

Projects Relieve Traffic Squeeze on I-15

Major Improvements Made to Key Freight, Commuter Route in South State

Caltrans photo by Kevin Dennert



The Devore Interchange where Interstates 15 and 215 meet in San Bernardino County is an extremely busy gateway for freight, commuter and recreational traffic. This photo shows I-215, appearing vertically at bottom, joining I-15 before its ascent through the Cajon Pass.

A notorious traffic bottleneck on a section of a Southern California interstate that frustrated travelers for decades has been eased with the completion of a pair of transformative projects spearheaded by Caltrans and supported by San Bernardino County Transportation Authority.

The Devore Interchange Project and the Cajon Pass Rehabilitation Project in San Bernardino County wrapped up in mid-2016, and since then have made life and business easier for those who travel to work in the Inland Empire and for companies that transport goods and services along this heavily traveled stretch of Interstate 15.

It took about three years to complete extensive renovations to each section of the interstate routes. The Devore Interchange Project where Interstates 15 and 215 meet cost \$324 million to construct, while \$121 million was spent improving I-15 that traverses Cajon Pass.

The route is a key economic lifeline in Southern California. Interstate 15 in the area of the two proj-

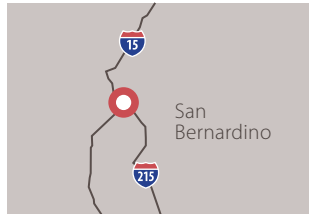
ects serves as a major route for commuters traveling from the high desert communities to jobs in the Inland Empire and Los Angeles basin, and it also serves as a recreational gateway to Las Vegas, the Colorado River and destinations beyond.

This route is also federally designated as a Trade Corridor of National Significance because of the heavy goods movement it accommodates.

The Devore interchange, located just north of the San Bernardino city limit, had been known as one of the worst grade-related traffic squeezes in the nation, with more than one million motorists traveling through weekly.

There was a critical need to help reduce congestion, collisions and improve overall freeway operations through the Devore Interchange, especially during peak afternoon and weekend hours when traffic back-ups often extended for miles and caused major delays. The Cajon Pass grade itself rises to an elevation of almost 3,800 feet through the San Gabriel Mountains east to the rapidly growing High

Project Spotlight



Desert area, including the cities of Victorville and Apple Valley.

After years of discussion and planning with local partners, and financing secured, construction on the Devore and Cajon Pass rehab projects began mid-2013. Caltrans opted to use a pilot construction method for both projects known as design-build, in which the contracting firm chosen designs and builds the project. Atkinson Construction of Colorado won the contract to design and rebuild the Devore Interchange. For Cajon Pass, the work was completed in a joint venture between Coffman Specialties in San Diego and Pasadena's Parsons Corp.

This streamlined approach to project delivery was credited for helping deliver each project on schedule and within budget.

Several major improvements were made to improve traffic flow and safety where I-15 and I-215 come together at Devore. They include:

- **Addition of Truck Bypass Lanes** — Two miles of truck bypass lanes were added in each direction to allow slower-moving trucks and vehicles to stay to the right and steer clear of faster-moving traffic passing through the area.
- **Addition of General Use Lanes** — One lane in each direction was added through the project area to reduce congestion and minimize the need for multiple lane changes. The additional lanes also improve transitions in all directions between I-15 and I-215.
- **Interchange Brought Up to Operational Standards** — Local ramp interchanges and connectors were reconfigured and upgraded.
- **Reconnection of Route 66** — A key section of Cajon Boulevard, which is part of historic Route 66, was reconnected between Kenwood Avenue and Devore Road/Glen Helen Parkway. This improvement provides local residents and motorists traveling through the pass an alternate route traveling through the Devore area.



A series of reinforcing steel bars for the new Devore Road overcrossing bridge deck give off an almost water-like shimmer in the afternoon sun. The Cajon Pass and Devore Interchange projects took about three years to complete, and were completed on time and within budget.

The Cajon project reconstructed 50 lane-miles of pavement between the Kenwood Avenue exit ramp and two miles south of U.S. Highway 395, focusing on the two outer lanes in each direction, along with other improvements. The new pavement has a predicted service life of 40 years, with minimal maintenance required, and replaces 1970s-era concrete that had exceeded its life cycle.

- **Replacement of Two Outer Concrete Pavement Lanes, Asphalt Concrete Shoulders and Patched Areas** — The outside two lanes and outside shoulder were replaced for 12 miles in both northbound and southbound directions. The inside shoulders were replaced at various locations.
- **Grinding and Slab Replacement of Interior Lanes** — Inside lanes were resurfaced for a smoother ride. At various locations, selected interior lane slabs were replaced.
- **Ramp Pavement Rehabilitation** — The on- and off-ramps at Oak Hill Road, Highway 138/I-15 junction, and Cleghorn Road were replaced.
- **Roadside Safety Features** — Roadway and safety features were added and/or upgraded, including additional signage, sign reflectivity, and additional metal beam guardrail.

- **Future Median Striping Features** — Future center median permanent striping was added to accommodate 12 miles of high occupancy vehicle or toll lanes in the future.

The Cajon project contractor also had the additional challenge of replacing damaged pavement without disturbing the area outside of the roadway shoulders. A significant portion of the I-15 through the Cajon Pass lies within the boundaries of the San Bernardino National Forest, and Caltrans did not have clearance to work outside the state right of way.

That restriction led to innovative traffic control strategies that kept construction on schedule, such as 55-hour lane closures, creation of construction islands, crossover lanes, and reversing lane flows by using moveable barriers to accommodate rush hour traffic.

Although complete traffic data is not yet available due to the recent completion of the projects, traffic reports show that bottlenecks that developed at the I-15/I-215 interchange have been mostly eliminated. **MM**

Source: Tyeisha Prunty, Public Information Officer, District 8



Caltrans photos by Jonathan Den Hartog

The Devore Road overcrossing bridge deck is lifted into place prior to the concrete pour as part of the interchange construction.



Precast bent cap beams are laid atop of bridge columns for what would be northbound I-15 to the southbound I-215 connector bridge.