



CONSTRUCTION • DESIGN • ENGINEERING SERVICES • ENVIRONMENTAL • PROJECT MANAGEMENT • RIGHT-OF-WAY



Rick Land, Chief Engineer

“Open to Traffic”

The Department’s Mission and Vision Statement, “Caltrans improves mobility across California,” and our new slogan, “We’re here to get you there” provide the public clear indications of what we do as an organization. For those of us in Project Delivery, we can tell people we meet on the street that our job at Caltrans is to deliver projects that improve transportation. That’s our role in support of the Department’s mission. From the public’s perspective, the delivery of projects means open to traffic and ready to use.

Construction of a transportation improvement and its opening to traffic is, then, the ultimate goal of Project Delivery. Creating the best design, securing necessary rights of way, and obtaining the necessary permits are important steps in getting those improvements made.

But it is the construction of the project that the public sees, and it is at this phase of project delivery that Caltrans’ image is either enhanced or diminished.

Over the past six months, Caltrans has consistently had over 600 projects with a combined contract value of over \$10.5 billion under construction at any given time – the largest construction value in the Department’s history. These projects vary from the very large, such as the Bay Bridge replacement projects, to minor B and emergency projects such as the McArthur Maze recovery and the Truck Tunnel restoration projects. What makes a project a success is not its size but the quality of the work that has gone into its preparation.

We are all challenged to meet the delivery commitments in the Contracts for Delivery and the accountability requirements of Proposition 1B. Project Delivery must not only deliver projects by the Ready-To-List (RTL) for advertising date, but also ensure delivery of quality products that will enable construction to proceed on time, within budget, and with the least impact possible to the traveling public. It takes teamwork to deliver a quality project *to* construction – and that teamwork must continue *through* construction if we want the project to be a success.

Examples of Project Delivery teamwork can be seen in the 80/580/880 McArthur Maze reconstruction and the I-5 Truck Tunnel restoration projects. Structures Design worked with both Maintenance and District 4 and 7 functional units to assess the damage and develop a scope of work. They then worked cooperatively to develop design requirements and a set of plans and specifications. Office Engineer then prepared special advertising processes and worked with District Construction and Civil Rights to arrange a pre-bid walk-through and a meeting between prospective prime contractors and small businesses. Finally, design and construction staff worked closely with the contractor during the actual construction; together, we returned the use of those facilities back to the public in a matter of days, not months. The focus and work of the whole team through to construction complete, while maintaining quality, was excellent.

Although these were emergency projects and therefore exceptions to the usual processes, they do illustrate the benefits to Project Delivery of teamwork and looking at a project in its entirety – planning, environmental, surveys, design, right of way, and construction – instead of as separate components.

When a project is going through the development phase, the entire

Project Delivery Team should be focused on the construction phase and constantly considering *how* it will be constructed, in order to effectively meet the project’s purpose and need, avoid costly construction delays and help ensure that the project will be “open to traffic” as planned. Things that should be given particular attention include:

- *Staging and traffic handling.* Consideration during the planning and Project Approval and Environmental Document (PA&ED) phases of project development may allow alternative designs or strategies that would mitigate or avoid traffic impacts. Limited work windows, detours, and other limitations on work due to traffic conditions will increase both the time and costs in constructing the project.
- *Constructability and value analysis reviews.* All functional units should attend these reviews, especially construction and maintenance. The review schedule should allow sufficient time to address identified challenges, including consideration of innovative solutions.
- *Working with our resource agency stakeholders to ensure the project is delivered while still preserving, if not enhancing, the State’s assets.* This includes analysis of project impacts and determining solutions to address those impacts. The solutions should be developed with the participation of Design, Construction, and possibly

Office Engineer personnel to ensure that the resulting commitments are constructable, are understood by all, and can be adequately described in contract documents to best enable their implementation.

- *Identifying and providing resources for all functional units to be engaged during pre-construction activities and after construction starts.* The involvement of construction staff before contract award is essential to the efficient development and delivery of projects; this involvement must be incorporated into work plans from the start. Conversely, the involvement of the rest of the project delivery team after contract award is also essential to getting the project constructed. When issues arise during construction, resolution of those issues must be a top priority for the entire team; all members of the team must stay engaged until the project is constructed and the necessary project closeout work is completed.

As part of the Governor’s Strategic Growth Plan, Caltrans and the construction industry have also been working as a team to improve the delivery of projects through what is called the Industry Capacity Expansion (ICE) effort. Although the Division of Construction administers the ICE program, it involves individual and group efforts from most Caltrans functional units. Through this effort, Caltrans is:

- Enhancing partnering relationships with contractors.

- Developing new specifications to make construction more efficient in time and cost.
- Working with Civil Rights, external agencies and industry to increase the number of small businesses that would bid on Caltrans projects by removing or lowering insurance and bonding barriers, and improving pre-bid outreach.
- Working with the US Bureau of Land Management, the Department of Conservation, and others to make more aggregate sites available, in order to provide necessary aggregates at lower costs.
- Developing specifications to increase the use of recycled materials in construction.
- Developing new tools for estimating project costs.
- Developing new insurance tools that will protect Caltrans based on quantified risks, and expand alternative insurance options to present less of a roadblock to contractors who want to bid on Caltrans work.

As I continue to emphasize, teamwork is the key to successful project delivery. That teamwork must continue throughout the life of the project. We must remember that “construction does not start with Contract Award” and the ultimate goal for all of us is an efficient, effective transportation improvement project that is *open to traffic*.

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<http://pd.dot.ca.gov/index.asp>