

Appendix C

Vessel Maintenance Staffing Memo

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MEMO

Date: October 19, 2015
To: Kitsap Transit
From: KPFF Project Team
Subject: Vessel Maintenance Staffing

This memo is intended to capture the rationale employed, including the assumptions made, in evaluating proposed maintenance staffing needs to support proposed Kitsap Transit passenger-only ferry service levels.

Assumptions: The following assumptions were made in formulating the necessary level of maintenance staffing to appropriately maintain the vessels providing the Kitsap Transit passenger-only ferry service.

- The maintenance staffing identified in the memo will be largely dedicated to vessel maintenance, with facility/infrastructure maintenance being conducted by other staff or contractor.
- While the exact details are not known, the level of service will include both commuter and expanded seasonal service. This service will be provided between downtown Seattle and some, or all, of the three terminals located at Southworth, Bremerton and Kingston in Kitsap County.
- Although the exact design of the vessels to be employed in this service is not known, the assumption is that they will be small passenger vessels, with systems typical of high or medium speed passenger ferry vessels.
- Typically, small passenger vessels are not required to operate with, or be maintained by, either a Coast Guard-licensed or unlicensed engineer onboard. However, King County currently maintains their vessels with a mix of license/unlicensed engineers, and this analysis assumes the Kitsap vessels will be maintained using some mix of these engineers as well.
- The mix of maintenance staff allows for varying expertise levels necessary to perform the necessary maintenance functions, as well as provides a supervisory-staff oversight relationship supportive of a successful workplace.
- The ratio of licensed engineer to unlicensed oiler, and the level of work oversight provided by engineers, may become a topic of discussion with the union. However, there is a practical need/desire to have more working level staff, with engineers providing more oversight/guidance and less actual work.
- There is no assumption that the maintenance staff will be available during all hours of operation. Indeed, it is assumed that some portion of the maintenance staff work hours

will be purposefully scheduled when the vessels are out of passenger service for routine preventative maintenance.

- The maintenance staff is assumed to be year round staff. While some form of expanded service would result in differing hours of vessel operations, with more service or operating hours in the peak season, the maintenance staffing level would remain constant. This would afford the staff the added time needed to conduct “heavier” vessel maintenance during the “off-season” when vessel availability is increased due to reduced vessel operations. Specifically this could include deferred maintenance or repair of those things that would not interrupt service during the peak season, maintenance that needs additional time to complete, and staff participation in vessel availability and shipyard periods.
- King County Marine Division is assumed to be the operators of this service through an interagency agreement. Accordingly, both the operating and maintenance crews will be employees of King County.

Rationale: Fundamentally, there are two approaches that might be employed to maintain the vessels used for the Kitsap ferry service. Perhaps not surprisingly, neither of the options is without benefits and challenges. Although not discussed in this memorandum, some hybrid of the two approaches might also be conceived. These two approaches are defined by the location where the maintenance functions are performed and are summarized as follows:

1. The first approach is to have the vessels based out of, and be maintained at, locations on the west side of Puget Sound (in Kitsap County). This approach has the advantage of commencing service from the western terminal, where the morning commute begins and terminating at the “home” location where the vessel ties up for the evening.
2. The second option is to have the vessels based out of, and maintained at, a centralized hub location on the eastern bank of Puget Sound (similar to other King County operated vessels). This approach would provide the most efficient approach to maintaining the vessels and have the highest level of staffing flexibility, with the added benefit of the potential to promptly use other available, and co-located, vessels in an emergent situation should the necessity arise.

A summary of the advantages and disadvantages of these two approaches is itemized in the following table:

Advantages	Disadvantages
Option 1	
<ul style="list-style-type: none"> • Starts and stops service on west side; where daily service would begin and end • Draws employees from Kitsap County • Vessels will be moored at their “home” port 	<ul style="list-style-type: none"> • Limited, if any, on-site maintenance facilities, representing challenges in conducting even the most routine of maintenance functions • No central maintenance facilities with infrastructure to house employee • Inefficient staffing use, since staff is essentially dedicated to the one vessel, which can't be maintained while in service • Remote location and associated distance to any maintenance supplies • Maintenance staff would not be available during much of the operating period, as more of their time would have to be schedule when maintenance

Advantages	Disadvantages
	functions can be performed
Option 2	
<ul style="list-style-type: none"> • There is a dedicated maintenance facility with all of the equipment and infrastructure needed to safely and efficiently conduct routine preventative maintenance • Employee management and oversight is more efficient and effective • Proximity to maintenance part/supplies and area shipyards • Vessels not otherwise in service could be readily pressed into service in some instances to facilitate maintenance and help with service delivery in the event of emergent situations • Time when maintenance staff is available during operating hours is increased, with a pool of maintenance employees 	<ul style="list-style-type: none"> • Likely draw employees from King versus Kitsap County • Start and stop service in Seattle, with first and last commuter trips of the day likely having very few passengers onboard • As number of vessels increase the availability of moorage space on Seattle waterfront may/will become an issue

Proposal: The rationale employed in assigning staff can be summarized by the following:

- A mix of engineers and oilers is preferable as a means to have some expertise and managerial oversight on staff to supervise the work being performed by nonsupervisory staff.
- Because of the geographic dispersion of the west terminals, only limited sharing of staff between locations might be feasible and assignment of staff at each location was incorporated into the proposed first alternatives staffing levels.
- Efficiencies could be realized by placing staff at a centralized hub, and this was incorporated into the proposed second alternative.

Accordingly, the proposed staffing levels for the two approaches considered and the number of vessels to be operated, are summarized in the following table:

No. of King Co. Vessels	No. of Kitsap Co. Vessels	Total No. of Vessels in Fleet	Option #1			Option #2		
			Licensed Engineers	Unlicensed Oiler	Total Staff	Licensed Engineers	Unlicensed Oiler	Total Staff
3	0	3	2	2	4	2	2	4
3	1	4	3	3	6	2	3	5
3	2	5	4	4	8	2	4	6
3	3	6	5	5	10	2	4	6
3	4	7	5	6	11	3	5	8
3	5	8	5	7	12	3	5	8

From this table and the list of advantages and disadvantage, it appears clear that vessel maintenance at a centralized hub is the most efficient approach to staffing the maintenance function. Plus this approach has some added operational benefits.

Accordingly, based solely on maintenance efficiency and practicality, the preferred option for maintenance staffing is option 2 as shown in the following table. However, a detailed cost-benefit analysis of these two options has not been completed.

No. of King Co. Vessels	No. of Kitsap Co. Vessels	Total No. of Vessels in Fleet	Option #1			Option #2				
			King Co. Staff	Kitsap Co. Staff	Total Staff	King Co. Staff	Kitsap Co. Staff	Total Staff	Kitsap Co. Portion of FTE's	Kitsap Co. FTE Savings vs. Opt. #1
3	0	3	4	0	4	4	0	4	-	-
3	1	4	4	2	6	4	1	5	25%	0.75 FTE
3	2	5	4	4	8	4	2	6	40%	1.60 FTE
3	3	6	4	6	10	4	2	6	50%	3.0 FTE
3	4	7	4	7	11	4	4	8	57%	2.44 FTE
3	5	8	4	8	12	4	4	8	62.5%	3.0 FTE