

MIAMI BEACH Middle Beach Recreational Corridor Phase III Final Report



MIAMI-DADE
METROPOLITAN
PLANNING
ORGANIZATION

Prepared by:



Calvin, Giordano & Associates, Inc.
EXCEPTIONAL SOLUTIONS™



The preparation of this report has been financed in part by the U.S. Department of Transportation (USDOT), through the Federal Highway Administration (FHWA) and/or the Federal Transit Administration (FTA), the State Planning and Research Program (Section 505 of Title 23, U.S. Code) and Miami-Dade County, Florida.

June 2016

Task 1

Public Involvement

Middle Beach Recreational Corridor - Phase III

Public Meeting - Tuesday, June 14, 2016, 6 p.m. to 8 p.m.
Miami Beach Golf Course - 2301 Alton Road, Miami Beach, FL 33140

SIGN-IN SHEET



NAME / NOMBRE	ADDRESS / DIRECCIÓN	PHONE / TELÉFONO	EMAIL / CORREO ELECTRÓNICO
Henry Scott	2445 Collins Ave.		henry.scott@comohotels.com
Harvey Burstein	1775 Washington	305-535-2888	harvey.burstein@gmail.com
Jean Richmond	3737 Collins Ave		
Jim Richmond	↓		jimrichmond123@hotmail.com
Avra Bank			

Office of Capital Improvement Projects | 1701 Meridian Avenue, Third Floor, Miami Beach, FL 33139 | 305.673.7071

Middle Beach Recreational Corridor - Phase III

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NAME / NOMBRE	ADDRESS / DIRECCIÓN	PHONE / TELÉFONO	EMAIL / CORREO ELECTRÓNICO
HUMBERTO CADAVAS	CMB/CIP DIV. DIRECTOR	(305) 673-7071	HUMBERTOCADAVAS@MIAMI-BEACH.FL.GOV
Jose Velez	CMB/CIP	305 X 73-7071	josevelez@miamibeach.fl.gov
DAVID GOMEZ	CMB/CIP	3/673-7071	DAVIDGOMEZ@MIAMI-BEACH.FL.GOV
DIANA FONTANA	CMB/CIP	3/373-7071	dianafontana@miamibeach.fl.gov

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MIAMI BEACH

NAME / NOMBRE	ADDRESS / DIRECCIÓN	PHONE / TELÉFONO	EMAIL / CORREO ELECTRÓNICO
Bill Sorba	2445 Collins		bill.sorba@comshotels.com
Valerie Novano			
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Maria L Torres	2625 Collins Ave #1408	33140	leidygraso@msn.com
Ronald Preston	4301 Collins Ave.	33140	RONPRESTON@ATLANTICBB.COM
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MIAMI BEACH

NAME / NOMBRE	ADDRESS / DIRECCIÓN	PHONE / TELÉFONO	EMAIL / CORREO ELECTRÓNICO
Steve Gombirsk	3732 Collins Ave	917-889-2127	Steven.gombirsk@ymail.com
Scott Ferguson	3732 Collins	305-794-2590	manager@caribbeanplaya.com
Francie Ruiz	3575 W. Glencoe St	305-431-8145	frxc@aol.com

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- **Income Limitations:**
 - Up to 120% of the Area Median Income adjusted for household size
- **Community Homebuyer Classes:**
 - First time homebuyer workshops required
 - Down Payment/Closing Cost Programs (based on availability in local markets)

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Robin Holley
Affordable Housing Specialist
2500 Weston Rd Ste 300, Weston, FL 33331
P: 954.984.3314 | E: rholley@fcb1923.com
NMLS# 484758

All credit applications are subject to credit and underwriting approval. Non-business purposes loan only. 2015 2015

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Office of Capital Improvement Projects (CIP)
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Middle Beach Recreational Corridor (MBRC) Phase III Project

The City of Miami Beach will host a MBRC community design kick-off meeting. The project consists of the installation of approximately 3,500 linear feet of an on-grade multi-purpose path (beachwalk) from 23 Street to 47 Street.

Middle Beach Recreational Corridor (MBRC) Phase III Community Meeting
Tuesday, June 14, 2016
6 p.m. to 8 p.m.
Miami Beach Golf Club
2301 Alton Road, Miami Beach, FL 33140

MORE INFORMATION:
305.673.7071 | miplannedprogress.com

City of Capital Improvement Projects | 1701 Modern Avenue, Third Floor, Miami Beach, FL 33139 | 305.673.7071 | miplannedprogress.com

ILLEGAL DUMPING IS NOT A VICTIMLESS CRIME
IT'S A SERIOUS ENVIRONMENTAL CRIME THAT IMPACTS THE QUALITY OF LIFE IN YOUR COMMUNITY

To report an illegal dumping site, call 311, click www.miamidade.gov/solidwaste, or download and use the free 311 Direct Mobile App.



CITY OF MIAMI BEACH NOTICE OF HEARING ORDINANCE REGULATING SHORT-TERM RENTAL OF APARTMENT AND TOWNHOME RESIDENTIAL UNITS IN NORTH BEACH NOTICE TO THE PUBLIC

PUBLIC NOTICE IS HEREBY GIVEN that the Miami Beach Planning Board will hold a meeting on **Tuesday June 28, 2016 starting at 10:00 a.m.**, in the City Commission Chambers, Third Floor of City Hall, located at 1700 Convention Center Drive, Miami Beach, Florida. (Filed Pursuant to Chapter 118, Article III of the Land Development Regulations of the City Code). During this meeting, the Planning Board, pursuant to Section 118-164 of the City's Land Development Code, will hold discussions and public hearings on the following item, in addition to those items previously advertised:

FILE NO. 2334. SHORT-TERM RENTAL OF APARTMENT AND TOWNHOME RESIDENTIAL UNITS IN NORTH BEACH. AN ORDINANCE OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, AMENDING THE CODE OF THE CITY OF MIAMI BEACH, SUBPART B, ENTITLED "LAND DEVELOPMENT REGULATIONS," OF CHAPTER 142, ENTITLED "ZONING DISTRICTS AND REGULATIONS," BY AMENDING DIVISION 2, ENTITLED "ACCESSORY USES"; BY AMENDING ARTICLE IV, ENTITLED "SUPPLEMENTARY DISTRICT REGULATIONS," BY AMENDING DIVISION 3, ENTITLED "SUPPLEMENTARY USE REGULATIONS," BY AMENDING SECTION 142-111, ENTITLED "SHORT-TERM RENTAL OF APARTMENT UNITS OR TOWNHOMES," BY CREATING A NEW SUBSECTION (D), WHICH ESTABLISHES ELIGIBILITY REQUIREMENTS FOR SHORT-TERM RENTAL OF APARTMENT AND TOWNHOME RESIDENTIAL UNITS IN NORTH BEACH; LIMITING THE ELIGIBILITY TO THOSE PROPERTIES FRONTING HARDING AVENUE FROM THE SOUTH SIDE OF 73RD STREET TO THE NORTHERN BOUNDARY OF THE CITY; BY ESTABLISHING CONDITIONS PRECEDENT BEFORE A PROPERTY OWNER IS LEGALLY AUTHORIZED TO ENGAGE IN SHORT-TERM RENTALS; AND REQUIRE THE PROPERTY TO BE FULLY RENOVATED AND RESTORED IN ACCORDANCE WITH THOSE DELINEATED STANDARDS SET FORTH IN SUBSECTION (d)(1), WHICH MUST BE ACCOMPLISHED PRIOR TO THE ISSUANCE OF THE BUSINESS TAX RECEIPT PERMITTING SHORT-TERM RENTALS; AND PROVIDING FOR REPEALER, SEVERABILITY, CODIFICATION, AND AN EFFECTIVE DATE.

Applications listed herein have been filed with the Planning Department for review by the Planning Board, pursuant Section 118-51 of the City's Land Development Regulations. All persons are invited to attend this meeting or be represented by an agent, or to express their views in writing addressed to the Planning Board to the Planning Department, 1700 Convention Center Drive, 2nd Floor, Miami Beach, Florida 33139. Applications for items listed herein are available for public inspection at the following link or during normal business hours at the Planning Department, 1700 Convention Center Drive, 2nd Floor, Miami Beach, Florida 33139. Inquiries may be directed to the Department at (305) 673-7550.

Any items listed in this agenda may be continued. Under such circumstances, additional legal notice would not be provided. Please contact the Planning Department at (305) 673-7550 for information on the status of continued items.

Pursuant to Section 286.0105, Fla. Stat., the City hereby advises the public that: Appeals of any decision made by this Board with respect to any matter considered at its meeting or hearing, such person will need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. This notice does not constitute consent by the City for the introduction or admission of otherwise inadmissible or irrelevant evidence, nor does it authorize challenges or appeals not otherwise allowed by law.

To request this material in alternate format, sign language interpreter (five-business day notice is required), information on access for persons with disabilities, and accommodation to review any document or participate in any city-sponsored proceedings, call 305.604.2489 and select 1 for English or 2 for Spanish, then option 6; TTY users may call via 711 (Florida Relay Service).

Northeast Dade Municipal Advisory Committee Public Hearing on Proposed Incorporation

Tuesday, June 21, 2016 at 6:00 P.M.
Highland Oaks Middle School • 2375 NE 203rd Street
Miami, FL 33180



The Northeast Dade Municipal Advisory Committee (NEMAC) will conduct a public hearing on June 21, 2016 to present the findings of the completed study for the feasibility of creating a municipality and incorporating within the following boundaries: The unincorporated area bounded by Interstate 95 (Westernmost); Dixie Highway/Biscayne Boulevard (Easternmost); City of North Miami Beach Limits (Southernmost); and NE 215 Street (Northernmost).

Notification is being sent to all property owners who live within the boundaries of the proposed municipality, and 600 feet thereof. You are welcomed to attend and participate in the public hearing. To learn more about projected revenues and expenditures, municipal type services, millage rates and general information regarding the creation of the proposed municipality, you may visit <http://www.miamidade.gov/incorporationandannexation/northeast-dade.asp>.

If you have questions or need additional information please call (305) 375-5143. For sign language interpreter services, call (305) 375-5143, at least five business days in advance.

For legal aids online, go to <http://legalsaids.miamidade.gov>

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PlannedProgress
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MORE INFORMATION:
305.673.7071 | miplannedprogress.com

City of Capital Improvement Projects | 1701 Modern Avenue, Third Floor, Miami Beach, FL 33139 | 305.673.7071 | miplannedprogress.com

MIDDLE BEACH RECREATIONAL CORRIDOR

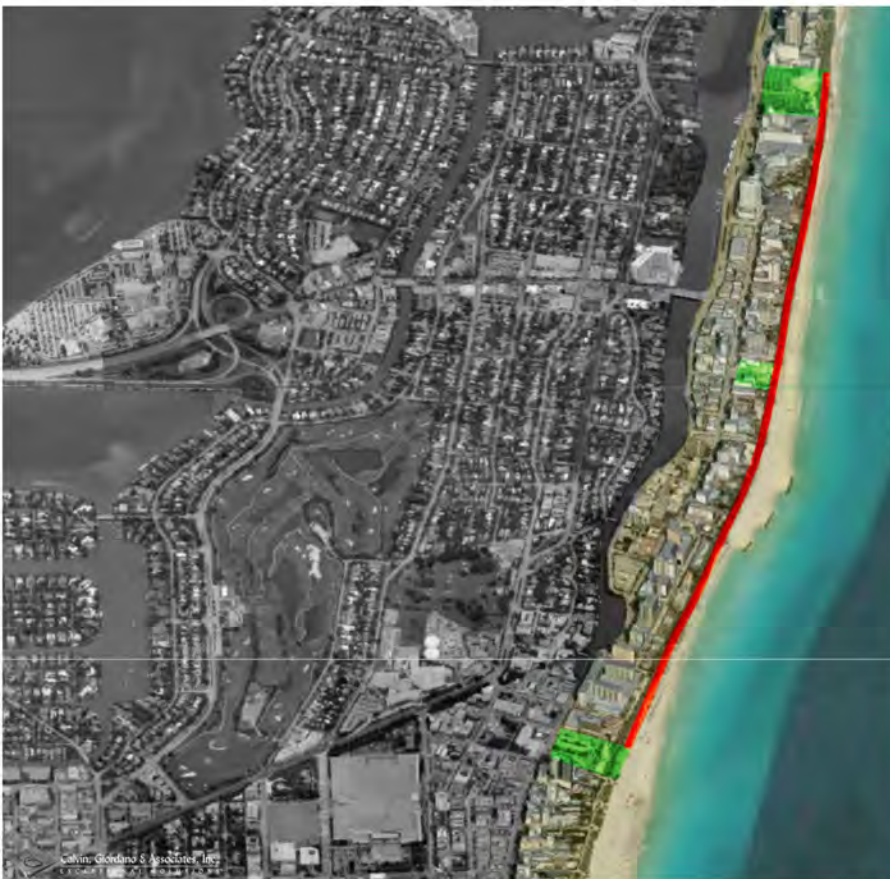
PHASE III



Calvin, Giordano & Associates, Inc.
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June 14, 2016
Public
Outreach
Informational
Meeting

MIAMI BEACH



ATLANTIC GREENWAY NETWORK

This project is
a portion of the
Atlantic
Greenway
Network, as
adopted by the
City
Commission

MIAMI BEACH

GREENWAYS

- A greenway network can be the uniting factor for "Places of Meaning", such as downtown areas, schools, cultural destinations, bus stops, prominent public buildings, libraries, city halls and civic centers.
- Greenways establish the importance of places to the community and add to the overall quality of life provided to residents and visitors alike.

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- **Transportation Element:**
 - To ensure the development of a safe, efficient and integrated motorized and non-motorized transportation system in the City of Miami Beach.

POLICY ELEMENT

Components of the City's Comprehensive Master Plan

MIAMI BEACH

■ Conservation/Coastal Zone Management Element:

- Provide public improvements and restrict development activities that would damage or destroy coastal resources, protect human life and limit public expenditures in areas subject to destruction by natural disasters in a manner maintaining or improving the marine and terrestrial animal habitats, vegetation, land, air, water, and the visual, aesthetic quality of Miami Beach for present and projected, future populations.
- Addresses the beach and dunes.

POLICY ELEMENT

Components of the City's Comprehensive Master Plan

MIAMIBEACH

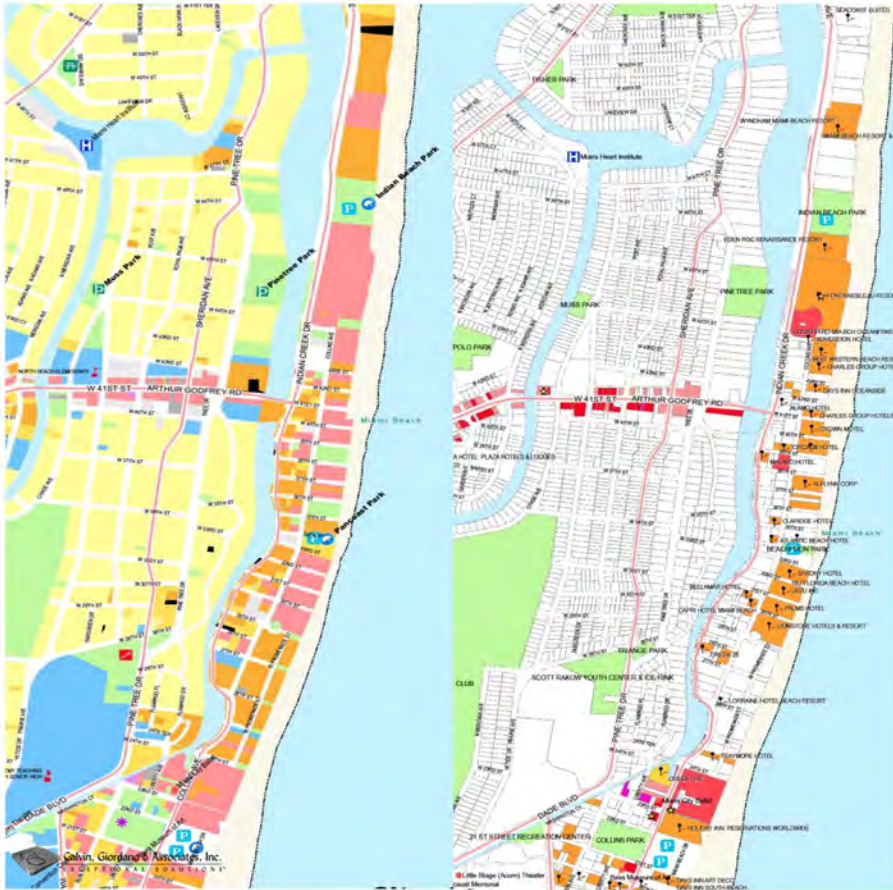
■ Recreation and Open Space Element Goal:

- Develop and maintain a system of recreational open spaces while encouraging the preservation and enhancement of the natural environment.

POLICY ELEMENT

Components of the City's Comprehensive Master Plan

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EXISTING LAND USES

Abutting properties include hotels and condominiums.

Overall, the beachwalk system will connect area business districts, cultural and tourism centers, residential neighborhoods, parking facilities, parks, schools, and the beaches.

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- Beachwalk facilities are multi-modal in nature, and allow for bicycling, pedestrian use, roller blading, etc.
- Bikeways a component of the Florida Greenways and Trails System

BICYCLE USES

Bikeways Master Plan

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SYSTEM COMPONENTS



- **Completed**
 - South Pointe Park to 3rd Street
 - 5th Street to 23rd Street
 - 64th Street to 79th Street
- **Bidding/Construction**
 - 3rd Street to 5th Street
 - 46th Street to 53rd Street
 - 53rd Street to 64th Street
- **Design**
 - 23rd Street to 46th Street
 - 79th Street to 87th Terrace

MANAGEMENT AND FUNDING

- This project will be managed by the City of Miami Beach Office of Capital Improvement Projects (CIP)
- One of the goals of the Atlantic Greenway Network Master Plan was to aggressively pursue grants and other funding sources.
- The city has secured funding from FDOT



Colin, Giordano & Associates, Inc.
RECEPTION & TOURS

SCOPE OF WORK FOR THIS PROJECT INCLUDES

Demolition of existing wooden boardwalk

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SCOPE OF WORK FOR THIS PROJECT INCLUDES

Installation of an on-grade paver path with a similar design to what has been previously constructed

Previous segments were designed at 15 feet wide; The width will vary between 15 feet and 25 feet where permitted.

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SCOPE OF WORK FOR THIS PROJECT INCLUDES

All construction to occur on state-owned land

Permitting through the FDEP is required; FDEP determines what can be built and how it can be built.

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SCOPE OF WORK FOR THIS PROJECT INCLUDES

Dune restoration and elimination of invasive exotic vegetation and protection of the beach dune ecosystem

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SCOPE OF WORK FOR THIS PROJECT INCLUDES

Installation of turtle friendly bollard lighting

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SCOPE OF WORK FOR THIS PROJECT INCLUDES

Street-end park improvements to eliminate dark spots, increase safety conditions, upgrade the aesthetic quality so they are consistent with other renovated street-end parks

EXISTING CONDITIONS TO BE MODIFIED

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ANTICIPATED SCHEDULE

■ Design and Engineering

- 6 months to 1 year, depending on State regulators
 - Surveying and soil testing
 - Site design engineering
 - Planting design
 - Lighting design

■ Permitting

- Additional 1-year

■ Construction

- Late 2018

THANK YOU!

■ CITY CONTACT INFORMATION

- Public Information Specialist
 - Diana Fontani Martinez
 - 305.673.7000 x 6399
- Capital Projects Coordinator
 - Jose Velez, Capital Improvement Projects (CIP)
305.673.7071
- Senior Capital Projects Coordinator
 - David Gomez, Capital Improvement Projects (CIP)
305.673.7071

City of Miami Beach Capital Improvement Projects Office

Community Meeting Summary

Project: Middle Beach Recreational Corridor Phase III

Project Managers:

David Gomez, CIP Senior Project Coordinator & Jose Velez, CIP Project Coordinator

Purpose of meeting:

1st Community Design Kick-Off Meeting

Date/Time/Location of meeting:

Tuesday, June 14, 2015 @ 6:00 p.m.
Miami Beach Golf Club
2301 Alton Road, Miami Beach, FL 33139

Elected or Public Officials attendees:

None

Other City attendees or City Consultants:

Humberto Cabañas, Division Director; David Gomez, CIP Senior Project Coordinator; Jose Velez, CIP Project Coordinator; Diana Fontani, Public Information Specialist; Gianni A. Feoli, Director of Landscape Urbanism, Calvin, Giordano & Associates, Inc.

Community attendees:

Please see sign in sheets attached

Key items discussed:

Diana Fontani provided a brief welcome to the community. Gianni Feoli gave a ten minute PowerPoint presentation on the Middle Beach Recreational Corridor Phase III. The community then asked the following questions and the following answers were provided:

Q: When is the anticipated time of completion for this project?

A: 2018

Q: We met with city officials awhile back including Eric Carpenter and he told us that a section of the wooden boardwalk would be saved. Is that accurate?

A: We are not aware of any section of the wooden boardwalk being saved.

Q: Are bicycle lanes being incorporated in the Beachwalk?

A: The entire Beachwalk is a multi-purpose path that can be used for bicyclists and pedestrians

Q: I walk on the existing Beachwalk and notice large puddles. Will this be addressed in the newly constructed Beachwalk?

A: Yes

Q: I also walk on the existing wooden boardwalk and I am worried that the new constructed Beachwalk will not have any shelter or shaded areas. Are shelters and shaded areas part of the scope?

A: Shade structures cannot be constructed on this state land and they would not be permitted. Some shade may be provided at street ends with landscaping.

Q: Will the project be done in phases?

A: Yes, as we finalize the design plans we will have a better idea of how we will phase this project and share with the community.

Q: Mine is not a question but more of a comment. I live in the North Beach area and the Beachwalk came out really nice up there and I really like the pattern. I would just like to comment to keep the newly constructed Beachwalk as straight as possible and to keep the same pattern as the one in North Beach.

Q: Are you going to be doing anything with the showers along the beach?

A: Showers may be considered during the design phase

Q: The shower at 43rd street is always clogged. Can you please send someone to repair it?

A: We can direct your question to the right department and provide you a follow up answer. Please see Diana Fontani after the presentation to obtain your contact information.

Q: Are you going to do anything with the street ends next to the Beachwalk?

A: Yes, they will be revamped as part of the scope of this project.

Q: Are mobimats going to be included in this project?

A: No, mobimats already exist on the beach.

Q: What can be done about the increased traffic congestion on the left turn from Collins Avenue to 41st Street?

A: We can direct your question to the right department and provide you a follow up answer. Please see Diana Fontani after the presentation to obtain your contact information.

Design Recommendations:

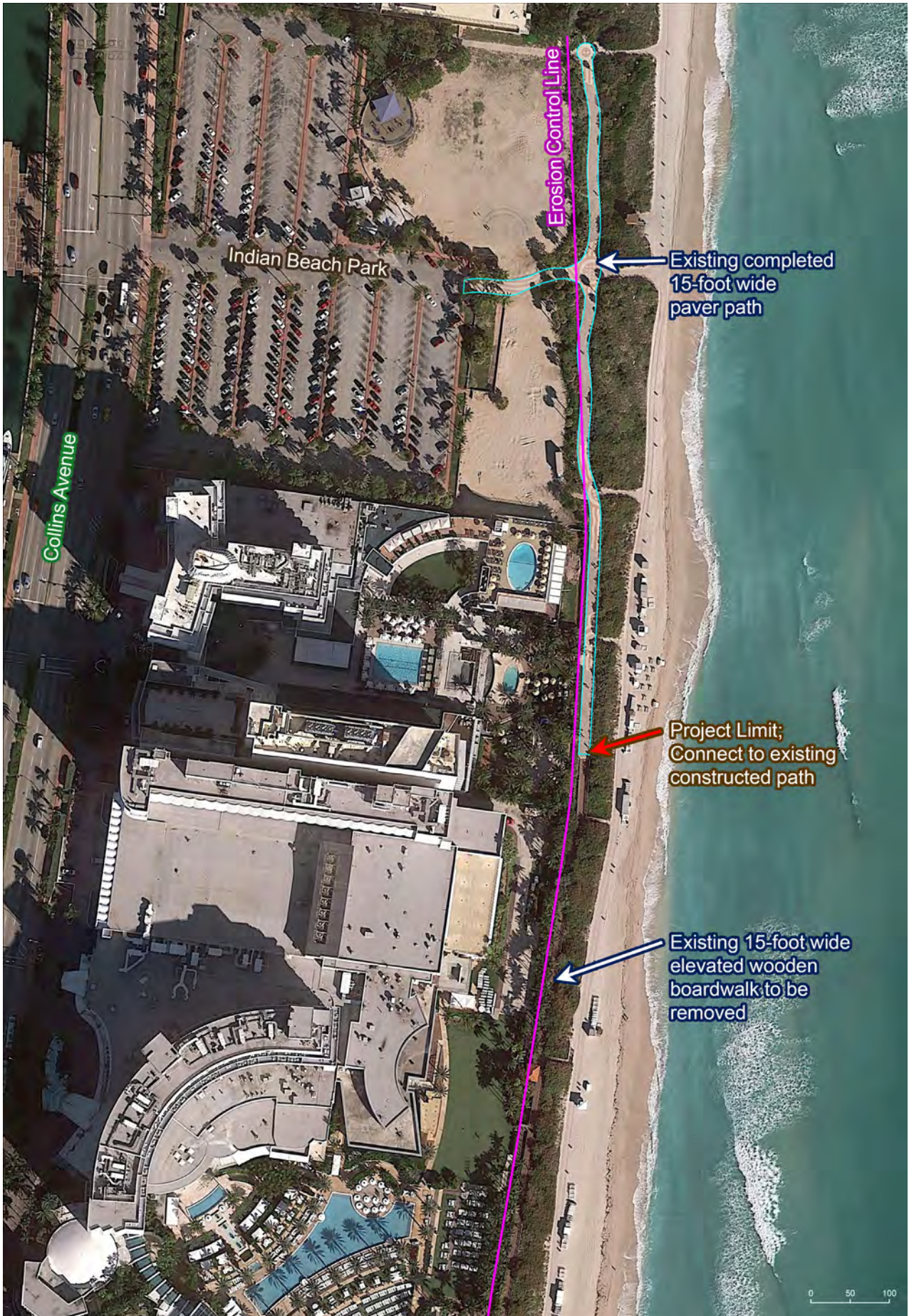
The community recommended the following design changes:

- 1) Marked bike lane
- 2) Straight paving vs curved
- 3) Benches with shade trees or any other shade structures

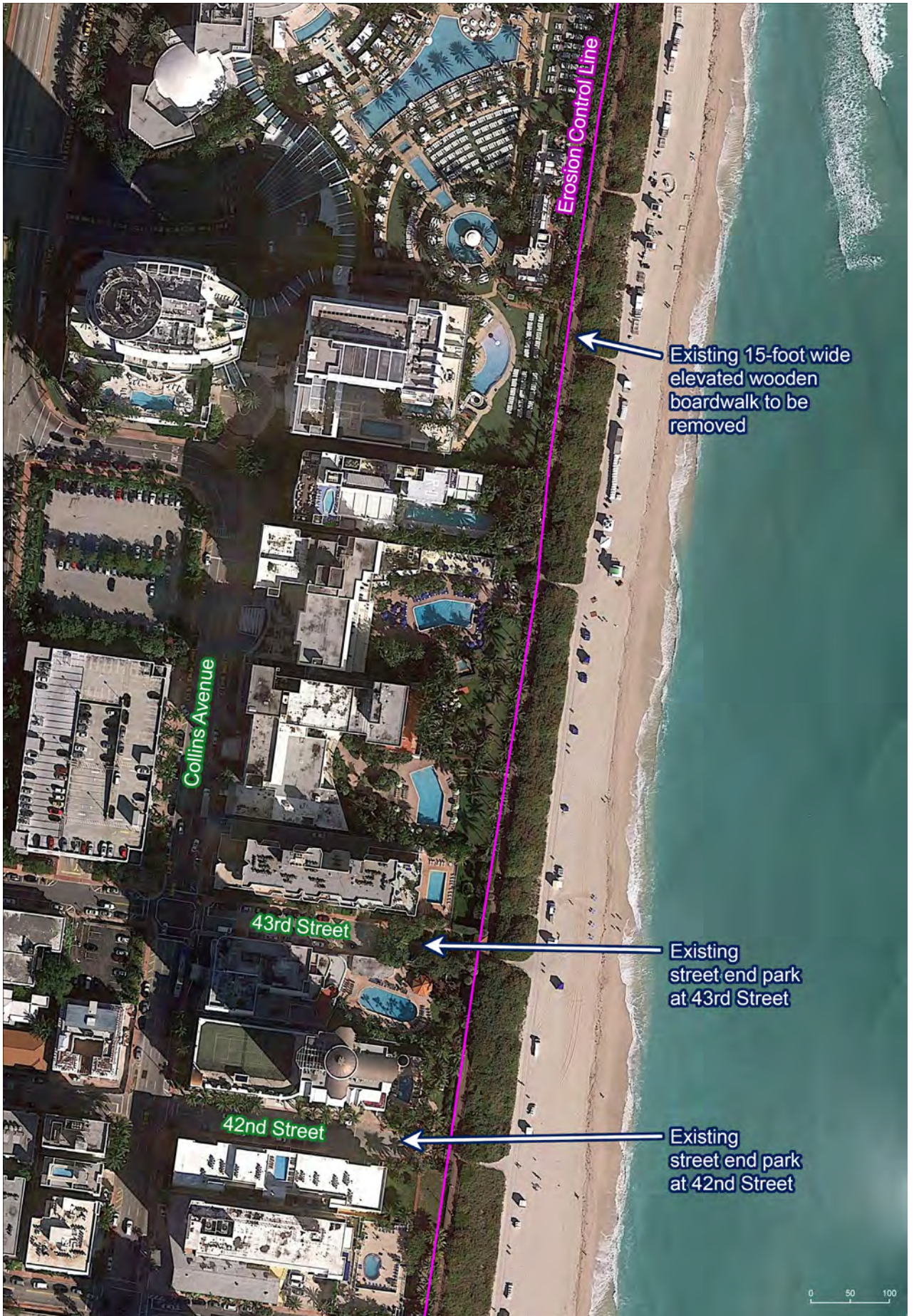
Task 2

Conceptual Plan Part 1: Existing Conditions

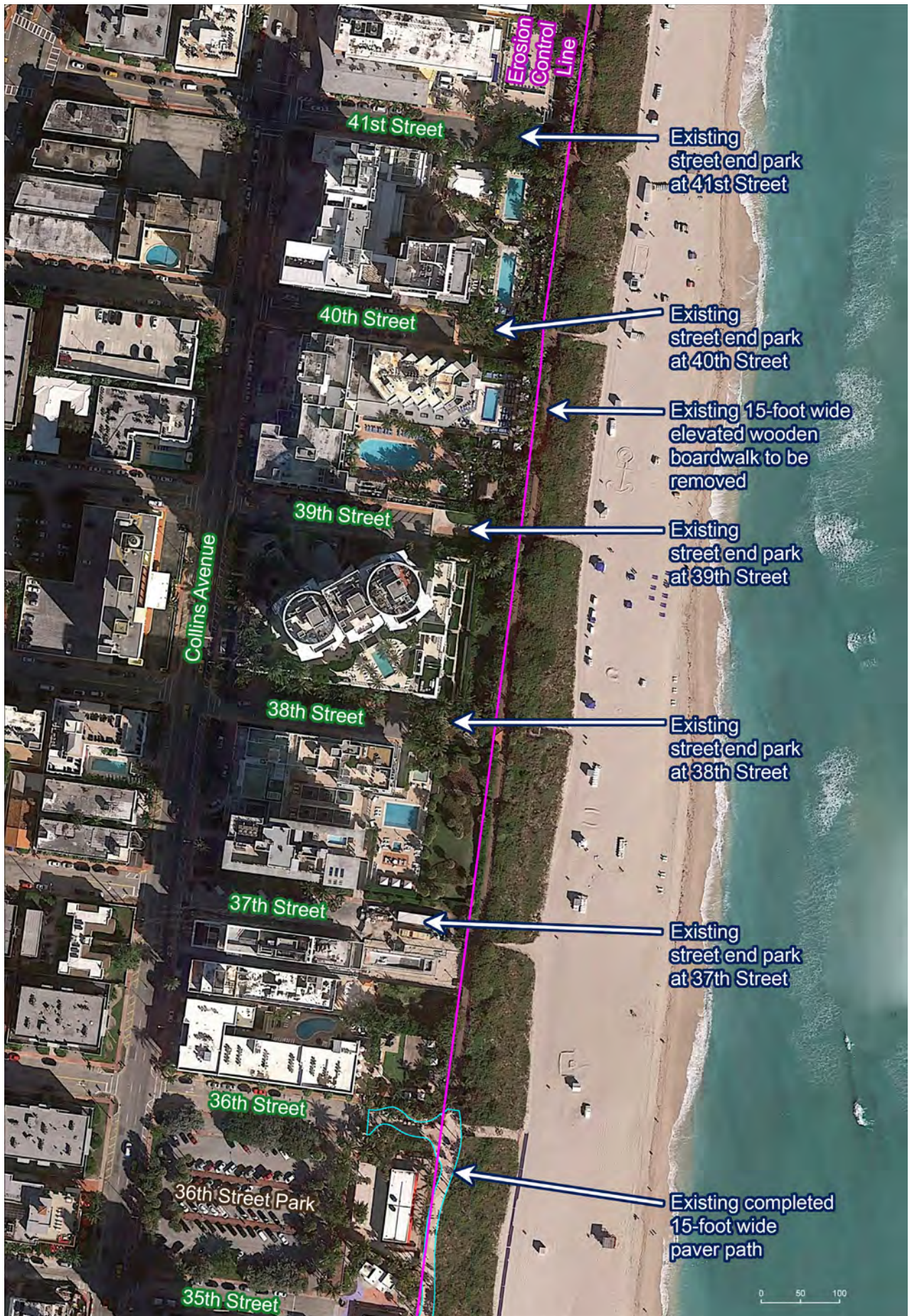




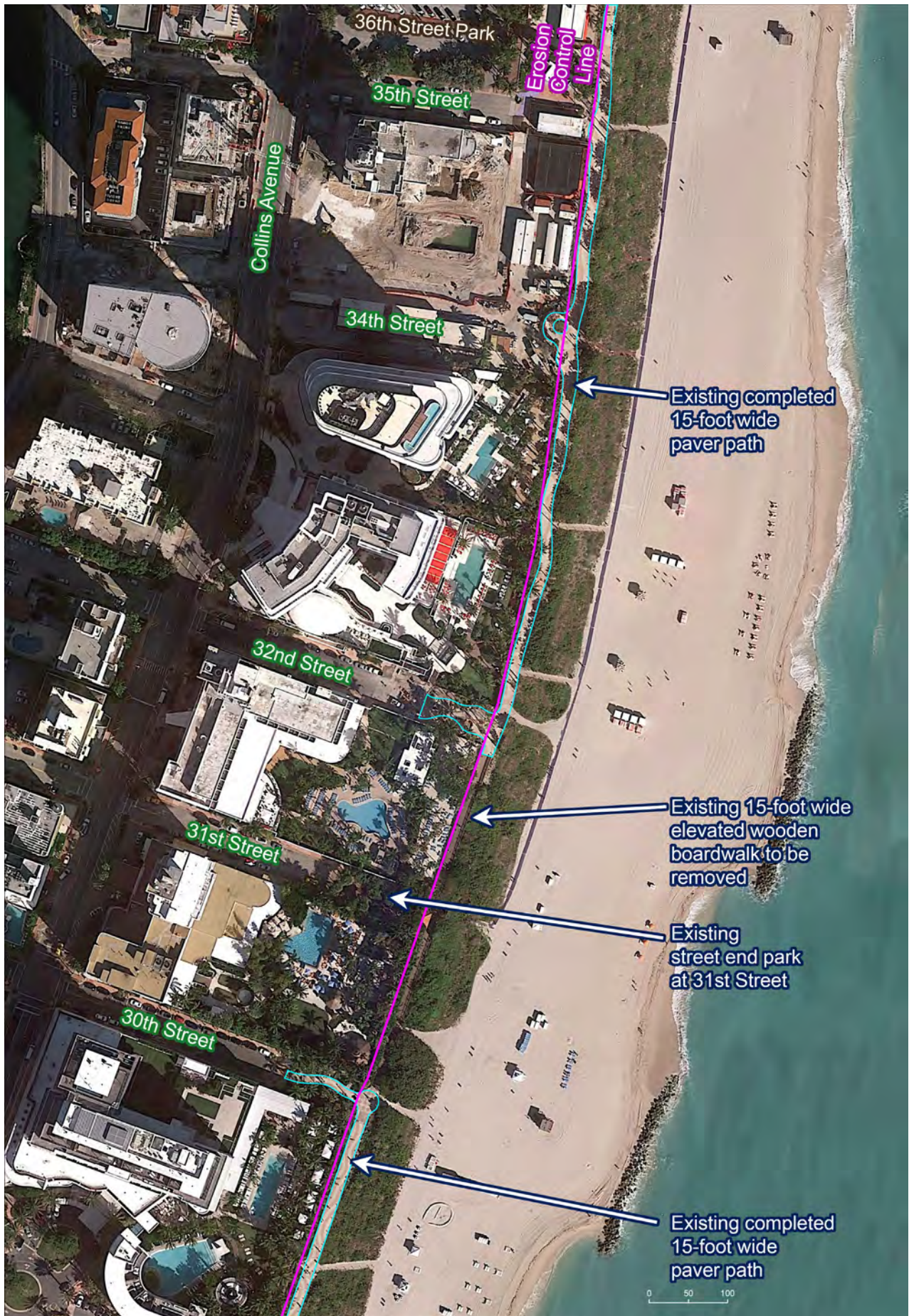
Conceptual Rendered Plan View - Plan 1 of 6



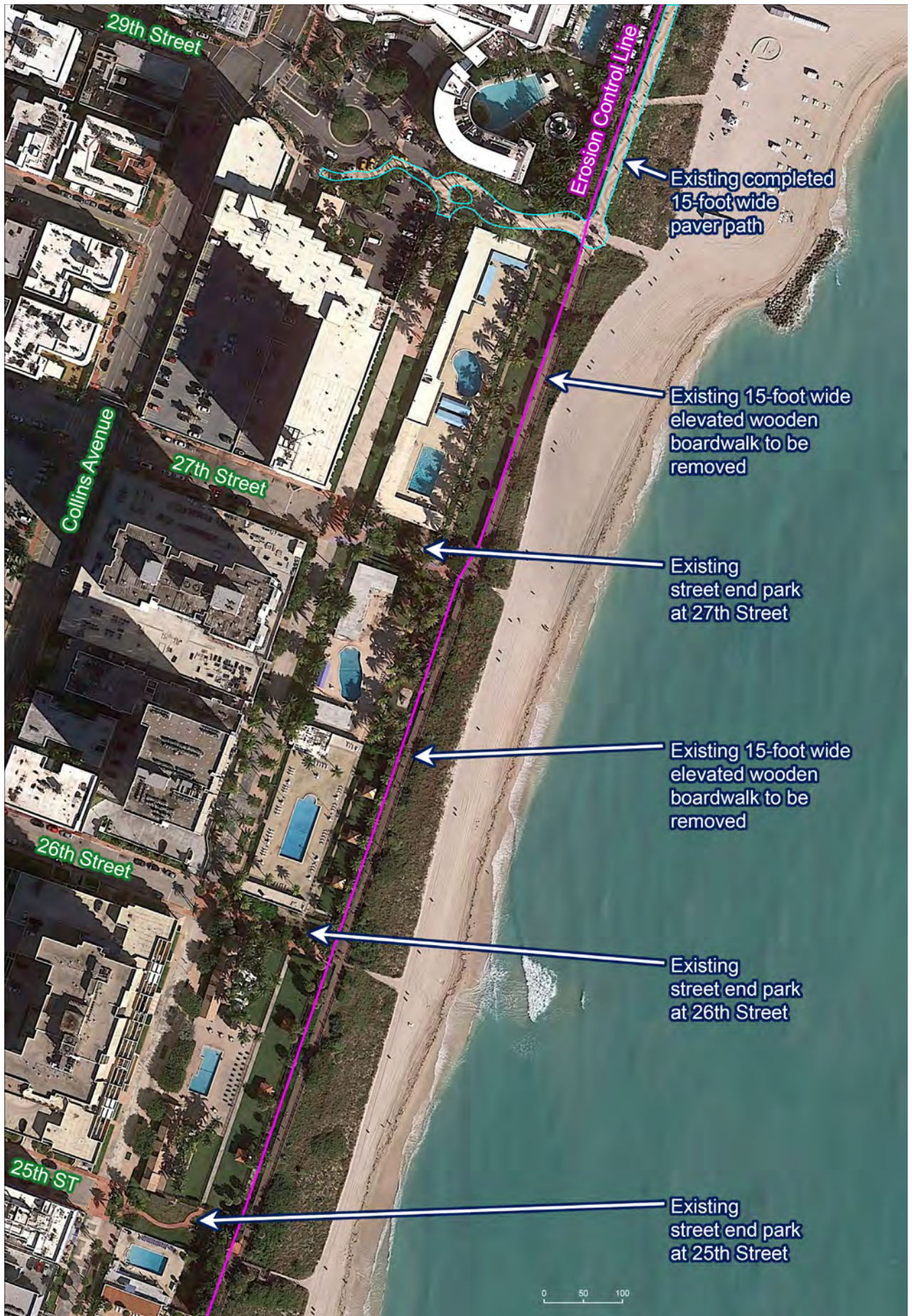
Conceptual Rendered Plan View - Plan 2 of 6



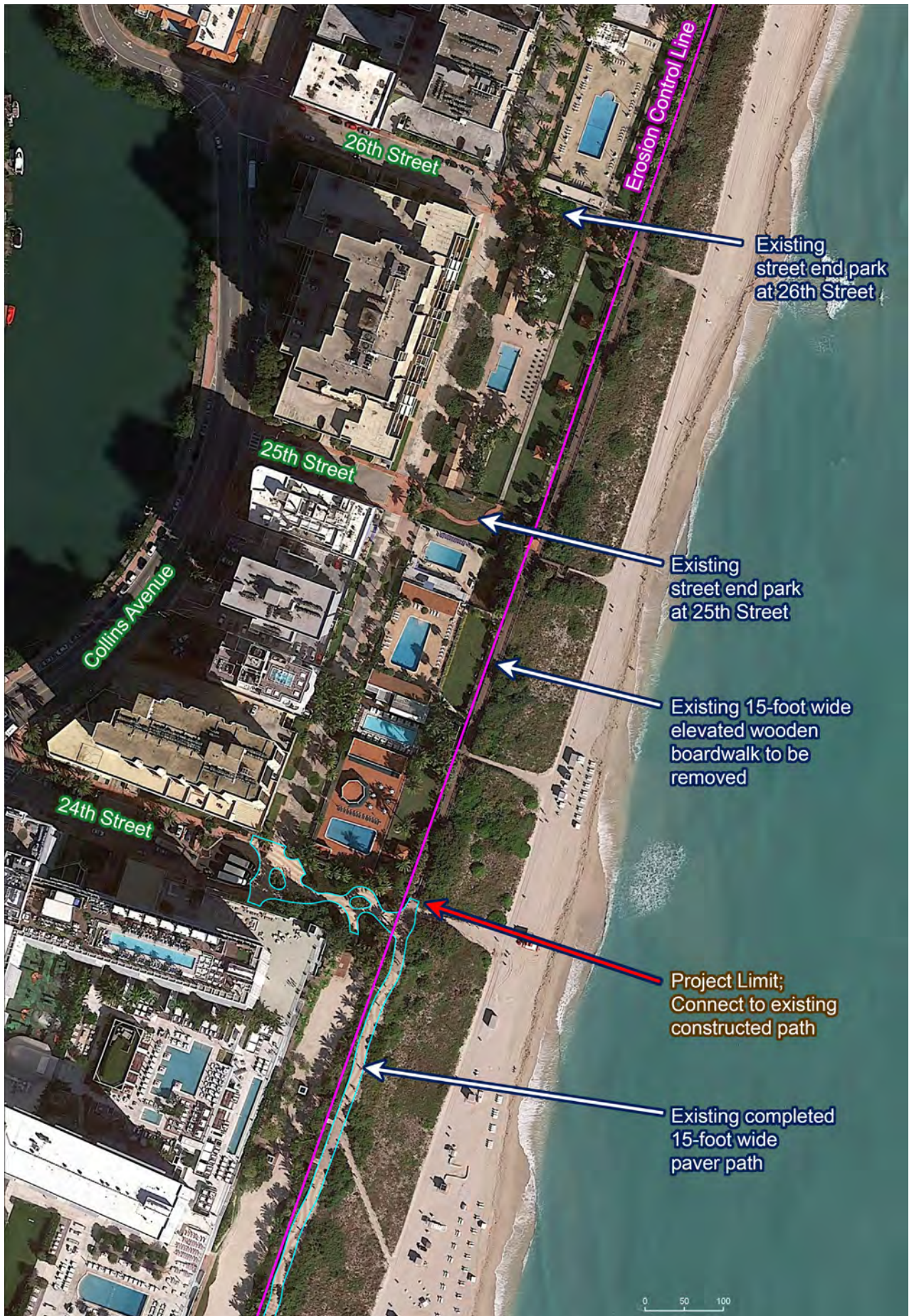
Conceptual Rendered Plan View - Plan 3 of 6



Conceptual Rendered Plan View - Plan 4 of 6



Conceptual Rendered Plan View - Plan 5 of 6



Conceptual Rendered Plan View - Plan 6 of 6





The Coastal Strand Zone



Sea grape
Coccoloba uvifera

The strand zone is a dense, flat-topped community of evergreen shrubs, including sea grape (*Coccoloba uvifera*) and silver buttonwood (*Conocarpus erectus* var. *sericeus*), that occurs behind the herbaceous pioneer zone. Strand zone vegetation helps stabilize dunes, protect upland structures from erosion, and protect sea turtles by blocking artificial light. If you witness unauthorized trimming of dune vegetation, please contact the Environmental Resources Management Division at 305.673.7080.

En el área oeste de nuestras dunas existe una comunidad de vegetación densa con especies típicamente enanas como la uva de playa (Coccoloba uvifera) y el mangle botón (Conocarpus erectus var. sericeus). La vegetación en esta zona ayuda a estabilizar las dunas, a proteger la infraestructura de la erosión, y a bloquear la luz artificial de la playa. Si usted ve a alguien podando esta vegetación, por favor llame a la División de Recursos Ambientales al 305.673.7080.

This sign was funded in part, through a grant agreement from the Florida Department of Environmental Protection, Florida Coastal Management Program, by a grant provided by the Office of Ocean and Coastal Resource Management under the Coastal Zone Management Act of 1972, as amended, National Oceanic and Atmospheric Administration Award No. #NA11NOS4190073. The views, statements, findings, conclusions and recommendations expressed herein are those of the City and do not necessarily reflect the views of the State of Florida, NOAA or any of their subagencies.



MIAMI BEACH











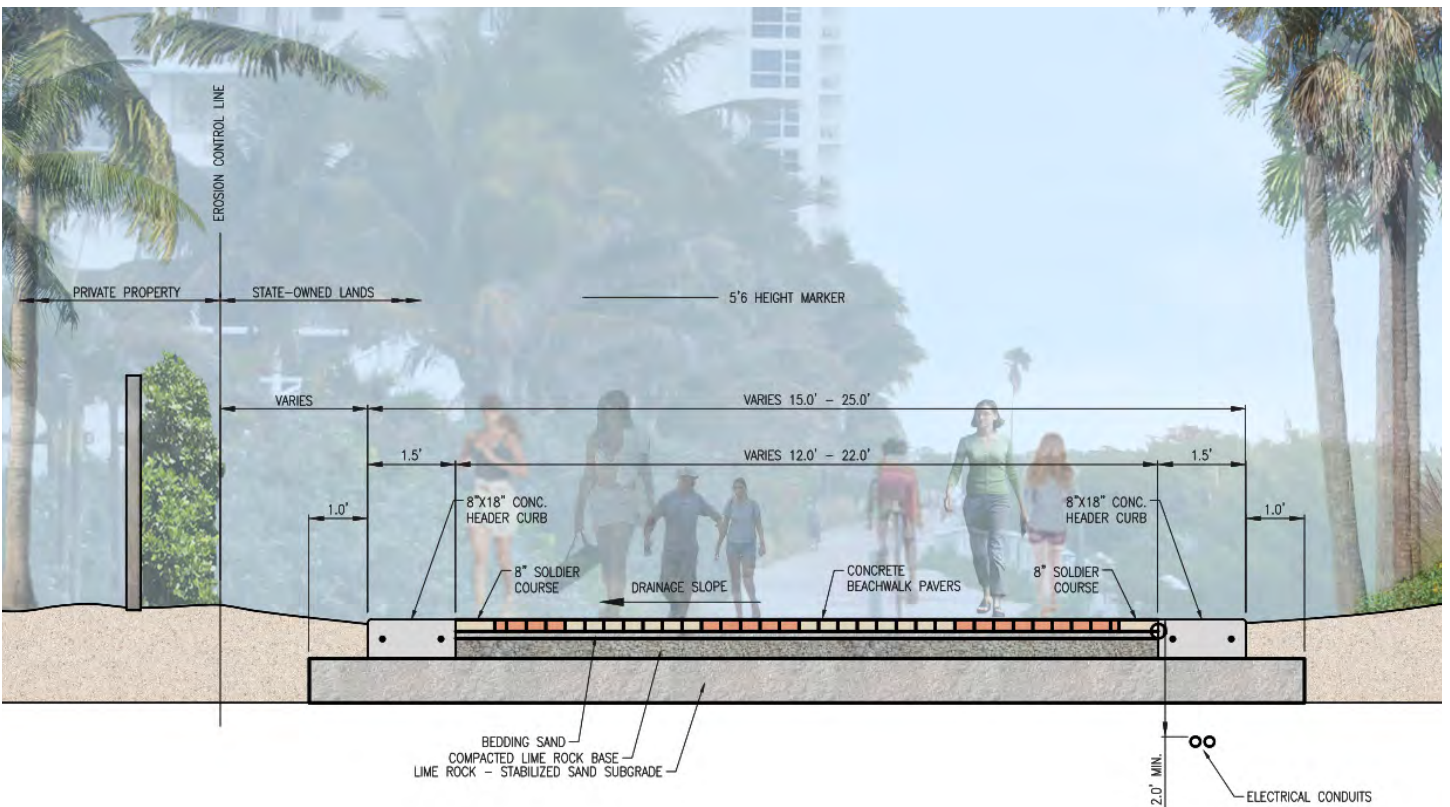
Task 2

Conceptual Plan Part 2: Conceptual Rendered Plans

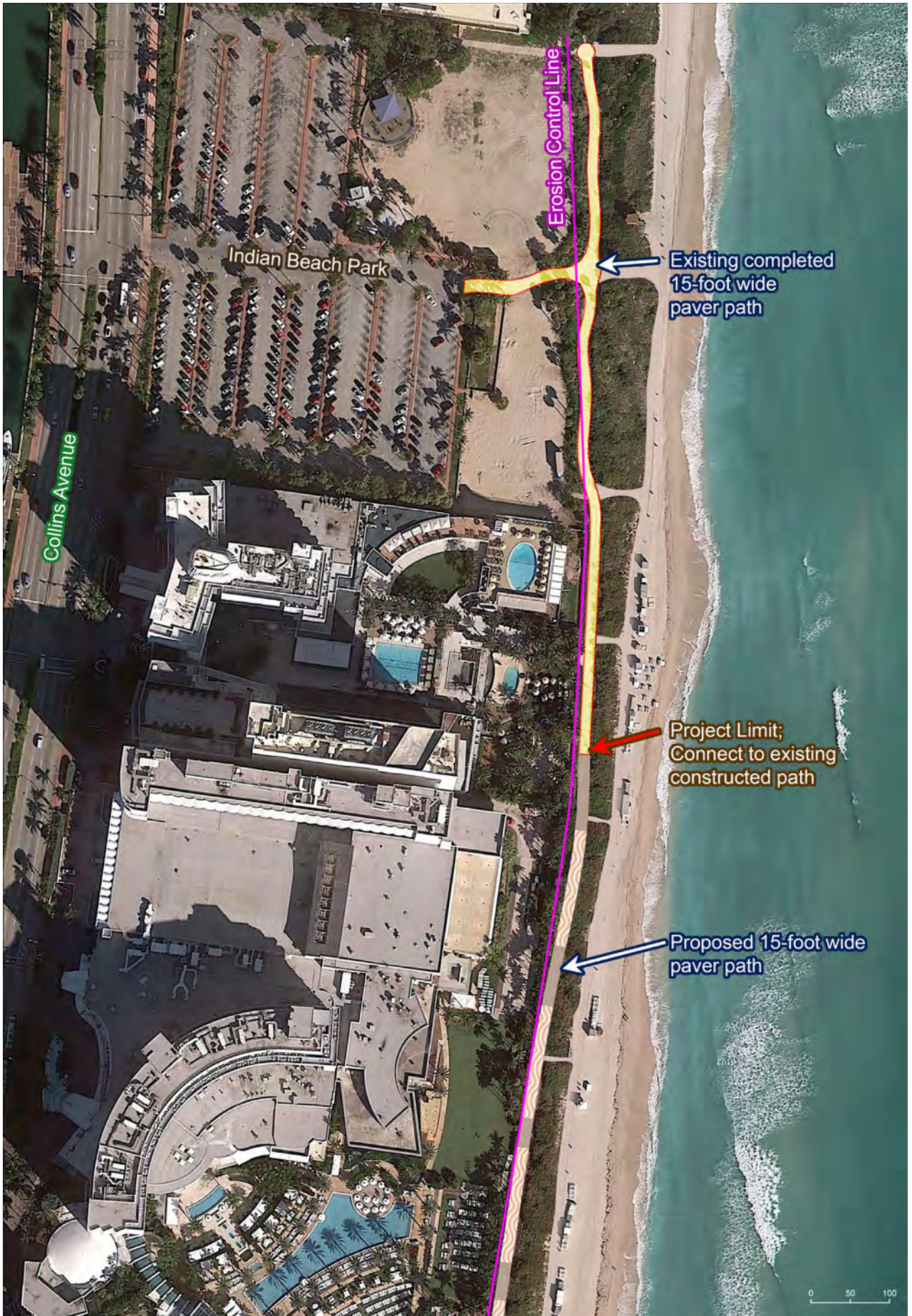
Proposed Conceptual Cross-Sections



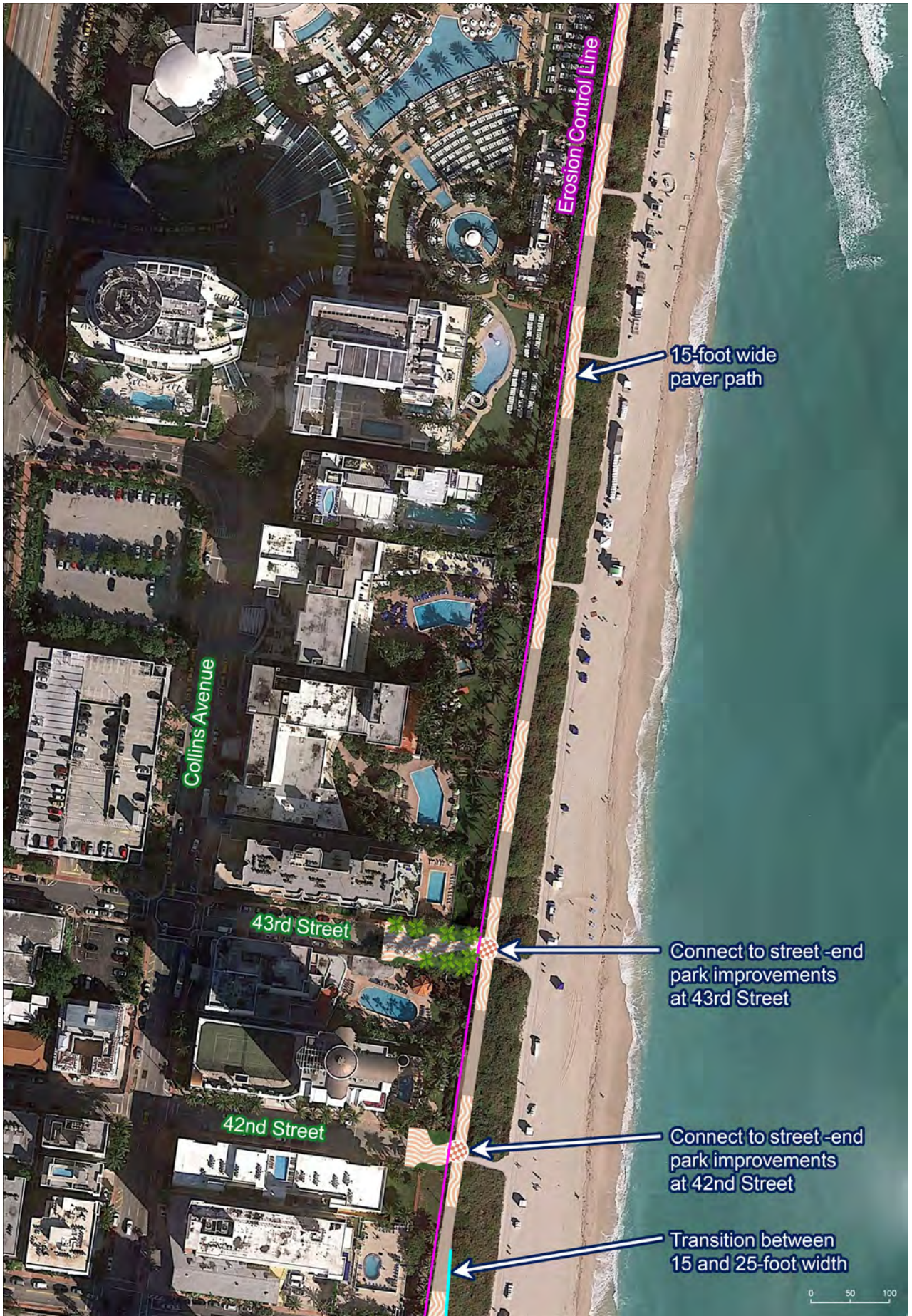
Conceptual Cross-Section through Beach Dune



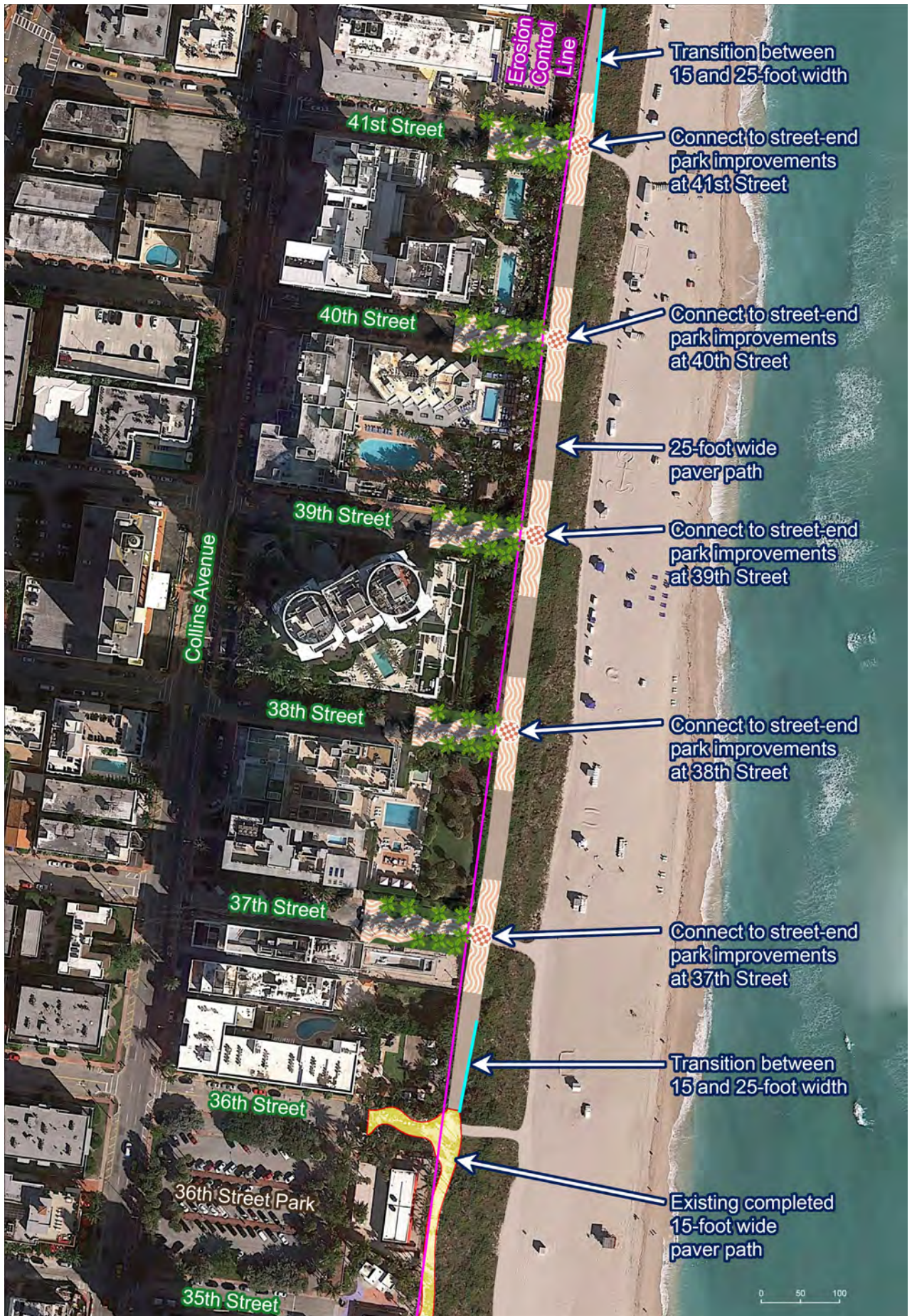
Conceptual Cross-Section - Beachwalk Paver Path Detail



Conceptual Rendered Plan View - Plan 1 of 6



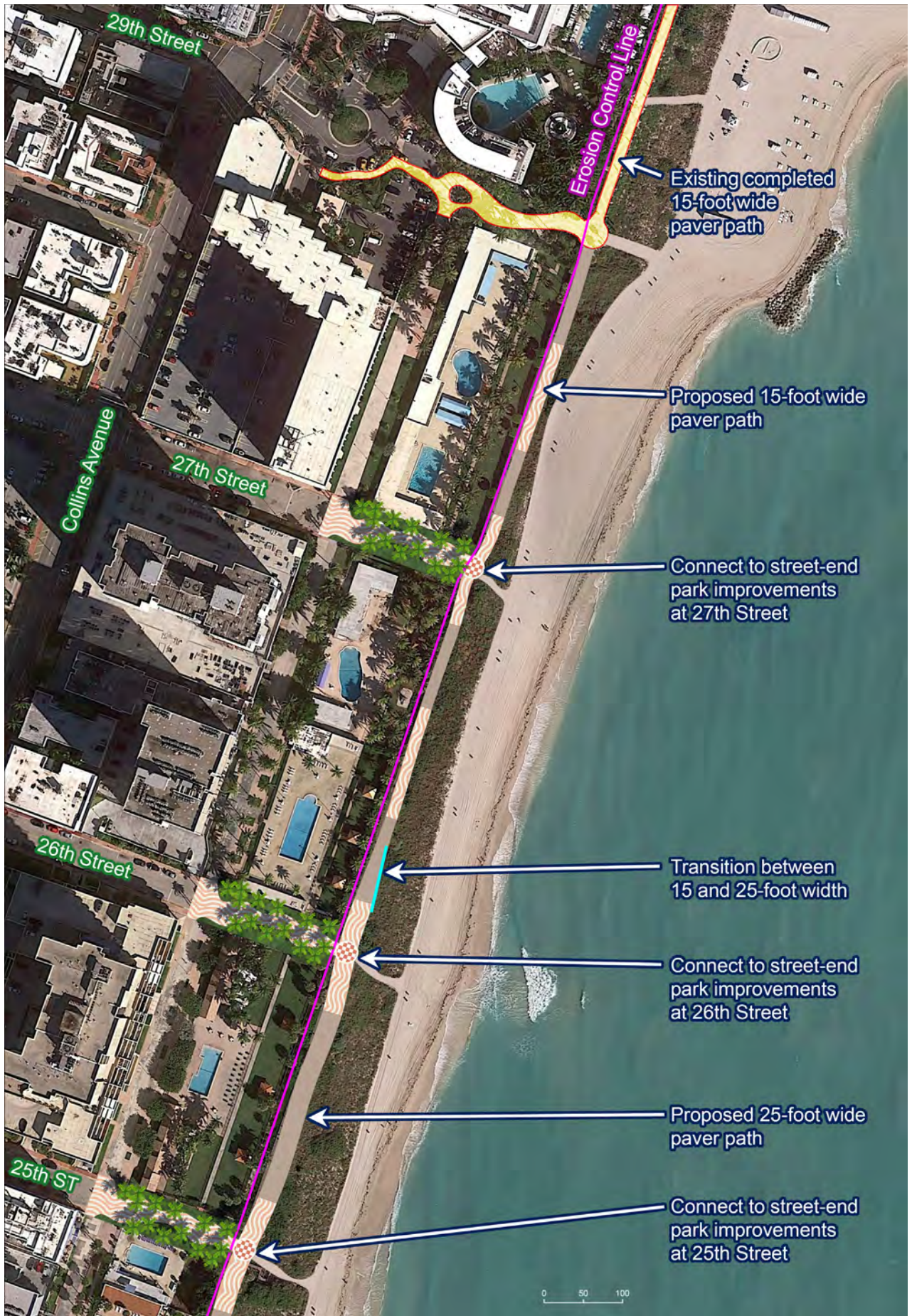
Conceptual Rendered Plan View - Plan 2 of 6



Conceptual Rendered Plan View - Plan 3 of 6



Conceptual Rendered Plan View - Plan 4 of 6



Conceptual Rendered Plan View - Plan 5 of 6



Conceptual Rendered Plan View - Plan 6 of 6

Task 2

Conceptual Plan Part 3: Conceptual Dune Vegetation

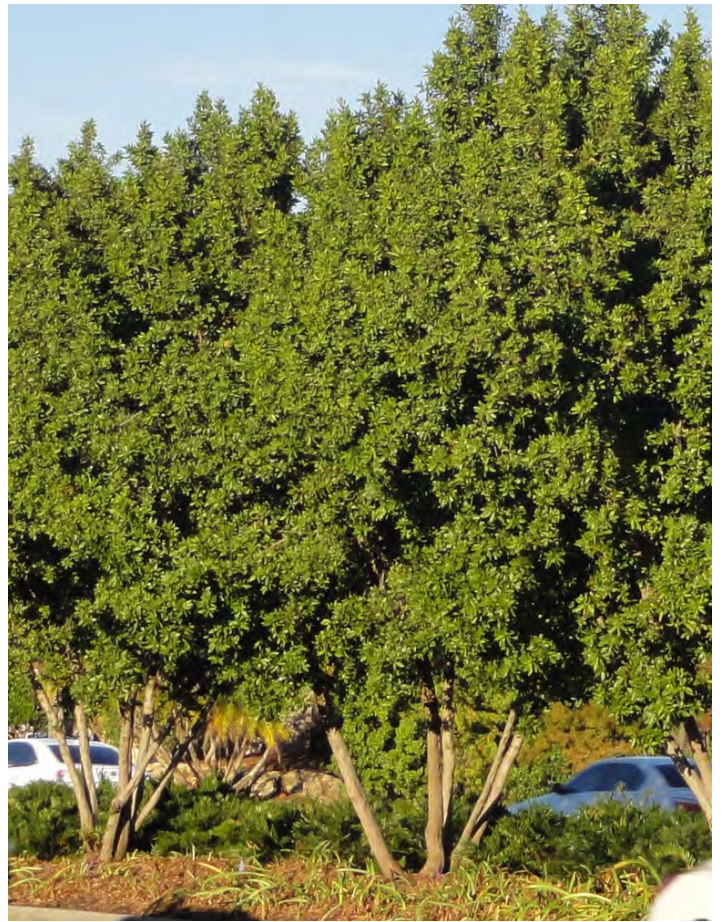




Native Dune Canopy Vegetation



Coccoloba uvifera - Seagrape



Conocarpus erectus - Green Buttonwood



Conocarpus erectus 'Sericeus' - Silver Buttonwood



Sabal palmetto - Cabbage Palm



Native Dune Pioneer Vegetation



Canavalia maritima - Beach Bean



Ipomea imperati - Beach Morningglory



Ipomea pes-caprea - Railroad Vine



Paspalum vaginatum - Shore Paspalum



Sporobolus virginicus - Virginia Dropseed Grass



Uniola paniculata - Sea Oats



Native Dune Strand Vegetation



Argusia gnaphalodes - Sea Lavender



Borrchia arborescens - Sea Oxeye Daisy



Chrysobalanus icaco 'Horizontalis' - Horizontal Cocoplum



Ernodea littoralis - Golden Beach Creeper



Gaillardia pulchella - Beach Blanket Flower



Helianthus debilis - Dune Sunflower



Iva imbricata - Seaside Elder



Panicum amarum - Dune Panic Grass



Randia aculeate - White Indigo Berry



Randia aculeate - White Indigo Berry



Spartina patens - Salt Meadow Cordgrass



Suriana maritima - Bay Cedar

Task 3

Cost Analysis

CONCEPTUAL COST ESTIMATE

ENGINEER'S OPINION
OF PROBABLE COST
WORKSHEET

DIV.	ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE MAT. & LABOR	ESTIMATED AMOUNT
I. GENERAL ITEMS						
	1	Bonds and Insurance (2.5%)	1	LS	\$205,492.01	\$205,492.01
	2	Mobilization (5%)	1	LS	\$410,984.02	\$410,984.02
	3	General Conditions (7%)	1	LS	\$575,377.63	\$575,377.63
	4	Survey and Layout Site Controls (1.5%)	1	LS	\$123,295.21	\$123,295.21
	5	E-Builder	1	LS	\$2,000.00	\$2,000.00
	6	Indemnification	1	LS	\$50.00	\$50.00
	7	Permit Fees Allowance	1	LS	\$20,000.00	\$20,000.00
	8	Maintenance of Traffic (1%)	1	LS	\$82,196.80	\$82,196.80
	9	NPDES Permit/Erosion Control (2.5%)	1	LS	\$205,492.01	\$205,492.01
	10	Project Identification Signs	4	EA	\$1,200.00	\$4,800.00
SUBTOTAL						\$1,629,687.69
II. DEMOLITION						
	11	Clearing, Grubbing and Grading for Parks	9,120	SY	\$7.50	\$68,400.00
	12	Removal and Disposal of Existing Trees or Palms	40	EA	\$125.00	\$5,000.00
	13	Removal and Disposal of Existing Pavillions	9	EA	\$325.00	\$2,925.00
	14	Removal and Disposal of Existing Wooden Boardwalk	96,120	SF	\$6.00	\$576,720.00
	15	Excavation, Grading, Site Prep and Relocation of Sand onto Dune	10,680	SY	\$41.00	\$437,880.00
	16	Relocation of Existing Trees and Palms	60	EA	\$375.00	\$22,500.00
SUBTOTAL						\$1,113,425.00
III. WALKWAY AND PARK IMPROVEMENTS						
	17	Conduct Regular Excavation	2,000	CY	\$6.50	\$13,000.00
	18	Furnish and Install Beach-compatible Sand Fill	3,000	CY	\$20.00	\$60,000.00
	19	Furnish and Install Pavers, Architectural Roadway (Incl. Bedding Sand)	10,803	SY	\$73.82	\$797,477.46
	20	Furnish and Install Pavers, Architectural Sidewalk (Incl. Bedding Sand)	5,905	SY	\$42.72	\$252,261.60
	21	Furnish and Install 6-13/16" Compacted Limerock Base	10,803	SY	\$8.40	\$90,745.20
	22	Furnish and Install 3-5/8" Compacted Limerock Base	5,905	SY	\$11.20	\$66,136.00
	23	Furnish and Install 12" Cement-Stabilized Subgrade	10,803	SY	\$95.00	\$1,026,285.00
	24	Furnish and Install 9" Cement-Stabilized Subgrade	5,905	SY	\$72.00	\$425,160.00
	25	Furnish and Install 12"x18" Header Curb	13,225	LF	\$19.60	\$259,210.00
	26	Furnish and Install 9"x18" Header Curb	3,305	LF	\$17.49	\$57,804.45
	27	Furnish and Install Dune Rope and Post	5,750	LF	\$9.00	\$51,750.00

CONCEPTUAL COST ESTIMATE

**ENGINEER'S OPINION
OF PROBABLE COST
WORKSHEET**

DIV.	ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE MAT. & LABOR	ESTIMATED AMOUNT
	28	Concrete Compaction and Testing	1	LS	\$9,000.00	\$9,000.00
	29	Furnish and Install Bonded Aggregate (per tree pit)	204	EA	\$150.00	\$30,600.00
	30	Furnish and Install Rootbarrier (36" NDS)	18	EA	\$125.00	\$2,250.00
	31	Furnish and Install Temporary Dune Protection Fencing	6,470	LF	\$1.50	\$9,705.00
SUBTOTAL						\$3,151,384.71

IV. PLANTING AND FURNISHINGS

A. PALMS AND SHADE TREES

	32	Coconut Palms	82	EA	\$550.00	\$45,100.00
	33	Cabbage Palms	270	EA	\$130.00	\$35,100.00
	34	Green Buttonwoods	127	EA	\$150.00	\$19,050.00
	35	Oaks	18	EA	\$650.00	\$11,700.00
	36	Specialty Palms	45	EA	\$475.00	\$21,375.00

B. UNDERSTORY PLANTING

	37	Ornamental Groundcover	13,293	EA	\$9.00	\$119,637.00
	38	Ornamental Shrubs	8,095	EA	\$12.00	\$97,140.00
	39	Dune Planting - Coastal Strand Zone Species	21,322	EA	\$2.75	\$58,635.50
	40	Dune Planting - Coastal Pioneer Species	47,893	EA	\$1.50	\$71,839.50

C. FURNISHINGS

	41	Custom Concrete Modular Benches	60	EA	\$2,700.00	\$162,000.00
	42	Benches	25	EA	\$2,100.00	\$52,500.00
	43	Signage and Wayfinding	15	EA	\$375.00	\$5,625.00
	44	Shade Structures	11	EA	\$55,000.00	\$605,000.00
	45	Trash Receptacles	33	EA	\$2,300.00	\$75,900.00
	46	Doggy Poop Stations	11	EA	\$650.00	\$7,150.00

D. MISCELLANEOUS

	47	Existing Tree Protection	300	EA	\$60.00	\$18,000.00
	48	Palm and Tree Staking	542	EA	\$150.00	\$81,300.00
	49	Mulching Beach Sand	82,085	SF	\$2.00	\$164,170.00
SUBTOTAL						\$1,651,222.00

V. IRRIGATION

	50	Temporary Watering Truck for Native Dune Areas	1	LS	\$85,000.00	\$85,000.00
	51	RWS-M-B-C-SOCK (w/ 1402 bubblers)	95	EA	\$70.00	\$6,650.00
	52	1" Solenoid valve	4	EA	\$210.00	\$840.00

CONCEPTUAL COST ESTIMATE

**ENGINEER'S OPINION
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WORKSHEET**

DIV.	ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE MAT. & LABOR	ESTIMATED AMOUNT
	53	1" Solenoid Valve (Master)	15	EA	\$210.00	\$3,150.00
	54	PVC Union Ball Valves	22	EA	\$45.00	\$990.00
	55	Rain Bird Automatic Controller (ESP4MEi)	3	EA	\$650.00	\$1,950.00
	56	Rain Bird Expansion Module (ESP-SM3)	6	EA	\$138.00	\$828.00
	57	1" RPZ (Zurn 375-B) Backflow Preventer	3	EA	\$3,500.00	\$10,500.00
	58	1-1/2" Water Service with 1" Meter and Box	3	EA	\$5,000.00	\$15,000.00
	59	Rain Bird Rain Shut Off (RSD-Cex) Pole Mounted	3	EA	\$700.00	\$2,100.00
	60	Controller Grounding	3	EA	\$780.00	\$2,340.00
	61	Various Wires, Detection Tape, PVC, Sleeves and Conduit	0	LF	\$15.10	\$0.00
	62	Valve Box	7	EA	\$120.00	\$840.00
	63	Park Irrigation	82,085	SF	\$1.80	\$147,753.00
					SUBTOTAL	\$277,941.00

VI. ELECTRICAL SERVICES AND LIGHTING

A. POLE LIGHTS, BOLLARDS AND FOUNDATIONS

	64	Various PVC Conduit and Wire	5750	LF	\$23.93	\$137,597.50
	65	Furnish and Install Turtle-friendly Bollards + Foundations	383	EA	\$3,100.00	\$1,187,300.00
	66	Furnish and Install Turtle-friendly Pole Lights + Foundations	25	EA	\$16,500.00	\$412,500.00
	66	Furnish and Install Service Wiring 2-Sets of 3-350 kcmil	230	LF	\$110.16	\$25,336.80
	67	Furnish and Install Pullboxes	17	EA	\$491.85	\$8,361.45
	68	Furnish and Install Ground Rods	383	EA	\$30.00	\$11,490.00
	69	Furnish and Install Ground Rod Clamps	383	EA	\$10.00	\$3,830.00
	70	Furnish and Install Splice Connectors	1278	EA	\$10.00	\$12,780.00
	71	Furnish and Install Fuses	766	EA	\$7.00	\$5,362.00
	72	Furnish and Install Trench and Backfill	6300	LF	\$4.00	\$25,200.00

B. ELECTRICAL RACK

	73	Furnish and Install Main Panel (400A) in SS NEMA 4X	3	EA	\$10,000.00	\$30,000.00
	74	Furnish and Install Sub Panels (100A) in SS NEMA 4X	6	EA	\$9,000.00	\$54,000.00
	75	Furnish and Install Lighting Contactors in SS NEMA 4X	3	EA	\$6,000.00	\$18,000.00
	76	Furnish and Install Meter Box - SS	3	EA	\$1,000.00	\$3,000.00
	77	Furnish and Install Surge Protector - Eaton CVX100-240S	3	EA	\$1,000.00	\$3,000.00
	78	Furnish and Install Photocell	3	EA	\$150.00	\$450.00
	79	Furnish and Install Support Structure	3	EA	\$7,500.00	\$22,500.00
					SUBTOTAL	\$1,960,707.75

CONCEPTUAL COST ESTIMATE

ENGINEER'S OPINION
OF PROBABLE COST
WORKSHEET

DIV.	ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE MAT. & LABOR	ESTIMATED AMOUNT
VII. ALLOWANCES						
	80	Professional Video Allowance	1	LS	\$5,000.00	\$5,000.00
	81	Unforeseen Conditions Allowance	1	LS	\$60,000.00	\$60,000.00
					SUBTOTAL	\$65,000.00
					GRAND SUBTOTAL BASE BID	\$9,849,368.15
					Contingency @ 20%	\$1,969,873.63
					GRAND TOTAL BASE BID	\$11,819,241.78

Task 4

Executive Summary

Background

The Middle Beach Recreational Corridor – Phase III (MBRC-PHIII) project will consist of the construction of an on-grade, paver pedestrian walkway connecting South Beach to Middle Beach. It is, in essence, the last link remaining to be designed and engineered to connect the northernmost areas of the city with those in the south. The pedestrian walkway will be constructed along the western side of the vegetated beach dune and east of oceanfront properties. The walkway will run north from approximately 23rd Street to Indian Beach Park at 46th Street.

This project is a portion of the Atlantic Greenway Network, which was adopted by the City of Miami Beach Commission and which has two primary goals: (a) to unite important places of meaning and (b) to add to the overall quality of life provided to residents and visitors alike.

As adopted by the City Commission in the City’s Comprehensive Master Plan, this project supports three key elements including those of transportation, conservation/coastal zone management, and recreation and open space. The project satisfies the transportation element of the comprehensive master plan by ensuring the development of a safe, efficient and integrated alternative and non-motorized transportation system. The proposed improvement will provide an alternative path for connectivity throughout the City and will be an integral component to the City’s overall Bikeways Master Plan.

In satisfying the conservation/coastal zone management the project will provide public improvements and restrict activities or uses that could damage or negatively impact coastal resources, protect human life, and improve the vegetation and habitat areas of the beach dune. This conservation effort also supports the City’s strategies for increasing her resilience to storm surges and to heightened oceanic forces resulting from sea level rise.

And finally, in satisfying the recreation and open space element, the project seeks to complete a connective system linking recreational open spaces, while encouraging the preservation and enhancement of the natural environment.



Existing Conditions

The project area is mostly characterized by the presence of an elevated wooden board walk which will be demolished and replaced with the proposed on-grade paver beachwalk. The boardwalk currently satisfies the needs of pedestrians seeking a recreational path, but because of it does not currently operate as a facility that supports alternative transportation. Cyclists are not allowed to utilize the beachwalk because its current dimension and make-up do not support this type of use. Additionally, along the existing board walk are installed lighting fixtures that provide security but are not equipped to meet the current turtle-friendly lighting standard. The proposed project seeks to serve as a corrective measure to resolve these current issues.

The project area's dune topography does not display a discernible dune structure, but rather has minor topographical undulations that vary between two and four feet. The presence of the existing board walk is currently operating as an entrapment device that collects sand beneath its elevated deck. The 'flatness' and ease of passage across the dune may make it very easy for beach users to walk over the vegetated dune areas in the future, instead of utilizing the designated dune crosswalks. An important strategy of the project will include the relocation of sand that is currently accumulated beneath the board walk to be placed on the dune-proper to strengthen its efficacy as a land mass protection against storm events and to



further deter users from traversing it freely. These increased land masses will be planted with native South Florida dune vegetation in a successional strategy to ensure that there is an adequate heterogeneity of dune pioneer and dune strand species. In addition to these improvements, post-and-rope delineators and signage will be provided to inform the users of the sensitivity of the dune ecosystem and to keep them from trampling on it.

The existing vegetated dune area is currently under a management program that has significantly reduced the opportunistic presence of invasive exotic vegetation. Nonetheless, there are evidences of patches of *Scaevola taccada* which will be removed and replaced with native dune plantings.

Conceptual Walkway Layout

The proposed walkway has as a primary goal to provide continuous ADA accessible and cyclist connection between 23rd Street and 46th Street. All grades will be kept to less than 3.9% with a cross slope that does not exceed 1.8%. The materials proposed for use in constructing the pathway are standard concrete unit pavers held in place by poured-in-place concrete header curbs. This is in keeping with what has been permitted and constructed elsewhere throughout the City's beachfront.

The geometry of the proposed pathway will be designed to provide the least amount of disruption to existing conditions. Consistent with



comments from FDEP, the beach walk's width will be design at 15 feet and it will be proposed an increase width of 25 feet where a minimum of a 50-foot wide vegetated dune can be guaranteed. Small intermittent segments of the beachwalk have been constructed at a width of 15 feet by development along the Erosion Control Line; this proposed project does not plan to demolish those existing improvements and will connect to them at reasonable locations. Where possible, the pathway will be placed as near as possible to the Erosion Control Line to satisfy FDEP's request that the improvements be located as far west as reasonably possible. Because of the existence of the current elevated board walk, there are few to no encroachments that extend beyond the Erosion Control Line that need to be negotiated throughout the design and engineering. Critically, the design will seek to move the layout's alignment eastward to accommodate ADA access to the existing thresholds where they will be harmonized to meet grades on private properties.

An important component of the design will be the alignment of the beachwalk and its resultant

geometry. Comments received from the cyclist community requested that sharp undulations in the design of the beachwalk's geometry be avoided, as they increase opportunities for collision conflicts between pedestrians and cyclists trying to negotiate the geometry. The design will seek to strike a balance between the needs of the cyclist community for a straighter path geometry and those expressed by the pedestrian users who prefer a meandering path.

Soil Relocation Avoidance/Minimization/Mitigation
To meet standards expressed by FDEP, a primary goal of for the engineering and design will be to ensure that there is a 'net zero' loss of beach fill throughout the project and that minimization and mitigation practices are designed for. All areas where cut or fill operations will occur are will be identified on the final engineering plans. Cutting and filling will only be conducted in those areas necessary to ensure the path is ADA compliant and that it provides an adequate harmonized transition to abutting private properties. Any additional compatible material needed to be



imported from off-site should prove to be beach compatible.

Street-end Parks

An important component of the overall project is its ability to be connected and accessible to the general public at large via public access ways. Currently, there are 11 existing street-end parks that will need to be improved and re-engineered to provide ADA access to the proposed improvements. Additionally, these will be locations where bike racks and short-term bike-sharing facilities may be placed. At the request of various residents, shading devices will be provided at these locations to mitigate for the loss of the existing pavilions that are an integral component of the existing boardwalk. These park areas will also be redesigned to more 'defensible' with the use of CPTED principles of design, adequate lighting, and landscape planting improvements that will be maintained by the City.

Lighting

The project is proposing to utilize the same amber turtle-friendly lighting that has been permitted by FDEP and FFWCC for use on previously constructed segments. These bollard-type path lighting will be provided along the entire

beachwalk to ensure that there is consistent low-level illumination. Pedestrian-scale light poles with turtle-friendly luminaires provided by the same manufacturer will be also integrated into the street-end parks for increased safety and security.

Cost Analysis

The project cost is estimated at approximately \$11,819,241.00. This estimated amount includes the cost of the beachwalk and the necessary improvements to the street-end parks.

The beachwalk component's cost is estimated at approximately \$8,958,773.00. This accounts for approximately 6615 linear feet of improvements east of the Erosion Control Line at an average cost of \$1,354.30 per linear foot, inclusive of contingencies.

The street-end component's cost is estimated at approximately \$2,860,468.00. This accounts for approximately 11 street-end parks being improved an average cost of \$260,042.50 per location, inclusive of contingencies. All street-end parks differ in area and represent a total area to be improved of approximately 82,050 square feet. This equals to \$35.86 per square foot, inclusive of contingencies.

