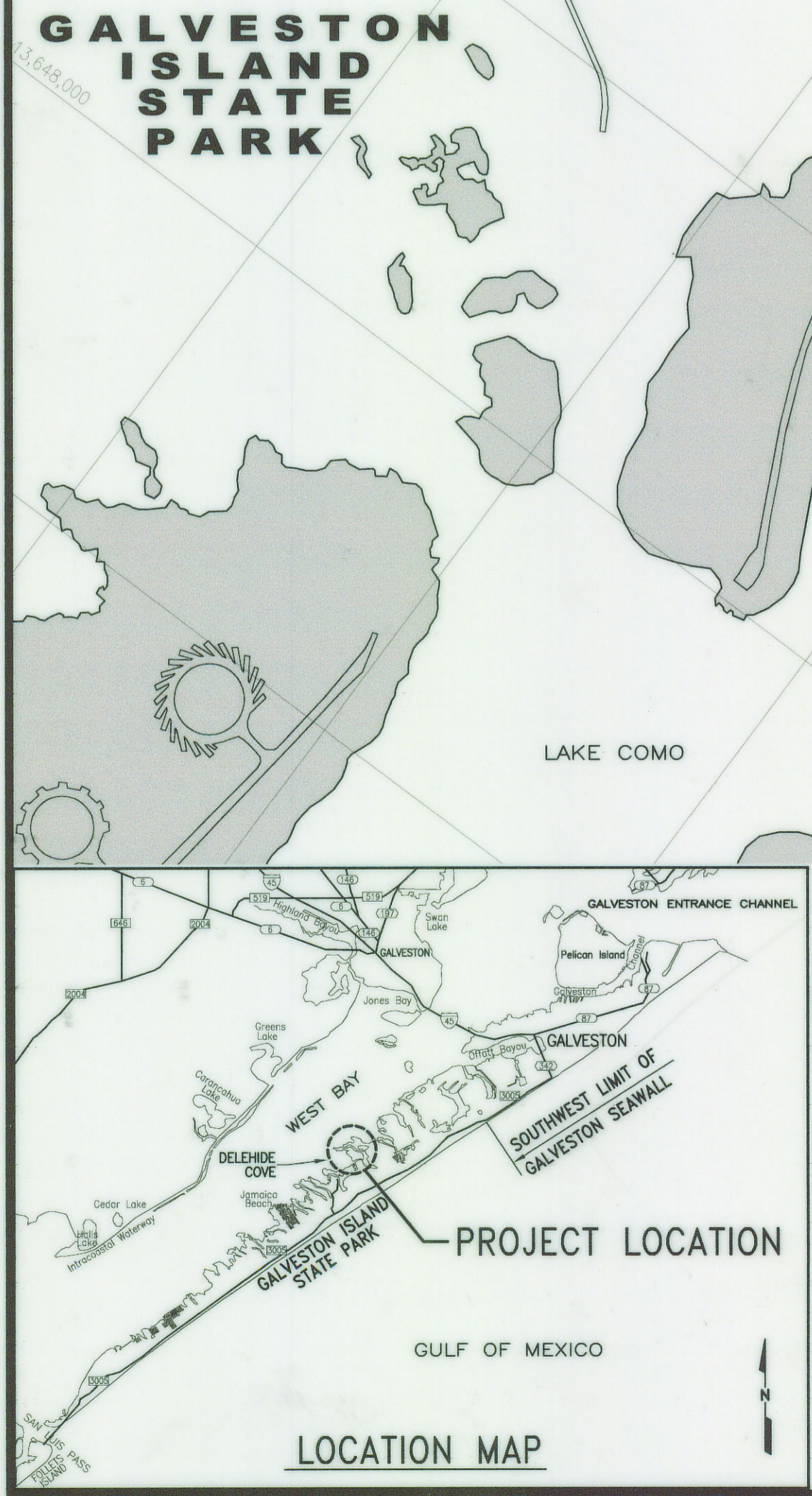


J:\SMA\Projects\2002\20093-09\COASTAL BOUNDARY SURVEY\20093-09-T1.dwg 6/18/2003 11:47:44 AM CST



TEXAS GENERAL LAND OFFICE
 Art. 33.136, Natural Resources Code
 County Galveston, Sk. No. 18
 File Date 6-26-2003 by D.J.H.



LEGEND

--- MHHW-LINE (1.25' NAVD'88)
 (D) MHHW-LINE DESIGNATION
 BEG./END BEGIN/END OF MHHW-LINE

| MHHW-LINE | | |
|-------------|-----------------------------------|-----------------------------------|
| DESIGNATION | BEGINNING STATION | ENDING STATION |
| (D) | N 13,650,519.59 E 3,261,482.59 | N 13,650,863.29 E 3,261,932.37 |
| (E) | N 13,651,377.99 E 3,262,316.86 | N 13,653,512.35 E 3,259,913.21 |
| (F) | N 13,653,767.81 E 3,259,865.75 | N 13,654,515.82 E 3,261,682.08 |
| (G) | N 13,655,361.26 E 3,261,493.81 | N 13,654,638.77 E 3,264,644.70 |

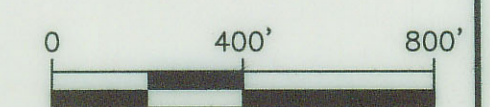
- NOTES**
- COORDINATES SHOWN ARE IN FEET BASED ON LAMBERT GRID, TEXAS SOUTH CENTRAL ZONE, NAD '83 (1999).
 - ELEVATIONS SHOWN ARE IN FEET AND BASED ON NAVD '88.
 - MONUMENTS USED FOR HORIZONTAL CONTROL WERE:
 "HGCS D 62" N 13,645,727.15
 E 3,264,124.31
 - MONUMENTS USED FOR VERTICAL CONTROL WERE:
 "HGCS D 62" ELEV. 6.53' NAVD'88
 "PARK RM2" ELEV. 7.26' NAVD'88
 - MEAN HIGHER HIGH WATER (MHHW) DETERMINED FROM GALVESTON PIER 21 TIDE STAFF AND BENCHMARKS.
 - ALL SURVEYING WAS PERFORMED BY SHINER MOSELEY AND ASSOCIATES, INC. THIS DRAWING REPRESENTS THE CONDITION THAT EXISTED AT THE TIME OF THE SURVEY CONDUCTED JANUARY 10 THROUGH JANUARY 24, 2003.
 - ADDITIONAL MHHW POINTS ALONG EACH MHHW-LINE PROVIDED ON ATTACHED SET OF DATA FOR CLARITY OF THIS DRAWING.

WE, SHINER MOSELEY AND ASSOCIATES, INC., WITH THE ASSISTANCE OF MICHAEL HAAS, A LICENSED STATE LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY STATE THAT THIS DRAWING REPRESENTS THE CONDITIONS THAT EXISTED AT THE TIME OF THE DELEHIDE COVE SURVEY CONDUCTED ON JANUARY 10 THROUGH JANUARY 24, 2003.

NOTICE: THIS SURVEY WAS PERFORMED IN ACCORDANCE WITH SECTION 33.136, NATURAL RESOURCES CODE, FOR THE PURPOSE OF EVIDENCING THE LOCATION OF THE SHORELINE IN THE AREA DEPICTED IN THIS SURVEY AS THAT SHORELINE EXISTED BEFORE COMMENCEMENT OF EROSION RESPONSE ACTIVITY, AS REQUIRED BY CHAPTER 33, NATURAL RESOURCES CODE. THE LINE DEPICTED ON THIS SURVEY FIXES THE SHORELINE FOR THE PURPOSE OF LOCATING A SHORELINE BOUNDARY, SUBJECT TO EROSION LANDWARD AS PROVIDED BY SECTION 33.136, NATURAL RESOURCES CODE.

STATE OF TEXAS REGISTERED PROFESSIONAL LAND SURVEYOR
 GEORGE RUBALCABA
 4229
 6-18-03
 REGISTERED PROFESSIONAL LAND SURVEYOR

Michael Haas 6-19-03
 MICHAEL HAAS, RPLS
 LICENSED STATE LAND SURVEYOR



| REV | DATE | DESCRIPTION | APP |
|-----|----------|---------------------------|-----|
| 0 | 02/06/03 | SUBMITTED TO TIGLO | |
| 1 | 6/18/03 | REMOVED A,B, & C SEGMENTS | |

| FM | DATE | BY | CHK | APP |
|---------|--------------|----|-----|-----|
| GR | 1/03 | | | |
| GRAPHIC | | | | |
| DATE | 20093-09-T1 | | | |
| NO. | 200.20093-09 | | | |

| | |
|--|--|
| SHINER MOSELEY AND ASSOCIATES, INC. ENGINEERS & CONSULTANTS 552 North Carancahua Street, Suite 1650 Corpus Christi, Texas 78478 | TEXAS GENERAL LAND OFFICE DELEHIDE COVE WETLANDS RESTORATION AND PROTECTION GALVESTON TEXAS STATE COASTAL BOUNDARY SURVEY |
|--|--|

| | |
|-------|-------|
| SHEET | T1 |
| OF 1 | REV 1 |



February 6, 2003

J200.20093.09

Mr. Ben Thomson
Texas General Land Office
1700 N. Congress Avenue
Austin, Texas 78701-1495

**RE: SURVEY AT DELEHIDE COVE, GALVESTON COUNTY, TEXAS
(STATE COASTAL BOUNDARY SURVEY)**

Dear Mr. Thomson:

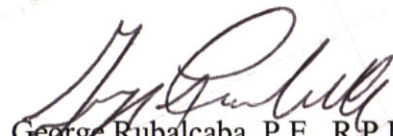
Enclosed is the State Coastal Boundary Survey drawing depicting the survey conducted by us with the assistance of Mr. Mike Haas, R.P.L.S., L.S.L.S. at Delehide Cove on Galveston Island. The Mean Higher High Water Line shown was determined on the tidal information obtained from the Pier 21 Gauge and Pier 21 benchmarks. As per my visit at your office on January 13, 2003, you indicated the datum from Pier 21 would be acceptable for determining the MHHW at this project site.

State plane coordinates were arrived at from the monumentation shown on the drawing. Elevations were looped from monuments at Pier 21 and transferred to the monuments noted on the drawing. Elevations were referenced to NAVD '88.

Thanks again for your time and assistance on this project. If you should have any questions, please call me at (361) 857-2211.

Sincerely,

SHINER MOSELEY AND ASSOCIATES, INC.


George Rubalcaba, P.E., R.P.L.S.
Manager of Surveys

Enclosure

Sketch 18
Galveston Co. NRC Art. 33.136 Report ~~11~~, Pg. 1 of 23



June 18, 2003

J200.20093.09

Mr. Ben Thompson
Texas General Land Office
1700 N. Congress Avenue
Austin, Texas 78701-1495

**RE: SURVEY AT DELEHIDE COVE, GALVESTON COUNTY, TEXAS
(STATE COASTAL BOUNDARY SURVEY)**

Dear Mr. Thompson:

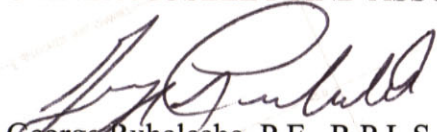
Enclosed is the revised State Coastal Boundary Survey drawing depicting the survey conducted by us with the assistance of Mr. Mike Haas, R.P.L.S., L.S.L.S. at Delehide Cove on Galveston Island. The drawing was revised because we were made aware that previous coastal boundary surveys were conducted just west of our segment D and that our coastal boundary surveys in this area were based on developments that took place after the initial coastal boundary surveys.

Since you were out of the office, we talked to Mr. Roy Molina and he indicated that this revision would be acceptable. We are also enclosing the corresponding boundary calls in between the beginning and ending point for each segment.

Thanks again for your time and assistance on this project. If you should have any questions, please call me at (361) 857-2211.

Sincerely,

SHINER MOSELEY AND ASSOCIATES, INC.


George Rubalcaba, P.E., R.P.L.S.
Manager of Surveys

Enclosures

cc: Dennis Rocha - GLO
Jamie Shubert - TPWD
Kim Shelton - TPWD

TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code
County Galveston, Report No. 11
File Date 6/26/2003 by D.J.H. Retain 18
See sketch 18

Galveston Co. NRC Art. 33.136 Report 11, pg. 2 of 23

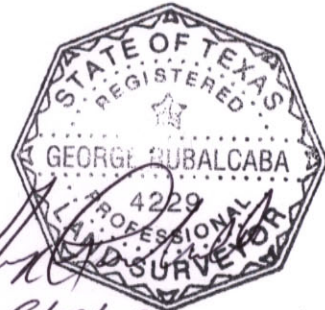
Project: 20093-09
Horizontal Alignment PI Station Report.
Alignment: D
Desc: MHHW-LINE D
PI Station

wed February 05 14:10:16 2003

| PI Station | Northing | Easting | Distance | Direction |
|------------|---------------|--------------|----------|--------------|
| 0+00 BEG. | 13650519.5926 | 3261482.5895 | 37.6541 | N 37-00-10 W |
| 0+37.65 | 13650549.6634 | 3261459.9273 | 512.5599 | N 50-06-00 E |
| 5+50.21 | 13650878.4452 | 3261853.1451 | 28.5506 | N 78-52-59 E |
| 5+78.76 | 13650883.9500 | 3261881.1600 | 26.0797 | S 84-44-31 E |
| 6+04.84 | 13650881.5600 | 3261907.1300 | 31.1585 | S 54-06-04 E |
| 6+36 END | 13650863.2900 | 3261932.3700 | | |



Michael Haas
6-19-03



George Rubalcaba
6/18/03

Project: 20093-09
 Horizontal Alignment PI Station Report.
 Alignment: E
 Desc: MHHW-LINE E
 PI Station

Wed February 05 14:11:05 2003

| PI Station | Northing | Easting | Distance | Direction |
|------------|---------------|--------------|----------|--------------|
| 0+00 BEG. | 13651377.9857 | 3262316.8631 | 53.7612 | S 69-47-35 W |
| 0+53.76 | 13651359.4160 | 3262266.4108 | 28.3563 | N 75-03-23 W |
| 0+82.12 | 13651366.7282 | 3262239.0135 | 23.1589 | N 03-58-03 W |
| 1+05.28 | 13651389.8316 | 3262237.4112 | 53.8344 | N 13-51-56 E |
| 1+59.11 | 13651442.0973 | 3262250.3122 | 39.9084 | N 32-48-49 W |
| 1+99.02 | 13651475.6378 | 3262228.6855 | 32.8566 | S 87-09-03 W |
| 2+31.88 | 13651474.0045 | 3262195.8695 | 54.1034 | N 46-17-47 W |
| 2+85.98 | 13651511.3861 | 3262156.7569 | 36.5503 | N 13-23-55 E |
| 3+22.53 | 13651546.9416 | 3262165.2266 | 57.5003 | N 48-09-27 E |
| 3+80.03 | 13651585.2991 | 3262208.0633 | 62.1008 | N 79-57-29 E |
| 4+42.13 | 13651596.1277 | 3262269.2128 | 59.3301 | N 74-05-54 E |
| 5+01.46 | 13651612.3833 | 3262326.2726 | 26.7848 | N 09-28-42 E |
| 5+28.25 | 13651638.8025 | 3262330.6834 | 33.9096 | N 60-38-11 W |
| 5+62.16 | 13651655.4301 | 3262301.1303 | 29.1395 | N 38-54-35 W |
| 5+91.29 | 13651678.1046 | 3262282.8279 | 16.7056 | N 88-31-43 E |
| 6+08 | 13651678.5335 | 3262299.5279 | 27.4623 | S 82-00-35 E |
| 6+35.46 | 13651674.7161 | 3262326.7237 | 44.7964 | N 07-05-34 W |
| 6+80.26 | 13651719.1697 | 3262321.1923 | | |

Sketch 18

| | | mhhw-line e.txt | | |
|----------|---------------|-----------------|---------|--------------|
| | | | 42.9796 | N 18-33-33 W |
| 7+23.24 | 13651759.9142 | 3262307.5126 | 17.7208 | N 43-32-27 E |
| 7+40.96 | 13651772.7598 | 3262319.7199 | 27.8077 | N 40-54-33 E |
| 7+68.77 | 13651793.7754 | 3262337.9301 | 26.2110 | N 37-00-00 W |
| 7+94.98 | 13651814.7085 | 3262322.1559 | 35.3378 | N 21-02-58 W |
| 8+30.32 | 13651847.6881 | 3262309.4635 | 30.4691 | N 14-30-49 W |
| 8+60.79 | 13651877.1848 | 3262301.8276 | 23.3189 | N 39-23-12 W |
| 8+84.10 | 13651895.2076 | 3262287.0306 | 37.2084 | N 21-52-16 W |
| 9+21.31 | 13651929.7379 | 3262273.1697 | 44.3586 | N 19-30-22 E |
| 9+65.67 | 13651971.5505 | 3262287.9813 | 56.0239 | N 09-05-41 W |
| 10+21.69 | 13652026.8701 | 3262279.1256 | 63.4837 | N 13-33-52 W |
| 10+85.18 | 13652088.5831 | 3262264.2364 | 82.1745 | N 22-37-51 W |
| 11+67.35 | 13652164.4304 | 3262232.6164 | 54.3722 | N 38-01-24 W |
| 12+21.73 | 13652207.2627 | 3262199.1240 | 34.4687 | N 38-22-35 W |
| 12+56.19 | 13652234.2843 | 3262177.7249 | 43.8042 | N 24-11-30 W |
| 13+00 | 13652274.2416 | 3262159.7744 | 70.8000 | N 10-47-19 E |
| 13+70.80 | 13652343.7902 | 3262173.0274 | 54.8280 | N 30-04-29 E |
| 14+25.63 | 13652391.2368 | 3262200.5034 | 38.3183 | N 61-44-36 E |
| 14+63.94 | 13652409.3776 | 3262234.2555 | 35.1835 | S 87-36-32 E |
| 14+99.13 | 13652407.9097 | 3262269.4084 | 18.7543 | N 74-14-38 E |
| 15+17.88 | 13652413.0022 | 3262287.4580 | 25.4867 | N 12-38-42 E |
| 15+43.37 | 13652437.8707 | 3262293.0372 | | |

Page 2

| | | mhhw-line e.txt | | |
|----------|---------------|-----------------|----------|--------------|
| | | | 37.4807 | N 16-26-10 E |
| 15+80.85 | 13652473.8198 | 3262303.6423 | 56.0267 | N 27-19-50 E |
| 16+36.88 | 13652523.5923 | 3262329.3655 | 33.4112 | N 17-28-17 E |
| 16+70.29 | 13652555.4621 | 3262339.3966 | 36.5441 | N 20-00-14 W |
| 17+06.83 | 13652589.8015 | 3262326.8955 | 41.4734 | N 16-26-15 W |
| 17+48.31 | 13652629.5798 | 3262315.1597 | 50.8626 | N 23-45-19 W |
| 17+99.17 | 13652676.1331 | 3262294.6707 | 5.2280 | N 15-11-32 W |
| 18+04.40 | 13652681.1784 | 3262293.3007 | 167.3150 | N 20-44-49 W |
| 19+71.71 | 13652837.6436 | 3262234.0304 | 103.3707 | N 22-18-23 W |
| 20+75.08 | 13652933.2787 | 3262194.7949 | 24.3471 | N 41-34-31 W |
| 20+99.43 | 13652951.4923 | 3262178.6381 | 41.7594 | N 72-32-48 W |
| 21+41.19 | 13652964.0171 | 3262138.8011 | 25.1908 | S 80-32-42 W |
| 21+66.38 | 13652959.8790 | 3262113.9525 | 19.5418 | S 79-33-27 W |
| 21+85.92 | 13652956.3370 | 3262094.7345 | 14.5648 | N 16-08-22 E |
| 22+00.49 | 13652970.3278 | 3262098.7831 | 43.8175 | N 65-48-00 E |
| 22+44.30 | 13652988.2895 | 3262138.7499 | 32.0611 | N 51-15-53 E |
| 22+76.36 | 13653008.3508 | 3262163.7591 | 28.2235 | N 03-49-29 E |
| 23+04.59 | 13653036.5114 | 3262165.6417 | 50.1174 | N 58-36-07 W |
| 23+54.70 | 13653062.6216 | 3262122.8631 | 103.5694 | N 78-07-06 W |
| 24+58.27 | 13653083.9455 | 3262021.5127 | 100.9303 | S 83-00-36 W |
| 25+59.20 | 13653071.6628 | 3261921.3326 | 76.5745 | S 65-26-46 W |
| 26+35.78 | 13653039.8422 | 3261851.6827 | | |

| | | mhhw-line e.txt | | |
|----------|---------------|-----------------|---------|--------------|
| | | | 60.2372 | S 73-45-57 W |
| 26+96.02 | 13653023.0021 | 3261793.8474 | 52.0453 | S 89-38-49 W |
| 27+48.06 | 13653022.6813 | 3261741.8030 | 57.4984 | N 48-41-35 W |
| 28+05.56 | 13653060.6355 | 3261698.6111 | 52.9946 | N 28-34-13 W |
| 28+58.55 | 13653107.1770 | 3261673.2671 | 65.1224 | N 26-41-30 W |
| 29+23.68 | 13653165.3597 | 3261644.0148 | 67.1649 | N 44-31-45 W |
| 29+90.84 | 13653213.2410 | 3261596.9138 | 29.3812 | N 44-35-50 W |
| 30+20.22 | 13653234.1622 | 3261576.2847 | 45.7517 | N 19-42-47 W |
| 30+65.97 | 13653277.2326 | 3261560.8522 | 42.1947 | N 60-01-56 W |
| 31+08.17 | 13653298.3093 | 3261524.2986 | 32.6425 | S 75-44-39 W |
| 31+40.81 | 13653290.2710 | 3261492.6613 | 35.1996 | S 77-26-12 W |
| 31+76.01 | 13653282.6144 | 3261458.3045 | 32.5474 | N 54-21-34 W |
| 32+08.56 | 13653301.5797 | 3261431.8536 | 62.6598 | N 77-36-39 W |
| 32+71.22 | 13653315.0235 | 3261370.6529 | 39.4262 | N 75-00-29 W |
| 33+10.64 | 13653325.2224 | 3261332.5687 | 50.6821 | N 73-26-24 W |
| 33+61.33 | 13653339.6677 | 3261283.9888 | 33.6486 | N 83-10-43 W |
| 33+94.98 | 13653343.6643 | 3261250.5784 | 36.4807 | N 62-12-30 W |
| 34+31.46 | 13653360.6736 | 3261218.3057 | 54.9647 | N 72-39-52 W |
| 34+86.42 | 13653377.0513 | 3261165.8377 | 44.8859 | N 88-09-22 W |
| 35+31.31 | 13653378.4957 | 3261120.9750 | 45.2257 | S 67-55-36 W |
| 35+76.53 | 13653361.5001 | 3261079.0642 | 25.6363 | S 28-23-01 W |
| 36+02.17 | 13653338.9456 | 3261066.8773 | | |

| | | mhhw-line e.txt | | |
|----------|---------------|-----------------|----------|--------------|
| | | | 35.9188 | S 37-00-00 E |
| 36+38.09 | 13653310.2596 | 3261088.4938 | 30.9644 | S 85-49-25 E |
| 36+69.05 | 13653308.0045 | 3261119.3759 | 34.4732 | S 46-43-51 E |
| 37+03.53 | 13653284.3757 | 3261144.4773 | 35.6168 | S 19-32-50 E |
| 37+39.14 | 13653250.8116 | 3261156.3942 | 26.7848 | S 09-28-42 W |
| 37+65.93 | 13653224.3924 | 3261151.9834 | 63.3999 | S 03-02-23 W |
| 38+29.33 | 13653161.0817 | 3261148.6214 | 27.3618 | S 25-32-00 W |
| 38+56.69 | 13653136.3922 | 3261136.8274 | 20.9566 | N 50-23-48 W |
| 38+77.65 | 13653149.7514 | 3261120.6809 | 47.8079 | N 13-01-50 W |
| 39+25.45 | 13653196.3282 | 3261109.9017 | 50.6297 | N 41-24-01 W |
| 39+76.08 | 13653234.3060 | 3261076.4196 | 52.0351 | N 51-02-27 W |
| 40+28.12 | 13653267.0240 | 3261035.9574 | 35.8056 | N 77-36-39 W |
| 40+63.92 | 13653274.7061 | 3261000.9856 | 52.5185 | S 72-26-02 W |
| 41+16.44 | 13653258.8558 | 3260950.9161 | 30.7874 | S 62-48-04 W |
| 41+47.23 | 13653244.7835 | 3260923.5330 | 58.0773 | S 73-32-59 W |
| 42+05.31 | 13653228.3370 | 3260867.8330 | 101.8447 | N 85-52-30 W |
| 43+07.15 | 13653235.6629 | 3260766.2522 | 71.2096 | N 62-52-26 W |
| 43+78.36 | 13653268.1310 | 3260702.8752 | 67.9328 | N 67-58-20 W |
| 44+46.29 | 13653293.6096 | 3260639.9014 | 50.8243 | N 83-33-28 W |
| 44+97.12 | 13653299.3122 | 3260589.3980 | 52.1970 | N 83-31-01 W |
| 45+49.32 | 13653305.2056 | 3260537.5348 | 71.7245 | N 44-04-46 W |
| 46+21.04 | 13653356.7307 | 3260487.6393 | | |

Page 5

Sketch 18

Galveston Co. NRC Art. 33.136 Report ~~17~~, pg. 8 of 23
 counter 78553 S-361-03

mhhw-line e.txt

| | | | | |
|----------|---------------|--------------|----------|--------------|
| | | | 49.8514 | N 43-42-43 W |
| 46+70.89 | 13653392.7644 | 3260453.1903 | 70.8817 | N 73-05-39 W |
| 47+41.77 | 13653413.3767 | 3260385.3717 | 73.4230 | S 73-06-23 W |
| 48+15.20 | 13653392.0403 | 3260315.1172 | 54.6631 | N 70-25-00 W |
| 48+69.86 | 13653410.3621 | 3260263.6162 | 57.1252 | N 77-45-35 W |
| 49+26.98 | 13653422.4733 | 3260207.7895 | 58.3617 | N 82-41-01 W |
| 49+85.35 | 13653429.9056 | 3260149.9030 | 105.8497 | S 75-05-15 W |
| 50+91.20 | 13653402.6659 | 3260047.6183 | 106.3940 | S 79-33-27 W |
| 51+97.59 | 13653383.3818 | 3259942.9864 | 93.3851 | S 69-55-20 W |
| 52+90.97 | 13653351.3231 | 3259855.2767 | 95.3159 | S 61-47-16 W |
| 53+86.29 | 13653306.2634 | 3259771.2842 | 53.5696 | N 83-28-42 W |
| 54+39.86 | 13653312.3477 | 3259718.0612 | 50.5644 | N 40-18-11 W |
| 54+90.42 | 13653350.9099 | 3259685.3546 | 57.0209 | N 79-56-22 W |
| 55+47.45 | 13653360.8707 | 3259629.2104 | 51.4685 | S 53-00-00 W |
| 55+98.91 | 13653329.8962 | 3259588.1059 | 35.0224 | S 21-53-59 E |
| 56+33.94 | 13653297.4010 | 3259601.1686 | 26.1466 | S 31-12-19 W |
| 56+60.08 | 13653275.0374 | 3259587.6218 | 32.2710 | N 21-17-11 W |
| 56+92.35 | 13653305.1068 | 3259575.9066 | 20.4162 | S 50-16-28 W |
| 57+12.77 | 13653292.0586 | 3259560.2041 | 98.4829 | S 40-28-31 W |
| 58+11.25 | 13653217.1440 | 3259496.2769 | 58.4674 | S 64-29-34 W |
| 58+69.72 | 13653191.9665 | 3259443.5082 | 69.7703 | S 44-11-46 W |
| 59+39.49 | 13653141.9441 | 3259394.8702 | | |

Page 6

Sketch 18
Galveston Co. NRC Art. 33.136 Report ~~11~~ pg. 9 of 23

counter 78559

S-361-03

mhhw-line e.txt

| | | | | |
|----------|---------------|--------------|---------|--------------|
| | | | 47.3545 | S 37-32-37 W |
| 59+86.85 | 13653104.3972 | 3259366.0139 | 45.5011 | N 87-12-14 W |
| 60+32.35 | 13653106.6169 | 3259320.5670 | 62.1980 | N 39-41-05 W |
| 60+94.54 | 13653154.4827 | 3259280.8497 | 37.3613 | N 61-34-28 W |
| 61+31.91 | 13653172.2673 | 3259247.9928 | 44.0671 | N 69-19-44 W |
| 61+75.97 | 13653187.8230 | 3259206.7626 | 64.9491 | S 84-32-34 W |
| 62+40.92 | 13653181.6463 | 3259142.1078 | 69.6185 | S 75-58-55 W |
| 63+10.54 | 13653164.7826 | 3259074.5626 | 48.1366 | N 78-44-21 W |
| 63+58.68 | 13653174.1826 | 3259027.3527 | 49.2950 | N 69-08-01 W |
| 64+07.97 | 13653191.7409 | 3258981.2908 | 48.2367 | N 86-54-31 W |
| 64+56.21 | 13653194.3423 | 3258933.1243 | 54.2718 | N 63-34-22 W |
| 65+10.48 | 13653218.4966 | 3258884.5239 | 51.9758 | N 69-48-30 W |
| 65+62.46 | 13653236.4367 | 3258835.7424 | 64.1890 | N 33-31-50 W |
| 66+26.65 | 13653289.9440 | 3258800.2856 | 46.2832 | N 46-39-47 W |
| 66+72.93 | 13653321.7076 | 3258766.6224 | 59.0544 | N 64-24-56 W |
| 67+31.98 | 13653347.2098 | 3258713.3583 | 40.5129 | N 82-58-50 W |
| 67+72.50 | 13653352.1607 | 3258673.1491 | 51.2728 | S 77-36-59 W |
| 68+23.77 | 13653341.1649 | 3258623.0692 | 70.2123 | N 76-53-20 W |
| 68+93.98 | 13653357.0919 | 3258554.6872 | 56.3141 | N 80-36-45 W |
| 69+50.30 | 13653366.2775 | 3258499.1273 | 62.7796 | N 76-21-40 W |
| 70+13.07 | 13653381.0809 | 3258438.1180 | 49.0637 | N 64-04-47 W |
| 70+62.14 | 13653402.5276 | 3258393.9899 | | |

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Galveston Co. NRC Art. 33.136 Report ^{Sketch 18} 11, pg. 10 of 23

counter 78555

S-361-03

mhhw-line e.txt

| | | | | |
|----------|---------------|----------------------------|---------|--------------|
| 70+94.59 | 13653403.6138 | 3258361.5566 ^{ca} | 32.4515 | N 88-04-55 W |
| 71+15.90 | 13653411.9158 | 3258341.9251 | 21.3147 | N 67-04-37 W |
| 71+41.32 | 13653414.7671 | 3258316.6734 | 25.4122 | N 83-33-28 W |
| 71+54.34 | 13653427.5772 | 3258314.3160 | 13.0252 | N 10-25-38 W |
| 71+83.54 | 13653443.5593 | 3258338.7512 | 29.1977 | N 56-48-46 E |
| 72+34.93 | 13653456.6902 | 3258388.4381 | 51.3927 | N 75-11-48 E |
| 72+98.32 | 13653490.0260 | 3258442.3547 | 63.3899 | N 58-16-20 E |
| 73+40.03 | 13653498.8632 | 3258483.1176 | 41.7099 | N 77-46-04 E |
| 74+32.71 | 13653501.8069 | 3258575.7436 | 92.6728 | N 88-10-47 E |
| 75+03.98 | 13653483.1388 | 3258644.5290 | 71.2736 | S 74-48-57 E |
| 75+55.59 | 13653452.3650 | 3258685.9580 | 51.6081 | S 53-23-41 E |
| 75+93.56 | 13653439.0531 | 3258721.5243 | 37.9759 | S 69-28-48 E |
| 76+21.83 | 13653422.0201 | 3258744.0871 | 28.2702 | S 52-57-01 E |
| 76+47.97 | 13653408.4819 | 3258766.4485 | 26.1402 | S 58-48-29 E |
| 76+85.45 | 13653408.7672 | 3258803.9280 | 37.4806 | N 89-33-50 E |
| 77+28.81 | 13653424.5939 | 3258844.2878 | 43.3520 | N 68-35-16 E |
| 77+53.08 | 13653439.2045 | 3258863.6767 | 24.2776 | N 53-00-00 E |
| 77+90.61 | 13653455.9856 | 3258897.2375 | 37.5224 | N 63-26-03 E |
| 78+27.37 | 13653471.4069 | 3258930.6070 | 36.7606 | N 65-11-47 E |
| 78+67.37 | 13653492.2672 | 3258964.7418 | 40.0042 | N 58-34-13 E |
| 79+25.38 | 13653510.0611 | 3259019.9537 | 58.0085 | N 72-08-12 E |

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Sketch 18
Galveston Co. NRC Art. 33.136 Report ~~11~~, pg. 11 of 23

counter 78556

S-361-03

| | | mhhw-line e.txt | | |
|----------|---------------|-----------------|---------|--------------|
| | | | 37.9227 | N 55-56-05 E |
| 79+63.30 | 13653531.3030 | 3259051.3689 | 35.8172 | S 69-50-14 E |
| 79+99.12 | 13653518.9573 | 3259084.9912 | 34.4054 | S 20-36-19 E |
| 80+33.52 | 13653486.7529 | 3259097.0994 | 35.9319 | S 35-27-05 E |
| 80+69.46 | 13653457.4825 | 3259117.9403 | 26.6593 | S 70-07-13 E |
| 80+96.12 | 13653448.4170 | 3259143.0109 | 21.8219 | N 73-50-53 E |
| 81+17.94 | 13653454.4875 | 3259163.9714 | 27.6121 | S 47-07-41 E |
| 81+45.55 | 13653435.7013 | 3259184.2077 | 26.3724 | S 43-20-32 E |
| 81+71.92 | 13653416.5215 | 3259202.3085 | 33.4770 | S 66-32-49 E |
| 82+05.40 | 13653403.1978 | 3259233.0199 | 33.5321 | S 59-06-58 E |
| 82+38.93 | 13653385.9858 | 3259261.7974 | 30.4691 | S 14-30-50 E |
| 82+69.40 | 13653356.4891 | 3259269.4334 | 17.8484 | S 14-36-47 E |
| 82+87.25 | 13653339.2180 | 3259273.9363 | 46.1525 | S 59-15-21 E |
| 83+33.40 | 13653315.6246 | 3259313.6025 | 27.0781 | S 51-32-21 E |
| 83+60.48 | 13653298.7825 | 3259334.8055 | 21.7143 | N 42-41-55 E |
| 83+82.19 | 13653314.7410 | 3259349.5309 | 30.3341 | N 13-12-14 E |
| 84+12.53 | 13653344.2732 | 3259356.4597 | 12.6586 | S 69-28-47 E |
| 84+25.19 | 13653339.8359 | 3259368.3151 | 8.2387 | S 82-00-35 E |
| 84+33.42 | 13653338.6907 | 3259376.4738 | 23.9834 | N 31-38-09 E |
| 84+57.41 | 13653359.1101 | 3259389.0536 | 33.0318 | N 54-41-03 E |
| 84+90.44 | 13653378.2052 | 3259416.0068 | 26.1414 | S 68-20-14 E |
| 85+16.58 | 13653368.5553 | 3259440.3019 | | |

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| | | mhhw-line e.txt | | |
|----------|---------------|-----------------|---------|--------------|
| | | | 18.3210 | N 84-59-48 E |
| 85+34.90 | 13653370.1532 | 3259458.5531 | 30.4691 | N 14-30-50 W |
| 85+65.37 | 13653399.6499 | 3259450.9172 | 27.9521 | S 57-19-46 E |
| 85+93.32 | 13653384.5611 | 3259474.4469 | 19.9223 | S 83-59-04 E |
| 86+13.25 | 13653382.4733 | 3259494.2595 | 27.2601 | N 48-54-57 E |
| 86+40.51 | 13653400.3878 | 3259514.8066 | 26.8542 | N 03-36-39 E |
| 86+67.36 | 13653427.1887 | 3259516.4978 | 24.3552 | N 48-25-40 E |
| 86+91.72 | 13653443.3499 | 3259534.7184 | 25.2107 | N 68-38-14 E |
| 87+16.93 | 13653452.5334 | 3259558.1969 | 27.6297 | N 18-33-34 W |
| 87+44.56 | 13653478.7263 | 3259549.4027 | 23.8796 | N 10-25-38 W |
| 87+68.44 | 13653502.2115 | 3259545.0809 | 26.3724 | N 43-20-33 W |
| 87+94.81 | 13653521.3912 | 3259526.9800 | 11.7332 | N 28-33-48 E |
| 88+06.54 | 13653531.6964 | 3259532.5900 | 20.2028 | S 72-13-36 E |
| 88+26.74 | 13653525.5295 | 3259551.8285 | 21.4452 | S 31-48-14 E |
| 88+48.19 | 13653507.3041 | 3259563.1305 | 30.9630 | S 78-11-43 E |
| 88+79.15 | 13653500.9698 | 3259593.4387 | 32.3216 | N 85-43-35 E |
| 89+11.47 | 13653503.3784 | 3259625.6704 | 28.5547 | S 72-19-13 E |
| 89+40.03 | 13653494.7064 | 3259652.8764 | 22.9139 | S 73-23-37 E |
| 89+62.94 | 13653488.1577 | 3259674.8345 | 47.8435 | S 48-07-39 E |
| 90+10.79 | 13653456.2233 | 3259710.4603 | 47.3777 | S 82-50-24 E |
| 90+58.16 | 13653450.3180 | 3259757.4686 | 20.0194 | N 67-01-54 E |
| 90+78.18 | 13653458.1300 | 3259775.9009 | | |

| | | mhhw-line e.txt | | |
|-----------|---------------|-----------------|---------|--------------|
| | | | 22.1859 | N 76-11-30 E |
| 91+00.37 | 13653463.4253 | 3259797.4457 | 34.0025 | N 54-38-10 E |
| 91+34.37 | 13653483.1048 | 3259825.1744 | 30.1505 | N 67-55-36 E |
| 91+64.52 | 13653494.4352 | 3259853.1150 | 33.3723 | N 44-38-13 E |
| 91+97.89 | 13653518.1821 | 3259876.5628 | 37.1058 | S 80-57-12 E |
| 92+35 END | 13653512.3476 | 3259913.2070 | | |

Project: 20093-09
 Horizontal Alignment PI Station Report.
 Alignment: F
 Desc: MHHW-LINE F
 PI Station

Wed February 05 14:11:46 2003

| PI Station | Northing | Easting | Distance | Direction |
|------------|---------------|--------------|----------|--------------|
| 0+00 BEG. | 13653767.8137 | 3259865.7545 | 79.4918 | N 38-35-30 W |
| 0+79.49 | 13653829.9454 | 3259816.1702 | 32.9309 | N 13-26-59 E |
| 1+12.42 | 13653861.9732 | 3259823.8296 | 33.5213 | N 70-14-09 E |
| 1+45.94 | 13653873.3083 | 3259855.3763 | 19.9026 | N 49-49-17 E |
| 1+65.85 | 13653886.1489 | 3259870.5826 | 35.2003 | N 04-11-44 E |
| 2+01.05 | 13653921.2549 | 3259873.1578 | 64.1174 | N 55-57-36 E |
| 2+65.16 | 13653957.1461 | 3259926.2885 | 40.8628 | N 51-27-09 E |
| 3+06.03 | 13653982.6103 | 3259958.2469 | 29.3931 | N 18-43-19 E |
| 3+35.42 | 13654010.4481 | 3259967.6814 | 25.6069 | N 45-34-15 E |
| 3+61.03 | 13654028.3736 | 3259985.9678 | 45.0381 | N 00-57-49 W |
| 4+06.07 | 13654073.4054 | 3259985.2105 | 27.3108 | N 38-58-06 E |
| 4+33.38 | 13654094.6394 | 3260002.3860 | 41.7913 | N 65-11-47 E |
| 4+75.17 | 13654112.1711 | 3260040.3221 | 41.3329 | N 87-06-20 E |
| 5+16.50 | 13654114.2583 | 3260081.6023 | 37.0870 | S 73-32-17 E |
| 5+53.59 | 13654103.7486 | 3260117.1690 | 30.5307 | S 86-24-30 E |
| 5+84.12 | 13654101.8359 | 3260147.6398 | 45.9184 | N 43-18-52 E |
| 6+30.04 | 13654135.2462 | 3260179.1399 | 32.6936 | N 41-18-52 E |
| 6+62.73 | 13654159.8023 | 3260200.7239 | | |

Sketch 18
 Galveston Co. NRC Art. 33.136 Report 11, pg. 15 of 23
 counter 78560

mhhw-line f.txt

| | | | | |
|----------|---------------|--------------|---------|--------------|
| | | | 47.5232 | N 50-20-17 E |
| 7+10.25 | 13654190.1344 | 3260237.3083 | 38.3910 | S 55-26-27 E |
| 7+48.64 | 13654168.3567 | 3260268.9248 | 32.2368 | S 75-03-23 E |
| 7+80.88 | 13654160.0438 | 3260300.0714 | 25.7431 | S 67-58-20 E |
| 8+06.62 | 13654150.3887 | 3260323.9353 | 78.8924 | N 74-29-08 E |
| 8+85.52 | 13654171.4909 | 3260399.9532 | 49.9778 | S 83-47-58 E |
| 9+35.49 | 13654166.0929 | 3260449.6386 | 37.6783 | N 84-49-08 E |
| 9+73.17 | 13654169.4955 | 3260487.1629 | 48.8856 | N 27-35-59 E |
| 10+22.06 | 13654212.8181 | 3260509.8112 | 49.6040 | N 16-08-21 W |
| 10+71.66 | 13654260.4672 | 3260496.0227 | 26.6778 | N 77-26-12 E |
| 10+98.34 | 13654266.2701 | 3260522.0617 | 37.0117 | N 35-39-05 E |
| 11+35.35 | 13654296.3449 | 3260543.6341 | 38.1155 | N 63-00-17 E |
| 11+73.47 | 13654313.6462 | 3260577.5967 | 24.3130 | N 55-36-06 E |
| 11+97.78 | 13654327.3817 | 3260597.6581 | 33.5714 | N 09-20-30 E |
| 12+31.35 | 13654360.5079 | 3260603.1075 | 23.2024 | N 34-16-22 W |
| 12+54.55 | 13654379.6816 | 3260590.0414 | 28.6943 | N 37-00-00 W |
| 12+83.25 | 13654402.5979 | 3260572.7728 | 28.9746 | N 12-38-42 E |
| 13+12.22 | 13654430.8697 | 3260579.1155 | 27.1529 | N 79-33-27 E |
| 13+39.38 | 13654435.7912 | 3260605.8187 | 24.3881 | N 58-11-34 E |
| 13+63.76 | 13654448.6453 | 3260626.5443 | 20.9462 | N 34-34-15 E |
| 13+84.71 | 13654465.8929 | 3260638.4297 | 41.6145 | N 74-47-41 E |
| 14+26.32 | 13654476.8074 | 3260678.5874 | | |

mhhw-line f.txt

| | | | | |
|----------|---------------|--------------|---------|--------------|
| | | | 34.3838 | N 58-31-32 E |
| 14+60.71 | 13654494.7597 | 3260707.9124 | 29.6154 | S 63-34-22 E |
| 14+90.32 | 13654481.5790 | 3260734.4330 | 20.2615 | S 66-21-58 E |
| 15+10.59 | 13654473.4563 | 3260752.9951 | 34.0090 | N 39-52-13 E |
| 15+44.59 | 13654499.5582 | 3260774.7966 | 21.0880 | N 05-53-19 E |
| 15+65.68 | 13654520.5349 | 3260776.9601 | 24.2316 | N 06-55-23 W |
| 15+89.91 | 13654544.5899 | 3260774.0393 | 24.5047 | N 29-13-56 W |
| 16+14.42 | 13654565.9738 | 3260762.0724 | 27.6589 | N 08-22-54 W |
| 16+42.08 | 13654593.3374 | 3260758.0408 | 41.4885 | S 65-37-07 E |
| 16+83.57 | 13654576.2106 | 3260795.8292 | 34.6589 | S 74-14-39 E |
| 17+18.23 | 13654566.7993 | 3260829.1858 | 33.4129 | N 60-35-32 E |
| 17+51.64 | 13654583.2058 | 3260858.2933 | 28.4845 | S 72-32-48 E |
| 17+80.12 | 13654574.6624 | 3260885.4664 | 19.3074 | S 67-58-21 E |
| 17+99.43 | 13654567.4212 | 3260903.3644 | 59.3475 | N 71-25-45 E |
| 18+58.78 | 13654586.3219 | 3260959.6217 | 23.2832 | S 68-26-17 E |
| 18+82.06 | 13654577.7652 | 3260981.2755 | 11.0950 | N 47-17-28 E |
| 18+93.16 | 13654585.2907 | 3260989.4283 | 22.3490 | S 69-54-50 E |
| 19+15.50 | 13654577.6153 | 3261010.4180 | 18.8004 | N 56-21-55 E |
| 19+34.30 | 13654588.0288 | 3261026.0709 | 13.2914 | N 04-38-35 E |
| 19+47.60 | 13654601.2766 | 3261027.1468 | 21.4309 | S 71-31-03 E |
| 19+69.03 | 13654594.4827 | 3261047.4723 | 16.0695 | S 52-57-02 E |
| 19+85.10 | 13654584.8007 | 3261060.2976 | | |

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Sketch 18
Galveston Co. NRC Art. 33.136 Report *11*, pg. 17 of 23
counter 78562 S-361-03

mhhw-line f.txt

| | | | | | |
|----------|---------------|---------------|--------------|------------|---|
| | | | 41.9239 | N 44-11-09 | E |
| 20+27.02 | 13654614.8637 | 3261089.5181 | | | |
| | | | 43.7088 | S 82-00-34 | E |
| 20+70.73 | 13654608.7879 | 3261132.8025 | | | |
| | | | 32.1840 | N 83-57-19 | E |
| 21+02.91 | 13654612.1770 | 3261164.8075 | | | |
| | | | 42.6098 | N 16-26-10 | E |
| 21+45.52 | 13654653.0456 | 3261176.8638 | | | |
| | | | 38.7544 | S 56-59-22 | E |
| 21+84.28 | 13654631.9324 | 3261209.3621 | | | |
| | | | 43.9605 | S 14-07-30 | W |
| 22+28.24 | 13654589.3009 | 3261198.6341 | | | |
| | | | 37.4753 | S 50-37-53 | E |
| 22+65.71 | 13654565.5301 | 3261227.6056 | | | |
| | | | 42.8617 | S 02-28-57 | E |
| 23+08.58 | 13654522.7086 | 3261229.4621 | | | |
| | | | 27.0562 | S 48-46-19 | E |
| 23+35.63 | 13654504.8770 | 3261249.8109 | | | |
| | | | 31.4006 | N 63-07-17 | E |
| 23+67.03 | 13654519.0733 | 3261277.8191 | | | |
| | | | 20.5311 | S 73-15-47 | E |
| 23+87.56 | 13654513.1608 | 3261297.4804 | | | |
| | | | 18.9918 | N 17-28-17 | E |
| 24+06.55 | 13654531.2764 | 3261303.1824 | | | |
| | | | 49.5926 | N 69-48-58 | E |
| 24+56.15 | 13654548.3876 | 3261349.7295 | | | |
| | | | 40.7004 | S 49-31-58 | E |
| 24+96.85 | 13654521.9725 | 3261380.6935 | | | |
| | | | 34.6456 | N 83-38-32 | E |
| 25+31.49 | 13654525.8090 | 3261415.1260 | | | |
| | | | 35.6610 | S 58-48-29 | E |
| 25+67.15 | 13654507.3400 | 3261445.6318 | | | |
| | | | 57.0263 | S 84-21-46 | E |
| 26+24.18 | 13654501.7384 | 3261502.3823 | | | |
| | | | 50.3589 | N 78-59-45 | E |
| 26+74.54 | 13654511.3510 | 3261551.8153 | | | |
| | | | 78.8162 | S 89-58-44 | E |
| 27+53.36 | 13654511.3219 | 3261630.6315 | | | |
| | | | 51.6443 | N 85-00-07 | E |
| 28+05 | END | 13654515.8212 | 3261682.0794 | | |

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Galveston Co. NRC Art. 33.136 *Sketch 18* Report ~~11~~, pg. 18 of 23
counter 78563

S-361-03

Project: 20093-09
 Horizontal Alignment PI Station Report.
 Alignment: G
 Desc: MHHW-LINE G
 PI Station

Wed February 05 14:12:24 2003

| PI Station | Northing | Easting | Distance | Direction |
|------------|---------------|--------------|----------|--------------|
| 0+00 BEG. | 13655361.2569 | 3261493.8138 | 56.6864 | N 09-17-33 W |
| 0+56.69 | 13655417.1994 | 3261484.6602 | 39.2171 | N 29-38-43 W |
| 0+95.90 | 13655451.2831 | 3261465.2624 | 39.2298 | N 45-39-00 E |
| 1+35.13 | 13655478.7063 | 3261493.3150 | 59.6176 | S 86-16-39 E |
| 1+94.75 | 13655474.8355 | 3261552.8069 | 41.7078 | S 52-42-49 E |
| 2+36.46 | 13655449.5690 | 3261585.9903 | 61.2021 | N 68-27-23 E |
| 2+97.66 | 13655472.0431 | 3261642.9167 | 30.2206 | N 04-38-35 E |
| 3+27.88 | 13655502.1646 | 3261645.3630 | 49.1987 | N 15-15-45 E |
| 3+77.08 | 13655549.6280 | 3261658.3142 | 50.4792 | N 18-08-01 E |
| 4+27.56 | 13655597.6001 | 3261674.0251 | 40.4056 | N 11-13-23 W |
| 4+67.96 | 13655637.2330 | 3261666.1609 | 40.6495 | N 44-07-20 E |
| 5+08.61 | 13655666.4135 | 3261694.4607 | 76.6247 | N 84-35-56 E |
| 5+85.24 | 13655673.6260 | 3261770.7453 | 134.6501 | S 87-40-57 E |
| 7+19.89 | 13655668.1810 | 3261905.2853 | 123.3418 | S 82-25-18 E |
| 8+43.23 | 13655651.9147 | 3262027.5498 | 98.1825 | N 88-06-11 E |
| 9+41.41 | 13655655.1649 | 3262125.6785 | 72.7830 | S 83-24-24 E |
| 10+14.20 | 13655646.8080 | 3262197.9801 | 181.3239 | S 70-08-56 E |
| 11+95.52 | 13655585.2349 | 3262368.5296 | | |

Sketch 18
 Galveston Co. NRC Art. 33.136 Report ~~11~~ pg. 19 of 23
 counter 78564

mhhw-line g.txt

| | | | | |
|----------|---------------|--------------|----------|--------------|
| | | | 136.0930 | S 55-16-25 E |
| 13+31.61 | 13655507.7085 | 3262480.3819 | 55.3332 | S 33-05-54 E |
| 13+86.95 | 13655461.3539 | 3262510.5980 | 52.2953 | S 67-15-53 E |
| 14+39.24 | 13655441.1432 | 3262558.8300 | 133.3652 | S 77-50-19 E |
| 15+72.61 | 13655413.0476 | 3262689.2022 | 103.4827 | S 87-54-56 E |
| 16+76.09 | 13655409.2837 | 3262792.6164 | 35.5179 | N 84-59-48 E |
| 17+11.61 | 13655412.3813 | 3262827.9990 | 68.4962 | S 65-27-03 E |
| 17+80.10 | 13655383.9230 | 3262890.3035 | 52.7743 | S 65-24-04 E |
| 18+32.88 | 13655361.9550 | 3262938.2882 | 46.2975 | N 85-49-11 E |
| 18+79.18 | 13655365.3298 | 3262984.4625 | 18.8239 | S 16-08-22 W |
| 18+98 | 13655347.2477 | 3262979.2300 | 33.0157 | S 61-44-36 W |
| 19+31.02 | 13655331.6173 | 3262950.1486 | 45.2508 | S 33-33-57 W |
| 19+76.27 | 13655293.9121 | 3262925.1295 | 65.1019 | S 09-26-22 E |
| 20+41.37 | 13655229.6916 | 3262935.8064 | 42.7322 | S 40-22-03 E |
| 20+84.10 | 13655197.1338 | 3262963.4836 | 30.1733 | N 36-04-40 E |
| 21+14.27 | 13655221.5204 | 3262981.2522 | 26.3777 | S 34-16-22 E |
| 21+40.65 | 13655199.7227 | 3262996.1063 | 53.1734 | S 56-17-46 E |
| 21+93.82 | 13655170.2167 | 3263040.3421 | 26.6794 | S 85-49-25 E |
| 22+20.50 | 13655168.2737 | 3263066.9507 | 31.9880 | S 25-41-11 E |
| 22+52.49 | 13655139.4467 | 3263080.8158 | 53.0680 | S 30-12-31 E |
| 23+05.56 | 13655093.5854 | 3263107.5170 | 47.9406 | S 43-00-40 E |
| 23+53.50 | 13655058.5302 | 3263140.2192 | | |

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Sketch 18
Galveston Co. NRC Art. 33.136 Report 17, pg. 20 of 23

counter 78565

S-361-03

mhhw-line g.txt

| | | | | |
|----------|---------------|--------------|---------|--------------|
| | | | 25.1836 | N 84-23-09 E |
| 23+78.68 | 13655060.9939 | 3263165.2820 | 60.8619 | S 51-19-38 E |
| 24+39.55 | 13655022.9631 | 3263212.7986 | 35.7189 | S 34-34-15 W |
| 24+75.27 | 13654993.5512 | 3263192.5308 | 65.8485 | S 06-01-40 E |
| 25+41.11 | 13654928.0668 | 3263199.4456 | 39.2171 | S 29-38-43 E |
| 25+80.33 | 13654893.9830 | 3263218.8434 | 25.8736 | N 38-58-06 E |
| 26+06.20 | 13654914.0996 | 3263235.1151 | 26.8218 | S 47-47-16 E |
| 26+33.03 | 13654896.0786 | 3263254.9810 | 45.2374 | S 33-49-09 E |
| 26+78.26 | 13654858.4954 | 3263280.1589 | 22.2395 | S 36-36-56 W |
| 27+00.50 | 13654840.6448 | 3263266.8943 | 87.9694 | S 33-43-42 E |
| 27+88.47 | 13654767.4825 | 3263315.7400 | 48.2680 | S 45-58-32 E |
| 28+36.74 | 13654733.9379 | 3263350.4468 | 51.7319 | S 22-57-33 E |
| 28+88.47 | 13654686.3040 | 3263370.6262 | 26.1136 | S 17-47-29 W |
| 29+14.59 | 13654661.4393 | 3263362.6471 | 37.0813 | S 29-02-41 W |
| 29+51.67 | 13654629.0213 | 3263344.6445 | 28.8910 | S 18-37-43 W |
| 29+80.56 | 13654601.6439 | 3263335.4157 | 58.4930 | S 72-24-14 E |
| 30+39.05 | 13654583.9612 | 3263391.1720 | 46.1465 | N 75-22-24 E |
| 30+85.20 | 13654595.6140 | 3263435.8229 | 28.3068 | S 49-48-30 E |
| 31+13.50 | 13654577.3464 | 3263457.4462 | 25.8416 | N 23-57-13 E |
| 31+39.35 | 13654600.9624 | 3263467.9378 | 52.5514 | N 03-40-50 W |
| 31+91.90 | 13654653.4054 | 3263464.5644 | 29.2949 | N 06-16-26 E |
| 32+21.19 | 13654682.5248 | 3263467.7657 | | |

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| | | mhhw-line g.txt | | |
|----------|---------------|-----------------|---------|--------------|
| | | | 39.8569 | S 65-11-12 E |
| 32+61.05 | 13654665.7983 | 3263503.9430 | | |
| | | | 33.4891 | N 65-59-26 E |
| 32+94.54 | 13654679.4246 | 3263534.5345 | | |
| | | | 49.9701 | N 08-29-47 W |
| 33+44.51 | 13654728.8464 | 3263527.1517 | | |
| | | | 45.6758 | N 00-11-39 E |
| 33+90.18 | 13654774.5219 | 3263527.3064 | | |
| | | | 61.5500 | N 55-20-11 E |
| 34+51.73 | 13654809.5289 | 3263577.9317 | | |
| | | | 41.7189 | N 74-09-17 E |
| 34+93.45 | 13654820.9198 | 3263618.0654 | | |
| | | | 16.3114 | S 14-22-24 E |
| 35+09.76 | 13654805.1189 | 3263622.1145 | | |
| | | | 36.5883 | S 22-02-41 W |
| 35+46.35 | 13654771.2056 | 3263608.3818 | | |
| | | | 44.7832 | S 25-41-11 E |
| 35+91.14 | 13654730.8478 | 3263627.7929 | | |
| | | | 44.0576 | S 66-13-07 E |
| 36+35.19 | 13654713.0818 | 3263668.1096 | | |
| | | | 28.0553 | S 47-18-30 E |
| 36+63.25 | 13654694.0588 | 3263688.7306 | | |
| | | | 12.7992 | N 64-18-22 E |
| 36+76.05 | 13654699.6080 | 3263700.2643 | | |
| | | | 17.5652 | S 37-00-00 E |
| 36+93.61 | 13654685.5798 | 3263710.8353 | | |
| | | | 24.3689 | N 41-06-55 E |
| 37+17.98 | 13654703.9390 | 3263726.8597 | | |
| | | | 29.8314 | N 75-14-32 E |
| 37+47.81 | 13654711.5381 | 3263755.7070 | | |
| | | | 37.7451 | S 52-25-38 E |
| 37+85.56 | 13654688.5222 | 3263785.6229 | | |
| | | | 21.9495 | S 06-01-40 E |
| 38+07.51 | 13654666.6941 | 3263787.9278 | | |
| | | | 40.5014 | S 53-11-40 E |
| 38+48.01 | 13654642.4296 | 3263820.3562 | | |
| | | | 72.3872 | S 70-41-56 E |
| 39+20.40 | 13654618.5033 | 3263888.6749 | | |
| | | | 55.0053 | N 80-08-31 E |
| 39+75.40 | 13654627.9207 | 3263942.8680 | | |
| | | | 59.4578 | S 82-51-53 E |
| 40+34.86 | 13654620.5352 | 3264001.8653 | | |

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| | | mhhw-line g.txt | | |
|-----------|---------------|-----------------|---------|--------------|
| | | | 59.8753 | S 64-41-39 E |
| 40+94.74 | 13654594.9417 | 3264055.9950 | 36.1936 | S 70-41-56 E |
| 41+30.93 | 13654582.9785 | 3264090.1543 | 40.4718 | N 82-44-12 E |
| 41+71.40 | 13654588.0954 | 3264130.3013 | 33.1331 | N 28-23-01 E |
| 42+04.53 | 13654617.2454 | 3264146.0519 | 38.1616 | S 64-24-55 E |
| 42+42.70 | 13654600.7655 | 3264180.4717 | 33.7184 | S 82-00-35 E |
| 42+76.41 | 13654596.0784 | 3264213.8628 | 80.1719 | S 76-55-48 E |
| 43+56.59 | 13654577.9481 | 3264291.9577 | 60.5744 | S 87-03-07 E |
| 44+17.16 | 13654574.8326 | 3264352.4519 | 38.1714 | N 43-32-27 E |
| 44+55.33 | 13654602.5025 | 3264378.7471 | 31.3702 | N 00-07-15 W |
| 44+86.70 | 13654633.8726 | 3264378.6809 | 43.7810 | N 80-17-30 E |
| 45+30.48 | 13654641.2555 | 3264421.8349 | 21.3690 | S 77-14-45 E |
| 45+51.85 | 13654636.5379 | 3264442.6767 | 56.1282 | N 63-18-05 E |
| 46+07.98 | 13654661.7560 | 3264492.8207 | 32.9397 | S 86-38-42 E |
| 46+40.92 | 13654659.8283 | 3264525.7039 | 41.7883 | S 78-21-26 E |
| 46+82.71 | 13654651.3951 | 3264566.6325 | 28.8875 | S 71-23-22 E |
| 47+11.60 | 13654642.1761 | 3264594.0094 | 14.0321 | N 63-18-06 E |
| 47+25.63 | 13654648.4806 | 3264606.5454 | 39.3723 | S 75-43-44 E |
| 47+65 END | 13654638.7748 | 3264644.7026 | | |