



EUCLID CHEMICAL

PROJECT PROFILE

RIVERFALLS TOWER DECK RECONSTRUCTION



SCOPE OF PROJECT

Repair and protect a 44 year old cast-in-place concrete deck to extend its service life while restoring the original esthetics of the design.

PRODUCTS FEATURED

EucoRepairV100

Single-Component, Low Shrinkage, Vertical/Overhead Repair Mortar

Tammspatch II

Two-Component Repair Mortar and Underlayment

Duraldeck System

Waterproofing, Wear Resistant, Urethane Deck Coating System

Dural 452 MV

ASTM C 881 Compliant, High Modulus Epoxy Adhesive

PROJECT DATA

Location – Spokane, WA

Engineer – DCI Engineers (Technical Consultant)

Architect – Warren Heylman

Contractor – Wm Winkler Company

PROJECT SUMMARY

PROBLEM: Originally constructed in 1972, Riverfalls Tower Apartments is a cast-in-place concrete structure encompassing four lower levels of parking and 11 stories of residences. Level 5, where the main reconstruction occurred, is on street level and incorporates a porte cochere lobby, street level exterior parking, and access to the parking garage. Two significant water features were incorporated on this deck at the main entry. Over decades of use, water migration through the deck and leakage through the water features had deteriorated the concrete deck, causing issues with structural integrity and reducing the utility of the area. The deck underside, a roof in the lower parking garage, was experiencing reinforcement corrosion and concrete failure. A structural overlay could not be used to repair this deck due to the restricted clearance of the existing porte cochere, and the additional dead load weight of an overlay was not acceptable.

Further complicating this project was the mandate that continued pedestrian and vehicle access to the main level lobby and lower level garage was required while performing all of the demolition and repair operations.

SOLUTION: To meet all the challenges of this project, a unique composite system of compatible products was developed. The products and systems used had to be flexible to allow for building movement, durable to withstand traffic and harsh weathering, and accommodating to the finishes which brought the area back to its original architectural design.

A variety of products were utilized for the various components of the composite reconstruction. Structural repair overhead in the underground garage underdeck was accomplished by EucoRepair V100 and horizontal deck repairs were made with Tammspatch II. Repaired horizontal surfaces were waterproofed with Duraldeck. Next, Dural 452 MV epoxy adhesive was used to bond the custom manufactured thin set brick to the Duraldeck system. The ceramic water features were also lined with Duraldeck, colored with blue metallic pigment to match the ceramic tile.

This project won a 2016 Build Northwest Special Project Award from the Inland Northwest chapter of the Associated General Contractors of America.