



Building Roof

Featuring Polyshield HT-101™

Project:
The Marlborough House

Location:
Seattle, Washington

Owner:
Broadstone Domaine, LLC

Applicator:
Vector Construction, Inc.

System:
POLYSHIELD HT-101™ Polyurea
100 mils

Total Area:
4,000 square feet

Completion Date:
July 2008

PROBLEM:
The Marlborough House in Seattle, Washington was in desperate need of a complete leak-free roofing system. This project had a tight deadline that had to be met regardless of weather conditions.

SOLUTION:
After much consideration of the available options, the project owner decided to use SPI's Polyshield HT-101™ polyurea due to its high elongation and tensile strength properties.

The original failing roofing material was removed, leaving exposed concrete and bitumen residue. The transitions included brick parapets, concrete and wood curbing, metal flashing, and cast iron pipe. Polyshield HT-101™ high elongation characteristics allow the coating to encapsulate virtually any shape or size, providing a truly seamless, monolithic coating that seals the substrate and locks out water. The entire roof area was tented or enclosed to ensure the schedule could be met during

the rainy season. Cracks were prepped and filled, then the area was coated with a tar conversion epoxy primer.

Polyurethane foam was used to smooth out the rough parapet wall and for slope correction. Next, the applicator sprayed applied 100 mils of SPI's Polyshield HT-101™ polyurea on the roof, parapet wall, and all penetrations. The applicator then added an acrylic topcoat for U.V. protection.

RESULTS:
The building owner was very impressed with the fact that Vector Construction finished the project within the required time frame even with difficult weather conditions. Polyshield HT-101™ provided a complete roofing membrane that moves with the concrete expansion and contraction during annual weather cycles. They now have a dependable system in place that will increase the service life of their roof, prevent leaks, ultimately providing repair cost savings.



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Sanitary Zoo Enclosure Lining

Featuring Polyshield HT™

Project:
Elephant Enclosure Area of Zoo

Location:
Portland, Oregon

Owner:
Portland Zoo

Applicator:
Exquisite Coatings

Coating System:
Polyshield HT™

Total Area:
1,500 square feet

Date Completed:
August 2008

PROBLEM:
In the elephant viewing area, rubber mats over the concrete floor are provided for the elephants to stand on. The mats were coated with urethane to waterproof and protect against wear and tear. This coating became ragged and started to crack. Curious elephants started to pull on the loose pieces of coating. The damaged mats remained wet, and quickly became unsanitary for the elephants and zoo patrons. The zoo needed a new sterile coating to protect the rubber mats from bacteria and waste. It was critical for the coating to withstand high point loading stresses associated with the elephants walking on it.

SOLUTION:
Several years earlier, in a separate area of the zoo, Polyshield HT™ had been applied on the same type of rubber floor mat. Based on several years of good performance, Polyshield HT™ was chosen to rehabilitate the damaged viewing area.

The old mats were removed and replaced with a ¾-inch thick rubber mat and over-laid with Polyshield HT™ at a thickness of 120-150 mils.

Polyshield HT™ provided a high-strength, resilient coating that can endure the elephant's weight. It also created a seamless protective membrane that resists bacteria and allows for the elephant waste to be easily cleaned several times a day with high pressure water hoses.

RESULTS:
The elephants now have a surface which can be cleaned as frequently as required, providing them with a sterile habitat.



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Building Roof

Featuring Ultra-Bond HT™

Project:

Dealership Building Roof
Parking for New Mini Cooper®
Automobiles

Location:

Seattle, Washington

Owner:

Seattle Mini Cooper

Applicator:

Vector Construction, Inc.

System:

ULTRA BOND-HT™ Polyurea
100 mils

Total Area:

14,000 square feet

Completion Date:

August 2009

PROBLEM:

Seattle's Mini Cooper® car dealership was in need of a waterproof roofing membrane. In addition, the dealership was running out of room due to the limited parking space at their Seattle location. They wanted to increase floor space for the popular automobiles. The challenge was to design and install a cost effective, leakproof, polyurea roof/parking membrane system that would solve both needs.

SOLUTION:

The project owner and contracting company chose SPI's Ultra Bond-HT™ polyurea due to the superior adhesion properties and ability to withstand daily traffic. The plan originally called for installing an asphalt roof system, however, this proved to be too problematic.

The applicator was contracted to provide a solution over the existing tar coating. Vector Construction and SPI devised a system of installing two layers of 3/4 inch fire rated plywood over 4 inches of 100 lb. compressive strength foam, applied on top of the original

tar coated concrete. The new solution had to be a "floating" roofing system because it could not be mechanically attached to the concrete deck.

Next, the protection mat, foam insulation, and drain mat were removed while pull tests were completed for wind uplift calculations. Each layer was then glued in place with two layers of structural plywood on top of 8.0 lb. density polyurethane foam. The polyurethane foam was used for sloping around drains & transitions. The applicator applied 100 mils of Ultra Bond-HT™ polyurea to the roof, parapet wall, and all transitions. Aluminum oxide was broadcast into the coating, and a final topcoat was applied to provide a non-skid surface.

RESULTS:

Seattle Mini Cooper® was pleased with the new roofing system. This multi-purpose solution provided a reliable, waterproof roofing barrier, and also freed up space allowing them to expand their inventory. The project was inspected in May 2010 and was performing well.



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