Georgia-Pacific
Gypsum

Hewlett-Packard (HP) Global Operations Headquarters

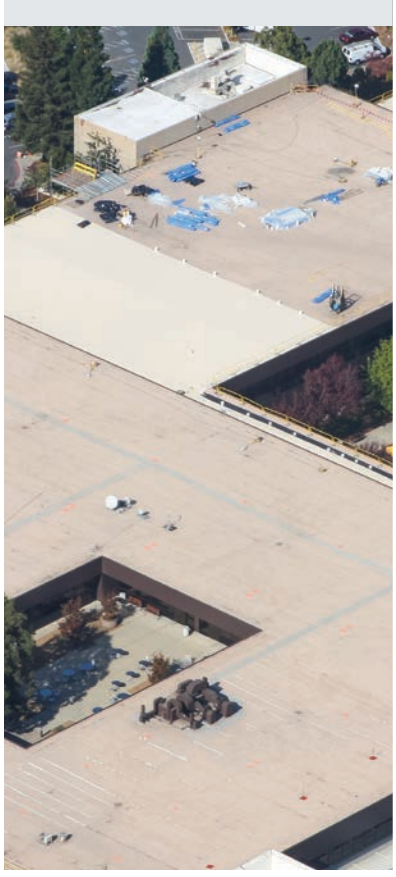
Palo Alto, California

PROJECT PROFILE

Roofing Contractor
Waterproofing Associates

Roofing Consultant
Independent Roofing Consultants

System Manufacturer
Sika Sarnafil



Sunny Days Ahead for HP HQ Roofing System, thanks to Dynamic Duo of DensDeck® Prime and Sika Sarnafil® Membrane

When night falls over Palo Alto, the work begins.

As thousands of Silicon Valley employees exit Hewlett-Packard (HP) global operations headquarters to head home for the evening, a crew of 25 roofers – under the glare of temporary spotlights – toils diligently. They are fastening thousands of ½" DensDeck® Prime cover boards to the 10-year-old insulation system covering the building's metal deck.

Soon after, they will adhere a single-ply, fleece-backed, tan-colored Sika Sarnafil EnergySmart Roof® membrane to the DensDeck Prime boards, creating a state-of-the-art 300,000 square foot re-roof. The added protection is much-needed, as it provides the durability and compressive strength to safely accommodate a massive system of solar panels that will be installed atop 85 percent of the roof.

"We chose DensDeck Prime because it provides the best support for the new membrane, the existing roof and all the (solar) equipment that will go on top of it," explains Steve Nash, Vice President of Waterproofing Associates, who designed the reroof system in conjunction with Ted Christensen of Independent Roofing Consultants, and selected the materials to make it work. "With all the weight that will be bearing directly on the roof membrane, we need the ultimate roof substrate."

Installing the massive, electricity-generating system of solar panels is an intricate endeavor, especially since its presence will complicate any repairs to the roof during the solar energy system's anticipated 25-year life cycle. The building owner called on Nash to create a roof with a lifecycle that would mirror the life of the solar panels.

"If the roof were to need repairs, the solar panels would have to be disassembled and out of service until the repairs are finished. And that can't happen," added Nash. "Basically, we have to build a virtually maintenance-free roof."

continued

PROJECT **PROFILE**

"With thousands of pounds of solar panels sitting on top of it, the roofing membrane cannot fail. So you get the best materials available to make it last – and that's exactly what we've done."

STEVE NASH, WATERPROOFING ASSOCIATES

Protection – Above and Below

Cost-effective due to its energy efficiency and high levels of dimensional stability, the Sika Sarnafil G410 membrane is requently installed over an underlayment of DensDeck® Prime because its surface treatment provides a stronger bond for adhered membrane applications. Also, DensDeck Prime roof boards' high pounds per square inch (PSI) compressive strength is an advantage as a durable platform for roofs with heavy equipment, like solar panels, on top.

Bill Gillette, senior technical sales representative for Sika Sarnafil, explained that "DensDeck Prime really protects our membrane because of its durability, puncture resistance and compressive strength. It helps our membrane withstand much more (weight) without a problem. And protecting the existing materials below, such as insulation, is just as important."

Adding further complexity to the building's new roofing system was the fact that the owner chose only to replace the original membrane – from another manufacturer – that had sprung a number of leaks in recent years. Keeping the remainder of the original roof – two inches of fiberglass insulation, a built-up gravel surface and ½" of fiberboard – saved considerable time and money, and avoided having to send thousands of pounds of materials to landfills.

However, it did require adding the layer of DensDeck Prime to do double duty – carefully protect the layers of the original roof that would remain, while forming the perfect foundation for the Sika Sarnafil membrane.

Upon completion of the five-week project – conducted only at night and on weekends so the noise won't interrupt the HP employees during normal work hours – the new roof will also be aesthetically pleasing. Originally planned to be white, the owners ultimately selected a tan-colored membrane, to reduce glare since two levels of the building have glass-to-ceiling windows that allow visual access to the roof.

Nash, the roofing contractor, noted that the new roof's beauty will only be exceeded by its durability. "With thousands of pounds of solar panels sitting on top of it, the roofing membrane cannot fail. So you get the best materials available to make it last – and that's exactly what we've done."

U.S.A.– Georgia-Pacific Gypsum LLC
Canada – Georgia-Pacific Canada LP

Sales Information & Order Placement
U.S.A. **1-855-6GP-DECK (647-3325)**

CANADA Canada Toll Free: **1-800-387-6823**
Quebec Toll Free: **1-800-361-0486**

Technical Information
Georgia-Pacific Gypsum Technical Hotline
U.S.A. and Canada: **1-800-225-6119**
www.DensDeck.com

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