

INTRODUCTION

Purpose

The following Construction Phase Project Management Plan (PMP) provides guidance and direction to allow for the successful construction management and completion of Contract 7936: I-5/SR 18/SR 161 Interchange Improvements. This PMP is a living document that will be updated regularly to record project changes and lessons learned as they occur throughout the life of the project.

PROJECT OVERVIEW

Scope

This project is designed to improve the I-5, SR 18 and SR 161 interchange connection in Federal Way. The reconstruction involves building a new two-lane flyover ramp connecting westbound SR 18 to southbound I-5 and rebuilds the westbound SR 18 to northbound I-5 ramp. In addition, an exit ramp connecting the new flyover ramp to SR 161 at S. 359th Street will be constructed.

Constructability considerations for the project include:

- Noise Variance Conditions
- On-Site Health Hazards
- Wetlands and Water Quality
- Fish and Wildlife
- Air Quality/Fugitive Dust Control
- Permits and Licenses
- Load Limits for Haul Routes
- Temporary Water Pollution and Erosion Control
- Spill Prevention
- Protection and Restoration of Worksite
- Mitigation Sites
- Public Convenience and Safety
- Traffic Control
- Construction and Maintenance of Detours
- Pedestrian Control and Protections

Project Specifics

This project provides for the improvement I-5 in King County, Milepost 140.64 to MP 142.95, SR 161/SR18 Interchange Improvements, by clearing and grubbing, grading, construction storm drainage systems,

bridges ES-01 and WN-01 retaining walls, landscaping, paving with HMA, installing water lines, precast and cast-in-place barriers, guardrails, pavement markings pavement signing, traffic signals systems, illumination systems, Intelligent Transportation System (ITS) erosion control, traffic control and other work.

Project Benefits

- Safety: Improvements to the I-5, SR 161 and SR 18 interchange will eliminate weaving vehicle movements by removing two cloverleaf loop ramps, reducing the number of side-swipe collisions.
- Congestion relief: The project will improve traffic flow at this busy interchange.
- Environmental: To manage storm-water runoff crews will build new and rebuild existing detention ponds. The project includes 22 wetland sites.

Major Milestones

The following construction milestones are critical to complete the contract as planned:

- | | |
|------------------------------------|------------------------|
| • Contract Advertisement (AD date) | April 4, 2010 |
| • Contract Award | June 21, 2010 |
| • Contract Execution | July 8, 2010 |
| • First Working Day | August 9, 2010 |
| • Substantially Complete | August 31, 2013 (est.) |

SCHEDULE AND BUDGET MANAGEMENT

This project was awarded to low bidder Mowat Construction Company in the amount of \$ 55,437,468.66; the total amount authorized including Payable Agreements, Engineering, Contingencies and Vendor Supplied Materials and Miscellaneous Items is \$68,878,955.34. See Appendix A for the Budget Summary.

The schedule and budget plans for the contract are managed in two discrete forms – Baseline and Updates. In addition, short term work planning is managed through the use of look-ahead schedules.

The Baseline Budget is defined as the contract budget at the time of contract award, including planned contract payments, agreements, engineering, and contingencies. It is included here as Appendix A.

The Baseline Schedule required for this project is Type C; it is the original accepted Contractor's schedule, showing contract duration, order of work, and any intermediate time-related milestones with a clear Critical Path. This project was chosen as one of the Earned Value Pilot Projects for the Northwest Region, using the Primavera P6 Scheduler software; by Special Provision, it requires the Contractor to cost-load the activities of the baseline schedule and all required updates, and submit their schedules using the software. The preliminary Baseline Schedule for this contract is attached in Appendix B.

The contractor will provide on a weekly basis a three week Look-ahead Schedule that includes the current week's activities, upcoming work activities and related traffic control. Night-time work activities will be clearly indicated on these schedules.

Once reviewed, look-ahead schedules will be sent to the NW Region Communications and Construction Traffic offices.

Reporting Issues and Change

Once the contract is awarded it is necessary to ensure that the work called for in the plans is completed on time and quantities and expenditures are held to what is in the contract. Should there be any extenuating circumstance why this cannot be done, it is imperative that NW Region Program Management and the Engineering Manager are notified before the contract exceeds the authorized budget or working days, and what will cause this to happen.

In addition, significant contract issues will be reported as they arise to NW Region Management.

COMMUNICATION

During construction, we will continue to hear from project opponents on a large variety of issues. We can expect this feedback will be addressed by communications and project staff, and possibly by contractor employees. Because of this, it is crucial that our responses are consistent and directed to WSDOT communications staff whenever possible.

No surprises

Throughout construction effective two-way communications will minimize the likelihood of surprises to the public and WSDOT executives.

Emergency Communication Plan

In the event of an accident on the project involving either Contractor or WSDOT personnel, or an accident involving severe injuries or a fatality, the following communication protocol will be followed. The same process will be followed, with the exception of providing medical assistance, for other types of on-site emergencies, such as vehicular accidents, significant spills, etc.:

WSDOT representative on site

- 1st - Call 911 (If you are a first responder)
- 2nd - Call Seattle Radio 206 440-4490
- 3rd - Work with the Contractor to have traffic control devices deployed if appropriate
- 4th - Provide emergency medical assistance if appropriate
- 5th - Call your immediate supervisor. If not available, continue calling, following up the chain of command, until you reach someone in person. Seattle radio has personal contact information for all supervisors and managers in the office.

Once this protocol has been followed, the WSDOT field team member does not need to call anyone else except as noted below (i.e. Contractor representative unable to make calls). The Seattle Radio team and your supervisor will make all other calls.

When the State Patrol or fire teams show up on site, they take control of the situation. Follow their direction.

If there is only one Contractor employee present, and that person can't make a call to his/her organization, the WSDOT inspector on site is to call Patrick Barnum at (206) 793 7916; if unavailable, call Meredith V. Daniels (Project Manager) at (206) 423-6003

WSDOT Supervisors

Contact the project engineer, Aleta Borschowa, at (425) 766-2617; if unavailable, contact the assistant project engineer, Mike Askarian, at (206) 331-0104. Make sure that a live person is reached.

WSDOT Project Engineers and Assistant Project Engineers

Contact the engineering manager, Messay Shiferaw, at (206) 399-4292. If unavailable call the appointing authority. Email a synopsis of the situation to the engineering manager, appointing authority, assistant Regional

administrator, and Region administrator. Continue to provide updates as needed.

Contractor

The contractor was given home phone numbers for the project engineer, assistant project engineer, and chief inspectors as well as the number for Seattle Radio. They were asked to call Seattle Radio and one of these people in the event that an accident occurs resulting in the on-site WSDOT representative being unable to make phone calls. The contractor was directed to keep this information confidential.

Communications Team Tools

Task/tool	Lead Team Member	Timing/deadline	Status
Community outreach (Murphy lead)			
Contact groups	Murphy	As needed	Ongoing
Briefings/presentations	Murphy		Underway
Distribute poster/folio	Murphy	As needed	Ongoing
Distribute noise flier	Murphy /Escude	As needed	Ongoing
Fact sheet updates	Murphy	As needed	Ongoing
Project graphics tools:			
Project visualization	Design PEO		Done
Project photos/Flickr posts	Murphy		
Public information tools			
Gov. Delivery alerts	Murphy	As needed	Ongoing
Stakeholder e-mail updates	Murphy	As needed	Ongoing
Project web site updates	Murphy	As needed	Ongoing
WSDOT blog stories	Murphy	As needed	Ongoing
Media relations (Murphy lead)			
News releases	Murphy	As needed	Ongoing
Resp. to media requests	Murphy	As needed	Ongoing
Talking points		As needed	Ongoing
Interview prep		As needed	Ongoing
Internal communications			
No Surprises workshop	Murphy		Done
Blue Bulletin articles		As needed	Ongoing

The communication plan for the project is broken into two sub-areas, Internal and External Communication, and is presented in Appendix C. Both sub-areas acknowledge that the project partners cannot realize their vision nor can the project delivery team attain their mission without a sufficient, timely and accurate flow of information. The items addressed in Appendix C identify what the item is, who is the primary contact, how the information moves and when it happens. We also recognize that effective communication demands effective listening and viewing project decisions from our customer's perspective.

Use new media tools to deliver information:

People today are relying on a great number of sources to learn about their world. Instead of the mainstream media, the public is getting information from special interest Web sites, blogs, message boards and news media such as social networking sites, YouTube, Twitter and e-mail lists. We will explore using these tools to get information about the project to our audiences.

Use the Web as an information hub:

The project Web site will be the information hub for this project. WSDOT will coordinate messaging and project information using this site; it will be utilized as a source of dialogue for newsletters, fliers, e-mails, correspondence, etc.

Tell people early and keep them engaged:

Create general awareness about the project and upcoming construction using face-to-face meetings, phone calls, project Web pages, new media, and media relations.

Tell the construction story as it unfolds:

Engage people by telling them about our progress on an ongoing basis, and how we're addressing some of the unique challenges of this project.

RISK MANAGEMENT

A risk is a known condition or event that has the potential to positively or negatively affect the scope, timely completion, cost, or quality of the planned work. Risk planning involves identifying risks, assessing the uncertainty of occurrence and the severity of the outcome in terms of cost, time or quality should they occur, and determining steps to be taken to avoid, transfer, minimize or manage these potential events.

When risks are identified, they will be placed in the Risk Management Plan worksheet, including response strategies. The Risk Management Plan is included as Appendix D and will be monitored regularly as construction progresses. As additional risk items surface throughout the life of the project, they will be added to the matrix and addressed.

Potential Risks

- Run into underground unknowns (structures, utilities, storm sewers, footings, drain lines, waterlines, etc.) - HIGH
- Water elevation too high at the ponds - HIGH
- Design team does not address critical review comments - HIGH
- Increased Engineering costs - HIGH
- Biennial allocations don't match expenditures - MODERATE
- Changed/new processes and new personnel - MODERATE
- Bid Item 40 Gravel Borrow Including Haul bid price is too low - HIGH
- The barrier atop the retaining wall in the vicinity of the new SB I-5 off-ramp intersection is unsafe and must be replaced - HIGH

Overall risk for this project - HIGH

These risks are described in more detail in Appendix D Project Risk Management Plan.

SAFETY

Safety is a top priority and is everyone's responsibility. The construction office will prepare a site specific safety plan for its employees before any field work begins. Every employee, prior to working on-site, will review and sign off on this plan. The site specific safety plan for this contract is in Appendix E.

Critical Safety Concerns

The following safety concerns include mitigation strategies:

- Errant vehicle enters work zone/closed lanes
 - Traffic control set-up to use concrete barrier to help prevent vehicles from entering work zone
- An item falls while moving an overhead load
 - Pay attention when overhead loads are moving and stand clear

- Fall from either an existing wall or a new replacement wall or the flyover structures
 - Contractor will maintain fall restraint atop walls and structures
- Excessive delays to traffic put Contractor and WSDOT staff at risk for personal injury from angry motorists
 - Maintain public outreach via Communications Office and follow Communications Plan

The **Site Specific Safety Plan** addresses each of these as well as others that may occur.

The construction office will determine each week with the contractor safest locations for inspection and materials testing for upcoming work activities.

Construction office inspectors will attend scheduled contractor safety meetings.

Traffic Control is a major feature for safely constructing this project. One of the main goals in the work zone is to allow vehicles, pedestrians and others to move safely and easily through or around the work areas. Safety of the traveling public is an integral part of our construction operations.

Using engineering and good judgment, our Project Office team will monitor and assist the contractor as needed with the planning and layout of traffic control devices and equipment.

Traffic control plans and procedures will be developed to address specific construction needs for the work operations that are not called out in the plans.

Each week, the construction office and contractor will determine the safest locations for inspection and materials testing for the upcoming work activities.

Construction office inspectors will attend weekly contractor safety meetings.

COMMITMENTS

The field inspectors, in partnership with all project contractors, are ultimately responsible for permit compliance. This team will monitor and

help other teams implement environmental commitments specifically assigned and planned. There will be tools provided to facilitate monitoring of and responsiveness to planned and unplanned events. In the context of our office construction practices and techniques, the Project Office team will enforce the rules and regulations called out in the contract provisions.

The Project Commitments are as follows:

- Geotechnical Conditions
- Washington Department of Ecology Water Quality Implementing Agreement, 1998
- Washington Department of Ecology Compliance Implementing Agreement, 2004
- US Army Corps of Engineers Section 404 Nationwide #23, NWS-2009-181
- Washington Department of Ecology Section 401 Letter of Verification, NWS-2009-181
- Washington Department of Ecology NPDES Construction Stormwater General Permit
- Puget Sound Clean Air Agency Fugitive Dust Agreement, 1999
- Washington Department of Fish and Wildlife Hydraulic Project Approval, 116319-2
- Temporary Erosion Sediment Control Plan Narrative
- Log of Test Borings
- Contract Plan sheets

During construction the team will strive to implement all rules and regulations in an effort to ensure all permit conditions are being satisfied. At any time the field inspectors will be ready to communicate and have joint site visits with other assigned regulatory agencies. If there are violations or non-compliances on the project, we are confident that the inspectors will use effective communication and respond quickly to correct the situation. Furthermore, whenever there is a problem the team will assess the issue and work together with others to explore all available solutions.

ENVIRONMENTAL COMPLIANCE AND AWARENESS

The existing site for construction is currently vegetated with areas of woodland, open grass and 16 (sixteen) designated wetlands. The construction of the project lies in the Hylebos creek watershed. During the wet season temporary surface water channels are formed at various locations; these channels of water flow down the surface of the slopes and into existing drainage ditches. The topography across the site is undulated with some low elevations towards the southeast.

The construction office team will adhere to the construction environmental commitments. Including, complying with the contract provisions of various Federal, State and local rules and regulations, as well as the specific stipulations in the permits issued under these authorities. The teams will comply with WSDOT policies, procedures and standards as well as interagency agreements pertaining to environmental matters. Finally, the team will satisfy the need of the regulatory community and the affected public for an environmentally healthy project.

With effective communication, planning and tools the team will be ready to engage in open communication with our permits regulators in an effort to reduce risk and stay within our environmental commitments. Some of the team's approach for successful environmental Compliances and Awareness are as follows:

- Keeping focus and being proactive for compliance problems and solutions.
- Listening carefully and find the right balance in discussing and promoting ideas
- Communicate regularly the work with teams such contractors, agencies and regulators.
- Ask for help and being respectful at all times during times of conflicts
- Work together as teams and follow the environmental requirements

The following are the most challenging environmental elements:

- Corrington wetland mitigation site
- Temporary and permanent infiltration ponds
- Stream diversion
- Potential for large areas of open ground during wet seasons

The Corrington site presents access challenges, both in getting to and from the site, and in working within it. There is a 9.5 foot wide, 0.3 mile long gravel road that is the sole access to Corrington. There are sensitive areas on both sides of the road, and no impact to these is permitted. In addition, the access road footprint is not within the access easement boundaries for a portion of its length.

There are several private residences that use this road for access. The mitigation site is at the far end. A special provision was written limiting the size and type of equipment that may use the road. Trailers are prohibited. Care must be taken by all vehicles to not leave this gravel roadway, nor drop any construction materials there.

There is shallow surface water throughout much of the mitigation site. In addition, its south portion consists of peat six to eight feet deep. There are also multiple existing wetlands within its borders. The contract plans indicate where construction equipment is allowed. The goal is to minimize disturbance of the site and compaction of soils.

Some of the temporary ponds to be constructed are immediately adjacent to existing ponds that infiltrate offsite water. It will be critical that these two parts have no hydraulic communication between them as the temporary ponds will infiltrate construction water. In addition, care must be taken in the construction of some of the temporary ponds that will later be further excavated to create permanent ponds. The bottom of these temporary ponds must be at their plan elevations so that sufficient excavation depth remains to remove all sediment laden soils when constructing the permanent ponds.

The stream diversion of Hylebos creek must be constructed during the water window, June 15 to September 15. In order to minimize the contract duration, a special provision requires that the diversion be implemented in 2010. It is therefore critical that the contractor quickly submit the stream diversion plan and all reviewers expedite reviews of this document. The actual diversion is not anticipated to be difficult as this is an intermittent stream, and so flows are expected to be minimal during this work.

The contract's total clearing and grubbing area is about 23 acres. With such a large area and long duration (660 working days) contract, it is possible that large areas will be open during wet seasons. A special provision was written limiting the area of ground that can be cleared at one time to that needed for each stage of the contract. Properly managing open ground is going to be a continuous construction team focus.