

**CBJ DOCKS & HARBORS BOARD**  
**OPERATIONS/PLANNING COMMITTEE MEETING AGENDA**  
**For Wednesday, July 21<sup>st</sup>, 2021**

Zoom Meeting  
<https://bit.ly/3gLr04U>  
or via Phone 1-253-215-8782  
Meeting ID: 944 8833 6148  
Passcode: 134990

- I. Call to Order** (5:00 p.m. via Zoom)
- II. Roll Call** (James Becker, Lacey Derr, Don Etheridge, Paul Grant, David Larkin, Matthew Leither, Annette Smith, Bob Wostmann and Mark Ridgway).
- III. Approval of Agenda**  
  
**MOTION: TO APPROVE THE AGENDA AS PRESENTED OR AMENDED**
- IV. Public Participation on Non-Agenda Items** (not to exceed five minutes per person, or twenty minutes total)
- V. Approval of Thursday, June 16<sup>th</sup>, 2021 Operations/Planning Meetings Minutes**
- VI. Consent Agenda - None**
- VII. Unfinished Business**
  - 1. Auke Bay Loading Facility (ABLF) – Pile Removal  
Presentation by the Port Director

Committee Questions

Public Comment

Committee Discussion/Action

**MOTION: TBD**
- VIII. New Business**
  - 1. Parking at Tanner Service Center, Inc (Douglas Harbor Parking Lot)  
Presentation by the Board Chair

Committee Questions

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Public Comment

Committee Discussion/Action

**MOTION: TBD**

**IX. Items for Information/Discussion**

1. Status of Self-Propelled Hydraulic Boat Lift @ Auke Bay Loading Facility  
Presentation by Karl Leis (Karl's Auto & Marine Repair)

Committee Discussion/Public Comment

2. Grant Application - Status  
Presentation by the Port Engineer

Committee Discussion/Public Comment

3. General Observation of July 4<sup>th</sup> Fireworks Impacts to Harbor Property  
Presentation by the Harbormaster

Committee Discussion/Public Comment

4. US Coast Guard/Army Diver Activity in Juneau Harbors  
Presentation by the Harbormaster

Committee Discussion/Public Comment

5. By-Laws of the Docks & Harbors Board of Directors  
Presentation by the Port Director

Committee Discussion/Public Comment

6. Charter Vessel Rates at Statter Harbor – Next Steps  
Presentation by the Port Director

Committee Discussion/Public Comment

7. Board Member Discussion on upcoming Docks & Harbors Year  
Presentation by the Operations-Planning Committee Chair

Committee Discussion/Public Comment

**X. Staff & Member Reports**

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**XI. Committee Administrative Matters**

1. Next Operations/Planning Committee Meeting-**Wednesday, August 18<sup>th</sup>, 2021**

**XII. Adjournment**

**CBJ DOCKS & HARBORS BOARD**  
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Zoom Meeting

**I. Call to Order** - Mr. Ridgway called the June 16<sup>th</sup> meeting to order at 5:00 p.m. via Zoom.

**II. Roll Call** - The following members were present at the Port Director's office or via Zoom meeting. James Becker, Chris Dimond, Don Etheridge, James Houck, David Larkin, Bob Wostmann and Mark Ridgway.

Absent - Lacey Derr, Annette Smith, and Bob Wostmann.

Also present at the Port Director's Office: Carl Uchtyl – Port Director, Erich Schaal – Port Engineer, Matthew Creswell – Harbormaster, and Teena Larson - Administrative Officer.

**III. Approval of Agenda**

**MOTION By MR. ETHERIDGE: TO APPROVE THE AGENDA AS PRESENTED AND ASK UNANIMOUS CONSENT.**

Motion passed with no objection.

**IV. Public Participation on Non-Agenda Items** - None

**V. Approval of Thursday, May 19<sup>th</sup>, 2021 Operations/Planning Meetings Minutes.** Hearing no objection the May 19<sup>th</sup>, 2021 minutes were approved as presented.

**VI. Consent Agenda** - None

**VII. Unfinished Business**

1. Dockage Fee – Next Steps

Mr. Uchtyl said on page nine in the packet is a letter drafted to the City Manager in response to the May 24<sup>th</sup> Assembly meeting where the Assembly directed the City Manager to consider reasons to review the proposed regulation changes for dockage fees. The delay in having this move forward will hurt Docks & Harbors with loss of revenue for this season.

Committee Questions

Mr. Etheridge said this document includes the reasoning behind this increase, provides information on the public outreach, and the public hearing. The City Manager should have everything he needs to know from this document on Docks & Harbors process.

Mr. Ridgway asked Mr. Uchtyl if he has a number on the loss of revenue from this not being passed at the Assembly level?

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Mr. Uchytel said it would be approximately \$150,000 loss in yacht revenue.

Mr. Ridgway suggested to add the potentially loss revenue of \$150,000 to the draft letter. His example was “lack of this change will cost us potential revenue of \$30,000 per month”. He suggested to also add the efforts of Docks & Harbors to reduce costs with not bringing back seasonal staff.

Mr. Uchytel said he would propose to set up a sub-committee of three to provide input on this letter at a non-public meeting and bring it to the full Board next Thursday.

Mr. Ridgway appointed Mr. Etheridge, Mr. Larkin and himself to that sub-committee.

Public Comment –

Kirby Day, Juneau, AK

Mr. Day commented that it is important this change is decided in the next 60 days or so because the cruise industry typically budgets well ahead of the following season.

Mr. Uchytel said we are already getting yacht reservations well into August. He said current reservation will not change to the increased fee if this is changed. Only new reservation will pay the increased fee.

Committee Discussion/Action

Mr. Larkin verified that the rates at the time of reservation would be honored.

Mr. Uchytel said yes.

Mr. Ridgway asked Mr. Uchytel to send an email out to the full Board letting everyone know the sub-committee will be meeting and if anyone has comments they can be sent to Mr. Etheridge, Mr. Ridgway, Mr. Larkin, or Mr. Uchytel. The draft letter from this sub-committee will go to the Board meeting next Thursday.

**No motion.**

**VIII. New Business**

1. Fee Modification for Tour Sales Permits (05 CBJAC 10.040)

Mr. Uchytel said on a normal year we have 11 permits available that start at a minimum of \$30,000 to sell independent tour packages along our waterfront. Last year the Board elected to return the \$30,000 fee that was collected in February. This year, the Board elected to reduce the fees for the loading zone permits and the passenger for hire permits due to the loss of tourism revenue. Recently he has received inquiries on these permits to see if this would be free this year or a reduced fee for the permits. This was discussed at the Finance Sub-Committee meeting and he said he recommended a fee of \$1,500. He came up with this number by guessing Juneau may have 10% of the passengers from 2019 numbers and with the shortened season of only ten weeks. He believes this is an appropriate fee to move forward with.

Committee Questions

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Mr. Etheridge asked if the \$1,500 was also recommended by the Finance Sub-Committee.

Mr. Uchytel said yes. The other unknown is how the dock agreements with the individual cruise lines will be written. There could be less opportunity for these permit holder to sell independent tours as we think about it today.

Mr. Ridgway asked if the process for this fee is in CBJ code?

Mr. Uchytel said this was changed in 2015 to increase the minimum bid from \$5,000 to \$30,000. There is still interest for these permits currently, but that may change someday.

Public Comment-

Kirby Day, Juneau, AK

Mr. Day said there is still uncertainty even with the ships coming. We do not know how many passengers will be on board during the 10 or 12 weeks and how many people will walk off the ship and buy an independent tour. Some of the CDC guidelines indicate that some of the ships' unvaccinated passengers may only be allowed to go ashore and take a cruise ship sponsored tour and then go right back to the ship. He said he supports this reduced fee for these permit holders.

Jeff Fanning, Douglas, AK

Mr. Fanning said the proposal is more than fair and he appreciates the opportunity to get a little bit of business back after the last couple of tough years. He would like as much time as possible to figure out if this will be a worth while investment based on what the cruise lines end up doing and if there are customers that are allowed to purchase independent tours.

Mr. Ridgway asked what he meant by as much time as possible?

Mr. Fanning said he was referring to waiting until mid to end of July when we know exactly what the status is and what the passengers are and are not able to do.

Committee Discussion/Action

**MOTION By MR. ETHERIDGE: THAT DUE TO THE EXTRAORDINARY ECONOMIC HARDSHIP FOR CY21, THAT THE FEE FOR TOUR SALES PERMIT BE REDUCED TO \$1500 FOR THE REMAINDER OF THE CY2021 CRUISE SEASON FOR ANY COMPANY WHICH WAS PERMITTED IN CY2019 AND ASK UNANIMOUS CONSENT.**

Motion passed with no objection.

**IX. Items for Information/Discussion**

1. Auke Bay Loading Facility – Update & Needs

Mr. Uchytel said at the Auke Bay Loading Facility, the area by the ramp has five guide piles. The guide piles restrict the ability for some barges to come in and load and unload. We have received requests recently from some construction companies to move rock

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from Stabler Point Quarry through this facility. The guide piles are located at the edge of our property so we can not set them out further, but we can remove them. There also may be an opportunity for Docks & Harbors to collect some revenue under 05 CBJAC 20.180 Other fees. There is no money in the budget to do this. One idea the Port Engineer had was to declare these pilings as surplus and the person who bids on them would need to come remove them.

Mr. Schaal said the original design for the ramp is about 60 feet and with the boarding float it narrows it down to 51 feet. The larger barges in town tend to be 52 or 53 feet wide and that makes the area too small to use the ramp. Removing the guide piles opens it up. It is a very busy facility for the landing crafts. The option to come up with a fee for a barge landing would be a good idea because the small landing crafts have an hourly rate and that rate will not work for a longer loading time that a large material barge would want to use.

Committee Discussion

Mr. Ridgway asked where the barges will tie up.

Mr. Schaal said the barge will go between the Glacier Seafood dock and the multiple piles that hold our boarding float. The distance between the guide piles and the boarding float is 51 feet. If you do not have a 50 foot barge, you will not fit. The barge would pull up and drop their bow to connect to the concrete float to drive their forklifts on and off loading quickly. A barge that will load gravel will have a longer drop gate to go on and off of. The rock will most likely come from Stabler Point Quarry.

Mr. Ridgway asked if all five piles absolutely need to be removed? Do we have the name and address of the design engineer for this facility.

Mr. Schaal said PND was the design engineer for this facility. The design was to fit this facility into our footprint. A large barge at that location will be very close to Alaska Glacier Seafood. The guide piles would serve a purpose if we could keep them but staff also feels confident the boarding float is engineered for heavy loads and has more piles than guide piles. This is the design use for this facility, we just need to address the constraints.

Mr. Ridgway asked if the guide piles were removed, would this make us more liable?

Mr. Schaal said there is always a level of risk. The guide piles serve as a fender system. We need to be cognizant of the weather. This is a multi use facility used for barges, the sealift, and small landing crafts.

Mr. Becker asked if Alaska Glacier Seafood has been contacted yet with this proposal?

Mr. Schaal said staff wanted to bring this to the Board first.

Mr. Becker recommended moving the piles over but put them back in for protection to Alaska Glacier Seafood. He asked what the process to move them would be?

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Mr. Schaal said pulling them and replacing them is simple. Getting the permits to do that is complicated. The benefit of these piles is that they are sleeved and can be removed with little effort. Four of the five piles could be removed at an extreme low tide. The piles farthest from shore would need to be dead pulled. If any equipment making sound is used there would be a need to obtain a permit. Moving the piles over will not work for the property lines and the time it would take to get the permits we would lose this whole summer.

Mr. Ridgway asked if the piles are sleeved, will this still need a permit?

Mr. Schaal said we know in water work requires permits. If work is completed in the dry, we do not need the permits.

Mr. Etheridge asked if we need a permit to pull the piles.

Mr. Schaal said we can pull them if they are out of the water and we do not use vibratory equipment.

Mr. Ridgway asked what the path forward for this is?

Mr. Schaal said staff is supportive of this plan and we have been contacted again to remove these piles. We also have in our fee structure an avenue for temporary pricing for this work.

Mr. Ridgway recommended to look into this in more depth to ensure all the liability is covered.

Mr. Etheridge wanted to make sure our infrastructure and the neighboring facility is protected.

Public Comment

Mr. Dave Hanna, Juneau, AK

Mr. Hanna said he was the latest request to remove the piles. When this facility was first built, it was presented to the industry as a multi-use barge facility. It was very unfortunate when we found out it was not large enough for all the barges we wanted to use. He has used the ramp a lot over the past years with landing crafts but there are things that require a barge. Having to go around Douglas Island has thrown some projects off the board. We have multiple people and multiple places who need rock and CBJ has a rock quarry and they could sell a lot of rock. We have missed out on work in the past because of logistics and if this was opened up we would be able to haul rock from Stablers. He said anyone who operates at this facility should have proof of liability insurance and be aware they have to protect the ramp when they are operating. The trucks in and out of this facility will not be a big impact. If this gets opened up to the bigger operators it will produce more revenue for the Harbor Department.

Mr. Dennis Watson, Juneau, AK



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Mr. Watson said he had some concerns, the eel grass that needed to be planted by Alaska Glacier Seafood, and the outfall coming from the condominiums adjacent to this facility. There was damage to that at one point and he is unsure if it was replaced or removed.

Mr. Jim Sidney, Juneau, AK

Mr. Sidney said when this facility was first built he was surprised that the barges did not fit. It has been expensive over the years trucking rock to downtown facilities to load barges. He would like the Board to follow through with this guide pile removal.

Mr. Jeremy Sidney, Juneau, AK

Mr. Sidney said he hauls rock to several different barge facilities downtown. There is interest for rock at remote locations and this is a needed thing. If this was opened up for the larger barges, there would probably be more use.

Mr. Hanna commented that the barge operators will not intentionally let their barge ground on the ramp because that makes more issues for them. They will put boards or tires under it if it looks to be necessary. He said this can be done successfully.

Mr. Ridgway recommended staff look into why this facility was built like it is with this being a multi-use facility before moving this forward.

**2. Professional Consulting Services for Comprehensive Fee Review**

Mr. Uchytel said this dialog was started at the June 7<sup>th</sup> Finance Sub-Committee meeting. On page 35 in the packet is the most recent rate study conducted by Northern Economics which was for Homer. The Finance Sub-Committee directed staff to continue to look into conducting a rate study for our operations. Is a rate study what Docks & Harbors should pursue and if so, what does it look like? We can always afford what we prioritize.

Committee Discussion

Mr. Etheridge asked if this is what the Board wants to do, what is the next step?

Mr. Uchytel said staff would draft an RFP and bring it back to the Board for approval. The RFP would have to be advertised and we would have a selection process. This RFP would not be selected based on cost but on qualifications. The cost of this rate study would be under \$100,000 so it would not require Assembly approval and Docks & Harbors Board could approve a contract.

Mr. Etheridge asked if the Board was unhappy with the RFP results, do we need to proceed?

Mr. Uchytel said there is no obligation for a contract.

Mr. Becker asked if we are bound to go to bid for this rate study or just select a company we are familiar with?

Mr. Uchytel said CBJ procurement code says up to \$5,000 there is no need to compete, but between \$5,000 and \$50,000 it requires quotes. Because this is professional services and not a commodity, it requires this RFP process to select on qualifications and not solely based on price.

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Mr. Ridgway asked how many areas of our current regulation would need to be changed with a rate study similar to the Homer one?

Mr. Uchtyl said it depends on how many fees we want the rate study to look at and to what detail.

Mr. Becker asked if the Board could establish an interim rate for the live-aboards and let people know the rate could change after the rate study is completed?

Mr. Uchtyl said an interim live-aboard rate could not be set without the Assembly approval and we would back to where we are now.

Mr. Becker said we could make the argument with the Assembly that this is what we want to do until we have a completed study.

Mr Uchtyl we have not done that before.

Mr. Ridgway said this is a complicated thing to have rational behind what a rate should be. The rate should be equal to our expense. He supports this rate study because the Board and staff just spent a lot of time to look at two rates and neither one was approved. If the Board is going to proceed with a rate study, he wants all the revenue generating rates as possible to be reviewed. He said this rate study is a must have in his mind.

Mr. Etheridge said we have the authority to hire a consultant for a rate study, but his concern is if the rate study is too large, will it be completed in a timely manner to be useful to us. We need to make this so it is useful in a timely manner.

Mr. Uchtyl said narrowing the rate study could be spelled out in the RFP.

Mr. Ridgway recommended staff draft a RFP for a rate study for all our fees that could be cut down in section.

Mr. Larkin said he does not want a small rate study but to have as many fees evaluated as possible. This will not be a quick or inexpensive process. We heard from the public the Board needs to be careful spending their money. He wants this to be a long term process so we do not have to keep fixing this again and again.

Mr. Becker said he is thinking about Docks & Harbors cash flow dilemma. We have not moved forward with the gate at Harris Harbor because we do not have any money for it. The little bit of tourism we are going to see this year is probably not even enough to do anything. Will we not be able to do any projects until this rate study is completed?

Mr. Uchtyl said we can afford what we prioritize. We do not have the money to do everything people want to do on this Board. This fiscal year we spent close to \$70,000 to get rid of the Lumberman. A new fiscal year starts July 1<sup>st</sup>. He said staff is taking a lot of yacht reservations this year and we remain hopeful fishing will be good this year as well.

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Mr. Schaal commented that if the Board moves ahead to bring a consultant in, that is not a sure thing to get the Assembly approval. We will still need a plan to get this approved by the Assembly.

Public Comment – None

Mr. Uchytel asked if the Committee wants this to be brought to the Board meeting next week.

Mr. Ridgway said yes. He also recommended a couple Board members get together to author a letter letting the Assembly know that we are looking into hiring a consultant to conduct a rate study. The members are Mr. Larkin, Mr. Etheridge, and himself.

**3. Aurora Harbor Phase III – Planning**

Mr. Schaal said it sounds like the Governor's budget still has full funding for the Municipal Harbor matching grant. With full funding of this program, staff is hopeful we will receive the \$2M to match our \$2M to get moving forward with Aurora Harbor phase III(A). With the \$4M we would be able to build the new head walk and maybe a finger or two. There needs to be a plan now with the ability to add fingers in the future after the initial head walk construction. In the packet on page 51 is the original master plan for Aurora Harbor. The last floats to figure out are H through N floats. Mr. Schaal said looking at the waitlist on page 53 in the packet shows it would be wiser to build the north end of Aurora for vessels 38' and up. He would like to hear the Board's perspective on the market needs today. Looking at the original design on page 52 in the packet, there are things that should be changed and that could add cost to the budget. The Army Corps of Engineers was able to dredge to a -14 in the basin so this area will be good for the larger vessels.

Mr. Uchytel said this was presented tonight to get the Board thinking what the north end of Aurora should look like and have a plan on how to tie it all together. The next opportunity to ask for money is next year for the 1% for sales tax initiative.

Committee Discussion

Mr. Etheridge recommended to hear the Harbor needs from Harbor staff before the Board provides input.

Mr. Becker commented that having net floats would help.

Public Comment - None

**4. Fireworks Ordinance – Impact on Harbor Facilities**

Mr. Uchytel said on page 66 in the packet is the fireworks use guidelines in the City & Borough of Juneau. On Monday there was a proposal that would have allowed year around use of fireworks outside the fire service area on public properties which would include Echo Cove, Amalga Harbor, and North Douglas Launch Ramp which could have had fireworks year around, but the Assembly did not pass this. Mr. Uchytel requested the Assembly not take action on the proposal until the Docks & Harbors Board has a chance to weigh in on how this would impact Docks & Harbors facilities.

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Committee Discussion - None

Public Comment - None

5. Harbor Employee Evening Security - Update

Mr. Creswell said one of our seasonal staff has take on the evening security duties last Tuesday. He works Tuesday through Saturday 3:00 pm to Midnight. His duties are maintaining a Harbor Officer presence within Docks & Harbors facilities. This person walks the floats at all the facilities, checks parking, and checks for launch ramp permits. The idea behind this position was that everyone knew the Harbor staff went home at 4:30pm so they did what they wanted, but not anymore. Harbor users already have indicated that they like seeing a harbor staff presence after hours. He has a SOP and a set of guidelines. He is not on a set schedule doing the same thing everyday. He is working with Chair Etheridge and the Deputy Harbormaster Jeremy Norbryhn figuring out the best use of his time. This position is proving to have a lot of added benefits. He is seeing boats tied up at night but not on the morning inventory, lights that are out and need replace, and other maintenance type things not found in the day. If this position is successful, it may turn into a full time position. There is a lot to learn with this new position.

Committee Discussion

Mr. Etheridge said this has worked very well. They are able to communicate and increase patrol in certain active areas. He said he is very supportive of making this a full time position. The difference it has already made in this short time is very noticeable.

Mr. Becker asked if it was legal for a fishing vessel to tie up for a short time and get groceries?

Mr. Creswell said yes. Before COVID, Port staff was on until 11:00 or 12:00 at night and they were given a list of empty stalls in Aurora to be able to communicate to a visiting boater where to tie up. This is another duty the new security position would be able to do.

Public Comment- None

**X. Staff & Member Reports**

Mr. Creswell reported

- Staff is busy with recreational use of the Harbor. All parking spaces were used at Statter Harbor.
- Admins are processing permits with the cruise ships coming back.
- The new passenger for hire floats are being used. Staff is still trying to figure out the best management of this area.
- Working on repairs at the Fishermans Terminal, and Taku Harbor needs repair work done.
- Staff is actively working to get ready for the cruise ships.
- Drew Baird was offered and accepted the Administrative Assistant III position. He is highly qualified and starts June 25<sup>th</sup>.

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- We are looking to hire our seasonal Administrative Assistant I position and will advertise the full time Administrative Assistant I position soon.
- We have six Part Time Limited positions advertised that will be filled on an as needed basis.

Mr. Etheridge said he was approached again from the Spuhn Island people about parking. He does not want an answer tonight but to think about it and let him know if this is something that can happen?

Mr. Creswell said the pot hole at North Douglas was temporarily repaired with gravel and will be repaired with a cold patch next week. He said in regards to the handicapped parking request for a parking space closer to the launch ramp he is still working on.

Mr. Etheridge said it was recommended to have it on the far side of the port a potties.

Mr. Creswell said he is working on it.

Mr. Uchytel reported;

- Docks & Harbors is supporting the Maritime Festival working with JEDC. The festival is Saturday from 11:00am to 5:00pm.

Mr. Ridgway reported he is a volunteer on the fireworks barge and they are receiving support from Docks & Harbors as well.

Mr. Etheridge reported one thing that has been noticeable over the last few weeks is that there is a lot of undeseriable traffic in the harbors and they are watching them closely.

**XI. Committee Administrative Matters**

1. Next Operations/Planning Committee Meeting-**Wednesday, July 21<sup>st</sup>, 2021**

**XII. Adjournment** – The meeting adjourned at 7:30pm.



# Port of Juneau

City & Borough of Juneau • Docks & Harbors  
155 S. Seward Street • Juneau, AK 99801  
(907) 586-0292 Phone • (907) 586-0295 Fax

**From:** *Carl J. Uchytel*  
Port Director

**To:** Auke Bay Loading Facility (ABLF) Stakeholders

**Date:** June 28<sup>th</sup>, 2021

**Re:** POTENTIAL REMOVAL OF GUIDE PILINGS - AUKE BAY LOADING FACILITY

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1. Docks & Harbors has received requests from segments of the Juneau building community and transportation companies to expand the barge capacity at the Auke Bay Loading Facility Ramp. This memo invites comments from all who may have recommendations or insight regarding expanding the proposed barge capacity. Docks & Harbors request stakeholders of the ABLF provide written comments or testify at the upcoming July Operations-Planning Committee Meeting on July 21<sup>st</sup> at 5 pm via Zoom. Email comments may be sent to [Carl.Uchytel@juneau.org](mailto:Carl.Uchytel@juneau.org).
2. Local general contractors are indicating an increasing need to transport rock and other product to areas such as Gustavas, Spuhn/Shelter/Colt/Shelter Islands and Excursion Inlet. It has been suggested that the landing craft fleet that routinely frequents this facility is insufficient to meet contractor needs to move large quantities of rock and product. The close proximity of the ABLF to Stabler's Point Quarry makes a compelling argument to make the ramp as utilitarian as possible.
3. When the ABLF was completed in 2011 it included a loading ramp which was intended for commercial shippers. This ramp is bounded by a boarding float to the west which provides lateral working distance of 52 feet. The lateral extent is limited by five "guide piles" to the east which were installed as non-structural mooring devices essentially to mark (and guide) vessels onto the ramp. To the east of the piles is property owned by Alaska Glacier Seafoods. If the five guide piles were removed the effective lateral distance could increase to excess of 60 feet, allowing wider barges to land at this facility.
4. Docks & Harbors has consulted with the engineer of record (PND Engineers) who have indicated no construction or engineering concerns with guide pile removal to facilitate larger vessels/barges using the ramp.
5. Because of the unbudgeted and potential burdensome permitting costs to remove the piling, Docks & Harbors staff recommends a process in which the piling is declared "surplus" and would be publicly noticed. Staff is optimistic that a local marine contractor will offer to bid on the opportunity to remove and keep the five, 50 feet galvanized piles as compensation for removal.

#

- Encl (1) ABLF Layout w/Description  
(2) 2008 ABLF Vision  
(3) Aerial View of Ramp

# The Auke Bay Loading Facility - Auke Bay, Alaska

Freight Staging Area

Concrete Loading Ramp - 52' Wide

Ramp Boarding Float

Pile-Supported Approach Dock w/ Metal Grate Decking

Transfer Bridge with HS-20 Load Rating

Security Gate

Net Mending Work Barge

Gear Storage Area

180' x 50' Drive Down Float w/ Cranes, Electrical and Water Service

**Note: All users must contact the Statter Harbor Office at 789-0819 for pre-approval to use the facility**

INITIAL FILL LIMITS

FUTURE FILL EXPANSION PROJECT (INCLUDED IN PERMITS)

GLACIER HIGHWAY



PILE-SUPPORTED APPROACH DOCK w/ METAL GRATE DECKING

EXISTING EELGRASS, TYP.

58' F/V

BARRIER PILES @ 100' O.C.

NAVIGATION SIGN 'KEEP OUT'

LANDING CRAFT RAMP

BOARDING FLOAT

GUIDE PILES

200' x 60' EROSION AND TURBIDITY CONTROL MAT


TRANSFER BRIDGE

50' x 200' FLOAT

75' LANDING CRAFT

**AUKE BAY  
COMMERCIAL  
LOADING FACILITY  
CONCEPT 10**

SCALE IN FEET  
0 50 100 FT.

  
**CITY/BOROUGH OF JUNEAU**  
ALASKA'S CAPITAL CITY  
**DOCKS & HARBORS DEPARTMENT**

**P N D** ENGINEERS INC.





Encl (3)



City & Borough of Juneau • Docks & Harbors  
155 S. Seward Street • Juneau, AK 99801  
(907) 586-0292 Phone • (907) 586-0295 Fax

## Port of Juneau

July xx<sup>th</sup>, 2021

Tanners Service Center  
808 Front St.  
PO Box 240329  
Douglas, AK 99824-0329

Mr. Robert Gentili,

After your comment at the Docks and Harbors Board Meeting on June 24, 2021 regarding use of the storage area in Douglas Launch Ramp Parking Lot, I have looked into the issue. I studied the signed agreement that we have available in our records and find no article that allows for free parking in the lot. As a board member at the time of negotiations over this property, I do not recall any discussion over use of the parking lot. Unless you can provide us with a signed agreement to the contrary, you will be required to pay the required fees for the use of the storage lot.

Respectfully,

Don Etheridge  
Chair Docks and Harbors Board

# Douglas Harbor Launch Ramp



## Letter of Agreement

Whereas, the City & Borough of Juneau Docks & Harbors Department ("Department") wishes to fill in portions of its lot #4, ATS 14 for the purposes of constructing a Launch Ramp and associated parking facility, and

Whereas, such Launch Ramp and associated parking facility would abut and therefore impact certain private landholdings located on Front St. in Douglas, and

Whereas the Department wishes to appropriately compensate the affected property owners for loss of waterfront access due to the proposed construction, and

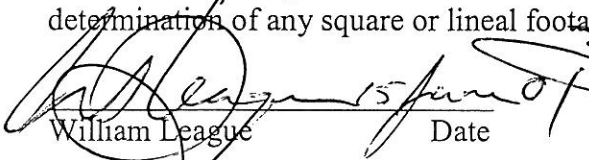
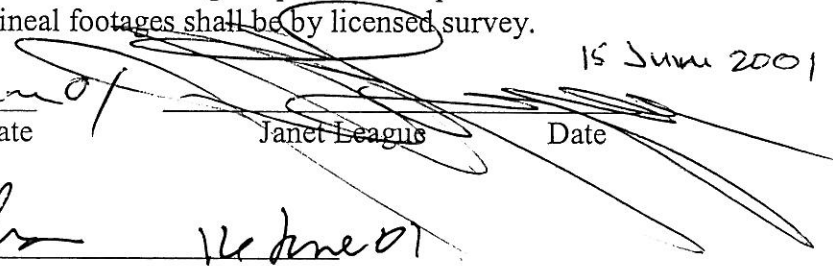
Whereas, William and Janet League, being owners of such an impacted property along Front St. in Douglas, do not object to the construction of the Launch Ramp parking area as indicated in CBJ Douglas Harbor Expansion Master Plan 8A, therefore,

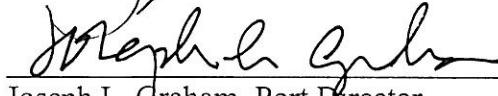
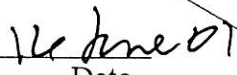
In full consideration between the parties herein, the undersigned parties agree:

1. William and Janet League permanently authorize the Department to place fill on the submerged portions of their tideland lots # BL 32 L 18, and BL 32 L 22 & 23 ATS 14.
2. The Department will pay William and Janet League the sum of \$63,000 to be used for the construction of a foundation wall beneath the Tanner Marine Building.
3. The Department will permanently fill in BL 32 L 18 with various courses of shot rock.
- ④ 4. The Department will pay William and Janet League \$1,000.00 per lineal foot of the east boundary of tideland lots #17A and 18A, ATS 14 (approximately 99.14 lineal feet x \$1,000.00 = \$99,140.00) as compensation arising from the taking of their direct waterfront access and for other such related impacts and damages.
5. The Department will convey its title to a portion lot #22A, ATS 14, consisting of approximately 6,212.268 sf and located directly east and contiguous to lot #22, ATS 14 to William and Janet League at no cost.
6. The Department will pay William and Janet League \$1,000.00 per lineal foot of the east boundary of tideland lot 22A, ATS 14 (approximately 58.20 lineal feet x \$1,000.00 = \$58,200.00) as compensation arising from the taking of their direct waterfront access and for other such related impacts and damages.
7. The Department will provide a jersey barricade, or similar barrier, between the proposed Launch Ramp parking area and the lots #17A, 18A, and 22A, ATS 14, until such time as William and Janet League request removal of the barricade.

- 8. The Department will pay any and all title, survey, and recording fees related to the actions identified above, including the placement of property corner monuments on the filled tideland lots. Copies of pertinent recorded plats will be given to William and Janet League.
- 9. The Department will expeditiously remedy drainage problems which may occur on the Front St. portion of William and Janet League's upland property if determined to be caused by the proposed construction project.
- 10. <sup>WHEN BY/SEE</sup> If the Department installs utilities in the proposed Launch Ramp parking area in any subsequent project phases, the Department will stub-in, at no cost to the property owners, the applicable utilities to the east boundary of the conveyed and filled tidelands identified in this agreement .
- 11. The Department will assist and support any request by William and Janet League for a variance related to set-backs and parking pertaining to the properties identified in this agreement, including payment of applicable fees.
- 12. The Department will allow snow removed by William or Janet League from the conveyed property to be commingled or dumped at the same site as snow removed from the Launch Ramp parking area as developed by the Douglas Harbor Expansion Project.
- 13. The Department will remove any and all biodegradable debris from tideland lots identified in this agreement prior to filling those tidelands.
- 14. William and Janet League, and their successors in interest, agree they will not sue the City and Borough of Juneau, Alaska for inverse condemnation for taking or damage to their property, including but not limited to loss of waterfront access, or for any other land use claim related to the matters outlined above.

This is the entire agreement between the undersigned parties, except that final determination of any square or lineal footages shall be by licensed survey.



  
 William League                      Date                      Janet League                      Date



  
 Joseph L. Graham, Port Director                      Date

CBJ Docks & Harbors Department

Approved as to Content – Engineering Department

John M Stone 7-2-01  
John Stone, P.E., Engineering Director Date

Approved as to Form - Law Department

John A. Leque 6-15-01  
John A. Leque, Assistant CBJ Attorney Date

RETURN TO: PORT DIRECTOR  
155 SOUTH SEWARD ST.  
JUNEAU, AK 99801

JUNEAU RECORDING DISTRICT

005277 CC  
JUNEAU 21.83  
RECORDING DISTRICT  
2001 JUN 10 PM 1:15  
REQUESTED BY CBJ



# Port of Juneau MEMORANDUM

**To:** Docks and Harbors Board  
**From:** Gary Gillette, Port Engineer  
**Date:** August 25, 2011  
**Re:** Self Propelled Hydraulic Boat Lift - Cost Comparison

In order to adequately evaluate the purchase of a boat lift the cost of each type of unit was researched. The resulting costs are as follows for the two types of lifts.

#### Tube Type Lift - KMI Sea-Lift

45-Ton Lift	\$405,000.00	Wireless Remote Included
4 Wheel Drive Upgrade	\$80,000.00	Recommended for our steep ramp
Stainless Steel Fittings	\$25,000.00	
Shipping	\$16,000.00	FOB Juneau
Install Supervisor & Training	\$3,500.00	
<b>TOTAL</b>	<b>\$529,500.00</b>	

#### Pad Type Lift - HOSTAR

45-Ton Lift	\$272,500.00	FOB Juneau
		Install Supervisor & Training Included
Catamaran Pkg.	\$16,500.00	
Wireless Remote	\$8,500.00	
<b>TOTAL</b>	<b>\$297,500.00</b>	

While it is clear the tube type lift is more expensive it has significant advantages over the pad type lift resulting in increased safety for the operator, less labor intensive operation, less stress on the hull of the vessel, requires less operational space for storage of vessels, and offers time efficiency in handling of vessels.

For these reasons it is recommended that a sole source contract be awarded to KMI Sea-Lift for a tube type boat lift.



# Port of Juneau

City & Borough of Juneau • Docks & Harbors  
155 S. Seward Street • Juneau, AK 99801  
(907) 586-0292 Phone • (907) 586-0295 Fax

July 11<sup>th</sup>, 2021

## The Honorable Pete Buttigieg

Secretary of the U.S. Department of Transportation  
Office of the Secretary of Transportation  
1200 New Jersey Ave, SE  
Washington, DC 20590

RE: 2021 RAISE Transportation Discretionary Grant | Port of Juneau Dock Electrification Grant

Dear Secretary Buttigieg:

The City and Borough of Juneau – Docks & Harbors Department is seeking Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Transportation Discretionary Grant funding to provide the shoreside power connection which will allow large cruise ships to shift to clean hydropower-generated electricity when in port. Once constructed, this project will reduce greenhouse gases and provide a cleaner local environment ensuring Juneau remains a highly desirable port-of-call for the Alaskan cruise ship itineraries.

Docks & Harbor is committed to seeing this project through and providing necessary infrastructure to support the local community and the cruise ship industry. Tourism is now the largest private economic industry in Southeast Alaska and in 2019 Juneau welcomed 1.3M passengers. We are optimistic our grant application fully meets the Administration's vision outlined in the NOFO to address climate change. In May, my Port Engineer and I were privileged to have the opportunity to brief Ms. Lucinda Lessely, the Acting MARAD Administrator, on the infrastructure concerns challenging the 49<sup>th</sup> State, including the Juneau needs contained in this application.

As Alaska's capital city, Juneau is known primarily as a government town. Unfortunately, over the past decades this has led to a neglected waterfront and economic opportunities afforded to well-managed, diversified ports and harbors have largely gone unfulfilled. The aphorism that *a rising tide floats all boats* cannot be truer in Juneau. Since 2012, Docks & Harbors has invested nearly \$136 million in infrastructure improvements, recapitalizing half-century old port and harbor facilities.

Though much has been accomplished, the vision to create and leverage economic diversity through smart, sustainable and expanded marine infrastructure requires funding sources outside what Juneau, with its 32,000 residents, can provide.

Of the \$136 million recapitalization efforts, less than 8 percent has been from federal grants or federal partnerships. This includes \$10 million from the USACE to conduct statutory maintenance dredging in Douglas Harbor, Harris Harbor and Aurora Harbor; \$3 million through a Sport Fish grant for the recently opened \$12 million Statter Harbor Launch Ramp; and \$175,000 for cruise ship security improvements under two FEMA Port Security Grants.




In addition, in testament to the investment and pride Docks & Harbors takes in our facilities, we have received numerous awards since 2012. This includes:

- Five Juneau Branch American Society of Civil Engineers (ASCE) Project-of-the-Year Awards
- Two Juneau Branch ASCE Engineer-of-the-Year Awards
- Pile Driving Contractors Association (PDCA) National Project-of-the-Year Award
- Precast Concrete Institute (PCI) Award
- Anchorage (AK) Engineers Week Project of the Year Award
- Two Engineering News-Record (ENR) Project-of-the-Year Regional Awards
- ENR Innovation Award for the new cruise ship berths project
- States Organization for Boating Access (SOBA) National Project-of-the-Year Award for the Statter Harbor Launch Ramp

To ensure local support of our initiatives, Docks & Harbors conducts comprehensive community involvement to engage the public throughout our visionary efforts. In 2017, we completed the expansion of the downtown cruise ship docks which was identified in the 2004 Long Range Waterfront Plan. In 2018, Docks & Harbors completed a plan linking the new cruise ship berths to the downtown shopping areas. This \$15M uplands development plan was fulfilled with a ribbon cutting ceremony this May. Cruise ship dock electrification studies have been completed in 2016 and 2021 which follows the Assembly adopted *Juneau Climate Action & Implementation Plan* from 2011. The Juneau community is in full support of advancing the infrastructure to provide access for visiting cruise ships to use locally generated, clean energy for their dockside use.

The City and Borough of Juneau Docks & Harbors respectfully requests consideration of our application to expand our marine services facilities at our cruise ship docks to provide electrical shore tie. We have a proven track record, a plan to expand economic opportunity and the ambition to make our port and harbors a world-class destination.

Sincerely,

  
Carl Uchytel, P.E.  
Port Director



**2021 RAISE Transportation Discretionary Grant Application:  
Juneau Cruise Ship Dock Electrification Project**

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## Attachments

A – Benefit Cost Analysis Technical Memo
B – Benefit Cost Analysis Spreadsheet
C – RAISE 2021 Project Information Form
D – Letters of Support (31)
E – City and Borough of Juneau Match Resolution



## I. Project Description

Juneau Alaska is a premier cruise ship destination. The Juneau Cruise Ship Dock Electrification Project will enable cruise ships visiting the community to plug into renewable shore power, thereby allowing the ships to operate without onboard fuel-fired generators and reduce carbon gas emissions in Juneau’s port. The dock electrification project includes two new power connection floats, cable positioning devices, submarine cables, a shared electrical substation, and upgrades to existing electrical systems. Juneau’s two city-owned cruise ship berths sit in the heart of downtown Juneau. Completed in 2017, the berths provide moorage for neopanamax cruise ships. The project will connect cruise ships moored at these docks with electricity generated by the utility’s hydroelectric power plants, providing a critically important reduction of vessel emissions in downtown Juneau and provide an alternative to vessel power generation while in port.

### Project Need

The primary purpose of the Juneau Cruise Ship Dock Electrification Project is to replace diesel used for cruise ship hoteling — when docked ships provide power, heat, air conditioning, and hot water for guests and staff, like a floating hotel — with shore-based hydroelectric power while visiting the community. Over a 20-year period, the installation of shore power at the two City and Borough of Juneau (CBJ) docks would eliminate cruise ship emissions of 46,314 metric tons of CO<sub>2</sub>, 1,681 metric tons of NO<sub>x</sub>, 1,337 metric tons of SO<sub>x</sub>, and 130 metric tons of PM<sub>2.5</sub>. that now occur when cruise ships run auxiliary engines for hoteling while in port at those berths. This will allow the community to realize the

## Project Goals

*THE JUNEAU CRUISE SHIP DOCK ELECTRIFICATION PROJECT WILL:*

1. Displace 4.6 million gallons of diesel with hydroelectric shore power over a 20-year period.
2. Reduce air emissions in Juneau by nearly 50,000 metric tons of combined CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>2.5</sub> over a 20-year period.
3. Support 3,390 jobs, \$100 million in wages, and \$300 million in tourism spending, annually.
4. Provide a monetary benefit of \$76 million, more than 3 times higher than the requested investment costs.

benefits of a successful, sustainable visitor industry while remediating environmental impacts associated with visiting cruise ships.

### Transportation Challenges Addressed

The predominant benefit of the Juneau Cruise Ship Dock Electrification Project is the reduction of vessel greenhouse gas emissions by providing shore tie power from clean hydroelectricity.

#### Emission Reduction

Cruise ships are “floating communities” which generate their own electrical and propulsion power, and heat using combustion equipment installed on-board the vessels. While docked in Juneau the ships operate in hotel mode and are a source of air pollution. Juneau hosts a significant number of cruise ships; 644

large cruise ship voyages are expected in 2022, so the emissions created during hoteling status add up.

Electrification of the two cruise ship berths would displace the following emissions over the next 20 years: 46,314 metric tons of CO<sub>2</sub>, 1,681 metric tons of NO<sub>x</sub>, 1,337 metric tons of SO<sub>x</sub>, and 130 metric tons of PM<sub>2.5</sub>. The value of this emission reduction, based on damage costs provided by the US Department of Transportation, is projected to be \$78 million. The reduction of these pollutants would also be part of a greater effort to address and reduce climate change.

### **Remote Community Transportation Services**

Juneau is surrounded by water, mountains, ice fields, and glaciers. Access into Juneau is only by water or air, as there are no roads extending beyond the immediate area.

Unlike most of the country, the electrical grid supporting the community is not connected to an outside grid or intertie. All electrical energy is generated by resources within the Juneau region. The effect is a “soft grid” that requires sensitive power plant control to respond to load changes. Cruise ships demand a large amount of power when connected. This requires additional control features to ensure smooth power transfers.

### **Environmental Justice Discussion**

According to the Environmental Protection Agency EJSCREEN, Juneau has a relatively low environmental justice (EJ) index. However, dock electrification will decrease environmental impacts on the entire downtown business district and nearby residential neighborhoods, with the reductions in air emissions and reduced

negative health impacts further benefiting Juneau's efforts to provide environmental justice to the elderly, minorities and children residing in the downtown Juneau port area. The Juneau population is 19% Alaska Native, and Juneau's youth population is 25% Alaska Native.

### **Project History**

In 2001, the world's first cruise ship shore power facility was installed in Juneau, and has been an incredible success story. It was installed as a collaborative project by Princess Cruise Lines and Alaska Electric Light and Power (AEL&P), the local utility. This facility has been in operation since then, providing electricity to the cruise ships moored at the Franklin Dock from Juneau's renewable resource, hydroelectric generating plants. The result has been a reduction of consumption of fossil fuels powering the onboard generators, and thereby a reduction of carbon gas emissions.

Hydroelectric power generation supports 100 percent of the firm electrical needs of the Juneau community, except in the rare case of electrical outages. With the hydro facilities, excess energy is delivered to “non-firm” loads which have alternative generation resources. The cruise ships that use the Franklin Dock have been afforded this opportunity for 20 years. The Juneau Cruise Ship Dock Electrification Project will build on the community's success in offering renewable hydropower as a value to additional ships.

### **Hydroelectric Generation in Juneau**

The Juneau mining industry pioneered world-class development of hydropower in the early 1900's. Originally hydropower was developed to provide energy to support mining and mills to

extract gold from low-grade ore bearing rock. The early hydroelectric facilities, Annex Creek, Salmon Creek, and Gold Creek Power Plants, are continuously maintained and upgraded so that more than 100 years later they continue to provide Juneau with renewable energy. Hydropower development has continued since the days of hardrock gold mining in Juneau with construction of the Snettisham Plant including taps into Long and Crater Lakes and the construction of the first phase of the Dorothy Lake project. These two plants presently provide the bulk of the electrical energy consumed by Juneau customers.

## **Technical Engineering: Project Components**

The primary hydroelectric power plants are connected to Juneau with two 69KV transmission lines routed into the town through the uplands above the new CBJ docks. Electricity will be fed from one of these transmission lines to the water-side facility and will include several components. These are defined in sequence leading from the transmission line to the power connectors for the ships.

### ***New AEL&P Substation***

A new substation will be located on the hillside above the new docks. This site is located adjacent to the two existing 69KV transmission lines. The substation will consist of 69KV switchgear and protective relays, transformer(s), and secondary circuit breakers and protective relays. The substation will be adequately sized to power two cruise ships with two separate transformers. The transformer(s) will be rated for the ships, 10 to 15 MVA each, producing output voltage of 11.2KV and 6.6KV.

### ***15KV feeder to South Franklin Street***

For each ship electrical deployment facility, this portion of the system will include four 6-inch diameter conduit (8 total) and one 2-inch diameter conduit (2 total) installed above ground on structural stands, or potentially installed below ground where possible. The conduits will include 15KV rated cables for power and fiberoptic cables for instrumentation and control. The conduits will terminate into a new vault at South Franklin Street on the uphill side.

### ***15KV Feeder from South Franklin Street to Shore***

Twelve 6-inch diameter conduits are presently installed below grade from the location of the proposed new vault on the uphill side of South Franklin Street to an existing vault near the shore adjacent to the Juneau Tram. Twelve more conduits extend from this vault beneath the shore and open under water at approximately -5 feet Mean Low-Low Water. This system of conduits and vaults provide allowance to install cables to power two ships. The 15KV cables identified earlier will extend to the existing vault at the shore where they will be terminated to a junction inside the vault. The fiber optic cable(s) will extend to this same vault and onto the shore power deployment float.

### ***15KV Submarine Cable to the Power Floats***

Submarine cables specifically designed for underwater application will be routed from the vault on shore underwater to shore power deployment floating docks. They will be connected to the shore cables on 15KV terminals inside the vault. These cables will be suspended to the float and supported on a structure specifically

designed to support their weight. The cables will terminate in a 15KV switch located on the floating dock.

### **Switchgear**

The switchgear on the floats will be enclosed in a cabinet mounted to the float near the cable deployment equipment. The cabinet and enclosed equipment will be suitable for the corrosive marine environment. The switchgear will include a disconnect switch and ground switch, combined to isolate and ground the cables to the ship when they are being handled. The switch will be collaboratively controlled by the ship crew and AEL&P operators.

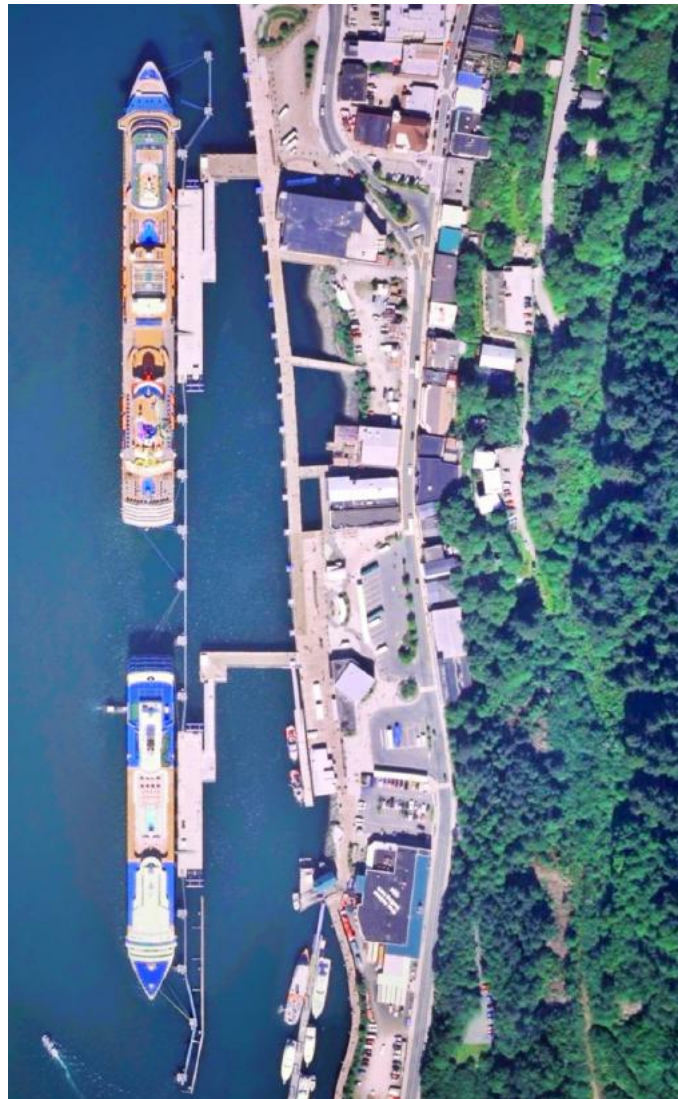
### **15KV Feeder to the Ship**

Durable cables rated for mining and marine applications will be routed from the switchgear to the ship via a cable deployment device. The cables are quite flexible and include connectors on the ship's end. The cables will be installed in covered cable trays from the switchgear or junction to the deployment device. The cable deployment device will support and move the cables to and from the ship as required to connect and disconnect shore power. This type of system mounted to a floating dock will ease cable hand-off and reduce the need for cable attendance typical with tidal changes.

### **Floating Docks**

The shore power system will be supported by floating dock structures that will be accessed from aluminum gangways mounted to the nearby catwalks and approach dock. The floating dock will be fabricated with concrete pontoons or steel pipe construction and will be anchored in

place with steel pipe piles and pile frames. The floating docks will offer cruise vessels a consistent level relative to the ships' electrical connection portals providing for improved handoff and retrieval of the shore power cables. The cable positioning/deployment devices will move along the face of the floating docks and they will have extendable booms capable of providing an extensive range of reach and ability to accommodate vessels with varying portal configurations.



**Figure 1. Aerial view of the two cruise ship berths that will be connected to hydroelectric shore power.**



Low voltage power will be provided from the shore electrical facilities for the cable positioning device and power float lighting. This will involve a separate 480-volt feeder with user voltage panels on the floating docks.

### **Existing AEL&P Franklin Dock Substation**

With the addition of a substation to support the CBJ docks, the existing transformer serving the Franklin Dock will have to be replaced. In order to synchronize the cruise ships to the system, voltage produced by the substation transformer must match the voltage generated onboard the cruise ship. With a single cruise ship connected to the system, AEL&P has been able to adjust the system voltage enough to make the connection. However, with additional ships connected to the system, it will be difficult if not impossible. The solution is to replace the existing transformer with one that includes a load tap changing (LTC) feature, thus adjusting voltage to the ship with reduced impact to the utility system.

### **Broader Infrastructure Investment Context**

Through public and private collaborations and partnerships, significant investments have been made into Juneau's port and hydroelectric generation.

AEL&P has been instrumental in initiating programs to utilize as much of their available renewable resources as possible, thereby minimizing the community's carbon footprint. Juneau is one of the greenest cities in the world when it comes to electricity. The electrical utility provides "100% hydropower 99% of the time." Few places in the world have such environmentally-sound, cost-effective, and reliable electricity sources.

The community has also invested heavily into the port of Juneau. The project would build upon benefits from the first electrified cruise ship dock in the world, just a few hundred yards south, at the South Franklin dock that went into operation 20 years ago. Since 2012, the City has invested nearly \$120 million (92% local, 8% federal) into its harbor and port infrastructure to modernize operations, facilitate economic diversity, and establish better management practices.

A more environmentally-sustainable cruise ship industry will also attract more private economic development, helping make Juneau and the region more economically competitive. According to the Southeast Alaska Business Climate Survey 2020, more than \$74 million in private dollars was invested into the regional tourism sector in 2019, with significant increases in private investment expected in future years.

### **Benefits to Communities in Rural Areas**

Juneau is a remote, rural community with access to important maritime resources. Since the community is not connected by the road system to the rest of the state, marine infrastructure is critical to the economy and to support and expand tourism in the community. The Juneau Cruise Ship Dock Electrification project is a key factor in accomplishing this and preserving and expanding jobs in the tourism industry.

### **Statement of Work**

The Juneau Cruise Ship Dock Electrification Project is a straightforward dock electrical infrastructure project primarily oriented toward reducing harmful hydrocarbon emissions in the

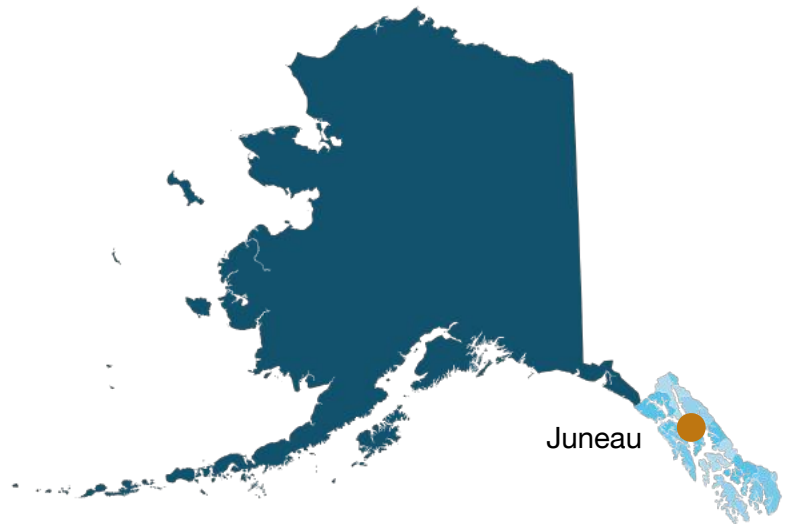
community, while continuing to support the local economy. It will provide added utility to the existing docks constructed in 2016 and 2017.

## II. Project Location

The project is situated at the CBJ North and South Berths adjacent to historic downtown Juneau. The cruise ship onshore electrical deployment system will include a connection to the existing electrical transmission lines into downtown with a substation and feeders as narrated in the project description above.

Downtown Juneau is located near the head end of Gastineau Channel. The town sits in the fjord on a delta formed by Gold Creek at the base of Mount Juneau and Mount Roberts. A deep water harbor at the port affords access for large ships. The North and South Berths are located along the shore at the base of Mount Roberts.

The 69KV transmission lines are routed near the project site at approximately 130 feet above sea level at the base of Mount Roberts. Each line is situated parallel to shore and mounted on separate support structures. The new substation will be positioned on a land bench adjacent to the lower transmission line. The feeders routed down to the onshore deployment floats will be 900-feet long to the South Berth and 1,350 feet to the North Berth.



**Figure 2 Project Location Map: Juneau is surrounded by mountains, some covered with ice fields and glaciers, forming numerous lakes. The port is situated at the base of Mount Roberts.**



## Connection to Existing Infrastructure

The electrical system supporting Juneau and its surrounding area is composed of a network of power plants, transmission lines, substations, and distribution lines. The project map (Figure 3) illustrates the locations of the components involved in the electrical deployment system to both CBJ cruise ship berths.

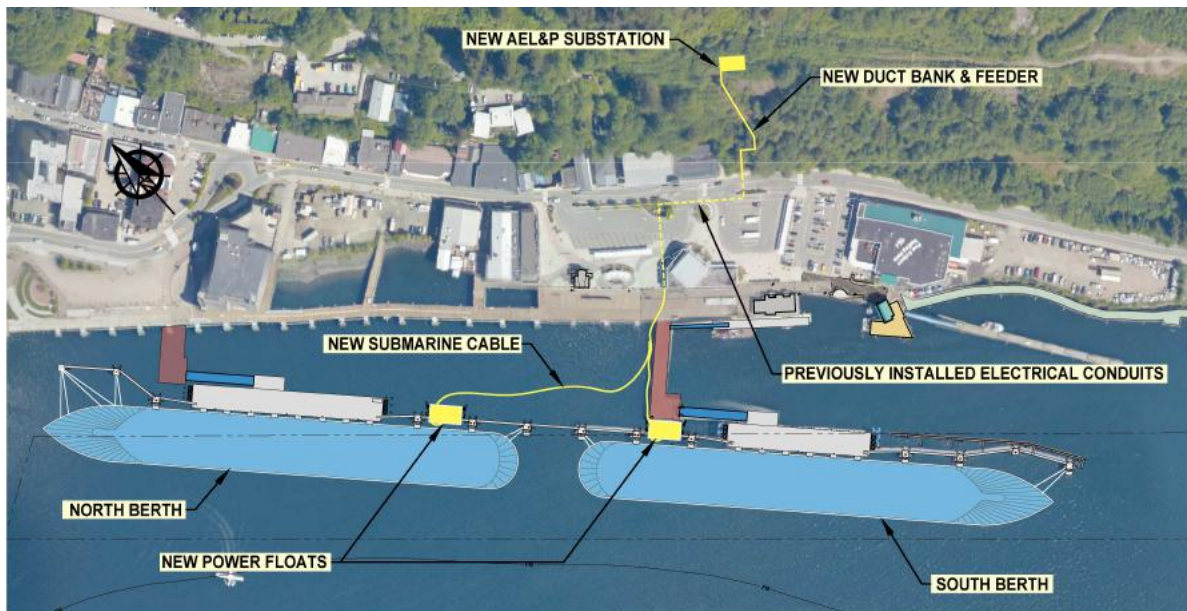
The primary source of electrical energy is generated by AEL&P’s hydroelectric power plants. The existing plants are detailed in Table 1:

**Table 1 Juneau Hydroelectric Capacity**

Hydroelectric Plant	Peak Capacity (MW)	Typical Annual Energy Production (MWH)
Snettisham (Crater & Long Lakes)	78.2	295,000
Lake Dorothy, Phase I	14.3	75,000
Salmon Creek	5	31,000
Annex Creek	3.6	24,000
Gold Creek	1.6	5,000
<b>Totals</b>	<b>102.7</b>	<b>430,000</b>

AEL&P maintains fuel-fired standby generators to support Juneau when there is a loss of electrical connection to the larger power sources. The largest source is considered to be the combination of the Snettisham and Lake Dorothy power plants. They are connected to Juneau via a single transmission line. The standby power plants include those at Lemon Creek, Gold Creek, Industrial Boulevard, and Auke Bay. Their total capacity is 107 MW.

The Snettisham and Lake Dorothy power plants are connected by transmission line to the Thane Substation. This transmission line operates at 138 Kilovolts (KV) with much of it configured with aerial lines supported on towers. A segment of the line is routed along the bottom of the Taku River with oil-cooled submarine cables. Annex Creek is also connected to the Thane Substation with a 23KV transmission line routed from the Annex Creek Power Plant over Powerline Ridge to the Sheep Creek Valley and subsequently the Thane Substation. The Thane Substation converts the voltages



**Figure 3 Project Map: The location of the substation designated for this project is identified. This illustrates the locations of the components involved in the electrical deployment system to both CBJ cruise ship berths.**



**Figure 4 Port of Juneau Map:** This map illustrates the Port of Juneau and the project site. Additionally, the Franklin Dock which is presently featured with a cruise ship electrical deployment system is identified.

from these power plants to 69KV with two transmission lines routed from there into Juneau proper.

69KV Line No. 1 is routed to feed power to the Second Street Substation on Gastineau Avenue, the Capital Avenue Substation, and the Lower Salmon Creek Substation. This power line is configured with aerial lines supported by wooden structures. It has a short segment of underground cable routed across the avalanche zone on Thane Road.

69KV Line No. 2 is routed parallel to Line No. 1 from the Thane Substation to the Lower Salmon Creek Substation with some exceptions in Juneau proper. This line feeds the Franklin Dock Substation

and continues to the Lower Salmon Creek Substation.

The substations on either of the 69KV transmission lines can be switched to the alternate line when required to deenergize one line or to balance their loads. The entire line is configured with aerial conductors supported by wooden structures.

From the Lower Salmon Creek Substation, a single 69KV transmission line is routed to serve power to the standby power plant and substation at Lemon Creek, the Airport Substation, the Mendenhall Loop Substation, the Lena Loop Substation, standby power plant and

substation at Industrial Boulevard, and the power plant and substation at Auke Bay.

### **Area of Persistent Poverty**

Juneau is not considered to be in persistent poverty. Persistent poverty is defined as a borough in which 20 percent or more of its population has lived in poverty over the past 30 years.

### **Designated Urbanized Area**

With a 2020 population of 31,773, Juneau is not considered an Urbanized Area, as it does not have at least 50,000 residents. It is designated as an Urban Cluster (2,500 to 49,999 residents.)

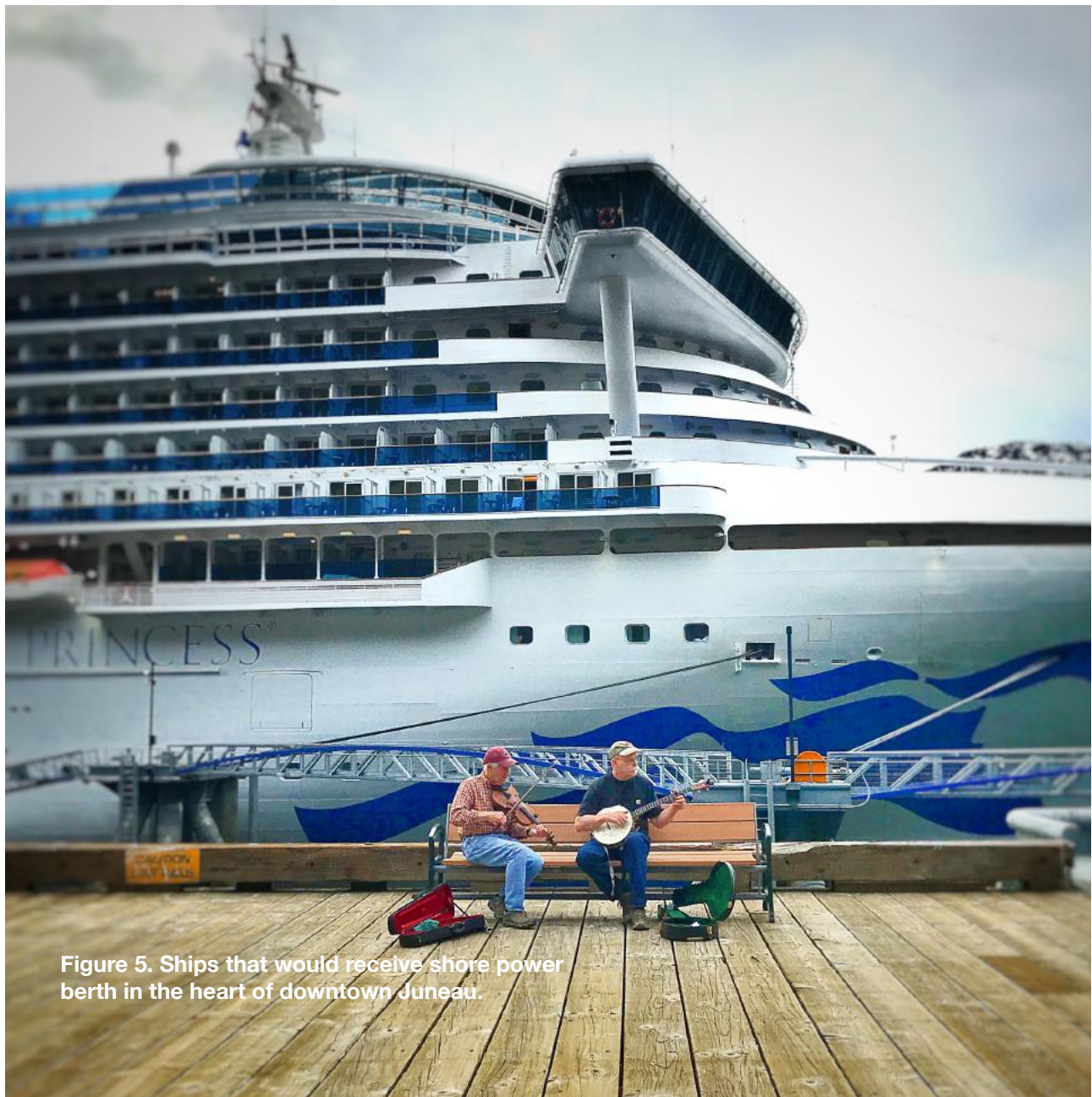


Figure 5. Ships that would receive shore power berth in the heart of downtown Juneau.

### III. Grant Funds, Sources, and Uses of All Project Funding

#### Project Cost

**\$24,951,856**

#### Funding Sources and Amounts

If awarded, RAISE grant funds will make up 80.3% of the funding for the project components.

#### Non-Federal Funding Commitments

The City has approved \$4.9 in funding for this project because of the importance to the community to begin this project. The City has in the past funded many cruise-related infrastructure projects with fees related to dockage and passenger arrivals. It has funded utility conduits crossing roadways and parking lots for this electrification project.

#### Non-Federal Funds

Juneau is a rural area under the RAISE grant definition and the Juneau Cruise

Ship Electrification project is eligible for greater than 80% RAISE grant funding. The CBJ requests that the US DOT increase its share of the grant funding for this project. The 20% matching portion equals \$4.99 million of the total project cost estimate. CBJ is very aware of the competitive nature of the RAISE program and the importance of local match, if available. The City has approved \$4.9 in match even though the city has suffered severe losses to its cruise-related revenues from the COVID-19 pandemic that halted all cruise ship travel for more than a year.

#### How Each Funding Source Will be Spent

The tables below outline the total allocation of funds by project component and show detailed cost estimates for each component. The cost estimates are based on similar, recent public project experience in Southeast Alaska. If awarded, RAISE grant funds and local matching funds would be the sources of funding for all project components, as identified in the grant award agreement.

#### Total Project Budget

Table 2 Total Project Budget

JUNEAU CRUISE BERTH ELECTRIFICATION PROJECT BUDGET		
Use of Funds	Eligible Project Costs	Percentage of Total Funds
<b>North Berth Power Connection</b>	<b>\$9,877,200</b>	<b>39.6%</b>
Contingency (15%)	\$1,481,580	5.9%
Environmental Permitting	\$200,000	0.8%
Final Design and Contract Documents (10%)	\$1,135,878	4.6%
Construction Administration and Inspection (10%)	\$1,135,878	4.6%
<b>South Berth Power Connection</b>	<b>\$7,914,000</b>	<b>31.7%</b>
Contingency (15%)	\$1,187,100	4.8%
Environmental Permitting	\$200,000	0.8%
Final Design and Contract Documents (10%)	\$910,110	3.6%
Construction Administration and Inspection (10%)	\$910,110	3.6%
<b>Total Project Costs</b>	<b>\$24,951,856</b>	<b>100%</b>

## North Berth Electrification Costs

Table 3 North Berth Project Budget

PORT OF JUNEAU CRUISE SHIP ELECTRIFICATION SHORE POWER CONNECTION STUDY BUDGET LEVEL ESTIMATE - NORTH BERTH					
Item	Item Description	Units	Quantity	Unit Cost	Amount
1505.1	Mobilization	LS	All Req'd	20%	\$1,646,200
2702.1	Construction Surveying	LS	All Req'd	\$75,000	\$75,000
2894.1	100-ft Aluminum Gangway with Pontoon Mounting Assemblies	LS	All Req'd	\$400,000	\$400,000
2895.1	Floating Dock, 36' x 66'	SF	2,376	\$500	\$1,188,000
2896.1	Furnish 36-Inch dia. Steel Pipe Pile	LF	1,200	\$350	\$420,000
2896.2	Install 36 -Inch dia. Steel Pipe Vertical Pile	EA	4	\$30,000	\$120,000
2896.3	Install 36 -Inch dia. Steel Pipe Batter Pile	EA	2	\$40,000	\$80,000
2896.4	Furnish and Install Pile Frames	LS	All Req'd	\$250,000	\$250,000
2897.1	Transition Plates	LS	All Req'd	\$75,000	\$75,000
2899.1	Supply and Install Pile Anodes	LS	All Req'd	\$75,000	\$75,000
5120.1	Electrical Support Assemblies	LS	All Req'd	\$50,000	\$50,000
11000.1	Cable Positioning Device	LS	All Req'd	\$1,000,000	\$1,000,000
16000.1	Electrical Substation	LS	All Req'd	\$3,193,000	\$3,193,000
16000.2	Feeder to Shore	LS	All Req'd	\$500,000	\$500,000
16000.3	Submarine Cable & Support Structure	LS	All Req'd	\$660,000	\$660,000
16000.4	Power on Float	LS	All Req'd	\$145,000	\$145,000
<b>Estimated Construction Bid Price</b>					<b>\$9,877,200</b>
Contingency (15%)					\$1,481,580
Environmental Permitting					\$200,000
Final Design and Contract Documents (10%)					\$1,135,878
Construction Administration and Inspection (10%)					\$1,135,878
<b>Total Recommended Project Budget</b>					<b>\$13,830,536</b>

## South Berth Electrification Costs

Table 4 South Berth Project Budget

PORT OF JUNEAU CRUISE SHIP ELECTRIFICATION SHORE POWER CONNECTION STUDY BUDGET LEVEL ESTIMATE - SOUTH BERTH					
Item	Item Description	Units	Quantity	Unit Cost	Amount
1505.1	Mobilization	LS	All Req'd	20%	\$1,319,000
2702.1	Construction Surveying	LS	All Req'd	\$75,000	\$75,000
2894.1	50-ft Aluminum Gangway	LS	All Req'd	\$100,000	\$100,000
2895.1	Floating Dock, 36'x66'	SF	2,376	\$500	\$1,188,000
2896.1	Furnish 36-Inch dia. Steel Pipe Pile	LF	1,200	\$350	\$420,000
2896.2	Install 36 -Inch dia. Steel Pipe Vertical Pile	EA	4	\$30,000	\$120,000
2896.3	Install 36 -Inch dia. Steel Pipe Batter Pile	EA	2	\$40,000	\$80,000
2896.4	Furnish and Install Pile Frames	LS	All Req'd	\$250,000	\$250,000
2897.1	Transition Plates	LS	All Req'd	\$75,000	\$75,000
2898.1	Approach Dock Addition with Gangway Mounting Assemblies	LS	All Req'd	\$350,000	\$350,000
2899.1	Supply and Install Pile Anodes	LS	All Req'd	\$75,000	\$75,000
5120.1	Electrical Support Assemblies	LS	All Req'd	\$50,000	\$50,000
11000.1	Cable Positioning Device	LS	All Req'd	\$1,000,000	\$1,000,000
16000.1	Electrical Substation	LS	All Req'd	\$1,855,000	\$1,855,000
16000.2	Feeder to Shore	LS	All Req'd	\$482,000	\$482,000
16000.3	Submarine Cable & Support Structure	LS	All Req'd	\$310,000	\$310,000
16000.4	Power on Float	LS	All Req'd	\$165,000	\$165,000
<b>Estimated Construction Bid Price</b>					<b>\$7,914,000</b>
Contingency (15%)					\$1,187,100
Environmental Permitting					\$200,000
Final Design and Contract Documents (10%)					\$910,110
Construction Administration and Inspection (10%)					\$910,110
<b>Total Recommended Project Budget</b>					<b>\$11,121,320</b>



## IV. Selection Criteria

The Juneau Cruise Ship Dock Electrification project will provide necessary infrastructure for cruise ships to connect to renewable hydroelectric shore power while at the CBJ cruise ship berths, significantly reducing the level of air pollution, and helping make the Juneau tourism sector more sustainable to support the overall economy. Due to emissions reductions, this project has an incredibly strong benefit cost ratio of 3.75 when discounted at 7%. Project benefits are detailed in the attached BCA, located in Appendix A.

### Primary Merit Criteria

#### Safety

Safety comprises a significant benefit to the project. Cruise ships contribute to Alaska's mobile-source emission inventories. In aggregate, reductions of emissions of nitrogen oxides (NO<sub>x</sub>), sulfur oxides (SO<sub>x</sub>), and fine particulate matter (PM<sub>2.5</sub>) prevent premature deaths and relieve respiratory symptoms. Monetized health-related benefits related to emissions reductions are estimated in the BCA (Attachment A).

#### Environmental Sustainability

In Juneau, environmental sustainability translates into economic sustainability. The City and Borough of Juneau (CBJ) has identified dock electrification as contributing to Juneau's sustainability, climate action, and renewable energy goals in several planning efforts and documents over the past decade. Significant sustainability benefits are achieved and optimized by displacing onboard fossil fuel electrical generation with clean, zero-emission, hydropower-

generated shore power for cruise ships berthed at Juneau's publicly-owned docks.

Dock electrification eliminates greenhouse gas (GHG) emissions, particulates and pollution while cruise ships are in port, reducing the cruise industry's carbon footprint while improving Juneau's air and water quality. These benefits ameliorate the impacts of cruise ship tourism in the community and contribute to Juneau's efforts to be a global leader in cruise port sustainability. The related electrical infrastructure upgrades required for dock electrification additionally support cruise ship-related tourism.

#### Incorporation of electrification

**infrastructure:** Dock electrification provides the infrastructure needed to enable cruise ships' use of safe, cleaner shore power.

#### Avoidance of adverse environmental

**impacts:** Dock electrification improves the air quality of Juneau for residents and visitors alike, providing an inviting downtown area. Dock electrification eliminates adverse environmental impacts to air quality and climate by reducing Clean Air Act criteria pollutants, including NO<sub>x</sub>, SO<sub>2</sub>, PM, and VOC, as well as CO<sub>2</sub> and other greenhouse gases. These benefits are described in more detail and quantified in the BCA, Appendix A.

Noise reduction from replacing the use of auxiliary engines with quiet renewable electricity will benefit the quality of life of downtown residents, businesses, and workers, as well as the quality of the cruise ship visitor experience.

Finally, dock electrification will reduce threats to public health in downtown Juneau by reducing emissions while cruise ships are in port. Much of Juneau's core downtown area is located within several

hundred yards of the CBJ's cruise ship port, and is bounded by mountains that result in a confined settlement area next to the port. Downtown Juneau and the port area are periodically subject to air inversions that trap emissions in the area as well as to light winds that can bring cruise ship emissions up Gastineau Channel and concentrate them against the mountains.

### **Long-Term Community and Regional Planning**

The role of dock electrification for economic and environmental reasons has been the focus of several recent significant planning efforts with robust public input.

#### **Southeast Alaska 2025 Economic Plan:**

The recently completed regional economic Comprehensive Economic Development Strategy prioritizes beneficial electrification as the #4 economic priority for the region, specifically including dock electrification.<sup>1</sup>

**Blueprint Downtown:** The City and Borough of Juneau's 2021 planning effort known as "Blueprint Downtown" focused on dock electrification as part of its final report, as well as the plan's vision statement: "Juneau has the opportunity to showcase best sustainable practices, focusing on a transition from fossil fuels to renewable hydroelectricity for heating and transportation. Mitigating cruise

industry impacts, with steps such as increased shore-side power, is a key element of this shared focus on enhancing renewable energy."<sup>2</sup>

**Visitor Industry Task Force:** The 2020 Juneau Mayor's Visitor Industry Task Force final report mentions dock electrification specifically, and electrification of transportation generally, in eight places and recommends maximizing use of shore power by all cruise lines by requiring assignment of shore power configured ships to electrified docks.<sup>3</sup>

#### **Juneau Renewable Energy Strategy:**

The CBJ adopted the Juneau Renewable Energy Strategy (JRES) in 2018. It establishes a goal to have renewable energy provide 80% of Juneau's energy by 2045. Dock electrification is identified as an action contributing to the goals.<sup>4</sup>

**Juneau's Climate Action Plan:** Dock electrification directly supports the goals and recommendations of the City and Borough of Juneau's climate action plan. The CBJ adopted the Juneau Climate Action & Implementation Plan (JCAIP) in 2011. The JCAIP provides an energy and GHG emission inventory and sets a goal of reducing GHG emissions by 25% by 2032. Juneau dock electrification is specifically identified in the plan as significantly assisting Juneau in meeting this goal.<sup>5</sup>

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<sup>1</sup> Southeast Alaska 2025 Economic Plan <https://www.seconference.org/publication/southeast-alaska-2025-economic-plan/>

<sup>2</sup> Blueprint Downtown <https://chstm2y9cx63tv84u2p8shc3-wpengine.netdna-ssl.com/wp-content/uploads/2019/07/Final-Blueprint-Downtown-Report-w-Appendix-6.18.19-1.pdf>

<sup>3</sup> Visitor Industry Task Force Report <https://juneau.org/assembly/visitor-industry-task-force>

<sup>4</sup> Juneau Renewable Energy Strategy <https://renewablejuneau.org/policies-for-renewables/cbj-renewable-energy-strategy/>

<sup>5</sup> Juneau's Climate Action Plan <https://juneau.org/index.php?gf-download=2019%2F03%2F2011-Climate-Action-Plan.pdf&form-id=22&field-id=11&hash=32c8805f269ce4bd156cb5cd0bdfd2917fbac831e531c75d02d84a2e17e4405c>



**Figure 6. Image shows a cruise ship docking in Juneau in 2019.**

Juneau dock electrification also supports and encourages cruise industry climate goals. The Cruise Line Industry Association (CLIA) has committed to a fleet-wide reduction in carbon emissions by 40% by 2030 compared to 2008 levels and notes the use of shore power as an implementation strategy. Dock electrification appears to be one of the more cost-effective near-term strategies for meeting industry carbon reduction goals.

### **Quality of Life**

Electrification of the City and Borough of Juneau’s two docks will make a significant contribution to the quality of life of Juneau residents and visitors. As the number and size of cruise ships visiting Juneau have increased, public concerns about the impacts of the visitor industry have grown concurrently. Quality of life benefits of dock electrification include reduced noise in the downtown Juneau waterfront and business district when auxiliary engine operations are replaced by quiet shore power, and improved air quality in Juneau.

### **Emissions Reduction**

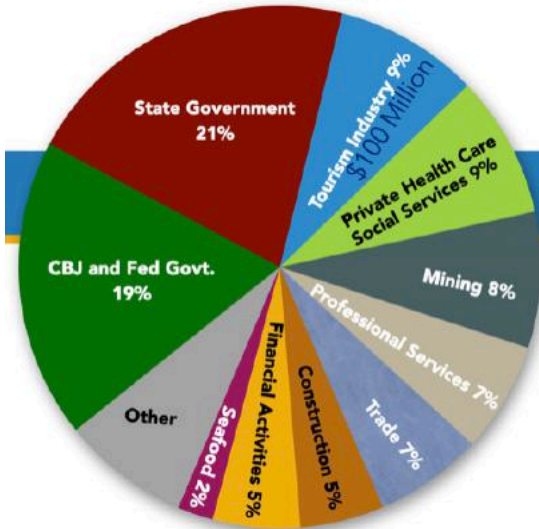
The air quality enjoyed by residents in the community is at times degraded by cruise ship stack emissions. The most visible emissions from ships are when they are approaching Juneau in its mountainous, fjord-like setting, while entering and departing the Juneau harbor, and during the hours docked in port. On occasion, there is a haze of emissions from cruise ships in the downtown and harbor areas.

### **Reduced Noise**

Elimination of ship noise at Juneau waterfront and business district when ship use “quiet” hydropower instead of auxiliary engines.

# Juneau Alaska Economy

## Employment Earnings



## Annualized Jobs

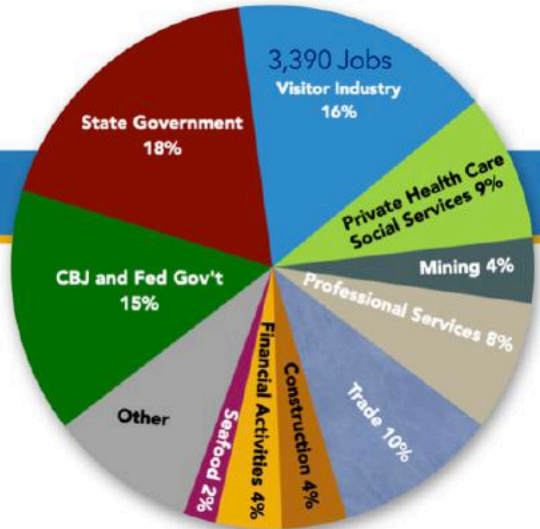


Figure 7 The Juneau Economy

### Economic Competitiveness

An environmentally sustainable cruise ship sector is not only good for the environment, it is also important for the economy. In recent years, the Juneau economy has been devastated by a pair of economic losses. Jobs in state government, historically the cornerstone of the local economic base, fell 20% over the past eight years. On top of this, Juneau was particularly impacted by the pandemic crisis, losing 19% of all jobs in the first six months of COVID-19.

As state government jobs are cut, the community is increasingly turning to tourism to help support the local economy. Most visitors, 94% of all Juneau tourists, come to the community by cruise ship. In 2019, the Juneau cruise ship focused tourism sector directly supported 3,390 year-

round equivalent jobs and \$100 million in associated wages, making it the largest private sector industry in the community, both in terms of jobs and wages. In 2022, Juneau tourists are expected to spend \$305 million in the community. Approximately one-fifth of all local sales tax dollars are spent by tourists.

Figure 8: Juneau Tourist by Arrival Mode, 2022 Projection

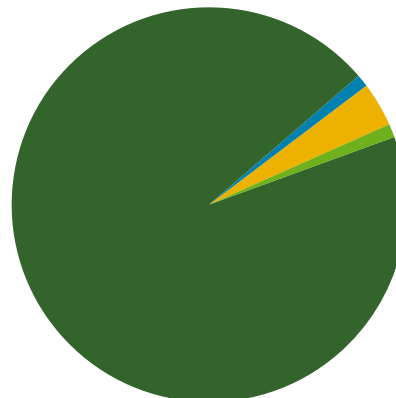




Figure 9 Annual Juneau Cruise Ship Passenger Arrivals

The number of cruise passengers to Juneau has been increasing – from just under a million in 2013, to 1.33 million in 2019, to a projected 1.58 million in 2022. In 2022, 664 large cruise ship voyages are planned for Juneau.

### State of Good Repair

The two city-owned berths called the Alaska Steamship Wharf (north berth) and the Cruise Ship Terminal (south berth) are in excellent structural condition and are among the newest facilities in the world, having been constructed in 2016 and 2017. An in-depth planning and design process led to the decision to install concrete floating berths, galvanized steel structures with sacrificial zinc pile anodes to construct a facility with a minimum service life of 50 years. The City is committed to ensuring the shore tie power systems are kept in a state of good repair,

in line with its demonstrated history of maintaining its assets.

## Secondary Selection Criteria

### Partnership

CBJ Docks & Harbors is the project proponent and owner. It operates and manages multiple waterfront facilities and properties throughout Juneau. These include the two CBJ-owned cruise ship docks, several small boat harbors and small boat floats, six launch ramps, two commercial loading facilities, two boat yards, and several hundred acres of tidelands and waterfront properties under lease.

There are multiple longstanding partnerships focused on the Cruise Ship Dock Electrification Project. First is with Alaska Electric Light & Power (AEL&P), the electrical utility providing all of

Juneau's clean hydro power for more than 125 years. AEL&P is committed to meeting Juneau's current and future power needs at some of the lowest rates in the state of Alaska. AEL&P has also partnered with the owners of the Franklin Dock to build the first electrified cruise dock in the world.

Cruise Line Agencies of Alaska is another partner. It represents the major cruise operators and organizes the yearly berthing schedule for Juneau. Their technical expertise in orchestrating the yearly ballet of transiting huge ships through narrow fjords and their support of environmental regulations provide the understanding to schedule ships to fully utilize available shore tie power

The Franklin Dock is a direct partner as they would receive some important infrastructure upgrades to provide AEL&P improved grid controls to alleviate system wide fluctuations.

Alaska Department of Environmental Conservation are partners as they are required to monitor and report emissions violations and provide monitoring.

CBJ has nearly three dozen letters of support for this project, including from several Alaska Native Regional Corporations and Alaska Native Brotherhood, the oldest known indigenous persons' civil rights organization in the world. The full list of letters of support can be found in Attachment D.

## **Innovation**

### **Innovative Technologies**

The sections above describe the configuration of the system to deploy electrical energy to the cruise ships. Much of the system will be engineered using conventional technology used in utilities and a corrosive marine environment.

However, some components will be unique to this system.

**Substation Transformers:** There will be a single transformer designated to each deployment system. Some of the ships utilize power plants with 6.6KV generation and main distribution while others use 11.2KV generation. To facilitate ships with differing voltages at each berth, separate transformers are necessary. The secondary windings in the transformers will be configured to provide both 6.6 and 11.2KV power. They will utilize interlocked circuit breakers to provide the desired voltage, but they can only provide one or the other. The transformers will include "Load Tap Changing" windings and control to accomplish refined voltage matching between the ship and the utility during power transfers to and from the utility. This feature will aid in minimizing voltage and power fluctuations to the overall grid.

**Submarine Cables:** The North and South Berths are located offshore with approach docks and ramps connecting them to shore. The deployment floating docks will also be positioned offshore so that they are adjacent to the ship when it is moored. They will not be close to the main floating docks. This situation promotes use of submarine cables routed from the vaults on shore to the deployment float. The cables will be suspended from the deployment float and laid on the sea floor in a circular manner to allow their movement with tide changes. This is unique to onshore power deployment systems in that the ships are moored to floating docks positioned slightly offshore.

**Deployment System:** The first onshore power deployment system for cruise ships

was installed in Juneau in 2001. It involved a festooning system mounted to a structure located at the end of the Franklin Dock, a fixed dock constructed close to shore. Although the system has provided good service since its installation, it requires constant management during onshore power connections due to tidal changes. More recent deployment systems at other ports involve fixed cranes with extendable booms supporting the connecting cables. Recent installations now include movable cranes with extendable booms to support the cables. These allow for a much greater range of service allowing connection to a larger variety of ships. The deployment systems for the North and South Berths will involve a movable device with extendable boom crane. Its design will be unique to these berths. They will be mounted to a floating versus fixed docks. They will include reels mounted to the equipment to store or deploy cables. The reels will lay cables on the deployment float as it travels away from the switch located on the float and gather cables as it travels back toward the switch.

#### **Innovative Project Delivery**

CBJ has a robust understanding of Design, Bid, Build project delivery methods, but it also has a charter amendment to allow for alternative procurement processes. This flexibility gives CBJ the latitude to maintain federal procurement requirements while capitalizing on possible proprietary technologies which would strengthen infrastructure resiliency, efficiency and reliability.

#### **Innovative Financing**

Maritime infrastructure projects do not have the same funding avenues as other transportation modes such as highways

and rail. Financing for this project would be through more traditional methods.

#### **Demonstrated Project Readiness**

The project will involve three primary components: construction of the substation, construction of the upland feeders to the deployment docks, and construction of the deployment dock. Alaska Electric Light & Power (AEL&P) will be responsible for the substation and contractors will be used to construct the feeders and deployment dock. Engineers and contractors with a strong background of installations of this type are locally available, and they are supported with additional resources from other locations in Alaska as needed to meet project schedules.

#### **Technical Capacity**

Juneau Alaska was the first place in the world to create the technology to allow cruise ships to plug into shore power and is ready to expand on that capacity.

Juneau has local engineers and contractors with experience throughout Alaska with strong backgrounds with marine structural and medium voltage electrical systems as required for this project. All are well versed with local climatic conditions, technical application, and resource acquisition. Local engineers and contractors worked alongside AEL&P to construct the world's first cruise ship onshore power deployment system here in Juneau.

#### **Financial Capacity**

While CBJ Docks & Harbors has a reserve account, all of that funding, and much more, is needed to provide the capital cost of this important infrastructure project. State passenger fees were levied for the new berth construction and those fees continue to pay off the financing

package. The principal source of funds for the Docks enterprise account within CBJ Docks & Harbors is the cruise ship berthing charges and a \$3 per visitor fee for Port Development. The COVID-19 pandemic completely devastated the 2020 and 2021 cruise seasons and revenue to the Docks enterprise has fallen to zero. A reasonably-sized fund balance has allowed regular maintenance and security staff to remain intact, but this fund is

shrinking as CBJ awaits the restart of Alaska cruises. The Juneau Cruise Dock Electrification Project cannot proceed absent the requested RAISE grant funding.

## V. Environmental Risk

As this project has been a part of the original port development plan, there is minimal environmental risk associated with completing the dock electrification.

Table 5 Environmental Permits and Reviews

<b>ENVIRONMENTAL PERMITS AND REVIEWS</b>	
NEPA Status	No NEPA has been conducted for this project. It will be developed as part of the required environmental reviews during the design process.
Reviews, Approvals and Permits by Other Agencies	Non-local agencies with permitting responsibilities include the U.S. Army Corps of Engineers (USACE). A USACE permit will be required for all work below the high tide line. An individual Section 10/404 permit will be necessary from the USACE and includes a purpose and need statement, detailed project description, mitigation statement, practicable alternatives analysis, essential fish habitat assessment, biological assessment for formal endangered species act consultation. While these permitting steps can be tedious, we expect little difficulty in achieving the permit. CBJ Docks & Harbors has a long and effective history of permitting significant in-water and tidelands projects and past experience tells us that this project will easily clear permitting requirements. The immediate area has already been highly developed with very similar infrastructure, and there are no known habitat issues like eel grass beds or salmon spawning streams in the project area.
Environmental Studies or Other Documents	From the National Marine Fisheries Service, an Incidental Harassment Authorization (IHA) along with a Marine Mammal Monitoring Plan are anticipated to be necessary to complete this project. The CBJ has had extensive past experience and success in acquiring and monitoring for these authorizations.
DOT&PF Coordination	Right of way and utility permit coordination has not yet been conducted with the local DOT, but the City has a close working relationship with them. We have worked with them on numerous transportation projects and do not anticipate any issues with obtaining local DOT reviews or approvals.
Public involvement	Over the last decade, this project has been through a comprehensive public involvement process which has included extensive coordination with the Cruise Line Agencies of Alaska and the input of Juneau stakeholders and residents during community workshops, open house events, harbor board presentations, integrated design charrettes and stakeholder meetings.
<b>STATE AND LOCAL APPROVALS</b>	
The Juneau Cruise Ship Berth Electrification project has become a demonstrated community value supported by CBJ Assembly (CBJ Resolution 2958) as well as in both the CBJ Juneau Climate Action Plan (CBJ Resolution 2593) and the CBJ Juneau Renewable Energy Strategy (CBJ Resolution 2808).	
<b>FEDERAL TRANSPORTATION REQUIREMENTS AFFECTING STATE &amp; LOCAL PLANNING</b>	
As stated above, this project has become a demonstrated community value supported by CBJ Assembly (CBJ Resolution 2958) as well as in both the CBJ Juneau Climate Action Plan (CBJ Resolution 2593) and the CBJ Juneau Renewable Energy Strategy (CBJ Resolution 2808).	



During the first phase of uplands work, conduits and vaults were installed for future power conductors. During the installation of the floating berths there were no issues. The City has received multiple environmental permits and approvals for recent projects in the vicinity. The immediate area has already been highly developed and there are no habitat issues such as eel grass beds, salmon spawning streams or marine mammal haul outs in the project area.

### Required Approvals

Due to the extensive planning and public involvement process that has already been performed, we expect the final permitting and approval process to be straight forward and relatively brief. The CBJ has extensive experience in acquiring environmental permits and local approvals for projects of a similar nature and will

draw upon that experience to navigate through and acquire all required approvals and permits in a timely manner as needed to meet the milestones described in the project schedule. The table below further discusses the specific reviews and approvals required for this project.

### Project Schedule

The anticipated schedule for this project spans a 36-month timeframe, with time intervals measured from the date of RAISE Grant awards. This schedule will easily accommodate the June 30, 2024 U.S. DOT fund obligation deadline, and includes contingency to account for any unexpected delays so that funds are not at risk of expiring prior to being obligated. Project completion will be achieved well in advance of the September 30, 2029 deadline for funding expenditure.

### Project Schedule

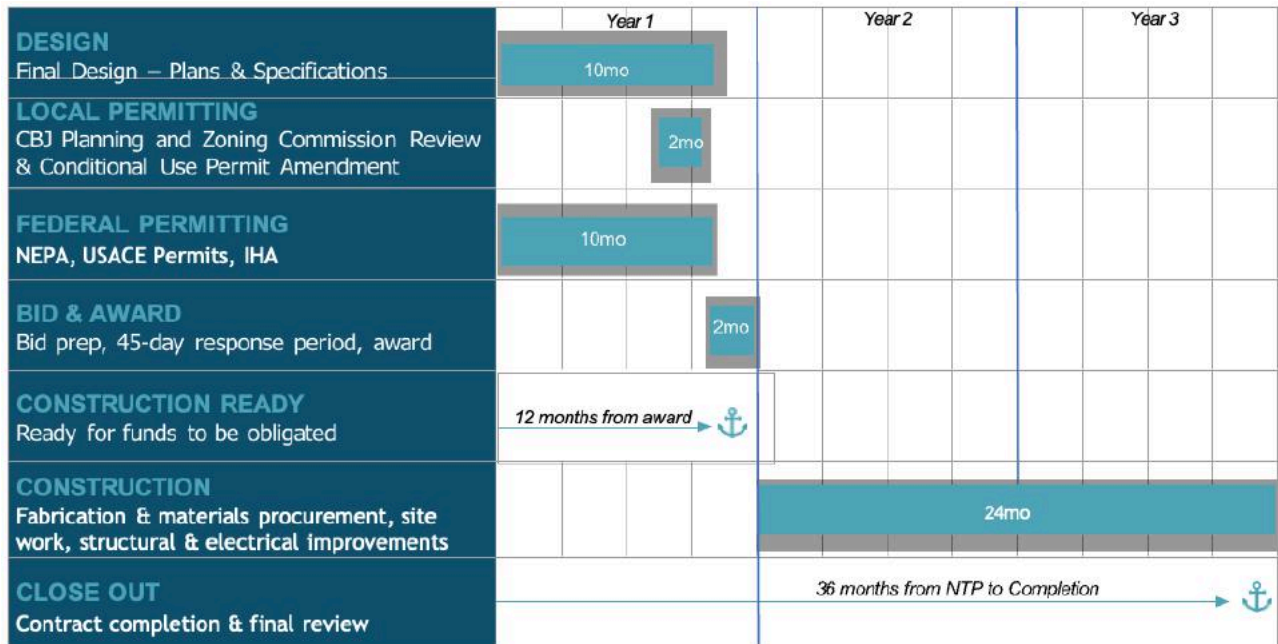


Figure 10 Project Schedule

## Assessment of Project Risks and Mitigation Strategies

### Risk

The largest project risk is associated with the total availability of hydropower on Juneau’s island grid. Juneau is situated in a rainforest with significant precipitation to provide excess power. Critical to the assumptions behind this grant application is the reasonable assertion that additional hydropower will be available to power the docks by 2038.

Most of the materials and supplies can be sourced domestically but several cable handling systems are produced by non-domestic companies. The City and Borough may pursue a waiver for relevant domestic preference laws, if a suitable cable handling system cannot be produced domestically. CBJ has taken steps to identify several cable handling device manufacturers to locate domestically sourced options.

Another risk is a catastrophic event that precipitates a substantial downturn in the cruise market, which was the temporary case with COVID-19.

### Mitigation Strategy

Juneau has three potential hydroelectric projects that are in the planning stages and may be constructed to provide additional energy. These include Sheep Creek (Chas’heeni), Lake Dorothy Phase II, and Sweetheart Lake.

To mediate risks to the cruise industry, Juneau continues to collaborate with the

industry, state and federal regulators and other partners in the environmental protection and security sectors to provide improved protocols to protect the passengers, crew and communities visited by over 1.5 million passengers each year.



Figure 11. View of berths from the water.

## V. Benefit Cost Analysis

The Benefit-Cost ratio for this project is incredibly strong at 3.75, meaning that in 20 years the project will provide nearly four times the value of the original investment. The BCA was conducted under the guidelines of the U.S. DOT for a Discretionary Grant Application to identify, estimate and quantify the expected benefits of the Juneau Cruise Ship Electrification Project compared to the baseline condition.

The largest calculated benefit of the Juneau Cruise Ship Dock Electrification Project is the monetized value of emission reductions. A growing number of cruise ships are traveling to Juneau, Alaska. Ships primarily use diesel to power all onboard cruise ship operations while visiting the Juneau port. Electrification of two municipally-owned cruise ship berths will allow two additional ships to plug into hydroelectrical power when they are docked in Juneau, thus eliminating a significant level of carbon-based emissions associated with cruise ship hoteling.

Electrification of the two cruise ship berths would displace the following emissions over the next 20 years: 46,314 metric tons of CO<sub>2</sub>, 1,681 metric tons of NO<sub>x</sub>, 1,504 metric tons of SO<sub>x</sub>, and 149 metric tons of PM<sub>2.5</sub>. The associated value of this emission reduction, based on damage costs provided by the US Department of Transportation, would be \$78 million.

The impact summary table is on the following page, and the complete BCA can be found in Appendix A.

## Project Benefits by the Numbers

**4.6** million gallons of diesel displaced

**50,000** metric tons of CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>2.5</sub> air emissions reduced

**\$76** million in project benefits

**3.75** benefit/cost ratio

*Annual support for*

**3,390** jobs

**\$100** million in wages

**\$300** million in local tourism spending

Table 6 Impact Summary

IMPACT SUMMARY						
CURRENT STATUS/BASELINE & PROBLEM TO BE ADDRESSED	CHANGE TO BASELINE	TYPE OF IMPACTS	POPULATION AFFECTED BY IMPACTS	ECONOMIC BENEFIT	SUMMARY OF RESULTS	PAGE REFERENCE IN BSA
<p>An increasing number of cruise ships are visiting Juneau, Alaska, with 664 large cruise visits planned for 2022.</p> <p>However, high levels of ship-generated emissions are also increasing.</p> <p>By electrifying two municipally-owned docks, cruise ships can plug into green hydroelectric shore power while visiting Juneau, reducing the level of air pollutants.</p>	<p>Installation of shore power at two cruise ship berths would eliminate cruise ship emissions, including nearly 50,000 metric tons of CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>2.5</sub> that occur when cruise ships run auxiliary engines for hoteling while in port.</p>	<p><b>Emissions Reduction Benefits</b></p>	<p><b>City and Borough of Juneau (CBJ) residents and visitors.</b></p> <p>The Juneau 2020 population was 31,773.</p> <p>Juneau's Alaska Native population is 19%.</p> <p>1.68 million tourists are expected in Juneau in 2022.</p>	<p>The value of this emission reduction is projected to be \$78 million.</p>	<p>Electrification of the two cruise ship berths would displace the following emissions over the next 20 years: 46,314 metric tons of CO<sub>2</sub>, 1,681 metric tons of NO<sub>x</sub>, 1,337 metric tons of SO<sub>x</sub>, and 130 metric tons of PM<sub>2.5</sub>.</p>	<p>Page 7-14 BCA Tabs 1,2,5-8</p>
		<p>Other Impacts: <b>Jobs and Wage Income</b></p>		<p>Growth of the tourism sector contingent upon the economic benefits of cruise ship tourism outweighing environmental costs.</p>	<p>94% of Juneau's tourists arrive on cruise ships. The tourism sector directly supports 3,390 year-round equivalent jobs and \$100 million in associated wages, annually. Tourists are expected to spend \$304 million in Juneau in 2022.</p>	<p>Pages 15-16</p>
		<p>Other Impacts: <b>Local Tax Revenue</b></p>		<p>CBJ will collect sales tax dollars from cruise ships on electricity.</p>	<p>\$434,000 over 20 years</p>	<p>Pages 16-17</p>
		<p>Other Impacts: <b>Safety Benefits</b></p>		<p>Health safety will improve due to reduced emissions.</p>	<p>Included in emissions reductions estimates above.</p>	<p>Page 17</p>

July 11<sup>th</sup>, 2021

## **Benefit-Cost Analysis of the Juneau Cruise Ship Dock Electrification Project**

*Rain Coast Data was hired by Haight & Associates, on behalf of City and Borough Docks and Harbors, to develop a Benefit-Cost Analysis for a RAISE Discretionary Grant application. The Rain Coast Data team included PhD economist Brian Vander Naald and Meilani Schijvens, M.S.*

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## Benefit-Cost Project Summary

The largest calculated benefit of the Juneau Cruise Ship Dock Electrification Project is the monetized value of emission reductions. The ratio of discounted benefits to costs (B/C ratio) is 3.75.

A growing number of cruise ships are traveling to Juneau, Alaska. While Juneau has one cruise ship berth that enables ships to connect to shore power – the first to be developed globally – the community has four cruise ship berths. Ships without access to shore-based electricity use diesel to power onboard cruise ship operations while visiting the Juneau port. Electrification of two municipally-owned cruise ship berths will allow two additional ships to plug into hydroelectrical power when they are docked in Juneau, thus eliminating carbon-based emissions associated with cruise ship hoteling.

Following the development of the baseline and project scenarios, the following impacts were considered and monetized for the Benefit-Cost Analysis (BCA):

**Emission Reduction Benefits:** Electrification of the two cruise ship berths would displace the following emissions over the next 20 years: 40,362 metric tons of carbon dioxide (CO<sub>2</sub>), 1,472 metric tons of nitrogen oxide (NO<sub>x</sub>), 1,337 metric tons of sulfur dioxide (SO<sub>x</sub>), and 130 metric tons of fine particulate matter (PM<sub>2.5</sub>). The associated value of estimated emissions reductions, based on damage costs provided by the US Department of Transportation, is \$73 million discounted over a 20-year period.

Table 1 summarizes the findings of the benefit-cost analysis for the development of Juneau Cruise Ship Dock Electrification.

**Table 1. Benefit-Cost Analysis Summary Results**

Measure	Discounted at 7%
Emissions Reduction Benefits	\$73,170,730
Residual Value	\$2,758,415
<b>Total Benefits</b>	<b>\$75,929,146</b>
Capital Costs in 2019 dollars	\$19,064,709
Maintenance Costs	\$1,208,542
<b>Total Costs</b>	<b>\$20,273,251</b>
<b>Benefit-Cost Ratio</b>	<b>3.75</b>

In addition, we qualitatively discussed the following benefits that are not included directly in the benefit-cost ratio calculations:

- Jobs and wage income supported
- Local tax income
- Safety benefits

## Project Description

The cruise industry is a significant and growing contributor to the Juneau economy. Growth in this sector has led to increasing concerns regarding cruise ship environmental impacts, including air emissions produced while in port. In 2022, 664 large cruise ships voyages are scheduled to visit in Juneau between April and October. CBJ owns and manages two of the four cruise ship berths in Juneau. The two privately owned berths provide similar moorage and utility connections as the city's, with the Franklin Dock providing the only shore tie power connection in Juneau. That system was the first of its kind in the world, constructed in 2001.

The Juneau Cruise Ship Dock Electrification Project would install two onshore power deployment facilities at the City & Borough of Juneau's (CBJ) two cruise ship docks. Completed in June of 2017, the berths provide moorage for neopanamax cruise ships up to 1,100 feet. The berths provide deep water moorage with access to potable water, sewer discharge and visitor amenities in the upland transportation staging areas. A deployment system will be developed to connect cruise ships moored at these docks to electricity generated by the utility's hydroelectric power plants. This system will enable connected ships to operate in hoteling mode without onboard fuel fired generators, reducing greenhouse gas emissions in Juneau's port.

## Impacts of Transportation Infrastructure Improvements

The primary goal of the Juneau Cruise Ship Dock Electrification Project is to continue building a successful visitor industry economic sector while remediating environmental impacts associated with large cruise ships visiting the community. Juneau's cruise ship docks are located in downtown Juneau. The community has a population of 32,000 and is 19% Alaska Native. The installation of shore power at the two CBJ docks would eliminate nearly 50,000 metric tons of cruise ship emissions, including the CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>2.5</sub> that is emitted when cruise ships run auxiliary engines for hoteling while in port at those berths.

## Baseline Scenario

In 2020, 43 cruise ships had been scheduled to make 606 port visits to Juneau. In 2022, 664 voyages are currently planned.<sup>1</sup> Cruise ships are "floating communities" which generate their own electricity and propulsion power, and heat using combustion equipment installed on board the vessels. While docked in Juneau, the ships operate in hotel mode, meaning they continue to provide power, heat, air conditioning, and hot water for guests and staff, like a floating hotel, and as a source of air pollution. The cruise ship season in Juneau begins in late April and continues through October.

If electrical power is not provided at the CBJ docks, the vessels' electrical needs will continue to be met by generation from the large on-board diesel-fired engines or gas turbines, which are a source of GHG emissions. This would mean nearly 50,000 metric tons of CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>2.5</sub> would be generated over the next 20 years in downtown Juneau, all of which could be avoided through development of this project.

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<sup>1</sup> Data provided by Cruise Lines International Association.

## Analysis Approach

The BCA for this project was prepared according to Benefit-Cost Analysis Guidance for Discretionary Grant Programs, published by US Department of Transportation, February 2021, and with reference to OMB Circulars A-4 and A-94 concerning benefit-cost analysis. This BCA considers all reasonable project costs and monetizable benefits over a 20-year horizon (2023–2043), and describes analysis period and discounting. The following sections summarize the results and outlines the project costs, benefits, and assumptions used in this analysis.





The Project Summary matrix (Table 2) provides a summary of the population impacted, the benefits of the project, and a reference to where each impact is discussed in this report.

**Table 2. Project Summary Matrix**

Current Status/Baseline & Problem to be addressed	Change to Baseline	Type of Impacts	Population Affected by Impacts	Economic Benefit	Summary of Results	Page Reference in BSA
<p>An increasing number of cruise ships are visiting Juneau, Alaska, with 664 large cruise visits planned for 2022. However, high levels of ship-generated emissions are also increasing. By electrifying two municipally-owned docks, cruise ships can plug into renewable hydroelectric shore power while visiting Juneau, reducing the level of air pollutants and greenhouse gas emissions.</p>	<p>Installation of shore power at two cruise ship berths would eliminate cruise ship emissions, including nearly 50,000 metric tons of CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>2.5</sub> that occur when cruise ships run auxiliary engines for hoteling while in port.</p>	<p><b>Emissions Reduction Benefits</b></p>	<p>31,773 Juneau residents (Juneau’s population is 19% Alaska Native), and 1.6 million tourists.</p>	<p>The value of this emission reduction, based on damage costs provided by the US Department of Transportation, is projected to be \$73 million.</p>	<p>Electrification of the two cruise ship berths would displace the following emissions over the next 20 years: 46,314 metric tons of CO<sub>2</sub>, 1,681 metric tons of NO<sub>x</sub>, 1,337 metric tons of SO<sub>x</sub>, and 130 metric tons of PM<sub>2.5</sub>.</p>	<p>Page 7-14 BCA Tabs 1,2,5-8</p>
		<p><b>Other Impacts: Jobs and Wage Income</b></p>		<p>The struggling Juneau economy is transitioning to a visitor industry economy. Long-term success of tourism is contingent upon the economic benefits of cruise ship tourism outweighing environmental costs.</p>	<p>Nearly all – 94% – of Juneau’s tourists arrive on cruise ship. The Juneau tourism sector directly supports 3,390 year-round equivalent jobs and \$100 million in associated wages annually. Tourists spend \$305 million annually. This project will support and grow those jobs, earnings, and spending.</p>	<p>Page 15-16</p>
		<p><b>Other Impacts: Local Tax Revenue</b></p>		<p>The municipality will collect sales tax dollars from cruise ships on electricity received during the time they are plugged into shore power, helping offset operating costs.</p>	<p>\$434,000 over 20 years</p>	<p>Page 16-17</p>
		<p><b>Other Impacts: Safety Benefits</b></p>		<p>Health safety will improve due to reduced CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>2.5</sub> emissions.</p>	<p>The monetized health-related benefits are included in the emissions reductions estimates above.</p>	<p>Page 17</p>

## Results of Benefit-Cost Analysis

This BCA was prepared under the guidelines of the U.S. Department of Transportation for a Discretionary Grant Application.

The proposed development of the Juneau Cruise Ship Dock Electrification Project will result in a variety of monetizable benefits, the sum of which significantly exceed the project costs considered in this analysis.

Table 3 summarizes the findings of the BCA. The ratio of discounted monetized benefits to costs (B/C ratio) is 3.75 at the 7% discount rate. The following sections describe the costs and benefits used to calculate the values displayed in the table below.

**Table 3. Benefit-Cost Analysis Summary Results**

Measure	Discounted at 7%
Total Benefits	\$75,929,146
Total Costs	\$20,273,251
<b>Benefit-Cost Ratio</b>	<b>3.75</b>

The results of the BCA are presented using the cash flows that occur over the analysis period (2025–2044). The discount rates of 7% follow the guidance of OMB Circular A-4. The discount rate is used to discount future cash flows to the present. The discount rate takes into account the time value of money and the uncertainty associated with future cash flows (put simply, the principle of discounting works on the assumption that a dollar today is worth more than a dollar a year or more in the future). (Note that due to the use of the discount rate and because the dollars are required to be in 2019 dollars by the BCA guidelines, the total costs dollar amount is not identical to the total grant request.)

Additional non-quantifiable social benefits would also result from this project that were not considered as part of the benefit-cost calculations.

## Benefits

The total benefit of this project is \$76 million. The largest monetizable benefit of providing electrical connectivity to the CBJ cruise ship berths is air emissions savings.

### Value of Emissions Reduction Benefits

#### *Reduction of CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>2.5</sub> Emissions*

The total benefit of avoided emissions is expected to be more than \$73.2 million over the 20-year scope of this analysis. Air pollution from cruise ships is generated by diesel engines that burn high sulfur content fuel, producing sulfur dioxide (SO<sub>x</sub>), nitrogen oxide (NO<sub>x</sub>), fine particulate matter (PM<sub>2.5</sub>), and carbon dioxide (CO<sub>2</sub>). Cruise ship emissions exert more significant impacts in specific coastal areas that are visited repeatedly, such as Juneau.

**Table 4. Value of Emissions Savings**

Foregone Emissions Value	Discounted at 3% or 7%
Foregone CO <sub>2</sub> emissions (discounted at 3%)	\$1,929,408
Foregone NO <sub>x</sub> emissions (discounted at 7%)	\$8,308,116
Foregone SO <sub>x</sub> emissions (discounted at 7%)	\$23,095,002
Foregone PM <sub>2.5</sub> emissions (discounted at 7%)	\$39,838,204
<b>Total annual 20-year savings of emissions value in 2019 Dollars</b>	<b>\$73,170,730</b>

Electrification of the two cruise ship berths would displace the following emissions over the next 20 years: 46,314 metric tons of CO<sub>2</sub>, 1,681 metric tons of NO<sub>x</sub>, 1,337 metric tons of SO<sub>x</sub>, and 130 metric tons of PM<sub>2.5</sub>.

**Table 5. Value of Emissions Savings**

Foregone Emissions Over 20 Years	Metric Tons
Probable Metric tons CO <sub>2</sub> avoided	46,314
Probable Metric tons NO <sub>x</sub> avoided	1,681
Probable Metric tons SO <sub>x</sub> avoided	1,524
Probable Metric tons PM <sub>2.5</sub> avoided	149

The team used “probable estimates” in place of “maximum estimates” to provide a conservative estimate (see tab “Fuel Consumption Avoidance”) of emissions reductions. It is possible that emissions reductions will be even greater.

Infrastructure enabling the connection of cruise ships to shore power will reduce the cruise industry’s impact on the environment by lowering the level of air pollutants created by the combustion of fuel while in port. The economic damage caused by air pollution represent externalities because these impacts are borne by everyone in the community, rather than by the cruise ship operators whose activities generate those emissions. Local air pollutants are generated by cruise ships while they are in hoteling

status (docked in Juneau, but continuing to provide power, climate control, and hot water for its guests and staff, like a floating hotel). The monetized value, per metric ton, of the damage caused by these emissions is provided by the US Department of Transportation. Using Appendix A, Table A-6 of the Benefit-Cost Analysis Guidance for Discretionary Grant Programs \$73 million in future savings will be realized if this project is developed, over the first 20 years of the project.

Ship-specific information on emissions levels are not available for the Alaska cruise ship fleet. In order to calculate the levels of CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>2.5</sub> emissions that are generated when a cruise ship is in hoteling status, the study team used the emission levels measured and presented in “Evaluating Air Emission Inventories and Indicators from Cruise Vessels at Ports,” by German De Melo Rodríguez, Enrique Martin-Alcalde, J.C. Murcia-González, and Sergi Saurí, published by the World Maritime University in 2017. This paper provides estimates of air emissions of the various pollutants (CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, and PM) released by cruise vessels at the port level. The methodology was especially valuable as it specifically measured emissions generated during hoteling. Additional insight was derived from another study “Air Pollution Emission Inventory For 2008 Tourism Season Klondike Gold Rush National Heritage Park Skagway, Alaska,” prepared by Richard Graw, US Forest Service, and Albert Faure, Alaska Department of Environmental Conservation Division of Water Cruise Ship Program.

In order to measure potential emission reductions from the Juneau Cruise Ship Dock Electrification Project, several assumptions were developed by the BCA project team:

**Total Cruise Ship Time in Port and Connection Time Assumptions:** Critical to measuring probable emissions avoided is understanding the total time that ships would be connected to shore power in the future. Cruise hours in port were developed by reviewing the schedules Cruise Line Agencies of Alaska Cruise Ship Calendar for 2022.<sup>2</sup> It is assumed that the average time in port by cruise ships visiting the community will remain relatively similar in future years, since the 2022 schedule effectively maximizes berth usage. Connection time is a subset of total time in port. The existing electrified cruise ship berth in Juneau requires approximately 90 minutes to tie up a ship, follow safety protocols – which includes a visual inspection and lockout of a switch on the dock by a member of the ship’s crew to ensure the cables are working safely – and coordinating between the ship and the electric utility’s system operator to perform the switching and transfer of load. The reverse action prior to departure takes a similar amount of time.<sup>3</sup> Haight & Associates projects that the upgraded substation transformer will better synchronize the ship with the grid and the deployment system will be slightly more efficient, so that the connection-disconnection time can be reduced to 60 minutes on each end, rather than 90 minutes. Therefore, to arrive at the total time connected per visit, the arrival time was subtracted from the departure time, with an additional two hours subtracted for electricity connection/disconnection time.

<sup>2</sup> <https://secureservercdn.net/198.71.233.51/2xl.54d.myftpupload.com/wp-content/uploads/2021/06/Juneau-2022.pdf>

<sup>3</sup> Interviews with Alec Mesdag, Director of Energy Services Alaska Electric Light & Power Co. June 16, 2021.

**Total Electricity Available:**

Understanding the total amount of excess hydroelectricity currently available to power two cruise ship berths in Juneau is fundamental to developing projected emission displacement calculations. The ability to provide energy with existing hydro resources is limited based on the water available at any given time, depending on annual precipitation rates.

According to Alaska Electric Light and Power (AEL&P), the electrical utility for Juneau, hydrologic data collected over the years indicates that enough additional energy is available to serve two additional docks around 25% of the time (one in every four years).<sup>4</sup>

The project team made a further assumption that within the next 15 years, additional electric capacity would become available, based on two assumptions:

1) There is a high likelihood that new electric generation capacity is likely to be constructed – three hydroelectric sources could be developed to provide Juneau with additional energy capacity, Lake Dorothy Phase II, Sheep Creek (Chas’heeni), and Sweetheart Lake;

2) One of AEL&P’s interruptible customers might no longer require electricity.

Therefore, for the first 15 years of the project, the project team assumes that 25% of ship power needed to electrify the cruise ship berths would be available, and that for the last five years of this 20-year analysis, 100% of cruise ship shore power electricity needs would be available.

**Avoided Fuel Consumption:** Avoided fuel consumption is estimated at 297,598 gallons per year, for years in which sufficient hydroelectricity is available – one in every four years for the first 15 years of the project analysis period. Avoided fuel consumption is based on time in port, estimated fuel consumption avoided for an



Aerial view of the two cruise ship berths that will be connected to hydroelectric shore power.

<sup>4</sup> Interviews with Alec Mesdag, Director of Energy Services Alaska Electric Light & Power Co. June 16, 2021.

existing electrified cruise ship dock in Juneau, and the number of vessels that currently have the technical capability to plug into shore power.

**At year 15 is it assumed that all vessels using the CBJ cruise ship berths would have the ability to connect to shore power:** Based on Cruise Lines International Association 2019 Environmental Technologies and Practices Report, 88% of new cruise ships are expected to be constructed with the ability to plug into shore power.<sup>5</sup> Because ships with shore-side electricity systems would likely be given docking priority at the berths with electrical capacity, by year 15 this analysis assumes that the probable time cruise ships in Juneau will be connected to shore power will increase from 494 hours at the North Berth and 353 hours at the South Berth to 1,663 total hours of connection time for both berths, thus also increasing the gallons of avoided fuel consumption during the final five years of the analysis period to 584,648 gallons annually. (See tab “Fuel Consumption Avoidance” of the BCA tables). Shore power usage is a primary means whereby the cruise industry work on its pledge to lower its carbon footprint.

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<sup>5</sup> CLIA 2019 Environmental Technologies and Practices Report. [https://cruising.org/-/media/research-updates/2019-clia-infographic\\_environmental-technologies-practices-report---cruise-industry-report.ashx](https://cruising.org/-/media/research-updates/2019-clia-infographic_environmental-technologies-practices-report---cruise-industry-report.ashx)

### Value of CO2 Savings

An estimated 46,314 metric tons of CO<sub>2</sub> air emissions is expected to be avoided through implementation of this project. The discounted present value of CO<sub>2</sub> avoided is expected to be \$37,684 in the initial year it is realized, and \$1.93 million over the 20-year scope of this analysis. See Table 6 below:

**Table 6. Monetary Value of Avoided CO2**

Year	Probable Metric tons CO2 avoided	2019 Value of CO2 value per metric ton	Nominal value of CO2 avoided	Discounted present value of CO2 avoided
2025	757.39	\$56	\$42,414	\$37,684
2026	757.39	\$57	\$43,171	\$37,240
2027	757.39	\$58	\$43,928	\$36,789
2028	757.39	\$59	\$44,686	\$36,334
2029	757.39	\$60	\$45,443	\$35,873
2030	757.39	\$61	\$46,201	\$35,409
2031	757.39	\$62	\$46,958	\$34,941
2032	757.39	\$63	\$47,715	\$34,471
2033	757.39	\$64	\$48,473	\$33,998
2034	757.39	\$66	\$49,988	\$34,039
2035	757.39	\$67	\$50,745	\$33,548
2036	757.39	\$68	\$51,502	\$33,057
2037	757.39	\$69	\$52,260	\$32,567
2038	757.39	\$70	\$53,017	\$32,076
2039	5,951.72	\$71	\$422,572	\$248,216
2040	5,951.72	\$72	\$428,524	\$244,381
2041	5,951.72	\$73	\$434,475	\$240,558
2042	5,951.72	\$75	\$446,379	\$239,951
2043	5,951.72	\$76	\$452,330	\$236,068
2044	5,951.72	\$77	\$458,282	\$232,208
<b>Total Savings over 20-year period, discounted at 3%</b>				<b>\$1,929,408</b>

**Notes: CO<sub>2</sub> emissions** are based on gallons of fuel consumed while “hoteling” in port. Probable gallons avoided came from adding the values from the north and south berth “probable” boxes from the “Fuel consumption Avoidance” tab. For the first 15 years of the project, probable metric tons of CO<sub>2</sub> avoided take the metric tons per gallon contained in the EPA guidance (<https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references>) times the 25% of the time that AELP will be able to supply hydro power for the plug in. Implicitly, we are assuming that the other 75% of the time there are equivalent amounts of CO<sub>2</sub> coming from burning diesel on board versus AELP providing shore power using diesel. For that 75% of the time, there are no emissions savings from plugging into shore power. From years 16-20, analysis assumes that there will be a renewable source of electricity for 100% of the ships’ plug in time. The 2019 value per metric ton came from Table A-6 of the 2021 BCA guidance document. Pages 40-41 of the 2021 BCA guidance document indicates that CO<sub>2</sub> emissions should be discounted at 3%.

### Value of NOx Savings

An estimated 1,681 metric tons of NOx air emissions is expected to be avoided through implementation of this project. The discounted present value of NOx avoided is expected to be \$340,667 in the initial year it is realized, and \$8.3 million over the 20-year scope of this analysis. See Table 7 below:

**Table 7. Monetary Value of Avoided NOx**

Year	Probable Time connected	Probable Metric tons NOx avoided	2019 NOx value per metric ton	Nominal value NOx avoided	Discounted present value of NOx avoided
2025	968	30.43	\$16,800	\$511,249	\$340,667
2026	968	30.43	\$17,000	\$517,336	\$322,171
2027	968	30.43	\$17,300	\$526,465	\$306,407
2028	968	30.43	\$17,500	\$532,551	\$289,673
2029	968	30.43	\$17,700	\$538,638	\$273,816
2030	968	30.43	\$18,000	\$547,767	\$260,240
2031	968	30.43	\$18,000	\$547,767	\$243,215
2032	968	30.43	\$18,000	\$547,767	\$227,304
2033	968	30.43	\$18,000	\$547,767	\$212,433
2034	968	30.43	\$18,000	\$547,767	\$198,536
2035	968	30.43	\$18,000	\$547,767	\$185,548
2036	968	30.43	\$18,000	\$547,767	\$173,409
2037	968	30.43	\$18,000	\$547,767	\$162,064
2038	968	30.43	\$18,000	\$547,767	\$151,462
2039	1663	209.12	\$18,000	\$3,764,201	\$972,741
2040	1663	209.12	\$18,000	\$3,764,201	\$909,104
2041	1663	209.12	\$18,000	\$3,764,201	\$849,630
2042	1663	209.12	\$18,000	\$3,764,201	\$794,046
2043	1663	209.12	\$18,000	\$3,764,201	\$742,099
2044	1663	209.12	\$18,000	\$3,764,201	\$693,551
<b>Total Savings over 20-year period, discounted at 7%</b>					<b>\$8,308,116</b>

**Notes: NOx emissions** are based on “hoteling” time in port. Probable time plugged in to shore power came from adding the Probable time connected to north and south berths from the “Probable CBJ Docks” box in the “Fuel consumption Avoidance” tab. The value of emissions per hour (125.75 kg/hr), which appears in the upper left-hand corner of the “Avoided NOx” tab in the BCA spreadsheet, comes from the average value in Table 3 of Melo Rodriguez et al. (2017). The 2019 value per metric ton came from Table A-6 of the 2021 BCA guidance document. Page 40 of the 2021 BCA guidance document indicates this gas should be discounted at 7%.



### Value of SOx Savings

An estimated 1,524 metric tons of SOx air emissions is expected to be avoided through implementation of this project. The discounted present value of SOx avoided is expected to be \$932,979 in the initial year it is realized, and \$23.1 million over the 20-year scope of this analysis. See Table 8 below:

**Table 8. Monetary Value of Avoided SOx**

Year	Probable Hours connected	Probable Metric tons SOx avoided	2019 value of SOx value per metric ton	Nominal value of SOx avoided	Discounted present value of SOx avoided
2025	968	27.24	\$44,900	\$1,222,946	\$932,979
2026	968	27.24	\$45,500	\$1,239,288	\$883,595
2027	968	27.24	\$46,200	\$1,258,354	\$838,494
2028	968	27.24	\$46,900	\$1,277,420	\$795,513
2029	968	27.24	\$47,600	\$1,296,486	\$754,567
2030	968	27.24	\$48,200	\$1,312,828	\$714,092
2031	968	27.24	\$48,200	\$1,312,828	\$667,375
2032	968	27.24	\$48,200	\$1,312,828	\$623,715
2033	968	27.24	\$48,200	\$1,312,828	\$582,911
2034	968	27.24	\$48,200	\$1,312,828	\$544,777
2035	968	27.24	\$48,200	\$1,312,828	\$509,137
2036	968	27.24	\$48,200	\$1,312,828	\$475,829
2037	968	27.24	\$48,200	\$1,312,828	\$444,700
2038	1663	46.79	\$48,200	\$2,255,406	\$714,004
2039	1663	187.17	\$48,200	\$9,021,625	\$2,669,173
2040	1663	187.17	\$48,200	\$9,021,625	\$2,494,555
2041	1663	187.17	\$48,200	\$9,021,625	\$2,331,359
2042	1663	187.17	\$48,200	\$9,021,625	\$2,178,841
2043	1663	187.17	\$48,200	\$9,021,625	\$2,036,300
2044	1663	187.17	\$48,200	\$9,021,625	\$1,903,084
<b>Total Savings over 20-year period, discounted at 7%</b>					<b>\$23,095,002</b>

**Notes: SOx emissions** are based on “hoteling” time in port. Probable time plugged in to shore power came from adding the Probable time connected to north and south berths from the “Probable CBJ Docks” box in the “Fuel consumption Avoidance” tab. The value of emissions per hour (112.55 kg/hr), which appears in the upper left-hand corner of the “Avoided SOx” tab in the BCA spreadsheet, comes from the average value in Table 3 of Melo Rodriguez et al. (2017). The 2019 value per metric ton came from Table A-6 of the 2021 BCA guidance document. Page 40 of the 2021 BCA guidance document indicates this gas should be discounted at 7%.

### Value of PM2.5 Savings

An estimated 148.6 metric tons of PM2.5 in air emissions is expected to be avoided through implementation of this project. The discounted present value of PM2.5 avoided is expected to be \$1.6 million in the initial year it is realized, and \$40 million over the 20-year scope of this analysis. See Table 9 below:

**Table 9. Monetary Value of Avoided PM2.5**

Year	Probable Hours connected	Probable Metric tons PM2.5 avoided	2019 value of PM2.5 per metric ton	Nominal value of PM2.5 avoided	Discounted value of PM2.5 avoided
2025	968	2.690	\$796,600	\$2,142,719	\$1,634,670
2026	968	2.690	\$807,500	\$2,172,038	\$1,548,633
2027	968	2.690	\$818,600	\$2,201,895	\$1,467,216
2028	968	2.690	\$829,800	\$2,232,021	\$1,389,990
2029	968	2.690	\$841,200	\$2,262,685	\$1,316,903
2030	968	2.690	\$852,700	\$2,293,618	\$1,247,576
2031	968	2.690	\$852,700	\$2,293,618	\$1,165,959
2032	968	2.690	\$852,700	\$2,293,618	\$1,089,681
2033	968	2.690	\$852,700	\$2,293,618	\$1,018,394
2034	968	2.690	\$852,700	\$2,293,618	\$951,770
2035	968	2.690	\$852,700	\$2,293,618	\$889,505
2036	968	2.690	\$852,700	\$2,293,618	\$831,313
2037	968	2.690	\$852,700	\$2,293,618	\$776,928
2038	968	2.690	\$852,700	\$2,293,618	\$726,101
2039	1663	18.484	\$852,700	\$15,761,516	\$4,663,264
2040	1663	18.484	\$852,700	\$15,761,516	\$4,358,190
2041	1663	18.484	\$852,700	\$15,761,516	\$4,073,075
2042	1663	18.484	\$852,700	\$15,761,516	\$3,806,612
2043	1663	18.484	\$852,700	\$15,761,516	\$3,557,582
2044	1663	18.484	\$852,700	\$15,761,516	\$3,324,843
<b>Total Savings over 20-year period, discounted at 7%</b>					<b>\$ 39,838,204</b>

**Notes: PM2.5 emissions** are based on “hoteling” time in port. Probable time plugged in to shore power came from adding the probable time connected to north and south berths from the “Probable CBJ Docks” box in the “Fuel consumption Avoidance” tab. The value of emissions per hour (11.7 kg/hr), which appears in the upper left-hand corner of the “Avoided PM2.5” tab in the BCA spreadsheet, comes from the average value in Table 3 of Melo Rodriguez et al. (2017). Moreover, “95% of the ship-generated PM is of an aerodynamic diameter of less than 2.5 µm (PM2.5)” (Melo Rodriguez et al. 2017, p.2), so we assume that 95% of the PM is PM2.5. The 2019 value per metric ton came from Table A-6 of the 2021 BCA guidance document. Page 40 of the 2021 BCA guidance document indicates this gas should be discounted at 7%.

## Residual Value and Remaining Life of Service

The project fully depreciates in 2044, which is 20-years after the expected first year of operation in 2025. Given that the assumed lifespan of the capital investment is 50 years, residual values were calculated as 60% of the original capital value. While residual value is technically a negative cost, we have classified the residual value as a benefit so it will be added to the numerator in the benefit-cost ratio according to the Benefit-Cost Analysis guidance document.

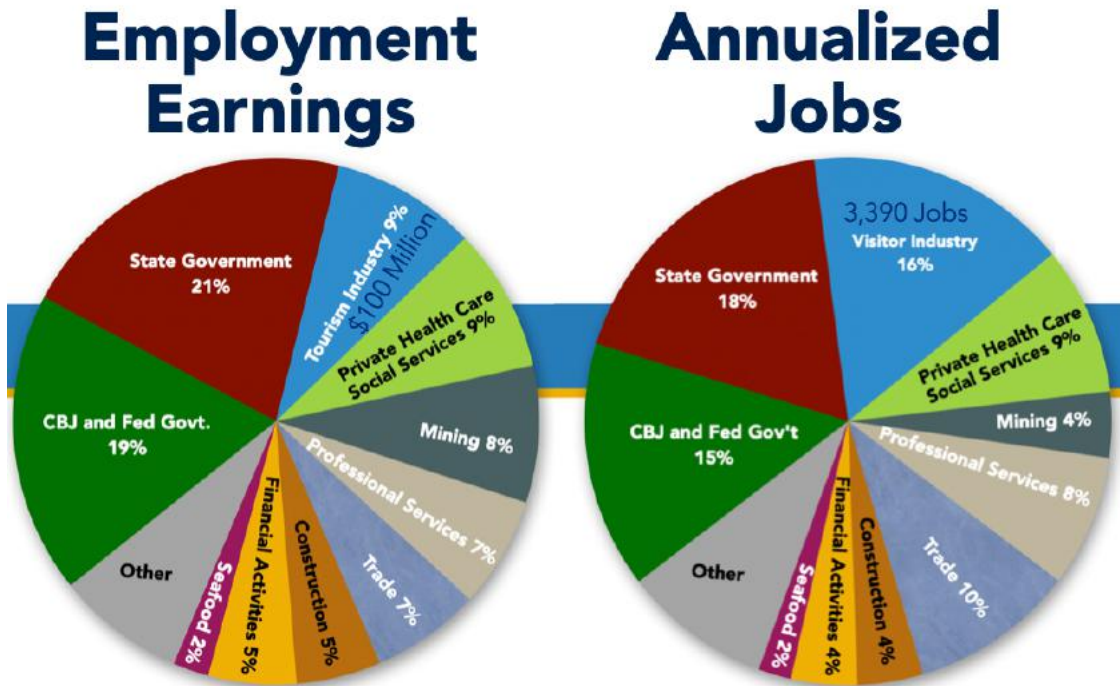
## Other Benefits

### Supporting the Local Economy

In recent years, the Juneau economy has been devastated by a pair of economic losses. Jobs in state government, historically the cornerstone of the local economic base, fell 20% over the past eight years. On top of this, Juneau was particularly impacted by the pandemic crisis, losing 19% of all jobs in the first six months of COVID-19.

As state government jobs are cut, the community is increasingly turning to tourism to help support the local economy. In 2019, the Juneau tourism sector directly supported 3,390 year-round equivalent jobs and \$100 million in associated wages, making it the largest private sector industry in the community, both in terms of jobs and wages. In 2022, Juneau tourists are expected to spend \$305 million in the community. Approximately one-fifth of all local sales tax dollars are spent by tourists.

City and Borough of Juneau by Industry, 2019



Most visitors, 94% of all Juneau tourists, come to the community by cruise ship. The number of cruise passengers to Juneau has been increasing – from just under a million in 2013, to 1.33 million in 2019, to a projected 1.58 million in 2022. In 2022, 664 large cruise ship voyages are planned for Juneau.



However, local support for a growing cruise ship tourism sector is contingent upon the economic benefits of this important sector outweighing environmental costs. The ability of the community to sustain and support this key economic sector depends on the community’s ability to remediate and address local environmental concerns. The development of the Juneau Cruise Ship Dock Electrification Project would be an important step in that process.

### Municipal Tax Benefits

One benefit of the Juneau Cruise Ship Dock Electrification Project is that it would allow the municipality to collect sales tax dollars from cruise ships on electricity received during the time they are plugged into shore power. The current sales tax in the City and Borough of Juneau is 5%. Since each cruise ship company that would use shore power would make electricity purchases in excess of the “single item or service tax cap” local tax exemptions – currently \$12,400 per month – sales tax on this would be capped at \$620 monthly. There are seven cruise ship lines which could potentially connect to shore

power. Assuming only May through September usages (there will be some usage in April and October) and that each line uses electricity in excess of \$12,400 then these 7 cruise lines would pay a combined total of \$4,340 in municipal sales tax for electricity on a monthly basis, and \$21,700 on an annual basis. If unchanged, this would provide \$434,000 in municipal tax revenue over the course of 20 years. However, the sales tax code provides for an adjustment to the level of the cap every two years, based on the most recent Anchorage CPI data.

### **Safety Benefits**

Cruise ships contribute to Alaska's mobile-source emission inventories. In aggregate, reductions of emissions of nitrogen oxides (NOx), sulfur oxides (SOx), and fine particulate matter (PM2.5) prevent premature deaths and relieve respiratory symptoms. The monetized health-related benefits estimated have already been included in the emissions reductions estimates.

### **Noise Pollution Reduction**

Reduced noise in the downtown Juneau waterfront and business district when auxiliary engine operations are replaced by quiet shore power, and improved air quality in Downtown Juneau, West Juneau & Douglas.

## Costs

### Capital Expenditures

Design, permitting, and construction of the Juneau Cruise Ship Dock Electrification Project are scheduled to occur over a three-year period from 2022–2024. The estimated construction cost for all elements of the electrification project (North and South berth connections) is \$24.9 million. To account for inflation, capital costs and maintenance costs were first adjusted from 2021 nominal dollars to the baseline 2019 real dollars using GDP deflators from the Bureau of Economic Analysis. Future costs were then further discounted using a 7% discount rate to the baseline 2019 dollars. For the sake of this analysis, capital costs have been spread evenly over the duration of the construction period.

**Table 10. Total Costs**

<b>Assume completion in 2024</b>	<b>Discounted at 7%</b>
Capital Costs	\$19,064,709
Maintenance Costs	\$1,208,542
<b>Total Costs</b>	<b>\$20,273,251</b>

### Operations and Maintenance Expenditures

Equipment and float maintenance will be approximately \$50,000 per berth annually. Discounted at 7% over a 20-year period, maintenance is expected to be \$1.2 million

Operations costs are assumed to be on par with the current South Franklin Dock during cruise season. According to a March 8<sup>th</sup> memo from AEL&P to the Juneau Assembly, “AEL&P staff now spends about 500 man-hours per year supporting the South Franklin Dock during the cruise ship season...Additional linemen and engineering support will be required during the summer season.” Because these are private utility costs, rather than municipally-borne costs, it is assumed that the fees for ship-to-shore power would include these increased costs, and thus they are not included in the BCA calculations.

### State of Good Repair

The residual value of the project assets is characterized as a state of good repair benefit. The two city-owned berths called the Alaska Steamship Wharf (north berth) and the Cruise Ship Terminal (south berth) are in excellent structural condition and are among the newest facilities in the world, having been constructed in 2016 and 2017. An in-depth planning and design process lead to the decision to install concrete floating berths, galvanized steel structures with sacrificial zinc pile anodes to construct a facility with a minimum service life of 50 years. The City is committed to ensuring the shore tie power systems are kept in a state of good repair, in line with its demonstrated history of maintaining assets.

**Table 1. Benefit-Cost Analysis Summary Results**

<b>Measure</b>	<b>Discounted at 7%</b>
Emissions Reduction Benefits	\$73,170,730
Residual Value	\$2,758,415
<b>Total Benefits</b>	<b>\$75,929,146</b>
Capital Costs in 2019 dollars	\$19,064,709
Maintenance Costs	\$1,208,542
<b>Total Costs</b>	<b>\$20,273,251</b>
<b>Benefit-Cost Ratio</b>	<b>3.75</b>

**Table 3. Benefit-Cost Analysis Summary Results**

<b>Measure</b>	<b>Discounted at 7%</b>
Total Benefits	\$75,929,146
Total Costs	\$20,273,251
<b>Benefit-Cost Ratio</b>	<b>3.75</b>

**Table 4. Value of Emissions Savings**

<b>Foregone Emissions Value</b>	<b>Discounted at 3% or 7%</b>
Foregone CO2 emissions (discounted at 3%)	\$ 1,929,408
Foregone NOx emissions (discounted at 7%)	\$ 8,308,116
Foregone SOx emissions (discounted at 7%)	\$ 23,095,002
Foregone PM2.5 emissions (discounted at 7%)	\$ 39,838,204
<b>Total annual 20 year savings of emissions value in 2019 Dollars</b>	<b>\$ 73,170,730</b>

**Table 5. Metric Tons of Emissions Savings**

<b>Foregone Emissions Over 20 Years</b>	<b>Metric Tons</b>
Probable Metric tons CO2 avoided	46,314
Probable Metric tons NOx avoided	1,681
Probable Metric tons SOx avoided	1,524
Probable Metric tons PM2.5 avoided	149

**Table x. Total Costs**

<b>Assume completion in 2024</b>	<b>Discounted at 7%</b>
Capital Costs in 2019 dollars	\$19,064,709
Maintenance Costs	\$1,208,542
<b>Total Costs</b>	<b>\$20,273,251</b>

# Attachment E

Presented by: The Manager  
Presented: 06/14/2021  
Drafted by: R. Palmer III

## RESOLUTION OF THE CITY AND BOROUGH OF JUNEAU, ALASKA

Serial No. 2958

### **A Resolution of the City and Borough of Juneau in Support of the U.S. Department of Transportation and the Rebuilding American Infrastructure with Sustainably and Equity (RAISE) Grant Program.**

WHEREAS, the U.S. Department of Transportation administers the Rebuilding American Infrastructure with Sustainably and Equity (RAISE) Grant Program under the Consolidated Appropriations Act 2021 by reviewing, scoring, and ranking applicants seeking limited federal funds; and

WHEREAS, Juneau led the world with the first electrified cruise ship berth in 2001 providing renewable hydroelectricity that utilized excess power reserves to reduce ship emissions and to lower the local residents power rates; and

WHEREAS, Juneau continues to wisely use new technologies to see power consumption reductions that have allowed the existing generation system to absorb new loads from electrical cars and electrical buses without new generation infrastructure; and

WHEREAS, the CBJ Climate Action Plan recommends mandating new commercial docks to provide electric plug-ins for cruise ships and other commercial vessels, and require that ships use electric shore power whenever it is available; and

WHEREAS, CBJ consistently receives public comment concerning emissions caused by cruise ships, and hydropower provides energy while limiting greenhouse gas emissions; and

WHEREAS, the Visitor Industry Task Force recommended that CBJ prioritize electrification of all cruise ship docks; and

WHEREAS, CBJ lost marine passenger fee funds that typically are used for public infrastructure projects as a result of tax revenue loss due to the Covid-19 pandemic; and

WHEREAS, the cruise ship fleets continue to retrofit or build shore tie power connection systems to reduce emissions and reduce operating costs; and

WHEREAS, CBJ Docks and Harbors is committed to designing, constructing, and maintaining infrastructure under its charge in a sustainable and efficient manner commensurate with available resources; and



WHEREAS, due to fiscal limitations with new capital projects for the municipally owned cruise ship berths were not initially equipped with shore tie power infrastructure; and

WHEREAS, the addition of shore power connections to the municipally owned cruise ship berths will drastically reduce vessel emissions and visible particulates in Juneau; and

WHEREAS, CBJ Docks and Harbors intends to submit an application under the Rebuilding American Infrastructure with Sustainably and Equity (RAISE) Grant Program to design, purchase, install, and maintain shore tie power connections to both municipally owned cruise ship berths.

NOW, THEREFORE, BE IT RESOLVED BY THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU, ALASKA:

**Section 1. Cruise Ship Dock Electrification.** The Assembly of the City and Borough of Juneau strongly supports the design, purchase, install, and maintenance of shore tie power connections to both municipally owned cruise ship berths, and requests the U.S. Department of Transportation provide full funding for this project.

**Section 2. Local Match.** The Assembly of the City and Borough of Juneau supports providing a local match as required by the grant agency.

**Section 3. Effective Date.** This resolution shall be effective immediately after its adoption.

Adopted this 14<sup>th</sup> day of June, 2021.



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Beth A. Weldon, Mayor

Attest:



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Elizabeth J. McEwen, Municipal Clerk

Presented by: The Manager  
Presented: 06/14/2021  
Drafted by: R. Palmer III

**RESOLUTION OF THE CITY AND BOROUGH OF JUNEAU, ALASKA**

**Serial No. 2958(b)**

**A Resolution of the City and Borough of Juneau in Support of the U.S. Department of Transportation and the Rebuilding American Infrastructure with Sustainably and Equity (RAISE) Grant Program.**

WHEREAS, the U.S. Department of Transportation administers the Rebuilding American Infrastructure with Sustainably and Equity (RAISE) Grant Program under the Consolidated Appropriations Act 2021 by reviewing, scoring, and ranking applicants seeking limited federal funds; and

WHEREAS, Juneau led the world with the first electrified cruise ship berth in 2001 providing renewable hydroelectricity that utilized excess power reserves to reduce ship emissions and to lower the local residents power rates; and

WHEREAS, Juneau continues to wisely use new technologies to see power consumption reductions that have allowed the existing generation system to absorb new loads from electrical cars and electrical buses without new generation infrastructure; and

WHEREAS, the CBJ Climate Action Plan recommends mandating new commercial docks to provide electric plug-ins for cruise ships and other commercial vessels, and require that ships use electric shore power whenever it is available; and

WHEREAS, CBJ consistently receives public comment concerning emissions caused by cruise ships, and hydropower provides energy while limiting greenhouse gas emissions; and

WHEREAS, the Visitor Industry Task Force recommended that CBJ prioritize electrification of all cruise ship docks; and

WHEREAS, CBJ lost marine passenger fee funds that typically are used for public infrastructure projects as a result of tax revenue loss due to the Covid-19 pandemic; and

WHEREAS, the cruise ship fleets continue to retrofit or build shore tie power connection systems to reduce emissions and reduce operating costs; and

WHEREAS, CBJ Docks and Harbors is committed to designing, constructing, and maintaining infrastructure under its charge in a sustainable and efficient manner commensurate with available resources; and

WHEREAS, due to fiscal limitations with new capital projects for the municipally owned cruise ship berths were not initially equipped with shore tie power infrastructure; and

WHEREAS, the addition of shore power connections to the municipally owned cruise ship berths will drastically reduce vessel emissions and visible particulates in Juneau; and

WHEREAS, CBJ Docks and Harbors intends to submit an application under the Rebuilding American Infrastructure with Sustainably and Equity (RAISE) Grant Program to design, purchase, install, and maintain shore tie power connections to both municipally owned cruise ship berths; and

WHEREAS, on June 14, 2021, the Assembly adopted Resolution 2958, and this version has been amended to include a match funding amount, which would require passage of an appropriation ordinance in the future and this resolution does not bind a future Assembly.

NOW, THEREFORE, BE IT RESOLVED BY THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU, ALASKA:

**Section 1. Cruise Ship Dock Electrification.** The Assembly of the City and Borough of Juneau strongly supports the design, purchase, install, and maintenance of shore tie power connections to both municipally owned cruise ship berths, and requests the U.S. Department of Transportation provide full funding for this project.

**Section 2. Local Match.** The Assembly of the City and Borough of Juneau supports providing a local match up to \$ 4,900,000 or as required by the grant agency.

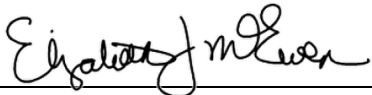
**Section 3. Effective Date.** This resolution shall be effective immediately after its adoption.

Adopted this 12 day of July, 2021.



Beth A. Weldon, Mayor

Attest:



Elizabeth J. McEwen, Municipal Clerk

**FY 2021 RAISE Project Information Form - All Fields Required**  
**\*\*DO NOT CHANGE FILE NAME, COPY/PASTE, OR PDF THIS DOCUMENT**  
**WHEN SUBMITTING TO AVOID PROCESSING ERRORS\*\***



Field Name	Response	Instructions
Project Name	Juneau Cruise Ship Berth Electrification	Enter a <b>concise</b> , descriptive <b>title</b> for the project. This should be the same title used in the Grants.gov SF-424 submission and the application narrative.
Project Description	The Juneau Cruise Ship Berth Electrification Project will enable cruise ships that are visiting the community to plug into renewable shore power, thereby allowing the ships to operate without onboard fuel fired generators. Juneau's two city-owned cruise ship berths sit in the heart of downtown Juneau. Completed in 2017, the berths provide moorage for neopanamax cruise ships. The RAISE Grant will fund two new power connection floats, cable positioning devices.	Describe the project in plain English terms, using <b>no more than 100 words</b> . For example, "The project will replace the existing bridge over the W river on Interstate-X between the cities of Y and Z" or "the RAISE Grant will fund construction activities for streetcar service from location X to location Y." Please <b>do not</b> describe the project's benefits, background, or alignment with the selection criteria in this description field.
Urban/Rural	Rural	Identify whether the project is <b>located in a rural or urban area</b> , using the drop-down menu. For RAISE 2021, a project is designated as urban if it is located within (or on the boundary of) a Census-designated urbanized area that had a population greater than 200,000 in the 2010 Census. If a project is located outside a Census-designated urbanized area with a population greater than 200,000, it is designated as a rural project.
Urbanized Area	Not located in an Urbanized Area	If you have identified the project as "urban," please select the <b>associated 2010 Census-designated urbanized area (UA)</b> from the drop-down. If you identified the project as "rural" but it is located in an UA with a population under 200,000, please select the UA from the drop-down. If you have identified the project as "rural" and it is located outside an urbanized area, please select "Not located in an urbanized area" from the drop-down.
Capital or Planning	capital	Identify the project as <b>capital</b> or <b>planning</b> .  The " <b>capital</b> " designation is for projects that requesting funding for the construction of surface transportation capital infrastructure.  The " <b>planning</b> " designation is for projects that are requesting funding primarily for planning, preparation, or design of eligible surface transportation capital projects.
Amount Requested	\$20,051,856	Enter the <b>total amount of RAISE funds requested</b> for this project in this application. [For <b>capital</b> projects, the minimum urban entry is \$5,000,000 and the minimum rural entry is \$1,000,000. For <b>planning</b> projects, the minimum entry is \$1. The maximum entry for both types is \$25,000,000 ].
Project Location County	AK - Juneau Borough	<b>Identify the county</b> where the project is located in using the drop-down. If the project is located in more than one county, please identify the county in which the majority of the project is located.
Additional Project Counties		<b>Identify additional counties seperated by a comma</b> . For instance, if the project additionally runs through Middlesex County and Suffolk County, please enter 'Middlesex County, Suffolk County' in the cell.

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Field Name	Response	Instructions
Project Location Census Tract		5 Identify the census tract number of the project. Please visit USDOT's RAISE webpage to review a full list of census tracts by state and county or refer to the Census Bureau's TIGER Web map to identify. For example, if the most central tract is Census Tract 93.30, please enter '93.30' into the cell. Do not be concerned if the last zero is missing from your response (e.g., 93.30 may display as 93.3). If the project is located in more than one census tract please identify the census tract in which the majority of the project is located.
Other Project Census Tracts		Identify other census tracts in which the project is located, seperated by a comma. For example, if the project is located in Census Tract 93.31, Census Tract 93.32, and Census Tract 94.03, please enter '93.31, 93.32, 94.03' into the cell.
Project Located in an Area of Persistent Poverty?	No - it is not located in area of persistent poverty	Identify if the project is located in an area of persistent poverty based on the criteria outlined in the NOFO. The list of counties and census tracts that meet this definition can be found on USDOT's RAISE webpage.
Project Location Zip Code	99801	Identify the 5-digit zip code of the project location. If the project is located in more than one zip codes, please identify the zip code in which the majority of the project is located.
Project Type	Maritime - New Capacity	Identify the <b>Primary</b> and <b>Secondary project type</b> combination that <b>most closely aligns with your project</b> from the choices in the drop-down menu. See the "Project Types" tab in this file for further information and project type definitions.
Prior BUILD/TIGER Funds Awarded to Project?	No	Identify <b>whether the project has previously received BUILD/TIGER funding</b> , and if so, whether that funding was through a planning or capital grant, using the drop-down menu.
Prior BUILD/TIGER Application?	No	Identify <b>whether this project has previously been submitted for BUILD/TIGER funding</b> and, if it is has, please identify the <b>most recent competition</b> it was submitted to for consideration.
USDOT FY21 Discretionary Application?	No	<b>Please identify if this project has been submitted to other USDOT FY21 discretionary grant programs</b> in addition to RAISE. If it has been submitted to multiple programs (in addition to RAISE), please select 'Multiple' from the drop-down.
Total Project Cost	\$24,951,856	Enter the <b>total cost of the project</b> . This should equal the sum of Total Federal Funding and Total Non-Federal Funding. <i>This value may not be less than the amount requested.</i>

**FY 2021 RAISE Project Information Form - All Fields Required**  
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Field Name	Response	Instructions
<b>Total Federal Funding</b>	\$20,051,856	Enter the <b><u>amount of funds committed to the project from ALL Federal sources including the proposed RAISE amount.</u></b> This value may not be less than the amount requested.  For <b>RAISE projects designated as urban</b> , Federal funding cannot exceed 80% of total project cost unless the project is a planning project located in an area of persistent poverty as defined in the RAISE NOFO.
<b>Total Non-Federal Funding</b>	\$4,900,000	Enter the <b><u>amount of funds committed to the project from non-Federal sources.</u></b> For <b>RAISE projects designated as urban</b> , the total non-Federal funding amount must be greater than or equal to 20% of the project cost unless the project is a planning project located in an area of persistent poverty as defined in the RAISE NOFO.
<b>Tribal Government?</b>	No	Select "Yes" from the drop-down menu if the applicant is a <b>Federally recognized tribal government.</b>
<b>Tribal Benefits?</b>	N/A	<b><u>If the applicant is not a Federally recognized tribal government,</u></b> is the project located on tribal land? And if not, does it have direct tribal benefits? Answer using the drop-down menu.
<b>Private Corporation Involvement</b>	Yes - directly involves or benefits a private corporation	Does this project <b><u>involve (a) private entity(ies) that will receive a direct and predictable financial benefit</u></b> if the project is selected for award? This includes, but it not limited to, private owners of infrastructure facilities being improved and private freight shippers or carriers directly benefitting from completion of the proposed project.
<b>Private Corporation Name(s)</b>	Alaska Electric Light and Power Company	<b><u>If this project directly involves or benefits a specific private corporation,</u></b> please list the corporation(s) separated by a comma.
<b>TIFIA/RRIF?</b>	No	Is the project currently, or does this project anticipate applying for Transportation Infrastructure Finance and Innovation Act ( <b>TIFIA</b> ) or Railroad Rehabilitation & Improvement Financing ( <b>RRIF</b> ) loans?
<b>Department Financing Program?</b>	No	If your application is unsuccessful, would you like to be contacted about the <b>Department's financing program?</b>

Presented by: The Manager  
Introduced: 06/09/2014  
Drafted by: A. G. Mead

**RESOLUTION OF THE CITY AND BOROUGH OF JUNEAU, ALASKA**

**Serial No. 2690**

**A Resolution Approving Amendments to the Bylaws of the Board of Directors of Docks and Harbors.**

WHEREAS, the Docks and Harbors Board of Directors is responsible for the administration and management of the Docks and Harbors under general direction of the Assembly; and

WHEREAS, CBJ 40.05.030 provides that the Docks and Harbors Board of Directors shall recommend bylaws for the administration and government of the Docks and Harbors, which bylaws shall become effective upon approval of the Assembly by resolution; and

WHEREAS, the Assembly may accept the bylaws recommended by the Docks and Harbors Board of Directors, may reject such bylaws, or may modify them; and

WHEREAS, at its regular meeting of May 29, 2014, the Docks and Harbors Board of Directors approved certain amendments to the bylaws consistent with CBJ ordinances and forwarded the same to the Assembly; and

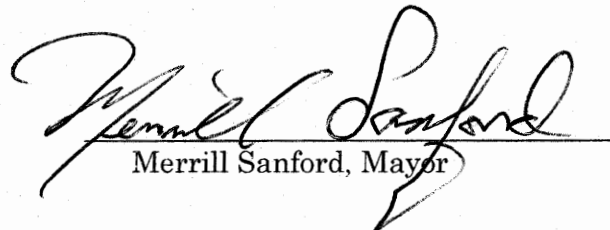
WHEREAS, the Docks and Harbors Board of Directors recommends that the Assembly approve the amended bylaws attached to this resolution.

NOW, THEREFORE, BE IT RESOLVED BY THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU, ALASKA:

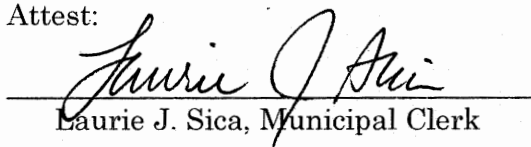
**Section 1.** The Assembly hereby approves the Docks and Harbors Board of Directors Bylaws, dated June 9, 2014, attached as Exhibit A.

**Section 2. Effective Date.** This resolution shall be effective immediately upon its adoption.

Adopted this 9<sup>th</sup> day of June, 2014.

  
Merrill Sanford, Mayor

Attest:

  
Laurie J. Sica, Municipal Clerk

**CITY AND BOROUGH OF JUNEAU  
DOCKS AND HARBORS BOARD  
BYLAWS**

ARTICLE I. NAME, DUTIES, AND POWERS

1. NAME. The governing body of the City and Borough of Juneau Docks and Harbors shall be known as the City and Borough of Juneau Docks and Harbors Board, hereafter referred to as the Board.
2. DUTIES AND POWERS OF THE BOARD. The duties and powers of the Board regarding the operation of the municipally owned and operated port and harbor facilities are established by Charter Section 3.21 and Chapter 85.02 of the Code of the City and Borough of Juneau.

ARTICLE II. BOARD MEMBERSHIP AND APPOINTMENT

1. NUMBER OF DIRECTORS. The Board shall consist of nine (9) members.
2. APPOINTMENT. All Board members shall be appointed by the City and Borough of Juneau Assembly as provided by Section 85.02.010 of the Code of the City and Borough of Juneau.

A new member shall be seated immediately upon the call of the roll at the first Board meeting after the new member is appointed.

3. TERM OF APPOINTMENT. As provided in Section 85.02.010, Board members shall be appointed for staggered three-year terms and until their successor is appointed. Appointment terms will not violate the conditions set forth in Section 85.02.010.
4. VACANCIES. When the conditions set forth in Section 85.02.030 of the Code of the City and Borough of Juneau occur, the Chair will notify the Clerk's Office that a vacancy exists.

Vacancies on the Board shall be filled by the City and Borough of Juneau Assembly as provided by Section 85.02.030 of the Code of the City and Borough of Juneau and the Assembly Rules of Procedure.

A member filling a vacancy shall be seated immediately upon the call of the roll at the first Board meeting after the new member is appointed.

5. MEMBERS. The duties and responsibilities of the Board members shall be as set forth in Sections 85.02.60, 85.02.63, and 85.02.65.

ARTICLE III. OFFICERS

1. OFFICERS. Officers of the Board shall consist of a Chair, Vice Chair and any other officers as



**CITY AND BOROUGH OF JUNEAU  
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the Board may from time to time deem necessary.

2. ELECTION OF OFFICERS. Officers shall be elected at the annual Board meeting or at such time as offices become vacant.
3. TERM. Each officer shall serve for a term to extend until the next annual Board meeting or until such time as they vacate the office.
4. REMOVAL. Any officer may be removed from his or her office by an affirmative vote of at least six (6) Board members at a meeting called for that purpose or by the Assembly in accordance with CBJ 85.02.030.
5. CHAIR. The Chair shall preside at all Board meetings.

The Chair shall assign tasks to Board members and committees and shall ensure that all business of the Board is carried out.

The Chair shall act as spokesperson for the Board and will have such other duties and responsibilities as delegated to him or her by the Board.

6. VICE CHAIR. The Vice Chair shall act as the Chair in the absence of the Chair.

**ARTICLE IV. COMMITTEES**

1. STANDING COMMITTEES. There shall be the following standing committees of the Board:

- \* Finance
- \* Operations & Planning

The Chair shall appoint each Board member to serve on at least one standing committee. The Board Chair shall serve as a voting member of all standing Committees.

The Chair shall appoint a Board member to serve as the Chair of each standing committee. No Board member shall chair more than one standing committee.

Unless otherwise directed by the Chair, all standing committees will function at the direction of the appointed committee Chair.

2. SPECIAL COMMITTEES. The Board or the Chair may establish special committees to facilitate any Board business.

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The Chair shall appoint two or more Board members and may appoint any individual that is not a member of the Board to serve on any special committee established.

The Chair shall appoint a Board member to serve as the Chair of each special committee.

Unless otherwise directed by the Chair, all special committees will function at the direction of the appointed committee Chair.

A special committee shall serve for a period of time or for the accomplishment of a particular task or tasks as determined by the Chair. No special committee shall serve beyond the annual Board meeting unless reconstituted by the newly elected Chair.

ARTICLE V. MEETINGS

1. REGULAR. The Board shall meet at least once each month at a place and time designated by the Chair.

The Board may act on any matter within its authority at a regular or annual Board meeting whether or not such item was identified in the notice of the meeting.

2. ANNUAL. An annual meeting shall be held on the last Thursday of July each year.

The annual Board meeting may be postponed by the Board to a certain day.

At the annual meeting, a Chair, a vice Chair and other such officers as the Board shall deem necessary, shall be elected.

3. EXCUSED ABSENCES. Any absence of a member from a regular Board meeting shall be deemed unexcused unless the member is absent as a result of attending to official business on behalf of the Board, for extenuating medical reasons or for other significant cause, in which case the absence may be deemed excused by the Board Chair.

4. SPECIAL. Special Board meetings may be called at any time by the Chair or any three (3) Board members for good cause, which must be reaffirmed at the beginning of any special meeting.

Only business identified in the notice of the meeting may be transacted at a special Board meeting.

5. COMMITTEE. Committee meetings may be called at any time by a committee Chair or by a majority of the committee's membership.

Any topic or item may be discussed that falls within the purview of the committee's charge as

**CITY AND BOROUGH OF JUNEAU  
DOCKS AND HARBORS BOARD  
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determined by the Chair, committee Chair, or a majority of the committee's membership.

6. QUORUM. For all Board meetings, a quorum shall consist of five (5) members in attendance or participating via telephone. For all committee meetings, a quorum shall consist of a minimum of three (3) voting committee members in attendance or participating via telephone.

7. ADJOURNMENT, CONTINUATION, AND POSTPONEMENT OF MEETINGS. If a quorum is not present at a meeting, the Chair or committee Chair may adjourn such meeting to a time and place he or she determines most appropriate; provided that notice of the time and place of the adjourned meeting shall be given to each Board or committee member and the general public at least twenty-four (24) hours prior to such meeting.

If a quorum is present at a meeting, such meeting may be continued or adjourned from day to day and no additional notice of such continuation or adjournment need be given.

8. VOTES. No person other than a Board member is entitled to vote at any Board or committee meeting, except appointed members of special committees within those committees.

Each Board member shall be entitled to one (1) vote. No proxy votes may be used to constitute a quorum, transact business, or otherwise. To register a vote, the Board member must be present at the meeting or participating via telephone at the time the vote is taken.

An affirmative vote of at least five (5) Board members is required for a main motion to pass the Board. An affirmative vote of the majority of committee membership is required for a main motion to pass a committee.

9. ORDER OF BUSINESS. The following order of business shall be observed at all regular, annual, or special Board meetings and committee meetings insofar as practicable or necessary:

- Call to Order
- Calling of the Roll
- Port Director Request's for Agenda Changes
- Public Participation on Non-agenda Items
- Approval of the Previous Meeting Minutes
- Consent Agenda
- Unfinished Business
- New Business
- Items for Information
- Staff, Committee and Member Reports
- Board Administrative Matters
- Adjournment

As the first order of business after the calling of the roll at the annual Board meeting or at the first

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regular or special meeting after an officer vacancy has been recognized by the Board, the Chair, Vice Chair and/or other officers shall be elected.

The Port Director may include under the consent agenda:

- A. Actions to Propose Regulations for Public Comment
- B. Bid awards that have received Committee concurrence
- C. Resolutions
- D. Other items requiring Board action which do not involve substantial public policy questions.

10. BOARD MEETINGS PUBLIC. All Board and committee meetings are open to the public, except that executive sessions may be held in accordance with AS 44.62.310.

11. CONFLICT OF INTEREST. No Board member shall vote or deliberate on any question in which he or she has a conflict of interest as defined by Chapter 01.45 of the Code of the City and Borough of Juneau.

Such a Board member shall not be counted in determining the quorum for such a vote.

12. TELEPHONIC PARTICIPATION.

A. A member may participate via telephone in a Board or Committee meeting, if the member declares that circumstances prevent physical attendance at the meeting. If the Chair chooses to participate by teleconference, the Vice chair shall preside.

B. No more than the first three members notifying the Board secretary regarding telephonic participation in a particular meeting may participate via telephone at any one meeting.

C. The member shall notify the Board secretary, if reasonably practicable, at least four hours in advance of a meeting which the member proposes to attend by telephone and shall provide the physical address of the location, the telephone number, and any available facsimile, email, or other document transmission service.

D. At the meeting, the Board or Committee secretary shall establish a telephone connection when the call to order is imminent.

E. A member participating by telephone shall be counted as present for purposes of quorum, discussion, and voting.

F. The member participating by telephone shall make every effort to participate in the

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entire meeting. From time to time during the meeting, the presiding officer shall confirm the connection.

G. The member participating by telephone may ask to be recognized by the presiding officer to the same extent as any other member.

H. If the telephone connection cannot be made or is made then lost, the meeting shall commence or continue as scheduled and the Board secretary shall attempt to establish or restore the connection, provided that if the member participating by telephone is necessary to achieve a quorum, the meeting shall be at ease, recess, or adjourn as necessary until the telephone connection is established or restored.

I. Participation by the telephone shall be allowed only for regular, special, or committee meetings of the Board.

J. Any member of the public present with the member participating by telephone shall be allowed to speak to the same extent he/she would if physically present at the meeting.

K. As used in these bylaws, “telephone” means any system for two-way communication.

**ARTICLE VI. PUBLIC HEARINGS, RULES FOR PUBLIC PARTICIPATION, AND APPEALS**

1. PUBLIC HEARINGS AND RULES FOR PUBLIC PARTICIPATION. The Board may hold public hearings in accordance with established City and Borough of Juneau procedures to take public or other testimony on any issue dealing with Board duties or responsibilities. Public testimony will be conducted according to the following rules, which will be available at the meeting:

A. The presiding chair of the meeting will conduct the hearing.

B. The presiding chair will open the hearing by summarizing its purposes and reemphasizing the rules of procedure.

C. The presiding chair may set a time limit for public testimony, for individual speakers, or both if it appears necessary to gain maximum participation and conserve time, and may for the same reason disallow all questions from the Board members to members of the public. A majority of the Board or Committee may extend the time limit. The time limit for individual speakers shall be uniform for all speakers and shall be strictly enforced. Speakers shall not have the right to transfer their unused time to other speakers, but the presiding officer may grant additional time to a person speaking on behalf of a group present at the meeting.

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D. Citizens will be encouraged to submit written presentations and exhibits. Material submitted to the Port Director's Office more than three business days before a meeting and comprising 10 pages or less will be eligible for copying for that meeting. Material submitted less than three days before a meeting will be distributed by the Port Director at the meeting provided the submission contains at least 15 copies.

E. The presiding officer will set forth the item to be discussed and will rule non-germane comments out of order.

F. All speakers, public, and members of the Board must be recognized by the presiding chair.

G. Members of the public will precede their remarks by stating their names, and unless otherwise allowed by the presiding chair, their place of residence.

H. Members of the Board will be recognized by their surnames.

I. Members of the Board will not direct questions to each other or to the chair during the public participation except as to the conduct of the hearing.

J. Members of the Board may direct questions to a member of the public only to obtain clarification of material presented. The questions may not be argumentative, nor may they have the effect of unreasonably extending the time limit applicable to public speakers.

K. The public may direct questions to the Board or the administration. However, the Chair shall have discretion as to the appropriate manner and time for a response. In no case shall the Board engage in debate with the public.

L. The Port Director may participate in the same manner as members of the Board.

2. APPEALS TO THE BOARD. The Board will, in those instances allowed by the Code of the City and Borough of Juneau and under procedures established by the City and Borough of Juneau, hear and adjudicate public appeals regarding the application of Harbor rules, policies and procedures. The Board will adopt rules of procedure for handling appeals.

**ARTICLE VII. PORT DIRECTOR**

1. PORT DIRECTOR. The Port Director serves at the pleasure of the Board as identified in Section 85.02.080 of the Code of the City and Borough of Juneau.

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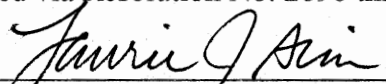
The Port Director shall have the duties and responsibilities identified in Section 85.02.090, 85.02.110, and 85.02.130 of the Code of the City and Borough of Juneau.

**ARTICLE VIII. EFFECTIVE DATE AND AMENDMENTS**

1. EFFECTIVE DATE OF BYLAWS. These Bylaws, as amended, are effective June 9th, 2014.
2. AMENDMENTS. Any of these Bylaws may be amended by an affirmative vote of six (6) Board members at any regular or special meeting called for and approved by the Assembly.
3. ADDITIONAL PROVISIONS. Indemnification of Directors and Officers Each director and officer now or hereafter serving as such, shall be, and by virtue of this Bylaw provision hereby is, indemnified by the City and Borough of Juneau against any and all claims and liabilities to which they, their heirs, and personal representatives, have or shall become subject due to serving or having served as such director or officer, or neglected by them as such director or officer; and the City and Borough of Juneau shall reimburse each such person for all legal expenses (including attorney's fees) reasonably incurred by them in connection with any such claim or liability, provided, however, that no such person shall be indemnified against, or be reimbursed for any expense incurred in connection with, any claim or liability arising out of their own willful misconduct or gross negligence.

The amount paid to any director or officer by way of indemnification shall not exceed their actual, reasonable, and necessary expenses incurred concerning the matter involved. The right of indemnification, herein above provided for, shall not be exclusive of any rights to which any director or officer may otherwise be entitled by law.

Adopted via Resolution No. 2690 this 9th day of June, 2014.

  
\_\_\_\_\_  
Attested by Municipal Clerk

**CBJ DOCKS AND HARBORS BOARD**  
**REGULAR BOARD MEETING MINUTES (CONTINUED)**  
**For Thursday, October 29th, 2020**

Mr. Uchytel said on page 38 in the packet is recommended language from staff. If the Board approves this, he will go to Law and start the change. The intent of what is in red (c) is that we want to recognize that there may be commercial fishing vessels that have reserved moorage at Statter Harbor and we want to provide them the same courtesy that fishing vessels downtown get when they go out to Statter Harbor to fish.

Committee Questions - None

Public Comment - None

Committee Discussion/Action - None

**MOTION BY MR. BECKER: TO PURSUE A REGULATION CHANGE TO ACKNOWLEDGE STATTER HARBOR COMMERCIAL FISHING VESSELS ARE ENTITLED TO DOWNTOWN HARBOR DISCOUNTS AND ASK UNANIMOUS CONSENT.**

Motion passed with no objection.

4. Charter Vessel Rates at Statter Harbor (05 CBJAC 20.080 - Passenger-for-hire fee)  
Mr. Uchytel said there is a Finance Sub-Committee looking at our budget and the Statter Harbor for-hire-float rates. With the completion of these floats in May, and the purpose of serving the charters for whale watching vessels and fishing charters, we should be adjusted the rates accordingly. The Finance Sub-Committee met on the 15<sup>th</sup> of this month and will meet again in late November to continue the discussion on an appropriate rate for passenger-for-hire. The Committee wanted to signal the charter operators that we would not make any changes to calendar year 2021. The Committee will continue to work on an appropriate fee for Statter Harbor passenger-for-hire activities for the following year.

Committee Questions

Public Comment

Dennis Watson, Juneau, AK

Mr. Watson asked if Mr. Uchytel is talking about the moorage rate of \$7.00 plus per foot for the charter boats as well?

Mr. Uchytel said this rate has not been determined yet.

Committee Discussion/Action

**MOTION BY MR. BECKER: NOT TO PURSUE ANY CHANGES TO THE STATTER HARBOR PASSENGER FOR HIRE FEE FOR CY2021 AND ASK UNANIMOUS CONSENT.**

Motion passed with no objection.

**X. Items for Information/Discussion**

1. UA/UAS Lease Agreement – Juneau Fishermen’s Terminal





**From:** Port Director  
**To:** Dock & Harbors Finance Sub-Committee  
**Date:** October 15<sup>th</sup>, 2020  
**Re:** STATTER HARBOR – FOR HIRE FLOAT – FEE DISCUSS

1. Statter Phase III(B) is scheduled for completion on May 28<sup>th</sup>, 2021. This infrastructure investment will benefit all Statter users but especially the charter vessel operators. Discussions regarding the appropriate fee structure for the charter vessel are in the infancy but this document helps to bracket what is a fair rate to apply to those using the for hire floats, once they become operational.

Statter Phase III	Construction Award
III (A) – Dredging	\$4.1M
III (B) - Floats	\$4.3M
III (C) – Uplands	\$4M (Estimated)
Total	\$12.4M

Phase III (C) is not yet fully designed but will provide restrooms, covered waiting area, curb & gutter and paving for the parking lot. The CLIA Settlement in 2019 did not object to using 75% of head tax in support of the Statter Phase III project. This implies that 25% must come from Harbor Enterprise fund or local CBJ match. We have sufficient Harbors Enterprise match for Phase III(A) and III(C).

2. The latest FY20 Available Fund Balance Summary:

	Revenue (FY20)	Expenditure (FY20)	Fund Balance (7/1/2020)
Docks Enterprise	\$1,708,507	\$1,399,191	\$2,588,939 (+\$309,316)
Harbor Enterprise	\$4,570,689	\$3,995,742	\$389,812 (\$574,947)

3. Currently the charter operator using Statter Harbor pay moorage (\$7.35/linear foot) and pay a passenger for hire fee as described in regulations (05 CBJAC 20.080 - Passenger-for-hire fee) for inspected vessels as \$500.00 per vessel plus \$1.50 per passenger each calendar day that one or more facilities is used for passenger-for-hire activity, adjusted annually for Anchorage CPI. It is our intentions that the newly constructed for-hire floats will be primarily used for Inspected Vessels and we will manage the Uninspected Vessels (i.e. 6 passenger operator) outside of the new facility. In 2019, Docks & Harbors collected \$150,703.50 under the Passenger-for-hire fee and \$73,780 from moorage from the vessels engaged in this activity. Collectively we received \$224,483.50 from the inspected charter operations in Statter Harbor.

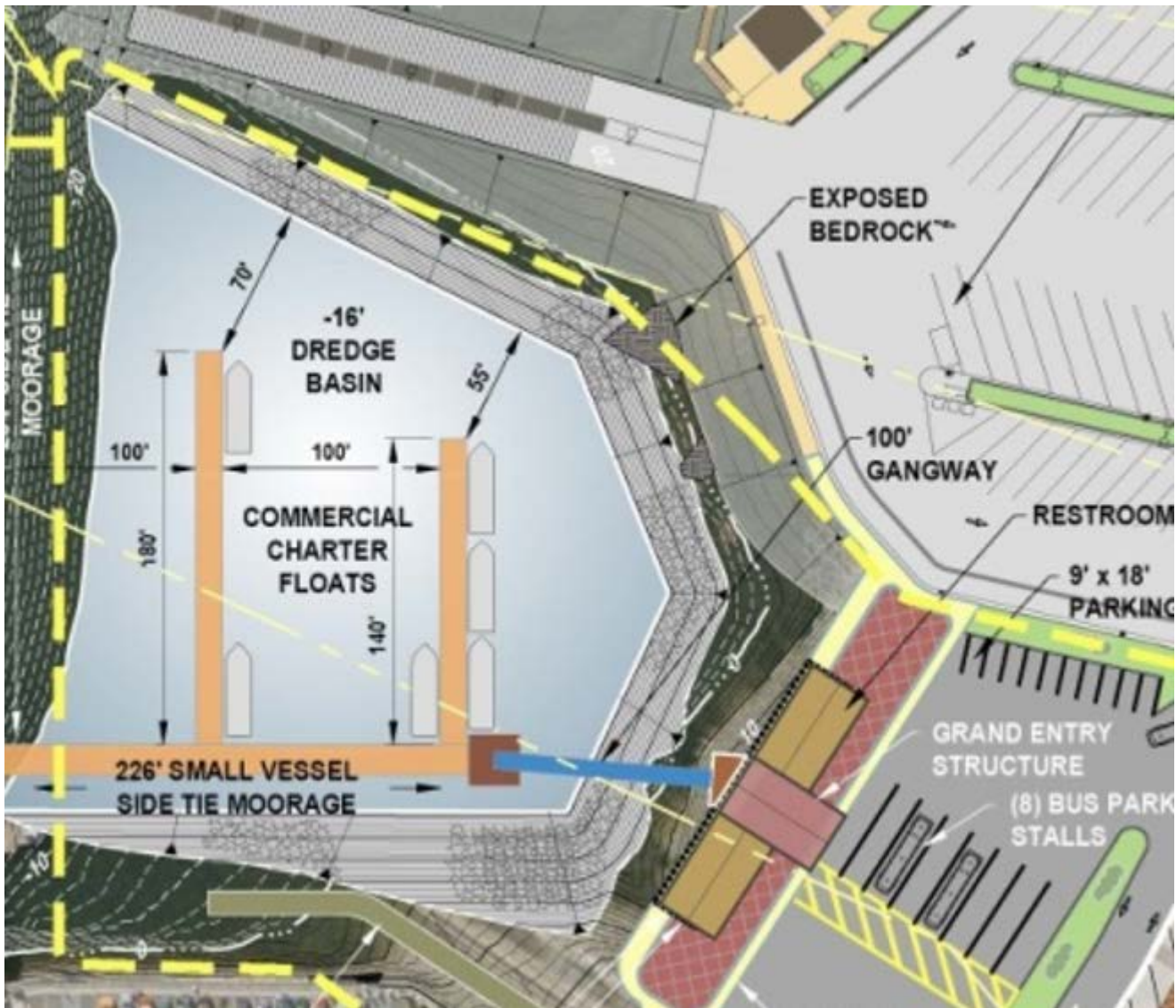
4. In an attempt to discuss the appropriate fee structure, the following comments may be appropriate to consider:

- Estimated construction award cost Phase III (all phases) is \$12.4M.
- Estimate permitting, design, construction inspection & contract administration adds 17% to \$14.5M
- CLIA Settlement allows up to \$11M to be funded with head tax
- Harbor match of approximately \$3M is required – of which \$2M has been accounted for.
- The user group which most benefits from Statter Phase III is the Inspected Charter Vessel Operators.
- In 2019, the Inspected Charter Vessel Operators paid nearly \$225K.
- There are 8896 square feet of new floats in Phase III(C)
- For the Statter Phase III construction (all phases), the approximate cost is \$1600/sf.
- The approximate cost per of new float at Douglas Harbor was \$360/sf (excludes USACE dredging).
- The approximate cost per of new float at Aurora Harbors (Phase I & II) was \$273/sf.

#

- Encl: (1) Rendering Statter Harbor Improvements  
(2) Small Scale – Statter Harbor Phase III  
(3) Revenue Collected by Passenger For Hire Fees





## Passenger For Hire Trends

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>Total # of Uninspected Companies (Total Boats)</b>	18 (26)	13 (19)	11 (17)	15 (23)	10 (19)	13 (24)	16 (40)	12 (30)	10 (22)	11 (25)	10 (26)
<b>Boat Fee</b>	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$100.00	\$150.00	\$151.00	\$156.00
<b>Passenger Fee</b>	\$15 per seat one time fee	\$15 per seat one time fee	\$15 per seat one time fee	\$15 per seat one time fee	\$15 per seat one time fee	\$15 per seat one time fee	\$1.00	\$1.25	\$1.50	\$1.50	\$1.50
<b>Uninspected Vessels per passenger totals \$</b>	\$2,299.95	\$5,700.00	\$5,100.00	\$2,070.00	\$5,700.00	\$2,160.00	\$8,725.13	\$9,078.61	\$9,517.50	\$8,818.50	\$9,291.00
<b>Total # of Inspected Vessel Companies (Total Boats)</b>	8 (13)	9 (27)	5 (17)	7 (21)	7 (19)	7 (19)	7 (25)	7 (29)	8 (32)	9 (35)	10 (41)
<b>Boat Fee</b>	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$400.00	\$500.00	\$518.00	\$518.00
<b>Passenger Fee</b>	\$1.00	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.25	\$1.50	\$1.50	\$1.50	\$1.50
<b>Inspected Vessels per passenger totals \$</b>	\$45,571.16	\$38,616.10	\$51,408.00	\$65,929.66	\$57,842.49	\$57,855.24	\$85,770.20	\$106,518.40	\$82,826.00	\$119,979.00	\$150,703.50



# Port of Juneau

City & Borough of Juneau • Docks & Harbors  
 155 S. Seward Street • Juneau, AK 99801  
 (907) 586-0292 Phone • (907) 586-0295 Fax

**From:** *Carl J Uchytel*  
 Port Director

**To:** Docks & Harbors Finance Sub-Committee

**Date:** November 24<sup>th</sup>, 2020

**Re:** Cost Estimate Attributable to Statter Harbor For-Hire Charters

1. In its efforts to determine an appropriate fee schedule for charter vessel who will benefit with the Statter Phase III project, the Docks & Harbor Finance Sub-Committee requested the Port Director identify operations and maintenance costs associated with this \$12M infrastructure investment. This question, although reasonable and commonly asked in a variety of ways, is difficult to provide in a direct, repeatable manner. This is primarily because our facilities including harbor officers, harbor technicians and administrative assistants are rarely conducting tasks so specific to separate one user group (i.e. recreational vessels with moorage, trailerable boats using launch ramp facilities, live-aboard patrons, commercial fishing vessels, commercial transport/landing craft, commercial charter vessels using Statter Harbor) from another with regards to their impact to Docks & Harbors staffing and budget.
2. We do know our Harbors Enterprise FY21 budget is \$4.25M. One way to roughly estimate direct costs would be to prorate the budget based on the 7 personnel (4 year round plus 3 seasonals) assigned to Statter relative to the 10 personnel (7 year round plus 3 seasonals) assigned downtown. Using this proportion, our annual Statter Harbor/Out the Road Activities amounts to \$1.75M. In addition to Statter Harbor proper, this would include costs (personnel, fixed and discretionary) for ABMS, ABLF, Amalga and Echo Cove. Assuming 75% of resources are expended at Statter Harbor proper, results in \$1.3M annual operating cost for that facility or approximately \$100K/month. Furthermore, if we assume one-third of the operating costs from May through September can be attributable to the 80K embarking charter guests, then \$150K is a reasonable annual cost to charter operations.
3. Another manner to estimate level of cost to support the charter operations is by line item.

Harbor Officer – 0.5 FTE (April thru September)	\$45,833
Harbor Technician – 0.5 FTE (April thru September)	\$35,616
Admin Assistant II – 25% of 1 FTE (April thru September)	\$10,228
Port-a-Potty – 5 @ \$855.80/month (May thru September)	\$21,395
Restroom supplies – 75% of total usage (May –September)	\$2,854
Water/Waste Water – 75% of total use (May – September)	\$4,530
Refuse Disposal – 25% of total use (May – September)	\$8,847
Sweeping & Striping of bus parking lot (LS)	\$3,682
<b>TOTAL</b>	<b>\$133,000</b>

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## **DOCKS & HARBORS FINANCE SUB-COMMITTEE MEETING MINUTES**

Monday November 30th, 2020

**I. Call to Order** – Mr. Wostmann called the November 30<sup>th</sup> Finance Sub-Committee meeting to order at 5:00 pm via Zoom Meeting.

### **II. Roll Call**

The following members were present via zoom or in the Port Director's conference room: James Becker, Chris Dimond, David Larkin, Don Etheridge, and Bob Wostmann.

Also present were the following: Carl Uchtyl – Port Director, Matt Creswell – Harbormaster, Teena Larson – Administrative Officer, and Tiara Ward – CBJ Finance Accountant

### **III. Approval of Agenda**

**THE AGENDA WAS APPROVED AS PRESENTED.**

**IV. Participation on Non-Agenda Items - None**

**V. Approval of October 15<sup>th</sup>, 2020 Finance Sub-Committee Minutes** – Hearing no objection the minutes of October 15<sup>th</sup>, 2020 are approved as presented.

### **VI. Items for Information/Discussion**

#### **1. Estimated Statter Harbor expenses related to charter vessel operations**

Mr. Uchtyl said he was asked from this Committee to separate costs attributable to the charter operations at Statter Harbor. What does it cost our staff through time and resources to support the charter operations at Statter Harbor? This is a difficult task because none of the user groups believe they are a burden on the operating costs. On page 15 in the packet is a memo that show costs attributable to Statter Harbor For-Hire Charter operations. In paragraph two, he estimates 75% of all Harbor operations at Statter Harbor are for the Statter Harbor facility which is \$1.3M of the annual operating costs or roughly \$100K/month. Broken down further, he estimated 1/3 of the \$1.3M is directly for charter operations for efforts to maintain Statter Harbor which results in a reasonable amount of \$150K. Mr. Uchtyl said the other way he looked at the costs associated with charter operations was to assume one Harbor Officer and one Harbor Technician are fully engaged with charter operations seven days a week from early morning to 8pm in the evening, the administrative portion is approximately a quarter of the seasonal time spent permitting, and monthly passenger billing. The port-a-potties are primarily at Statter Harbor for the charter operations which is five at \$855.50 per month. He assumed 75% of the restroom supplies and water/waste water is used directly on the charter operations. For the refuse disposal he estimated 25% of the total cost is for the charter operations.



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The sweeping and striping of the bus lot is a lump sum with 100% associated with the charter operations. Adding all of these costs together are \$133K which is in line with the \$150K estimated in paragraph two of the memo.

Mr. Wostmann asked if the Harbor Officer, Harbor Technician, and the Administrative costs include benefits?

Mr. Uchytel said they include benefit costs.

Mr. Wostmann said there are two components to the fees associated with the charter operations. One being the direct costs that were identified in the memo and either using the \$150K or the \$133K, and the other being the capital costs for the facility that is being built for the charter operations. He said he has been doing some calculations to determine a depreciation cost and he estimates \$270K annually which may not be a good number right now because he used the standard straight line depreciation and it may not be calculated this way. There was previous discussion about reimbursement from the charter operators for about half of the capital costs which is around \$137K. These are estimated numbers to have something to work with and think about. He said taking the \$137K and adding the \$150K it comes to a little under \$300K annually. Currently, the inspected vessels paid in fees \$225K. Using these numbers, there could be an approximate fee increase of 30% to get to the \$300K from the \$225K. If this approach seems reasonable, staff would need to work with CBJ Finance to figure out how they do the depreciation to get an accurate number. The 30% increase could possibly be carried out over a few years.

Mr. Etheridge asked if the numbers used for replacement is for the full cost of the Statter Harbor For-Hire facility or just the 25% that Harbors has to provide?

Mr. Wostmann said that is the full cost of the project. This would be paying off the full investment of the facility so the funds can be set aside to replace the facility 50 years from now. He put these numbers together to get a general scope of what the Committee wanted to do. Another calculation he was working with was the estimated 80,000 passenger that go on whale watching tours at \$150 per person he estimates the charter operators receiving revenue of \$12M. The \$300K contribution from the fleet as a whole seems like a reasonable cost. Providing this vastly improved facility, the charter operators should predict there would be an increase in fees.

Mr. Larkin asked if the charter operators asked for the new facility or is this something Docks & Harbors decided to do?

Mr. Uchytel said it is a little bit of both. Statter Harbor is the highest requested facility. Staff knows the demand exceeds capacity and the charter operators has brought up that





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they need a place to tie up every night. The charter operators have indicated they are a value to the community and they provide some of the economic engine of tourism. The charter operators has requested additional facilities and staff has seen how packed Statter Harbor can be. Staff looks at this as a win/win because it provides a place for the charter operators but it also relieves the stress for others to use Statter Harbor.

Mr. Larkin said the raising of the fees will be a little easier knowing this facility was built from their request.

Mr. Wostmann said he was a charter operator and he avoided Statter Harbor whenever he could to avoid the congestion during the summer. He said his perspective of this facility is that it is going to be a huge improvement.

Mr. Etheridge said when he was a charter operator he would never go to Statter Harbor due to congestion. If there was not space of the IVF downtown they would anchor out and lighter back and forth with skiffs.

Mr. Becker said this will be a great benefit for the charter operators. He asked what the estimate for adjustment was going to be and how the phasing in over a few years would work?

Mr. Wostmann said his rough numbers were estimated off the entire investment of \$14.7M and over a 50 year amortization so the amount that will be going toward that in a given year is about 2%. If the idea is to just pay back the City's portion, they would probably want to be reimbursed a whole lot sooner. The phasing over a few years idea would be to do increments of 10% over a few years.

### Public Comment –

Brent Bitterman, Alaska Luxury Tours

Mr. Bitterman asked if this project is paid for by cruise ship head tax money?

Mr. Uchytel said three quarters of the funding for this project is from head tax and one quarter from local sources.

Mr. Bitterman said the reason he believes this is important is when you talk about raising fees. He said regarding the idea of the facility being paid for by the charter industry because it would not need to be built if it was not for the charter industry being there, it is already being paid for by the cruise lines so it seems like it is double dipping from his perspective. To pass along a rate increase does not seem fair in his estimation.

Kirby Day, Juneau, AK

Mr. Day said he was making sure there would be no increase in calendar year 2021.



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Mr. Wostmann said that is correct and this would not take effect until 2022.

Mr. Day said as operators, we all want to keep our costs down especially given the uncertainty of where we are today. It is important to remember that if we did not do this project that was three quarters of the way funded by passenger head tax, in all likelihood, the City would have had to cap this business and limit the capacity because we were out of room and out of residential patience. This project does benefit the charter operators, the cruise industry, the passengers, and the residents. He said in general, most operators do not want their costs to increase right now but it may be a good idea to sit down with the operators after the first of the year and talk through thoughts and ideas on how to have a fee increase over the next five years. Given the uncertainty that may creep into 2022, maybe have a gradual increase for that year and a normal increase in the following years. He is not speaking for the operators. This comes out of their bottom line and in turn needs to charge the guest as well. He asked if it was the intent to make up this increase based off the per passenger or also on the moorage, or both?

Mr. Wostmann said what the increase is based off is undecided. He agrees that the charter operators need to be involved in the discussion and could be over the next six to nine months. Ultimately, the Committee is looking for a fee structure to have in place in 2022 but if there still is not a full season we would undoubtedly not raise the fees or raise them a lot less. In correcting his earlier statement, only 1% of the value would be depreciated because we are looking at half the value. There are multiple ways to approach this reimbursement or even if that is something the Committee wants to do.

Mr. Etheridge said there will be several meeting if there is a proposed fee increase and a lot of opportunity for public comment.

Mr. Wostmann asked about Mr. Uchytel's memo dated October 15<sup>th</sup>. In the last sentence in paragraph one which says, "We have sufficient Harbors Enterprise match for Phase III(A) and III(C)", but what about III (B)?

Mr. Uchytel said that is an error, it should say Phase III(A) and III(B). Harbors does not have enough funds for Phase III(C).

Mr. Wostmann asked why the uninspected vessels will not be operating in the new facility?

Mr. Uchytel said this is an attempt to maximize or manage the new facility as best as possible.

**2. CY22 Statter Harbors For-Hire Fee Rate Discussion-** This was discussed in the previous item.



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### **3. FY21 Docks and Harbors Budget Review**

Mr. Uchytel said the Docks & Harbors revenue and expense projections was put together today for FY21. Looking at the Docks projections, staff is estimating \$785,628 in revenue and \$1,321,413 in expense and this will leave Docks with a deficit of \$535,785. At some point staff will need to go forward to the Assembly and ask for fund balance money to cover the deficit. Mr. Uchytel said looking at the Harbors projections, staff is estimating \$4,393,680 in revenue and \$3,979,833 in expense this will leave \$413,847 up in revenue at the end of FY21.

### **4. FY22 Budget Process Calendar**

Mr. Uchytel said this is the first year the Finance Department provided this calendar and he wanted to share this with the Board. He pointed out important dates for the Board. By Charter, the date the Assembly is required to approve the budget is June 15<sup>th</sup>. The process is broken down into three waves with Docks & Harbors in wave 3. The MPF requests are due January 4<sup>th</sup>, December 7<sup>th</sup> is the first round of training for the budget process and provide the spreadsheets to be completed by the Department. On January 25<sup>th</sup> is when the spreadsheets are due to finance with the updates for this current fiscal year FY21 and make changes to the next fiscal year FY22. Once the Finance Department has the budget updates they will add their portion of the budget numbers, such as debt service, interest, and make other appropriate adjustments. The City Manager will schedule a presentation from Docks & Harbors to address Assembly concerns with our budget. This date is typically in March or April and then all the budgets are approved at the June 15<sup>th</sup> deadline. He said Tiara Ward is our Finance Accountant who is also on this zoom meeting if you have any questions.

Ms. Ward said this is a new schedule for the Finance Department as well due to our new budget analyst. The plan is to have the budget completed earlier so as to not be scrambling at the last minute City-wide.

Mr. Wostmann said he would like to focus on the dates from December 7<sup>th</sup> to January 25<sup>th</sup>. December 7<sup>th</sup> is the date staff receives the working spreadsheets to update and January 25<sup>th</sup> is when they need to be submitted to Finance. During this time there will need to be a Finance Sub-Committee meeting, an Operations meeting, and a Board meeting in order to approve the budget numbers for submission.

Mr. Uchytel said if we did not compete all the meetings before the January 25<sup>th</sup> deadline it would be okay. We have an Operations meeting on January 20<sup>th</sup> and the Full Board on January 28<sup>th</sup>. He is sure the Finance Department would accept the working draft that we could have approved at the January 28<sup>th</sup> Board meeting.



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Ms. Ward said if the Board needed a little more time that would be appropriate. The goal is to have most of a budget ready so the Manager's office can look at all the needs and set the MPF and CIP schedules. She believes the January 28<sup>th</sup> date would be fine.

Mr. Wostmann asked when staff would have a preliminary review of the budget with the Finance Sub-Committee?

Mr. Uchytel said the 20<sup>th</sup> of January is the Operations Committee meeting and recommended having a Finance Sub-Committee review anywhere between the 6<sup>th</sup> and the 14<sup>th</sup> of January.

Mr. Wostmann asked Mr. Uchytel to send out a doodle poll for the dates between January 6<sup>th</sup> and the 14<sup>th</sup>.

Mr. Uchytel asked what level the Committee wants to see the budget. The Assembly approves a very high level biennial review.

Mr. Wostmann said the Sub-Committee should get into the weeds that leads up to the total budget which he believes is the duties of the Finance Sub-Committee. In part so when this goes to the Operations and the Full Board there is not a need for the Board as a whole to dig into the detail items again. He wants to review all the detail line items and believes this could be a two part process. Staff could send out the draft budget to the Finance Sub-Committee members to have a little time to review it before the meeting date.

Mr. Uchytel said he will send out a doodle poll for the January 6<sup>th</sup> to the 14<sup>th</sup> time period.

### **5. Graphic ideas to communicate to the Docks & Harbors Board**

Mr. Uchytel said he had a discussion with Mr. Wostmann, Mr. Etheridge and Mr. Ridgway about better way to communicate the financial health of Docks & Harbors on a periodic basis. He said he has nothing to present and is asking what the members would like to see with the budget numbers.

Mr. Becker said he would like to have a one on one to get caught up on budget numbers with Mr. Uchytel.

Mr. Wostmann said he wanted to pull some other reports that had some effective graphics but he was unable to find the time for that for this meeting but he would like this topic on the next agenda. If any other members have a finance report they would like to see to please send it to Mr. Uchytel.

**VII. Next Meeting** – January meeting TBD.

**VIII. Adjournment** – The Finance Sub-Committee Meeting adjourned at 6:15 pm.