# CITY\_OF\_CORDOVA

Chairman: Robert Beedle Commissioners: Andy Craig Max Wiese

HARBOR COMMISSION REGULAR MEETING Dec 15, 2016 @ 7:00 PM CITY HALL CONFERENCE ROOM B

**AGENDA** 

Max Wiese Kenneth Jones Jacob Betts Harbormaster: Tony Schinella Admin Assistant: Brandy Griffith

#### **CALL TO ORDER**

10. ADJOURNMENT

#### **ROLL CALL**

Robert Beedle, Andy Craig, Max Wiese, Ken Jones, Jacob Betts

1.	APPROVAL OF REGULAR AGENDA Page 1
2.	APPROVAL OF MINUTES A. Nov 09, 2016 @ 7:00 PM Regular meeting. Page 2
3.	COMMUNICATIONS BY VISITORS
	B. Audience comments regarding agenda items (3 minutes per speaker)
4.	HARBORMASTERS REPORT. Page 3
5.	NEW BUSINESS
	A. Harbor Strategic planning. Discussion
6.	OLD BUSINESS A. Harbor Condition Assessment report additional info
7.	MISCELLANEOUS BUSINESS
8.	AUDIENCE PARTICIPATION
9.	COMMISSION COMMENTS

# MINUTES HARBOR COMMISION MEETING November 9, 2016 @ 7:00 PM CORDOVA CENTER MAYOR'S CONFERENCE ROOM

Call to order: This meeting was called to order by Robert Beedle @ 7:00 pm.

Roll Call: In Attendance: Jake Betts via phone, Robert Beedle, Ken Jones

Approval of Agenda: M/ Betts, 2<sup>nd</sup>/ Jones, V/ Unanimous

**Approval of Minutes:** M/ Betts, 2<sup>nd</sup>/ Jones, V/ Unanimous

Communications by Visitors: None

Correspondence: Letter from Robert Smith. No comments.

**Harbormaster's Report:** The report was printed in the agenda packet. Additional information: The harbormaster will be traveling to fish expo next week.

**New Business:** Dock use charges as it applies to small processors. Discussion on Northern Fish and Alaska Wild Seafood's use of the city docks. Concern over the possibility of additional wear and tear to the city cranes and to the docks. It was brought up that other entities pay wharfage fees for products coming across the dock, and to be fair these processors should be charged that as well. Jones expressed the desire to see small processors supported by the harbor commission.

Budget: General discussion. No need to raise harbor rates this year. Changes from last year include additional funds for waste oil disposal costs.

Old Business: None

**Miscellaneous Business:** Used oil: Discussed potential cost savings for the city departments if they were burning used oil. Discussed building a system that will make the used oil more burnable. The idea of creating a heat loop and selling the heat from burning the used oil was brought up. Possibilities will be revisited when more accurate projected costs are available.

Audience Participation: None

**Commission Comments:** 

**Beedle:** Thanks to Andy Craig for attending the meeting and for signing up to be a new commission member.

**Adjournment:** M/Jones, 2<sup>nd</sup>/ Betts, meeting adjourned at 8:44pm

#### Harbormaster's Report

- Reinstalled repaired light pole with 2 new LED light and all new wiring at the north end of Ocean Dock
- Installed 23 new pile hoops.
- Peterson's welding is fabricating new Ocean Dock fender walkways
- Snow removal
- Build 3<sup>rd</sup> new fire extinguisher shed
- Repaired or replaced 3 street lights
- Installed LED lighting in Harbor office hallway
- Removed old row of lighting in Harbor office and repaired holes
- Rewired and reduce light switches in office
- Cleaned oil sumps
- Sent out monthly invoices
- Awaiting quotes for 30' pressure treated timbers to make repairs to finger floats
- Painted restroom shower area's
- Working on a letter in support of the Alaska State matching harbor grant program with Tori Baker
- Cleaned out boiler room and installed lockers for employees
- Dock rounds
- Painted new slip name tags
- Attended multiple department head budget meetings
- Attended 2 council meetings
- Attended Pacific Marine Expo
- Issued intent to impound notice for F/V Oldetowne, Will impound on 14 Dec

## CORDOVA SOUTH HARBOR OPTION 1- MAINTENANCE AND REPAIRS ROM COST ESTIMATE



No. Item Description	Unit	Quantity	1	Jnit Cost		Total Cost
1 MOB/DEMOB				-	\$	100,000
Contractor Mob/Demob	LS	1	\$	100,000	\$	100,000
2 FLOAT REPAIRS					\$	475,000
Provide and Install Pile Hoops	EA	60	\$	600	\$	36,000
Provide and Install New Tri-Braces	EA	50	\$	800	\$	40,000
Replace Damaged Walers and Thru-Rods	LF	500	\$	150	\$	75,000
Replace Damaged Bullrail	LF	400	\$	60	\$	24,000
Replace Damaged Rubstrip	LF	800	\$	25	\$	20,000
Provide and Install Floatation Billets on Concrete Mainwalks	EA	400	\$	500	S	200,000
Concrete Surface Repair of Float Modules, (as needed)	EA	40	\$	2,000	\$	80,000
3 GANGWAY LANDING FLOATS					\$	68,000
Proivde and Install Floatation Leveling Billets	EA	75	\$	500	\$	38,000
Replace Walers, Thru-Rods and Connections	LS	1	\$	30,000	\$	30,000
4 TIMBER ACCESS TRESTLE REPAIRS						
Replace Damaged Cross Bracing	LF	100	•	50	\$	6,000
Replace Damaged Bullrail	LF	10	\$	60	\$	5,000 1,000
	RO	OM Constru	ction	Subtotal	\$	649,000
	Desig	gn Engineer	ing, F	Permitting	\$	40,000
Shop Drawing, Submittal Review, Fabrication Inspection (Estimated Construction Administration (Estimated 1 Months						15,000
Construction	Administra	ation (Estim	ated	1 Months)	\$	60,000
Post Construction Sup	port & As-	Built Drawin	gs (E	Estimated)	\$	5,000
15% Construction Contingence						98,000
	Total Co	st Includin	g En	gineering	\$	867,000

#### Notes:

- 1) Cost estimate is based on conceptual design.
- Costs are presented in current (October 2016) dollars and do not include escalation.
- Repair quantities approximate based on condition assessment findings and assuming major to severely damaged components require repair/replacement

20,000 1,133,000 13,396,000

#### CORDOVA SOUTH HARBOR OPTION 2- IN-KIND REPLACEMENT USING EXISTING PILES **ROM COST ESTIMATE**

No. Item Description	Unit	Quantity		Unit Cost		Total Cost
1 MOB/DEMOB					S	
Mob/Demob	LS	1	\$	600,000		600,000
2 DEMOLITION					\$	400.000
Demo and Dispose of Existing Float System	LS	1	\$	100,000		100,000
3 NEW G FLOAT						4 007 00
G Mainwalk Float - 8'x950' Concrete	SF	7,600	\$	80	\$	1,007,00
Finger Floats (14) (5' x 60')	SF	4,200	\$	95	35	608,00 399,00
4 NEW H FLOAT						
H Mainwalk Float - 8'x1130' Concrete	SF	0.040	•		\$	1,465,00
Finger Floats (39) (4' x 50')	SF	9,040 7,800	\$	80 95	\$	724,000 741,000
5 NEW I FLOAT						
I Mainwalk Float - 8'x1040' Concrete	SF	8,320	•	-00	\$	1,350,00
Finger Floats (45) (4' x 40')	SF	7,200	\$	80 95	\$	666,000 684,000
6 NEW J FLOAT						
J Mainwalk Float - 8'x950' Concrete	SF	7.000	•		\$	1,139,00
Finger Floats (62) (3' x 30')	SF	7,600 5,580	\$	80 95	\$	608,000 531,000
7 NEW K FLOAT					1160	33.103.
K Mainwalk Float - 8'x910' Concrete	05	7		100	\$	1,090,000
Finger Floats (36) (3' x 30')	SF	7,280	\$	80	\$	583,000
Finger Floats (29) (3' x 24')	SF SF	3,240 2,088	\$	95 95	\$	307,800 198,360
B NEW L FLOAT						
L Mainwalk Float - 8'x740' Concrete	SF	F 000			\$	827,000
Finger Floats (32) (3' x 20')	SF	5,920	\$	80	\$	473,600
Gangway Landing Floats (3) (20'x30')	SF	1,920 1,800	\$	95 95	\$	182,400 171,000
NEW AIRPLANE FLOAT						
New Airplane Float - 40'x135' Concrete	LS	5,400	\$	95	<b>S</b>	<b>513,000</b> 513,000
ON-FLOAT WATER AND FIRE WATER SYSTEM						
Potable Water System	LS	1	\$	480,000	\$	910,000
Fire Water System	LS	1	\$	430,000	\$	480,000 430,000
ELECTRICAL					•	0.075.000
Electrical Service	LS	1		2,150,000	\$	2,275,000
Uplands Upgrades	LS	1	\$	125,000	\$	2,150,000 125,000
CONSTRUCTION SURVEY					•	
Construction Survey	LS	1	\$	50,000	\$	<b>50,000</b> 50,000
	ROM Construction Subtotal			\$	11,326,000	
Design En	Design Engineering, Permitting (Assumed at 5%)				s	567,000
Shop Drawing, Submittal Revi	ew, Fabricati	on Inspecti	on (E	stimated)	\$	100,000
Construction	n Administra	tion (Estima	ated .	4 Months)	\$	250,000
Post Construction Su	upport & As-E	Built Drawin	gs (E	stimated)	\$	20,000

Post Construction Support & As-Built Drawings (Estimated) \$
10% Construction Contingency \$
Total Cost Including Engineering \$

#### Notes:

- Cost estimate is based on conceptual design.
   Costs are presented in current (October 2016) dollars and do not include escalation.
   Cost assumes reuse of existing piles, timber access trestles and gangways

#### CORDOVA SOUTH HARBOR OPTION 3 - IN-KIND REPLACEMENT W/ NEW PILES ROM COST ESTIMATE

2 DEMOLITION Demo and Dispose of Existing Float System Demo and Dispose of Existing Float System Demo and Dispose of Existing Piles EA 180 \$ 100,000 \$ 100,000 Demo and Dispose of Existing Piles EA 180 \$ 500 \$ 90,000  3 NEW G FLOAT G Mainwalk Float - 8'x950' Concrete Finger Floats (14) (5' x 80') Provide and Install Float Piles (Assumed 70' - 16"x0.5") EA 28 \$ 13,000 \$ 384,000  4 NEW H FLOAT H Mainwalk Float - 8'x1130' Concrete Finger Floats (39) (4' x 50') Provide and Install Float Piles (70' - 16"x0.5") EA 46 \$ 12,000 \$ 95 741,000  5 NEW I FLOAT I Mainwalk Float - 8'x1040' Concrete Finger Floats (45) (4' x 40') Provide and Install Float Piles (70' - 12"x0.5") EA 53 \$ 12,000 \$ 684,000  6 NEW J FLOAT J Mainwalk Float - 8'x950' Concrete Finger Floats (62) (3' x 30') Provide and Install Float Piles (70' - 12"x0.5") EA 18 \$ 12,000 \$ 216,000  7 NEW K FLOAT K Mainwalk Float - 8'x910' Concrete SF 7,280 \$ 95 \$ 531,000 Provide and Install Float Piles (70' - 12"x0.5") EA 18 \$ 12,000 \$ 216,000  7 NEW K FLOAT K Mainwalk Float - 8'x910' Concrete SF 7,280 \$ 80 \$ 688,000 Finger Floats (63) (3' x 30') Provide and Install Float Piles (70' - 12"x0.5") EA 18 \$ 12,000 \$ 216,000  8 NEW L FLOAT L Mainwalk Float - 8'x910' Concrete SF 7,280 \$ 80 \$ 583,000 Finger Floats (39) (3' x 20') SF 3,240 \$ 95 \$ 307,800 Finger Floats (39) (3' x 20') SF 3,240 \$ 95 \$ 307,800 Finger Floats (39) (3' x 20') SF 3,240 \$ 95 \$ 307,800 Finger Floats (39) (3' x 20') SF 1,800 \$ 95 \$ 171,000 S 204,000  8 NEW L FLOAT L Mainwalk Float - 8'x740' Concrete Finger Floats (39) (3' x 20') SF 1,800 \$ 95 \$ 171,000 S 204,000  9 NEW AIRPLANE FLOAT S 373,000	ROM COS	T ESTIMATE					
MOBIDEMOB   LS   1						P	
MOBIDEMOB   LS   1	No. Item Description	Unit	Quantity		Init Cost		Total Cost
Mobi/Demob   LS		Office	Quartity	,	Jill Oost	_	
Demo and Dispose of Existing Piles		LS	1	\$	600,000		600,000
Demo and Dispose of Existing Piles						\$	190,000
3 NEW G FLOAT G Mainwalk Float - 8'\(\text{S60}'\) Concrete Finger Floats (14) (6' \times 80') Provide and Install Float Piles (Assumed 70' - 18'\times 0.5') Finger Floats (14) (6' \times 80') Provide and Install Float Piles (Assumed 70' - 18'\times 0.5') Finger Floats (39) (4' \times 50') Finger Floats (45) (4' \times 40') Finge			1		100,000	\$	100,000
G Mainwalk Float - 8/956/ Concrete   SF   7,800   \$ 80   \$ 600,000   Finger Floats (14) (5' x 60')   SF   4,200   \$ 96   \$ 399,000   Finger Floats (14) (5' x 60')   SF   4,200   \$ 96   \$ 399,000   Float Float Flies (14) (5' x 60')   SF   4,200   \$ 96   \$ 399,000   Float Float Float Flies (Assumed 70' - 16"x0.5")   EA   28   \$ 13,000   \$ 399,000    4 NEW H FLOAT   H Mainwalk Float - 8'x1130' Concrete   SF   9,040   \$ 80   \$ 724,000   Float Float S (39) (4' x 50')   SF   7,800   \$ 96   \$ 724,000   Float Float Flies (70' - 16"x0.5")   EA   46   \$ 12,000   \$ 552,000   Float Float Flies (70' - 16"x0.5")   EA   46   \$ 12,000   \$ 562,000   Float Float Float Flies (70' - 12"x0.5")   EA   53   \$ 12,000   \$ 563,000   Float Float Float Flies (70' - 12"x0.5")   EA   53   \$ 12,000   \$ 563,000   Float Float Float Flies (70' - 12"x0.5")   EA   53   \$ 12,000   \$ 563,000   Float Float Float Flies (70' - 12"x0.5")   EA   18   \$ 12,000   \$ 1365,000   Float Float Float Flies (70' - 12"x0.5")   EA   18   \$ 12,000   \$ 12,000   Float Float Float Flies (70' - 12"x0.5")   EA   18   \$ 12,000   \$ 12,000   Float Float Flies (70' - 12"x0.5")   EA   17   \$ 12,000   \$ 12,000   Float Float Flies (70' - 12"x0.5")   EA   17   \$ 12,000   \$ 12,000   Float Float Flies (70' - 12"x0.5")   EA   17   \$ 12,000   \$ 12,000   Float Float Flies (70' - 12"x0.5")   EA   17   \$ 12,000   \$ 12,000   Float Float Flies (70' - 12"x0.5")   EA   17   \$ 12,000   \$ 12,000   Float Float Flies (70' - 12"x0.5")   EA   17   \$ 12,000   \$ 12,000   Float Float Flies (70' - 12"x0.5")   EA   17   \$ 12,000   \$ 12,000   Float Float Flies (70' - 12"x0.5")   EA   17   \$ 12,000   \$ 12,000   Float Landing Floats (3) (3' x 20')   SF   1,920   SF   5,920   SF   5,92	Demo and Dispose of Existing Piles	EA	180	\$	500	\$	90,000
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## Provide and Install Float Piles (Assumed 70' - 16'x0.5")   ## A 28 \$ 13,000 \$ 364,000 \$ 364,000 \$ 364,000 \$ 364,000 \$ 364,000 \$ 366,000 \$ 724,000 \$ 366,000 \$ 724,000 \$ 366,000 \$ 724,000 \$ 366,000 \$ 724,000 \$ 366,000 \$ 724,000 \$ 366,000 \$ 724,000 \$ 366,000 \$ 724,000 \$ 366,0				120		2.5	608,000
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Provide and Install Float Piles (70' - 16"x0.5")		100000			200		
Mainwalk Float - 8'x10.40' Concrete		(Fig. 6)				7.5	552,000
I Mainwalk Float - 8'x10.40' Concrete   SF   8,320   S   80   \$ 686,000	5 NEW I FLOAT					\$	1 986 000
Finger Floats (45) (4' x 40') Provide and Install Float Piles (70' - 12"X0.5")  6 NEW J FLOAT J Mainwalk Float - 8'x950' Concrete Finger Floats (62) (3' x 30') Provide and Install Float Piles (70' - 12"X0.5")  7 NEW K FLOAT K Mainwalk Float - 8'x910' Concrete Finger Floats (62) (3' x 30') Frovide and Install Float Piles (70' - 12"X0.5")  8 1,294,000  7 NEW K FLOAT K Mainwalk Float - 8'x910' Concrete Finger Floats (30) (3' x 30') Finger Floats (30) (3' x 20') Finger Floats (30) (20' x 30') Finger Floats (30) (20' x 30') Finger Floats (30) (3' x 20') Finger Floats (30) (20' x 30') Finger Floats (30) (3' x 20') Finger Floats (30) (20' x 30') Finger Floats (30) (3' x 20') Finger Floats (30) (20' x 30') Finger Floats (30) (3' x 20') Finger Floats (30) (20' x 30') Finger Floats (30' x 30') Finger Floats (3	I Mainwalk Float - 8'x1040' Concrete	SF	8.320	\$	80		
Provide and Install Float Piles (70' - 12'x0.5")		SF				100	
J Mainwalk Float - 8'x950' Concrete Finger Floats (62) (3' x 30') Provide and Install Float Piles (70' - 12"x0.5")  Finger Floats (62) (3' x 30') Provide and Install Float Piles (70' - 12"x0.5")  Finger Floats (80) (3' x 30') Finger Floats (30) (3' x 24') Float Float Float Float Flies (70' - 12"x0.5")  Finger Floats (30) (3' x 20') Finger Floats (20) (3' x 20') Finger Floats (30) (3' x 20') Finger Floats (20) (3' x 20') Fi	Provide and Install Float Piles (70' - 12"x0.5")	EA	Charles and Charles and Charles	-	and the second second		636,000
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Provide and Install Float Piles (70' - 12"x0.5")  FA 18 \$ 12,000 \$ 216,000  7 NEW K FLOAT  K Mainwalk Float - 8'x910' Concrete  SF 7,280 \$ 80 \$ 583,000  Finger Floats (36) (3' x 30')  SF 3,240 \$ 95 \$ 307,800  Finger Floats (29) (3' x 24')  SF 2,088 \$ 95 \$ 198,380  Provide and Install Float Piles (70' - 12"x0.5")  EA 17 \$ 12,000 \$ 204,000  8 NEW L FLOAT  L Mainwalk Float - 8'x740' Concrete  SF 5,920 \$ 80 \$ 473,600  Finger Floats (32) (3' x 20')  SF 1,920 \$ 95 \$ 182,400  Gangway Landing Floats (3) (20'x30')  SF 1,920 \$ 95 \$ 171,000  Gangway Landing Floats (3) (20'x30')  Provide and Install Float Piles (70' - 12"x0.5")  EA 13 \$ 12,000 \$ 156,000  9 NEW AIRPLANE FLOAT  New Airplane Float - 40'x135' Concrete  LS 5,400 \$ 95 \$ 513,000  Finger Floats (30) (20'x30')  New Airplane Float - 40'x135' Concrete  LS 5,400 \$ 95 \$ 513,000  Float All Float Piles (70' - 12"x0.5")  EA 5 \$ 12,000 \$ 60,000  10 ON-FLOAT WATER AND FIRE WATER SYSTEM  Potable Water System  LS 1 \$ 480,000 \$ 480,000  Fire Water System  LS 1 \$ 480,000 \$ 480,000  Canded the System Canded		SF	7,600	\$	80	\$	608,000
7 NEW K FLOAT K Mainwalk Float - 8'x910' Concrete Finger Floats (36) (3' x 30') Finger Floats (36) (3' x 30') Finger Floats (36) (3' x 24') SF 3,240 \$ 95 \$ 307,800 Finger Floats (29) (3' x 24') SF 2,088 \$ 95 \$ 198,385 Provide and Install Float Piles (70' - 12"x0.5") EA 17 \$ 12,000 \$ 204,000  8 NEW L FLOAT L Mainwalk Float - 8'x740' Concrete SF 5,920 \$ 80 \$ 473,600 Finger Floats (32) (3' x 20') SR 1,920 \$ 95 \$ 182,400 Gangway Landing Floats (3) (20'x30') SF 1,920 \$ 95 \$ 182,400 Provide and Install Float Piles (70' - 12"x0.5") EA 13 \$ 12,000 \$ 156,000  9 NEW AIRPLANE FLOAT New Airplane Float - 40'x135' Concrete LS 5,400 \$ 95 \$ 513,000 Provide and Install Float Piles (70' - 12"x0.5") EA 5 \$ 12,000 \$ 60,000  10 ON-FLOAT WATER AND FIRE WATER SYSTEM Potable Water System LS 1 \$ 480,000 \$ 430,000 Fire Water System LS 1 \$ 430,000 \$ 430,000  11 ELECTRICAL Electrical Service Uplands Upgrades LS 1 \$ 50,000 \$ 50,000  Posign Engineering, Permitting (Assumed at 5%) \$ 60,000  Post Construction Survey  ROM Construction Subtotal Shop Drawing, Submittal Review, Fabrication Inspection (Estimated) Construction Administration (Estimated) Construction Administration (Estimated) Scope Construction Contingency 10% 1,361,000		SF	5,580	\$	95	\$	531,000
K Mainwalk Float - 8'x910' Concrete	Provide and Install Float Piles (70' - 12"x0.5")	EA	18	\$	12,000	\$	216,000
K Mainwalk Float - 8'x910' Concrete	7 NEW K FLOAT					•	4 004 000
Finger Floats (36) (3' x 30') Finger Floats (29) (3' x 24') Frovide and Install Float Piles (70' - 12"x0.5")  8 NEW L FLOAT L Mainwalk Float - 8"x740' Concrete Finger Floats (32) (3' x 20') SF 1,920 Finger Floats (32) (3' x 20') Finger Floats (32		QE.	7 200	•	00		
Finger Floats (29) (3' x 24') Provide and Install Float Piles (70' - 12"x0.5")  8 NEW L FLOAT L Mainwalk Float - 8"x740' Concrete Finger Floats (32) (3' x 20') Gangway Landing Floats (3) (20"x30') Provide and Install Float Piles (70' - 12"x0.5")  9 NEW Airplane Floats (3) (20"x30') SF 1,800 SP 1,800 SP 1,800 SP 5, 5,920 SP 1,800 SP 5, 1,800 SP 5, 171,000 SP SP 5, 171,000 SP 5, 171,000 SP 5, 171,000 SP 1,800 SP 5, 171,000 SP 60,000 SP 60,						1000	
Provide and Install Float Piles (70' - 12"x0.5")   EA			ALC: NO.	1		11.00	
L Mainwalk Float - 8'x740' Concrete Finger Floats (32) (3' x 20') Gangway Landing Floats (3) (20'x30') Provide and Install Float Piles (70' - 12"x0.5")  9 NEW AIRPLANE FLOAT New Airplane Float - 40'x135' Concrete Provide and Install Float Piles (70' - 12"x0.5")  10 ON-FLOAT WATER AND FIRE WATER SYSTEM Potable Water System LS 1 \$480,000 \$480,000 Fire Water System LS 1 \$430,000 \$400,000  11 ELECTRICAL Electrical Service Uplands Upgrades  LS 1 \$2,150,000 \$2,150,000  12 CONSTRUCTION SURVEY Construction Survey  ROM Construction Subtotal Shop Drawing, Submittal Review, Fabrication Inspection (Estimated) Post Construction Support & As-Built Drawings (Estimated) Post Construction Support & As-Built Drawings (Estimated) Construction Survey  LS 10 Construction Contingency LS 10 Construction Contingency LS 10 Construction Contingency LS 10 Construction Contingency LS 100 Construction Continge							204,000
L Mainwalk Float - 8"x740" Concrete Finger Floats (32) (3" x 20") Gangway Landing Floats (3) (20"x30") Provide and Install Float Piles (70" - 12"x0.5")  9 NEW AIRPLANE FLOAT New Airplane Float - 40"x135" Concrete Provide and Install Float Piles (70" - 12"x0.5")  10 ON-FLOAT WATER AND FIRE WATER SYSTEM Potable Water System LS 1 \$480,000 \$480,000 Fire Water System LS 1 \$480,000 \$480,000 Fire Water System LS 1 \$2,150,000 \$2,150,000  11 ELECTRICAL Electrical Service Uplands Upgrades  12 CONSTRUCTION SURVEY Construction Survey  13 CONSTRUCTION SURVEY Construction Survey  14 CONSTRUCTION SURVEY Construction Survey  15 Construction Subtotal Post Construction Support & As-Built Drawings (Estimated) Post Construction Support & As-Built Drawings (Estimated) Post Construction Support & As-Built Drawings (Estimated) 10% Construction Contingency 10,361,000	8 NEW L FLOAT					\$	983 000
Finger Floats (32) (3' x 20') Gangway Landing Floats (3) (20'x30') Provide and Install Float Piles (70' - 12"x0.5")  9 NEW AIRPLANE FLOAT New Airplane Float - 40'x135' Concrete Provide and Install Float Piles (70' - 12"x0.5")  10 ON-FLOAT WATER AND FIRE WATER SYSTEM Potable Water System Fire Water System Fire Water System LS 1 \$480,000 \$480,000  11 ELECTRICAL Electrical Service Uplands Upgrades  12 CONSTRUCTION SURVEY Construction Survey  Post Construction Support & As-Built Drawings (Estimated) Shop Drawing, Submittal Review, Fabrication (Estimated) Post Construction Support & As-Built Drawings (Estimated) Construction Contingency 10% Construction Contingency 11,361,000	L Mainwalk Float - 8'x740' Concrete	SF	5.920	S	80		
Gangway Landing Floats (3) (20'x30')   SF   1,800   \$ 95   \$ 1771,000   Provide and Install Float Piles (70' - 12"x0.5")   EA   13   \$ 12,000   \$ 156,000   \$ 15	Finger Floats (32) (3' x 20')	SF					
Provide and Install Float Piles (70' - 12"x0.5")   EA   13   \$ 12,000   \$ 156,000	Gangway Landing Floats (3) (20'x30')	SF					
New Airplane Float - 40'x135' Concrete	Provide and Install Float Piles (70' - 12"x0.5")	EA				400	
Provide and Install Float Piles (70' - 12"x0.5") EA 5 \$ 12,000 \$ 60,000  10 ON-FLOAT WATER AND FIRE WATER SYSTEM Potable Water System Fire Water System LS 1 \$ 480,000 \$ 480,000  11 ELECTRICAL Electrical Service Uplands Upgrades LS 1 \$ 2,150,000 \$ 2,150,000  12 CONSTRUCTION SURVEY Construction Survey LS 1 \$ 50,000  ROM Construction Subtotal  Pesign Engineering, Permitting (Assumed at 5%) Geotechnical Investigation Shop Drawing, Submittal Review, Fabrication Inspection (Estimated) Construction Administration (Estimated 4 Months) Post Construction Support & As-Built Drawings (Estimated) 10% Construction Contingency 1,361,000						\$	573,000
10 ON-FLOAT WATER AND FIRE WATER SYSTEM Potable Water System Fire Water System LS 1 \$ 480,000 \$ 480,000 LS 1 \$ 430,000 \$ 430,000  11 ELECTRICAL Electrical Service Uplands Upgrades LS 1 \$ 2,150,000 \$ 2,150,000 Uplands Upgrades LS 1 \$ 125,000 \$ 125,000  12 CONSTRUCTION SURVEY Construction Survey LS 1 \$ 50,000 \$ 50,000  ROM Construction Subtotal  Posign Engineering, Permitting (Assumed at 5%) Geotechnical Investigation \$ 150,000 Shop Drawing, Submittal Review, Fabrication Inspection (Estimated) Construction Administration (Estimated 4 Months) Post Construction Support & As-Built Drawings (Estimated) 10% Construction Contingency 1,361,000		LS	5,400	\$	95	\$	513,000
Potable Water System	Provide and Install Float Piles (70' - 12"x0.5")	EA	5	\$	12,000	\$	60,000
Fire Water System  LS 1 \$ 430,000 \$ 430,000  11 ELECTRICAL  Electrical Service Uplands Upgrades  LS 1 \$ 2,150,000 \$ 2,150,000  LS 1 \$ 125,000 \$ 125,000  12 CONSTRUCTION SURVEY Construction Survey  LS 1 \$ 50,000 \$ 50,000  ROM Construction Subtotal \$ 13,604,000  Begin Engineering, Permitting (Assumed at 5%) Geotechnical Investigation \$ 150,000  Shop Drawing, Submittal Review, Fabrication Inspection (Estimated) \$ 100,000  Construction Administration (Estimated 4 Months) Post Construction Support & As-Built Drawings (Estimated) \$ 20,000  10% Construction Contingency \$ 1,361,000							
Section   Sect				40.35		0.00	
Electrical Service   LS   1   \$ 2,150,000   \$ 2,150,000   125,00		LS	-1	\$	430,000	\$	430,000
Uplands Upgrades		18	4	•	150,000		
Construction Survey  ROM Construction Subtotal \$ 13,604,000  ROM Construction Subtotal \$ 13,604,000  Design Engineering, Permitting (Assumed at 5%) \$ 681,000 Geotechnical Investigation \$ 150,000 Shop Drawing, Submittal Review, Fabrication Inspection (Estimated) \$ 100,000 Construction Administration (Estimated 4 Months) \$ 250,000 Post Construction Support & As-Built Drawings (Estimated) \$ 20,000 10% Construction Contingency \$ 1,361,000							
ROM Construction Survey   LS   1   \$ 50,000   \$ 50,000	12 CONSTRUCTION SURVEY					•	50,000
Design Engineering, Permitting (Assumed at 5%) \$ 681,000 Geotechnical Investigation \$ 150,000 Shop Drawing, Submittal Review, Fabrication Inspection (Estimated) \$ 100,000 Construction Administration (Estimated 4 Months) \$ 250,000 Post Construction Support & As-Built Drawings (Estimated) \$ 20,000 10% Construction Contingency \$ 1,361,000	Construction Survey	LS	1	\$	50,000		9990 35 2000
Design Engineering, Permitting (Assumed at 5%) \$ 681,000 Geotechnical Investigation \$ 150,000 Shop Drawing, Submittal Review, Fabrication Inspection (Estimated) \$ 100,000 Construction Administration (Estimated 4 Months) \$ 250,000 Post Construction Support & As-Built Drawings (Estimated) \$ 20,000 10% Construction Contingency \$ 1,361,000							
Geotechnical Investigation \$ 150,000 Shop Drawing, Submittal Review, Fabrication Inspection (Estimated) \$ 100,000 Construction Administration (Estimated 4 Months) \$ 250,000 Post Construction Support & As-Built Drawings (Estimated) \$ 20,000 10% Construction Contingency \$ 1,361,000		RO	M Constru	ction	Subtotal	\$	13,604,000
Geotechnical Investigation \$ 150,000 Shop Drawing, Submittal Review, Fabrication Inspection (Estimated) \$ 100,000 Construction Administration (Estimated 4 Months) \$ 250,000 Post Construction Support & As-Built Drawings (Estimated) \$ 20,000 10% Construction Contingency \$ 1,361,000	Design E					\$	681,000
Construction Administration (Estimated 4 Months) \$ 250,000 Post Construction Support & As-Built Drawings (Estimated) \$ 20,000 10% Construction Contingency \$ 1,361,000			Geotechnic	al Inv	estigation		150,000
Post Construction Support & As-Built Drawings (Estimated) \$ 20,000 10% Construction Contingency \$ 1,361,000	Shop Drawing, Submittal Rev	view, Fabricat	ion Inspect	ion (E	Estimated)	\$	100,000
10% Construction Contingency \$ 1,361,000	Constructi	on Administra	ation (Estim	ated	4 Months)	\$	
	Post Construction S						
10tal Cost including Engineering \$ 16,016,000							
		Total Co	stincludin	g En	gineering	\$	16,016,000

- Cost estimate is based on conceptual design.
   Costs are presented in current (October 2016) dollars and do not include escalation.
   Cost assumes reuse of existing timber access trestles and gangways

### CORDOVA SOUTH HARBOR OPTION 4 - TOTAL REPLACEMENT ROM COST ESTIMATE

lo. Item Description	Unit	Quantity		Unit Cost		Total Cos	1
1 MOB/DEMOB	Orac	Quantity		Unit Cost		-	_
Mob/Demob	LS	1	S	600,000	\$	600	
		5		000,000	, 4	600	,,,
2 DEMOLITION					\$	250	0.0
Demo and Dispose of Existing Float System	LS	1	\$	100,000	\$	100	100
Demo and Dispose of Existing Piles	EA	180	\$	500	\$	90	),(
Demo and Dispose of Existing Timber Trestles	EA	3	\$	20,000	\$	60	),(
3 ACCESS TRESTLES AND GANGWAYS					\$	4 200	
G Float Access Trestle (16' x 60')	SF	960	\$	400		1,362 384	
I Float Access Trestle (16' x 60')	SF	960	S		33500	384	
K Float Access Trestle (16' x 60')	SF	960	\$			384	
Provide and Install Gangways	EA	3	\$	70,000	\$	210	
4 NEW G FLOAT					727		
G Mainwalk Float - 8'x950' Concrete	SF	7,600		00	\$	1,371	
Finger Floats (14) (5' x 60')	SF	4,200	\$	80	200	608	
Provide and Install Float Piles (Assumed 70' - 16"x0.5")	EA	28	\$	95 13,000	1000	399	
		20	Ψ	15,000	φ	364	,U
5 NEW H FLOAT					\$	2,017,	,0
H Mainwalk Float - 8'x1130' Concrete Finger Floats (39) (4' x 50')	SF	9,040	\$	80	\$	724.	
Provide and Install Float Piles (70' - 16"x0.5")	SF	7,800	\$	95		741.	,0
(70 - 16 X0.5)	EA	46	\$	12,000	\$	552,	,0
NEW I FLOAT					\$	1 096	_
Mainwalk Float - 8'x1040' Concrete	SF	8.320	\$	80	\$	1,986, 666,	
Finger Floats (45) (4' x 40')	SF	7,200	\$	95	S	684,	
Provide and Install Float Piles (70' - 12"x0.5")	EA	53	\$	12,000	\$	636,	
NEW J FLOAT							
J Mainwalk Float - 8'x950' Concrete	SF	7.000		8220	\$	1,355,	
Finger Floats (62) (3' x 30')	SF	7,600	\$	80	\$	608,	
Provide and Install Float Piles (70' - 12"x0.5")	EA	5,580	\$	12,000	\$	531,	
				12,000	•	216,	U
NEW K FLOAT					\$	1,294,0	^
K Mainwalk Float - 8'x910' Concrete	SF	7,280	\$	80	\$	583,0	
Finger Floats (36) (3' x 30')	SF	3,240	S	95	\$	307,8	
Finger Floats (29) (3' x 24')	SF	2,088	\$	95	\$	198,3	
Provide and Install Float Piles (70' - 12"x0.5")	EA	17	\$	12,000	\$	204,0	00
NEW L FLOAT							
L Mainwalk Float - 8'x740' Concrete	SF	5,920	\$	80	\$	983,0	
Finger Floats (32) (3' x 20')	SF	1,920	\$	95	\$	473,6	
Gangway Landing Floats (3) (20'x30')	SF	1,800	\$	95	S	182,4	
Provide and Install Float Piles (70' - 12"x0.5")	EA	13	\$	12,000	\$	156,0	
NEW AIRPLANE FLOAT							
New Airplane Float - 40'x135' Concrete	LS	E 400	•	0.5	\$	573,0	
Provide and Install Float Piles (70' - 12"x0.5")	EA	5,400	\$	95 12,000	\$	513,0	
	America Company		9	12,000	Þ	60,0	JU
ON-FLOAT WATER AND FIRE WATER SYSTEM Potable Water System					\$	910,0	00
Fire Water System	LS	1	\$	480,000	\$	480,0	
- Joseph	LS	1	\$	430,000	\$	430,0	00
ELECTRICAL						0.0==	
Electrical Service	LS	1	4 2	150,000	\$	2,275,0	
Uplands Upgrades	LS	1		150,000	\$	2,150,0	
CONSTRUCTION OUR TO			-	.20,000	*	125,0	U
CONSTRUCTION SURVEY Construction Survey	93900				\$	50,0	0
Construction Survey	LS	1	\$	50,000	s	50,0	
	ROM	Construc	tion	Subtotal	s	15,026,0	n
ROM Construction Subtotal  Design Engineering, Permitting (Assumed at 5%)						10,020,0	J
Design Engin	eering, Pen	mitting (As	sume	ed at 5%)		752,00	00
Shop Drawing, Submittal Review	G Eshricati-	eotechnica	I Inve	estigation	\$	150,00	
Construction A	Administrati	on (Estima	on (E	stimated)	\$	100,00	
Post Construction Supp	ort & Ac-Pi	uilt Drawina	ied 4	ivionths)	3	250,00	
· as it as a stront outpp	10%	onstruction	O CC	otingene	9	20,00	
				military Chick	\$ .	1,503,00	IJί

#### Notes:

- Notes:
  1) Cost estimate is based on conceptual design.
  2) Costs are presented in current (October 2016) dollars and do not include escalation.
  3) Estimate assumes full replacement of float system including new piles and new timber trestles and gangways.