



CALTRANS NEWS

February Issue 2015

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News



New traffic cones, like the one at right, will be purchased through the next contract and will replace cones that don't meet standards.

New Environmentally Friendly Cones Will Be Easier on the Wrists

*By Gordon Wang P.E., Maintenance Safety Engineer
Division of Maintenance*

New ergonomic, environmentally friendly traffic cones are on the way.

All U.S. traffic cones look alike because their color and shape are regulated by the Federal Highway Administration standards. But Caltrans cones are unique in many ways. Caltrans cones are 10 pounds, while most cones in the world are seven pounds, which can be blown over by semitrucks at freeway speeds. If cones are too heavy, they can cause strains to employees' wrists, so we keep ours under 12 pounds.

Can you imagine sitting in the cone truck bucket with one foot above the pavement while traffic speeds by inches beyond the reach of your fingertips? Meanwhile, you have to grab cones, set them down and make sure they land upright in a perfectly straight line. What a gut-wrenching experience. Yet our crews have to do that day in and day out.

So how can we make our crews' job safer and easier? Can new cones be designed better? We were asked to make the weight of the cones more consistent, and their bases smaller to fit into the cone trucks better. We went to the cone manufacturer and asked them what they can do for us. They showed us a European-style cone that had a recess on top for better ergonomics. We liked that feature and asked them to make one that weighs 10 pounds and will stack on Caltrans' existing cones. The manufacturer made a prototype for us and a new Caltrans cone was born.

The new

cones have a black base made of recycled material that makes up about 70 percent of the weight of the cone.



The new traffic cone, right, features a recessed tip for better ergonomics than the current cones.

That means the new cones are 70 percent recycled. The corners of those black bases are more rounded and fit our cone trucks perfectly, following suggestions made by our Maintenance crews. Lastly, a recess is molded into the cone top so our employees can grab onto them better and reduce possible injuries. We also revised the specification to require less weight variation among cones.

The timing was perfect. The Caltrans cone contract has recently expired, leaving Caltrans with enough stock to supply our crews for a couple more years. A pilot project to improve safety in the field showed the new cone fit the criteria perfectly. We assembled an elite team of Caltrans staff to conduct this pilot project and 700 cones were sent to districts for field testing. From the Division of Maintenance, District Liaison Patti-Jo Dickinson and statewide Safety Manager Theresa Drum identified districts and crews who could test the cones in the field. From the Division of Engineering Services, Material Engineer Lisa Dobec started inspecting and testing the cones in the laboratory. She also led changes to the Caltrans traffic cones specification.

Within months, the new cones passed specification review and field testing. Our crews loved the new features and made sure the new cones work with the old cones without any problems. We saved months of testing by trying the new cones in the lab and field simultaneously. Next, Division of Traffic Operations Traffic Engineer Devinder Singh reviewed the cones for compliance. He made sure the new cones meet federal standards and approved the new cones as official traffic control devices. With all the regulatory work done, it's time to start the purchasing process.

The California Highway Patrol, Department of Forestry and Fire and other state departments also use cones. Due to the high cost of such a purchase, this contract is administered by the Department of General Services (DGS). The Caltrans Division of Procurements and Contracts (DPAC) is responsible for working with DGS to ensure the contract is awarded with the correct specification and meets Caltrans' needs. Analyn Deloso in DPAC worked diligently and made sure the contract was awarded in a timely fashion. The new contract was recently awarded to include the new cones and it was actually a lower contract price compared to prior contracts.

The entire project took less than a year from prototype to contract awarding. It was only possible through the leadership of the office chiefs who allowed their staff to expedite this project and worked together to make the entire process move seamlessly and swiftly.

The "same old cones" are no longer the same. They are more environmentally friendly, more ergonomic, better fitted to cone trucks and easier to set up and retrieve. Best of all, we achieved

all of those goals while saving taxpayers' money. We use the cones to direct traffic in work zones, and we hope our new traffic cone project will lead the way in many improvements for safety, sustainability, and efficiency in our work zones and the entire transportation system.

This project is a testament to our new mission and the vision of a performance-driven, transparent and accountable organization that values its people, resources and partners, and meets new challenges through leadership, innovation and teamwork.

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