MANASOTA KEY MITIGATION REEF
PREPARED FOR:
CHARLOTTE COUNTY BOARD OF COMMISSIONERS

INDEX
1. COVER SHEET
2. PLAN VIEW
3. BOUNDARY AREAS
4. DETAILS AND NOTES

GENERAL NOTES
1. PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE WEST ZONE OF FLORIDA AND REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
2. ELEVATIONS SHOWN HEREON ARE IN FEET AND TENTHS AND REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. MEAN HIGH WATER ELEVATION OF +0.32 FEET NAVD88 IS BASED ON INTERPOLATION BETWEEN TIDE STATIONS 872.5559 VENICE AIRPORT AND 872.5110 NAPLES. TIDAL EPOCH REFERENCED AT TIDE STATIONS IS 1983 - 2001.
4. INFORMATION SHOWN HEREON REFLECTS CONDITIONS AS THEY EXISTED ON THE SURVEY DATE SHOWN AND CAN ONLY BE CONSIDERED INDICATIVE OF CONDITIONS AT THAT TIME.
5. AERIAL PHOTOGRAPHY PROVIDED BY PICKETT & ASSOCIATES, INC., DATED 2019.
BOUNDARY COORDINATE TABLE

<table>
<thead>
<tr>
<th>POINT</th>
<th>NORTHING</th>
<th>EASTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>944,364</td>
<td>535,415</td>
</tr>
<tr>
<td>2</td>
<td>944,263</td>
<td>535,469</td>
</tr>
<tr>
<td>3</td>
<td>944,175</td>
<td>535,297</td>
</tr>
<tr>
<td>4</td>
<td>944,266</td>
<td>535,231</td>
</tr>
<tr>
<td>5</td>
<td>944,312</td>
<td>530,173</td>
</tr>
<tr>
<td>6</td>
<td>944,326</td>
<td>535,082</td>
</tr>
<tr>
<td>7</td>
<td>944,389</td>
<td>535,046</td>
</tr>
<tr>
<td>8</td>
<td>944,463</td>
<td>534,977</td>
</tr>
<tr>
<td>9</td>
<td>944,610</td>
<td>534,816</td>
</tr>
<tr>
<td>10</td>
<td>944,855</td>
<td>534,847</td>
</tr>
<tr>
<td>11</td>
<td>944,987</td>
<td>534,805</td>
</tr>
<tr>
<td>12</td>
<td>945,062</td>
<td>534,746</td>
</tr>
<tr>
<td>13</td>
<td>944,983</td>
<td>534,578</td>
</tr>
<tr>
<td>14</td>
<td>945,096</td>
<td>534,514</td>
</tr>
<tr>
<td>15</td>
<td>945,212</td>
<td>534,739</td>
</tr>
</tbody>
</table>

BOUNDARY COORDINATE TABLE

<table>
<thead>
<tr>
<th>POINT</th>
<th>NORTHING</th>
<th>EASTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>945,402</td>
<td>534,688</td>
</tr>
<tr>
<td>17</td>
<td>945,444</td>
<td>534,753</td>
</tr>
<tr>
<td>18</td>
<td>945,155</td>
<td>534,908</td>
</tr>
<tr>
<td>19</td>
<td>945,090</td>
<td>534,837</td>
</tr>
<tr>
<td>20</td>
<td>944,911</td>
<td>535,024</td>
</tr>
<tr>
<td>21</td>
<td>944,766</td>
<td>534,952</td>
</tr>
<tr>
<td>22</td>
<td>944,635</td>
<td>534,999</td>
</tr>
<tr>
<td>23</td>
<td>944,476</td>
<td>535,141</td>
</tr>
<tr>
<td>24</td>
<td>944,338</td>
<td>536,288</td>
</tr>
<tr>
<td>25</td>
<td>940,339</td>
<td>537,564</td>
</tr>
<tr>
<td>26</td>
<td>940,258</td>
<td>537,455</td>
</tr>
<tr>
<td>27</td>
<td>940,319</td>
<td>537,334</td>
</tr>
<tr>
<td>28</td>
<td>940,488</td>
<td>537,236</td>
</tr>
<tr>
<td>29</td>
<td>940,533</td>
<td>537,468</td>
</tr>
</tbody>
</table>

LEGEND

- DIVER MAPPED OFFSHORE HARD BOTTOM EDGE (CEG: JUNE 2018)
- MITIGATION REEF AREA
- BOUNDARY COORDINATE LOCATION

MITIGATION REEF AREA A

SCALE: 1" = 100'

MITIGATION REEF AREA B

SCALE: 1" = 100'
**CONSTRUCTION NOTES**

1. ROCKS SHALL BE CLEAN LIMESTONE BOULDERS. ROCKS SHALL BE FREE OF SOILS, OILS, GREASES, DEBRIS, LITTER, OR OTHER POLLUTANTS.
2. PERIMETERS OF EACH PERMITTED AREA SHALL BE MARKED AND MAINTAINED WITH BUOYS DURING CONSTRUCTION PER PERMITS AND IN ACCORDANCE WITH USCG REQUIREMENTS.
3. NO ROCK SHALL BE DEPOSITED OUTSIDE OF PERMITTED AREAS.
4. MITIGATION REEF SHALL BE CONSTRUCTED BY PLACING ROCK IN A SINGLE LAYER AS TIGHTLY AS PRACTICABLE.
5. STACKING OF ROCK SHALL BE MINIMIZED. ALL ROCK MUST BE PLACED BELOW -14 FT NAVD88.
6. ROCK SHALL BE PLACED TO BEAR UPON GULF BOTTOM.
7. ROCK SHALL NOT BE INDISCRIMINATELY DUMPED.
8. PERMITTED REEF AREAS EXHIBIT A THIN LAYER OF SAND (AVG. 12" THICK) OVER ROCK SUBSTRATE.
9. SEE TECHNICAL SPECIFICATIONS FOR ADDITIONAL DETAILS OF WORK.

**TYPICAL MITIGATION REEF CROSS SECTION**

- **LANDWARD ELEVATION AT REEF**
  - VARIES DEPENDING ON LOCATION (SEE PLAN VIEW)
- **SEAWARD ELEVATION AT REEF**
  - VARIES DEPENDING ON LOCATION (SEE PLAN VIEW)
- **SAND THICKNESS**
  - VARIES
- **HARD SUBSTRATE**
  - VARIES
- **SEA FLOOR ELEVATION**
  - VARIES

**ROCK PLACEMENT ORIENTATION**

- **FLATTEST SURFACE TO BE PLACED FACE DOWN**
- **THE GREATEST DIMENSION OF EACH ROCK TO BE PARALLEL TO THE EXISTING BOTTOM**

**MITIGATION REEF PLAN VIEW (TYP)**

- **SCALE: N.T.S.**
- **SCALE: N.T.S.**

**SCALE: 1" = 3’**

**FILE NO.: 19082-REEF-4**

**SHEET 4**

**CLIENT:**

**TITLE:**

**NO.**

**REVISION DESCRIPTION**

**DATE**

**BY**

**ACAD NO.**

**DATE**

**DRAWN:**

**SEC.**

**CHECKED:**

**AS NOTED**

**RNG.**

**REF. NO.**

**MANASOTA KEY MITIGATION REEF DETAILS AND NOTES**

**STATE OF FLORIDA**

**CONSTRUCTION NOTES**

1. ROCKS SHALL BE CLEAN LIMESTONE BOULDERS. ROCKS SHALL BE FREE OF SOILS, OILS, GREASES, DEBRIS, LITTER, OR OTHER POLLUTANTS.
2. PERIMETERS OF EACH PERMITTED AREA SHALL BE MARKED AND MAINTAINED WITH BUOYS DURING CONSTRUCTION PER PERMITS AND IN ACCORDANCE WITH USCG REQUIREMENTS.
3. NO ROCK SHALL BE DEPOSITED OUTSIDE OF PERMITTED AREAS.
4. MITIGATION REEF SHALL BE CONSTRUCTED BY PLACING ROCK IN A SINGLE LAYER AS TIGHTLY AS PRACTICABLE.
5. STACKING OF ROCK SHALL BE MINIMIZED. ALL ROCK MUST BE PLACED BELOW -14 FT NAVD88.
6. ROCK SHALL BE PLACED TO BEAR UPON GULF BOTTOM.
7. ROCK SHALL NOT BE INDISCRIMINATELY DUMPED.
8. PERMITTED REEF AREAS EXHIBIT A THIN LAYER OF SAND (AVG. 12" THICK) OVER ROCK SUBSTRATE.
9. SEE TECHNICAL SPECIFICATIONS FOR ADDITIONAL DETAILS OF WORK.