

## VALUE ENGINEERING PROPOSAL

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DESCRIPTION Eliminate Emergency Bulkheads

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### ORIGINAL DESIGN:

The current design is based on using emergency bulkheads to cut off flow through the lock in the event a sector gate is damaged. Slots are provided on both the north and south sides of each sector gate to support the emergency bulkheads. (See Drawing No. 1)

### PROPOSED DESIGN:

It is proposed to eliminate the emergency bulkheads.

### ADVANTAGES:

Reduces life cycle cost of the project.

### DISADVANTAGES:

None known.

### JUSTIFICATION:

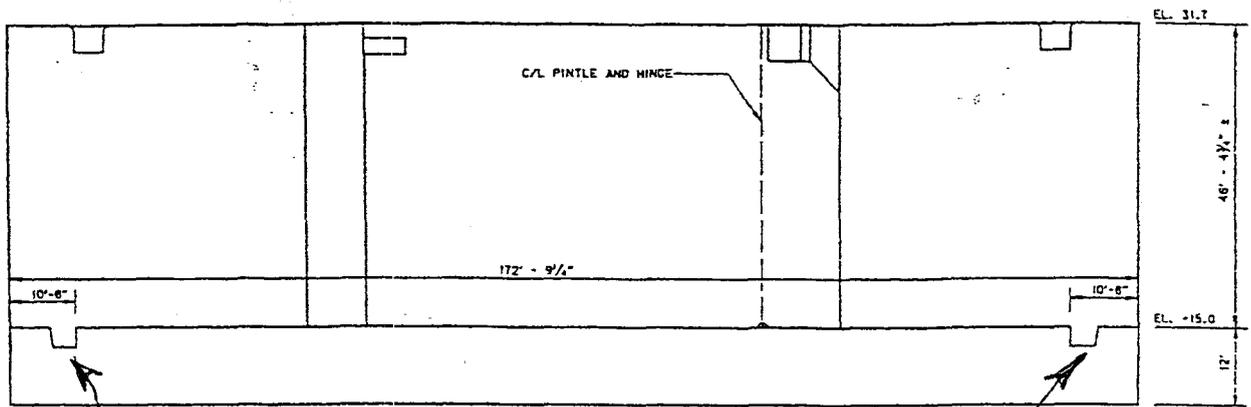
Since sector gates are provided at each end of the lock if one gate is damaged the other gate can be closed to terminate flow. It is extremely unlikely that both sector gates would be inoperable simultaneously.

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DRAWING NO. 1



Typical location of emergency bulkheads

COST ESTIMATE WORKSHEET					
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<b>DELETIONS</b>					
	ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
	Emergency Bulk Heads				
	Structural Steel	LBS	1,300,000	\$2.00	\$2,600,000
	Rubber Seals	LNFT	1960	\$40.00	\$78,400
	Contingencies		2,678,400	\$0.25	\$669,600
			Total Deletions		\$3,348,000
<b>ADDITIONS</b>					
	ITEM	UNITS	QUANTITY	UNIT COST	TOTAL
*	Gate Bay Wall Conc	CU YD	83.2	\$260.00	\$21,632
			Total Additions		\$21,632
			Net Savings		\$3,326,368
			Markups	25.00%	\$831,592
			Total Savings		\$4,157,960
	Markups include: Contingency; Escalation; Engineering/Design; and SIOH				
*	[3' x 46.7' x 2'] 1/27 = 10.4 cy/slot				
	8 slots x 10.4 cy/slot = 83.2 cy				