Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in Program Delivery

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
Organization and training	Owners should create an organization that supports the successful procurement and execution of a DB project, with key personnel (including those advising/representing the owner) educated and trained in, among other things: (a) The procurement, contracting and execution of DB projects; and (b) The importance of setting expectations and fostering a collaborative relationship among all members of the project team.	DOTs with active DB programs have implemented this DBIA technique by: • Dedicating at least one full-time staff position in Headquarters or the Central Office to administer and coordinate the DB program; and • Conducting formalized training and/or promoting peer-to-peer information exchanges to transfer and instill DB information throughout the organization.	WSDOT is partially aligned with DBIA's best practices and current DOT practices: • Similar to other DOTs, WSDOT has dedicated staff (currently 1 full-time DB Engineer supported by a part-time Assistant State Construction Engineer) assigned to supporting the development of the DB program. • On its larger projects, key personnel are experienced with DB.	Given the size of the "Connecting Washington" program, and the DB program to date, HQ appears to be somewhat understaffed for DB program. WSDOT has stated that it recognizes a need for more formal and standardized training in DB concepts, particularly with regard to changing roles and responsibilities: • WSDOT currently lacks a formalized DB training program. • Training efforts remain mostly ad hoc, with most staff learning on the job through the mentoring efforts of experienced Project Managers. Of the six projects reviewed by the research team, several were staffed with individuals that had limited to no previous experience with DB. These projects included: • US 2/Rice Road • I-5 ATMS • SR 520	1. Increase dedicated DB staff at HQ through shifting existing staff to support DB delivery for the Connecting Washington program. DB has been significant percent of WSDOT construction program to date in terms of dollars expended (38%). Given this level of commitment, more full-time staff is needed to support training, manual development, technical support, and industry outreach. 2. Develop formal statewide training materials to include DB basics and modules for project development (scoping), procurement, contract development, contract administration, and other specialty topics. 3. Expand mentoring, shadowing, and peer-to-peer exchanges 4. Tie training to a thoughtful DB career development process with recognition of how to retain experienced DB staff through career advancement and a more competitive compensation structure.
Commitment of senior leaders	Owners should involve senior leadership that is committed to the success of the DB process, as this will foster a healthy and trusting relationship among the entire project team.	DOTs with successful DB programs generally have senior leadership that is committed to successful DB project execution.	WSDOT's senior leadership is committed to the DB process. Senior staff has been dedicated to developing and championing the use of DB.	No readily apparent gaps.	5. While senior WSDOT leadership is committed to DB success, it may be appropriate to expand the definition of "senior leadership" to key legislators within the transportation committees (i.e. chairs and ranking members of the House and Senate Transportation Committees). Given the uniqueness of the Washington state funding processes, these legislators could meet with WSDOT senior leadership to discuss how to better appropriate funds for design-build projects.

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in Program Delivery

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations

Market Considerations	Owners should carefully research and assess current market conditions as they plan their DB programs, as this will identify potential risks and opportunities. Among the issues to be researched and assessed include:
	(a) Procurement actions that could limit or expand competition;
	(b) Projected labor, material and equipment availability;
	(c) Lessons learned from similar projects; and
	(d) Realism of budget and schedule estimates.
		DOTs have begun to address market conditions by:
		• Partnering with industry to develop and/or expand DB programs.
		• Providing a healthy mix of projects (both size and type) to create opportunities for firms to gain experience with DB, potentially leading to increased competition on larger projects.
		• Efforts that the DOTs recognize to be good practices but which have not yet been widely implemented include:
		  • Developing a database of lessons learned that could assist with developing similar projects in the future.
		  • Capturing historical cost and schedule performance to assist with the development of realistic budgets and schedules.
			WSDOT is partially aligned with DBIA's best practices and current DOT practices:
			• Similar to other DOTs, WSDOT regularly engages industry as it continues to develop and refine its DB program.
			• WSDOT is also beginning to expand the use of DB to smaller projects, which should help grow the DB industry by expanding opportunities for smaller firms to prime projects (as was the experience of other DOTs, such as NCDOT).
			• Through its cost risk assessment (CRA)/cost estimate validation process (CEVP), WSDOT has developed a scalable and standardized process for cost estimating that should assist with the development of realistic budget and schedules.
				• Lessons-learned and performance metrics are primarily captured on an ad hoc basis and do not appear to be catalogued or compiled in a manner that could be used to inform future project development activities.
				• Although it is possible to mine data, there is not consistent analysis of information in the construction audit and tracking system (CATS) to compare DB to DBB (or GC/CM). The Gray Notebook (WSDOT's quarterly performance report) generally addresses construction cost performance, highlighting the accuracy of Engineers Estimates compared to award amounts.
					6. Develop more systematic comparisons of DB with DBB performance to include additional measures of cost and schedule performance.
					7. Maintain a database (in CATs or other) with DB performance metrics. (i.e. cost growth, schedule, Non Conformance Reports (NCRs) or Incidents, Change Order types, etc.).
					8. Formalize lessons-learned process for all DB projects. WSDOT HQ should create project report cards to evaluate the extent to which the project met performance goals, including DB team and DOT performance.
					9. Allow flexibility to add scope because of market conditions (i.e. justification for use of owner-directed change orders that add value to project within the defined budget).

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in Program Delivery

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
Programmatic Documents and Guidance	Create a DB infrastructure that promotes the consistent development and execution of DB program	Agencies with mature DB programs have created a robust DB infrastructure including up-to-date: • Standard DB Contract Templates • DB Manuals • Selection Guidance • Policy updates	WSDOT recognized the need for these programmatic infrastructure documents, and developed a DB guidance manual at the outset of its program (2004). This was one of the first in the industry. WSDOT has also developed detailed Project Delivery Method Selection Guidance (PDMSG).	The DB guidance manual is very much outdated and limited to planning and development. An updated DB guidance manual is needed to provide more detailed guidance and to supplement existing design and construction policy manuals. There are no standard DB contract or procurement templates.	10. While WSDOT has been working on developing its programmatic documents and guidance, the work product is slow in coming. Part of this is due to the lack of HQ staff and other resources committed to this initiative. Recommendations include: o Committing staff and other resources and a specific date for delivering these materials. o Developing and then using a standard contract template for DB and modifying it as needed for small projects. o Developing the DB manual with policies and procedures to promote the consistent use of DB. Potential topics could include: ▪ Overview of DB ▪ DB Selection Decision ▪ Project Development ▪ Procurement ▪ Standards and Specifications ▪ Contract Administration
Informed decisions as to whether the use of DB will benefit program or project	Owners should understand the potential benefits, limitations, and attributes of DB and make an informed decision as to whether the use of DB will benefit their program/project	Several DOTs have developed formal selection criteria and processes to decide when to use DB based on project objectives, risks, market conditions, and other considerations. One DOT with a mature DB program did not see the benefit to use a formal selection process. However, DOTs that have implemented a formal process use it to better justify the selection of DB over the other possible approaches to project delivery.	WSDOT recently implemented a formal decision tool for project delivery method selection – Project Delivery Method Selection Guidance (PDMSG). The process is used to decide whether to use bid-build, DB, or GC/CM delivery methods. Prior to that, all projects were pursued using bid-build unless the region/program specifically requested approval for DB.	No apparent gaps in process	11. Evaluate the effectiveness of the PDMSG as DB projects are executed and completed, and adjust as needed based on lessons-learned and feedback from PEs and industry.

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in Program Delivery

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
Budgeting and Packaging for DB	N/A	DOTs generally require that DB projects be fully funded and appropriated (including contingency and DOT costs) before proceeding with procurement. Project size and schedule are considered for funding purposes.	WSDOT budgeting process for the "Connecting Washington" funding package involved identifying and prioritizing projects in capital program schedule over a 16 year period, much longer than a typical DOT program cycle (5-year STIP). The Legislature allows for adjustments to be made to the funding schedule in the fall of each fiscal year (adjusted capital plan). WSDOT uses a maximum rate of payment specification in contracts to limit the expenditure of funds in a given fiscal year to the amount allocated to the project or program.	More information is needed to compare the WA budgeting process with other similar programs and assess whether there are gaps	12. After the decision is made to use DB delivery for a project, WSDOT should work with the Legislature to make adjustments to the capital program to fully fund each project selected for DB delivery. 13. Carefully consider contract packaging for DB from cost, schedule, community impact, DB market, and other perspectives. Smaller DB projects can alleviate funding limitations, and stimulate more competition from local industry

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in DB Procurement

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
Level of Scope Definition (performance requirements)	Owners should develop their DB procurement with the goal of minimizing the use of prescriptive requirements and maximizing the use of performance-based requirements, which will allow the DB team to meet or exceed the owner's needs through innovation and creativity.	The DOTs are not widely using performance requirements. Although most of the DOTs acknowledge that performance requirements and innovation go hand in hand, requirements tend to be fairly prescriptive due to a number of factors, including: • The need to advance the design to satisfy the NEPA process and accommodate any constraints imposed thereby • Public safety concerns • Unwillingness by some DOT departments (e.g., structural, traffic control, etc.) to allow deviations from Standard Specifications To provide opportunities for innovation, the DOTs allow proposers to submit ATCs.	• WSDOT is in alignment with current DOT practices where scoping tends to be relatively prescriptive, but less in alignment with DBIA goals • In part due to late delivery method selection decisions, WSDOT has procured DB services using fairly advanced (i.e. prescriptive) designs. For example, the design for 2011 US 2/Rice Road was almost complete when the decision was made to include it as part of the DB small pilot projects program. This required the design team to restructure the design documents to make them more suitable for DB. It also caused some confusion for the design-builder who did not initially recognize that some of the completed designs still had to be revised, stamped, and resubmitted by the design-builder. The lesson-learned for DB was not to take the design details too far to avoid these issues.	• The standard process is to develop a project summary package regardless of delivery method (per Design Manual). According to HQ, each region has flexibility to modify the processes for DB as long as the processes provide a consistent outcome and produce required deliverables. This flexibility has in some cases resulted in scoping and level of design that may not match what is needed for a project. • WSDOT HQ lacks a standard policy and guidance that the regions/programs can use to develop appropriate scoping for DB projects. • WSDOT (and other DOTs) lack sufficient guidance and training regarding the effective use of performance requirements for DB.	14. Include guidance to address scoping for DB in the DB Manual. The scoping definition and level of design will depend on project goals, risks, and procurement approach. Specifically address the appropriate use of performance specifications in the Manual and provide guidance through the formalized training program. 15. Based on the Manual's guidance, make informed, and conscious decisions regarding the use of performance versus prescriptive specifications during project development. Address the appropriate use of performance specifications in the DB Manual and provide guidance through the formalized training program. 16. Use performance criteria/ specifications for appropriate projects to allow bidders to work with less-than-complete designs to develop bid packages that both meet the needs of WSDOT and benefit from innovation and creativity

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in DB Procurement

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
Project Development	Owners should perform appropriate front-end tasks (e.g., geotechnical/environmental investigations and permit acquisitions) to enable the owner to: (a) Develop a realistic understanding of the project's scope and budget; and (b) Furnish proposers with information that they can reasonably rely upon in establishing their price and other commercial decisions.	The DOTs routinely perform front-end investigation and engineering work (e.g., geotechnical, survey, environmental, etc.) as part of preparing their procurement documents. However, contrary to the DBIA recommendation, some DOTs limit the ability of proposers to reasonably rely on the geotechnical and other information contained in the solicitation documents in establishing their prices.	• WSDOT is generally in alignment with current best practices regarding front-end investigations and engineering work. For example, as part of the procurement documents, WSDOT provides a geotechnical baseline report, which establishes a baseline for what would be considered a differing site condition. Each proposer can also ask for 3 additional borings; the resulting information is used to supplement the original baseline report.	• There is considerable latitude in how the regions can modify the standard project development process for DB, which can lead to inconsistency in how DB projects are developed and scoped. • WSDOT has experienced change orders stemming from inadequate scoping as part of project development. For example, had WSDOT performed additional upfront investigation on the SR 167 project, work that was ultimately paid for under a change order could have been included as part of the original scope of work (thus eliminating the premium cost associated with negotiating a change order after award). • On the SR 520 project, the procurement documents could have more clearly defined the geotechnical risks on the project.	17. Include guidance in DB Manual to address project development and appropriate front-end investigations needed for DB projects. The level of investigation and project development (i.e. scoping definition) will depend on project goals, risk allocation, and procurement approach. 18. Ensure that the risk registering process considers the status of front-end investigations, and the potential need for more work to be done before starting the procurement
Project Risk Considerations	Owners should use a rigorous and equitably-balanced project risk assessment process early in the procurement process and update/refine the risk assessment as the project proceeds from procurement through project execution.	The DOTs largely adhere to this practice by conducting project risk assessments as early as possible so that risk can be properly allocated in the DB contract. However, after the initial assessment, risks are often not consistently updated and refined.	• WSDOT has a very mature standardized risk assessment (i.e. CVEP) that is used to identify and evaluate project risks that could impact budget and schedule. WSDOT also has a standard risk allocation matrix that is adapted for each project to guide risk allocation in the contract documents.	• The extent to which WSDOT's risk evaluation process is integrated with other project development activities is unclear. For example, on the SR 520 project, the Project Manager commented that it may have been helpful to consider geotechnical approaches as part of the scored criteria and to have more fully defined the geotechnical risks in the contract.	19. Include risk as an evaluation criteria. Ask proposers to identify project risks and address how to manage or mitigate risks as part of the evaluation criteria for large, complex, high risk projects. Alternatively, DOT can provide the risk register and ask proposers to address how they plan to manage or mitigate risks.

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in DB Procurement

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
DB Delivery Strategies	DBIA recommends the use of a two-phase best-value procurement process for DB with the selection of shortlisted firms based on price and technical factors.	DOTs with mature DB programs have developed flexibility in procurement practices and have successfully implemented different procurement approaches for the delivery of DB projects. In general, this entails using low bid procurement options (one-step or two-step) when warranted by project conditions (e.g., for smaller projects having clearly defined scopes of work and lower risk and for which innovation from contractors is not a goal). Various approaches have included: • Low bid DB: involving a one-step procurement process with selection based on price for smaller less complex projects • DB with optional scope: Selection is based on the base bid with optional scope items not to exceed the stipulated budget; a strategy to control cost by seeking the maximum scope for a defined budget ceiling • Bundled DB: Bundling small projects (e.g. bridge rehabilitation) under a single DB contract to accelerate delivery and achieve efficiencies in design, environmental permitting, and construction sequencing • One-step Best-Value DB: A streamlined version of two-step best-value process for less complex projects where shortlisting is not advantageous.	• WSDOT is aligned with DBIA's two-phase best-value procurement process. • WSDOT has implemented one DB project with optional scope. • WSDOT has experimented successfully with smaller DB projects (i.e. <$10M) but still uses a two-step best-value procurement process.	• For smaller, less complex projects where innovation is less likely, WSDOT has not adjusted or streamlined its procurement practices to align better with project characteristics and goals. A two-step best-value procurement process may be overly burdensome and not beneficial for smaller projects where innovation or creativity are not sought.	20. Continue to use DB for smaller, less complex projects (i.e. < $10M). However, streamline the procurement of these projects (e.g., use bundled DB, or a one-step procurement process with selection based on low bid or best-value).

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
Role of Qualifications	Owners should use a procurement process that: (a) Focuses heavily on the qualifications of the design-builder and its key team members rather than price; and (b) Rewards DB teams that have a demonstrated history of successfully collaborating on DB projects.	The DOTs do not strictly adhere to the DBIA best practice of emphasizing qualifications over price. • Best value procurements are often heavily weighted towards price (e.g., 70% price vs. 30 % technical). • Several DOTs also have the flexibility to use low bid procurement options (one-step or two-step) when warranted by project conditions (e.g., on smaller projects having clearly defined scopes of work and lower risk and for which innovation from contractors is not a goal).	On the surface, by only applying a best-value procurement process to select DB teams, WSDOT appears to be closer to meeting the DBIA best practice than other DOTs. However, WSDOT's scoring criteria for the sampled projects tends to be much more weighted towards price (e.g., 90% price vs. 10% technical).	Had WSDOT more fully implemented this DBIA practice (i.e. qualifications and technical weightings, it may have achieved better results on certain projects. • On the I-5 et al. ATMS project, a more qualifications-focused procurement process could have led to the selection of a more qualified design-builder. According to the PE, a large discrepancy in price proposals led to selecting the team that was least able to deliver innovation. • The past relationship of DB teaming partners could be a useful RFQ/RFP qualifications criterion. On at least 2 of the 6 projects reviewed (US 2/Rice Road and SR 520), a poor relationship between the DB teaming partners hampered project performance.	21. For high risk or technically challenging projects, increase the qualifications and technical weightings, and adjust other factors (i.e. stipends) accordingly 22. Consider the working relationship of DB teaming partners as a criterion in the qualifications requirements.
Shortlisting	Owners should appropriately shortlist the number of proposers invited to submit proposals for a two-step process, as this will, among other things, provide the best opportunity for obtaining high quality competition.	The DOTs routinely use this practice where a two-step best value process is used and innovation is sought.	WSDOT routinely uses this practice and targets 3-4 shortlisted proposers.	No gaps	23. For smaller projects, consider expanding the short-list to broaden the reach of DB and allow more firms to gain experience...
Optimization of selection process: ***Limiting evaluation criteria to key differentiators*** ***Limiting evaluation of technical criteria to second phase***	Owners should consider the level of effort required by proposers to develop responsive proposals, and should limit the deliverables sought from proposers to only those needed to differentiate among proposers during the selection process. Owners who require project-specific technical submittals (e.g., preliminary designs) for evaluating and selecting the design-builder should: (a) use a two-phase procurement process; and (b) Limit the requirement for such submittals to the second phase, where the list of proposers has been reduced.	DOTs are implementing this practice by: • Increasing use of pass/fail criteria • Carefully identifying key evaluation criteria that closely align with project goals and risks • Using streamlined solicitation processes (e.g., one-step or low bid processes) for simple or small projects for which limited innovation is sought (i.e., time savings is the primary driver) • Routinely use two-step process where best value is used and innovation is sought.	WSDOT partially implements this best practice: • WSDOT's solicitation documents do not appear to ask proposers to provide an unreasonable level of detail in their technical proposals and the technical content is limited to the second phase in a two-step process. • However, the evaluation criteria and associated weightings used to select the design-builder may not always provide for meaningful distinctions among proposers, particularly given the high weighting generally allocated to price.	• It does not appear that WSDOT has any guidance or standardized processes to assist project teams with identifying appropriate project-specific evaluation criteria and deliverables that align with project goals and risks.	24. Develop repeatable procurement guidance in the DB manual to carefully identify and weight key evaluation criteria that closely align with project goals and risks.

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations

Confidential one-on-one meetings with proposers	Owners should conduct confidential meetings with shortlisted proposers prior to the submission of technical and price proposals, as this encourages the open and candid exchange of concepts, concerns, and ideas.	The DOTs routinely use this practice in conjunction with ATCs. They tend to limit the number of confidential meetings to only one or two for each procurement, although for complicated projects they will make a conscious decision to add more. They recognize that the value of this practice, but also the need to manage the time expended on this effort by their staff and the proposers.	WSDOT fully and routinely uses this practice.
			• WSDOT allocates 1 to 1.5 hours per week to each proposing team during the procurement process to provide proposers with the opportunity to vet ideas with DOT staff. This may amount to 3 – 5 hours per week for ATC-related meetings during the procurement phase (one to several months).
			• WSDOT staff noted that the weekly meetings were useful for:
			  ○ Working out any kinks in the solicitation documents.
			  ○ Building a relationship and rapport with proposers early on that would ideally carry through to the post-award design and construction phase.
			• All of the Project Managers interviewed stressed the value of holding one-on-one meetings, but they recognized that it requires a significant time commitment during procurement.
				WSDOT appears to routinely have more frequent confidential meetings than other DOTs, which can create a stress point in administering the procurement.	25. Optimize the efficiency of one-on-one meetings. Account for the significant effort associated with conducting these meetings on the part of DOT staff when planning procurement staffing needs and determining the number of firms to shortlist.
					26. For one-on-one meetings, keep WSDOT participating staff small; and limit consultant support to ensure the strictest confidentiality

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
Stipends	Owners should offer a reasonable stipend to unsuccessful shortlisted proposers when the proposal preparation requires a significant level of effort.	The DOTs routinely offer stipends. However, industry often feels that the stipend amounts are not a reasonable reflection of the level of effort needed to prepare a responsive proposal. Some DOTs have adjusted the amounts based on the anticipated effort required to prepare a responsive technical proposal	WSDOT routinely offers stipends that are in the appropriate range (i.e., 0.1 - 0.3%) of the estimated project costs. This is consistent with stipends offered by the majority of DOTs with DB programs.	No apparent gaps	27. Offer increased stipend amounts for complex, high risk projects where the DOT is asking for a greater level of proposal effort (i.e. more technical detail) from shortlisted proposers
Objective evaluation of proposals	Owners should ensure that their technical and cost proposal evaluation team members are: (a) trained on the particulars of the procurement process; (b) unbiased; and (c) undertake their reviews and evaluations in a manner consistent with the philosophy and methodology described in the procurement documents.	The DOTs recognize the need for an objective and impartial evaluation of proposals. To help ensure the objectivity of the proposal evaluation process, DOTs use a variety of techniques, including: • Developing guidance manuals or Standard Operating Procedures to address proper evaluation procedures • Developing project-specific proposal evaluation plans • Training evaluators for each project • "Blinding" technical proposals (i.e., concealing the identity of the proposers) • Having witnesses observe evaluation discussions and report out on any unfair or biased treatment of proposers • Providing adequate documentation to sufficiently support the ratings and scoring	• WSDOT programs/regions have developed specialized training for evaluation of proposals on a project by project basis in keeping with the procurement approach in the RFP documents.	• WSDOT does not appear to have statewide and consistent guidance for evaluating proposals, as suggested by the following comments received from industry representatives o *Shortlisting of finalists is not consistent between the WSDOT regions.* o *With the same qualifications, a design-builder can be graded at the top or the bottom of the list.* o *Some regions appear to selectively use references to either promote or disqualify a proposer.* • To some industry representatives, WSDOT's qualifications process does not necessarily provide for a fully competitive procurement: o *Although shortlisting to three is preferred, there are two design-builders who appear to always be in the shortlist, and the remainder of the field seem to be vying for only one spot on the shortlist.*	28. Provide specialized statewide training for evaluators with repeatable guidance on evaluating proposals 29. Develop standard operating procedures in the DB manual for evaluation of proposals, witnessing, documentation of selection decisions, etc.

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in DB Procurement

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
Alternative technical concepts (ATCs)	Proposers should be encouraged to submit ATCs that do not compromise project quality or intent, and that allow proposers to provide input to the owner regarding new ideas, innovations or concepts that may not have been reflected in the RFP documents.	Most DOTs routinely encourage proposers to submit ATCs as a means to obtain innovation or cost savings.	WSDOT routinely encourages proposers to submit ATCs. (An exception was the Skagit River Bridge emergency project for which the DOT was not seeking alternative concepts. DOT had pre-determined that the new structure could be built on existing piers.) WSDOT's philosophy is to evaluate ATCs based on obtaining equal or better value without consideration of cost savings. This approach appears to be consistent with DBIA but DOTs evaluate cost savings as well.	• Because WSDOT's approach to ATCs does not address cost savings, and Practical Design is implemented as a post-award strategy for DB, the opportunity to realize cost-savings during the DB procurement phase is limited.	30. Take full advantage of Practical Design in the pre-award phase for DB through ATCs and adjustments to scope that do not compromise functionality or quality. 31. Consider two categories of ATC's o Cost Value ATCs (current equal or better strategy) o Cost reduction ATCs where reduction does not significantly reduce performance, or impact safety or quality

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in Contracting for DB Services

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
Explicit and appropriate allocation of project risks in contract	Contracting parties should proactively and cooperatively identify significant project-specific risks and clearly identify in the contract how such risks will be handled. Contracts should reasonably allocate risks to the party that is best capable of addressing and mitigating the risk.	Most DOTs conduct a project risk assessment early in the project development process as a standard practice so that risks can be properly allocated in the contract. • The DOTs are generally taking a balanced approach to risk, allocating each risk to the party that is best able to manage it. • Some DOTs use DB to shift substantial risk to the design-builder, including risks in areas where the design-builder is not as capable of addressing and mitigating that risk (e.g. site conditions or errors in the owner's design documents).	• WSDOT routinely identifies project-specific risks and allocates them in the contract The allocation appears to take a balanced approach to risk, allocating each risk to the party that is best able to manage it. • WSDOT worked with industry to develop a risk allocation matrix that recommends a contract allocation strategy for various risks and issues commonly encountered on highway construction projects. However,there can be project-specific variations to allocation based on size and risk analysis (CRA and CEVP).	• There could be some improvement in up-front investigations for projects with a higher potential for subsurface or other risks to reduce change order impacts. For example, on the SR 520 project, geotechnical risks were not well-defined resulting in a change order. In contrast, on the SR 167 project, geotechnical risks were very well defined and could therefore be effectively shifted to the design-builder.	32. Include guidance in DB Manual to address project development and appropriate front-end investigations needed for DB projects. The level of investigation and project development (i.e. scope definition) will depend on project goals, project risk assessment, and procurement approach. 33. Use a standard contract template for DB and modify as needed based on project characteristics (i.e. project size) and the assessment of specific project risks. 34. Train staff on these standard forms, which will enable project personnel to better administer their contracts.
Roles and responsibilities	• The contract should specify the respective responsibilities of the owner and design-builder in the areas of: design, permitting, ROW, and utilities. • The contract should be clear about rules of engagement with specific third parties regarding utility relocations, ROW acquisitions and/or environmental permitting.	DOTs routinely define roles and responsibilities of the owner and design-builder in the DB contract	• WSDOT recognizes the importance of clearly defining roles and responsibilities in the DB contract documents. • For the past 1.5 years, WSDOT has been working closely with the AGC Subcommittee for DB and ACEC representation to set policies and review standard contract language and template documents.	No apparent gaps	

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in Contracting for DB Services

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
ROW acquisition	Owners should be closely involved with ROW acquisition, including: (a) providing procurement documents that clearly define the existing ROW and that address line and grade development in a manner that allows flexibility with ROW; (b) starting procurement (i.e., the release of the RFQ) only after determining the status of ROW and expected dates for acquisition; and (c) providing specific guidance regarding the ROW acquisition process, schedule, guidelines and procedures. When ROW acquisition is the responsibility of the owner and all ROW will not be acquired prior to the Notice to Proceed, the owner should develop a ROW acquisition schedule and include it in the procurement documents and ultimate contract agreement.	The DOTs largely implement these practices. • There could be some improvement in the level of robustness of existing ROW information provided to proposers. • Some DOTs also issue RFPs without having all of the ROW information complete or parcels acquired. This can create pricing challenges for proposers. • DOTs provide a means for the DB team to acquire additional permanent ROW for the work with DOT coordination and approval. • DB team are typically responsible for obtaining additional temporary construction easements to accommodate the work.	WSDOT routinely implements DBIA's best practices • WSDOT is responsible for ROW acquisition. The RFP provides a means for the DB to pursue additional permanent ROW for the Work, but it requires DOT approval. • The DB team is responsible for obtaining additional temporary construction easements	No apparent gaps	
Utilities	Owners should: (a) Develop risk mitigation strategies and evaluate how best to assign risks associated with utilities relocation; (b) Include, where appropriate from a risk mitigation perspective, an allowance in the contract for utility relocation cost; and (c) Secure utility agreements whenever possible before the RFP is released. Utility agreements should clearly define divisions of responsibilities, and when work is being performed by the private utility, should include schedule commitments that can be relied upon by the design-builder. The contract language should address risk allocation when unexpected utilities are encountered. Owners should clearly identify the design-builder's submittal requirements for the utility work plan, emergency response plan, subsurface utility engineering validation, utility plans and conflict matrix; including record drawing requirements if applicable.	The DOTs largely implement these practices. • DOT will investigate the presence of existing utility facilities in the project area, provide the location and ownership of these utilities to the prospective DB Teams, and enter into utility agreements where appropriate • If a utility allowance or provisional sum is part of the contract, DOTs will pay up to the reimbursable amount; however, if the DB Team's design impacts utilities more than the reimbursable amount, the DB Team will absorb the overrun.	• WSDOT substantially implements these practices. • WSDOT's Project Delivery Method Selection (PDMS) Guidance explains the Department's philosophy towards utilities as follows: o *Utilities responsibilities need to be clearly defined in contract requirements, and appropriately allocated to both design-builder and WSDOT.* • WSDOT identifies all utility impacts, and relocations needed for the baseline configuration. The DB team is responsible for a site investigation to verify the utility relocations needed. • The DB team will be issued change orders for utilities not shown in baseline, but they are responsible for utilities not found during their required site investigation	No apparent gaps	

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in Contracting for DB Services

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
Railroads	Owners should meet early with any impacted railroad management team to discuss the project and define scope.	The DOTs generally retain responsibility for railroad coordination and risk.	• Consistent with the DBIA practice and practice of other DOTs, WSDOT generally retains responsibility for railroad coordination. • WSDOT's Project Delivery Method Selection (PDMS) Guidance explains the Department's railroad coordination philosophy as follows: ○ *Railroad coordination and schedule risks should be well understood to be properly allocated and are often best assumed by WSDOT.* ○ *Railroad design risks can be allocated to the designer if well defined.* ○ *Best to obtain an agreement with railroad defining responsibilities prior to procurement.*	No apparent gaps	
Environmental Permits	Owners should obtain all environmental permits prior to issuance of the RFP, unless the owner will be using a progressive DB procurement process.	The DOTs generally adhere to the DBIA best practice and retain primary responsibility and risk for environmental permits. • However, the design-builder's scope will often include assisting with the permitting process and assuming responsibility for permit modifications necessitated by a proposed ATC. • Though the FHWA allows the issuance of the RFP before the conclusion of the NEPA process, most of the DOTs generally require the completion of all environmental documents before the final RFP is issued.	• Consistent with the DBIA practice and practice of other DOTs, WSDOT generally obtains all environmental permits prior to issuing the final RFP. If changes are needed based on the DB proposal (or ATC process), the DB team may be responsible for modifying the permit. • Permits obtained to date are often included in the RFP for the proposers' reference. • WSDOT's PDMS Guidance explains the Department's philosophy regarding permits as follows: ○ *Certain environmental approvals and processes that can be fully defined can be allocated to the design-builder.* ○ *Agreements or MOUs with approval agencies prior to procurement is best to minimize risks.*	No apparent gaps	

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in Contracting for DB Services

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment with Best and Current Practices	Gaps	Recommendations
Third Party Commitments and Restrictions	The contract should clearly specify if there are restrictions placed upon the design-builder's ability to perform work on third party property or facilities, or if time restrictions apply.	• The DOTs generally obtain third party consent before issuing an RFP • Usually DB contracts are not awarded until all third party or municipal agreements are signed	WSDOT strives to clearly document in the solicitation and contract documents all agreements or commitments made with local agencies. The DB team is responsible for coordination.	No apparent gaps	

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in DB Project Execution

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment With Best and Current Practices	Gaps	Recommendations
Training and staff experience with DB	All DB team members should be educated and trained in the DB process, and be knowledgeable of the differences between DB and other delivery systems. In furtherance of this practice: • All members of the DB team must understand that the project's success is dependent on the ability of the team members to work collaboratively and to trust that each member is committed to working in the best interests of the project. • Projects should be staffed with individuals who are educated and experienced in the implementation of DB best practices, and whose personalities are well-suited to the collaborative nature of the DB process. • All project teams should have senior leadership committed to the success of their projects and actively supportive of DB best practices.	The DOTs are implementing this practice by various techniques, including: • Developing and conducting a formalized DB training program • Promoting peer-to-peer information exchanges to transfer DB knowledge • Using small DB programs as a means to get more staff exposed to DB	• WSDOT HQ recognizes the need for a more formalized DB training program to train DOT staff state-wide, including regions where DB has not been used. • Senior leadership is committed to training and supporting DB best practices	• WSDOT currently lacks a formalized statewide DB training program. Training efforts remain at the regional or program level. Staff have gained DB experience through the on the job mentoring efforts of experienced DB Project Managers. • DB experience is not widely dispersed within WSDOT. Expertise resides with a relatively small number of individuals.	35. Develop formal statewide training materials to include DB basics and modules for project execution (i.e. contract development and administration, and other specialty topics) 36. Expand mentoring, shadowing, and peer-to-peer exchanges 37. Tie training to a thoughtful DB career development process with recognition of how to retain experienced DB staff through career advancement and a more competitive compensation structure.
DB infrastructure and administrative processes	Project logistics and infrastructure should be established to support integrated project delivery. In furtherance of this practice: • Owners and the appropriate members of the design-builder's team should co-locate when justified by project characteristics (e.g., project's complexity and volume of design submittals). • Owners and design-builders should ensure that the administrative processes established for project execution are appropriate, well-understood and expeditious.	The DOTs are partially implementing this practice. • DOTs routinely use co-location to support collaboration, particularly on large and/or complex projects. • For the most part, DOT processes related to post-award contract administration are not formally defined. Processes (e.g., design oversight, quality management, payment procedures, change management, etc.) may be recognized by team members, but definition is lacking and understanding may be inconsistent.	WSDOT is making progress towards more fully implementing this practice: • Recognizing the need for more standardization and guidance, WSDOT has established an internal DB Work Group to support the development of DB policy, manuals, and contract templates.	• Some processes are formally defined (e.g., delivery method selection, procurement, project delivery) and encouraged by management, whereas others remain ad hoc and may be inconsistently interpreted or applied by staff.	38. Develop DB manual with policies and procedures to promote the consistent use of DB and DB best practices. 39. Focus on developing the processes that are critical to administration of the DB contract, such as inspection, design reviews and similar areas where the design-bid-build roles and responsibilities of WSDOT personnel may be different.

Task 4: Comparison of WSDOT's Current Practices to DB Best Practices with Preliminary Recommendations

Best Practices in DB Project Execution

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment With Best and Current Practices	Gaps	Recommendations
Communication and Collaboration	The project team, at the outset of the project, should establish processes to facilitate timely and effective communication, collaboration, and issue resolution. In furtherance of this practice: • The owner and design-builder should create an executive leadership group, including individuals from key members of the design-builder's team (e.g. designer(s)-of-record and key subcontractors) to meet regularly, monitor the project's execution, and facilitate the understanding and achievement of the parties' mutual goals. • The owner and design-builder should develop processes that enable key stakeholders (e.g., government agencies and third-party operators) to interface directly with the design-builder and its design professionals on significant elements of the work. • The owner and design-builder should, at the outset of the project, endorse and liberally use techniques that effectively integrate design and construction activities and take steps to continue these processes throughout the duration of the project. • The owner should be fully engaged and prepared to make the timely decisions necessary to facilitate the design-builder's performance, including being represented by staff that has the authority to make decisions and perform its project functions.	Although the DOTs recognize and stress the importance of collaboration and communication on DB projects, related processes (apart from requirements to co-locate) remain largely ad hoc. On a project-by-project basis, formal communication plans (meetings, reporting, etc.) may be provided by the design-builder or directed by the DOT's project manager.	Similar to other DOTs, WSDOT encourages partnering and collaboration between its staff (and consultant staff) with those of the design-builder, and third parties during project execution. WSDOT uses co-location, partnering, an issue or dispute resolution techniques	A key to effective communication includes consistency of staff. WSDOT has struggled with consistency on some projects. • On the I-5 et al. ATMS project, having the Project Manager split time between two projects was reported to not work out well. • On the SR 520 project, the design development staff transitioned off the project too early, which impacted the DOT's responsiveness when it came to reviewing field design changes during the construction WSDOT lacks formalized or standardized communication plans and processes. It does not appear that WSDOT has consistently had strong communication between project-level staff and HQ staff. • On the I-405 project lessons-learned, it was noted that HQ was not being kept adequately apprised of project developments. Conversely, the project team felt that they were not being fully supported by HQ.	40. Address effective communication practices among DOT staff, DB team, key stakeholders, and consultants in DB Manual 41. Provide dedicated, experienced project management (or consultant staff) to perform all duties required during project execution 42. Understand and optimize the role of consultants with regard to decision-making and supporting DOT staff.

Element	DBIA Best Practice	Current Practices Used by DOTs (from Task 2)	WSDOT Alignment With Best and Current Practices	Gaps	Recommendations
Design Reviews	The project team should focus on the design management process and ensure that there is alignment among the team as to how to execute these processes. In furtherance of this practice: • The owner and design-builder should acknowledge the significant level of effort required to manage the development and review of the design and, consequently: (a) dedicate sufficient resources to foster a collaborative environment for this work; and (b) mutually develop a realistic design development plan that efficiently engages the owner and key members of the design-builder's team (e.g., designer(s)-of-record and key subcontractors) in purposeful meetings. • The owner and design-builder should agree upon clear, realistic and expeditious submittal and review/approval processes that are in harmony with the parties' schedule and other project-specific goals.	The DOTs agree with the intent of the DBIA practice, and understand that design reviews require a quick turnaround to support the design-builder's schedule. They also understand that the design reviews should focus on contract compliance, and not on any DOT preferences or details that are not expressed in the contract documents. Nevertheless, the DOTs struggle with effectively implementing the design oversight process for various reasons, including: • A lack of formalized guidance or training related to design reviews, • Insufficient design resources • Difficulty of designers to let go of design preferences or asking for details typical of design-bid-build. • Staff mistrust of industry and other cultural issues	• WSDOT is in alignment with the other DOTs regarding design reviews and for some projects has struggled with effectively implementing the design oversight process.	• WSDOT does not have any formalized guidance related to design oversight and compliance reviews. • Its staff have struggled with understanding their role in the final design process. • Difficulty of design staff to let go of design preferences or the requirement for levels of design details typical for bid-build projects.	43. Address effective design review best practices in the DB Manual 44. Create standard templates for design reviews 45. Provide specialized training for design reviews to WSDOT staff to address: o the role of WSDOT staff in effective design reviews o realistic design submittal and review/approval processes to support the project schedule and project-specific goals
Construction Administration and Quality Management	N/A	Although not a prime focus area of DBIA, construction quality assurance (QA) has been a topic of considerable interest to the DOTs. Some DOTs have had success with transferring more responsibility for QA to industry, whereas others largely apply the same QA processes to DB projects as they do for design-bid-build (i.e., DOT assumes responsibility for sampling and testing).	WSDOT appears to have had success growing the QA industry in Washington. • In contrast to other DOTs, this is allowing WSDOT to transfer more QA responsibility to industry (i.e., design-builder or its agent conducts sampling and testing; DOT performs verification testing).	• For smaller DB projects, (Rice Road), having the design-builder assume QA responsibility may not be as efficient (due to the duplication of testing effort needed to ensure compliance with the FHWA verification requirements in 23 CFR 637).	46. Provide specialized training for WSDOT construction and inspection staff on changed roles and responsibilities regarding inspection, quality verification, responses to requests for information/clarification, change management, payment, and documentation requirements 47. Optimize quality management for smaller projects to avoid unnecessary duplication