



Delivering Concrete Solutions



Amgen Parking Garage, Seattle, WA



I loved Hycrete concrete. The waterproof concrete was very user friendly and had no odors. We even saved a step at the elevator pit walls by eliminating the need for a membrane. This saved us a lot of time. Cadman and the Hycrete team provided great onsite assistance. I will be looking for future opportunities to use Hycrete waterproof concrete.

Pat Cregan, Superintendent
Skanska USA Building, Inc.

CASE STUDY

Amgen Parking Garage

Seattle, WA

Hycrete Saves Skanska 30% on Waterproofing and Amgen \$1.4M Over 30-Year Building Life

| | |
|----------------------|---|
| Structure: | Parking Garage |
| Application: | Post-tensioned deck and elevator pit |
| Owner: | Amgen |
| General Contractor: | Skanska USA Building, Inc. |
| Architect: | LMN Architects |
| Engineer: | Coughlin Porter Lundeen |
| Concrete Contractor: | McClone Construction |
| Ready Mix Provider | Cadman |

Introduction

Amgen, a Fortune 500 human therapeutics company in the biotechnology industry, built a seven-level above-ground parking garage with capacity for 1,200 cars as a part of the Seattle campus.

Challenge

Due to the proximity to the corrosive atmosphere of the Puget Sound, the Amgen parking garage required a solution capable of protecting from water as well as chlorides. The top deck and exposed ramps are particularly susceptible to water infiltration and corrosion, especially during winter months when snow accumulates. Also, as the exposed areas protect employees' and customers' cars, a trusted solution was required.

Solution

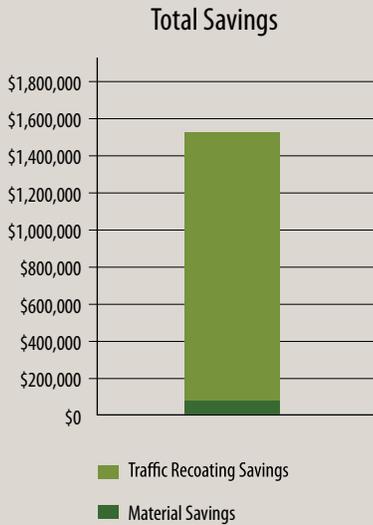
Hycrete System W offered superior performance to other waterproofing solutions and eliminated the need for traffic coatings, which require periodic re-application. Hycrete System W saved Skanska approximately \$66,000 up-front in material savings compared to the alternative coating.

Material Savings

| Location | Membrane | | | Hycrete System W | |
|-------------|-----------------|-------------------------|---------------------|---------------------|-----------------|
| | Type | Area (ft ²) | \$/ ft ² | \$/ ft ² | Savings |
| Podium Deck | Traffic Coating | 54,500 | \$3.60 | \$2.38 | \$66,490 |

Total Material Savings = \$66,490

Hycrete is a long-term, durable solution that does not need to be re-applied. The alternative traffic coating that was considered would have needed to be re-applied every 3-5 years. Assuming a 30-year building life, the maintenance associated with removing old traffic coatings and re-applying a new coating is approximately \$1.4M. With Hycrete all of this expense is avoided.



Traffic Recoating Savings

| | |
|---|----------------------|
| Building Life | 30 years |
| Traffic Coatings: | |
| Re-application frequency | Every 5 years |
| Number of re-applications | 5 |
| Cost of replacement – multiple of original cost | 1.5 x |
| Original installed cost of traffic coating | \$3.60 |
| Area (square feet) | 54,500 |
| Cost per re-application | \$294,300 |
| Traffic Recoating Savings | \$1,471,500 |

In addition, the time required to periodically replace the traffic coating would mean that the top deck could not be used for employee parking, and could result in increased costs to the owner to arrange for alternative parking.

Results

The top deck and exposed ramps of Amgen’s parking garage are waterproof and protect the cars beneath. Amgen has a long-term, worry-free solution that does not require re-application or replacement and anticipates savings of over \$1.4M over a 30-year building life.

Simple Detailing for Elevator Pits

