



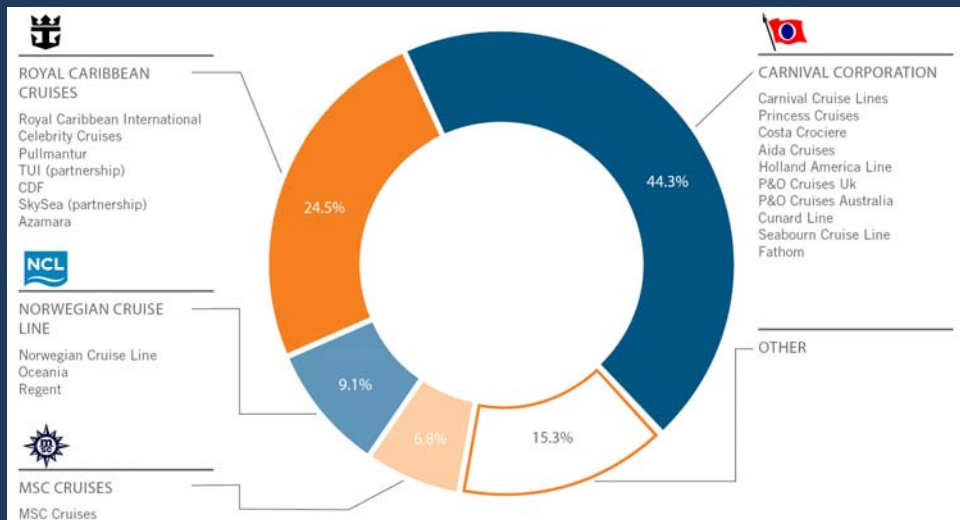
OPEN HOUSE OVERVIEW

- Discuss the global and regional cruise market conditions and implications for Ketchikan
- Present ship types and berthing demand that inform design alternatives
- Offer alternatives for review and discussion that respond to site and market conditions
- Outline recommended short term port improvements
- Outline project next steps and continued opportunity for public involvement



CRUISE INDUSTRY MARKETSHARE

Leading Vessel Conglomerates, Brands, Ships and Lower Berths, 2016



Note: Lower Berth refers to the "lower bed" of a cruise ship cabin as a standard unit for capacity measurement. Cruise ships often run at capacities of greater than total lower berths, using other beds (upper berths) available in some cabins. Sources: CIN and LandDesign, 2016



DEPLOYMENT BY REGION

Total Percentage of Capacity as Measured by Lower Berths, 2016

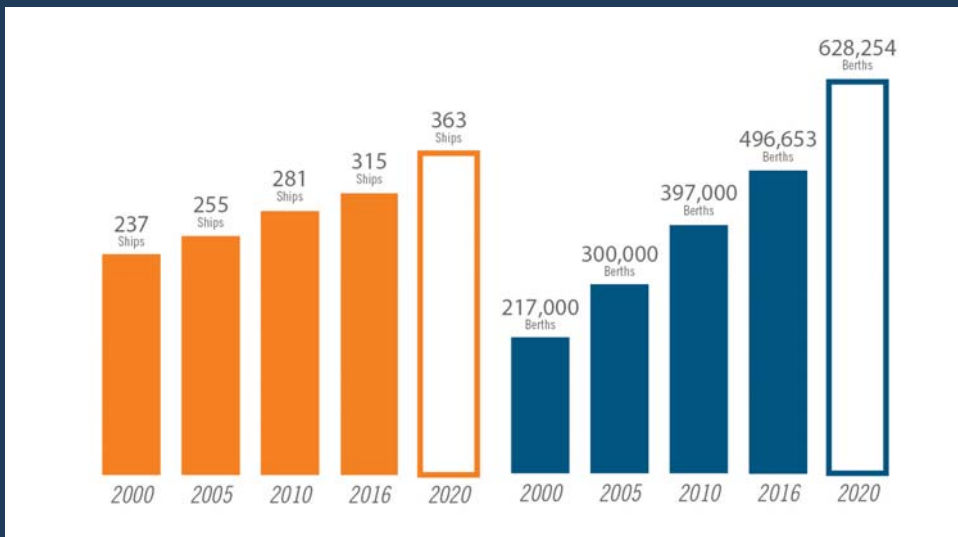


Sources: CIN and LandDesign, 2016



FORECAST OF CRUISE INDUSTRY SUPPLY

As Measured by Total Vessels and Lower Berths, 2016 to 2020



Sources: CIN, CLIA and LandDesign, 2016; *Projections prepared by LandDesign, Inc., 2016

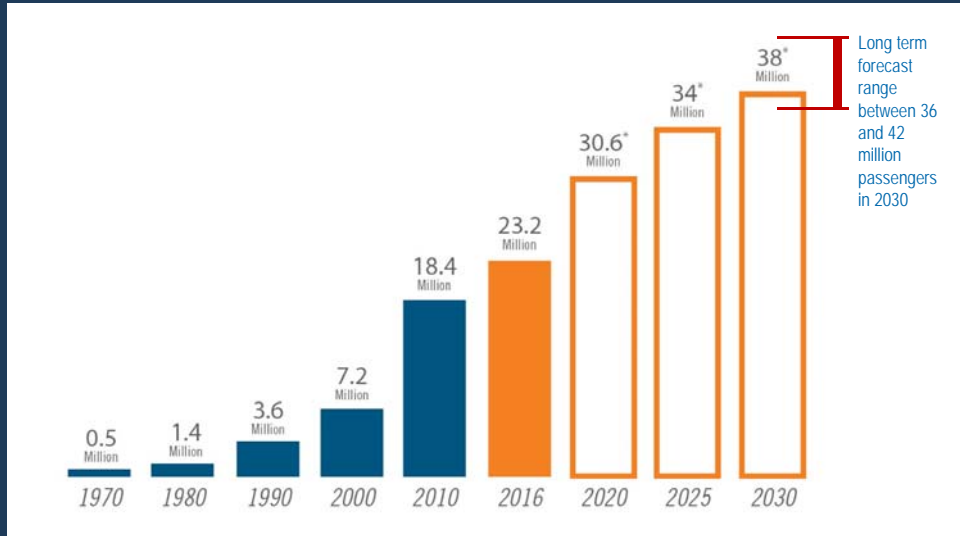
Between 2016 and 2020, the total number of ships is forecast to grow by 15%; total industry supply of lower berths by 25%.

The industry is considered supply lead, where expansion in capacity results in a similar expansion in passenger growth. Thus, expansion to a level of 628,254 berths is expected to lead to significant growth in passengers worldwide.



FORECAST OF WORLDWIDE PASSENGERS

Long Term Forecast of Total Capacity Placement – Low, Medium and High Scenarios



Long term forecast range between 36 and 42 million passengers in 2030

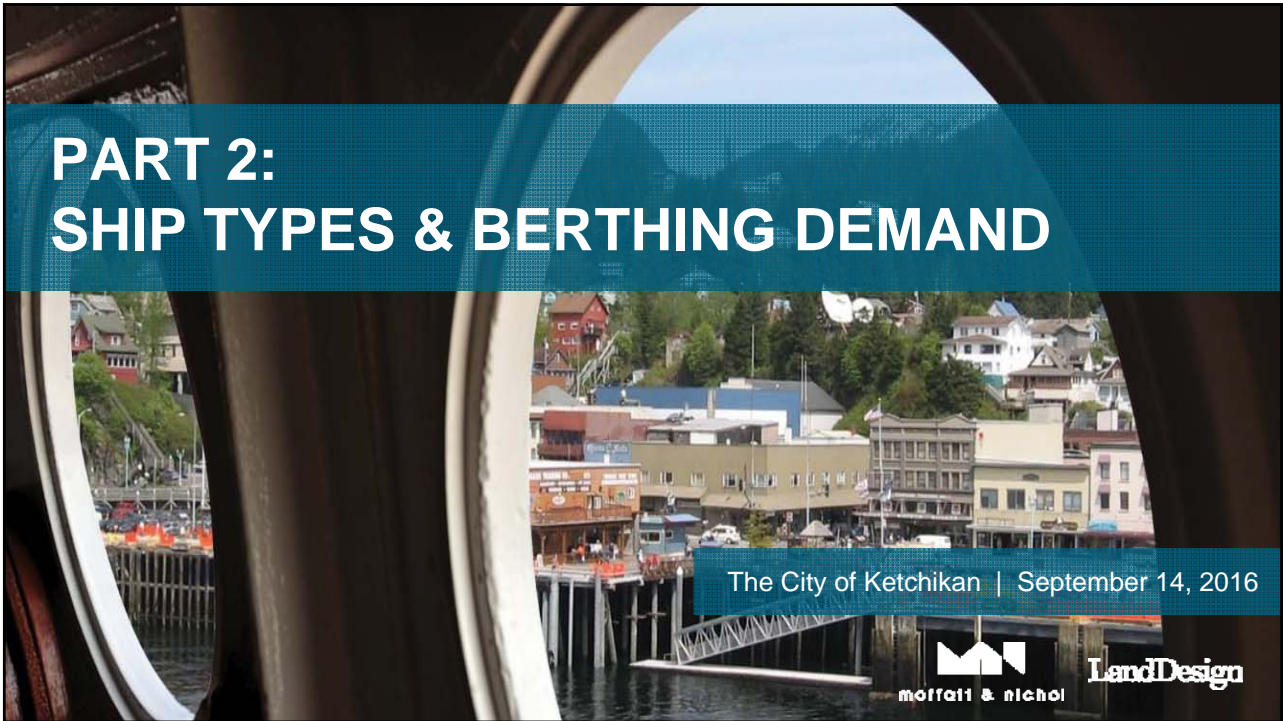
The cruise industry is positioned for continued growth.

Each of the primary elements propelling growth forward over the past 3 decades remains in place. With 59 new ships scheduled for delivery by 2022 and beyond and continued positive industry fundamentals, growth passengers could reach 38 million by 2030 (medium forecast scenario).

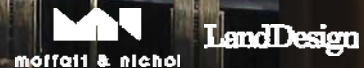
Sources: CIN, CLIA and LandDesign, 2016; *Projections prepared by LandDesign, Inc., 2016.



PART 2: SHIP TYPES & BERTHING DEMAND



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THE ALASKAN REGION

Regional Highlights



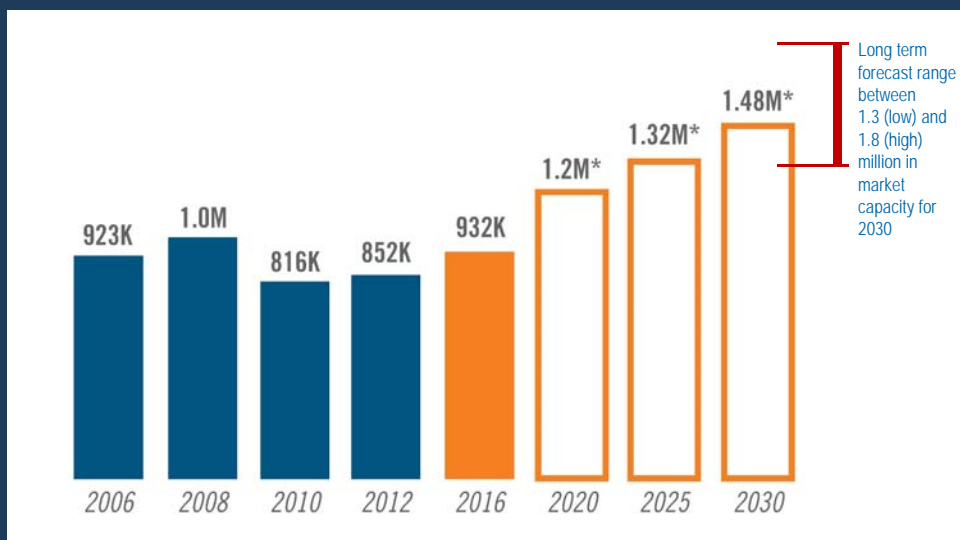
- A** Homeports. Core homeports of Seattle and Vancouver provide primary base of operations for the region. Combined 6 berths / terminals available
- B** Canada's Inside Passage. Growing collection of ports-of-call that add to overall number of places / venues in the region. Ports (including Vancouver) help meet far foreign port requirements for cruises embarking from Seattle, Seward and others. Nanaimo new in 2016.
- C** Core SE Alaska Region. Mainstay ports-of-call (Skagway, Juneau, Ketchikan) and other supporting destinations comprise the primary offer for +/-7-day cruises from Seattle and Vancouver. Mainstay ports welcome over +/-75% of all capacity in the region. New fixed cruise facilities at Hoonah and expanded facilities in Juneau infrastructure expansion highlights of 2015/16.
- D** Northern Alaska. Destinations visited as part of longer, 14-day itineraries and/or open-jaw deployments from Seward.

Sources: CIN, CLIA, CLAA, Cruise Lines Meetings and LandDesign, 2016

LandDesign

FORECAST OF ALASKAN CAPACITY

Long Term Forecast of Total Capacity Placement – Low, Medium and High Scenarios



Long term forecast range between 1.3 (low) and 1.8 (high) million in market capacity for 2030

Forecasts based on market capture levels. Upper levels of forecast are achievable only through homeport expansion (Seattle and Vancouver) and expanded port-of-call facilities throughout SE Alaska.

Sources: CIN, CLIA and LandDesign, 2016; *Projections prepared by LandDesign, Inc., 2016.

metform & mebel
LandDesign

ESSENTIAL QUESTIONS FOR THE REGION

Summary

- Will the size of vessels in the Alaskan region increase, and if so, what design targets should be set for homeports and ports-of-call?
 - *Global market supports the trend toward larger vessels in operations worldwide*
- The Alaska cruise region relies on a balance of infrastructure from a limited number of marquee homeports and ports-of-call. Achieving market demand opportunities hinges on infrastructure inputs growing together.
 - *Can capacity get to the region?*
 - *Can homeports support this capacity, especially on key sailing days of Sat/Sun?*
 - *Can key ports-of-call support this capacity?*

Results from cruise lines interviews strongly support the notion that the region will grow through the incremental replacement of smaller vessels with larger ones. Regional growth will not occur through increases in the number of vessels deployed given the limited number of homeports and ports-of-call.

Sources: CII, CLIA, CLAA, Cruise Lines Meetings and LandDesign, 2016



FUTURE DEPLOYMENT: BALANCED SYSTEM

Regional Highlights



- A** Can capacity get to the region?
- B** Can key homeports support this capacity?
- C** Can key ports-of-call support this capacity?

Sources: CLAA, Cruise Lines Meetings and LandDesign, 2016



VESSELS IN ALASKA: GROWING TODAY

Summary

- Comparison of vessels in the region in 2010 vs. 2016 shows growth of GRT (12.6%), length overall (4.6%) and passenger capacity (16.4%)
- Extrapolating these trends outward to 2030 suggests the *average* vessel in the region could be 129,000 GRT, 1,050 LOA and carry 3500 passengers
- Panama canal opening in June 2016 greatly frees up movement of most of the largest vessels to/from the Caribbean to Alaska
 - *Air draft under the Bridge of the Americas (201 feet) limits Oasis and other very large cruise ships*
- Removal of this barrier builds case for larger vessel placement in Alaska

Sources: CII, CLIA, CLAA, Cruise Lines Meetings and LandDesign, 2016



FUTURE DEPLOYMENT: BALANCED SYSTEM

Regional Highlights



- A** Can capacity get to the region?
Yes, Panama Canal limits minimized.
- B** Can key homeports support this capacity?
- C** Can key ports-of-call support this capacity?

Sources: CLAA, Cruise Lines Meetings and LandDesign, 2016



SEATTLE AND VANCOUVER

Summary

- Seattle’s facilities able to welcome very large vessels
 - Bell Street at Pier 66 berth is 1,600’, with terminal modification / expansion underway; likely homeport for Breakaway / Breakaway-plus vessels
 - Smith Cove at Pier 91 has two berths, both 1,200’ long with upland facilities to support large vessels; able to welcome RCCL larger vessels, including Quantum
 - Study of 4th berth anticipated for 2017
 - Seattle homeporting reliant on touching far foreign-port
- Vancouver also has larger vessel capabilities but with air draft limitations at Lion’s Gate Bridge and Seymour Narrows
 - Canada Place offers a 1,663’ (East) and 1,060’ (West) for larger vessels; terminal operations more constrained

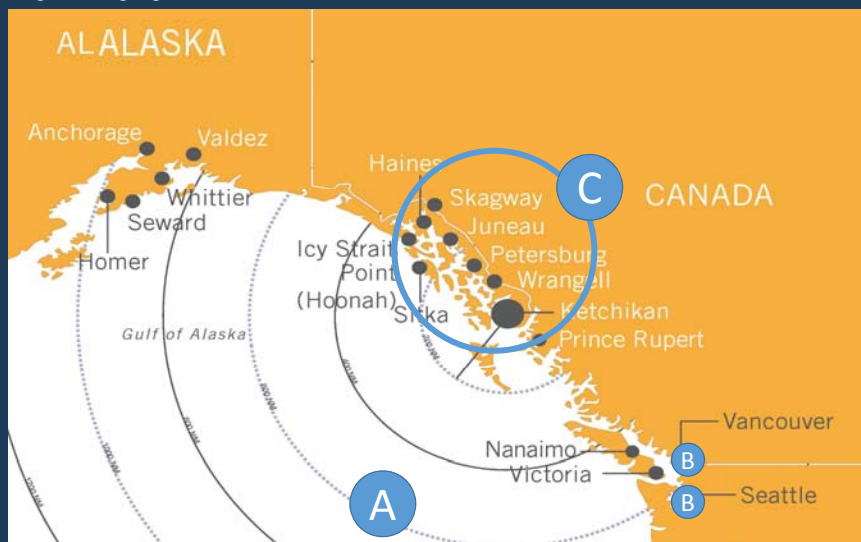


Sources: CCLAA, Cruise Lines Meetings, Port Discussions, and LandDesign, 2016



FUTURE DEPLOYMENT: BALANCED SYSTEM

Regional Highlights



- A** Can capacity get to the region?
Yes, Panama Canal limits minimized.
- B** Can key homeports support this capacity?
Yes, Seattle and Vancouver can accommodate large vessels.
- C** Can key ports-of-call support this capacity?

Sources: CLAA, Cruise Lines Meetings and LandDesign, 2016



SE ALASKA PORTS-OF-CALL

Summary

- Ketchikan, Juneau and Skagway are essential to the equation; their ability to provide similar sized facilities over time has market sway over the long term
 - *Juneau is moving to 1,100' berths; potential exists for one or two existing facilities to move to 1,150'*
 - *Skagway starting to study long term expansion; needs to reach agreement with White Pass and/or build local consensus; potential for expansion*
- Lines suggest 4 large fixed berths plus 1 to 2 tender locations most likely needed for each
- Sitka, Hoonah and other ports beneficial to region overall

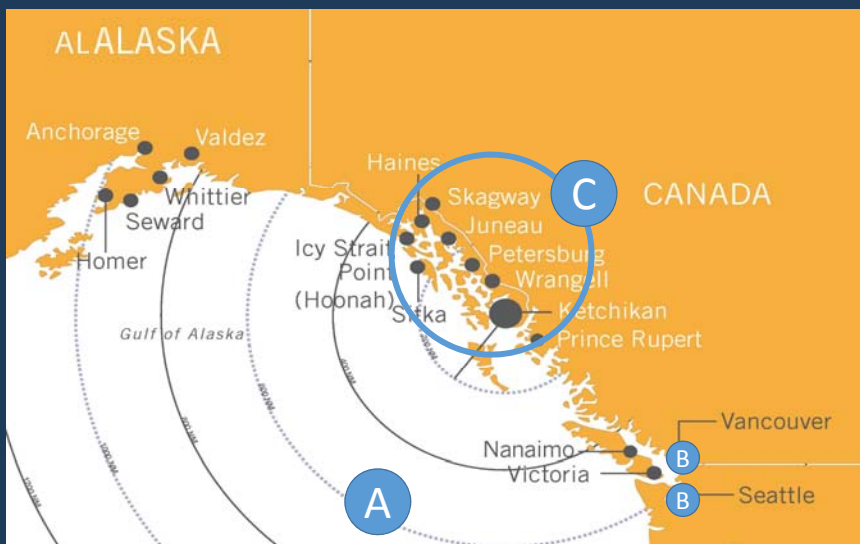


Sources: CLAA, Cruise Lines Meetings, Port Discussions, and LandDesign, 2016



FUTURE DEPLOYMENT: BALANCED SYSTEM

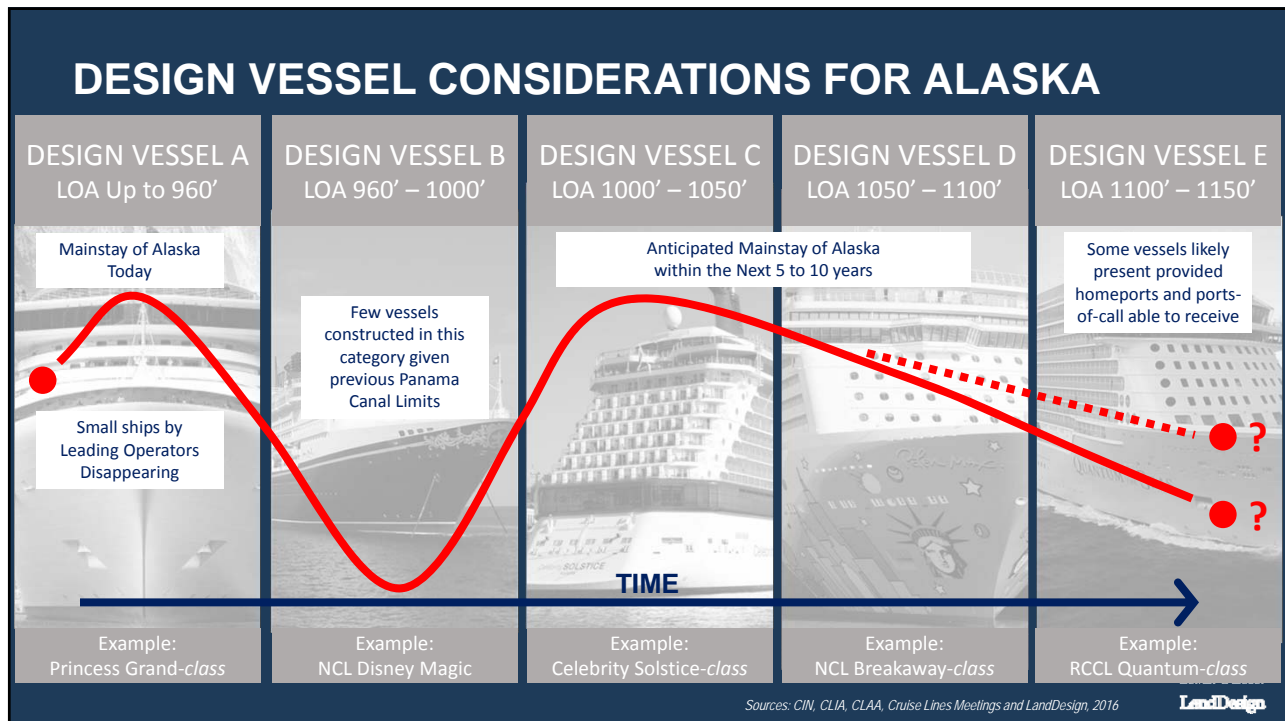
Regional Highlights



- A** Can capacity get to the region?
Yes, Panama Canal limits minimized.
- B** Can key homeports support this capacity?
Yes, Seattle and Vancouver can accommodate large vessels.
- C** Can key ports-of-call support this capacity?
Maybe. Work to be done.

Sources: CLAA, Cruise Lines Meetings and LandDesign, 2016



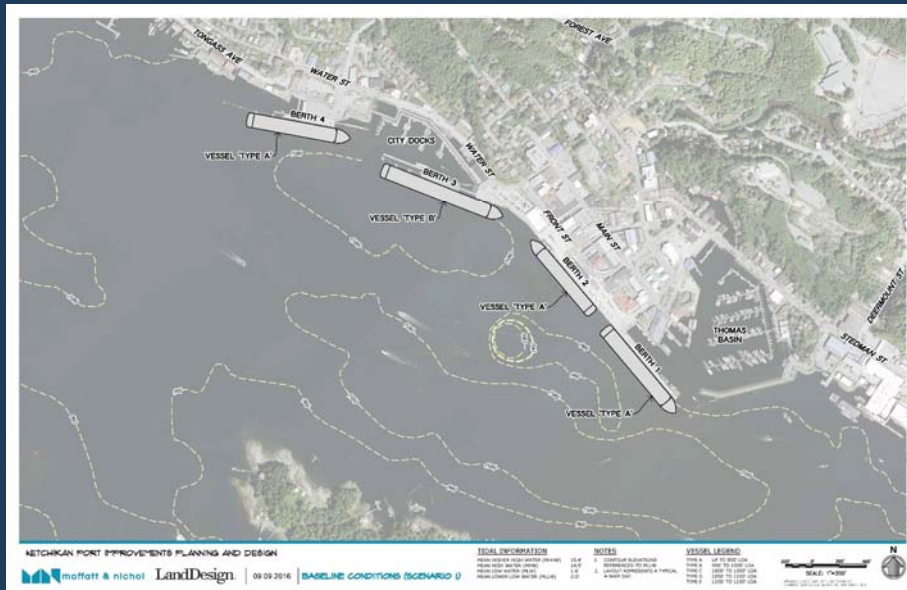


PART 3: KETCHIKAN: TODAY AND TOMORROW

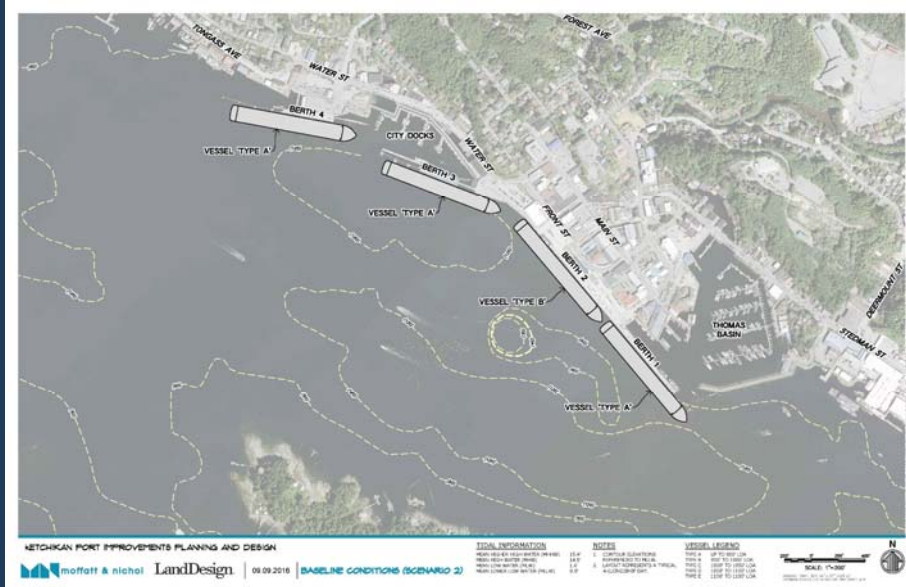
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KETCHIKAN TODAY (BASELINE SCENARIO 1)



KETCHIKAN TODAY (BASELINE SCENARIO 2)



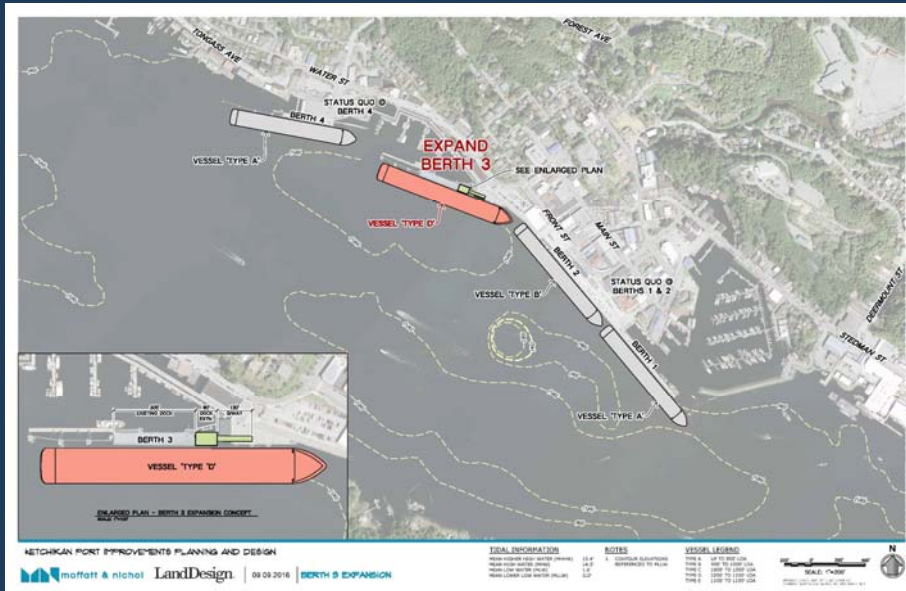
CONSIDERATIONS FOR KETCHIKAN

TODAY	NEAR-TERM 2017-2019	MID-TERM 2020-2023	LONG-TERM 2024 & BEYOND
BERTH 1 Type A / Up to 960'	BERTH 1 Type A / Up to 960'	BERTH 1 Type E / 1100-1150'	BERTH 1 Type E / 1100-1150'
BERTH 2 Type B / 960-1000'	BERTH 2 Type B / 960-1000'	BERTH 2 Type B / 960-1000'	BERTH 2 Type E / 1100-1150'
BERTH 3 Type C / 1,000-1,050'	BERTH 3 Type D / 1050-1100'	BERTH 3 Type D / 1050-1100'	BERTH 3 Type D / 1050-1100'
BERTH 4 Type A / Up to 960'	BERTH 4 Type A / Up to 960' Expansion Ability Unknown	BERTH 4 Type A / Up to 960' Expansion Ability Unknown	BERTH 4 Type A / Up to 960' Expansion Ability Unknown

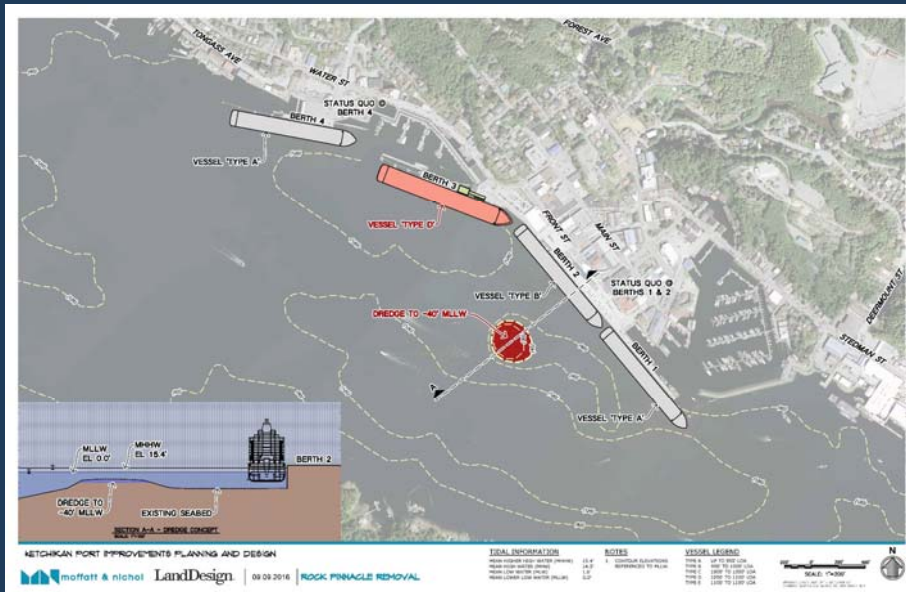
As Market Conditions Warrant

?

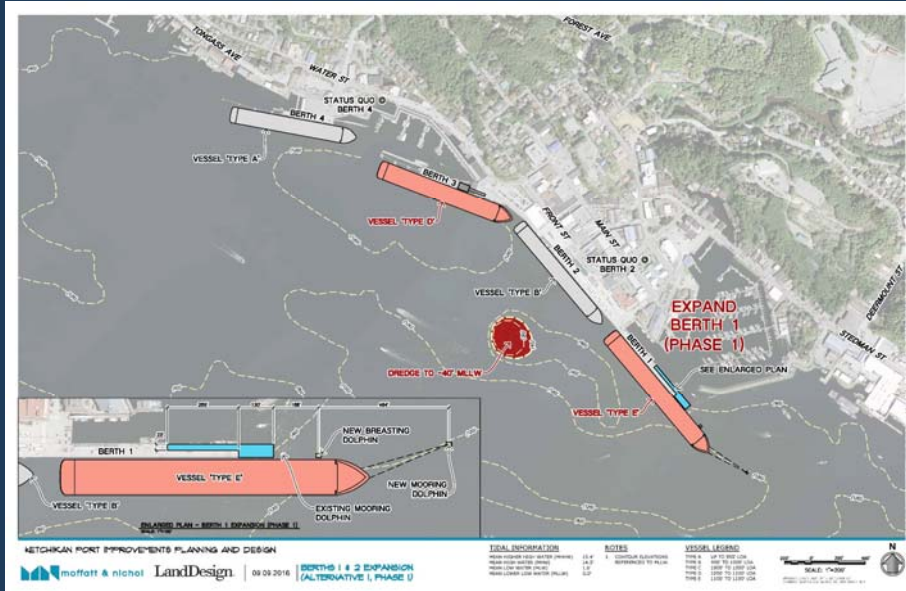
BERTH 3 EXPANSION (NEAR-TERM)



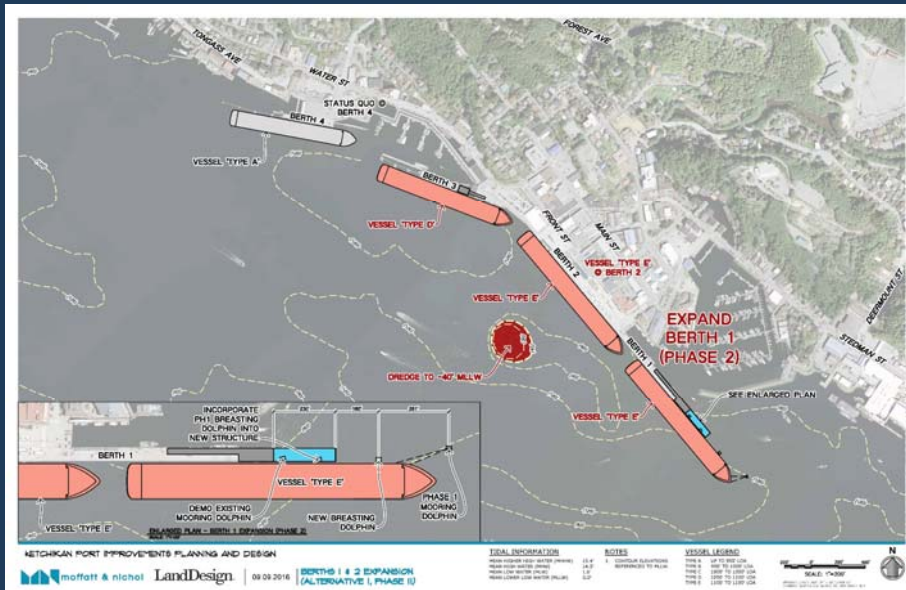
ROCK PINNACLE REMOVAL



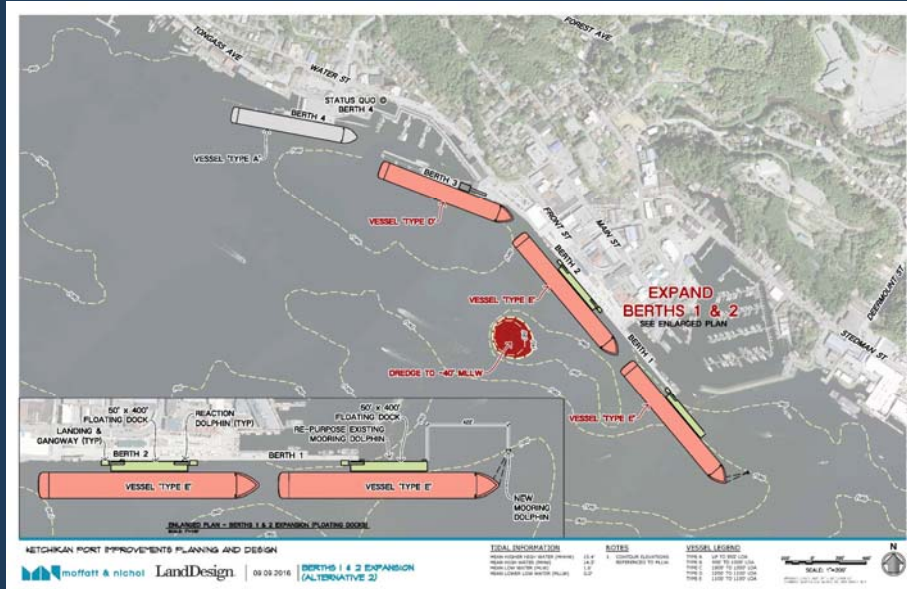
BERTHS 1&2 EXPANSION (FIXED, PH. I) (MID-TERM)



BERTHS 1&2 EXPANSION (FIXED, PH. II) (LONG-TERM)



BERTHS 1&2 EXPANSION (FLOATING) (MID/LONG-TERM)



PROJECT EVALUATION MATRIX

	BERTH 3	BERTH 1/2 (Fixed)	BERTH 1/2 (Floating)
1. Meets Future Capacity Needs	●	●	●
2. Passenger Preference	●	●	●
3. Cruise Line Preference	●	●	●
4. Local Business Preference	●	●	●
5. Ground Transportation Impact	●	●	●
6. Broader Upland Impact	●	●	●
7. Impact to Small Boat Harbors	●	●	●
8. Cruise Ship Navigation	●	●	●
9. Construction Costs	●	●	●
10. Phasing	●	●	●
11. Environmental Impact	●	●	●
12. Construction Downtime	●	●	●

LEGEND

- Beneficial / Positive
- Neutral / Average
- Challenging / Adverse










SHORT-TERM IMPROVEMENTS (BERTHS 1 & 2)

- Tier 2 underwater and topside inspection
- Addition of four (4) new bollards:
 - *Existing fixed dock, west end Berth II (2)*
 - *Existing fixed dock, between Berths I and II*
 - *Existing mooring dolphin, east of Berth I*
- Safety ladder repairs and upgrades
- Fender panel transition plate and timber plank repair/replacement
- Light pole repair/replacement
- Bullrail replacement
- Water line replacement



PROJECT SCHEDULE

	MAY	JUN	JUL	AUG	SEP	OCT	NOV
Task 1 Inspect and Evaluate City Berths		 Open House #1 (Jun 15)					
Task 2 Cruise Market & Assessment							
Task 3 Conceptual Design Alternatives & Costing						 Open House #2 (Sep 14)	
Task 4 Planning Study Report							



HOW TO STAY INVOLVED

- Final reports and project work will be submitted in draft form in October 2016
- Information on the project will be available on the City's website at www.ktn-ak.us
- Contact Port & Harbors Director Steve Corporon at (907) 228-5632 / stevec1@ktn-ak.us
- Contact Shaun McFarlane at Moffatt & Nichol at (907) 677-7500 / smcfarlane@moffattnichol.com

