



Figure 2

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

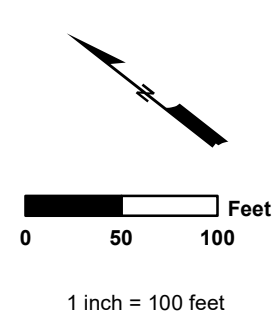
Shoreline Parcels

- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

Longboat Key Bulkheads & Lift Stations Map



APTIM
Environmental & Infrastructure, LLC.
2481 N. W. Boca Raton Boulevard
Boca Raton, FL 33431
Ph. (561) 391-8102
Fax (561) 391-9116
COA#9317

Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 1

Figure 4

Figure 1



Figure 5

Figure 3

Notes:

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4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

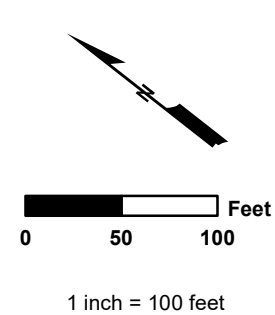
Shoreline Parcels

- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

**Longboat Key
Bulkheads & Lift Stations Map**



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Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 2

F:\CPM\Longboat Key\Sea Level Rise\Bulkhead Maps.mxd

Figure 2

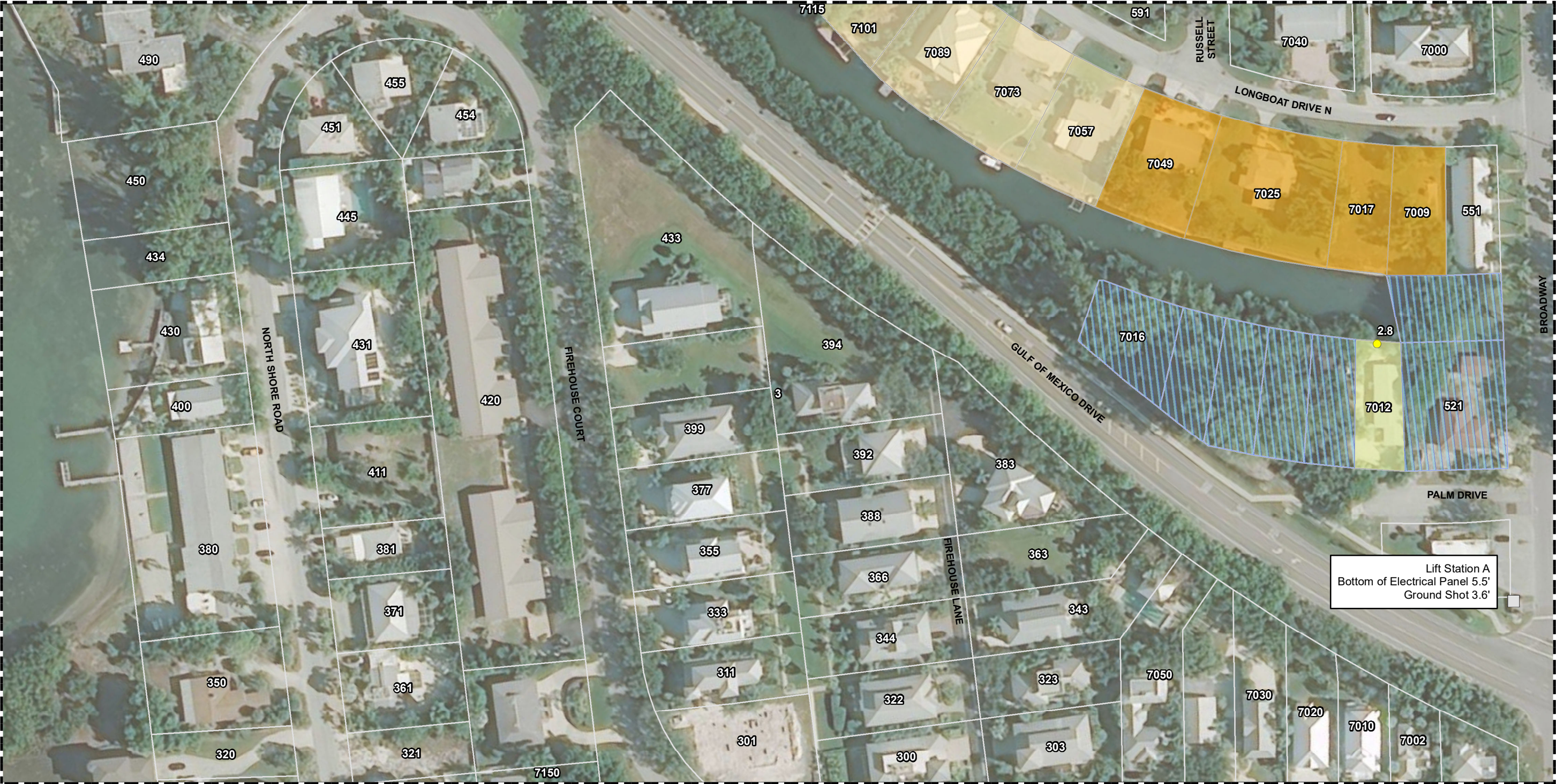


Figure 6

Notes:

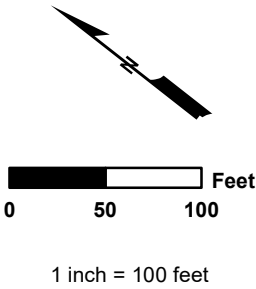
- 1. Data were collected by APTIM on the following dates:
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- 3. Elevations are in feet NAVD88.
- 4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

- Bulkhead Elevation (ft)**
- 1.3 - 1.5
 - 1.6 - 2.0
 - 2.1 - 2.5
 - 2.6 - 3.0
 - 3.1 - 3.5
 - 3.6 - 4.0
 - 4.1 - 4.5
 - 4.6 - 5.0
 - 5.1 - 5.5



TITLE:

**Longboat Key
Bulkheads & Lift Stations Map**



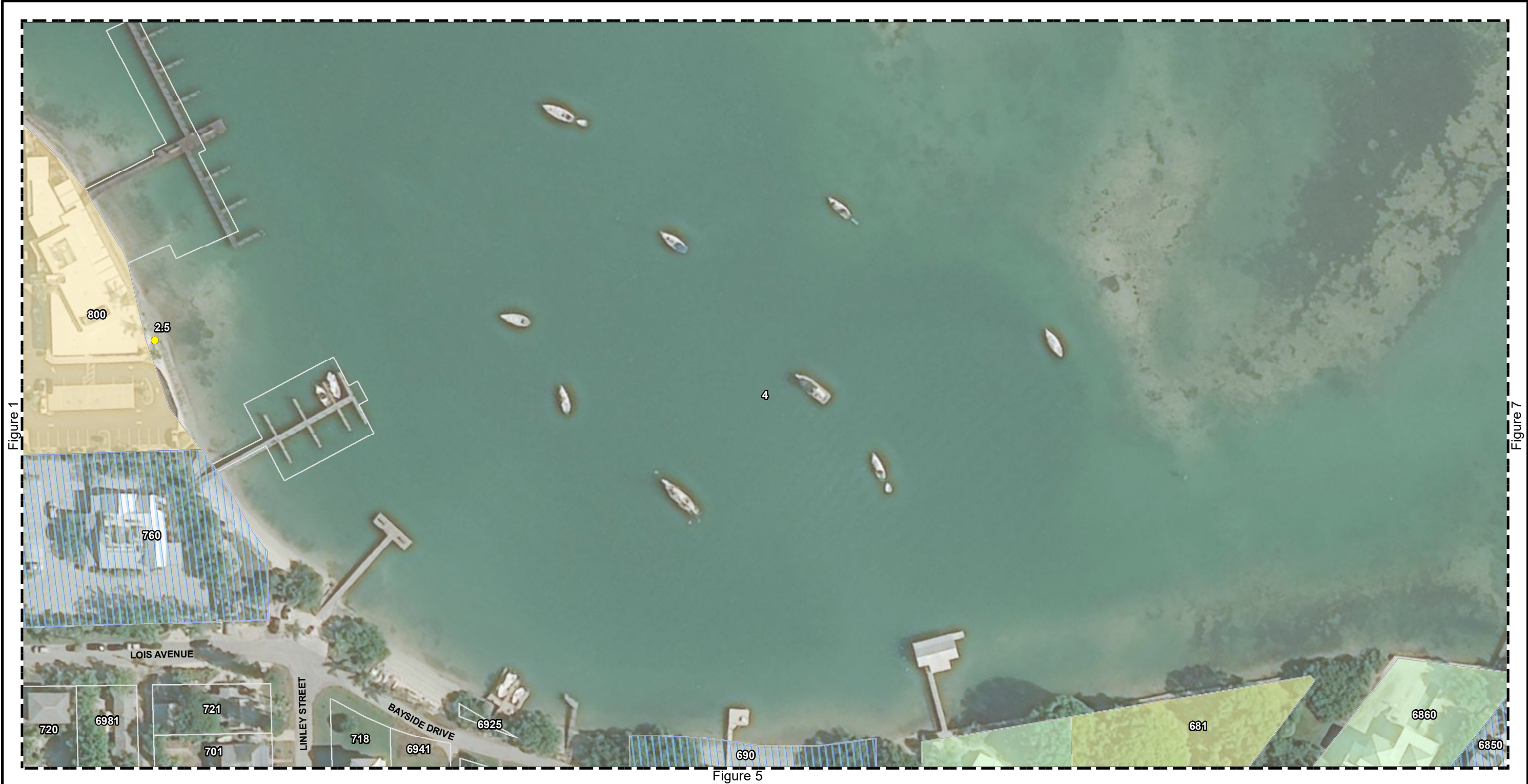
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Date: 05/13/21

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Figure 3



- Notes:**
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 3. Elevations are in feet NAVD88.
 4. Background imagery is ESRI's World Imagery basemap.

Legend:

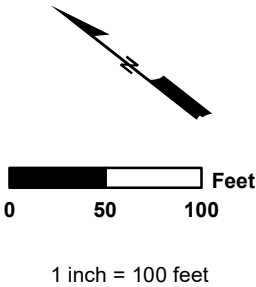
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

Longboat Key Bulkheads & Lift Stations Map

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Fax (561) 391-9116
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Date: 05/13/21 By: HMV Comm No. : 631005068 **Figure 4**



Notes:

1. Data were collected by APTIM on the following dates:
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3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

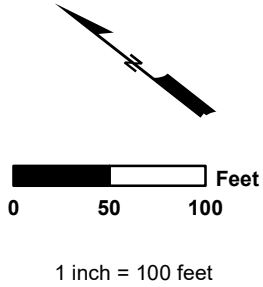
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

**Longboat Key
Bulkheads & Lift Stations Map**



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Date: 05/13/21

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Comm No. : 631005068

Figure 5



Notes:

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4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

Shoreline Parcels

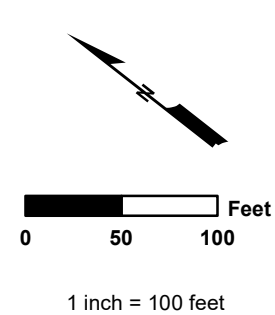
- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

Bulkhead Elevation (ft)

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

Longboat Key Bulkheads & Lift Stations Map



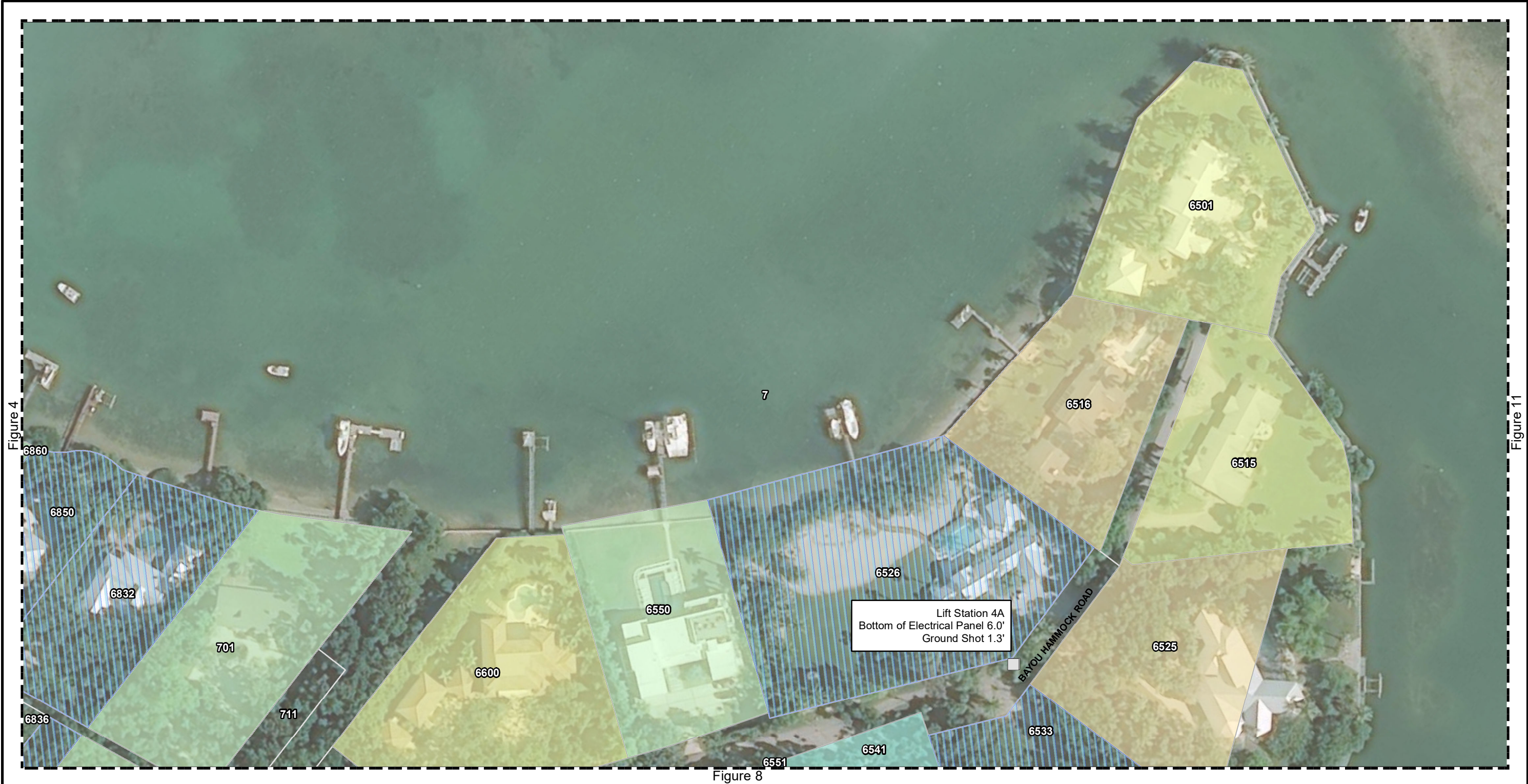
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Fax (561) 391-9116
COA#9317

Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 6



Notes:

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Legend:

● Field Measurement

■ Lift Stations

Shoreline Parcels

▨ Natural Shoreline

▤ Rock Revetment

Bulkhead Elevation (ft)

1.3 - 1.5	3.1 - 3.5
1.6 - 2.0	3.6 - 4.0
2.1 - 2.5	4.1 - 4.5
2.6 - 3.0	4.6 - 5.0
	5.1 - 5.5

0 50 100 Feet

1 inch = 100 feet

TITLE:

Longboat Key Bulkheads & Lift Stations Map

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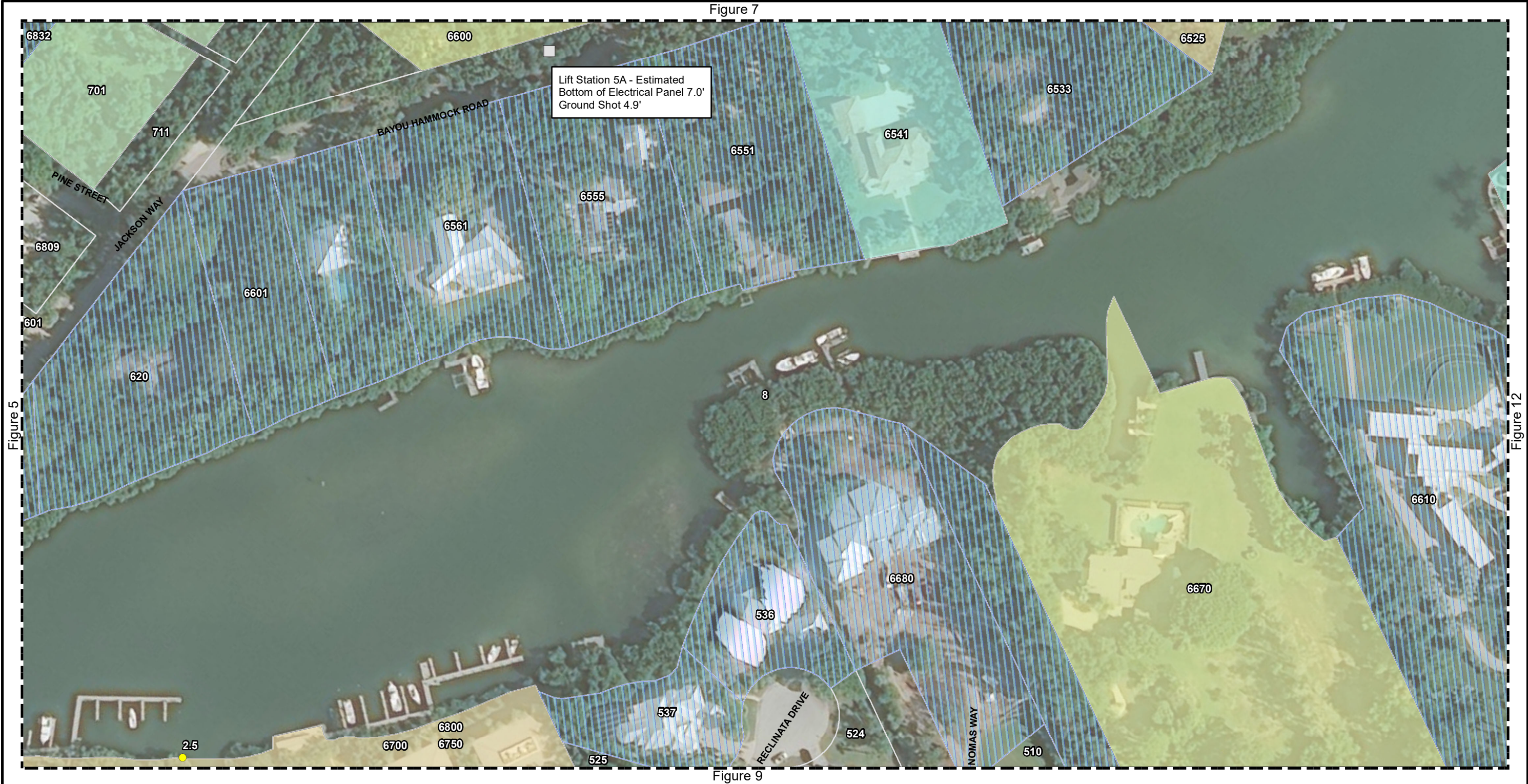
Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 7

F:\CPM\Longboat Key\Sea Level Rise\Bulkhead Maps.mxd



Notes:

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3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

Shoreline Parcels

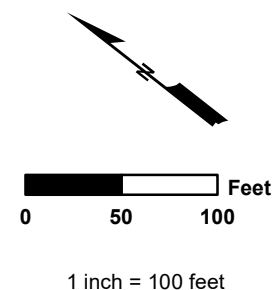
- ▨ Natural Shoreline
- ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

Bulkhead Elevation (ft)

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

Longboat Key Bulkheads & Lift Stations Map



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Figure 8

Figure 6

Figure 13



Notes:

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3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.





Legend:

- Field Measurement
- Lift Stations

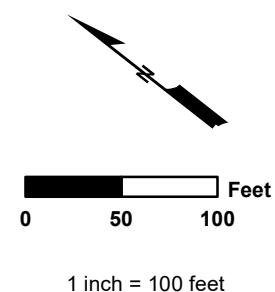
Shoreline Parcels

-  Natural Shoreline
 Rock Revetment

Bulkhead Elevation (ft)

- | | |
|---|-----------|
|  | 1.3 - 1.5 |
|  | 1.6 - 2.0 |
|  | 2.1 - 2.5 |
|  | 2.6 - 3.0 |

- | | |
|--|-----------|
| | 3.1 - 3.5 |
| | 3.6 - 4.0 |
| | 4.1 - 4.5 |
| | 4.6 - 5.0 |
| | 5.1 - 5.5 |



TITLE:

Longboat Key Bulkheads & Lift Stations Map



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Date: 05/13/21

By: HMOV

/	Comm No. : 631005068
---	----------------------

Figure 9

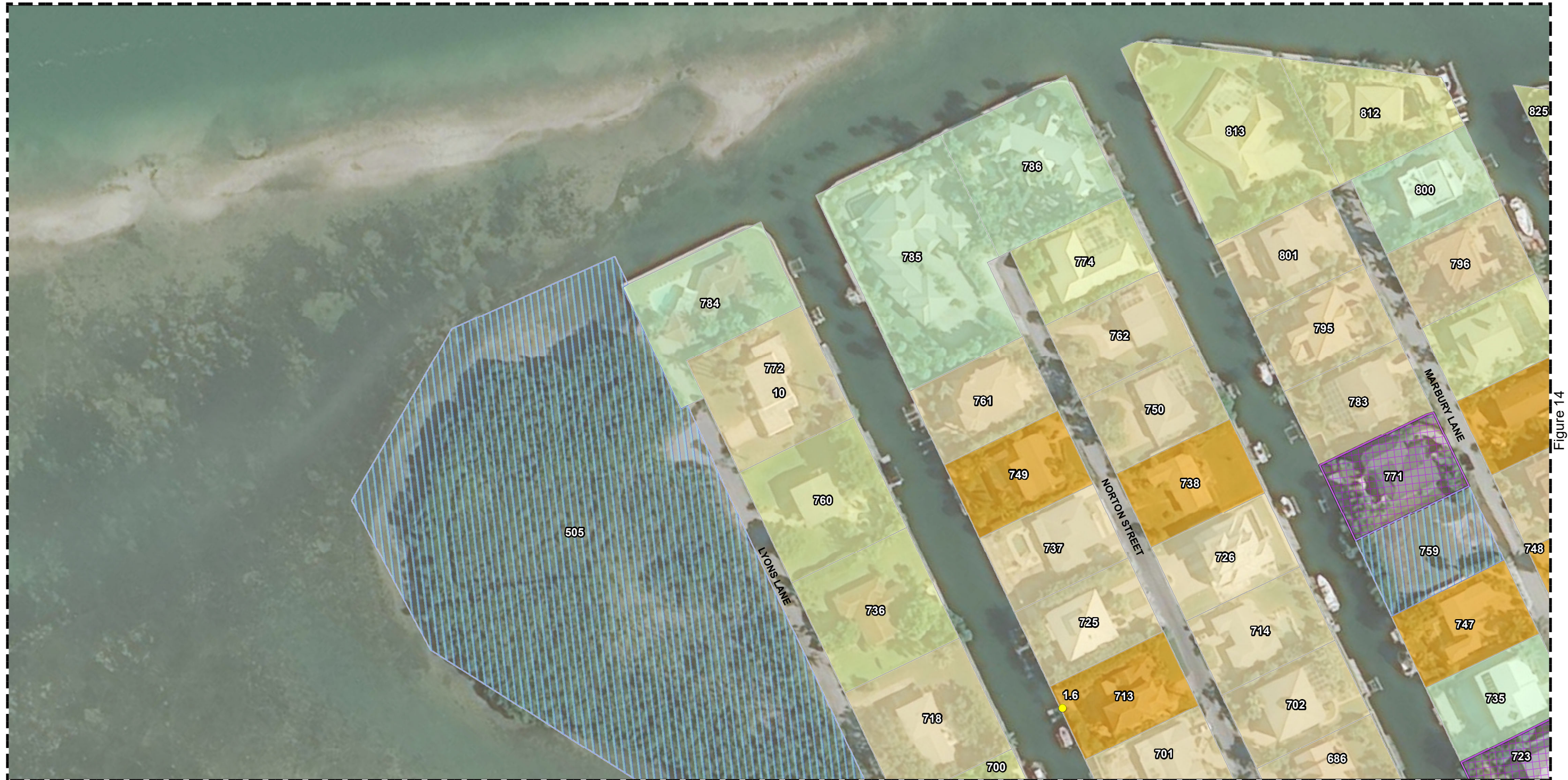


Figure 11

Figure 14

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
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3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

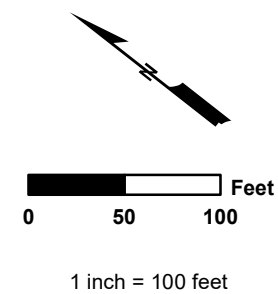
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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Comm No. : 631005068

Figure 10

Figure 7

Figure 10

Figure 12

Figure 15



Notes:

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4. Background imagery is ESRI's World Imagery basemap.





Legend:

- Field Measurement
- Lift Stations

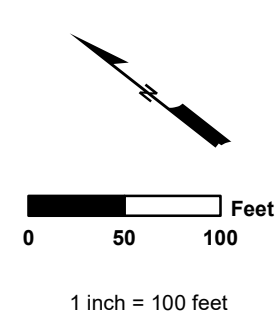
Shoreline Parcels

-  Natural Shoreline
 Rock Revetment

Bulkhead Elevation (ft)

- | | |
|---|-----------|
|  | 1.3 - 1.5 |
|  | 1.6 - 2.0 |
|  | 2.1 - 2.5 |
|  | 2.6 - 3.0 |

- | | |
|--|-----------|
| | 3.1 - 3.5 |
| | 3.6 - 4.0 |
| | 4.1 - 4.5 |
| | 4.6 - 5.0 |
| | 5.1 - 5.5 |



TITLE:

Longboat Key Bulkheads & Lift Stations Map



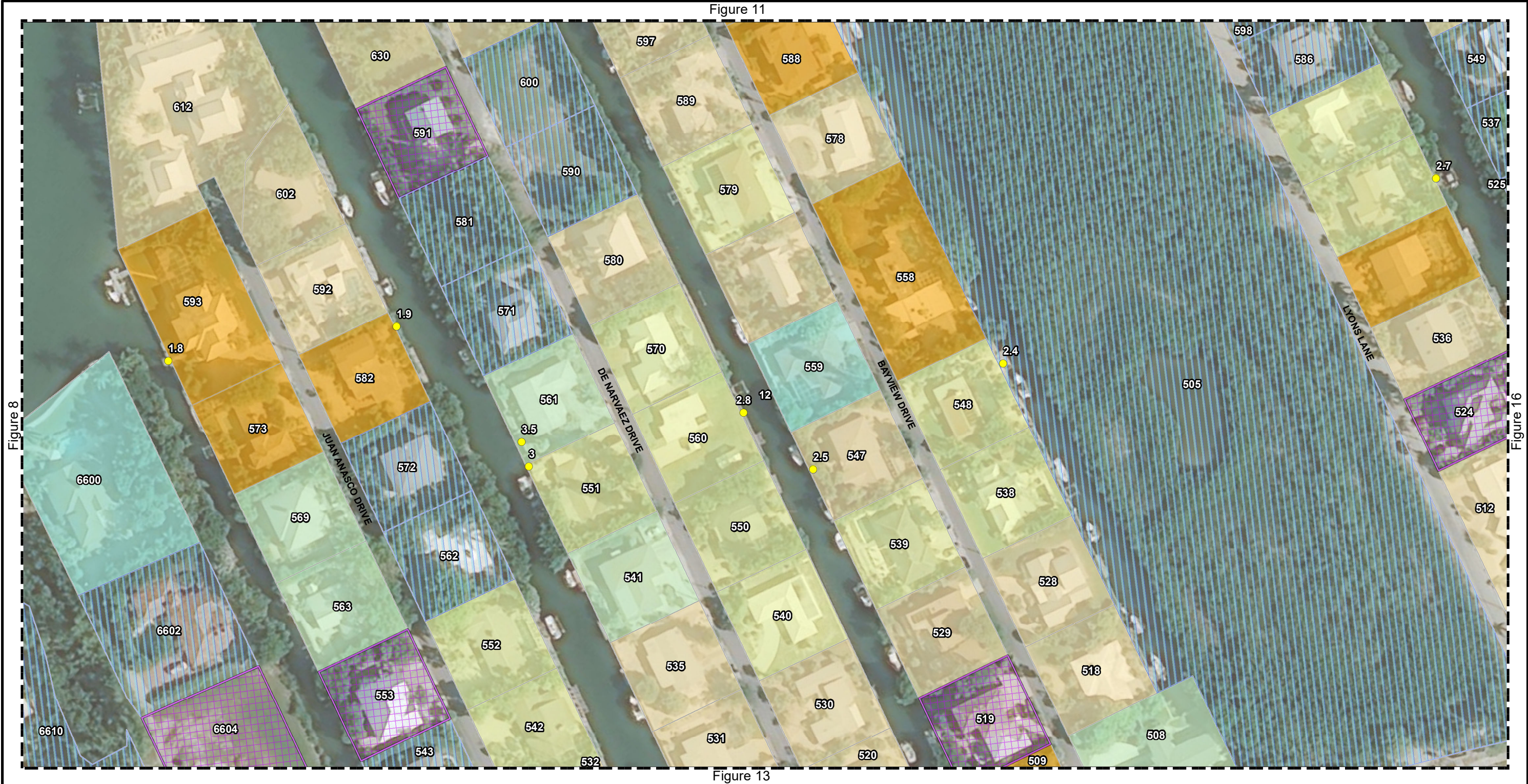
APTIM
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Boca Raton, FL 33431
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Fax (561) 391-9116 COA#9317

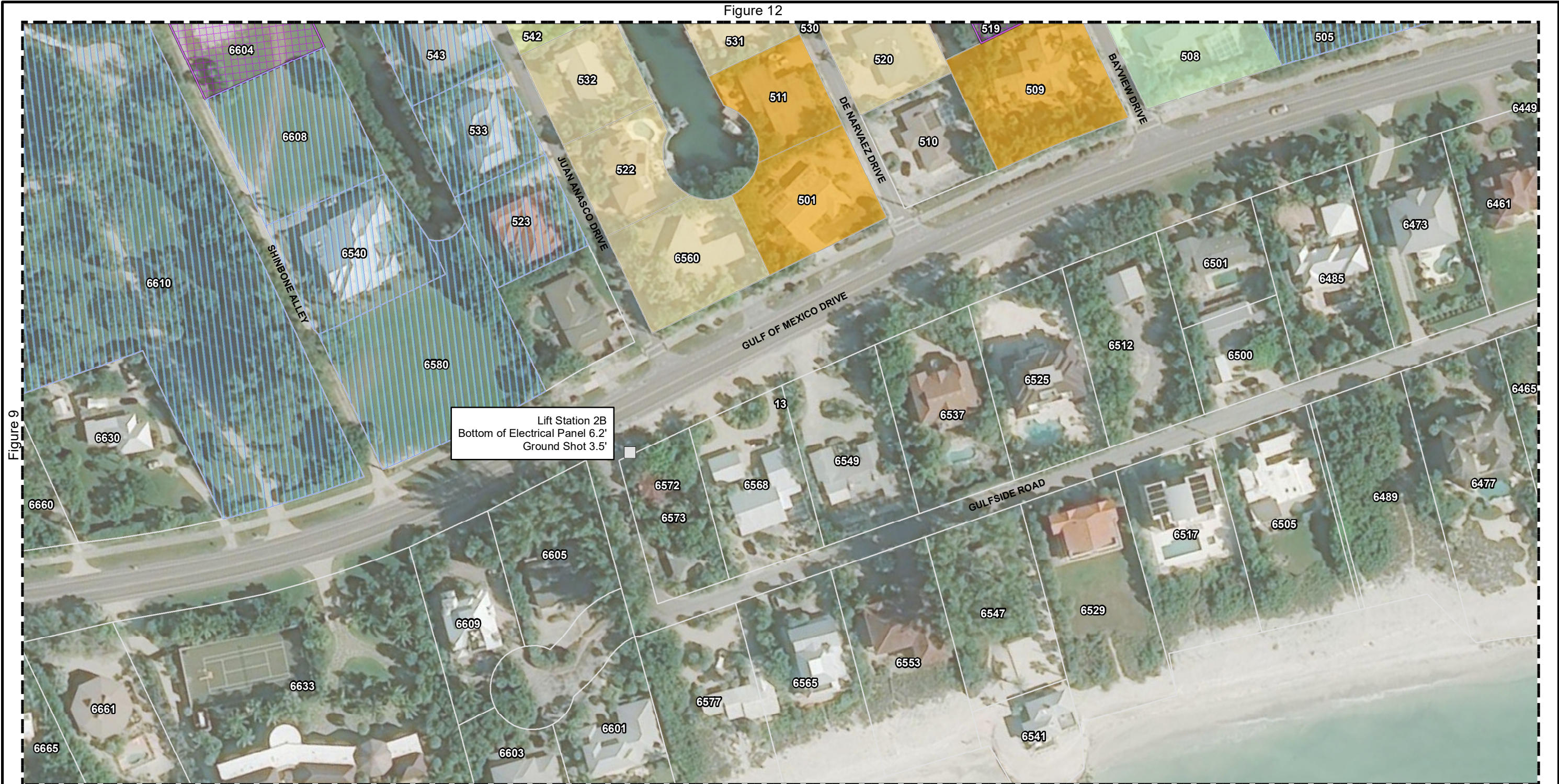
Date: 05/13/21

By: H MV

/	Comm No. : 631005068
---	----------------------

Figure 11





Notes:

1. Data were collected by APTIM on the following dates:
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3. Elevations are in feet NAVD88.
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Legend:

- Field Measurement
- Lift Stations

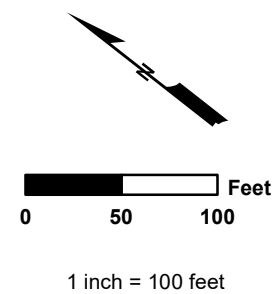
Shoreline Parcels

- ▨ Natural Shoreline
- ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

Longboat Key Bulkheads & Lift Stations Map



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Comm No. : 631005068

Figure 13



Notes:

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Legend:

- Field Measurement
- Lift Stations

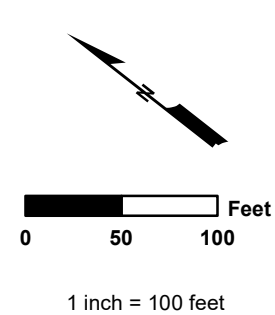
Shoreline Parcels

- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

Longboat Key Bulkheads & Lift Stations Map



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By: HNV

Comm No. : 631005068

Figure 14

Figure 14

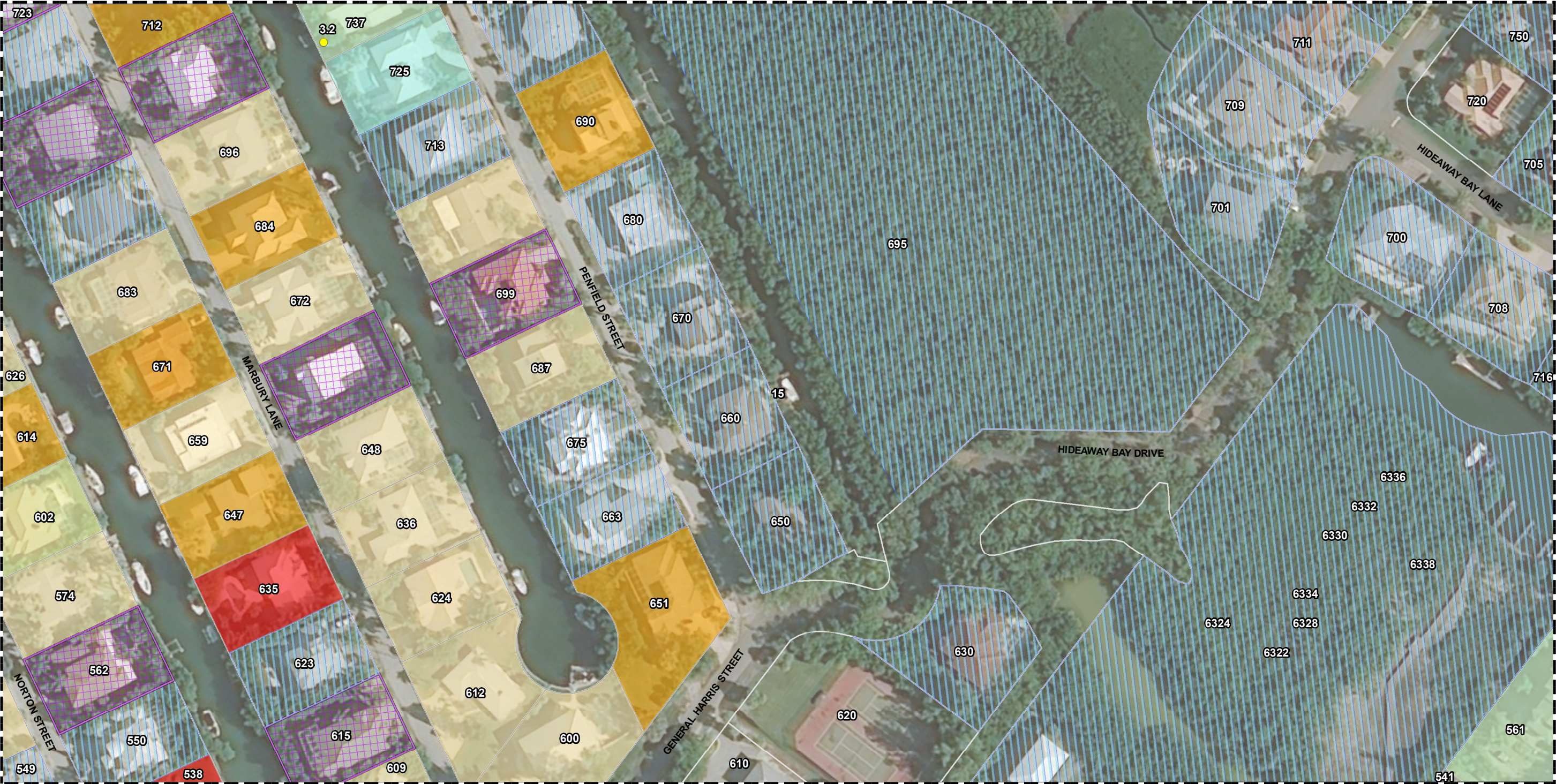


Figure 16

Figure 17

Notes:

1. Data were collected by APTIM on the following dates:
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3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

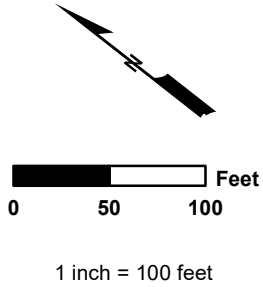
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

**Longboat Key
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Comm No. : 631005068

Figure 15

F:\CPM\Longboat Key\Sea Level Rise\Bulkhead Maps.mxd

Figure 12



Figure 18

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
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3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

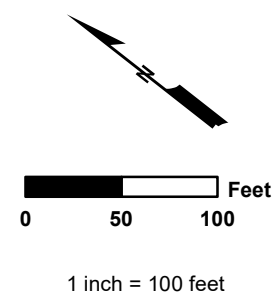
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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By: HMV

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Figure 16

Figure 15



Figure 18



Figure 20

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

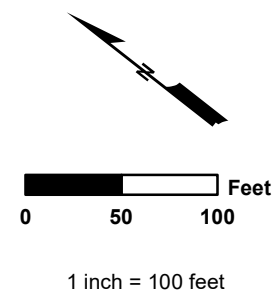
Shoreline Parcels

- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 17

Figure 16

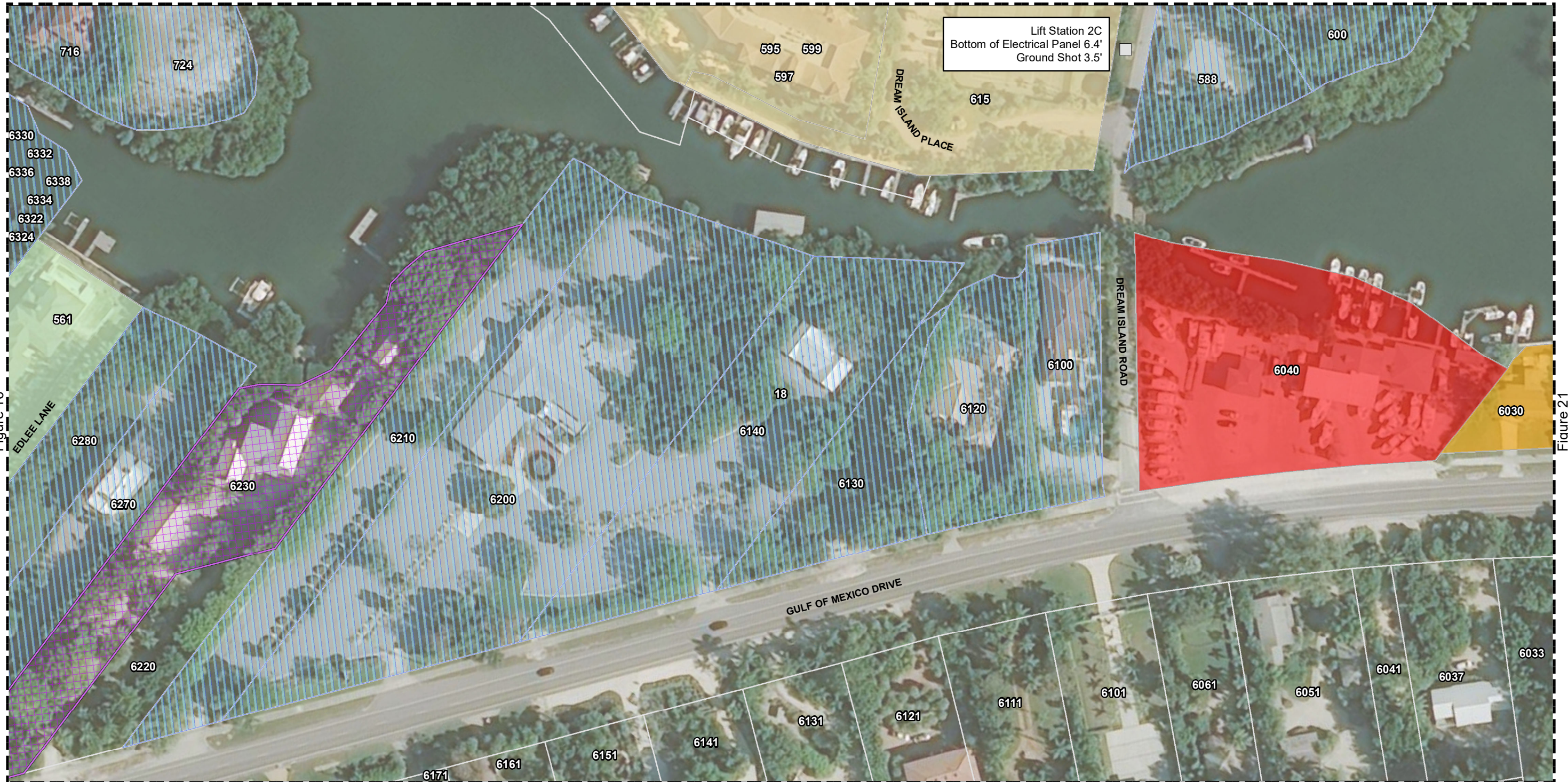


Figure 21

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

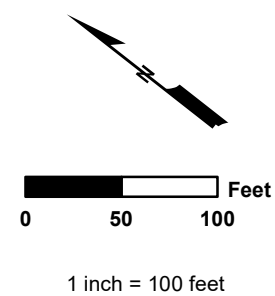
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

Longboat Key Bulkheads & Lift Stations Map



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By: HMV

Comm No. : 631005068

Figure 18

F:\CPM\Longboat Key\Sea Level Rise\Bulkhead Maps.mxd



Figure 20

Figure 23

Notes:

1. Data were collected by APTIM on the following dates:
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3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

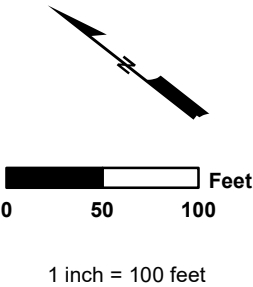
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

**Longboat Key
Bulkheads & Lift Stations Map**



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COA#9317

Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 19



Notes:

1. Data were collected by APTIM on the following dates:
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2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

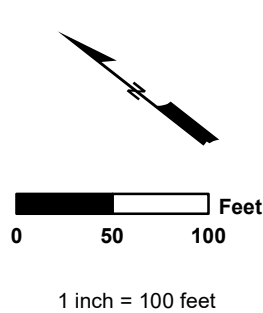
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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Date: 05/13/21 By: HMV Comm No. : 631005068 **Figure 20**

F:\CPM\Longboat Key\Sea Level Rise\Bulkhead Maps.mxd

Figure 18



Figure 25

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

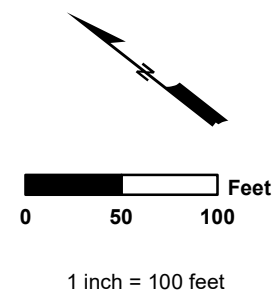
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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Figure 21



Figure 23

Figure 26

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

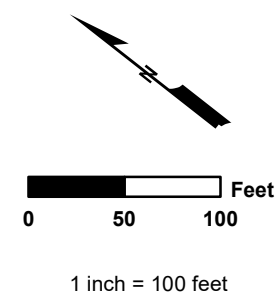
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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Figure 22



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

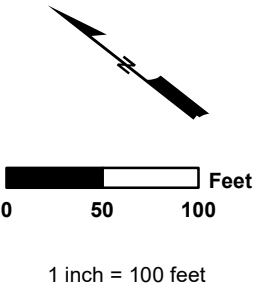
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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By: HNV

Comm No. : 631005068

Figure 23



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

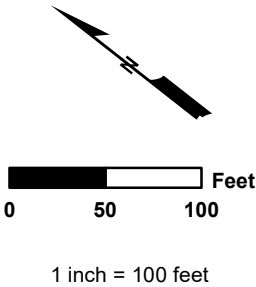
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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Date: 05/13/21 By: HMV Comm No. : 631005068 **Figure 24**

F:\CPM\Longboat Key\Sea Level Rise\Bulkhead Maps.mxd

Figure 21



Figure 29

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

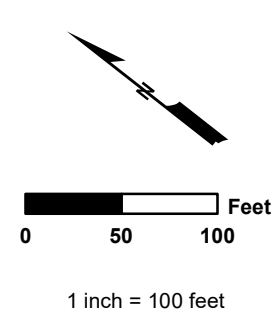
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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By: HMV

Comm No. : 631005068

Figure 25

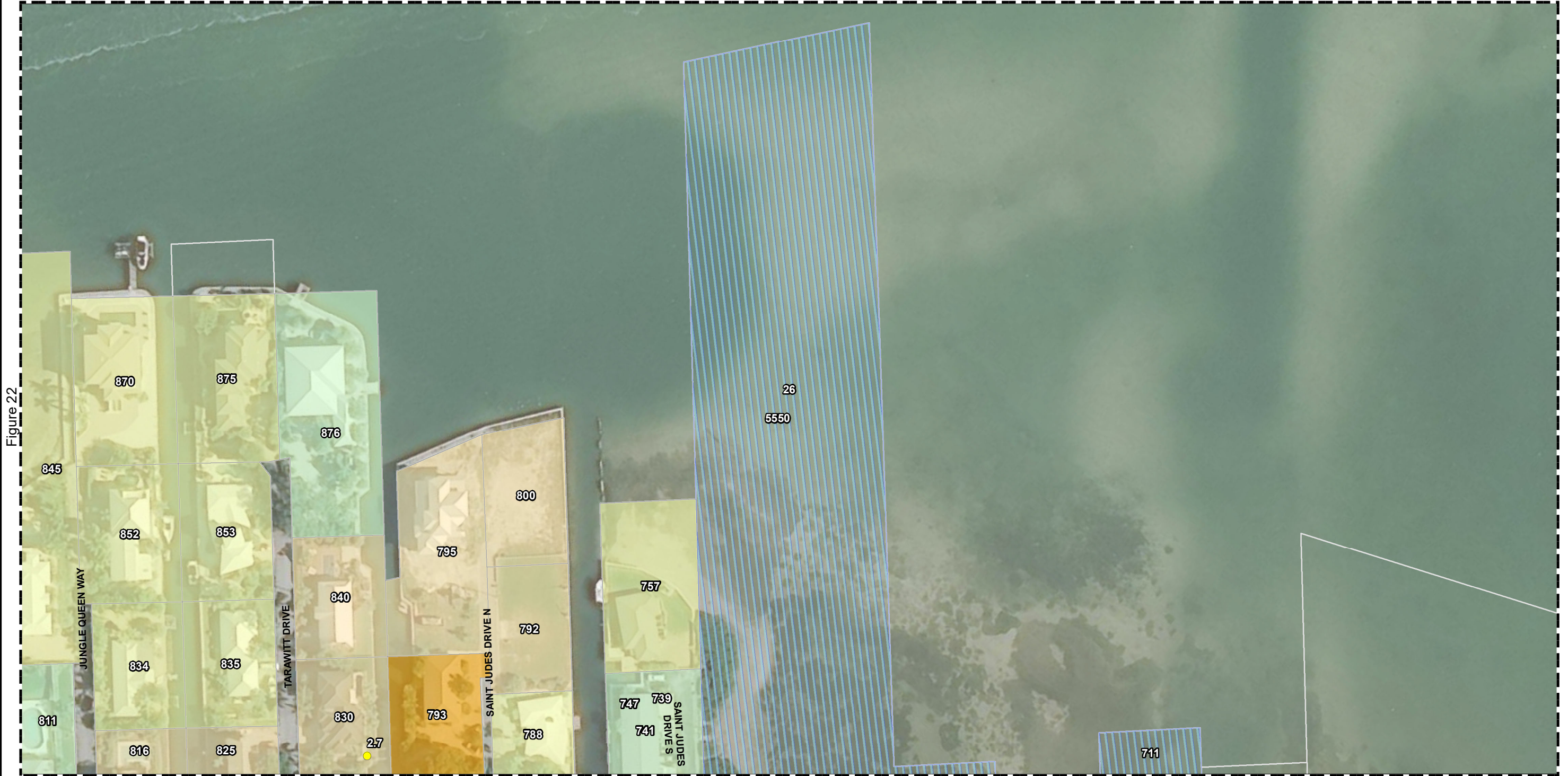


Figure 27

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

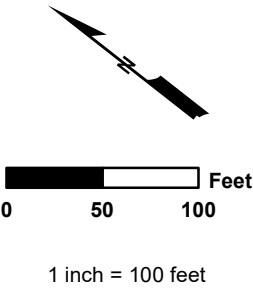
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

**Longboat Key
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By: HNV

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Figure 26

Figure 26



Figure 28

Notes:



1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations





- Lift Stations

Shoreline Parcels

-  Natural Shoreline
 Rock Revetment

- 
- Rock Revetment

Bulkhead Elevation (ft)

- | | |
|---|-----------|
|  | 1.3 - 1.5 |
|  | 1.6 - 2.0 |
|  | 2.1 - 2.5 |
|  | 2.6 - 3.0 |

- 2.1 - 2.5

- 2.1 - 2.5

- 2.6 - 3.0

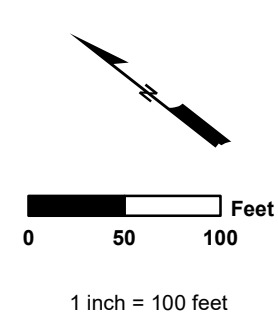
- | | |
|--|-----------|
| | 3.1 - 3.5 |
| | 3.6 - 4.0 |
| | 4.1 - 4.5 |
| | 4.6 - 5.0 |
| | 5.1 - 5.5 |

- 3.6 - 4.0

- 4.1 - 4.5

- 4.6 - 5.0

- 5.1 - 5.5



1 inch = 100 feet

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Longboat Key Bulkheads & Lift Stations Map



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By: H MV

V	Comm No. : 631005068	
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Figure 27

Figure 24

Figure 29

Figure 30



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.





Legend:

- Field Measurement
- Lift Stations

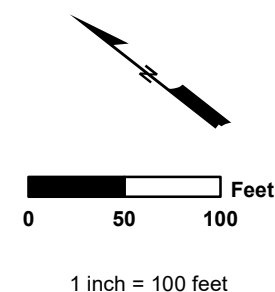
Shoreline Parcels

-  Natural Shoreline
 Rock Revetment

Bulkhead Elevation (ft)

- | | |
|---|-----------|
|  | 1.3 - 1.5 |
|  | 1.6 - 2.0 |
|  | 2.1 - 2.5 |
|  | 2.6 - 3.0 |

- | | |
|--|-----------|
| | 3.1 - 3.5 |
| | 3.6 - 4.0 |
| | 4.1 - 4.5 |
| | 4.6 - 5.0 |
| | 5.1 - 5.5 |



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By: HMMV

/	Comm No. : 631005068
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Figure 28

Figure 28



5
6
7
8
9



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.





Legend:

- Field Measurement
- Lift Stations

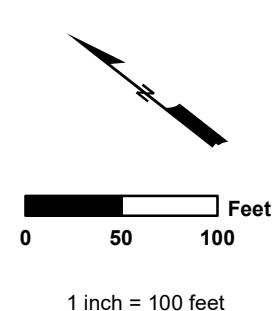
Shoreline Parcels

-  Natural Shoreline
 Rock Revetment

Bulkhead Elevation (ft)

- | | |
|---|-----------|
|  | 1.3 - 1.5 |
|  | 1.6 - 2.0 |
|  | 2.1 - 2.5 |
|  | 2.6 - 3.0 |

- | | |
|--|-----------|
| | 3.1 - 3.5 |
| | 3.6 - 4.0 |
| | 4.1 - 4.5 |
| | 4.6 - 5.0 |
| | 5.1 - 5.5 |



TITLE:

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By: H MV

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Figure 29

Figure 28



Figure 31

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

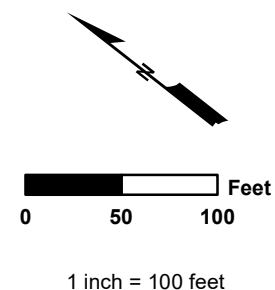
Shoreline Parcels

- ▨ Natural Shoreline
- ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

**Longboat Key
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By: HMV

Comm No. : 631005068

Figure 30

Figure 29



Figure 32

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

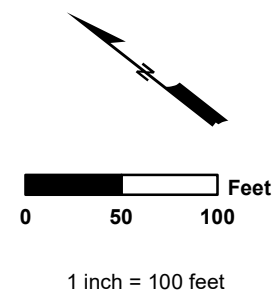
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

Longboat Key Bulkheads & Lift Stations Map



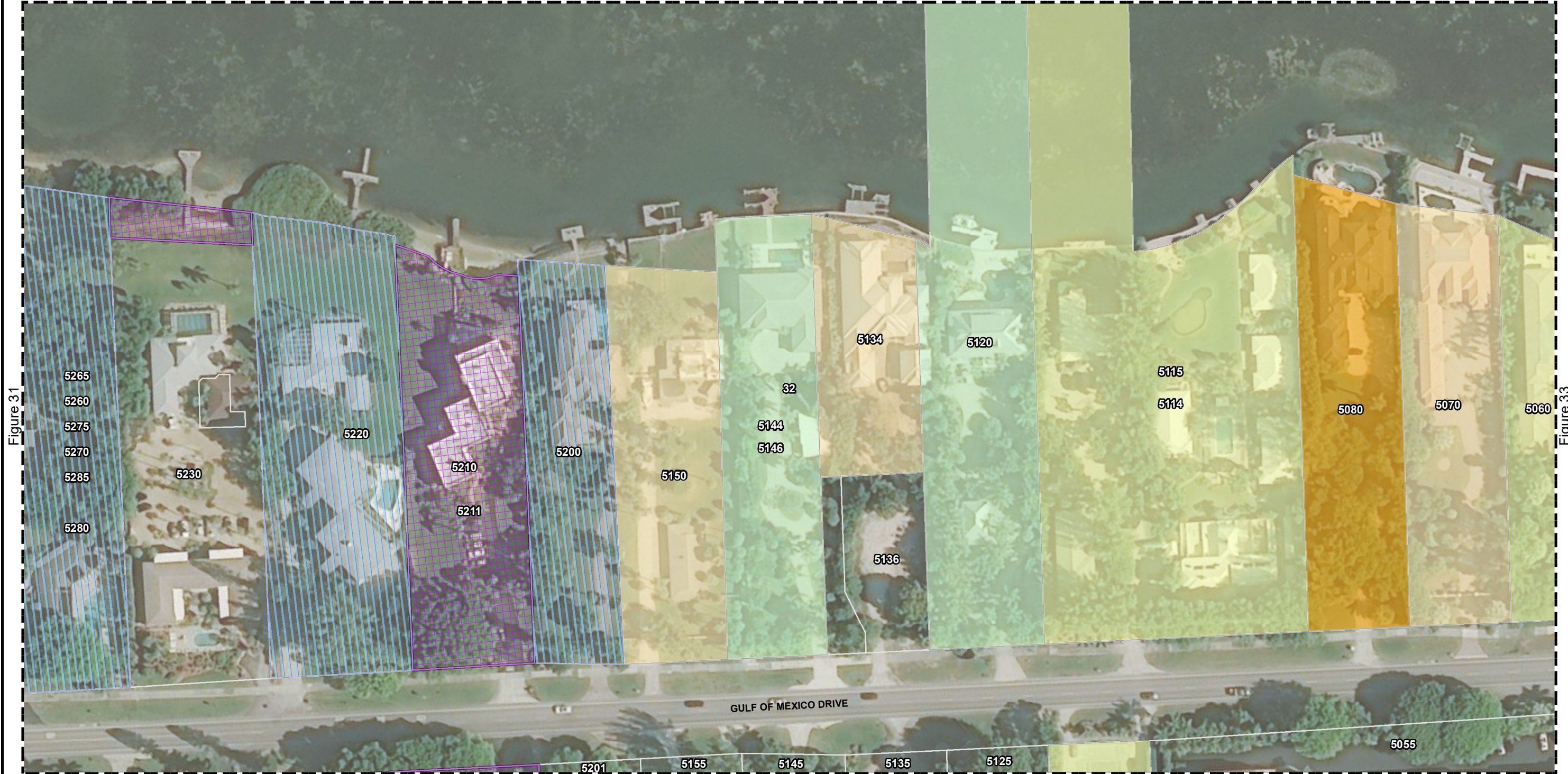
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Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 31



Notes:

1. Data were collected by APTIM on the following dates:
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3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

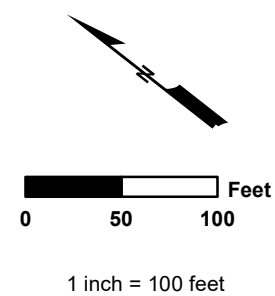
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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Figure 32

Figure 32



Figure 34

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

Shoreline Parcels

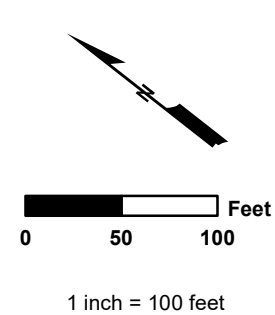
- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

Bulkhead Elevation (ft)

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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Comm No. : 631005068

Figure 33

Figure 33



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

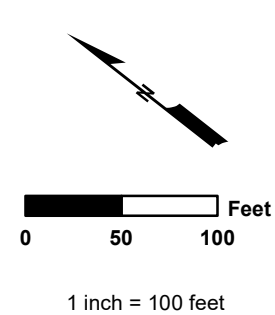
Shoreline Parcels

- ▨ Natural Shoreline
- ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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By: HMV

Comm No. : 631005068

Figure 34

F:\CPM\Longboat Key\Sea Level Rise\Bulkhead Maps.mxd

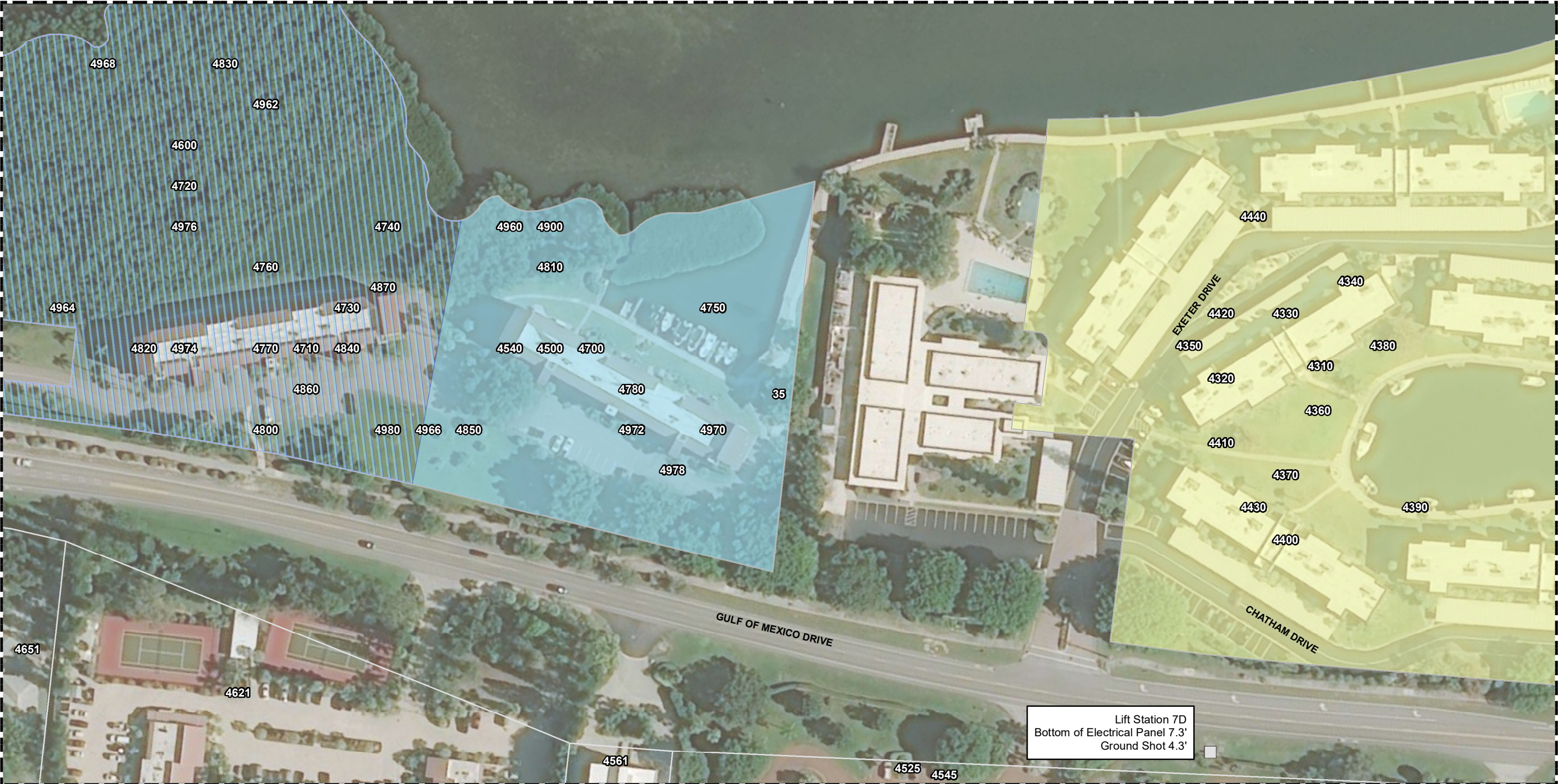


Figure 37

Notes:

- 1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
- 2. Bulkhead elevations based on 2017 Lidar data.
- 3. Elevations are in feet NAVD88.
- 4. Background imagery is ESRI's World Imagery basemap.

Legend:

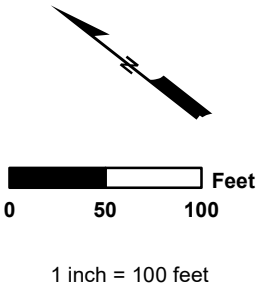
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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Date: 05/13/21 By: HMV Comm No. : 631005068

Figure 35

F:\CPM\Longboat Key\Sea Level Rise\Bulkhead Maps.mxd

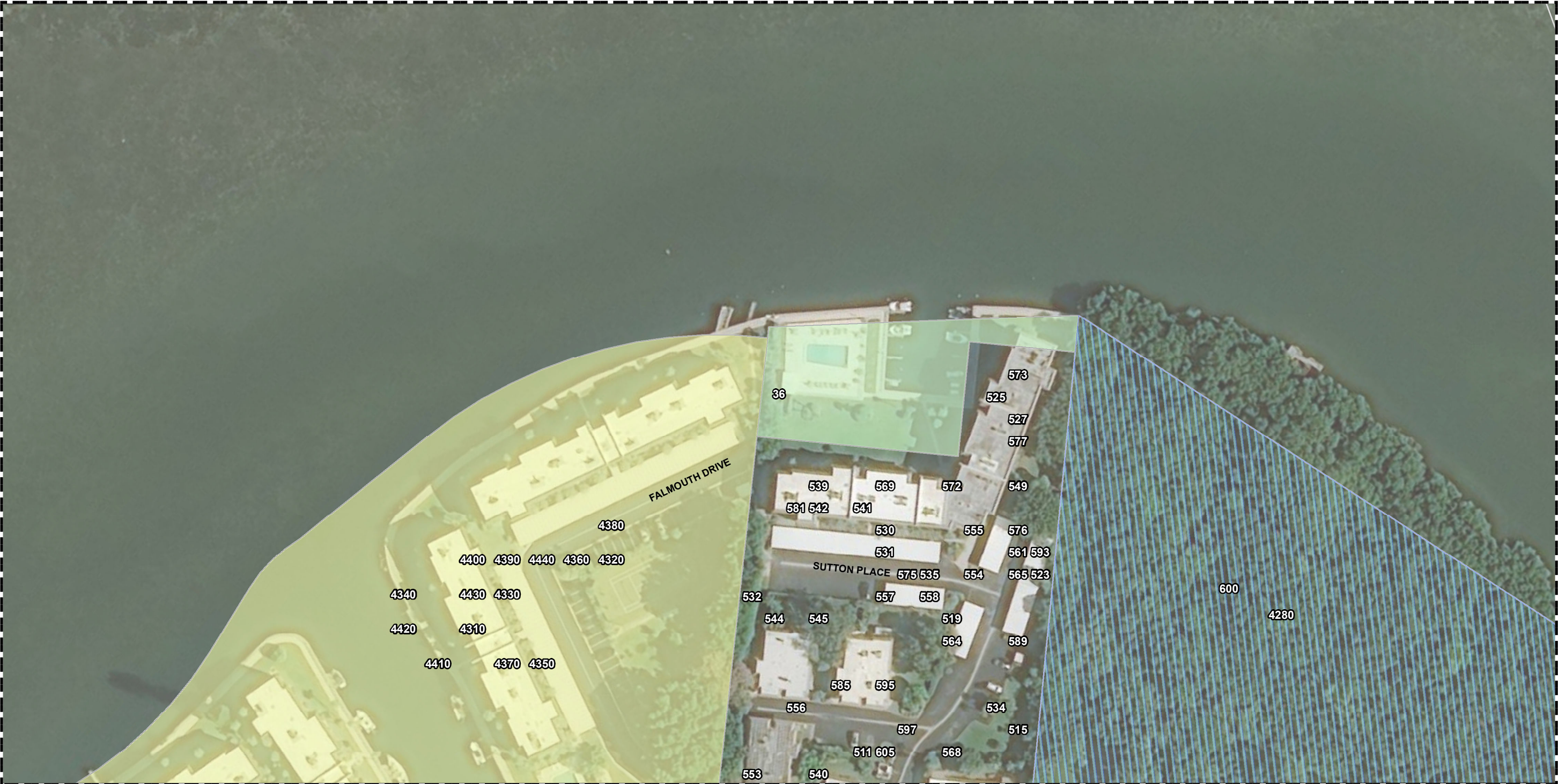


Figure 37

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

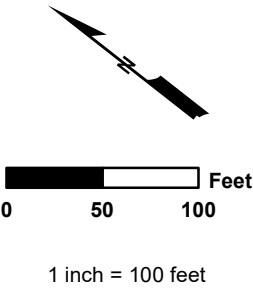
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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By: HMV

Comm No. : 631005068

Figure 36

Figure 35



Figure 36

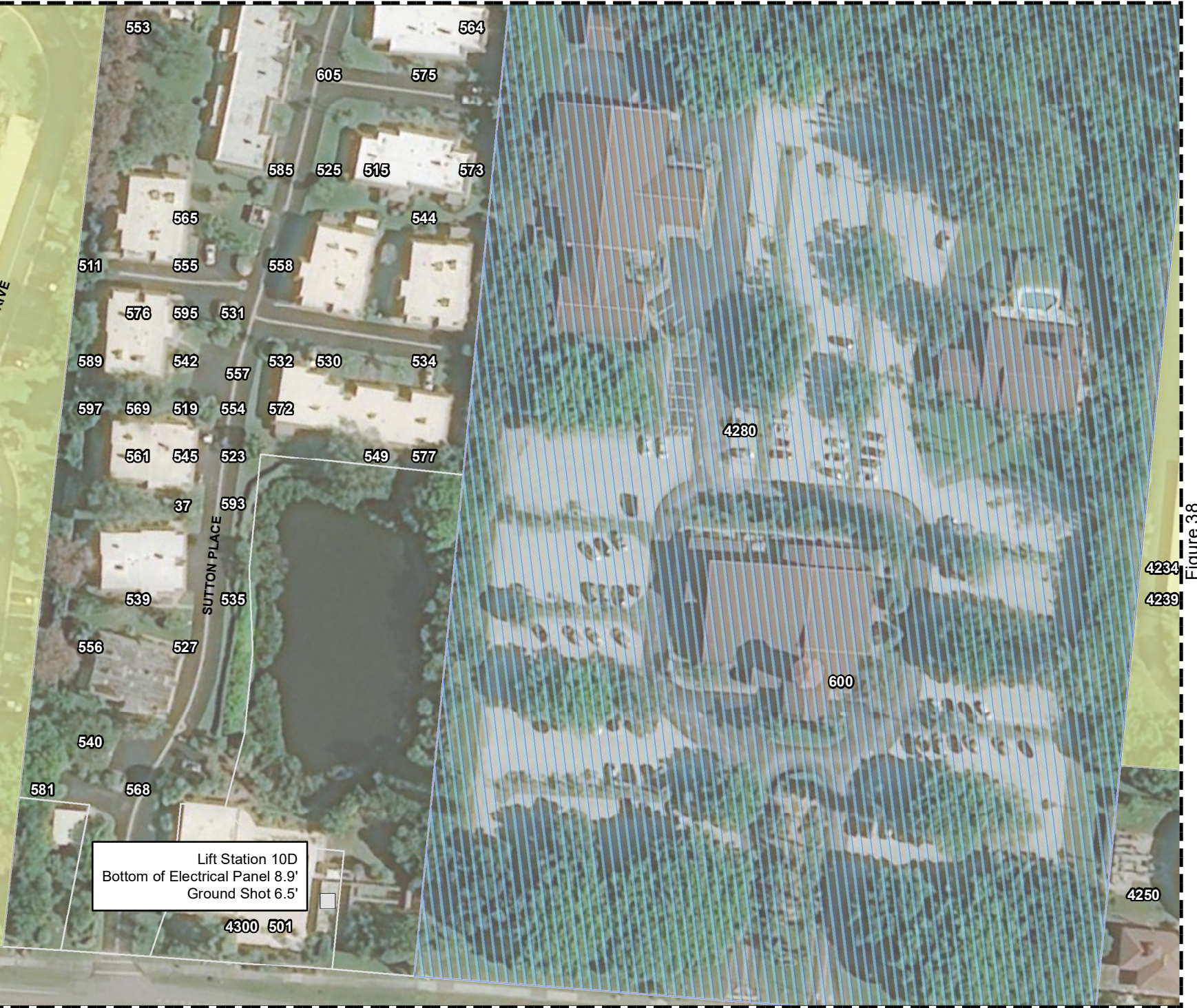


Figure 38

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

Shoreline Parcels

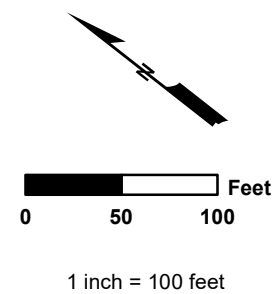
- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

Bulkhead Elevation (ft)

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

**Longboat Key
Bulkheads & Lift Stations Map**



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Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 37

Figure 37

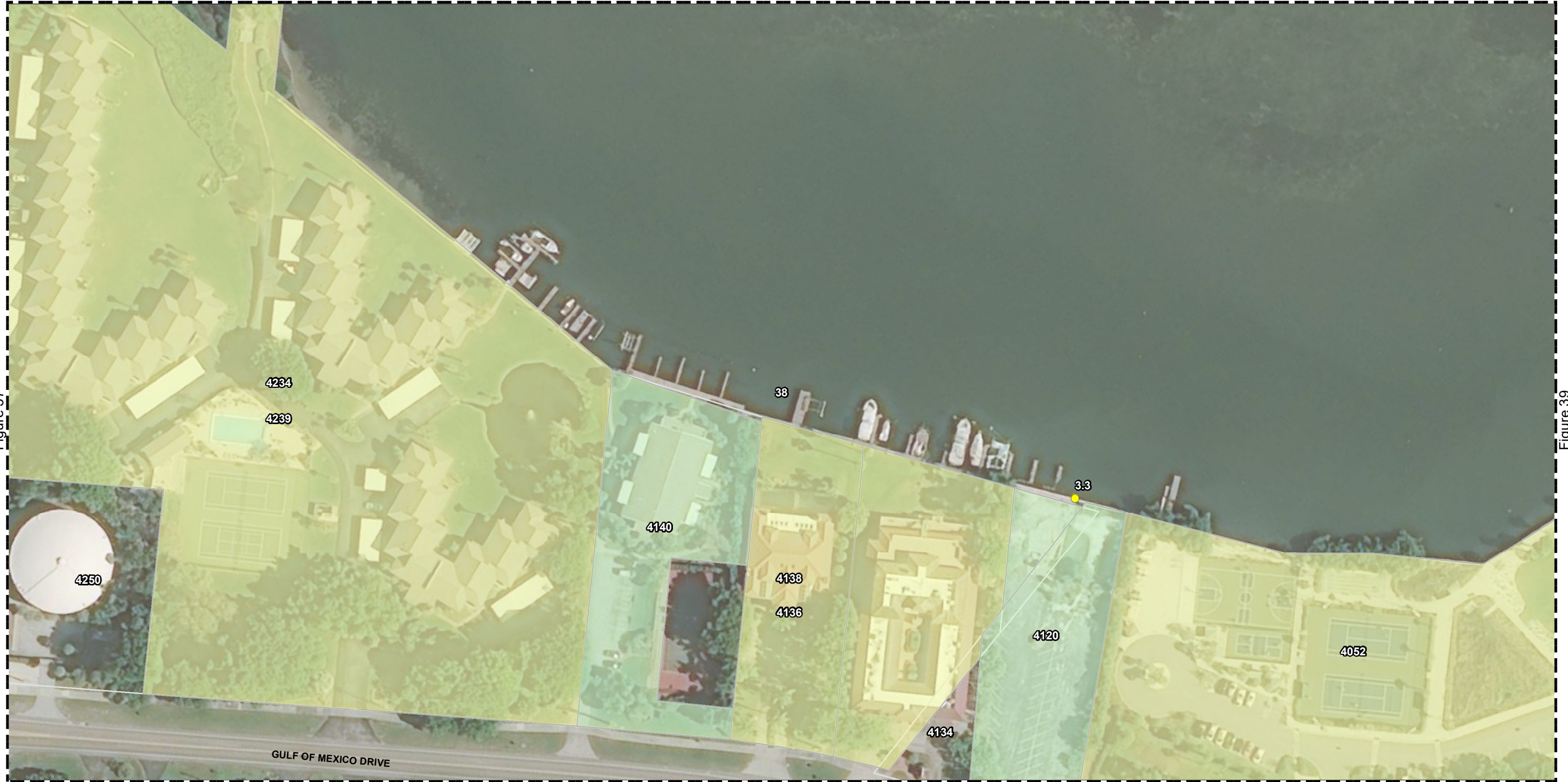


Figure 39

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

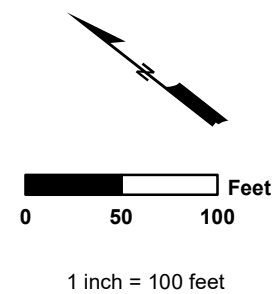
Shoreline Parcels

- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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By: HNV

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Figure 38

Figure 38

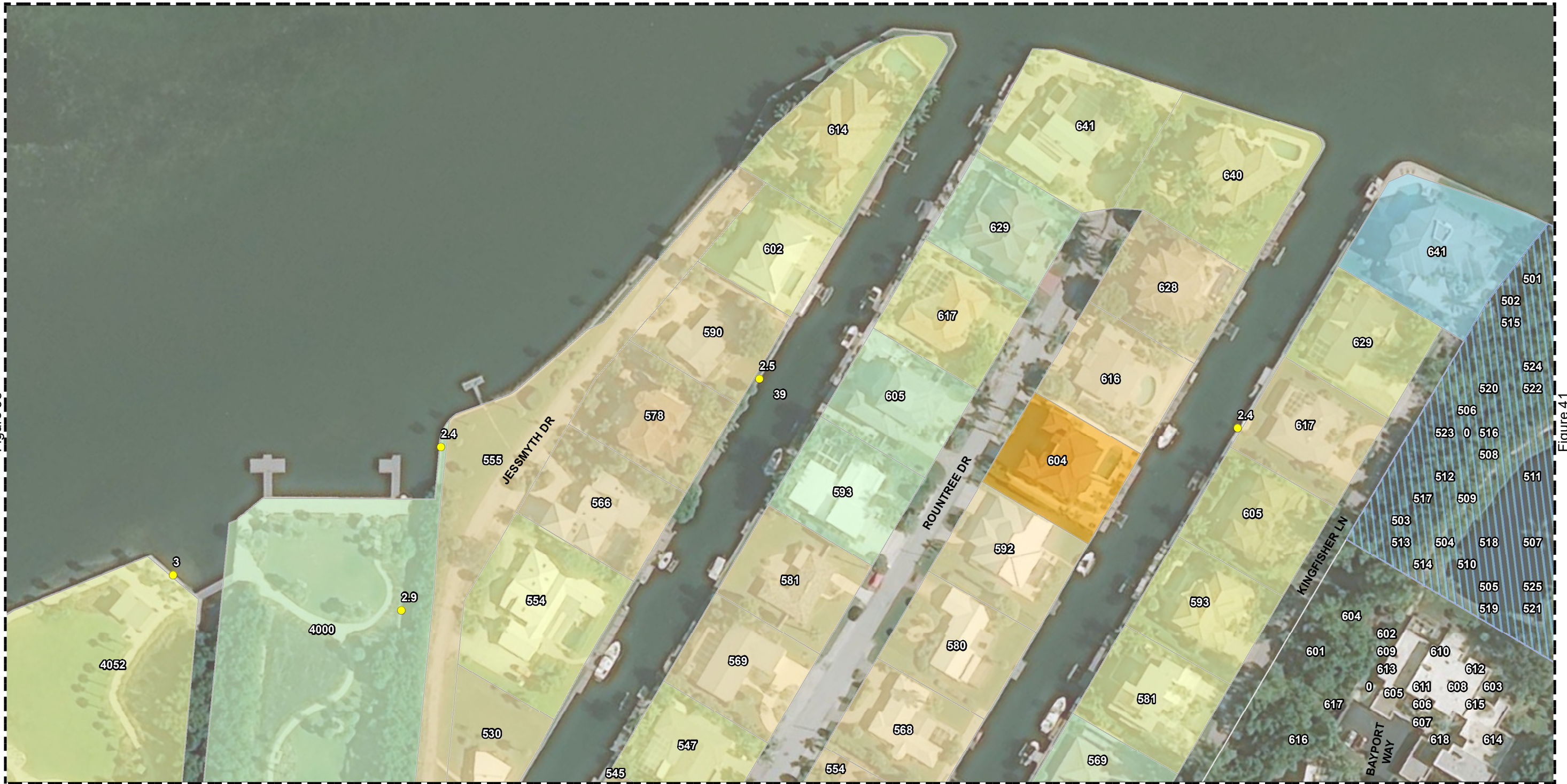


Figure 41

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

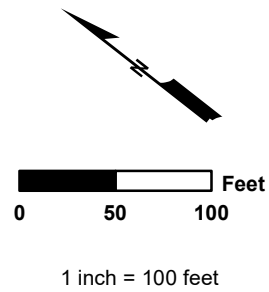
Legend:

- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- | | |
|-------------|-------------|
| ■ 1.3 - 1.5 | ■ 3.1 - 3.5 |
| ■ 1.6 - 2.0 | ■ 3.6 - 4.0 |
| ■ 2.1 - 2.5 | ■ 4.1 - 4.5 |
| ■ 2.6 - 3.0 | ■ 4.6 - 5.0 |
| | ■ 5.1 - 5.5 |



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By: HMV

Comm No. : 631005068

Figure 39

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Figure 39



Figure 42

Notes:

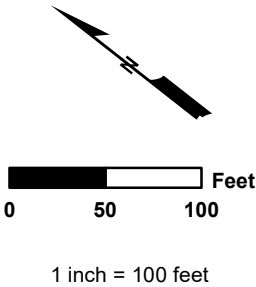
1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

- Bulkhead Elevation (ft)**
- 1.3 - 1.5
 - 1.6 - 2.0
 - 2.1 - 2.5
 - 2.6 - 3.0
 - 3.1 - 3.5
 - 3.6 - 4.0
 - 4.1 - 4.5
 - 4.6 - 5.0
 - 5.1 - 5.5



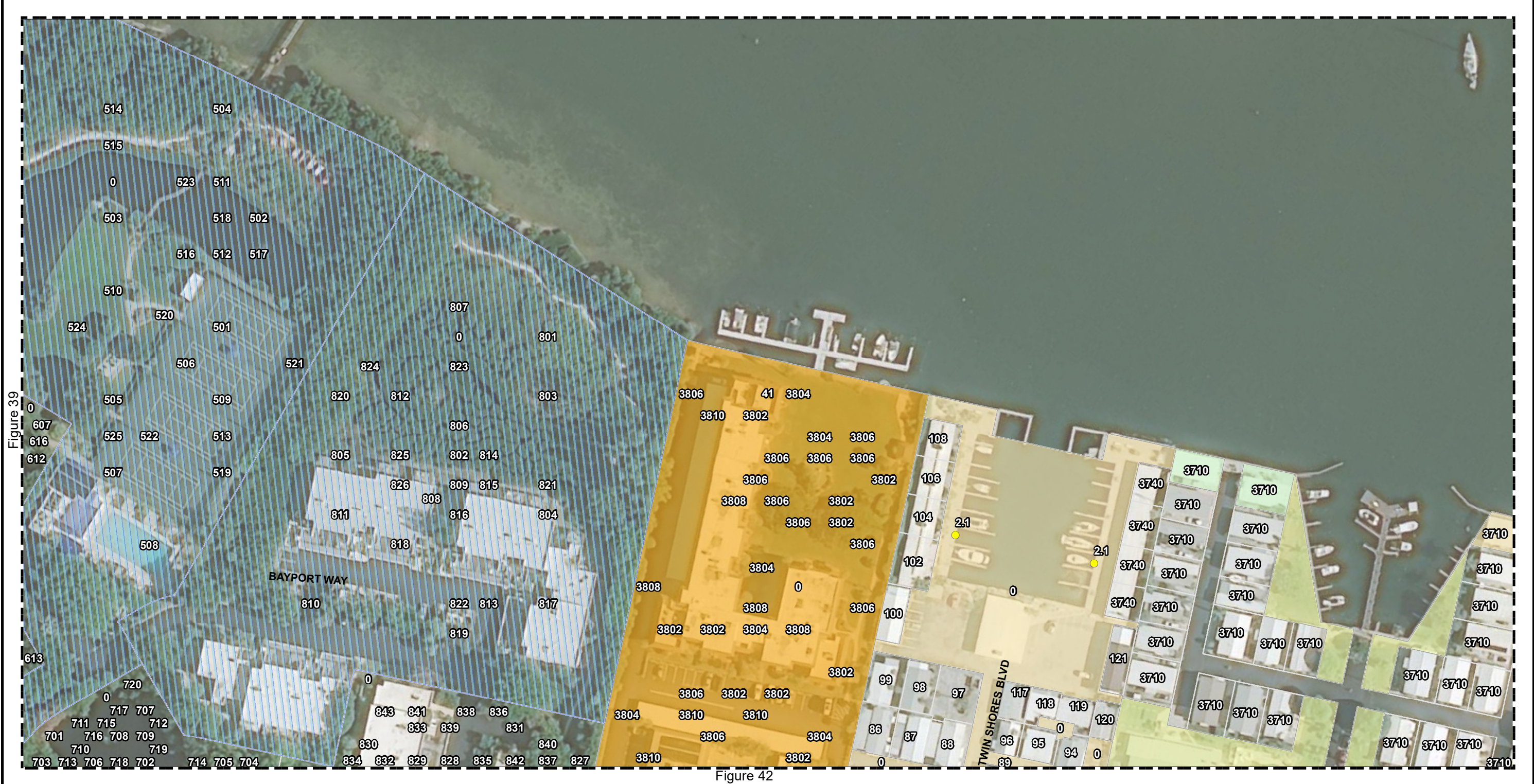
TITLE:

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Date: 05/13/21 By: HMV Comm No. : 631005068 **Figure 40**



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

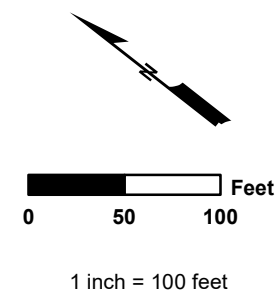
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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By: HNV

Comm No. : 631005068

Figure 41

Figure 41

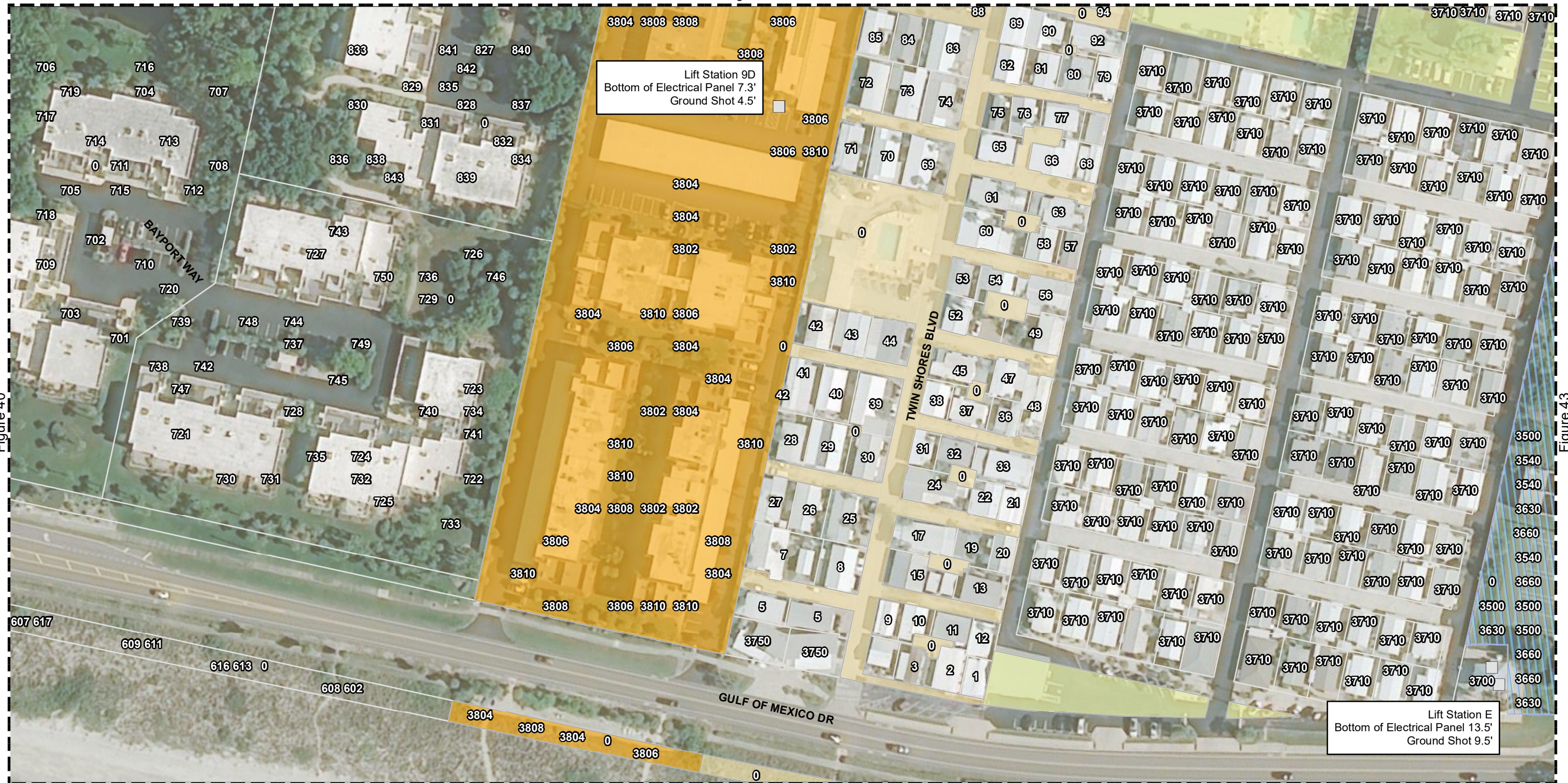


Figure 40

Figure 43

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

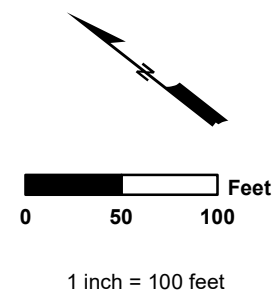
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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By: HMV

Comm No. : 631005068

Figure 42

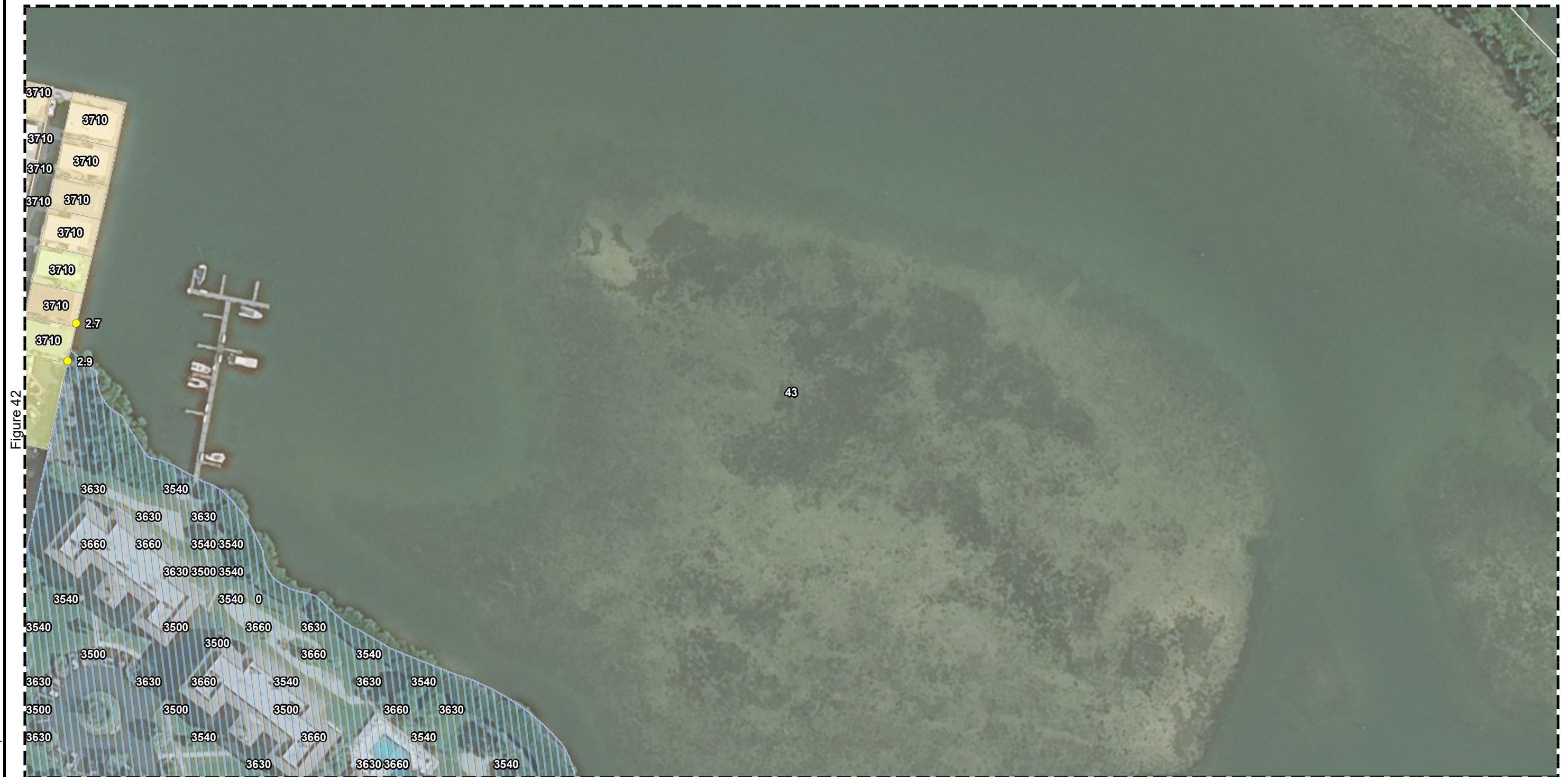


Figure 43



Figure 45

Notes:

- 1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
- 2. Bulkhead elevations based on 2017 Lidar data.
- 3. Elevations are in feet NAVD88.
- 4. Background imagery is ESRI's World Imagery basemap.

Legend:

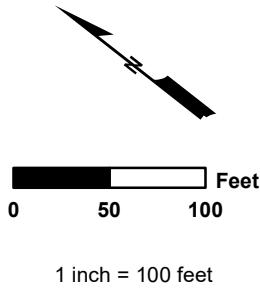
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

**Longboat Key
Bulkheads & Lift Stations Map**



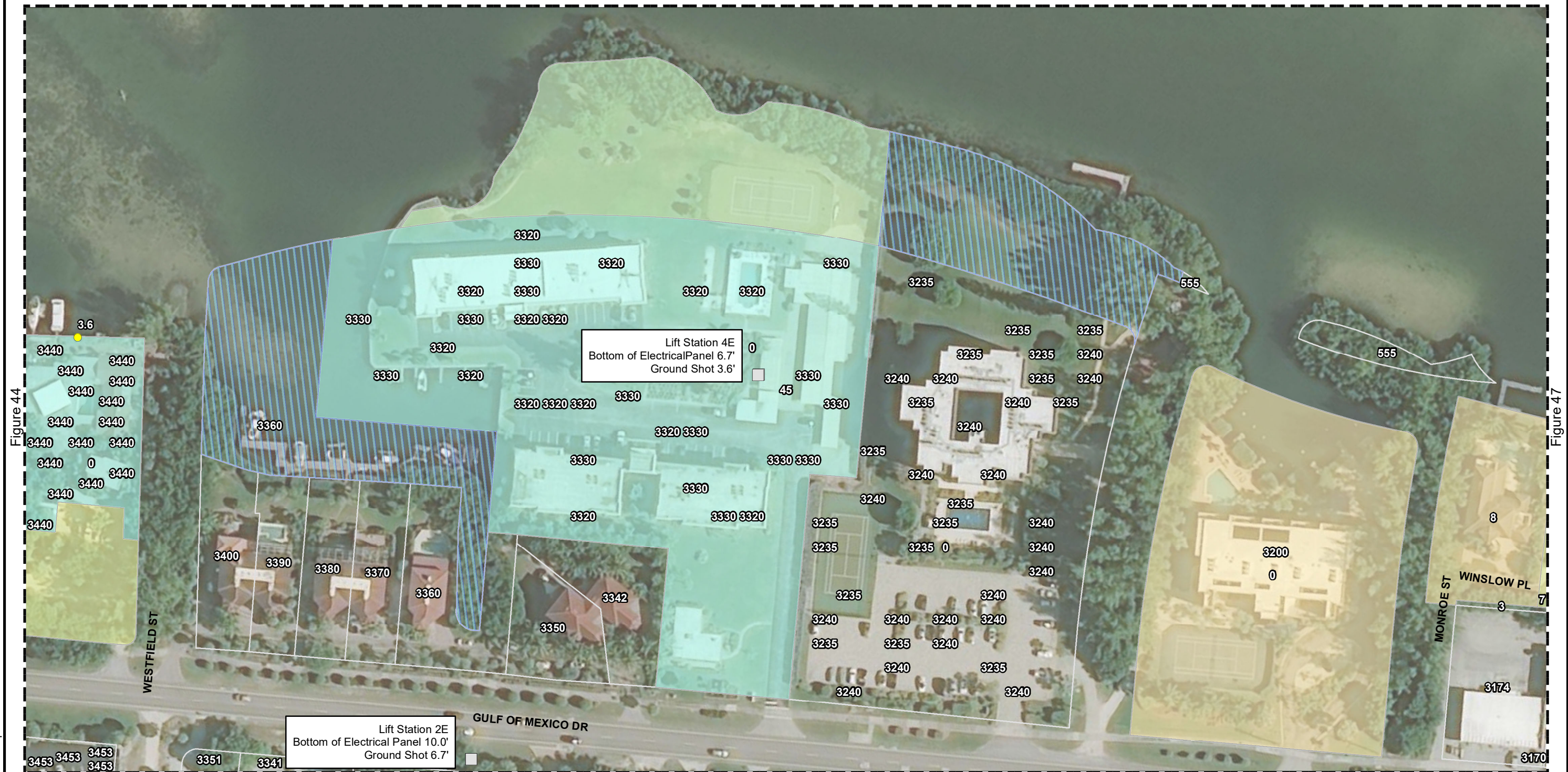
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By: HMV

Comm No. : 631005068

Figure 44





Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.





Legend:

- Field Measurement
- Lift Stations

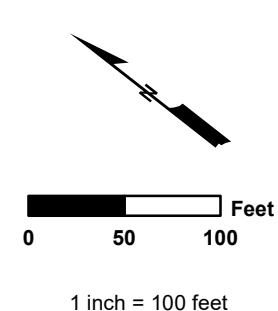
Shoreline Parcels

-  Natural Shoreline
 Rock Revetment

Bulkhead Elevation (ft)

- | | |
|---|-----------|
|  | 1.3 - 1.5 |
|  | 1.6 - 2.0 |
|  | 2.1 - 2.5 |
|  | 2.6 - 3.0 |

- | | |
|--|-----------|
| | 3.1 - 3.5 |
| | 3.6 - 4.0 |
| | 4.1 - 4.5 |
| | 4.6 - 5.0 |
| | 5.1 - 5.5 |



TITLE:

Longboat Key Bulkheads & Lift Stations Map



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By: HMV

/	Comm No. : 631005068
---	----------------------

Figure 45

F:\CPM\Longboat Key\Sea Level Rise\Bulkhead Maps.mxd



Figure 48

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

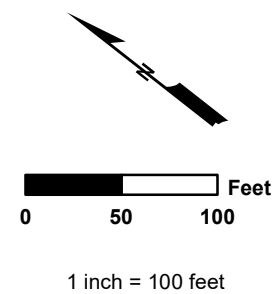
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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Longboat Key Bulkheads & Lift Stations Map



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By: HMV

Comm No. : 631005068

Figure 46

Figure 45

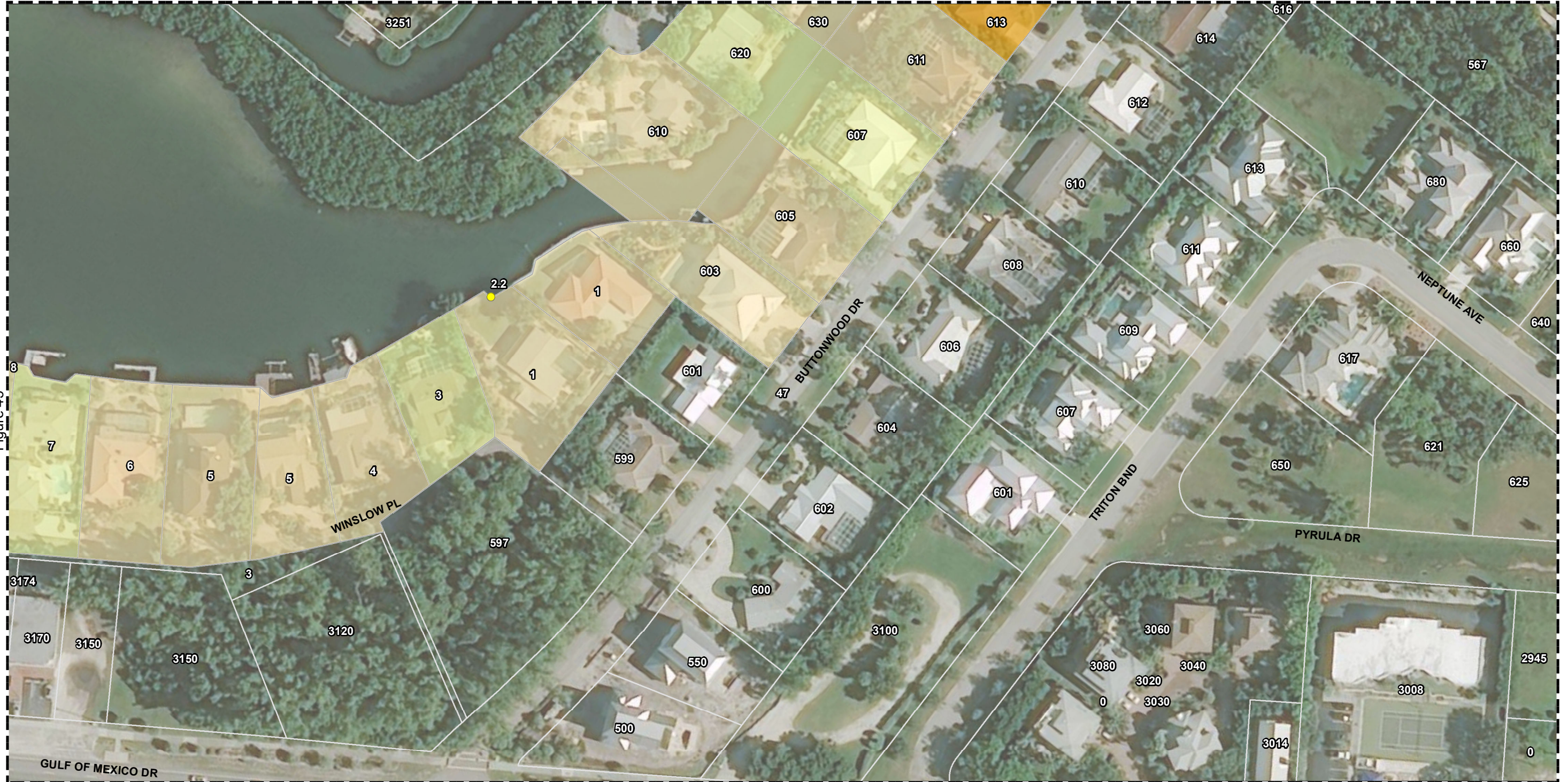


Figure 46

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

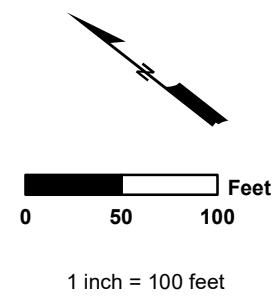
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

Longboat Key Bulkheads & Lift Stations Map



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Date: 05/13/21 By: HMV Comm No. : 631005068 **Figure 47**

F:\CPM\Longboat Key\Sea Level Rise\Bulkhead Maps.mxd

Figure 46



Figure 49

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

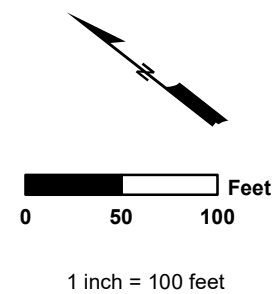
Shoreline Parcels

- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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By: HNV

Comm No. : 631005068

Figure 48

Figure 48



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

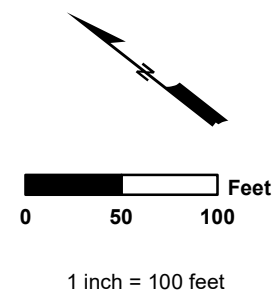
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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By: HMV

Comm No. : 631005068

Figure 49



Figure 52

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

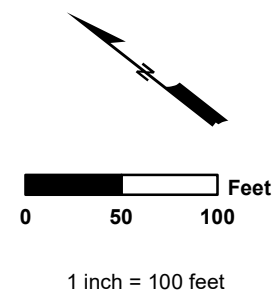
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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By: HMV

Comm No. : 631005068

Figure 51

Figure 51



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

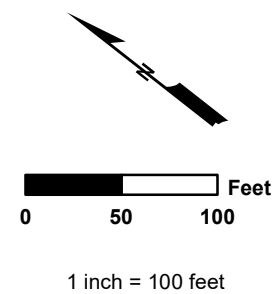
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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By: HMV

Comm No. : 631005068

Figure 52

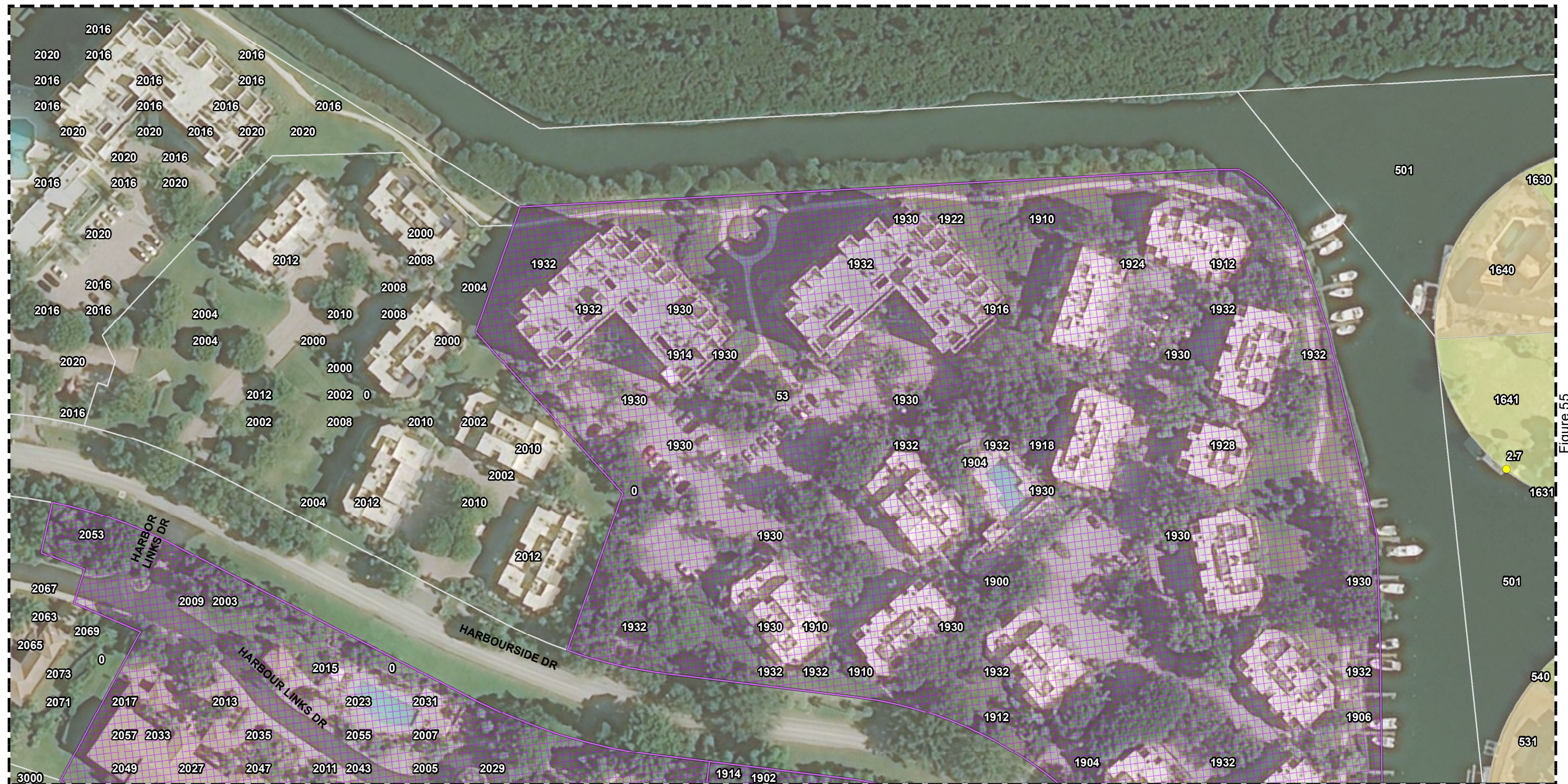


Figure 54

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

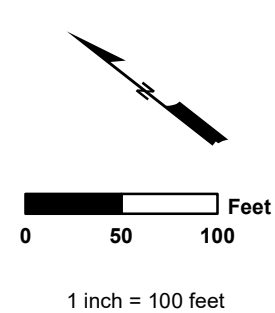
Shoreline Parcels

- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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By: HMV

Comm No. : 631005068

Figure 53

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Figure 53

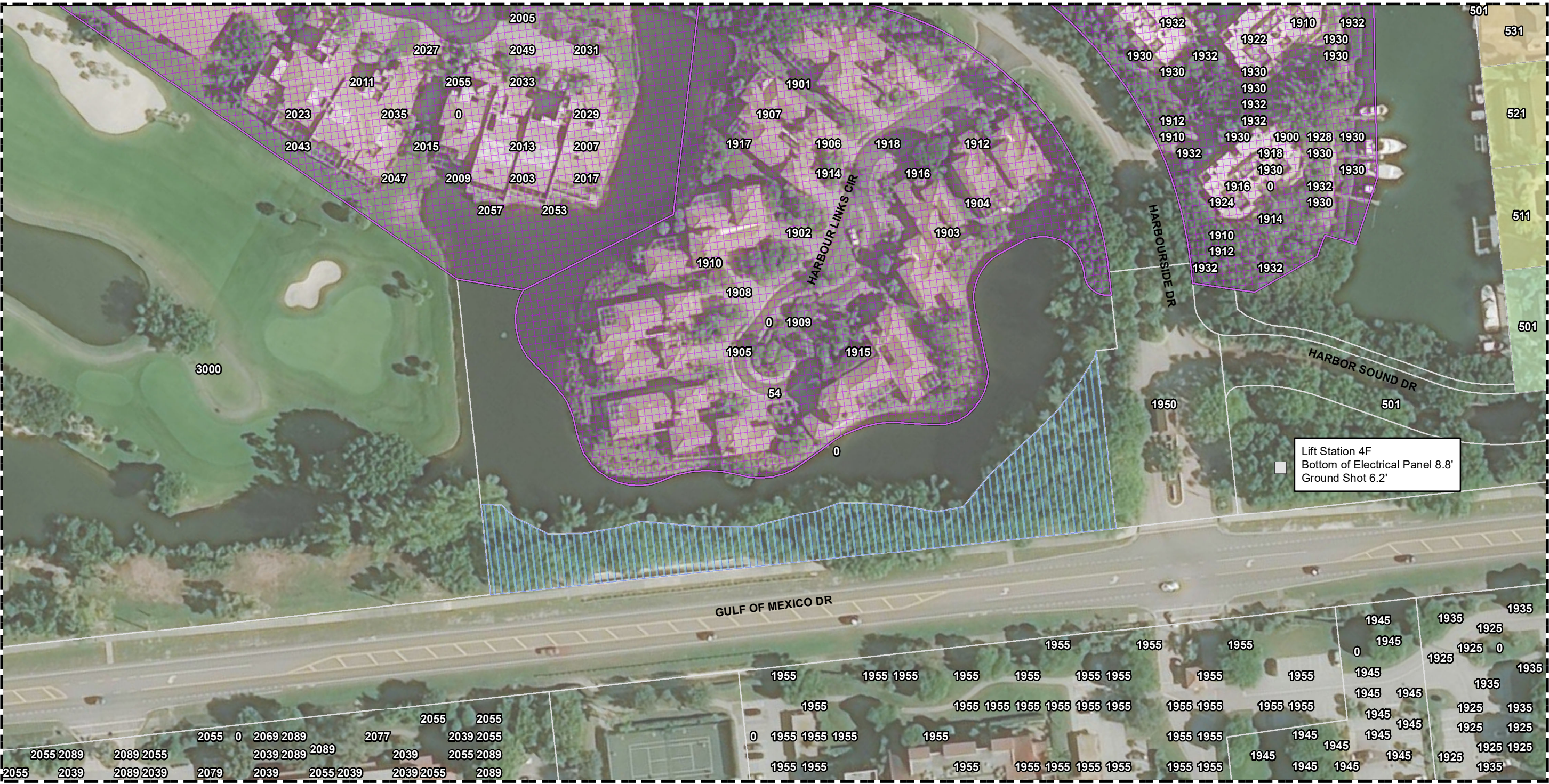


Figure 56

Notes:

- 1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
- 2. Bulkhead elevations based on 2017 Lidar data.
- 3. Elevations are in feet NAVD88.
- 4. Background imagery is ESRI's World Imagery basemap.

Legend:

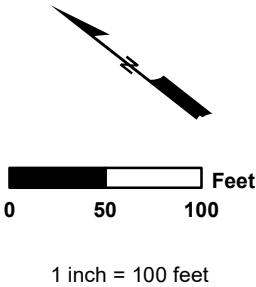
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



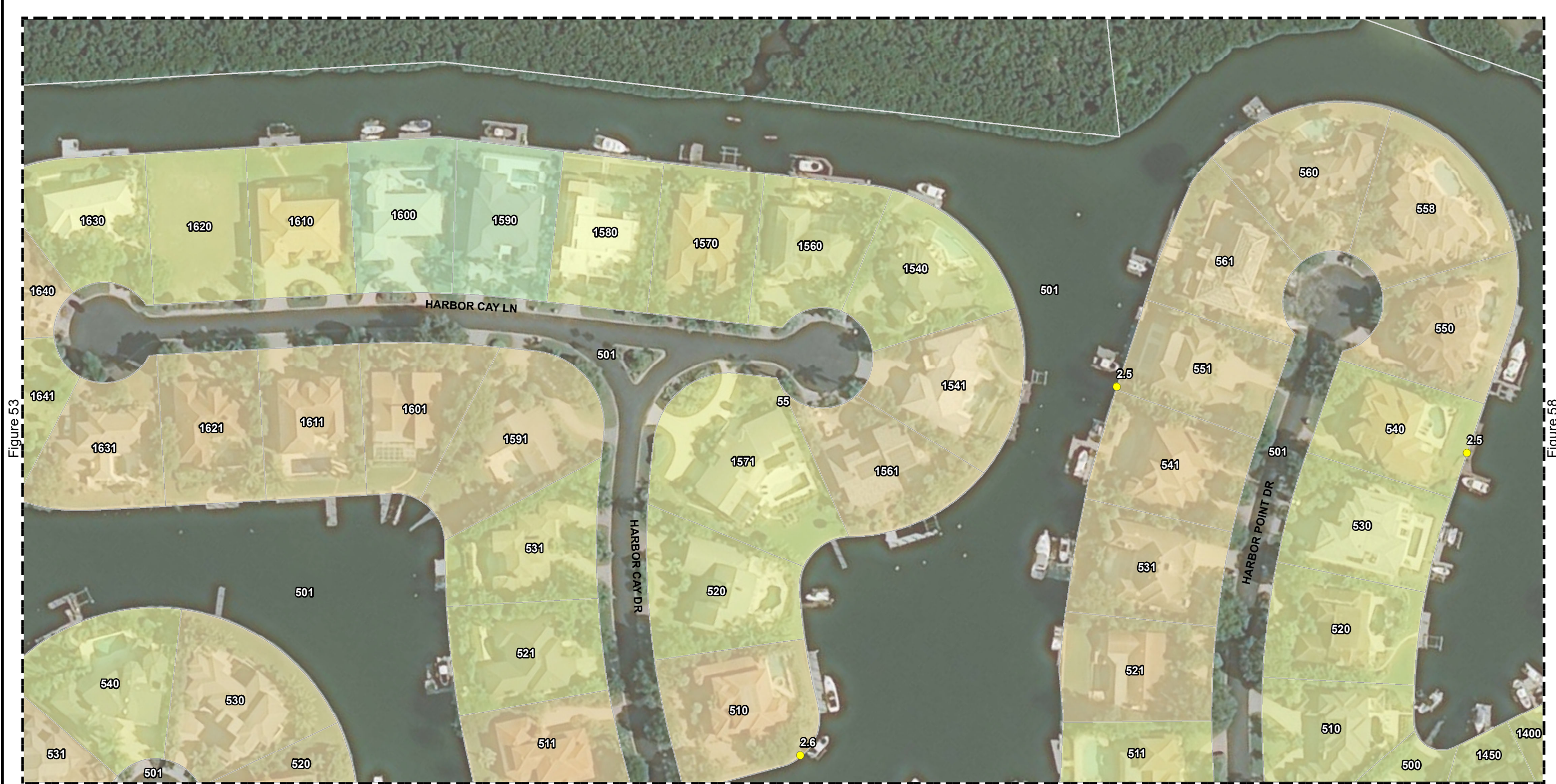
TITLE:

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Date: 05/13/21 By: HMV Comm No. : 631005068 **Figure 54**



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

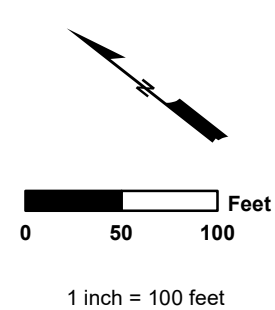
Shoreline Parcels

- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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Bulkheads & Lift Stations Map**



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Environmental & Infrastructure, LLC.
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Fax (561) 391-9116
COA#9317

Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 55

F:\CPM\Longboat Key\Sea Level Rise\Bulkhead Maps.mxd

Figure 54



Figure 59

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

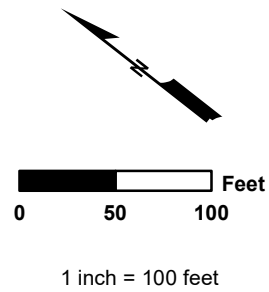
Legend:

- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

Bulkhead Elevation (ft)

- | | |
|-----------|-----------|
| 1.3 - 1.5 | 3.1 - 3.5 |
| 1.6 - 2.0 | 3.6 - 4.0 |
| 2.1 - 2.5 | 4.1 - 4.5 |
| 2.6 - 3.0 | 4.6 - 5.0 |
| | 5.1 - 5.5 |



TITLE:

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By: HMV

Comm No. : 631005068

Figure 56



Figure 60

Figure 58

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

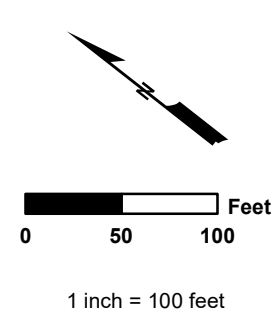
Shoreline Parcels

- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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Date: 05/13/21

By: HNV

Comm No. : 631005068

Figure 57

Figure 55



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

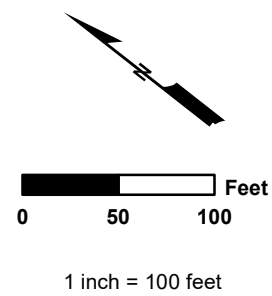
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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COA#9317

Date: 05/13/21 By: HMV Comm No. : 631005068 **Figure 58**

Figure 56



Figure 58

Figure 62

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

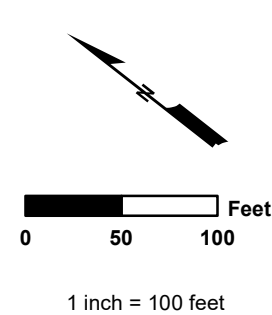
Shoreline Parcels

- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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COA#9317

Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 59



Figure 57

Figure 61

Figure 63

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

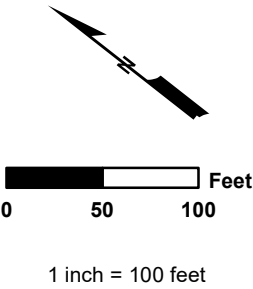
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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**Longboat Key
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By: HMV

Comm No. : 631005068

Figure 60

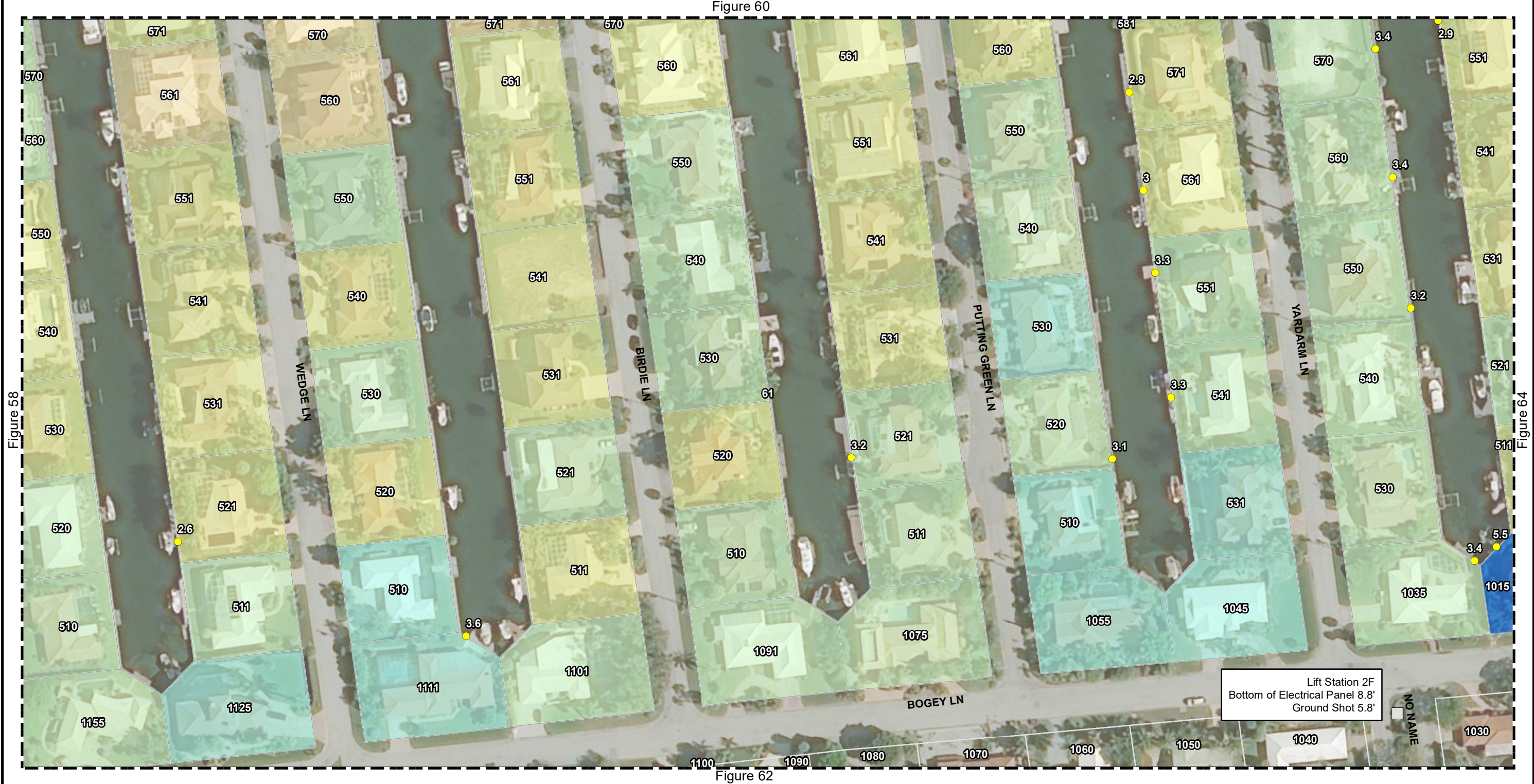
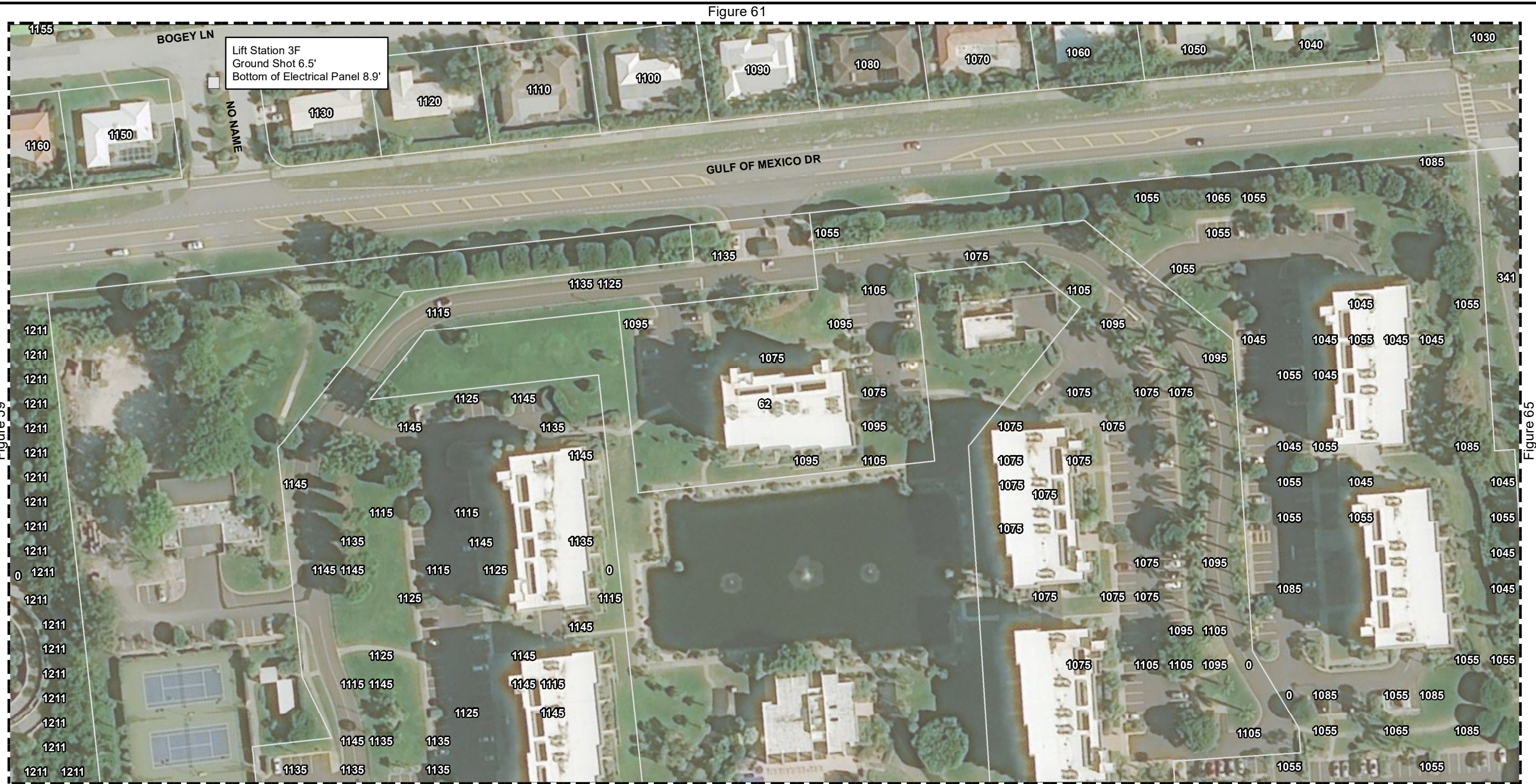


Figure 59



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

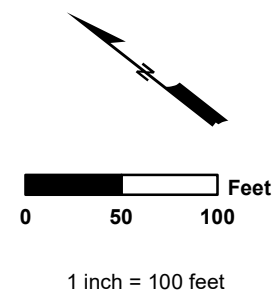
- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

Bulkhead Elevation (ft)

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

**Longboat Key
Bulkheads & Lift Stations Map**



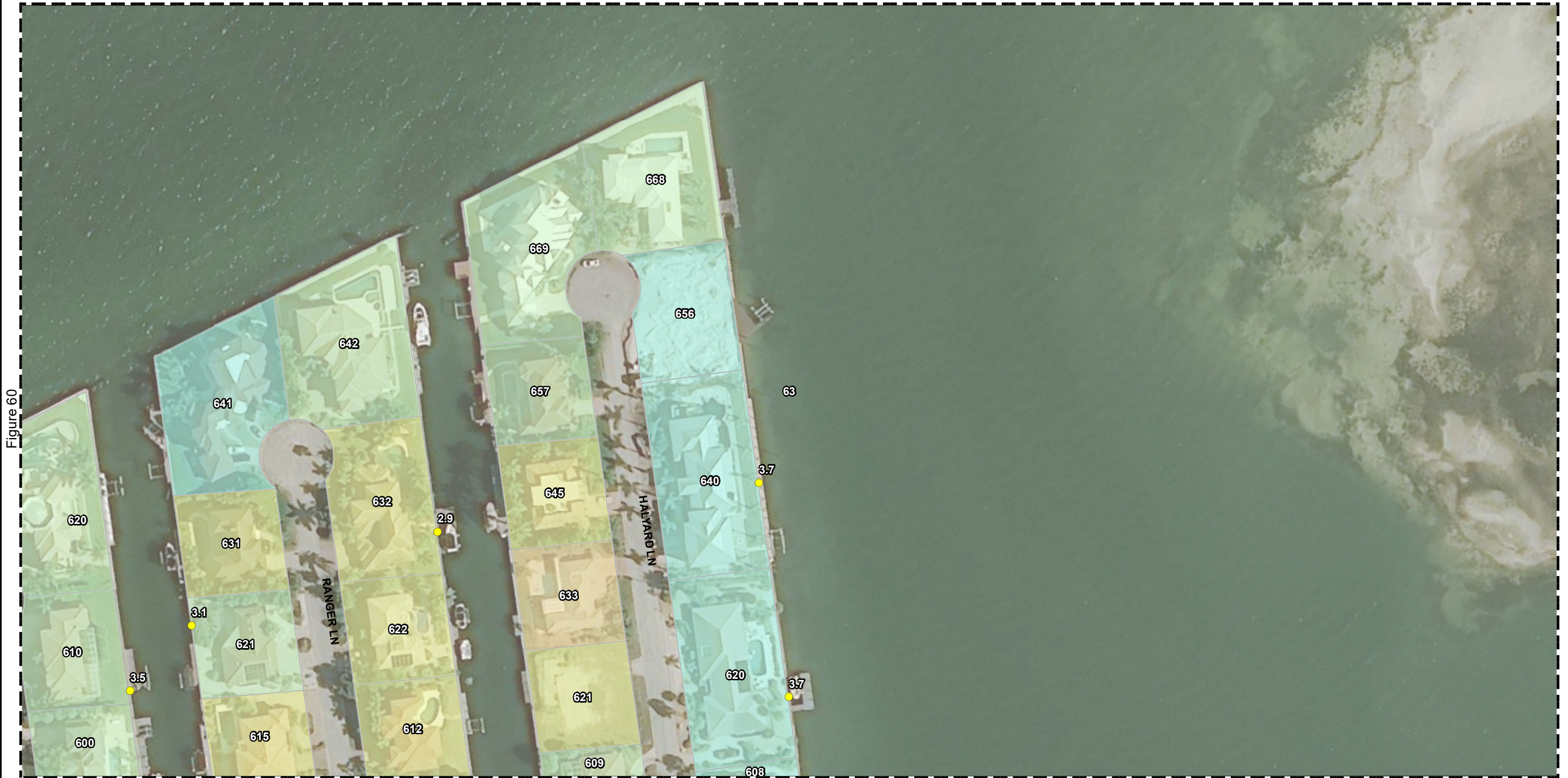
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COA#9317

Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 62



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

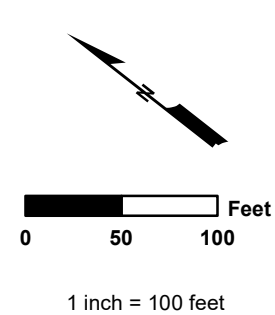
Shoreline Parcels

- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

**Longboat Key
Bulkheads & Lift Stations Map**



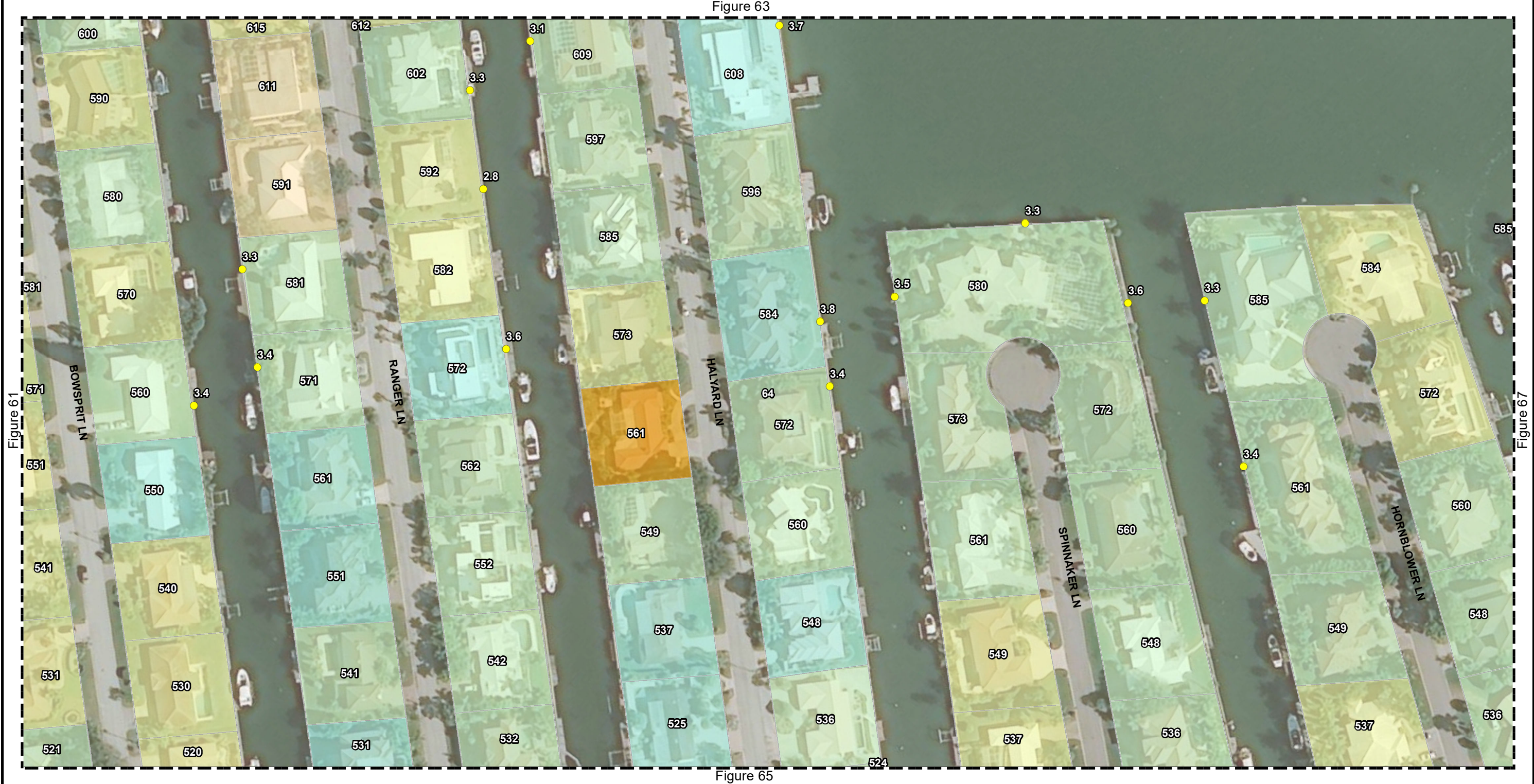
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Boca Raton, FL 33431
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COA#9317

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By: HNV

Comm No. : 631005068

Figure 63



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

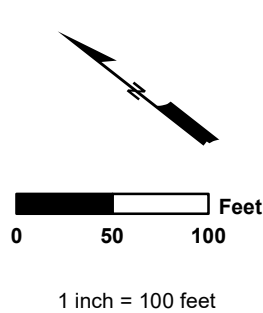
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- Natural Shoreline
 - Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 64

Figure 62



Figure 68

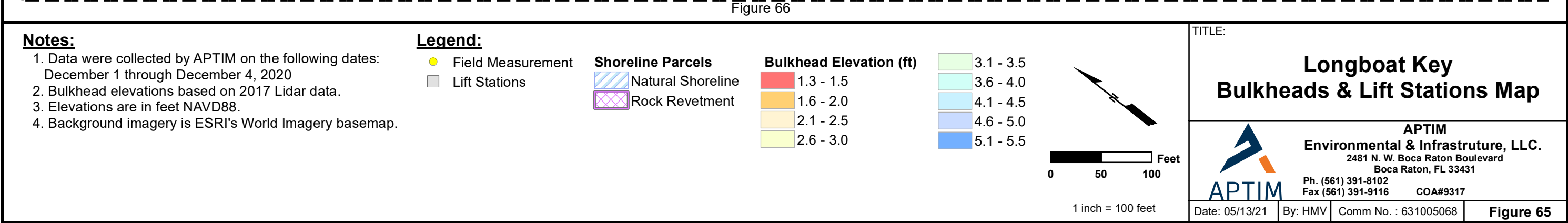


Figure 65



Notes:

- 1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
- 2. Bulkhead elevations based on 2017 Lidar data.
- 3. Elevations are in feet NAVD88.
- 4. Background imagery is ESRI's World Imagery basemap.

Legend:

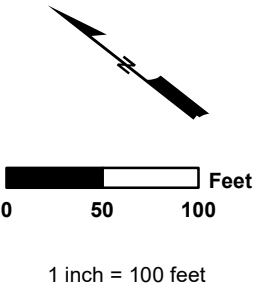
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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COA#9317

Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 66



Figure 68



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
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3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.





Legend:

- Field Measurement
- Lift Stations

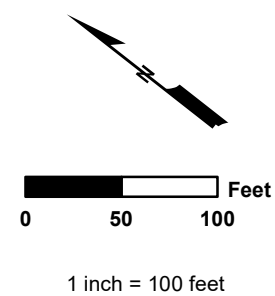
Shoreline Parcels

-  Natural Shoreline
 Rock Revetment

Bulkhead Elevation (ft)

- | | |
|---|-----------|
|  | 1.3 - 1.5 |
|  | 1.6 - 2.0 |
|  | 2.1 - 2.5 |
|  | 2.6 - 3.0 |

- | | |
|--|-----------|
| | 3.1 - 3.5 |
| | 3.6 - 4.0 |
| | 4.1 - 4.5 |
| | 4.6 - 5.0 |
| | 5.1 - 5.5 |



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Longboat Key Bulkheads & Lift Stations Map



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Date: 05/13/21

By: H MV

Comm No. : 631005068

Figure 67





Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.





Legend:

- Field Measurement
- Lift Stations

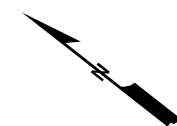
Shoreline Parcels

-  Natural Shoreline
 Rock Revetment

Bulkhead Elevation (ft)

- | | |
|---|-----------|
|  | 1.3 - 1.5 |
|  | 1.6 - 2.0 |
|  | 2.1 - 2.5 |
|  | 2.6 - 3.0 |

- | | |
|--|-----------|
| | 3.1 - 3.5 |
| | 3.6 - 4.0 |
| | 4.1 - 4.5 |
| | 4.6 - 5.0 |
| | 5.1 - 5.5 |



0 50 100 Feet

1 inch = 100 feet

TITLE:

Longboat Key Bulkheads & Lift Stations Map



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Date: 05/13/21

By: HMV

/	Comm No. : 631005068
---	----------------------

Figure 68

Figure 67



Figure 70

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

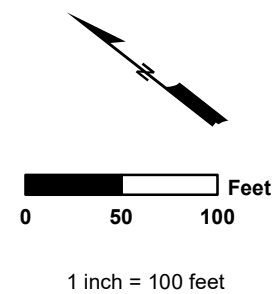
Shoreline Parcels

- ▨ Natural Shoreline
- ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



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**Longboat Key
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COA#9317

Date: 05/13/21

By: HNV

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Figure 69

Figure 69





Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.





Legend:

- Field Measurement
- Lift Stations

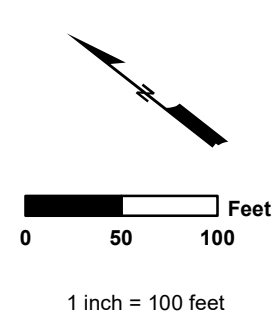
Shoreline Parcels

-  Natural Shoreline
 Rock Revetment

Bulkhead Elevation (ft)

- | | |
|---|-----------|
|  | 1.3 - 1.5 |
|  | 1.6 - 2.0 |
|  | 2.1 - 2.5 |
|  | 2.6 - 3.0 |

- | | |
|--|-----------|
| | 3.1 - 3.5 |
| | 3.6 - 4.0 |
| | 4.1 - 4.5 |
| | 4.6 - 5.0 |
| | 5.1 - 5.5 |



TITLE:

Longboat Key Bulkheads & Lift Stations Map



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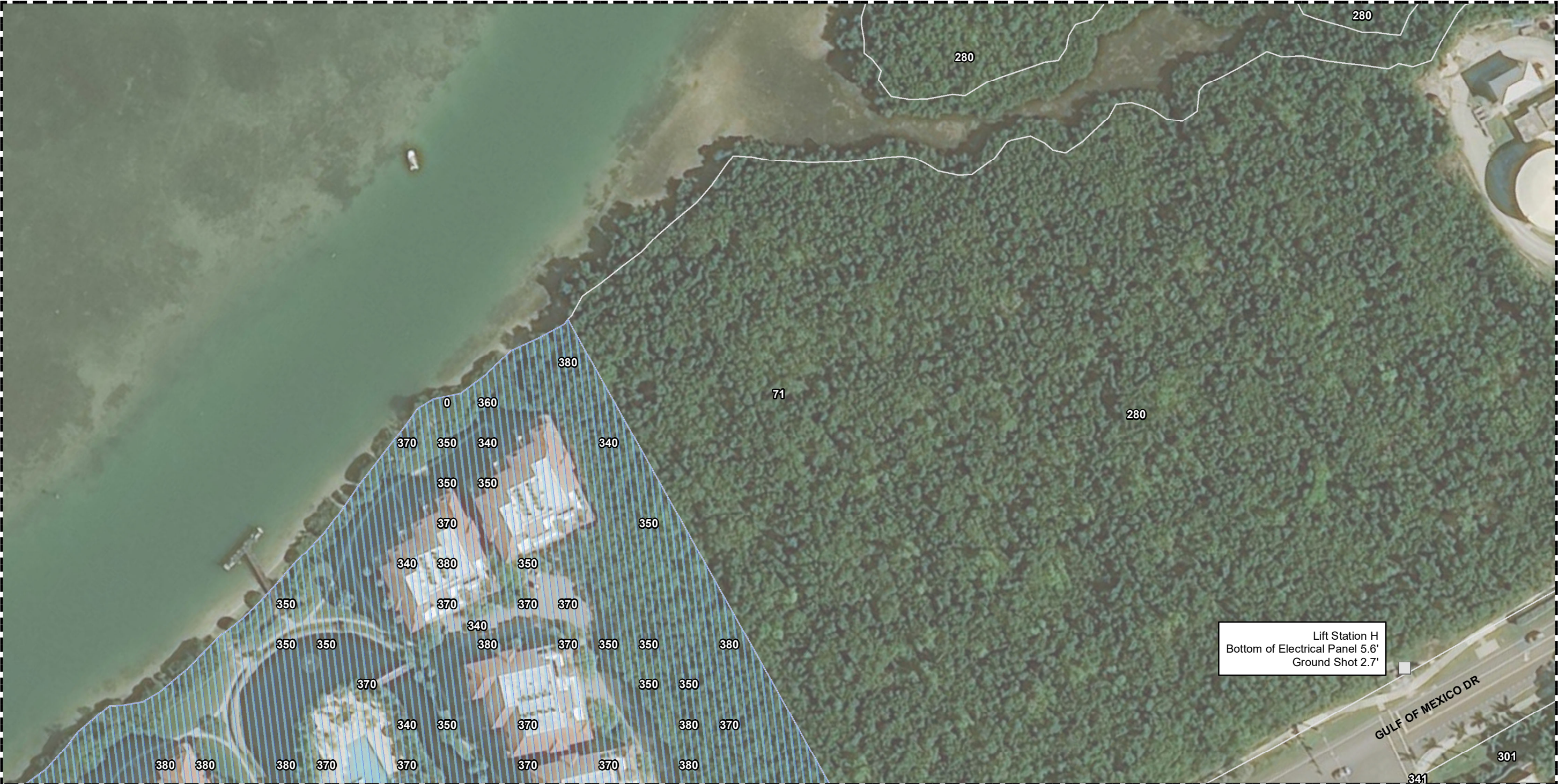
Date: 05/13/21

By: HMOV

Comm No. : 631005068

Figure 70

F:\CPM\Longboat Key\Sea Level Rise\Bulkhead Maps.mxd



Notes:

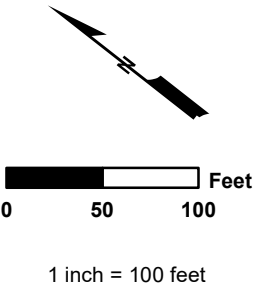
- 1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
- 2. Bulkhead elevations based on 2017 Lidar data.
- 3. Elevations are in feet NAVD88.
- 4. Background imagery is ESRI's World Imagery basemap.

Legend:

- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▤ Rock Revetment

- Bulkhead Elevation (ft)**
- 1.3 - 1.5
 - 1.6 - 2.0
 - 2.1 - 2.5
 - 2.6 - 3.0
 - 3.1 - 3.5
 - 3.6 - 4.0
 - 4.1 - 4.5
 - 4.6 - 5.0
 - 5.1 - 5.5



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Date: 05/13/21 By: HMV Comm No. : 631005068 **Figure 71**

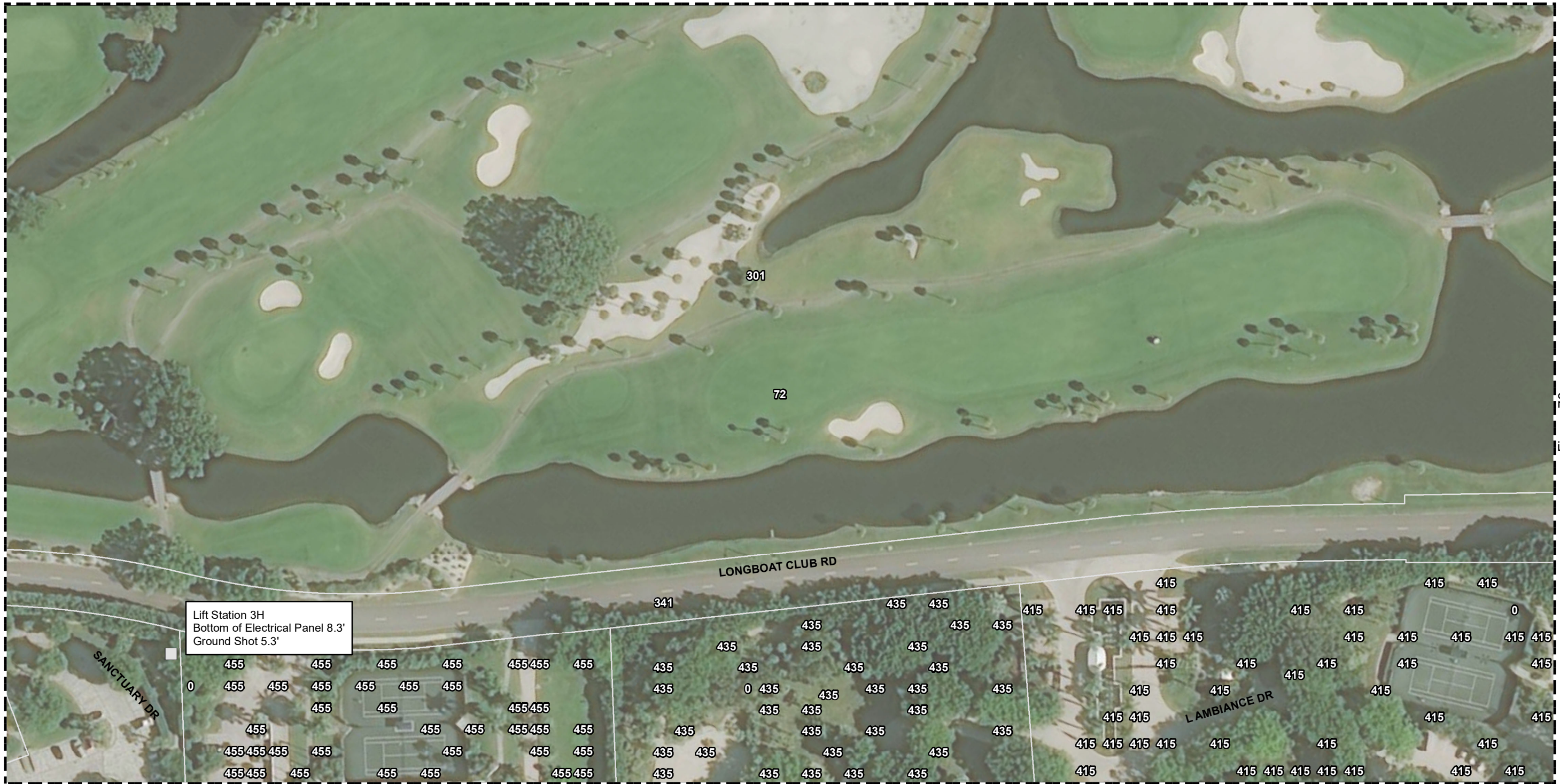


Figure 73

Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

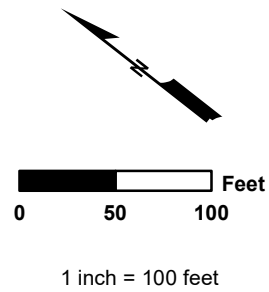
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

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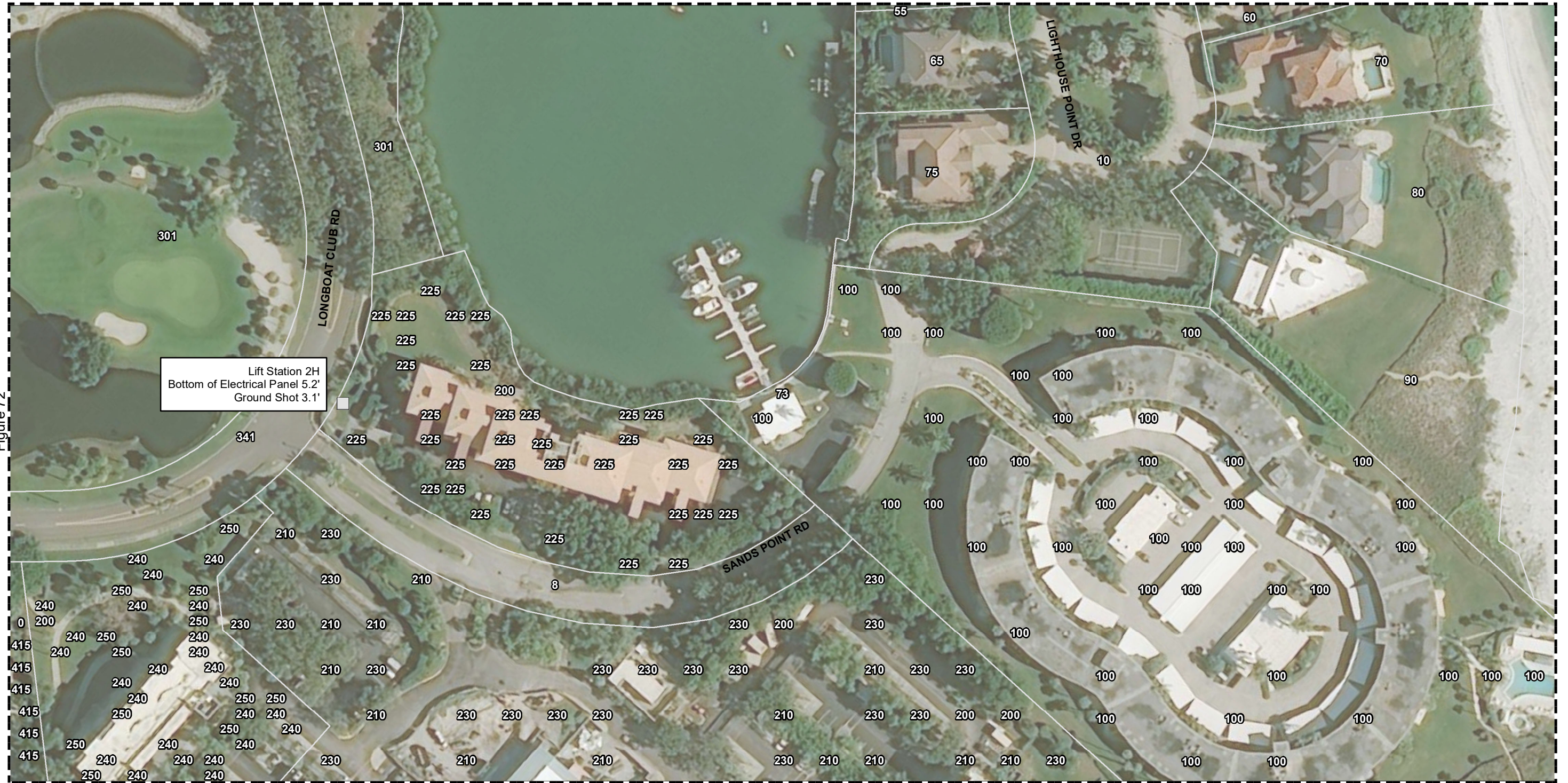
Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 72

Figure 72



Notes:

1. Data were collected by APTIM on the following dates:
December 1 through December 4, 2020
2. Bulkhead elevations based on 2017 Lidar data.
3. Elevations are in feet NAVD88.
4. Background imagery is ESRI's World Imagery basemap.

Legend:

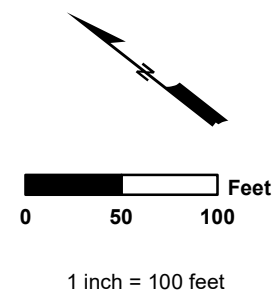
- Field Measurement
- Lift Stations

- Shoreline Parcels**
- ▨ Natural Shoreline
 - ▨ Rock Revetment

Bulkhead Elevation (ft)

- 1.3 - 1.5
- 1.6 - 2.0
- 2.1 - 2.5
- 2.6 - 3.0

- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5



TITLE:

**Longboat Key
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COA#9317

Date: 05/13/21

By: HMV

Comm No. : 631005068

Figure 73