APPENDIX D: CURRENT PONTOON CONSTRUCTION PROJECT RISK ASSESSMENT MATRIX

Project Title	WSDOT SR-520 Pontoon Construction			RISK MANAGEMENT SUMMARY RESULTS	
Estimate Date		Target AD date	07/17/09	**Planned and Actual**	**($ M)**
Project PIN #		Estimated CN Duration	57.9Mo	Expected Value Total Risk Before Response	-17.1 $M
Last Review Date		Estimated PE Cost	37.0 $M	Expected Value Total Risk After Response	-19.7 $M
Project Manager		Estimated ROW Cost	16.9 $M	Estimated Cost to Respond	0.0 $M
Est $ Impact of Significant Project Risks (cost & schedule)		Estimated CN Cost	693.4 $M	**Potential Cost Savings**	**2.5 $M**

Functional Area	Post-Response	Pre-Response	Functional Area	Post-Response	Pre-Response
Construction	4.7 $M	5.7 $M	Management / Funding	0.0 $M	0.0 $M
Right-of-Way	0.0 $M	0.0 $M	Structures & Geo-tech	1.6 $M	1.6 $M
Design/PS&E	1.8 $M	2.1 $M	Utilities	0.0 $M	0.0 $M
Railroad	0.0 $M	0.0 $M	Environmental & Hydraulics	0.4 $M	5.6 $M
Partnerships and Stakeholders	0.4 $M	0.4 $M	Contracting and Procurement	2.1 $M	2.2 $M

Update History	Risk #	Status	RBS Group	Project Phase--Date Identified	Phase (pre CN, CN, or ROW)	Summary Description Threat and/or Opportunity	Detailed Description of Risk Event (Specific, Measurable, Attributable, Relevant, Timebound) [SMART]	Risk Trigger	Type	Probability/ Cost of Schedule Delay	Risk Impact ($M or Mo)		Expected Impact ($M) [most likely X probability]	Probability	Impact	Risk Matrix	Total Cost Impact (Cost of delay + cost event risk)	Response Strategy	ACTION TO BE TAKEN Response Actions including advantages and disadvantages (include dates)	Risk Owner	Risk Review Dates	Date, Status and Review Comments	Is Risk on Critical Path?	Responded Probability	Responded Risk Impact ($M or Mo)		Expected Impact (Post-Response)	Cost to Respond [$M]	Est. Risk Avoided [$M]/Months	Probability	Impact	Risk Matrix	Total Cost Impact (Cost of delay + cost event risk)	Risk Assignment (Contractor or WSDOT)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	[10a]	(11)	(12)	(13)	(14)	(15)	(15a)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	[22a]		(23)	(24)	(25)	(26)	(27)	(28)	(28a)	
23-Jun-09 Current	VE1	Active		May-09 Design/PS&E		Opportunity / Gate / Threat	Value engineering recommendation #1, modifications to the gate.		Cost	50%	MIN 0.0$M		-0.3$M	Moderate	Very Low	$,Mo	0.2$M							50%	MIN 0.0$M		-0.3$M			Moderate	Very Low	$,Mo	0.3$M	Contractor
											MAX -2.0$M														MAX -2.0$M									
											Most Likely -0.5$M														Most Likely -0.5$M			-$0.1						
									Schedule	0.4 $M	MIN 0.0Mo		0.8Mo		Very Low									0.5 $M	MIN 0.0Mo		0.8Mo		0.0Mo		Very Low			
											MAX 3.0Mo														MAX 3.0Mo			0.0Mo						
											Most Likely 1.5Mo														Most Likely 1.5Mo			0.0Mo						
23-Jun-09 Current	VE2	Active		May-09 Design/PS&E		Opportunity / Basin Floor / Opportunity	VE recommendation #2, modifications for the basin floor. VE decision report revises VE design to use lesser different type of piles than included in the base. (A refinement of the foundation analysis that minimizes piles and slab thickness.)		Cost	75%	MIN -10.0$M		-9.4$M	High	Low	Mo $	-9.7$M							75%	MIN ######		-9.4$M			High	Low	Mo $	-9.8$M	Contractor
											MAX -15.0$M														MAX ######									
											Most Likely -12.5$M														Most Likely ######			$0.1						
									Schedule	-0.4 $M	MIN 0.0Mo		-0.8Mo		Very Low									-0.5 $M	MIN 0.0Mo		-0.8Mo		0.0Mo		Very Low			
											MAX -2.0Mo														MAX -2.0Mo			0.0Mo						
											Most Likely -1.0Mo														Most Likely -1.0Mo			0.0Mo						
23-Jun-09 Current	VE3	Active		May-09 Design/PS&E		Opportunity / Wall-Center / Opportunity	VE recommendation #3, modifications to the center wall. Implementation of a fully movable wall.		Cost	33%	MIN -10.0$M		-4.0$M	Low	Low	Mo $	-4.1$M							33%	MIN ######		-4.0$M			Low	Low	Mo $	-4.2$M	Contractor
											MAX -15.0$M														MAX ######									
											Most Likely -12.0$M														Most Likely ######			$0.1						
									Schedule	-0.2 $M	MIN -1.0Mo		-0.5Mo		Very Low									-0.2 $M	MIN -1.0Mo		-0.5Mo		0.0Mo		Very Low			
											MAX -2.0Mo														MAX -2.0Mo			0.0Mo						
											Most Likely -1.5Mo														Most Likely -1.5Mo			0.0Mo						
23-Jun-09 Current	VE5	Active		May-09 Design/PS&E		Opportunity / At Grade Casting Yard / Opportunity	VE recommendation #5, revised basin concept (at grade casting yard). This recommendation is mutually exclusive from VE recommendations 1 through 4. Add a risk for schedule delay due to this VE recommendation (correlated with this opportunity), delay of 0 to 9 months for NEPA/permitting, 25% probability.		Cost	75%	MIN -20.0$M		-22.5$M	High	Moderate	Mo $	-23.9$M							75%	MIN ######		-22.5$M			High	Moderate	Mo $	-24.5$M	Contractor
											MAX -60.0$M														MAX ######									
											Most Likely -30.0$M														Most Likely ######			$0.7						
									Schedule	-1.4 $M	MIN -3.0Mo		-3.4Mo		Very Low									-2.1 $M	MIN -3.0Mo		-3.4Mo		0.0Mo		Very Low			
											MAX -6.0Mo														MAX -6.0Mo			0.0Mo						
											Most Likely -4.5Mo														Most Likely -4.5Mo			0.0Mo						
6-Aug-09 Current	CNS 900.07	Active		May-09 Design/PS&E	Construction / Construction	Threat / Change Order is required to create permanent Pontoon Moorage due to effects on the next project	There is a chance that a delay to this project causes permanent pontoon moorage to be necessary while only temporary is costed in the base costs.	Corridor ROD is not obtained as scheduled	Cost	25%	MIN 15.2$M		4.7$M	Low	Moderate	$	4.7$M	Acceptance	Update this risk as more information becomes available.					25%	MIN $15.2		4.7$M			Low	Moderate	$	4.7$M	WSDOT
											MAX 24.9$M														MAX $24.9									
											Most Likely 18.7$M														Most Likely $18.7			$0.0						
									Schedule	0.0 $M	MIN		0.0Mo		NO RISK									0.0 $M	MIN		0.0Mo		0.0Mo		NO RISK			
											MAX														MAX			0.0Mo						
											Most Likely														Most Likely			0.0Mo						
6-Aug-09 Current	CTR 40.02	Active		May-15-2009 Design/PS&E	Contracting and Procurement / Construction	Threat / Additional project costs incurred due to current accelerated base schedule	Issues with contract documents due to short time line; change permit conditions from assumptions; alternative technical concepts; RFP document will be issued on partial pontoon design could lead to more or less costs when final design is completed; With only 3 months for the RFP response, the contractor may be less comfortable with their design and bid up price to cover the uncertainty; premium may apply to the casting basin costs 2.5% to 5% of the casting basin costs		Cost	15%	MIN 5.0$M		1.1$M	Very Low	Low	$	1.1$M	Mitigation	Increase the amount of the stipend; Limit the amount and changes that are in the addendums that would require any type of redesign;					15%	MIN $5.0		1.1$M			Very Low	Low	$	1.1$M	Contractor
											MAX 10.0$M														MAX $10.0									
											Most Likely 7.5$M														Most Likely $7.5			$0.0						
									Schedule	0.0 $M	MIN		0.0Mo		NO RISK									0.0 $M	MIN		0.0Mo		0.0Mo		NO RISK			
											MAX														MAX			0.0Mo						
											Most Likely														Most Likely			0.0Mo						
23-Jun-09 Current	DES 10.01	Active		May-09 Design/PS&E	Construction / Construction	Threat / Local road maintenance that the city may require lead to a cost impact	Haul route improvement costs don't seem to be in the base; discussions with the cities and the Port have occurred and may need to do some paving overlay costs; basin excavation schedule is tight but maintenance won't affect schedule		Cost	100%	MIN 1.0$M		2.0$M	Very High	Very Low	$	2.0$M	Acceptance	Continued communication with cities and the Port.					100%	MIN 1.0$M		2.0$M			Very High	Very Low	$	2.0$M	Contractor
											MAX 3.0$M														MAX 3.0$M									
											Most Likely 2.0$M														Most Likely 2.0$M			$0.0						
									Schedule	0.0 $M	MIN		0.0Mo		O RISK									0.0 $M	MIN		0.0Mo		0.0Mo		O RISK			
											MAX														MAX			0.0Mo						

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(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	[10a]	(11)	(12)	(13)	(14)	(15)	(15a)	
									Type		Most Likely				Impact	Impact		
6-Aug-09	ROW 50.03	Active	Right Of Way	May-09	Construction	Threat	Updated: CTC has not been saying that they will require any improvements, could be fish handling improvements.	CTC Modifications	Cost	50%	MIN 1.0$M		1.0$M	Moderate	Very Low		1.0$M	Contractor
						Concrete Tech agrees to work on site but Requires Improvements					MAX 3.0$M							
Current			Design/PS&E								Most Likely 2.0$M							
									Schedule	0.0 $M	MIN		0.0Mo		NO RISK			
											MAX							
											Most Likely							
6-Aug-09	ENV 40.01	Active	Environmental & Hydraulics	May-09	Construction	Threat	Archaeological resources may be discovered during construction. Artifacts discovered during construction, historical burial discovery during construction; Update Two, currrently the site is undergoing a cultural resources review so expect less chance of an issue during construction.		Cost	15%	MIN 0.2$M		0.2$M	Very Low	Very Low		1.1$M	WSDOT
						Potential issues with Section 106 during construction					MAX 2.5$M							
Current			Design/PS&E								Most Likely 1.0$M							
									Schedule	0.9 $M	MIN 6.0Mo		1.4Mo		Very Low			
						Threat					MAX 12.0Mo							
											Most Likely 9.0Mo							
23-Jun-09	ROW 50.04	Active	Right Of Way	May-09	Construction		If CTC refused because of environmental regulations and had to move to build all pontoons at Gray's Harbor; Risk 50.04 and Risk 50.03 are mutually exclusive		Cost	40%	MIN		0.0$M	Moderate	NO RISK		1.2$M	WSDOT
						CTC refuses to allow on site, have to build all pontoons at Gray's Harbor					MAX							
Current			Design/PS&E								Most Likely							
									Schedule	1.2 $M	MIN 6.0Mo		2.4Mo		Very Low			
						Threat					MAX 6.0Mo							
											Most Likely 6.0Mo							
6-Aug-09	ENV 60.02	Active	Environmental & Hydraulics	May-09	Construction		14 hour work days are planned, could include extensive pile driving; this could lead to community opposition to noise and vibration leading to change in construction schedule. Noise will be significant, over time there could be opposition due to long work days and day after day of noise. Reduction in the work hours would be the impact if community opposition occurs. Already employing 3 sets of crews, which is the maximum possible. Update Two: The cities seem supportive of this so the likelihood should be lower...lowered to 10% chance.		Cost	10%	MIN		0.0$M	Very Low	NO RISK		0.8$M	Acceptance
						Noise issues during construction lead to alteration of construction plan					MAX							
Current			Design/PS&E								Most Likely							
									Schedule	0.9 $M	MIN 1.0Mo		0.2Mo		Very Low			
						Threat					MAX 2.0Mo							
											Most Likely 1.5Mo							
23-Jun-09	ENV 10.03	Active	Environmental & Hydraulics	May-09	Pre-construction		Risk of legal challenge from regional marine industry, conservation groups, NGOs, etc. (will team up) as a result of construction site. Impact occurs when a challenge with injunction happens. 33% chance of no challenge; 60% chance of challenge with/noeffect.		Cost	7%	MIN		0.0$M	Very Low	NO RISK		1.8$M	Acceptance
						Legal Challenge to NEPA Documentation					MAX							
Current			Design/PS&E								Most Likely							
									Schedule	1.8 $M	MIN 3.0Mo		0.9Mo		Very Low			
						Threat					MAX 24.0Mo							
											Most Likely 13.5Mo							
15-May-09	CTR 90.03	Active	Contracting and Procurement	May-09	Construction	Threat	Base assumes domestic steel. Minimal chance for waiver; pontoons use some stainless steel and this can be difficult to get domestic; design builder may add to his bid to prepare to cover any penalty if he is forced to get too much foreign material.		Cost	50%	MIN 2.0$M		1.0$M	Moderate	Very Low		1.0$M	
						Buy America Clause					MAX 2.0$M							
Current			Design/PS&E								Most Likely 2.0$M							
									Schedule	0.0 $M	MIN		0.0Mo		NO RISK			
											MAX							
											Most Likely							
15-May-09	CNS 90.08	Active	Construction	May-09	Construction		Contractor may need to do the mock up more than once until accepted; have seen this issue in past projects; minor changes won't trigger a new mockup; Base assumes 4 months after ROD to allow for a mockup;		Cost	30%	MIN		0.0$M	Low	NO RISK		0.9$M	
						Risk of delay to pontoon construction due to unacceptable mock up					MAX							
Current			Design/PS&E								Most Likely							
									Schedule		MIN 3.0Mo							

Update History	Risk #	Response Strategy	ACTION TO BE TAKEN Response Actions including advantages and disadvantages (include dates)	Risk Owner	Risk Review Dates	Date, Status and Review Comments	Is Risk on Critical Path?	Responded Probability	Responded Risk Impact ($M or Mo)		Expected Impact (Post-Response)	Cost to Respond [$M]	Est. Risk Avoided [$M]/Months	Probability	Impact	Risk Matrix	Total Cost Impact (Cost of delay + cost event risk)	Risk Assignment (Contractor or WSDOT)
(0)	(1)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	[22a]		(23)	(24)	(25)	(26)	(27)	(28)	(28a)	
									Most Likely				0.0Mo		Impact	Impact		
6-Aug-09	ROW 50.03	Acceptance	Pursue no effect letter from FHWA;					50%	MIN 1.0$M		1.0$M			Moderate	Very Low		1.0$M	Contractor
									MAX 3.0$M									
Current									Most Likely 2.0$M				$0.0					
								0.0 $M	MIN		0.0Mo		0.0Mo		NO RISK			
									MAX				0.0Mo					
									Most Likely				0.0Mo					
6-Aug-09	ENV 40.01	Acceptance	Write the MOA to assume they may find some cultural resources; Complete extensive cultural resource investigations;					15%	MIN 0.2$M		0.2$M			Very Low	Very Low		1.3$M	WSDOT
									MAX 2.5$M									
Current									Most Likely 1.0$M				-$0.3					
								1.2 $M	MIN 6.0Mo		1.4Mo		0.0Mo		Very Low			
									MAX 12.0Mo				0.0Mo					
									Most Likely 9.0Mo				0.0Mo					
23-Jun-09	ROW 50.04	Mitigation	Met with CTC and will meet every other Thursday with the services to make a case that consultation is not necessary, failing that the team will negotiate terms that are acceptable to CTC.					20%	MIN		0.0$M			Low	NO RISK		0.0$M	WSDOT
									MAX									
Current									Most Likely				$1.2					
								0.0 $M	MIN 6.0Mo		1.2Mo		1.2Mo		Very Low			
									MAX 6.0Mo				1.2Mo					
									Most Likely 6.0Mo				1.2Mo					
6-Aug-09	ENV 60.02	Acceptance	Currently planning work hours of 7am to 9pm and keep the City of Aberdeen informed.					10%	MIN		0.0$M			Very Low	NO RISK		1.1$M	Contractor
									MAX									
Current									Most Likely				-$0.3					
								1.1 $M	MIN 1.0Mo		0.2Mo		0.0Mo		Very Low			
									MAX 2.0Mo				0.0Mo					
									Most Likely 1.5Mo				0.0Mo					
23-Jun-09	ENV 10.03	Acceptance	We follow our proven process for environmental documentation.					7%	MIN		0.0$M			Very Low	NO RISK		1.3$M	WSDOT
									MAX									
Current									Most Likely				$0.5					
								1.3 $M	MIN 3.0Mo		0.9Mo		0.0Mo		Very Low			
									MAX 24.0Mo				0.0Mo					
									Most Likely 13.5Mo				0.0Mo					
15-May-09	CTR 90.03							50%	MIN 2.0$M		1.0$M			Moderate	Very Low		1.0$M	
									MAX 2.0$M									
Current									Most Likely 2.0$M				$0.0					
								0.0 $M	MIN		0.0Mo		0.0Mo		Very Low			
									MAX				0.0Mo					
									Most Likely				0.0Mo					
15-May-09	CNS 90.08							30%	MIN		0.0$M			Low	NO RISK		0.9$M	
									MAX									
Current									Most Likely				$0.0					
									MIN 3.0Mo				0.0Mo		Low			

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Functional Area	Post-Response	Pre-Response	Functional Area	Post-Response	Pre-Response
Construction	4.7 $M	5.7 $M	Management / Funding	0.0 $M	0.0 $M
Right-of-Way	0.0 $M	0.0 $M	Structures & Geo-tech	1.6 $M	1.6 $M
Design/PS&E	1.8 $M	2.1 $M	Utilities	0.0 $M	0.0 $M
Railroad	0.0 $M	0.0 $M	Environmental & Hydraulics	0.4 $M	5.6 $M
Partnerships and Stakeholders	0.4 $M	0.4 $M	Contracting and Procurement	2.1 $M	2.2 $M

Pre-Response

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(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	[10a]	(11)	(12)	(13)	(14)	(15)	(15a)
Cu				Des					Schedu	0.9 $M	MAX	4.0Mo	1.1Mo		Very L	VL L M H VH Impact	
						Threat					Most Likely	3.5Mo					
6-Aug-09	ENV 00.02	Retired		May-09	Construction	Threat	Would add cost but if caught early would not lead to schedule impacts Retired as of final update, Geotech did not find contamination. Retired as of Update Two.		Cost	75%	MIN	0.1$M	0.0$M		NO RISK	Probability VH H M L VL; VL L M H VH Impact	0.0$M
											MAX	2.0$M					
											Most Likely	1.1$M					
Current			Environmental & Hydraulics	Design/PS&E		Soil Contamination discovery during pre-construction/geo-tech			Schedule	0.0 $M	MIN		0.0Mo		NO RISK		
											MAX						
											Most Likely						
15-May-09	DES 00.07	Active		May-09	Construction	Opportunity	The single contract approach was selected to provide the contractor with an opportunity to develop a more innovative or cost effective design. RFP will have some restrictions because there is another project coming after this that would also need to use the same criteria; Slide launch; elevator launch barges, dual stage pontoons; remove one of the gates; change the wall type; savings (low end) could be single gate $8M to $12M savings, different pile types (pre-cast concrete pile is the base) possibly $10M savings on foundation driving from a floating crane inside the hole could save 1 to 2 months schedule; wall changes (base is cast in place wall) could move to sheetpile or MSE wall, $4M to $5M savings; Possibly no need for the wall; Excavation changes $1M to $3M savings Steep Slopes		Cost	50%	MIN	-1.0$M	-0.8$M		Moderate	Probability VH H M L VL; $; VL L M H VH Impact	-0.8$M
											MAX	-2.0$M					
											Most Likely	-1.5$M					
Current			Design/PS&E	Design/PS&E		Opportunity for Contractor Innovation on Casting Basin Site Design or Construction Methods (Excavation Changes)			Schedule	0.0 $M	MIN		0.0Mo		NO RISK		
											MAX						
											Most Likely						
6-Aug-09	DES 00.06	Active		May-09	Pre-construction	Delay to final design of facilities	No time in the construction schedule to allow for permit changes in final design; Corps permit may be the big issue as the permit may have to be reinitiated and lead to a delay;		Cost	50%	MIN		0.0$M		Moderate	Probability VH H M L VL; Mo; VL L M H VH Impact	1.8$M
											MAX						
											Most Likely						
Current			Design/PS&E	Design/PS&E					Schedule	1.8 $M	MIN	2.0Mo	2.8Mo		Very Low		
											MAX	9.0Mo					
						Threat					Most Likely	5.5Mo					
6-Aug-09	CTR 30.01	Active	Contracting and Procurement	May-09	Pre-construction	Delays in Ad/Bid/Award Process	Bid protests, addenda, etc.; critical period is the 3 months of proposal preparation time; depending on the severity of the addendum delay could be larger; there is a tight schedule for this large of a job.		Cost	50%	MIN		0.0$M		Moderate	Probability VH H M L VL; Mo; VL L M H VH Impact	0.1$M
											MAX						
											Most Likely						
Current			Design/PS&E	Design/PS&E					Schedule	0.1 $M	MIN	1.0Mo	1.0Mo		Very Low		
											MAX	3.0Mo					
						Threat					Most Likely	2.0Mo					
23-Jun-09	ENV 08.03	Active	Environmental & Hydraulics	May-09	Construction	Truck traffic creates community complaints either air quality or traffic.	One truck every 30 seconds during basin excavation for 6 to 8 months. This can lead to long traffic queues. If reduce the number of trucks by 50% leads to the 6 month upper impact		Cost	10%	MIN		0.0$M		Very Low	Probability VH H M L VL; Mo; VL L M H VH Impact	0.2$M
											MAX						
											Most Likely						
Current			Design/PS&E	Design/PS&E					Schedule	0.2 $M	MIN	4.0Mo	0.5Mo		Very Low		
											MAX	6.0Mo					
						Threat					Most Likely	5.0Mo					
23-Jun-09	ENV 08.01	Active	Environmental & Hydraulics	May-09	Pre-construction	Corps of Engineers May Not Accept Grays Harbor Sites as the LEDPA	Corps might not accept this site as the Least Environmentally Damaging Practicable Alternative (LEDPA) based on public comments a new site could be entered into the LEDPA review.		Cost	15%	MIN		0.0$M		Very Low	Probability VH H M L VL; Mo; VL L M H VH Impact	0.2$M
											MAX						
											Most Likely						
Current			Design/PS&E	Design/PS&E					Schedule	0.2 $M	MIN	2.0Mo	0.5Mo		Very Low		
											MAX	4.0Mo					
						Threat					Most Likely	3.0Mo					
15-May-09	DES 00.04	Active		May-09		Risk that fish windows concerning pontoon float out are missed	June 15th through Feb 28th is the assumed fish window; base currently does not asume a window on pontoon floatout		Cost	10%	MIN		0.0$M		Very Low	Probability VH H M L	0.1$M
											MAX						
											Most Likely						

Post-Response

Update History	Risk #	Response Strategy	ACTION TO BE TAKEN Response Actions including advantages and disadvantages (include dates)	Risk Owner	Risk Review Dates	Date, Status and Review Comments	Is Risk on Critical Path?	Responded Probability	Responded Risk Impact ($M or Mo)		Expected Impact (Post-Response)	Cost to Respond [$M]	Est. Risk Avoided [$M]/Months	Probability	Impact	Risk Matrix	Total Cost Impact (Cost of delay + cost event risk)	Risk Assignment (Contractor or WSDOT)
(0)	(1)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	[22a]		(23)	(24)	(25)	(26)	(27)	(28)	(28a)	
Cu								0.9 $M	MAX	4.0Mo	1.1Mo		0.0Mo		Very L	VL L M H VH Impact		
									Most Likely	3.5Mo			0.0Mo					
6-Aug-09	ENV 00.02							75%	MIN	0.1$M	0.0$M			NO RISK	Probability VH H M L VL; VL L M H VH Impact	0.0$M	
									MAX	2.0$M								
									Most Likely	1.1$M			$0.0					
Current								0.0 $M	MIN		0.0Mo		0.0Mo	NO RISK				
									MAX				0.0Mo					
									Most Likely				0.0Mo					
15-May-09	DES 00.07							50%	MIN	-1.0$M	-0.8$M			Moderate	Very Low	Probability VH H M L VL; $; VL L M H VH Impact	-0.8$M	
									MAX	-2.0$M								
									Most Likely	-1.5$M			$0.0					
Current								0.0 $M	MIN		0.0Mo		0.0Mo		NO RISK			
									MAX				0.0Mo					
									Most Likely				0.0Mo					
6-Aug-09	DES 00.06	Mitigation	WSDOT to apply for most of the permits not requiring contractor to do this; Those permits that are more concerned with work process will be obtained by the design builder. Environmental impacts are captured elsewhere for NEPA changing the impacts to 1 to 3 months.					25%	MIN		0.0$M			Low	NO RISK	Probability VH H M L VL; Mo; VL L M H VH Impact	0.3$M	Contractor
									MAX									
									Most Likely				$1.5					
Current								0.3 $M	MIN	1.0Mo	0.5Mo		0.8Mo		Very Low			
									MAX	3.0Mo			3.8Mo					
									Most Likely	2.0Mo			2.3Mo					
6-Aug-09	CTR 30.01	Mitigation	Follow WSDOT's proven design builder process; WSDOT is holding a voluntary submitters meeting on July 1, 2009, to provide potential bidders with information and answer questions; Work with other support groups on addendum coordination and set key milestone dates for when major changes are accepted. Weekly coordination meetings with AG's office. Update, submittals have been tendered to WSDOT still on schedule. Still chance of a protest but less likelihood than previously.					25%	MIN		0.0$M			Low	NO RISK	Probability VH H M L VL; Mo; VL L M H VH Impact	0.1$M	WSDOT
									MAX									
									Most Likely				$0.0					
Current								0.1 $M	MIN	1.0Mo	0.5Mo		0.3Mo		Very Low			
									MAX	3.0Mo			0.8Mo					
									Most Likely	2.0Mo			0.5Mo					
23-Jun-09	ENV 08.03	Mitigation	When VE recommendation #5 occurs this risk lessens in impact. Correlate this mitigated impact with the VE#5 Opportunity.					10%	MIN		0.0$M			Very Low	NO RISK	Probability VH H M L VL; Mo; VL L M H VH Impact	0.3$M	Contractor
									MAX									
									Most Likely				-$0.1					
Current								0.3 $M	MIN	2.0Mo	0.3Mo		0.2Mo		Very Low			
									MAX	3.0Mo			0.3Mo					
									Most Likely	2.5Mo			0.3Mo					
23-Jun-09	ENV 08.01	Acceptance	Continue to work with WSDOT execs and Quinault indian nation in identification of LEDPA.					15%	MIN		0.0$M			Very Low	NO RISK	Probability VH H M L VL; Mo; VL L M H VH Impact	0.5$M	WSDOT
									MAX									
									Most Likely				-$0.2					
Current								0.5 $M	MIN	2.0Mo	0.5Mo		0.0Mo		Very Low			
									MAX	4.0Mo			0.0Mo					
									Most Likely	3.0Mo			0.0Mo					
15-May-09	DES 00.04							10%	MIN		0.0$M			Very Low	NO RISK	Probability VH H M L	0.0$M	Contractor
									MAX									
									Most Likely				$0.1					

Project Title	WSDOT SR-520 Pontoon Construction			RISK MANAGEMENT SUMMARY RESULTS	
Estimate Date		Target AD date	07/17/09	**Planned and Actual**	**($ M)**
Project PIN #		Estimated CN Duration	57.9Mo	Expected Value Total Risk Before Response	-17.1 $M
Last Review Date		Estimated PE Cost	37.0 $M	Expected Value Total Risk After Response	-19.7 $M
Project Manager		Estimated ROW Cost	16.9 $M	Estimated Cost to Respond	0.0 $M
Est $ Impact of Significant Project Risks (cost & schedule)		Estimated CN Cost	693.4 $M	**Potential Cost Savings**	**2.5 $M**

Functional Area	Post-Response	Pre-Response	Functional Area	Post-Response	Pre-Response
Construction	4.7 $M	5.7 $M	Management / Funding	0.0 $M	0.0 $M
Right-of-Way	0.0 $M	0.0 $M	Structures & Geo-tech	1.6 $M	1.6 $M
Design/PS&E	1.8 $M	2.1 $M	Utilities	0.0 $M	0.0 $M
Railroad	0.0 $M	0.0 $M	Environmental & Hydraulics	0.4 $M	5.6 $M
Partnerships and Stakeholders	0.4 $M	0.4 $M	Contracting and Procurement	2.1 $M	2.2 $M

Pre-Response

Update History	Risk #	Status	RBS Group	Project Phase--Date Identified	Phase (pre CN, CN, or ROW)	Summary Description Threat and/or Opportunity	Detailed Description of Risk Event (Specific, Measurable, Attributable, Relevant, Timebound) [SMART]	Risk Trigger	Type	Probability/ Cost of Schedule Delay	Risk Impact ($M or Mo)		Expected Impact ($M) [most likely X probability]	Probability	Impact	Risk Matrix	Total Cost Impact (Cost of delay + cost event risk)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	[10a]	(11)	(12)	(13)	(14)	(15)	(15a)
Current	C		C	Design/P	C	Threat			Schedule	0.1 $M	MIN MAX Most Likely	1.0Mo 3.0Mo 2.0Mo	0.2Mo	V	Very Low	Probability: VL; Impact: VL L M H VH; Mo	
15-May-09	ENV 30.02	Active	Environmental & Hydraulics	May-09	Pre-construction	Risk of the 401/404 permit being delayed	Corps has to deal with extensive comments on their permit or the department of ecology, water quality, 401 approval is delayed; Minor risk (See also 106 risk ENV 40.01)		Cost	5%	MIN MAX Most Likely		0.0$M	Very Low	NO RISK	Probability: VH H M L VL; Impact: VL L M H VH; Mo	0.1$M
Current				DesignPS&E		Threat			Schedule	0.1 $M	MIN MAX Most Likely	2.0Mo 4.0Mo 3.0Mo	0.2Mo		Very Low			
15-May-09	CNS 40.03	Active	Construction	May-09	Construction	Uncertain production rates for basin excavation	20 hrs per day excavation assumed equates to a truck every 30 seconds; 12,000 cubic yards/day is assumed as the rate.		Cost	20%	MIN MAX Most Likely		0.0$M	Low	NO RISK	Probability: VH H M L VL; Impact: VL L M H VH; Mo	0.1$M
Current				DesignPS&E		Threat			Schedule	0.1 $M	MIN MAX Most Likely	0.5Mo 1.0Mo 0.8Mo	0.2Mo		Very Low			
15-May-09	ENV 28.02	Active	Environmental & Hydraulics	May-09	Pre-construction	Other Endangered Species Act (ESA) Consultation Issues	Minor issue of a delay; but this risk is already minimized due to incremental consultation process; minor issues may occur with pontoon storage (assumption is the storage is within Gray's Harbor); invasive species; negligible risk.		Cost	5%	MIN MAX Most Likely		0.0$M	Very Low	NO RISK	Probability: VH H M L VL; Impact: VL L M H VH; Mo	0.0$M
Current				DesignPS&E		Threat			Schedule	0.0 $M	MIN MAX Most Likely	2.0Mo 4.0Mo 3.0Mo	0.2Mo		Very Low			
6-Aug-09	ENV 30.03	Active	Environmental & Hydraulics	May-09	Construction	Delay in Gray's Harbor Pontoon Moorage Permits	DNR aquatic land use lease, HPA, Shoreline, Section 10. Risk is that DNR requests information late before willing to issue the aquatic land use lease; Believes there is enough time to address issues with DNR;		Cost	15%	MIN MAX Most Likely		0.0$M	Very Low	NO RISK	Probability: VH H M L VL; Impact: VL L M H VH; Mo	0.4$M
Current				DesignPS&E		Threat			Schedule	0.4 $M	MIN MAX Most Likely	2.0Mo 4.0Mo 3.0Mo	0.5Mo		Very Low			
15-May-09	ENV 30.05	Active	Environmental & Hydraulics	May-09	Construction	Delay in dredge channel construction	DNR aquatic land use lease, HPA, Shoreline, Section 10, DMMO (Dredge Material Management Office). Risk is that DNR requests information late before willing to issue the aquatic land use lease; Believes there is enough time to address issues with DNR.		Cost	5%	MIN MAX Most Likely		0.0$M	Very Low	NO RISK	Probability: VH H M L VL; Impact: VL L M H VH; Mo	0.3$M
Current				DesignPS&E		Threat			Schedule	0.3 $M	MIN MAX Most Likely	2.0Mo 4.0Mo 3.0Mo	0.2Mo		Very Low			
23-Jun-09	ENV 40.04	Active	Environmental & Hydraulics	May-09	Construction	Cultural Resources Issues at Mitigation Site cause delay during construction	Currently contemplating sites that don't require much excavation, such as converted intertidal areas. Field reconnaissance will be don during the wetland survey. A database evaluation has been done o currently identified sites. Possibility of encountering cultural issues since 4 sites that are possible all had tribal villages at some point in time. Some excavation is required.		Cost	20%	MIN MAX Most Likely		0.0$M	Low	NO RISK	Probability: VH H M L VL; Impact: VL L M H VH; Mo	0.0$M
Current				DesignPS&E		Threat			Schedule	0.0 $M	MIN MAX Most Likely	3.0Mo 6.0Mo 4.5Mo	0.9Mo		Very Low			
15-May-09	.02		Hydraulics	May-09	on	Threat			Cost	30%	MIN MAX Most Likely	0.5$M 1.0$M 0.8$M	0.2$M		Very Low	Probability: VH H M	

Post-Response

Update History	Risk #	Response Strategy	ACTION TO BE TAKEN Response Actions including advantages and disadvantages (include dates)	Risk Owner	Risk Review Dates	Date, Status and Review Comments	Is Risk on Critical Path?	Responded Probability	Responded Risk Impact ($M or Mo)		Expected Impact (Post-Response)	Cost to Respond [$M]	Est. Risk Avoided [$M]/Months	Probability	Impact	Risk Matrix	Total Cost Impact (Cost of delay + cost event risk)	Risk Assignment (Contractor or WSDOT)
(0)	(1)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	[22a]		(23)	(24)	(25)	(26)	(27)	(28)	(28a)	
Current	C							0.0 $M	MIN MAX Most Likely	1.0Mo 3.0Mo 2.0Mo	0.2Mo		0.0Mo 0.0Mo 0.0Mo	V	Very Low	Probability: VL; Impact: VL L M H VH; Mo		
15-May-09	ENV 30.02							5%	MIN MAX Most Likely		0.0$M		-$0.1	Very Low	NO RISK	Probability: VH H M L VL; Impact: VL L M H VH; Mo	0.2$M	WSDOT
Current								0.2 $M	MIN MAX Most Likely	2.0Mo 4.0Mo 3.0Mo	0.2Mo		0.0Mo 0.0Mo 0.0Mo		Very Low			
15-May-09	CNS 40.03							20%	MIN MAX Most Likely		0.0$M		$0.0	Low	NO RISK	Probability: VH H M L VL; Impact: VL L M H VH; Mo	0.2$M	Contractor
Current								0.2 $M	MIN MAX Most Likely	0.5Mo 1.0Mo 0.8Mo	0.2Mo		0.0Mo 0.0Mo 0.0Mo		Very Low			
15-May-09	ENV 28.02							5%	MIN MAX Most Likely		0.0$M		$0.0	Very Low	NO RISK	Probability: VH H M L VL; Impact: VL L M H VH; Mo	0.0$M	WSDOT
Current								0.0 $M	MIN MAX Most Likely	2.0Mo 4.0Mo 3.0Mo	0.2Mo		0.0Mo 0.0Mo 0.0Mo		Very Low			
6-Aug-09	ENV 30.03							15%	MIN MAX Most Likely		0.0$M		$0.0	Very Low	NO RISK	Probability: VH H M L VL; Impact: VL L M H VH; Mo	0.4$M	WSDOT
Current								0.4 $M	MIN MAX Most Likely	2.0Mo 4.0Mo 3.0Mo	0.5Mo		0.0Mo 0.0Mo 0.0Mo		Very Low			
15-May-09	ENV 30.05							5%	MIN MAX Most Likely		0.0$M		-$0.1	Very Low	NO RISK	Probability: VH H M L VL; Impact: VL L M H VH; Mo	0.4$M	WSDOT
Current								0.4 $M	MIN MAX Most Likely	2.0Mo 4.0Mo 3.0Mo	0.2Mo		0.0Mo 0.0Mo 0.0Mo		Very Low			
23-Jun-09	ENV 40.04							20%	MIN MAX Most Likely		0.0$M		$0.0	Low	NO RISK	Probability: VH H M L VL; Impact: VL L M H VH; Mo	0.0$M	WSDOT
Current								0.0 $M	MIN MAX Most Likely	3.0Mo 6.0Mo 4.5Mo	0.9Mo		0.0Mo 0.0Mo 0.0Mo		Very Low			
15-May-09	.02							30%	MIN MAX Most Likely	0.5$M 1.0$M 0.8$M	0.2$M		$0.0		Very Low	Probability: VH H M		

Project Title	WSDOT SR-520 Pontoon Construction			RISK MANAGEMENT SUMMARY RESULTS	
Estimate Date		Target AD date	07/17/09	**Planned and Actual**	**($ M)**
Project PIN #		Estimated CN Duration	57.9Mo	Expected Value Total Risk Before Response	-17.1 $M
Last Review Date		Estimated PE Cost	37.0 $M	Expected Value Total Risk After Response	-19.7 $M
Project Manager		Estimated ROW Cost	16.9 $M	Estimated Cost to Respond	0.0 $M
Est $ Impact of Signficant Project Risks (cost & schedule)		Estimated CN Cost	693.4 $M	**Potential Cost Savings**	**2.5 $M**

Functional Area	Post-Response	Pre-Response	Functional Area	Post-Response	Pre-Response
Construction	4.7 $M	5.7 $M	Management / Funding	0.0 $M	0.0 $M
Right-of-Way	0.0 $M	0.0 $M	Structures & Geo-tech	1.6 $M	1.6 $M
Design/PS&E	1.8 $M	2.1 $M	Utilities	0.0 $M	0.0 $M
Railroad	0.0 $M	0.0 $M	Environmental & Hydraulics	0.4 $M	5.6 $M
Partnerships and Stakeholders	0.4 $M	0.4 $M	Contracting and Procurement	2.1 $M	2.2 $M

Pre-Response

Update History (0)	Risk # (1)	Status (2)	RBS Group (3)	Project Phase--Date Identified (4)	Phase (pre CN, CN, or ROW) (5)	Summary Description Threat and/or Opportunity (6)	Detailed Description of Risk Event (Specific, Measurable, Attributable, Relevant, Timebound) [SMART] (7)	Risk Trigger (8)	Type (9)	Probability/ Cost of Schedule Delay (10)	Risk Impact ($M or Mo) [10a]	(11)	Expected Impact ($M) [most likely X probability] (12)	Probability (13)	Impact (14)	Risk Matrix (15)	Total Cost Impact (cost of delay + cost event risk) (15a)
Current	ENV 900	Active	Environmental &	Design/PS&E	Construc	Dredge material is not clean leads to disposal costs	Base assumes the material is clean.		Schedule	0.0 $M	MIN		0.0Mo	Low	NO RISK	$ (L / VL)	0.2$M
											MAX						
											Most Likely						
6-Aug-09	ROW 50.07	Retired	Right Of Way	May-09	Pre-construction	Threat	Maximum necessary may require 2 commercial properties relocation, widen some roads may require some more row. Volume of truck traffic may lead to more row necessary to mitigate the traffic impacts on congestion; delay risk comes from if had to move to condemnation. Updated due to assignment of this risk to the contractor, believe they will price in a higher probability than in past update. Retired as of Update Two.		Cost	50%	MIN	1.0$M	0.0$M	NO RISK	NO RISK		0.0$M
											MAX	2.0$M					
											Most Likely	1.5$M					
Current				Design/PS&E		Traffic issues lead to more ROW acquisition necessary			Schedule	0.0 $M	MIN	2.0Mo	0.0Mo		NO RISK		
											MAX	3.0Mo					
						Threat					Most Likely	2.5Mo					
15-May-09	CNS 40.01	Active	Construction	May-09	Construction	Opportunity	Have defined a wet weather season from oct 15th to april 15th, lower production rates for weather affected activities; basin excavation affected, base will be changed to gravel borrow, opportunity to use less costly method. -1.0, 0.0, 1.0 Impact		Cost	33%	MIN	-1.0$M	-0.5$M	Low	Very Low	$ (L / VL)	-0.5$M
											MAX	-2.0$M					
											Most Likely	-1.5$M					
Current				Design/PS&E		Production rate due to weather is better or worse than assumed in the base			Schedule	0.0 $M	MIN	-1.0Mo	0.0Mo		NO RISK		
											MAX	1.0Mo					
						Threat					Most Likely	0.0Mo					
15-May-09	CNS 900.05	Active	Construction	May-09	Construction	Threat	Applies to site grading, utilities; stormwater, conduit; estimates 4 to 6 inches but could be worse; up to 4 to 6 feet of fill in places; low costs.		Cost	80%	MIN	0.2$M	0.5$M	Very High	Very Low	$ (VH / VL)	0.5$M
											MAX	1.0$M					
											Most Likely	0.6$M					
Current				Design/PS&E		Settlement occurs at the site leading to increased costs due to repair costs			Schedule	0.0 $M	MIN		0.0Mo		NO RISK		
											MAX						
											Most Likely						
15-May-09	STG 20.02	Active	Structures & Geo-tech	May-09	Construction		Base assumes 5.5 piles per day per crew for each 3 crews over a 14 hour shift; obstruction delay is low, could be opportunity for quicker schedule due to uncertain production rate. -1.0, 0.0, 1.0 impact		Cost	10%	MIN		0.0$M	Very Low	NO RISK		0.0$M
											MAX						
											Most Likely						
Current				Design/PS&E		Productivity of pile driving is uncertain leading to change in schedule			Schedule	0.0 $M	MIN	-1.0Mo	0.0Mo		NO RISK		
											MAX	1.0Mo					
						Threat					Most Likely	0.0Mo					
6-Aug-09	STG 30.01	Active	Structures & Geo-tech	May-09	Construction	Threat	Could be a liquifiable site; WSDOT cannot get the analysis finished before the RFP so the information will not be available. Impact is due to negative issues that can arise due to no hazard analysis information being available before the bid; seismic risk issues; assumption is design criteria for 1,000 year event life safety only; ground improvements may be necessary to solve the issue leading to high cost; IBC requires for special structures if there is an applicable code use that if not the owner develops a specific code; could design to survive lesser earthquakes; upper cost is design to make the structural serviceable after an earthquake; have the contractor to design for lateral spreading; risk is for lateral spreading costs; analysis supplied is conservative; cost is to allow the structure to hold together and float if it has to move sideways because of liquifaction. Update: Geotech information now seems to indicate that lateral spreading will occur.		Cost	80%	MIN	1.0$M	1.6$M	Very High	Very Low	$ (VH / VL)	1.6$M
											MAX	3.0$M					
											Most Likely	2.0$M					
Current				Design/PS&E		Geotechnical baseline report will not contain hazard analysis and due to lack of information there is a higher risk of a higher bid due to fears that lateral spreading occurs			Schedule	0.0 $M	MIN		0.0Mo		NO RISK		
											MAX						
											Most Likely						
15-May-09	DES 10.03	Active	Design/PS&E	May-09	Construction	Threat	Discussions with the city to solidify haul routes have not occurred; changes may occur; some concern has been expressed about base haul routes; if a different route is chosen could be different traffic mitigation necessary; basin excavation is the activity that could be delayed if the haul routes are changed; possibly improvements required by the city in negotiations could also require new ROW; this risk should be carried by WSDOT as earlier solution reduces the impact greatly.		Cost	20%	MIN	0.5$M	0.2$M	Low	Very Low	$ (L / VL)	0.2$M
											MAX	1.0$M					
											Most Likely	0.8$M					
Current				Design/PS&E		Change to base assumed haul routes lead to delay and/or costs			Schedule	0.0 $M	MIN		0.0Mo		NO RISK		
											MAX						
											Most Likely						
-May-09				May-09					Cost	10%	MIN		0.0$M		O RISK		
											MAX						

Risk Matrix axes (each matrix): Probability VH, H, M, L, VL; Impact VL, L, M, H, VH.

Post-Response

Risk #	Response Strategy (16)	ACTION TO BE TAKEN Response Actions including advantages and disadvantages (include dates) (17)	Risk Owner (18)	Risk Review Dates (19)	Date, Status and Review Comments (20)	Is Risk on Critical Path? (21)	Responded Probability (22)	Responded Risk Impact ($M or Mo) [22a]		Expected Impact (Post-Response) (23)	Cost to Respond [$M] (24)	Est. Risk Avoided [$M]/Months (25)	Probability (26)	Impact (27)	Risk Matrix (28)	Total Cost Impact (cost of delay + cost event risk) (28a)	Risk Assignment (Contractor or WSDOT)
ENV 900							0.0 $M	MIN		0.0Mo		0.0Mo	Low	NO RISK	$ (L / VL)	0.2$M	Contractor
								MAX				0.0Mo					
								Most Likely				0.0Mo					
ROW 50.07							50%	MIN	1.0$M	0.0$M			NO RISK	NO RISK		0.0$M	Contractor
								MAX	2.0$M								
								Most Likely	1.5$M			$0.0					
							0.0 $M	MIN	2.0Mo	0.0Mo		0.0Mo		Very Low			
								MAX	3.0Mo			0.0Mo					
								Most Likely	2.5Mo			0.0Mo					
CNS 40.01							33%	MIN	-1.0$M	-0.5$M			Low	Very Low	$ (L / VL)	-0.5$M	
								MAX	-2.0$M								
								Most Likely	-1.5$M			$0.0					
							0.0 $M	MIN	-1.0Mo	0.0Mo		0.0Mo		NO RISK			
								MAX	1.0Mo			0.0Mo					
								Most Likely	0.0Mo			0.0Mo					
CNS 900.05							80%	MIN	0.2$M	0.5$M			Very High	Very Low	$ (VH / VL)	0.5$M	
								MAX	1.0$M								
								Most Likely	0.6$M			$0.0					
							0.0 $M	MIN		0.0Mo		0.0Mo		NO RISK			
								MAX				0.0Mo					
								Most Likely				0.0Mo					
STG 20.02							10%	MIN		0.0$M			Very Low	NO RISK		0.0$M	
								MAX									
								Most Likely				$0.0					
							0.0 $M	MIN	-1.0Mo	0.0Mo		0.0Mo		NO RISK			
								MAX	1.0Mo			0.0Mo					
								Most Likely	0.0Mo			0.0Mo					
STG 30.01							80%	MIN	1.0$M	1.6$M			Very High	Very Low	$ (VH / VL)	1.6$M	Contractor
								MAX	3.0$M								
								Most Likely	2.0$M			$0.0					
							0.0 $M	MIN		0.0Mo		0.0Mo		NO RISK			
								MAX				0.0Mo					
								Most Likely				0.0Mo					
DES 10.03							20%	MIN	0.5$M	0.2$M			Low	Very Low	$ (L / VL)	0.2$M	
								MAX	1.0$M								
								Most Likely	0.8$M			$0.0					
							0.0 $M	MIN		0.0Mo		0.0Mo		NO RISK			
								MAX				0.0Mo					
								Most Likely				0.0Mo					
							10%	MIN		0.0$M				O RISK			
								MAX									

Project Title	WSDOT SR-520 Pontoon Construction			RISK MANAGEMENT SUMMARY RESULTS	
Estimate Date		Target AD date	07/17/09	**Planned and Actual**	**($ M)**
Project PIN #		Estimated CN Duration	57.9Mo	Expected Value Total Risk Before Response	-17.1 $M
Last Review Date		Estimated PE Cost	37.0 $M	Expected Value Total Risk After Response	-19.7 $M
Project Manager		Estimated ROW Cost	16.9 $M	Estimated Cost to Respond	0.0 $M
Est $ Impact of Significant Project Risks (cost & schedule)		Estimated CN Cost	693.4 $M	**Potential Cost Savings**	**2.5 $M**

Functional Area	Post-Response	Pre-Response	Functional Area	Post-Response	Pre-Response
Construction	4.7 $M	5.7 $M	Management / Funding	0.0 $M	0.0 $M
Right-of-Way	0.0 $M	0.0 $M	Structures & Geo-tech	1.6 $M	1.6 $M
Design/PS&E	1.8 $M	2.1 $M	Utilities	0.0 $M	0.0 $M
Railroad	0.0 $M	0.0 $M	Environmental & Hydraulics	0.4 $M	5.6 $M
Partnerships and Stakeholders	0.4 $M	0.4 $M	Contracting and Procurement	2.1 $M	2.2 $M

Update History	Risk #	Status	RBS Group	Project Phase--Date Identified	Phase (pre CN, CN, or ROW)	Summary Description Threat and/or Opportunity	Detailed Description of Risk Event (Specific, Measurable, Attributable, Relevant, Timebound) [SMART]	Risk Trigger	Type	Probability/ Cost of Schedule Delay	Risk Impact ($M or Mo)		Expected Impact ($M) [most likely X probability]	Probability	Impact	Risk Matrix	Total Cost Impact (Cost of delay + cost event risk)	Risk Assignment (Contractor or WSDOT)
(1)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	[10a]	(11)	(12)	(13)	(14)	(15)	(15a)	
15																		
Current	DES 60.01	Active	DesignPS&E	DesignPS&E	Pre-construction	Design Delays Resulting from New Permit Criteria	If significant changes are made at the last minute, then delays may result. Risk is better held by WSDOT; construction related permits; changes to the inwater work (channel, moorage) the terms and conditions aren't solidified until later generally; possibly some term or condition that is unanticipated comes up; Risk is when permits are acquired need to make a change that wasn't accounted for prior.		Schedule	0.1 $M	Most Likely MIN 0.5Mo MAX 1.0Mo Most Likely 0.8Mo	0.1Mo	Very Low Very Low	N Very Low	Probability: M, L, VL; Impact: VL, L, M, H, VH; Mo	0.1$M	
Threat																		
15-May-09						Threat												
Current	DES 60.08	Active	DesignPS&E	May-09 DesignPS&E	Construction	Risk that additional pontoon is required for 4 lane bridge	May require 2 more flanker pontoons for the 4 lane; change in alignment for the 4 lane bridge happened, so more pontoons may be needed.		Cost Schedule	10% 0.0 $M	MIN 3.0$M MAX 5.0$M Most Likely 4.0$M MIN MAX Most Likely	0.4$M 0.0Mo	Very Low Very Low	Very Low NO RISK	Probability: VH, H, M, L, VL; Impact: VL, L, M, H, VH; $	0.4$M	
15-May-09																		
Current	DES 900.02	Active	DesignPS&E	May-09 DesignPS&E	Pre-construction	RFP ready pontoon design is delayed for reasons other than those explicitly listed	Manpower issue to draft the design could be an issue; issue if wind and wave analysis comes back with unanticipated results may delay a final addendum.		Cost Schedule	5% 0.0 $M	MIN MAX Most Likely MIN 1.0Mo MAX 1.0Mo Most Likely 1.0Mo	0.0$M 0.1Mo	Very Low Very Low	NO RISK Very Low	Probability: VH, H, M, L, VL; Impact: VL, L, M, H, VH; Mo	0.0$M	
Threat																		
6-Aug-09	PSP 10.01	Retired	Partnerships and Stakeholders	May-09 DesignPS&E	Pre-construction	Agreements with Tribes	Duration for reaching satisfactory conclusions / agreements. Issues such as eelgrass, crabbing, treaty rights, cultural resources, PA, being discussed. Agreement issues can lead to a delay the RFP. Update: Did not receive the PA, have increased the probability from 25% to 50%. Retired as of Update Two.		Cost Schedule	50% 0.8 $M	MIN MAX Most Likely MIN 1.0Mo MAX 2.0Mo Most Likely 1.5Mo	0.0$M 0.0Mo	NO RISK NO RISK	NO RISK NO RISK	Probability: VH, H, M, L, VL; Impact: VL, L, M, H, VH	0.0$M	Acceptance
Threat																		
23-Jun-09	VE4	Retired		May-09 DesignPS&E		Opportunity Walls-Outside	VE recommendation #4, modification to exterior wall. The value engineering recommendation is not accepted. See VE decision document for details.		Cost Schedule	0%	MIN 0.0$M MAX 0.0$M Most Likely 0.0$M MIN MAX Most Likely	0.0$M 0.0Mo	NO RISK NO RISK	NO RISK NO RISK	Probability: VH, H, M, L, VL; Impact: VL, L, M, H, VH	0.0$M	
23-Jun-09	DES 60.04	Retired		May-09 DesignPS&E	Construction	Opportunity Opportunity for Contractor Innovation on Casting Basin Site Design or Construction Methods (Different Pile Types) Opportunity	The single contract approach was selected to provide the contractor with an opportunity to develop a more innovative or cost effective design. RFP will have some restrictions because there is another project coming after this that would also need to use the same criteria; slide launch; elevator launch barges, dual stage pontoons; removal of one of the gates; changing of the wall type; savings (low end) could be single gate $8M to $12M savings, different pile types (pre-cast concrete pile is the base) possibly $10M savings on foundation driving from a floating crane inside the hole could save 1 to 2 months schedule; wall changes (base is cast in place wall) could move to sheetpile or MSE wall, $4M to $5M savings; Possibly no need for the wall;		Cost Schedule	75% -1.3 $M	MIN -5.0$M MAX -10.0$M Most Likely -7.5$M MIN -1.0Mo MAX -2.0Mo Most Likely -1.5Mo	0.0$M 0.0Mo	NO RISK NO RISK	NO RISK NO RISK	Probability: VH, H, M, L, VL; Impact: VL, L, M, H, VH	0.0$M	
23-Jun-09	DES 60.03	Retired		May-09 DesignPS&E	Construction	Opportunity Opportunity for Contractor Innovation on Casting Basin Site Design or Construction Methods (Single Gate Design) (Cost Opportunity Impact) (DES 60.10 has the Schedule Risk Impact)	The single contract approach was selected to provide the contractor with an opportunity to develop a more innovative or cost effective design. RFP will have some restrictions because there is another project coming after this that would also need to use the same criteria; Slide launch; elevator launch barges, dual stage pontoons; remove one of the gates; change the wall type; savings (low end) could be single gate $8M to $12M savings, different pile types (pre-cast concrete pile is the base) possibly $10M savings on foundation driving from a floating crane inside the hole could save 1 to 2 months schedule; wall changes (base is cast in place wall) could move to sheetpile or MSE wall, $4M to $5M savings; Possibly no need for the wall; This is a cost opportunity but this opportunity also creates a schedule risk which is captured in DES 60.10. Both DES 60.03 and DES 60.10 impacts occur simultaneously.		Cost Schedule	50% 0.0 $M	MIN -8.0$M MAX -12.0$M Most Likely -10.0$M MIN MAX Most Likely	0.0$M 0.0Mo	NO RISK NO RISK	NO RISK NO RISK	Probability: VH, H, M, L, VL; Impact: VL, L, M, H, VH	0.0$M	
09				May-09		Threat					MIN 60.0$M				K	VH		

Update History	Risk #	Response Strategy	ACTION TO BE TAKEN Response Actions including advantages and disadvantages (include dates)	Risk Owner	Risk Review Dates	Date, Status and Review Comments	Is Risk on Critical Path?	Responded Probability	Responded Risk Impact ($M or Mo)		Expected Impact (Post-Response)	Cost to Respond [$M]	Est. Risk Avoided [$M]/Months	Probability	Impact	Risk Matrix	Total Cost Impact (Cost of delay + cost event risk)
(1)	(1)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	[22a]		(23)	(24)	(25)	(26)	(27)	(28)	(28a)
15																	
Current	DES 60.01								Most Likely MIN 0.5Mo MAX 1.0Mo Most Likely 0.8Mo		0.1Mo		$0.0 0.0Mo 0.0Mo 0.0Mo	Very Low Very Low	N Very Low	Probability: M, L, VL; Impact: VL, L, M, H, VH; Mo	0.0$M
15-May-09																	
Current	DES 60.08							10% 0.0 $M	MIN 3.0$M MAX 5.0$M Most Likely 4.0$M MIN MAX Most Likely		0.4$M 0.0Mo		$0.0 0.0Mo 0.0Mo 0.0Mo	Very Low Very Low	Very Low NO RISK	Probability: VH, H, M, L, VL; Impact: VL, L, M, H, VH; $	0.4$M
15-May-09																	
Current	DES 900.02							5% 0.0 $M	MIN MAX Most Likely MIN 1.0Mo MAX 1.0Mo Most Likely 1.0Mo		0.0$M 0.1Mo		$0.0 0.0Mo 0.0Mo 0.0Mo	Very Low Very Low	NO RISK Very Low	Probability: VH, H, M, L, VL; Impact: VL, L, M, H, VH; Mo	0.0$M
6-Aug-09	PSP 10.01	Acceptance	Meeting with the tribes to resolve the issue with PA;					50% 0.4 $M	MIN MAX Most Likely MIN 1.0Mo MAX 2.0Mo Most Likely 1.5Mo		0.0$M 0.0Mo		-$0.4 0.0Mo 0.0Mo 0.0Mo	NO RISK NO RISK	NO RISK Very Low	Probability: VH, H, M, L, VL; Impact: VL, L, M, H, VH	0.4$M
23-Jun-09	VE4							0% 0.0 $M	MIN 0.0$M MAX 0.0$M Most Likely 0.0$M MIN MAX Most Likely		0.0$M 0.0Mo		$0.0 0.0Mo 0.0Mo 0.0Mo	NO RISK NO RISK	NO RISK NO RISK	Probability: VH, H, M, L, VL; Impact: VL, L, M, H, VH	0.0$M
23-Jun-09	DES 60.04		VE recommendation #2 and/or #5 retire this opportunity.						MIN MAX Most Likely MIN MAX Most Likely		0.0$M 0.0Mo		$0.0 -0.8Mo -1.5Mo -1.1Mo	NO RISK NO RISK	NO RISK NO RISK	Probability: VH, H, M, L, VL; Impact: VL, L, M, H, VH	0.0$M
23-Jun-09	DES 60.03		Covered with VE Recommendations #3 and #5						MIN MAX Most Likely MIN MAX Most Likely		0.0$M 0.0Mo		$0.0 0.0Mo 0.0Mo 0.0Mo	NO RISK NO RISK	NO RISK NO RISK	Probability: VH, H, M, L, VL; Impact: VL, L, M, H, VH	0.0$M
09									MIN						K	VH	

Project Title	WSDOT SR-520 Pontoon Construction			RISK MANAGEMENT SUMMARY RESULTS	
Estimate Date		Target AD date	07/17/09	**Planned and Actual**	**($ M)**
Project PIN #		Estimated CN Duration	57.9Mo	Expected Value Total Risk Before Response	-17.1 $M
Last Review Date		Estimated PE Cost	37.0 $M	Expected Value Total Risk After Response	-19.7 $M
Project Manager		Estimated ROW Cost	16.9 $M	Estimated Cost to Respond	0.0 $M
Est $ Impact of Significant Project Risks (cost & schedule)		Estimated CN Cost	693.4 $M	**Potential Cost Savings**	**2.5 $M**

Functional Area	Post-Response	Pre-Response	Functional Area	Post-Response	Pre-Response
Construction	4.7 $M	5.7 $M	Management / Funding	0.0 $M	0.0 $M
Right-of-Way	0.0 $M	0.0 $M	Structures & Geo-tech	1.6 $M	1.6 $M
Design/PS&E	1.8 $M	2.1 $M	Utilities	0.0 $M	0.0 $M
Railroad	0.0 $M	0.0 $M	Environmental & Hydraulics	0.4 $M	5.6 $M
Partnerships and Stakeholders	0.4 $M	0.4 $M	Contracting and Procurement	2.1 $M	2.2 $M

Update History	Risk #	Status	RBS Group	Project Phase--Date Identified	Phase (pre CN, CN, or ROW)	Summary Description Threat and/or Opportunity	Detailed Description of Risk Event (Specific, Measurable, Attributable, Relevant, Timebound) [SMART]	Risk Trigger	Type	Probability/ Cost of Schedule Delay	Risk Impact ($M or Mo)		Expected Impact ($M) [most likely X probability]	Probability	Impact	Risk Matrix	Total Cost Impact (Cost of delay + cost event risk)	Risk Assignment (Contractor or WSDOT)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	[10a]	(11)	(12)	(13)	(14)	(15)	(15a)	
Pre-Response																		
23-Jun-09	STG 30.02	Retired	Structures & Geo-tech	May-09	Construction	Change in structural design criteria affect the project	Possibly seismic design level and differential settlement level; possible reasons are more information from geotech, or permit from the city to go to a different criteria; performance criteria is currently tied to a mechanism; Possibly the performance criteria could change dictated by the City of Aberdeen to survive lesser earthquakes; worst case is needed to design to survive a 2500 yr quake; $120 million extra cost minus $25m for piles and floor and $25m for the wall net $70M is the median cost		Cost	5%	MAX	80.0$M	0.0$M	NO RISK	NO RISK	0.0$M
											Most Likely	70.0$M						
Current						Threat			Schedule	0.4 $M	MIN	3.0Mo	0.0Mo	NO RISK	NO RISK			
											MAX	12.0Mo						
											Most Likely	6.0Mo						
15-May-09	DES 90.10	Retired	Design/PS&E	May-09	Construction	Opportunity for Contractor Innovation on Casting Basin Site Design or Construction Methods (Single Gate Design) (Schedule Risk Impact for DES 60.03)	The single contract approach was selected to provide the contractor with an opportunity to develop a more innovative or cost effective design. RFP will have some restrictions because there is another project coming after this that would also need to use the same criteria; Slide launch; elevator launch barges, dual stage pontoons; remove one of the gates; change the wall type; savings (low end) could be single gate $8M to $12M savings, different pile types (pre-cast concrete pile is the base) possibly $10M savings on foundation; driving from a floating crane inside the hole could save 1 to 2 months schedule; wall changes (base is cast in place wall) could move to sheetpile or MSE wall, $4M to $5M savings; Possibly no need for the wall; This risk is a schedule impact due to the cost opportunity of DES 60.03, both DES 60.03 and DES 60.10 impacts occur simultaneously.		Cost	50%	MIN		0.0$M	NO RISK	NO RISK	0.0$M
											MAX							
											Most Likely							
Current									Schedule	0.0 $M	MIN	1.0Mo	0.0Mo	NO RISK	NO RISK			
											MAX	3.0Mo						
						Threat					Most Likely	2.0Mo						
23-Jun-09	DES 60.09	Retired	Design/PS&E	May-09	Construction	Risk that an epoxy coating for the pontoon is added to the pontoon design	The pontoons are designed for freshwater but will be moored in saltwater until needed; if the project was delayed many years, this could lead to corrosion that damages the pontoons significantly. The design change may happen to save this potential issue. The risk of the pontoons sitting in salt water for a long time is very low.		Cost	25%	MIN	5.0$M	0.0$M	NO RISK	NO RISK	0.0$M
											MAX	7.0$M						
											Most Likely	6.0$M						
Current									Schedule	0.0 $M	MIN		0.0Mo	NO RISK	NO RISK			
											MAX							
											Most Likely							
23-Jun-09	CNS 900.06	Retired	Construction	May-09	Construction	Opportunity	Performing a test pile program on the preferred alternative site could possibly lead to savings due to more information. In DB usually the contractor would do a pile load test during design; and could gain some useful information still from doing the test pile program. For the RFP will have some borings, and lab test raw data; information may lead to fewer piles being necessary leading to a cost savings in bid (problem is the information isn't known by the bidders prior to bid, savings is due to lower premium in bid due to lack of information); with the information can find the ultimate capacity and can design closer to that limit which can lead to savings, test costs about $300k saves around $4.2 million so a net savings of about $4m at the largest. This program needs to be done by the State before bids to get the information out to save on bids. Update: A decision has been made that this cannot be performed before the RFP goes out.		Cost	50%	MIN	-1.0$M	0.0$M	NO RISK	NO RISK	0.0$M
											MAX	-4.0$M						
											Most Likely	-2.5$M						
Current						Test pile program implemented leads to lower bid prices due to more information			Schedule	0.0 $M	MIN		0.0Mo	NO RISK	NO RISK			
											MAX							
											Most Likely							
23-Jun-09	DES 60.05	Retired	Design/PS&E	May-09	Construction	Opportunity	The single contract approach was selected to provide the contractor with an opportunity to develop a more innovative or cost effective design. RFP will have some restrictions because there is another project coming after this that would also need to use the same criteria; foundation driving from a floating crane inside the hole could save 1 to 2 months schedule; wall changes (base is cast in place wall) could move to sheetpile or MSE wall, $4M to $5M savings; possibly no need for the wall. Retired because VE recommendations replaces this opportunity.		Cost	10%	MIN	-4.0$M	0.0$M	NO RISK	NO RISK	0.0$M
											MAX	-5.0$M						
											Most Likely	-4.5$M						
Current						Opportunity for Contractor Innovation on Casting Basin Site Design or Construction Methods (Change Wall Type)			Schedule	0.0 $M	MIN		0.0Mo	NO RISK	NO RISK			
											MAX							
											Most Likely							

Update History	Risk #	Response Strategy	ACTION TO BE TAKEN Response Actions including advantages and disadvantages (include dates)	Risk Owner	Risk Review Dates	Date, Status and Review Comments	Is Risk on Critical Path?	Responded Probability	Responded Risk Impact ($M or Mo)		Expected Impact (Post-Response)	Cost to Respond [$M]	Est. Risk Avoided [$M]/Months	Probability	Impact	Risk Matrix	Total Cost Impact (Cost of delay + cost event risk)
(0)	(1)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	[22a]		(23)	(24)	(25)	(26)	(27)	(28)	(28a)
Post-Response																	
23-Jun-09	STG 30.02	Avoidance	Received a written response from the City of Aberdeen that accepted the seismic criteria.						MAX		0.0$M			NO RISK	NO RISK		0.0$M
									Most Likely				$0.0				
Current								0.0 $M	MIN		0.0Mo		0.2Mo	NO RISK	NO RISK		
									MAX				0.6Mo				
									Most Likely				0.3Mo				
15-May-09	DES 90.10		Due to VE Rec #3 and #5 retired.						MIN		0.0$M			NO RISK	NO RISK		0.0$M
									MAX								
									Most Likely				$0.0				
Current								0.0 $M	MIN		0.0Mo		0.5Mo	NO RISK	NO RISK		
									MAX				1.5Mo				
									Most Likely				1.0Mo				
23-Jun-09	DES 60.09								MIN		0.0$M			NO RISK	NO RISK		0.0$M
									MAX								
									Most Likely				$0.0				
Current								0.0 $M	MIN		0.0Mo		0.0Mo	NO RISK	NO RISK		
									MAX				0.0Mo				
									Most Likely				0.0Mo				
23-Jun-09	CNS 900.06								MIN		0.0$M			NO RISK	NO RISK		0.0$M
									MAX								
									Most Likely				$0.0				
Current								0.0 $M	MIN		0.0Mo		0.0Mo	NO RISK	NO RISK		
									MAX				0.0Mo				
									Most Likely				0.0Mo				
23-Jun-09	DES 60.05								MIN		0.0$M			NO RISK	NO RISK		0.0$M
									MAX								
									Most Likely				$0.0				
Current								0.0 $M	MIN		0.0Mo		0.0Mo	NO RISK	NO RISK		
									MAX				0.0Mo				
									Most Likely				0.0Mo				