Port of Juneau, Alaska
Cruise Ship Dock Electrification
Stage 2 - 35% Design Development - Cost Estimate
July 21, 2026

1.0	Shore Power System - Utility Substation & Transmission Line Extension	Units	QTY	Unit Cost ($)	Total ($)
-	**Major Equipment**				
1.1	69 - 11/6.6 kV, 15/20/25 MVA transformers with ALTC	EA	2	3,750,000.00	7,500,000.00
1.2	69kV, 1200A, 25KAIC Circuit Breaker	EA	3	140,000.00	420,000.00
1.3	69kV, 1200A, Group Operated Disconnect	EA	7	60,000.00	420,000.00
1.4	Combo Metering Unit, Single Phase, Revenue Grade	EA	9	100,000.00	900,000.00
1.5	15kV, 2000A Group Operated Disconnect	EA	6	10,000.00	60,000.00
1.6	15kV Station Service Transformer (50kVA)	EA	1	30,000.00	30,000.00
1.7	Substation Control Enclosure	EA	1	300,000.00	300,000.00
1.8	Station Fence & Gates	LS	1	130,000.00	130,000.00
1.9	Substation Surface Rock	LS	1	40,000.00	40,000.00
-	**Substation Steel Structures**				
1.10	69kV H Frame Dead End Structure	EA	1	120,000.00	120,000.00
1.11	3-Bay Bus Support Structure	EA	1	180,000.00	180,000.00
1.12	Static Mast	EA	3	40,000.00	120,000.00
1.13	3-Phase Metering Unit Structure	EA	3	30,000.00	90,000.00
1.14	Firewall	EA	2	150,000.00	300,000.00
1.15	15kV Riser Structure	EA	6	25,000.00	150,000.00
1.16	15kV Disconnect Switch Stand	EA	3	40,000.00	120,000.00
1.17	Switch Operator Platform	EA	7	4,000.00	28,000.00
-	**Substation Foundations**				
1.18	Steel Structure Pier Foundations (Small)	EA	29	10,000.00	290,000.00
1.19	Transformer Foundation & Oil Containment	EA	3	300,000.00	900,000.00
1.20	Circuit Breaker Foundation	EA	3	30,000.00	90,000.00
1.21	Tapered Steel Structure Foundations (Large)	EA	5	42,000.00	210,000.00
-	**Electrical Bus Installation**				

1.22	3" SPS Al (Fittings included in unit cost)	LF	860	150.00	129,000.00
1.23	1272kcm AAC	LF	500	15.00	7,500.00
1.24	MV Power Cable	LF	4200	115.00	483,000.00
1.25	70kV MCOV Surge Arrester	EA	3	7,500.00	22,500.00
1.26	69kV Station Post Insulator	EA	12	1,500.00	18,000.00
1.27	15kV Station Post Insulator	EA	18	600.00	10,800.00
-	**Other Minor Equipment**				
1.28	Conduit System	LF	4000	150.00	600,000.00
1.29	Control Cable	LS	1	120,000.00	120,000.00
1.30	Shield Wire System	LS	1	4,000.00	4,000.00
1.31	Substation Grounding System	LS	1	120,000.00	120,000.00
	Material & Labor Subtotal				**13,912,800.00**
	Contractor General & Administration Costs (10% of Estimated Material & Labor Subtotal)				1,391,280.00
	Subtotal (Materials and Labor)				**15,304,080.00**
2.0	**Shore Power System - Electrical Distribution System**	**Units**	**QTY**	**Unit Cost ($)**	**Total ($)**
2.1	Shore Power Metal-Clad Switchgear (15kV)	EA	2	1,500,000.00	3,000,000.00
2.2	Shore Power 11kV & 6.6kV conduits and conductors feeder conduit bank	LF	1000	3,000.00	3,000,000.00
2.3	Capacitor Bank	EA	2	1,000,000.00	2,000,000.00
2.4	Neutral Grounding Resistors	EA	2	75,000.00	150,000.00
2.5	Pre-Manufacturered Building Steel Structure for Switchgear and Capacitor Banks	SF	2000	175.00	350,000.00
2.6	Dock Shore Power Control Switchgear (15kV)	EA	2	1,500,000.00	3,000,000.00
2.7	480V Service Entrance Board	EA	1	50,000.00	50,000.00
2.8	480V Distribution Infrastructure (inccludes conduit and conductors)	EA	1	300,000.00	300,000.00
2.9	480V Panelboards	EA	2	45,000.00	90,000.00
2.10	208/120 V Transformer and Distribution Infrastructure	EA	1	100,000.00	100,000.00
2.11	Echain flexible/movable shore power outlet connection interface assembly	EA	2	2,000,000.00	4,000,000.00
2.12	Shore power cable manager crane unit	EA	2	350,000.00	700,000.00

Port of Juneau, Alaska
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2.13	Concrete electrical manhole	EA	1	200,000.00	200,000.00
2.14	Concrete electrical pullbox	EA	1	50,000.00	50,000.00
2.15	Submarine Cable & Termination Infrastructure	LF	1500	750.00	1,125,000.00
	Material Subtotal				**18,115,000.00**
	Labor Cost (40% of Estimated Material Subtotal)				7,246,000.00
	Subtotal (Materials and Labor)				**25,361,000.00**
3.0	**Shore Power Sysem - Civil, Structural and Site Development**	**Units**	**QTY**	**Unit Cost ($)**	**Total ($)**
3.1	Demolition, Salvage and Disposal	LS	1	350,000.00	350,000.00
3.2	Clearing and Grubbing	ACRE	1	30,000.00	30,000.00
3.3	Excavation and Disposal	CY	24000	75.00	1,800,000.00
3.4	Rock Excavation	CY	250	250.00	62,500.00
3.5	Class A Shot Rock Borrow	CY	7500	100.00	750,000.00
3.6	Base Course, Grading D-1	CY	1000	125.00	125,000.00
3.7	Wastewater Service System Modifications	LF	760	400.00	304,000.00
3.8	Drainage Improvements	LS	1	50,000.00	50,000.00
3.9	Construction Surveying	LS	1	100,000.00	100,000.00
3.10	Signage	LS	1	25,000.00	25,000.00
3.11	Vertical Lift Gate	LS	1	100,000.00	100,000.00
3.12	Retaining Structures/Embankment	LF	800	2,000.00	1,600,000.00
3.13	Pile Supported Dock	SF	27120	400.00	10,848,000.00
3.14	Existing CT Berth Dock Modifications	LS	1	100,000.00	100,000.00
3.15	Asphalt Concrete Pavement	TON	500	450.00	225,000.00
3.16	Protected Species Work Suspension	HR	20	3,000.00	60,000.00
3.17	Protected Species Observation	LS	1	200,000.00	200,000.00
3.18	Pile Obstruction Removal	LS	1	100,000.00	100,000.00
3.19	Modify Existing 80' Gangway	EA	2	75,000.00	150,000.00
3.20	Furnish Steel Pipe Pile, 30" dia. x .500" thick	EA	97	56,000.00	5,432,000.00
3.21	Install 30" dia. Vertical Pile	EA	61	25,000.00	1,525,000.00

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3.22	Install 30" dia. Batter Pile	EA	36	30,000.00	1,080,000.00
3.23	Rock Anchor	EA	24	100,000.00	2,400,000.00
3.24	Pile Splice	EA	24	15,000.00	360,000.00
3.25	Transition Ramps	EA	6	50,000.00	300,000.00
3.26	Dolphin Cap Modifications	LS	1	100,000.00	100,000.00
3.27	Supply and Install Pile Anodes	LS	1	1,000,000.00	1,000,000.00
3.28	Concrete Sidewalk	SY	120	250.00	30,000.00
3.29	Electrical Support Assemblies	LS	1	250,000.00	250,000.00
3.30	50'x64' Dock Mounted Garage	SF	3200	1,000.00	3,200,000.00
	Subtotal (Materials and Labor)				**32,656,500.00**
	Subtotal Project labor & Materials				**73,321,580.00**
	Contingency (20%)				14,664,316.00
	Mobilization (10%)				7,332,158.00
	Environmental Permiting				400,000.00
	Engineering Design (6.5% Remaining after 35% Submittal)				4,765,902.70
	Construction Management and Support (10%)				7,332,158.00
	Project Management (5%)				3,666,079.00
	GRAND TOTAL PROJECT COST				**111,482,193.70**

Prepared by
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