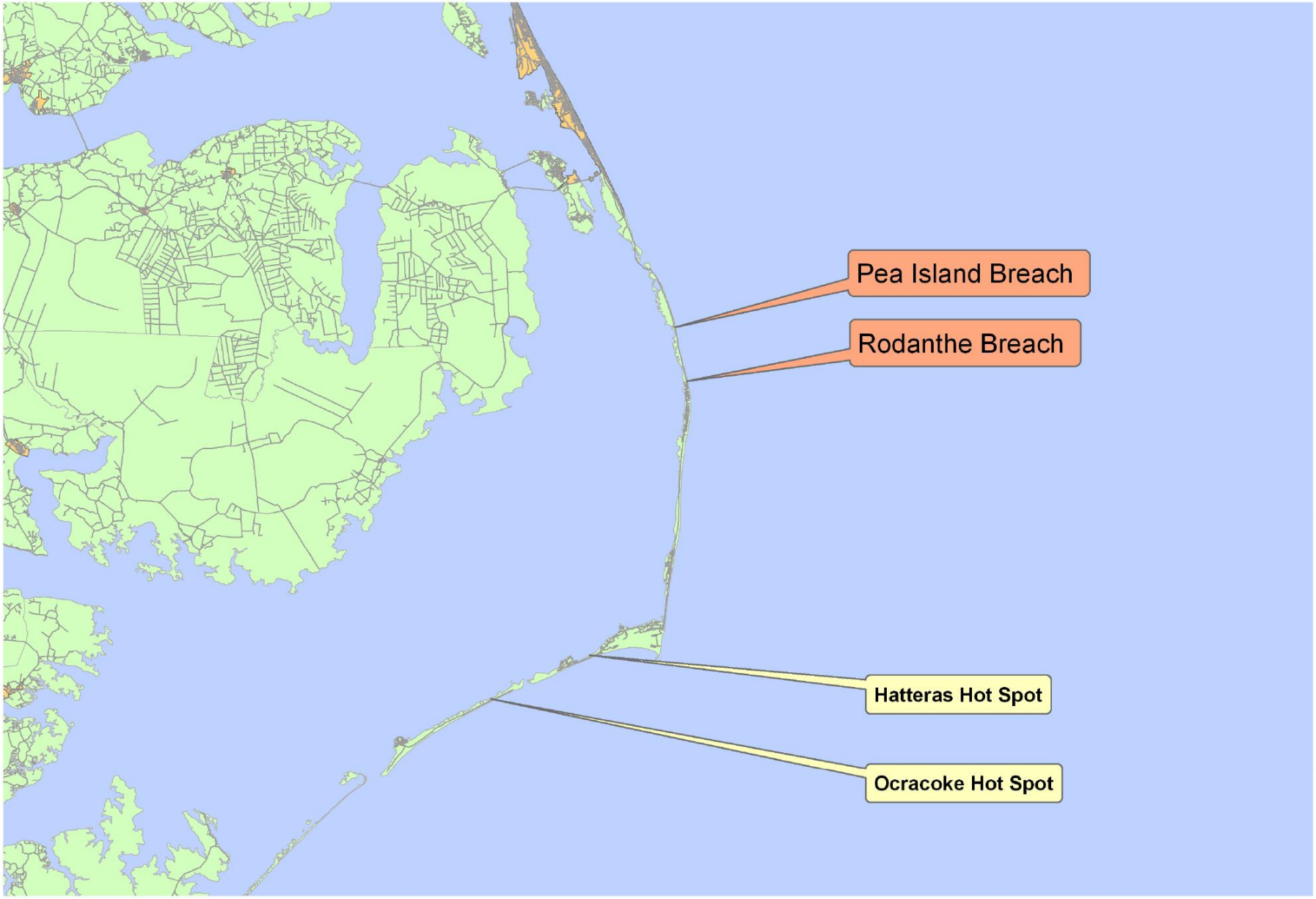
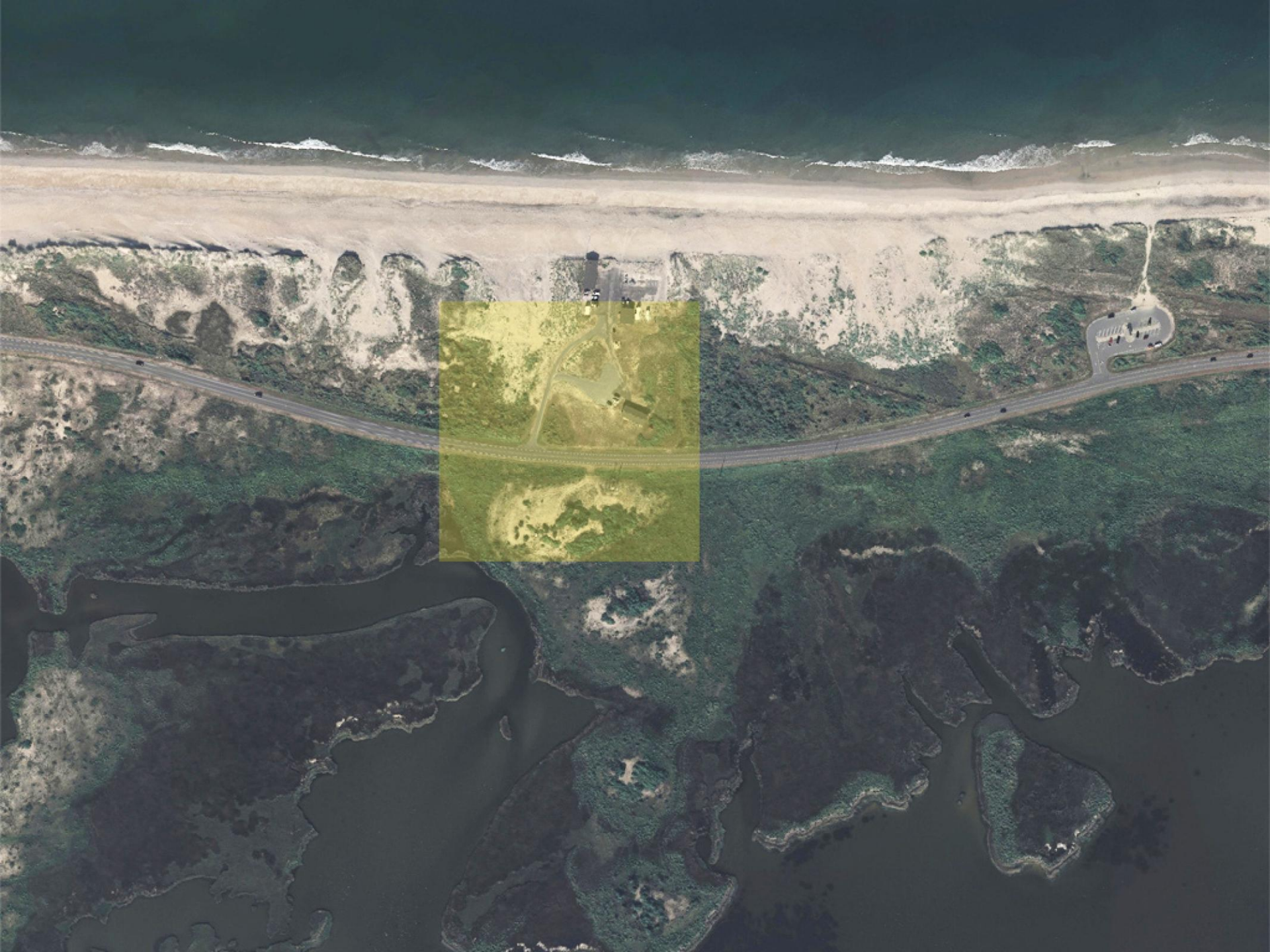
HURRICANE IRENE

August 27, 2011


Pea Island Breach
Rodanthe Breach
Hatteras Hot Spot
Ocracoke Hot Spot

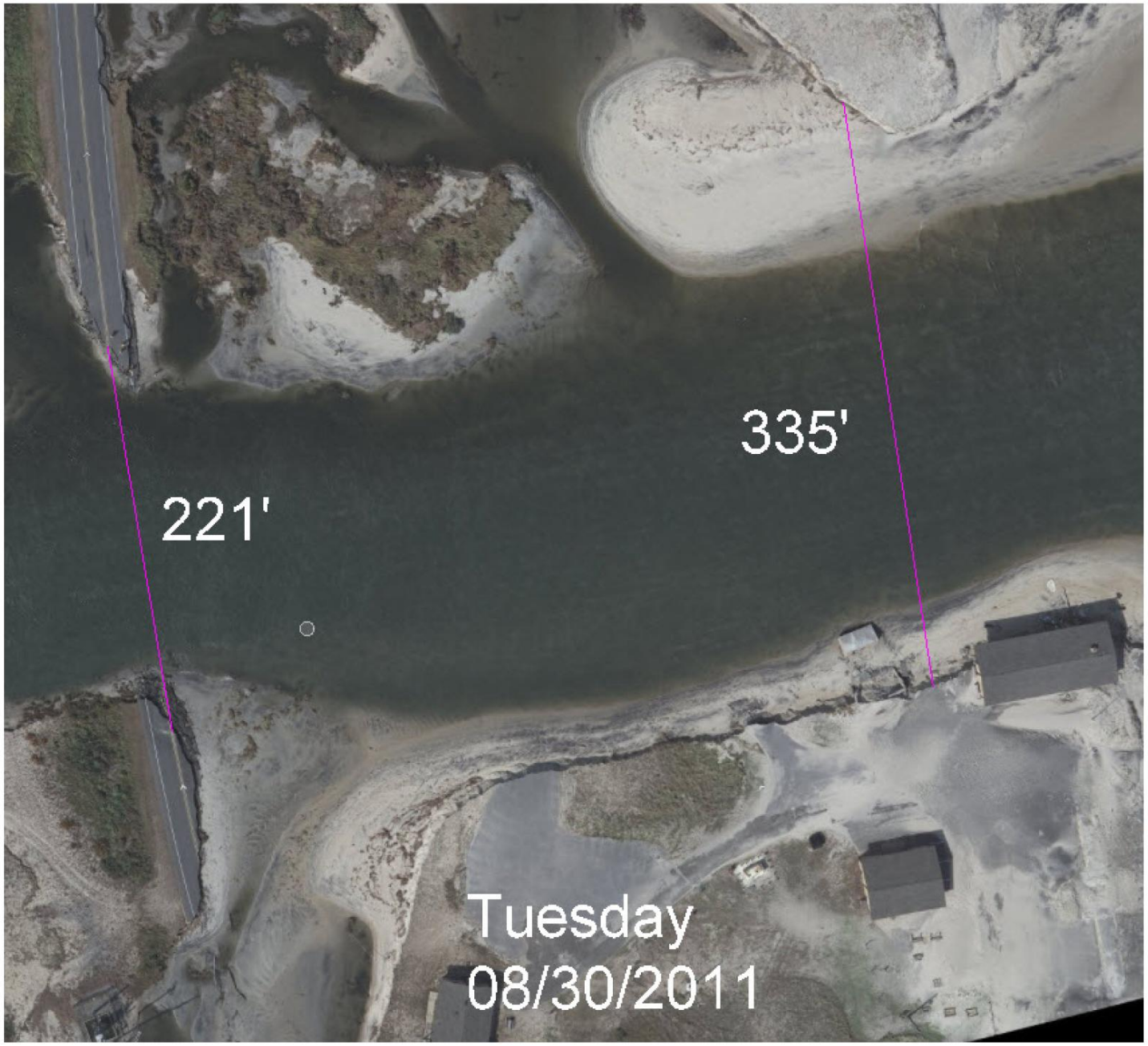
Pea Island Breach - Before

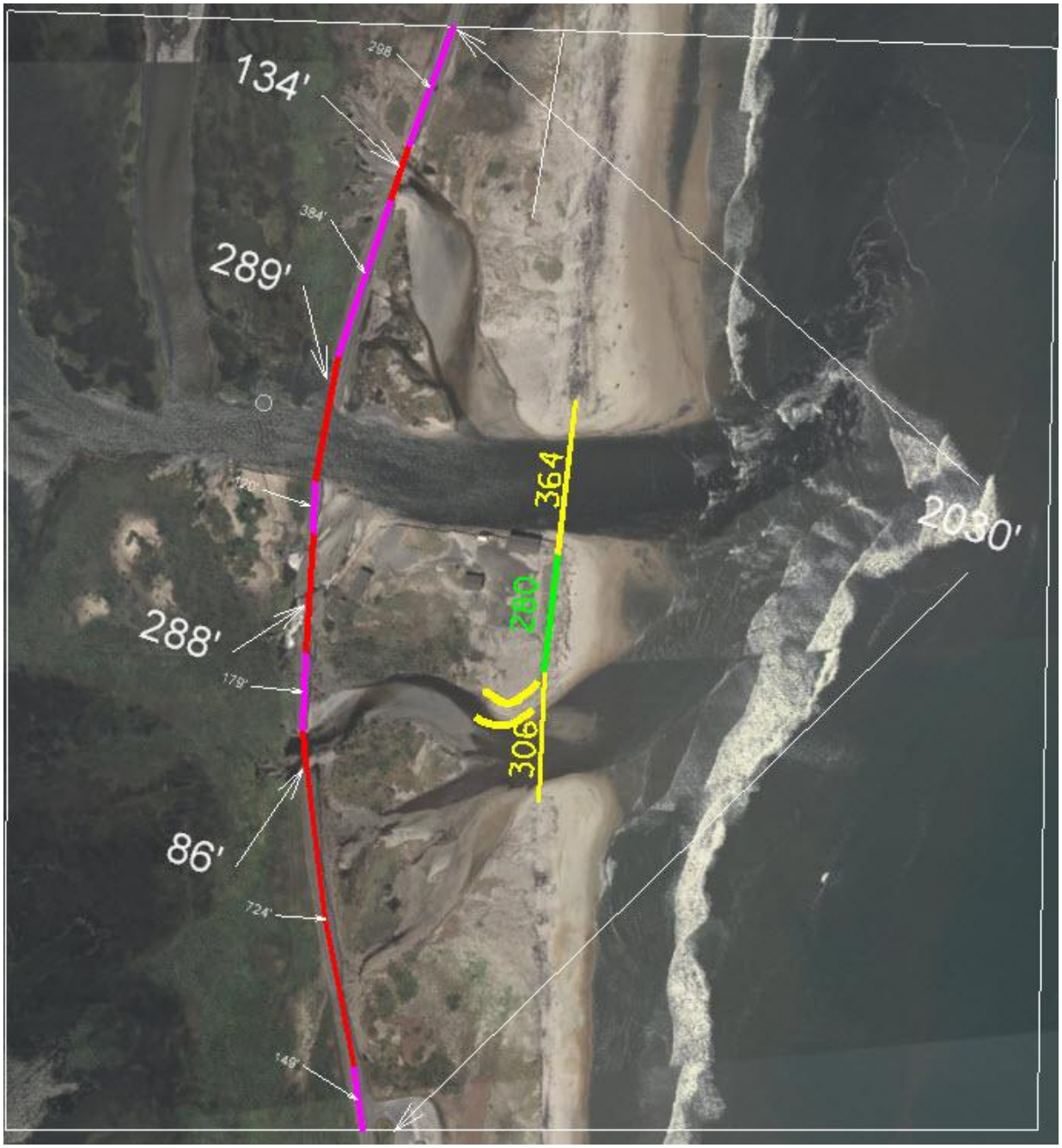


Pea Island Breach - After

26 9 2011

198'
9 to 10 fps
331'
Sunday
08/28/2011


221'
335'
Tuesday
08/30/2011


134'
298
384'
289'
120'
288'
179'
86'
724'
149'
364
280
306
2030'

5.3'
8.5'
10.7'
5.9'
5.1 + ? water
6.0'
2'
8.0'
7.8'
6.2'
0.1'
0.3'
0.1'
9.3'
4.3'
6.4'
7.4'
7.9'

Rodanthe Breach - Before

Rodanthe Breach - After

862'
Sunday
08/28/2011

Element Select...
862'
Tuesday
08/30/2011

147'
1851'
311'
466'

505'
Tuesday 6-30-11
3:02 pm
19:03 GMT

5.5'
6.4'
8.4'
8.8'
7.2'
3.2
3.3'
2.6'
3.5'
5.9'
11.3 @ water depth
3.1'
2.3'
4.3'
7.5'
5.8'
3.8'
3.2'
3.7'
2.9'
5.0'
9.5
6.5'
5.6'
3.5'

Possible Solutions

Possible Breach Repair Solution

Temporary Repairs

Pea Island - Fill Smaller Channels to Facilitate Temporary Bridge

Install Temporary Bridges over Large Breaches

Contractor Has Bridges Available

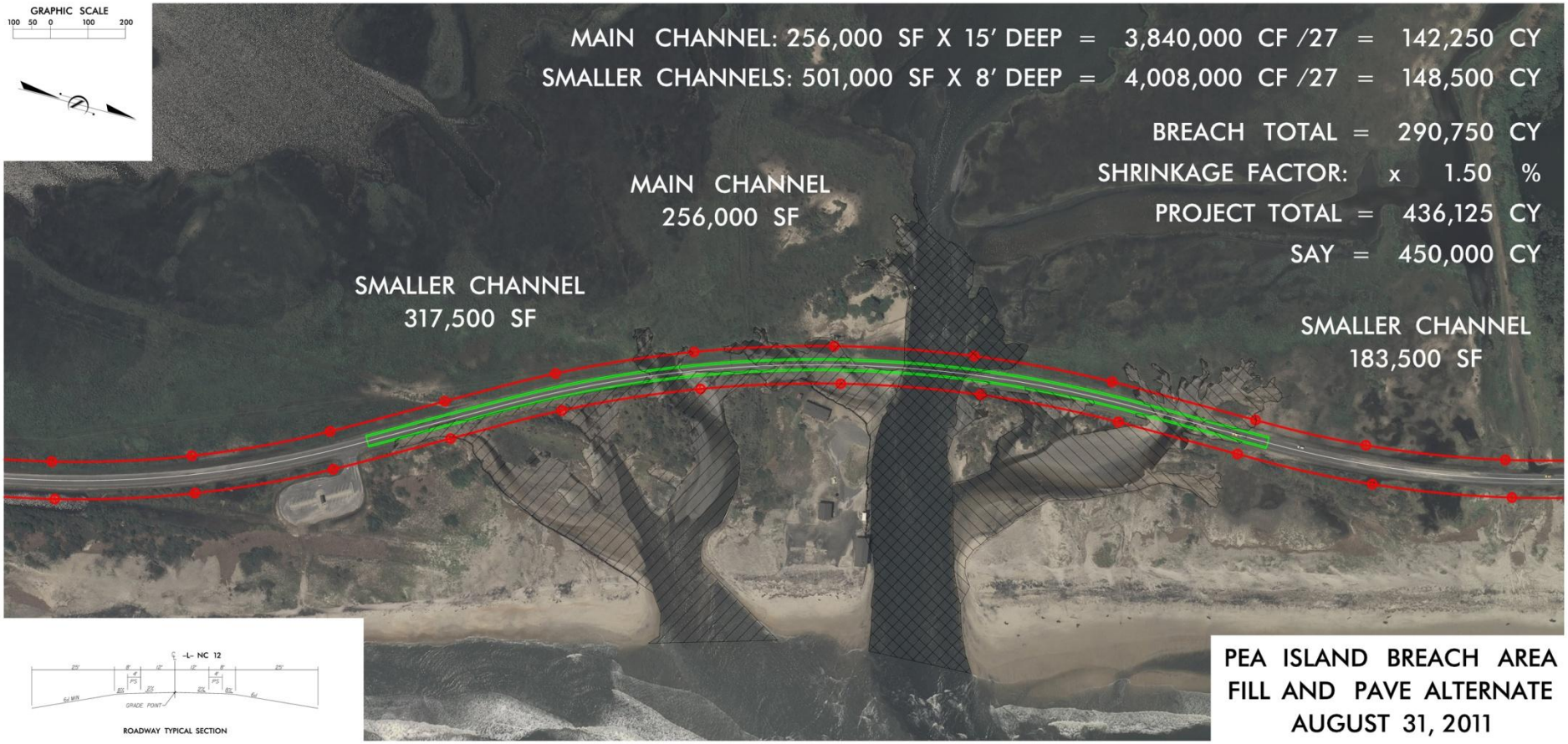
Rodanthe – Fill Channels

Begin Work in 3-5 days

Possible Breach Repair Solution

After Temporary Structures Are in Place Work With Merger Team To Develop Permanent Solution

Begin Work Within 3-6 Months



ROADWAY TYPICAL SECTION

PEA ISLAND BREACH AREA
FILL AND PAVE ALTERNATE
AUGUST 31, 2011

MAIN CHANNEL: 80,500 SF X 10' DEEP = 805,000 CF /27 = 29,850 CY
OUTER CHANNEL: 112,500 SF X 6' DEEP = 675,000 CF /27 = 25,000 CY

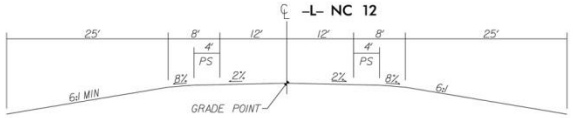
BREACH TOTAL = 54,850 CY
SHRINKAGE FACTOR: x 1.50 %
PROJECT TOTAL = 82,275 CY
SAY = 85,000 CY

GRAPHIC SCALE
100 50 0 100 200

ASSUMED NO EARTHWORK BEYOND 120' OFFSET FROM EXISTING ROAD

OUTER CHANNEL
112,500 SF

MAIN CHANNEL
80,500 SF



ROADWAY TYPICAL SECTION

RODANTHE BREACH AREA
FILL AND PAVE ALTERNATE
AUGUST 31, 2011