

Bridge Bundling WSACE Annual Conference 2017

June 21, 2017
Leavenworth, WA

Goals of Effort

- Develop framework for bundling bridge rehabilitation or replacement projects.
- Identify Best Practices in project bundling
- Review Washington State procurement methods in relation to bundling.
- Review environmental permitting processes related to bundling.
- Identify and Recommend Solutions to challenges with bundling.
 - Contracting
 - Permitting
 - Geographic conditions
- Develop concept for pilot project including identification of bridges to be included.
- Identify potential funding sources for pilot project.

Project Schedule

Schedule of Tasks	March	April	May	June	July	Aug	Sept
Background Information Collection and Recommendations							
1.1 Scan of bridge bundling efforts in other states		■					
1.2 Review and evaluate Washington procurement methods in relation to bundling projects		■					
1.3 Review and evaluate Washington environmental review processes			■	■	■		
1.4 Summary of alternative options and methods that could be utilized for bundling bridge projects		■	■				
1.5 Summary of barriers and solutions related to bridge bundling					■	■	
Development of Bundling Recommendations							
2.1 Analyze bridge deficiencies and priorities that could be addressed through bridge bundling					■	■	
2.2 Analyze potential regional and geographic conditions suitable for bridge bundling					■	■	
2.3 Evaluate potential partnerships for procurement					■	■	
2.4 Evaluate potential for permit streamlining					■	■	
Pilot Program Development							
3.1 Prepare list of bridge repair and replacements for consideration in a bridge bundling program						■	■
3.2 Prepare options for pilot program funding						■	■
3.3 Prepare a final report for a bridge bundling pilot program including the necessary partners and steps for implementation							■

- Other States or Agencies Approaches Reviewed

Pennsylvania

Missouri

New York

Oregon

Idaho

Georgia

Northampton County, PA

Wellington County (Ontario Canada)

- What do all of these projects have in Common?
 - Complicated and/or large bridges are not typically included in the bundles
 - Packages most often include bridges with similar characteristics in order to take advantage of economies of scale in purchasing
 - In general, there have been attempts to cluster bridge bundles to both minimize mobilization cost and maximize contractor scheduling, particularly around bridge closures and maintenance of traffic
 - When possible total road closures are permitted to reduce cost by giving contractors unobstructed use of the construction site- but the length of the closure is limited by the bid documents
 - Bundles are selected in rural areas more than not to reduce traffic impacts
 - Bundles are selected where there is limited need for additional rights-of-way
 - Bundles are selected where the permitting process is less complicated
 - Design-build seems to be the preferred procurement method

Washington allows public agencies to cooperate to provide services and for joint purchasing under the inter-local cooperation act

- Is WSDOT willing to be a partner on a bridge bundling project as the lead entity through inter-local cooperation agreements (assumes local and/or state funding)?
- Is WSDOT willing to be the lead on a bridge bundling project through local agency agreements (assumes federal funding)?
- Given the current level of transportation funding in Washington and the WSDT program, does WSDOT have the capacity to assist with implementation of county bridge bundling programs?
- An inter-local cooperation agreement should be executed and should establish payment requirements to cover project funding and project cash flow.
- Review and approval of project design procedures should also be established.

Review of Alternate Contracting

- **Design Build:** Method of project delivery in which one entity, the design-build team works under a single contract with the project owner to provide design and
- **Public Private Partnerships (P3):** Agreements with private entities, or consortia thereof, for the building, operation, ownership, or financing of transportation facilities include bridges.
- **General Contractor/Construction Manager (GC/CM):** A collaborative approach between the designer and the contractor, without the “tension” sometimes created when the designer is a subcontractor reporting directly to the contractor.
- **Job Ordering Contracting (JOC):** An agency issues work orders to a prime contractor, with unit pricing, typically pre-determined by a commonly accepted
- **General Engineering Consultant (GEC):** An approach to delivering capital projects.

Alternative Contracting

Firm	Opportunities	Risks
Design Build	<ul style="list-style-type: none"> • Faster Delivery • Risk Transfer • Single Source Responsibility • Cost Savings • Collaborative Innovation 	<ul style="list-style-type: none"> • Loss of Design Control • Unidentified Utilities & Cost Impacts • 3rd Party Impacts • Regulatory Impacts
P3	<ul style="list-style-type: none"> • Faster Delivery • Risk Transfer • Single Source Responsibility • Cost Savings • Collaborative Innovation • Access to Money • Integration of Construction & Maintenance 	<ul style="list-style-type: none"> • Lack of Statutory Authority • Risk Premium • Financing Costs • Contracting Costs • Loss of Design Control • Unidentified Utilities & Cost Impacts • 3rd Party Impacts • Regulatory Impacts
GC/CM	<ul style="list-style-type: none"> • Collaborative Process • Potential for Innovation • Design Control • Faster Delivery 	<ul style="list-style-type: none"> • Construction Cost Risk • Designing to One Contractors Strengths • Higher Up Front Costs • Larger Contingencies • Dispute over Design Details
JOC	<ul style="list-style-type: none"> • Collaborative Approach • Qualifications Based/Best Value Approach • Reduced Risk of Change Orders • Simplified Design Documents 	<ul style="list-style-type: none"> • Perception of Reduced Competition • Additional Contracting Effort • Difficult to Terminate for Marginal Performance
GEC	<ul style="list-style-type: none"> • Flexible Workforce • Access to Experts • Reduced Budget Risk to Agency • Knowledge Transfer 	<ul style="list-style-type: none"> • Confusion in Risk Transfer with Joined Workforce • Public Work Force Concerns

- All standard permit requirements apply
- Most Complex bridge (for permitting) will drive permitting schedule
- Potential to take advantage of repeated conservation measures for bridge is same watershed.
- Potential advantage to programmatic approaches

- FAST Act Requires Bundled Bridges to be in STIP as Bundle
 - Bridges located in Differing RTPD's create challenge (must be included in all)
 - Bundle must identify bridges included

Potential Bridges for Bundling

- Draft Criteria Bridges Over 20ft (out of 3,278)
 - County Owned
 - Sufficiency Rating Less than 50
 - Structurally Deficient
 - Estimated Cost for Replacement less than \$5,000,000
 - County Owned Bridges Meeting Criteria = 87
- Expanded Criteria
 - County Owned
 - Sufficiency Rating Less than 50
 - Functionally Obsolete
 - Estimated Cost for Replacement less than \$5,000,000
 - County Owned Bridges Meeting Criteria = 48

- Refine Criteria
 - Screen Bridges via location
 - Consider Expanding to Include Culverts (data?)
 - Evaluate Rehab/Repair Needs (Painting, Decks, Seismic)
- Further Define Environmental and Permitting Issues
- Evaluate Opportunities for Permit Streamlining
- Develop Options for Pilot Project
- Identify Potential Funding Options