

JAN 27 2020



CANDY ABSHIER WMA SHORELINE PROTECTION

GALVESTON COUNTY
IN COOPERATION WITH
TEXAS PARKS AND WILDLIFE DEPARTMENT



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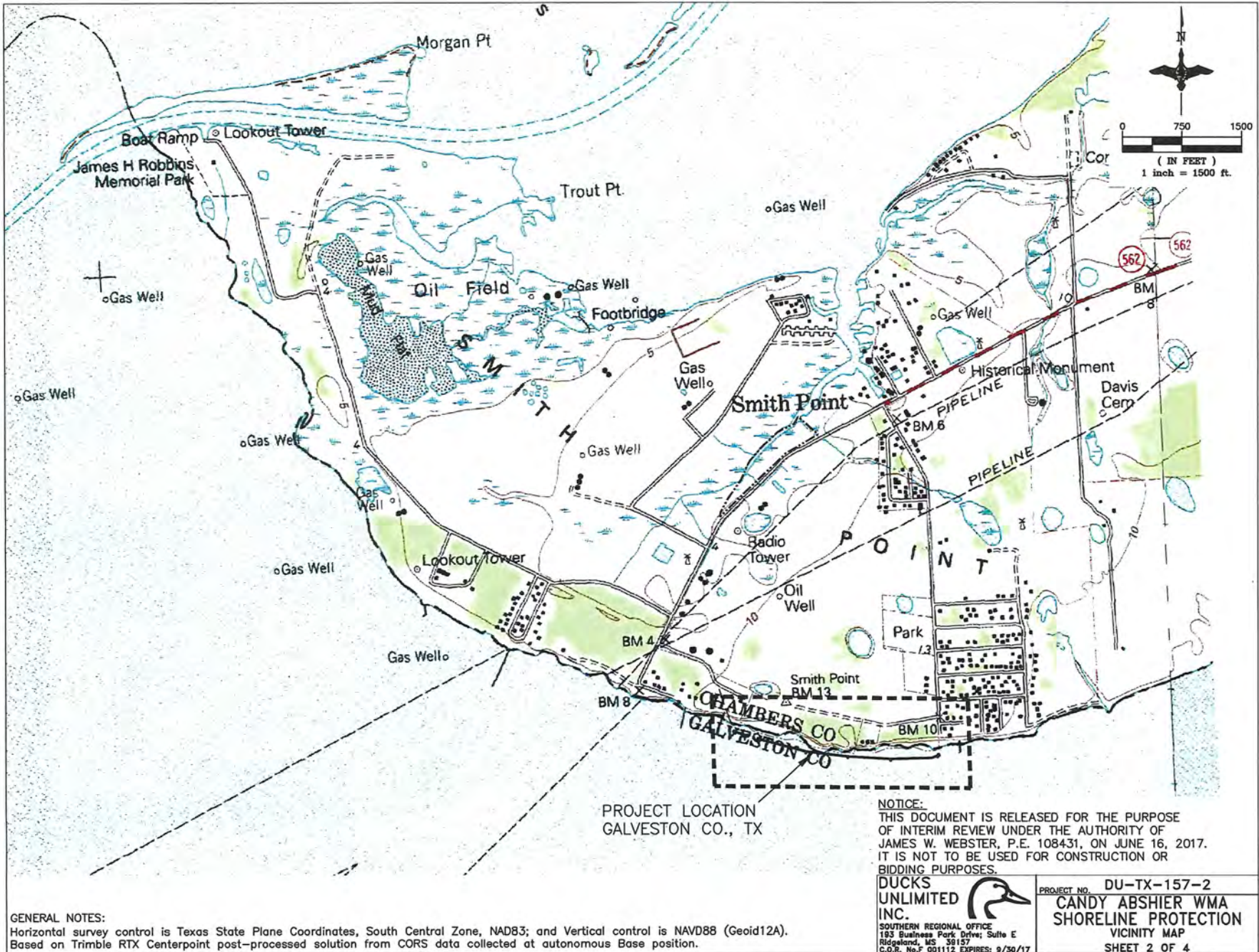
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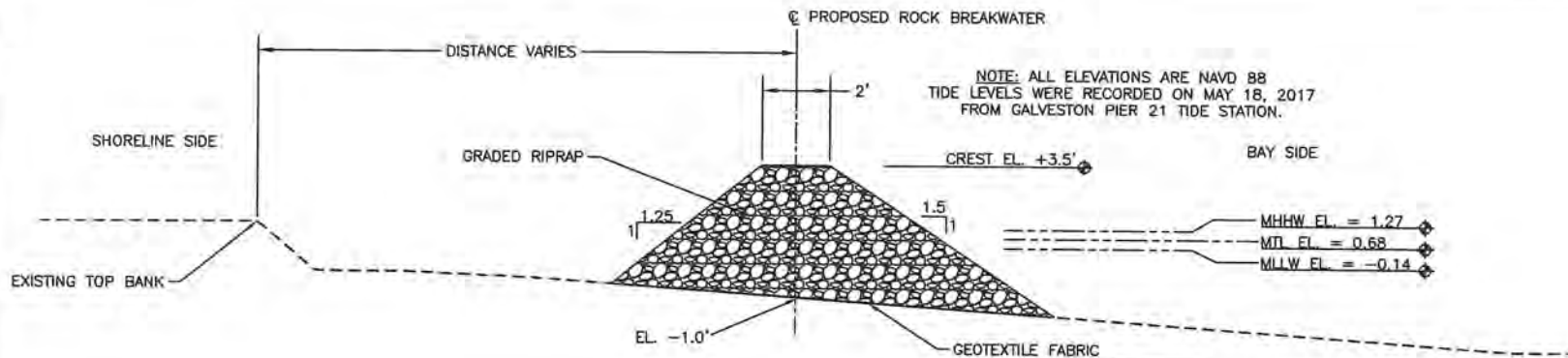
DUCKS UNLIMITED INC.
SOUTHERN REGIONAL OFFICE
183 Business Park Drive, Suite E
Ridgeland, MS 39157
C.O.R. No.F 001112 EXPIRES: 9/30/17



PROJECT NO. DU-TX-157-2
**CANDY ABSHIER WMA
SHORELINE PROTECTION**
COVER SHEET
SHEET 1 OF 4



JAN 27 2020



TYPICAL SECTION - ROCK BREAKWATER
NOT TO SCALE

NOTE:
1. ALL ELEVATIONS ARE NAVD 88
BREAKWATER 1 - 628 TONS
BREAKWATER 2 - 6,120 TONS

IMPACT TABLE				
ITEM	TONS	CUBIC YARDS	AREA (AC)	LINEAR FEET
BREAKWATER #1	628	314	0.08	146'
BREAKWATER #2	6,120	3,060	0.77	2,265'

SUBMERGED BREAKWATER (SQ.FT.)			
ITEM	MLLW	MTL	MHHW
BREAKWATER #1	640	1,198	1,745
BREAKWATER #2	4,875	10,150	13,981

(3) 3/4" DIA. x 12" LONG A307 (HDG) DOME HEAD BOLTS WITH OGEE WASHER AND NUT (TYP.)



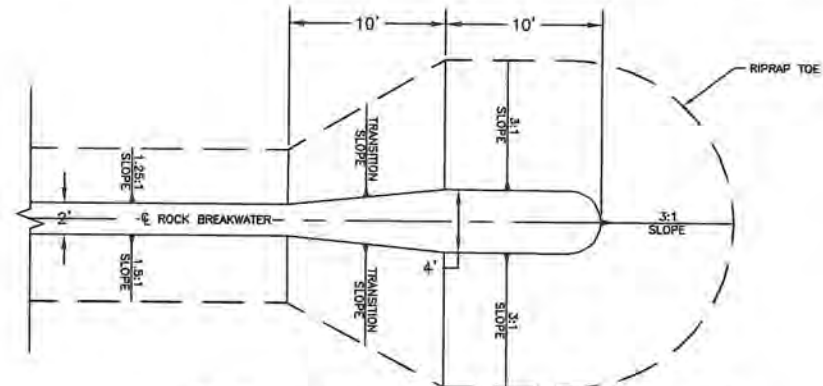
RETROFLECTIVE BLACK LETTERS (TYP.) SIGN LETTERING SHALL CONFORM TO 33CFR, CHAPTER 1, SUBPART 66.10-25

(1) 10" DIA. x 25' LONG TREATED TIMBER POST (2.5CCA)

DRIVE OR JET TIMBER POST IN PLACE

TYPICAL DETAIL - DAY BEACON
NOT TO SCALE

NOTE:
TOTAL OF 7 DAY BEACONS ARE TO BE INSTALLED. DAY BEACONS ARE TO BE LOCATED AT THE STARTING POINT, AND ENDING POINT OF THE ROCK BREAKWATER #1 DAY BEACONS ARE TO BE LOCATED AT THE STARTING POINT, MIDDLE, AND ENDING POINT OF THE ROCK BREAKWATER #2.



DETAIL - ROCK BREAKWATER TERMINATION
NOT TO SCALE

NOTE: GRADED RIP RAP IS COE 650# GRADATION.

GRADATION COE 650# STONE GRADATION	
PARTICLE MASS. lb.	% LIGHTER
280-650	100
130-280	50
40-130	25
0-40	5 MAX.

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BREAKWATER OVERVIEW**
SHEET 4 OF 4