Case Study: Structural Restoration of Bumper Walls

Structural Crack Repair Epoxy Injection

utilizing

SealBoss Surface mounted Tri-Base Ports

SealBoss P3003-2c plural component injection pump

Jobsite: Parking Garage for University of Arkansas

Contractor: AW

Scope: Inject Structural cracks on exterior Vehicular Barrier Walls “Bumper Walls”

Materials Used: LV EP Resin & EP Paste

I**njection Tools: *Tri-Base* Surface mounted ports, P3003-2c Injection Pump**

Angle grinder, Generator, PPE

Synopsis:

In this repair job, we addressed structural and shrinkage cracks found along exterior "bumper walls". These minor protruding walls, constructed over the reinforcing lateral cables, provide additional shear strength to the structure. However, over time, potential cable movement and contributing forces had induced lateral cracks in the surrounding concrete. Contractor task was to restore both front and back of each identified panel, adhering to the SealBoss Epoxy Injection Guidelines.

Process:

The initial and most critical stage of the repair involved thorough crack and surface preparation. The contractor expertly removed paint and chased the fine shrinkage cracks to ensure proper material travel during the subsequent injection stage.

Following the preparation, the SealBoss Surface Mount Tri-Base Ports were installed. The port placement was directly above the crack, with a build-up of non-sag epoxy paste around it. This technique ensured a robust seal that could withstand the pressure of the injection process.

Once all the ports were set, and caps placed on each, the injection commenced using the SealBoss P3003-2c plural component injection pump. Specifically designed for epoxy injection, the P3003 pump incorporates custom-sized cylinders and hoses with an internal diameter calibrated to achieve the 2:1 ratio necessary for most structural epoxies.

Outcome:

By adhering to specified procedures and utilizing highly effective equipment, contractor successfully remedied the identified structural cracks, thereby restoring the structural integrity and prolonging the lifespan of the bumper walls.