

Willamette River Bridge: THE BRIDGE OF SIZE

In June 2008, when the Oregon Department of Transportation (ODOT) selected Hamilton Construction as the CM/GC for the Willamette River Bridge (WRB) between Eugene and Springfield it was notable for several reasons: not only is it the largest single project ever sponsored by ODOT, but at a cost of \$150 million, the WRB is also two and a half times larger than any project Hamilton has ever undertaken.

Perhaps most important of all, the WRB marks the first time the state agency has used the alternative delivery system to low-bid known as CM/GC (Construction Management/General Construction). CM/GC redefines construction decision making by selecting a contractor who can help problem-solve earlier in the process. By selecting Hamilton, ODOT created a strategic partnership based on their trust in our professional credibility. It was a huge compliment to the abilities of the Hamilton team.

OBEC Consulting Engineers, Eugene, with subcontract assistance from TY-Lin International out of Salem, designed the early

phases of the project.

In summer of 2009 work began and Hamilton's crews rose to the task of installing three acres of work bridge, comprised of more than two million board feet of 12' x 12's, and over 130,000 sq. ft. of plywood. It was a busy summer with all of this completed within three months. Demolition started soon after, and the old decommissioned bridge removal was completed right after the first of the year in 2010. In fall of 2010, 64,000 sq. ft. of additional work bridge was added.

In 2010 and 2011, work will focus on the construction of two spans of dual arches, one 390 ft. and the other 416 ft., along with a 869 ft. long box girder. All this work will be done by Hamilton crews. There will be various retaining walls, another 180 ft. long structure called Canoe Canal, and roadwork for the I-5 Southbound side that will be completed by subcontractors. During the first construction phase, a Hamilton crew size of 45-55 people will accomplish this big task.

Currently, the majority of southbound road work is done



Hydraulic mechanisms at WRB use canola oil instead of petroleum-based products to reduce risk to the environment. The amount of oil it takes to cook your Holiday turkey will keep this impact hammer going for about six months. (from left) Veril Humbert and Mike Sheeley running the Hydraulic Impact Hammer while building work bridge.

and work proceeds on box girders and jacking the #2 arch span.

In late 2011 and 2012, a major traffic switch will put both lanes of I-5 Northbound and Southbound onto the newly completed southbound structure. At that point, the detour bridge Hamilton built in 2003 will start to be dismantled for the construction of the new northbound arch and box girder structure which mirrors the southbound structure. This will be work for the Hamilton crews through fall 2013.

In December 2013, the contract time will be up and both structures are to be completed. With an estimate of over 450,000 man-hours to reach completion, this will be the biggest project Hamilton Construction has ever taken on and will accomplish. So let's reinforce to ODOT that Hamilton Construction will be the CM/GC of Choice for future projects through working safely, our quality of work, and our sensitivity to the environment. ■

As one observer recently quipped, "At WRB, we've got so many environmental safeguards in place it's like wearing suspenders and two belts to make sure your pants don't fall down."

All equipment used on the work bridges are running on biodiesel and on top of that, wearing giant "diapers" to catch any leaks. Hydraulic jacks are using canola oil instead of petroleum-based products. If any oil still manages somehow to escape, it will be caught in a drainage system of gutters that run underneath the work bridge which captures all run-off and sends it through a filter and settling pond before release. These are just a few of the innovations Hamilton has brought to the job. Other examples of earth-friendly thinking include a hydro acoustic bubbler – the Bubble Curtain – that protects fish by dampening noise and recycling of bridge demo materials – including 500 truckloads of old steel re-bar. ■



WRB in November