



Advancing Women in Transportation
Portland Chapter

2013 Project of the Year Nomination Form

Project Name: OR 213/I-205 to Redland Road Crossing

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Nominations should address the following:

1. Describe the project and its successful outcome. [defined as a project open for use, a Record of Decision for an EIS, or a final recommendation to a decision-making body for a study project]

This project started as part of off-site improvements associated with a large commercial development in Oregon City. The conceptual phase of this project established the preferred jughandle configuration after developing more than 10 interchange concepts at the beginning of this project. The project team guided all involved parties (ODOT, Clackamas County, the City of Oregon City, and other stakeholders including private property owners and Clackamas Community College) through a public involvement process to establish the preferred alternative. The consultant team was instrumental in assisting the City to secure construction funding for this \$22 million project through the Jobs and Transportation Act (JTA).

The OR 213/I-205 to Redland Road Crossing project—also known as the Highway 213 (OR 213) Jughandle

Improvement—is as a set of constructed improvements commissioned by the City of Oregon City that result in a grade separation of Washington Street and Clackamas River Drive from OR 213. These facilities are connected via a realigned local roadway



Figure 1. Original 2007 Jughandle sketch.

(Washington Street) crossing under OR 213 and are equipped to serve pedestrian, bicycle, transit, vehicular, and freight goods movement. The at-grade intersection of OR 213 with Washington Street and Clackamas River Drive has been reconfigured to operate as separate, signalized right-in/right-out connections. OR 213 has been improved to a six-lane divided facility that includes raised median control for the entire segment. The project was substantially completed in Fall 2012, with additional refinements such as landscaping wrapping up in early 2013.



Figure 2. The completed OR 213/I-205 to Redland Road Crossing project.

2. Did the project support one or more key community values, such as improved accessibility to key services, employment or other opportunities?

This project was strongly supported by the City of Oregon City, Clackamas County, and representatives of ODOT that have all been involved in its development. The City of Oregon City has successfully secured partial federal funding through an earmark obtained by Representative Hooley.

Funding this project had several significant benefits in the near-term and the longer-term.

- The project improved safety, alleviated congestion, reduced delay and travel time, increased freight mobility, and provided residual capacity for continued growth in travel demand on local, regional, and interstate facilities.

- The additional capacity on OR 213 brought by the improvements has resulted in significant employment, cultural, and residential benefits to approximately 100,000 residents of Oregon City and surrounding areas.
- The project stimulated near-term construction job growth.
- More importantly, the project supported construction of more than \$250 million of development in Oregon City's Regional Center, providing as many as 400 permanent office and 700 permanent retail jobs and more than 200 residential units. This long-term economic benefit was in jeopardy, if this project was not funded.
- The feedback the City has received from the public following the completed construction has been very positive.
- With improved access to Oregon City off OR 213, there is potential for redevelopment, especially the decommissioned landfill area that has been investigated by numerous developers with no success due to the costs associated with the off-site improvements on top of the on-site construction costs on a landfill area.

3. Did the project team have to overcome any obstacles to provide a service or build a project?

Accelerated Bridge Construction (ABC)

The greatest challenge presented by the project was how to build new infrastructure in an area that experiences an average daily traffic (ADT) count of 65,000. In order to reduce the impact to the surrounding community during construction, the project contractor—Mowat Construction Company—built the new 130-foot bridge superstructure next to OR 213 starting in the fall of 2011. On March 22, 2012 at 8:00 PM, OR 213 between Washington Street and the northbound I-205 on/off-ramps was closed for five nights and four days.



Figure 3. The bridge was built next to the existing roadway and moved into place during a four-day closure of OR 213.

Extensive public involvement, including a newsletter and webpage featuring a live construction camera, was implemented prior to and during the closure to ensure that all roadway users were aware of the closure. The entire process—which included excavating approximately 433 cubic yards of asphalt and between 8,000–10,000 cubic yards of material under the existing roadway and moving approximately 3.2 million pound bridge into place—was completed on time by the afternoon of March 27, 2012.

The ABC allowed Mowat to maintain unrestricted day time traffic on OR 213 during all but four days of the nearly two-year construction timeline; it also shorted the project construction by approximately six months. Traditional bridge construction methods such as staged construction

would have required unacceptable traffic impacts that would have closed at least two travel lanes on OR 213 all day and night for 12 to 16 months. A traditional detour structure was also prohibitive due to the close proximity to both Union Pacific Railroad and ODOT's I-205 interchange bridges at exit 10.

To support the ABC, the consultant team worked with the City of Oregon City, Clackamas County, emergency responders, and ODOT to create an Incident Action Plan. This plan clearly outlined the objectives of the roadway closure; established a Communication Plan for the internal team, as well as a Media Plan to get the word out to the public; established contingencies for any possible interruptions or issues; and clearly delineated a schedule of activities. By including all affected agencies in the development of the Incident Action Plan, the consultant team ensured that operations would run smoothly in almost any possible situation.



Figure 4. Traffic was rerouted to local streets during ABC.

Decommissioned Landfill

The project area overlapped a decommissioned landfill, which challenged the consultant team to find creative solutions to minimize contamination and promote environmental mitigation. The solutions included:

- Eight shafts were drilled in the landfill to penetrate and found on competent soil below; six of these were between 60–80 feet deep.
- 500 tons of trash and 20,000 gallons of contaminated water were removed to construct the foundation of the improvements.
- Cement-Bentonite-Soil trench dams were constructed to prevent gas migration in new utility trenches.
- Structure foundations were constructed below the landfill to prevent settlement. To span shallow landfill areas, roadways were constructed with stone embankment and geotextile fabrics and ductile iron pipe was used in place of CMP and concrete pipe.



Figure 5. Much of the project area was built atop a decommissioned landfill.

4. Please describe how the project made a difference in the lives of its users.

The project brings significant and immediate traffic operational and safety improvements to one of ODOT's busiest interchanges on the I-205 corridor. In addition, the grade-separation of Washington Street-Clackamas River Drive with OR 213 provides multimodal connectivity without conflicting with the OR 213 expressway. The jughandle configuration replaces a previous large signalized intersection with exclusive left-turn (some double) and right-turn lanes. The large intersection exposed pedestrians and cyclists when crossing the intersection. The project team explored a range of alternatives and the jughandle provides a grade separated crossing as well as separated multi-paths eliminating pedestrians and cyclists to cross an expressway. The improvement accommodates 20-year growth within the project vicinity and as well as regional traffic. Therefore, the project was strategically important for ODOT, Clackamas County, Metro, Tri-Met, and Oregon City, because it provided additional capacity of 20-30 percent after build-out of the planned development within the project influence area.

5. Did the project feature multi-modal collaboration, public/private partnerships or unique design or funding processes? Please describe.

The project was originally conceived in 2007 by a private party to be completed in support of a development project. Kittelson & Associates, Inc. (KAI) worked with the developer and the City of Oregon City to create preliminary concepts for improvements

at the interchange. When the developer decided not to pursue the project, the City and KAI were so invested in the value the improvements would bring to residents, commuters, and visitors that they decided to pursue public funds to complete the project. KAI, the City, and OBEC Consulting Engineers were ultimately successful in securing \$22 million through the State of Oregon Jobs and Transportation Act (JTA), with additional funds coming from the City and federal congressional appropriations. The project was chosen for JTA funds due to the significant employment, cultural, and residential benefits that additional capacity on OR 213 will bring to approximately the residents of Oregon City and surrounding areas.

6. Did the project include women in meaningful leadership roles?

The joint effort of Kittelson & Associates, Inc. (KAI) and OBEC Consulting Engineers (OBEC), acting as consultants to the City of Oregon City from the beginning of this project through the end, was instrumental to the success of the OR 213 Jughandle project. The key aspects of the project that were managed by the lead consultants include:

- **Kittelson & Associates, Inc.** – traffic operations analyses, traffic control, traffic signal design and timing, intelligent transportation systems applications, illumination, and signing and striping design
- **OBEC Consulting Engineers** – surveying; roadway, utility, bridge, structural, and stormwater design; design specifications; and utility and railroad coordination; and project management and inspection during construction phase



Additional work was completed by an outstanding team of subconsultants, including:

- Mason, Bruce & Girard – public involvement and environmental permitting
- GreenWorks – landscaping and irrigation
- Shannon & Wilson, Inc. – geotechnical and hazardous materials
- Heritage Research Associates – archeological and historic resources
- David Place – construction expert
- Michael Minor & Associates – noise and air quality analysis
- Universal Field Services – right-of-way acquisition

In particular, the following women contributed significantly to the project's success:

- The project was originally conceived when Nancy Kraushaar—who has since moved to the City of Wilsonville as their Community Development Director/City Engineer—was the Public Works Director for the City of Oregon City. Ms. Kraushaar was crucial in the effort to find funding for the project and in overseeing the development of project alternatives. Partially due to her involvement with this project, Ms. Kraushaar received the 2012 National

American Public Works Association Professional Manager of the Year award in the transportation category.

- Aleta Froman-Goodrich was also involved in the project from the start and took over as its project manager after Ms. Kraushaar's departure. Ms. Froman-Goodrich was selected as Oregon City's City Engineer this January.
- Amy Jones, PE led the waterline and sanitary sewer relocation design. This work included the replacement of existing expansion joints through the UPRR bridge structure that were failing in their previous condition, design of approximately 3500 feet of waterlines and commercial water services, and 600 feet of sanitary sewer lines. Ms. Jones was also the stormwater management quality control engineer for this project. Major stormwater treatment facilities were incorporated into the project design to meet stringent City and DEQ requirements for water quality.
- The significant public involvement effort undertaken in support of the accelerated bridge construction was overseen by Kate Parker of Mason Bruce Girard. Much of the good will surrounding the completed project is a direct result of Ms. Parker's ability to keep the public informed and engaged.