REVISED 4/28/88

LMV FORM 107e

PREVIOUS EDITIONS MAY BE USED

(FOR USE WITH 10 x 10 GRID)

PROJECT 17th St Outfall Canal

SUBJECT Sta 553+70 To STA 589+00 Jefferson

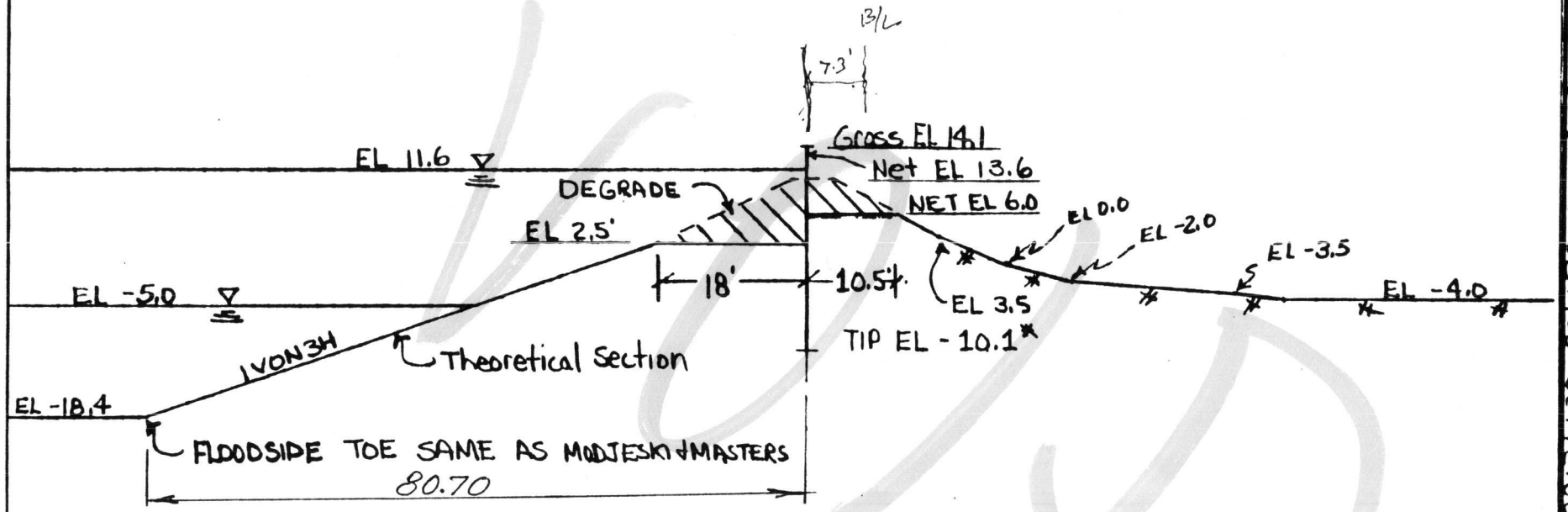
COMPUTATION SHEET

PAGE OF

COMPUTED BY DATE 4/24/87

CHECKED BY DATE

STA 553+70 TO STA 589+00
JEFFERSON SIDE



NOTE: TRANSITION FROM STA 589+00 TO STA 590+00

SCALE: 1" = 20'

Elevation in Feet N.G.V.D

Incls 9-18 M&M toe is as shown in Dec 1981 plans.

QFILES	F.S.	SWL	CASE
Q589JA	1.0	11.6	S
* Q589JB	1.5	11.6	S
Q589JD	1.0	13.6	Q

REVISED 4/28/88

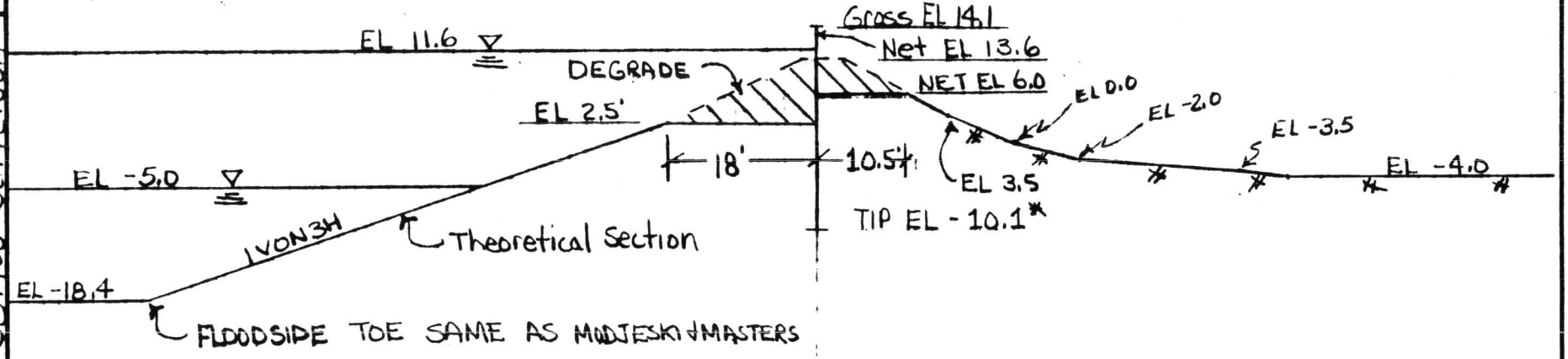
(ADDGG 73)

End 9

COMPUTATION SHEET

PROJECT 17th St Outfall Canal | PAGE OF | COMPUTED BY ESP | DATE 4/24/87
SUBJECT Sta 553+70 To STA 589+00 Jefferson | | CHECKED BY | DATE

STA 553+70 TO STA 589+00
JEFFERSON SIDE



SCALE 1" = 20'
Elevation in Feet N.G.V.D

Q589J0
Q589J1

	QFILES	F.S.	SWL	CASE
2	* Q589JB	1.5	11.6	S
3	Q589JD	1.0	13.6	Q

DRW22

REVISED 4/28/88

LMV FORM MAR 82 107e

PREVIOUS EDITIONS MAY BE USED

(FOR USE WITH 10 x 10 GRID)

Fnl 1

LI Q589J1

BEAMS (SHEAR, MOMENT, DEFLECTION)

17TH STR -Q589JA-SWL=11.6-S CASE-FS=1.0
=1.

THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS AS COUNTERCLOCKWISE.

THE MAXIMUM DEFLECTION IS 0.45 INCHES AND OCCURS AT MEMBER COORDINATE 13.60 FT.

Z-22 HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.

THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.

CALCULATED EXTERNAL LOADS

DISTANCE FROM REFERENCE(FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
-5.70	POINT LD	11.66 LBF
-5.70	COUPLE	-47.50 LBF-FT

INPUTTED LOADS

DISTANCE FROM REFERENCE(FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
11.60	CONTN LD	0.00 LBF/SQ FT
10.60	CONTN LD	62.50 LBF/SQ FT
9.60	CONTN LD	125.00 LBF/SQ FT
8.60	CONTN LD	187.50 LBF/SQ FT
7.60	CONTN LD	250.00 LBF/SQ FT
6.60	CONTN LD	312.50 LBF/SQ FT
6.00	CONTN LD	350.00 LBF/SQ FT
6.00	CONTN LD	350.00 LBF/SQ FT
5.00	CONTN LD	138.59 LBF/SQ FT
4.34	CONTN LD	0.00 LBF/SQ FT
4.00	CONTN LD	-72.83 LBF/SQ FT
3.50	CONTN LD	-178.54 LBF/SQ FT
3.50	CONTN LD	-178.54 LBF/SQ FT
2.50	CONTN LD	-351.15 LBF/SQ FT
2.50	CONTN LD	-351.15 LBF/SQ FT
1.50	CONTN LD	-506.01 LBF/SQ FT
0.50	CONTN LD	-660.88 LBF/SQ FT
0.00	CONTN LD	-738.32 LBF/SQ FT
0.00	CONTN LD	-738.32 LBF/SQ FT
-0.53	CONTN LD	-775.21 LBF/SQ FT
-2.67	CONTN LD	0.00 LBF/SQ FT

-5.70 CONTN LD 1092.45 LBF/SQ FT
-5.70 CONTN LD 0.00 LBF/SQ FT

Z-22 PROPERTIES ARE AS FOLLOWS.

MOMENT OF INERTIA= 84.38 IN. TO THE 4TH PER FOOT OF WALL
CROSS SECTIONAL AREA= 1.84 SQ IN.
ELASTIC MODULUS= 29000000. LBF/SQ IN.
DEFLECTION REFERENCE IS AT -13.200

THE MAXIMUM BENDING MOMENT IS 6853.97 LBF-FT AND OCCURS AT 0.65
WHICH HAS THE SHEAR FORCE OF 17.52 LBF.

DISTANCE (FEET)	SHEAR FOR (LBF)	SHEAR STR (LBF/SQIN)	BENDING MOM (LBF-FT)	DEFLECTION FROM TANG. THRU DEFLE REFERENCE (INCHES)
13.600	0.0	0.0	0.0	0.4459
13.599	0.0	0.0	0.0	0.4459
13.000	0.0	0.0	0.0	0.4243
12.000	0.0	0.0	0.0	0.3884
11.000	11.2	6.1	2.2	0.3524
10.000	80.0	43.5	42.7	0.3165
9.000	211.2	114.8	183.1	0.2806
8.000	405.0	220.1	486.0	0.2448
7.000	661.2	359.4	1013.9	0.2094
6.000	980.0	532.6	1829.3	0.1748
5.000	1224.3	665.4	2949.1	0.1415
4.344	1269.7	690.1	3771.5	0.1207
4.000	1257.2	683.2	4207.4	0.1103
3.000	1083.5	588.9	5393.8	0.0820
2.000	734.6	399.2	6316.4	0.0575
1.000	228.5	124.2	6810.9	0.0375
0.654	17.5	9.5	6854.0	0.0316
0.000	-432.3	-235.0	6721.9	0.0222
-1.000	-1157.6	-629.1	5916.3	0.0115
-2.000	-1581.6	-859.6	4516.6	0.0050
-2.673	-1663.7	-904.2	3415.4	0.0025
-2.675	-1663.7	-904.2	3412.0	0.0025
-3.000	-1644.5	-893.7	2873.5	0.0017
-4.000	-1346.1	-731.6	1348.1	0.0003
-5.000	-686.6	-373.1	301.6	0.0000
-5.697	-12.8	-6.9	47.5	0.0000
-5.699	0.0	0.0	0.0	0.0000
-6.000	0.0	0.0	0.0	0.0000
-7.000	0.0	0.0	0.0	0.0000
-8.000	0.0	0.0	0.0	0.0000
-9.000	0.0	0.0	0.0	0.0000
-10.000	0.0	0.0	0.0	0.0000
-11.000	0.0	0.0	0.0	0.0000
-12.000	0.0	0.0	0.0	0.0000
-13.000	0.0	0.0	0.0	0.0000
-13.199	0.0	0.0	0.0	0.0000
-13.200	0.0	0.0	0.0	0.0000

116
117
118
119 *RUN COMPLETED*

LI Q589J2
1
2 BEAMS (SHEAR, MOMENT, DEFLECTION)
3
4
5 17TH STR -Q589JB-SWL=11.6-S CASE-FS=1.5
6 =1.
7
8 THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT
9 INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS
10 AS COUNTERCLOCKWISE.
11
12
13 THE MAXIMUM DEFLECTION IS 1.00 INCHES AND OCCURS AT MEMBER COORDINATE
14 13.60 FT.
15
16
17
18 Z-22 HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.
19
20 THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.
21
22
23 CALCULATED EXTERNAL LOADS
24
25 DISTANCE FROM TYPE OF MAGNITUDE OF
26 REFERENCE(FT) LOAD LOAD
27
28 -10.14 POINT LD 0.00 LBF
29 -10.14 COUPLE -17.86 LBF-FT
30
31
32 INPUTTED LOADS
33
34 DISTANCE FROM TYPE OF MAGNITUDE OF
35 REFERENCE(FT) LOAD LOAD
36
37 11.60 CONTN LD 0.00 LBF/SQ FT
38 10.60 CONTN LD 62.50 LBF/SQ FT
39 9.60 CONTN LD 125.00 LBF/SQ FT
40 8.60 CONTN LD 187.50 LBF/SQ FT
41 7.60 CONTN LD 250.00 LBF/SQ FT
42 6.60 CONTN LD 312.50 LBF/SQ FT
43 6.00 CONTN LD 350.00 LBF/SQ FT
44 6.00 CONTN LD 350.00 LBF/SQ FT
45 5.00 CONTN LD 202.70 LBF/SQ FT
46 4.00 CONTN LD 55.40 LBF/SQ FT

47 3.62 CONTN LD 0.00 LBF/SQ FT
4 3.50 CONTN LD -18.26 LBF/SQ FT
49 3.50 CONTN LD -18.26 LBF/SQ FT
50 2.50 CONTN LD -135.84 LBF/SQ FT

2.50	CONTN LD	-135.84	LBF/SQ FT
1.50	CONTN LD	-230.25	LBF/SQ FT
0.50	CONTN LD	-324.67	LBF/SQ FT
0.00	CONTN LD	-371.87	LBF/SQ FT
0.00	CONTN LD	-371.87	LBF/SQ FT
-1.00	CONTN LD	-419.52	LBF/SQ FT
-2.00	CONTN LD	-463.19	LBF/SQ FT
-3.00	CONTN LD	-443.54	LBF/SQ FT
-4.00	CONTN LD	-423.88	LBF/SQ FT
-5.00	CONTN LD	-404.23	LBF/SQ FT
-5.27	CONTN LD	-398.96	LBF/SQ FT
-6.62	CONTN LD	0.00	LBF/SQ FT
-10.14	CONTN LD	1040.40	LBF/SQ FT
-10.14	CONTN LD	0.00	LBF/SQ FT

Z-22 PROPERTIES ARE AS FOLLOWS.

MOMENT OF INERTIA= 84.38 IN. TO THE 4TH PER FOOT OF WALL
CROSS SECTIONAL AREA= 1.84 SQ IN.
ELASTIC MODULUS= 29000000. LBF/SQ IN.
DEFLECTION REFERENCE IS AT -13.200

THE MAXIMUM BENDING MOMENT IS 9564.43 LBF-FT AND OCCURS AT -1.65
WHICH HAS THE SHEAR FORCE OF 4.96 LBF.

DISTANCE (FEET)	SHEAR FOR (LBF)	SHEAR STR (LBF/SQIN)	BENDING MOM (LBF-FT)	DEFLECTION FROM TANG. THRU DEFLE REFERENCE (INCHES)
13.600	0.0	0.0	0.0	0.9969
13.599	0.0	0.0	0.0	0.9969
13.000	0.0	0.0	0.0	0.9564
12.000	0.0	0.0	0.0	0.8887
11.000	11.2	6.1	2.2	0.8211
10.000	80.0	43.5	42.7	0.7534
9.000	211.2	114.8	183.1	0.6858
8.000	405.0	220.1	486.0	0.6183
7.000	661.2	359.4	1013.9	0.5512
6.000	980.0	532.6	1829.3	0.4849
5.000	1256.3	682.8	2959.8	0.4199
4.000	1385.4	752.9	4292.9	0.3570
3.624	1395.8	758.6	4816.5	0.3340
3.000	1370.9	745.0	5682.1	0.2971
2.000	1237.9	672.8	6995.3	0.2412
1.000	1007.7	547.6	8126.0	0.1903
0.000	683.0	371.2	8979.2	0.1451
-1.000	287.3	156.1	9468.3	0.1061
-1.651	5.0	2.7	9564.4	0.0843
-2.000	-154.0	-83.7	9538.6	0.0738
-3.000	-607.4	-330.1	9156.2	0.0482
-4.000	-1041.1	-565.8	8330.3	0.0290
-5.000	-1455.2	-790.9	7080.5	0.0157
-6.000	-1775.8	-965.1	5444.5	0.0073
-6.618	-1832.5	-995.9	4323.1	0.0041

109	-6.620	-1832.5	-995.9	4319.4	0.0041
110	-7.000	-1811.1	-984.3	3626.4	0.0027
111	-8.000	-1551.0	-842.9	1920.8	0.0007
112	-9.000	-995.5	-541.0	622.9	0.0001
113	-10.000	-144.7	-78.6	28.2	0.0000
114	-10.141	-1.0	-0.6	17.9	0.0000
115	-10.143	0.0	0.0	0.0	0.0000
116	-11.000	0.0	0.0	0.0	0.0000
117	-12.000	0.0	0.0	0.0	0.0000
118	-13.000	0.0	0.0	0.0	0.0000
119	-13.199	0.0	0.0	0.0	0.0000
120	-13.200	0.0	0.0	0.0	0.0000

124 *RUN COMPLETED*

EOT..

LI Q589J3

BEAMS (SHEAR, MOMENT, DEFLECTION)

17TH STR.-Q589JD-SWL=13.6-Q CASE-FS=1.0
=1.

THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT
INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS
AS COUNTERCLOCKWISE.

THE MAXIMUM DEFLECTION IS 0.32 INCHES AND OCCURS AT MEMBER COORDINATE
13.60 FT.

Z-22 HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.

THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.

CALCULATED EXTERNAL LOADS

DISTANCE FROM REFERENCE(FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
-1.83	POINT LD	0.00 LBF
-1.83	COUPLE	299.33 LBF-FT

INPUTTED LOADS

DISTANCE FROM REFERENCE(FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
13.60	CONTN LD	0.00 LBF/SQ FT
12.60	CONTN LD	62.50 LBF/SQ FT
11.60	CONTN LD	125.00 LBF/SQ FT

40	10.60	CONTN LD	187.50	LBF/SQ FT
41	9.60	CONTN LD	250.00	LBF/SQ FT
42	8.60	CONTN LD	312.50	LBF/SQ FT
43	7.60	CONTN LD	375.00	LBF/SQ FT
44	6.60	CONTN LD	437.50	LBF/SQ FT
45	6.00	CONTN LD	475.00	LBF/SQ FT
46	6.00	CONTN LD	0.00	LBF/SQ FT
47	6.00	CONTN LD	-525.00	LBF/SQ FT
48	5.00	CONTN LD	-582.50	LBF/SQ FT
49	4.00	CONTN LD	-640.00	LBF/SQ FT
50	3.50	CONTN LD	-668.75	LBF/SQ FT
51	3.50	CONTN LD	-668.75	LBF/SQ FT
52	2.50	CONTN LD	-709.25	LBF/SQ FT
53	2.50	CONTN LD	-1709.25	LBF/SQ FT
54	2.06	CONTN LD	-1709.25	LBF/SQ FT
55	0.40	CONTN LD	0.00	LBF/SQ FT
56	-1.83	CONTN LD	2290.75	LBF/SQ FT
57	-1.83	CONTN LD	0.00	LBF/SQ FT
58				
59				

60 Z-22 PROPERTIES ARE AS FOLLOWS.

61

62

63 MOMENT OF INERTIA= 84.38 IN. TO THE 4TH PER FOOT OF WALL

64 CROSS SECTIONAL AREA= 1.84 SQ IN.

65 ELASTIC MODULUS= 29000000. LBF/SQ IN.

66 DEFLECTION REFERENCE IS AT -13.200

67

68

69 THE MAXIMUM BENDING MOMENT IS 7367.29 LBF-FT AND OCCURS AT 3.04

70 WHICH HAS THE SHEAR FORCE OF 0.86 LBF.

71

72					DEFLECTION FROM TANG. THRU DEFLE
73					
74					
75 DISTANCE	SHEAR FOR	SHEAR STR	BENDING MOM	REFERENCE	
76 (FEET)	(LBF)	(LBF/SQIN)	(LBF-FT)	(INCHES)	
77	13.600	0.0	0.0	0.0	0.3174
78	13.599	0.0	0.0	0.0	0.3174
79	13.000	11.2	6.1	2.2	0.2979
80	12.000	80.0	43.5	42.7	0.2652
81	11.000	211.2	114.8	183.1	0.2326
82	10.000	405.0	220.1	486.0	0.2002
83	9.000	661.2	359.4	1013.9	0.1681
84	8.000	980.0	532.6	1829.3	0.1368
85	7.000	1361.2	739.8	2994.7	0.1068
86	6.000	1805.0	981.0	4572.7	0.0790
87	5.000	1251.2	680.0	6105.6	0.0544
88	4.000	640.0	347.8	7056.0	0.0340
89	3.040	0.9	0.5	7367.3	0.0191
90	3.000	-26.6	-14.5	7366.8	0.0186
91	2.000	-1229.0	-668.0	6864.8	0.0083
92	1.000	-2363.2	-1284.4	4982.9	0.0026
93	0.399	-2549.8	-1385.8	3487.4	0.0010
94	0.397	-2549.8	-1385.8	3482.3	0.0010
95	0.000	-2468.4	-1341.5	2481.4	0.0004
96	-1.000	-1544.5	-839.4	389.1	0.0000

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97    -1.827          -2.3          -1.2          -299.3     0.0000
98    -1.829           0.0           0.0             0.0     0.0000
99    -2.000           0.0           0.0             0.0     0.0000
100    -3.000           0.0           0.0             0.0     0.0000
101    -4.000           0.0           0.0             0.0     0.0000
102    -5.000           0.0           0.0             0.0     0.0000
103    -6.000           0.0           0.0             0.0     0.0000
104    -7.000           0.0           0.0             0.0     0.0000
105    -8.000           0.0           0.0             0.0     0.0000
106    -9.000           0.0           0.0             0.0     0.0000
107   -10.000           0.0           0.0             0.0     0.0000
108   -11.000           0.0           0.0             0.0     0.0000
109   -12.000           0.0           0.0             0.0     0.0000
110   -13.000           0.0           0.0             0.0     0.0000
111   -13.199           0.0           0.0             0.0     0.0000
112   -13.200           0.0           0.0             0.0     0.0000
113
114
115

116   *RUN COMPLETED*
117
EOT..
LI DRW22
1 100 1 13.6 -13.2 1 -13.2 0 -1
2 200 PZ-22
3 300 29000000 1.84 84.38
EOF..
EOT..
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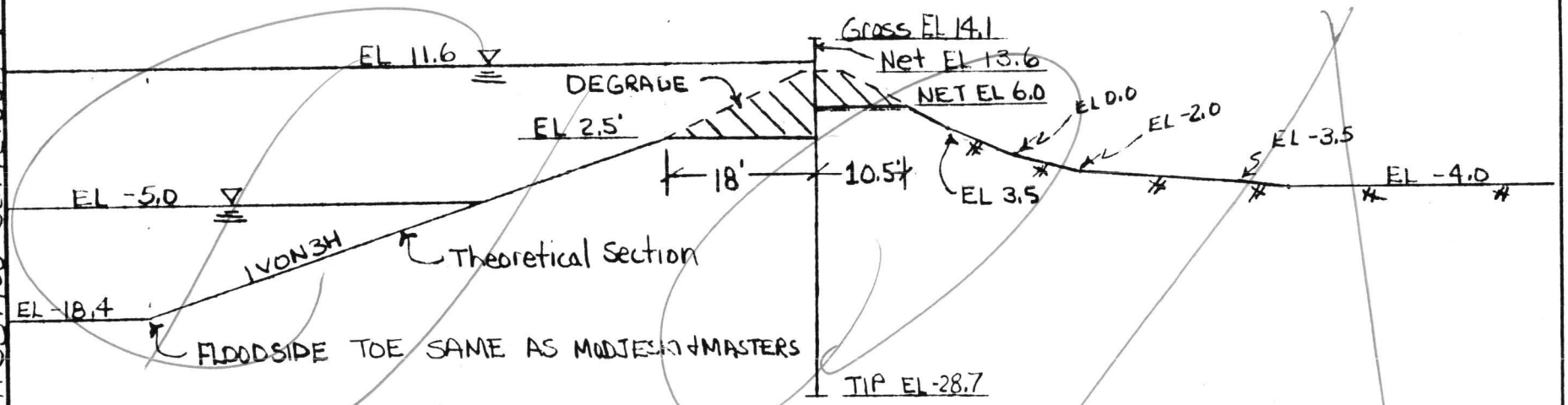
PROJECT 17th St Outfall Canal | COMPUTED BY DLP | DATE 7/24/87
SUBJECT Sta 553+70 To STA 589+00 Jefferson | PAGE OF | CHECKED BY | DATE

Encl 1

STA 553+70 TO STA 589+00
JEFFERSON SIDE



312 BEC

SCALE 1" = 20'
Elevation in Feet N.G.V.D

Q File & Q589IJ (F.S. = 1.5)
Q589IJA (F.S. = 1.0)

(FOR USE WITH 10 x 10 GRID)
PREVIOUS EDITIONS MAY BE USED
LMV FORM MAR 82 107e

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0589IJ
1 10001 17TH ST CANAL HLP STA 553+70 TO STA 589+00
2 10002 I-WALL TOP EL. 14.1 BOTT EL. -28.7 F.S.=1.5
3 10003                    3  0.13600000E+02  0.00000000E+01
  10004                    3  0.12600000E+02  0.62500000E+02
  10005                    3  0.11600000E+02  0.12500000E+03
6 10006                    3  0.10600000E+02  0.18750000E+03
7 10007                    3  0.96000000E+01  0.25000000E+03
8 10008                    3  0.86000000E+01  0.31250000E+03
9 10009                    3  0.76000000E+01  0.37500000E+03
10 10010                    3  0.66000000E+01  0.43750000E+03
11 10011                    3  0.60000000E+01  0.47500000E+03
12 10012                    3  0.60000000E+01  0.47500000E+03
13 10013                    3  0.50000000E+01  0.32769798E+03
14 10014                    3  0.40000000E+01  0.18039595E+03
15 10015                    3  0.35000000E+01  0.10674494E+03
16 10016                    3  0.35000000E+01  0.10674494E+03
17 10017                    3  0.25921511E+01  0.00000000E+01
18 10018                    3  0.25000000E+01 -0.10835128E+02
19 10019                    3  0.25000000E+01 -0.10835128E+02
20 10020                    3  0.15000000E+01 -0.10525050E+03
21 10021                    3  0.50000000E+00 -0.19966588E+03
22 10022                    3  0.00000000E+01 -0.24687356E+03
23 10023                    3  0.00000000E+01 -0.24687356E+03

24 10024                    3 -0.10000000E+01 -0.29451705E+03
25 10025                    3 -0.20000000E+01 -0.33818994E+03
26 10026                    3 -0.30000000E+01 -0.31853741E+03
27 10027                    3 -0.40000000E+01 -0.29888488E+03
28 10028                    3 -0.50000000E+01 -0.27923235E+03
29 10029                    3 -0.60000000E+01 -0.25957982E+03
30 10030                    3 -0.70000000E+01 -0.23992730E+03
31 10031                    3 -0.80000000E+01 -0.22027477E+03
32 10032                    3 -0.90000000E+01 -0.20062224E+03
33 10033                    3 -0.10000000E+02 -0.18229472E+03
34 10034                    3 -0.11000000E+02 -0.16764215E+03
35 10035                    3 -0.12000000E+02 -0.15298958E+03
36 10036                    3 -0.13000000E+02 -0.14003391E+03
37 10037                    3 -0.14000000E+02 -0.12991498E+03
38 10038                    3 -0.15000000E+02 -0.11979605E+03
39 10039                    3 -0.16000000E+02 -0.10967713E+03
40 10040                    3 -0.17000000E+02 -0.99558200E+02
41 10041                    3 -0.18000000E+02 -0.89439274E+02
42 10042                    3 -0.19000000E+02 -0.79320348E+02
43 10043                    3 -0.20000000E+02 -0.69201421E+02
44 10044                    3 -0.20500000E+02 -0.66813024E+02
45 10045                    3 -0.20500000E+02 -0.66813024E+02
46 10046                    3 -0.21500000E+02 -0.89767691E+02

47 10047                    3 -0.22500000E+02 -0.11666599E+03
48 10048                    3 -0.23500000E+02 -0.14356428E+03
49 10049                    3 -0.24500000E+02 -0.17046258E+03
50 10050                    3 -0.25500000E+02 -0.19736087E+03
51 10051                    3 -0.25906277E+02 -0.21126324E+03
52 10052                    3 -0.26175516E+02  0.00000000E+01
53 10053                    3 -0.28658675E+02  0.19484484E+04
  10054                    4 -0.28658675E+02  0.00000000E+01
55 10055                    0 -0.28658675E+02  0.00000000E+01
56 10056  -0.28658675E+02  0.68525648E+00  0.89020700E+01
EOT..
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LIST QI589IJO
1
2                        BEAMS (SHEAR, MOMENT, DEFLECTION)
3
4
5      17TH ST CANAL HLP STA 553+70 TO STA 589+00
6        WAL
7
8   THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT
9   INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS
10   AS COUNTERCLOCKWISE.
11
12
13    THE MAXIMUM DEFLECTION IS    4.78 INCHES AND OCCURS AT MEMBER COORDINATE
14    14.10 FT.
15
16
17
18  Z-27           HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.
19
20  THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.
21
22
23        CALCULATED EXTERNAL LOADS

24
25  DISTANCE FROM    TYPE OF    MAGNITUDE OF
26  REFERENCE(FT)      LOAD             LOAD
27
28          -28.66  POINT LD       -0.69 LBF
29          -28.66    COUPLE       -8.90 LBF-FT
30
31
32                INPUTTED LOADS
33
34  DISTANCE FROM    TYPE OF    MAGNITUDE OF
35  REFERENCE(FT)      LOAD             LOAD
36
37           13.60  CONTN LD        0.00 LBF/SQ FT
38           12.60  CONTN LD       62.50 LBF/SQ FT
39           11.60  CONTN LD      125.00 LBF/SQ FT
40           10.60  CONTN LD      187.50 LBF/SQ FT
41            9.60  CONTN LD      250.00 LBF/SQ FT
42            8.60  CONTN LD      312.50 LBF/SQ FT
43            7.60  CONTN LD      375.00 LBF/SQ FT
44            6.60  CONTN LD      437.50 LBF/SQ FT
45            6.00  CONTN LD      475.00 LBF/SQ FT
46            6.00  CONTN LD      475.00 LBF/SQ FT

47            5.00  CONTN LD      327.70 LBF/SQ FT
48            4.00  CONTN LD      180.40 LBF/SQ FT
49            3.50  CONTN LD      106.74 LBF/SQ FT
50            3.50  CONTN LD      106.74 LBF/SQ FT
51            2.59  CONTN LD        0.00 LBF/SQ FT
52            2.50  CONTN LD      -10.84 LBF/SQ FT
53            2.50  CONTN LD      -10.84 LBF/SQ FT
54            1.50  CONTN LD     -105.25 LBF/SQ FT
55            0.50  CONTN LD     -199.67 LBF/SQ FT
56            0.00  CONTN LD     -246.87 LBF/SQ FT
57            0.00  CONTN LD     -246.87 LBF/SQ FT
```

58	-1.00	CONTN LD	-294.52	LBF/SQ FT
59	-2.00	CONTN LD	-338.19	LBF/SQ FT
60	-3.00	CONTN LD	-318.54	LBF/SQ FT
61	-4.00	CONTN LD	-298.88	LBF/SQ FT
62	-5.00	CONTN LD	-279.23	LBF/SQ FT
63	-6.00	CONTN LD	-259.58	LBF/SQ FT
64	-7.00	CONTN LD	-239.93	LBF/SQ FT
65	-8.00	CONTN LD	-220.27	LBF/SQ FT
66	-9.00	CONTN LD	-200.62	LBF/SQ FT
67	-10.00	CONTN LD	-182.29	LBF/SQ FT
68	-11.00	CONTN LD	-167.64	LBF/SQ FT
69	-12.00	CONTN LD	-152.99	LBF/SQ FT
70	-13.00	CONTN LD	-140.03	LBF/SQ FT
71	-14.00	CONTN LD	-129.91	LBF/SQ FT
72	-15.00	CONTN LD	-119.80	LBF/SQ FT
73	-16.00	CONTN LD	-109.68	LBF/SQ FT
74	-17.00	CONTN LD	-99.56	LBF/SQ FT
75	-18.00	CONTN LD	-89.44	LBF/SQ FT
76	-19.00	CONTN LD	-79.32	LBF/SQ FT
77	-20.00	CONTN LD	-69.20	LBF/SQ FT
78	-20.50	CONTN LD	-66.81	LBF/SQ FT
79	-20.50	CONTN LD	-66.81	LBF/SQ FT
80	-21.50	CONTN LD	-89.77	LBF/SQ FT
81	-22.50	CONTN LD	-116.67	LBF/SQ FT
82	-23.50	CONTN LD	-143.56	LBF/SQ FT
83	-24.50	CONTN LD	-170.46	LBF/SQ FT
84	-25.50	CONTN LD	-197.36	LBF/SQ FT
85	-25.91	CONTN LD	-211.26	LBF/SQ FT
86	-26.18	CONTN LD	0.00	LBF/SQ FT
87	-28.66	CONTN LD	1948.45	LBF/SQ FT
88	-28.66	CONTN LD	0.00	LBF/SQ FT
89				
90				

91 Z-27 PROPERTIES ARE AS FOLLOWS.
92

93
94 MOMENT OF INERTIA= 184.20 IN. TO THE 4TH PER FOOT OF WALL
95 CROSS SECTIONAL AREA= 7.94 SQ IN.
96 ELASTIC MODULUS= 29000000. LBF/SQ IN.
97 DEFLECTION REFERENCE IS AT -28.700
98
99
100 THE MAXIMUM BENDING MOMENT IS 27527.72 LBF-FT AND OCCURS AT -7.98
101 WHICH HAS THE SHEAR FORCE OF -0.19 LBF.
102
103
104
105
106 DISTANCE SHEAR FOR SHEAR STR BENDING MOM DEFLECTION FROM TANG. THRU DEFLE REFERENCE
107 (FEET) (LBF) (LBF/SQIN) (LBF-FT) (INCHES)
108 14.100 0.0 0.0 0.0 4.7755
109 14.099 0.0 0.0 0.0 4.7755
110 14.000 0.0 0.0 0.0 4.7555
111 13.000 11.2 1.4 2.2 4.5532
112 12.000 80.0 10.1 42.7 4.3510
113 11.000 211.2 26.6 183.1 4.1488
114 10.000 405.0 51.0 486.0 3.9467
115 9.000 661.2 83.3 1013.9 3.7447

116	8.000	980.0	123.4	1829.3	3.5431
117	7.000	1361.2	171.4	2994.7	3.3421
118	6.000	1805.0	227.3	4572.7	3.1420
119	5.000	2206.3	277.9	6590.6	2.9435
20	4.000	2460.4	309.9	8936.3	2.7472
121	3.000	2570.9	323.8	11462.9	2.5537
122	2.592	2580.6	325.0	12514.1	2.4758
123	2.000	2562.9	322.8	14038.6	2.3639
124	1.000	2457.7	309.5	16556.8	2.1787
125	0.000	2258.0	284.4	18922.5	1.9988
126	-1.000	1987.3	250.3	21049.1	1.8251
127	-2.000	1671.0	210.4	22881.9	1.6581
128	-3.000	1342.6	169.1	24387.0	1.4985
129	-4.000	1033.9	130.2	25573.6	1.3468
130	-5.000	744.8	93.8	26461.3	1.2034
131	-6.000	475.4	59.9	27069.8	1.0684
132	-7.000	225.7	28.4	27418.7	0.9423
133	-7.981	-0.2	0.0	27527.7	0.8271
134	-8.000	-4.4	-0.6	27527.7	0.8250
135	-9.000	-214.9	-27.1	27416.4	0.7165
136	-10.000	-406.3	-51.2	27104.2	0.6170
137	-11.000	-581.3	-73.2	26609.2	0.5262
138	-12.000	-741.6	-93.4	25946.5	0.4440
139	-13.000	-888.1	-111.9	25130.5	0.3702
140	-14.000	-1023.1	-128.9	24174.0	0.3045
141	-15.000	-1148.0	-144.6	23087.6	0.2466
142	-16.000	-1262.7	-159.0	21881.4	0.1962
143	-17.000	-1367.3	-172.2	20565.6	0.1528
144	-18.000	-1461.8	-184.1	19150.2	0.1161
145	-19.000	-1546.2	-194.7	17645.3	0.0856
146	-20.000	-1620.5	-204.1	16061.1	0.0608
147	-21.000	-1690.7	-212.9	14406.3	0.0412
148	-22.000	-1781.0	-224.3	12672.5	0.0262
149	-23.000	-1897.7	-239.0	10835.4	0.0153
150	-24.000	-2041.2	-257.1	8868.1	0.0080
151	-25.000	-2211.7	-278.6	6743.9	0.0035
152	-26.000	-2406.4	-303.1	4435.7	0.0011
153	-26.175	-2418.5	-304.6	4014.4	0.0009
154	-26.177	-2418.5	-304.6	4009.5	0.0009
155	-27.000	-2151.8	-271.0	2091.3	0.0002
156	-28.000	-1112.5	-140.1	393.8	0.0000
157	-28.658	-1.3	-0.2	8.9	0.0000
158	-28.660	0.0	0.0	0.0	0.0000
159	-28.699	0.0	0.0	0.0	0.0000
160	-28.700	0.0	0.0	0.0	0.0000

161

162

163

164 *RUN COMPLETED*

165

EOT..

COMPUTATION SHEET

PROJECT 17th St Outfall Corp

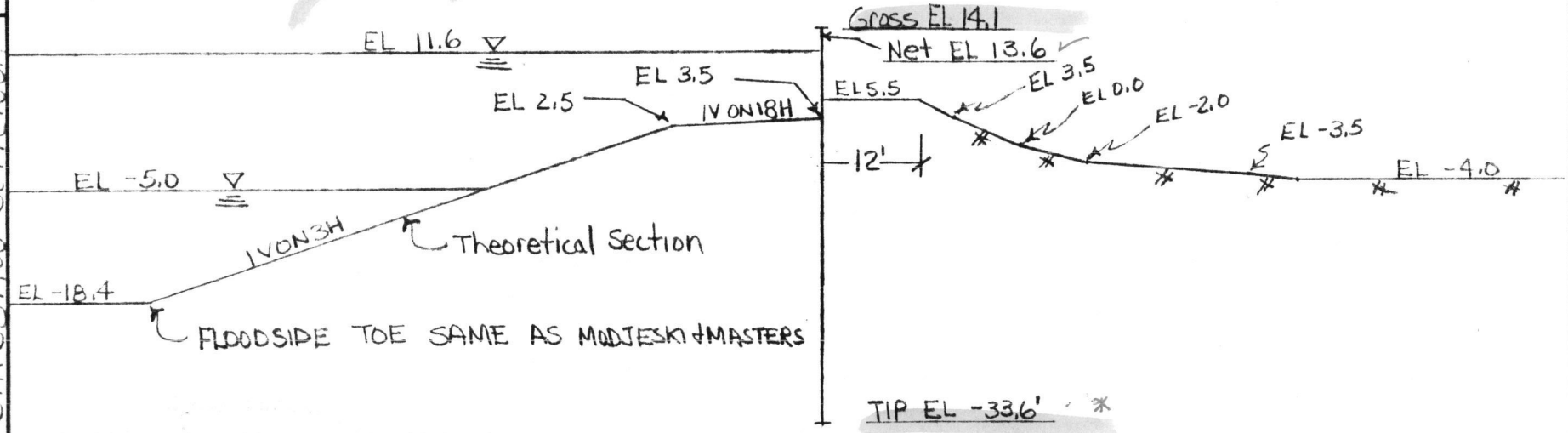
SUBJECT Sta 554+00 To STA 589+00 Jefferson

COMPUTED BY [illegible] DATE

CHECKED BY DATE

PAGE OF

STA 554+00 TO STA 589+00
JEFFERSON SIDE



SCALE: 1" = 20'

Elevation in Feet N.G.V.D

TOP OF SAND EL -36.5

Q File: Q589IJ (F.S. = 1.5)

Q589IJA (F.S. = 1.0)

SHEET PILE: PZ-27

Max. DEFLECTION: 1.63" (F.S. = 1.0)

Max. Stress: (fa) = 16344 #/□"

< 17,550 #/□"

* Permit review - indicated El. -38.33 CoE

-38.53 (M & M)

Revised

LMV FORM MAR 82 107e

PREVIOUS EDITIONS MAY BE USED

(FOR USE WITH 10 x 10 GRID)

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1 10001 17TH ST CANAL HLF STA 554+00 TO STA 589+00
2 10002 I-WALL TOP EL. 14.1 BOTT EL -33.6 F.S.=1.0
3 10003                    3  0.13600000E+02  0.00000000E+01
4 10004                    3  0.12600000E+02  0.62500000E+02
  10005                    3  0.11600000E+02  0.12500000E+03
6 10006                    3  0.10600000E+02  0.18750000E+03
7 10007                    3  0.96000000E+01  0.25000000E+03
8 10008                    3  0.86000000E+01  0.31250000E+03
9 10009                    3  0.76000000E+01  0.37500000E+03
10 10010                    3  0.66000000E+01  0.43750000E+03
11 10011                    3  0.56000000E+01  0.50000000E+03
12 10012                    3  0.55000000E+01  0.50625000E+03
13 10013                    3  0.55000000E+01  0.50625000E+03
14 10014                    3  0.45000000E+01  0.29483524E+03
15 10015                    3  0.35000000E+01  0.83420487E+02
16 10016                    3  0.35000000E+01  0.83420487E+02
17 10017                    3  0.29645493E+01  0.00000000E+01
18 10018                    3  0.25000000E+01 -0.72374415E+02
19 10019                    3  0.15000000E+01 -0.22816932E+03
20 10020                    3  0.50000000E+00 -0.38396422E+03
21 10021                    3  0.00000000E+01 -0.46186167E+03
22 10022                    3  0.00000000E+01 -0.46186167E+03
23 10023                    3 -0.10000000E+01 -0.53749263E+03

24 10024                    3 -0.20000000E+01 -0.61312360E+03
25 10025                    3 -0.30000000E+01 -0.62742155E+03
26 10026                    3 -0.40000000E+01 -0.59301311E+03
27 10027                    3 -0.50000000E+01 -0.55860468E+03
28 10028                    3 -0.60000000E+01 -0.52419624E+03
29 10029                    3 -0.70000000E+01 -0.48978781E+03
30 10030                    3 -0.80000000E+01 -0.48604784E+03
31 10031                    3 -0.90000000E+01 -0.50461763E+03
32 10032                    3 -0.92558769E+01 -0.50936921E+03
33 10033                    3 -0.10516761E+02  0.00000000E+01
34 10034                    3 -0.14611106E+02  0.16540240E+04
35 10035                    4 -0.14611106E+02  0.00000000E+01
36 10036                    0 -0.14611106E+02  0.00000000E+01
37 10037  -0.14611106E+02 -0.29802322E-07 -0.20052072E+02
EOT..
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LIST Q589IJAO

BEAMS (SHEAR, MOMENT, DEFLECTION)

17TH ST CANAL HLP STA 554+00 TO STA 589+00
WAL

THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS AS COUNTERCLOCKWISE.

THE MAXIMUM DEFLECTION IS [illegible] INCHES AND OCCURS AT MEMBER COORDINATE 14.10 FT.

Z-27 HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.

THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.

CALCULATED EXTERNAL LOADS

DISTANCE FROM REFERENCE(FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
-14.61	POINT LD	0.00 LBF
-14.61	COUPLE	20.05 LBF-FT

INPUTTED LOADS

DISTANCE FROM REFERENCE(FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
13.60	CONTN LD	0.00 LBF/SQ FT
12.60	CONTN LD	62.50 LBF/SQ FT
11.60	CONTN LD	125.00 LBF/SQ FT
10.60	CONTN LD	187.50 LBF/SQ FT
9.60	CONTN LD	250.00 LBF/SQ FT
8.60	CONTN LD	312.50 LBF/SQ FT
7.60	CONTN LD	375.00 LBF/SQ FT
6.60	CONTN LD	437.50 LBF/SQ FT
5.60	CONTN LD	500.00 LBF/SQ FT
5.50	CONTN LD	506.25 LBF/SQ FT
5.50	CONTN LD	506.25 LBF/SQ FT
4.50	CONTN LD	294.84 LBF/SQ FT
3.50	CONTN LD	83.42 LBF/SQ FT
3.50	CONTN LD	83.42 LBF/SQ FT
2.96	CONTN LD	0.00 LBF/SQ FT
2.50	CONTN LD	-72.37 LBF/SQ FT
1.50	CONTN LD	-228.17 LBF/SQ FT
0.50	CONTN LD	-383.96 LBF/SQ FT
0.00	CONTN LD	-461.86 LBF/SQ FT
0.00	CONTN LD	-461.86 LBF/SQ FT
-1.00	CONTN LD	-537.49 LBF/SQ FT
-2.00	CONTN LD	-613.12 LBF/SQ FT
-3.00	CONTN LD	-627.42 LBF/SQ FT
-4.00	CONTN LD	-593.01 LBF/SQ FT
-5.00	CONTN LD	-558.60 LBF/SQ FT

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62          -6.00   CONTN LD     -524.20 LBF/SQ FT
63          -7.00   CONTN LD     -489.79 LBF/SQ FT
64          -8.00   CONTN LD     -486.05 LBF/SQ FT
65          -9.00   CONTN LD     -504.62 LBF/SQ FT
66          -9.26   CONTN LD     -509.37 LBF/SQ FT
67         -10.52   CONTN LD        0.00 LBF/SQ FT
68         -14.61   CONTN LD     1654.02 LBF/SQ FT
 9         -14.61   CONTN LD        0.00 LBF/SQ FT

70
71
72  Z-27          PROPERTIES ARE AS FOLLOWS.
73
74
75  MOMENT OF INERTIA=  184.20 IN. TO THE 4TH PER FOOT OF WALL
76  CROSS SECTIONAL AREA=   7.94 SQ IN.
77  ELASTIC MODULUS=  29000000. LBF/SQ IN.
78  DEFLECTION REFERENCE IS AT -33.600
79
80
81   THE MAXIMUM BENDING MOMENT IS  22593.42 LBF-FT AND OCCURS AT   -3.46
82   WHICH HAS THE SHEAR FORCE OF   -4.28 LBF.
83
84                                                        DEFLECTION
85                                                        FROM TANG.
86                                                        THRU DEFLE
87 DISTANCE  SHEAR FOR  SHEAR STR  BENDING MOM  REFERENCE
88  (FEET)     (LBF)    (LBF/SQIN)   (LBF-FT)    (INCHES     )
89   14.100       0.0         0.0          0.0    1.6299
90   14.099       0.0         0.0          0.0    1.6299
91   14.000       0.0         0.0          0.0    1.6205
92   13.000      11.2         1.4          2.2    1.5254

93   12.000      80.0        10.1         42.7    1.4303
94   11.000     211.2        26.6        183.1    1.3353
95   10.000     405.0        51.0        486.0    1.2403
96    9.000     661.2        83.3       1013.9    1.1454
97    8.000     980.0       123.4       1829.3    1.0509
98    7.000    1361.2       171.4       2994.7    0.9571
99    6.000    1805.0       227.3       4572.7    0.8642
100   5.000    2277.0       286.8       6619.9    0.7728
101   4.000    2571.8       323.9       9061.9    0.6836
102   3.000    2662.2       335.3      11694.3    0.5973
103   2.965    2662.3       335.3      11788.6    0.5943
104   2.000    2589.8       326.2      14333.3    0.5148
105   1.000    2361.7       297.4      16822.0    0.4369
106   0.000    1977.7       249.1      19004.7    0.3645
107  -1.000    1478.0       186.2      20738.9    0.2982
108  -2.000     902.7       113.7      21935.5    0.2385
109  -3.000     282.5        35.6      22529.3    0.1860
110  -3.463      -4.3        -0.5      22593.4    0.1641
111  -4.000    -327.8       -41.3      22503.8    0.1407
112  -5.000    -903.6      -113.8      21885.3    0.1026
113  -6.000   -1445.0      -182.0      20708.1    0.0716
114  -7.000   -1952.0      -245.8      19006.8    0.0472
115  -8.000   -2439.9      -307.3      16810.6    0.0290

116  -9.000   -2935.2      -369.7      14124.6    0.0162
117 -10.000   -3332.1      -419.7      10962.9    0.0080
118 -10.516   -3386.1      -426.5       9225.8    0.0051
119 -10.518   -3386.1      -426.5       9219.1    0.0051
120 -11.000   -3338.9      -420.5       7593.8    0.0032
121 -12.000   -2941.7      -370.5       4419.8    0.0010
122 -13.000   -2140.5      -269.6       1845.0    0.0002
123 -14.000    -935.4      -117.8        273.4    0.0000
124 -14.610      -1.7        -0.2        -20.0    0.0000
```

125	-14.612	0.0	0.0	0.0	0.0000
126	-15.000	0.0	0.0	0.0	0.0000
127	-16.000	0.0	0.0	0.0	0.0000
128	-17.000	0.0	0.0	0.0	0.0000
129	-18.000	0.0	0.0	0.0	0.0000
130	-19.000	0.0	0.0	0.0	0.0000
131	-20.000	0.0	0.0	0.0	0.0000
32	-21.000	0.0	0.0	0.0	0.0000
133	-22.000	0.0	0.0	0.0	0.0000
134	-23.000	0.0	0.0	0.0	0.0000
135	-24.000	0.0	0.0	0.0	0.0000
136	-25.000	0.0	0.0	0.0	0.0000
137	-26.000	0.0	0.0	0.0	0.0000
138	-27.000	0.0	0.0	0.0	0.0000
139	-28.000	0.0	0.0	0.0	0.0000
140	-29.000	0.0	0.0	0.0	0.0000
141	-30.000	0.0	0.0	0.0	0.0000
142	-31.000	0.0	0.0	0.0	0.0000
143	-32.000	0.0	0.0	0.0	0.0000
144	-33.000	0.0	0.0	0.0	0.0000
145	-33.599	0.0	0.0	0.0	0.0000
146	-33.600	0.0	0.0	0.0	0.0000

147

148

149

150 *RUN COMPLETED*

151

EOT..

COMPUTATION SHEET

PROJECT 17th St Outfall Canal

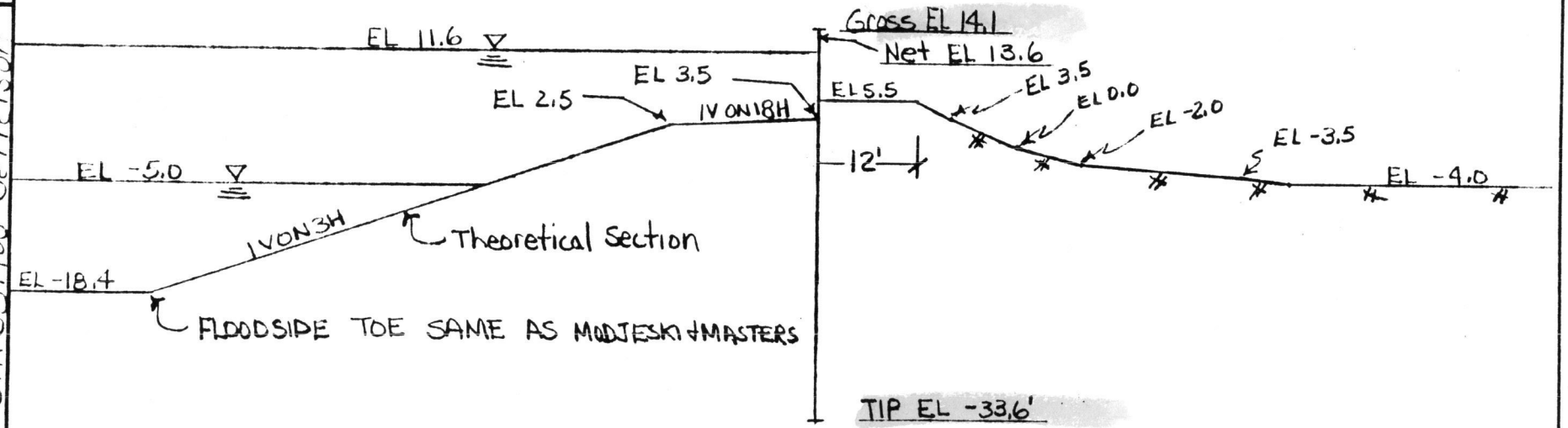
SUBJECT Sta 554+00 To STA 589+00 Jefferson

PAGE OF

COMPUTED BY DATE

CHECKED BY DATE

STA 554+00 TO STA 589+00
JEFFERSON SIDE



SCALE : 1" = 20'

Elevation in Feet N.G.V.D

TOP OF SAND EL -36.5 ✓

Q File # Q589IJ (F.S. = 1.5)

Q589IJA (F.S. = 1.0) ✓

LMV FORM MAR 82 107e

PREVIOUS EDITIONS MAY BE USED

(FOR USE WITH 10 x 10 GRID)

```
 1 10001 17TH ST CANAL HLP STA 554+00 TO STA 589+00
 2 10002 I-WALL TOP EL. 14.1 BOTT EL. -33.6 F.S.=1.5
 3 10003                    3  0.13600000E+02  0.00000000E+01
 4 10004                    3  0.12600000E+02  0.62500000E+02
   10005                    3  0.11600000E+02  0.12500000E+03
 6 10006                    3  0.10600000E+02  0.18750000E+03
 7 10007                    3  0.96000000E+01  0.25000000E+03
 8 10008                    3  0.86000000E+01  0.31250000E+03
 9 10009                    3  0.76000000E+01  0.37500000E+03
10 10010                     3  0.66000000E+01  0.43750000E+03
11 10011                     3  0.56000000E+01  0.50000000E+03
12 10012                     3  0.55000000E+01  0.50625000E+03
13 10013                     3  0.55000000E+01  0.50625000E+03
14 10014                     3  0.45000000E+01  0.35894798E+03
15 10015                     3  0.35000000E+01  0.21164595E+03
16 10016                     3  0.35000000E+01  0.21164595E+03
17 10017                     3  0.25000000E+01  0.11585721E+03
18 10018                     3  0.15000000E+01  0.20068461E+02
19 10019                     3  0.12904925E+01  0.00000000E+01
20 10020                     3  0.50000000E+00 -0.75720285E+02
21 10021                     3  0.00000000E+01 -0.12361466E+03
22 10022                     3  0.00000000E+01 -0.12361466E+03
23 10023                     3 -0.10000000E+01 -0.17263152E+03

24 10024                     3 -0.20000000E+01 -0.22164838E+03
25 10025                     3 -0.30000000E+01 -0.27066524E+03
26 10026                     3 -0.40000000E+01 -0.28671088E+03
27 10027                     3 -0.50000000E+01 -0.25807053E+03
28 10028                     3 -0.60000000E+01 -0.22943017E+03
29 10029                     3 -0.70000000E+01 -0.20078982E+03
30 10030                     3 -0.80000000E+01 -0.17214947E+03
31 10031                     3 -0.90000000E+01 -0.14432261E+03
32 10032                     3 -0.10000000E+02 -0.15389447E+03
33 10033                     3 -0.11000000E+02 -0.16346633E+03
34 10034                     3 -0.12000000E+02 -0.17303819E+03
35 10035                     3 -0.13000000E+02 -0.18261005E+03
36 10036                     3 -0.14000000E+02 -0.19443079E+03
37 10037                     3 -0.15000000E+02 -0.20755552E+03
38 10038                     3 -0.16000000E+02 -0.22068025E+03
39 10039                     3 -0.17000000E+02 -0.23380498E+03
40 10040                     3 -0.18000000E+02 -0.24692971E+03
41 10041                     3 -0.19000000E+02 -0.26005444E+03
42 10042                     3 -0.20000000E+02 -0.27317917E+03
43 10043                     3 -0.20500000E+02 -0.27974154E+03
44 10044                     3 -0.20500000E+02 -0.27974154E+03
45 10045                     3 -0.21500000E+02 -0.29168989E+03
46 10046                     3 -0.22500000E+02 -0.30363824E+03

47 10047                     3 -0.23500000E+02 -0.31558658E+03
48 10048                     3 -0.24500000E+02 -0.32753493E+03
49 10049                     3 -0.25500000E+02 -0.34701764E+03
50 10050                     3 -0.26500000E+02 -0.37238588E+03
51 10051                     3 -0.27500000E+02 -0.39775413E+03
52 10052                     3 -0.28500000E+02 -0.42312238E+03
53 10053                     3 -0.28511654E+02 -0.42341801E+03
54 10054                     3 -0.29388034E+02  0.00000000E+01
55 10055                     3 -0.33609381E+02  0.20395184E+04
56 10056                     4 -0.33609381E+02  0.00000000E+01
57 10057                     0 -0.33609381E+02  0.00000000E+01
58 10058  -0.33609381E+02 -0.23841858E-06  0.31108441E+02
EOT..
LIST MSD27
1 100 1 14.1 -33.6 1 -33.6 0 -1
```

2 200 PZ-27
3 300 29000000 7.94 184.2
EOT..

BEAMS (SHEAR, MOMENT, DEFLECTION)

17TH ST CANAL HLP STA 554+00 TO STA 589+00
WAL

THE REFERENCE SYSTEM SELECTED DEFINES POSITIVE FORCES AS TO THE LEFT INCREASING MEMBER COORDINATES AS UPWARD, AND POSITIVE MOMENTS AS COUNTERCLOCKWISE.

THE MAXIMUM DEFLECTION IS 9.55 INCHES AND OCCURS AT MEMBER COORDINATE 14.10 FT.

Z-27 HAS BEEN GIVEN TO SUPPORT THE LOAD SYSTEM.

THE WEIGHT OF THIS VERTICAL MEMBER HAS BEEN NEGLECTED.

CALCULATED EXTERNAL LOADS

DISTANCE FROM REFERENCE(FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
-33.61	POINT LD	19.11 LBF
-33.61	COUPLE	-31.02 LBF-FT

INPUTTED LOADS

DISTANCE FROM REFERENCE(FT)	TYPE OF LOAD	MAGNITUDE OF LOAD
13.60	CONTN LD	0.00 LBF/SQ FT
12.60	CONTN LD	62.50 LBF/SQ FT
11.60	CONTN LD	125.00 LBF/SQ FT
10.60	CONTN LD	187.50 LBF/SQ FT
9.60	CONTN LD	250.00 LBF/SQ FT
8.60	CONTN LD	312.50 LBF/SQ FT
7.60	CONTN LD	375.00 LBF/SQ FT
6.60	CONTN LD	437.50 LBF/SQ FT
5.60	CONTN LD	500.00 LBF/SQ FT
5.50	CONTN LD	506.25 LBF/SQ FT
5.50	CONTN LD	506.25 LBF/SQ FT
4.50	CONTN LD	358.95 LBF/SQ FT
3.50	CONTN LD	211.65 LBF/SQ FT
3.50	CONTN LD	211.65 LBF/SQ FT
2.50	CONTN LD	115.86 LBF/SQ FT
1.50	CONTN LD	20.07 LBF/SQ FT
1.29	CONTN LD	0.00 LBF/SQ FT
0.50	CONTN LD	-75.72 LBF/SQ FT
0.00	CONTN LD	-123.61 LBF/SQ FT
0.00	CONTN LD	-123.61 LBF/SQ FT
-1.00	CONTN LD	-172.63 LBF/SQ FT

58	-2.00	CONTN LD	-221.65	LBF/SQ FT
59	-3.00	CONTN LD	-270.67	LBF/SQ FT
60	-4.00	CONTN LD	-286.71	LBF/SQ FT
61	-5.00	CONTN LD	-258.07	LBF/SQ FT
62	-6.00	CONTN LD	-229.43	LBF/SQ FT
63	-7.00	CONTN LD	-200.79	LBF/SQ FT
64	-8.00	CONTN LD	-172.15	LBF/SQ FT
65	-9.00	CONTN LD	-144.32	LBF/SQ FT
66	-10.00	CONTN LD	-153.89	LBF/SQ FT
67	-11.00	CONTN LD	-163.47	LBF/SQ FT
68	-12.00	CONTN LD	-173.04	LBF/SQ FT
69	-13.00	CONTN LD	-182.61	LBF/SQ FT
70	-14.00	CONTN LD	-194.43	LBF/SQ FT
71	-15.00	CONTN LD	-207.56	LBF/SQ FT
72	-16.00	CONTN LD	-220.68	LBF/SQ FT
73	-17.00	CONTN LD	-233.80	LBF/SQ FT
74	-18.00	CONTN LD	-246.93	LBF/SQ FT
75	-19.00	CONTN LD	-260.05	LBF/SQ FT
76	-20.00	CONTN LD	-273.18	LBF/SQ FT
77	-20.50	CONTN LD	-279.74	LBF/SQ FT
78	-20.50	CONTN LD	-279.74	LBF/SQ FT
79	-21.50	CONTN LD	-291.69	LBF/SQ FT
80	-22.50	CONTN LD	-303.64	LBF/SQ FT
81	-23.50	CONTN LD	-315.59	LBF/SQ FT
82	-24.50	CONTN LD	-327.53	LBF/SQ FT
83	-25.50	CONTN LD	-347.02	LBF/SQ FT
84	-26.50	CONTN LD	-372.39	LBF/SQ FT
85	-27.50	CONTN LD	-397.75	LBF/SQ FT
86	-28.50	CONTN LD	-423.12	LBF/SQ FT
87	-28.51	CONTN LD	-423.42	LBF/SQ FT
88	-29.39	CONTN LD	0.00	LBF/SQ FT
89	-33.61	CONTN LD	2039.52	LBF/SQ FT
90	-33.61	CONTN LD	0.00	LBF/SQ FT
91				
92				

93 Z-27 PROPERTIES ARE AS FOLLOWS.
94
95
96 MOMENT OF INERTIA= 184.20 IN. TO THE 4TH PER FOOT OF WALL
97 CROSS SECTIONAL AREA= 7.94 SQ IN.
98 ELASTIC MODULUS= 29000000. LBF/SQ IN.
99 DEFLECTION REFERENCE IS AT -33.600

$f = \frac{41131.87 \times 12}{30.20} = 16,344$ psi

100
101
102 THE MAXIMUM BENDING MOMENT IS [redacted] LBF-FT AND OCCURS AT -14.67
103 WHICH HAS THE SHEAR FORCE OF 1.46 LBF.
104
105
106
107
108 DISTANCE (FEET) | SHEAR FOR (LBF) | SHEAR STR (LBF/SQIN) | BENDING MOM (LBF-FT) | DEFLECTION FROM TANG. THRU DEFLE REFERENCE (INCHES)
109
110 14.100 | 0.0 | 0.0 | 0.0 | 9.5549
111 14.099 | 0.0 | 0.0 | 0.0 | 9.5549
112 14.000 | 0.0 | 0.0 | 0.0 | 9.5204
113 13.000 | 11.2 | 1.4 | 2.2 | 9.1711
114 12.000 | 80.8 | 10.1 | 42.7 | 8.8218
115 11.000 | 211.2 | 26.6 | 183.1 | 8.4726

116	10.000	405.0	51.0	486.0	8.1234
117	9.000	661.2	83.3	1013.9	7.7744
118	8.000	980.0	123.4	1829.3	7.4257
119	7.000	1361.2	171.4	2994.7	7.0776
20	6.000	1805.0	227.3	4572.7	6.7306
121	5.000	2285.0	287.8	6621.2	6.3850
122	4.000	2644.0	333.0	9098.0	6.0416
123	3.000	2862.1	360.5	11861.1	5.7012
124	2.000	2977.9	375.1	14789.1	5.3646
125	1.290	3002.0	378.1	16913.4	5.1286
126	1.000	2998.0	377.6	17785.0	5.0328
127	0.000	2922.3	368.0	20753.1	4.7067
128	-1.000	2774.1	349.4	23605.4	4.3873
129	-2.000	2577.0	324.6	26285.1	4.0756
130	-3.000	2330.8	293.6	28743.1	3.7724
131	-4.000	2052.2	258.5	30935.9	3.4784
132	-5.000	1779.8	224.2	32849.5	3.1945
133	-6.000	1536.0	193.5	34505.0	2.9211
134	-7.000	1320.9	166.4	35931.1	2.6590
135	-8.000	1134.4	142.9	37156.4	2.4084
136	-9.000	976.2	122.9	38209.3	2.1698
137	-10.000	827.1	104.2	39111.8	1.9436
138	-11.000	668.4	84.2	39860.3	1.7300
139	-12.000	500.2	63.0	40445.4	1.5293
140	-13.000	322.3	40.6	40857.5	1.3417
141	-14.000	133.8	16.9	41086.5	1.1673
142	-14.666	1.5	0.2	41131.9	1.0585
143	-15.000	-67.2	-8.5	41120.9	1.0062
144	-16.000	-281.3	-35.4	40947.8	0.8583
45	-17.000	-508.5	-64.0	40554.0	0.7237
146	-18.000	-748.9	-94.3	39926.3	0.6022
147	-19.000	-1002.4	-126.2	39051.8	0.4937
148	-20.000	-1269.0	-159.8	37917.2	0.3977
149	-21.000	-1548.6	-195.0	36509.4	0.3140
150	-22.000	-1840.3	-231.8	34815.9	0.2420
151	-23.000	-2143.9	-270.0	32824.8	0.1814
152	-24.000	-2459.5	-309.8	30524.1	0.1313
153	-25.000	-2788.0	-351.1	27901.6	0.0911
154	-26.000	-3135.8	-394.9	24941.6	0.0598
155	-27.000	-3508.1	-441.8	21621.8	0.0367
156	-28.000	-3905.9	-491.9	17916.9	0.0205
157	-29.000	-4268.4	-537.6	13811.4	0.0101
158	-29.387	-4304.8	-542.2	12150.0	0.0073
159	-29.389	-4304.8	-542.2	12141.4	0.0073
160	-30.000	-4214.3	-530.8	9529.8	0.0041
161	-31.000	-3677.0	-463.1	5543.9	0.0013
162	-32.000	-2656.7	-334.6	2336.7	0.0002
163	-33.000	-1153.1	-145.2	391.6	0.0000
164	-33.599	-21.1	-2.7	31.2	0.0000
165	-33.600	-19.1	-2.4	31.2	0.0000
166					
167					
168					
69	*RUN COMPLETED*				
170					

EOT..