

# Project Delivery Process Tested

## Construction Manager/General Manager Pilot Shows Progress



Caltrans photo by Bill Hall

Nearly 600 controlled charges were used to implode one of the foundations of the old Bay Bridge in 2015. The contract for the demolition project was reached using the Construction Manager/General Contractor Pilot Program.

A pilot program to bring a contractor into the project delivery process much earlier than the traditional method for certain projects is showing early promise, according to a Caltrans report on the Construction Manager/General Contractor (CMGC) Pilot Program submitted in November to the Legislature.

The CMGC Pilot Program, established by AB 2498, allowed Caltrans to use this trial procurement method for up to six projects beginning in January 2013. The law required at least five of the six projects to have a construction cost of more than \$10 million.

The CMGC program is an alternative to the traditional design-bid-build process for highway improvement construction. Under design-bid-build, construction on any part of a project cannot begin until an agency develops complete plans and specifications for the entire project, places the contract out for bid, and awards the contract. The general contractor chosen has no involvement during a project's development.

Through the CMGC program, Caltrans hires a construction manager/general contractor to provide input during a project's design process. During the

design phase, the construction manager advises on scheduling, pricing, phasing and other factors as a way to lower project costs and head off delays.

At an agreed-upon point (typically at 90 percent design completion), the agency and the construction manager negotiate a guaranteed maximum price for the construction of the project based on the scope. If the price is acceptable to both parties, a contract is executed for construction services, and the construction manager becomes the general contractor. If an agreed-upon price cannot be negotiated, the contract will be awarded via the typical design-bid-build process.

Of the six projects chosen as part of the CMGC pilot program, one construction contract has been completed (San Francisco-Oakland Bay Bridge Foundation Removal – bid package 1), and four construction contracts have been awarded (Mariposa 140 Ferguson Slide Restoration – rock debris removal, SFOBB Foundation Removal – final bid package, Fresno Highway 99 Realignment – early work bid package and Fresno Highway 99 Realignment – final bid package). The status of all six projects are listed in the table on page 38.

Caltrans project teams are tracking potential innovations and cost savings identified by the contractor during the design phase. Caltrans estimates that the CMGC process yielded cost savings of about \$15 million for the first stage of the SFOBB Foundation Removal due to input from the construction manager/contractor during the design process. In addition, the contract was completed on time, and a new method of demolition was utilized on which Caltrans had no prior experience.

The new process has produced its set of challenges, the report noted, including the need to develop new documents and processes. Caltrans developed its CMGC processes and contract documents based on best practices from other state departments of transportation with mature CMGC programs. Caltrans also solicited industry comments on the contract documents and processes. After each procurement, Caltrans provides debriefings for each proposing team. This allows an opportunity to share the strengths and weaknesses of their submittals, as well as feedback on the selection process.

Another challenge identified so far is the reconciliation of differences in estimates between Caltrans us-

ing historical bid-based data and the contractor using a production-based approach in their respective estimates. Consequently, Caltrans has hired an Independent Cost Estimator (ICE) to assist in the reconciliation process of the non-binding “Opinion of Probable Construction Costs” submitted at different design stages of the project, and the guaranteed maximum price.

Based on Caltrans’ experience to date, Caltrans considers the use of an ICE as a best management practice for the CMGC process.

To this point, comments from industry have been extremely positive and supportive of the CMGC Pilot Program, the report noted.

Caltrans will continue to identify challenges and best practices as the projects move towards completion. In addition, Caltrans was given authority by AB 2126, signed into law by Gov. Edmund G. Brown Jr. in September 2016, to apply the CMGC process to another six construction projects. MM

*Source: Caltrans Annual Progress Report – Construction Manager/General Contractor Pilot Program*

## Construction Manager/General Contractor Pilot Program Selected Projects

Project	Description	Estimated Cost	Status	Stage of Completion	Estimated Date of Completion
Foundation Removal	Remove existing marine foundation	\$130 million	Awarded to Kiewit/Manson A Joint Venture	One construction package completed. The second and final construction package awarded and under construction.	Dec. 2018
Freeway 99 Realignment	Realign Route 99 to accommodate High Speed Rail	\$111 million	Awarded to Granite Construction Company	One construction package awarded and under construction. The second and final construction package awarded.	March 2018
Reconstruct Interchange	Reconstruct Barton Road Interchange	\$79 million	Awarded to Myers-Rados, A Joint Venture	Preconstruction Phase	Mid-2018
Southbound 58 Upgrade	Convert 2-lane conventional highway to 4-lane expressway	\$158 million	Awarded to Kiewit Infrastructure West Co.	Preconstruction Phase	Mid-2020
MPA 140 Ferguson Slide Restoration	Construct 2-lane highway on new alignment	\$52 million	Awarded to Myers and Sons/RL Wadsworth Joint Venture	Preconstruction Phase. One construction package awarded and under construction.	Fall 2018
I-5 North Coast Corridor (27 miles)	Improve I-5, Rail, and Transit in the North Coast Corridor	\$606 million	Awarded to Flatiron-Skanska-Stacy and Whitbeck (FSSW) a Joint Venture	Preconstruction Phase	Summer 2020

*Source: Annual Progress Report – Assembly Bill 2498 – Construction Manager/General Contractor Pilot Program*