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CELMN-ED-CF

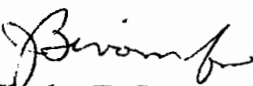
(CELMN-ED-DD)

26 Apr 93

MEMORANDUM FOR Chief, Design Branch

SUBJECT: Lake Pontchartrain, LA and Vicinity, High Level Plan, London Avenue Outfall Canal, Parallel Protection, Pump Station #3 to Mirabeau Ave. Floodwall, Orleans Parish, LA.

1. Enclosed please find the relocation cost estimates for the above project as requested.

  
Charles E. Settoon  
Chief, Cost Engineering Branch

LAKE PONTCHARTRAIN HURRICANE PROTECTION PROJECT  
HIGH LEVEL PLAN  
ESTIMATED RELOCATION COSTS

<u>Item</u>	<u>Estimated Cost</u>
Remove Pedestrian Bridge at Mirabeau Ave. <i>4 pile bents - all timber construction</i>	\$ 6000
Remove Concrete Steps at Gregory Jr. High - 2 sets	\$ 500
Relocation of 4" Waterline	
- Construct new waterline along levee base <i>3' of cover - 554 lin ft PVC (2.5" dia) - 1/4"</i>	
- Replace existing fire hydrant - 1	\$ 1500
- Replace existing water meters - 2	\$ 500
- Replace existing water valve - 3	\$ 300
- Construct new waterline tie-ins - 2	\$ 600
- Cut and plug existing waterline - 3	\$ 300
- Construct asphalt paving	
Relocation of 6" Waterline	
- Construct new 6" waterline <i>3' of cover - 620 lin ft PVC - 3"</i>	
- Construct new waterline tie-ins - 2	\$ 600
- Cut and plug existing waterline - 2	\$ 200
① Relocation of S&WB electric feeder cable <i>(feeder line #400)</i>	
- Construct new electric feeder cables - 6680 lin ft.	} \$574,000
- Construct splices - 3 or 4	
- Temporarily relocate cables - 5510 lin ft.	
- Permanently relocate cables - 5510 lin ft.	
② Relocation of S&WB electric feeder cable <i>(feeder line #340)</i>	
- Temporarily relocate cables - 6620 lin ft. <i>re-use materials</i>	} \$146,000
- Permanently relocate cables - 6620 lin ft.	
existing - 3 conductor, steel armored, 400 MCM copper, rubber insulated, lead covered power cable rated 15KV.	
new - 3 conductor 500 MCM copper, lead covered w/ PVC jacket rated 15KV.	

## REASONABLE CONTRACT ESTIMATE WORKSHEET

sheet 1 of 3

Project: London Ave Canal - S&amp;WB electric relo

Subject: Relocate electric Feeder Line #400	quantity	6,680.00
West Levee	shifts/wd	1.00
	hours/shift	10.00

## PLAN OF OPERATION

This item is for all equipment, labor and materials required to furnish and install a new feeder line.

Clearing along floodwall where necessary: 6680'  
Use - 1 laborer @ 50 lf/hr = 135 hrs

Excavate and remove from protected side: 1880' @ 3'd x 1.5w = 350 cy  
Use - 1dr/bkh, cozer, & 1 laborer @ 10 cy/hr = 35 hrs

Remove existing line from floodwall (floodside): 4800'  
Use - 2 chypicker, 2 laborers, & 1 ironworker @ 120'/hr = 40 hrs

Install new FL - buried in concrete on protected side: 1180', 2.5'd (110cy)  
Use - 1dr/bkh, dozer, & 1 laborer @ 10 cy/hr = 11 hrs  
- 2 elect, 1dr/bkh, & 1 laborer @ 50 lf/hr = 24 hrs

TEMP Install new FL - attached to existing chl lining(floodside): 700'  
Use - 2 chypicker, 2 elect, 2 laborers, & 2 ironworker @ 50'/hr = 14 hrs

TEMP Install new FL - bury in trench(floodside) w/ cover: 4800' @ 2'd  
Use - 2 chypicker, 1 trencher, 2 elect, & 2 laborers @ 50'/hr = 96 hrs  
- w/ 1/4" steel plate & fill material on top (1 laborer)

Uncover trench (floodside): 4800' @ 2'd  
Use - 1 Cat 225, 2 laborers, & 1 elect @ 50'/hr = 96 hrs

Attach new FL to new floodwall(floodside): (4800+700)= 5500'  
Use - 4 winches, 2 elect, 2 laborers, & 2 ironworker @ 50'/hr = 110 hrs

REASONABLE CONTRACT ESTIMATE WORKSHEET

sheet 2 of 3

Subject: Relocate electric Feeder Line #400 quantity 6,680.00

Equipment

unit of equipment	size	no.	hours	rate	amount
electric truck		1	292	\$32.00	\$9,344
electric truck w/ auger		0		\$32.00	
cherry picker	18 ton	2	300	\$26.30	\$7,890
loader/backhoe	JD 710	1	70	\$18.25	\$1,278
dozer	D-4	1	46	\$18.24	\$839
backhoe	Cat 215	1		\$30.95	
backhoe	Cat 225	1	96	\$36.92	\$3,544
trencher	16"-30"x70"	1	96	\$30.64	\$2,941
winches		4	440	\$2.00	\$880

All other operations @ 5% subtotal \$26,716  
 \$1,336

tools 5% of labor subtotal \$28,052  
 \$2,884  
 total equipment cost \$30,936

Labor

operation	no.	hours	rate	amount
laborer	3.00	1013	\$16.67	\$16,887
electrician helper			\$25.00	
electrician/lineman	2.00	584	\$30.04	\$17,543
peo cherry picker	1.00	300	\$25.84	\$7,752
peo loader/backhoe	1.00	70	\$25.84	\$1,809
ironworker	2.00	288	\$26.18	\$7,540
peo dozer	1.00	46	\$25.84	\$1,189
peo backhoe	1.00	96	\$25.84	\$2,481
peo trencher	1.00	96	\$25.84	\$2,481

total labor costs \$57,682

REASONABLE CONTRACT ESTIMATE WORKSHEET

sheet 3 of 3

Subject: Relocate electric Feeder Line #400 quantity 6,680.00

Materials

description	unit	quantity	price	amount
* FL-3 cndt, 500MCM, 15 KV LF + 5%		7,014	\$30.00	\$210,420
concrete - inst	cy	40	\$100.00	\$4,000
1/4" steel plate	SF	7,200	\$1.52	\$10,944
* cable splices	EA	4	\$3,000.00	\$12,000
5" steel conduit	LF	6,680	\$15.00	\$100,200

50% of steel plate incl in #400 & 50% in #340 FL.

\* approx prices from:  
Gary Serat @ S&WB 4/23/93  
865-0450

subtotal	\$337,565
9% tax	\$30,381
total material cost	\$367,946

Supplies

description	unit	quantity	price	amount
dispose of old cable	LS	1	\$2,000	\$2,000
subtotal				\$2,000

Lump Sum Supplies

description	unit	quantity	price	amount
safety and misc				\$636
total supplies cost				\$2,636

Summary

Equipment	\$30,936
Labor	\$57,682
Materials	\$367,946
Supplies	\$2,636

estimator:	checked:	TOTAL	\$459,200
		Unit Cost:	\$68.74

X 1.25 \$574,000

## REASONABLE CONTRACT ESTIMATE WORKSHEET

sheet 1 of 3

Project: London Ave Canal - S&amp;WB electric relo

Subject: Relocate electric Feeder Line #340	quantity	6,735.00
East Levee	shifts/wd	1.00
	hours/shift	10.00

## PLAN OF OPERATION

This item is for all equipment, labor and materials required to relocate the existing feeder line. 100' of new line will be allowed in case slack is needed.

Clearing along floodwall where necessary: 6735'

Use - 1 laborer @ 50 lf/hr = 135 hrs

Remove existing line from floodwall (floodside): 6735'

Use - 2 chypicker, 2 laborers, & 1 ironworker @ 120'/hr = 56 hrs

TEMP Install new FL - attached to existing chl lining(floodside): 1935'

Use - 2 chypicker, 2 elect, 2 laborers, & 2 ironworker @ 50'/hr = 39 hrs

TEMP Install new FL - bury in trench(floodside) w/ cover: 4800' @ 2'd

Use - 2 chypicker, 1 trencher, 2 elect, & 2 laborers @ 50'/hr = 96 hrs

- w/ 1/4" steel plate & fill material on top (1 laborer)

Uncover trench (floodside): 4800' @ 2'd

Use - 1 Cat 225, 2 laborers, & 1 elect @ 50'/hr = 96 hrs

Attach new FL to new floodwall(floodside): (4800+1935)= 6735'

Use - 4 winches, 2 elect, 2 laborers, & 2 ironworker @ 50'/hr = 135 hrs

REASONABLE CONTRACT ESTIMATE WORKSHEET

sheet 2 of 3

Subject: Relocate electric Feeder Line #340 quantity 6,735.00

Equipment

unit of equipment	size	no.	hours	rate	amount
electric truck		1	318	\$32.00	\$10,176
electric truck w/ auger		0		\$32.00	
cherry picker	18 ton	2	382	\$26.30	\$10,047
loader/backhoe	JD 710	1		\$18.25	
dozer	D-4	1		\$18.24	
backhoe	Cat 215	1		\$30.95	
backhoe	Cat 225	1	96	\$36.92	\$3,544
trencher	16"-30"x70"	1	96	\$30.64	\$2,941
winches		4	540	\$2.00	\$1,080

All other operations @ 5% subtotal \$27,788  
 \$1,389

tools 5% of labor subtotal \$29,177  
 \$3,122  
 total equipment cost \$32,299

Labor

operation	no.	hours	rate	amount
laborer	3.00	1075	\$16.67	\$17,920
electrician helper			\$25.00	
electrician/lineman	2.00	636	\$30.04	\$19,105
peo cherry picker	1.00	382	\$25.84	\$9,871
peo loader/backhoe			\$25.84	
ironworker	2.00	404	\$26.18	\$10,577
peo dozer			\$25.84	
peo backhoe	1.00	96	\$25.84	\$2,481
peo trencher	1.00	96	\$25.84	\$2,481

total labor costs \$62,435

REASONABLE CONTRACT ESTIMATE WORKSHEET

sheet 3 of 3

Subject: Relocate electric Feeder Line #340 quantity 6,735.00

Materials

description	unit	quantity	price	amount
* FL- 3 cndt, 500MCM	LF + 5%	100	\$30.00	\$3,000
1/4" steel plate	SF	7,200	\$1.52	\$10,945
* cable splices	EA	2	\$3,000.00	\$6,000

50% of steel plate incl #340 & 50% in #400 FL.

\* approx prices from:  
Gary Serat @ S&WB 4/23/93  
865-0450

subtotal	\$19,945
9% tax	\$1,795
total material cost	\$21,740

Supplies

description	unit	quantity	price	amount
dispose of old cable	LS	0		
subtotal				\$0

Lump Sum Supplies

description	unit	quantity	price	amount
safety and misc				\$326
total supplies cost				\$326

Summary

Equipment	\$32,299
Labor	\$62,435
Materials	\$21,740
Supplies	\$326

estimator:	checked:	TOTAL	\$116,800
		Unit Cost:	\$17.34

x 1.25 \$146,000



PROJECT	London Ave Canal	PAGE 1 OF	COMPUTED BY	DATE 4/21/93
SUBJECT	S+WB electric rebo		CHECKED BY	DATE

West side (#400) - access all along protected side - no roadways to worry about

2+40 → Gently Blvd (1180') - EXISTING - Buried on protected side (3'-10" deep)  
 (14+20)  
 - WORK - <sup>move over +</sup> Bury <sub>new</sub> on protected side in concrete

Gently Blvd → 21+00 (700') - EXISTING - buried on protected side  
 - WORK - SD thru floodwall to floodside + temp attach <sup>new</sup> to existing lining  
 - RE-ATTACH to new floodwall when complete

21+00 → 68+88 (~4800') - EXISTING - ATTACHED to EXISTING floodwall floodside  
 - WORK - place <sup>new</sup> in temp <sup>floodside</sup> trench (assume 2' deep) w/ blanket over  
 - ATTACH to new floodwall when complete

PROJECT	PAGE OF	COMPUTED BY	DATE 4/21/93
SUBJECT		CHECKED BY	DATE

Westside (#400) (Summary)

Remove

dig out existing  $\rightarrow (1180' + 700')$  - 1880' @ 3' deep

remove existing from FLOWL  $\rightarrow 4800'$

New

bury "NEW" - 1180' protected side in concrete

ATTACH "NEW" TEMPORARILY TO LINING - 700'

TRENCH W/COVER "NEW" - 4800' - assume 2' deep

DIG UP "NEW" - 4800'

RE-ATTACH "NEW" TO FLOWL -  $(4800 + 700)$  - 5500'  
in 5" <sup>steel</sup> conduit

COMPUTATION SHEET

PROJECT	London Cove Canal	PAGE 2 OF	COMPUTED BY	DATE 4/21/93
SUBJECT	S+WB electric rels.		CHECKED BY	DATE

East side (# 340) -      access - 1+65 → 6+10 - access between bridges by water, very limited street access, or suspend w/ cables from wall.  
 6+16 → 68+56 - access all along protected side

1+65 → 21+00 (1935') - EXISTING - ATTACHED TO EXISTING FLOODWALL (floodside)  
 - WORK      - TEMP ATTACH to existing channel lining  
                   - RE-ATTACH TO NEW floodwall

21+00 → 68+56 (4800') - EXISTING - ATTACHED TO EXISTING Floodwall (floodside)  
 WORK      - place in TEMP floodside trench (assume 2' deep)  
                   w/ blanket cover  
                   - ATTACH TO NEW FLOOD wall when complete

PROJECT	STWB/Landon Ave	PAGE OF	COMPUTED BY	DATE 4/21/98
SUBJECT			CHECKED BY	DATE

Earthwork (#340) (Summary)

Remove from EXISTING FLOWL - 6735'

TEMP ATTACH TO EXISTING CHANNEL LINING - 1935'

TEMP TRENCH & BURY w/ plate & blanket - 4800'

UNCOVER TRENCH - 4800'

RE ATTACH TO NEW FLOWL WALL  
EXISTING LINE - 6735'

West

labore

135  
35  
40  
40  
11  
24  
14  
14  
96  
96  
96  
96  
110  
49 17

add/24

35  
11  
24  

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70

franchise

96

doger

35  
11

minwaker

40  
14  
14  
110  

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288

cut 225

96

chypden

40  
40  
14  
14  
96  
96  

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300

elect

24  
24  
14  
14  
96  
96  
96  
110  
110  

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584

wishes

110  
110  
110  
110  

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440

East

labore

135  
56  
56  
39  
39  
96  
96

96  
96  
135  
135  

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479

minwaker

56  
39  
39  
135  
135  

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404

chypden

56  
56  
39  
39  
96  
96  

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382

elect

39  
39  
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135  
135  

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636

franchise

96

cut 225

96

wishes

135  
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135  

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540

# FILE

CELMN-ED-DD

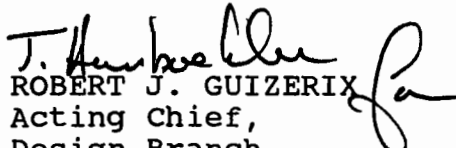
19 Apr 93

MEMORANDUM FOR Chief/ Cost Engineering

**SUBJECT:** Lake Pontchartrain, LA and Vicinity, High Level Plan, London Ave. Outfall Canal, Parallel Protection, Pump Station #3 to Mirabeau Ave. Floodwall

1. Please prepare a relocation cost estimate for the subject job NLT 26 Apr 93. Enclosed is a breakdown of the relocations work.
2. Point of contact is Angela DeSoto, x2733.

encl  
as

  
ROBERT J. GUIZERIX  
Acting Chief,  
Design Branch

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LAKE PONTCHARTRAIN HURRICANE PROTECTION PROJECT  
HIGH LEVEL PLAN  
ESTIMATED RELOCATION COSTS

Item

Estimated Cost

Remove Pedestrian Bridge at Mirabeau Ave.

4 pile bents - all timber construction \$ 6000

Remove Concrete Steps at Gregory Jr. High - 2 sets \$ 500

Relocation of 4" Waterline

- Construct new waterline along - 554 lin ft pvc levee base
- Replace existing fire hydrant - 1 \$ 1500
- Replace existing water meters - 2 \$ 500
- Replace existing water valve - 3 \$ 300
- Construct new waterline tie-ins - 2 \$ 600
- Cut and plug existing waterline - 3 \$ 300
- Construct asphalt paving

Relocation of 6" Waterline

- Construct new 6" waterline - 620 lin ft pvc
- Construct new waterline tie-ins - 2 \$ 600
- Cut and plug existing waterline - 2 \$ 200

①

Relocation of S&WB electric feeder cable (feeder line #400)

- Construct new electric feeder cables - 6680 lin ft.
- Construct splices - 3 or 4
- Temporarily relocate cables - 5510 lin ft.
- Permanently relocate cables - 5510 lin ft.

②

Relocation of S&WB electric feeder cable (feeder line #340)

- Temporarily relocate cables - 6620 lin ft.
- Permanently relocate cables - 6620 lin ft.

weight  
25 #

existing - 3 conductor, steel armored, 400 MCM copper, rubber insulated, lead covered power cable rated 15KV.

15 #

new - 3 conductor 500 MCM copper, lead covered w/ PVC jacket rated 15KV.

GRAY Serat @ S&WB  
8/5 - 0450