U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

OMB No. 1660-0008
Expiration Date: November 30, 2018

ELEVATION CERTIFICATE

Important: Follow the instructions on pages 1–9.

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

SECTION A – PROPERTY INFORMATION

	FOR INSURANCE COMPANY USE
A1. Building Owner's Name: BARRY SIEWERT & JEANNINE C. LEHOUX-SIEWERT	Policy Number:
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: 7070 SOUTH SHORE DRIVE SOUTH	Company NAIC Number:
City: SOUTH PASADENA / State: FLORIDA / ZIP Code: 33707	

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)
NORTHWESTERLY 66' OF LOT 45, BLOCK 1, PASADENA ISLE & 50' SUBMERGED LAND S'LY.

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) RESIDENTIAL

A5. Latitude/Longitude: Lat. 27.7449 Long. -82.7369 Horizontal Datum: ☐ NAD 1927 ☒ NAD 1983

A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.

A7. Building Diagram Number 6

A8. For a building with a crawlspace or enclosure(s):

a) Square footage of crawlspace or enclosure(s) 2314 sq ft

b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 12

c) Total net area of flood openings in A8.b 2400 sq in

d) Engineered flood openings? ☒ Yes ☐ No

A9. For a building with an attached garage:

a) Square footage of attached garage NA sq ft

b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade NA

c) Total net area of flood openings in A9.b NA sq in

d) Engineered flood openings? ☐ Yes ☒ No

SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number	B2. County Name	B3. State
SOUTH PASADENA 125151	PINELLAS	FL.

B4. Map/Panel Number	B5. Suffix	B6. FIRM Index Date	B7. FIRM Panel Effective/ Revised Date	B8. Flood Zone(s)	B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth)
12103C0276	G	8-18-09	9-03-03	AE	12'

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9:
☐ FIS Profile ☐ FIRM ☐ Community Determined ☒ Other/Source: ENGINEERING STUDY

B11. Indicate elevation datum used for BFE in Item B9: ☐ NGVD 1929 ☒ NAVD 1988 ☐ Other/Source:

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☒ No
Designation Date: ☐ CBRS ☐ OPA

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Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.			Policy Number:
7076 SOUTH SHORE DRIVE SOUTH			
City	State	ZIP Code	Company NAIC Number
SOUTH PASADENA	FLORIDA	33707	

SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: ☐ Construction Drawings* ☐ Building Under Construction* ☒ Finished Construction

*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO. Complete Items C2.a–h below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.

Benchmark Utilized: SEE COMMENTS Vertical Datum: NAVD 1988

Indicate elevation datum used for the elevations in items a) through h) below.

☐ NGVD 1929 ☒ NAVD 1988 ☐ Other/Source: _____

Datum used for building elevations must be the same as that used for the BFE.

		Check the measurement used.	
a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	6.4	☒ feet	☐ meters
b) Top of the next higher floor	14.0	☒ feet	☐ meters
c) Bottom of the lowest horizontal structural member (V Zones only)	NA	☒ feet	☐ meters
d) Attached garage (top of slab)	6.4	☒ feet	☐ meters
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	10.2	☒ feet	☐ meters
f) Lowest adjacent (finished) grade next to building (LAG)	5.9	☒ feet	☐ meters
g) Highest adjacent (finished) grade next to building (HAG)	6.4	☒ feet	☐ meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	6.2	☒ feet	☐ meters

SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. *I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.*

Were latitude and longitude in Section A provided by a licensed land surveyor? ☐ Yes ☐ No ☐ Check here if attachments.

Certifier's Name	License Number	Place Seal Here
DAVID C. HARNER	2650	
Title		
PROFESSIONAL LAND SURVEYOR & MAPPER		
Company Name		
DAVID C. HARNER		
Address		
9925 GULF BOULEVARD		
City / State / ZIP Code		
TREASURE ISLAND / FL. / 33706		
Signature	Date	Telephone
	6-27-16	727-360-0636

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments (including type of equipment and location, per C2(e), if applicable) A8a INCLUDES FOYER, GARAGE, ELEVATOR SHAFT AND STORAGE AREAS. B10-COASTAL EVALUATION STUDY BY MULTI-LYNX COMPANIES, INC. DATED 10-09-15. C2e. A/C COMPRESSOR ON EAST SIDE OF HOUSE. ELECTRIC METER ELEVATION = 17.3'. ELEVATOR SHAFT ELEVATION = 6.0'. C2a = FRONT DOOR ENTRANCE FOYER. 2ND STORY MAIN LIVING AREA FLOOR ELEVATION = 18.0'. TEMPORARY BENCHMARK ELEVATION = 5.05' ON BACK OF CURB, 17.9' NORTH OF NORTHWEST PROPERTY CORNER. A8d. SMARTVENTS MODEL #S40-520, #S2096509, RATED AT 200 SQ. FT. EACH. PAGES 3 AND 4 ARE NOT APPLICABLE.

ELEVATION CERTIFICATE

BUILDING PHOTOGRAPHS

See Instructions for Item A8.

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7076 SOUTH SHORE DRIVE SOUTH			
City	State	ZIP Code	Company NAIC Number
SOUTH PASADENA	FLORIDA	33707	

If using the Elevation Certificate to obtain NFIP flood insurance, affix at least 2 building photographs below according to the instructions for Item A8. Identify all photographs with date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8. If submitting more photographs than will fit on this page, use the Continuation Page.

6-09-16

Photo One

Photo One Caption FRONT VIEW

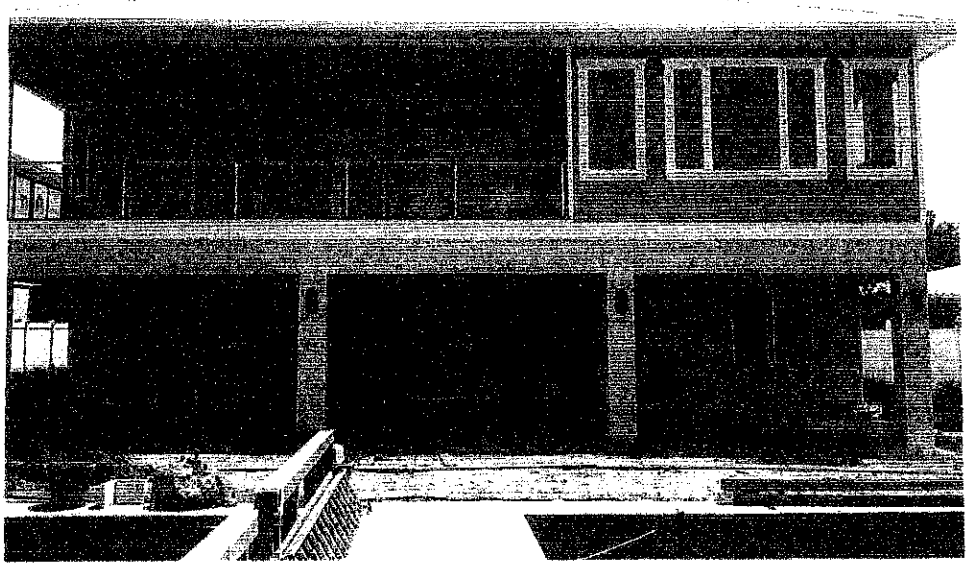

Photo Two

Photo Two Caption REAR VIEW

ELEVATION CERTIFICATE

BUILDING PHOTOGRAPHS
Continuation Page

OMB No. 1660-0008
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IMPORTANT: In these spaces, copy the corresponding information from Section A.

FOR INSURANCE COMPANY USE

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: 7076 SOUTH SHORE DRIVE SOUTH

Policy Number:

City: SOUTH PASADENA | State: FLORIDA | ZIP Code: 33707

Company NAIC Number

If submitting more photographs than will fit on the preceding page, affix the additional photographs below. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8.

6-09-20

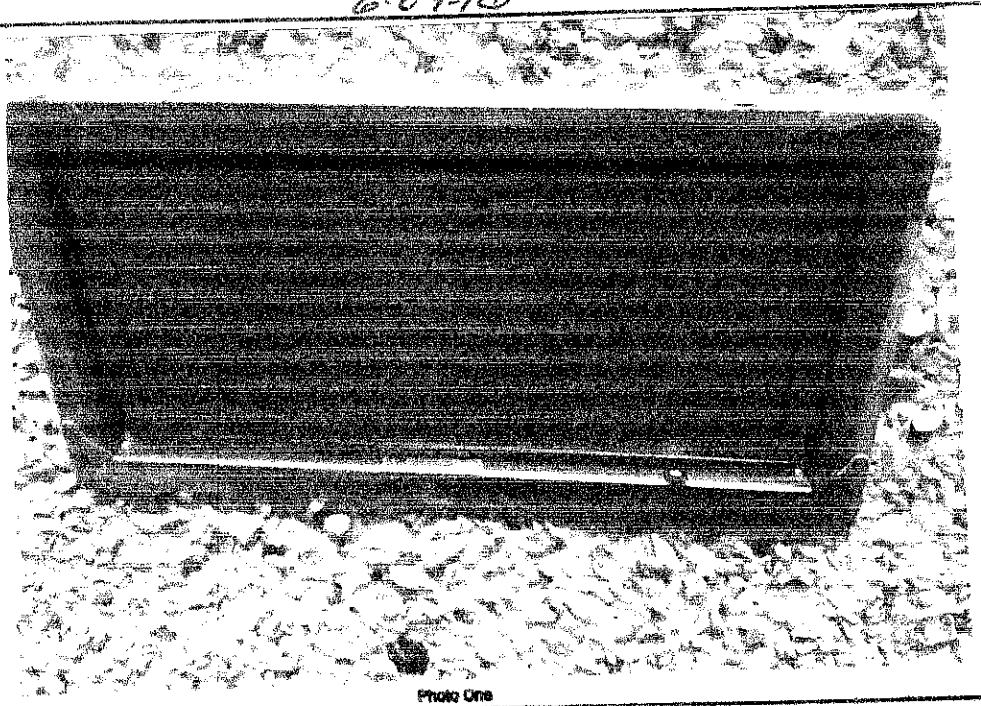


Photo One

Photo One Caption: TYPICAL SMART VENT

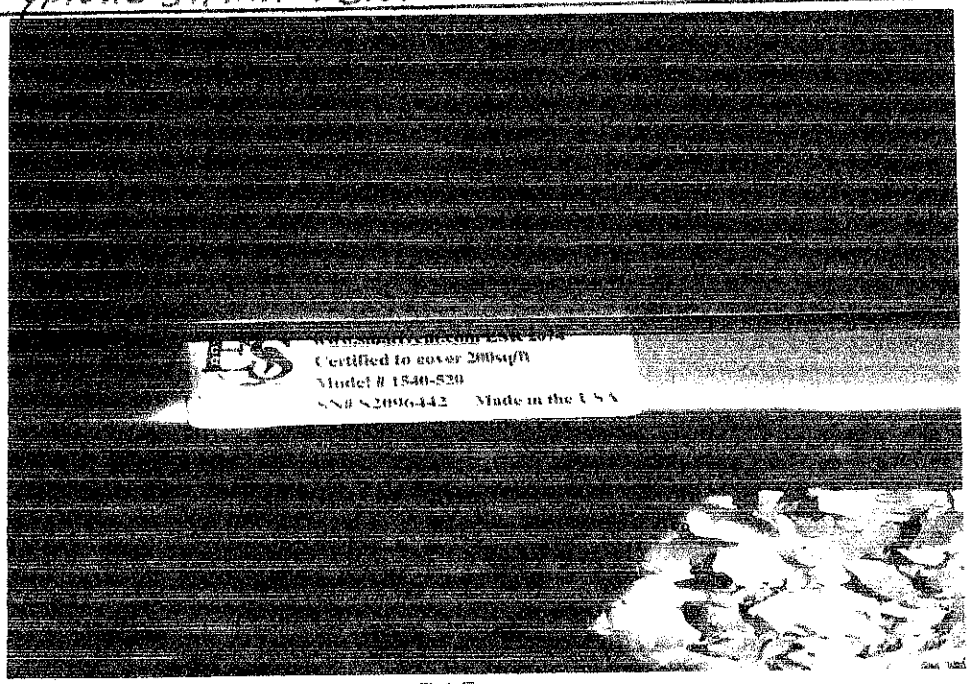


Photo Two

Photo Two Caption: TYPICAL SMART VENT

Coastal Evaluation
Wave Height & Wave Runup Analysis

At

7076 South Shore Drive
South Pasadena, Florida

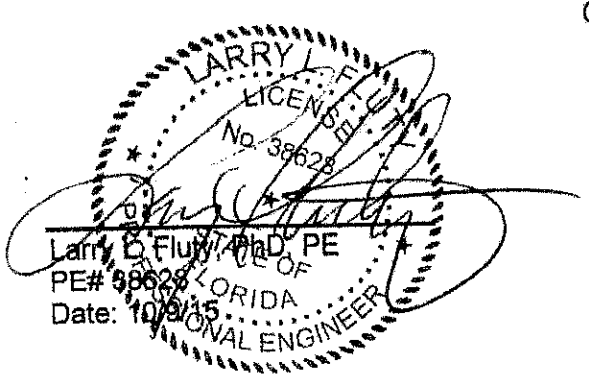
Prepared for:

Barry Siewert
7076 South Shore Drive
South Pasadena, Florida 33707

Prepared by:

Multi-Lynx Companies, Inc.
12331 Stringer Rd
Brooksville, Florida 34601

October 9, 2015



Larry D Fluty, PhD, PE
PE# 38628
Date: 10/9/15

EXECUTIVE SUMMARY

Current FEMA flood hazard maps for the City of South Pasadena show the coastal velocity zone (VE) extends along the City's entire shoreline. In the residential areas along South Shore Drive the coastal velocity zone extends landward into the area where adjacent areas of similar terrain does not have this significant extent of the coastal velocity zone landward of the shoreline. This inconsistency prompted the property owner to review and evaluate the accuracy of the existing FEMA coastal velocity zone delineation.

The initial steps in the study consisted of data collection of existing terrain data, FEMA model data, previous studies and other information that would provide the best available information. The evaluation utilized the collected data and developed a coastal model to evaluate and determine the accurate location of the coastal velocity zone along the property shoreline.

The findings of the model analysis determined that the elevation and location of the coastal velocity zone along the property moves seaward to a point along the existing seawalls. The results provide a consistency of velocity zone location along the mainland shoreline within the City of Pasadena.

INTRODUCTION

Multi-Lynx Companies, authorized by Mr. Barry Siewert, property owner, evaluated the proposed construction activities consisting of improvements to the existing residential property. The purpose of this evaluation is to confirm the above construction activities do not cause adverse impact to adjacent properties and compliant with FEMA criteria/standards.

Flood Insurance Rate Map (FIRM) No. 12103C0276G (effective 9/3/2003) show the project site lies within the velocity zone as defined in the National Flood Insurance Program (NFIP). To ensure construction activities are in compliance with NFIP standards, the City of South Pasadena requires an engineering analysis with supporting documentation be performed in accordance with the Coastal Construction Manual, FEMA Publication 55.

This document examines the factors due to the project construction activities at the subject site in terms of the requirements outlined in the above regulations. The analysis for wave runup was performed using FEMA's Coastal Hazard Analysis Modeling Program, "CHAMPS" Version 2.0 for wave height and runup calculations. The core programs used by CHAMPS for wave height and runup analysis are WHAFIS 4.0 and RUNUP 2.0 programs developed by FEMA.

DESCRIPTION OF THE SITE

The subject residence is located at 7076 South Shore Drive, generally situated on the south side of South Shore Drive. See Figure 1, Project Site Location. The back lot faces the inter-coastal waterway separating South Pasadena with the barrier islands of Treasure Island and Madeira Beach. The rear yard area consists of grassed yard from the residence to the shoreline seawall. The project site is in close proximity to the Gulf of Mexico and barrier islands.

SITE IMPROVEMENTS

The property is undergoing remodeling/construction including site construction in the rear property areas. The rear yard gently slopes from the residence building to the inter-coastal waterway. This area prior to construction activities consist of an open concrete patio area. The subject improvements at the site consists of a ground garage, elevated main living area, construction of a new pool, associated stem walls, outdoor patio space, and landscaping in the rear yard areas. Construction activities will not alter site drainage patterns, internal drainage basins or grades to the rear yard area. The rear yard patterns/slopes will remain unaltered thereby maintaining the slope to the intercoastal waterway.

Figure 1 Project Site Location

The topographic survey prepared by John C. Brendla & Associates, Inc.; proposed site plans prepared by Legacy Design Group are used for the basis for existing and proposed conditions for modeling purposes.

MODEL DATA DEVELOPMENT

Wave Height Analysis

For the purposes of considering storm effects on the project site, it is necessary to classify storms traveling through the area into one of three categories (1) emerging, (2) entering and (3) parallel. These categories relate to storm paths of each with respect to the overall shoreline in which the property is found.

An emerging storm will have struck Florida entering across the coast elsewhere and is traveling across this area on its way back to open sea. An entering storm will approach from the open sea first striking land in our general vicinity. A parallel storm will generally travel along the shoreline with a portion of the storm's circulation over the sea and portion over land.

An emerging storm, having recent travel predominantly over land, has significantly reduced winds and does not have any storm surge associated with its arrival at this site. The fact that a significant portion of a parallel storm's travel is also over land also significantly reduces its surge. The most severe storm surge effects are associated with an entering storm.

An entering storm must approach the site from the Gulf of Mexico and must travel across the barrier islands of Treasure Island prior to reaching the mainland to St. Petersburg. The distance between the barrier islands and mainland will limit the size and severity of wave action and erosion due to waves and surge.

CHAMPS model engine for wave height analysis WHAFIS predicts wave heights associated with hurricane coastal surge and is widely accepted for similar applications such as this analysis. Data

requirements for analysis include determining the fetch and depth of water approaching the site along an established transect line and the transaction of the site to the SWEL. The project transect line was established to represent the site and area characteristics for data development for model input. Data input also utilized standardized FEMA data values for this area of the Gulf of Mexico.

Figure 2, Project Transect Line, was used for wave height (WHAFIS) and for wave propagation (RUNUP) analysis.

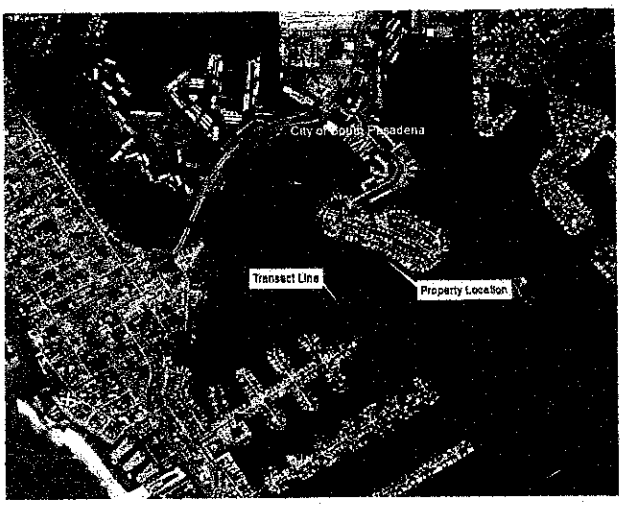


Figure 2
Project Transect Line

Wave Runup Analysis

Wave runup is commonly defined as the upper limit of wave uprush above the stillwater elevation. Wave runup for purposes of this evaluation is the landward boundary of the area affected by wave action. Wave runup due to existing and post grade and structural conditions of the project site are the key determinate's to determine the landward boundary of the area affected by wave action in each case.

Again, CHAMPS model engine for wave runup analysis RUNUP predicts wave propagation associated with hurricane winds and coastal surge. RUNUP similarly is widely accepted for similar model applications such as for this analysis. Data input utilized standardized FEMA data values for this area of the Gulf of Mexico and collected survey data.

Figure 3, LABINs Bathymetric Data Map (FDEP bureau of survey and mapping) was use for determining water depths across the intercoastal waterway to support the wave runup analysis.

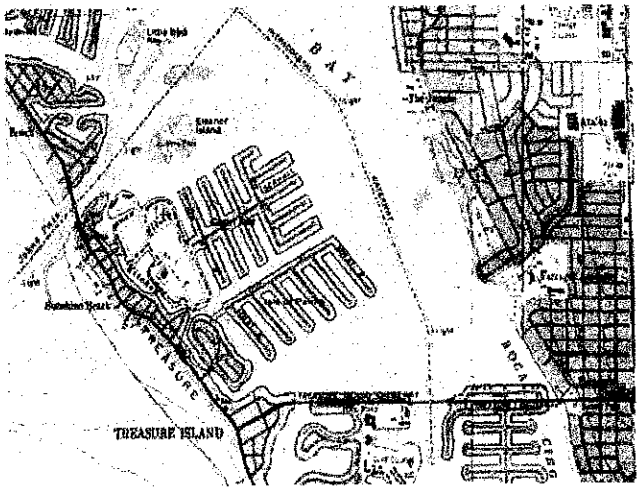


Figure 3 LABINs Bathymetric Data Map
(Source: FDEP bureau of survey and mapping)

Project Site Effective FIRM MAP PANELS

As stated previously in this report, the effective FIRM map panels covering the project site are panels 12103C0276G (Effective Date Sept 3, 2003).

The Effective FEMA FIS report dated September 3, 2003 was used as the source of SWEL elevations for analysis. The FIS study document shows the project site is located near transect No. 84. Table 1,

Transect Data, is presented below:

Table 1
Transect Data

Flooding Source	Still Water Elevations (feet NAVD)					
Gulf of Mexico /Boca Ciega Bay	10-YR	50-YR	100-YR	500-YR	ZONE	BFE
84	4.42	8.12	10.62	12.62	VE	13-17
					AE	11-13

The general conditions parameters used in the CHAMP model were taken from data available from the Florida Department of Environmental Protection shown in Table 2, General Data, as follows:

Table 2
General Data

General Data Input (source, FDEP)		
MHW	0.48	NAVD
MLW	-1.19	NAVD
Fetch Length	1 - 2	Miles

CHAMPS Model Description

The Coastal Hazard Analysis Modeling Program (CHAMP) is a software program designed to enable the user to perform storm-induced erosion treatments, wave heights analyses, and wave runup analyses associated with coastal flooding hazard assessments for FEMA Flood Insurance Studies (FIS) and revisions to Flood Insurance Rate Maps.

CHAMP is a Window-interfaced Visual Basic language program that allows the user to enter data, perform coastal engineering analyses, visualize and tabulate results and chart summary information for each transect within a user-friendly graphical interface. With CHAMP, the user can import digital elevation data; perform storm-induced erosion treatments, wave height analyses, and wave runup analyses; plot summary graphics of the results; and create summary tables and reports in a single environment.

CHAMP analyses are completed in 3 general steps:

1. Subject Property Information and Data Entry
2. Modeling