



GUEMES ISLAND FERRY REPLACEMENT Contingent Vessel Cost Estimate

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DOC: 17097.02-043-03	REV: -	FILE: 17097.02	DATE: 30 June 2021		

References

1. *Guemes Island Ferry Replacement, Preliminary Vessel Cost Estimate*, Glosten, Report No. 17097.02-043-03.

Summary

The Reference 1 cost estimate has been updated in this report to incorporate additional budgetary contingency. With this contingency, the upper budgetary cost estimate for vessel construction is \$17.9 million.

Background and Assumptions

The following assumptions are unchanged from Reference 1:

- \$85/hr shipyard labor rate.
- 70 hrs/LT production rate for steel.
- 300 hrs/LT production rate for aluminum.
- 20% plate wastage.
- 10% shape wastage.
- 15% material markup – to cover associated material shipping, storage, handling.
- 10% estimating allowance.
- 2% builders risk insurance and bonding.
- 4% non-Skagit County construction management.
- 0% tax for the vessel.

Consideration of several factors identified a need for an additional budgetary contingency. These include:

- Project timeline, with greater than 18 months anticipated between the release of Reference 1 and awarding a shipyard contract
- Recent price volatility associated with both complex manufactured products and basic commodities
- Shipyard perceptions of equipment and administrative cost risks

An additional 15% contingency factor is applied to the “High” cost estimate in Reference 1 to provide a budgetary cost estimate that mitigates the cost risk resulting from these factors.

Cost Breakdown

Total construction cost is shown in Table 1. This includes a breakdown of the shipyard construction cost estimate showing the material, direct shipyard labor, and shipyard overhead and other miscellaneous costs. The 15% contingency is applied to the total cost of each line item except construction management.

Table 1 Shipyard construction cost estimate, cost x \$1000

Vessel Construction Total		17,903			
Outside Construction Management (4%)		689			
		Labor (hrs)	Material (\$1000)	Total (\$1000)	Percent
Shipyard Contract Total		17,214			
Labor rate per hour		85			
Bonding and Risk Insurance		2%	338		
Material Markup (% of Materials)		15%	995		
Estimating Allowance (% of Subtotal)		10%	1,444		
Shipyard Contract Subtotal		68,064	5,769	14,438	
Shipyard Engineering & Services		18,367	686	2,584	19%
Structure		23,712	711	3,136	21%
Propulsion		600	781	957	7%
Electric Plant		3,868	2,451	4,347	30%
Command and Surveillance		2,220	300	562	4%
Auxiliary Systems		6,182	408	1,073	7%
Outfit & Furnishings		13,116	433	1,780	12%