

NOTES:

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"MARIAH" PID: DH4664
N = 17,200,025.97
E = 1,352,830.82
NAVD 88 = 3.1'
- MEAN HIGH WATER (MHW) ELEVATION OF 1.2' FOR CORPUS CHRISTI BAY WAS DETERMINED FROM TEXAS STATE AQUARIUM TIDE GAUGE DATA.
- TO CONVERT FEET TO VARAS MULTIPLY BY 0.36.
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- BACKGROUND IMAGE FROM GOOGLE EARTH AND DRONE IMAGERY (SEP 2018).



LINE	BEARING	DISTANCE	VARAS
L1	N 01°49'33" E	110.45'	39.76V
L2	N 26°30'24" E	71.30'	25.67V
L3	N 50°41'01" E	76.55'	27.56V
L4	N 20°50'48" E	38.57'	13.89V
L5	N 29°11'23" E	96.41'	34.71V
L6	N 33°26'32" E	183.06'	65.90V
L7	N 51°17'59" E	170.52'	61.39V
L8	N 52°36'02" E	293.89'	105.80V
L9	N 60°35'01" E	212.89'	76.64V
L10	N 84°46'15" E	64.41'	23.19V
L11	N 39°28'28" E	61.29'	22.06V
L12	S 62°47'12" E	70.98'	25.55V
L13	N 71°17'27" E	75.89'	27.32V
L14	N 46°04'22" E	91.14'	32.81V

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SURVEYED: SEPTEMBER 2018

SURVEY PERSONNEL:
JAMES M. NAISMITH
B.S. GAMBILL

Jma 12/4/2018
JAMES M. NAISMITH, LICENSED STATE LAND SURVEYOR

TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code
Co. San Patricio SK No. 8
File Date 12/2/2018 by K. Schreiber

C.W. EGERY, A-111
CITY OF PORTLAND
1900 BILLY G WEBB DR
PORTLAND, TX 78374
CALLED 52.48 ACRE TRACT
DOC# 299446 (O.P.R.S.P.C.T.) &
*CALLED 4.605 ACRE TRACT
DOC# 299447 (O.P.R.S.P.C.T.)

FND BENT IR
N: 17,200,177.7
E: 1,354,457.5

POINT OF BEGINNING
N: 17,200,095.50
E: 1,354,617.83

PORT OF CORPUS CHRISTI
3929.1 ACRE TRACT NO. 2
PATENT 106
REFUGIO SCRIP SF-1930

CORPUS CHRISTI BAY
NUECES COUNTY

Naismith Marine
Hydrographic · Geophysical
Environmental
www.naismithmarine.com
(361) 945-0248
FIRM #10078500

NO.	DATE:	REVISION
0	10/18	PER GLO
1	11/18	PER GLO

COASTAL BOUNDARY SURVEY OF THE LITTORAL BOUNDARY OF A PORTION OF A 35.1 ACRE UPLAND TRACT IN THE C.W. EGERY SURVEY, A-111 ADJACENT TO PATENT 106 CORPUS CHRISTI BAY, NUECES CO. TEXAS		
SCALE: 1" = 300'	DATE: SEP 2018	SHEET: 1 OF 2
DWG: JZG		

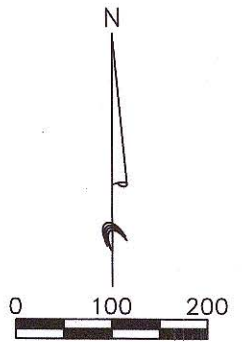
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TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code

Co. San Patricio, SK No. 8

File Date 12/21/2018 by K. Schreiber



LINE BEARING	DISTANCE	VARAS
L21 N 51°17'59" E	170.52'	61.39V

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PLAT CABINET 2, DRAWER F, FILE 1B
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SURVEYED: SEPTEMBER 2018

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J. Naismith 12/4/2018
JAMES M. NAISMITH, LICENSED STATE LAND SURVEYOR

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CITY OF PORTLAND
1900 BILLY G WEBB DR
PORTLAND, TX 78374
CALLED 4.805 ACRES
DOC# 299447
(O.P.R.S.P.C.T.)

FND T-POST
N:17,201,264.7
E: 1,355,104.2

FND T-POST
N:17,201,076.1
E: 1,355,260.3

TRACT 1A-BUILDUP
POINT OF BEGINNING
N:17,200,857.05
E: 1,355,139.10

LINE BEARING	DISTANCE	VARAS
L15 N 01°49'33" E	110.45'	39.76V
L16 N 26°30'24" E	71.30'	25.67V
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L19 S 44°27'32" W	62.01'	22.32V
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STATE TRACT 41

FILL MAP

LIMESTONE BREAKWATER

ROCK RIP RAP

ROCK GROIN

ROCK RIP RAP

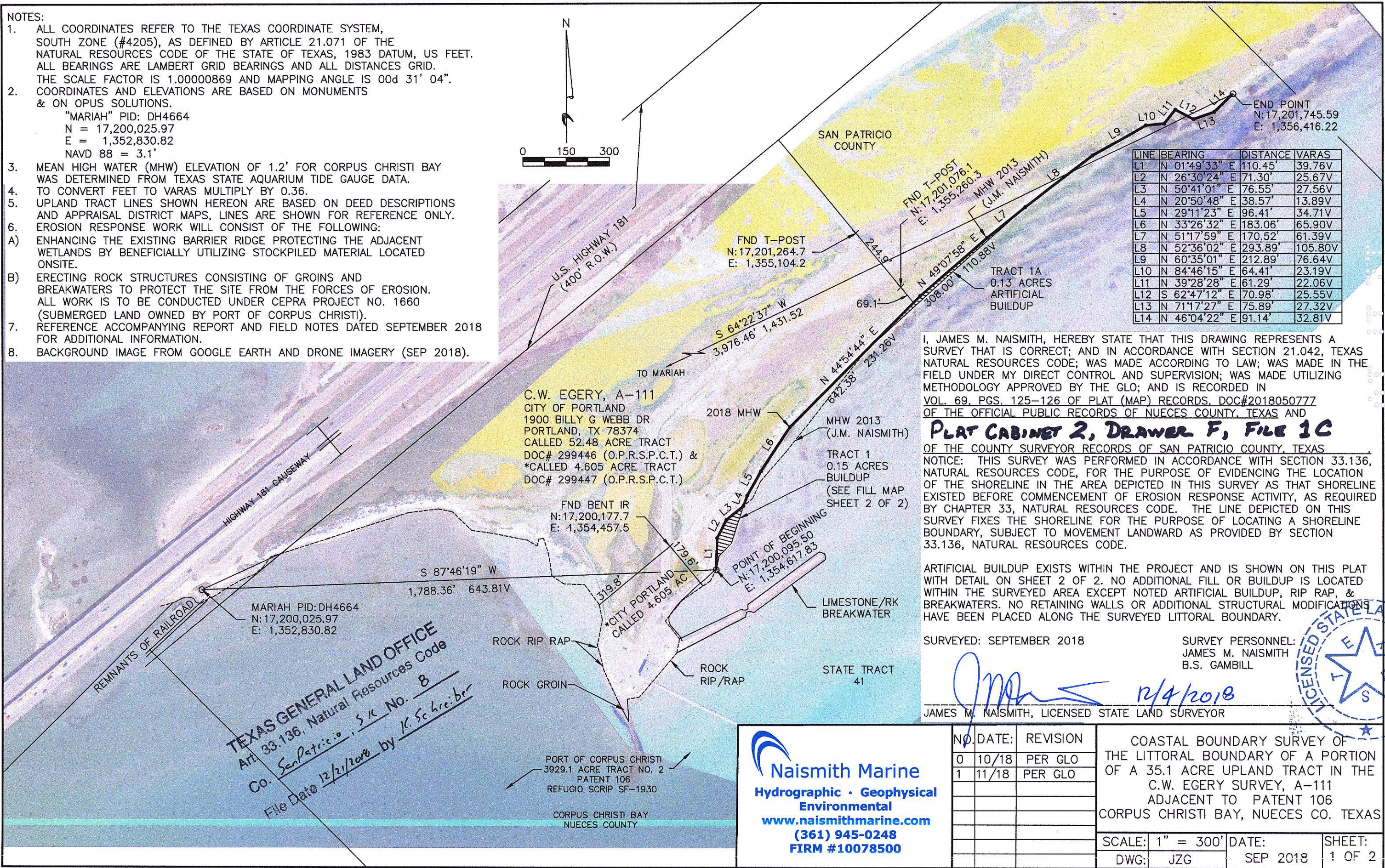
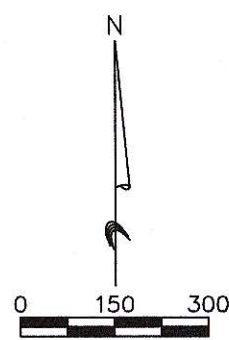
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FILL MAP ASSOCIATED WITH A COASTAL BOUNDARY SURVEY OF THE LITTORAL BOUNDARY OF A PORTION OF A 35.1 ACRE UPLAND TRACT IN THE C.W. EGERY SURVEY, A-111 ADJACENT TO PATENT 106 CORPUS CHRISTI BAY, NUECES CO. TEXAS

SCALE: 1" = 200'	DATE: SEP 2018	SHEET: 2 OF 2
DWG: JZG		

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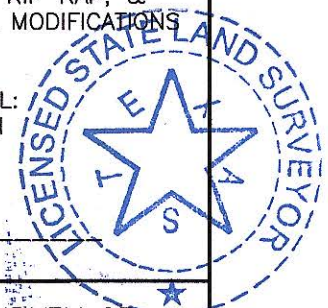
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 12/4/2018



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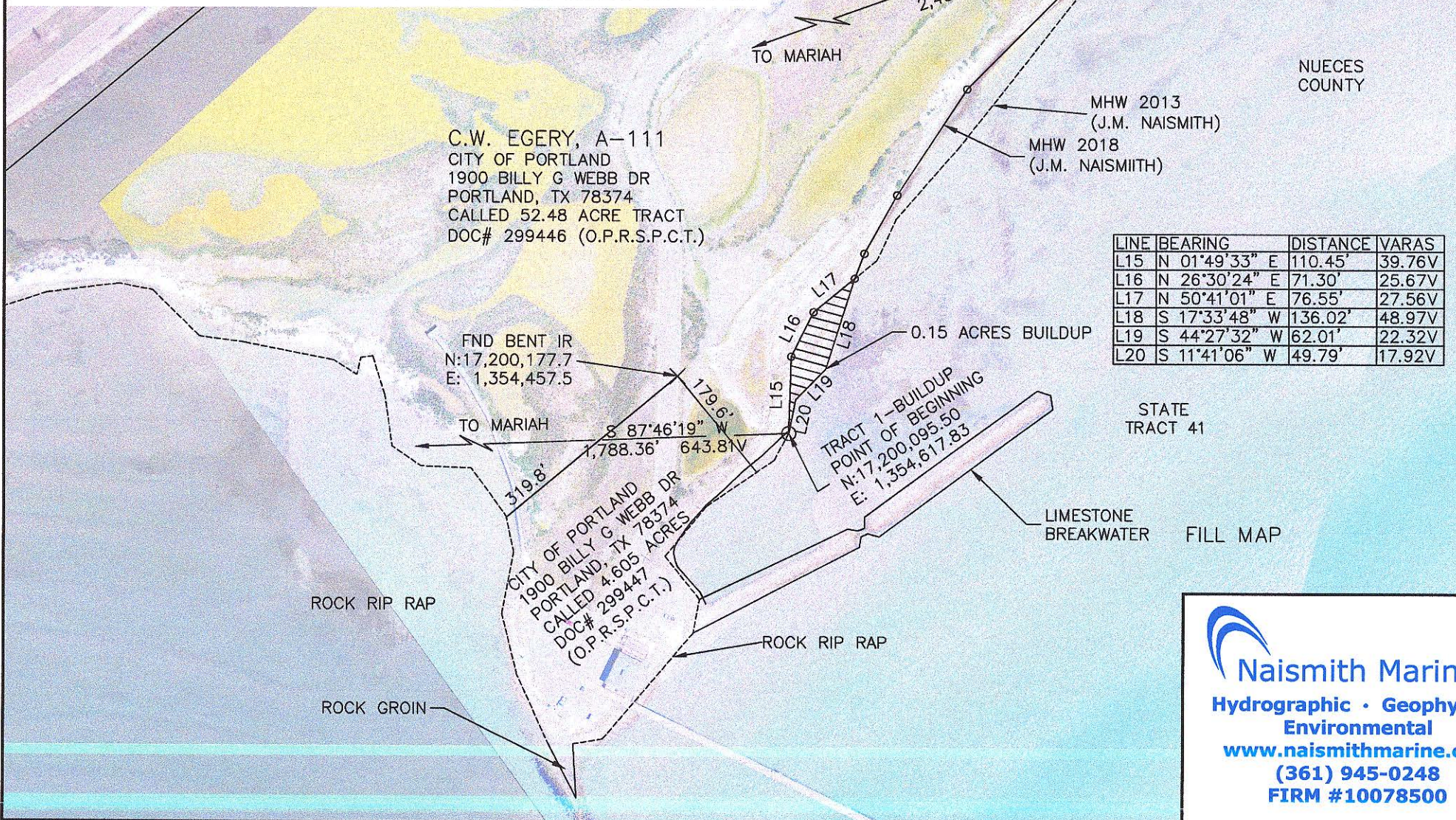
SCALE: 1" = 300'
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SHEET: 1 OF 2

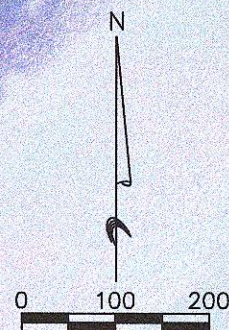
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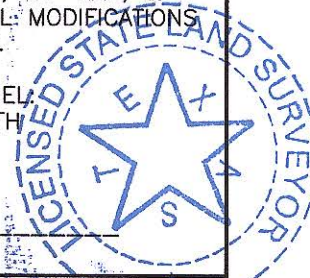
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SCALE: 1" = 200'	DATE: SEP 2018	SHEET: 2 OF 2
DWG: JZG		

Naismith Marine Services, Inc.

2007 FM 3036
Rockport, TX 78382
(361) 945-0248

www.naismithmarine.com

[FIRM #10078500](#)



September 2018

Report of a Coastal Boundary Survey

THE LITTORAL BOUNDARY OF A PORTION OF A
35.1 ACRE UPLAND TRACT
IN THE C.W. EGERY SURVEY, A-111
ADJACENT TO PATENT 106
CORPUS CHRISTI BAY, NUECES CO. TEXAS

to accompany map of survey dated September, 2018
Indian Point, Corpus Christi Bay

TEXAS GENERAL LAND OFFICE

Art. 33.136, Natural Resources Code

Co. San Patricio, Sk. No. 8
File Date 12/2/2018 by K. Schneider



Survey Area (Google Earth)

Survey Methodology

The littoral boundary of a 37.7 acre tract of land consisting of a 35.2 acre tract of land (called 52.48 acres) described in a deed to the City of Portland, file no. 299446 OPRSPCT, and a 2.5 acre tract (called 4.605 acres) described in a deed to the City of Portland, file no. 299447 OPRSPCT; in the C.W. Egery Survey, A-111, adjacent to "Patent 106", a portion of State Tract 41 patented to the Nueces County Navigation District No. 1 (now the Port of Corpus Christi), described in Refugio Scrip SF-1930 filed at the Texas General Land Office (GLO) was surveyed in January, 2013 by Naismith Marine Service. A plat and survey report of the littoral boundary survey were filed with the GLO as required under Texas Natural Resources Code 33.136. (GLO San Patricio Sketch File 7). Please see GLO San Patricio Sketch File 7 for details on the history of the upland tracts and reasoning for the location of the 2013 littoral boundary as surveyed. The 2013 survey was updated and supplemented by a littoral boundary survey conducted September 2018. Both surveys were completed with GPS-RTK. The base was stationed at NGS control point "MARIAH" PID: DH4664 (N:17,200,025.97, E: 1,352,830.82, EL.: 3.1')

Artificial Buildup

Artificial buildup exists along the project area. Two tracts have been delineated along the littoral boundary (Tract 1 & Tract 1A). The artificial buildup appears to be the result of unnatural accretion accelerated by the placement of rock breakwaters seaward of the littoral boundary; thus, the littoral boundary remains along the 2013 MHW line landward of the 2018 MHW line & toe of buildup where artificial buildup exists. Detail of artificial buildup is shown on a buildup map being sheet 2 of 2 of the survey map which accompanies this survey report.

Datums

Horizontal Datum is NAD83, Texas South Central Zone, US Feet and varas.

Vertical Datum is NAVD88, Mean High Water (MHW) determined at Tide Station 'Texas State Aquarium' (2013). Note that the published NAVD88 values at the Tide Gauge are approximately 0.2' different than the NGS published values at Indian Point. Mean High Water is 1.2' NAVD88 for this survey.

Proposed Erosion Response Activity

A) enhancing the existing barrier ridge protecting the adjacent wetlands by beneficially utilizing stockpiled material located onsite.

B) Erecting rock structures consisting of groins and breakwaters to protect the site from the forces of erosion. CEPR Project Number 1660 (Submerged land owned by the Port of Corpus Christi)

Equipment

GPS-RTK – Hemisphere S320 or Trimble R8

Personnel

Project Surveyor: James M. Naismith, RPLS, LSLS

Crew Chief: Seth Gambill

Field notes of littoral boundary along project area

Field Notes of the littoral boundary of a portion of a 35.1 acre tract of land (called 52.48 acres) described in a deed to the City of Portland, file no. 299446 OPRSPCT, in the C.W. Egery Survey, A-111, adjacent to "Patent 106", a portion of State Tract 41 patented to the Nueces County Navigation District No. 1 (now the Port of Corpus Christi), described in Refugio Scrip SF-1930 filed at the Texas General Land Office;

Beginning at a point (N:17,200,095.50, E: 1,354,617.83) on the intersection of the littoral boundary being the Mean High Water (MHW) line surveyed in January, 2013 by Naismith Marine Services; a plat and survey report of which were filed with the Texas General Land Office as required under Texas Natural Resources Code 33.136 (TGLO San Patricio Sketch File 7), and the position of the MHW line of Corpus Christi Bay surveyed in 2018, being the southeast littoral boundary of said 35.1 acre (called 52.48 acre) tract described in file no. 299446 OPRSPCT, point also being the point of beginning of a 0.15 acre tract of artificial buildup; from which NGS control point "MARIAH" PID: DH4664 (N:17,200,025.97, E: 1,352,830.82, EL.: 3.1') bears S 87°46'19" W, a distance of 1,788.36' (643.81)v;

thence N 01°49'33"E continuing along the 2013 position of the MHW line of Corpus Christi Bay a distance of 110.45' (39.76v) and for the following calls;

thence N 26°30'24"E a distance of 71.30' (25.67v);

thence N 50°41'01"E a distance of 76.55' (27.56v) to a point on the intersection of the said 2013 MHW line and said 2018 MHW line;

thence N 20°50'48"E continuing along the 2018 MHW line a distance of 38.57' (13.89v) and for the following calls;

thence N 29°11'23"E a distance of 96.41' (34.71v);

thence N 33°26'32"E a distance of 183.06' (65.90v);

thence N 44°54'44"E at 375.45' (135.16v) passing a point on the intersection of 2018 MHW line and 2013 MHW line being the point of beginning of a 0.13 acre tract of artificial buildup, and continuing along 2013 MHW line in all a distance of 642.38' (231.26v);

thence N 49°07'58"E continuing along 2013 MHW line a distance of 308.00' (110.88v) and for the following call;

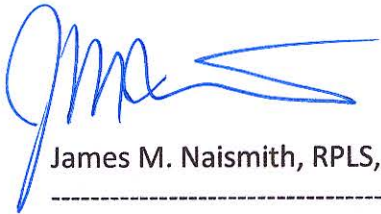
thence N 51°17'59"E a distance of 170.52' (61.39v) to a point on the intersection of 2018 MHW line and 2013 MHW line;

thence N 52°36'02"E continuing along 2018 MHW line a distance of 293.89' (105.80v) and for the following calls;

thence N 60°35'01"E a distance of 212.89' (76.64v);

thence N 84°46'15"E a distance of 64.41' (23.19v);

thence N 39°28'28"E a distance of 61.29' (22.06v);
thence S 62°47'12"E a distance of 70.98' (25.55v);
thence N 71°17'27"E a distance of 75.89' (27.32v);
thence N 46°04'22"E a distance of 91.14' (32.81v) which is the **end point** (N:17,201,745.59,
E:1,356,416.22), from which NGS control point "MARIAH" bears S 64°22'37" W, a distance of
3,976.46' (1,431.52v).



James M. Naismith, RPLS, LSLS

Naismith Marine Services, Inc.



11/15/2018

Field notes of artificial fill - buildup

Tract 1

Field Notes of artificial buildup being seaward of the littoral boundary of a portion of a 35.1 acre tract of land (called 52.48 acres) described in a deed to the City of Portland, file no. 299446 OPRSPCT, in the C.W. Egery Survey, A-111, adjacent to "Patent 106", a portion of State Tract 41 patented to the Nueces County Navigation District No. 1 (now the Port of Corpus Christi), described in Refugio Scrip SF-1930 filed at the Texas General Land Office;

Beginning at a point (N:17,200,095.50, E: 1,354,617.83) on the intersection of the littoral boundary being the Mean High Water (MHW) line surveyed in January, 2013 by Naismith Marine Services; a plat and survey report of which were filed with the Texas General Land Office as required under Texas Natural Resources Code 33.136 (TGLO San Patricio Sketch File 7), and the position of the MHW line of Corpus Christi Bay surveyed in 2018, being the southeast littoral boundary of said 35.1 acre (called 52.48 acre) tract described in file no. 299446 OPRSPCT; from which NGS control point "MARIAH" PID: DH4664 (N:17,200,025.97, E: 1,352,830.82, EL.: 3.1') bears S 87°46'19" W, a distance of 1,788.36' (643.81v);

thence N 01°49'33"E continuing along the 2013 MHW line a distance of 110.45' (39.76v) and for the following calls;

thence N 26°30'24"E a distance of 71.30' (25.67v);

thence N 50°41'01"E a distance of 76.55' (27.56v) to a point on the intersection of the 2013 MHW line and the 2018 MHW line;

thence S 17°33'48"W continuing along the 2018 MHW line a distance of 136.02' (48.97v) and for the following calls;

thence S 44°27'32"W a distance of 62.01' (22.32v);

thence S 11°41'06"W a distance of 49.79' (17.92v);

which is the **point of beginning**, containing 6,670 sq ft or 0.15 acres

Tract 1A

Field Notes of artificial buildup being seaward of the littoral boundary of a portion of a 35.1 acre tract of land (called 52.48 acres) described in a deed to the City of Portland, file no. 299446 OPRSPCT, in the C.W. Egery Survey, A-111, adjacent to "Patent 106", a portion of State Tract 41 patented to the Nueces County Navigation District No. 1 (now the Port of Corpus Christi), described in Refugio Scrip SF-1930 filed at the Texas General Land Office;

Beginning at a point (N:17,200,857.05, E: 1,355,139.10) on the intersection of the littoral boundary being the Mean High Water (MHW) line surveyed in January, 2013 by Naismith Marine Services; a plat and survey report of which were filed with the Texas General Land Office as required under Texas Natural Resources Code 33.136 (TGLO San Patricio Sketch File 7), and the position of the MHW line of Corpus Christi Bay surveyed in 2018, being the southeast

littoral boundary of said 35.1 acre (called 52.48 acre) tract described in file no. 299446 OPRSPCT; from which NGS control point "MARIAH" PID: DH4664 (N:17,200,025.97, E: 1,352,830.82, EL.: 3.1') bears S 70°11'56" W a distance of 2,453.33' (883.20v);

thence N 44°54'44"E continuing along said 2013 MHW line a distance of 266.93' (96.10v) and for the following calls;

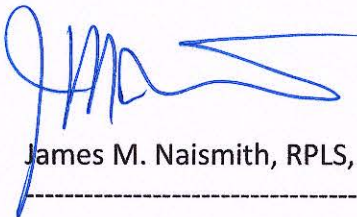
thence N 49°07'58"E a distance of 308.00' (110.88v);

thence N 51°17'59"E a distance of 170.52' (61.39v) to a point on the intersection of the 2013 MHW line and the 2018 MHW line;

thence S 48°36'53"W continuing along 2018 MHW line a distance of 237.98' (85.67v) and for the following call;

thence S 47°53'02"W a distance of 506.77' (182.44v);

which is the **point of beginning**, containing 5,781 sq ft or 0.13 acres



James M. Naismith, RPLS, LSLs

Naismith Marine Services, Inc.

