units are downsized because of a reduction in load on the HVAC system.

Installation of a reflective roofing membrane also meets the EPA's Energy Star® Roof Products Program requirements and has the potential to reduce urban heat gain as well as pollution by lowering air conditioning usage.

"It was the perfect choice for the customer," said Robert Cardenas, the manufacturer's representative for IB Roof Systems and a member of the re-roofing team. "Energy codes, durability and safety benchmarks set by the building management were all met or exceeded on this project," he said.

In addition to fall protection, fire safety during the re-roofing also was not an issue as CPA membranes are naturally fire retardant and the IB Roof System comes with a UL "Class A" fire rating. The rating was achieved with two layers of IB Fire Sheet placed below the membrane.

Building maintenance is also much easier because PVC remains hot air weldable throughout its service life, simplifying repairs and maintenance. Property managers also do not have to worry about the IB roof membrane withstanding ponding water because moisture cannot pass through an IB roof membrane.

The end result was the building management team had both a winning commercial roofing manufacturer and a contractor it could rely on. This has resulted in a much improved situation for the building maintenance manager.

"It's a great feeling to know we don't have any more leaks and the sun is reflecting off the roof membrane in compliance with the energy code," the building manager said. He added, "We have noticed a drop in energy costs through a reduction in air conditioning use in the upper floors of the building. The roof really has made a difference in both energy and maintenance costs."

About State Roofing the building manager said, "From the estimator to the clean-up crew, the attention to detail, knowledge of IB Roof Systems products and specifications reassured us of making the right decision in choosing State Roofing Systems as our roofing contractor to install IB Roof Systems products."