



BALTIMORE AND WILMINGTON AVENUES STREETSCAPE CONCEPT

Commissioners Presentation - December 7, 2021



Outline

- Introduction
- Existing Conditions
- Concept Development & Recommendations
- Public Workshop and Comments
- Cost Estimate
- Next Steps





Introduction

Introduction

- DeIDOT administers the Federal Highways Administration (FHWA) Transportation Alternatives Program (TAP)
- Rossi Group is a consultant to DeIDOT for TAP
- Eligible activities include installing sidewalks, creating bike and multi-use pathways, renovating streetscapes, installing lighting and crosswalks
- Wilmington / Baltimore Avenues Streetscape Concept Development is funded by TAP; future efforts (TAP or other methods) will require City financial participation
- The Concept Recommendations are result of coordination with the Streetscape Task Force - comprised of property and business owners, community organizations, and city commissioners and staff



Goals

- Elevate the perception of this commercial core relative to the Boardwalk and Rehoboth Avenue
- Bring pedestrians and bicyclists and other alternate modes of transportation (scooters, etc.) onto Wilmington and Baltimore Avenues
- Include area for streetscape elements that will attract these traffic types including bicycle parking, sitting areas, landscaping, lighting, green infrastructure, etc.
- Streetscape improvements will enhance vehicular and non-vehicular movements, including parking accommodations, while benefiting adjacent property owners and businesses



Objectives

- Provide ADA accessible walkways and widen walkways for pedestrian traffic and outdoor activities
- Increase safety and visibility at crosswalks
- Increase safe pedestrian and bicycle travel
- Increase connectivity to the Boardwalk and Rehoboth Avenue





Existing Conditions

Existing Conditions



- Crosswalks in poor condition
- Ramps and curbs in need of upgrades



- Physical and visual connection with Boardwalk is limited



- Parking dimensions less than standard
- Bikes must compete with motor vehicles in narrow travel lanes



- Sidewalks in poor condition
- Competing features in limited sidewalk space
- Constrained pedestrian movements



- Driveways and fire lanes restrict parking and sidewalk use
- Limited scooter parking
- Drainage upgrades needed



- Pavement space utilized for amenities
- Limited bike parking in other areas

Existing Dimensions vs Recommendations

Element	Existing Dimensions	Recommended Minimum ^a
Pedestrian Circulation Path^b	4'7"-15'3"	7'
Travel Lanes		
Through Lanes	8.5'-12'	11'-12' ^c
Turn Lanes	8'	11'
Curb	5"-7"	6"
Parking		
Head in parking (length)	17'-19'	18'
Head in parking (width)	8'-9'	9'
60 deg parking (length)	15'	NA
60 deg parking (width)	9.5'-10.5'	NA
Parallel parking (width)	6.5'-8'	8'
Parallel parking (length)	17'-22'	22'

^a As per DeIDOT and City requirements

^b Pedestrian Circulation Path includes the Pedestrian Access Route (PAR), the buffer between the PAR and curb line, and building frontage

^c 11' minimum is absolute minimum recommendation. 12' minimum is preferred and included in the concept where ROW allows



Related Projects/Studies

Coordination is required with the following related projects/studies, though these are independent from the Streetscape Concept Development:

- Utility undergrounding
- Beach patrol and restroom facilities
- Development of ADA parking design standards

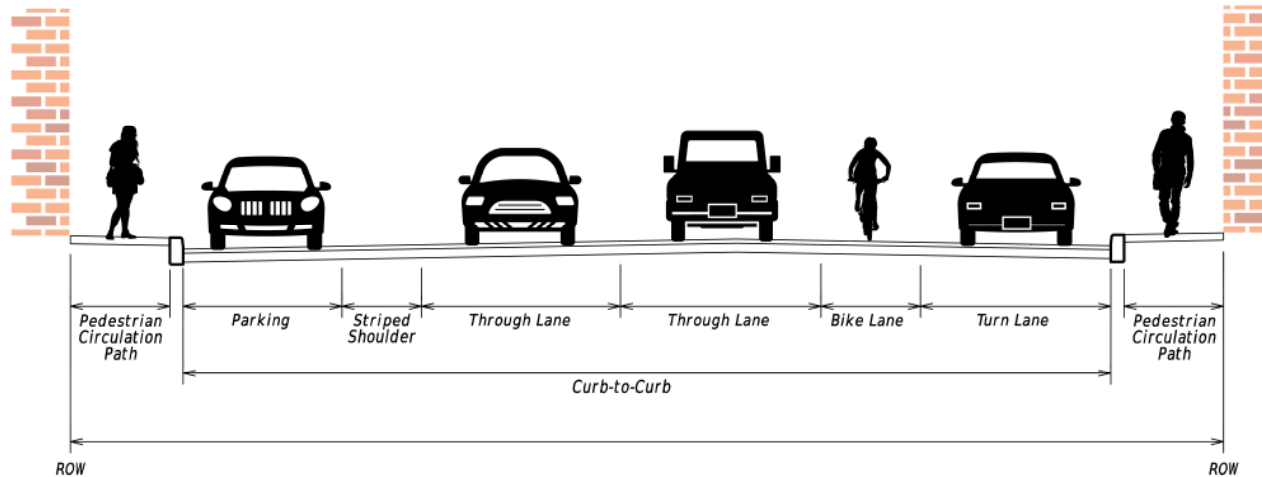




Concept Development & Recommendations

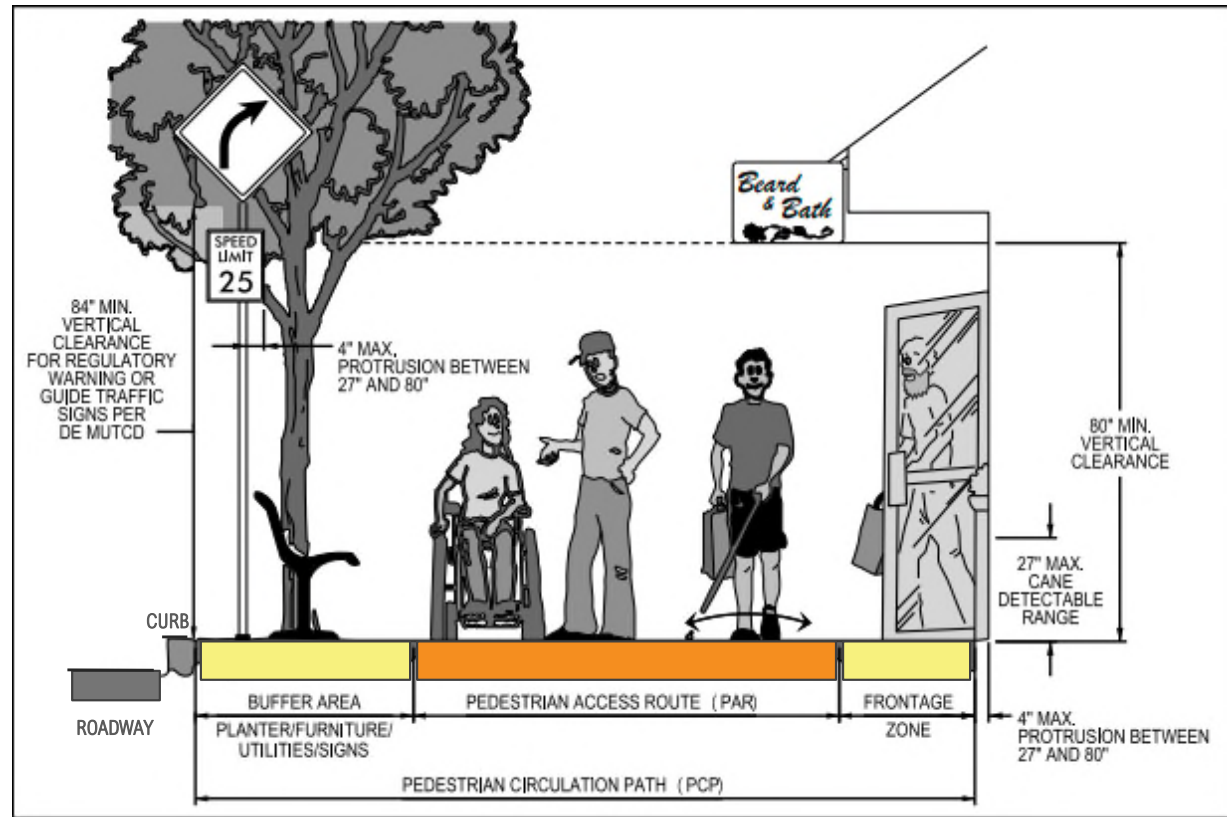
Review Design Guidance & City Code

- DeIDOT Pedestrian Accessibility Standards
- DeIDOT Road Design Manual
- DeIDOT Manual on Uniform Traffic Control Devices
- City of Rehoboth Beach Code
- City of Rehoboth Beach Comprehensive Development Plan (2010)



Pedestrian Circulation Path (PCP)

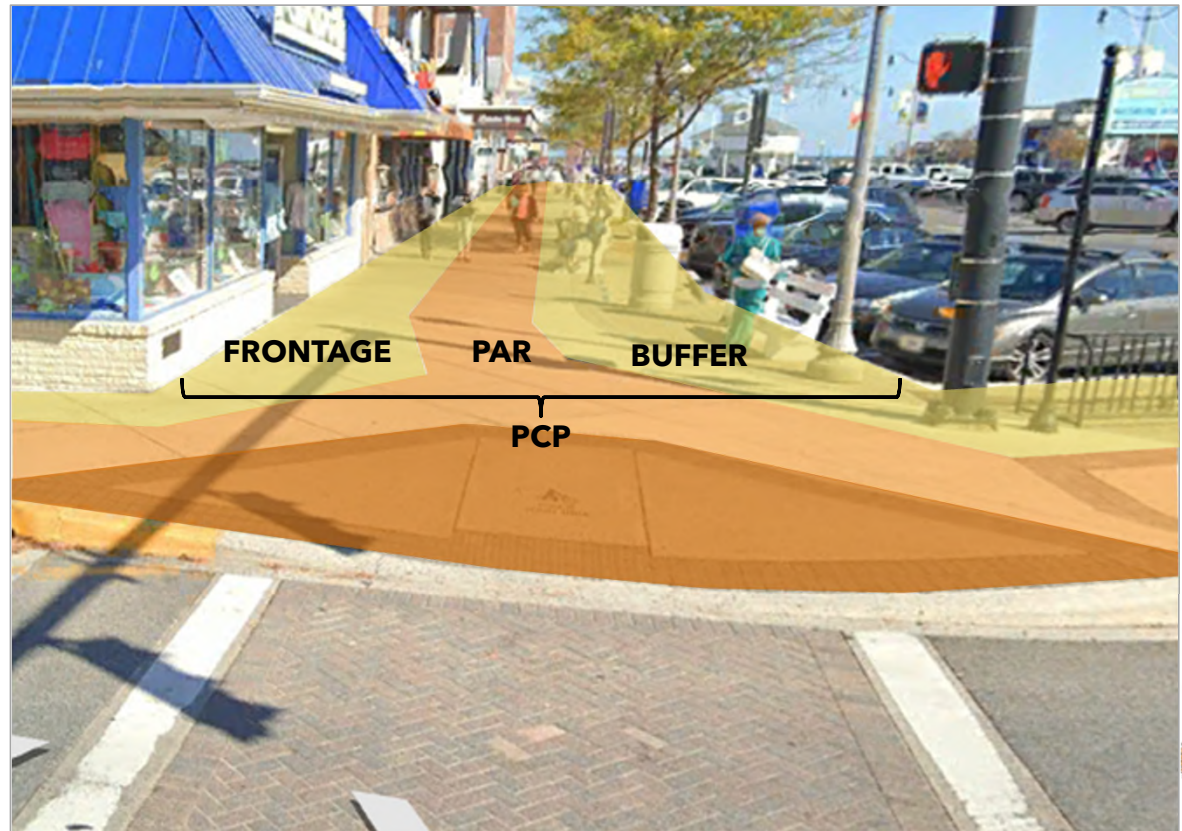
- Incorporates a Pedestrian Access Route (PAR)
- Where feasible PCP also includes Buffer between the PAR and curblines and building frontage



Source: DeIDOT Pedestrian Accessibility Standards (2018)

Pedestrian Access Route (PAR)

- Unobstructed route
- Located within or coinciding with the Pedestrian Circulation Path (PCP)
- Width less than 5 ft requires a pedestrian passing area
- Cross slopes must be 2% or less
- No vertical gaps



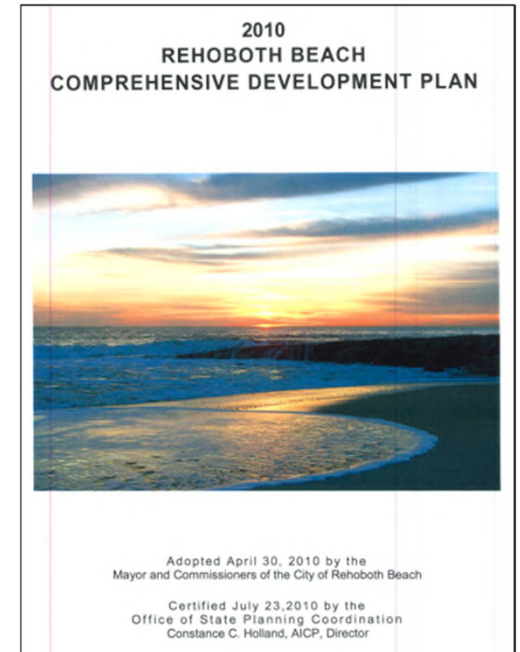
Ensure Compatibility

2012 Rehoboth Beach Bicycle and Pedestrian Plan

- Recommends sharrows on First and Second Streets

2010 Comprehensive Development Plan

- Assure connectivity, walkability, safe and unrestricted pedestrian passage of all sidewalks
- Streets designed to enable safe access to all users in a City-wide integrated network



Concept Recommendations

CONCEPT

Element	Recommended Minimum ^a
Pedestrian Circulation Path^b	7'
Travel Lanes	
Through Lanes	11'-12' ^c
Turn Lanes	11'
Curb	6"
Parking	
Head in parking (length)	18'
Head in parking (width)	9'
60 deg parking (length)	NA
60 deg parking (width)	NA
Parallel parking (width)	8'
Parallel parking (length)	22'

^a As per DeIDOT and City requirements

^b Pedestrian Circulation Path includes the Pedestrian Access Route (PAR), the buffer between the PAR and curblines, and building frontage

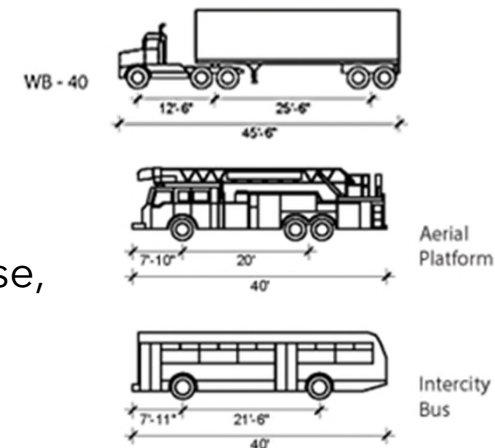
^c 11' minimum is absolute minimum recommendation. 12' minimum is preferred and included in the concept where ROW allows

- Travel lanes and minimum PCP can be accommodated within existing ROW
- Increase PCP where possible
- Amenities such as bicycle parking, landscaped sitting areas, landscaping, benches, lighting, and others will be determined in design phase



Key Highlights – PCP

- Accommodates a consistent 7 ft PAR
- No narrowing of PAR to less than 5 ft
- Enhanced crosswalks and ramps for safety and ADA compliance
- Widened PCP creates space for amenities to be determined in design phase
- Bump outs at intersections create additional PCP area while accommodating adequate turn radius
- Modelled using WB-40, a small semi with 40 ft wheelbase, encompasses emergency vehicles and buses



Key Highlights - Buffer/Frontage Ideas

CONCEPT

- Pay Stations
- Fire hydrants and FDC
- Pedestrian / Street Lighting
- Utility poles / transformers
- Stormwater / green infrastructure
- Landscaping
- Bicycle parking
- Street art
- Benches
- Trash cans
- Wayfinding signs
- Café / restaurant seating
- Newspaper corrals
- *And More...*



citygreen.com



downbeach.com



Key Highlights – Travel Lanes

On Wilmington and Baltimore Avenues:

- Through lanes are a minimum of 12 feet wide
- Within the 1st block, lanes widen from 12 to 16 feet near the boardwalk

On First and Second Streets through and turn lanes are 11 feet wide

Bicycles share the roadway, marked with sharrows (i.e. no specific bike lane designation)

Key Highlights - Parking

Vehicular parking

- Parallel and Head-in is upgraded to meet standards on Wilmington and Baltimore Aves
- Angled converted to head-in
- Parking removed on First Street accommodates widened travel lanes and PCP
2010 CDP recommends removal of parking on west side of First Street for the first two blocks
- Subject to revision in coordination with property owners, fire/EMS, and ADA requirements
- Proposed number of vehicular parking spaces: 247 (329 existing)

Scooter / bike parking accommodate alternative transportation modes

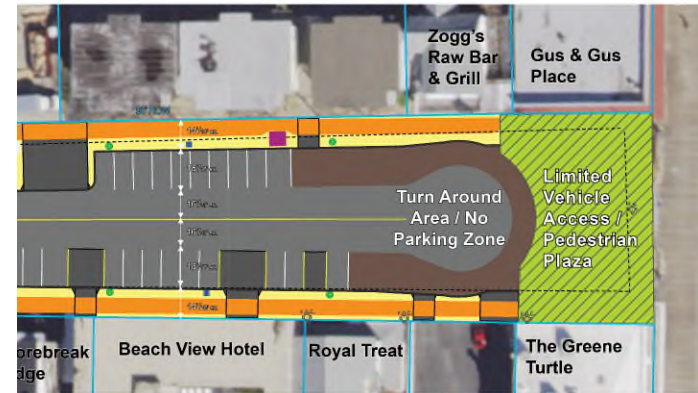
- Proposed number of scooter parking: 88 (58 existing)
- Proposed number of bike rack locations: 21 (8 existing)

Key Highlights – Pedestrian Plaza

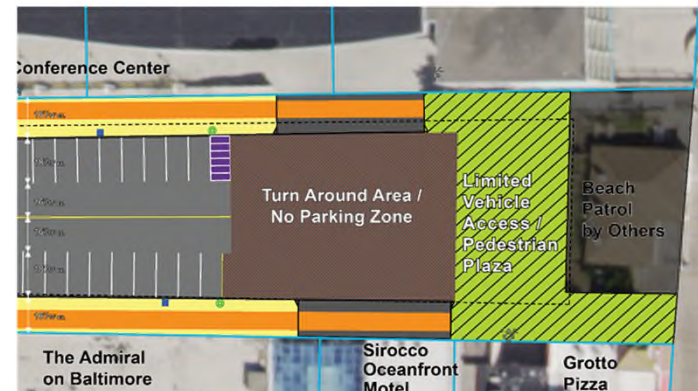
CONCEPT

- Turn Around Area / No Parking Zone allows for drop off and deliveries only
- Provides transition space between the streetscape and the boardwalk
- Provides visual interest and attracts beachgoers onto Wilmington and Baltimore Avenues
- Provides increased space for additional amenities such as landscaping and seating
- Maintains existing movements / accessibility (EMS, driveways)

WILMINGTON AVENUE



BALTIMORE AVENUE



CONCEPT

Wilmington Avenue 2nd Block



Legend

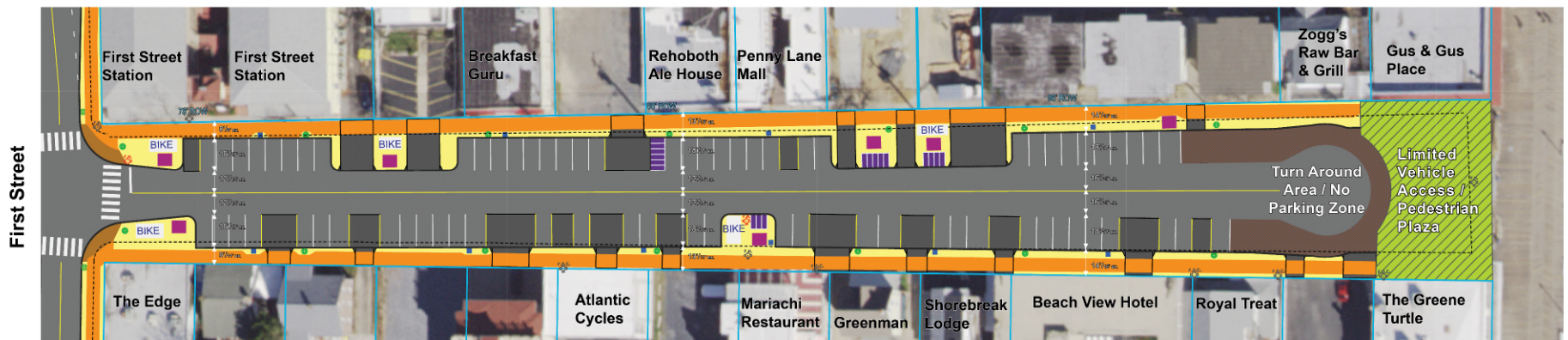
Pedestrian Circulation Path (PCP)	Parking Pay Station
Pedestrian Access Route (PAR)	Scooter Parking
Travel Lane	Bike Rack
Driveway/No Parking Area	Street Light
Curb	Utility Pole
Existing Curb	Transformer
Right-of-Way (ROW)*	Fire Hydrant
	Existing Fire Connections/Hydrants

*Aerial and ROW measurements are approximate

Note: Concept parking subject to revision in coordination with property owners, fire/EMS, and ADA requirements

CONCEPT

Wilmington Avenue 1st Block



Note: Concept parking subject to revision in coordination with property owners, fire/EMS, and ADA requirements

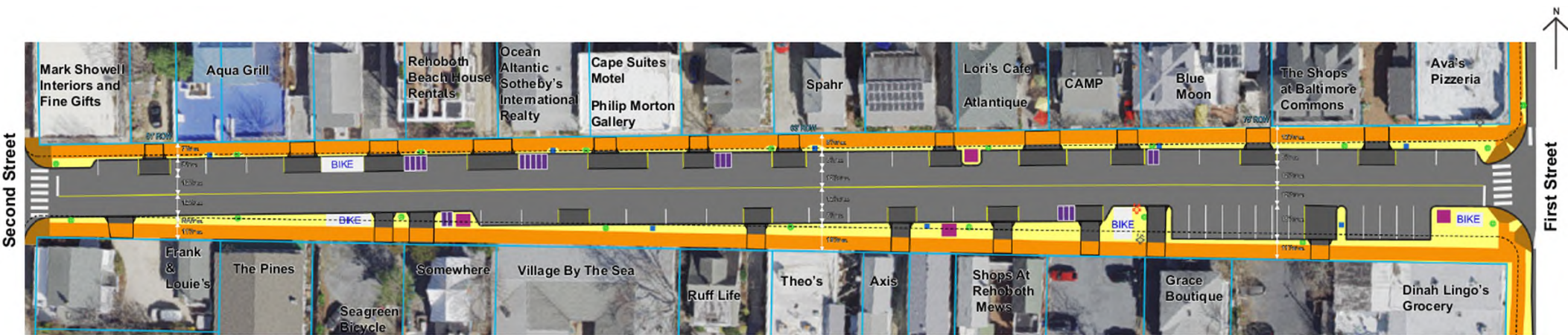
Legend

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CONCEPT

Baltimore Avenue 2nd Block



Legend

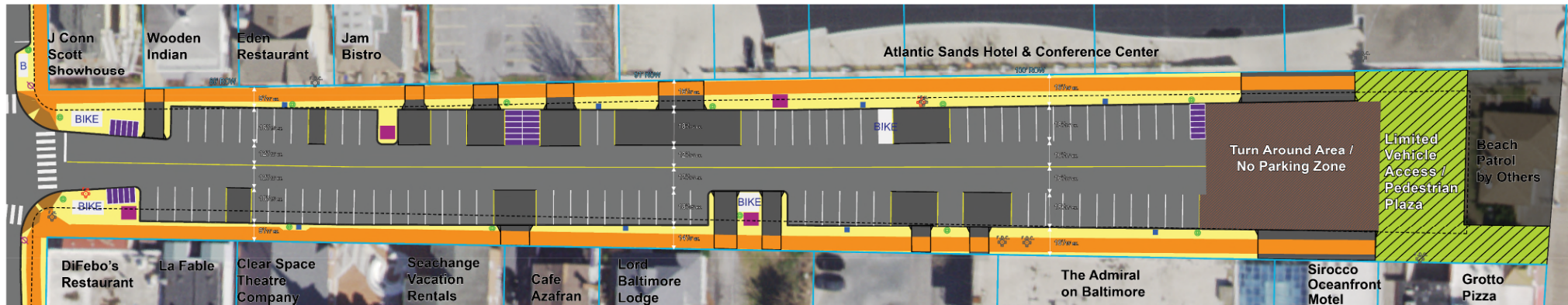
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CONCEPT

Baltimore Avenue 1st Block



Legend

Pedestrian Circulation Path (PCP)	Parking Pay Station
Pedestrian Access Route (PAR)	Scooter Parking
Travel Lane	Bike Rack
Driveway/No Parking Area	Street Light
Curb	Utility Pole
Existing Curb	Transformer
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North
First
Street

CONCEPT

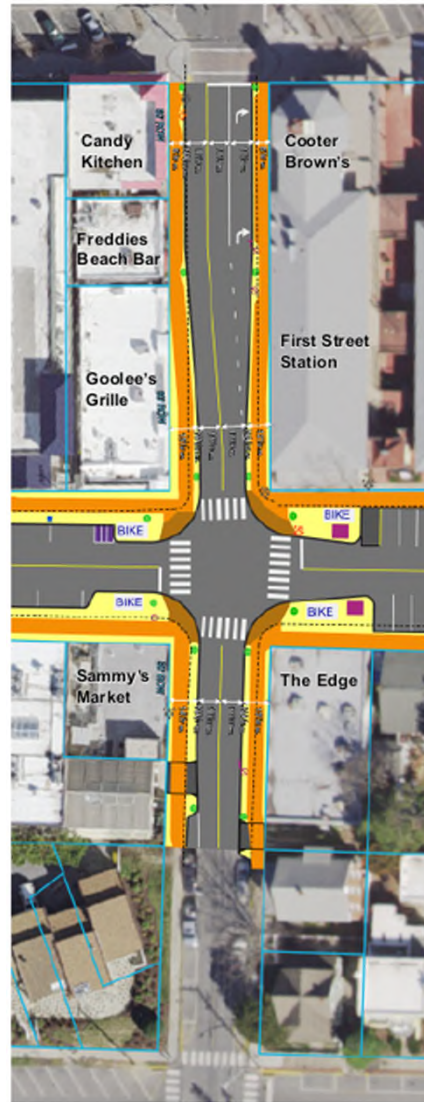
Maryland Avenue



Rehoboth Avenue

Rehoboth Avenue

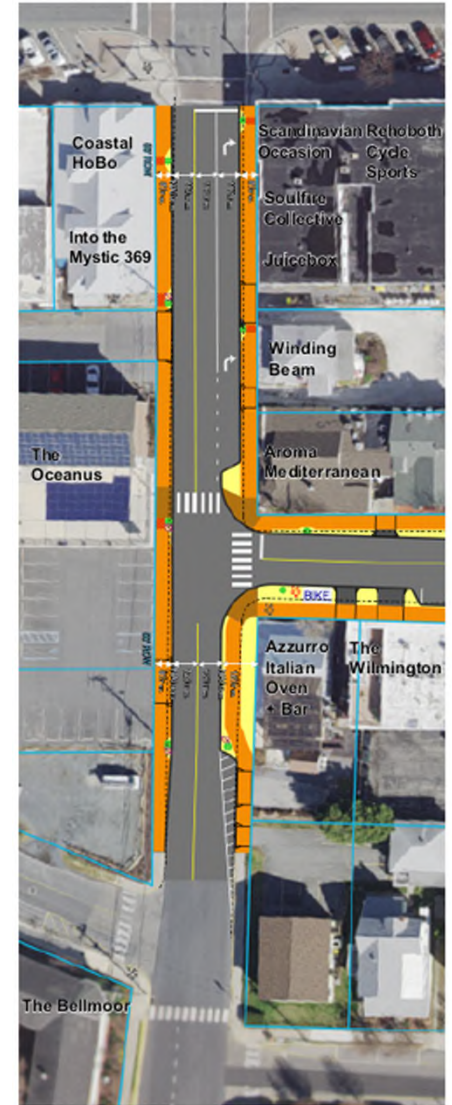
South
First
Street



Delaware Avenue

Rehoboth Avenue

South
Second
Street



Delaware Avenue





Public Input

Public Workshop – Open House

- Advertised through DelDOT and City websites, direct mailings to adjacent property owners, and media coverage
- Sept 29, 2021, 9 a.m. – 12 p.m. at Rehoboth Beach Convention Center
- 53 attendees signed in, including 7 commissioners and 7 task force members
- 30-day public comment period through October 28, 2021
- 29 comments received (including one from the City of Rehoboth Beach Trees & Green Infrastructure Committee)

PUBLIC INPUT



Summary of Written Comments

- Reference to Baltimore Ave Beach Patrol Facility (14, *Outside Study Scope*)
- Concern about the loss of vehicular parking (10, 7 specific to First Street)
- Concerns about narrowing intersections or adding bump outs (4)
- Location or quantity of scooter and bicycle parking (4)
- Aesthetics, landscaping, or maintenance (4)
- In favor of or requests to further expand pedestrian zones (3)
- Suggestion to provide four-way stops at intersections (2)

General support and in favor of streetscape recommendations

All comments and concerns will be evaluated and addressed in the next stage

Compatibility with Beach Patrol Facility will be ensured



Cost Estimate

Cost Estimate

Section of Roadway	Est. Project Cost
N First Street - 2nd Block (145 ft)	\$750k - \$950k
N First Street - 1st Block (240 ft)	\$1.2M - \$1.4M
S First Street - 1st Block (205 ft)	\$950k - \$1.1M
S First Street - 2nd Block (110)	\$650k - \$850k
Second Street - 1st Block (215 ft)	\$1.0M - \$1.2M
Second Street - 2nd Block (165 ft)	\$600k - \$800k
Baltimore Ave - 2nd Block (855 ft)	\$4.8M - \$5.1M
Baltimore Ave - 1st Block (805 ft)	\$5.1M - \$5.4M
Wilmington Ave - 2nd Block (835 ft)	\$4.3M - \$4.6M
Wilmington Ave - 1st Block (805 ft)	\$5.3M - \$5.5M
Total (4,380 ft)	\$24M-\$27M*

*Assumes the project will be bid and constructed as one project

Includes: concept level major quantities, contingencies, and percentages to account for unknown or unforeseen items

Excludes: cost for right-of-way, easements, and utility undergrounding



Next Steps

Next Steps –

- Streetscape Special Meeting #2 - December 14th at 2:30 PM
 - Receive logistics analysis by JMT Engineers related to undergrounding utilities in the study area, including cost estimates.
- Streetscape Special Meeting #3 - January 4th at 2:30 PM
 - Discuss if and how to move forward on design, engineering, funding, and construction of a renovated streetscape on Wilmington and Baltimore Avenues and connecting streets.