

**FY 2014/15 Local Government Funding Request
Beach Management Projects**

Project Name : Gasparilla Island Beach Erosion Control

Project Description:

Initial project included removal of a derelict groin field and placement of beachfill along 16,390 feet (3.1 miles). The complete Lee County project area, from Boca Grande Pass to 17th Street, is listed as critically eroded shoreline by FDEP. Restoration, consisting of placement of 1,072,781 cubic yards and removal of the derelict groin field was completed in April 2007.

The derelict groin field was comprised of approximately thirty-five steel sheet piles, pre-cast concrete interlocking units and rubble mound groins between DEP reference monuments R-13 and R-21. Although not required by State permit conditions, the County removed twenty-seven of the derelict groins. In late 1997, the Gasparilla Island Conservation and Improvement Association (GICIA), with the assistance of Lee County and adjacent private property owners, removed approximately 900 linear feet of derelict seawall, corroded steel reinforcement and rip-rap debris from the shoreline between R-21 + 200 ft south and R-22.

The beach erosion control project extends from 17th Street (R-10 + 500 ft. south) to the south end of Gasparilla Island (R-26). These limits are consistent with the FDEP Bureau of Beaches and Coastal Systems (BBCS) recommendations as delineated in "Beach Conditions in Florida, 5th Edition, December 1993", and the north limit of a federal beach erosion control project. Erosion rates in the project area are reported to be 7 ft/yr ("Beach Management Plan for Lee County", Olsen Associates, Inc., April 1987). The FDEP-BBCS has designated shoreline between R-7 and R-26/Boca Grande Pass as critically eroded.

The first nourishment is scheduled to begin in late 2013 by the Army Corps of Engineers and Lee County. This is a FCCE project plus nourishment of the full template to take advantage of economic efficiencies, and will include extension to the south beyond the federal project limit (approximately R-24+500) to R-26. Total volume is estimated at 480,000 federal plus 70,000 local. Construction should be complete by April 2014 with transition to monitoring phase thereafter.

Use of Requested Program Funds:

Funds requested for FY2014-15 will be used for monitoring of nourishment planned for completion in FY14. Design funding is for federal LRR process to extend project participation.

Local Government Contact

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Mapping- Maps should be provided as attachments.

Maps should be to scale at a minimum of 1"=200'

Mapping elements include:

- Project Boundary with Critically Eroded Shoreline
- Range Monuments
- Beach Access and Parking- Primary and Secondary, including access widths.
- Public Lodging Establishments- locations and length of property boundaries along project shoreline or street frontage.
- Comprehensive Plan/Current Land Use designations of Commercial and Recreational Facilities and associated property boundaries along the project shoreline.

Length of Project Boundary in Feet (total restored length)

16,175'

Eligibility: Access Points and Public Lodging Establishments:

Location/Name (Map Reference)	Address	R- Mon	Type of Access	Width of Access/ Frontage	Total units or parking spaces	No. Public	Eligible shoreline
17 th Street (A)		R10.5	Secondary	60	12	12	694
14 th Street (B)		R-11	Secondary	50	18	18	1,000
13 th Street (C)		R-11.3	Secondary	50	19	19	
12 th Street (D)		R-11.5	Secondary	50	18	18	
Innlet Motel (48)		R-11.6	Lodging	390			
11 th Street (E)		R-11.75	Secondary	50	23	23	
10 th Street (F)		R-12	Secondary	50	10	10	1264
9 th Street (G)		R-12.3	Secondary	50	14	14	
7 th Street (H)		R-13	Secondary	50	50	50	
5 th Street (I)		R-13.5	Secondary	100	50	50	1222
Gasparilla Inn (56)		R-13.8	Lodging	995			
4 th Street (J)		R-14	Secondary	60	16	16	
3 rd Street (K)		R14.5	Secondary	60	41	41	904
Banyan (L)		R-15	Secondary	60	42	42	176
1 st Street (M)		R-15.5	Secondary	50	28	28	1320
Sandspur Park / Federal Park (N)		R-17	Secondary	1,320	50	50	2785
Sea Grape Park (Y1)		R-24	Secondary	2095	50	50	3416
Sea Wall (Y2)		R-25	Secondary	764	25	25	869
Dunes Park (Y3)		R-26	Primary	583	120	120	583

Provide Public Lodging Establishment documentation including proof of licensure.

Innlet Motel FL Motel License #4600685

Gasparilla Inn FL Motel License #4600002, 4600679, 4600832, 4600843, 4604250, 4604875

Schedule and Budget:

(Include estimated phases for 10 years and estimated project costs for 5 years.)

Schedule and Budget

Year	Proposed Method	Description	Total Estimated Cost	Fed Cost Share	State Cost Share	Local Cost Share
2014/ 2015	Monitoring/ Design	Physical / Biological/ LRR	\$825,000	\$461,505	\$162,809	\$200,686
2015/ 2016	Monitoring	Physical / Biological	\$125,000	\$69,925	\$24,668	\$30,407
2016/ 2017	Monitoring	Physical / Biological	\$125,000	\$69,925	\$24,668	\$30,407
2017/ 2018	Monitoring	Physical	\$100,000	\$55,940	\$19,734	\$24,326
2018/ 2019	Monitoring	Physical	\$100,000	\$55,940	\$19,734	\$24,326
2019/ 2020	Monitoring/ Permitting	Physical / JCP				
2020/ 2021	Monitoring/ Permitting	Physical / JCP				
2021/2022	Construction	Nourishment				
2022/2023	Monitoring	Physical / Biological				
2023/2024	Monitoring	Physical / Biological				

Severity of erosion: Criterion will be calculated by the Department. Please provide narrative and any data that should be considered in addition to the Department’s database.

The calculated erosion rates need to recognize that (1) significant volumes of fill were placed on the shoreline from maintenance dredging in 1993, and (2) recession between R-10 and R-15 is limited due to the fact that the sandy beach had eroded back to the seawall in this region. The GRR clearly lists these factors as confounding the calculation of erosion rates simply from shoreline position for the project area. The GRR Appendix A (paragraph A-101) states that a background erosion rate was calculated at 2.3 cubic yards per year per linear foot of shoreline.

The volumetric loss is also consistent with the findings of the 1987 Beach Management Plan for Lee County submitted to DNR Beach and Shores by Olsen Associates. The report estimates a loss of 35 million cubic yards of material from the 3.6 miles of shoreline north of Boca Grande Pass over the period 1909-1985. Table 1 of the report goes on to reference erosion rates calculated for R10-26 as -8.0 ft/yr, 1939-53, USACE 1969; -7.3 ft/yr, 1974-82 DNR profiles. That report goes on to calculate fill requirements based on an assumption of -7.65 ft/yr.

The entire project area has been designated as critically eroded by the FDEP. The island has a north-south orientation, but offshore bottom irregularities and the ebb shoal at Boca Grande Pass cause increased wave energy; consequently, persistent beach erosion occurs at several locations along the island. The most severely impacted area (R-15 to R-19) experienced an average erosion rate of 11.2 feet per year from 1991 to 2002. Continued erosion over the decades has necessitated

the construction of seawalls along approximately 45% of the gulf-front properties in the project area.

Designed with a 20-foot berm at an elevation of +5 MLW, construction was completed in April 2007 with a design life of seven years. Tropical Storm Debby caused serious impacts to the central portion of the project in June 2012. The design integrity has been compromised over approximately 2,700 feet of the project between R13 (7th Street) and R15.8 (1st Street). Of particular concern is the exposure of the vertical seawalls in this area. Wave reflection is expected from interaction of these walls with any subsequent storm events, causing scour which could further damage the project. Federal emergency funding in accordance with PL84-99 (requested in August 2012) was approved as part of the 2013 nourishment.

Threat to Upland Structures

Criterion will be calculated by the Department. Please provide narrative and any data that should be considered in addition to the Department's database.

Shoreline development within the project area consists of multifamily, hotel, single family, and state/federal park properties providing public beach access. Approximately 5,600 feet of State Road 771 (Gulf Boulevard) lies seaward of the Coastal Construction Control Line.

Throughout the project area, there were many seawalls with little or no emergent beach fronting them. Several derelict groins fronting the walls were non-functional (no sand in the system), and a few of the seawalls were incapable of sustaining severe storm impacts without substantial structural as well as upland damage. FDEP Division of Recreation and Parks, with assistance from private organizations, restored the seawall fronting the roadway immediately north of Belcher Road in 2004.

Recreational and Economic Benefit: 42.6%

Public beach access consists of approximately 990 feet of federal park property and 3,755 feet of state recreation area. Gasparilla State Park was the second most visited state park in Florida for the fiscal year ending June 30, 2012 with 872,917 in attendance (FDEP). A total of 642 public parking spaces are available within one-quarter mile of the twenty-seven access sites within the project boundaries. Although the Island is largely residential, a 2001 analysis determined the annual recreational beach benefits within the project area to total \$2.2 Million. The project provided increased beach width, which corresponds, to increased storm protection benefits, increased recreational area, and increased habitat for loggerhead and green turtles and numerous species of shore and wading birds.

Availability of Federal Funds:

Is the project Federally authorized by WRDA?	Yes
Provide date of authorization expiration.	2056
Does this project phase have a Federal Project Cooperative Agreement, or similar for the current phase? Provide a copy of the document.	Yes

<http://minutes.leeclerk.org/Minutes/Mins2013-PDF/Documents-2013/062513R/062513R-WO1-Project%20Participation%20Agr.pdf>

<http://minutes.leeclerk.org/Minutes/Mins2013-PDF/Documents-2013/062513R/062513R-WO1-Cooperation%20Agr.pdf>

Federal cost share percentage available for this project: **55.94%**
Is this project funded through FEMA for storm repairs? **No**
Provide a copy of the signed Project Worksheet.

Local Sponsor Financial and Administrative Commitment

Is funding for the project in the local sponsor's 10-year comprehensive financial plan? **Yes**
Please provide copy or web link to the plan.

<http://www.lee.gov/gov/dept/budgetservices/book/Budget%20Books/FY%202012-2013%20Annual%20Operating%20Budget.pdf> SEE PAGE 67

Is funding provided through a source established by referendum? **Ordinance 13-14**
Please provide a copy or web link to the referendum.

<http://www.lee-county.com/gov/BoardofCountyCommissioners/ordinances/Ordinances/13-14.pdf>

Is funding provided by a third party? **No**
What is the percentage of total project costs provide by the third party? **N/A**
Please provide a copy of the cost sharing agreement.

Quarterly report Compliance:

2012-2013	End Date	Report Remitted	Compliant
Qtr 1 (Sept)	Sept 30	Oct 29	Yes
Qtr 2 (Dec)	Dec 31	Jan 24	Yes
Qtr 3 (Mar)	Mar 31	April 30	Yes
Qtr4 (June)	June 30	July 09	Yes

Are there active federal and state permits for the project? **Yes**

Have local funds been secured for the project? **Yes**
Explain: Budgeted in accordance with financial plan referenced above.

In order to acquire state funding, a resolution from the local sponsor must be provided by the application deadline which declares:

- Support from the Sponsor for the Proposed Project
- Willingness to serve as the Local Sponsor
- Ability to provide the full Local Cost Share
- And the source of the funding

Resolution has been routed to BOCC for approval and will be sent to DEP Pending BOCC Action.

Previous State Commitment:

Has the Department previously cost shared, reviewed, and approved a feasibility or design phase for this project? **Yes**

Previous State Cost Share percentage **58.34%**

Will this project enhance or increase the longevity of a previously-constructed project? How? **No**

Will this project nourish a previously restored shoreline? (Full beach nourishment. Dune-only projects do not qualify.) **Yes.**

Project Performance:

Nourishment Interval (Years): **8**

Mitigation of Inlet Effects:

Criterion is calculated by the Department. Please provide any supplemental information that may assist in determining if the project is located with the area of inlet influence and provides supplemental nourishment for an inlet that is not balancing its sediment budget as defined by the Inlet Management Plan or Strategic Beach Management Plan.

An inlet management plan has not been prepared for Boca Grande Pass, but it is believed with the entire project area is within the inlet's zone of influence. The proposed project components are consistent with state goals to mitigate inlet-induced erosion.

Use of Innovative Applications of existing technologies:

Does the project address erosion in a method that is economically competitive with nourishment, that will not adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats, and that is designed to demonstrate an innovative application of existing technologies?

N/A

Has the project been documented to be effective and demonstrated technologies previously untried in the state?

Regionalization:

Is this project being planned or constructed in cooperation with another local government to reduce contracting costs? Explain and attach a signed copy of the interlocal agreement between the two local sponsors.

USACE jointly contracted for construction of Gasparilla and Anna Maria nourishments.

Significance:

What is the volume of advanced nourishment lost since the last sand placement event of a beach restoration or nourishment project as measured landward of the Mean High Water Line?

120,698 cubic yards

Has the project eroded into the design template?

Yes

What is the proposed placement volume?

550,000 cubic yards

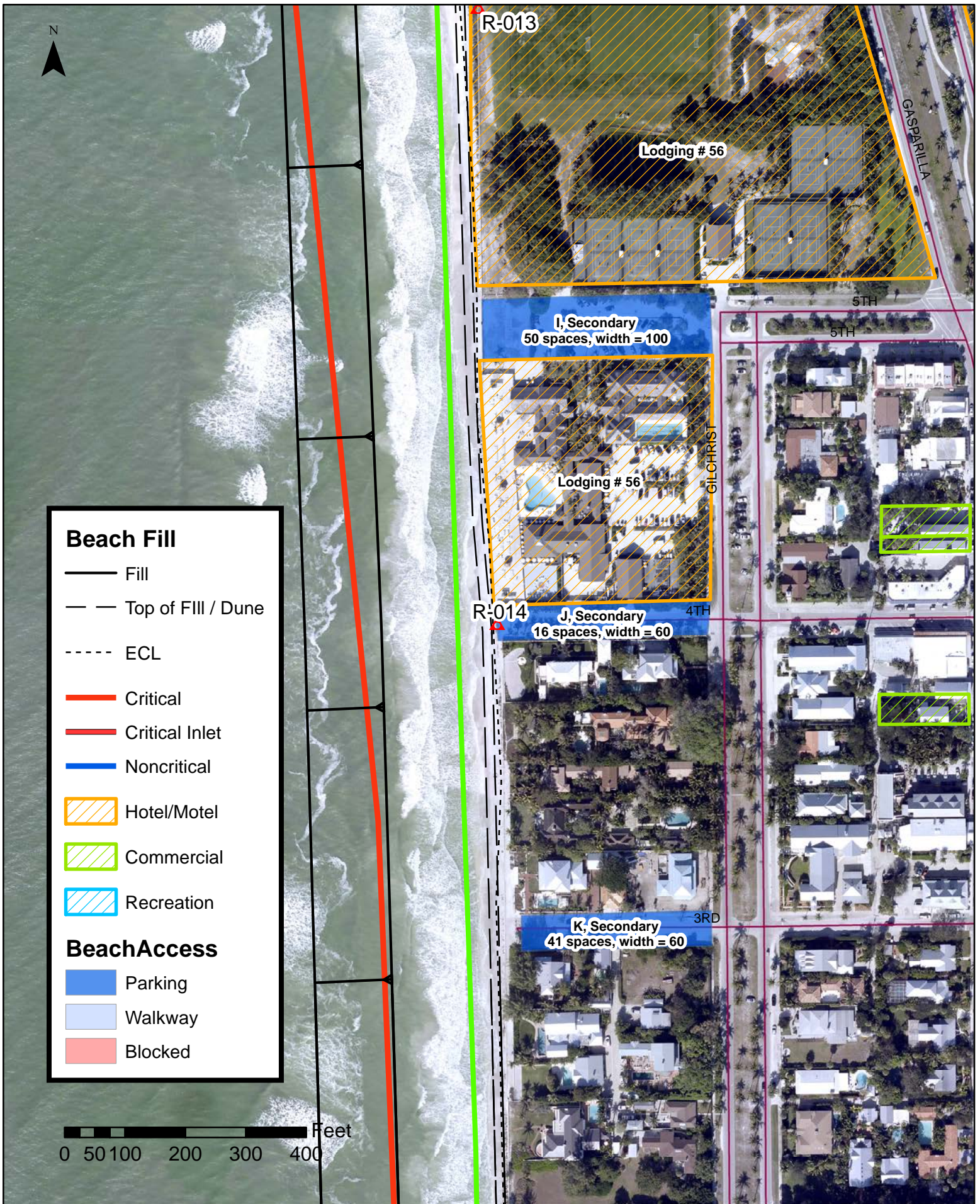
Lee County, Florida



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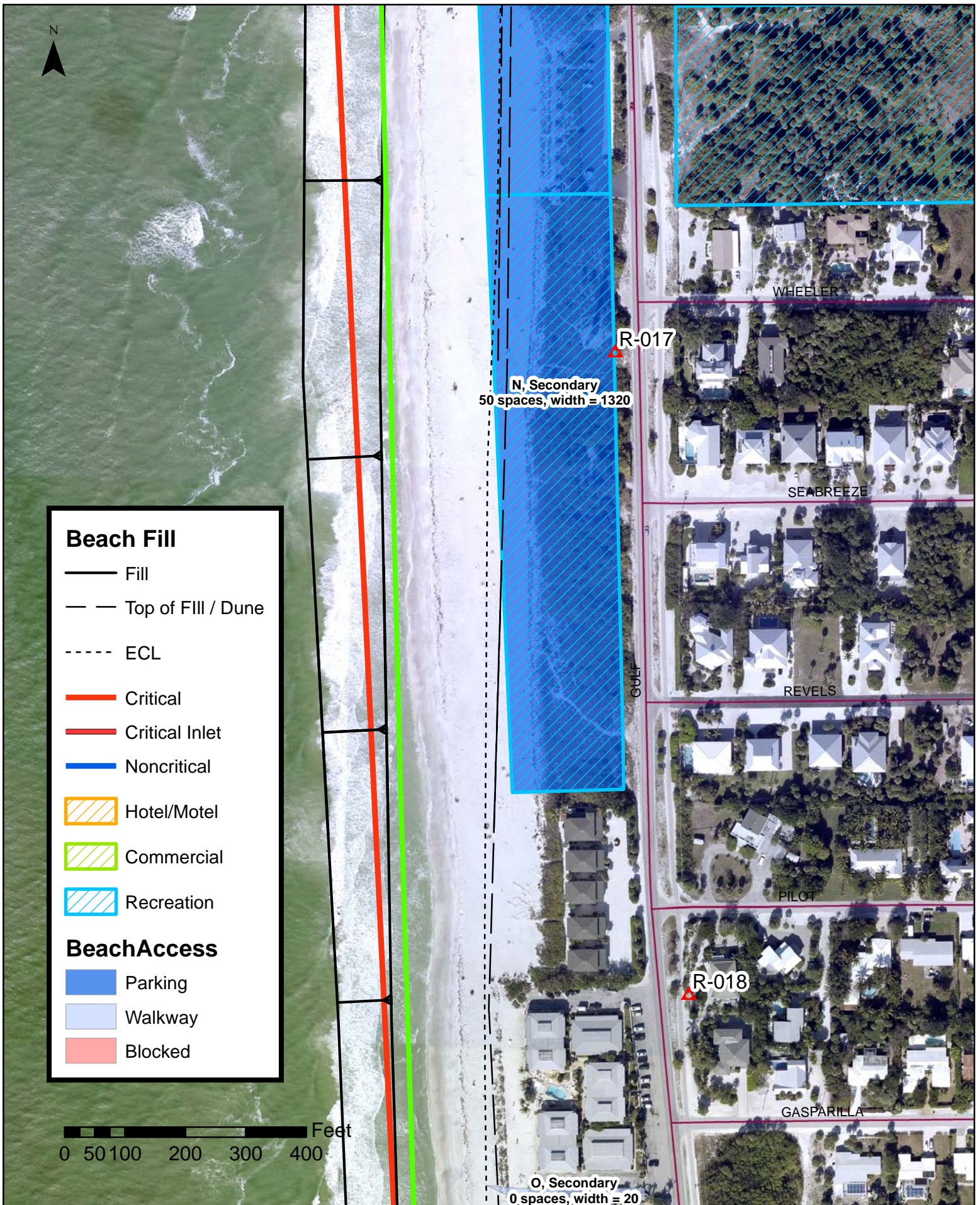
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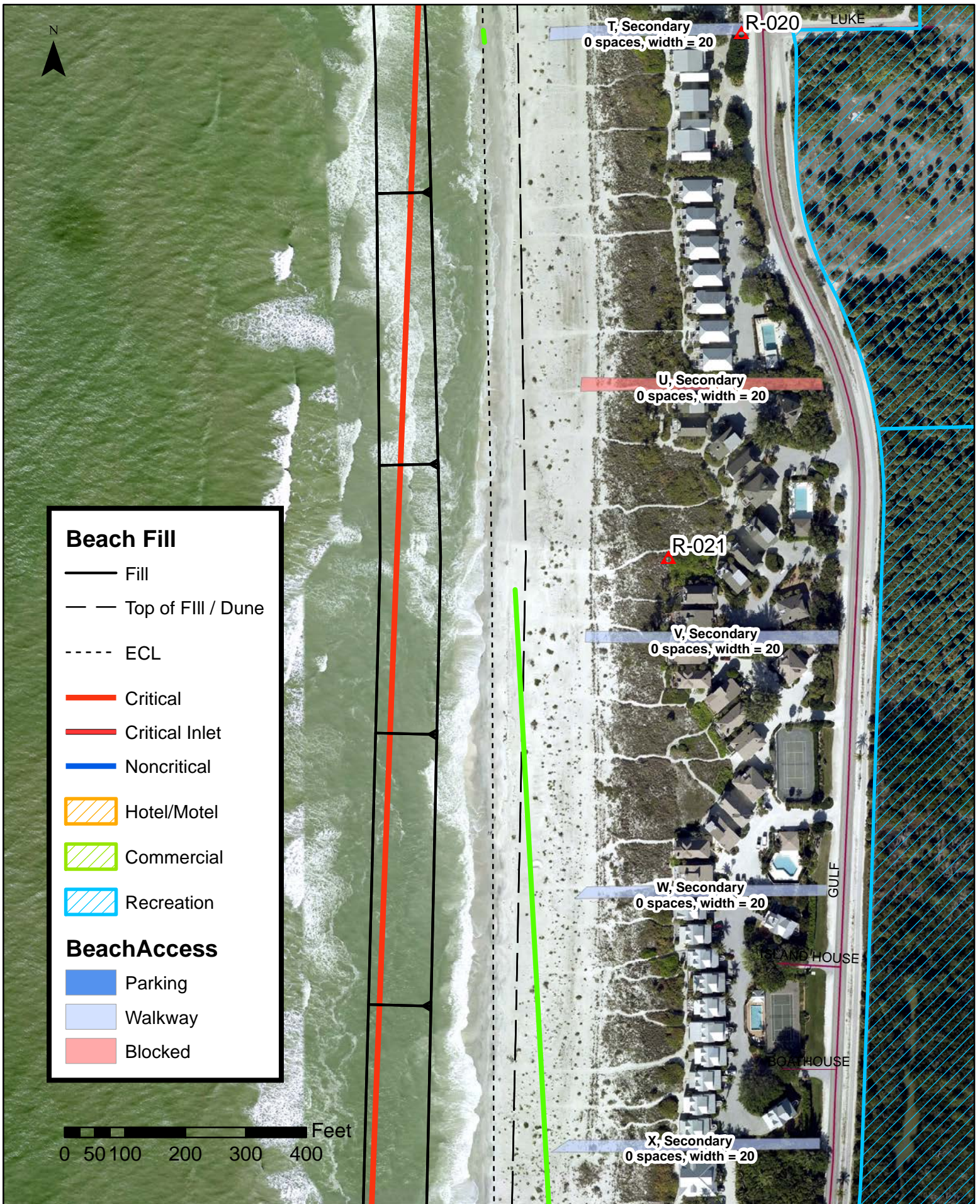
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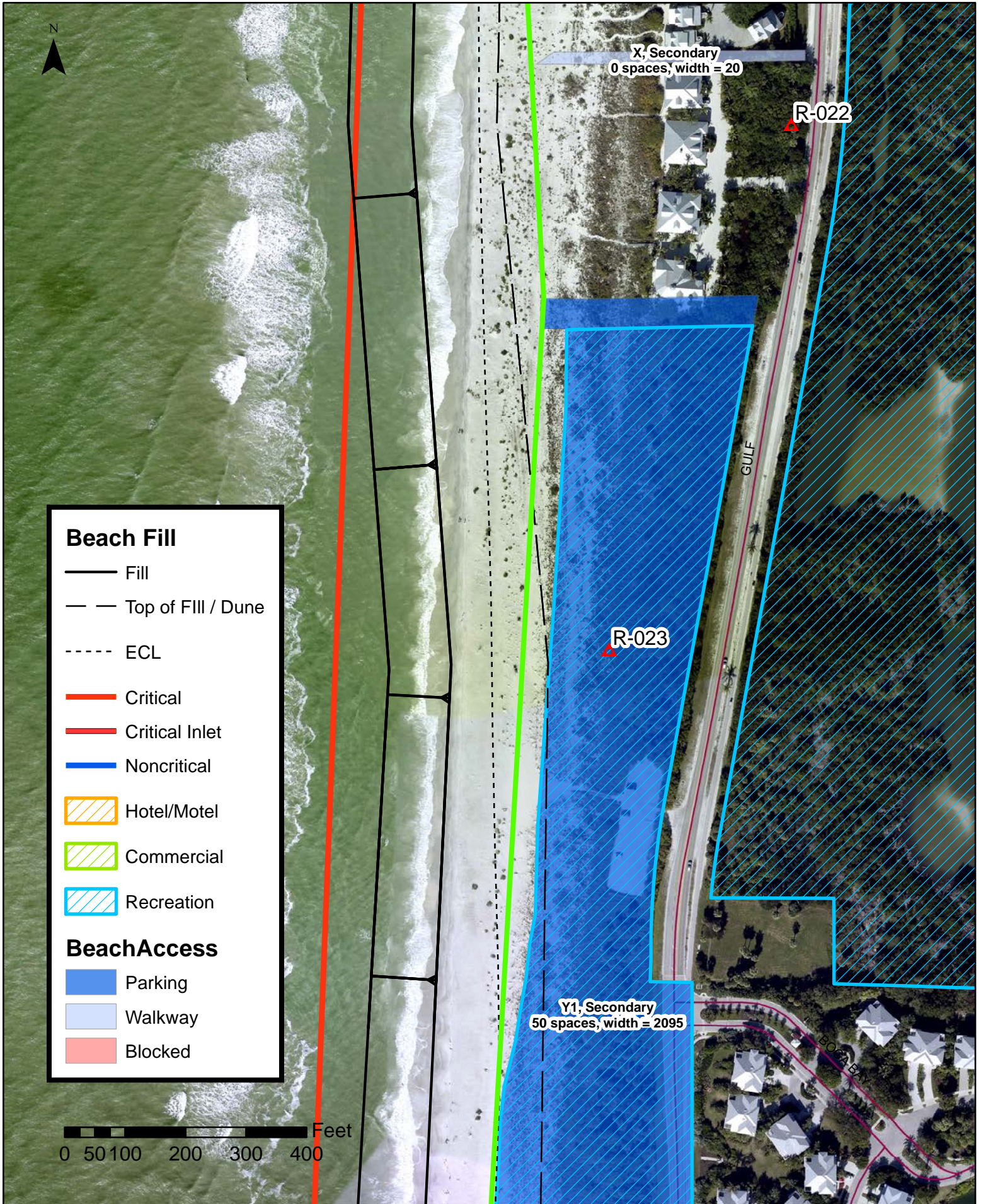
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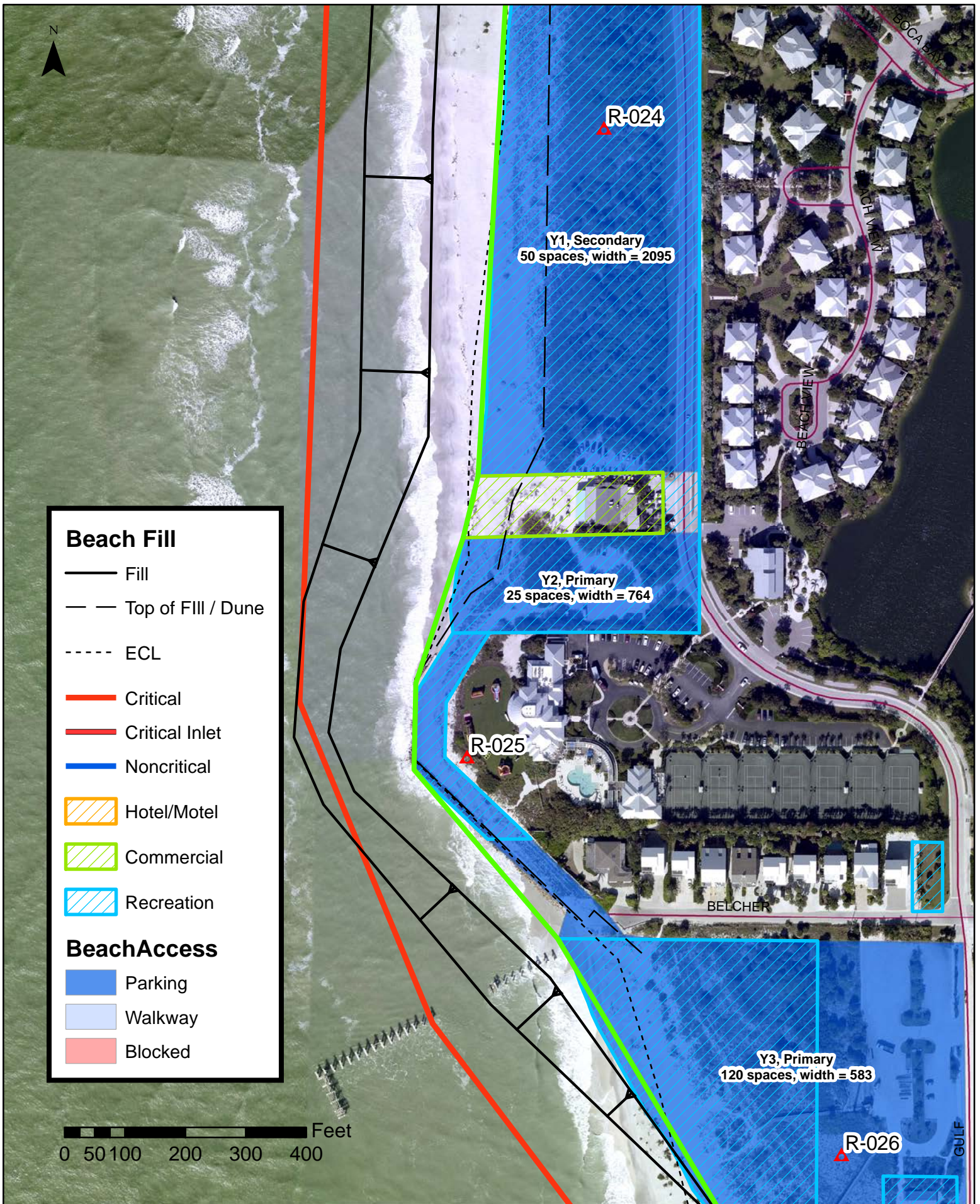
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