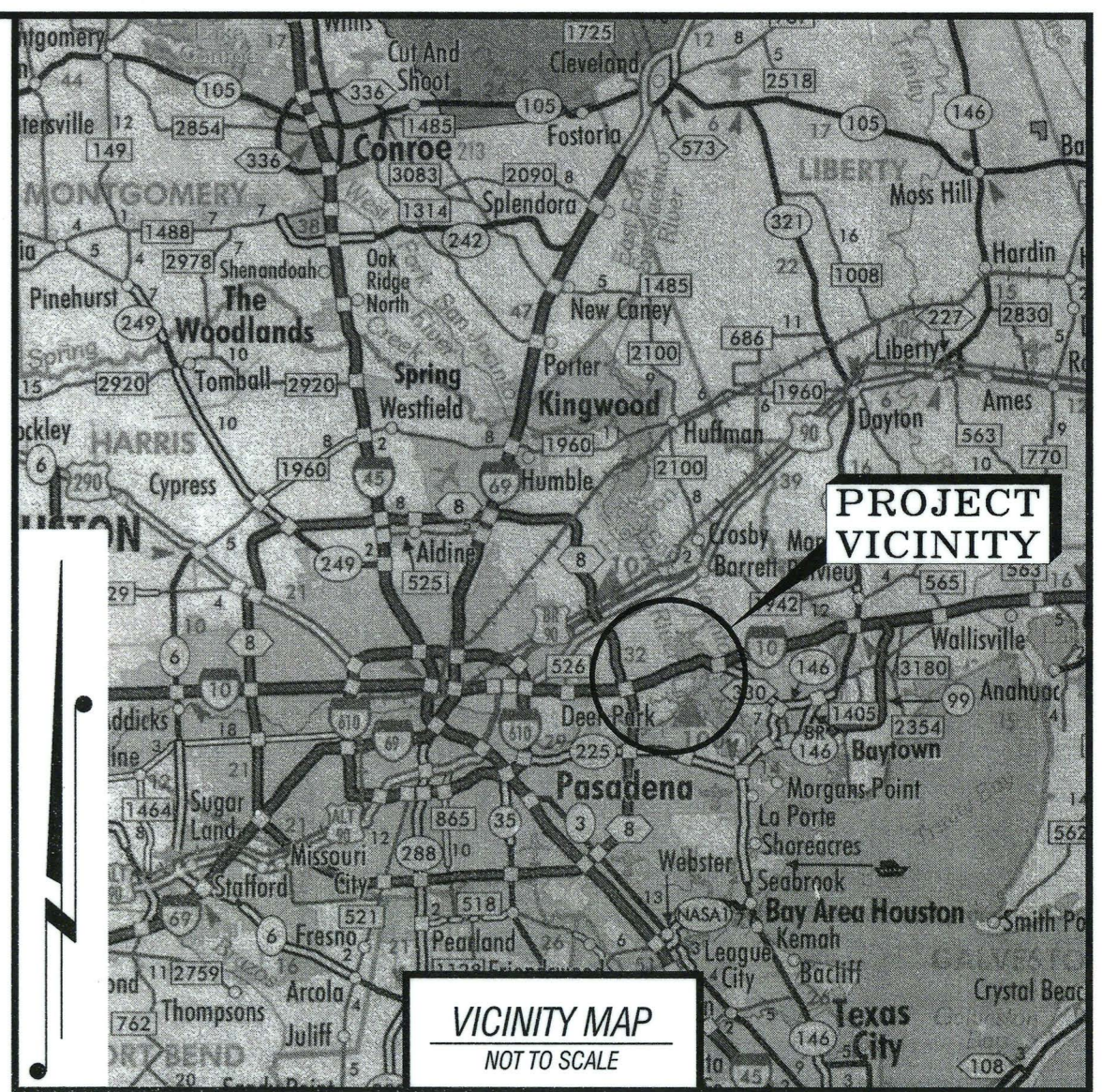


6/17/2024 - P:\1\2023\2023.1809\DWG\CBS - COASTAL BOUNDARY\23.1809_OLD RIVER TERRACE-COASTAL BOUNDARY REV01.DWG



REFERENCE MAPS:

- 1. REVISED OLD RIVER TERRACE AS RECORDED IN VOLUME 14, PAGE 19, MAP RECORDS OF HARRIS COUNTY TEXAS, DATED NOVEMBER 1906, REVISED OCTOBER 12, 1907.
2. SURVEY CONDUCTED RELATIVE TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, US SURVEY FEET, NORTH AMERICAN DATUM OF 1983 (NAD83). ALL BEARINGS, DISTANCES, AND COORDINATES SHOWN HEREON ARE GRID, COMBINED SCALE FACTOR 0.9999725, BASED ON STATIC GPS OBSERVATIONS AND ONLINE POSITIONING USER SERVICE SOLUTION. CONVERSION ANGLE IS +1° 54' 41.2".

- 3. ALL OTHER MONUMENTS ARE REFERENCED AS MEASURED AND SHOWN HEREON.
4. ALL POSITIONS AND ELEVATIONS RECORDED USING SURVEY GRADE, RTK GPS, EQUIPMENT: TRIMBLE R10 AND R12 RECEIVERS.
5. AS REFERENCED TO THIS SURVEY, THE STATE OWNERSHIP BOUNDARY IS BASED ON THE MEAN HIGH WATER (MHW) CONTOUR. MHW ELEVATION OF 1.6 NAVD83 WAS DETERMINED IN ACCORDANCE WITH A LOCAL TIDE STUDY CROSS-CHECKED AGAINST NOAA TIDE GAUGES: "MANCHESTER, TX - STATION ID: 877077" AND "MORGANS POINT, BARBOURS CUT, TX - STATION ID: 8770813".
6. TO CONVERT FEET TO VARAS MULTIPLY BY 0.36.
7. SURVEY ABSTRACTS NOT FIELD VERIFIED AND SHOULD BE CONSIDERED APPROXIMATE.
8. REFERENCE ACCOMPANYING REPORT CONTAINING FIELD NOTES DATED JANUARY 2024 FOR ADDITIONAL INFORMATION.
9. VARIOUS TRASH AND DEBRIS ALONG THE BANK EXISTS AT TIME OF SURVEY.
10. EROSION RESPONSE WORK: PROPOSED BULKHEAD / PRIVATE PROJECT
11. NO BULDOZOR OR FILL WAS OBSERVED IN THIS AREA.

Table with columns: LINE, BEARING, FEET, VARAS. Lists survey points L1 through L44 with their respective bearings and distances.

- LEGEND:
● FOUND IRON ROD
○ SET IRON ROD
▲ FOUND BRASS DISK/SET CONTROL
■ FOUND CONCRETE MONUMENT
(B) RECORD
(M) MEASURED
B.F.E. BASE FLOOD ELEVATION
P.O.C. POINT OF COMMENCEMENT
P.O.B. POINT OF BEGINNING
P.O.T. POINT OF TERMINATION
FND. FOUND
F.I.R. FOUND IRON ROD
F.I.P. FOUND IRON PIPE
RCP. REINFORCED CONCRETE PIPE
R.O.W. RIGHT-OF-WAY
N.T.S. NOT TO SCALE
D.R.N.C.T. DEED RECORDS OF NUCCES COUNTY, TEXAS
O.P.R.N.C.T. OFFICIAL PUBLIC RECORDS OF NUCCES COUNTY, TEXAS
M.R.N.C.T. MAP RECORDS OF NUCCES COUNTY, TEXAS
--- PROPERTY LINE
--- APPROXIMATE SURVEY ABSTRACT
--- APPROXIMATE SCALED FLOOD ZONE
--- RIGHT-OF-WAY LINE
--- FENCE
--- OVERHEAD POWERLINE
--- CULVERT
--- APPARENT TELEPHONE/BURIED CABLE
--- GAS --- APPARENT GAS SERVICE
--- EXISTING PIPELINE
--- EXISTING WATER LINE
--- EXISTING FIBER OPTIC
--- VEGETATION LINE
--- FIRE HYDRANT
--- POWER POLE
--- LIGHT POLE
--- TRANSMISSION POLE/TOWER
--- MANHOLE
--- MONITOR WELL
○ TREE

I, JAMES M. NAISMITH, HEREBY STATE THAT THIS DRAWING REPRESENTS A SURVEY THAT IS CORRECT, IN ACCORDANCE WITH SECTION 21.042 TEXAS NATURAL RESOURCES CODE, WAS MADE ACCORDING TO LAW, WAS MADE IN THE FIELD UNDER MY DIRECT CONTROL AND SUPERVISION, WAS MADE UTILIZING METHODOLOGY APPROVED BY THE GLO, AND IS RECORDED IN

Doc # RP-2024-234339

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 MOVEMENT LANDWARD AS PROVIDED BY SECTION 33.136, NATURAL RESOURCES CODE.

THIS LITTORAL BOUNDARY SURVEY OF MEAN HIGH WATER EXTENDS ALONG A PORTION OF THE NORTHERLY BANK OF OLD RIVER.

SURVEYED: JANUARY 25, 2024
SURVEY PERSONNEL: SCOTTY RALL, SR., MARLON AMAYA

Signature of James M. Naismith, dated 6/24/2024, with professional seal and registration number 4828.

TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code
Co. Harris, SK No. 21
File Date: 7/20/24 by L. Parsons

Table with columns: REV. NO., REV. DATE, REV. DESCRIPTION, REV. BY. Shows revision 01 dated 05/24/24 for 'REVISION FOR GLO' by MM.

TBS T. BAKER SMITH A CENTURY OF SOLUTIONS
412 South Van Ave, Houma, LA 70363
(985)868-1050 - tbsmith.com

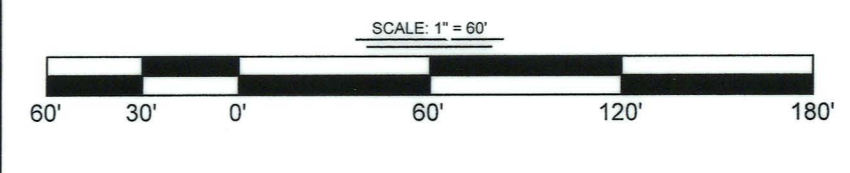


Table with columns: DRAWN BY, DATE, DRAWING NAME, PROJECTION, GRID UNITS, SHEET NO. Values include MM, 1/31/2024, 09_OLD RIVER TERRACE-COASTAL BOUNDARY REV01.DWG, TEXAS SOUTH CENTRAL, US SURVEY FEET, 1 OF 1.

COASTAL BOUNDARY SURVEY
MUNOZ ENGINEERING
COASTAL BOUNDARY SURVEY
ALONG A PORTION OF THE NORTHERLY BANK OF OLD RIVER
SITUATED IN THE J. HARRELL SURVEY, ABSTRACT 330
AND THE W. CARTER SURVEY, ABSTRACT 1709
HARRIS COUNTY, TEXAS



TEXAS GENERAL LAND OFFICE
COMMISSIONER DAWN BUCKINGHAM, M.D.

TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code
Co. Harris Sk No. 21
File Date 7/30/24 by L. Parsons

**Surveying Services
Coastal Boundary Survey**

Project: N. Bank of Old River, J. Harrell, A-330, W. Carter, A1709
Project No: Houston Port Authority Nav District (State Mineral Interest only)
Project Manager: Amy Nunez, Dianna Ramirez, Coastal Field Operations
Surveyor: Jim M. Naismith, Licensed State Land Surveyor
Description: Coastal Boundary Survey dated January 25, 2024, was conducted along a portion of the northerly bank of Old River situated in the J. Harrell Survey, Abstract 330, the W. Carter Survey, Abstract 1709, and Submerged Land Tract A in Harris County, Texas, for State of Texas mineral interest only. Centroid coordinates 29.785100° N, 95.097868° W, WGS84. A copy of the survey has been filed in Document No. RP-2024-234339, on June 27, 2024, Real Property Records, Harris County Texas.

A Coastal Boundary Survey for the above-referenced project has been reviewed and accepted by Surveying Services; upon completion of public notice requirements, the survey will be filed in the Texas General Land Office, Archives and Records, in accordance with provisions of the Tex. Nat. Res. Code §33.136.

by:

Signed:

David Klotz, Staff Surveyor

7/24/2024

Surveying Services Date

Pursuant to Tex. Nat. Res. Code §33.136, the herein described Coastal Boundary Survey is approved by Dawn Buckingham, M.D., Commissioner of the Texas General Land Office.

by:

Signed:

Jennifer Jones
Chief Clerk and Deputy Land Commissioner

DocuSigned by:
Jennifer G Jones
E70CDF09B56540E...

7/29/2024

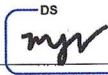
Date


1700 North Congress Avenue, Austin, Texas 78701-1495
P.O. Box 12873, Austin, Texas 78711-2873
512-463-5001 glo.texas.gov


Filed as: Harris County, NRC Article 33.136 Sketch No. 21
Tex. Nat. Res. Code §33.136

ROUTING FOR INTERNAL DOCUSIGN PACKET

Staff Surveyor 

Surveying 

Legal 

Director 

Dep. Gen. Counsel 

Gen. Counsel 



T. BAKER SMITH
A CENTURY OF SOLUTIONS
3854 FM 1069
Aransas Pass, TX 78336
(361)334-5719 - tbsmith.com

TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code
Co. Harris, SK No. 21
File Date 7/30/24 by L. Parsons

JANUARY 2024

COASTAL BOUNDARY SURVEY ALONG A PORTION OF THE NORTHERLY BANK OF OLD RIVER
ACROSS THE REMAINDER OF LOTS 11, 12, 13, 14, AND 15, BLOCK 1 OF REVISED OLD RIVER TERRACE
SITUATED IN THE J. HARRELL SURVEY, ABSTRACT 330
AND THE W. CARTER SURVEY, ABSTRACT 1709,
HARRIS COUNTY, TEXAS

This report accompanies a map of survey dated January 25, 2024.



Figure 1: The typical shoreline of Old River. (Looking Easterly)



Figure 2: The typical shoreline of Old River. (Looking Westerly)

A coastal boundary survey was conducted along a portion of the northerly bank of Old River situated in the J. Harrell Survey, Abstract 330, the W. Carter Survey, Abstract 1709, and Submerged Land Tract A in Harris County, Texas. All survey work was performed using survey grade RTK GPS base and rover: Trimble R10 and R12 receivers. The survey was conducted on January 25, 2024.

SURVEY CONTROL: One NGS monument and two found monuments were used as primary control:
"HGCS D 31" (N: 13,852,649.36, E: 3,204,626.75, EL: 18.90' NAVD88), published position
Found 1/2" iron rod with cap (N: 13,853,990.46, E: 3,205,672.46, EL: 27.09' NAVD88)
Found "X" in concrete (N: 13,854,273.66, E: 3,206,354.88, EL: 25.48' NAVD88)

Datum is NAD 83 (2011), South Central Zone of the Texas Coordinate System (US Survey Feet).
Orthometric heights referenced to NAVD88 datum (Geoid 18).



Figure 3: NGS benchmark “HGCS D 31” (N: 13,852,649.36, E: 3,204,626.75, EL: 18.90’ NAVD88)

STATE OWNERSHIP BOUNDARY: As referenced to this survey, the state ownership boundary is based on the Mean High Water (MHW) contour. MHW elevation of 1.6’ NAVD88 was determined in accordance with a local tide study cross-checked against NOAA Tide Gauges: “Manchester, TX – Station ID: 8770777” and “Morgans Point, Barbours Cut, TX – Station ID: 8770613”.

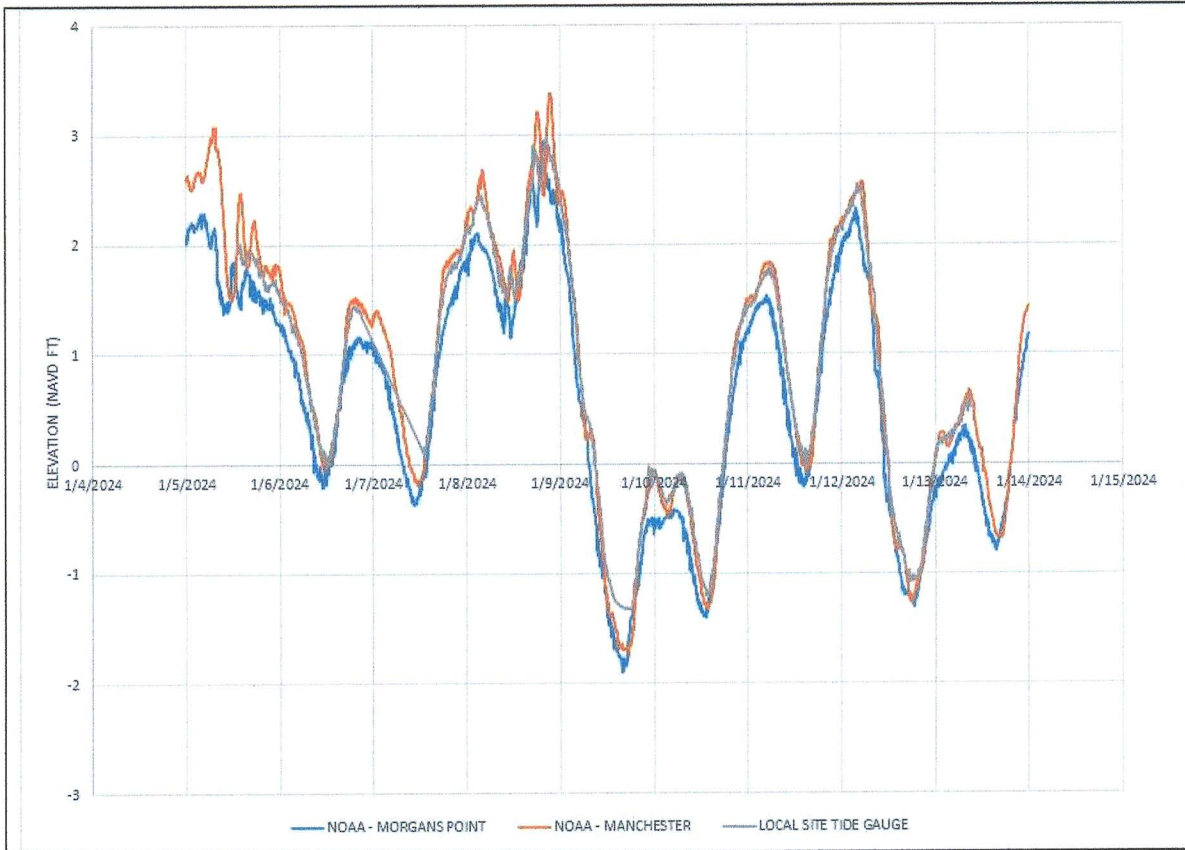


Figure 5: Tide Study Chart

FIELD NOTES for the coastal boundary survey along a portion of the northerly bank of Old River across the remainder of Lots 11, 12, 13, 14, and 15, Block 1 of Revised Old River Terrace as recorded in Volume 14, Page 19 of the Map Records of Harris County, Texas (M.R.H.C.T.), and being situated in the J. Harrell Survey, Abstract 330, the W. Carter Survey, Abstract 1709, and Submerged Land Tract A in Harris County, Texas. Distances, bearings, and Coordinates are grid, North American Datum of 1983 (2011), South Central Zone (4204) of the Texas Coordinate System;

Beginning at the intersection of the MHW line with the west line said remainder of Lot 11, (N: 13,853,522.61, E: 3,205,869.75) along the northerly bank of Old River, from which NGS monument "HGCS D 31" (N: 13,852,649.36, E: 3,204,626.75, EL: 18.90') bears S 54°54'38" W, a distance of 1,519.08 feet (546.87V), also from which a 1/2" iron rod with cap found for the ostensible northwest corner of said remainder of Lot 11 (N: 13,853,990.46, E: 3,205,672.46, EL: 27.09'), bears N 22°51'55" W, a distance of 507.75 feet (182.79V);

Thence along said MHW line, the following courses and distances:

- N 49°48'44" E, a distance of 13.45 feet (4.84V);
- N 13°38'28" E, a distance of 12.87 feet (4.63V);

N 30°47'41" W, a distance of 15.11 feet (5.44V);
N 00°37'12" E, a distance of 22.92 feet (8.25V);
N 43°40'43" E, a distance of 32.99 feet (11.88V);
N 59°48'43" E, a distance of 18.32 feet (6.60V);
N 19°10'30" W, a distance of 11.04 feet (3.97V);
N 05°35'30" E, a distance of 12.00 feet (4.32V);
N 37°38'54" E, a distance of 18.31 feet (6.59V);
N 47°03'26" E, a distance of 9.97 feet (3.59V); from which a 5/8" iron rod with cap found on
the ostensible common line of said remainders of Lots 11 and 12 bears
N 19°22'35" W, a distance of 20.65 feet (7.43V);
N 73°35'31" E, a distance of 13.95 feet (5.02V);
S 81°57'34" E, a distance of 17.37 feet (6.25V);
N 79°05'01" E, a distance of 8.45 feet (3.04V);
S 73°00'11" E, a distance of 7.56 feet (2.72V);
S 50°22'21" E, a distance of 8.86 feet (3.19V);
S 80°29'10" E, a distance of 19.90 feet (7.16V);
N 68°22'22" E, a distance of 19.29 feet (6.94V);
N 33°03'56" E, a distance of 18.50 feet (6.66V);
N 62°33'14" E, a distance of 8.03 feet (2.89V);
N 33°51'31" E, a distance of 24.60 feet (8.86V);
N 70°39'22" E, a distance of 13.49 feet (4.86V);
N 43°11'45" E, a distance of 21.18 feet (7.62V);
N 64°52'46" E, a distance of 7.18 feet (2.58V);
S 83°38'45" E, a distance of 9.13 feet (3.29V);
N 57°15'44" E, a distance of 9.91 feet (3.57V);
N 80°52'52" E, a distance of 8.20 feet (2.95V);
N 45°45'01" E, a distance of 12.10 feet (4.36V);
S 82°59'40" E, a distance of 6.07 feet (2.19V);
N 49°41'13" E, a distance of 6.72 feet (2.42V);
N 72°39'19" E, a distance of 9.26 feet (3.33V);
S 87°10'36" E, a distance of 8.32 feet (3.00V);
S 36°39'22" E, a distance of 9.76 feet (3.51V);
S 88°29'37" E, a distance of 5.33 feet (1.92V);
N 39°27'03" E, a distance of 6.16 feet (2.22V);
N 67°05'02" E, a distance of 6.55 feet (2.36V);
S 75°33'58" E, a distance of 21.98 feet (7.91V);
N 88°57'28" E, a distance of 9.35 feet (3.37V);
N 66°24'20" E, a distance of 24.08 feet (8.67V);
S 81°00'43" E, a distance of 6.59 feet (2.37V);
N 70°00'10" E, a distance of 22.40 feet (8.06V);
N 77°52'11" E, a distance of 55.44 feet (19.96V);
N 50°37'10" E, a distance of 11.65 feet (4.19V);
N 76°18'14" E, a distance of 9.97 feet (3.59V);

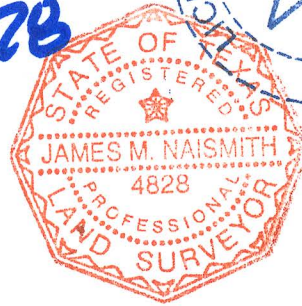
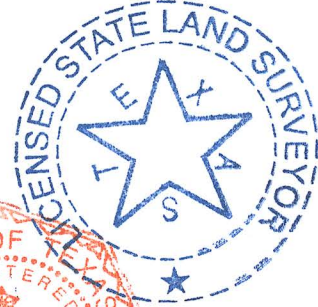
Thence N 57°05'32" E, a distance of 6.80 feet (2.45V) to the intersection of the MHW line with the east line of said remainder of Lot 15 for the **POINT OF TERMINATION** (N: 13,853,773.53, E: 3,206,327.79), from which an "X" cut in a concrete driveway found for the ostensible northeast corner of said remainder of Lot 15 (N: 13,854,273.66, E: 3,206,354.88, EL: 25.48' NAVD88) bears N 03°05'58" E, a distance of 500.86 feet (180.31V).

Prepared 1/31/2024. Revised 5/24/2024.



James M. Naismith, RPLS, LSLs

6/24/2024
#4828



TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code
Co. Harris, SK No. 21
File Date 7/30/24 by L. Parsons



State of Texas
County of Harris
County Auditor's Form 153
Harris County, TX (rev. 07/11)

Teneshia Hudspeth, County Clerk
Real Property (713) 274-8680
201 Caroline, STE 320, Houston, TX 77002-1901
Fee Officer's Official Receipt

Receipt # : RP24017183

Receipt Date : 06/27/2024 10:47:11 AM

Client Name:

Fee Description	Amount
Doc#: RP-2024-234339 Pgs: 15 Recorded: 06/27/2024 REAL PROPERTY	\$81.00

Total	\$81.00
Amount Tendered	\$81.00
Change	\$0.00
Balance	\$0.00

Credit Card \$81.00

Total Documents: 1

06/27/2024 10:47:11 AM

Cashier: Rosa.Infante