

March 18, 2014

TO: Project File
FROM: Kris Westersund
SUBJECT: Project Closeout Summary for Columbia River Bridges & Approaches Design Build Procurement – Surveying and Mapping

Executive Summary

This memorandum provides the status of the work for the development of the Columbia River Bridges & Approaches Design Build Procurement, specifically addressing the following technical focus areas:

- **Surveying and Mapping**

This memo overviews the status of the work, outstanding work and next steps, an overview of project history, key decisions, and information on key documents and references. This memorandum, assembled at the time of project closeout, is intended to provide adequate information to allow project start-up within a year’s time-frame.

Status of Work

The work includes survey control, aerial orthophotography, topographic surveys, bathymetric and riverbank surveys, base mapping, digital terrain models (DTMs), initial utility surveys, monument recovery and perpetuation, records of survey, and the right of way base drawing. See the Right of Way Surveys memorandum for other tasks..

The following deliverables were completed at the approximate level of completeness as identified in Table 1, at the time of project closeout.

TABLE 1.
 CRBA DB Procurement Deliverables Status Summary
Status of Deliverables for the CRBA Design Build Procurement Development

TASK	DELIVERABLE	APPROX. PERCENT COMPLETE	STATUS OF WORK
4.3	Draft technical Performance Requirements - provision DB 141	75%	Work in progress. Waiting for client review. Continued cleanup of DB 141 for formatting, language, terminology, acronyms, interdisciplinary coordination, project interfaces, and other outstanding issues. See "Draft RFP action items list".
9.2	Draft survey control drawings	95%	Control drawings for CRBA are thought to be ready for Design Builder’s use, but format could change.
9.2	Draft updated Monument Inventory Spreadsheet	80%	First page of Spreadsheet provides summary of work completed. Will need to be updated as more monuments are set and access is gained to tie more existing monuments.
9.2	Draft updated ROW Base Drawings	90%	No update under ODOT contract. Will need to be revisited as more monuments are tied (see above) and if parcels are changed.

9.2	Draft Updated CRC Base Map and Digital Terrain Models	80%	<p>No update under ODOT contract. DTMs are not updated for pavement overlays in several locations, especially in WA. Nearshore bathymetric surveys and bank scanning from a boat are needed to complete the DTM. The WA bank has been scanned. Additional mapping is needed in several locations. See numbered areas in "2014_Jan_Survey_status_Gaps.pdf:</p> <ol style="list-style-type: none"> 1. Not needed. 2. Unsurveyed parking lot 3. Joe's Crab Shack parking lot- new driveway and along nearby right of way line 4. Thunderbird site- this will be a total take, so mapping is not needed for legal descriptions, but would help finalize the design and monument ties could finalize the boundary. 5. ODOT-owned area leased to Red Lion for parking 6. Red Lion- possible temporary work area easement to demo the existing bridges? The new bridges will obstruct the west side. 7. Red Lion- new driveway and along nearby right of way line 8. Near access driveway to new Target store- requested by Gavin Oien 9. Block of businesses between I-5 and N. Center Avenue to be total takes. The Design Builder will likely impact the north and east sides. Demolition could be by the Design Builder or by the mainland connector contractor. A strip along the east side is within I-5 right of way but outside the right of way fence and therefore difficult to access from the highway.
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Table Notes:

1. Table status as of March 14, 2014.
2. Percents Complete are for the overall product including work for WSDOT and ODOT

Known Issues

The following is a summary of the known issues that were not resolved at the time of closeout:

- Access not acquired to complete topographic surveys and monument ties

Outstanding Work

The following is a summary of outstanding work and next steps at the time of closeout that was not started, but necessary for the development of the DB Procurement final RFP for the CRBA Package:

- Begin arrangements to obtain access for survey crews where needed.
- Confirm primary control monument positions and elevations as needed, perhaps starting with a visual inspection and including measurements where the visual inspection or other measurements indicate a problem.
- Review survey records looking especially for new monuments and new parcels.
- Review base map looking for new construction. Discuss any recent overlays with the design team.
- Survey new monuments and add them to the spreadsheet and right of way base map. Update the right of way base map as needed.

- Survey additional or revised topography, and add to the base map and DTMs. Remove outdated information.
- Scan Oregon riverbanks from a small boat when the water is low.
- Gather near-shore bathymetric data on both sides of the Columbia and of the Oregon Slough when the water is high.

Milestones & Key Decisions Related to Disciplines

Key project milestones include: [TH1]

- 2005, “SR 005 Vancouver Photo Control”, primary control by WSDOT Geographic Services. Aerial photo control by WSDOT and ODOT. Aerial mapping and digital orthophotography.
- May 2006, began field surveys (other than photo control)
- August 2008, began primary control survey
- July 23, 2009, Clark County Book 60 of Surveys, Page 36, Survey Control Drawing Record of Survey
- November 3, 2009, Clark County Book 60 of Surveys, Page 85, Downtown Vancouver Street Centerlines (by WSDOT)
- August 19, 2010, Clark County Book 61 of Surveys, Page 12, CRC Highway Centerlines
- April 27, 2011, Clark County Book 61 of Surveys, Page 109, Revised Downtown Vancouver Street Centerlines (by WSDOT)
- October 6, 2011, Control, Recovery and Retracement Survey, Multnomah County Survey Number 63031
- February 9, 2012, CRC Record of Survey, Clark County Book 61 of Surveys, Page 195, Downtown Vancouver Street Centerlines- 17th Street and Vicinity
- February 21, 2013, Clark County Book 62 of Surveys, Page 131, BNSF Railroad
- July 2013, end WSDOT project, begin ODOT project
- March 2014, end ODOT project

Key project decisions include:

- Project datums chosen including Local Datum Plane coordinates and NAVD-1988 elevations.

Project Records

Records of the work conducted under this task can be found at:

- CRC Records

Standards & Versions

Standards used for the work are listed in the Design-Build General Provisions DB 141.

[KRW:krw]

Attachments: Survey and Topographic Mapping Status Summary.pdf
Gaps in Topographic Mapping.pdf