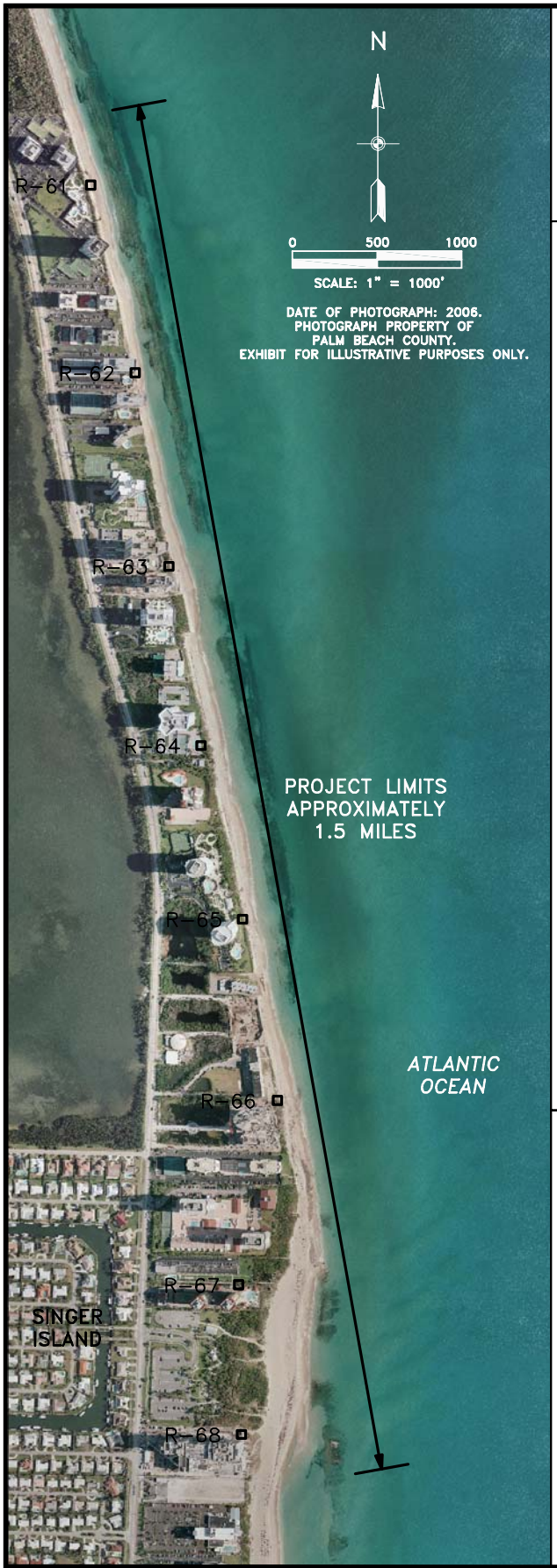


SINGER ISLAND
EROSION CONTROL PROJECT

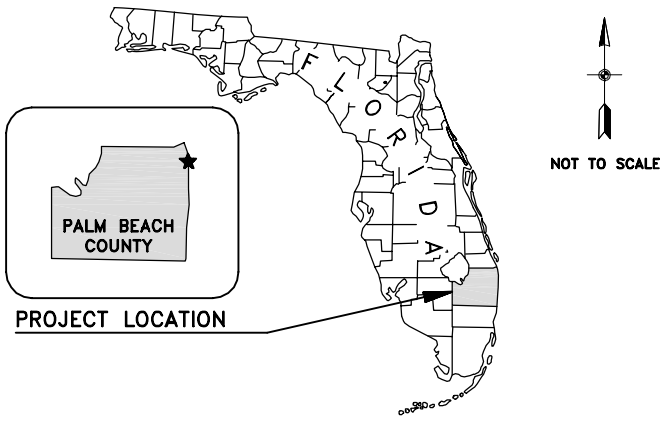
SHEET INDEX

THESE PLANS COMPLY WITH THE DESIGN STANDARDS ESTABLISHED IN CHAPTER 62B-41, FLORIDA ADMINISTRATIVE CODE.

NOTE: THESE CONSTRUCTION DRAWINGS SHALL NOT BE CONSIDERED VALID FOR CONSTRUCTION PURPOSES UNLESS SIGNED AND SEALED BY EITHER:

BRETT D. MOORE, P.E. #37326
KENNETH K. HUMISTON, P.E. #23326

LOCATION MAP



HUMISTON & MOORE ENGINEERS
COASTAL ENGINEERING DESIGN AND PERMITTING

SINGER ISLAND EROSION CONTROL PROJECT COVER SHEET AND LOCATION MAP		
FOR: PALM BEACH COUNTY		
DATE: 08/05/08	FILE: SHEET01	SCALE: 1"=1000'
JOB: 14-011	DATUM: NONE	SHEET 1

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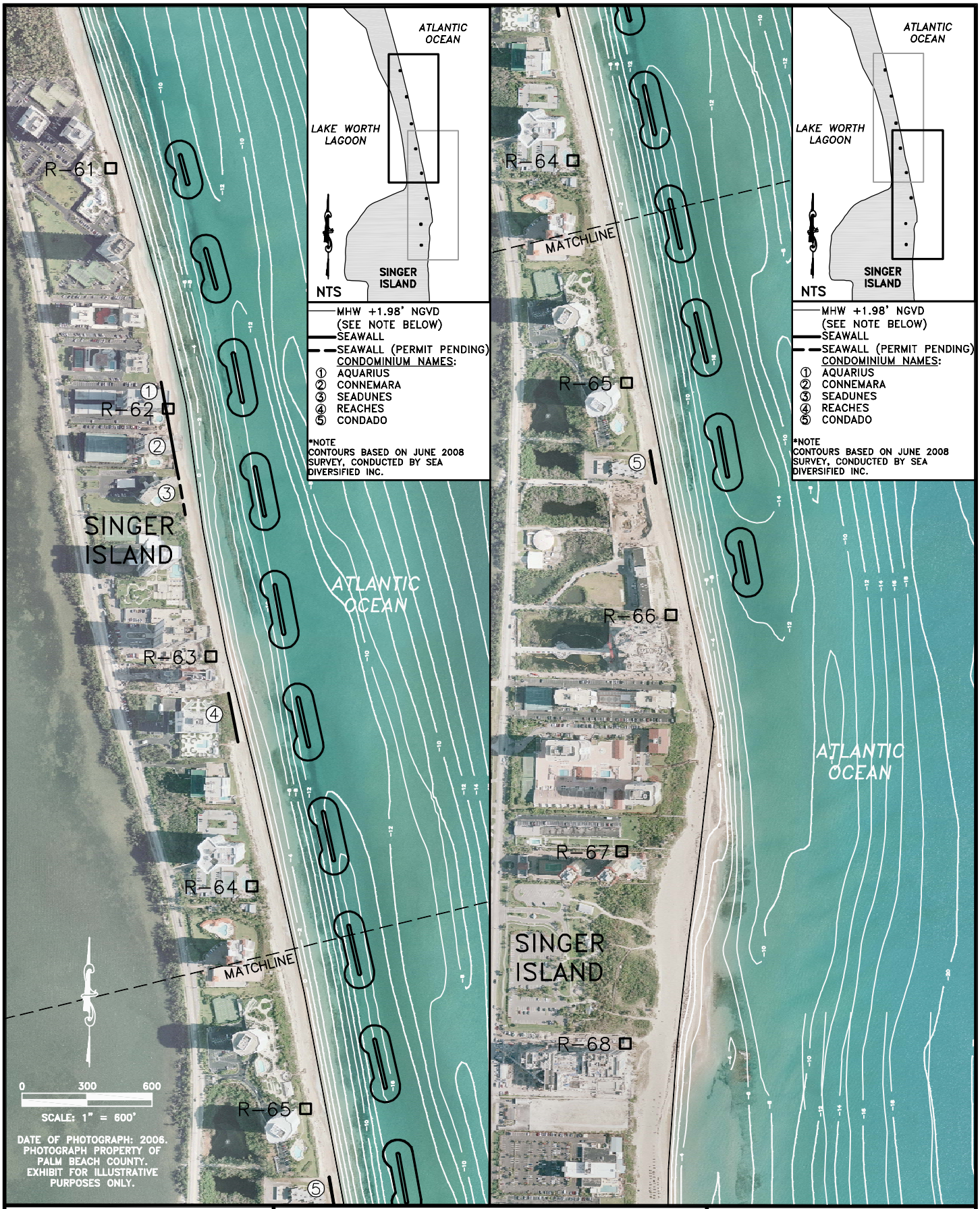

HUMISTON & MOORE ENGINEERS
COASTAL ENGINEERING DESIGN AND PERMITTING

SINGER ISLAND EROSION CONTROL PROJECT
PROJECT SITE PLAN

FOR: PALM BEACH COUNTY		
DATE: 08/05/08	FILE: SHEET02-03	SCALE: 1"=600'
JOB: 14-011	DATUM: NGVD	SHEET 2

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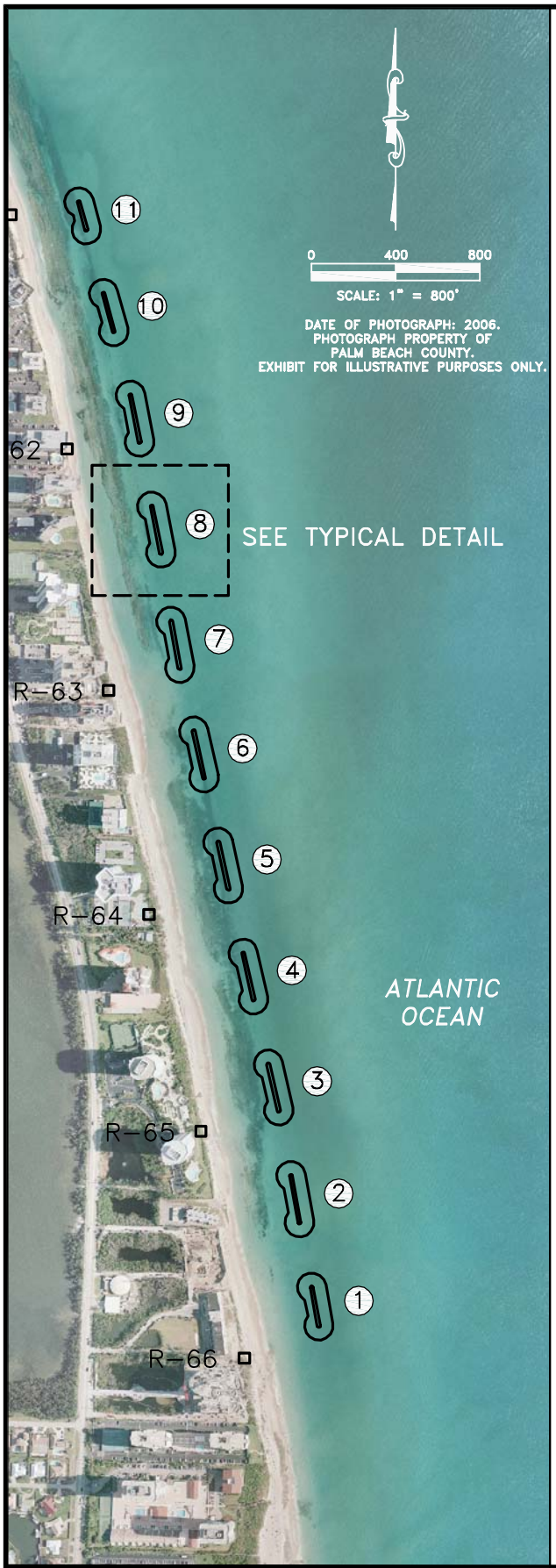
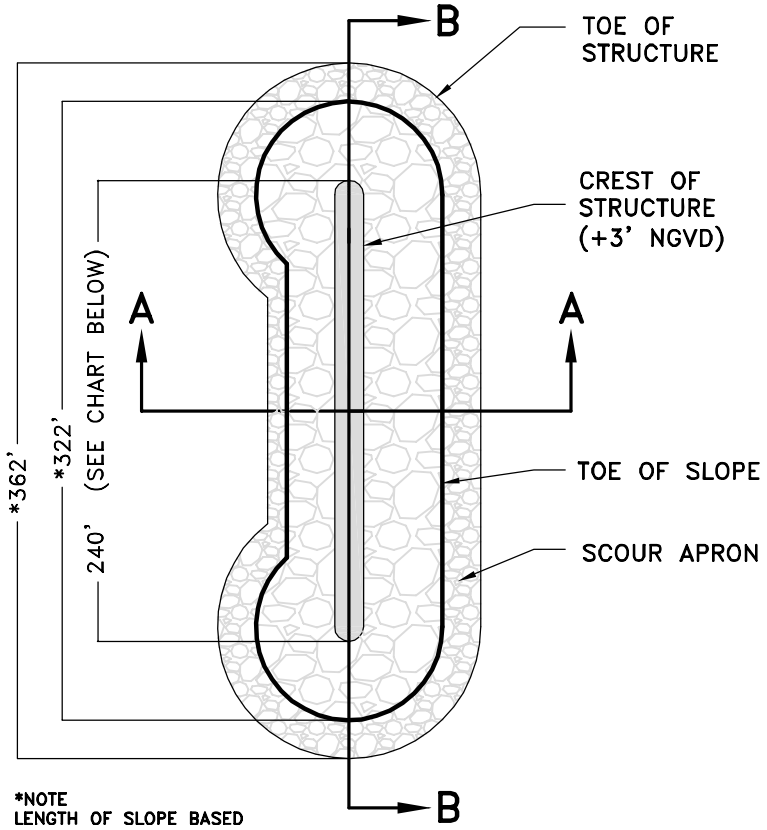




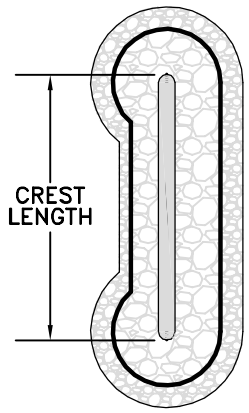
*NOTE
LENGTH OF SLOPE BASED UPON EXISTING GRADE ELEVATION, MAY VARY FROM STRUCTURE TO STRUCTURE.

TYPICAL DETAIL

SECTIONS SHOWN ON SHEET 3A, 3B, & 3C

0 50 100
SCALE: 1"=100'

INDIVIDUAL BREAKWATER DIMENSIONS



NOT TO SCALE

	CREST LENGTH
1	200'
2	240'
3	240'
4	240'
5	240'
6	240'
7	240'
8	240'
9	240'
10	200'
11	150'

HUMISTON & MOORE ENGINEERS
COASTAL ENGINEERING DESIGN AND PERMITTING

SINGER ISLAND EROSION CONTROL PROJECT
SEGMENTED BREAKWATER SITE PLAN

FOR: PALM BEACH COUNTY		
DATE: 08/05/08	FILE: SHEET04-05	SCALE: AS SHOWN
JOB: 14-011	DATUM: NONE	SHEET 3

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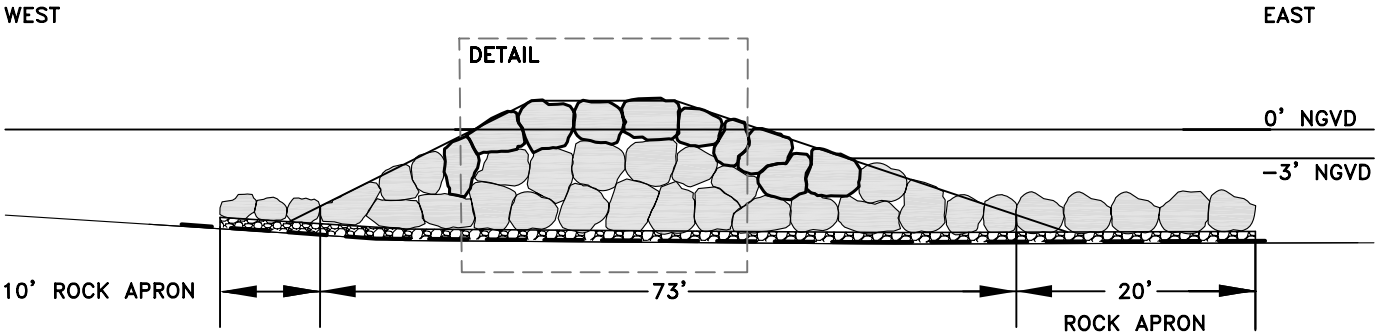


SECTION A-A

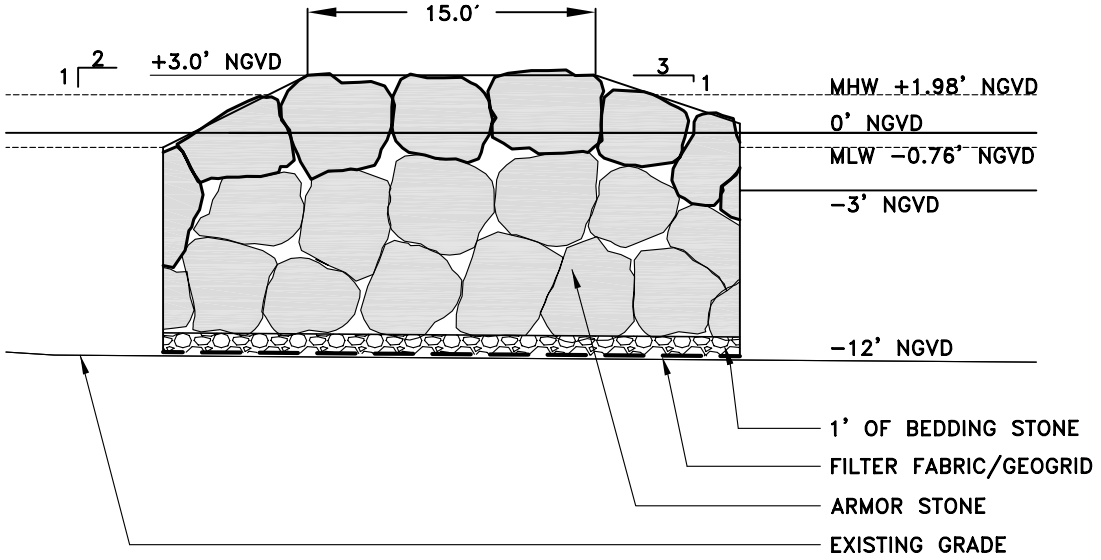
SCALE 1"=20'

GRANITE ARMOR STONE

LIMESTONE ARMOR STONE

NOTES:

1. GRANITE ARMOR STONE
   DENSITY: 165LB/CU. FT. OR GREATER
   SIZE: 50% GREATER THAN 3.5 TONS
   MINIMUM SIZE: 3 TONS
   MAXIMUM SIZE: 4 TONS
   TOLERANCE ±1.0' WITH 75% OF ARMOR UNITS AT OR ABOVE DESIGN GRADE
   * TO BE PLACED BETWEEN +3 NGVD AND -3 NGVD
2. LIMESTONE ARMOR STONE
   DENSITY: 140LB/CU. FT. OR GREATER
   SIZE: 50% GREATER THAN 6 TONS
   MINIMUM SIZE: 5 TONS
   MAXIMUM SIZ: 7 TONS
   TOLERANCE ±1.0' WITH 75% OF ARMOR UNITS AT OR ABOVE DESIGN GRADE
   * TO BE PLACED BETWEEN -3 NGVD AND BEDDING STONE
3. BEDDING STONE
   DENSITY: 140 LB/CU. FT OR GREATER
   SIZE: 4" TO 9"
   LAYER THICKNESS: 6" TO 12"
   * TO BE PLACED ABOVE FILTER MATERIAL
4. FILTER FABRIC/GEOGRID
   * TO BE PLACED ABOVE EXISTING GRADE, A MINIMUM OVERLAP OF ONE FOOT
5. ROCK TO BE PLACED CAREFULLY TO ACHIEVE SMALLEST VOIDS PRACTICAL, REMAINING VOIDS TO BE CHINKED WITH SMALLER ROCK.
6. LENGTH OF SLOPE BASED UPON EXISTING GRADE ELEVATION, MAY VARY FROM STRUCTURE TO STRUCTURE.



DETAIL

SCALE 1"=10'

HUMISTON & MOORE ENGINEERS
COASTAL ENGINEERING DESIGN AND PERMITTING

SINGER ISLAND EROSION CROSS CONTROL PROJECT TYPICAL BREAKWATER SECTION A-A		
FOR: PALM BEACH COUNTY		
DATE: 08/05/08	FILE: SHEET 3A	SCALE: AS SHOWN
JOB: 14-011	DATUM:	SHEET 3A

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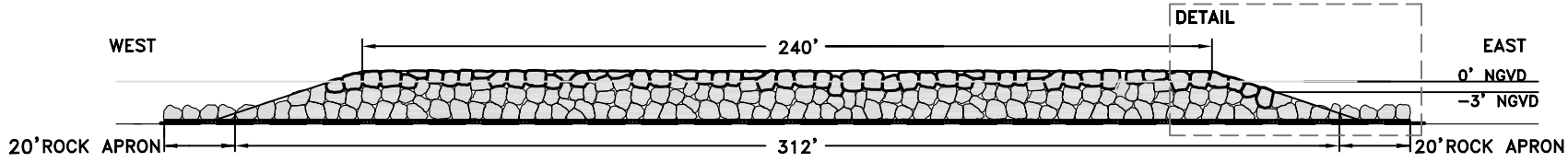
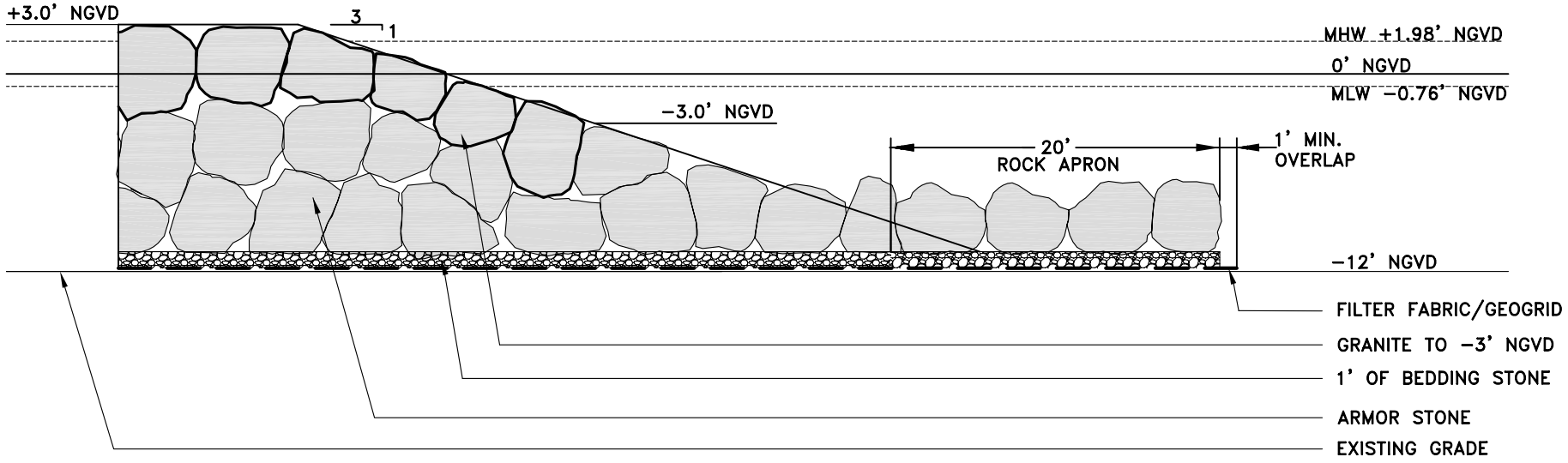


SECTION B–B

SCALE 1"=50'

NOTES:

1. GRANITE ARMOR STONE
   - DENSITY: 165LB/CU. FT. OR GREATER
   - SIZE: 50% GREATER THAN 3.5 TONS
   - MINIMUM SIZE: 3 TONS
   - MAXIMUM SIZE: 4 TONS
   - TOLERANCE ±1.0' WITH 75% OF ARMOR UNITS AT OR ABOVE DESIGN GRADE
     * TO BE PLACED BETWEEN +3 NGVD AND −3 NGVD
2. LIMESTONE ARMOR STONE
   - DENSITY: 140LB/CU. FT. OR GREATER
   - SIZE: 50% GREATER THAN 6 TONS
   - MINIMUM SIZE: 5 TONS
   - MAXIMUM SIZ: 7 TONS
   - TOLERANCE ±1.0' WITH 75% OF ARMOR UNITS AT OR ABOVE DESIGN GRADE
     * TO BE PLACED BETWEEN −3 NGVD AND BEDDING STONE
3. BEDDING STONE
   - DENSITY: 140 LB/CU. FT OR GREATER
   - SIZE: 4" TO 9"
   - LAYER THICKNESS: 6" TO 12"
     * TO BE PLACED ABOVE FILTER MATERIAL
4. FILTER FABRIC/GEOGRID
   - * TO BE PLACED ABOVE EXISTING GRADE, A MINIMUM OVERLAP OF ONE FOOT
5. ROCK TO BE PLACED CAREFULLY TO ACHIEVE SMALLEST VOIDS PRACTICAL,REMAINING VOIDS TO BE CHINKED WITH SMALLER ROCK.



DETAIL

SCALE 1"=10'

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COASTAL ENGINEERING DESIGN AND PERMITTING

SINGER ISLAND EROSION CROSS CONTROL PROJECT TYPICAL BREAKWATER CROSS SECTION B–B		
FOR: PALM BEACH COUNTY		
DATE: 08/05/08	FILE: SHEET 3B	SCALE: AS SHOWN
JOB: 14–011	DATUM:	SHEET 3B

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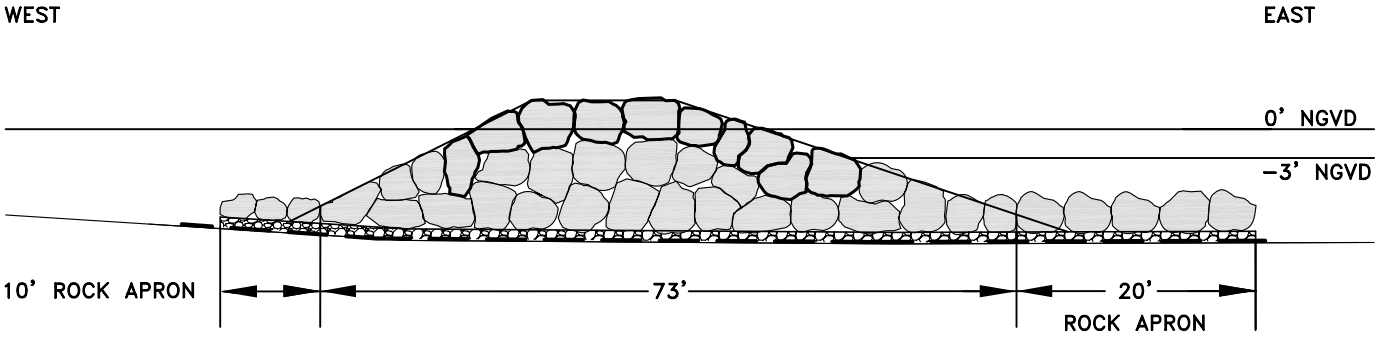

NOTES:

1. GRANITE ARMOR STONE
   DENSITY: 165LB/CU. FT. OR GREATER
   SIZE: 50% GREATER THAN 3.5 TONS
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   * TO BE PLACED BETWEEN −3 NGVD AND BEDDING STONE
3. BEDDING STONE
   DENSITY: 140 LB/CU. FT OR GREATER
   SIZE: 4" TO 9"
   LAYER THICKNESS: 6" TO 12"
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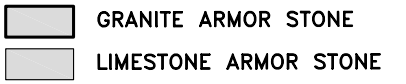
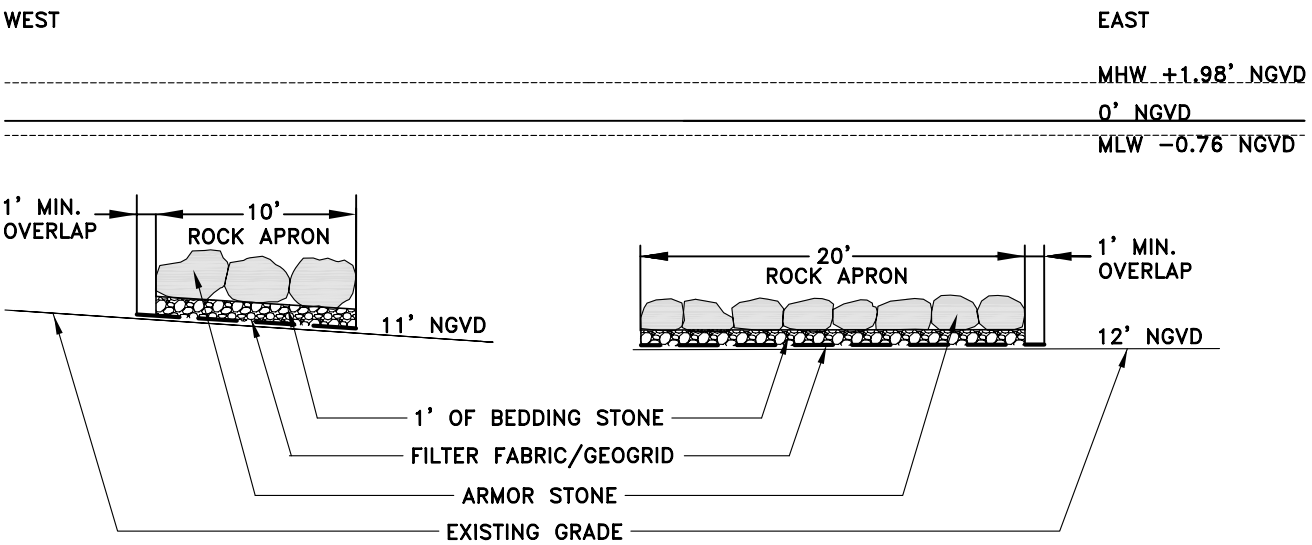
4. FILTER FABRIC/GEOGRID
   * TO BE PLACED ABOVE EXISTING GRADE, A MINIMUM OVERLAP OF ONE FOOT
5. ROCK TO BE PLACED CAREFULLY TO ACHIEVE SMALLEST VOIDS PRACTICAL, REMAINING VOIDS TO BE CHINKED WITH SMALLER ROCK.

SECTION A−A

SCALE 1"=20'





ROCK APRON DETAIL

SCALE 1"=10'

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COASTAL ENGINEERING DESIGN AND PERMITTING

SINGER ISLAND EROSION CONTROL PROJECT TYPICAL BREAKWATER APRON DETAIL		
FOR: PALM BEACH COUNTY		
DATE: 08/05/08	FILE: SHEET 3C	SCALE: AS SHOWN
JOB: 14−011	DATUM:	SHEET 3C

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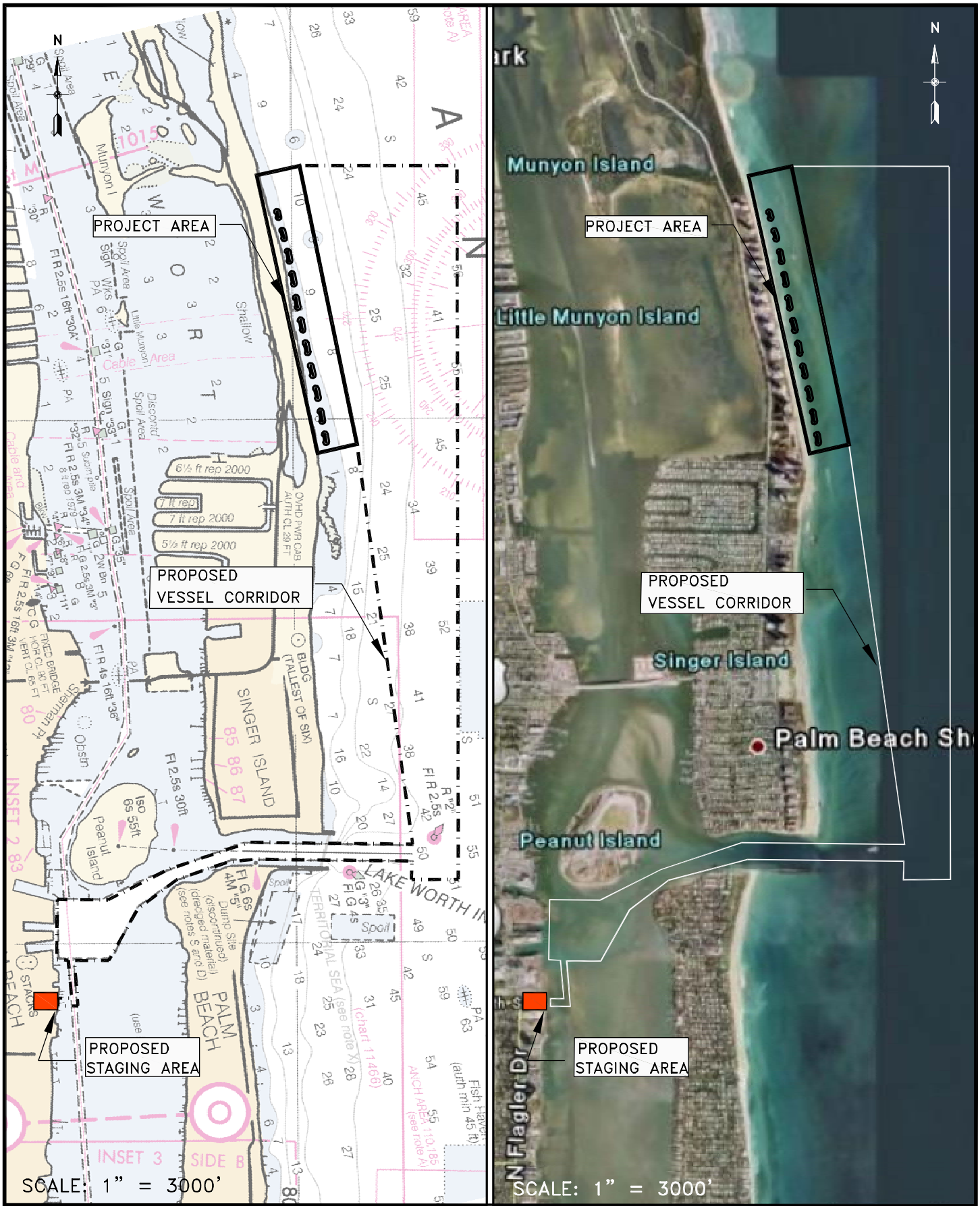

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SINGER ISLAND EROSION CONTROL PROJECT
VESSEL CORRIDOR

FOR: PALM BEACH COUNTY		
DATE: 08/05/08	FILE: SHEET4	SCALE: AS SHOWN
JOB: 14-011	DATUM: NGVD	SHEET 4

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