

STATE OF ALASKA



DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES -SOUTHEAST REGION-



RECONNAISSANCE ENGINEERING STUDY UPDATE

KODIAK FERRY TERMINAL



PROJECT NO. 68938
HPRL-0003(109)

January, 2012

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AND
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KODIAK FERRY TERMINAL**

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ABSTRACT & NOTICE TO USERS

The Alaska Department of Transportation and Public Facilities (Department) is studying alternatives for a new Alaska Marine Highway System (AMHS) facility in Kodiak, Alaska. This *Reconnaissance Engineering Study Update* contains a summary of the Department's previous engineering studies and recent efforts to improve existing or construct new facilities for AMHS operations in Kodiak.

Changes occur frequently during the project development process. Persons relying on information contained in this study should contact the Department for the most current information.

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1. PROJECT DESCRIPTION

1.1 Introduction

The Alaska Department of Transportation and Public Facilities (Department) has been contemplating ferry terminal improvements in Kodiak for some time. This report summarizes the Department's previous studies and presents new information pertaining to ferry terminal improvements intended to improve the level of ferry service in Kodiak. Figures 1.1 and 1.2 show the project location.

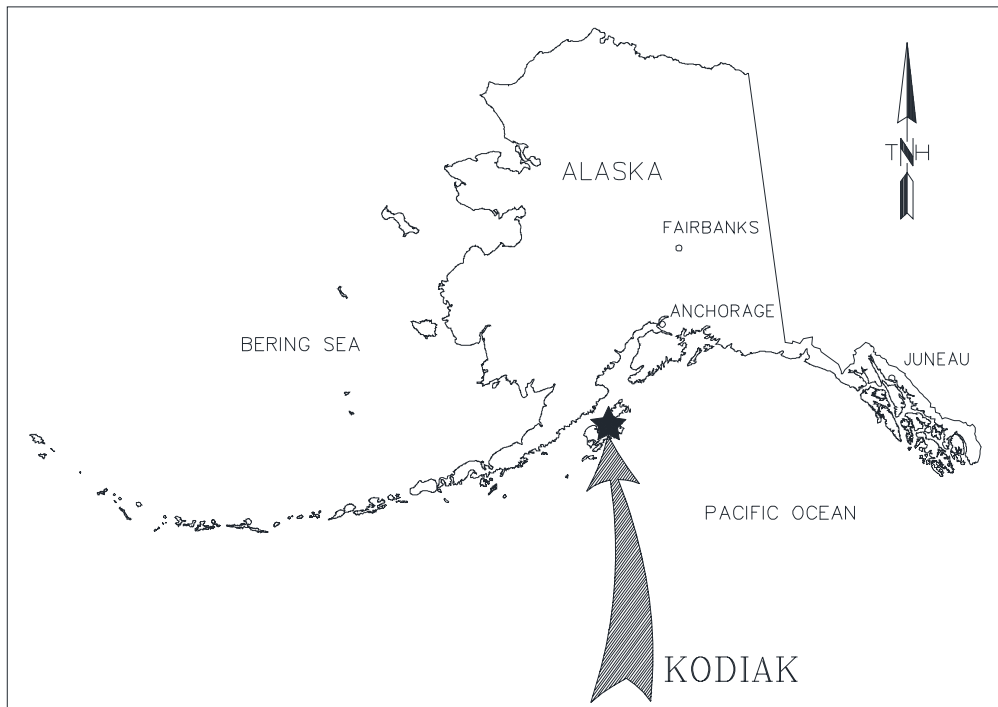


Figure 1.1 Project Location Map

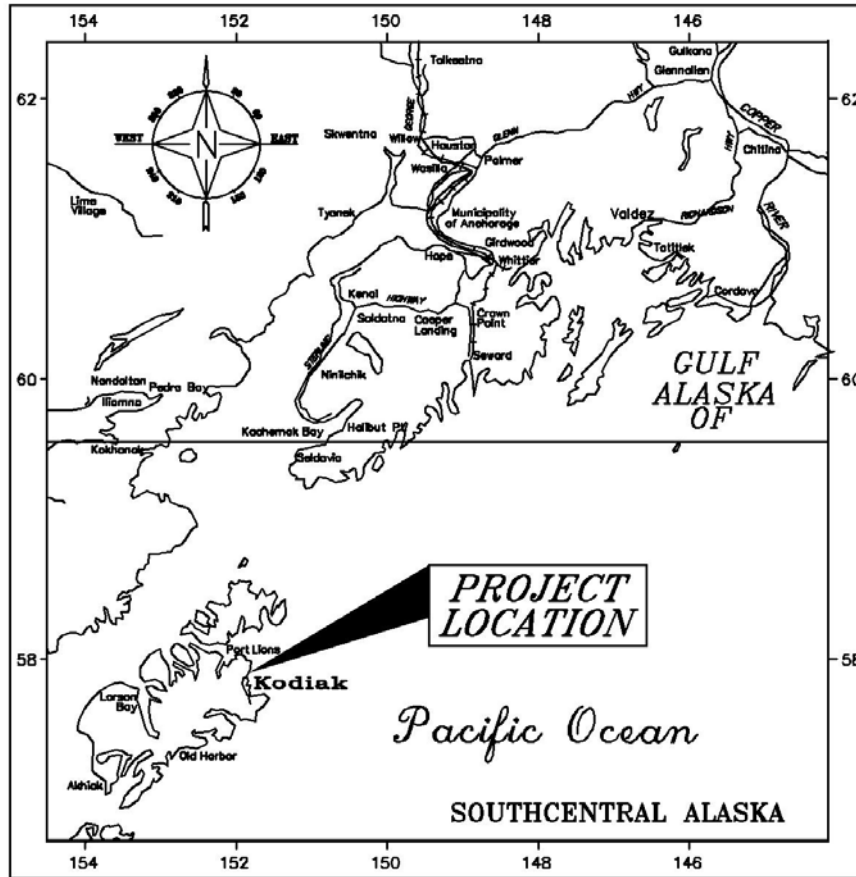


Figure 1.2 Project Location Map

1.2 Existing Ferry Operations in Kodiak

The City of Kodiak has been served for over 40 years by the Alaska Marine Highway System (AMHS) using the M/V *Tustumena*, the principal mainline ferry operating in Southcentral Alaska and the eastern Aleutians. The *Tustumena* operates between Kodiak, Seldovia, Port Lions, and Homer with summer excursions to the Eastern Aleutian communities. The *Tustumena* moors at Pier 1 (also called the City Dock) located near downtown Kodiak.

In 1998, the M/V *Kennicott* was added to the southwest route. Like the *Tustumena*, this ferry is ocean certified, equipped with a vehicle elevator, and is the only other AMHS ferry capable of serving the western communities. The *Kennicott* is 86 feet longer and 26 feet beamier than the *Tustumena* and is unable to transit the Near Island Channel and dock at Pier 1 because of its size. When the *Kennicott* calls at Kodiak it moors at Pier 2, a city-owned dock located on the northwest side of St. Paul Harbor.

Figure 3.1 (reference Page 7) shows the location of Piers 1 and 2 within the community of Kodiak.

Table 1.1 shows the scheduled number of visits to Kodiak by both vessels for the period from May 2010 to April 2011. Both vessels utilize elevator systems to load and unload vehicles to the fixed platform docks at Piers 1 and 2.

VESSEL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR
<i>Tustumena</i>	7	14	14	13	15	8	0	11	15	14	15	15
<i>Kennicott</i>	12	9	8	8	4	6	2	0	0	0	0	3

Table 1.1 – Scheduled Number of Ferry Visits to Kodiak (May 2010 to April 2011)

The two existing vessel berths are about a mile apart and each have significant operational constraints that result in inefficiencies in providing ferry service in Kodiak. The two separated locations present logistical and operational obstacles for AMHS operations as further noted below.

1.3 Problem Statements

The two ferries that serve Kodiak presently berth at two separate facilities - the *Tustumena* berths at Pier 1 and the *Kennicott* berths at Pier 2. There are deficiencies in the mooring and upland configurations at both sites and neither location is ideal for AMHS operations.

Pier 1 is a 200 foot timber dock on the north shore of Kodiak North Entrance Channel located between a marine fuel depot to the east and a seafood processor to the west. The bow and stern of the *Tustumena* extend beyond the dock face and encroach on the adjacent facilities. A small ticketing office and parking area lie between the dock and the access road. The office has no passenger waiting area and parking is inadequate for those making reservations, ticketing or checking-in. There is no secured staging area; vehicles and commercial trucks queue up along the public road prior to loading the ferry. There is no separation of pedestrians and actively loading vehicles, posing a risk to travelers. The *Kennicott* cannot safely access or berth at Pier 1.

Pier 2 is a 900 foot concrete platform dock on the north shore of St. Paul Harbor. This city-owned dock is a multipurpose facility frequently occupied by commercial fishing boats, research vessels, and ocean-going cruise ships in the summer season. The dock is often used for transfer and overhauling of fishing gear. AMHS must reserve use of the pier far in advance and unplanned delays in the *Kennicott's* schedule can cause conflicts with other vessels. AMHS does not have priority use of the facility. The *Kennicott* transfers vehicles with its shipboard elevator, not via a bridge as it does in Southeast Alaska, and may require an hour or more to unload the car deck. The dock is exposed to southeasterly swells from Chiniak Bay in the winter and there have been instances when the ship's roll has caused its transfer bridge to separate from the elevator. Crews must use extreme caution when transferring vehicles in these conditions. The dock is an open platform with no secured area for staging and screening of vehicles. All passenger reservations and ticketing is managed at Pier 1. Embarking passengers and vehicles must check in at Pier 1 and then proceed to Pier 2 to board the *Kennicott*.

1.4 Purpose and Need

The purpose of this project is to provide ferry terminal improvements in Kodiak that will increase the efficiency and safety for the transfer of passengers and vehicles by AMHS vessels. The need for the project is due to deficiencies of mooring facilities and upland land areas and related support facilities that presently hinder ferry operations at the present berthing locations.

1.5 Project Objectives

Ideally, all AMHS operations would be incorporated into a single terminal that can serve both ferries. The combined terminal would provide adequately sized ticketing and passenger facilities, sufficient parking area, and staging that permits check-in, screening, and holding of embarking vehicles. The terminal would be used exclusively by AMHS to avoid schedule disruptions by other uses (non-AMHS) and aid in complying with U.S. Department of Homeland Security regulations.

In the event that a dedicated AMHS facility that can adequately serve both vessels cannot be provided due to funding or other constraints, then project alternatives to improve vessel mooring and cargo transfer at the present berthing locations should be examined.

1.6 Project Development History

The search for a new ferry terminal dates to 1980 when the Alaska State Legislature authorized the development of a new facility in Kodiak and in 1981 Federal funds were approved for preliminary engineering. The *Kodiak Marine Highway Terminal Study*, prepared for the Department in 1982, examined nine potential sites for location of a marine highway terminal. The study eliminated those sites not worthy of further investigation and reduced the list to three candidates: Alternate A - Near Island, Alternate B - Pier 2 and 3, and Alternate C - No Build. The No Build alternative meant continued use of Pier 1. The *Kodiak Ferry Terminal Environmental Assessment* considered the three alternatives in more detail in 1986 and selected Alternative A, a site on Near Island near the entrance to St. Herman Harbor, as the Department's preferred alternative.

At that time, neither the City nor the public were supportive of Alternative A. The existing facility at Pier 1 was perceived to be superior to development of the Near Island Site. The Department determined that the Pier 2 and 3 sites were unacceptable because geophysical hazards threatened any development at the base of Pillar Mountain. With the elimination of Alternatives A and B, Alternative C - No Build alternative was approved and the *Tustumena* continued to moor at Pier 1. The search for a new terminal location ceased.

In 2006, the City of Kodiak successfully lobbied for Federal aid to construct an AMHS ferry terminal and received \$7.5 million in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) funding bill. The earmark description reads, "Kodiak, AK Construction of AMHW [sic] ferry terminal and approach". As a result, the Department renewed its search for suitable locations for a new ferry landing in Kodiak. Project funding is managed by the Department and listed as Need ID 2045 in the Alaska Statewide

Transportation Improvement Program (STIP). Appendix B contains a copy of the various STIP approvals and federal funding documents that have been adopted or approved to date.

The Department examined four sites in the Kodiak environs: Near Island, Pier 2, St. Paul Harbor Breakwater, and LASH Dock in Womens Bay. The suitability of each site was evaluated for construction of a terminal for exclusive use by AMHS to serve both the *Tustumena* and the *Kennicott*. Only those locations accessible by both ferries were considered in the study; therefore, sites in the channel were excluded. The *Reconnaissance Engineering Study – Kodiak Ferry Terminal* was completed in February 2007 and concluded that the Near Island site was the best option to meet the project objectives. The preferred alternative was construction of a terminal on the northern shore of Near Island, the same location identified as Alternative A in 1986.

Before proceeding with development of the preferred alternative, the Department sought to verify that the vessel approach and departure at the Near Island site was feasible in most weather conditions. On April 23, 2008 buoys marking the location of the proposed mooring structures were set in the entrance to the channel and the *Kennicott* made a trial approach through St. Paul Harbor, stopped at the proposed terminal site, backed away from the site, turned 180 degrees, and then departed via St. Paul Harbor. The vessel master's assessment of the terminal site was unfavorable, see letter in Appendix A from Capt. Wilkens to the AMHS Port Captain. He considered the location safe in only the mildest weather and discouraged further consideration of the Near Island site.

With elimination of the preferred alternative, the next best option considered in the reconnaissance study was development on the St. Paul Harbor breakwater. AMHS's preferred configuration was a terminal at the south end of the breakwater with the vessel bow pointing to the southwest. At this location vessels have more space to maneuver during their approach and more room to leeward if needed during adverse weather. Construction of a terminal at this site is expensive however and requires a pile supported dock and an approach and staging area embankment. Initial cost estimates far exceeded the available funding. The general consensus was this project was unaffordable and project development stalled.

On April 29, 2009 the City urged the Department to use the available funds to reconstruct the existing terminal at Pier 1 or construct a new facility at the City Transient Float, see correspondence in Appendix A from City Manager Freed to Commissioner von Scheben. Both sites are within the channel and inaccessible to the *Kennicott*. However, the City agreed to continue to accommodate the larger ferry at Pier 2. Work on this project was temporarily suspended pending direction from AMHS on how to proceed.

On September 21, 2009 the Department surveyed the uplands and water depths of the City Transient Float that is located just west of the Near Island Bridge. Several alternatives were developed for constructing a terminal building, vehicle staging, parking, and berthing for only the *Tustumena* at both Pier 1 and the City Transient Float. There are very limited uplands available for vehicle staging and parking between the channel shore and developed properties at both locations.

All candidate sites at Near Island, Pier 2, LASH Dock, and St. Paul Harbor were reanalyzed under this study effort. This updated study examined all feasible terminal locations in the Kodiak region, including those not previously considered along the Near Island Channel.

On September 22, 2010 the Department met with the Director of Marine Operations, general manager, and staff to present the myriad of alternatives for terminal sites. All agreed that operating from two separate locations in Kodiak is undesirable (but not impossible) because duplicate staging, parking, and passenger amenities are required at both locations. Compliance with Homeland Security regulations is problematic at both existing terminals as they are multipurpose docks used by various vessels and are difficult to secure from the public. AMHS affirmed that the ideal objective for long-term development and service in Kodiak is to operate a single terminal that would serve both ferries, for exclusive use by AMHS, with ample uplands for secured vehicle check-in and screening.

A preliminary project management plan was prepared and distributed on February 8, 2011 and a teleconference meeting was held on February 25, 2011 to discuss the direction of the project. Southeast Region (SER) and AMHS staff reaffirmed that a dedicated AMHS ferry terminal at the St. Paul Breakwater site is the preferred alternative; however, the estimated project cost for development of the St. Paul site is greatly in excess of current funding authorizations. A future funding plan would need to be established to ensure project delivery. SER staff subsequently discussed the project again with the AMHS leadership. Substantial increases in funding for this project are unlikely considering other AMHS needs and that less funding for capital improvements is anticipated in the future. As such, all feasible project alternatives should be evaluated and a dedicated AMHS facility is not affordable in view of the present project budget limitations.

On March 11, 2011 a draft copy of this study report was completed and distributed to the City of Kodiak and AMHS. The various alternatives and related project considerations were presented and discussed at a City of Kodiak Council workshop meeting on June 21, 2011. The meeting concluded that unless additional funding was provided by DOT&PF, the project should be focused on improvements to Pier 1 as the other alternatives were not financially feasible. AMHS continued to seek additional funding for a dedicated AMHS facility subsequent to this meeting, but these efforts were ultimately not successful.

2. EVALUATION CRITERIA

2.1 Dual Vessel Facility

Comparison and evaluation of potential ferry terminal development alternatives for a dedicated AMHS terminal suitable for both ferry vessels is based on the following criteria:

- A single facility for exclusive use by AMHS that is accessible by both the *Tustumena* and *Kennicott* class vessels.
- Upland staging and parking areas with vehicle capacity suitable for at least the *Kennicott*. (1,400 lane-ft required for the *Kennicott* / 650 lane-ft required for the

Tustumena), short and long term parking (30-spaces desirable). Staging area enclosed within security fencing and concrete barrier/guardrail where required. Staging and parking areas paved with curb, gutters, storm drains, concrete sidewalks, striping, and lighting.

- A site and marine facilities that can be readily adapted to suit *Tustumena*'s potential replacement in the near future.
- Transfer of vehicles via shipboard elevator or with a movable bridge and apron system. A movable bridge and apron system is preferred (or the ability to provide in the future) in order to increase speed and efficiency of loading and unloading of vehicles.
- Mooring, fendering, and navigation structures as may be required for shore-assisted and/or vessel accessible line handling.
- Passenger and AMHS personnel terminal building equipped with ticketing, waiting, office, storage, and public restroom areas. Building electrical, water, and sewer utilities.
- Warehouse and storage space for restocking and maintenance of vessels.
- Provision of vessel water, sewer utilities and electrical utilities but no on-site fuel storage facilities.
- Minimum mooring depth at the berthing face and approach ways of at least -30 ft MLLW.

2.2 Single Vessel Criteria

Improvements to one or both of the existing berthing locations and/or development of new sites to provide a better terminal facility for either vessel (separate locations) were also examined. Evaluation criteria for these considerations include:

- Provision of adequate upland area and other enhancements to meet vehicle staging and parking needs for the particular vessel served.
- Reduce congestion and improve safety for AMHS and other vessel activities in the vicinity of Pier 1.
- Improve the efficiency of vehicle and cargo transfer by providing a transfer bridge where practical.
- Provision of terminal and maintenance/storage buildings.

3. ALTERNATIVES CONSIDERED

The 2007 *Reconnaissance Engineering Study* selected the Near Island site as the preferred engineering alternative for a dual vessel use facility; however, the *Kennicott's* trial run demonstrated it was a poor choice for the larger ferry. In this engineering study update the Department developed additional alternatives at the St. Paul Harbor breakwater and considered again the alternatives at the LASH Dock and Pier 2. In addition, the Near Island site was reconfigured and new alternatives at Pier 1 and the City Transient Float were developed to serve only the *Tustumena*.

This report identifies and analyzes a variety of feasible alternatives that accommodate one or both ferries at six different locations. Figure 3.1 shows the location of the study locations and their proximity to the community of Kodiak. The sites cannot be compared directly because each site cannot be developed identically. Each location or alternative accommodates different objectives. This alternatives analysis attempts to develop all feasible options, whether single or dual vessel use.

Refer to Appendix C for detailed project cost estimates and Appendix D for conceptual site plans of each terminal layout. Project costs and the relative pros and cons for each alternative are also listed directly on the plans contained in Appendix D.

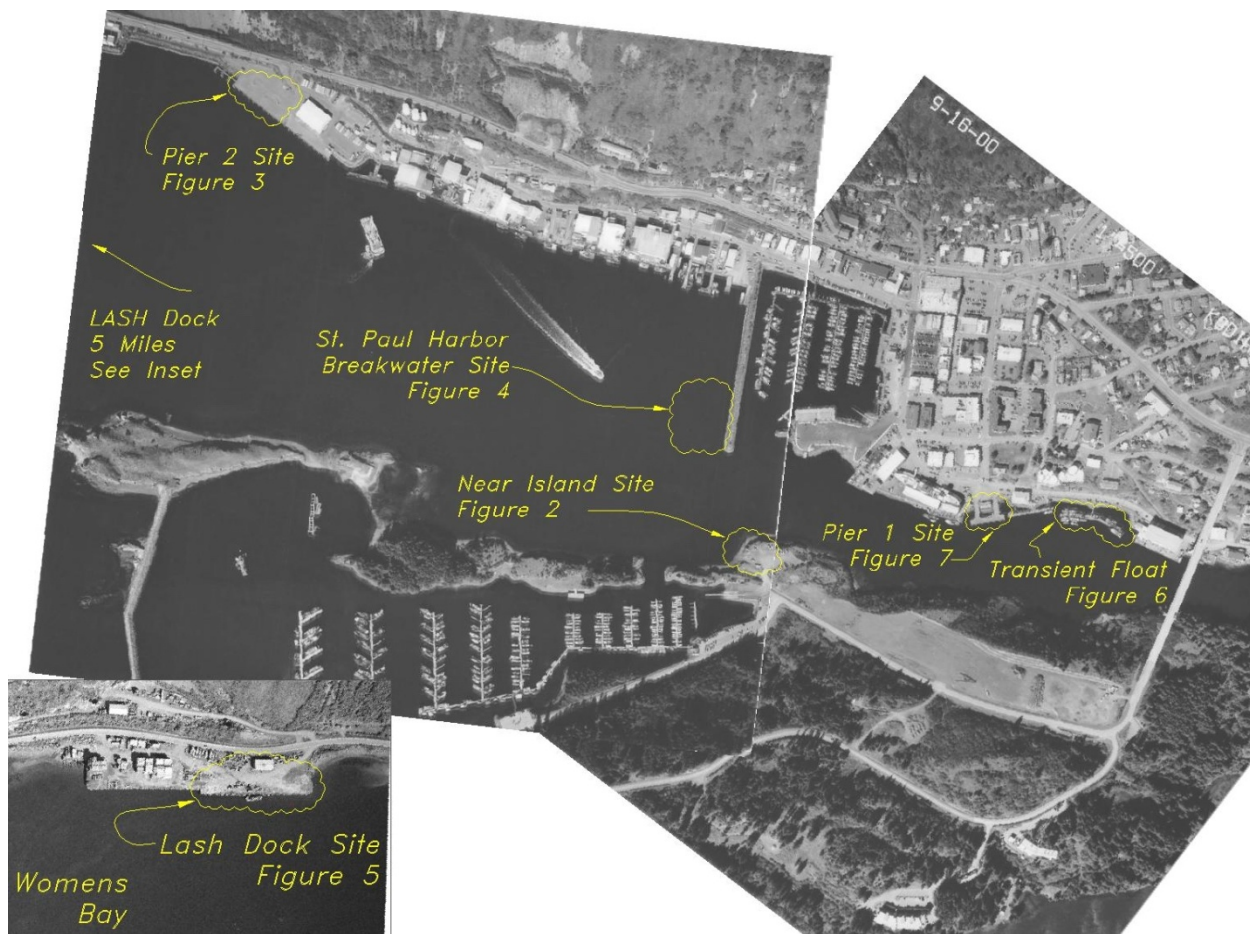


Figure 3.1 Ferry Terminal Sites

3.1 Near Island

The Near Island site, located just east of the north entrance to St. Herman Harbor initially appeared to satisfy all of AMHS's needs. It provided sufficient land area, had utilities nearby, and furnished protection from wind and waves. However, its confined access made it suitable

for the *Tustumena* only. This site can be developed for the *Tustumena* only and has an estimated project cost on the order of \$11 million. The *Kennicott* would continue to use Pier 2 because it cannot safely access this location. Figures 2A and 2B in Appendix D show possible terminal configurations for the *Tustumena*.

3.2 Pier 2

Pier 2 is a City of Kodiak owned facility located just west of the Kodiak city center on the northern shore of St. Paul Harbor. This platform dock was last renovated in 2005 and is the current mooring location for the *Kennicott*. Pier 2 is utilized by other commercial and private vessels. It is accessible by both AMHS vessels but its exposure to ocean swells can make it unsuitable for both ferries during adverse winter weather. This dock cannot be exclusively used by AMHS and scheduling conflicts with other dock users can occur unless carefully scheduled in advance. Other upland uses in this region also conflict with AMHS needs. Figures 3A, 3B and 3C in Appendix D show potential terminal improvements that could be developed at this site. The estimated project costs for these improvements range from \$1.0 to \$8.0 million depending on the extent of the proposed upgrades.

3.3 St. Paul Harbor Breakwater

The St. Paul Harbor Breakwater site is located on the southern end of the breakwater protecting the small boat harbor. An embankment would be constructed on the west side of the breakwater over an existing shoal to develop areas for staging, parking, and a terminal building. An embankment paralleling the breakwater provides access from the terminal to the Kodiak road system. The site is located near the city center and other visitor amenities. Development of this location will be costly - requiring substantial quantities of in-water fill. The estimated project cost for development of a new ferry terminal at this location is in excess of \$20.0 million. Figures 4A and 4B show potential terminal layouts for this location. This site best suits the purpose and need for a dedicated AMHS facility that would accommodate both vessels.

3.4 LASH Dock

The LASH Dock is a privately owned cargo-transfer facility on the north shore of Womens Bay and is located approximately five road miles west of the Kodiak city center. This dock is an open cell bulkhead structure constructed of bare steel sheet piles. Womens Bay is sheltered from ocean conditions but is purported to occasionally form ice in the winter. Vessels enter the bay through a dredged channel from Chiniak Bay but the channel is not an impediment to either ferry.

This location would be able to accommodate both vessels; however, the site has no visitor amenities nearby and lies outside of the Kodiak police and fire protection districts. There are no public sewer and water utilities. The western corner of the LASH Dock settled after construction but is reported to have been repaired. The steel sheet piles that form the bulkhead are freely corroding and will require costly cathodic protection. The uplands and dock are owned privately and purchase of the property and associated existing improvements will be required. Total costs

are estimated between \$12-16 million which include purchase of the facility from the private owner(s). Figures 5A and 5B show possible terminal layouts that could be developed at this site.

3.5 City Transient Float

The City Transient Float and Pier 1 are located on the north shore of the Kodiak North Entrance Channel; therefore, these sites are accessible by only the *Tustumena*. These two facilities are near the city center and only a short distance from many visitor amenities.

The City Transient Float is a timber float used for short term moorage of small fishing and recreational boats. The shore line slopes steeply in this area and there is no room for staging or parking between the shore and the adjacent roadway. The float is located between a busy marine fuel dock and a fish processing plant. Figures 6A, 6B, 6C and 6D depict possible terminal layouts using sheet pile bulkheads or pile supported docks. Estimated construction costs are in the range of \$15-22 million. Upland land areas that would be gained by these alternatives are marginally adequate.

3.6 Pier 1

Pier 1 is as a City of Kodiak owned facility that is the present terminal for the *Tustumena*. It is a timber, horseshoe-shaped dock that is used by other vessels to transfer cargo and by a fuel barge to supply the bulk plant. The existing dock structure is comprised of heavy timber frame construction dating to the late 1960's. The City has routinely maintained the dock over years and it has been equipped with an adequate fender system. The length of the dock face is shorter than the *Tustumena* and it is flanked by a fish processor and marine fuel dock at either end. The dock is convenient to the city center but has very little area for parking and staging vehicles. The site is small with no room to expand onshore or towards the channel. Alternatives 7A and 7B in Appendix D show two possible terminal layouts that show replacement and expansion the existing dock. These alternatives would greatly increase the available area for vehicle staging and parking, but may still not satisfy the space needs of the *Tustumena* at all times. Estimated project costs for these alternatives are \$14.0 and \$8.0 million. Alternative 7B best meets the project objectives considering the available project funding which is on the order of \$7.0 million.

Another option for Pier 1 is to simply reconstruct the existing facility in-part or in whole without enlarging the footprint or providing for enhanced upland areas to support AMHS operations. This alternative would consist of the replacement of the aging timber dock with a new, modern structure and associated mooring fender system. This option is represented as Alternative 7C and has an estimated project cost on the order of \$7.1 million.

3.7 Summary of Alternative Costs

A summary of the estimated project costs for all the alternatives considered is summarized in Table 3.1. The notation "T" or "K" under vessels served means *Tustumena* or *Kennicott*. The listed costs include environmental analysis, engineering design, construction administration and project construction and a 5-percent estimating contingency. Right of way or land acquisition

costs are not included for any of the alternatives except for the LASH Dock which is privately owned. Right of way acquisition needs for the other alternatives are unknown at this time but should not be too excessive.

Table 3.1 - Total Project Costs

LOCATION	ALT	DESCRIPTION	VESSELS SERVED	COST
NEAR ISLAND	2A	BY CHANNEL	T	\$11,000,000
NEAR ISLAND	2B	AWAY FROM CHANNEL	T	\$11,000,000
PIER 2	3A	EXISTING DOCK	K	\$1,000,000
PIER 2	3B	NEW TRANSFER BRIDGE WEST SIDE	T+K	\$6,000,000
PIER 2	3C	NEW TRANSFER BRIDGE MIDDLE	T+K	\$8,000,000
ST. PAUL BREAKWATER	4A	SIDE / STERN LOAD	T+K	\$22,000,000
ST. PAUL BREAKWATER	4B	PILE SUPPORTED SIDE / STERN LOAD	T+K	\$27,000,000
LASH DOCK	5A	EXISTING SHEET PILE	T+K	\$12,000,000
LASH DOCK	5B	SHEET PILE DOCK/ NEW TRANSFER BRIDGE	T+K	\$16,000,000
CITY TRANSIENT FLOAT	6A	SHEET PILE CELL, DOCK 1	T	\$22,000,000
CITY TRANSIENT FLOAT	6B	SHEET PILE CELL, DOCK 2	T	\$22,000,000
CITY TRANSIENT FLOAT	6C	FILL AND DOCK	T	\$16,000,000
CITY TRANSIENT FLOAT	6D	FILL AND DOCK	T	\$17,000,000
PIER 1	7A	NEW ENLARGED DOCK	T	\$14,000,000
PIER 1	7B	MODIFY/ADD TO EXIST DOCK	T	\$8,000,000
PIER 1	7C	RECONSTRUCT EXIST DOCK	T	\$7,100,000

4. SUMMARY AND RECOMMENDATIONS

A single, dedicated AMHS terminal facility would be the preferred alternative for improving ferry service in Kodiak if supported in future project funding plans. Ferry terminal improvements for a dedicated facility would accommodate AMHS ferries and have sufficient uplands to support vehicle parking, staging and security needs. These requirements are presently not met at the existing Pier 1 and Pier 2 sites. Additionally, the facility should be sited as close as possible to the existing business community and visitor amenities (near the town of Kodiak).

Initial studies and community input indicated many positive attributes for the Near Island site; however, this location has proved to be insufficient for safe access by the *Kennicott*. Study efforts then focused on the St. Paul Breakwater site which meets the criteria for both vessels but has estimated project costs in excess of current funding allocations. The City of Kodiak then requested that the Department investigate other ferry service improvement possibilities that may be less cost and not necessarily a dedicated AMHS facility. As a result of this request, this study effort explores all feasible options that would provide an enhanced level of ferry service in Kodiak - whether dual or single ferry vessel use and/or at multiple locations. The St. Paul

Breakwater site (reference Figures 4A and 4B in Appendix D) appears to be the most favorable location of the six locations evaluated in this report for a dual vessel facility. This site can be safely accessed and used by either the *Kennicott* or the *Tustumena*, offers the required upland area and is located near the community of Kodiak and existing business development.

Future project funding plans do not include sufficient resources to construct a dedicated AMHS facility, so the alternative(s) to improve existing terminal operations should be pursued. The present federal funding source is authorized only for the community Kodiak. These funds cannot be used elsewhere. The alternative which probably best meets this purpose and need is the existing Pier 1 location reflected under Alternatives 7A, 7B and 7C in Appendix D. Primary service to Kodiak is provided by the *Tustumena*. The *Tustumena* has been berthed at Pier 1 for many years. The primary deficiency at Pier 1 is congestion from nearby development and lack of suitable staging and parking area. Expansion of nearby land areas is not possible to meet staging and parking needs. Expansion of the pile supported dock structure is therefore the only feasible alternative.

Further evaluation with regard to making improvements at Pier 2 may also be in order as part of this project – or at least in the near future in the event that Pier 2 is to continue to be used as the primary port for the *Kennicott*.

The existing Pier 1 and Pier 2 facilities are owned by the City of Kodiak. Improvements at either of these locations under this project will require a project agreement defining principal conditions in order to expend federal funds at this facility. This agreement (including 23 USC 129) should address, but may not be limited to, the following:

- Maintenance and operations
- No AMHS “use tariff” or “head-tax” for ferry traffic
- Requirement that pier revenue must be deposited in a dedicated fund for pier maintenance and future capital improvements.
- Establishment of priority use for scheduling and use by AMHS vessels

The next stage of project progression is for the Department to determine a preferred alternative or direction for the project, establish a realistic funding plan and then request Federal Highway Administration (FHWA) approval to develop the environmental document and conduct further project development work in accordance with NEPA requirements. Additional preliminary engineering, inspections, surveying, and other relevant studies will be conducted as necessary to support the selection of the preferred alternative under the environmental document.

The estimated project cost for the development of most of the alternatives evaluated in this report exceeds current federal funding authorizations. The projected AMHS funding levels versus overall system needs are presently inadequate to cover costs in excess of funding provided by the earmark. As such, Alternative 7C should be selected as the preferred alternative as it best fits the available budget. Alternative 7C provides for the removal and replacement of the existing timber Pier 1 dock structure and ensures the safe and functional operational status of the dock for the next 30 or more years but does not improve upland staging and access conditions for AMHS ferry terminal use.

5. REFERENCES

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