

Parking Structures

ABOVE-GRADE PARKING APPLICATIONS



Issaquah Park and Ride

Issaquah, WA

Overview: Four floor parking structure for Sound Transit and King County

Construction Type: Post-tensioned deck

Owner: Sound Transit

Engineer: KPFF Consulting Engineers

Summary: In above-grade parking structures, the top deck is exposed to rain and snow and decks below are exposed to chlorides, brought in by cars or through the air. It is critical to both waterproof the concrete to protect the cars below, and protect the concrete from corrosion, which necessitates expensive and disruptive maintenance.

Hycrete was used in the concrete to waterproof the decks and protect them from corrosion. Because Hycrete is integral and is permanent, the owner has a durable solution and has been able to eliminate costly maintenance, saving hundreds of thousands of dollars.

Hycrete has been used in eight similar parking projects in the Northwest since 2000. In addition, Sound Transit and King County have Hycrete in their standard specifications for parking projects.



Kings County Hospital Center Parking Garage

Brooklyn, NY

Overview: 500 car garage with one full level below-grade and the second deck half exposed

Construction Type: Post-tensioned deck

Owner: Clarkson Avenue Garage LLC

General Contractor: Clearview Development

Summary: The parking garage at Kings County Hospital has both above- and below-grade decks. The below-grade walls are exposed to soil high in chlorides and the exposed parking deck will receive periodic de-icing using road salts. The developer of the project has a 40-year lease of the structure and required a long-term solution that would minimize maintenance requirements.

Hycrete replaced traffic coatings and sealers, drastically reducing maintenance and saving the owner money.

“Hycrete has saved me a lot of money by greatly reducing maintenance requirements. Because we have a long-term lease, it is critical that our solution protects the structure over the long-term and limits maintenance – Hycrete achieves both.”

— Owner’s Representative



Yale Station

Denver, CO

Overview: Five story mixed-use retail and apartment building with on-grade parking

Construction Type: Cast-in-place deck over mechanical rooms and retail space

Owner: Koelbel Co.

Architect: Davis Partnership

Summary: The project includes a parking deck over sensitive mechanical equipment. Accordingly, the architect required a cost-effective and warranted system capable of protecting the assets below.

Hycrete System W was used to waterproof the deck. The owner saved money and time and has a permanent solution backed with a performance warranty.

BELOW-GRADE PARKING APPLICATIONS



Thomas Jefferson School of Law San Diego, CA

Overview: Eight story classroom building in downtown San Diego with ground level retail space and three levels of underground parking. The foundation is ten feet in the water table.

Construction Type: Cast-in-place structural slab and walls

Owner: Thomas Jefferson School of Law

General Contractor: Bovis Lend Lease

Summary: Thomas Jefferson School of Law, located in downtown San Diego, CA, built a new classroom building with three levels of parking in the water table in high hydrostatic conditions.

By selecting Hycrete's membrane-free approach the school reduced the critical path by four weeks and saved an estimated \$187,000 on construction costs, a 32% improvement over traditional waterproofing approaches.

In addition, the U.S. Green Building Council has awarded the School a LEED credit for "Membrane-Free Construction Through Integral Concrete Waterproofing" (Innovation in Design (ID) Credit 1.1) for its use of Hycrete System W.



City Creek Reserve - Blocks 75 & 76 Salt Lake City, UT

Overview: Multi-family housing and retail with underground parking

Construction Type: Cast-in-place structural slab and shotcrete walls

Owner: City Creek Reserve, Inc.

Engineer: Magnusson Klemencic & Associates

Waterproofing Consultant: Morrison Hershfield

Architect: FFKR Architects, Zimmer Gunsul Frasca Architects

Summary: The project is 30 feet below the water table and the considerable hydrostatic pressure made waterproofing challenging

and extremely important. Additionally, the walls were poured with shotcrete, traditionally a more difficult application to waterproof.

Areas under high hydrostatic pressure and prone to leaking were protected with Hycrete as a back-up defense to water migration. Where there were minor leaks, Hycrete, via the owner's choice of the Hycrete IntegraTek warranty, was there to support the client and address the leaks well before the building was placed in use and without being a burden to other trades.



University of Washington Medicine Seattle, WA

Overview: The project consists of two five-story laboratory buildings and one five-story office building. The buildings are above three floors of below-grade parking. The lowest level had to be constructed eight feet below the water table.

Construction Type: Cast-in-place structural slab and walls

Architect: Perkins + Will

Engineer: Magnusson Klemencic & Associates

Summary:

To meet the parking requirements for the project, the lowest parking level had to be constructed eight feet below the water table,

necessitating a solution capable of withstanding high hydrostatic pressure.

Hycrete System W offered superior performance to other waterproofing systems, was more cost-effective, accelerated the construction schedule, and eliminated the expense of permanent de-watering pumps.

Benefits include:

- \$150,000 in material savings
- 30 days on the critical path saved
- 129 tons of CO² per year saved