VALDEZ COMPREHENSIVE WATERFRONT MASTER PLAN

Volume III | Final Planning Document

PORT OF VALDEZ

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THANK YOU

To Valdez's citizens, businesses, stakeholders, and all who participated in the development of this master planning document. We would also like to thank the past elected officials and managers who held positions during the development of this plan.

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PND Engineers, Inc.; Corvus Design, Inc.; ECI; and McDowell Group

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PROJECT OVERVIEW

1.0 EXECUTIVE SUMMARY

The Valdez Comprehensive Waterfront Master Plan is being developed for the City of Valdez to support existing and new waterfront opportunities and activities within the community. This effort is rooted within the 2018 Valdez Ports & Harbors Commission's identification of 14 sites that are community assets and key to supporting and growing Valdez and its waterfront.

From these 14 sites, five were prioritized by the Commission and are the focus of this Master Plan effort. This plan will create site-specific waterfront master plans that facilitate future development and economic opportunities for the community. The entire planning effort has been developed within an inclusive public process.

This document (Preferred Concept Development) is the development of the preferred master plans for each of the five prioritized sites. Each master plan is backed by economic analysis, construction estimates, understanding return on investments, and implementation strategies for each site.

This document builds off the findings and recommendations within the Inventory & Concept Development document completed in May 2019.

2.0 INTRODUCTION

The City of Valdez is in Prince William Sound on the northern shore of Port Valdez. The City has a rich history in mining, with the military, and as the starting point of the first major road route to the interior of Alaska. The City of Valdez has undergone boom and bust periods with the result of a fluctuating population and different growth patterns. Heavy damage caused by the 1964 earthquake required the City of Valdez to move to the delta of Mineral Creek, approximately 4 miles west of the original town site.

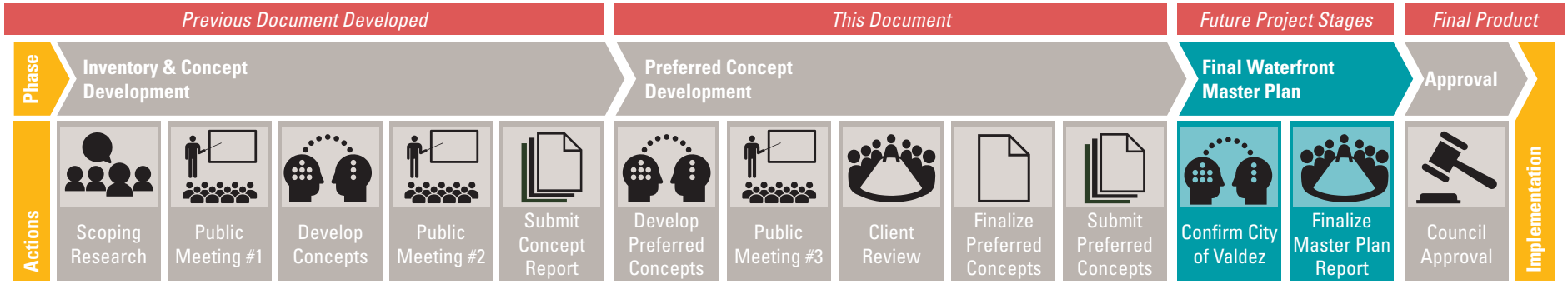
The economy in Valdez started to recover in 1969 when Valdez was selected as the terminus of the Trans-Alaska Pipeline and an oil storage/transfer marine terminal. Valdez has since become a diverse community supported by the Trans-Alaska Pipeline, all-season tourism, fishing, transportation, and shipping. The waterfront plays a crucial role in serving the community and supporting its industries; the waterfront is the identity of Valdez and the future of the community.

3.0 PROJECT NEED

The Valdez Comprehensive Waterfront Master Plan examines a variety of development options for the waterfront and how this growth will fit within the desired community character. The goal is to ensure the long-term viability of commercial and charter fishing operations, retail businesses, and tourism, while preserving public and recreational use of the waterfront. These are vital components of the City's planning goals.

The waterfront functions as a gateway for Valdez into Prince William Sound and serves as the driver for future growth, preservation, and the enhancement of Valdez as a community. The master plan will be used to encourage and direct new opportunities and activities that strengthen Valdez as a premier port in Prince William Sound, ensuring that it remains a first-class working waterfront.

The plan is being developed by PND Engineers, Corvus Design, ECI, and McDowell Group.



Planning process and document structure

VALDEZ: A WATERFRONT COMMUNITY CONT'D

WHAT IS THE WATERFRONT?

4.0 PROJECT COMPONENTS

The waterfront is a crucial component of the City of Valdez. It plays many different roles in the lives of residents, tourists, and long- and short-term working citizens. It is a working waterfront that serves as a major economic contributor to Valdez, which in part also makes it a first-class public waterfront. The day-to-day activities of a working waterfront serve as a major draw for tourists and visitors who find themselves engaging in the charter and commercial fishing operations that make up a large part of Valdez's identity. As a smaller community, Valdez has maintained its charm as a recreational paradise within a stunning landscape. Valdez's waterfront, and the activities it provides access to, acts as a draw for residents, recreators, and visitors despite the community's secluded location.

As the City plans for the future, it is imperative to encourage a diversity of opportunities along the waterfront without compromising the natural character and beauty. It is important to understand that the waterfront is an asset to the community on more levels than as a draw for tourism or for economic prosperity. The waterfront is described as a natural, public, and working waterfront. Balancing these needs is a challenge and a key planning goal for the master plan. Future development needs to adhere to this multifaceted nature, embracing and blending the three components into a cohesive working community of parts. The natural, public, and working components of the waterfront and how these relate to future development and growth are further described in the following sections 4.1, 4.2, and 4.3.

4.1 Natural Waterfront

The natural waterfront consists of those areas that have ecological function and allow visitors and residents to interact with flora, fauna, and natural processes.

These natural areas support the tourist industry and the commercial fishing industry, as well as contribute to the quality of life for residents of Valdez.

4.2 Public Waterfront

The public waterfront comprises those areas that maintain access to Port Valdez: beaches, recreation harbors, water-based recreation, motorized and non-motorized water vehicle sports, wildlife and marine-base viewing, and the working waterfront.

These areas facilitate resident and visitor interaction with the waterfront through maintaining community recreational needs, transportation requirements, subsistence access, and through commercial enterprises.

4.3 Working Waterfront

The working waterfront provides lands and infrastructure used for water-dependent economic activities and operations. These include ports and freight facilities, commercial boat harbors, waterfront and marine-dependent businesses and operations, and services to support marine-based activities.

These areas facilitate operations of the port, harbor, and industrial facilities that are dependent on the Port Valdez for future growth and success. Promoting a working waterfront requires maintaining intermodal connections of operations to the water, highway, and airport transportation links.

Natural Waterfront

Public Waterfront

Working Waterfront

PROJECT APPROACH

5.0 PLANNING PROCESS

The Inventory and Concept Development phase of the Valdez Comprehensive Waterfront Master Plan precedes this document and provides the background and concept development of alternative plans for the five prioritized sites. The Inventory and Concept Development report identified current and future needs by developing a thorough local and regional economic analysis and by communicating with members of the community through a series of public workshops and interviews. Several conceptual master plans were developed, along with a cost analysis for each concept, and presented through a series of workshops for each site. The current report (Preferred Concept Development) is based on input received from the previous document and refinement of the master plans that will assist future growth along the waterfront to support and expand the local economy and develop Valdez's first-class waterfront. The public will have the opportunity to provide input as this document goes from a draft to the final Valdez Comprehensive Waterfront Master Plan.

The graph on the right of this page explains the planning process and the parties that contribute through each phase of master plan development. Sections 5.1 and 5.2 provide a more thorough explanation of the data, research, and public engagement involved with the development of this report, which will be used to create the final master plan report.

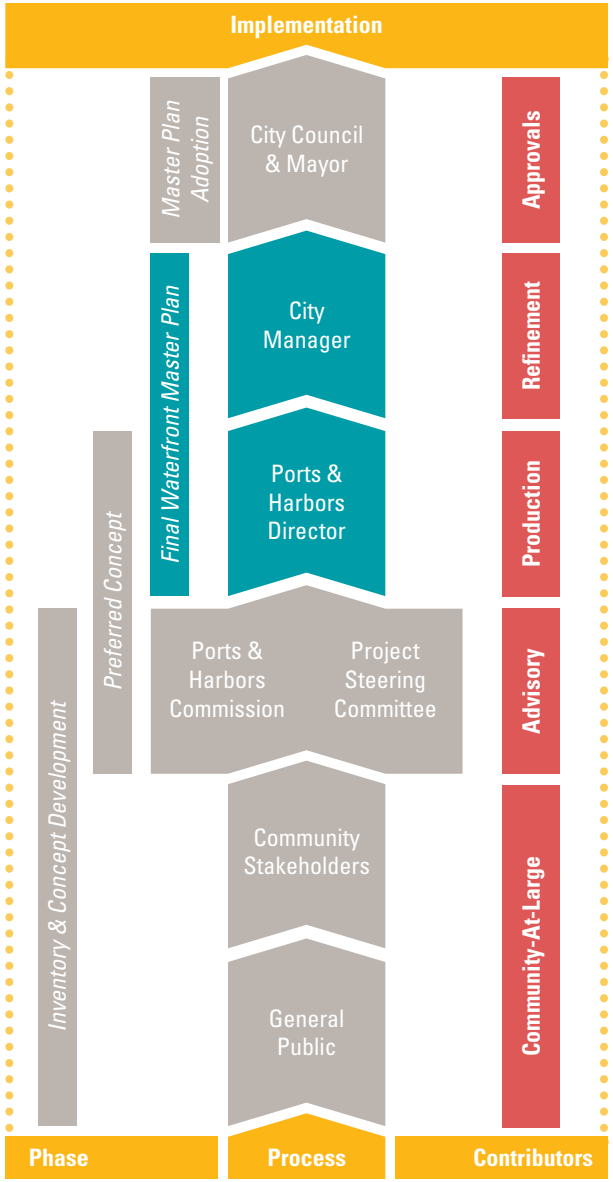
5.1 Public Engagement

The master planning effort is supported by an extensive public process to guide the community in the development of a cohesive waterfront vision. The planning team has conducted a four-day public planning workshop that included public meetings, open houses, and interviews, drawing the participation of nearly 100 people. Three additional multiday community meetings and workshops throughout the balance of the planning effort made up our public engagement and were well attended. It is the goal of this planning effort to fully support community inclusion and create opportunities for the community to review all of the proposed master plans and supporting materials. Additionally, all materials developed and public input received has been posted on the project website: https://valdezwaterfront.blogspot.com.

5.2 Reports & Data

Previous planning documents, data, and resources were reviewed to direct the planning process and assist in developing the master plans for each site. The following is a list of documents and resources that were used to gather information for this report.

- 2018 Economic Impact of the Valdez Fisheries
- 2019 City of Valdez Comprehensive Plan (Draft: in progress)
- 2017 Valdez Visitor Market Profile
- 2015 Competitive Market Analysis and Long Range Planning for the Port of Valdez
- 2015 Draft Waterfront Front Development Plan
- 2014 Valdez New Harbor: Harbor Economic Impact Model Findings
- 2007 Valdez Waterfront Development Master Plan
- Alaska Commercial Fisheries Entry Commission
- Alaska Department of Fish and Game
- Alaska Department of Labor and Workforce Development
- U.S. Census Bureau, American Community Survey
- City of Valdez, Zoning and Local Ordinances
- Interviews with various department directors and managers



COMMUNITY VISION

PROJECT GOALS

6.0 GUIDING PRINCIPLES

The Ports & Harbors Commission and Port Department developed an overall Waterfront Master Planning document in 2018. The document identified goals, completed projects, ongoing projects, and deferred maintenance projects that are related to the waterfront in Valdez. The identification of site and setting goals were developed by Port staff and the Commission during a series of regular meetings in which members of the public were invited to participate.

The goals that were developed in the Waterfront Master Planning document have been carried over and will drive the development of the Valdez Comprehensive Waterfront Master Plan and future waterfront planning in Valdez.

6.1 Provide a first-class waterfront experience

The waterfront should be a first-class experience for both residents and visitors, one that is welcoming, connective, and reaches out to the rest of the community. The core of what Valdez is – the natural, public, and working waterfront – should be effortlessly reflected here.

6.2 Preserve, enhance, and expand the diversity of amenities

Creating a draw for both visitors and locals will enhance access to boating, fishing, sightseeing, entertainment, and events along the waterfront.

6.3 Attract new industries and businesses

By establishing a diversified economy, Valdez can continue to be a strong economic contributor into the future. This will help create new jobs and develop a solid and stable economy for Valdez.

6.4 Leverage public investments to catalyze private investment and development

The use of public funding to stimulate economic growth will in return attract private investments to further increase economic opportunity and provide community services. Private-Public Partnerships should be developed where logical.

6.5 Contribute to the overall sustainable fiscal health of the City

The three pillars of sustainability are environmental, social, and economic. To create sustainable health, Valdez must focus strongly on all three pillars and maintain a balance between the natural, public, and working waterfront.

6.6 Develop a phased execution plan

In developing a phased execution plan, Valdez can ensure that there is long-term financing available, facilities are being implemented when needed, and operations and maintenance are running smoothly and are adequately sized for future growth.

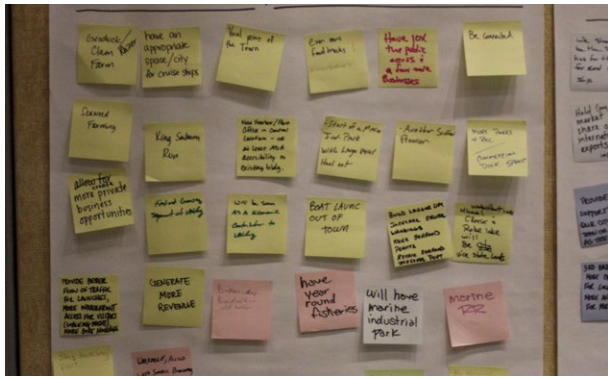
Preserve

Enhance

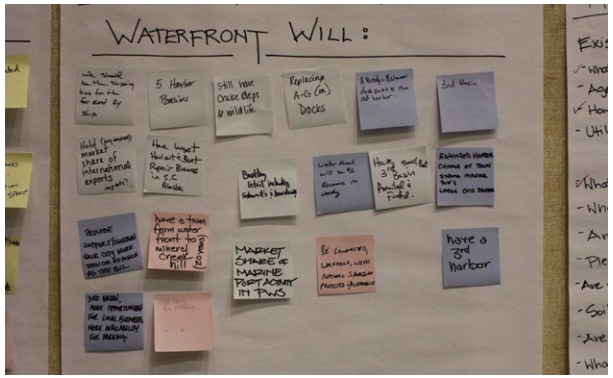
Diversify

7.0 VISION

A five- and 30-year vision was developed with the community during the first week of the public planning process. Community members were asked to provide ideas of what their vision was for the Valdez waterfront. The planning team took these ideas and generated three primary planning ideas to strive toward throughout a five- and 30-year window.



Five-Year Vision



Thirty-Year Vision

FIVE-YEAR VISION

Strengthen the Marine Industrial Sector

- More seafood plants
- Another seafood processor
- Seaweed farming
- Start of marine industrial park with large vessel haulout
- Build larger lift
- Commercial dock space
- Will be seen as an economic contributor to Valdez
- Waterfront access for visitors
- More boat storage
- Retail seafood
- Have year-round fisheries

Increase Business Opportunities on the Waterfront

- Create more private business opportunities
- Fastest-growing segment of Valdez
- More waterfront access for visitors
- Generate more revenue
- Walkable, filled with small businesses, connected
- Be known for its great restaurants!
- Businesses along boardwalk of Old Harbor

Create Waterfront as a Focal Point of Valdez

- Have an appropriate space/city for cruise ships
- Focal point of town
- More food trucks
- Ten times the public access
- Be connected
- New harbor/port office in central location
- More parks and recreation
- Commercial dock space
- Increase cruise landings

THIRTY-YEAR VISION

Expand the Working Waterfront

- Five harbor basins
- Have largest haulout and boat repair business in Southcentral Alaska
- Have small-boat third basin, permitted and funded
- Expand harbor, center of town, strong marine services, large CCID storage
- More opportunities for local business and availability for parking

Increase Tourism

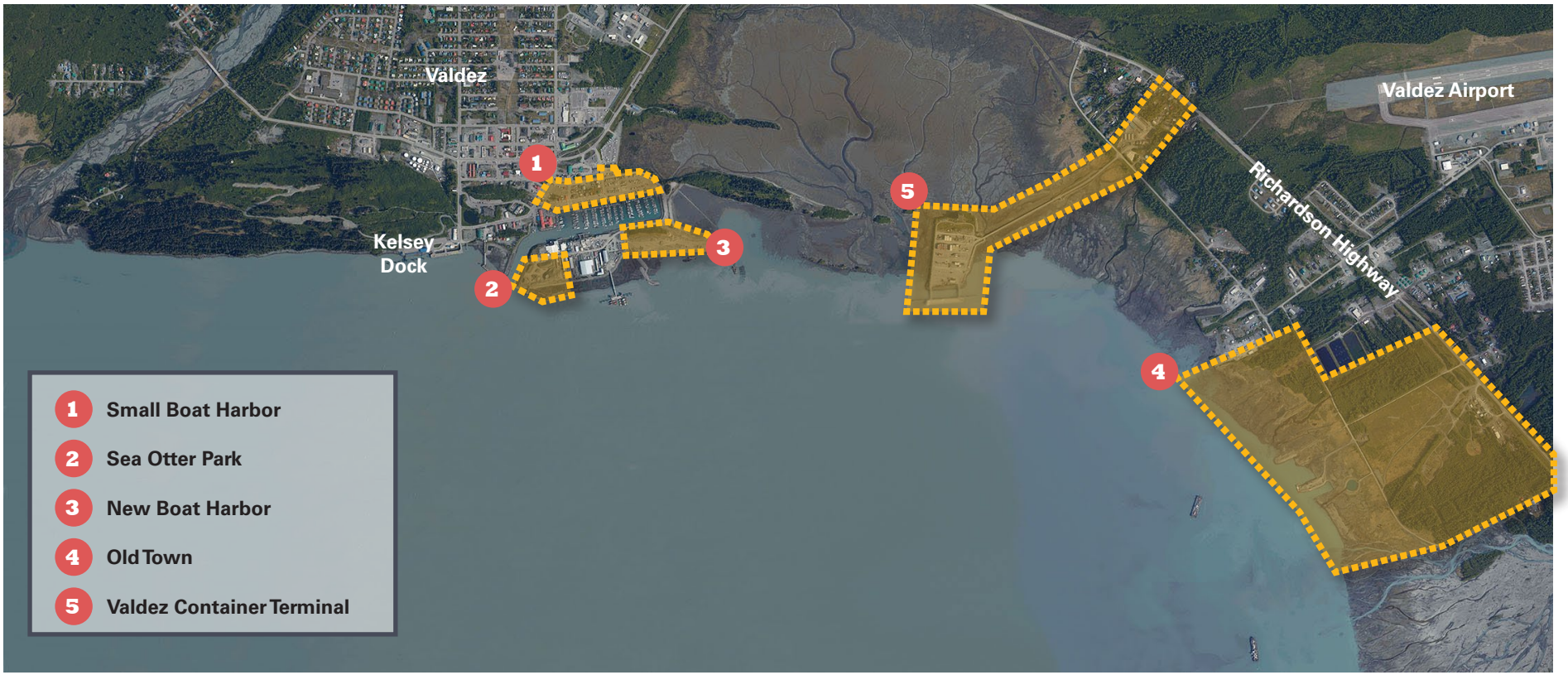
- Expand/provide cruise ship facilities
- Have cruise ships and wildlife
- Bustling retail including restaurants and boardwalks
- Have a tram from waterfront to Mineral Creek Hill
- Be connected, walkable, with natural shoreline (protected and accessible)
- Opportunities for local businesses

Make Valdez a Fishing Hub of Prince William Sound

- Be the shipping hub for the Far East
- Hold market share of international exports (and imports?)
- Waterfront will be the #1 economy in Valdez
- Provide/support our city more than or as much as the oil market share of marine port activity in Prince William Sound

STUDY BOUNDARY

FIVE FOCUS AREAS



8.0 STUDY AREA

In 2018, the City of Valdez Ports and Harbors Commission identified fourteen sites that had the potential to support future growth through diversifying the local economy and establishing the waterfront as a first-class experience. Five of these 14 sites were identified as the highest priority and are the focus of study for the master planning effort. These five sites are:

- Small Boat Harbor;
- Sea Otter Park;
- New Boat Harbor;
- Old Town; and
- Valdez Container Terminal.

8.1 Small Boat Harbor

The Small Boat Harbor is a developed site in downtown Valdez that includes commercial development, a marine services area, a boat launch, parking, and a waterfront boardwalk. It is a busy area and a draw for locals and visitors alike. During the summer, the uplands area faces congestion and poor circulation. The focus for this area will be to increase functionality for the harbor uplands, compatibility with the downtown commercial district, and improve the visitor and local experience.

8.2 Sea Otter Park

Sea Otter Park is located on the spit south of the Small Boat Harbor within a busy industrial area including seafood plants and the Alyeska Ship Escort/Response Vessel System facility. It is an undeveloped site and is currently being used for stockpile and informal recreation. The focus for the site will be to build off its deep-water access and potential for industrial or marine-related uses.

8.3 New Boat Harbor

The New Boat Harbor opened in the summer of 2019 and will provide the needed additional slips with a focus on commercial boats. The uplands area is currently mostly undeveloped but has designated recreation areas, a waterfront boardwalk, and facilities to support the fishing fleet. Development of the New Boat Harbor area will be focused on commercial and marine-related facilities. As the Small Boat Harbor is better suited for activities to tourism and visitors, the New Boat Harbor will be best used for commercial fishing and marine-related activities.

8.4 Old Town

Old Town is a large, flat, and mostly undeveloped site located 4 miles from downtown Valdez near the airport. The large undeveloped site is an ideal location for generating new economic opportunities including marine-service facilities, related commercial development, and other businesses. Ground stability is a significant concern for this site, and further studies must be done to determine the potential for the site. Opportunities exist for recreational facilities and the ability to interpret the history of Old Town.

8.5 Valdez Container Terminal

The Valdez Container Terminal (VCT) was constructed in 1982 as a shipping port. It has a concrete floating dock, mooring dolphins, and catwalks to provide additional berthing for large ships. It is used as a container storage yard and is currently undersized for predicted demand. The VCT is also home to nine concrete grain silos at the northern end of the site. Focus for the VCT is mainly on understanding capacity needs to recommend improvements and expansions, while maintaining the current and new uses of the facility.

The planning team has established needs for each site by conducting an economic analysis and site inventory, through interacting with the public and garnering public input, and by understanding current and future waterfront needs. By evaluating each site and determining growth potential of current facilities, the planning team has developed a Master Plan that will collectively meet the current and future needs of the community.

Based on findings, the planning team developed alternative master plans, presented these to the community, and moved forward to develop preferred master plans for each site. These plans will be moved forward to create a cohesive waterfront master plan that follows the aforementioned guiding principles and supports the community's vision.

1 Economic Assessment

ECONOMIC ASSESSMENT

1.0 SMALL BOAT HARBOR

The Small Boat Harbor master plan development concept is a multiphase plan. Phase I includes uplands expansion via fill behind a harbor bulkhead and park strip development in front of the existing commercial area. The park strip ("community plaza") is envisioned to include green space, a few spaces reserved for small footprint retail establishments, shelters, playground, seating, restrooms, fish-cleaning stations, and improved parking. Phase I includes construction of a four-lane boat launch ramp. In Phase II, a new harbor office would be constructed and park strip development extended to the east, with additional green space, fish-cleaning stations, and shelters. Vessel lifts, maintenance/repair, and storage would continue in the current boatyard location until there is clear, higher-value retail/commercial demand for that area. Phase III will transition the boatyard area from marine services to retail and other commercial activity focused on the visitor market.

ECONOMIC ASSESSMENT

Retail and visitor facilities/amenities development

Several waterfront and waterfront uplands areas have been identified for potential retail and other visitor-related development, including the Small Boat Harbor area. Investment in visitor-related infrastructure would support additional visitation, building on Valdez's current base of about 100,000 Alaska resident and non-resident visitors annually. Valdez draws summer visitors from a wide range of markets: sport-fishermen, RVers, package bus tours, cruise passengers, and adventure travelers, among others. Valdez now captures a 4% share of Alaska's non-resident visitor market, which totals about 2 million annually.

Visitors to Valdez have a range of economic impacts. Visitor spending creates opportunities for a wide array of local businesses, including retail and lodging establishments, charter and tour operators, and others. Those businesses create jobs, pay property taxes, and have other local economic benefits.

Valdez's challenge is to invest in marketing and infrastructure that enhances the community's appeal as a visitor destination, resulting in longer stays (now averaging about four nights) and increased visitor spending (now averaging about $300 per person per visit).

Valdez has an opportunity to re-establish itself as a cruise ship port-of-call. Improvements to Small Boat Harbor waterfront and uplands areas can give Valdez a recognized "downtown" core area to draw cruise and independent visitors with walkable retail, dining, and visitor attractions. Phase I and Phase II development will provide the functional and aesthetic improvements needed to make the area a more attractive and accessible place to spend time. Beyond that, the long-term market forces will drive commercial redevelopment of private and public land in the Small Boat Harbor area.

Launch ramp expansion

The preferred master plan alternative includes expanding the Small Boat Harbor launch ramp from two lanes to four. The $3.5 million improvement would reduce launch ramp congestion and wait times. Launch ramp fees account for approximately $20,000 in revenue annually. Launch ramp fees are $10 per day or $75 per season. Vessels paying annual moorage fees are exempt from launch fees. Improvements to the launch ramp will result in an increase in launch use, as the convenience of trailering will be significantly enhanced. The net effect on revenues is likely to be positive, as more boaters may be inclined to purchase the annual pass rather than daily passes.

Small Boat Harbor Launch Ramp Usage, 2008-2017

YEAR	SEASON LAUNCH PERMITS	DAILY LAUNCHES	LAUNCH FEES
2008	65	1,926	$12,882
2009	151	2,008	$27,607
2010	155	1,770	$25,447
2011	151	1,634	$23,837
2012	101	1,375	$21,323
2013	81	1,609	$22,173
2014	72	1,339	$18,864
2015	64	1,511	$19,910
2016	79	1,237	$18,094
2017	81	1,410	$20,153

Source: City of Valdez

Implications for waterfront planning

No immediate direct economic benefits can be linked to Small Boat Harbor waterfront park strip development, other than potential lease or user-fee revenues (for the City) from parcels set aside for food truck or other small-scale retail activities. The primary economic benefits of park strip, launch ramp expansion, and related development will be indirect, long-term, and the result of community-wide efforts to further enhance the appeal of Valdez to visitors.

2.0 SEA OTTER PARK

ECONOMIC ASSESSMENT OF EXPANDED MARINE SERVICES FACILITIES

The local economic benefits of a busy marine service center can be substantial. A wide range of service and supply businesses are connected to vessel maintenance and repair. The services of welders, mechanics, electricians, metal fabricators, shipwrights, refrigeration technicians, divers, hydraulics specialists, painters, marine surveyors, and others are typically needed. Machine shops and businesses offering fiberglass repair, tool rentals, pressure washer rentals/services, security services, vessel shrink wrapping, gear storage, and other goods and services are part of the marine services sector. Hotels, restaurants, taxi/car rental companies, hardware stores, grocery stores, and others benefit from spending by users of a marine services center.

With completion of the South Basin Harbor, Valdez's harbor capacity, as measured in terms of total lineal footage of stall space, increased from 15,770 ft to 22,082 ft, a 40% increase. The average slip length increased from 31 ft to 47 ft, a 52% increase. With greater harbor capacity and increased boat-lifting capacity, Valdez can expect an increase in local demand for vessel maintenance and repair infrastructure and services.

Current marine services facilities and activity

Valdez's existing marine services facilities include:

- Marine services area of approximately 2.5 acres, with additional off-season boat storage space.
- Two 40-ft by 80-ft concrete washdown pads
- Eight 24-ft by 60-ft concrete maintenance stations
- Storage capacity for 25 to 30 boats in season and significantly more in the off-season

Recent marine services activity has included:

- Average of 878 maintenance pad use-days annually from 2013 to 2017
- Range of 733 to 1,123 maintenance pad use-days annually
- Average of 354 boat lifts annually (with 75-ton lift)

Boat storage is an important aspect of marine services in Valdez. In 2017, 245 boats were stored for a total of 17,403 storage days. The number of boats served annually ranged from 180 to 245 between 2013 and 2017, while the number of total storage days ranged from 17,403 to 20,667 over the same period. Recreational boats have historically accounted for most of the storage demand, but recreational demand has been trending down while commercial demand has been trending up. The 2013-2017 five-year annual average for recreational boat storage was 11,180 days, about 60% of total storage days. Commercial vessels averaged 5,300 days annually over the same period.

The market for marine services

Valdez's primary marine services opportunity is to capture a larger share of the regional commercial fishing fleet market. Based on the most recent inventory (2015), the Prince William Sound-based fleet totals approximately 950 vessels more than 28 ft in length, including 590 commercial fishing boats, 237 recreational boats, 54 passenger and cruise vessels, and a mix of other commercial vessels (oil and gas industry-related service vessels, tugs, and others).

The Prince William Sound seine fleet would be a key target market. There are 267 vessels in that fleet (196 owned by Alaska residents and 71 owned by non-residents). Valdez residents hold 18 Prince William Sound seine permits, 14 of which were fished in 2018.

Approximately 80 seiners sell to Silver Bay Seafoods and Peter Pan Seafoods in Valdez, and each of these also has a seine skiff associated with it. In recent years, an estimated 20-30 seiners spent the winter in Valdez, with about half of those in the harbor and half hauled out in the boatyard. In 2017, 52 commercial fishing boats (nearly all seine boats) spent at least some time in the Valdez boatyard.

More than two dozen tenders also serve the local Valdez seafood processing plants. At 100-ft to 160-ft long and more, these vessels are too big for the community's existing boat lift but occasionally use the tidal grid for minor repairs. These tenders spend the winter in other parts of the state/country, but there is likely some opportunity to address more of the needs of this fleet during the time they are in the region.

The marine services development plan

Expansion of Valdez's marine services infrastructure could be accomplished gradually, maintaining the existing facility and lift services at the Small Boat Harbor while initiating development of a commercial vessel-focused facility at Sea Otter Park. For a period of time, both facilities would be operating — with the boatyard at the Small Boat Harbor serving recreational and other smaller vessels and the Sea Otter Park facility serving larger commercial vessels. Eventually, most maintenance and repair services could be consolidated at Sea Otter Park, with recreational vessel storage and light maintenance provided at the New Boat Harbor area. The long-term plan would depend on several factors, including whether a dry stack storage facility is constructed, whether the community would derive greater value over time from the Small Boat Harbor by transitioning to retail and visitor services, as well as other factors.

ECONOMIC ASSESSMENT CONT'D

More detailed planning is required to determine optimal travel lift lift size, yard layout, and pad configurations at Sea Otter Park. A 150-ton lift will meet the needs of the Prince William Sound commercial fishing fleet. The newest and largest seine boats may weigh more than 100 tons – but less than 150 tons – and may have beams greater than 25 ft. A larger lift would broaden the potential market and place Valdez at a competitive advantage over Cordova, but upfront costs for the machine and boat lift pier construction would be higher, as would maintenance costs.

A roughly 7-acre Sea Otter Park site could provide space for two 50-ft by 100-ft concrete washdown pads, for example, and a range of designated maintenance stations of various dimensions. The site would also offer in-season vessel storage capacity for 50 or more commercial boats, depending on the overall footprint of the facility, its configuration, and the time of year.

Revenues and expenditures

A new marine services facility at Sea Otter Park serving the commercial fleet would generate additional lift, maintenance pad, and boat storage revenues. Between fiscal year FY 2014 and FY 2018, City of Valdez marine services revenues included an annual average of $68,222 in boat lift fees, $15,190 in maintenance pad fees, and $72,811 for boat storage, among other revenue. Additional revenues could be expected from lease lots or leased warehouse space, depending on what is developed to facilitate the marine trades sector.

It is difficult to predict the increase in marine services revenues. Most of the new business will be larger commercial vessels, while most of the existing business is recreational/charter vessels. It is reasonable to expect that the increase in revenues will cover the increased costs associated with operating the Sea Otter Park facility. More staff time will be required, but the existing harbor staffing headcount is likely sufficient to operate the new lift and otherwise manage the yard. Labor requirements may change as demand for services increase, but a commensurate increase in revenue would be expected to cover additional costs.

Economic benefits

It will take time for the local marine services sector to develop around an expanded boatyard in Valdez, and the economic impacts of that development will unfold gradually. Wrangell, for example, aggressively invested in marine services infrastructure as an economic development initiative. After about a decade of development and operations, the Marine Service Center underpins an average of approximately $7,200 in local spending, per haulout, on a range of services and supplies. User fees more than cover the City's cost to operate the boatyard. FY 2018 Marine Service Center revenues totaled $434,000. City expenditures attributable to the Center totaled $304,000. Whether Valdez can replicate the success of Wrangell will depend on many factors, but the potential exists.

Wrangell's 300-ton and 150-ton boat lifts in operation

Marine services facility development costs

A 150-ton travel lift, boat lift pier, abutment fill, and wave barrier would have a combined cost of approximately $8.5 million. Development of the marine services yard would cost approximately $3.3 million, including site preparation, concrete work pads, water supply, wastewater/sewer, electrical and communications extensions.

Implications for waterfront planning

Investment in expanded marine services facilities makes economic sense for Valdez, a community with newly expanded harbor space, a significant recreational/charter fleet, and an underserved commercial fleet. As the community considers how to diversify its oil industry-dependent economy, building its marine services capacity represents a good, long-term opportunity. While it is difficult to predict the increase in marine services revenues, it is reasonable to expect that the increase in revenues will cover the increased costs associated with operating the Sea Otter Park facility.

ECONOMIC ASSESSMENT OF EXPANDED SEAFOOD PROCESSING

The Sea Otter Park area, adjacent to Silver Bay and Peter Pan operations, is an appropriate area for public and private investment aimed at expanding seafood processing activity in Valdez. The local economic benefits of seafood processing include fisheries-related tax revenues, property tax revenues, employment opportunities, local purchases of goods and services by processors and their employees, and local spending by the fleet that delivers fish to local processors.

The preferred Sea Otter Park development concept includes 5 acres of fill expansion, intended for lease to seafood processors, and construction of a 550-ft bulkhead dock. The concept includes a 60-ft access corridor from South Harbor Road to the proposed bulkhead dock. The cost of this development is estimated at $20 million.

Specific uses of the proposed uplands expansion that would generate the highest economic value for both the City and for seafood processors are yet to be determined. To the extent that infrastructure development can be leveraged to generate increased seafood landings in Valdez, the community will take in additional tax revenue and potentially add jobs. From 2014 to 2018, the City of Valdez received an average of $370,000 in tax revenue resulting from seafood landings at the two major processors in the community.

Additional acreage for seafood processing could also facilitate development of new value-added/byproduct processing activity. This type of development would increase local spending and add a limited number of jobs but would not necessarily generate additional seafood landings and associated tax revenue. It should also be noted that seafood processing is increasingly being automated, changing the nature of the jobs projected for this industry.

Leasing newly developed uplands property to processors could generate revenues for the City. Processors may have an interest in leasing those uplands, if doing so would allow more efficient handling of fish from boat to processing line. More efficient operations might allow them to handle a larger share of the Prince William Sound (PWS) salmon harvest. From 2015 to 2018, the PWS salmon harvest has averaged approximately 200 million pounds with an ex-vessel value averaging $100 million for all salmon species combined. PWS seafood processors generated, on average, a net of 115 million pounds of salmon products worth $238 million at the first wholesale level. More than $5 million in tax revenues were generated and 1,800 processing workers employed. The community currently captures roughly a quarter of PWS seafood processing activity. Capturing more of this economic activity in Valdez is the community's opportunity and challenge.

Implications for waterfront planning

While there are no specific development plans to underpin a detailed benefit/cost analysis, Sea Otter Park is the most appropriate area for expanding seafood processing in Valdez. The City and processors working together can define specific public and private investments and development strategies that maximize economic return to the community and private investors.

It is premature to suggest lease rates and revenue for newly developed Sea Otter Park area waterfront property, dedicated for seafood processing related uses. Rates will likely be negotiated either in advance of property development or at the time the property becomes available. The lease would likely be based on the property's fair market value. If the property were valued at $750,000, for example, $75,000 in annual lease revenue would be generated, based on an annual lease rate equal to 10% of the land's fair market value.

3.0 NEW BOAT HARBOR

ECONOMIC ASSESSMENT OF A DRY STACK VESSEL STORAGE FACILITY

A boat dry stack facility is a covered, enclosed building providing multilevel, often heated, vessel storage. A dry stack boat storage facility in Valdez would be the first of its kind in Alaska, providing a safe and secure storage option for vessel owners residing in the community and for those who frequently visit Valdez. Absentee owners would no longer worry about the safety of their vessels or pay for a boat watch and snow-removal service. Additionally, transportation expenses could be reduced for vessel owners trailering to Valdez from out of town multiple times each season. Dry storage also reduces maintenance expenses and protects the vessel from degradation caused by sun, inclement weather, birds, and soot from oil stoves.

Dry stack operations

Patrons of a dry stack facility notify facility staff in advance of their anticipated arrival. To launch, a vessel is lifted from the rack and transported via specialized forklift to the launch ramp, where it is placed directly into the water. An attendant secures the vessel to a queuing float until the owner's arrival. Upon return, the owner secures the vessel at the queuing float. Facility staff lift the vessel from the saltwater, wash it down with fresh water, and then move it into the building where it is stacked and stored until its next use.

Capacity

Two dry stack facilities, one with capacity for 100 vessels up to 32 ft length overall (LOA) and another capable of storing 200 vessels up to the same size, were examined as potentially suitable for Valdez.

A 100-vessel facility – a fully enclosed metal building on a concrete pad, with pre-engineered metal racking – would measure 120 ft by 138 ft. The eave height would be 48 ft. As currently designed, this facility would accommodate the following numbers of vessels by size:

- 65 vessels up to 30 ft LOA with a maximum height of 9 ft and beam of about 8.5 ft (stacked five high);
- 23 vessels up to 32 ft LOA with a maximum height of 11 ft and beam of about 10 ft (stacked four high); and
- 12 vessels up to 32 ft LOA with a maximum height of 14.5 ft and beam of about 10 ft (stacked three high).

Key dry stack facility operating assumptions include:

- Operations would occur seven days per week, 12 hours per day, from about mid-April to mid-September (approximately 22 weeks) with dedicated staff on site.
- Vessel space would only be leased on an annual basis (no seasonal lease arrangements).
- Stacking and launching vessels would be done by a specialized negative-drop forklift. Launching would be directly from forklift to water; vessel launch would be possible at all tides.
- The facility would be temperature-controlled to about 50 degrees or above year-round.

The demand for a dry stack storage services in Valdez is uncertain and will depend on the cost to store a boat in the facility. As of August 2019, there were about 100 vessels 32-ft-long or smaller on the waitlist. Not all of these vessels would choose a dry stack option, as higher costs versus wet slips would likely reduce demand. Boat owners would weigh the increased cost of dry stack against the benefits associated with indoor storage. For some, the convenience and security of dry stack would be worth some extra cost; for other more cost-sensitive boaters, the status quo might be preferable.

Expenses and revenues

Annual operating expenses for a 100-vessel facility are estimated at $420,000. The largest annual operating expense is for staffing. Payroll and benefits are estimated at $180,000, or about 43% of total annual expenses. Utilities costs, including electricity and heating oil, are based on estimated annual per-sq-ft costs of $2.20 and $3.30, respectively, and would total approximately $93,000 annually. Facility and equipment maintenance costs are anticipated to total approximately $37,000 annually.

Reflecting some economies of scale, operating expenses are estimated to increase by about 50% to $630,000 annually for a 200-vessel facility. The largest expenses, payroll and benefits, are estimated to be about $20,000 higher than for the smaller facility.

At full capacity, dry stack rental rates of at least $143 per foot would be required to generate revenue sufficient to cover the facility's estimated annual operating and maintenance expenses (O&M) of about $420,000. An average rate of $101 would be required to cover the O&M costs for a 200-vessel facility. The current wet slip tenant rate is about $44 per foot and the transient vessel moorage rate about $50 per foot.

A first step in the process of planning for and eventually developing a dry stack facility is to see how well the old and new harbors together satisfy existing demand for slips, refresh the waitlist, then identify remaining need in terms of size and number of vessels. Meantime, a face-to-face intercept survey of boaters could be conducted to quantify interest in dry stack storage and measure price sensitivity for that service.

Break-even Rates for 100 and 200 Vessel Dry Stack Facilities

CAPACITY (NO. OF BOATS)	APPROXIMATE BREAK-EVEN RATE/FOOT	TOTAL ANNUAL GROSS REVENUE AT FULL CAPACITY	TOTAL ANNUAL OPERATING COSTS
100	$143	$432,000	$420,000
200	$101	$634,000	$630,000

Source: City of Valdez

Summary of dry stack facility development costs

The total cost of facility and infrastructure construction is estimated at $12.3 million, including site preparation, infrastructure, construction, and associated costs and equipment. This includes about $2.5 million for site infrastructure, $8.7 million for construction (including design, permitting, site preparation, and contingency), and $1.1 million for equipment. These are preliminary estimates based on other projects in Alaska and estimated equipment costs. Actual costs may vary based on final design.

Construction cost for a 200-vessel facility is estimated at $20.5 million, a savings of about 16% over a 100-vessel facility, on a per-sq-ft basis. If the facility were phased, first constructing a 100-vessel facility then adding an additional building for another 100 vessels in the future, the estimated overall cost for both facilities would increase slightly to $21 million (in constant dollars).

The cost of dry stack construction is significant, but less on a per-boat basis than a new harbor. The cost of new harbor and wet slip construction includes approximately $200,000 per vessel for basin construction and another $53,000 for floats and other infrastructure. The estimated per-vessel cost for dry stack construction is about $122,000 for a 100-vessel facility and about $105,000 for a 200-vessel facility. However, the community carries the cost of dry stack facility construction, whereas the U.S. Army Corps of Engineers (USACE) carries the bulk of harbor development costs. Importantly, Valdez may not receive federal funding for additional harbor development for a decade or more as USACE typically funds new development for regions and communities on a rotational basis.

ECONOMIC ASSESSMENT CONT'D

Implications for waterfront planning

The community benefits economically from vessels stored/moored in Valdez whether in a wet slip or dry stack as vessel owners purchase fuel, food and beverages, fishing tackle, and other supplies, as well as services for boat maintenance. A dry stack facility represents an opportunity for Valdez to increase boat slip capacity at a lower per-boat rate than a new harbor "wet" basin.

The demand for dry stack slips in Valdez will depend, in large part, on the cost to store a boat in the facility. For a 100-vessel facility operating at full capacity, estimated break-even rates of $143 per foot are more than three times the price of current wet slip rates. To keep pricing competitive, some ongoing subsidy from the city will likely be required to support operations of a dry stack facility, at least initially as interest in and demand for space in the facility grows. Additional research is recommended to improve the community's understanding of demand for dry stack services.

ECONOMIC ASSESSMENT OF RETAIL DEVELOPMENT AT THE NEW BOAT HARBOR

Retail space developed in association with a dry stack facility in the new boat harbor area could create a revenue opportunity for the City and support marine services business development in Valdez. Retail space adjoining the dry stack building along the harbor side of the structure could house businesses catering to harbor users. Approximately 3,000 sf of retail space could accompany the first phase of dry stack facility construction. Lease rates would reflect the largely seasonal aspect of retail activity in the area of the new boat harbor and would need to be priced competitively. Depending on demand for the space and prevailing lease rate at the time of dry stack development, $30,000 to $50,000 in annual lease revenues could be generated.

ECONOMIC ASSESSMENT OF RECREATION/VISITOR AMENITY DEVELOPMENT AT THE NEW BOAT HARBOR

The preferred master plan alternative for the New Boat Harbor area includes recreation-related improvements, such as day-use shelters, restrooms, green spaces, and fishing and kayak launch floats. These improvements are not revenue generators, but they will enhance the quality of recreational opportunities in Valdez and, over the long-term, contribute to increased visitation to the community.

4.0 OLD TOWN

A broad range of potential development concepts have been identified for the Old Town area, including marine services such as vessel haulout, vessel washdown/maintenance areas, a covered maintenance area, boat storage space, a boat launch ramp, and boat trailer parking area. Adjacent areas have been identified for visitor-related amenities, such as picnic and interpretive areas, and a salmon fishing pond.

Economic benefits and implications for waterfront planning

The economic benefits of marine services-related development in Valdez are described in some detail in the Sea Otter Park concept development discussion. Old Town would offer more space for marine services development than Sea Otter Park, though at higher development costs, estimated at about $45 million, including $16 million in dredging costs. As a potential marine services center, Old Town is disadvantaged relative to Sea Otter Park by its distance from the boat harbors.

More detailed planning and concept development is required to assess the economic benefits of visitor-related amenities and attractions in the Old Town area. Picnic areas, interpretive kiosks, wildlife-viewing platforms, a trail system, RV parking, and other facilities are included in the development concept.

One specific development concept with potential to increase visitation to Valdez is a king salmon fishing pond – modeled after Homer's Fishing Hole, an easily accessible man-made lagoon stocked with king and coho salmon smolt. Similar to Homer's Fishing Hole, the fishing lagoon will have paved handicapped parking, as well as ADA ramps and landings to access the fishing lagoon and a trail to an accessible restroom.

A successfully developed and stocked Valdez lagoon would extend the salmon sportfishing season into May and June, bringing more anglers to the community earlier in the year. The technical and economic feasibility of developing a king salmon stocked sportfishing lagoon in the Old Town area is beyond the scope of this waterfront planning project. Valdez Fisheries Development Association (VFDA) could be an important resource for the community as it considers the feasibility of this concept. VFDA already has a major economic impact on Valdez and the PWS region, producing pink salmon for commercial harvest and coho for sport harvest.

5.0 VALDEZ CONTAINER TERMINAL

The priority for the Valdez Container Terminal (VCT) is to maintain it in good working order. Near-term improvements to the VCT focus on the barge facility and include dredging to -20 ft elevation and installation of an additional three breasting dolphins, two shore dolphins, and 100-ft-long bulkhead with an adjustable, non-tide dependent, roll-on, roll-off ramp. Long-term improvements to the VCT include a new crane, replacement of the concrete pontoon float, and related infrastructure, at a total cost of $33 million. Current and anticipated usage of the VCT does not indicate need for that investment in the near-term.

Improvements to the barge landing are estimated at $4 million, including the barge dock bulkhead, dredging, shore bollards, breasting dolphins, transfer ramp, and lift frames.

Economic benefits

VCT maintenance and barge landing improvements will not directly generate additional revenue (absent increased user fees) or new jobs in Valdez. Those expenditures will, however, preserve and enhance the functionality of an essential aspect of the community's transportation infrastructure. Port activity is dominated by movement of seafood, mining supplies, shipments destined for the North Slope, construction materials, and one-off oversize shipments. The VCT has a reputation for capably handling oversize freight and other freight destined for the North Slope, Interior mines, communities, and military bases. Direct access to the Alaska Interior and the North Slope along the relatively uncongested Richardson and Dalton Highways represents an advantage for shippers.

In 2017, VCT freight tonnage included 25,400 tons in-bound and 43,500 tons out-bound. Tonnages vary year-to-year, depending mainly on out-bound pink salmon shipments. VCT handled a total of 34,100 tons in 2016 and 42,400 tons in 2015. A significant amount of marine freight into, out of, and through Valdez crosses the VCT barge landing.

VCT generated approximately $382,000 in wharfage, dockage, and other revenue in 2017.

VCT Tonnage and Billings, 2015-2017

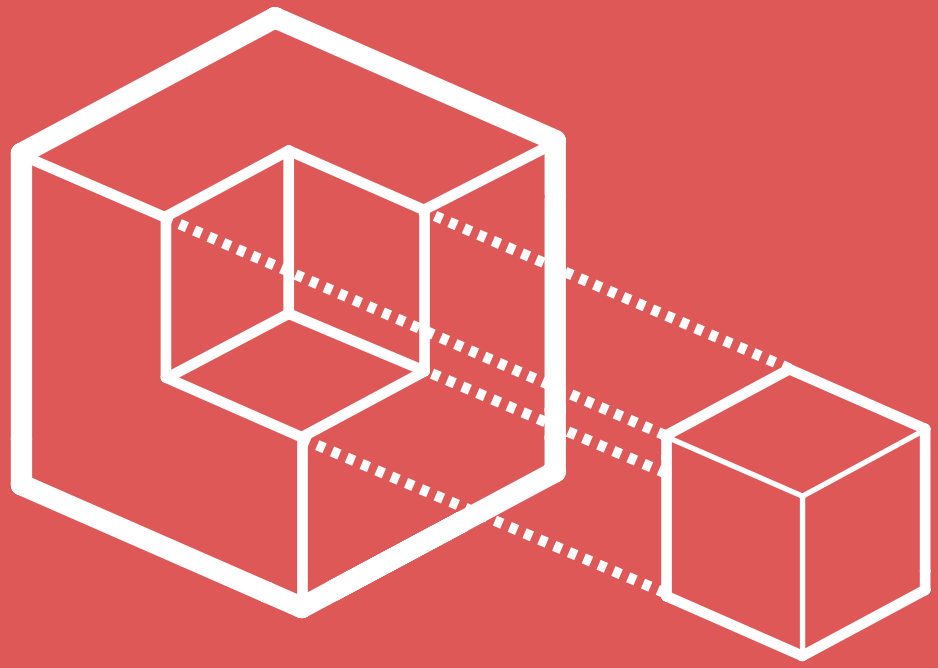
YEAR	TOTAL TONNAGE	TOTAL BILLING
2015	42,376	$332,608
2016	34,117	$239,656
2017	69,498	$381,771

Source: City of Valdez

Investments in the VCT that enhance shippers' efficiency of operations will ensure that Valdez maintains its share of the Southcentral in-bound marine freight market and, to the maximum extent possible, captures more of that market. Some freight markets are extremely cost- and time-sensitive. For in-bound freight destined for Interior markets, there is a high degree of competition between trucking and rail options. Maintaining and improving the VCT, along with competitive dockage, wharfage, and stevedoring costs, are necessary for Valdez to preserve and potentially expand this aspect of its economy.

2

Preferred Concepts



SMALL BOAT HARBOR

SUMMARY

The Small Boat Harbor is a mixed-use waterfront that includes commercial businesses, retail services, marine services, RV parking, and hotels. The harbor supports a mix of tour and charter fishing activities as well as passive recreation uses and has a boat launch and travel lift for bringing boats into and out of the harbor. Currently, the Small Boat Harbor serves as moorage for tour vessels and other commercial vessels, has the community's only launch ramp, and has a 75-ton Travelift that services the storage yard and eight maintenance pads.

Opportunities at the Small Boat Harbor include additional retail development along the harbor edge, improvements to the tour dock, increasing boat launch capacity and corresponding trailer parking to address congestion, and developing a lively and attractive downtown waterfront.

Valdez's challenge is to invest in marketing and infrastructure that enhances the community's appeal as a visitor destination, resulting in longer stays and increased visitor spending. Investment in visitor-related infrastructure supports additional visitation, building on Valdez's current base of about 100,000 Alaska resident and non-resident visitors annually. Valdez has an opportunity to re-establish itself as a cruise ship port-of-call and provide the needed services and destinations. The primary economic benefits of the proposed improvements are indirect, long-term, and the result of community-wide efforts to further enhance the appeal of Valdez to visitors and locals. Improving the Small Boat Harbor waterfront and uplands areas will establish a recognized "downtown" waterfront core area and will draw cruise and independent visitors with walkable retail, dining, and visitor attractions.

The master plan for the Small Boat Harbor focuses on the following main improvements:

- Improve and expand the recreational boat launch and parking facility layout, quantities, and quality. Increasing parking and providing additional space at the launch ramp will improve user experience;
- Replace harbor floats H through K;
- Allow expansion of retail and commercial opportunities in a key downtown waterfront area;
- Enhance the downtown waterfront experience for locals and visitors;
- Maintain the continued use of the existing marine service facilities and travel lift until these facilities are relocated to Sea Otter Park;
- Upgrade facilities to meet the expected increase in cruise ship passengers and other visitors to Valdez; and
- Celebrate Valdez as an authentic waterfront community.

ECONOMIC FEASIBILITY

It is not possible to quantitatively forecast job creation and other economic impacts associated with the park strip and related development, which would enhance the waterfront experience for locals and visitors; those economic benefits would be indirect, long-term, and the result of a community-wide effort to further enhance the appeal of Valdez to visitors as a place to spend their time.

The benefits of expanding the recreational boat launch ramp and related parking include more time-efficient operations, more convenient usage, and overall enhanced user experience. The improvements would not be expected to attract non-resident boaters, who do not visit the community, though an increase in launch ramp usage and revenue could be expected. Currently, annual launch ramp fees total approximately $20,000. The increased revenue would be small relative to the cost of the expansion and would not over time provide payback of the initial investment of $3.5 million.

Expansion of retail and other commercial opportunities at the Small Boat Harbor is a long-term concept. A small amount of City revenue could be generated from leases or user fees from areas set aside for food truck or other small-scale retail activities along the park strip. However, the intent of this type of development in the park strip is about increasing the overall appeal of the area to visitors and residents rather than generating City revenue.

Long-term transitions to retail and other commercial uses of the City-owned property where marine services are now provided is best driven by market forces. If privately owned property in the area is "densified" with additional commercial development over the next decade, the City can then consider how to generate maximum benefit from sale or lease of its property in the area.

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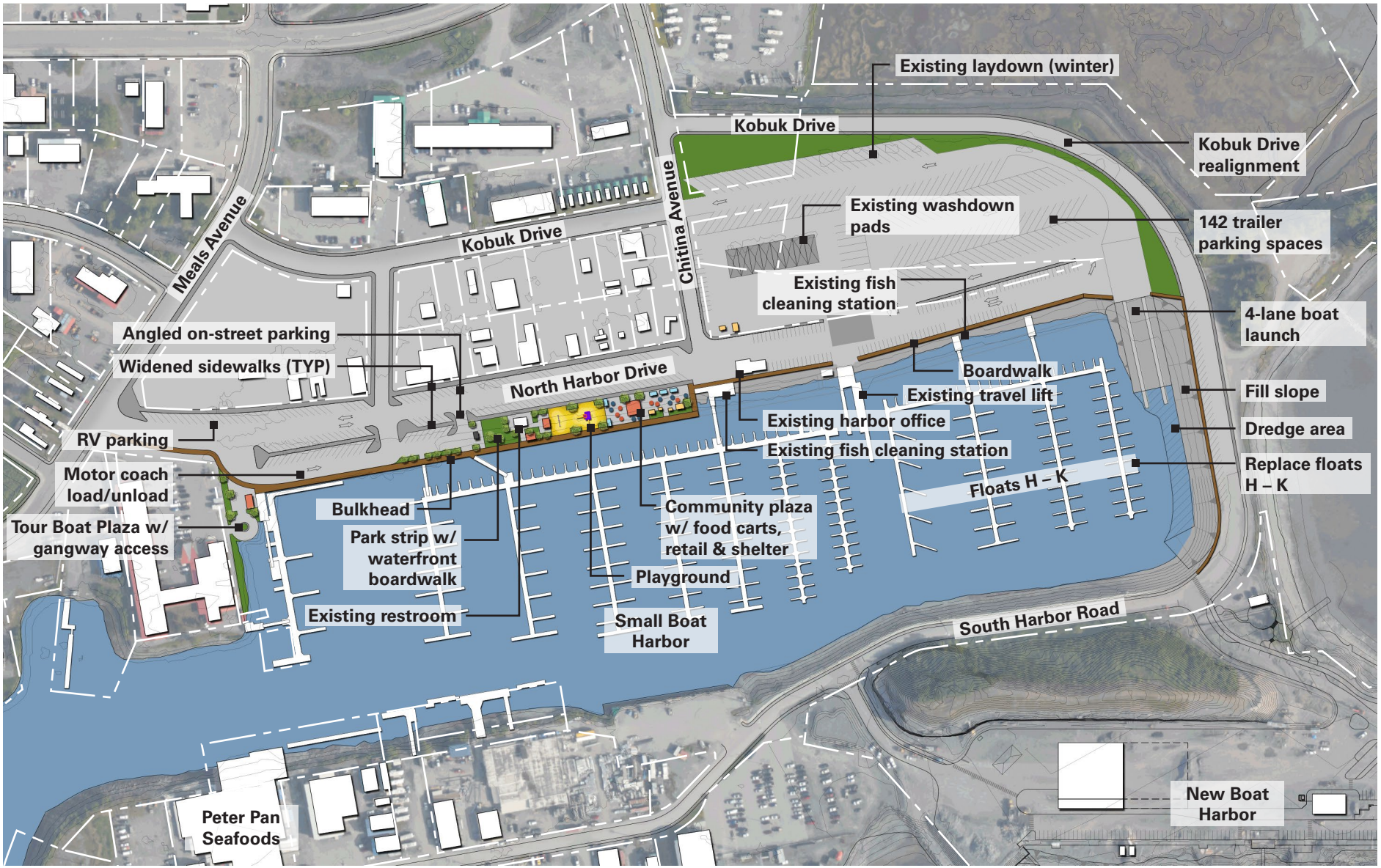
SMALL BOAT HARBOR CONT'D

PHASE I: MASTER PLAN



IMPLEMENTATION

Phase I will be implemented over the next 10 years and will include increased parking, an improved visitor experience, better harbor access for tourists, and an expanded boat launch.

There will be a new bulkhead installed along the waterfront from the tour dock to Chitina Avenue that will allow the uplands to be expanded by 60 ft, creating a park strip and new destination. North Harbor Drive will be realigned with expanded sidewalks, increased angled on-street parking, and a welcoming connection to the new park strip. In conjunction with this, there will be an opportunity to expand small commercial and retail businesses along the waterfront. On the eastern side of the park strip at the tour staging area, the bulkhead will be expanded to improve the small plaza area, providing proper wayfinding and interpretive signage, as well as an accessible ramp for tour-related cruises.

Kobuk Drive will be realigned, making additional space for truck and trailer parking. The boat launch will be expanded to four lanes, and the harbor edge will be dredged and a new revetment slope installed.

INNOVATION

The community gathering area and shelter is a flexible space that serves many purposes from a food and retail focal point on the waterfront to an area for special community events. In winter, it can function as a temporary snow dump. Small pop-up retail carts and shacks and food carts/trucks allow new businesses to grow incrementally with the hopes of becoming brick and mortar businesses.

The master plan for the Small Boat Harbor allows for smart growth, infill, and densification of activity, thus discouraging sprawl. This densification helps contain increased maintenance and improves the experience for locals and visitors.

Reconfiguration of on-street parking on North Harbor Drive creates parking efficiencies and allows for a desired expansion of sidewalks.

COSTS

The overall estimated cost for Phase I development at the Small Boat Harbor is $21.5 million. The estimate includes construction, design, permitting, project management, construction administration, and a 30% contingency. Major line items that will be completed in this phase and corresponding estimated costs are outlined below:

- $4 million for Kobuk Drive realignment, expanded parking, and service yard
- $1 million for street and sidewalk improvements
- $2.5 million for park strip improvements that include the plaza, sidewalk, and greenspace
- $1.8 million for the tour boat staging area and access
- $6.8 million for the bulkhead extension, new ADA gangway, and float adjustments
- $5.3 million for the boat launch and related work
- $7.2 million for harbor floats H through K replacement.

A detailed breakdown of the conceptual costs are found at the end of the Small Boat Harbor section.

SMALL BOAT HARBOR CONT'D

PHASE I: FACILITY IMPROVEMENTS

KOBUK DRIVE REALIGNMENT

Kobuk Drive will be realigned to the north of its current location to increase the truck and trailer parking area near the boat launch. Approximately 1,250 linear feet of road will be realigned, beginning at the northeast corner of the Small Boat Harbor and terminating at Chitina Avenue. The new roadway will have 12-ft lanes to accommodate a tractor trailer combination and 6-ft concrete sidewalks on either side with four storm drain inlets installed on either side of the roadway. Concerns include potential impacts on the surrounding wetlands and that the realignment will occur in close proximity to an existing area-wide drainage ditch and likely require permitting.

Materials

Materials will include asphalt cement pavement for the roadway surfaces and cast-in-place concrete for the sidewalks and gutters. The storm drain manholes will be concrete with cast-iron grated inlets. All roadway signage will be typical aluminum signs on galvanized steel posts.

BOAT LAUNCH AND TRAILER PARKING

The existing launch ramp facility will be upgraded to conform to modern recreational boat access requirements and design standards. The upgrades will increase the overall ramp width and alter the grades by extending the ramp and floats into deeper water to allow improved access during low tides. The upgrades will include four launch ramp lanes and two boarding floats that are accessible from both sides. Launch lanes will be widened to a 16-ft driving surface, with lane-designating rumble strips, and the end-of-ramp will be at a -7 mean low low water (MLLW). The boarding floats will be 10-ft by 240-ft, allowing all-tide access on the approximately 240 linear feet of berthing face. The proposed launch ramp upgrade will need to be coordinated closely with the future float replacements of the eastern portion of the harbor (floats H through K).

The eastern edge of the harbor basin will be dredged to an elevation of -10 MLLW and protected with riprap erosion protection. This will allow the launch ramp to extend into deeper water. The edge of the harbor basin will be re-graded and dredged to the south to eliminate shallow water/shoaling present near the end of the K-float.

With the realignment of Kobuk Drive, the expanded area has parking for 132 12-ft by 62-ft truck and trailer parking stalls as well as space allotted for passenger parking. All parking area improvements are contingent on the realignment of Kobuk Drive.

Reconfiguration of the eastern float system is anticipated to target generally smaller vessels, resulting in an approximate 10-percent increase in total slip count. This change in layout can be accommodated due to the recent completion of the New Boat Harbor that will draw vessels current occupying the larger slips in the Small Boat Harbor.

Materials

Materials will include a cast-in-place concrete approach slab with high-strength prefabricated concrete launch ramp panels. The floats will be heavy-timber-framed float units with fiberglass-reinforced traction plate surfacing and high-density polyethylene flotation tubs. All revetment areas will be constructed with riprap rock.

EXISTING MARINE SERVICES AND TRAVELIFT

The existing 75-ton Travelift will continue to be used as it is now. Harbor staff will be in attendance whenever the lift is operated for the safety of vehicles and pedestrians that may be in the area during operation. The lift will track over North Harbor Drive to continue to access the existing maintenance and washdown pads. The maintenance pads and laydown yard will continue to operate until replacement facilities are developed at Sea Otter Park.

NORTH HARBOR DRIVE IMPROVEMENTS (PARKING AND SIDEWALKS)

The Small Boat Harbor master plan includes several key elements to enhance the pedestrian experience along the waterfront. First, the plan maintains the existing 10-ft-wide concrete sidewalk along the north side of North Harbor Drive with connections to side streets Chitina Avenue, Wrangell Way, and Meals Avenue. Approximately 1,400 linear feet of new 8-ft-wide sidewalk will be constructed along the south side of North Harbor Drive, adjacent to the proposed waterfront park strip. The new sidewalk will maintain capacity for busy pedestrian traffic flow.

Larger angled parking stalls will replace current parking at the west end of North Harbor Drive to accommodate larger recreational vehicles that, at present, obstruct traffic flow when parked in the existing, standard-length stalls. It is proposed that 20 12-ft by 30-ft RV stalls be included in the parking layout. However, in order to increase the size of the parking stalls, the new parking layout is for angled parking, which will reduce the overall number of standard 10-ft by 20-ft parking stalls currently offered along North Harbor Drive. As there are numerous private driveways along North Harbor Drive, this will also reduce the number of parking stalls that can be provided.

Materials

Materials will include asphalt cement pavement for the roadway surfaces and cast-in-place concrete for the sidewalks and gutters. The storm drain manholes will be concrete with cast-iron grated inlets. All roadway signage will be typical aluminum signs on galvanized steel posts.

WATERFRONT BULKHEAD

It is proposed in the master plan that there be approximately 590 linear feet of new sheet pile bulkhead installed along the northern edge of the harbor for Phase I and an additional 890 linear feet installed for Phase II. Overall, the waterfront bulkhead will create an additional 2.2 acres of high-value uplands along the waterfront that can be used for commercial and recreational use. The bulkhead is planned to be constructed in two phases. The first phase will start at the northwest corner of the harbor and extend the bulkhead east to the gangway near the harbormaster's office, terminating at Chitina Avenue. The second phase will extend from the termination point at Chitina Avenue to the northeast corner of the harbor, terminating at the boat launch. When both phases are complete, the bulkhead will be approximately 60-70 linear feet, and will maintain all existing near-shore access on the main float headwalk. The bulkhead is planned to accommodate future dredging of the near-shore portions of the harbor basin to improve vessel access to shoreward-oriented slips.

During the bulkhead construction, it will require the re-orientation of existing gangways along the northern edge of the harbor to account for the change in the uplands tie-in locations.

A 12-ft-wide waterfront boardwalk will extend along the harbor side of the entire length of bulkhead, allowing convenient pedestrian access and an elevated user experience.

Materials

The bulkhead will be constructed with steel sheet pile and gravel fill. The boardwalk will be timber to match the existing boardwalk aesthetic and will have a water-side guardrail with banner poles that run the length to match existing design.

HARBOR FLOATS H – K REPLACEMENT

Harbor floats H through K to be replaced within the next 5 to 10 years. Replacement will include all main and slip flats to include utilities with water, sewer, electrical, and fire suppression.

Artistic play elements

Play area

Seating area

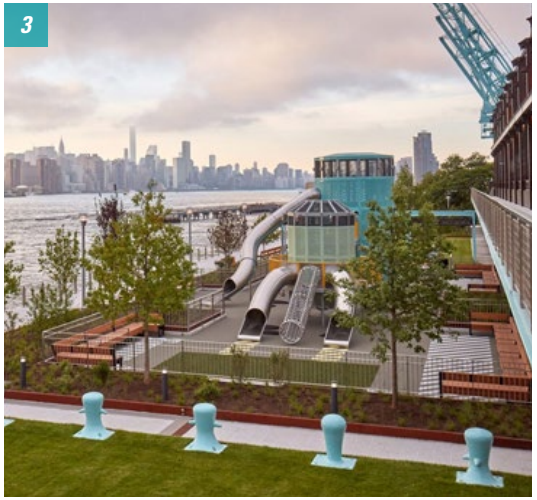
Plaza & greenspace edge

Community plaza space

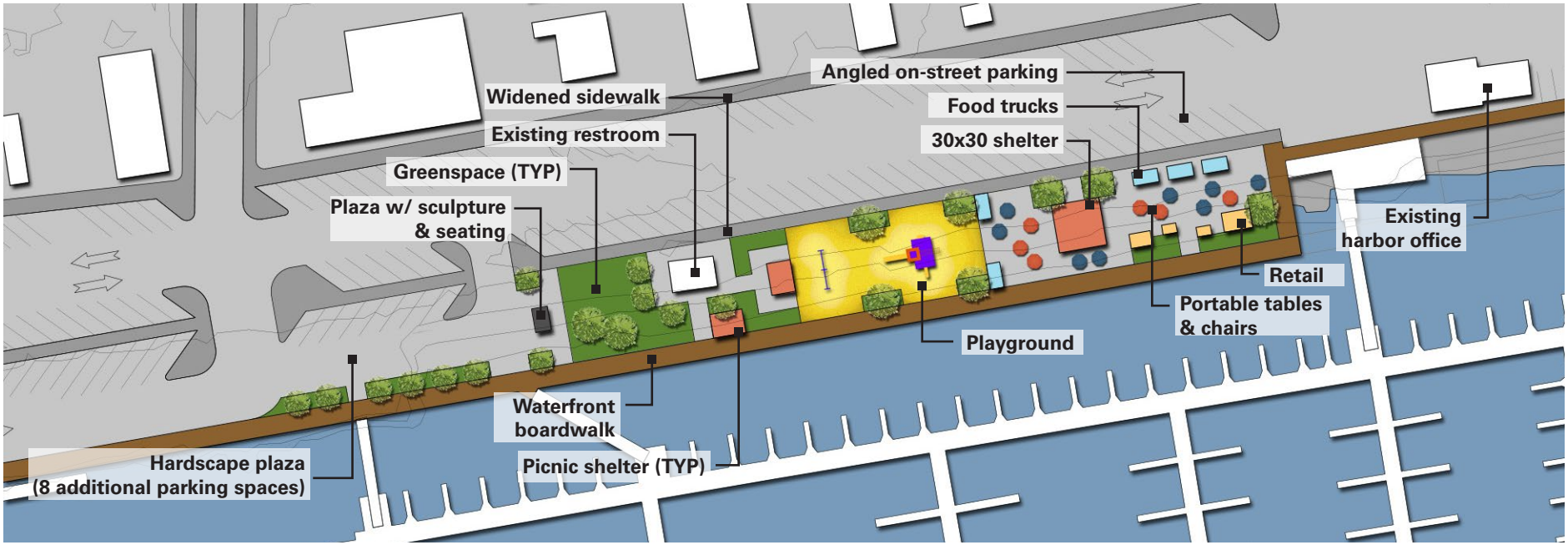
Integrated waterfront boardwalk

SMALL BOAT HARBOR CONT'D

PHASE I: WATERFRONT PARK STRIP



1. *Attractive setting – draw for tourists*
2. *Waterfront entry plaza*
3. *Playground and green space*
4. *Small-scale retail*
5. *Open area for food trucks*



WATERFRONT PARK STRIP

Constructing a new bulkhead along the north edge of the Small Boat Harbor will create space to develop a vibrant waterfront park strip and open space. The park strip will be designed to be a destination unto itself, allowing users to make use of active and passive areas, as well as creating space for a wide range of events and activities.

A community plaza will be created at Chitina Avenue to accommodate food trucks and a variety of small-scale vendors clustered around the paved plaza with a large shelter. The shelter and plaza can be used for community events and function daily as a food and retail court with moveable seating. An inclusive playground will provide a variety of play opportunities for children ages 2 and older and will tie in with Valdez's waterfront persona. All playground areas will have accessible safety surfacing, encouraging interactive and creative play opportunities, and include a seating area and shelter. A turf area will allow people to participate in small-scale sports and to play or relax on the grass. A passive plaza area is located at the west end of the park strip and includes paved areas with benches, landscaping, and space to include artwork.

The boardwalk will run along the water's edge and create a direct connection from the cruise tour area to the section of existing boardwalk that terminates at the New Boat Harbor. The length of new boardwalk will include seating, trash cans, a guardrail, and installation of Valdez's existing banner poles. The existing restroom will remain, and the two existing shelters will be relocated or removed.

The community plaza is 10,000 sf of paved area with space for three food carts, approximately 800 sf of retail, and a 30-ft by 30-ft shelter. The open area will include various pieces of movable tables, chairs, and picnic-style seating. Capacity for the community plaza is approximately 250 people seated or 650 people standing.

The playground will be approximately 9,000 sf that can accommodate about six pieces of play equipment. The proposed layout for safety surfacing totals approximately 5,000 sf. It also includes a 10-ft by 15-ft shelter, accessible pathway connections, benches, and a turf area. The playground has capacity for approximately 50 children.

At the west end of the site is the passive plaza area that is 9,500 sf of paved area with a placeholder location for an art or sculpture piece. It will also include landscaping, seating walls, and benches and serve as an informal entrance to the waterfront park strip.

Materials

Paving materials for pedestrian sidewalks and plazas will be either cast-in-place concrete paving or, for a more decorative appeal, concrete unit pavers. The cast-in-place concrete can be given more appeal through the use of aesthetic score-line patterns and/or colored pigmentation of the concrete. The boardwalk will be timber to match the existing boardwalk aesthetic, and will have a water side guardrail with banner poles that run the length to match existing design.

Landscaping

All landscaped areas for trees and shrubs will receive a minimum of 18 inches of planting soil and be planted with hardy, low-maintenance plant material appropriate for Valdez's harsh environment. Turf areas will receive 4 inches of planting soil.

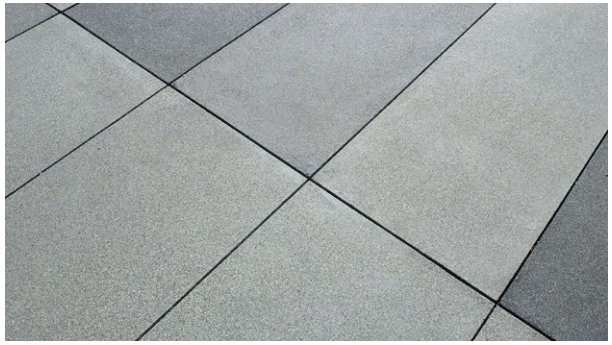
Site Furnishings

All furnishings will be galvanized, metal powder-coated, or stainless steel. Where required, treated wood, plastic wood, or marine-appropriate wood will be used.

Shelters

All shelters will be timber structures with metal roofing that conform to existing architecture within Valdez.

Waterfront benches & seawalk

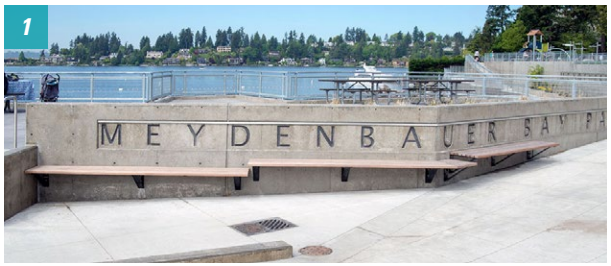


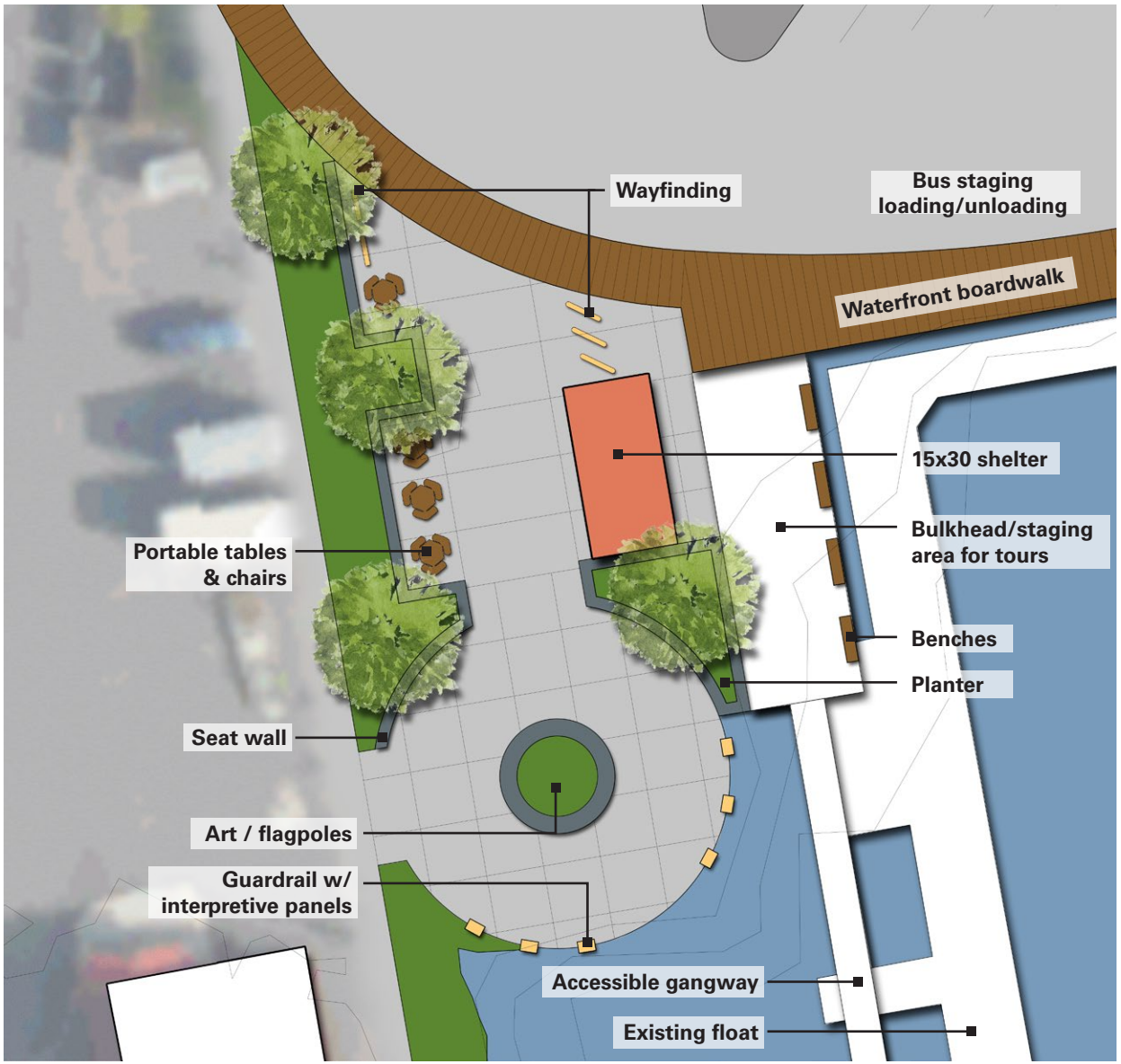
Concrete paving w/ decorative scorelines

Shelter

SMALL BOAT HARBOR CONT'D

PHASE I: TOUR BOAT PLAZA





1 *Entry character*

2 *Wayfinding*

3 *Art feature*

4 *Interpretive panels*

TOUR BOAT PLAZA

The existing small concrete plaza will be redesigned and will include a smartly arranged space for tourists to gather and wait for their assigned activities. It will feature a 15-ft by 30-ft waiting shelter near the gangway and staging area. Within this space there will be benches and wayfinding information. The plaza will support a more passive gathering space away from the staging area that will have portable tables and chairs, raised planters and seating walls, and a focal point space that can include flagpoles, art, or other focal features on the waterfront. Interpretive panels will be included in the space and will be mounted on the guardrail overlooking the water.

The staging area will be expanded by installing a nominally 20-ft by 60-ft pile-supported trestle infilling the northwest corner of the existing sheet pile bulkhead. Access for day cruise passengers will be improved with a 100-ft gangway and associated landing float oriented south of the trestle. The increased length will significantly reduce the gangway slope during tidal movements. The curb line in front of the plaza area will be softened to allow motor coaches to queue up to drop off and pick up passengers going on day cruises or using the rest area and interpretive signs along the plaza.

The plaza is a total of 9,000 sf and has a capacity for just under 100 people seated or 300 standing. The shelter has a capacity for 75 people that include both sitting and standing.

Materials

Paving materials for pedestrian sidewalks and plazas will be either cast-in-place concrete paving or, for a more decorative appeal, concrete unit pavers. The cast-in-place concrete can be given more appeal through the use of aesthetic score-line patterns and/or colored pigmentation of the concrete. The boardwalk will be timber to match the existing boardwalk aesthetic and will have a water-side guardrail with banner poles that run the length to match existing design.

Planters

Planters will be approximately 18 inches high and fabricated from cast-in-place concrete.

Landscaping

All landscaped areas for trees and shrubs will receive a minimum of 18 inches of planting soil and planted with hardy, low-maintenance plant material appropriate for the harsh environment typical of Valdez.

Site Furnishings

All furnishings will be galvanized, metal powder-coated, or stainless steel. Where required, treated wood, plastic wood, or marine-appropriate wood will be used.

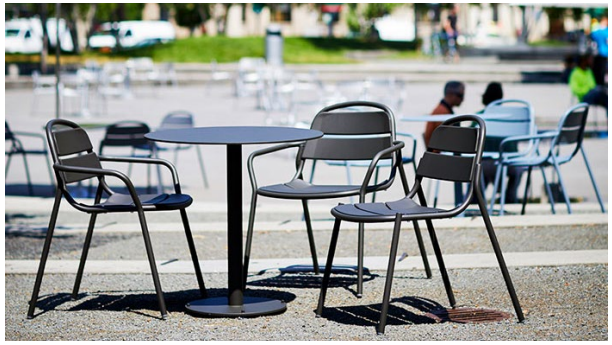
Interpretive Panels

The interpretive panels will be post- or kiosk-mounted, custom high-pressure laminate panels.

Shelters

All shelters will be timber structures with metal roofing that conform to existing architecture within Valdez.

Seat wall

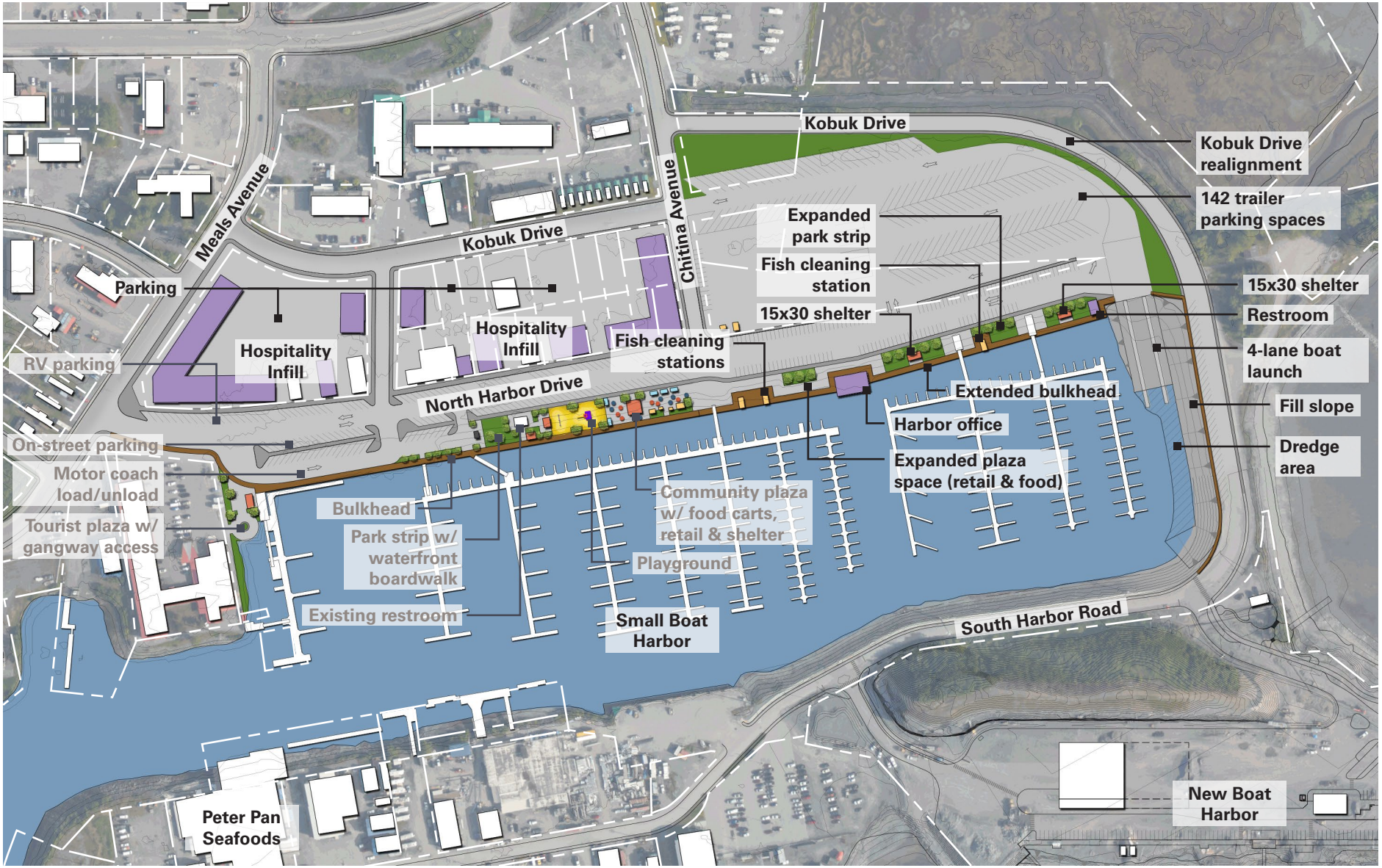


Portable tables & chairs

Landscaping

SMALL BOAT HARBOR CONT'D

PHASE II: MASTER PLAN



IMPLEMENTATION

Phase II is anticipated to be implemented as other waterfront projects are completed and is dependent on relocating the existing marine service facilities to Sea Otter Park. As the marine services are moved out of the Small Boat Harbor and to Sea Otter Park, truck and trailer parking, as well as public parking, will be able to expand into these areas. The bulkhead will be expanded from Chitina Avenue east to the boat launch, increasing space for the park strip and creating a connected and vibrant waterfront. Small commercial and retail businesses can be extended throughout this area.

During this phase, the business district directly north of North Harbor Drive can be densified, infilling the vacant and underutilized lots and promoting a lively waterfront area for locals and tourists alike. The old harbor office will be demolished, and when the existing travel lift is relocated, and rebuilt in this location overhanging the water and overseeing harbor activities.

The long-term vision for the Small Boat Harbor is that there will be a gradual expansion of the waterfront business district east of Chitina Avenue. It is anticipated that the cruise ship industry in Valdez is growing and that this expansion can help facilitate and support economic growth in this area.

INNOVATION

Relocation of the harbor office to the former location of the travel lift over the water gives improved visual access to the harbor and eliminates congestion along the boardwalk.

An expanded park strip with shelters, additional fish cleaning stations, extended boardwalk, green space, and new restrooms will take advantage of the entire harbor and disperse visitors to maintain the small-town feel.

Relocating the marine service facilities will create room for expanding the trailer parking for the boat launch and support the gradual expansion of the downtown waterfront retail district.

COSTS

The overall estimated cost for Phase II development at the Small Boat Harbor is $16.3 million. The estimate includes construction, design, permitting, project management, construction administration, and a 30% contingency. Major line items that will be completed in this phase and corresponding estimated costs are outlined below:

- $3 million for the new harbormaster office
- $1.5 million for uplands improvements that include extending the park strip, plaza space, an additional restroom building, and shelter
- $12 million for the bulkhead and boardwalk

A detailed breakdown of the conceptual costs are found at the end of this section.

SMALL BOAT HARBOR CONT'D

PHASE II: FACILITY IMPROVEMENTS

COMMERCIAL AND RETAIL INFILL

Commercial and retail businesses across from the Small Boat Harbor are expected to benefit significantly from increased tourism over the life of the master plan. Currently, several vacant lots are being utilized by food trucks, tour vendors, and other temporary buildings. The master plan envisions these temporary facilities moving to the waterfront park strip to allow for development of permanent commercial/retail buildings in the vacant lots. The block endcaps are viewed as high-value locations for larger hospitality developments, such as hotels that also support restaurant and retail operations. The master plan recommends that off-street parking be provided in the back of lots.

The business case for infill development is strongly tied to tourism, particularly the return of cruise ships to Valdez. The long-term success of commercial tourism in Valdez is highly dependent on the quality of the visitor experience being offered. Investments such as the aforementioned park strip and recent improvements at Kelsey Dock will help ensure the long-term viability of cruise ship visitation.

The buildings will be sized according to market demand but, in general, new buildings are assumed to be similar in scale to those existing along North Harbor Drive. The exception is at block endcaps, where larger-scale development should be encouraged. Larger-scale endcaps add energy to waterfront streets, bringing residential activity and customers to the area. By locating larger hospitality at the endcaps, vehicular pressure is kept away from the pedestrian-oriented centers of the blocks, especially with parking provided in the rear of buildings. This new energy benefits all businesses and provides better after-hours safety since it provides eyes on the street.

Increased development will significantly increase parking demand. Updates to the local zoning ordinance should be considered to encourage off-street parking on back lots. Storage sheds and similar buildings that currently occupy back lots should slowly be eliminated to make room for off-street parking.

Example of Sitka

Example of Wrangell

Main street revitalization

PHASE I & II: GENERAL CONSIDERATIONS

PRIORITIES & IMPLEMENTATION

Priorities identified by the community and supported by the steering committee include:

- Kobuk Drive realignment and the truck and trailer parking area expansion;
- Street improvements (Chitina Avenue and North Harbor Drive);
- Tour boat plaza, staging area, and access improvements; and
- Boat launch ramp improvements.

Execution of these components would occur during the initial phase (first 10 years) of the Valdez Comprehensive Waterfront Master Plan. While each component could feasibly be constructed at any time, it is recommended that the Kobuk Drive realignment and the truck and trailer parking expansion occur prior to the boat launch improvements. This would allow for increased truck and trailer parking for users of the new, larger boat launch ramp.

The remaining components shown on the Phase I plan, including the uplands bulkhead and associated plaza development, are considered secondary to the prioritized items and would be constructed over the next 10 to 20 years.

STAFF & OPERATING COST

Under the development scenarios presented for the Small Boat Harbor, no city staffing changes are anticipated. The boat launch improvements are anticipated to eliminate the need for temporary staffing (roughly 300 hours) currently used to manage traffic during peak summer fishing weekends. The decrease in these costs are anticipated to be balanced out by the increase in winter maintenance costs that are likely required with the proposed improvements.

Staffing for the park strip will include summer maintenance of the turf and paving areas, an increase in trash pick-up, and weekly maintenance for the playground. It is estimated that required weekly maintenance for all of the above tasks will increase maintenance staff work by approximately four hours per week and will equal a total of approximately $5,000 worth of additional effort.

MAINTENANCE

Summer Maintenance

New landscaping and park facilities will require typical landscape maintenance (weeding, watering, and pruning of trees and shrubs, and mowing of turf areas), sweeping of pedestrian routes, and likely an increase in trash pick-up. Playgrounds will require annual inspections and, depending on the safety surfacing used, routine inspection and maintenance of these areas.

Marine infrastructure will require periodic inspection and repair on an as-needed basis. Detailed inspections on above- and below-water components typically occur on four-year intervals.

Snow Management

During the winter, key pedestrian routes will need to be plowed. The playground will require winter inspections to ensure that the safety surfacing meets standards and will need to be closed if those standards are not met. Spaces that are not high-use areas during the winter months, such as the community plaza, can be used as a snow dump and will not require winter maintenance. Site furnishings may be stored off-site in winter to avoid damage.

Parking lots and streets will continue to be maintained in a similar fashion as existing.

Building Maintenance

The enlarged harbormaster office in Phase II will be twice the size of the existing office but shouldn't have significantly higher maintenance costs because it will be more energy efficient and less maintenance-intensive with all new systems.

SMALL BOAT HARBOR CONT'D

PHASE I: COST ESTIMATE

					Implementation Plan		
Upland Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Kobuk Drive Realignment and Expanded Parking & Service Yard				**$ 3,972,540**	**$ 3,972,540**		
Realignment of Kobuk Drive (pavement, drainage, and sidewalks)	1,250	LF	$ 1,872	$ 2,340,000			
Truck and trailer parking area pavement and striping	299,000	SF	$ 5.46	$ 1,632,540			
Street Improvements				**$ 989,040**	**$ 989,040**		
Street improvements at Chitina Avenue (sidewalks)	460	LF	$ 7.80	$ 3,588			
Street improvements at North Harbor Drive (paving)	44,200	SF	$ 5.46	$ 241,332			
Street improvements at North Harbor Drive (sidewalk modifications)	11,200	SF	$ 7.80	$ 87,360			
Street improvements at Wrangell Drive (sidewalk modifications)	200	SF	$ 7.80	$ 1,560			
New sewer services	6	EA	$ 31,200	$ 187,200			
New water services	6	EA	$ 31,200	$ 187,200			
Storm drainage improvements on North Harbor Drive	600	LF	$ 468.00	$ 280,800			
Plaza, Sidewalk, and Greenspace Improvements				**$ 2,532,525**		**$ 2,532,525**	
Existing concrete sidewalk and boardwalk demolition (8 ft x630 ft) and (4 ft x 250 ft)	8,560	SF	$ 3.12	$ 26,707			
Concrete sidewalk at plaza (12 ft x 630 ft)	7,560	SF	$ 7.80	$ 58,968			
Community plaza (10,000 sf) with shelter (30-ft x 30-ft) and site furnishings	1	LS	$ 741,000	$ 741,000			
Playground w/ safety surfacing	1	LS	$ 702,000	$ 702,000			
Park strip greenspace with landscaping and site furnishings	1	LS	$ 858,000	$ 858,000			
Hardscaped parking and public space	10,450	SF	$ 5	$ 52,250			
Signs and wayfinding	1	LS	$ 93,600	$ 93,600			
Tour Boat Staging Area and Access				**$ 1,794,000**	**$ 1,794,000**		
Tour cruise plaza (9,500 sf), shelter (15-ft x 30-ft), landscaping, and site furnishings	1	LS	$ 624,000	$ 624,000			
Trestle, gangway and landing float at tour boat area	1	LS	$ 1,170,000	$ 1,170,000			
Subtotal				**$ 9,288,105**	**$ 6,755,580**	**$ 2,532,525**	**$ -**
Waterfront Items	**Quantity**	**Unit**	**Unit Cost***	**Total Cost**	**10-Year**	**20-Year**	**30-Year**
Bulkhead Extension, New ADA Gangway, and Float Adjustments				**$ 6,793,800**		**$ 6,793,800**	
Demolition	1	LS	$ 234,000	$ 234,000			
Bulkhead sheet pile extension	580	LF	$ 8,580	$ 4,976,400			
Bulkhead extension common fill	11,200	CY	$ 31.20	$ 349,440			
Relocate existing gangway and provide bulkhead connection	1	LS	$ 54,600	$ 54,600			
Bulkhead boardwalk (12 ft x 630 ft)	7,560	SF	$ 156.00	$ 1,179,360			
H to K Float Replacement				**$ 7,190,040**	**$ 7,190,040**		
Replacement Floats	28,400	SF	$ 133	$ 3,765,840			
Piles	60	EA	$ 18,720	$ 1,123,200			
Utilities (Water, Fire Supression, Electrical)	1	LS	$ 2,051,400	$ 2,051,400			
Gangways	2	EA	$ 124,800	$ 249,600			
Boat Launch Improvements				**$ 5,382,000**	**$ 5,382,000**		
Boat launch - concrete ramp and preparation	1	LS	$ 2,340,000	$ 2,340,000			
Boat launch - dredging	15,600	CY	$ 39.00	$ 608,400			
Boat launch - underlayer rock	1,500	CY	$ 156.00	$ 234,000			
Boat launch - riprap	3,600	CY	$ 195.00	$ 702,000			
Boat launch - boarding float and support piles	4,800	SF	$ 312.00	$ 1,497,600			
Subtotal				**$ 19,365,840**	**$ 12,572,040**	**$ 6,793,800**	**$ -**
Small Boat Harbor Phase I - Grand Total				**$ 28,653,945**	**$ 19,327,620**	**$ 9,326,325**	**$ -**

Notes:

*Unit cost includes 20% for engineering, permitting, construction administration and project management and 30% for contingency

PHASE II: COST ESTIMATE

					Implementation Plan		
Upland Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
New Harbormaster Office				**$ 2,964,000**			**$ 2,964,000**
Demolition of marine maintenance infrastructure	1	LS	$ 780,000	$ 780,000			
Demolition of harbor office	1	LS	$ 312,000	$ 312,000			
Harbormaster Office Foundation	2,000	SF	$ 234.00	$ 468,000			
Harbormaster Office	2,000	SF	$ 702.00	$ 1,404,000			
Miscellaneous Uplands Improvements				**$ 1,498,848**			**$ 1,498,848**
Lease parcel parking	4,000	SF	$ 5.46	$ 21,840			
Plaza (5,000 sf) and site furnishings	1	LS	$ 390,000	$ 390,000			
Park strip greenspace with landscaping and site furnishings	1	LS	$ 468,000	$ 468,000			
Shelter (two at 15 ft x 25 ft)	750	SF	$ 280.80	$ 210,600			
Restroom	2	LS	$ 83,304	$ 166,608			
Signs and wayfinding	1	LS	$ 46,800	$ 46,800			
Electrical improvements	1,000	LF	$ 195.00	$ 195,000			
Subtotal				**$ 4,462,848**	**$ -**	**$ -**	**$ 4,462,848**
Waterfront Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Bulkhead Expansion				**$ 11,845,080**			**$ 11,845,080**
Demolition (remove existing trestles, boat lift, and miscellaneous structures)	1	LS	$ 390,000	$ 390,000			
Bulkhead extension	900	LF	$ 8,580	$ 7,722,000			
Bulkhead extension common fill	9,500	CY	$ 31.20	$ 296,400			
Bulkhead boardwalk (12 ft x 940 ft)	11,280	SF	$ 156.00	$ 1,759,680			
New gangway and abutment	3	EA	$ 195,000	$ 585,000			
Fish cleaning station	2	EA	$ 546,000	$ 1,092,000			
Subtotal				**$ 11,845,080**	**$ -**	**$ -**	**$ 11,845,080**
Small Boat Harbor Phase II - Grand Total				**$ 16,307,928**	**$ -**	**$ -**	**$ 16,307,928**

Notes:

*Unit cost includes 20% for engineering, permitting, construction administration and project management and 30% for contingency

SEA OTTER PARK

SUMMARY

Sea Otter Park is a large undeveloped site adjacent to Valdez's two busy fish processing plants and the U.S. Coast Guard radar tower. The site is used as an area for stockpiling rock. Informal onshore fishing occurs near the harbor entrance but without any recreation facilities. The site is one of the community's last large area waterfront properties in the downtown core.

Opportunities at Sea Otter Park include expanding the existing fish processing plants, relocating of the marine service yard with expanded facilities and capacity, commercial lease properties, and new large vessel docking. Consolidating similar uses in the area will reduce conflicts, create use efficiencies, and allow relocation of the existing marine service yard from downtown to this site.

The local economic benefits of a busy marine service center can be substantial. A wide range of service and supply businesses are connected to vessel maintenance and repair. The services of welders, mechanics, electricians, metal fabricators, shipwrights, refrigeration technicians, divers, hydraulics specialists, painters, marine surveyors, and others are typically needed. Machine shops and businesses offering fiberglass repair, tool rentals, pressure washer rentals/services, security services, vessel shrink wrapping, gear storage, and other goods and services are part of the marine services sector. Hotels, restaurants, taxi/car rental companies, hardware stores, grocery stores, and others benefit from spending by users of a marine services center.

With completion of the South Basin Harbor, Valdez's harbor capacity, as measured in terms of total lineal footage of stall space, increased from 15,770 ft to 22,082 ft, a 40% increase. The average slip length increased from 31 ft to 47 ft, a 52% increase. With greater harbor capacity and increased boat-lifting capacity, Valdez can expect an increase in local demand for vessel maintenance and repair infrastructure and services.

The Sea Otter Park area, adjacent to Silver Bay and Peter Pan Seafoods, is an appropriate area for public and private investment aimed at expanding seafood processing activity in Valdez. The local economic benefits of seafood processing include fisheries-related tax revenues, property tax revenues, employment opportunities, local purchases of goods and services by processors and their employees, and local spending by the fleet that delivers fish to local processors.

Additional acreage for seafood processing can also facilitate development of new value-added/byproduct processing activity. This type of development will increase local spending and add a limited number of jobs.

Leasing newly developed uplands property to processors can generate revenues to the City. Processors may have an interest in leasing those uplands if doing so allows more efficient handling of fish, from boat to processing line. More efficient operations might allow them to handle a larger share of the PWS salmon harvest. The community currently captures a quarter of PWS seafood processing activity. Capturing more of this economic activity in Valdez is the community's opportunity and challenge.

The master plan for Sea Otter Park is intended to do the following:

- Allow phased expansion and improvement of marine service facilities and related marine/commercial lease opportunities;
- Improve operations for seafood plants;
- Build a new berth for larger vessels and seafood use;
- Promote phased expansion of existing seafood industry;
- Reduce boat congestion in the Small Boat Harbor Channel; and
- Create additional vessel laydown (storage) capacity.

ECONOMIC FEASIBILITY

It is reasonable to expect that marine services-related revenue such as the boat lift, maintenance pad, and storage fees to the City could eventually double from its current level of approximately $160,000 annually. An increase in revenues is expected to cover the increased costs associated with operating the new facility.

Additional City revenues might be generated by leasing the marine service yard to various vendors specializing in boat repair and maintenance services. Demand for such leased space will grow over time as use increases. Approximately $25,000 to $50,000 in annual lease revenues could be anticipated, depending on how quickly demand for yard services materializes.

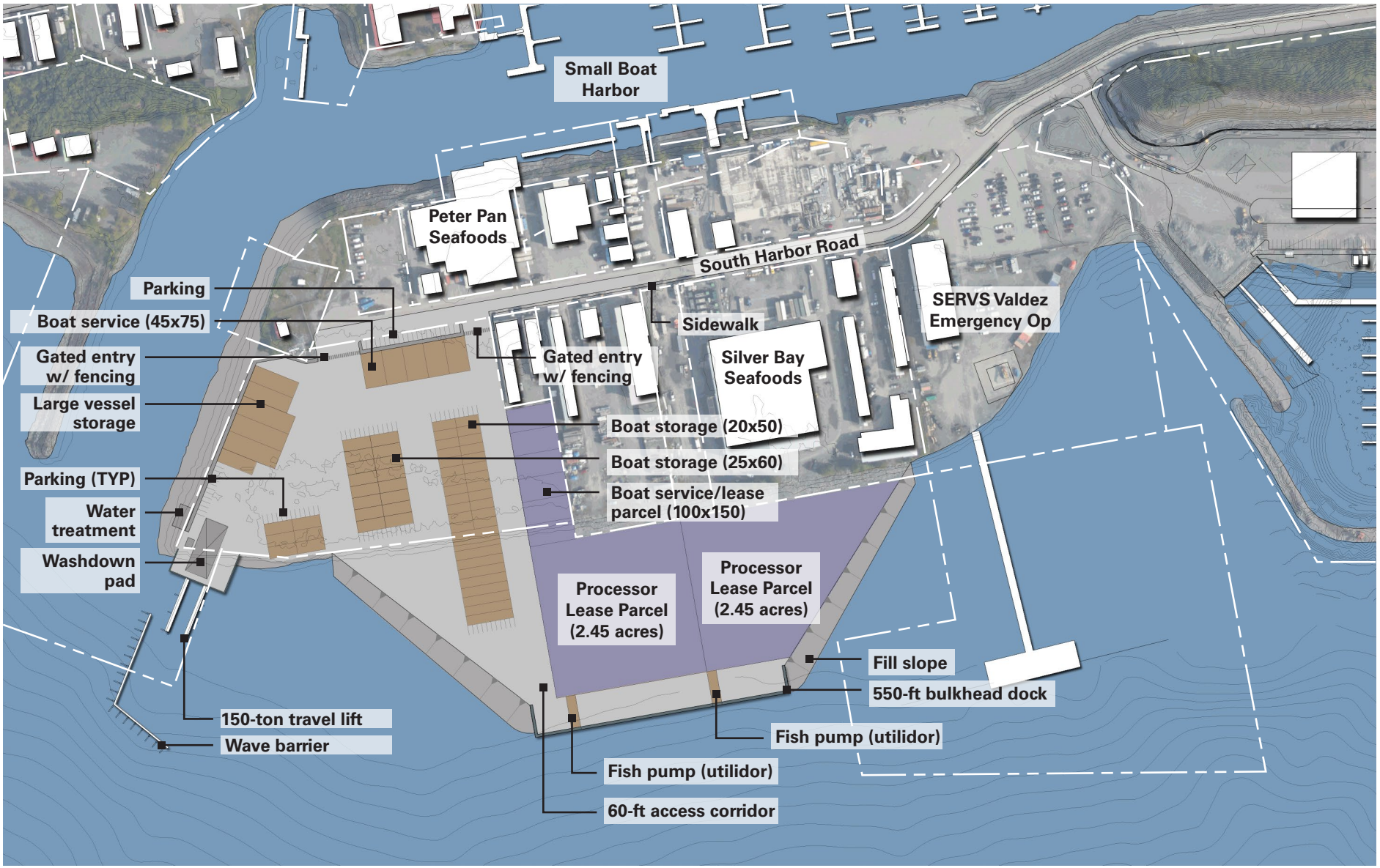
The economic benefits of a vibrant marine service center can be substantial. A wide array of businesses can directly or indirectly generate income by providing services to boatyard users. The community might expect approximately $1 million in additional annual spending related to boat maintenance and repair.

Additional revenues flowing to the City of Valdez, that is associated with expanded marine services facilities and infrastructure, would be insufficient to fully recover the approximately $10 million investment required to develop Sea Otter Park as a marine services facility with a 150-ton travel lift. However, this development has the potential to generate the highest relative level of investment payback of all the waterfront development concepts considered in this master plan. It would also generate the highest level of overall near-term community economic benefit, per dollar of initial investment.

A $20 million investment in a 550-ft bulkhead dock and fill expansion, while not expected to pay for itself through user fees or leases, would have important economic benefits. It could facilitate additional seafood processing activity in Valdez, although it is not possible to predict the scale and timing of that additional activity. Importantly, a bulkhead dock would support a more focused cruise vessel-related usage of Kelsey Dock. Additional detailed planning and analysis are required to fully assess the timing and magnitude of revenue and other economic benefits associated with the bulkhead dock and fill expansion.

SEA OTTER PARK CONT'D

PHASE I: MASTER PLAN



IMPLEMENTATION

The Phase I expansion of Sea Otter Park will be implemented over the next 10-15 years. Work will include constructing a new bulkhead dock and expanding the uplands area. The seafood offloading area will be relocated from the Small Boat Harbor to the new bulkhead dock. A new travel lift will be built that will serve vessels up to 150 tons. A wave barrier will be constructed to protect the travel lift. The uplands will consist of washdown facilities, a water treatment system, vessel work areas, lease space, and a vessel laydown area.

The bulkhead will serve as a new 550-ft dock and create additional uplands. The dock can be used for large vessels when Kelsey Dock is in use, as well as by the fishing fleet accessing the seafood plants. Utilidors will be provided from the dock to the processing plants for fish pumping. Nearly 5 acres will be set aside as future lease space for the seafood processors. The remaining portion of the uplands will be used for an expanded marine service yard with boat service lease parcels, vessel storage, and maintenance areas. The yard will be supported by a 150-ton travel lift and pier, washdown pads, and a water treatment system. The travel lift will be protected by a wave barrier. The marine service yard will be enclosed by a fence and provide the needed utilities and parking for supporting the service yard and related marine service businesses.

INNOVATION

Relocating the processing boats for Silver Bay Seafoods from the Small Boat Harbor to Sea Otter Park significantly reduces congestion in the Small Boat Harbor. The relocation also improves processing efficiencies for the plant with fish entering the plant on the south and following the existing configuration of the production line with fish already moving from the south to the north through the plant.

The new bulkhead dock will create large vessel moorage, which is needed when Kelsey Dock is in use.

Relocating the marine service yard to Sea Otter Park removes congestion from the downtown waterfront and allows expansion of facilities. Providing marine services near the seafood plants and new boat harbor will provide convenient access. An expanded service yard and laydown is a high priority for the community, and this site has uplands that can be economically used.

The lift pier will be protected from waves using an innovative partially penetrating wave barrier that allows transportation of sediments below the wave-deflecting structure. The wave barrier and lift pier will be supported by fin-tipped piles that allow for significant reduction in pile length and increased tension capacity.

Further subphasing of the project will allow for development to match available funds and as needs arise. For example, initial development of the dock area can occur on a smaller scale or without all appurtenances to minimize capital costs. The marine service yard components (wave barrier, lift pier, and uplands) can be installed independently of the dock and fill expansion as a standalone project.

COSTS

The overall estimated cost for Phase I development at Sea Otter Park is $53.5 million. The estimate includes construction, design, permitting, project management, construction administration, and a 30% contingency. Major line items that will be completed in this phase and corresponding estimated costs are outlined below:

- $3.6 million for South Harbor Drive improvements
- $3.7 million for marine service yard improvements and water treatment system
- $1 million for utility improvements
- $13.2 million for the travel lift, pier, and wave barrier
- $32 million for the bulkhead, fill, and dock

A detailed breakdown of the conceptual costs are found at the end of this section.

SEA OTTER PARK CONT'D

PHASE I: FACILITY IMPROVEMENTS

BULKHEAD, DOCK, AND UPLANDS CREATION

Expanding the Sea Otter Park uplands is planned as a phased approach. The first phase will consist of a large fill-based expansion, creating approximately 9.3 acres of new uplands, with a nominally 550-ft sheet pile bulkhead dock creating new potential lease areas for processors (or others), a large usable dock area, and a sizable marine service yard located within the existing site footprint. The dock structures include a fabricated steel face beam with integral bollards and railing. A 75-ft hard-surfaced area (assumed to be pre-cast concrete pavers) will be provided behind the face of the bulkhead to allow use of heavy-lift vehicles within the City dock area. Utilidors will be provided at discrete locations along the dock face to allow fish pumps or utilities access to the dock face.

The proposed dock and fill area is maximized to stay within existing tidelands boundaries while not conflicting with usage of adjacent facilities. The bulkhead is aligned to be positioned in deep water (approximately -35 MLLW) while not extending beyond reasonable wall heights for a fill-based structure.

The potential for difficult or soft soils is anticipated at the site based on previous geotechnical investigations and experience in nearby areas. As such, mitigation techniques to densify the in-situ soils will likely be required. Mitigation methods have been initially accounted for in estimated costs; however, actual conditions may vary.

Materials

Materials will consist of a steel sheet pile with gravel or shot-rock for common fill and a steel dock face beam with ultra-high-molecular-weight (UHMW) -faced composite fender piles. The City dock area will have concrete surfacing for durability and low maintenance, while the lease parcels and access corridor will have gravel surfacing.

TRAVEL LIFT, PIER, WAVE BARRIER, WASHDOWN PAD, AND WATER TREATMENT

The marine service area was developed to allow advancement as a standalone project; the Phase I area could be installed without the proposed bulkhead dock or other structures. The lift structure will consist of two 120-ft pile-supported piers with a steel superstructure. This will allow for vessels up to 150 tons (nominally 110 ft in length with a beam of 30 ft) to be efficiently removed for servicing. The boat-lift facility will include a 50-ft by 120-ft cast-in-place concrete vessel washdown area, in-ground water detention, and a recirculating wash-water treatment system. These components are necessary to ensure water discharge and containment of sediments meet regulatory requirements.

A 350-ft partially penetrating wave barrier will be installed, offshore of the lift, to provide a protected basin for vessel berthing and lift operations. The wave barrier is oriented to provide protection from easterly and southerly waves reported at the site while allowing room for maneuvering vessels up to 125 ft in length. The barrier will be constructed with a combination of braced pipe pile sheet pile sections that stop short of the sea floor. This will allow for transportation of sediments below the sheet pile while reducing wave transmission.

Coordination with the U.S. Army Corps of Engineers will be required for structures near the Small Boat Harbor entrance.

Materials

Materials will consist of steel pile-supported lift piers with a steel superstructure and a UMHW-faced composite fender piles at the lift pier. The washdown pads will be cast-in-place concrete, and the uplands areas will have gravel surfacing.

VESSEL MAINTENANCE, LAYDOWN, AND LEASE SPACE

A sizable portion of the uplands area created during development of Sea Otter Park will be dedicated as a marine service area. Phase I will have approximately 8 acres of existing uplands, and this area will be available for storage, laydown, and maintenance of vessels removed using the proposed boat-lift facility.

The boat service yard will consist of a gravel-surfaced area with dedicated but flexible use for various vessels. Additional areas will be dedicated as lease areas for marine service or commercial retail relating to the marine service sector.

There are 22 25-ft by 60-ft and 44 20-ft by 50-ft storage areas and 6 large vessel 80-ft x 120-ft storage areas proposed for the vessel maintenance, laydown, and lease space. It is proposed that there will be 5 45-ft by 75-ft service areas provided and 6 50-ft by 100-ft additional spaces that can be used for service areas or lease parcels as needed. These will be oriented to allow for 75-ft-wide maneuvering aisles between the storage areas, as well as a 60-ft access corridor that will be provided through the marine service area to the Sea Otter Park dock.

Materials

Surface materials for the laydown and staging areas will be gravel, and there will be water supply and wastewater collection piping installed.

SEAFOOD PROCESSING

It is likely that fish processing businesses will seek to expand in the area of the Sea Otter Park site. This is an ideal location for fish processing-related businesses due to the presence of similar businesses in the area along with adequate electrical, sewer, and water utilities. Construction of the new bulkhead dock will also enhance this area for processors, making it easier to ship increased quantities and accommodate larger vessels. Approximately 5 acres have been dedicated in the master plan for one or more seafood-related businesses. Until such time that a qualified tenant for the area is identified, the ground surface can be left unpaved and ready for development.

The area identified for seafood processing plant development can accommodate a building similar in size to the recently constructed Silver Bay Seafoods with limited parking, or multiple smaller facilities on the order of 5,000 sf in area, with room for staff and visitor parking.

Adequate maneuvering space will be allocated for pick-up and delivery vehicles as well as some private vehicle parking.

Fish processing is both competitive (between Prince William Sound ports and beyond) and cyclical, due to changes in harvest numbers and the market for fish. Therefore, it is difficult to predict when the business case will be right for expanded fish processing. A large fish processing facility may require increased utility capacity.

Materials

Gravel surfacing until such time that development is determined.

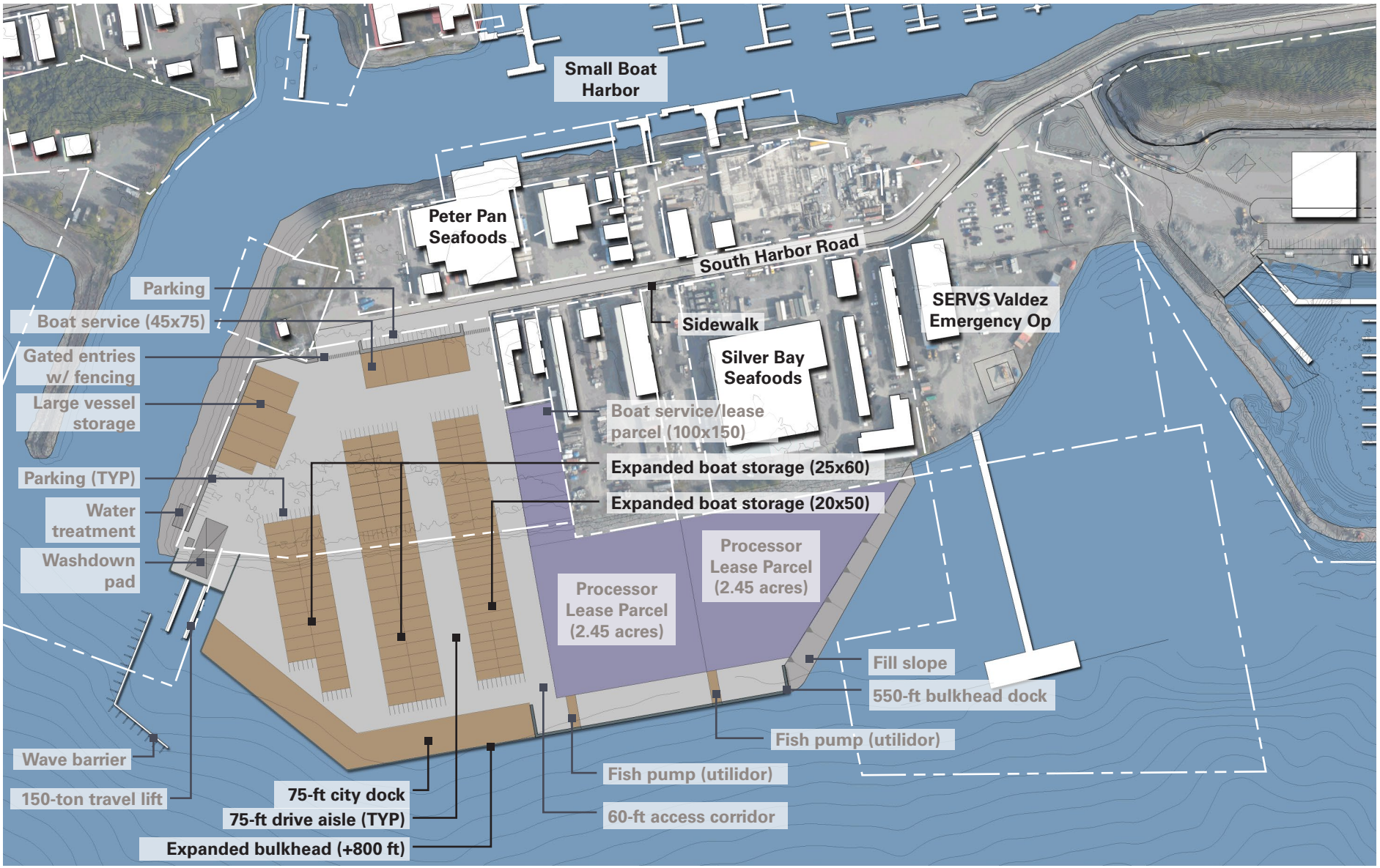
Bulkhead dock

150-ton travel lift and pier

Partially penetrating wave barrier

SEA OTTER PARK CONT'D

PHASE II: MASTER PLAN



IMPLEMENTATION

Phase II will be implemented over the next 15-20 years and will expand the marine service yard and large vessel dock.

The expanded bulkhead will add another 880 ft of dock and create additional uplands area. The dock can provide additional support for large vessels moorage. By expanding the bulkhead, it will add approximately 4 acres of uplands to the marine service yard and provide more space for vessel storage and maintenance areas.

INNOVATION

Phase II of Sea Otter Park will help to expand the service yard and dock, providing additional area for vessel storage and maintenance areas when demand requires, and will have very little impact to the existing operations during construction.

Creating nearly 1,400 linear feet of dock will allow Valdez to accommodate the largest vessels or multiple large vessels at one time. Direct access to the marine service yard will be a benefit to vessels needing maintenance while still in the water.

The new larger boat lift, which is envisioned as a City project, will spark opportunities for new private investment and marine service business in the new marine service yard. The City will benefit from land leases to the service providers and increased tax revenue, and private businesses will benefit from an increased share of the marine service demand in Prince William Sound. This will create a healthy environment for further private or public/private partnership investments, such as covered marine service bays.

COSTS

The overall estimated cost for Phase II development at Sea Otter Park is $26 million. The estimate includes construction, design, permitting, project management, construction administration, and a 30% contingency. Major line items that will be completed in this phase and corresponding estimated costs are outlined below:

- $1 million for uplands improvements
- $25 million for the bulkhead, fill, and dock expansion

A detailed breakdown of the conceptual costs are found at the end of this section.

SEA OTTER PARK CONT'D

PHASE II: FACILITY IMPROVEMENTS

BULKHEAD, DOCK, AND UPLANDS CREATION

Phase II will extend the bulkhead with approximately 800 ft of wall and provide approximately 6.2 acres of additional usable uplands area. The dock structures include a fabricated steel face beam with integral bollards and railing. A 75-ft hard-surfaced area (assumed to be pre-cast concrete pavers) behind the face of the extended bulkhead will build off of the existing City dock built in Phase I and will allow the use of heavy-lift vehicles within the City dock area.

The proposed dock and fill area is maximized to stay within existing tidelands boundaries while not conflicting with usage of adjacent facilities. The bulkhead is aligned to be positioned in deep water (approximately -35 MLLW) while not extending beyond reasonable wall heights for a fill-based structure.

The potential for difficult or soft soils is anticipated at the site based on previous geotechnical investigations and experience in nearby areas. As such, mitigation techniques to densify the in-situ soils will likely be required. Mitigation methods have been initially accounted for in estimated costs; however, actual conditions may vary.

Materials

Materials will consist of a steel sheet pile with gravel or shot-rock for common fill and a steel dock face beam with UHMW-faced composite fender piles. The City dock area will have concrete surfacing for durability and low maintenance, while the lease parcels and access corridor will have gravel surfacing.

VESSEL MAINTENANCE AND LAYDOWN

Phase II will expand the vessel maintenance and laydown area by 3.1 acres and, similar to Phase I, this area will be available for storage, laydown, and maintenance of vessels removed using the proposed boat-lift facility.

The boat service yard will consist of a gravel-surfaced area with dedicated but flexible use for various vessels. Additional areas will be dedicated as lease areas for marine service or commercial retail relating to the marine service sector.

Phase II will increase the 25-ft by 60-ft storage area by 51 spaces and the 20-ft by 50-ft storage area by 12 spaces. These spaces will extend from Phase I and will maintain the 75-ft-wide maneuvering aisles between the storage areas and the 60-ft corridor that accesses the Sea Otter Park dock.

In time, demand will eventually outgrow capacity at this location. At such time, development of a Marine Service Yard at Old Town is recommended.

Materials

Surface materials for the laydown and staging areas will be gravel, and there will be water supply and wastewater collection piping installed.

PHASE I & II: GENERAL CONSIDERATIONS

PRIORITIES & IMPLEMENTATION

All of the Phase I components shown were identified as priorities by the community and supported by the steering committee. Development of the uplands marine service yard will be dependent on the installation of the boat lift system including the wave barrier, lift pier, washdown pad, and water treatment systems. All other project components could be installed as discrete phases as dictated by available funds and demand.

STAFF & OPERATING COST

Discussions with the Ports and Harbors Commission management indicate that operating a new boat yard at Sea Otter Park would not require additional staff beyond those running the existing boat yard. As envisioned, the Sea Otter Park boat yard would serve an increased number of larger vessels than the existing harbor. Any increased utility expenses would be passed on to users through adjustments in service fees. The largest cost increase is likely to be for snow clearing, which is estimated to cost approximately $600/acre per snowfall event.

MAINTENANCE

Summer Maintenance

During the summer months, occasional grading and smoothing of gravel surfaces will be required. Routine inspection and recertification will be required for the mobile travel lift. The washdown pad collection system will require annual removal of sediment and disposal as required by regulatory agencies. Marine infrastructure will require periodic inspection and repair on an as-needed basis. Detailed inspections on above- and below-water components typically occur on four-year intervals.

Snow Management

Areas for snow storage have been identified on master plan documents. All the snow that falls on the site can be stored in the immediate area. Some boat storage slips may be lost during winter months to provide adequate space for snow; however, the larger paved areas allow for ample snow storage.

SEA OTTER PARK CONT'D

PHASE I: COST ESTIMATE

					Implementation Plan		
Upland Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
South Harbor Drive Improvements				**$ 3,632,850**	**$ 3,632,850**		
South Harbor Drive - sidewalk improvements (5 ft x 2,150 ft)	10,750	SF	$ 7.80	$ 83,850			
South Harbor Drive - paved parking	40,000	SF	$ 5.46	$ 218,400			
Uplands utilities extensions (water, sewer, and electric)	2,800	LF	$ 1,014.00	$ 2,839,200			
Submarine Utilities Extensions (Water)	700	LF	$ 702.00	$ 491,400			
Marine Service Yard				**$ 3,731,665**	**$ 3,731,665**		
Maintenance yard AC paving	190,825	SF	$ 5.46	$ 1,041,905			
Maintenance yard concrete work pads	40,675	SF	$ 16.85	$ 685,449			
Leveling course surface	240,000	SF	$ 2.73	$ 655,200			
Stormwater collection and treatment	1	LS	$ 312,000	$ 312,000			
Washdown pad	6,000	SF	$ 16.85	$ 101,111			
Water treatment system	1	LS	$ 936,000	$ 936,000			
Utility Improvements				**$ 928,200**	**$ 928,200**		
Utility extensions to fish processor parcel - water	600	LF	$ 195.00	$ 117,000			
Utility extensions to fish processor parcel - sewer	600	LF	$ 195.00	$ 117,000			
Utility extensions to fish processor parcel - elec/com	600	LF	$ 117.00	$ 70,200			
Site electrical improvements	1	LS	$ 624,000	$ 624,000			
Subtotal				**$ 8,292,715**	**$ 8,292,715**	**$ -**	**$ -**
Waterfront Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***			
Boat-Lift System				**$ 13,206,960**	**$ 13,206,960**		
Travel lift pier	1	LS	$ 1,872,000	$ 1,872,000			
Travel lift abutment/bulkhead	1	LS	$ 3,120,000	$ 3,120,000			
Travel lift abutment fill	3,300	CY	$ 31.20	$ 102,960			
Travel lift	1	EA	$ 1,560,000	$ 1,560,000			
Wave barrier	350	LF	$ 18,720	$ 6,552,000			
Bulkhead Dock				**$ 31,958,550**	**$ 31,958,550**		
Bulkhead dock structure	1	LS	$ 9,204,000	$ 9,204,000			
Dock face beam and fenders	1	LS	$ 2,340,000	$ 2,340,000			
Bulkhead dock fill	294,000	CY	$ 31.20	$ 9,172,800			
Bulkhead armor rock	10,400	CY	$ 312.00	$ 3,244,800			
Bulkhead filter rock	5,300	CY	$ 234.00	$ 1,240,200			
Soils modification (vibracompaction or similar)	110,000	SF	$ 46.80	$ 5,148,000			
Dock area surfacing (assumes pavers with subbase)	41,250	SF	$ 39.00	$ 1,608,750			
Subtotal				**$ 45,165,510**	**$ 45,165,510**	**$ -**	**$ -**
Sea Otter Park Phase I - Grand Total				**$ 53,458,225**	**$ 53,458,225**	**$ -**	**$ -**

Notes:

*Unit cost includes 20% for engineering, permitting, construction administration and project management and 30% for contingency

PHASE II: COST ESTIMATE

					Implementation Plan		
Upland Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Upland Improvements				**$ 954,525**			**$ 954,525**
Leveling course surface	192,500	SF	$ 2.73	$ 525,525			
Electrical improvements	600	LF	$ 195.00	$ 117,000			
Stormwater collection and treatment	1	LS	$ 312,000	$ 312,000			
Subtotal				**$ 954,525**	**$ -**	**$ -**	**$ 954,525**
Waterfront Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Bulkhead Dock Expansion				**$ 24,765,000**			**$ 24,765,000**
Demolition (removal of armor rock, etc.)	1	LS	$ 780,000	$ 780,000			
Bulkhead dock structure	1	LS	$ 9,204,000	$ 9,204,000			
Bulkhead dock fill	140,000	CY	$ 31.20	$ 4,368,000			
Dock face beam and fenders	1	LS	$ 1,638,000	$ 1,638,000			
Soils modification (vibracompaction or similar)	140,000	SF	$ 46.80	$ 6,552,000			
Dock area surfacing (assumes pavers with subbase)	57,000	SF	$ 39.00	$ 2,223,000			
Subtotal				**$ 24,765,000**	**$ -**	**$ -**	**$ 24,765,000**
Sea Otter Park Phase II - Grand Total				**$ 25,719,525**	**$ -**	**$ -**	**$ 25,719,525**

Notes:

*Unit cost includes 20% for engineering, permitting, construction administration and project management and 30% for contingency

NEW BOAT HARBOR

SUMMARY

The New Boat Harbor opened in 2019 to meet moorage needs of the fishing fleet and larger vessels. The intent is that larger vessels in the Small Boat Harbor will relocate to this new facility and free up moorage space. Providing consolidated services for the fleet at the new harbor will create efficiencies and attract new vessels to be moored in Valdez. The site includes an expansive paved uplands dedicated mostly to parking. The original intent was to also include recreation launch ramps and the associated trailer parking at this location. With the launch and parking not included in the original project, large areas of parking are no longer needed and there is an opportunity to utilize this space for new facilities.

Opportunities at the New Boat Harbor include creating lease parcel for commercial and retail businesses that support the fleet in the harbor, storage and launching for recreation boats, and providing expanded recreation facilities, including fishing and day-use facilities.

Valdez clearly has a shortage of moorage space for recreation boats as there are 100 boats on the waiting list in Valdez even with the new harbor opened in 2019. Due to this shortage, many visitors to the community 'trailer' their boats several times a year from Fairbanks and other towns to enjoy Valdez's recreation opportunities. The cost, time, and permitting for a new harbor to meet the moorage demand is a significant undertaking. An alternative and cost effective method to store recreation boats is the use of dry stack storage.

A boat dry stack facility is a covered, enclosed building with multilevel, often heated vessel storage. A dry stack boat storage facility in Valdez will be the first of its kind in Alaska, offering a safe and secure storage option for vessel owners residing in the community and for those that frequently visit Valdez. This storage addresses the demand for smaller boat storage (32 ft or less). Additionally, it will be attractive to those from out of town who trailer their boat to and from Valdez several times a year. Dry storage also reduces maintenance expenses and protects the vessel from degradation caused by sun, inclement weather, and birds. Revenue will be generated from the storage and vessel launching.

Marine-related retail/commercial space developed in association with a dry stack facility can create a revenue opportunity for the City and support marine services business development in Valdez. Revenue will be generated from the lease space and taxes, while new business and improved services are provided to harbor users, the fishing fleet, and those that store their boats in the dry stack storage.

The master plan for the New Boat Harbor is intended to do the following:

- Incorporate a phased approach to introducing a dry stack storage facility into the community;
- Launching recreational boats to meet the demand for smaller boat storage and moorage;
- Promote opportunities for marine-related commercial/retail development to meet the needs of the fishing fleet and harbor users; and
- Enhance recreation opportunities including shore fishing, kayak launch, and day-use recreation.
- Install two portable fish cleaning floats similar to those provided in the Small Boat Harbor.

ECONOMIC FEASIBILITY

The centerpiece development at the New Boat Harbor, the dry stack facility, has a range of economic implications. While it will not be possible to directly recover any of the $12 million in upfront development costs through user fees, a dry stack facility would expand the community's capacity to "home-port" vessels, mainly recreational vessels, and as such, strengthen a growing part of Valdez's economic foundation.

Annual revenues from a dry stack facility will depend on pricing. Rental rates in line with current wet slip rates would result in much greater demand and utilization than rates required for the facility to operate on a break-even basis. At current wet slip rates of about $50/foot/year, a dry stack facility with capacity for 100 vessels under 32 ft would likely be substantially or fully utilized within a few years. It would also reduce the number of vessels on the wet slip waiting list. The convenience and security of indoor storage will support rates higher than wet slip rates, though how much higher is unclear. Rates of $100/foot may be tolerable to the market and over time result in full utilization. Rental rates set at levels necessary for the facility to generate revenues to cover costs, estimated at $143/foot and assumes full utilization, may meet with market resistance. It is anticipated that the additional of dry stack storage will attract new user types that have not yet considered Valdez for a home port.

Construction of the dry stack facility will require financial support from the City, but operations of the facility could be handled in a number of ways:

- the City could operate the facility;
- the City could contract to a private vendor for operations of the facility;
- the City could enter into a public-private partnership for the facility; or
- the City could seek a vendor who would lease the facility and become responsible for operations and revenues.

The operational side of the business case is compelling.

While some financial support from the City to operate a dry stack facility will be required, it is likely that construction of a dry stack would indirectly increase boating-related spending in the community and over time create jobs in businesses that provide goods and services to boat owners.

Detailed business-planning-level feasibility analysis may be warranted to further the community's understanding of market demand, revenue potential, and overall economic benefit/cost of the dry stack facility construction and operations.

Retail space developed in association with a dry stack facility in the New Boat Harbor area could create a revenue opportunity for the City and support marine services business development in Valdez. Depending on demand for the space and prevailing lease rates at the time of dry sack development, $30,000 to $50,000 in annual lease revenues could be generated.

Recreation-related improvements in the New Boat Harbor area – such as day-use shelters, restrooms, green spaces, and fishing and kayak launch floats – while not directly generating revenue or other economic benefits, will enhance the quality of recreational opportunities in Valdez and contribute to increased visitation to the community over the long-term.

NEW BOAT HARBOR CONT'D

MASTER PLAN

IMPLEMENTATION

The first phase of work at the New Boat Harbor is anticipated to occur in the next 5-10 years and will include the Phase I section of the dry stack storage building and washdown pad, as well as the related launch facilities including bulkhead, queuing float, and boat-lift equipment. Other improvements include a waterfront day-use recreation area and float, as well as a larger kayak float that will also serve for seasonal offshore fishing. The expansion of phased marine-related commercial and retail lease shops will be attached to the dry stack storage building.

The proposed master plan includes space to expand the dry stack storage as demand requires. When the need arises, the dry stack storage can be doubled in size, offering additional room for up to 100 vessels and additional marine-related commercial and retail space.

Improvements at the New Boat Harbor will develop facilities not yet seen in Valdez. Development at the Small Boat Harbor and Sea Otter Park will create connectivity between these areas and promote a unified downtown waterfront.

INNOVATION

A dry stack boat storage facility provides a safe, enclosed, and secure storage option for recreational vessels. The efficiency of the facility is expected to be attractive to out-of-town vessel owners who will no longer need to transport their boats to Valdez multiple times each season. Dry storage also reduces maintenance expenses and protects the vessels.

The dry stack boat storage facility will likely not be accessed regularly during winter months which could allow the City to use floor space for equipment storage.

Sea Otter Park has served as an informal recreational shore fishing area without facilities and is located within an industrial use area. The development of a formal shore fishing facility adjacent to the recreation area at the New Boat Harbor will significantly improve fishing opportunities with the addition of the fishing float. The accessible float provides all-tide access creating an improved and safe facility for locals and visitors. The float also provides all-tide access for kayaks without having to launch within the busy boat harbor.

COSTS

The overall estimated cost for Phase I and Phase II development at the New Boat Harbor is $33 million. The estimate includes construction, design, permitting, project management, construction administration, and a 30% contingency. Major line items that will be completed in this phase and corresponding estimated costs are outlined below:

- $8.8 million for the Phase I of the drystack building
- $1.3 million for marine-related commercial/retail space
- $1.2 million for the washdown pad and fueling station
- $1 million for street, utility, and park improvements
- $7.9 million for the dry stack launch equipment and facilities that includes the bulkhead, queuing floats, gangways, and lift
- $2 million for the kayak launch facility
- $750,000 for the harbor fuel float
- $8.8 million for the expansion of Phase II drystack building
- 1.3 million for the expansion of Phase II marine-related commercial/retail
- $1.1 million for two portable fish cleaning stations

A detailed breakdown of the conceptual costs are found at the end of this section.

NEW BOAT HARBOR CONT'D

PHASE I & II: DRY STACK FACILITIES

DRY STACK STORAGE AND MARINE-RELATED COMMERCIAL/RETAIL

The master plan proposes two-phase development of a heated facility that can store up to 200 vessels. The building is sited to allow for a 20-ft-deep retail "lean-to" on the water side. Retail vendors may include companies serving the commercial fleet and companies that provide value-added services to dry stack tenants. Please refer to the economic assessment performed by McDowell Group for additional details.

The dry stack facility is envisioned as a City project but is also a prime candidate for a public-private partnership. Regardless of who bears the capital cost, the facility will become an economic engine that sparks new businesses to serve dry stack patrons. It also helps create critical mass in the New Boat Harbor to support small retail operations. Likewise, the retail portion of that building could be constructed as part of the initial dry stack building, or it could be constructed downstream as a public-private partnership. In either case, the City will benefit from lease revenue and an improved tax base.

Phase I of the dry stack building will be 16,560-sq-ft net (17,343 sf gross) facility with 48-ft eave height capable of storing 100 vessels with lengths up to 32-ft LOA. The retail expansion for this phase will be 2,760 sf, divisible into multiple small tenants.

Phase II of the dry stack building will be similar to Phase I at 16,560 sf net (17,343 sf gross), with 48-ft eave height capable of storing 100 vessels with lengths up to 32-ft LOA. Retail expansion will be 2,760 sf, divisible into multiple small tenants.

Concerns with the location of the dry stack storage is that there will be some conflict with pedestrian/vehicle traffic and movement of the boat-lift equipment to access the dry stack building. There is a pedestrian walkway adjacent to the boat haulout area, as well as a traffic route for vehicles moving in and out of the New Boat Harbor. This will need to be addressed with personnel on site to manage pedestrian and vehicular conflicts while boats are being moved across these surface routes. As well, there is an existing electrical transformer that currently sits in the area of the proposed fuel dispenser which will need to be relocated.

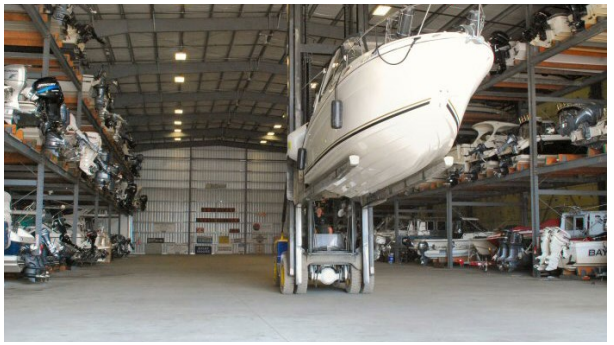
To be economically successful, lease rates for dry stack storage will need to be much higher than lease rates for wet slips. This will affect market demand and could cause a slow absorption rate for the building. Please refer to the economic assessment performed by McDowell Group for additional details.

Materials

The materials will consist of a pre-engineered metal building with a concrete foundation and slab and stone wainscot to match other new harbor buildings. There will be steel fuel tanks that will hold gasoline and diesel. Dry stack storage will be associated with a cast-in-place concrete washdown area and cast-in-place concrete sidewalks.

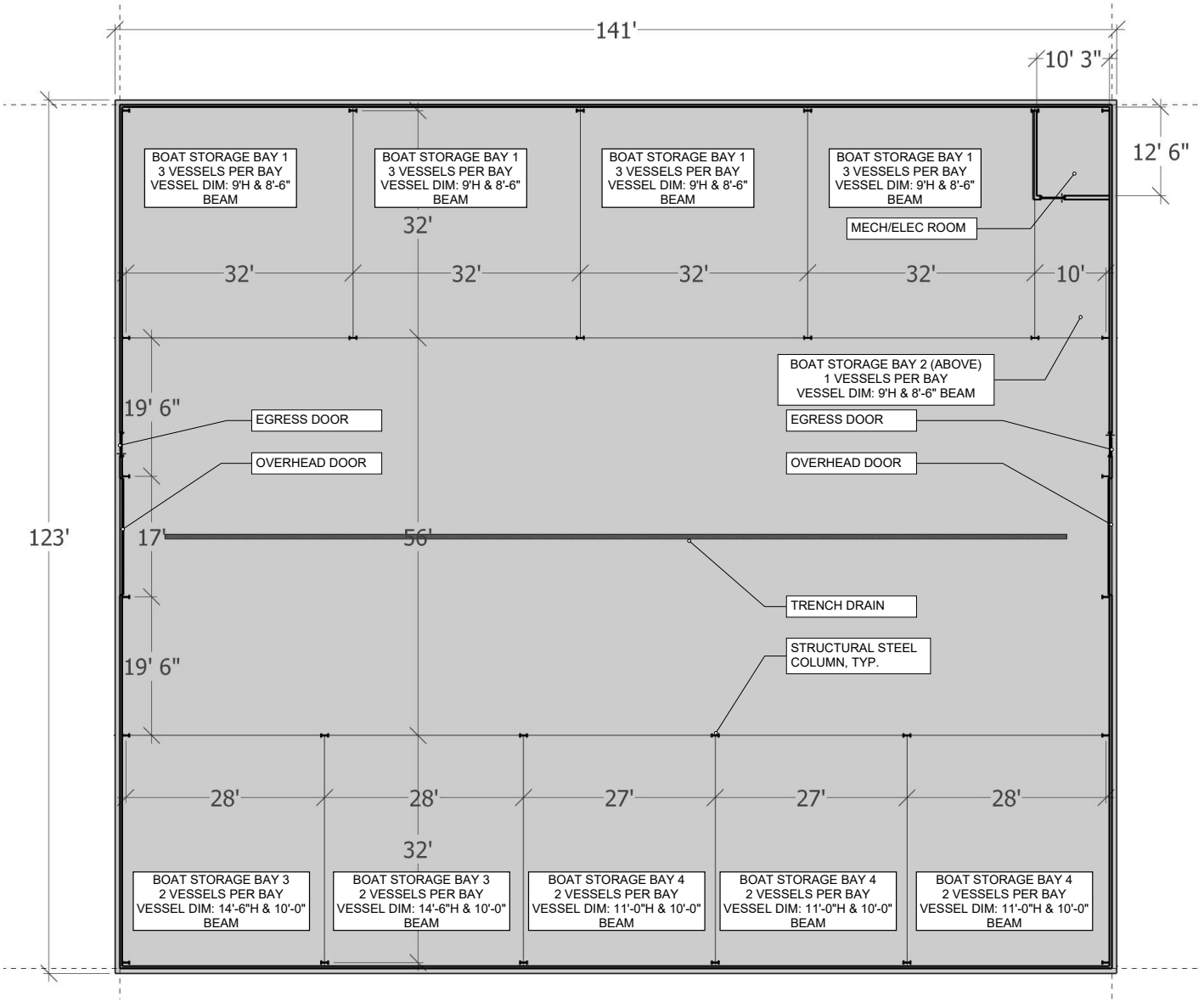
Example of dry stack storage

Boat storage with forklift



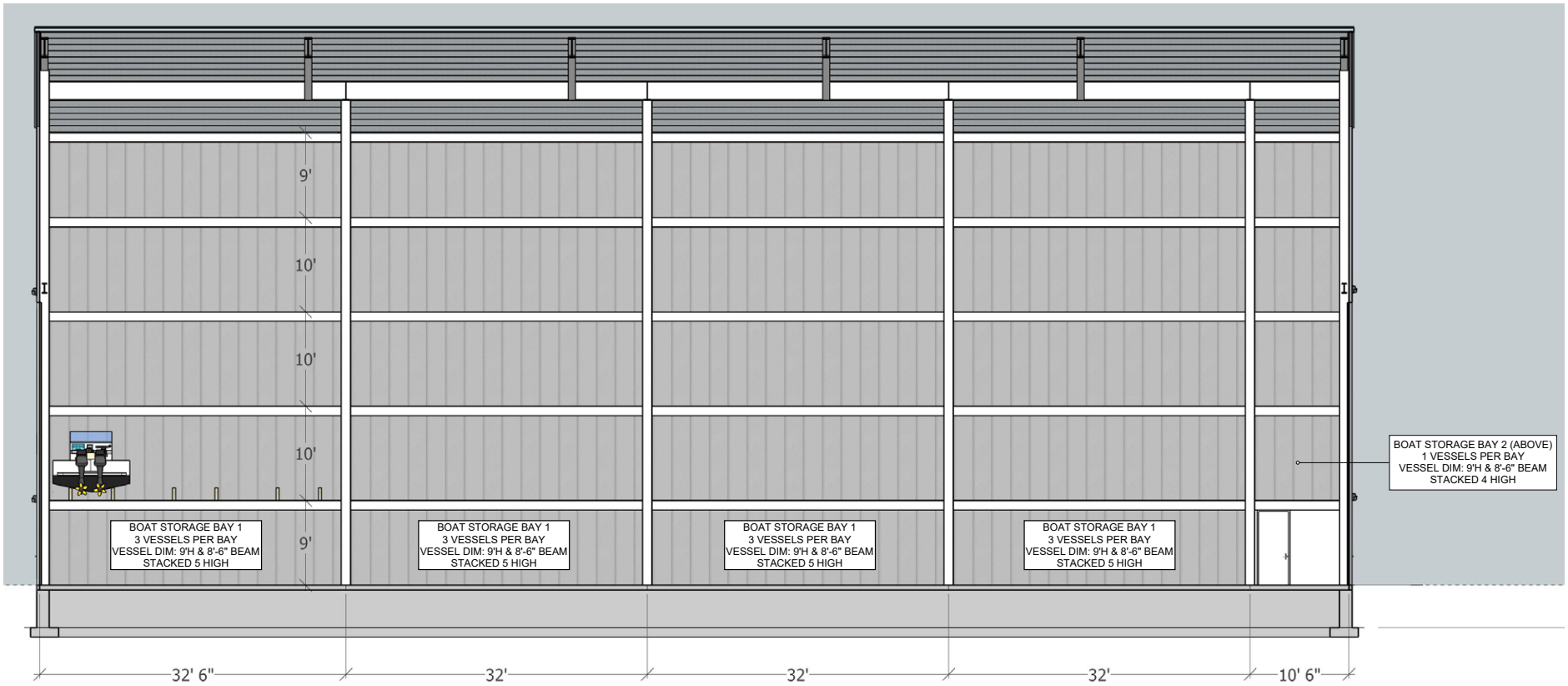
Haul-in/haul-out

FLOOR PLAN

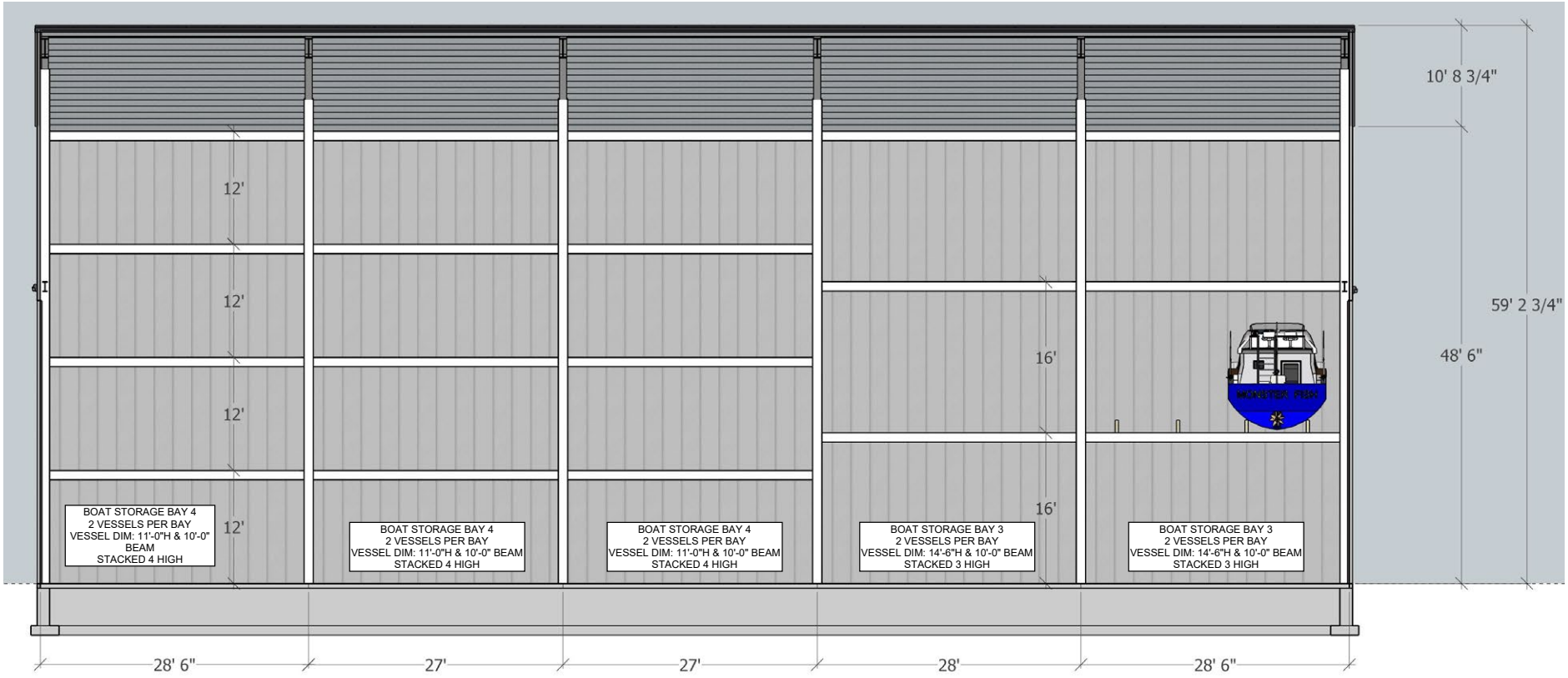

141'
10' 3"
12' 6"
123'
BOAT STORAGE BAY 1
3 VESSELS PER BAY
VESSEL DIM: 9'H & 8'-6"
BEAM
BOAT STORAGE BAY 1
3 VESSELS PER BAY
VESSEL DIM: 9'H & 8'-6"
BEAM
BOAT STORAGE BAY 1
3 VESSELS PER BAY
VESSEL DIM: 9'H & 8'-6"
BEAM
BOAT STORAGE BAY 1
3 VESSELS PER BAY
VESSEL DIM: 9'H & 8'-6"
BEAM
MECH/ELEC ROOM
32'
32'
32'
32'
32'
10'
BOAT STORAGE BAY 2 (ABOVE)
1 VESSELS PER BAY
VESSEL DIM: 9'H & 8'-6" BEAM
19' 6"
EGRESS DOOR
EGRESS DOOR
OVERHEAD DOOR
OVERHEAD DOOR
17'
56'
TRENCH DRAIN
STRUCTURAL STEEL
COLUMN, TYP.
19' 6"
28'
28'
27'
27'
28'
32'
BOAT STORAGE BAY 3
2 VESSELS PER BAY
VESSEL DIM: 14'-6"H & 10'-0"
BEAM
BOAT STORAGE BAY 3
2 VESSELS PER BAY
VESSEL DIM: 14'-6"H & 10'-0"
BEAM
BOAT STORAGE BAY 4
2 VESSELS PER BAY
VESSEL DIM: 11'-0"H & 10'-0"
BEAM
BOAT STORAGE BAY 4
2 VESSELS PER BAY
VESSEL DIM: 11'-0"H & 10'-0"
BEAM
BOAT STORAGE BAY 4
2 VESSELS PER BAY
VESSEL DIM: 11'-0"H & 10'-0"
BEAM

NEW BOAT HARBOR CONT'D

BUILDING SECTION — LOOKING SOUTH



BUILDING SECTION — LOOKING NORTH



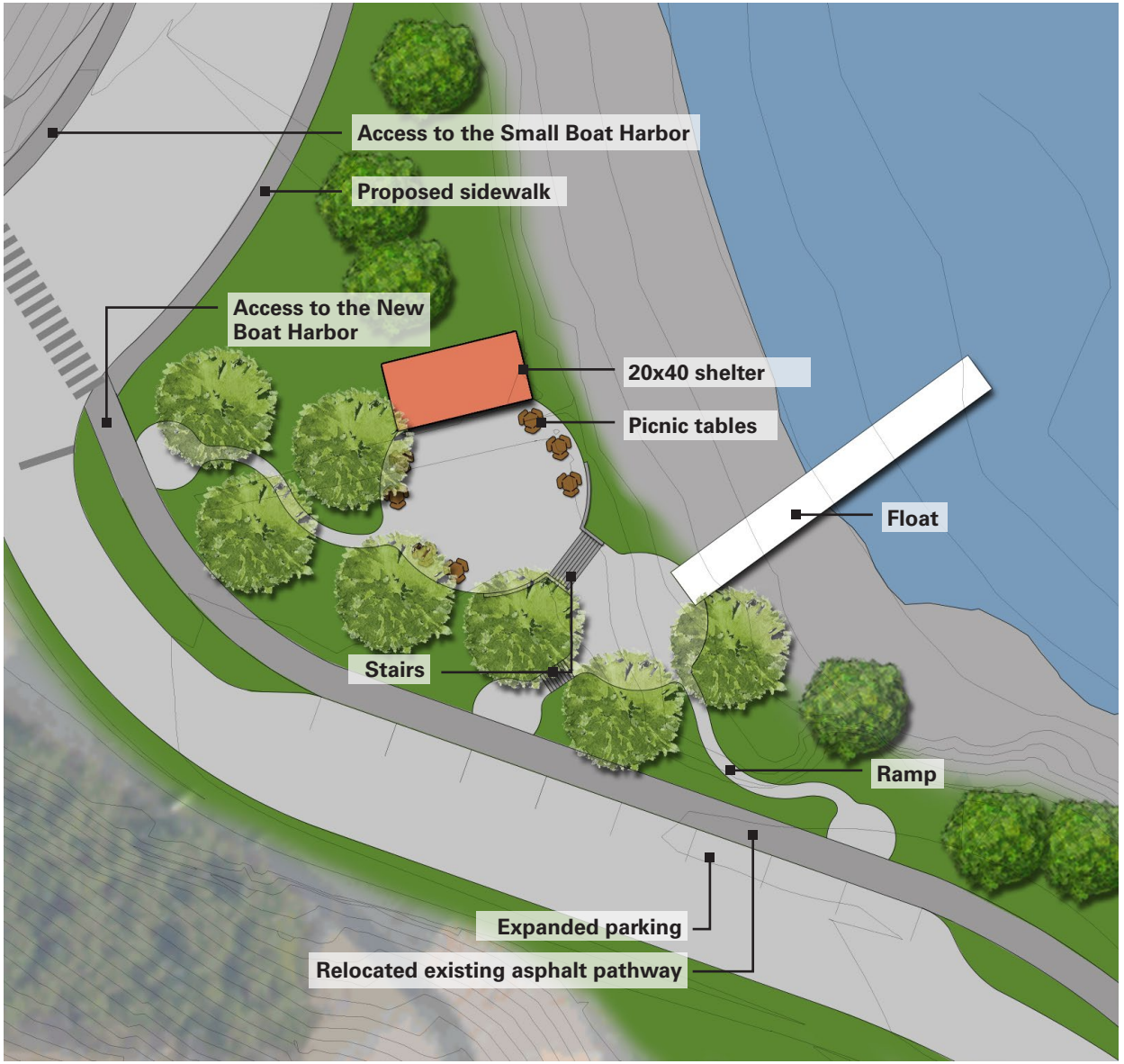
NEW BOAT HARBOR CONT'D

PHASE I: DAY-USE RECREATION AREA

DAY-USE RECREATION AREA

A small day-use recreation area provides a space to enhance additional waterfront opportunities. The facility will have a large 20-ft by 40-ft shelter that can be used as a rental facility and will have capacity for approximately 75 people. The shelter is sited to allow maximum visibility from the roadway; however, there are some concerns that the facility may become a hangout for seafood plant employees.

Also featured in the recreation area will be a firepit and two large hardscaped gathering spaces that total approximately 2,000 sf. There will be accessible ramps with beach access and an 8-ft by 100-ft float that is usable at a 7-ft tide or higher and can be used for additional water access, as well, launching kayaks, fishing, and swimming. The upper gathering space will include BBQ grills, picnic tables, and trash receptacles. There will be expanded on-street parking to accommodate increased use of the location.



Materials

The hardscape can be asphalt or compacted gravel that meets accessibility standards. Required stairs, ramps, or retaining walls will be cast-in-place concrete. The float will be constructed of timber with a non-skid traction surfacing and steel piles.

Landscaping

All landscaped areas for trees and shrubs will receive a minimum of 18 inches of planting soil and planted with hardy, low-maintenance plant material appropriate for the harsh environment typical of Valdez.

Site Furnishings

All furnishings will be galvanized, metal powder-coated, or stainless steel. Where required, treated wood, plastic wood, or marine-appropriate wood will be used.

Shelters

The shelter will be a timber structure with shingle roofing to match the neighboring Dock Point Beach and new facilities within the harbor.

Picnic table

Offshore recreation

Bench

Firepit

Landscaping

Shelter

NEW BOAT HARBOR CONT'D

PHASE I & II: FACILITY IMPROVEMENTS

LAUNCH FACILITIES

Launching and retrieval of vessels from the dry stack storage will occur in a 'launch pit' area developed in the northwest corner of the Small Boat Harbor. Negative-lift forklifts will operate from a 110-ft combination-pile (combi-wall) bulkhead that allows access to the harbor basin from a vertical face. A 50-ft fairway (opening) provides access along the bulkhead wall face to the water below. The in-water area will be dredged to approximately -10 MLLW to create the basin for lift and retrieval operations and installation of queuing floats. Two 12-ft by 160-ft queuing floats will provide approximately 320 linear feet of dock for vessel staging operations, allowing a single float to be used for both launching and retrieval operations. Additional transient moorage can be provided in the existing Small Boat Harbor, if required.

It is a concern that there will be shallow bedrock at the launch location that may make dredging difficult.

Materials

The materials will be a steel pile combi-wall (assumed to be socketed in bedrock), timber queuing floats with steel support piles, and aluminum for the 80-ft gangways.

FISHING/KAYAK FLOAT

A designated access area for launch and retrieval of kayaks and fishing is proposed in the northeast corner of the harbor uplands. This area will allow for recreation access away from primary harbor activities. The facility will consist of a fill ramp with a seasonal float system that will be removed annually prior to the fall storm season. The ramp will have a 10-ft minimum width with a grade that is less than 13% at low tide. The timber float will be 10-ft by 280-ft and will have steel support piles.

The proposed area is located in shallow water, requiring a float system design that can tidally ground without damage. The ramp will be similar to a conventional boat launch ramp, providing an even surface for pedestrian access for kayak launch and retrieval. The timber float system will extend seaward into deeper water to provide access to fishing opportunities. Launch cribs are planned on the southern face of the float system to secure kayaks during boarding.

There are potential coordination requirements with the U.S. Army Corps of Engineers due to proximity to the harbor breakwater.

Materials

Rock revetment on the exposed face of the ramp will be required. The abutment for the float system will be cast-in-place concrete, and the float restraint piles will be steel pipe. The boarding floats will be timber with a non-skid traction surfacing.

Launch facility

Float

Fork lift

PHASE I & II: GENERAL CONSIDERATIONS

PRIORITIES & IMPLEMENTATION

Priorities identified by the community and supported by the steering committee include:

- New Harbor fuel float;
- Kayak launch and fishing pier facility; and
- Dry stack storage including lift and supporting structures, washdown pad, and fueling station.

While identified as a priority, the dry stack storage requires further vetting including a demand study to verify the economic assessment included in this report. Based on the current evaluation, user rates for dry stack storage would need to be at a premium over current wet slip rates to support operation and maintenance costs for the facility. A demand study and further economic evaluation is recommended prior to advancement of the dry stack storage facility.

Implementation of the prioritized components does not require a sequential approach; each component could be installed as an individual project or sub-phase. The street, utility, and park improvements are considered secondary to the prioritized components and would be constructed over the next 10 to 20 years.

STAFF & OPERATING COST

Annual operating expenses for a 100-vessel dry stack facility are estimated at $420,000. The largest annual operating expense is for staffing. Operations staff costs will be approximately $180,000 annually and are based on spring, summer, and early fall season lasting approximately 22 weeks with the facility operating from 7am to 7pm, seven days per week. Facility staff will include two full-time and one part-time equipment operators working a total of 112 hours per week. Other staff include two positions working a total of 56 hours per week. Based on current Valdez rates, the operator's compensation would be about $48 per hour including benefits; the rate for other labor is about $20 per hour including benefits. Facility maintenance personnel expense is estimated at $35,000 to cover maintenance needs beyond the capability of regular staff. This position could be contracted out or be shared with other harbor operations.

Utility costs, including electricity and heating oil, are based on estimated annual per sf costs of $2.20 and $3.30, respectively, and would total approximately $93,000 annually. Water, sewer, trash, and internet expenses are included in the catch-all expense listed below.

Facility and equipment maintenance costs (non-labor) are anticipated to total approximately $37,000 annually. Other costs include supplies ($18,000), snow removal and landscaping ($12,000), insurance ($11,000), marketing ($5,000), janitorial ($4,000), and a catch-all category of $25,000 to cover other expenses.

Operations and revenue potential from a dry stack facility show a compelling case for a private vendor to participate in the project as operator and/or tenant.

MAINTENANCE

Summer Maintenance

New landscaping and park facilities will require typical landscape maintenance (weeding, watering, pruning of trees and shrubs, and mowing of turf areas), sweeping of pedestrian routes, and an increase in trash pick-up.

Routine mechanical maintenance will be required for the negative-lift forklifts. The washdown pad collection system will require annual removal of sediment and disposal as required by regulatory agencies. Marine infrastructure will require periodic inspection and repair on an as-needed basis. Detailed inspections on above and below water components typically occur on four-year intervals.

Snow Management

During the winter, key pedestrian routes will need to be plowed. Other areas such as parking for the day-use area can be used for a snow dump and will not require winter maintenance. Site furnishings may be stored off-site in winter to avoid damage due to snow removal.

Parking lots and streets will continue to be maintained in a similar fashion as existing. The large amount of paved areas allows for ample snow storage.

Building Maintenance

Maintenance of the dry stack facility is considered in the economic analysis and is ideally offset by revenue generated by the facility. Likewise, the retail lease space will have building maintenance costs that are more than offset by lease revenue. These facilities will require electricity, heating fuel, janitorial, snow removal, insurance, building maintenance, and other standard landlord operating costs.

NEW BOAT HARBOR CONT'D

PHASE I: COST ESTIMATE

					Implementation Plan		
Upland Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Dry Stack Storage Building				**$ 8,783,424**	**$ 8,783,424**		
Dry stack building	16,560	SF	$ 530	$ 8,783,424			
Retail Space				**$ 1,291,680**		**$ 1,291,680**	
Retail space	2,760	SF	$ 468	$ 1,291,680			
Washdown Pad and Fueling Station				**$ 1,170,000**	**$ 1,170,000**		
Washdown pad and wastewater treatment	1	LS	$ 936,000	$ 936,000			
Fueling station - upland	1	LS	$ 234,000	$ 234,000			
Street, Utility and Park Improvements				**$ 990,600**		**$ 990,600**	
Waterfront park with shelter (20-ft x 40-ft), site furnishings, and hardscape	1	LS	$ 663,000	$ 663,000			
Boardwalk	600	SF	$ 156	$ 93,600			
Harbor entrance sidewalk addition (5 ft x 300 ft)	1,500	SF	$ 8	$ 11,700			
Existing parking lot modifications	1	LS	$ 78,000	$ 78,000			
Concrete sidewalk modifications	1	LS	$ 31,200	$ 31,200			
Electrical service improvements	400	LF	$ 195	$ 78,000			
Street lighting relocation	3	EA	$ 11,700	$ 35,100			
Fish Cleaning Stations				**$ 1,092,000**	**$ 1,092,000**		
Fish Cleaning Stations	2	EA	$ 546,000	$ 1,092,000			
Subtotal				**$ 13,327,704**	**$ 11,045,424**	**$ 2,282,280**	**$ -**
Waterfront Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Dry stack Launch Equipment and Facilities				**$ 7,910,760**	**$ 7,910,760**		
Lift bulkhead (assumes tied-back combiwall installed in bedrock)	1	LS	$ 1,326,000	$ 1,326,000			
Dredging (bedrock)	14,800	CY	$ 234	$ 3,463,200			
Filter rock	800	CY	$ 156	$ 124,800			
Rip rap	1,800	CY	$ 195	$ 351,000			
Gangways and abutments	2	EA	$ 195,000	$ 390,000			
Queuing floats w/ support piles	1	LS	$ 1,132,560	$ 1,132,560			
Dry stack lifts	2	EA	$ 561,600	$ 1,123,200			
Kayak Launch Facility				**$ 1,996,800**	**$ 1,996,800**		
Kayak launch/fishing area core fill	1,800	CY	$ 117	$ 210,600			
Kayak launch/fishing area revetment	2,700	CY	$ 234	$ 631,800			
Kayak launch/fishing area surfacing and abutment	4,000	SF	$ 55	$ 218,400			
Float and support piles	3,000	SF	$ 312	$ 936,000			
Harbor Fuel				**$ 756,600**	**$ 756,600**		
Fuel float (12 ft x 100 ft) with piles	1,200	SF	$ 468	$ 561,600			
Utilities and mechanical systems	1	LS	$ 195,000	$ 195,000			
Subtotal				**$ 10,664,160**	**$ 10,664,160**	**$ -**	**$ -**
New Boat Harbor Phase I - Grand Total				**$ 23,991,864**	**$ 21,709,584**	**$ 2,282,280**	**$ -**

Notes:

*Unit cost includes 20% for engineering, permitting, construction administration and project management and 30% for contingency

PHASE II: COST ESTIMATE

					Implementation Plan		
Upland Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Dry Stack Storage Building Extension				**$ 8,783,424**			**$ 8,783,424**
Dry stack building	16,560	SF	$ 530	$ 8,783,424			
Retail Space Extension				**$ 1,291,680**			**$ 1,291,680**
Retail space	2,760	SF	$ 468	$ 1,291,680			
Subtotal				**$ 10,075,104**	**$ -**	**$ -**	**$ 10,075,104**
New Boat Harbor Phase II - Grand Total				**$ 10,075,104**	**$ -**	**$ -**	**$ 10,075,104**

Notes:

*Unit cost includes 20% for engineering, permitting, construction administration and project management and 30% for contingency

OLD TOWN

SUMMARY

Old Town is the site where the community once stood, before the 1964 earthquake. This large tract of land is largely undeveloped with some recently cleared areas. Proposed development at Old Town includes an Old Town Historic Site located between the City's sewage treatment plant and Alaska Avenue and a space allotted for marine service facilities. The historic area will be designated for recreation, wildlife viewing, and for walking tours and interpretive trails. It will also serve as the location for the king salmon fishing lagoon. The area south of Alaska Avenue will be used for marine services, industrial use, and recreational boating amenities.

Developing a king salmon fishing lagoon has the potential to increase visitation to Valdez. The proposed fishing lagoon is modeled after Homer's "Fishing Hole," an easily accessible man-made lagoon stocked with king and coho salmon smolt. A successfully developed and stocked Valdez lagoon has the opportunity to extend the salmon sportfishing season into May and June, bringing more anglers to the community earlier in the year. Valdez Fisheries Development Association (VFDA) could be an important resource for the community as it considers the feasibility of this concept. The VFDA already has a major economic impact on Valdez and the PWS region, producing pink salmon for commercial harvest and coho for sport harvest.

It has been a common desire from many members of the community that a portion of Old Town is used for marine-related purposes. This will include a recreational boat launch, truck and trailer parking, vessel washdown, maintenance, and storage. A marine service facility at Old Town can significantly alleviate congestion at the existing Small Boat Harbor and accommodate future growth in commercial and recreational boating for many years to come. The preferred alternative master plan addresses current and future marine needs, as well as ensuring that a portion of Old Town be protected and established as a historic area.

The economic benefits of marine services-related development in Valdez are described in some detail in the Sea Otter Park concept development discussion. Old Town offers more space for marine service facilities than Sea Otter Park, and with an 800-ton travel lift, has the potential to meet regional needs. However, there are some disadvantages to establishing Old Town as a marine services center. One such disadvantage is the distance from the boat harbors compared to Sea Otter Park.

The master plan for Old Town is therefore intended to accomplish the following:

- Designate space at Old Town as an historic site and promote pedestrian access and interpretive displays in a sensitive manner;
- Improve recreation use and develop a day-use recreational area and designated parking areas;
- Develop a king salmon fishing lagoon that will further promote recreational benefits and extend the current offshore fishing season; and
- Expand the marine service industry and related economic opportunities to meet regional needs.

The Old Town area, particularly south of McKinley Street, may be susceptible to seismically induced ground failure and, due to the risk of loss of life and property, no permanent structures have been planned at this location. The remaining portion of Old Town may also carry a significant risk of property damage; however, low-density development has been considered with a preference toward activities requiring only intermittent occupancy and recreational use. A geotechnical study is planned to ascertain the stability of the area and to validate potential uses put forth in this master plan.

ECONOMIC FEASIBILITY

Though it is not possible to directly attribute new visitation, jobs, and income to the development of visitor and recreation-related amenities and attractions in the Old Town area, such development is expected to enhance the quality of recreational opportunities and experiences in Valdez and over the long-term contribute to increased visitation to the community.

An easily accessible man-made lagoon in the Old Town area, stocked with king salmon smolt, has potential to increase visitation to Valdez. If successful in providing opportunity to catch king salmon, such a lagoon would extend the salmon sportfishing season into May and June, bringing more anglers to the community earlier in the year. The technical and financing-related aspects of developing a king salmon stocked sportfishing lagoon in the Old Town area are beyond the scope of this waterfront planning project.

Phase I total costs of $10.2 million, including development of recreation facilities and a fishing lagoon, would not be recoverable through user fees or other direct revenue sources. However, the fishing lagoon in particular may have potential to be a significant visitor attraction, with accompanying increases in visitor spending and related economic benefits.

Regarding Phase II, while Old Town would offer more space for marine services development than Sea Otter Park, significantly higher marine services-related development costs, estimated at about $45 million and including $16 million in dredging costs, make this concept a less economically attractive option. The total Phase II cost of $87 million does not appear to be justified by reasonably foreseeable economic benefits.

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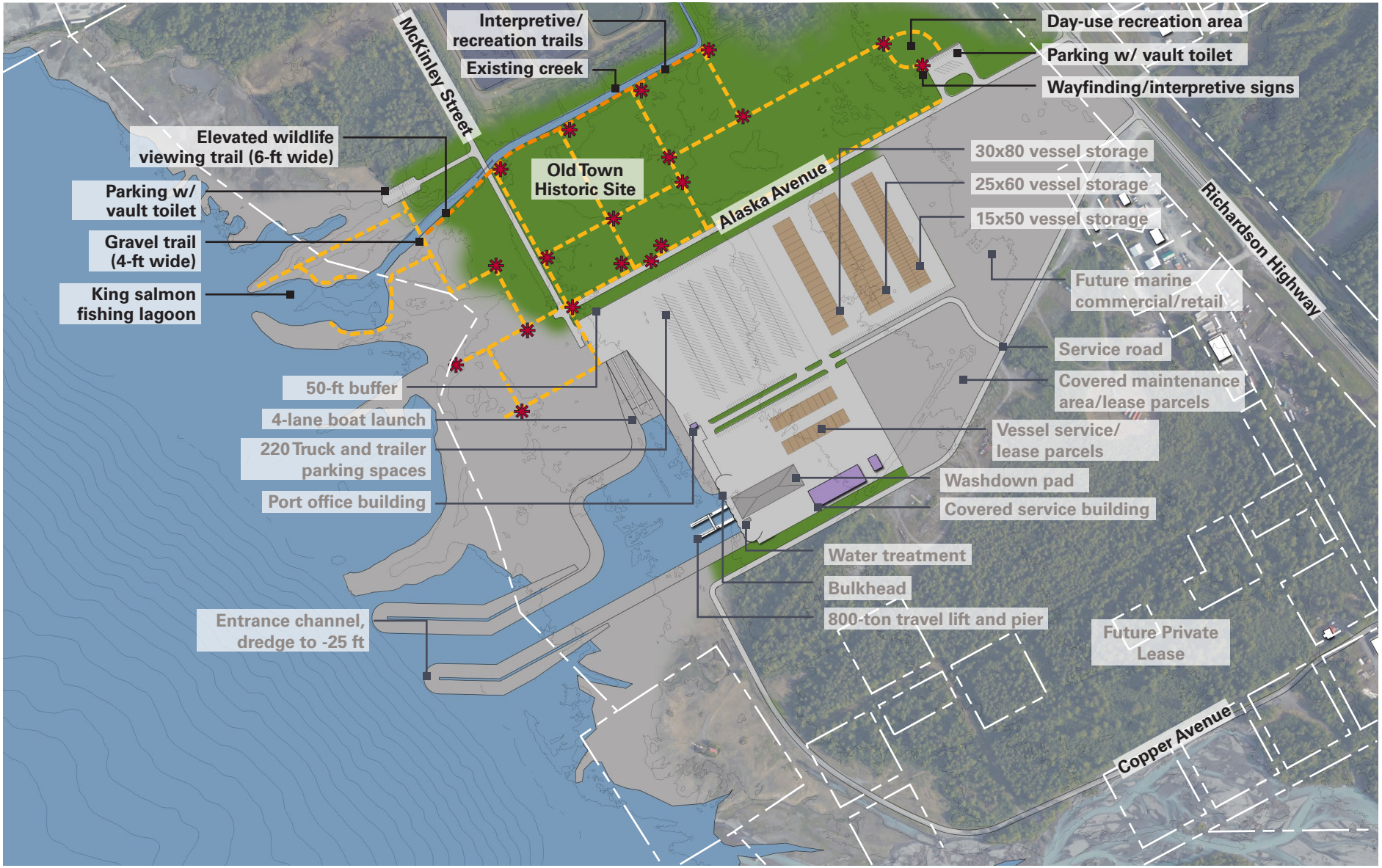
OLD TOWN CONT'D

PHASE I: MASTER PLAN



IMPLEMENTATION

Development of an historic site and fishing lagoon is anticipated to occur during the next 10-15 years and will include recreational trails, interpretive information in key locations, wayfinding, designated parking areas, day-use areas, and a fishing lagoon. The day-use and parking areas will include parking for RVs and regular vehicle parking, a vault toilet, and shelters. The parking areas will be located near Alaska Avenue and Richardson Highway intersection, as well as at the fishing lagoon off of McKinley Street. The parking areas will include interpretive and wayfinding information for users who want to participate in walking tours and wildlife viewing. The recreation trails throughout the Old Town Historic Site will follow the old road alignments and provide interpretive displays in key locations. An elevated trail will be constructed along the existing creek that will feed into the fishing lagoon and will be developed mainly as a wildlife viewing trail.

The fishing lagoon that is included in this phase of work will include the construction of two deepwater basins and hardened accessible trails along the edges for fishing. The trail along the bermed edges of the fishing lagoon will connect into the greater trail network along the creek and in the historic area.

INNOVATION

Developing a partnership to provide a stocked king salmon lagoon will extend the recreation fishing season in Valdez and be a draw to both locals and visitors. Providing land-based king salmon fishing can extend the fishing season in Valdez by up to two months when other fishing or recreational activities are not occurring in the community. This provides a new economic and recreation opportunity.

Valdez's Old Town is one of the great (although tragic) stories of Alaska. Providing on-site interpretation through passive recreation trails will allow these stories to be told in an appropriate and sensitive manner.

Bears often frequent the creek during mid-late summer to feed on salmon. Providing an elevated trail that is above the surrounding grade allows bears to move about freely below with pedestrians separated and protected by high guardrails on either side of the elevated trail. This could become a draw to both locals and visitors.

The dredged basin proposed for development of the marine service yard will allow locating all permanent and occupied structures outside of areas of highest potential for seismic instability.

COSTS

The overall estimated cost for Phase I development at Old Town is $13 million. The estimate includes construction, design, permitting, project management, construction administration, and a 30% contingency. Major line items that will be completed in this phase and corresponding estimated costs are outlined below:

- $920,000 for the day-use recreation area, parking, and restroom
- 3.3 million for the Old Town historic site trails
- $8.7 million for the fishing lagoon, trails, parking, and restroom

A detailed breakdown of the conceptual costs are found at the end of this section.

OLD TOWN CONT'D

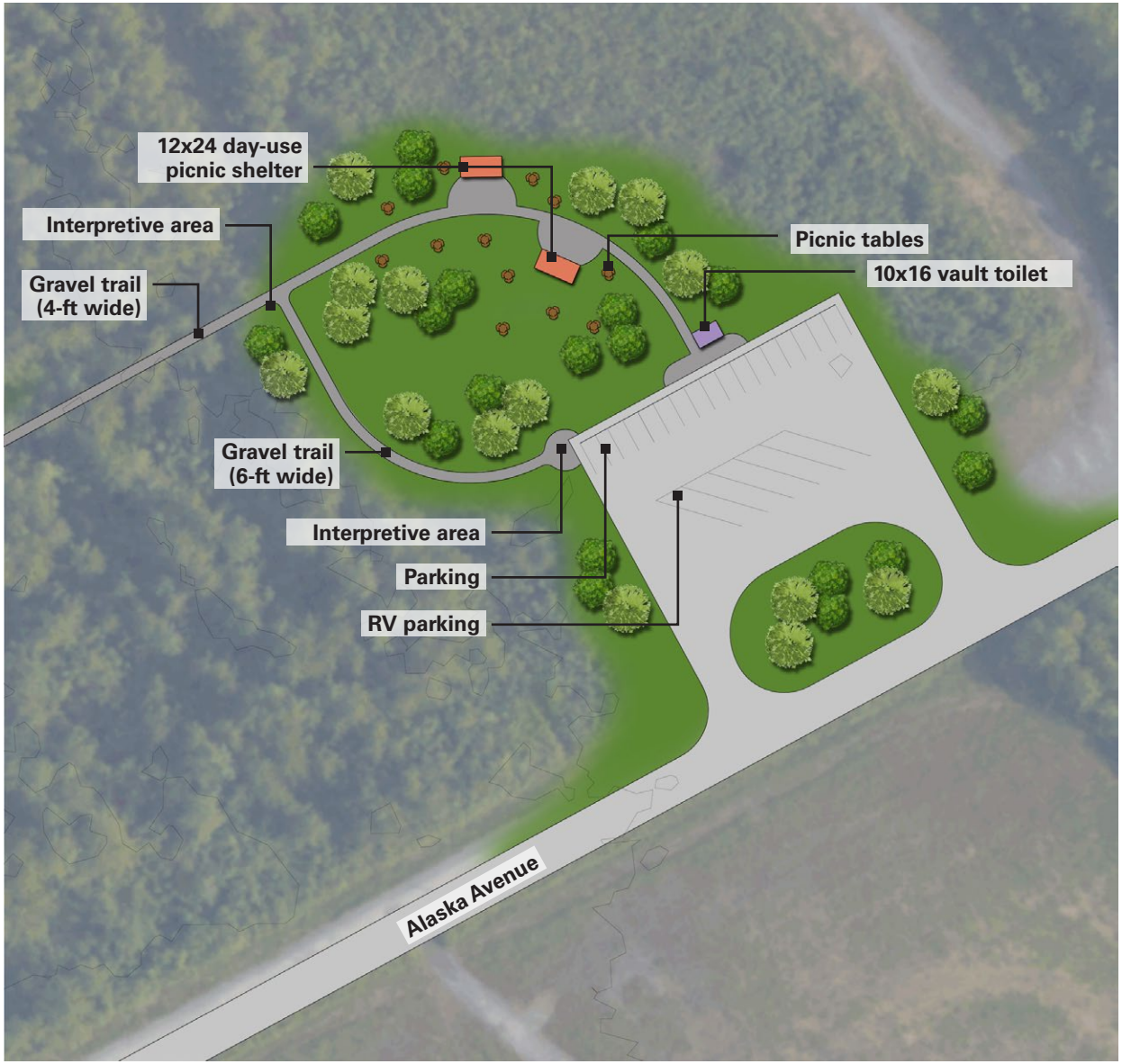
PHASE I: DAY-USE RECREATION AREA

OLD TOWN DAY-USE RECREATION AREA AND INTERPRETIVE TRAILS

A series of trails will follow the historic road system of Old Town, allowing visitors to move through the site with an understanding of what was once there. Throughout the tour of the Old Town Historic Area, there will be a series of interpretive signs at key locations that will tell the story of Old Town and mark locations of prominent structures and buildings that once stood on-site. Located near the intersection of Alaska Avenue and the Richardson Highway will be a day-use recreation facility that includes parking, a vault toilet, 12-ft by 24-ft day-use picnic shelters, BBQs, and seating areas. Parking will accommodate five RV stalls and 15 vehicle stalls. The recreation area will serve as the gateway to the Old Town Historic Site and will include interpretive kiosks that will provide a walking map and wayfinding. All improvements to the historic Old Town area will be done in a sensitive manner and include coordination with the Pioneers of Alaska and others that maintain an interest in the Old Town site.

Running parallel to the creek on the south side, an elevated bear viewing trail will provide separation between pedestrians and bears and allow the opportunity for visitors to safely view wildlife often found in this area. It is intended that the trail system continue toward the water and provide a link to the fishing lagoon and its trail system.

All trails will be accessible and maintain a minimum width of 4 ft within the Old Town Historic Site and 6 ft in the day-use recreation area. The elevated wildlife viewing trail will be a minimum width of 6 ft.



Materials

All on-grade trails will be compacted gravel, and the elevated bear viewing trail will be timber post and framing that supports fiberglass grating and timber and wire-mesh guardrails. The parking areas will be paved asphalt with concrete curbing.

Site Furnishings

All furnishings to be galvanized, metal powder-coated, or stainless steel. Where required, treated wood, plastic wood, or marine-appropriate wood will be used.

Interpretive Panels

The interpretive panels will be post- or kiosk-mounted, custom high-pressure laminate panels.

Shelters

All shelters will be timber structures with shingle roofing that conforms to existing architecture within Valdez.

Elevated wildlife viewing trails

Trail surface

Historic panels

Bench

Interpretive area

Picnic shelter

OLD TOWN CONT'D

PHASE I: FISHING LAGOON

A new fishing lagoon will replace the existing one that has failed and will be stocked with king salmon to provide an extension of the recreation fishing season in the spring. The new lagoon will be located at the mouth of the creek providing a continual source of water and will be approximately 12,000 sf and have an approximate maximum depth of 10-12 ft below MLLW. The average depth will be approximately 6 ft to 8 ft. Modeled after the Homer Spit Fishing Lagoon, the lagoon will have two deepwater basins. A sill will be located at the mouth to contain water within and will have an estimated elevation of 8 ft, allowing floods during high tide events. The lagoon will require riprap berms to contain the water and protect it from storm and tidal action. Trails along the side of the berm will provide fishing access at a variety of elevations.

All trails will be accessible and maintain a minimum width of 4 ft. The trails will be connected from the lagoon to the adjacent trail system, as well as a parking area located off of McKinley Street that offers eight RV stalls and 24 vehicle stalls. There will be an accessible vault toilet located at the parking area.

The lagoon will need to be stocked annually with king salmon and it will be essential to connect with a partner to provide this service. The Homer Spit Fishing Lagoon has an established program with the Alaska Department of Fish and Game, which stocks the lagoon. Continual maintenance and sediment deposition control will be required. Hydrological analysis and design will be required to make the fishing lagoon successful. Management of fish waste and general trash will be needed, and there is concern that it could become a bear nuisance.

Materials

The berms at the lagoon will be constructed of armor rock and riprap. The accessible trails on the sides of the berms will be concrete, while all other trails will be constructed of hardened gravel. The parking lot will be gravel or asphalt.

Homer Spit fishing lagoon

Community attraction

Mouth of the fishing hole

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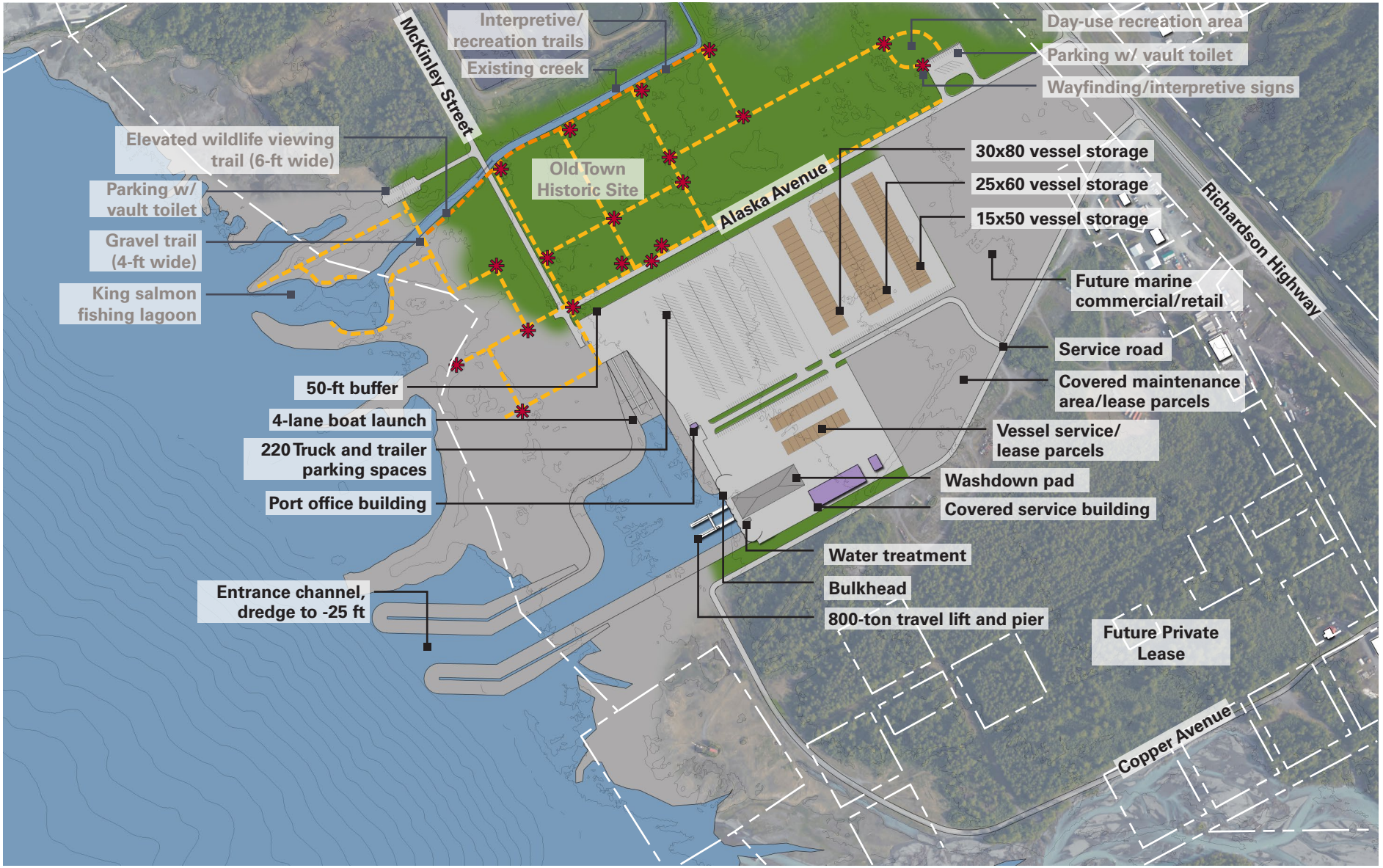
OLD TOWN CONT'D

PHASE II: MASTER PLAN



IMPLEMENTATION

Developing Old Town as a marine service center is a long-term goal and is anticipated to occur 25 years out, or further into the future if validated by demand and stability of soils. Phase II is dependent on expansion opportunities at Sea Otter Park and as demand requires. All marine service expansion is dependent on the determination of ground stability in the area. Space has been provided in the master plan to dredge a large basin and construct a travel lift and bulkhead that will serve vessels up to 800 tons. There will be a four-lane boat launch, a marine service yard, space for vessel storage, a marine-related commercial/retail area, and parking and road improvements.

It is understood that as the marine service yard is developed in this area, there will be a 50-ft planted buffer between the service yard and the Old Town Historic Site. This will serve to maintain the serenity and integrity of the Old Town Historic Site and fishing lagoon and ensure that the recreational benefits provided here are not diminished by the proximity to a marine-related facility.

INNOVATION

The marine service yard and related facilities will make Valdez the premier port in Prince William Sound, able to service and store most every vessel in the region

The dredge channel and basin are expected to allow the placement of the marine service yard and laydown on stable soils. Commercial and retail businesses related to vessel service will also be located on stable soils. This needs to be confirmed through additional geotechnical analysis.

The development of a regional marine service facility will be a catalyst for new economic development for Valdez and the ability to capitalize on the adjacent 'Free Trade Zone,' if desired.

The long-term vision for Old Town is a major economic development project that is accomplished through a mix of City economic starter projects, such as the new dredged basin and travel lift, public-private partnerships, such as development at the new marine service yard, and private investment to support the new retail and service demands at Old Town. As part of this long-term vision, land at Sea Otter Park is freed up for higher-value public and private development near downtown.

COSTS

The overall estimated cost for Phase II development at Old Town is $87 million. The estimate includes construction, design, permitting, project management, construction administration, and a 30% contingency. Major line items that will be completed in this phase and corresponding estimated costs are outlined below:

- $4 million for the marine service yard site access and road upgrades
- $3.3 million for the truck and trailer parking area
- $912,000 for the long term vessel laydown yard
- $11.5 million for the washdown and maintenance area
- $3.8 million for the boat launch
- $46 million for the dredge channel and basin
- $18 million for the bulkhead, boat lift pier, and 800-ton travel lift

A detailed breakdown of the conceptual costs are found at the end of this section.

OLD TOWN CONT'D

PHASE II: FACILITY IMPROVEMENTS

DREDGE BASIN AND BULKHEAD

The proposed basin allows for marine access to structures that are located inland of near-shore areas of Old Town that have been identified as being "very highly susceptible to seismically induced ground failures." All permanent structures will be located outside of the geotechnically unsuitable areas, albeit in areas that still have potential for displacement or movement under significant seismic events. A rock revetment breakwater is proposed at the basin entrance to reduce wave action in the basin. All basin side slopes will be protected by rock revetment erosion protection.

The proposed development includes a sheet pile bulkhead on the eastern side of the basin that will serve as an abutment/backwall for the 800-ton marine lift pier. The dredged basin is sized for vessel lengths up to 260 ft.

Alternative and more cost-effective designs may be possible if geotechnical investigations show that more favorable in-situ conditions exist.

This represents a long-term improvement once the facilities at Sea Otter Park no longer meet needs/demands or there is the need for servicing larger and/or additional vessels to meet regional needs.

Materials

The dredged basin will be constructed with rock revetment slopes and an armor rock breakwater. The bulkhead will be constructed with steel sheet pile and there will be a steel pile-supported lift pier that has a superstructure and a cast-in-place concrete deck surface.

TRAVEL LIFT, PIER, WASHDOWN PADS AND VESSEL MAINTENANCE AREA

Immediately east of the dredge basin and bulkhead, a lift system will be constructed to remove vessels of various sizes from the water for storage, maintenance, or washdown. The lift will consist of two 180-ft-long by 15-ft-wide pile-supported piers that will support the mobile lift equipment and maintain a 55-ft inside clear width. This will allow for vessels up to 800 tons (up to 260 ft in length with a beam up to 55 ft) to be efficiently removed for servicing. The boat-lift facility will include a 100-ft by 300-ft concrete vessel washdown area, in-ground water detention, and a recirculating wash-water treatment system. These components are necessary to ensure water discharge and containment of sediments meet regulatory requirements.

Maintenance pads will be provided east of the lift. These gravel pads will be equipped with vaults that will service the pads with power and water for maintenance work. Twenty gravel pads measuring 30-ft by 60-ft will be provided with individual utility vaults to service the vessels.

One 80-ft by 240-ft covered maintenance area will be installed adjacent to the washdown slab. The maintenance area is designed to accommodate one larger vessel, measuring up to 260 ft, or several smaller vessels as needed. A second 40-ft by 60-ft covered work area will also be installed for vessels up to 60 ft in length.

This represents a long-term improvement once the facilities at Sea Otter Park no longer meet needs/demands or there is the need for servicing larger and/or additional vessels to meet regional needs.

Materials

Materials will include steel pile-supported lift piers with a steel superstructure and UMHW-faced composite fender piles. The washdown pads will be cast-in-place concrete. All uplands areas and maintenance pads will be gravel-surfaced. Maintenance and service-related structures and buildings will be steel with metal roofs. Utility vaults for servicing vessels will be concrete.

PHASE II: FACILITY IMPROVEMENTS

BOAT LAUNCH AND PARKING

A small boat launch facility, consisting of four concrete ramps and two floats is planned near the shoreline to accommodate recreational users. The boat launch will be positioned north of the planned dredged channel leading in from Port Valdez. The facility is planned to be a 100-ft-wide concrete boat launch with two 8-ft-wide timber floats.

Grant money can be obtained from the Alaska Department of Fish and Game for recreational boat ramps. Guidelines for this funding provides a target of 50 truck and trailer parking stalls per ramp. The truck and trailer parking area will include passenger vehicle parking stalls and will have a gravel surface with a leveling course for grading and maintenance. Truck and trailer parking will be more than 9 acres and includes 220 truck and trailer parking stalls, measuring 12-ft by 50-ft, and 56 passenger vehicle parking stalls measuring 10-ft by 20-ft.

It is envisioned that a small remote port building be constructed at this site to facilitate equipment storage and to provide a location for public restrooms. The building will be approximately 300 sf. Payment for launching and parking can be accommodated with two payment kiosks positioned near the entrances.

Materials

Materials will include a cast-in-place concrete approach slab with high-strength prefabricated concrete launch ramp panels. The floats will be heavy-timber framed float units with fiberglass-reinforced traction plate surfacing and high-density polyethylene flotation tubs.

VESSEL LAYDOWN YARD

A vessel laydown yard is planned at the location just east of the truck and trailer parking lot. This 9.7-acre facility is planned to accommodate 17 stalls sized 30-ft by 80-ft, 42 stalls sized 25-ft by 60-ft, and 70 stalls sized 15-ft x 50-ft. This area is planned to be reserved primarily for storage; however, some minor maintenance may be accommodated. The laydown yard will be constructed with a gravel core and a leveling course at the surface to accommodate grading and maintenance. The facility will have perimeter fencing and access gates, as well as parking for 60 passenger vehicles.

This represents a long-term improvement once the facilities at Sea Otter Park no longer meet needs/demands or there is the need for storing larger and/or additional vessels to meet regional needs.

Materials

The parking area will be gravel.

LEASE PARCELS

The preferred alternative for Old Town provides additional undeveloped areas for future lease parcels. Such parcels will be available on undeveloped land northeast of the Vessel Laydown Yard. Typical leases may include marine engine repair, propeller shops, and other marine repair and service businesses.

Materials

Lease parcels will be left undeveloped. The City may consider providing road and utility service to lease parcels and performing site preparation (grading) to accommodate future building construction by lease holders.

OLD TOWN CONT'D

PHASE I & II: GENERAL CONSIDERATIONS

PRIORITIES & IMPLEMENTATION

Priorities identified by the community and supported by the steering committee include:

- A site geotechnical investigation;
- Developing the king salmon fishing lagoon;
- The day-use recreation area and interpretive trails; and
- A dock or other nearshore structures (pending results of the geotechnical studies).

A site geotechnical investigation is recommended as the highest priority for the Old Town site. The results of the investigation will determine the suitability of the area for development and, as such, may result in changes to the master plan. The development of a small offshore commercial dock facility has been identified as a desired component but was not included in the master plan due to the current understanding of unsuitable site geotechnical conditions in the nearshore areas. A site geotechnical investigation is planned to occur prior to implementation of any work at Old Town.

The prioritized components, including the king salmon fishing lagoon and day-use facilities, would be implemented within the next 10 years. Developing the historic site and the wayfinding was identified as a secondary priority and would be implemented within 10 to 20 years.

STAFF & OPERATING COST

Park and trail development in the Old Town area will require additional maintenance costs for bathrooms, trails, parking lot, and the new fishing lagoon. Roughly $50/day is anticipated for additional contracting costs associated with bathroom upkeep and trash removal.

Developing large vessel haul out facilities and a marine industrial trade park would be associated with significant increases in city staff requirements, likely in the order of an additional 6 full time and another 6 seasonal staff. Maintenance cost estimates have not been estimated in detail at this time. A focused study is recommended when this concept is more mature.

MAINTENANCE

Summer Maintenance

New landscaping and park facilities will require typical landscape maintenance (weeding, watering, pruning of trees and shrubs, and mowing of turf areas), annual maintenance of trails, and an increase in trash pick-up. For the industrial areas of Old Town, regular maintenance of the gravel-surface areas will be needed for smoothing. Water spraying will also be desirable during high-use times of the season for dust control.

Marine infrastructure will require periodic inspection and repair on an as-needed basis. Detailed inspections on above- and below-water components typically occur on four-year intervals.

Snow Management

In the historic area, trails and parking areas will likely not need to be plowed during winter months. The master plan provides adequate space so that piling snow on trees and shrubs can be avoided. Site furnishings and interpretive panels may be stored off-site in winter to avoid damage due to winter weather and extend the life of the panels.

In all other industrial areas, adequate room is provided for snow plowing and storage.

Building Maintenance

The new restrooms and shelter will have some maintenance requirements, such as electricity, janitorial and normal deferred maintenance.

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OLD TOWN CONT'D

PHASE I: COST ESTIMATE

					Implementation Plan		
Upland Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Day-use Parking, Toilets, Picnic Area				**$ 920,400**	**$ 920,400**		
Parking area AC pavement	18,000	SF	$ 7.80	$ 140,400			
Vault toilet (2 stalls)	1	LS	$ 234,000	$ 234,000			
Day-use shelter (two 20-ft x 40-ft) and picnic area	1	LS	$ 546,000	$ 546,000			
Historic Area Trails				**$ 3,260,400**		**$ 3,260,400**	
Historic streets trails	3,000	LF	$ 499.20	$ 1,497,600			
Elevated bear viewing trail	1,000	LF	$ 1,528.80	$ 1,528,800			
Interpretive signs and wayfinding	1	LS	$ 234,000	$ 234,000			
Subtotal				**$ 4,180,800**	**$ 920,400**	**$ 3,260,400**	**$ -**
Waterfront Items	**Quantity**	**Unit**		***Total Cost***	**10-Year**	**20-Year**	**30-Year**
King Salmon Fishing Lagoon				**$ 8,658,000**	**$ 8,658,000**		
Fishing lagoon road and parking	20,000	SF	$ 7.80	$ 156,000			
Vault toilet (2 stalls)	1	LS	$ 234,000	$ 234,000			
Fishing lagoon dredge and rip rap (120,000 sf lagoon)	120,000	SF	$ 62.40	$ 7,488,000			
Trails	2,000	LF	$ 390	$ 780,000			
Subtotal				**$ 8,658,000**	**$ 8,658,000**	**$ -**	**$ -**
Old Town Phase I - Grand Total				**$ 12,838,800**	**$ 9,578,400**	**$ 3,260,400**	**$ -**

Notes:

*Unit cost includes 20% for engineering, permitting, construction administration and project management and 30% for contingency

PHASE II: COST ESTIMATE

					Implementation Plan		
Upland Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Marine Service Yard Site Access				**$ 4,048,200**			**$ 4,048,200**
Alaska Avenue improvements	2,500	LF	$ 546	$ 1,365,000			
New Old Town access road development	4,300	LF	$ 624	$ 2,683,200			
Truck and Trailer Parking Area				**$ 3,267,654**			**$ 3,267,654**
Earthwork (200 spaces with maneuvering lanes)	492,200	SF	$ 2.34	$ 1,151,748			
Leveling course	492,200	SF	$ 2.73	$ 1,343,706			
Port staff office with public restrooms	800	SF	$ 624	$ 499,200			
Domestic wastewater treatment	1	LS	$ 78,000	$ 78,000			
Well (potable drinking water)	1	LS	$ 39,000	$ 39,000			
Electrical service	800	LF	$ 195	$ 156,000			
Long Term Vessel Laydown Yard				**$ 912,600**			**$ 912,600**
Earthwork (129 vessels with maneuvering lanes)	390,000	SF	$ 2.34	$ 912,600			
Washdown and Maintenance Area				**$ 11,412,648**			**$ 11,412,648**
Earthwork	254,400	SF	$ 2.34	$ 595,296			
Leveling course	254,400	SF	$ 2.73	$ 694,512			
Large vessel concrete washdown slab (100-ft x 300-ft)	30,000	SF	$ 15.60	$ 468,000			
Well (potable water)	1	LS	$ 62,400	$ 62,400			
Water distribution	1,600	LF	$ 312	$ 499,200			
Wastewater treatment	1	LS	$ 936,000	$ 936,000			
Electrical supply/distribution	1,800	LF	$ 195	$ 351,000			
Utility distribution manholes	16	EA	$ 31,200	$ 499,200			
Covered maintenance area - concrete stands	21,600	SF	$ 15.60	$ 336,960			
Covered maintenance area - roof structure	21,600	SF	$ 280.80	$ 6,065,280			
Sanitary sewer collection	1,600	LF	$ 312	$ 499,200			
Sanitary sewer treatment leach field	1	LS	$ 93,600	$ 93,600			
Area wide stormwater ditching and treatment	1	LS	$ 312,000	$ 312,000			
Subtotal				**$ 19,641,102**	**$ -**	**$ -**	**$ 19,641,102**
Waterfront Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Boat Launch				**$ 3,837,600**			**$ 3,837,600**
Boat launch - concrete ramp and preparation	1	LS	$ 2,340,000	$ 2,340,000			
Boat launch - boarding float and support piles	4,800	SF	$ 312	$ 1,497,600			
Basin				**$ 45,732,180**			**$ 45,732,180**
Dredge channel and basin	640,000	CY	$ 39	$ 24,960,000			
Harbor side slope rip rap	15,000	CY	$ 195	$ 2,925,000			
Armor rock	27,500	CY	$ 312	$ 8,580,000			
Filter rock A	11,000	CY	$ 234	$ 2,574,000			
Filter rock B	5,300	CY	$ 210.60	$ 1,116,180			
Core rock	55,000	CY	$ 101.40	$ 5,577,000			
Boat Lift (800 ton)				**$ 18,174,000**			**$ 18,174,000**
Bulkhead	300	LF	$ 8,580	$ 2,574,000			
Boat-lift pier (800tn)	1	LS	$ 5,460,000	$ 5,460,000			
Travel lift (800tn)	1	LS	$ 10,140,000	$ 10,140,000			
Subtotal				**$ 67,743,780**	**$ -**	**$ -**	**$ 67,743,780**
Old Town Phase II - Grand Total				**$ 87,384,882**	**$ -**	**$ -**	**$ 87,384,882**

Notes:

*Unit cost includes 20% for engineering, permitting, construction administration and project management and 30% for contingency

VALDEZ CONTAINER TERMINAL

SUMMARY

The Valdez Container Terminal (VCT) is an existing facility located within the Duck Flats wetland area. The VCT facilitates shipping into and out of the community as well as materials into and out of the Interior via the highway system. The VCT meets current needs but facilities are aging. Upgrades can be made that will improve efficiency, and there has been a desire expressed by the community that the VCT expand operations that will attract new shipping opportunities.

Opportunities at the VCT include expanding the storage yard and pontoon to accommodate a greater supply of materials that are being stored and shipped, as well as a larger size of materials. Improving the aging transfer bridges and causeway will allow continued use while avoiding the high cost of replacing the structure. Improving the function of the safety yard and vehicles using the VCT will help to reduce safety concerns and impacts to the surrounding neighborhood.

VCT maintenance and barge landing improvements will not directly generate additional revenue. Those expenditures will, however, preserve and enhance the functionality of an essential aspect of the community's transportation infrastructure. Port activity is dominated by movement of seafood, mining supplies, shipments destined for the North Slope, construction materials, and one-off oversize shipments. The VCT has a reputation for capably handling oversize freight and other freight destined for the North Slope, Interior mines, communities, and military bases. Investments in the VCT that enhance shippers' efficiency of operations will ensure that Valdez maintains its share of the Southcentral in-bound marine freight market and, to the maximum extent possible, captures more of that market.

In addition to regular marine activity and storage, the VCT is the site of concrete grain elevators that are no longer in use for grain storage. The grain elevators purpose at this time is to serve as a support structure for communication systems belonging to both private and government owned entities. Currently, the access ladder and platform to the communications equipment is unsafe due to significant bird droppings. An access ladder and platform that is improved with screens is needed to mitigate bird roosting and subsequent bird droppings.

The master plan for the VCT is intended to do the following:

- Promote phased expansion and improvements of facilities allowing more capacity;
- Improve barge landing use to all tides;
- Upgrade aging infrastructure, including the transfer bridges and causeway;
- Provide direct vehicle access to the Richardson Highway; and
- Repurpose the existing grain elevators.
- Construct an improved access ladder, platform, and safety railing at the grain elevators to accommodate safe worker access.

ECONOMIC FEASIBILITY

The VCT rehabilitation/repair and barge landing improvements, together estimated at $11.5 million, will not directly generate additional revenue for the City (absent increased user fees) or additional employment in Valdez. The investment will, however, preserve and enhance the functionality of an essential aspect of the community's transportation infrastructure. Further economic analysis should consider how VCT users might contribute to barge landing and other improvements through increased fees.

Storage revenues range from one-third to one-half of total VCT revenues. Though additional revenues associated with expanded storage would not alone justify the cost of increasing terminal yard space, there could be additional near-term and longer-term economic benefits associated with greater capacity to meet peak demand periods during the fishing season.

Phase II improvements have substantially greater costs ($83 million) than Phase I and less clear economic benefits. These Phase II improvements would best be made only after a more compelling economic case can be documented at some point in the future as freight-related circumstances change.

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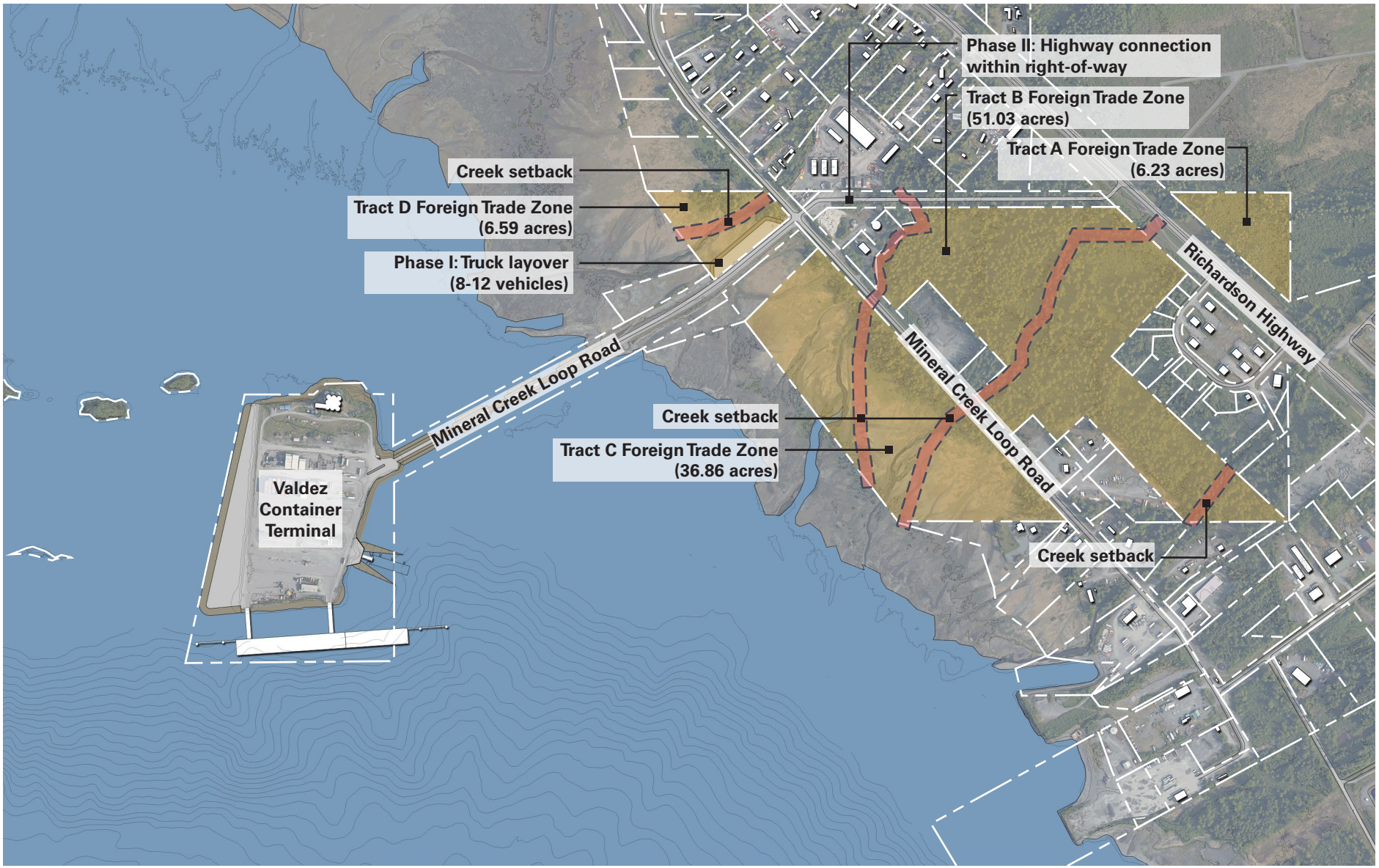
VALDEZ CONTAINER TERMINAL CONT'D

MASTER PLAN: OVERALL



IMPLEMENTATION

It is anticipated that Phase I improvements to the VCT will occur in the next 5-10 years. These improvements will include rehabilitating and repairing the floating dock, transfer bridges, and causeway. They will also include dredging and building new facilities for the barge landing, expanding the truck scale, relocating the scale house, and developing a truck staging area at the perimeter of the facility.

Phase II will include work based on meeting needed demand and will likely occur 20 years out or longer. This work will include expanding the storage yard, rehabilitating the crane rails on the existing concrete pontoons, expanding the concrete pontoons with crane rails, purchasing and installing a container crane, and developing an access road from the VCT to the Richardson Highway.

INNOVATION

The transfer bridge and causeway are in the need of near-term improvements. Improvements to these facilities (rather than more costly replacement) are expected to extend the lifespan by 25 years.

The grain elevators provide mounting for telecommunications and are a unique feature on the landscape. Painting these with a mural will allow use to continue and upgrade this feature to become an aesthetic landmark. This is more cost effective than removal of the elevators and allows possible partnerships to be established for future redevelopment.

Creating a new access road from the Richardson Highway directly to the facility capitalizes on an unused right-of-way. This new road eliminates the existing truck traffic from the surrounding neighborhood.

To better serve customers and become a larger regional shipping terminal, expansion of the facilities will allow more materials to be handled, especially if an Alaska mega-project comes online, such as the gas pipeline.

COSTS

The overall estimated cost for Phase I development at the VCT is $11.5 million. The estimate includes construction, design, permitting, project management, construction administration, and a 30% contingency. Major line items that will be completed in this phase and corresponding estimated costs are outlined below:

- $665,000 for the truck scale upgrades
- $1.7 million for the transfer bridge rehabilitation
- $2.5 million for the causeway rehabilitation
- $375,000 for the truck layover
- $6.3 million for the barge landing upgrades
- $133,000 for the improvements to the grain elevator communications access and platform

A detailed breakdown of the conceptual costs are found at the end of this section.

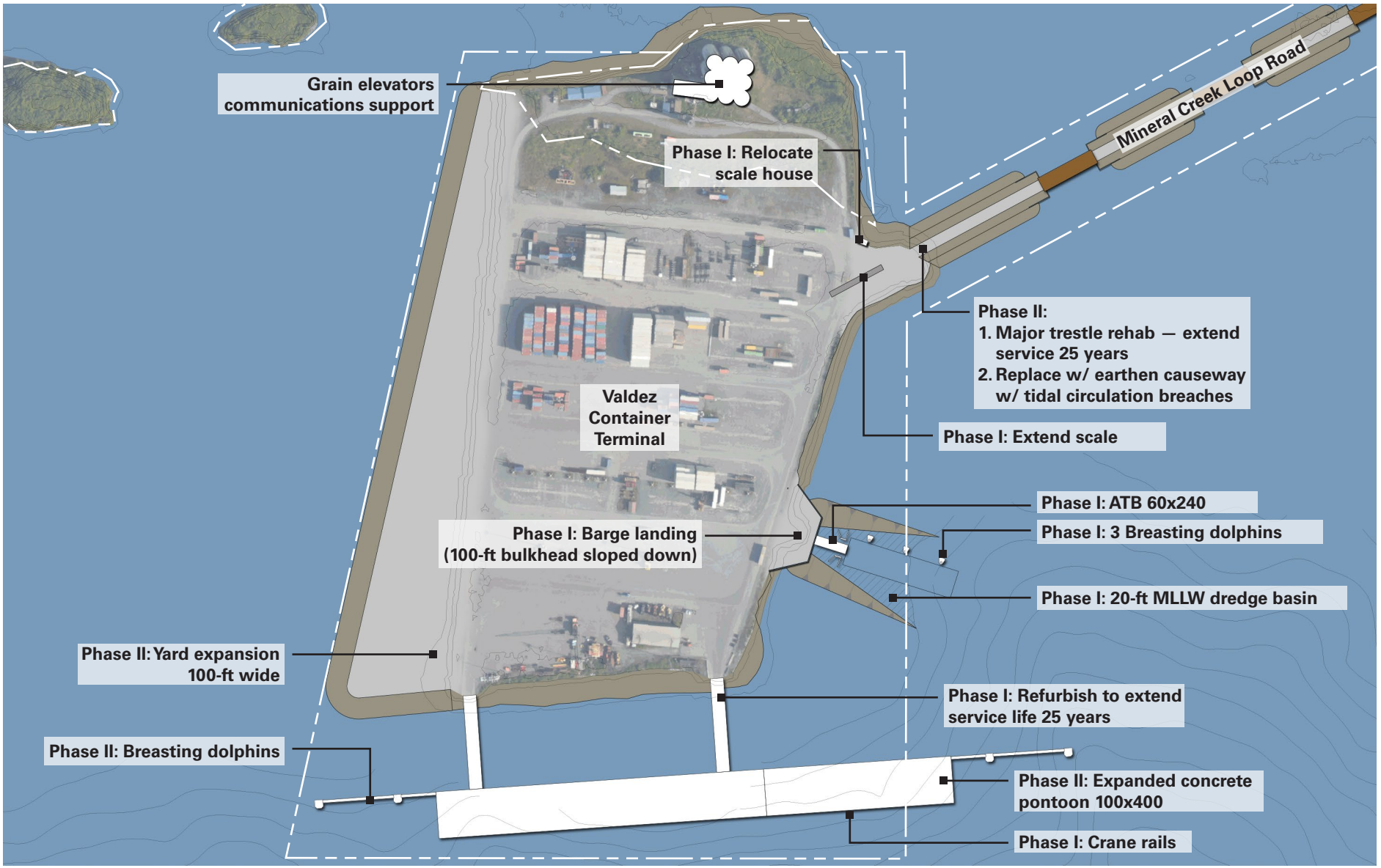
The overall estimated cost for Phase II development at the VCT is $82.8 million. The estimate includes construction, design, permitting, project management, construction administration, and a 30% contingency. Major line items that will be completed in this phase and corresponding estimated costs are outlined below:

- $2.3 million for the Richardson Highway connection
- $9.5 million for the yard expansion
- $19 million for the causeway replacement
- $17.5 million to refurbish the crane rails and provide a new container crane
- $35 million for container dock improvements

A detailed breakdown of the conceptual costs are found at the end of this section.

VALDEZ CONTAINER TERMINAL CONT'D

MASTER PLAN: ENLARGEMENT



PHASE I: FACILITY IMPROVEMENTS

REHABILITATION AND REPAIR

Continued maintenance and repair of the existing facility is expected to extend the serviceable life of the VCT. Rehabilitation efforts should be planned and coordinated based on inspection results and engineer recommendations. Known items include replacing transfer bridge bearings, re-tensioning transfer bridge strands, repairing causeway pile caps, recoating steel components, and repairing concrete spalls/cracks on the concrete floating dock. It will benefit the City to develop a programmatic approach for addressing deferred maintenance items and additional defects as they are encountered. Additional information on quantities, capacity, and sizing are identified in the inspection reports. Materials will be selected as required based on engineer evaluations.

BARGE LANDING IMPROVEMENTS

Improvements to the existing barge landing located on the east side of the VCT uplands will allow for more efficient freight offloading and all-tide vessel access. The barge landing improvements include a new 270-ft sheet pile bulkhead with a 100-ft face, mooring appurtenances, 20-ft wide adjustable transfer ramp with lift frame, three breasting dolphins, and dredging offshore to -20 MLLW for all-tide vessel access.

Coordination required with existing and potential transporters to accommodate vessel fleets during the design phase.

Depending on transporter demand, the barge landing transfer ramp could be installed with railways to facilitate direct railcar offload. This would require the addition of uplands railways and may require relocation of the facility.

Materials

The bulkhead will be constructed with steel sheet pile and gravel fill and surfacing. The lift frame will be steel pipe pile with a mechanical winch system. The approach ramp will be fabricated steel. The breasting dolphins will be steel with rubber energy-absorbing elements.

TRUCK SCALE AND SCALE HOUSE IMPROVEMENTS

Replacement of the existing scale system near the entrance to the VCT will allow weighing of longer and heavier vehicles. The existing scale system consists of a 60-ton scale that is 12-ft by 70-ft. The replacement scale will consist of a 135-ton scale with a length of 120 ft. The existing scale house will be relocated north, away from the primary traffic corridor, to improve vehicle circulation and eliminate potential conflicts with wide loads entering and exiting the VCT. The new scale house will require extension and tie-in to existing utilities that are of unknown condition.

Materials

Materials will include cast-in-place concrete approaches and scale pit structure, cast-in-place concrete foundation for the relocated scale house, and the scale and associated wiring.

TRUCK STAGING

When munitions are handled at the VCT there is a need to stage loaded tractor trailer rigs outside the secure area of the port to wait for access. The master plan provides an area at the east end of the gravel causeway for such a staging pad. The pad will accommodate a minimum of 10 tractor trailer rigs capable of transporting four 20-ft-long containers. In order to allow for these large transport vehicles to enter and exit the staging pad, it will need to be constructed to approximately 650 ft in length by 75 ft in width to allow for parallel rows of five tractor trailer rigs.

There are safety concerns for the traveling public and nearby facilities due to the nature of the cargo at the staging area.

Materials

Materials will include gravel fill and surfacing course, as well as salvaged rock revetment supplemented with new.

STORAGE YARD EXPANSION

The western edge of the marshalling yard upland of the VCT will be expanded to provide 4.5 acres of additional storage area. The expansion consists of a 50-ft to 200-ft offset from the existing yard that is positioned to maximize the potential uplands gained while staying within the existing site tidelands lease area.

It is a concern that expanding the storage yard will impact the wetlands due to the increased footprint of the VCT.

Materials

Materials will include gravel fill and surfacing course, as well as salvaged rock revetment supplemented with new.

CONCRETE PONTOONS AND CONTAINER CRANE EXPANSION

Extension of the VCT concrete floating dock will occur with the addition of a new 100-ft by 400-ft concrete pontoon on the eastern edge of the existing structure. The new floating structure is anticipated to be restrained by a combination of anchor system and driven-pile mooring frames. The extension will require removal and replacement of the eastern dolphin and catwalk system.

A new container crane will be purchased and installed on the dock. A 40-LT, 90-ft gauge container crane was accounted for in the design of the existing VCT; however, a container crane has never been installed on the dock. Rehabilitation of the existing crane rail system is anticipated prior to installation of the crane.

Concerns include offloading the container crane onto the existing and new dock.

Materials

The pontoons will be prefabricated pre-cast concrete with steel pile mooring frames and steel chain anchors.

VALDEZ CONTAINER TERMINAL CONT'D

PHASE II: FACILITY IMPROVEMENTS

GRAIN ELEVATOR IMPROVEMENTS

The existing grain elevators/silos were constructed as part of a plan to transport grain from Interior Alaska. The towers became obsolete shortly after their construction. The elevators have been used minimally as a storage facility and more recently as a cell and communication tower. Many other communities with obsolete grain silos have converted them to new uses, ranging from boutique housing to art houses. Some have become projection screens for changing art exhibits. The location of the Valdez silos, distant from downtown and within a secure port area, severely restricts their potential future usage. Present usage as communication towers may be the most viable option for the foreseeable future. Due to the significant cost of removing the silos, estimated at between $2 to 3 million dollars, the master plan team's suggestion is to continue usage as a communication tower until it is time to reconstruct the causeway. At that time, if port-related storage use hasn't become viable, then demolition should be considered, with concrete spoils used in construction of a new causeway. In the meantime, using the elevators as a canvas for art, either as a projection screen, or for painting a mural, can transform these structures into an aesthetic Alaska art piece.

If the grain elevators are demolished, replacement by one or more of the tower users on leased, city owned land, may be a potential option. Most cell phone companies operate in this manner, erecting and maintaining their own towers. A tower owner could also lease space on the structure for other end users without City involvement other than leasing the land and gaining another revenue source.

ACCESS ROAD TO RICHARDSON HIGHWAY

A platted road easement exists between the Richardson Highway and Mineral Creek Loop Road that can be used to provide a more direct access route to the VCT and avoid the mixed-use neighborhood. It is proposed that a new 1,250 linear feet connection to the Richardson Highway be developed to accommodate modern standard highway design vehicles. The road extension includes two 12-ft-wide lanes with 2-ft-wide gravel shoulders and four storm drain inlets on either side of the roadway to match the design of the existing Mineral Creek Loop Road. There will be 6-ft-wide concrete sidewalks on either side of the roadway.

It will be necessary to coordinate with Department of Transportation to ensure a safe intersection.

Materials

Roadway surfaces will be asphalt cement pavement with steel culverts for cross drainage with thaw pipes. All traffic and informational signage will be mounted to galvanized steel posts with aluminum signs.

CAUSEWAY REPLACEMENT

Long-term replacement of the 1,500-ft access bridge is anticipated to occur using a fill causeway with intermittent breaches to allow flow conveyance. Three 120-ft bridges with a 28-ft width are planned at intermittent locations on the causeway. Sheet pile bulkheads will be constructed on each end of the bridges to reduce overall bridge length while providing improved flow conveyance. The predominately fill-based structure results in significant cost reduction when compared to a full-length 1,500-ft bridge. The fill portions of the causeway will be constructed with shot rock fill protected by rock revetment.

A concern with replacing the causeway is that regulatory approval for the construction of a fill causeway is uncertain.

Materials

The causeway will be constructed with shot rock fill and rock revetment and will have asphalt concrete surfacing. The bulb-tee bridges will be pre-cast concrete and will have steel sheet pile abutments with vertical steel pile bridge supports.

FOREIGN TRADE ZONE

The adjacent uplands to the VCT includes 75-acres located within designated Foreign Trade Zone (FTZ) tracts. Companies operating within an FTZ have the potential to realize various savings, including duty exemption for imports that are re-exported without leaving the FTZ; deferral of duties until goods leave the FTZ for domestic consumption; streamlined import and export procedures; elimination of duties on foreign materials destroyed as scrap or waste within an FTZ; ability to take advantage of lower tariffs (when present) on finished goods via manufacturing or processing of imported goods within an FTZ (these activities are subject to approval by national FTZ board); and other potential benefits. There are no known private sector proposals or plans to take advantage of Valdez's FTZ status. While the existing FTZ status of land in Valdez may have relevance at some point, non-FTZ-related developments, located within FTZ areas, should not be postponed if they provide an economic benefit to the community.

PHASE I & II: GENERAL CONSIDERATIONS

PRIORITIES & IMPLEMENTATION

Priorities identified by the community and supported by the steering committee include:

- Deferred maintenance of the facility including the dock structure, transfer bridges, and causeway;
- Developing the truck layover area;
- Expanding the west side of the yard;
- Upgrading the Richardson Highway connection through the existing right-of-way; and
- Rehabilitating the container crane and rails.

Implementation of the prioritized project components can occur in any sequence. However, continued repair of deferred maintenance items should be prioritized to maximize the overall serviceable life of the facility. The Phase I components that were not identified as a priority, including the scale improvements and barge landing, would be constructed over the next 10 to 20 years.

STAFF & OPERATING COST

The City currently operates a lean staff for maintenance of the VCT area, which is functional but may result in increased periodic maintenance costs due to reduced preventative maintenance. The developments considered here for the VCT, notably the barge landing improvements, will only add limited additional maintenance needs. A full review of current maintenance staffing is beyond the scope of this analysis; however, consideration should be given to adding a position or part of a position to cover the additional maintenance needs associated with VCT development envisioned in this master plan.

MAINTENANCE

Summer Maintenance

Summer maintenance at the VCT will continue as it has been conducted in the past. Occasional grading of gravel surfaces may be needed for smoothing.

Maintenance of the existing marine infrastructure, including repair of deferred maintenance items, will be critical to extending the serviceable life of the VCT. Items identified as needing repair from previous detailed inspection should be prioritized. Detailed inspections on above- and below-water components should continue on four-year intervals.

Snow Management

The master plan for the VCT has left adequate maneuvering room for large snow removal equipment. Adequate room for storage of snow is also provided at several locations throughout the terminal as shown on master planning documents.

VALDEZ CONTAINER TERMINAL CONT'D

PHASE I: COST ESTIMATE

					Implementation Plan		
Upland Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Scale Improvements				**$ 663,000**		**$ 663,000**	
Relocate scale house	1	LS	$ 117,000	$ 117,000			
Extended scale	1	LS	$ 546,000	$ 546,000			
Transfer Bridge Deferred Maintenance				**$ 1,669,200**	**$ 1,669,200**		
Retension transfer bridge strands	4	EA	$ 31,200	$ 124,800			
Replace transfer bridge bearings and sole plates	16	EA	$ 15,600	$ 249,600			
Replace transfer bridge rubber fenders	6	EA	$ 15,600	$ 93,600			
Repair miscellaneous concrete (bullrails, abutments, etc.)	1	LS	$ 468,000	$ 468,000			
Recoat transfer bridges	1,000	SF	$ 78.00	$ 78,000			
Recoat dolphin piles	28	EA	$ 23,400	$ 655,200			
Causeway Deferred Maintenance				**$ 2,538,120**	**$ 2,538,120**		
Causeway pile cap concrete repairs	7	EA	$ 46,800	$ 327,600			
Recoat piles	116	EA	$ 18,720	$ 2,171,520			
Guardrail replacement	100	LF	$ 390.00	$ 39,000			
Truck Layover				**$ 372,927**	**$ 372,927**		
Truck layover area core fill	6,019	CY	$ 23.40	$ 140,833			
Truck layover area surfacing course	32,500	SF	$ 2.81	$ 91,260			
Truck layover area filter B material	722	CY	$ 195.00	$ 140,833			
Silo Access and Platform				**$ 132,600**	**$ 132,600**		
Access Ladder	1	LS	$ 54,600.00	$ 54,600			
Platform and Safety Railing	1	LS	$ 78,000.00	$ 78,000			
Subtotal				**$ 5,375,847**	**$ 4,712,847**	**$ 663,000**	**$ -**
Waterfront Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Barge Landing				**$ 6,267,300**		**$ 6,267,300**	
Shore bollards and winches	1	LS	$ 390,000	$ 390,000			
Barge dock bulkhead	270	LF	$ 8,580	$ 2,316,600			
Bulkhead fill	4,000	CY	$ 31.20	$ 124,800			
Transfer ramp and lift frames	1	LS	$ 1,794,000	$ 1,794,000			
Dredging	12,100	CY	$ 39.00	$ 471,900			
Breasting dolphins	3	EA	$ 390,000	$ 1,170,000			
Subtotal				**$ 6,267,300**	**$ -**	**$ 6,267,300**	**$ -**
Valdez Container Terminal Phase I - Grand Total				**$ 11,643,147**	**$ 4,712,847**	**$ 6,930,300**	**$ -**

Notes:

*Unit cost includes 20% for engineering, permitting, construction administration and project management and 30% for contingency

PHASE II: COST ESTIMATE

					Implementation Plan		
Upland Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
New Richardson Highway Connection				**$ 2,340,000**	**$ 2,340,000**		
New interconnecting roadway (pavement, drainage, etc.)	1,500	LF	$ 1,560	$ 2,340,000			
Yard Expansion (West Side)				**$ 9,419,280**	**$ 9,419,280**		
Yard Expansion (west side) - common fill	100,000	CY	$ 31.20	$ 3,120,000			
Salvage and reinstall armor rock	9,000	CY	$ 117	$ 1,053,000			
New filter rock B	1,800	CY	$ 234	$ 421,200			
New filter rock A	7,500	CY	$ 234	$ 1,755,000			
New armor rock	5,900	CY	$ 312	$ 1,840,800			
Surface course	197,000	SF	$ 6.24	$ 1,229,280			
Causeway Replacement				**$ 19,017,960**			**$ 19,017,960**
Causeway demolition	42,000	SF	$ 70.20	$ 2,948,400			
Causeway breach bridges	3	EA	$ 3,120,000	$ 9,360,000			
Causeway core rock fill	41,400	CY	$ 62.40	$ 2,583,360			
Causeway filter B rock	1,800	CY	$ 195	$ 351,000			
Causeway filter A rock	4,400	CY	$ 234	$ 1,029,600			
Causeway armor rock	8,800	CY	$ 312	$ 2,745,600			
Subtotal				**$ 30,777,240**	**$ 11,759,280**	**$ -**	**$ 19,017,960**
Waterfront Items	**Quantity**	**Unit**	**Unit Cost***	***Total Cost***	**10-Year**	**20-Year**	**30-Year**
Crane & Rails				**$ 17,472,000**	**$ 17,472,000**		
Refurbish crane rails	800	LF	$ 2,340	$ 1,872,000			
New container crane	1	EA	$ 15,600,000	$ 15,600,000			
Container Dock Improvements				**$ 34,554,000**			**$ 34,554,000**
Demolish dolphins	2	EA	$ 117,000	$ 234,000			
Concrete pontoon float w/ mooring frame & fenders	40,000	SF	$ 780	$ 31,200,000			
New dolphins w/ catwalks	2	EA	$ 1,560,000	$ 3,120,000			
Subtotal				**$ 52,026,000**	**$ 17,472,000**	**$ -**	**$ 34,554,000**
Valdez Container Terminal Phase II - Grand Total				**$ 82,803,240**	**$ 29,231,280**	**$ -**	**$ 53,571,960**

Notes:

*Unit cost includes 20% for engineering, permitting, construction administration and project management and 30% for contingency

3

Funding Strategy

FUNDING MATRIX

LEGEND	SMALL BOAT HARBOR									SEA OTTER PARK					NEW BOAT HARBOR				
Applicable Funding Source Potential Funding Source	Bulkhead Wall	Park Strip and Playground	Boardwalk and Sidewalks	Boat Launch and Parking	Kobuk Drive Realignment	Tour Gangway and Plaza	Retail Infill/ Densification	Harbor Drive Parking Reconfiguration	Harbor Office	Bulkhead Dock and Fill	Wave Barrier and Travel Lift	Marine Service Yard	Seafood Processing	Commercial Lease Parcels	Dry Stack Storage and Washdown	Launch Facility and Float	Fishing and Kayak Float	Marine-Related Commercial	Waterfront Day-Use Recreation Area
FUNDING SOURCE																			
City of Valdez CIP	■	■	■	■	■	■		■	■	■	■	■		■	■	■	■	■	■
Commercial Passenger Excise Tax	■	■	■			■			■								■		■
ADOT&PF CIP					■			■											
General Obligation Bonds	■	■	■	■	■	■		■	■	■	■	■			■	■	■	■	■
Alaska Municipal Harbors Matching Grant										■	■								
Revenue Bonds											■	■		■	■			■	
Better Utilizing Investments to Leverage Development Grant										■	■	■			■	■			
City of Valdez Temporary Bed Tax Ballot	■	■	■	■	■	■	■	■	■						■	■	■	■	■
USDA Rural Community Facilities Direct Loan & Grant Program		■	■	■	■	■			■										
Economic Development Administration Public Works and Economic Adjustment Assistance Program									■		■	■			■				
Alaska Small Business Economic Development Loan Program															■				

LEGEND	OLD TOWN									VALDEZ CONTAINER TERMINAL								
Applicable Funding Source Potential Funding Source	Day-Use Recreation Area	Interpretive Trails and Signs	Fishing Lagoon and Facilities	Boat Launch and Parking	Dredge Basin	Travel Lift and Washdown Facilities	Marine Service Yard	Commercial Lease Parcels	Roadway Improvements	Transfer Bridge Upgrades	All-Tides Barge Landing	Causeway Improvements	Scale and Scale House Improvements	Yard Expansion	Grain Elevators Repurposing	Concrete Pontoon Expansion	Causeway Replacement	Richardson Highway Access Road
FUNDING SOURCE																		
City of Valdez CIP	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Commercial Passenger Excise Tax																		
ADOT&PF CIP	■								■									■
General Obligation Bonds	■	■	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■
Alaska Municipal Harbors Matching Grant					■													
Revenue Bonds							■	■										
Better Utilizing Investments to Leverage Development Grant				■	■	■	■		■	■	■	■	■	■		■	■	
City of Valdez Temporary Bed Tax Ballot	■	■	■	■											■			
USDA Rural Community Facilities Direct Loan & Grant Program																		
Economic Development Administration Public Works and Economic Adjustment Assistance Program						■	■				■				■			
Alaska Small Business Economic Development Loan Program																		

FUNDING MATRIX CONT'D

LEGEND	SMALL BOAT HARBOR									SEA OTTER PARK					NEW BOAT HARBOR				
Applicable Funding Source Potential Funding Source	Bulkhead Wall	Park Strip and Playground	Boardwalk and Sidewalks	Boat Launch and Parking	Kobuk Drive Realignment	Tour Gangway and Plaza	Retail Infill/ Densification	Harbor Drive Parking Reconfiguration	Harbor Office	Bulkhead Dock and Fill	Wave Barrier and Travel Lift	Marine Service Yard	Seafood Processing	Commercial Lease Parcels	Dry Stack Storage and Washdown	Launch Facility and Float	Fishing and Kayak Float	Marine-Related Commercial	Waterfront Day-Use Recreation Area
FUNDING SOURCE																			
State of Alaska Boating and Angler Access Grant Program			Potential	Applicable	Potential												Potential		
Rasmuson Foundation		Applicable	Applicable			Applicable											Applicable		Applicable
Private or Public/Private Partnership Investment							Applicable			Applicable	Applicable	Applicable	Applicable	Potential				Applicable	
Federal Lands Access Program			Potential																
User Fees/Administrative Fees or Fines	Potential	Potential	Potential	Applicable	Potential	Applicable	Applicable	Applicable	Applicable	Potential	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Clean Vessel Act Grant															Potential				
USACE Section 107 Dredge Grants																			
Transportation Infrastructure Finance and Innovation Act Rural Project Initiative																			
Small Shipyard Grant										Applicable	Applicable	Applicable							
Boating Infrastructure Grant						Potential										Applicable			

LEGEND	OLD TOWN									VALDEZ CONTAINER TERMINAL								
Applicable Funding Source Potential Funding Source	Day-Use Recreation Area	Interpretive Trails and Signs	Fishing Lagoon and Facilities	Boat Launch and Parking	Dredge Basin	Travel Lift and Washdown Facilities	Marine Service Yard	Commercial Lease Parcels	Roadway Improvements	Transfer Bridge Upgrades	All-Tides Barge Landing	Causeway Improvements	Scale and Scale House Improvements	Yard Expansion	Grain Elevators Repurposing	Concrete Pontoon Expansion	Causeway Replacement	Richardson Highway Access Road
FUNDING SOURCE																		
State of Alaska Boating and Angler Access Grant Program			Applicable	Applicable														
Rasmuson Foundation	Applicable	Applicable	Applicable															
Private or Public/Private Partnership Investment		Potential	Potential	Applicable	Applicable	Applicable	Applicable	Potential							Applicable			
Federal Lands Access Program		Potential																
User Fees/Administrative Fees or Fines	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable	Potential	Applicable	Applicable	Applicable	Applicable	Applicable	Potential	Applicable	Applicable	Applicable
Clean Vessel Act Grant						Potential												
USACE Section 107 Dredge Grants					Applicable													
Transportation Infrastructure Finance and Innovation Act Rural Project Initiative										Potential	Potential	Potential	Potential	Potential		Potential	Potential	Potential
Small Shipyard Grant					Applicable	Applicable	Applicable	Potential	Potential									
Boating Infrastructure Grant																		

FUNDING SOURCES

CITY OF VALDEZ CIP

Administrator: City of Valdez

Eligibility: City of Valdez

Use of Funds: The City of Valdez has a variety of funding options available to support a capital improvement plan, including property tax revenues. A concept that has garnered attention in other areas – "value capture" – involves collecting additional revenue from those most benefiting from a development. The most common mechanism for "value capture" is a temporary property tax increase on the land value of lots adjacent to infrastructure development.

COMMERCIAL PASSENGER EXCISE TAX

Administrator: City of Valdez

Eligibility: Local governments receiving cruise ship port calls

Use of Funds: The State of Alaska collects a head tax of $34.50 per passenger on large (250+ berths) cruise ships operating in the state. Of that, $5 per passenger is distributed to the first seven ports of call in Alaska. These funds may be used on port facilities, harbor infrastructure, and other services that support the cruise ships calling on a community. Use of these funds has been the subject of recent lawsuits.

ADOT&PF CIP

Administrator: Alaska Department of Transportation and Public Facilities

Eligibility: Alaska Department of Transportation and Public Facilities (ADOT&PF) manages these funds

Use of Funds: ADOT&PF Capital Improvement Program works with three main streams of funding for transportation projects in the State of Alaska: federal highway funds, other federal funds, and state capital budget funds.

GENERAL OBLIGATION BONDS

Administrator: Alaska Municipal Bond Bank Authority

Eligibility: Alaska municipalities, joint action agencies, and regional health organizations.

Use of Funds: Alaska Municipal Bond Bank Authority (AMBBA) can assist eligible Alaska borrowers with bond financing for capital improvements such as schools, water and sewer systems, public buildings, harbors, and docks. General obligation bonds are backed by a city's taxing authority, such as a local property tax. Completed projects with support from AMBBA are harbor improvements for Seward and Homer.

ALASKA MUNICIPAL HARBORS MATCHING GRANT

Administrator: Alaska Department of Transportation and Public Facilities

Eligibility: Alaska municipalities and regional housing authorities

Use of Funds: This program requires a 50/50 match and can only be used for the construction phase of small boat harbor facilities. Legislative grants to municipalities may not be used for the local match requirement. Maximum state contribution is $5 million per year.

REVENUE BONDS

Administrator: Alaska Municipal Bond Bank Authority

Eligibility: Alaska municipalities, joint action agencies, and regional health organizations.

Use of Funds: AMBBA can assist eligible Alaska borrowers with bond financing for capital improvements such as schools, water and sewer systems, public buildings, harbors, and docks. Revenue bonds are backed by specified revenues from an income-producing project. Completed projects with support from AMBBA are harbor improvements for Seward and Homer.

BETTER UTILIZING INVESTMENTS TO LEVERAGE DEVELOPMENT GRANTS

Administrator: U.S. Department of Transportation

Eligibility: State, local, and tribal governments

Use of Funds: Better Utilizing Investments to Leverage Development (BUILD) grants help fund surface transportation projects such as roads, bridges, transit, rail, port, or intermodal transportation. Half of available funds ($450 million of $900 million) are designated for rural areas of the United States. There is no matching requirement for projects in rural areas. The minimum project award for rural areas is $1 million, and the maximum is $25 million. Selection criteria focus on "safety, economic competitiveness, quality of life, state of good repair, innovation and partnerships with a broad range of stakeholders." Cost-benefit analyses are welcomed but not required; the Department of Transportation recognizes that these analyses are not always possible in the early feasibility stages of the planning process.

CITY OF VALDEZ TEMPORARY BED TAX BALLOT

Administrator: City of Valdez

Eligibility: City of Valdez

Use of Funds: Public accommodation tax revenue – including the option of temporary increase if supported by Valdez residents – is a possible source of funds for waterfront improvements. Improvements that share a nexus with overnight visitors include the dry stack facility, old harbor uplands developments, and recreation improvements in the new harbor and old town areas.

USDA RURAL COMMUNITY FACILITIES DIRECT LOAN & GRANT PROGRAM

Administrator: U.S. Department of Agriculture

Eligibility: Public agencies, non-profit organizations, and tribal entities located in rural areas

Use of Funds: Funds may be used to purchase or construct various types of community facilities, including health care clinics, street improvements, community centers, fire stations, museums, community gardens, and many other types of facilities. Priority is given to communities with fewer than 5,500 residents and/or median household incomes below 80% of the state non-metropolitan median household income. Loans, grants, and loan guarantees are available through this program. Applicants must be unable to finance the project from their own resources and/or through commercial credit at reasonable terms.

ECONOMIC DEVELOPMENT ADMINISTRATION PUBLIC WORKS AND ECONOMIC ADJUSTMENT ASSISTANCE PROGRAM

Administrator: U.S. Economic Development Administration

Eligibility: State, local, and tribal governments and institutions of higher education

Use of Funds: Grants of $600,000 to $3 million are provided under this grant program to "leverage regional assets to support the implementation of regional economic development strategies designed to create jobs, leverage private capital, encourage economic development, and strengthen America's ability to compete in the global marketplace." Grant applications are accepted on a rolling basis.

ALASKA SMALL BUSINESS ECONOMIC DEVELOPMENT LOAN PROGRAM

Administrator: Alaska Department of Commerce, Community, and Economic Development

Eligibility: Small businesses located in Alaska communities with fewer than 30,000 residents

Use of Funds: Loans through this program are to be used to start or expand businesses creating long-term employment, may not exceed $300,000, and must be adequately secured. These loans are designed to step in or supplement in situations where private banks are not willing to fund an entire project.

FUNDING SOURCES CONT'D

STATE OF ALASKA BOATING AND ANGLER ACCESS GRANT PROGRAM

Administrator: Alaska Department of Fish and Game, Sport Fish Division

Eligibility: Typically involve state, federal, and local agencies that manage boating access sites

Use of Funds: Funds for this program derive from federal excise taxes and import duties placed on recreational fishing and boating equipment and supplies – as set up by the Dingell-Johnson Act. This program will cover up to 75% of the cost of an eligible project and requires a 25% non-federal match. Funded projects must primarily benefit the recreational boating and sportfishing public (not primarily benefiting subsistence or commercial fishing users).

RASMUSON FOUNDATION

Administrator: Rasmuson Foundation

Eligibility: Non-profit organizations, as well as local and tribal governments

Use of Funds: This grant program is designed to support capital projects of "demonstrable strategic importance or innovative nature that address issues of broad community or statewide significance." The Foundation specifies that they are rarely the largest or only contributor and generally expect the project will have multiple other funding sources that demonstrate widespread community support. Two different grant programs (Tier 1 and Tier 2) are available, one for grants up to $25,000 and the other for grants of more than $25,000.

PRIVATE OR PUBLIC/PRIVATE PARTNERSHIP INVESTMENT

Administrator: Alaska businesses, state agencies, and communities

Use of Funds: Private enterprise can bring additional financial resources, different cost structures and cultures, and other resources to waterfront projects. Some of the most successful public/private projects in Alaska have been supported by the Alaska Industrial Development and Export Authority (AIDEA). AIDEA supports economic activity in Alaska by providing loan guarantees, conduit revenue bonds, and participation in infrastructure projects (wholly or partially owned by AIDEA). Current port-related projects owned by AIDEA and leased to the private operators include the Skagway Ore Terminal, Ketchikan Shipyard, and the Delong Mountain Transportation System (connecting the Red Dog Mine to export markets).

FEDERAL LANDS ACCESS PROGRAM

Administrator: U.S. Department of Transportation

Eligibility: Unrestricted

Use of Funds: Federal Lands Access Program (FLAP) funds support projects that improve access to federal lands. Funding is provided to states via a specified formula. FLAP projects in Alaska typically involve trailhead, boat launch, road, and/or trail improvements.

USER FEES/ADMINISTRATIVE FEE OR FINES

Administrator: City of Valdez

Use of Funds: Revenues from various port, harbor, boat launch, boat yard, lease, and other fees are currently used in Valdez to support the operations and maintenance of various community facilities. These and other fees can be regularly revisited to ensure they are working for the community. Harbor fees are currently undergoing a multiyear increase, for example, to come closer to parity with fees at other PWS harbors. Operations of many of the facilities envisioned in this master plan would likely be supported largely by user fees.

CLEAN VESSEL ACT GRANT

Administrator: U.S. Fish and Wildlife Service

Eligibility: States, often in partnership with local governments or private marinas

Use of Funds: Funds for this program derive from federal excise taxes and import duties placed on recreational fishing and boating equipment and supplies (Dingell-Johnson Act funds). Clean Vessel Act grants fund building, operating, and maintaining sewage pumpout stations that benefit recreational boaters. Related educational programs also qualify. A 25% non-federal match is required.

USACE SECTION 107 DREDGE GRANTS

Administrator: U.S. Army Corps of Engineers

Eligibility: State and local governments

Use of Funds: The Army Corps provides funding for boat harbor and channel dredging through the Section 107 Small Navigation Projects program. Section 107 projects require a local match of 0 to 50% for the study phase and 10% for design and implementation phases. The maximum federal expenditure per project is $10 million.

TRANSPORTATION INFRASTRUCTURE FINANCE AND INNOVATION ACT RURAL PROJECT INITIATIVE

Administrator: U.S. Department of Transportation (DOT)

Eligibility: State and local governments, among other private and public entities

Use of Funds: The goal of DOT's Rural Project Initiative is to make Transportation Infrastructure Finance and Innovation Act (TIFIA) financing more accessible to small communities (<150,000 residents) to support projects between $10- and $75-million in cost. Eligible projects include sea ports, bridges, freight transfer facilities, and roads connecting ports to the National Highway System (intermodal connectors), among other types of transportation infrastructure. Selected projects can access loans for up to 49% of project cost at fixed, low interest rates (e.g. 1.07% for loans closed in fall 2019). Application fees can be covered as well.

SMALL SHIPYARD GRANT

Administrator: U.S. DOT Maritime Administration

Eligibility: Shipyard facilities serving commercial vessels greater than 40 ft in length and employing not more than 1,200 production workers.

Use of Funds: The Maritime Administration's Small Shipyard Grant Program funds capital and related improvements at small shipyards with the goal of fostering efficient operations and quality ship construction and repair. Grants can also be used to provide training for workers in shipbuilding, ship repair, and associated industries. Grants are capped at 75 percent of the project's estimated cost. Previous rounds of funding have supported 8-20 projects with an average grant amount of about $1 million.

BOATING INFRASTRUCTURE GRANT

Administrator: U.S.. Fish and Wildlife Service

Eligibility: States, often in partnership with local governments or private marinas.

Use of Funds: Funds for this program derive from federal excise taxes and import duties placed on recreational fishing and boating equipment and supplies (Dingell-Johnson Act funds). Grants of up to $200,000 annually are provided to projects selected under Tier One (non-competitive) and no cap is specified for Tier Two projects (selected through a national competition). Projects funded by Boating Infrastructure Grant (BIG) grants focus on construction, renovation, and maintenance of tie-up facilities benefiting transient boaters in vessels 26 ft or more in length.

4

Appendices

FOURTEEN OVERALL SITES

1. Small Boat Harbor
2. Sea Otter Park
3. New Harbor Uplands
4. Old Town
5. Valdez Container Terminal
6. Shoop Bay - Mineral Creek
7. Harbor Cove
8. Duck Flats
9. Meals Hill
10. Loop Road
11. Kelsey Dock Uplands
12. Dayville Road
13. Robe Lake
14. Anderson Bay

1.0 SMALL BOAT HARBOR

- Kobuk widening and harbor flushing
- Expanded laydown yard
- Sheet pile north side
- Sheet pile south side
- Underground the power lines

2.0 SEA OTTER PARK

- Recreational fishing pier
- Public waterfront access
- Commercial business lease space
- Fill in additional tide lands to increase footprint
- Additional fish processing facilities
- Park strip

3.0 NEW HARBOR UPLANDS

- Ice plant
- Commercial business lease space
- Dry stack
- Remove the rest of Hotel Hill
- Viewing area at top of Hotel Hill

4.0 OLD TOWN

- Marine railway and travel lift system
- Ship repair, maintenance, inspection, and demolition
- Barge landing
- Marine industrial lease
- Railcar off-load facility
- Tourism interpretive Old Town
- Foreign Trade Zone manufacturing and storage

5.0 VALDEZ CONTAINER TERMINAL

- Fill in truck staging area near entrance
- Underground the powerlines
- Additional fill around the scalehouse
- Electrical system upgrades 2nd system, additional plugs
- Barge landing improvements
- Expanded dockage
- Spur road Eagle Drive

6.0 SHOOP BAY - MINERAL CREEK

- Kayak launches
- Non-motorized recreational trails and nature viewing
- Erosion control
- Waterfront park space and access
- Elevated nature trails and trail network improvements

7.0 HARBOR COVE

- Kayak launching site
- Kayak rack storage
- Future boat harbor
- Sea plane dock

8.0 DUCK FLATS

- Wetland conservation and future mitigation areas
- Improved parking and pull-off areas
- Boardwalks and public nature viewing

9.0 MEALS HILL

- Outdoor trails and recreation
- Hike-in camping areas
- Conservation / Land Trust
- Private housing development
- Conservation / Land Trust

10.0 LOOP ROAD

- Transient vessel launch facility
- Paddle sport launch
- Waterfront park and recreation area

11.0 KELSEY DOCK UPLANDS

- Port offices
- Waterfront retail
- Farmers market
- Interpretive center
- Improved kayak launch
- Paddle vessel storage
- Amphitheater, pavilion, event space

12.0 DAYVILLE ROAD

- Retail space
- Accessibility improvements
- RV dump site
- Refinery dockage and barge landing
- Fishing pier
- Transient vessel launch ramps

13.0 ROBE LAKE

- Transient vessel launch facility
- Paddle sport launch
- Waterfront park and recreation area
- Float plane dock
- Salmon enhancement dredge
- Elevated walkways and nature viewing
- L93 float plane base - Dean Cummings (name change)

14.0 ANDERSON BAY

- Future site for oil and gas development

DRY STACK DESIGN NARRATIVE

PRELIMINARY CODE ANALYSIS

Authority Having Jurisdiction:

State of Alaska Fire Marshall

- City of Valdez Planning and Zoning Department

Owner: City of Valdez

Legal Description: TBD

Project Address: TBD

Applicable Codes:

- 2012 IBC
- 2017 NFPA 70: National Electrical Code
- 2017 National Electrical Safety Code
- 2015 Uniform Plumbing Code
- 2012 International Mechanical Code
- 2012 International Fuel Gas Code

Building Information:

Building Area: 16,560 sf

- Building Height: 59 ft to roof ridge, 48 ft at eaves

Occupancy Type: S-1 (dry boat storage – indoor)

Allowable Building Height:

2 stories (55 ft)

- 504.2: sprinkler increases building height by 20 ft
- Total Allowable Building Height: 75 ft

Allowable Building Area: 17,500 sf

- 300% area increase by including sprinklers in single-story building
- Total Allowable Building Area: 52,500 sf

Construction Type: Type IIB

Fire Protection Systems: occupancy type S-1 fire area exceeds 12,000 sf, sprinklers are required

Occupant Load: Function of Space: 500G-sf/occupant: 33 occupants

Plumbing Fixtures: Adjacent building has adequate plumbing fixtures to accommodate occupant load and consequent fixtures load from new boat storage facility.

Water Closets: 1 male, 1 female

- Lavatories: 1 male, 1 female
- Drinking Fountain
- 1 Service Sink

PRELIMINARY SPECIFICATION WORKBOOK

Div. 00 – Procurement and Contracting Requirements

- To be determined

Div. 01 – General Requirements

- Per City of Valdez standard specifications

Div. 02 – Existing Conditions

- Existing conditions assessment
- Geotechnical survey
- Allowance for site remediation
- Misc. demolition and clearing

Div. 03 – Concrete

- Slab on grade
- Concrete foundations

Div. 04 – Masonry

- Not applicable

Div. 05 – Metals

- Structural steel frame/pre-engineered metal building
- Metal roof decking (if required by structural steel frame design)

Div. 06 – Woods, Plastics, Components

- Wood blocking at boat slips
- Misc. rough carpentry

Div. 07 – Thermal and Moisture Protection

- Foundation waterproofing
- Underslab vapor retarder
- Insulated metal panel (wall assembly)
- Translucent wall panels
- Fiberglass insulation below roof assembly
- Metal roofing panels
- Translucent roofing panels (skylights)
- Misc. metal flashing

Div. 08 – Openings

- 16-ft-wide x 30-ft-high insulation overhead doors
- Hollow metal man doors at building perimeter (2)
- Door hardware

Div. 09 – Finishes

- Misc. interior painting
- Fiberglass-faced gypsum board at interior mechanical/electrical room
- Non-load-bearing interior metal stud framing
- Misc. metal stud blocking
- Concrete slab on grade sealer

Div. 10 – Specialties

- Fire extinguishers per code requirements

Div. 11 – Equipment

- Boat forklift

Div. 12 – Furnishing

- Not applicable

Div. 21 – Fire Suppression

- Sprinkler system designed in accordance with NFPA 13

Div. 22 – Plumbing

- Facility trench drains
- Water service to building, hose bibs for misc. cleaning

Div. 23 – Heating, Ventilating, and Air Conditioning

- Unit heaters

Div. 26 – Electrical

High bay lighting

- Exterior lighting at building perimeter

Div. 31 – Earthwork

- Site clearing, excavation, grading

Div. 32 – Site Improvements

- Misc. landscaping

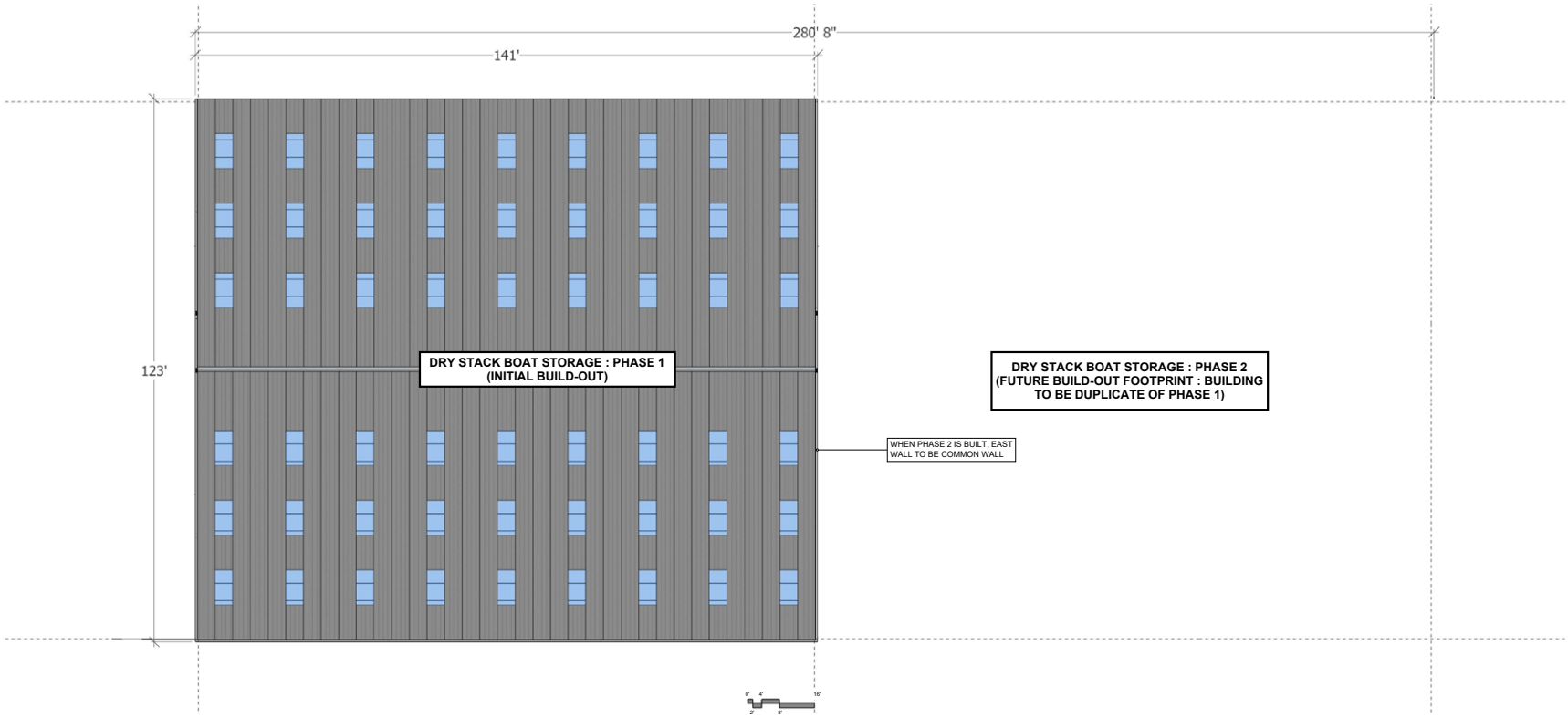
Div. 33 – Utilities

- Municipal power and water service extended to building

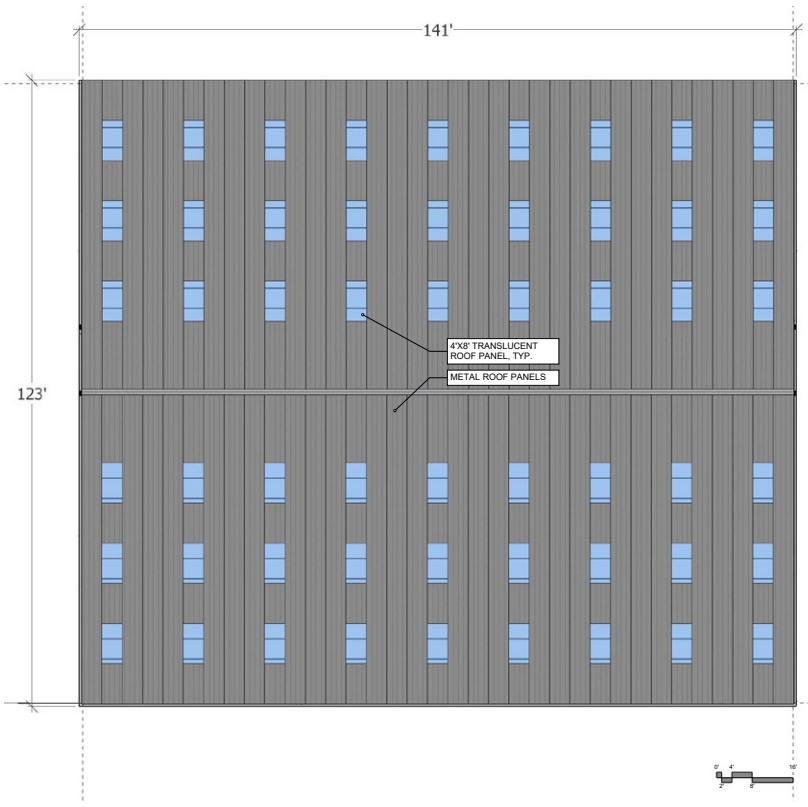
DRY STACK DESIGN DRAWINGS

ECI

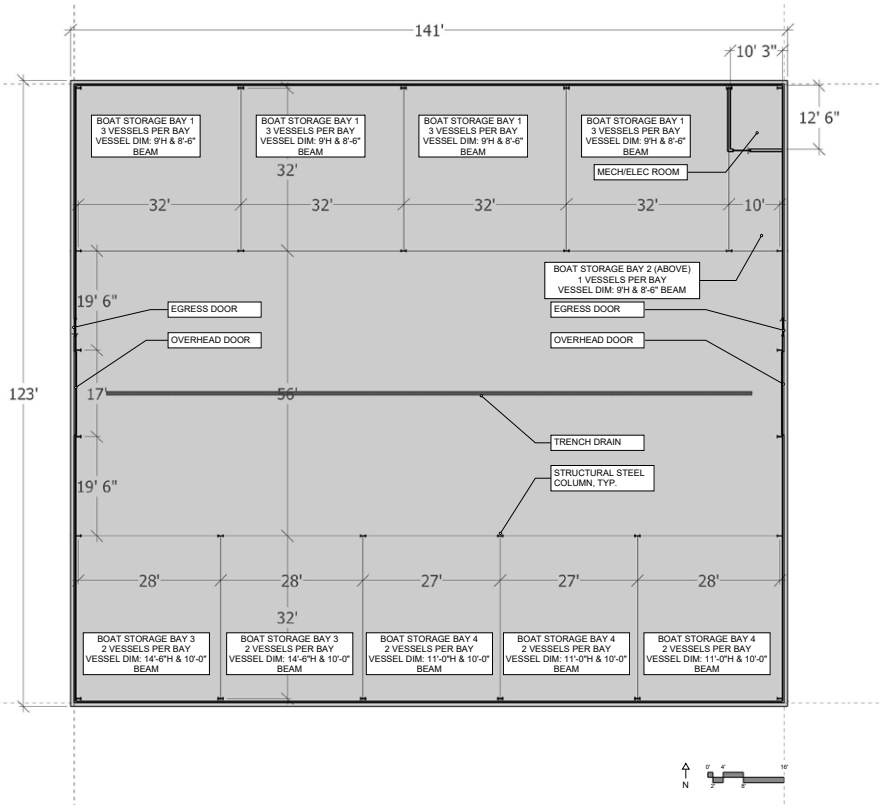
CITY OF VALDEZ : WATERFRONT MASTER PLAN
DRY STACK BOAT STORAGE : CONCEPT DESIGN DOCUMENTS : 09.05.2019



DRY STACK BOAT STORAGE : SITE PLAN



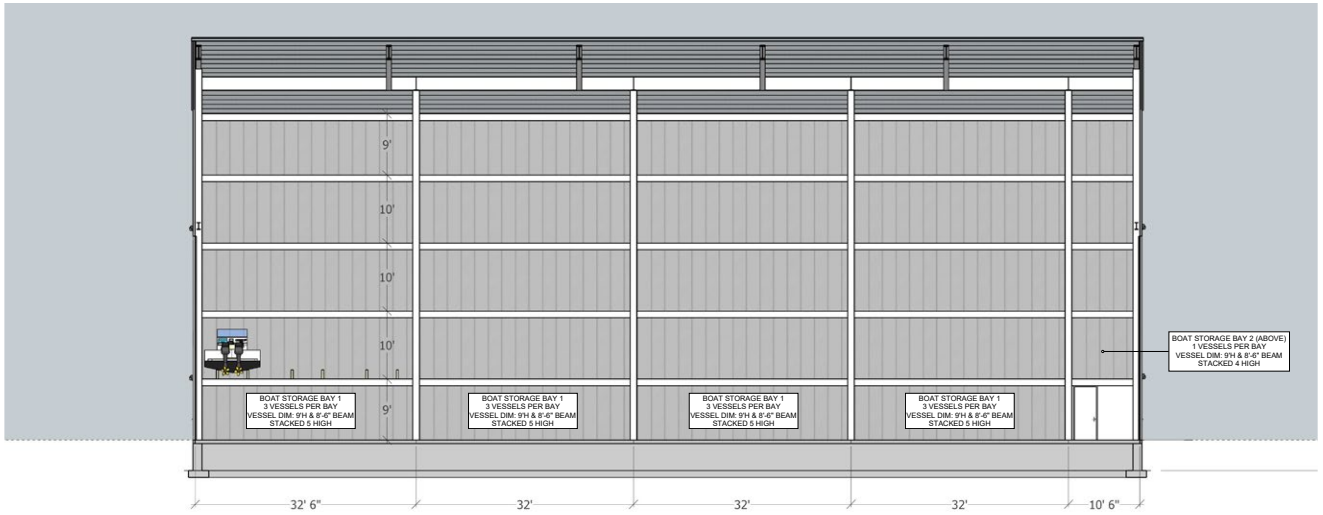
ROOF PLAN



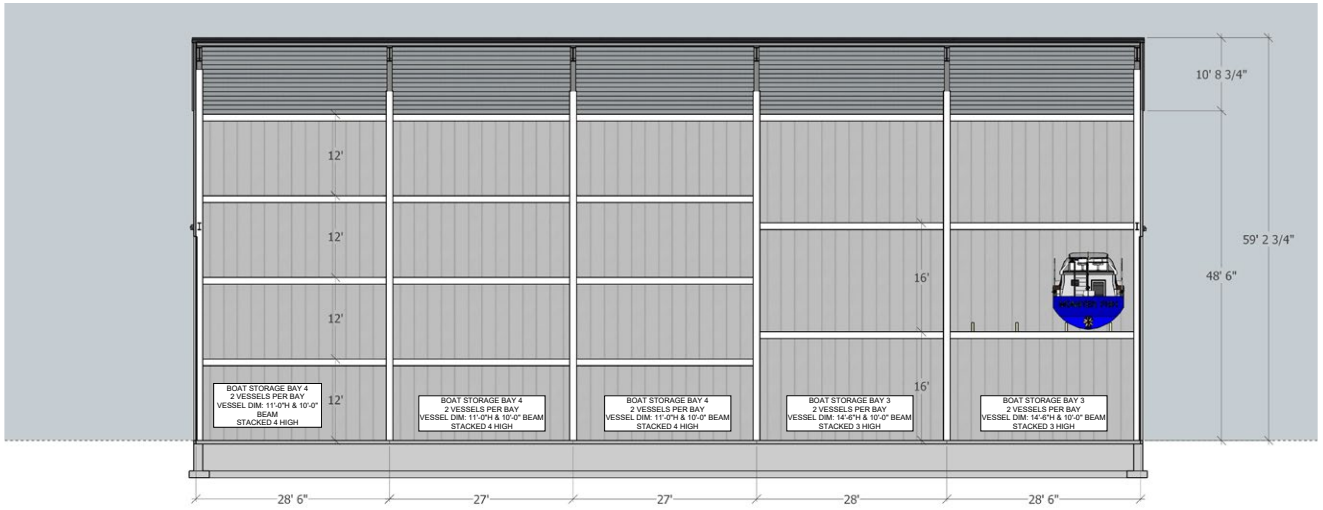
FLOOR PLAN

DRY STACK BOAT STORAGE - FLOOR PLAN

DRY STACK DESIGN DRAWINGS CONT'D

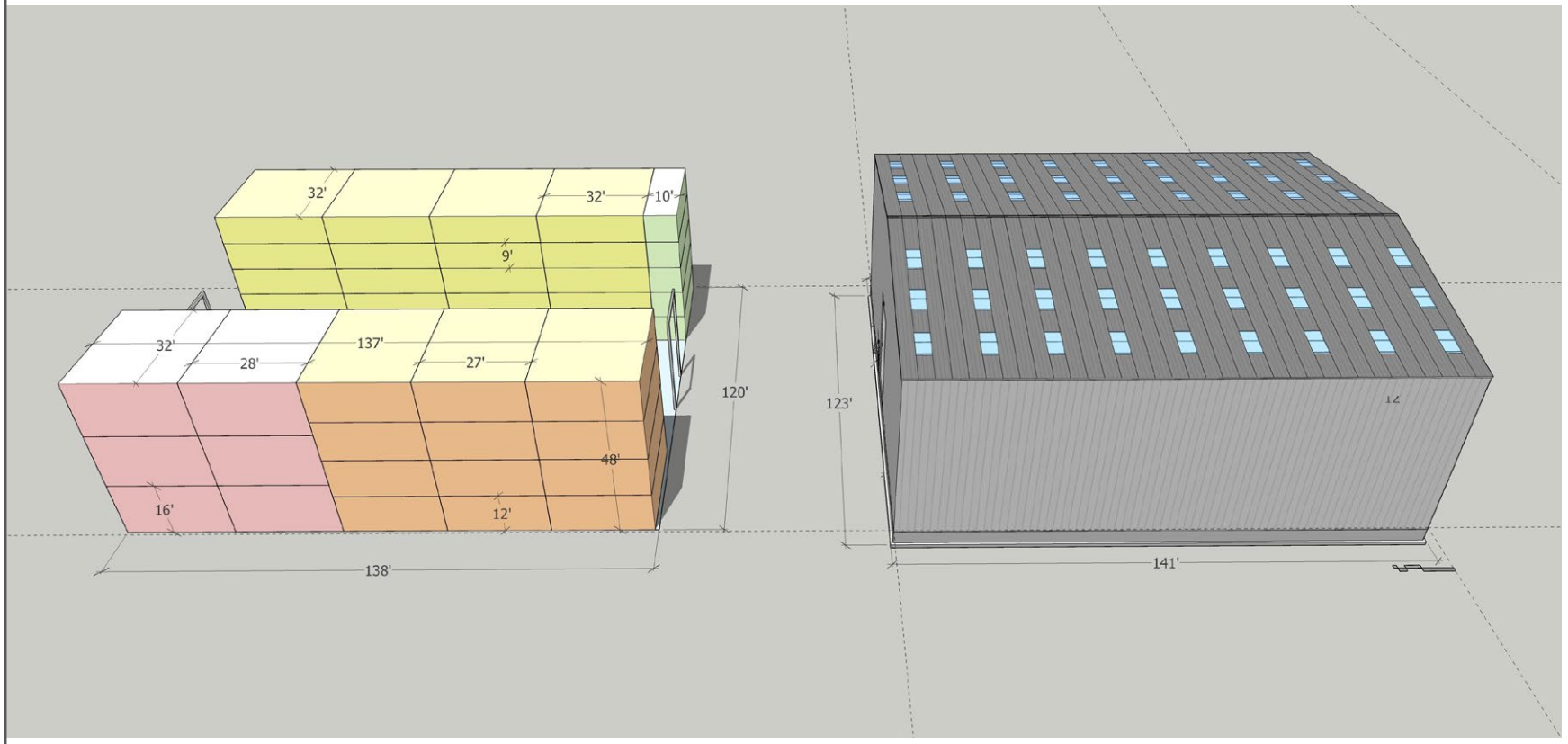


BUILDING SECTION - LOOKING SOUTH



BUILDING SECTION - LOOKING NORTH

DRY STACK BOAT STORAGE - BUILDING SECTIONS



GRAPHIC LEGEND

- BOAT STORAGE BAY 1 : 3 VESSELS PER BAY : VESSEL DIM: 9'H & 8'-6" BEAM : STACKED 5 HIGH
- BOAT STORAGE BAY 2 : 1 VESSELS PER BAY : VESSEL DIM: 9'H & 8'-6" BEAM : STACKED 4 HIGH
- BOAT STORAGE BAY 3 : 2 VESSELS PER BAY : VESSEL DIM: 14'-6"H & 10'-0" BEAM : STACKED 3 HIGH
- BOAT STORAGE BAY 4 : 2 VESSELS PER BAY : VESSEL DIM: 11'-0"H & 10'-0" BEAM : STACKED 4 HIGH

DRY STACK BOAT STORAGE - PROGRAMMING DIAGRAM

DRY STACK DESIGN DRAWINGS CONT'D

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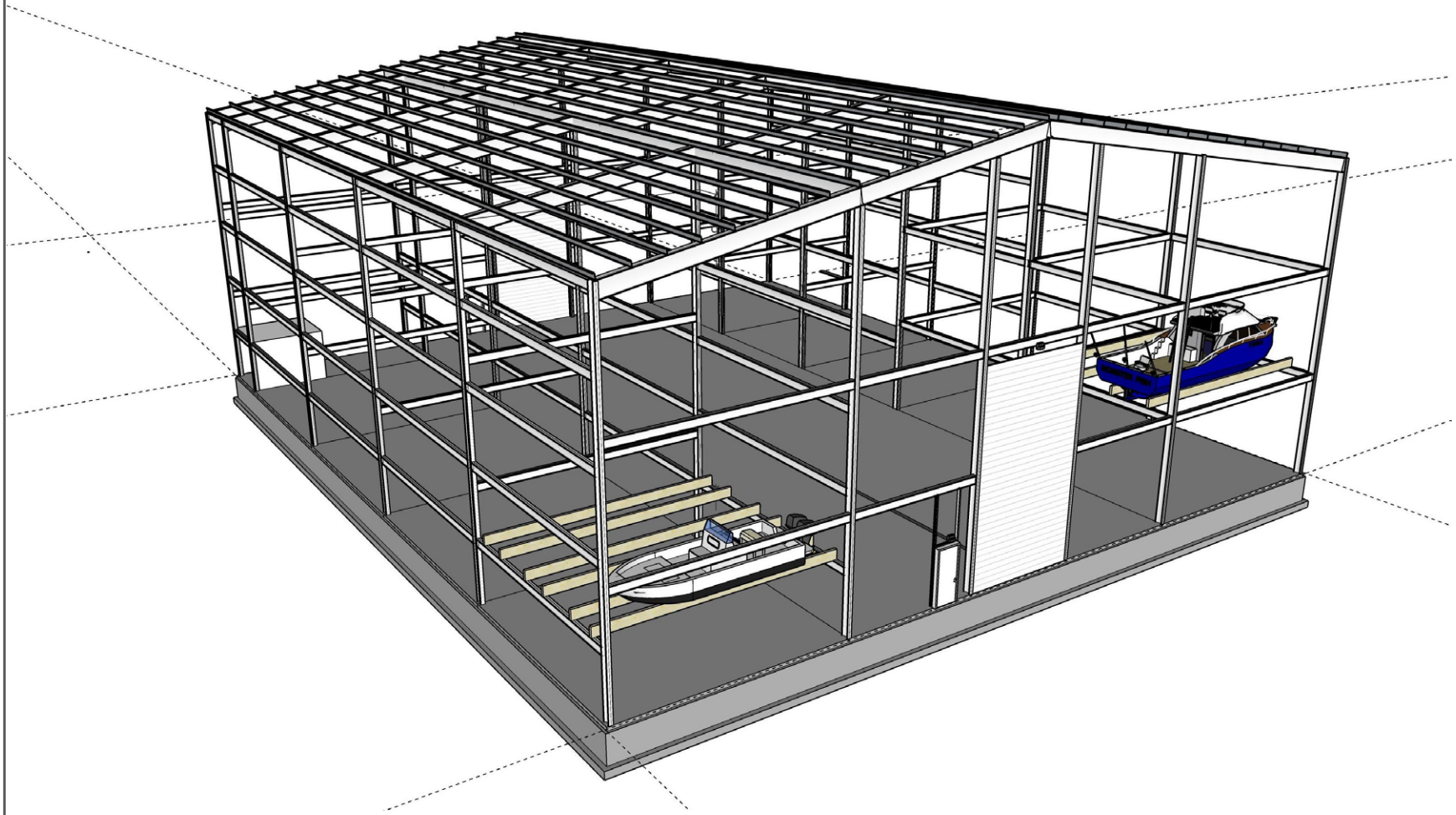
CITY OF VALDEZ : WATERFRONT MASTER PLAN
DRY STACK BOAT STORAGE : CONCEPT DESIGN DOCUMENTS : 09.05.2019



DRY STACK BOAT STORAGE - STRUCTURAL FRAMING PERSPECTIVE

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DRY STACK FEASIBILITY ASSESSMENT

OVERVIEW

A dry stacking facility is a covered building with metal racks providing secure (often heated) vessel storage. A dry stack boat storage facility in Valdez would provide a safe and secure storage option for vessel owners in the community and for those that frequently visit Valdez. Absentee owners would no longer worry about the status of their vessel or pay for a boat watch and snow removal service. Additionally, transportation expenses could be reduced for vessel owners trailering to Valdez from out of town multiple times each season. Dry storage also reduces maintenance expenses and protects the vessel from degradation caused by sun, inclement weather, soot from oil stoves, birds, and other animals.

Patrons of a dry stack facility notify, in advance, facility staff of their anticipated arrival. To launch, a vessel is lifted from the rack and transported via specialized forklift to the launch ramp where it is placed directly in the water. An attendant secures the vessel to a queuing float, where the vessel is tied until the owner's arrival. Upon return, the owner secures the vessel at the queuing float. Facility staff lift the vessel from the saltwater, wash it down with fresh water, then move it into the building where it is stacked and stored until its next use.

Most facilities examined for this study are capable of stacking vessels up to 32 ft Length Over All (LOA), although there are facilities that stack larger vessels. Vessels may be stacked five levels high, depending on the vertical clearance of the boat.

FACILITY SIZE AND CONFIGURATION

A variety of potential facility sizes were examined for this study, with capacities ranging from 78 to 200 vessels of various LOA combinations up to 40 ft. Preliminary construction cost and revenue analyses were completed for a variety of facility sizes and configurations. Ultimately, two dry stack facilities – with capacity for 100 and 200 vessels up to 32 ft LOA – were identified for more detailed analysis.

Facilities that house vessels larger than 32 ft are significantly more costly to construct on a per vessel capacity basis, as larger vessels typically require more overhead space and larger forklifts. Further, because the height of larger vessels can be two or three times that of smaller vessels, the rent per foot for larger vessels would need to be two to three times higher to generate the same revenue as smaller vessels. The market would be unlikely to bear that substantially higher rental rate.

Based on the Valdez harbor waitlist, there may be some demand for dry stack storage for vessels between 33 ft and 40 ft; however, this demand is likely insufficient to justify a facility designed for larger vessels.

Site and operational assumptions

To support this analysis, the following assumptions were made regarding the location of the facility and its operations. These assumptions are common to both facilities analyzed.

Site assumptions include

- The facility would be located adjacent to the new boat harbor.
- There is adequate space for the facility without the removal of Hotel Hill.
- Adequate parking is available for vehicles and trailers of dry stack users.
- The site will accommodate 120/208V 3-phase power, and adequate sewer and water are available.

Facility assumptions include

- Stacking and launching vessels would be done by a specialized negative-drop forklift such as a Wiggins Marina Bull. Launch would be directly from forklift to water; vessel launch would be possible at all tides down to minus 2 ft.
- The facility would be temperature-controlled to about 50 degrees F.

Business operations assumptions include

- Operations would occur seven days per week, 12 hours per day, from about mid-April to mid-September (approximately 22 weeks) with dedicated staff on site. If vessel owners wished to have their vessels ready before hours, they would arrange to have the vessel launched the day before. Conversely, if they return after hours, they would leave the vessel tied to the queuing float for stacking the following day.
- Operations would be minimal from mid-September to early April. Regular harbor staff would launch vessels by appointment during this period.
- Vessel space would only be leased on an annual basis (no seasonal lease arrangements).
- The operation would provide freshwater washdown of vessels prior to storage.
- There is adequate transient space in the harbor to provide overnight moorage for dry stack users that return to the harbor each night while boating.

100-VESSEL FACILITY

A 100-vessel facility – a fully enclosed metal building on a concrete pad, with pre-engineered metal racking – would measure 120-ft x 138-ft. The eave height would be 48 ft. As currently designed, this facility would accommodate the following number of vessels by size:

- 65 vessels up to 30-ft LOA with a maximum height of 9 ft and beam of about 8.5 ft (stacked five high),
- 23 vessels up to 32-ft LOA with a maximum height of 11 ft and beam of about 10 ft (stacked four high).
- 12 vessels up to 32-ft LOA with a maximum height of 14.5 ft and beam of about 10 ft (stacked three high)

There is some flexibility to adjust these height and width configurations and remain consistent with the capital and operating costs presented below. Maximum LOA (all space filled to length) would be 3,130 ft.

Capital costs

The total cost of facility and infrastructure construction is estimated at $12.3 million, including site prep, infrastructure, construction, and associated costs and equipment. This includes about $2.5 million for site infrastructure, $8.7 million for construction (including design, permitting, site prep, and contingency), and $1.1 million for equipment. These are preliminary estimates based on similarly sized buildings in Alaska. Actual costs may vary based on final design.

Table 1: Estimated Capital Costs for 100-Vessel Dry Stack Facility

CATEGORY		COST
Infrastructure		
Dredging		$1,600,000
Bulkhead		$650,000
Float/gangway		$250,000
Total Infrastructure		$2,500,000
Facility Construction		
Site prep, pad, building, racks		$6,200,000
Engineering, permits, CA, PM	20%	$1,240,000
Contingency	20%	$1,240,000
Total Facility		$8,680,000
Equipment		
Forklifts (x2)		$1,000,000
Other equipment		$110,000
Total Equipment		
Estimated Grand Total		$12,280,000

Source: ECI and McDowell Group estimates. Figures have been rounded

Estimated operational expenses

Annual operating expenses for a 100-vessel facility are estimated at $420,000.

Labor Expense

The largest annual operating expense is for staffing. Payroll and benefits are estimated at $180,000, or about 43% of total annual expenses. Staffing costs are based on spring, summer, and early fall season lasting approximately 22 weeks with the facility operating from 7am to 7pm, seven days per week. Facility staff would include two full-time and one part-time equipment operators working a total of 112 hours per week, with one operator on duty at all times. Other staff include two positions working a total of 56 hours per week. Based on current Valdez rates, the operator's compensation would be about $48 per hour including benefits; the rate for other labor is about $20 per hour including benefits. Facility maintenance personnel expense is estimated at $35,000 to cover maintenance needs beyond the capability of regular staff. This position could be contracted out or be shared with other harbor operations.

Utilities

Utilities costs, including electricity and heating oil, are based on estimated annual per sf costs of $2.20 and $3.30, respectively, and would total approximately $93,000 annually. Water, sewer, trash, and internet expenses are included in the "all other" category.

Facility and Equipment

Facility and equipment maintenance costs (non-labor) are anticipated to total approximately $37,000 annually.

All Other Costs

Other costs include supplies ($18,000), snow removal and landscaping ($12,000), insurance ($11,000), marketing ($5,000), janitorial ($4,000), and a catch-all category of $25,000 to cover other expenses.

Table 2: Estimated Annual Operating Expenses

CATEGORY	COST
Operations staff	$180,000
Maintenance staff	$35,000
Insurance	$11,000
Electric	$38,000
Heating oil	$55,000
Janitorial	$4,000
Building repairs and maintenance	$22,000
Forklift repairs and maintenance	$15,000
Supplies and parts	$18,000
Snow removal/landscaping	$12,000
Marketing	$5,000
All other	$25,000
Estimated Grand Total	$420,000

Source: ECI and McDowell Group estimates.

DRY STACK FEASIBILITY ASSESSMENT CONT'D

Revenue potential

The following analysis indicates revenue potential at various lease rates. Estimates assume the facility is 100% occupied.

Estimated Rental Rates

As a basis for rate comparisons, the Valdez Harbor 2019 annual tenant wet slip rate is $43.82 per foot LOA. For purposes of this analysis, the current wet slip rate is rounded to $44.00. Applying various percentage increases (25% to 225%) to the $44 base rate provides the revenue projections shown in the Table 3. Dry stack rental rates lower than $143 per foot LOA would not generate enough revenue to cover the facility's estimated annual operating expenses of about $420,000.

Table 3: Revenue Potential by Total Average Vessel LOA

% INCREASE ABOVE CURRENT WET SLIP RATE*	DRY STACK LOA ANNUAL RATE/FOOT	AVERAGE TOTAL LOA AT CAPACITY	TOTAL ANNUAL GROSS REVENUE
25%	$55	2,955	$163,000
50%	$66	2,955	$195,000
75%	$77	2,955	$228,000
100%	$88	2,955	$260,000
225%	$143	2,955	$423,000

Source: McDowell Group estimates. *% increase over 2019 annual tenant LOA of $44.00. Assumes 100% annual occupancy. Revenue figures have been rounded.

200-VESSEL FACILITY

A 200-vessel facility would have a footprint of 120-ft x 276-ft and accommodate 130 vessels up to 30-ft LOA and 70 vessels up to 32-ft LOA.

Capital costs

Construction cost for a 200-vessel facility is estimated at $20.5 million, a savings of about 16% over a 100-vessel facility, on a per sf basis. If facility development was phased, first constructing a 100-vessel facility then adding an additional building for another 100 vessels in the future, the estimated overall cost for both facilities would increase slightly to $21 million (in constant dollars).

Operating expenses

Reflecting some economies of scale, operating expenses are estimated to increase by about 50% to $630,000 annually for a 200-vessel facility. The largest expense, payroll and benefits, was adjusted upwards by $20,000.

Revenue potential

A rate of about $100 LOA (130% above current tenant rate) would be required to cover estimated annual operating expenses for a 200-vessel facility.

Table 4: Revenue Potential by Total Average Vessel LOA

% INCREASE ABOVE CURRENT WET SLIP RATE*	DRY STACK LOA ANNUAL RATE/FOOT	AVERAGE TOTAL LOA AT CAPACITY	TOTAL ANNUAL GROSS REVENUE
25%	$55	6,260	$344,000
50%	$66	6,260	$413,000
75%	$77	6,260	$482,000
100%	$88	6,260	$551,000
130%	$101	6,260	$634,000

Source: McDowell Group estimates. *% increase over 2019 annual tenant LOA of $44.00. Assumes 100% annual occupancy. Revenue figures have been rounded.

POTENTIAL DEMAND

There are six potential sources of demand for dry stack storage:

- Current harbor tenants
- Harbor users that purchase an annual transient pass
- Harbor users that purchase one or more monthly transient passes
- Those who frequently purchase daily harbor transient passes
- Launch ramp users not on the waitlist and not falling into the above categories
- Other unknown new demand, such as vessel owners from Anchorage/Whittier who desire the protection of dry stack

The demand for a dry stack storage services in Valdez is uncertain. As of August 2019, there are about 100 vessels 32-ft or smaller on the waitlist. Not all of these vessels would choose a dry stack option, as significantly higher costs versus wet slips would reduce demand. Boat owners would weigh the increased cost of dry stack against the benefits associated with indoor storage. For some, the convenience and security of dry stack would be worth some extra cost; for other more cost-sensitive boaters, their status quo might be preferable.

Current out-of-town users who frequently trailer their vessels to Valdez would factor transportation cost savings into dry stack rental decisions. A pickup truck towing a boat from Fairbanks that makes eight trips annually and spends two days in Valdez per trip incurs costs for fuel, launch fees, and parking estimated at $2,255 annually. The vessel owner would save approximately $1,160 on transportation, parking, and launch fees for a vessel stored in a Valdez dry stack. Dry stack users from Anchorage would see savings of about $985; Mat-Su users would save about $895. These estimates consider travel cost savings only and are not net of dry stack facility rental costs.

Table 5: Estimated Boat Owner Travel Costs

	FAIRBANKS	ANCHORAGE	MAT-SU
With Trailered Vessel			
Fuel round-trip	$1,980	$1,630	$1,450
Annual launch permit	$75	$75	$75
Parking	$200	$1,905	$1,725
Total with vessel	$2,255	$1,905	$1,725
Without Trailered Vessel			
Fuel round-trip	$990	$816	$726
Parking	$105	$104	$104
Total without vessel	$1,095	$920	$830
Estimated annual savings without trailered vessel	**$1,160**	**$985**	**$895**

Source: McDowell Group and ECI estimates. Figures have been rounded.

In summary, actual demand and annual revenues from a dry stack facility will depend on pricing. Rental rates in line with current wet slip rates would result in much greater initial demand and utilization than rates that would be required for the facility to operate on a break-even basis. At current wet slip rates, a dry stack facility with capacity for 100 vessels under 32-ft would likely be substantially or fully utilized within a few years. It would also reduce the number of vessels on the wet slip waiting list. The convenience and security of indoor storage will support rates higher than wet slip rates (which are low in Valdez, relative to Whittier, which also has highway access from population centers), though how much higher is unclear. Rates of $100/foot may be tolerable to the market and over time result in full utilization. Rental rates set at levels necessary for the facility to generate revenues to cover costs (estimated at $143/foot, assuming full utilization) may meet with some market resistance.

While there is almost certainly some existing demand for dry stack in Valdez, it is not possible to place precise estimates on that demand. This facility would be the first of its kind in Alaska. Measuring demand with a greater degree of certainty would require a comprehensive survey of current harbor users and those on the waitlist (such a survey is beyond the scope of this waterfront planning study). The survey would measure interest in the dry stack concept and price sensitivity at various lease rates.

DRY STACK FEASIBILITY ASSESSMENT CONT'D

SUMMARY

Investment in a dry stack might be best considered in the same way as investment in a boat harbor or other public marine infrastructure. The revenue generated by these facilities typically do not provide any direct payback on that investment. Benefits accrue in other ways, such as supporting important economic drivers such as local commercial or charter fishing fleets, attracting non-resident recreational boaters (and their spending), or making the community a more attractive place to live for people who enjoy a marine/boating-oriented lifestyle.

The cost of dry stack construction is significant, but less on a per-boat basis than a new harbor. The cost of new harbor and wet slip construction includes approximately $200,000 per vessel for basin construction and another $53,000 for floats and other infrastructure. The estimated per-vessel cost for dry stack construction is about $122,000 for a 100-vessel facility and about $105,000 for a 200-vessel facility. However, the community carries the cost of a dry stack facility, whereas the United States Army Corps of Engineers (USACE) carries the bulk of harbor development costs. Importantly, Valdez may not receive federal funding for additional harbor development for a decade or more as USACE typically funds new development for regions and communities on a rotational basis.

In addition to funding construction, some ongoing subsidy will be required to support operations of a dry stack facility, at least initially as interest in and demand for space in the facility grows, and perhaps long-term if the market will not bear rates needed for break-even operations.

Recognizing that demand is uncertain, and that demand will be highly correlated with rental rates, a 100-vessel facility has the potential to reach full capacity within a few years of construction at rates perhaps 50% to 75% higher than the current annual wet slip tenant rate. Higher rates mean higher operational cost recovery but slower market capture. With rates about double current wet slip rates required for break-even, some level of ongoing subsidy would be required to cover annual operating costs.

A phased approach, where a 100-vessel facility is constructed first, then expanded as demand warrants, would have less subsidy risk than starting with a 200-vessel facility. There are no significant capital cost savings associated with building a 200-vessel facility initially, compared to a 100-vessel Phase I facility and similarly sized Phase II facility.

A first step in the process of planning for and eventually developing a dry stack facility is to see how well the old and new harbors together satisfy existing demand for slips, refresh the waitlist, then identify remaining need in terms of size and number of vessels. Meantime, a face-to-face intercept survey of boaters could be conducted to quantify interest in dry stack storage and measure price sensitivity for that service.

The community would benefit economically from more vessels ported in Valdez whether in a wet slip or dry stack. Vessel owners purchase fuel, food, beverages, gifts, fishing tackle, and other supplies locally, as well as services for boat maintenance. While some financial support from the City to operate a dry stack facility may be required, it is likely that construction of a dry stack would result in increased boating-related spending in the community and support jobs in businesses that provide goods and services to boat owners.

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