

Joint Transportation Committee

Capital Program Staffing and Administration Cost Final Report

Washington State Department of Transportation Ferries Division
Financing Study II



Prepared For:

Joint Transportation Committee
Washington State Legislature

Consultant Team:

Cedar River Group, LLC
RL Collier, LLC
John Boylston



April 10, 2008

Joint Transportation Committee

Paul Neal

P.O. Box 40937
Olympia, WA 98504-0937
(360) 786-7327
neal.paul@leg.wa.gov

Cedar River Group

Kathy Scanlan

93 Pike Street, Suite 315
Seattle, WA 98101
(206) 223-7660 x105
Kathy@cedarrivergroup.com

Contents

Executive Summary	1
Section I. Purpose and Scope of Review	12
A. Purpose.....	12
B. Scope of Report.....	12
C. Sources and Methods	13
D. Baseline Measures.....	14
Section II. Size of Capital Program.....	15
Section III. Capital Staffing: Findings and Recommendations	16
A. Staffing Overview	16
B. Total Capital Program Staffing Costs	19
C. Staff Budgeted in the Capital Budget.....	20
D. Operating Staff Charges to Capital Program	29
E. On-Site Consultants.....	31
Section IV. Non-Staff Capital Administration Expenses: Findings and Recommendations	34
A. Total Non-Staff Administration Costs	34
B. Administrative Expenses for Specific Capital Projects.....	36
C. Other Administrative Capital Services and Charges.....	38
Section V. Management Communication and Oversight: Findings and Recommendations	39

List of Tables

Summary of Recommendations and Department Response	8
Table 1 Capital Budget Distribution 2005-07 By Major Project Categories.....	15
Table 2 Headquarters FTEs by Division 2005-07 Biennium.....	18
Table 3 Staffing Charges to Capital Budget by Division, 2005-07 Biennium	20
Table 4 Total Distribution of Capital Staff and Expenses Charged to Capital and Operating Budgets, 2005-07 Biennium	21
Table 5 Capital Staff Charging 90 Percent or More to Administrative Work Order, 2005-07 Biennium.....	23
Table 6 Non-Staff Capital Administration Costs by Division, 2005-07 Biennium.....	35
Table 7 Systemwide and Administrative Expenses for Capital Projects, 2005-07 Biennium.....	36

List of Figures

Figure 1 Expense Areas Reviewed in Relation to Capital Program, 2005-07 Biennium	13
Figure 2 Ferries Total Staff 2005-07	17
Figure 3 Ferries Headquarters Organization Chart, 2005-07.....	17
Figure 4 2005-07 Capital Staff Charges by Staff Category	19
Figure 5 Non-Staff Administration Costs Charged to the Capital Program in 2005-07.	35

Executive Summary

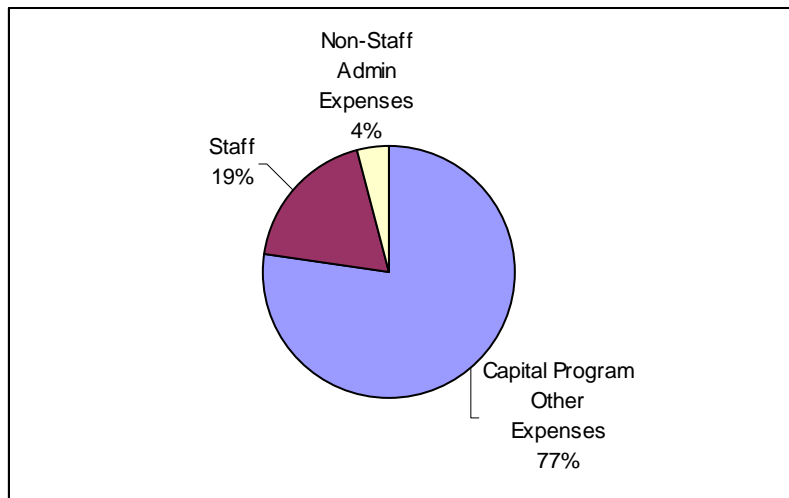
The 2007 Legislature directed the Joint Transportation Committee (JTC) to review the Washington State Department of Transportation (WSDOT) Ferries Division (Ferries) administrative and systemwide capital costs (ESHB 1094 §205(1)(b)(iii)). This report provides information on Ferries' capital program expenses that will inform development of a revised Long-Range Plan and associated capital budget, as required by ESHB 2358. In addition, this report provides information critical to the long-term financing studies being conducted at the direction of the legislature by the JTC and the Washington State Transportation Commission (WSTC) (ESHB 1094 §205(1)(b)(iii)).

A. Scope of Report

The Ferries budget is divided into an operating program, which maintains and operates the vessels and terminals, and a capital program, which preserves and improves the vessels and terminals. This report addresses only the capital program, focusing on two areas:

- **Staffing:** includes all Ferries' staff who charged their time to the capital program, and on-site consultants for the capital program. Staffing represents 19 percent of the total capital program costs in the 2005-07 biennium.
- **Non-staff administration costs:** includes administrative expenses for specific capital projects (such as scheduling systems, and legal and communications charges), and overhead charges to the capital program (such as leases, office equipment and training). These costs represent 4 percent of the total capital program costs in the 2005-07 biennium.

**Expense Areas Reviewed in Relation to Capital Program,
2005-07 Biennium**



Sources. The consultants used data from the most recent full biennium—2005-07. Data gathering began in October of 2007, so there were insufficient 2007-09 data to provide useful information. Because of this, the underlying data do not reflect organizational

changes made by Ferries since July 1, 2007. The text of this report notes those changes where appropriate.

Ferries' finance, human resources and contract management systems provided the information analyzed for this report. The consultants had to compare data across several systems. No one system tracks the data necessary to analyze Ferries' capital program staffing and administration costs adequately.

A standard way of analyzing expenses in a capital program is as a percentage of the total costs of that program, and comparing those percentages to pre-established baselines. Ferries has not established baselines or performance measures necessary to assess the reasonableness of capital staffing costs. This report documents the current baselines from which benchmark performance measures can be developed in the future.

Size of Capital Program. The Ferries capital program includes three areas: terminals, vessels, and emergency repairs. The size of the Ferries capital program is a determinant of capital staff and administration requirements. In the 2005-07 biennium, Ferries' capital expenses totaled \$183.1 million, with the terminal capital program accounting for \$102.0 million (56 percent of capital expenses), and the vessel capital program accounting for \$76.0 million (41 percent), and a small amount, \$5.1 million, for emergency repairs (3 percent).

Recommendations. As part of the ESHB 2358 implementation, Ferries is developing a revised Long-Range Plan and capital budget. Recognizing the potential for significant changes in the near future, the consultants categorized their recommendations as:

- Short-term – those that the legislature and/or Ferries could undertake immediately;
- Medium-term – for consideration as Ferries completes its Long-Range Plan, and as the JTC and WSTC complete long-term financing studies; and
- Long-term – for consideration following the adoption of the capital program in the 2009 session.

B. Capital Staffing Findings and Recommendations

This review of capital staffing looks at charges to the capital program from: (1) the capital program staff (141 positions shown in the Ferries organization chart); (2) operating staff billed to the capital budget; and (3) on-site consultants.

1. Staff Budgeted in the Capital Budget

Charges for the 141 capital staff in the 2005-07 biennium totaled \$17.3 million, or 10 percent of total capital program expenses.

Staffing levels and vacancies. Given the current re-analysis of Ferries' capital program, hiring of capital staff to fill existing vacancies should be carefully considered. With the exception of one position in Finance and Administration, this recommendation is consistent with actions Ferries is already taking to reduce costs. Future decisions on the

size of the capital program staff should focus on core competencies required to preserve Ferries terminals and vessels.

Recommendation 1 (Short-term): Current capital position vacancies should not be filled until the Draft Long-Range Plan is complete and decisions on staffing can be informed by the Plan.

Ferries should carefully review any other vacancies that occur between now and the completion of the 2009 legislative session. The consultants recommend that the most prudent course of action, given the uncertainties surrounding the size and sequencing of the Ferries capital program, would be to freeze hiring. However, the consultants also recognize that critical vacancies may occur that will require hiring despite the uncertainties.

Recommendation 2 (Medium-term): Future vacancies in capital staff positions should not be filled until the completion of the Long-Range Plan, unless absolutely critical to project delivery.

Administrative work order. Capital staff charge their time directly to specific capital projects through project work orders or across projects using an administrative work order. Given the level of charges to the administrative work order in 2005-07, it appears that the use of the administrative work order is not in conformance with established Ferries policy. The consultants note that it is not the intent of the administrative work order to be a primary charging center for capital staff. ESHB 2358 (Section 9) requires Ferries to identify separately the administrative charges in project budgets.

Recommendation 3 (Short-term): Ferries should distinguish administrative work order charges to projects from direct staff charges to projects in order to facilitate legislative and management understanding of capital project costs.

Currently 23 percent of Ferries' capital staff expenses are charged to the administrative work order. This apparently disproportionate use of the administrative work order makes it difficult to track actual administrative costs. An important consideration in determining the appropriate size of the capital program staff is to understand staffing required for administrative purposes, which cannot be done when almost all staff charge time to this work order.

Recommendation 4 (Short-term): Ferries should review staff authorized to charge to the administrative work order and fully implement the established procedures for authorizing such charges.

Of special concern are the charges to the administrative work order from the engineering divisions, which were particularly high. Terminal Engineering had 33 percent of all charges to the administrative work order (\$1.4 million) and 10 positions that charged 90 percent or more of their time to the administrative work order. In reviewing staffing,

Ferries should determine its headquarters structure, and project the costs anticipated to be charged to the administrative work order.

Recommendation 5 (Medium-term): Terminal Engineering should review its structure and anticipated ongoing charges to the administrative work order.

Project work orders. The consultants found that Terminal Engineering and Vessel Engineering charged less than half of their staff time to preservation project work orders. Staff time in these two divisions was spent primarily on vessel and terminal improvement/new vessel construction and systemwide projects. The *Auto-Passenger Vessel Preservation and Replacement Final Report of WSDOT Ferries Division Financing Study II*, January 2008, recommended a realignment of vessel staff to focus on improving vessel maintenance, and noted significant under-spending of the vessel preservation budget in the 2005-07 biennium.

Recommendation 6 (Medium-term): Ferries should review staffing in its engineering divisions to ensure core competency in, and a focus on, terminal and vessel preservation, with staffing sufficient to implement the preservation program proposed in the upcoming Long-Range Plan.

Recommendation 7 (Medium-term): Ferries should clearly distinguish responsibility for terminal improvement projects, and for vessel construction and systemwide vessel improvement projects, from its preservation responsibility in order to ensure a focus on preservation.

2. Operating Staff Charges to Capital Program

Operating budget staff—such as terminal, vessel and information agent staff—assist in the delivery of the capital program. Operating staff charged \$4.3 million to the capital program in the 2005-07 biennium, representing 2 percent of all capital program costs.

Operations construction support. One systemwide project alone, Terminal Operations Construction Support, cost \$1.0 million in operating staff time. The project is intended to mitigate disruption during construction. However, 20 percent of the staff time was for design projects.

Recommendation 8 (Short-term): Ferries should evaluate operating budget staff charges to the terminal operations construction support project to determine whether they are appropriate capital program expenses.

Other operating staff capital charges. Thirty-three (33) percent (\$1.4 million) of the operating budget staff charges to the capital budget cannot be traced to individual projects, which makes it difficult to understand whether these charges are justified.

Recommendation 9 (Short-term): Ferries should review and determine whether charges to the capital program from information agents, vessel engineering crews, vessel deck crews, and terminal staff are appropriate capital charges, and whether these charges should be separately identified in project budgets.

Recommendation 10 (Long-term): Ferries should develop and implement a policy on charges by information desk, terminal, vessel deck and vessel engineering staff to the capital program.

3. Use of On-Site Consultants

This review looks at Ferries' use of on-site consultants who have offices at Ferries headquarters, provide project management, engineering and support capacities, and are either identified in the accounting system as on-site or were so identified by Ferries staff. Ferries spent \$12.2 million in the 2005-07 biennium for on-site consultants, representing 7 percent of all capital program expenses during the biennium. That is, 36 percent of the capital program staffing costs are for on-site consultants. Most of these expenditures were from Terminal Engineering, with some from Vessel Engineering.

Terminal Engineering. While Terminal Engineering has reduced its reliance on on-site consultants in 2007-09, many Terminal Engineering Division on-site consultants have been under contract for a year or longer.

Recommendation 11 (Short-term): Terminal Engineering should continue to review and, where appropriate, reduce expenditures on on-site consultants.

Recommendation 12 (Short-term): Ferries should review its use of long-term on-site consultants.

Focus. In the future, Ferries should consider focusing its use of on-site consultants in the improvement program, while retaining a core staff capability to meet its preservation program requirements.

Recommendation 13 (Medium-term): The use of on-site consultants should be based on Ferries' decisions on the delivery method for and scheduling of preservation and terminal improvement/new vessel construction, and vessel systemwide improvement projects.

C. Non-Staff Capital Administration Expenses Findings and Recommendations

In the 2005-07 biennium, Ferries incurred costs of \$7.8 million to the capital program for non-staff capital administration expenses. This cost represents 4 percent of the total capital program costs, and approximately 21 percent of the total non-staff administration expenses for Ferries capital and operating budgets.

1. Administrative Expenses for Specific Capital Projects

Communications and legal expenses. Expenditures of \$1.2 million for legal and communications assistance appear to be a reasonable use of outside expertise and appropriate for the projects.

Scheduling system. In the 2005-07 biennium, Terminal Engineering invested \$2.3 million in the acquisition and development of a Primavera scheduling system and project controls, and plans to hire one FTE staff to support the system. A typical private

owner/developer would not themselves use such a complex system, relying instead on contractors for detailed scheduling. This system may integrate with WSDOT reporting as WSDOT develops its Primavera scheduling system.

Recommendation 14 (Long-term): WSDOT should review the cost-benefits of continued use of the Primavera scheduling system for Ferries.

2. Other Administrative Capital Services and Charges

Non-staff, general administration expenses in support of the capital program include rent and lease payments for office property, telephone and data lines, office related machinery and technology equipment, Attorney General charges¹, staff training, and travel. In the 2005-07 biennium, these expenses totaled \$5.1 million, or 3 percent of all capital program expenses.

These expenses seem reasonable. However, it is difficult to determine the total administrative services and charges in the capital budget presented by Ferries. ESHB 2358 requires Ferries to allocate systemwide services and charges to individual terminal and capital projects and to separately identify such costs within the project budgets.

Recommendation 15 (Long-term): Ferries should separately identify the capital administration services and charges for review by the legislature.

D. Management Communication and Oversight Findings and Recommendations

Organization chart. Ferries has provided an organization chart to the legislature showing 141 authorized capital positions for the 2005-07 biennium. The actual number of funded capital positions in the 2005-07 biennium was 131, but Ferries has not reconciled the 2005-07 biennium organization chart to these funded positions.² Since the organization chart can be used as a key communication tool, it is important that an organization chart be developed that clearly relates to the adopted capital budget.

Recommendation 16 (Short-term): Ferries should develop and present to the legislature an organization chart that shows only funded positions and denotes which legislatively adopted budget the chart represents.

Baselines and performance measures. Ferries does not aggregate and then track staffing or administration costs against the total cost of the capital budget. This makes it difficult to know on a consistent basis whether these costs are in line with the size of the capital program. This review has highlighted the need to establish a set of baselines and performance measures for future budget and staff resource decisions associated with each of the areas addressed by this study.

¹ Charges by the Attorney General are not the same as the legal expenses in specific projects, which were for outside counsel.

² Ferries did not exceed its funded positions because of vacancies.

Recommendation 17 (Long-term): Ferries should develop baseline information and performance measures for the percentage of the capital program and individual capital project budgets that should be devoted to capital staffing and administration expenses.

The chart below summarizes the consultant's recommendations and the Department's response.

WSDOT Response

We appreciate the opportunity to share comments on the Capital Administrative Staffing Report prepared for the JTC by the Cedar River Group.

As this report is reviewed there are three important factors that should be considered. First, this report is based on the 05/07 biennium expenditures and since that time we experienced a significant paradigm shift in the Ferries Division capital program. We went from legislative funding to plan and build improved and multimodal terminals, to pulling the Steel Electric Class vessels, daily service impacts of aging vessels without replacement, and building new vessels in a short period of time to maintain the current level of service. The capital administrative staffing has and will continue to reflect this shift. While several of the recommendations within this report address right sizing staffing and consulting levels of the capital program, these efforts will become easier when Ferries capital funding levels become more predictable.

Second, we made changes in Terminal Engineering use of on-site consultants at the end of 05/07 and during the first year of the current 07/09 biennium, resulting in a substantial reduction in consultant use.

Third, we recently combined Vessel Engineering unit with Vessel Maintenance and Preservation, resulting in more efficient administration.

Finally, as called for within ESHB 2878, we are in process of identifying core staff and competencies necessary to deliver the current capital program.

The Department agrees with all but one of the 17 recommendations. The Department does not concur with the draft recommendation of a hiring freeze and would suggest instead that the report reference the staffing proviso in the 2008 transportation budget bill (ESHB 2878), which requires WSF to maintain capital staffing levels at or below the level of staffing as of January 1, 2008.

Many of the remaining 16 recommendations are being addressed by strengthening business rules; and clarifying the processes, procedures, and oversight of capital administrative expenditures. Working with OFM and the Governor's Office, we will continue to review and improve our capital program reporting capabilities to the legislature.

Summary of Recommendations and Department Response

Area	Short-Term Recommendations	Medium-Term Recommendations	Long-Term Recommendations
Capital Staffing: Staff Budgeted in the Capital Budget			
Staffing levels and vacancies	<p>Recommendation 1. Current capital position vacancies should not be filled until the Draft Long-Range Plan is complete and decisions on staffing can be informed by the Plan.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Department Does Not Concur: Suggest instead that the report reference the staffing proviso in the 2008 transportation budget bill (ESHB 2878), which requires WSF to maintain capital staffing levels at or below the level of staffing as of January 1, 2008.</p> </div>	<p>Recommendation 2. Future vacancies in capital staff positions should not be filled until the completion of the Long-Range Plan, unless absolutely critical to project delivery.</p> <div style="border: 1px solid black; padding: 2px; margin-top: 10px;"> <p>Department Concur</p> </div>	
Administrative Work Order	<p>Recommendation 3. Ferries should distinguish administrative work order charges to projects from direct staff charges to projects in order to facilitate legislative and management understanding of capital project costs.</p> <div style="border: 1px solid black; padding: 2px; margin-top: 10px;"> <p>Department Concur</p> </div> <p>Recommendation 4. Ferries should review staff authorized to charge to the administrative work order and fully implement the established procedures for authorizing such charges.</p> <div style="border: 1px solid black; padding: 2px; margin-top: 10px;"> <p>Department Concur</p> </div>	<p>Recommendation 5. Terminal Engineering should review its structure and anticipated ongoing charges to the administrative work order.</p> <div style="border: 1px solid black; padding: 2px; margin-top: 10px;"> <p>Department Concur</p> </div>	

Area	Short-Term Recommendations	Medium-Term Recommendations	Long-Term Recommendations
Project Work Orders		<p>Recommendation 6. Ferries should review staffing in its engineering divisions to ensure core competency in, and a focus on, terminal and vessel preservation, with staffing sufficient to implement the preservation program proposed in the upcoming Long-Range Plan.</p> <p>Department Concur</p>	
		<p>Recommendation 7. Ferries should clearly distinguish responsibility for terminal improvement projects, and for vessel construction and systemwide vessel improvement projects, from its preservation responsibility in order to ensure a focus on preservation.</p> <p>Department Concur</p>	
Capital Staffing: Operating Staff Charges to Capital Program			
Operations Construction Support capital charges	<p>Recommendation 8: Ferries should evaluate operating budget staff charges to the terminal operations construction support project to determine whether they are appropriate capital program expenses.</p> <p>Department Concur</p>		
Other operating staff capital charges	<p>Recommendation 9: Ferries should review and determine whether charges to the capital program from information agents, vessel engineering crews, vessel deck crews, and terminal staff are appropriate capital charges, and whether these charges should be</p>		<p>Recommendation 10: Ferries should develop and implement a policy on charges by information desk, terminal, vessel deck, and vessel engineering staff to the capital program.</p> <p>Department Concur</p>

Area	Short-Term Recommendations	Medium-Term Recommendations	Long-Term Recommendations
	separately identified in project budgets. Department Concur		
Capital Staffing: On-Site Consultants			
Use of on-site consultants	Recommendation 11: Terminal Engineering should continue to review and, where appropriate, reduce expenditures on on-site consultants. Department Concur	Recommendation 13: The use of on-site consultants should be based on Ferries' decisions on the delivery method for, and scheduling of, preservation and terminal improvement/new vessel construction, and vessel systemwide improvement projects. Department Concur	
	Recommendation 12: Ferries should review its use of long-term on-site consultants. Department Concur		
Non-Staff Capital Administration Expenses: Administrative Expenses for Specific Capital Projects			
Scheduling system cost			Recommendation 14: WSDOT should review the cost-benefits of continued use of the Primavera scheduling system for Ferries. Department Concur
Non-Staff Capital Administration Expenses: Other Administrative Capital Services and Charges			
Identifying administrative expenses			Recommendation 15: Ferries should separately identify the capital administration services and charges for review by the legislature. Department Concur

Area	Short-Term Recommendations	Medium-Term Recommendations	Long-Term Recommendations
Management Communication and Oversight			
Organization chart	<p>Recommendation 16. Ferries should develop and present to the legislature an organization chart that shows only funded positions and denotes which legislatively adopted budget the chart represents.</p> <p>Department Concur</p>		
Baselines and performance measures			<p>Recommendation 17. Ferries should develop baseline information and performance measures for the percentage of the capital program and individual capital project budgets that should be devoted to capital staffing and administration expenses.</p> <p>Department Concur</p>

Section I. Purpose and Scope of Review

A. Purpose

The 2007 Legislature directed the Joint Transportation Committee (JTC) to review the Washington State Department of Transportation (WSDOT) Ferries Division (Ferries) administrative and systemwide capital costs (ESHB 1094 §205(1)(b)(iii)). This review is particularly important in light of the recommendation in the *Washington State Ferries Financing Study Final Report*, January 2007, that future ferry planning should recognize a likely significant shortfall in long-term capital funding, the magnitude of which cannot be determined until the completion of ridership, level-of-service standard, and pricing and operation strategy reviews (p. 67).

This report provides information on Ferries' capital program expenses that will inform development of a revised Long-Range Plan and associated capital budget, as required by ESHB 2358. In addition, this report provides information critical to the long-term financing studies currently being conducted, at the direction of the legislature, by the JTC and the Washington State Transportation Commission (WSTC) (ESHB 1094 §206(2) & §205 (1)(c)(ii)).

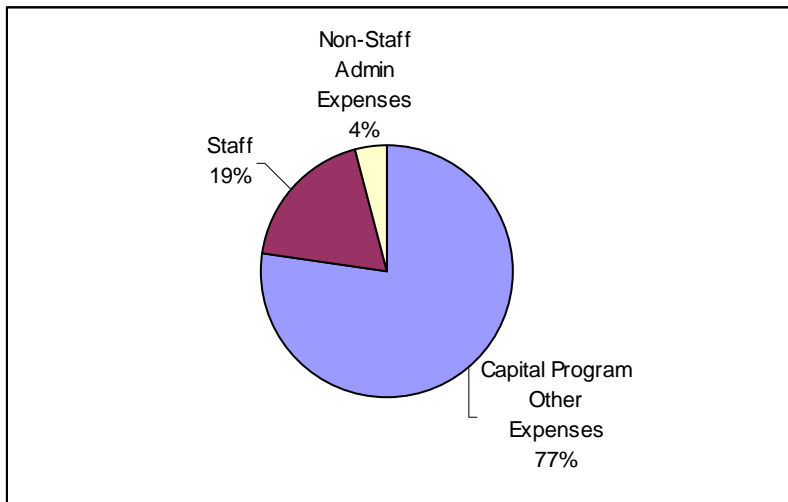
B. Scope of Report

The Ferries budget is divided into an operating program, which maintains and operates the vessels and terminals, and a capital program, which preserves and improves the vessels and terminals. This report addresses only the capital program. More specifically, to respond to the legislative direction and inform future ferry financing, this report focuses on two areas of the capital program:

- **Staffing:** includes all Ferries' staff who charged their time to the capital program, and on-site consultants for the capital program. Staffing represents 19 percent of the total capital program costs in the 2005-07 biennium.
- **Non-staff administration costs:** includes administrative expenses for specific capital projects (such as scheduling systems, and legal and communications charges), and overhead charges to the capital program (such as leases, office equipment and training). These costs represent 4 percent of the total capital program costs in the 2005-07 biennium.

Figure 1 below shows the relative size of these two "slices" of the total capital program in the 2005-07 biennium.

Figure 1
Expense Areas Reviewed in Relation to Capital Program,
2005-07 Biennium



Because Ferries is developing a revised Long-Range Plan and capital budget, the consultants’ recommendations are identified as short-term, medium-term and long-term recommendations.

- *Short-term recommendations* are those that the legislature and/or Ferries could undertake immediately. Some of the short-term recommendations are in areas where Ferries has already taken strides to reduce costs during the 2007-09 biennium.
- *Medium-term recommendations* are for consideration as Ferries completes its Long-Range Plan, and as the JTC and WSTC complete long-term financing studies.
- *Long-term recommendations* are for consideration following the adoption of the capital program in the 2009 session.

C. Sources and Methods

The consultants used data from the most recent full biennium – 2005-07. Data gathering began in October of 2007, so there were insufficient 2007-09 data to provide useful information. Because of this, the underlying data do not reflect organizational changes made by Ferries since July 1, 2007. The text of this report notes those changes where appropriate.

Ferries has cooperated fully in the development of this report. The 2005-07 biennium staffing and administration costs information that the consultants analyzed for this report was provided by Ferries’ finance, human resources and contract management systems.

The capital program expenditures in the 2005-07 biennium were spread throughout the Ferries divisions, with the only group not incurring capital expenses being the Office of

the Assistant Secretary/Executive Director. The reports Ferries provided³ and that consultants used included:

- 2005-07 biennium organization chart
- Capital program expenditures data (CPED) construction variance report for the 2005-07 biennium
- On-site consultants, 2005-07 biennium
- Overhead labor costs by staff position 2005-07 biennium – charges to the administrative work order
- Program W 2005-07 organization object direct cost distribution
- Expenditures by project for Vessel Engineering project positions 2005-07
- Expenditures by project for Terminal Engineering project positions 2005-07
- 2005-07 staff positions charging to systemwide projects
- Capital program vacancy list – Feb. 1, 2008

In addition, the consultants interviewed Ferries staff and used project information received in developing two prior reports: (i) *WSDOT Ferries Division Financing Study Final Report*, January 2007, *Appendix C. Capital Program Prioritization and Terminal and Repair Facility Capital Projects Review*, and (ii) *Auto-Passenger Vessel Preservation and Replacement Final Report of WSDOT Ferries Division Financing Study II*, January 2008.

D. Baseline Measures

Ferries has not established baselines or performance measures that provide a way to assess whether the costs analyzed in this report are reasonable. A standard way of analyzing expenses in a capital program is as a percentage of the total costs of that program. This report, therefore, uses Ferries' 2005-07 capital expenditure data to provide baseline percentages of capital program expenditures from which benchmark performance measures can be developed in the future.

³ This report is based on expenditure data. Ferries also provided labor hour information. Ferries notes, however, that there are discrepancies in the databases between the "FIRS" system, used to provide labor dollars and hours by PIN, and the "Labor Datamart" system, which provides individual Ferries staff hours charges to projects. The Labor Datamart system does not produce project-level roll-ups, whereas FIRS does. Ferries has concluded that the FIRS data are more accurate than the Labor Datamart data. The consultants have, therefore, relied on the FIRS project-level data and based the report on expenditure data available from that system.

Section II. Size of Capital Program

The Ferries capital program includes three areas: terminals, vessels, and emergency repairs. The size of the Ferries capital program is the key determinant of capital staff and administration requirements. For example, the terminal capital program will drive the requirements for Terminal Engineering staff and administration, while the vessel capital program will drive Vessel Engineering.

This report is based on expenditures in the 2005-07 biennium. As discussed in Section I, Ferries is developing a new Long-Range Plan and revised capital budget as required by ESHB 2358. The JTC and WSTC are conducting ferry financing studies that will also affect the future size of the capital program. The Long-Range Plan and recommendations from the ferry financing studies will be presented to the legislature in the 2009 session.

Capital expenditures in the 2005-07 biennium totaled \$183.1 million, of which 56 percent was on the terminal capital program, 41 percent on the vessel capital program and 3 percent for emergency repairs.

Table 1
Capital Budget Distribution 2005-07
By Major Project Categories
(\$ millions)

	\$	%
Terminals	102.0	56%
Vessels	76.0	41%
Emergency Repairs	5.1	3%
Total	183.1	

In the 2005-07 biennium, Ferries' expenditures of \$102 million on terminal capital projects were largely to support major new or improved terminals at Anacortes, Bainbridge Island, Edmonds, Keystone, Mukilteo, Port Townsend, and Seattle. These projects have been placed largely on hold by the Legislature for the 2007-09 biennium pending revisions to Ferries' Long-Range Plan as required by ESHB 2358.

Expenditures in the 2005-07 biennium on auto-passenger vessels were reviewed in the *Auto-Passenger Vessel Preservation and Replacement Final Report of WSDOT Ferries Division Financing Study II*, January 2008.

Section III. Capital Staffing: Findings and Recommendations

This section provides the consultants' findings, analysis and recommendations in three areas of capital staffing: staff budgeted in the capital budget; staff budgeted in the operating budget charging to the capital budget; and on-site consultants charging to the capital budget. Together in the 2005-07 biennium these staff costs were 19 percent of Ferries' total capital expenses.

An important finding in this section is that there are areas in which Ferries and the legislature should consider immediate cost reductions. The consultants also recommend a review of staff expenses in the development of Ferries' Long Range Plan and associated capital budget, with particular attention given to meeting the ongoing requirements of the vessel and terminal preservation programs. Over the long term, this section recommends developing performance measures for the percentage of the capital program and individual capital projects that Ferries should spend on staff.

A. Staffing Overview

Staff charges in the capital program include: (1) charges from staff whose positions are budgeted in the capital budget; (2) charges from staff whose positions are budgeted in the operating budget; and (3) charges from consultants who have offices at Ferries headquarters, provide project management, engineering and support capacities, and are either identified in the accounting system as on-site or were so identified by Ferries staff.

1. 2005-07 Ferries Total Staff Positions

This review is based on the 2005-07 Ferries organization chart. Ferries has a total staff of 1,629 full-time equivalent (FTE) positions. Of these positions, 320.25 FTEs are headquarters positions. Figure 2 below shows the relative size of Ferries headquarters staff compared to operating staff, and the breakout by budget category of the 320.25 FTE headquarters staff.

**Figure 2
Ferries Total Staff 2005-07**

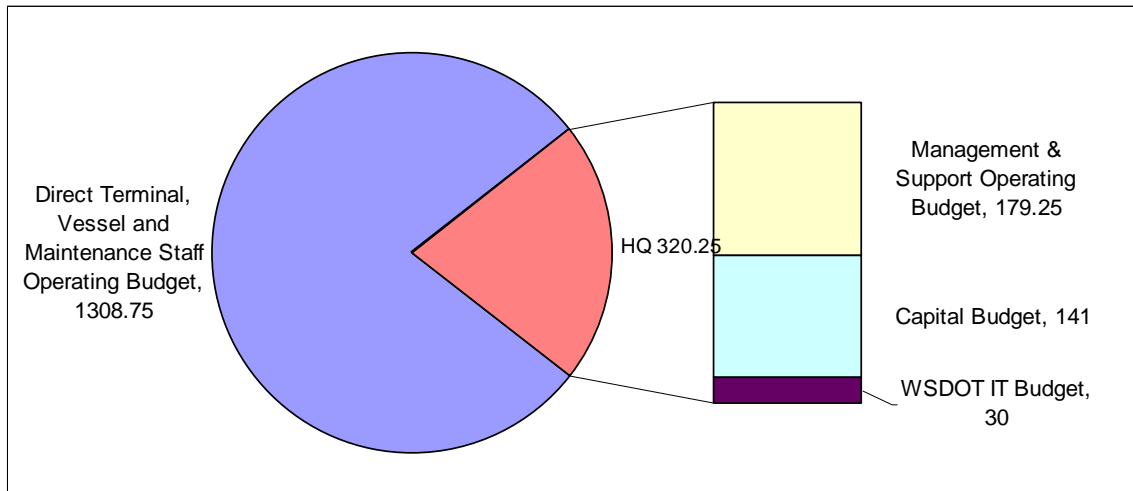
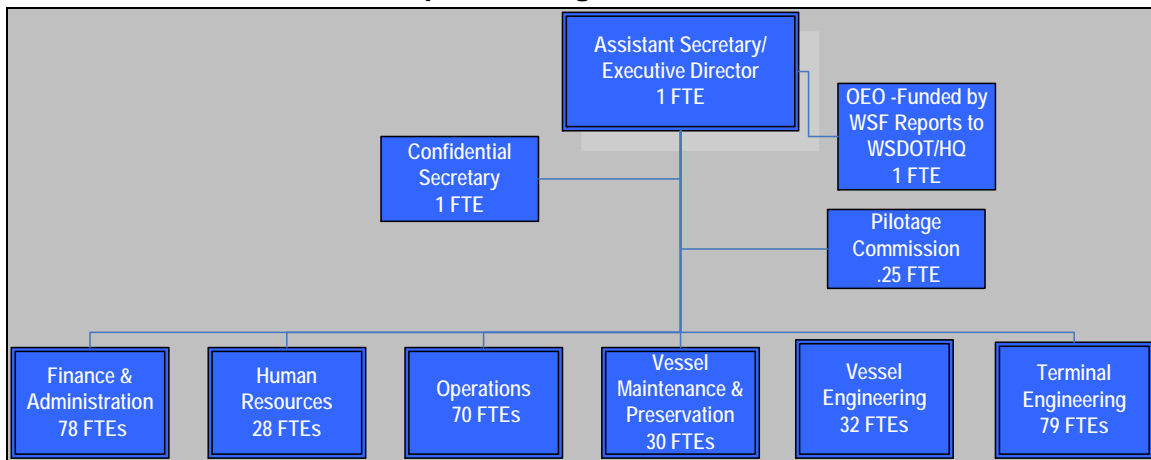


Figure 3 below shows the organization chart for the 320.25 headquarters positions.⁴ The other Ferries staff, not included in this chart, are terminal, vessel, and maintenance staff.

**Figure 3
Ferries Headquarters Organization Chart, 2005-07**



Of the 320.25 headquarters FTEs in 2005-07, a total of 141 were supported by the capital budget.⁵ These 141 positions represent 44 percent of the headquarters positions, and 3 percent of Ferries' total staff (the light blue breakout section in Figure 2 above).

⁴ Ferries re-organized in the 2007-09 biennium to create a Deputy Director position to which some sections of the 2005-07 Finance and Administration Division and the Operations Division now report. Ferries re-organized again in March 2008 to merge the Vessel Engineering and the Vessel Maintenance and Preservation Divisions.

⁵ The Office of Financial Management's approved allotment of capital positions to Ferries was 131. The Ferries organization chart has not been reconciled by Ferries to the OFM allotment.

This review looks at the 141 FTE positions budgeted in the capital budget.⁶ The table below shows the breakdown of these positions by Ferries division, compared to the total headquarters staff in each division.

**Table 2
Headquarters FTEs by Division 2005-07 Biennium**

Ferries Division	Total HQ Staff FTEs	Capital HQ Staff FTEs	Capital as % of Total HQ FTEs
Executive	2.25	0	0%
Funded by Ferries - Reports to WSDOT	1	0	0%
Finance & Administration	78	15	19%
Human Resources	28	4	14%
Operations	70	9	13%
Vessel Maintenance & Preservation	30	6	20%
Vessel Engineering	32	31	97%
Terminal Engineering	79	76	96%
Total FTEs	320.25	141	44%

* In the Ferries organization chart, 2 FTE of the Terminal Engineering capital project positions are supported by operating budget charges as are 3 FTE of the capital project positions in Vessel Engineering. These are accounted for by charges from numerous positions to the operating budget.

2. Staff Budgeted in the Capital Budget: Charging Time

Ferries uses a work order based system for staff time charged to the capital program. Staff budgeted in the capital budget can charge their time one of two ways to the capital budget and may also charge time to the operating budget:

- *Capital administrative work order:* This work order is used to charge for time devoted to the overall administration of the capital program. Charges are distributed by various formulas to individual capital projects.⁷
- *Capital project work orders:* These work orders reflect staff time charged directly to a specific capital project.
- *Operating budget (Program X):* Capital staff also charge to the operating budget when undertaking activities in support of operating budget activities.

3. Operating Budget Staff: Charging Time to the Capital Budget

Some of the staff whose positions are funded in the operating budget also charged time to the capital budget in 2005-07. These staff include vessel deck and engineering crews,

⁶ Ferries divides the capital program staff into “program” positions, which are not aligned to a particular capital project, and “project” positions, which support specific capital projects. However, the consultants found little practical difference between these two categories in terms of how their time was charged in the 2005-07 biennium.

⁷ Ferries’ cost allocation of the administrative work order charges is being revised in accordance with legislative direction in (ESHB 1094 §(section 225 (8)(d)). In the 2005-07 biennium, charges were distributed based on shared costs to benefiting projects. See *Washington State Ferries Implementation of ESHB 2358 Laws of 2007 Relating to Capital Cost Allocation Plan*, July 2007, for more information on the cost allocation formulas used in the 2005-07 biennium and planned modifications.

terminal staff, and information agents. The review does not include charges to the capital program by the Eagle Harbor Repair and Maintenance Facility staff.⁸

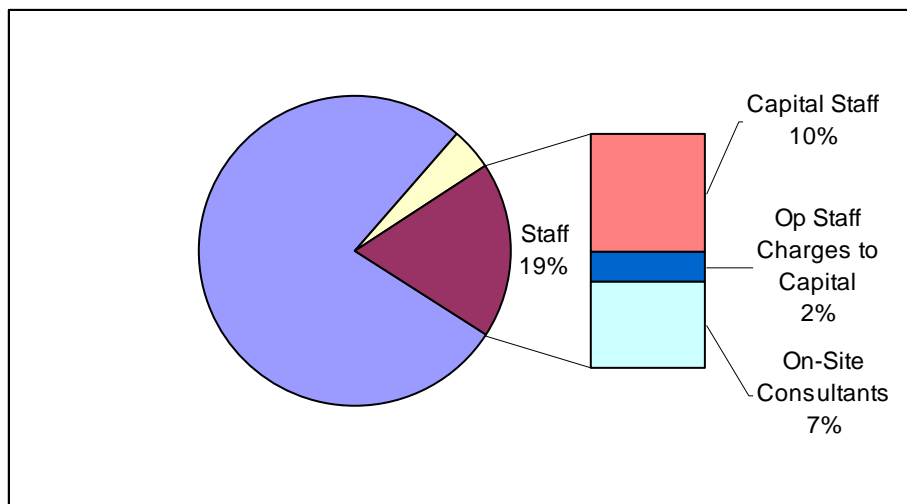
4. On-Site Consultants: Charging Time to the Capital Budget

This review looks at Ferries' use of on-site consultants. These are consultants who have offices at Ferries headquarters, provide project management, engineering and support capacities, and are either identified in the accounting system as on-site or were so identified by Ferries staff.

B. Total Capital Program Staffing Costs

In the 2005-07 biennium, Ferries incurred costs of \$33.8 million to the capital program for staff time and on-site consultants. This cost represents 19 percent of the total capital program costs of \$183.1 million for the biennium. Figure 4 below shows the relative size of the capital staffing costs within the 2005-07 capital program. Table 3 shows the breakdown of these costs by type and Ferries division.

Figure 4
2005-07 Capital Staff Charges by Staff Category



⁸ See *Washington State Ferries Financing Study II: Auto-Passenger Vessel Preservation and Replacement Final Report*, January 2008, for a discussion of Eagle Harbor capital expenses. Work at the Eagle Harbor Repair Facility in the capital program is construction in support of vessel and terminal improvements.

Table 3
Staffing Charges to Capital Budget by Division, 2005-07 Biennium
(\$ millions)

Staff Charges	\$ Terminal Eng.	\$ Vessel Eng.	\$ Vessel Maintenance & Pres.	\$ Admin. Divisions*	\$ Ops.	Total \$	% of Capital Program Cost
Capital staff charges to admin. work order	1.4	0.6	0.3	2.0		4.3	
Capital staff charges to project work orders	7.0	4.8	0.7		0.5	13.0	
<i>Sub-total capital staff charges</i>	<i>8.4</i>	<i>5.4</i>	<i>1.0</i>	<i>2.0</i>	<i>0.5</i>	<i>17.3</i>	<i>10%</i>
Operating staff charges to capital			1.1	0.3	2.9	4.3	2%
On-site consultants	8.7	2.1	0.2	0.2	1.0	12.2	7%
Total Capital Staffing Costs	17.1	7.5	2.3	2.5	4.4	33.8	
Ferries Capital Program Cost						183.1	19%

* Includes Finance and Administration, Human Resources and Communications

Using 2005-07 data, consultants identified the following baselines for future analyses of capital program staffing:

- Capital staff charges were 10 percent of total capital program expenses.
- Operating staff charges to the capital program were 2 percent of all capital program costs.
- On-site consultant charges to the capital program were 7 percent of all capital program costs.
- In total, capital program staffing accounted for 19 percent of capital program expenses.

For details of each division’s organizational structure and capital staffing costs in the 2005-07 biennium, see the Appendices (Appendix A. Terminal Engineering; Appendix B. Vessel Engineering, and Vessel Maintenance & Preservation; Appendix C. Administrative Divisions, including Finance & Administration, Human Resources, and the Communications Section of the Operations Division; and Appendix D. Operations).

C. Staff Budgeted in the Capital Budget

Core Questions: How were the 141 staff positions budgeted in the capital budget allocated in the 2005-07 biennium? On what basis should future staffing levels be set?

1. Findings and Recommendations: Staffing Level and Vacancies

Charges to the capital budget for the 141 capital staff were \$17.3 million, 10 percent of the \$183.1 million capital program expenses in the 2005-07 biennium, as shown in Table 3. Capital staff also charged \$1.2 million to the operating budget, for a total expense of \$18.5 million. The distribution of the 141 capital positions by Ferries division for 2005-07, and the amounts they charged to capital projects, the administrative work order, and the operating budget are shown in Table 4, below.

Table 4
Total Distribution of Capital Staff and Expenses Charged to Capital and Operating Budgets, 2005-07 Biennium
(\$ millions)

	# Capital FTEs	\$ Charged to Cap. Project	\$ Charged to ADM	\$ Charged to Operating	\$ Total	% of Capital Staff Expense by Ferries Division
Finance & Administration	15		1.6		1.6	9%
Human Resources	4		0.3		0.3	2%
Operations	5	0.5	0.0		0.5	3%
Communications	4		0.1		0.1	1%
Vessel Maintenance & Preservation**	6	0.7	0.3		1.0	5%
Vessel Engineering	31	4.8	0.6	0.7	6.1	33%
Terminal Engineering	76	7.0	1.4	0.5	8.9	48%
Total	141	13.0	4.3	1.2	18.5	
% of Capital Staff Expense by Budget Category		70%	23%	7%		

* ADM = Administrative Work Order

** Administrative work order charges include \$0.2 million charged in error by Vessel Chief Engineer staff.

While the tables above are for the 141 capital positions Ferries reported in the 2005-07 biennium, in the current biennium (2007-09), Ferries has 134 funded capital positions. Of these 134 positions, 13 are vacant (as of February 1, 2008). Eleven (11) of the vacancies are in Terminal Engineering, which has 69 funded capital positions in the 2007-09 biennium. Two (2) of the vacancies are in the Finance and Administration division, which has seven (7) funded positions.

Ferries does not plan to fill any of the vacant Terminal Engineering positions, recognizing that the reductions in the terminal program in the 2007-09 biennium and the uncertainty surrounding the long-term terminal capital program make hiring unwise. Ferries plans to fill one of the two vacant positions in the Finance and Administration division, specifically, a position designated to support the Primavera scheduling system used by Terminal Engineering. (For more on the Primavera system, see the discussion of Recommendation 14, in Section IV, below.)

Given the current re-analysis of Ferries' capital program, hiring of capital staff to fill existing vacancies should be carefully considered. With the exception of the one position in Finance and Administration, this recommendation is consistent with actions Ferries is already taking to reduce costs. Future decisions on the size of the capital program staff should focus on core competencies required to preserve Ferries' terminals and vessels.

Recommendation 1 (Short-term): *Current capital position vacancies should not be filled until the Draft Long-Range Plan is complete and decisions on staffing can be informed by the Plan.*

Department Response 1: The department recognizes the need to carefully consider hiring decisions prior to the completion of the Draft Long-Range Plan and has already taken steps to hold some vacant positions. It is important that the department's core staffing levels reflect the size and complexity of the capital program as determined by the enacted budget and ultimately the long-range plan. However, the department does not concur with the draft recommendation of a hiring freeze and would suggest instead that the report reference the staffing proviso in the 2008 transportation budget bill (ESHB 2878), which requires WSF to maintain capital staffing levels at or below the level of staffing as of January 1, 2008. This approach would allow for filling of the most critical permanent needs while deferring all less critical vacancies. The recommendation, as currently drafted, would preclude WSF ability to fill core program support positions and critical priority vacancies, instead requiring increased reliance on consultant support in order to deliver the 2007-2009 program.

Ferries should carefully review any other vacancies that occur between now and the completion of the 2009 legislative session. The consultants recommend that the most prudent course of action, given the uncertainties surrounding the size and sequencing of the Ferries capital program, would be to freeze hiring. However, the consultants also recognize that critical vacancies may occur that will require hiring despite the uncertainties.

Recommendation 2 (Medium-term): *Future vacancies in capital staff positions should not be filled until the completion of the Long-Range Plan, unless absolutely critical to project delivery.*

Department Response 2: We concur with the recommendation. The department will focus on ensuring the core staff and competencies required to deliver the capital program as enacted by legislature. Future staffing needs will be determined upon completion of the revised Long-Range Plan.

2. Findings and Recommendations: Administrative Work Orders

Capital staff can charge their time to: (1) specific capital projects, through the project work orders; (2) the general capital program, through the administrative work order; or (3) the operating budget. As shown in Table 4, above, of the \$18.5 million in capital position expenses, 23 percent (\$4.3 million) was charged to the administrative work order. The 141 capital staff charged the bulk of their time (70 percent) to specific capital projects, and a small amount (7 percent) to the operating budget.

That 23 percent of capital staff time was charged to the administrative work order warrants review. The administrative work order is intended by Ferries to represent overhead charges. The Ferries budget system distributes these charges across groups of

capital projects. As described by Ferries, staff charging to the administrative work order fall into two categories. The first is those positions in traditional overhead positions (e.g., accountants) who charge 100 percent of their time to the administrative work order. The second category is positions that would normally charge their time to projects but on an “exception basis” are allowed to charge to the administrative work order with approval of their Senior Manager and Program and Budget Development.⁹

However, in 2005-07, almost all staff budgeted in the capital budget charged at least some of their time to the administrative work order. Moreover, 18 percent of the 141 positions charged nearly all their time to the administrative work order. Table 5 below shows a breakdown by division of positions charging 90 percent or more of their time to the administrative work order. Of special note is the Terminal Engineering Division, which has nearly as many staff positions with high charges to the administrative work order (10 FTEs) as did the Finance and Administration Division (11 FTEs), where administrative charges would be expected. Consultants found that of the 76 capital positions in Terminal Engineering, a total of 41 charged at least some of their time to the administrative work order (see Appendix A, Table A-3).

Complicating the issue is the fact that in Ferries’ financial reporting systems, the administrative work order charges are intermingled with staff design (work group 70) and staff construction (work group 60) charges to projects. So consultants were not able to distinguish the amount allocated to individual projects from distributed administrative work order charges.

Table 5
Capital Staff Charging 90 Percent or More to Administrative Work Order, 2005-07 Biennium

	Capital FTEs	FTEs Charging 90%+ to ADM*	% FTEs Charging 90%+ ADM
Finance & Administration	15	11	73%
Human Resources	4	3	75%
Operations	5		0%
Communications	4	1	25%
Vessel Maintenance & Preservation	6	0	0%
Vessel Engineering	31	1	3%
Terminal Engineering	76	10	13%
Total	141	26	18%
% of Total Capital Staff Expense			

* ADM = Administrative Work Order

The consultants note that the administrative work order is intended to be an exceptions charging center for non-administrative capital staff. Given the level of charges to the

⁹ Source: Ferries Program Development and Management Response to Data Request 1e from the Cedar River Group: “Clarification of approval of administrative charges ‘State Labor Force’ to capital projects,” Oct. 2007.

administrative work order in the 2005-07 biennium, it appears that the use of the administrative work order is not in conformance with established Ferries policy. ESHB 2358 (Section 9) requires Ferries to identify separately the administrative charges in project budgets.

Recommendation 3 (Short-term): *Ferries should distinguish administrative work order charges to projects from direct staff charges to projects in order to facilitate legislative and management understanding of capital project costs.*

Department Response 3: We concur with the recommendation. We are in process of strengthening business rules that will formalize the distinction between administrative and project related direct staff charges.

An important consideration in determining the appropriate size of the capital program staff is to understand staffing required for administrative purposes, which cannot be done when almost all staff charge time to this work order.

Recommendation 4 (Short-term): *Ferries should review staff authorized to charge to the administrative work order and fully implement the established procedures for authorizing such charges.*

Department Response 4: We concur with the recommendation. We are in process of strengthening business rules that will formalize approval and oversight of administrative charges.

Of special concern are the charges to the administrative work order from the Terminal Engineering Division, where charges to the administrative work order were particularly high. Terminal Engineering had 33 percent of all charges to the administrative work order and 10 positions that charged 90 percent or more of their time to the administrative work order. In reviewing staffing, Ferries should determine its headquarters structure, then project the costs anticipated to be charged to the administrative work order.

Recommendation 5 (Medium-term): *Terminal Engineering should review its structure and anticipated ongoing charges to the administrative work order.*

Department Response 5: We concur with the recommendation, and are in process of developing and implementing procedures to formalize the process. The strengthened business rules will clarify the type of work that will be charged to the administrative work order, which should result in fewer terminal engineering staff charges to this work order.

3. Findings and Recommendations: Project Work Orders

Three Ferries divisions are responsible for preservation and improvement of the system's terminals and vessels. The Terminal Engineering division is responsible for the preservation and improvement of Ferries' 20 terminals, and the Eagle Harbor Repair and

Maintenance Facility. The Vessel Engineering Division and the Vessel Maintenance and Preservation Division are responsible for the preservation and improvement of Ferries' fleet, and for the design and construction of new vessels. In addition, the Operations Division's capital staff has responsibilities for one of the systemwide projects.

For the 2005-07 biennium, the consultants found the following staff charges to capital projects:¹⁰

- *Terminal Engineering* capital staff charged \$7 million to capital project work orders, representing 78 percent of the Division's total capital staff charges.
- *Vessel Engineering* capital staff charged \$4.8 million to capital projects, representing 79 percent of the Division's total capital staff charges.
- *Vessel Maintenance and Preservation* capital staff charged \$0.7 million to capital projects, representing 70 percent of the Division's total capital staff charges.
- *Operations* capital staff had a total of \$0.5 million in capital charges, all of which was to systemwide projects. The systemwide operations construction support project accounted for \$0.3 million of these charges.

Reviewing the individual capital projects, the consultants found that the Terminal Engineering and Vessel Engineering divisions charged less than half of their staff time on preservation projects. Staff time in these two divisions was charged primarily to vessel and terminal improvement, new vessel construction and systemwide projects. This follows the pattern of expenditures in the capital program, where for example, the *Auto-Passenger Vessel Preservation and Replacement Final Report of WSDOT Ferries Division Financing Study II* found that in the 2005-07 biennium, vessel preservation projects were underspent by 21 percent from that anticipated in the 2006 legislative session, while systemwide projects were overspent by 17 percent (pp. 54-56).

- *Terminal Engineering*: Of \$7 million in staff time charged to project work orders, only 35 percent was for terminal preservation projects. Fifty (50) percent was for major improvement projects at Mukilteo, Bainbridge, Anacortes, Keystone, Port Townsend, Edmonds and Seattle; and 15 percent was for systemwide projects.
- *Vessel Engineering*: Of \$4.8 million in staff time charged to project work orders, only 45 percent was for preservation projects. The rest of the staff charges were split among systemwide projects (31 percent), new vessel construction (20 percent), and terminal projects and emergency repairs (4 percent). In addition, the consultants note that some staff identified as "preservation" in the organizational chart did not charge to this activity. For example, there are three Project Engineers identified on the organization chart as Preservation and Improvement positions. As discussed in Appendix B, these three positions, along with the Vessel Project Secretary, charged only 32 percent of their time to vessel preservation projects in the 2005-07 biennium. In addition, the three Vessel

¹⁰ The percentages of time charged to projects are calculated as a percentage of total time charged to the capital budget and to the operation budget by staff within these divisions.

Engineering design sections charged less than 50 percent on vessel preservation projects, as discussed in Appendix B.

The Vessel Maintenance and Preservation Division was primarily focused on vessel preservation in the 2005-07 biennium. Of \$0.7 million in staff time charged to project work orders, 98 percent was for vessel preservation projects and 2 percent for systemwide projects.

The consultants have concerns about devoting considerable staff resources to improvement and systemwide projects which may be at the expense of preservation projects. The *Auto-Passenger Vessel Preservation and Replacement Final Report of WSDOT Ferries Division Financing Study II*, January 2008, recommended a realignment of vessel staff to focus on improving vessel maintenance, and noted significant under-spending of the vessel preservation budget in the 2005-07 biennium.

Recommendation 6 (Medium-term): *Ferries should review staffing in its engineering divisions to ensure core competency in, and a focus on, terminal and vessel preservation, with staffing sufficient to implement the preservation program proposed in the upcoming Long-Range Plan.*

The consultants suggest the following considerations for this review:

- *Terminal Engineering:* In Terminal Engineering less staff support is expected to be required for the preservation program given modifications to the terminal life-cycle cost model, which has reduced the preservation program by \$106 million in the 16-year financial plan (2007-23). The Ferries Long-Range Plan will include a projected terminal preservation program based on this revised life-cycle cost model and investments needed for scour prevention, regulatory compliance and seismic improvements. ESHB 2358 requires that the preservation program be based on the life-cycle cost model, as updated by condition assessments, and include pre-design studies for all preservation projects of more than \$5 million. Terminal Engineering staff should be consistent with these requirements and with the Long-Range Plan.
- *Vessel Engineering and Vessel Maintenance and Preservation:*¹¹ The consultants recommend that Ferries focus Vessel Engineering and Vessel Maintenance and Preservation on key vessel preservation program improvements recommended in the *Auto-Passenger Vessel Preservation and Replacement Final Report of WSDOT Ferries Division Financing Study II*, and on full implementation of the vessel preservation program in the Long-Range Plan. Focusing on preservation will require a realignment of staff resources, which was a recommendation of the *Auto-Passenger Vessel Preservation and Replacement Final Report*.

¹¹ In March 2008 Ferries re-organized and merged the Vessel Engineering and the Vessel Maintenance and Preservation divisions.

Recommendation 7 (Medium-term): *Ferries should clearly distinguish responsibility for terminal improvement projects, and for vessel construction and systemwide vessel improvement projects, from its preservation responsibility in order to ensure a focus on preservation.*

Department Response 6 and 7: We concur with the recommendations. Core competencies and staffing levels will align with the project list passed by the legislature and the Long-Range Capital Plan. Specific future staffing needs, including those associated with vessel construction, terminal improvement, and systemwide improvement projects, will be determined upon completion of the revised Long-Range Plan. For those projects where preservation work may be included within an improvement project, we are developing budget allocation methods that will improve our ability to clearly differentiate between preservation and improvement expenditures.

The consultants suggest the following considerations for this review:

- *Terminal improvements:* The Ferries Long-Range Plan will include a projection of the size, scope, cost and sequencing of major new and improved terminals. This information should be used by Terminal Engineering to determine the staff needed for improvement projects. The consultants recommend that Terminal Engineering consider approaching these projects as an owner-developer, managing the work of outside design and construction firms. Staffing per project under this approach should be based on a percentage of project costs and should not exceed 3.5 percent of project costs (based on private sector experience). Design should be accomplished by outside firms. Construction inspection and testing should be conducted by outside experts, with an anticipated cost in the range of 0.5 percent to 1 percent of construction costs.¹²
- *New vessel construction:* Ferries should consider creation of a section devoted to new vessel construction and to systemwide improvement projects as a way to prevent delays in the preservation program. New vessel construction will be reviewed by the JTC in its ongoing work in support of ESHB 2358. Streamlining new vessel planning and construction to ensure timely, appropriate and business-case based recommendations on vessel replacement will be crucial to the long-term stability of the ferry system. Concerns about the length of time it takes to make vessel decisions have risen in intensity since the closure of the auto ferry service on the Keystone-Port Townsend route, while the new 144-car vessel procurement project has been delayed by lawsuits and other problems.¹³
- *Vessel systemwide projects:* Vessel systemwide projects were reviewed in the *Auto-Passenger Ferry Preservation and Replacement Final Report*.¹⁴ These

¹² Source: R.L. Collier, "Typical in-house staff costs don't exceed 3.4% on a private project." Feb. 3, 2008 review.

¹³ See discussion in Appendix C of the *Auto-Passenger Vessel Preservation and Replacement Final Report of WSDOT Ferries Division Financing Study II*, January 2008.

¹⁴ See pages 50-53 for a discussion of Vessel Systemwide projects.

projects are largely improvements to existing vessels. The *Auto-Passenger Ferry Preservation and Replacement Final Report* recommends that, in conformance with ESHB 2358, vessel improvements be distinguished from vessel preservation and that vessel preservation be given priority over improvements.

D. Operating Staff Charges to Capital Program

Core questions: What is the level of operating budget staff charges to the capital program? Should these costs be reduced?

1. General Findings

Operating budget staff—such as terminal, vessel and information agent staff—assist in the delivery of the capital program. Operating staff charged \$4.3 million to the capital program in the 2005-07 biennium, representing 2 percent of all capital program costs. As shown in Table 3, these charges came from the following three groups:

- *Vessel Maintenance and Preservation Division* engineering room crews charged \$1.1 million of labor costs to the capital program.¹⁵ A breakdown of the charges by project is not available.
- *Operations Division* terminal staff and vessel deck staff charged a total of \$2.9 million to capital projects. Forty-two (42) percent of these charges were to two projects: systemwide terminal operations construction support project (\$1.0 million) and the systemwide terminal point of sale replacement project (\$0.2 million). No detail was available on the remainder of the charges (\$1.7 million).
- *Communications Section* information agents charged \$0.3 million to the capital program. There was no information on which particular projects within the capital project were charged.

2. Findings and Recommendations: Construction Support

One systemwide project alone, Terminal Operations Construction Support, cost \$1.0 million in operating staff time—\$0.8 million for terminal staff and \$0.2 million for vessel deck staff.¹⁶ This project is described in budget documents as: “Promotes government efficiency and effectiveness through mitigation of the impact of construction on terminal facilities so as to minimize inconvenience to ferry riders.”¹⁷

As described, the project is intended to mitigate disruption during construction. However, the consultants note that approximately 20 percent of the expenses in this project in 2005-07 were for design projects, such as Anacortes and Mukilteo. While it is possible that these charges may have been for designing mitigation, there is insufficient information to determine that. In the first six months of the 2007-09 biennium, Ferries has expended \$38,000 on operating budget labor in this project, which, if expenditures continue at this level, would be a much lower level of expenditure in this biennium.

¹⁵ The Ferries object code report shows total capital program charges of \$1.3 million for Vessel Engine Crews, of which \$0.2 million is accounted for in overhead.

¹⁶ The total cost of the Terminal Operations Construction Support project in the 2005-07 was \$1.6 biennium, which included \$.3 million in on-site consultant expense and \$.3 million in 2 staff budgeted in the capital budget.

¹⁷ Project Detail Report – Transportation Executive Information System

The consultants recommend the terminal and vessel deck staff charges to the terminal operations construction project be reviewed to determine whether all of these charges should be made to the capital budget and if these charges are a necessary expense.

***Recommendation 8 (Short-term):** Ferries should evaluate operating budget staff charges to the terminal operations construction support project to determine whether they are appropriate capital program expenses.*

3. Findings and Recommendations: Operating Staff Charges to Capital Budget

A significant portion (33 percent) of the operating budget staff charges to the capital budget cannot be traced to individual projects, which makes it difficult to understand whether these charges are justified. Charges to the Ferries capital program by these staff should be carefully scrutinized, justified and, where possible, reduced.

***Recommendation 9 (Short-term):** Ferries should review and determine whether charges to the capital program from information agents, vessel engineering crews, vessel deck crews, and terminal staff are appropriate capital charges, and whether these charges should be separately identified in project budgets.*

Department Response 8 and 9: We concur with the recommendation, and the department has already evaluated the operating budget staff charges to the Terminal Operations Construction Support budget and has determined they are appropriate capital program expenses. From its inception, the intent of the Terminal Operations Construction Support budget included constructability support during design, as well as field support during construction of terminal projects. This is critical in order to minimize the likelihood and magnitude of construction change orders. The information agents, vessel engineering crews, vessel deck crews, and terminal operations support staff mentioned within Recommendation 9 contributed information during planning, design and construction based on their intimate operations knowledge. These contributions have proven essential in ensuring that terminal designers and construction inspectors understand the operational challenges and impacts, and have provided adequate direction and mitigation within the project contracts. When applicable, the department will continue to evaluate future operating budget staff charges to the capital program, though this may be irrelevant if a decision is made to allocate the systemwide budget in question to specific projects, as is currently being considered.

Ferries needs to develop a clear protocol and policy regarding information agent, vessel and terminal staff charges to the capital program, based on the review of actual expenditures.

Recommendation 10 (Long-term): *Ferries should develop and implement a policy on charges by information desk, terminal, vessel deck and vessel engineering staff to the capital program.*

Department Response 10: We concur with the recommendation. We are in process of strengthening business rules to clarify the type of work that will be charged to the administrative work order.

E. On-Site Consultants

Core questions: How much is Ferries spending for on-site consultants? Should use of these consultants be refocused?

1. General Findings

Ferries uses on-site consultants at headquarters to provide project management, engineering and support capacities. These consultants are either identified in the accounting system as on-site or were so identified by Ferries staff. As shown in Table 3, Ferries spent \$12.2 million in the 2005-07 biennium for on-site consultants, representing 7 percent of all capital program expenses during the biennium. The majority of the expenditures for on-site consultants were incurred by Terminal Engineering, with some from Vessel Engineering. The other Ferries divisions made relatively limited use of on-site consultants. The details are as follows:

- *Terminal Engineering* made extensive use of on-site consultants, with expenditures of \$8.7 million, representing 71 percent of all on-site consultant expenses. Of this amount expended, 77 percent was in the Engineering Design section for project managers and engineers; 20 percent in the Project Controls section to manage the section and develop a scheduling system; and 3 percent in the Construction Maintenance Engineering section for engineers.
- *Vessel Engineering* made limited use of on-site consultants, with expenditures of \$2.3 million, representing 17 percent of all on-site consultant expenses. These expenses were for engineering, management services, staffing support and fuel conservation studies.
- *Finance and Administration* used an on-site consultant in the Information Technology section for electronic fare system training and supervision. The total contract expense was \$0.2 million for the biennium.
- *Operations* spent \$1.0 million for on-site consultants who provided security, operations construction coordination, and grant and product development services.

2. Findings and Recommendations: Terminal Engineering On-Site Consultants

It should be noted that Terminal Engineering has significantly reduced its reliance on on-site consultants as a result of improved management oversight. In the first six months of

the 2007-09 biennium, Terminal Engineering has spent \$0.9 million on on-site consultants. Terminal Engineering is projecting that they will expend a total of \$2.5 million for on-site consultants in the 2007-09 biennium, which represents a 71 percent reduction from the 2005-07 level of expenditure.

Recommendation 11 (Short-term): Terminal Engineering should continue to review and, where appropriate, reduce expenditures on on-site consultants.

Many Terminal Engineering Division on-site consultants have been under contract for a year or longer (50 percent of 36 on-site consultants in October 2007). Use of long-term consultants should be reviewed to determine if the uses are appropriate.

Recommendation 12 (Short-term): Ferries should review its use of long-term on-site consultants.

Department Response 11 and 12: The terminal program changes between 2005-07 and 2007-09 not only represent a significant downward budget and work plan adjustment from one biennium to the next, they represent a change in future priorities while working within a more constrained budget than was previously assumed. In the meantime, the vessels' needs have grown substantially. In light of these significant changes, terminal engineering has made great strides in reducing the amount of consultant use while ensuring that the types of consultant use are appropriate and complementary to core state staff competencies. This effort began late in the 2005-07 biennium and continues today. Related to appropriate types of consultant use, Ferries would like to clarify that over half of the reported 2005-07 terminal engineering consultant charges were related to traditional contracting in support of specific projects and deliverables, where the contract had required one or more staff to be present within the terminal engineering office in order to facilitate close staff coordination. Those project deliverable consultant charges should be differentiated from consultant charges related to administrative program support.

3. Findings and Recommendations: Focus for Use of On-Site Consultants

On-site consultants have charged their time to a variety of projects. Decisions made by Ferries on staffing its preservation and its terminal improvement/new vessel construction and vessel systemwide improvement projects should drive decisions on the use of on-site consultants to meet projected peak workloads. In the future, Ferries should consider focusing its use of on-site consultants in the improvement program, while retaining a core staff capability to meet its preservation program requirements.

Recommendation 13 (Medium-term): The use of on-site consultants should be based on Ferries' decisions on the delivery method for and scheduling of preservation and terminal improvement/new vessel construction, and vessel systemwide improvement projects.

Department Response 13: We concur with the recommendation. The level and type of future consultant use, both on-site and off-site, will be based upon the size and complexity of the capital program as determined by the enacted legislation and the Long-Range Capital Plan.

Section IV. Non-Staff Capital Administration Expenses: Findings and Recommendations

This section provides the consultants' findings, analysis and recommendations in two areas of non-staff capital administration expenses: (1) administrative expenses for specific projects, such as scheduling systems, and legal and communications project charges; and (2) other administration expenses typically thought of as overhead, such as rents, office expenses, and training costs. Together in the 2005-07 biennium, these non-staff administration costs were 4 percent of Ferries' total capital expenses.

An important finding in this section is that the majority of costs for non-staff capital administration expenses were reasonable. The consultants recommend that WSDOT review the use of the Primavera scheduling system for Terminal Engineering after the revised terminal capital program is adopted by the legislature in the 2009 session. The consultants also recommend that, in conformance with ESHB 2358, Ferries separately identify capital administration expenses for review by the legislature.

A. Total Non-Staff Administration Costs

To carry out the capital program, Ferries incurs non-staff administration expenses of two types: (1) administrative expenses for specific projects, such as scheduling systems, and legal and communications project charges, and (2) other administration expenses typically thought of as overhead, such as rents, office expenses, and training costs.

In the 2005-07 biennium, Ferries incurred costs of \$7.8 million to the capital program for non-staff capital administration expenses. This cost represents 4 percent of the total capital program costs of \$183.1 million for the biennium. It is approximately 21 percent of Ferries' total capital and operating budget non-staff administration expenses.¹⁸

Figure 5 below shows the relative size of the non-staff capital administration expenses within the 2005-07 capital program. Table 6 shows the breakdown of these costs by type and Ferries division.

¹⁸ Operating budget non-staff administration expenses were \$29.5 million in the 2005-07 biennium. The Operating Management and Support Cost Draft Report of the WSDOT Ferries Division Financing Study II will provide more information on these costs.

Figure 5
Non-Staff Administration Costs Charged to the Capital Program in 2005-07

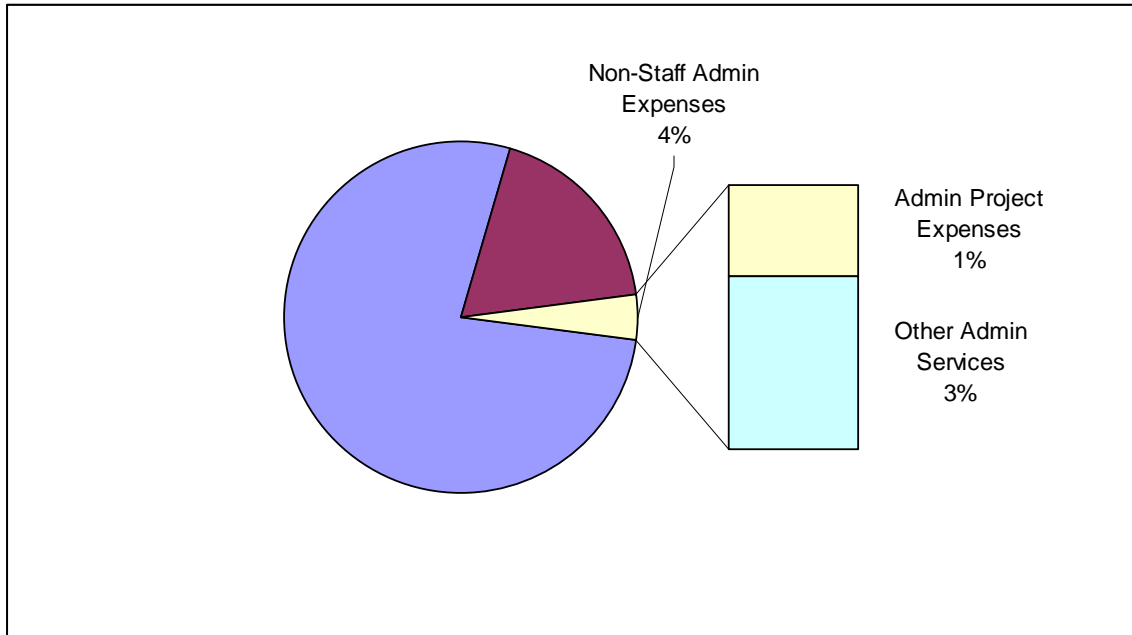


Table 6
Non-Staff Capital Administration Costs by Division, 2005-07 Biennium

(\$ millions)

	\$ Terminal Eng.	\$ Vessel Eng.	\$ Vessel Maintenance & Pres.	\$ Admin. Divisions*	\$ Ops.	Total \$	% of Capital Program Cost
Administrative project expenses	1.5			1.2		2.7	1%
Other administrative services & charges	2.8	1.1		1.1	0.1	5.1	3%
Total Cap Administration Costs	4.3	1.1	0.0	2.3	0.1	7.8	
Ferries Capital Program Costs						183.1	4%

* Includes Finance and Administration, Human Resources and Communications

Using 2005-07 data, the consultants identified the following baselines for future analyses of non-staff capital administration expenses:

- Non-staff administrative capital project costs were 1 percent of all capital program expenses.
- Expenses for rent and lease payments for office property, telephone and data lines, office related machinery and equipment, Attorney General charges, staff training, and travel were 3 percent of all capital program expenses.

B. Administrative Expenses for Specific Capital Projects

Core questions: How much is Ferries spending within capital project budgets that could be considered part of capital program administration? Should these costs be reduced?

1. General Findings

In the 2005-07 biennium, Ferries spent \$2.7 million on administrative capital project expenses, which represents 1 percent of all capital program expenses. As shown in Table 7, above, these expenses were incurred only in the Terminal Engineering and the Administrative divisions. The Terminal Engineering expenses were primarily for systemwide projects, while the Administrative divisions' expenses were to support specific capital projects.

- *Systemwide Projects:* As detailed in the table below, Ferries spent \$1.5 million on administrative systemwide projects, not including staff charges or on-site consultant charges. The largest expense was \$1.2 million to support the development of a scheduling system for Terminal Engineering.
- *Other Projects:* Ferries retains consultants to perform legal and communications functions related to projects when Ferries has insufficient in-house staff or expertise. In the 2005-07 biennium, Ferries spent \$1.2 million on these services, with \$1.1 million for communications consultants and \$0.1 million for legal services.

Table 7
Systemwide and Administrative Expenses for Capital Projects,
2005-07 Biennium
(\$ millions)

PIN	Project Title	Admin. \$	Description
<i>Systemwide Projects</i>			
989920X	Misc. Terminal Projects*	1.1	Terminal project scheduling system
966650B	Ferries Staff Relocation	0.3	Furniture & design costs for headquarters relocation
989930J	WSDOT Project Controls	0.1	Terminal portion of WSDOT Scheduling System
Total Systemwide Administrative		1.5	
<i>Other Projects</i>			
Various	Various	1.1	Communications
944460U	Construct 4 New 144 car Vessels	0.1	Legal
Total Other Administrative Projects		1.2	
Total Administrative Project Expenses		2.7	

*Net of on-site consultants and staff charges. Total cost \$2.3 million.

The consultants found that the expenditures for legal and communications assistance were a reasonable use of outside expertise and appropriate for the projects.

2. Finding and Recommendation: Systemwide Scheduling System

In the 2005-07 biennium, Terminal Engineering invested \$2.3 million¹⁹ in the acquisition and development of a Primavera scheduling system and project controls, including on-site consultants, staff and other charges. Through the first six months of the 2007-09 biennium, Ferries has expended \$0.3 million on the system and other project controls, and plans to hire one FTE staff in the Finance and Administration Division to support the system.

The consultants recognize that WSDOT has decided to use the Primavera scheduling system for department-wide scheduling. However, the consultants recommend that Terminal Engineering review its implementation of this system to determine the anticipated long-term costs and benefits. A typical private owner/developer would not themselves use such a complex system, relying instead on contractors for detailed scheduling. The Primavera system may be less appropriate for Ferries, given the relatively small scale of the terminal capital program as compared to the WSDOT highways capital program. This system may integrate with WSDOT reporting as WSDOT develops its Primavera scheduling system.

***Recommendation 14 (Long-term):** WSDOT should review the cost-benefits of continued use of the Primavera scheduling system for Ferries.*

Department Response 14: We concur with the recommendation and, per legislative direction, will include the review of the costs and benefits of continuing to use the Primavera scheduling system with our 2009-11 biennial budget submittal. The department would like to note, however, that the true Ferries Division cost of implementing the Primavera system (integrated cost and schedule management and reporting) was approximately \$850 thousand (37%) of the \$2.3 million systemwide budget referenced. The systemwide budget in question supports the many terminal engineering program management and project controls functions, which, in addition to the Primavera system, includes biennial and long-range scoping, life cycle cost model support, change management, work and task order development and processing, and monthly and quarterly performance reporting.

¹⁹ The total project cost \$2.3 million, including on-site consultants (\$1.1 million), capital staff (\$0.1 million) and other administration expenses (\$1.1 million). Also see Table 7.

C. Other Administrative Capital Services and Charges

Core questions: How much is the capital program being charged for other administrative costs such as leases, training, office equipment, and Attorney General charges? Should these costs be reduced?

1. General Findings

Ferries incurs non-staff, general administration expenses in support of the capital program. As shown in Table 6, these expenses totaled \$5.1 million in the 2005-07 biennium, or 3 percent of all capital program expenses.

These general administration expenses include rent and lease payments for office property, telephone and data lines, office related machinery and technology equipment, Attorney General charges, staff training, and travel. These were incurred by four areas, as follows:

- *Terminal Engineering* incurred \$2.8 million in other capital administration services and charges. Nearly all of these expenses (\$2.4 million) were for rent and lease of property. The remainder was for telephone, office and technology equipment, training courses and materials, and staff travel.
- *Vessel Engineering* incurred \$1.1 million in other capital administration services and charges. Of these expenses, \$0.7 million was for rent and lease of property. The remainder was for telephone, office and technology equipment, and staff travel.
- *Administrative divisions* (Finance and Administration, Human Resources and Communications) spent \$1.1 million on other capital administration services and charges. Of these expenses, \$0.6 million was for information technology, office machinery and associated software and supplies, and \$0.3 million was for Attorney General capital expenses.
- *Operations* had less than \$0.1 million in other capital administration services and charges in the 2005-07 biennium.

2. Findings and Recommendations: Identifying Administrative Expenses

The consultants note that these expenses seem reasonable. However, it is difficult to determine the total administrative services and charges in the capital budget presented by Ferries. ESHB 2358 requires Ferries to allocate systemwide services and charges to individual terminal and capital projects and to separately identify these allocated amounts within each project budget.

Recommendation 15 (Long-term): *Ferries should separately identify the capital administration services and charges for review by the legislature.*

<p>Department Response 15: We concur with the recommendation. We are in process of strengthening business rules that will separately identify the capital administrative services and charges.</p>

Section V. Management Communication and Oversight: Findings and Recommendations

Core questions: How does Ferries identify capital staff positions and staff charges to the capital budget? What baselines and performance measures should Ferries establish to track capital staffing and administration costs?

Ferries has cooperated fully in the development of this report, providing information from its financial, human resources and contract management systems. However, the review has been complicated by the fact that Ferries has not previously compiled a complete review of its capital staff and program administration costs. The consultants recommend the following improvements in data presentation that would facilitate legislative and management oversight.

1. Findings and Recommendations: Organization Chart

Ferries has provided an organization chart to the legislature showing 141 authorized capital positions, which were created through the human resources process. The actual number of funded capital positions in the 2005-07 biennium was 131, but Ferries has not reconciled the 2005-07 biennium organization chart to these funded positions. (Funded positions were not exceeded because of vacancies.) This report is, therefore, based on the original organization chart provided by Ferries showing 141 capital positions.

Since the organization chart can be used as a key communication tool with the legislature, legislative staff, and the Office of Financial Management, it is important that a chart be developed that clearly relates to the adopted capital budget. Ferries has recently provided the legislature with a revised organization chart for the 2007-09 biennium budget that matches the capital budget adopted by the 2007 legislature.

***Recommendation 16 (Short-term):** Ferries should develop and present to the legislature an organization chart that shows only funded positions and denotes which legislatively adopted budget the chart represents.*

Department Response 16: We concur with the recommendation. The organization chart is under revision to reflect the most recent enacted legislation.

2. Findings and Recommendations: Baselines/Performance Measures

Ferries does not aggregate and then track staffing or administration costs against the total cost of the capital budget. This makes it difficult to know on a consistent basis whether these costs are in line with the size of the capital program. This review has highlighted the need to establish baseline information and performance measures for future staff and administration budget decisions.

Recommendation 17 (Long-term): Ferries should develop baseline information and performance measures for the percentage of the capital program and individual capital project budgets that should be devoted to capital staffing and administration expenses.

Department Response 17: We concur with the recommendation. Ferries Division will develop staffing and administrative guidelines and performance standards specific to the categories and types of projects within the enacted legislation and Long-Range Capital Plan. Ferries Division will not be able to determine a comprehensive, balanced, capital program performance goal until greater clarity exists related to the size and complexity of the future capital program.