

**Oregon Department of Transportation  
Interim Evaluation Report No. 4 for SEP-14 (Special Experimental Project No.14)**

August 6, 2012

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**Project: I-5: Willamette River Bridge (Lane County), Bundle 220  
Construction Manager / General Contractor (“CM/GC”) Method  
Key Number 14259  
ODOT Contract No. C13480**

## **Introduction**

The Oregon Department of Transportation (ODOT) submits this fourth interim evaluation report under the provisions of Special Experimental Project No. 14 (SEP-14) for the use of Construction Manager / General Contractor (“CM/GC”) contracting for transportation projects. The purpose of this interim evaluation report is to fulfill the reporting requirements of the Work Plan for SEP-14 regarding the evaluation of the CM/GC contracting method as provided by ODOT to the Federal Highway Administration (FHWA) on May 17, 2007.

This interim report includes a brief scope of the CM/GC project, a brief history of the contracting process, and summary of the effects CM/GC has had on work performance and monitoring, quality, completion time, cost, claims, and other contract administration or legal issues. This report will be followed by separate reports on an annual basis until completion of the experimental project, with a final report submitted within 90 days of completion and ODOT acceptance of the project.

The CM/GC contracting method is an innovative process which is being considered and utilized by State transportation agencies for construction of highways, buildings, and bridges. CM/GC may be defined as an integrated team approach applying modern management techniques to the planning, design and construction of a project in order to control time and cost, and to assure quality for the project owner. The team consists of the Agency (ODOT), the A&E (retained by the Agency), and the CM/GC. The A&E is selected utilizing a standard qualification-based consultant selection process, and the CM/GC is selected utilizing a qualification-based Request for Proposals (RFP). The CM/GC contract includes both Pre-construction and Construction Phase Services.

## **Scope**

The scope of work for this project is as follows:

The I-5 Willamette River Bridge (Lane County), Bundle 220 CM/GC project is replacing two (2) bridges on Interstate 5 (I-5) in Lane County, Oregon; the 1800-foot Willamette River Bridge, and the 100-foot Canoe Canal (a.k.a. “Patterson Slough”) Bridge. The Agency built detour bridges at both locations in 2004 and the existing bridges have been removed. Both detour bridges were removed as part of this project. I-5 runs generally north-south in the project area, forming the boundary between the cities of Eugene to the west and Springfield to the east. The project area is located within the urban growth boundary of both cities.

In addition to crossing the Willamette River, the new bridges cross pedestrian paths, Franklin Boulevard, two (2) Union Pacific Railroad (UPRR) tracks, and the northbound I-5 to westbound Franklin Boulevard off-ramp. With I-5 being the West Coast's major trade corridor and one of the top freight routes in the nation traffic flow has to be accommodated on all of these facilities during construction.

The new Willamette River Bridge is being constructed at the same location as the old Willamette River Bridge, but requires roadway alignment adjustments in the immediate project area as the bridge design dictates. The new Willamette River Bridge is designed to eventually carry up to six (6) lanes of traffic (three lanes in each direction) to accommodate the 20-year design for future traffic needs. The Canoe Canal Bridge is also designed to eventually carry up to six (6) lanes of traffic to accommodate the 20-year design for future traffic needs. The new bridges will keep I-5 traffic moving safely over the Willamette River for the next 100 years and significantly protect and improve the river's health. As part of our commitment to the Eugene-Springfield communities, ODOT also is improving the park lands adjacent to the bridge to enhance the natural habitat and improve mobility for park path users.

The new targeted contract completion date for the project is January 31, 2015. Additional bike path and park restoration work will continue into 2014. ODOT funding sources earmarked for this project are Oregon Transportation Investment Act and Federal SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users) earmark funds. Project estimated cost is \$154 million for construction and the total project cost is estimated to be approximately \$206 million dollars.

The A&E contract was awarded in May 2008 and the CM/GC contract was awarded in June 2008.

### **Summary of the effects CM/GC method has had on:**

#### **Work Performance and Monitoring**

The CM/GC process has enabled the project team to work side by side to track the work progress. The CM/GC has a complete 3D model of the project site, which not only allowed the project team to verify that the engineer's estimated quantities were accurate during the bidding process, but it also worked as the baseline for monthly quantity checks. The 3D model as well provides the means for controlling GPS controlled grading equipment. On a typical project the Owner has to either estimate the percentage complete or they have to have their surveyors gather the data and calculate the volumes based on average end areas. Utilizing 3D modeling the Owner is able to not only gather the data, but is also able to print out 3D drawings showing the area or volume being calculated along with the associated quantities. The Owner can then shoot a few confidence points to verify the data being presented is accurate.

The CM/GC being co-located on the site with the Owner allows for much easier interaction within the project team. It is a lot easier to bounce ideas back and forth or to cut off potential problems without ever writing a letter or sending an email. From the CM/GC and ODOT's stand-point being co-located significantly enhanced the team's ability to identify and resolve critical issues that otherwise would have negatively impacted work performance.

## Quality

The atmosphere of the project fosters collaboration, which creates a team that looks out for each other. The Team works very closely with DMWESB contractors to make sure that they are spending the time up front to get their work planned before arriving on site. This includes getting the appropriate approvals needed before they install their work product and providing necessary documentation.

## Completion time

The south bound bridge was completed and all traffic shifted onto it in August 2011. The detour bridge was removed. The new north bound bridge is under construction and is scheduled to open to traffic in fall 2013. Removal of the work bridge, construction of a bicycle and pedestrian viaduct along the south bank and park restoration will continue through 2014.

## Claims

No claims have been initiated at this time. Team collaboration in problem resolution has avoided potential claims.

## Other contractual administration or legal issues

None occurred during this reporting period.

## Lessons Learned

ODOT continues to assess the CM/GC processes, including identifying national best practices and lessons learned. With this on-going assessment lessons learned will be identified and documented through the course of the project and cannot be fully evaluated until the project is complete. A final account of all lessons learned will be included in the final SEP-14 evaluation report.

## Reporting

Interim SEP-14 evaluation reports will be prepared and submitted to FHWA on an annual basis (on or near June 16<sup>th</sup>), until the completion of the experiment. These reports will focus on the effects on work performance and monitoring, quality, completion time, cost, claims, and other contract administration or legal issues.

The final SEP-14 evaluation report will be prepared and submitted within 90 days of completion of the experiment and ODOT acceptance of the project. The final report will contain an overall evaluation of the project innovations, along with suggestions, lessons learned, and recommendations pertaining to the use of the CM/GC project delivery and contracting method on other projects.