

<div>Alaska Marine Highway System</div> <div>Vessel Condition and Cost of Repairs</div>										
Request	Aurora	LeConte	Malaspina	Matanuska	Columbia	Kennicott	Lituya	Hubbard	Tazlina	Tustumena
Repairs needed in last survey-Repairs Assessment Per the FY18-FY19 Fleet Condition Survey See Attached Appendixes	<ul style="list-style-type: none"> <li>Hull Structure and Appendages</li> <li>Main Propulsion System Repower</li> <li>Vehicle Loading Doors</li> <li>Centralized Fire Detection/Alarm System</li> <li>Navigation Equipment - Gyrocompass</li> <li>Communications Systems</li> <li>Bilge Alarms</li> <li>Stbd Main Engine Exhaust Leak</li> <li>Mooring Capstans</li> <li>Firemain System and Piping</li> <li>Bow Thruster Control</li> <li>Vehicle Side Doors</li> <li>Main Machinery Room HVAC</li> <li>Fire Detection and Extinguishing, Engine Room Halon System</li> <li>Vehicle Deck</li> <li>Flushing System</li> <li>Electrical Cabling</li> <li>Emergency Electrical Power Distribution</li> <li>Heating Plant -Steam and Condensate, accommodations spaces ventilation</li> <li>Heating Plan -Solarium Electric Heaters</li> <li>Vehicle Space Ventilation Louver</li> <li>Fuel Oil System</li> <li>Refrigeration Systems</li> <li>Ship's Service Electrical Power Distribution</li> </ul>	<ul style="list-style-type: none"> <li>Lifeboat Davit Controls</li> <li>Ship Service Power Generation, digital voltage regulators</li> <li>Bilge System</li> <li>Heating Plant</li> <li>Engineering Spaces, Refrigeration Systems</li> <li>Tank Coatings</li> <li>Galley</li> <li>Centralized Fire Detection/Alarm System</li> <li>Anchor Windlass</li> <li>Superstructure, Engineering Spaces</li> <li>Lockers and Stores</li> <li>Vehicle Space Ventilation</li> <li>Steering Stand</li> <li>Steering Systems</li> <li>Accommodation Space Ventilation</li> <li>Communications Systems</li> <li>Utility Boats and Davits</li> <li>Pilothouse</li> <li>Ship Service Power</li> <li>Generation</li> <li>Bridge/Sun Deck</li> <li>Lube Oil Systems</li> </ul>	<ul style="list-style-type: none"> <li>Vehicle Loading Doors</li> <li>Vehicle Deck Steel Replacement</li> <li>Bow Thruster</li> <li>Ship Service Electrical Generation and Distribution</li> <li>Propellers and Shafting: Four Centerline Ballast Tank</li> <li>Emergency Generator</li> <li>Main Engines</li> <li>Firemain System and Piping</li> <li>Manual Fire Alarm System</li> <li>Tank and Void Coatings</li> <li>Galley</li> <li>Forward Observation</li> <li>Lounge ACM Abatement</li> <li>Centralized Fire</li> <li>Detection/Alarm System</li> <li>Fast Rescue/Utility Boats and Davits</li> <li>Modify Accommodations Ventilation Filters</li> <li>Humidifiers: Ship Service Power Generation</li> <li>Public Address System</li> <li>Sewage Treatment System</li> <li>Engine Room Ventilation</li> <li>Tank Level Indicator System</li> <li>CCTV Cameras</li> <li>Heating Plant</li> <li>Passenger Elevators</li> <li>Talkback System</li> <li>Potable Water Piping</li> <li>Vehicle Space Ventilation</li> <li>Refrigeration</li> <li>Superstructure</li> <li>Hazardous Material Survey</li> <li>EOT (Engine Order Telegraph)</li> <li>Electrical Power Distribution</li> </ul>	<ul style="list-style-type: none"> <li>Generator Replacement</li> <li>Centralized Fire Detection/Alarm System</li> <li>Accommodations Ventilation Overhaul</li> <li>Crew Quarters Air Conditioning</li> <li>Rudders</li> <li>Vehicle Space Monitoring</li> <li>Tank Coatings</li> <li>Stern and Side Loading Doors</li> <li>Automatic Sprinkling System</li> <li>CCTV System Upgrade</li> <li>MSD System Upgrade</li> <li>Digital GPS</li> <li>Bow Thruster Replacement</li> <li>Bilge and Ballast System</li> <li>Boiler Replacement</li> <li>Anchor Windlass</li> <li>Galley Deck Covering</li> <li>Potable Water System</li> <li>Refrigeration Systems</li> <li>Searchlights</li> <li>Replace PA/GA System</li> </ul>	<ul style="list-style-type: none"> <li>Cathodic Protection System</li> <li>Shaft Alley Ventilation</li> <li>Sewage Collection and MSD Treatment System</li> <li>Firemain System and Piping</li> <li>Engineering Spaces and Tank Coatings</li> <li>Fan Rooms</li> <li>Main Galley Food Preparation and Service Area</li> <li>Seawater Cooling Systems</li> <li>CPP system replacement</li> <li>Electrical Distribution</li> <li>Steering Control System</li> <li>Public Address System</li> <li>Exterior Coatings</li> <li>Passenger Elevator</li> <li>Freight Elevator</li> <li>Lift System</li> <li>Aft Dumbwaiter</li> <li>Bow Thruster</li> <li>Depth Sounder</li> <li>Mooring Capstans</li> <li>ACM Survey</li> <li>Centralized Fire Detection System</li> <li>Galley Equipment</li> <li>MMR and AMR Ventilation</li> <li>Pilothouse Window Wipers and Heating System</li> <li>Fuel Management System</li> <li>Power Survey • Potable Water Filter</li> <li>Fuel Oil System</li> <li>Steam Heaters</li> <li>Potable Water System: Accommodation Space</li> <li>Ventilation</li> <li>Vehicle Loading Doors</li> <li>Vehicle Space HVAC</li> <li>Bridge Deck A/C Unit</li> <li>Exterior safety wires and handrails - Aft Mooring Station</li> <li>Motor Controllers</li> <li>Fuel Tank - Separation of 7-centreline fuel tank and skeg keel</li> <li>Reduction Gear Coolers</li> <li>Additional CCTV Cameras</li> <li>Compressed Air System</li> <li>Refrigeration Equipment</li> </ul>	<ul style="list-style-type: none"> <li>Main Propulsion</li> <li>Elevator Systems</li> <li>Heating Plant</li> <li>Sewage Collection and Treatment Systems</li> <li>Ventilation Systems</li> <li>Alarm Monitoring Systems</li> <li>Hull Plating and Appendages</li> <li>Fire Suppression Systems and Piping</li> <li>Tanks and Voids</li> <li>Fire Doors and Fire Screen Doors</li> <li>Elevator Systems</li> <li>Heating Plant</li> <li>Vehicle Space</li> <li>Accommodations Ladders</li> <li>Seawater Piping Systems</li> <li>Fuel and Lube Oil Systems</li> <li>Superstructure (Cabin Deck and Above)</li> <li>Communication Systems</li> <li>Galley</li> <li>Means of Rescue (MOR) Platform and Davit</li> <li>Ship Service Electrical Power Distribution</li> <li>Steering Systems</li> <li>Seawater Piping Systems</li> <li>Steering Systems</li> <li>Elevator Systems</li> <li>Emergency Electrical Power Distribution</li> <li>Freshwater Piping Systems</li> <li>Fire Boundaries and Structural Insulation</li> <li>Mooring Capstans</li> <li>Lifeboats and Davits</li> <li>Ship Service Electrical Power Distribution</li> <li>Refrigeration Systems</li> <li>Ship Service Power Generation</li> <li>Fuel and Lube Oil Systems</li> <li>Fire Suppression Systems and Piping</li> </ul>	<ul style="list-style-type: none"> <li>Propellers and Shafting</li> <li>Bow Thruster</li> <li>Steering Gear</li> <li>Docking Intercom</li> <li>House, Deck &amp; Freeboard Coating Systems</li> <li>Crew Areas</li> <li>Sewage Collection and Discharge</li> <li>Cables</li> <li>Heating Plant</li> <li>Machinery Alarm and Monitoring</li> <li>MOR and Crane</li> <li>Uptake</li> <li>Seawater Cooling Pumps</li> </ul>	NA due to New Constructed Vessels	NA due to New Constructed Vessels	<ul style="list-style-type: none"> <li>Structural Repairs</li> <li>Vehicle Lift Structural Repairs</li> <li>Fin Stabilizer</li> <li>Watertight Doors</li> <li>Passenger Elevator Upgrades</li> <li>Replacement of Steel Piping</li> <li>Repairs to the forward Sponson</li> <li>Overheated Electrical Panels</li> <li>Steering System</li> <li>Bridge Wing Control Stations</li> <li>Fan Room: Exterior Coating</li> <li>Main Propulsion System</li> <li>Talk Back System: Training Room</li> <li>Steering Stand</li> <li>Tank, Void and Bilge Coatings</li> <li>Tank Wastage</li> <li>Emergency Electrical Distribution</li> <li>CCTV System</li> <li>Solarium Deck HVAC</li> <li>Aft Vehicle Space Doors</li> <li>Emergency Batteries</li> </ul>
Cost of Needed Repairs	24,820,00	9,686,600	68,033,800	19,436,800	14,816,500	61,209,600	1,644,620			14,689,400
Provider Of Cost Estimate	Glosten	Glosten	Glosten	Glosten	Glosten	Glosten	Glosten			Glosten
Valid Certificate of Inspection (COI)	No	No	Yes	Yes	No	Yes	Yes	NA	Yes	Yes
Date of Certificate of Operation	Certification Date: 11/16/2018 Expiration Date: 11/16/2019	Certification Date: 12/26/18 Expiration Date: 12/26/2019	Certification Date: 02/21/19 Expiration Date: 02/21/2020	Certification Date: 11/17/19 Expiration Date: 11/17/2020	Certification Date: 12/12/18 Expiration Date: 12/12/2019	Certification Date: 04/04/19 Expiration Date: 04/04/20	Certification Date: 01/58/19 Expiration Date: 01/25/24	NA	Certification Date: 04/12/19 Expiration Date: 04/12/20	Certification Date: 05/03/19 Expiration Date: 05/03/20
Additional Costs if COI Expires	5.0 Million	5.5 Million	15.5 Million		1.75 Million					
Annual overhaul in FY20 & est. cost FY20 Annual Budget-FY20 Expended as of 01/01/2020	Original Estimated Budget: \$810,000 Actual Expenditures to Date: \$183,484	Original Estimated Budget: \$1,178,200 Actual Expenditures to Date: \$ 1,770,214	Original Estimated Budget: \$663,500 Actual Expenditures to Date: \$150,731	Original Estimated Budget: \$625,000 Actual Expenditures to Date: \$193,736	Original Estimated Budget: \$21,000 Actual Expenditures to Date: Risk Management Funds---approximately \$500k Annual overhaul is estimated @ \$1.5 million	Original Estimated Budget: \$2,707,000 Actual Expenditures to Date: Overhaul Just Began	Original Estimated Budget: \$428,200 Actual Expenditures to Date: \$7,757	Original Estimated Budget: \$0 Actual Expenditures to Date: \$0	Original Estimated Budget: \$0 Actual Expenditures to Date: \$0	Original Estimated Budget: \$1,685,500 Actual Expenditures to Date: \$105,833
Annual Overhauls in FY21	*no overhaul currently planned	Estimated FY21 Budget: \$2,000,000	*no overhaul currently planned	Estimated FY21 Budget: \$2,750,000	Estimated FY21 Budget: 3,000,000	Estimated FY21 Budget: \$2,500,000	Estimated FY21 Budget: \$750,000	Estimated FY21 Budget: \$1,200,000	Estimated FY21 Budget: \$1,200,000	Estimated FY20 Budget: \$2,500,000
Weekly Operating Costs**	\$186,000	\$161,000	\$361,000	\$345,000	\$477,000	\$423,000	\$20,000	\$169,000	\$169,000	\$260,000
Dates of Operation in FY20***	July 1, 2019 - Oct. 31, 2019	July 1, 2019 - Sept. 9, 2019 May 20, 2020 - June 30, 2020	July 1, 2019 - Dec. 1, 2019	Dec. 2, 2019 - June 30, 2020	July 1, 2019 - Oct. 2, 2019 May 6, 2020 - June 30, 2020	July 1, 2019 - Oct. 7, 2019 April 16, 2020 - June 30, 2020	July 1, 2019 - Jan. 9, 2020 Jan. 26, 2020 - June 30, 2020	None currently planned	July 1, 2019 - Sept. 15, 2019 Nov. 21, 2019 - Jan. 19, 2020 Mar. 1, 2020 - June 30, 2020	July 1, 2019 - Jan. 14, 2020 May 1, 2020 - June 30, 2020
Cost of Recertification of Lapsed COI	5.0 Million	5.5 Million	15.5 Million		1.75 Million					

\*\*The weekly operating costs listed are the average weekly costs and include direct vessel operating costs only. They do not include any vessel overhead or shoreside costs to support vessel operations.

\*\*\*These are the planned operating dates as of 1/21/20