



BALTIMORE AND WILMINGTON AVENUES STREETSCAPE CONCEPT

Task Force Presentation #2 - May 26, 2021



Introduction

- DelDOT administers FHWA's Transportation Alternatives Program
- Baltimore and Wilmington Avenues Streetscape Concept Development is funded by TAP
- Focus of Concept Development:
 - Widen walkways for pedestrian traffic and outdoor activities
 - Increase safe pedestrian and bicycle travel
 - Provide connectivity to Rehoboth Avenue
 - Increase lighting
 - Incorporate green infrastructure



Outline

- Task Force Directions
- Streetscape Elements
- Existing Conditions Assessment
- Comprehensive Development Plan
- Schematic Concepts
- Next Steps



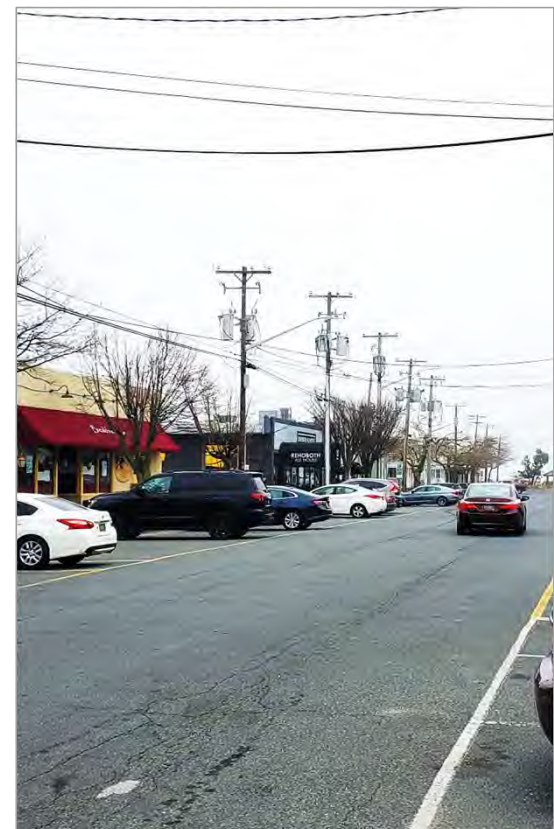
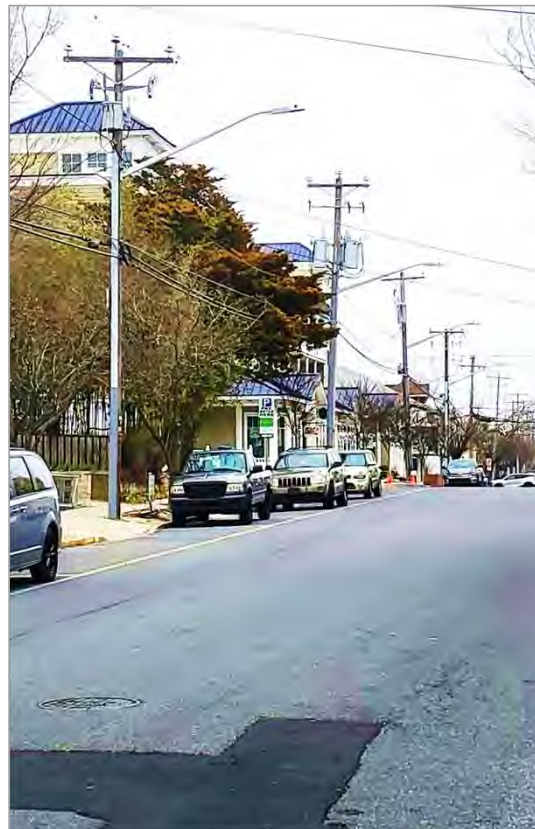
Task Force Directions

Task Force Directions (Approved April)

- Drop One-Way Traffic Schematic
- Retain Limited Vehicular Access Area on Baltimore and Wilmington Avenues (*only the portion nearest the beach*)
- Retain Enhanced Current Layout Schematic
- No traffic study at the time
- Consider Utility Undergrounding (*separate from this study*)



Consider Utility Undergrounding



Consider Utility Undergrounding

- DelDOT will not pay for utility undergrounding
- Coordinated and executed by the City
- Undergrounding design can be concurrent with streetscape design
- Undergrounding construction could be advanced prior to streetscape construction – Similar to Bethany Beach

Consider Utility Undergrounding

- Schematics were developed without existing utility constraints
- Estimated Transformers, per City discussion with Delmarva Power:

	Existing number of utility poles	Estimated number of transformers
Wilmington 1 st Block	17	7
Wilmington 2 nd Block	10	4
Baltimore 1 st Block	8	4
Baltimore 2 nd Block	9	4
First / Second Street	Feasibility to underground is not likely due to space constraint	



Consider Utility Undergrounding

- Transformer sizes vary, approx. 6'x 4' up to 10' x 8'
- Preference for pad-mounted transformers on private property next to ROW
- Within 10' of roadway, protection needed (bollards, fence, etc.)
- Light poles and wireless antennas required along routes

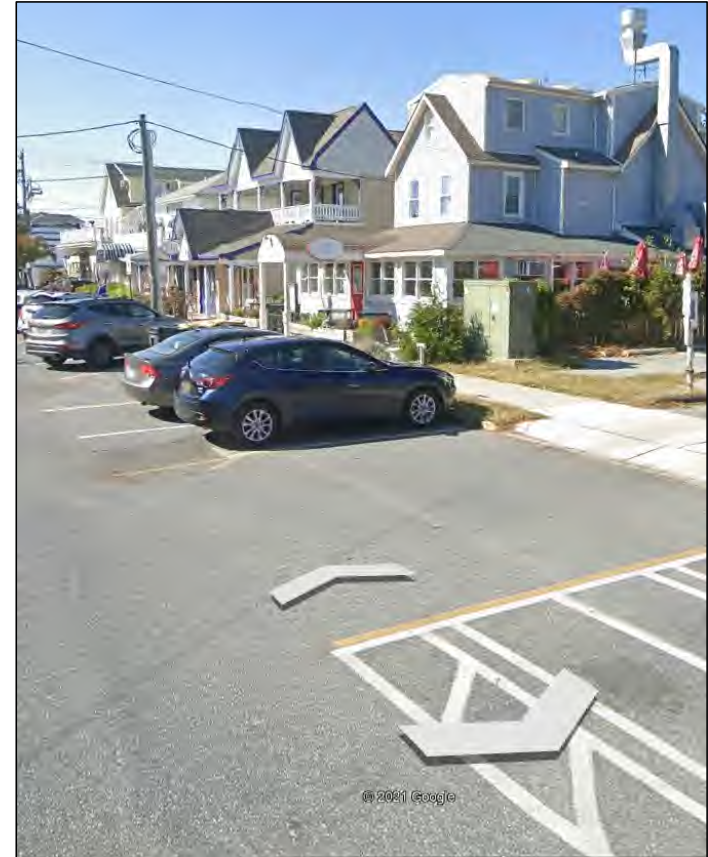


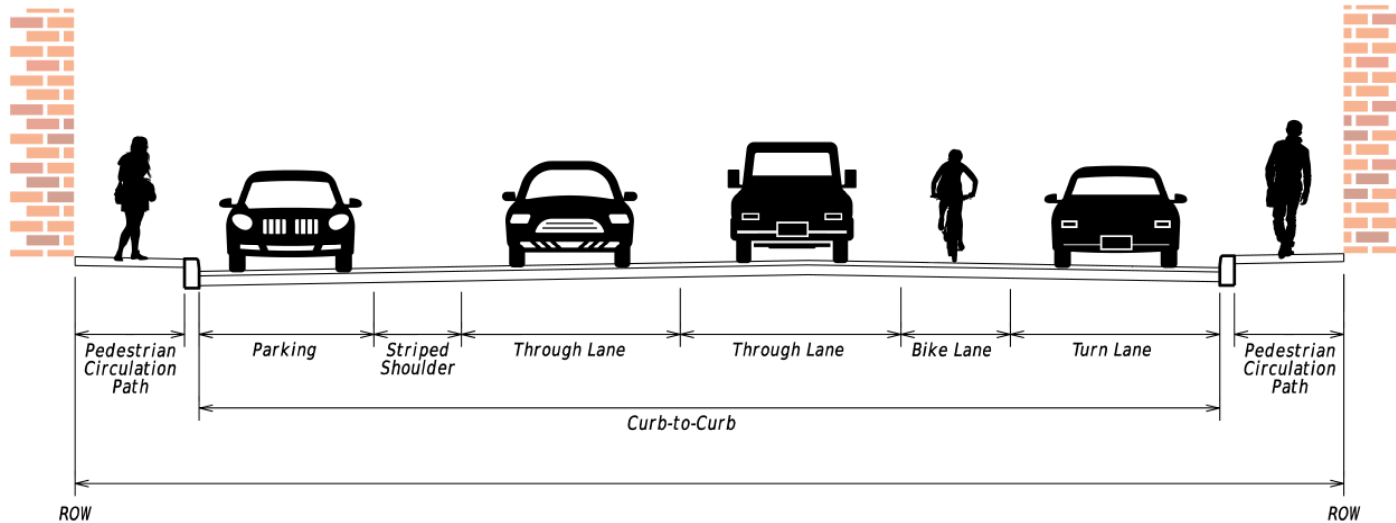
Image from Google Maps





Streetscape Elements

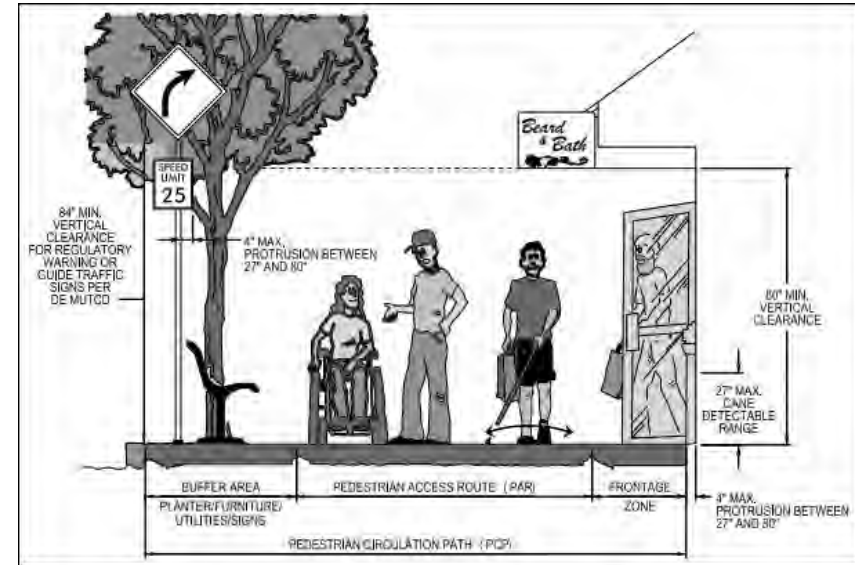
Elements of a Streetscape



- DelDOT Pedestrian Accessibility Standards & Road Design Manual
- City of Rehoboth Beach Code

Pedestrian Circulation Path

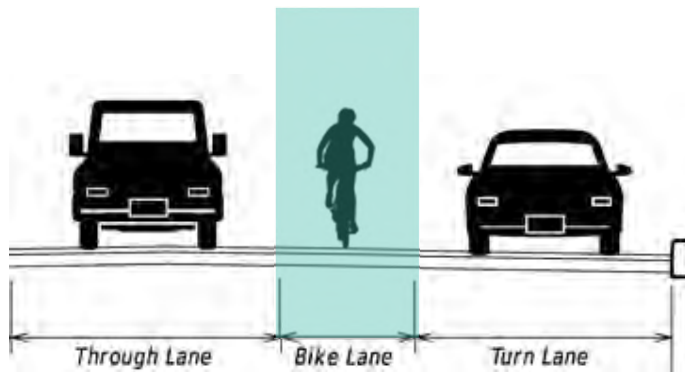
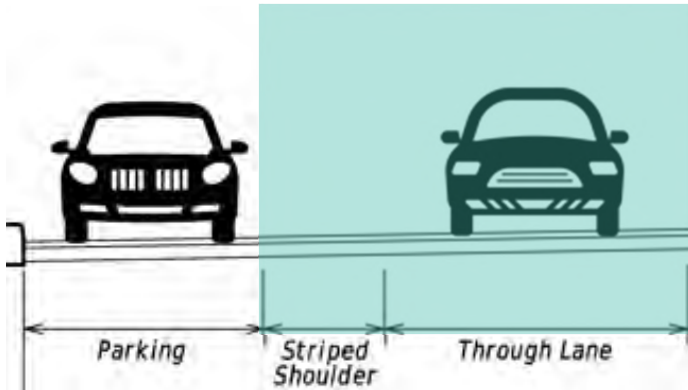
- **Buffer Area**
 - located directly behind the curb
 - used to locate signs, streetlights, fire hydrants, utilities and street furniture
 - provides separation from moving traffic and amenities
- **Pedestrian Access Route**
 - a safe, convenient, continuous, and unobstructed pedestrian route in the ROW
 - 4' absolute minimum is only acceptable for short spans
- **Frontage Zone**
 - linear portion of the pedestrian corridor when the sidewalk is adjacent to buildings along the ROW line



Source: DelDOT Pedestrian Accessibility Standards (2018)



Bike Facilities



Shared Roadway

- Through Lane + Striped Shoulder
- Designated by bike route signs and provide continuity to other bicycle facilities or designate a preferred route
- Signing and striping advise the motorist to expect bicyclists

Bike Lane

- Established where there is a significant bicycle demand
- Pavement marking and signing along streets in corridors defining space for preferential use by bicycles
- Separate from Through and Turn Lanes



Streetscape Elements

Element	Existing Dimensions	Desired Minimum	Absolute Minimum	Recommended Minimum
Pedestrian Circulation Path^a	4'7"-15'3"	8'	4'	5'
Bicycle Accommodations				
• One-way Bicycle Lane (Signed and Striped) ^b	N/A	5'	5'	5'
• Paved Shoulder (Striped) ^b	N/A	N/A	4'	4'
• Shared Roadway (Signed and Striped) ^b	N/A	N/A	12'	14'
Travel Lanes				
• Through Lanes ^b	8.5'-12'	11'	9'	10'
• Turn Lanes ^b	8'	11'-12'	9'	10'
• Curb	5"-7"	8" ^b	6" ^d	6"
Parking				
• Head in parking (length) ^b	17'-19'	20'	18'	18'
• Head in parking (width) ^b	8'-9'	9.5'	8.5'	9'
• 60 deg parking (length) ^b	15'	19'	19'	19'
• 60 deg parking (width) ^b	9.5'-10.5'	10.4'	10.4'	10.4'
• Parallel parking (width) ^c	6.5'-8'	8'	8'	8'
• Parallel parking (length) ^c	17'-22'	22'	20'	22'

- a) DeIDOT Pedestrian Accessibility Standards
 b) DeIDOT Road Design Manual
 c) DeIDOT Manual on Uniform Traffic Control Devices
 d) City of Rehoboth Code

Amber indicates insufficient width/not meeting recommended minimum
Red indicates insufficient width/not meeting absolute minimum





Existing Conditions Assessment

Assessment Highlights

- Not a detailed topographical or right-of-way survey
- Aerial photography and GIS data
- Measured roadway, parking, and sidewalk widths at sample points
- Documented: no parking zones, fire hydrants, parking pay stations, trees, light/utility poles, crosswalk locations and conditions, etc.

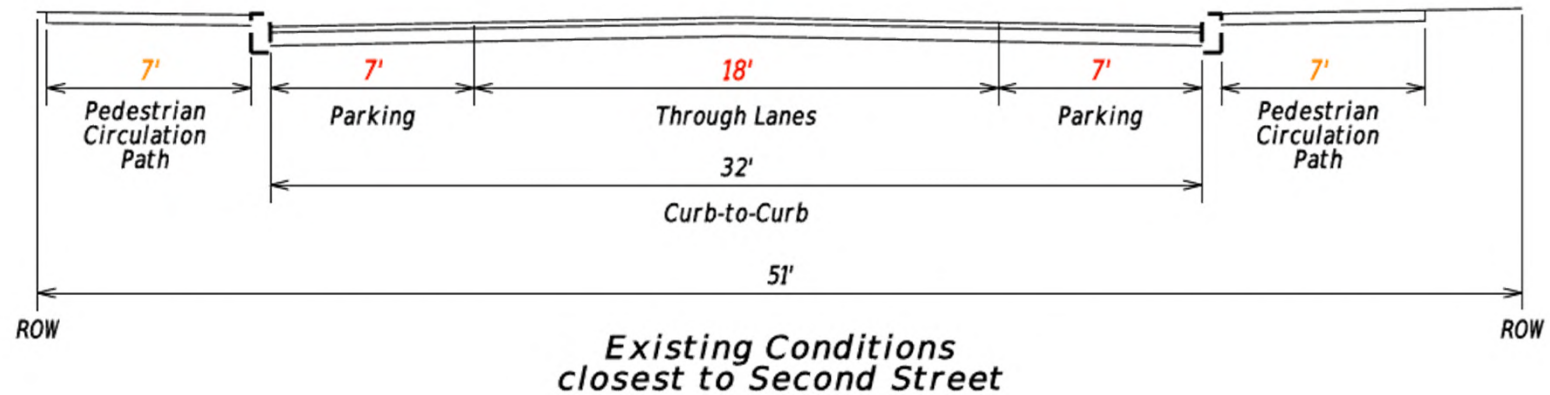


Baltimore Avenue

Looking east from Second Street



Looking southwest toward Village By the Sea

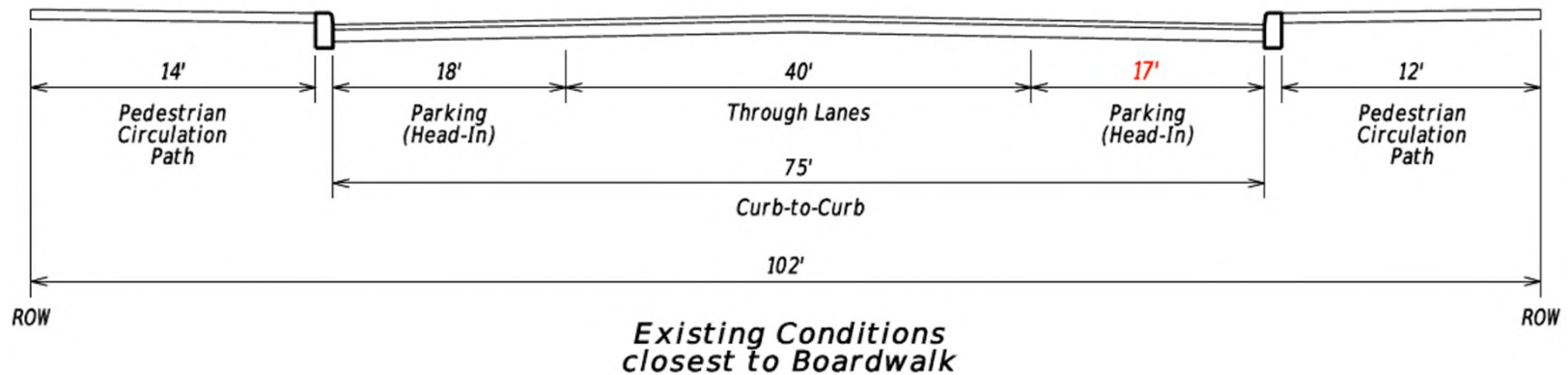


Baltimore Avenue

Looking east from First Street



Looking west from the Boardwalk

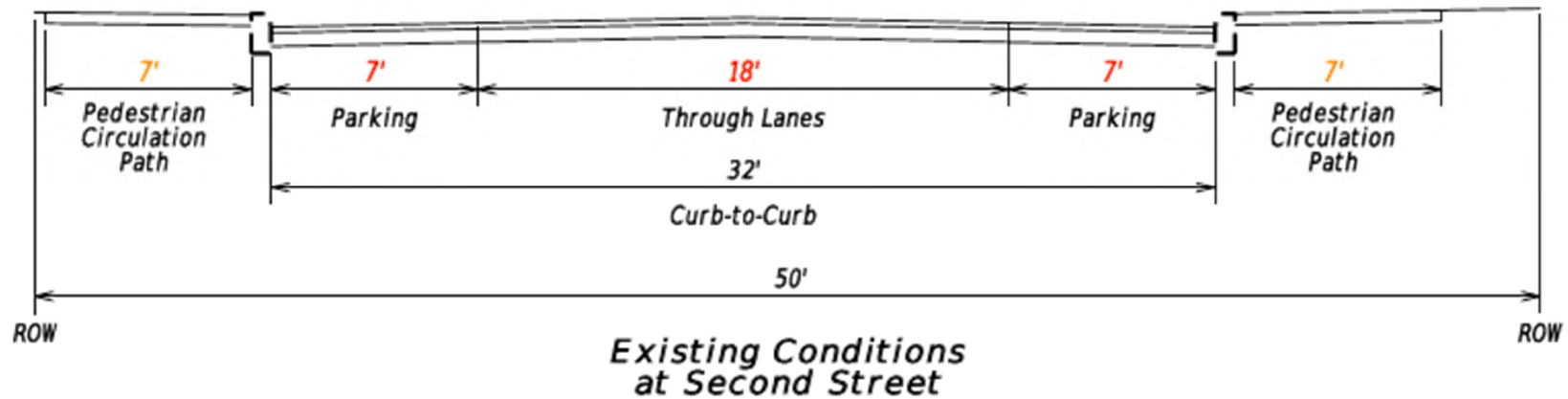


Wilmington Avenue

Looking east from Second Street



Looking east from First Street

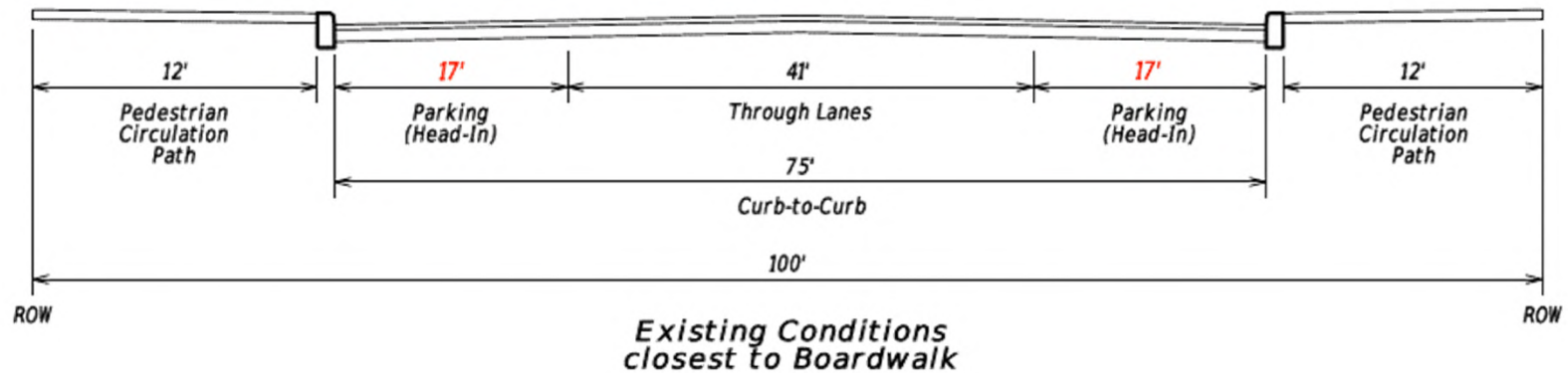


Wilmington Avenue

Looking southwest from Beach Block



Looking east toward Boardwalk

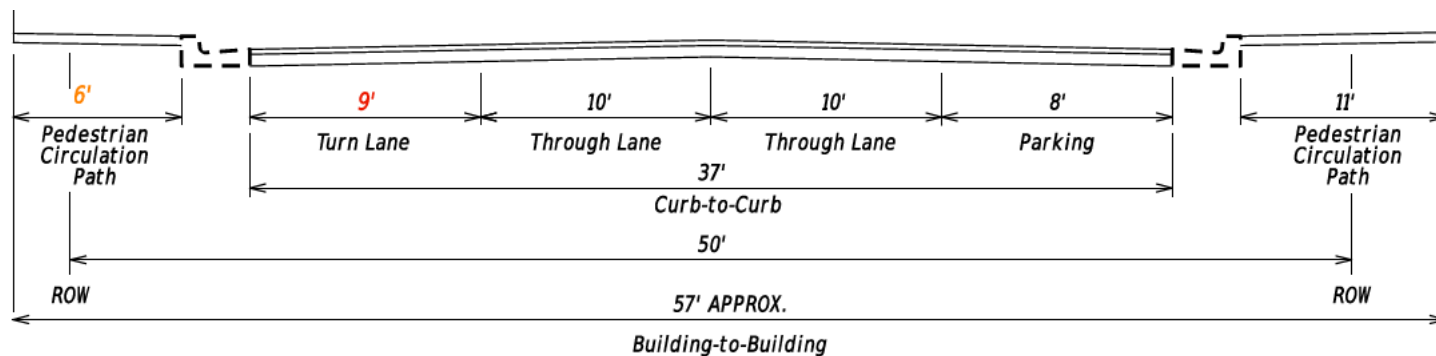


First Street

Looking north from Rehoboth Avenue



Looking south from Baltimore Avenue



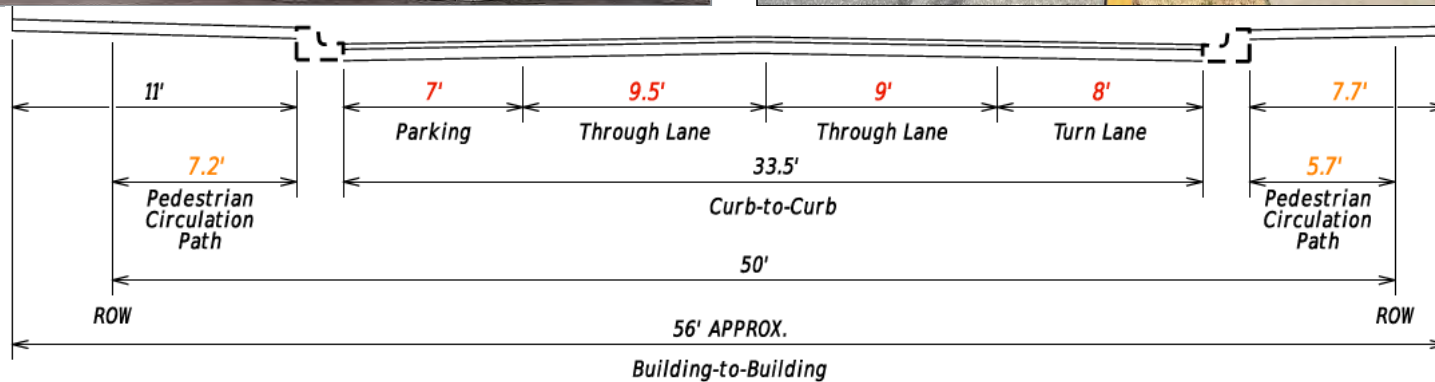
Existing Conditions
at Rehoboth Avenue

First Street

Looking north from Wilmington Avenue



Looking north from Wilmington Avenue



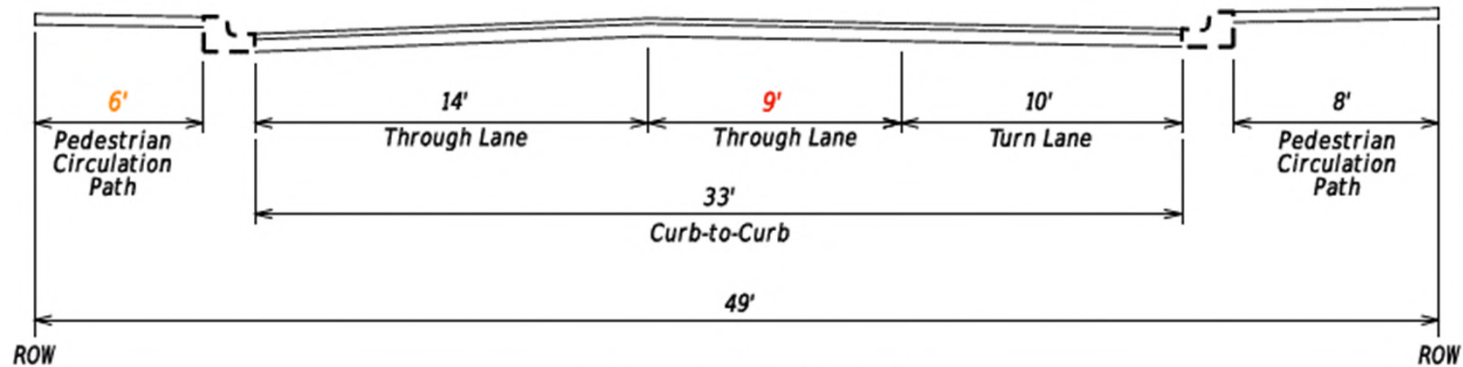
Existing Conditions
at Wilmington Avenue

Second Street

Looking north from Wilmington Avenue



Looking north from south of Wilmington Avenue



Existing Conditions
at Wilmington Avenue

Streetscape Elements

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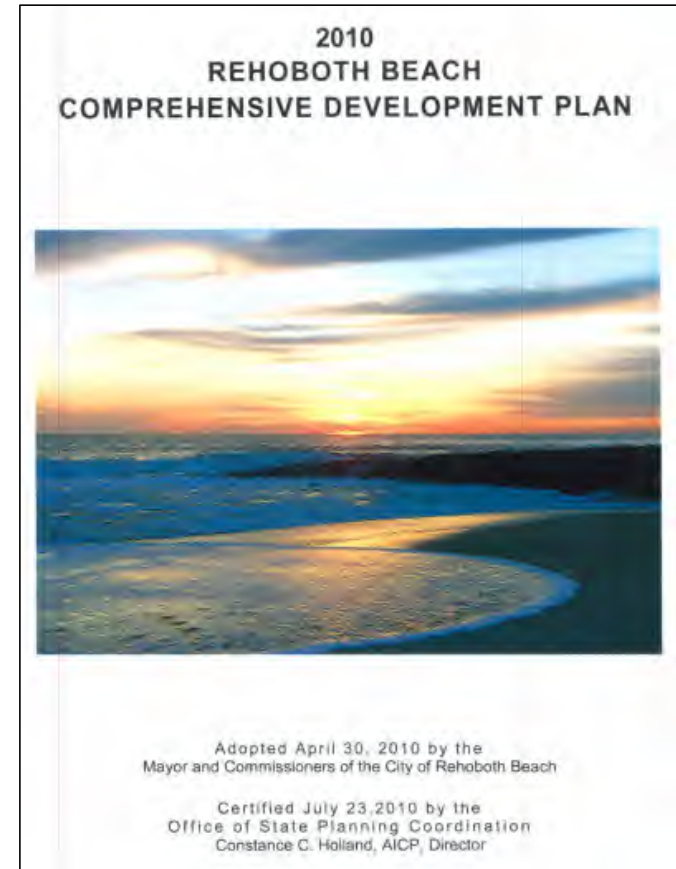




Comprehensive Development Plan

Comprehensive Development Plan

- New plan under development with the Planning Commission
- Until approval of a new plan, the Concept will follow on the 2010 CDP Goals



2010 CDP Overview of Goals

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

2010 CDP Actions

- Upgrade first two blocks of Baltimore and Wilmington Avenues and First Street to improve commercial viability, safety, ambiance, and access by pedestrians
- Eliminate parking on west side of First Street for at least the first two blocks north of Rehoboth Avenue

Rehoboth Beach Bicycle and Pedestrian Plan (2012) calls for the installation of sharrows on First and Second Streets





Schematic Concepts

Enhance Existing Layout

- Meet minimum requirements for all elements
- Incorporate new elements
- Prioritize elements
- Work within existing Right-of-Way

Schematic Concepts



Concept 1A: Focus on Enhanced Pedestrian Circulation



Concept 1B: Focus on Enhanced Pedestrian & Bike Circulation



Concept 2: Focus on Enhanced Vehicular Access

Common Elements to Schematic Concepts

Minimum five feet pedestrian circulation path:

- This is greater than the absolute minimum width of four feet
- Less than the desired width of eight feet

Consistent travel width throughout of ten feet:

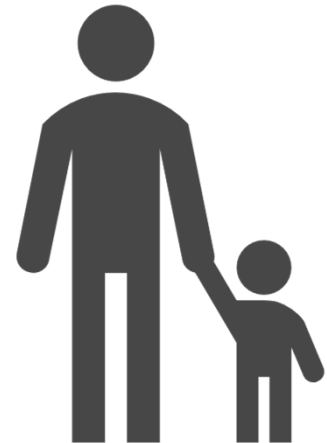
- This is greater than the absolute minimum width of nine feet
- Less than the desired width of eleven feet

Each schematic maximizes use of the ROW to accommodate streetscape elements

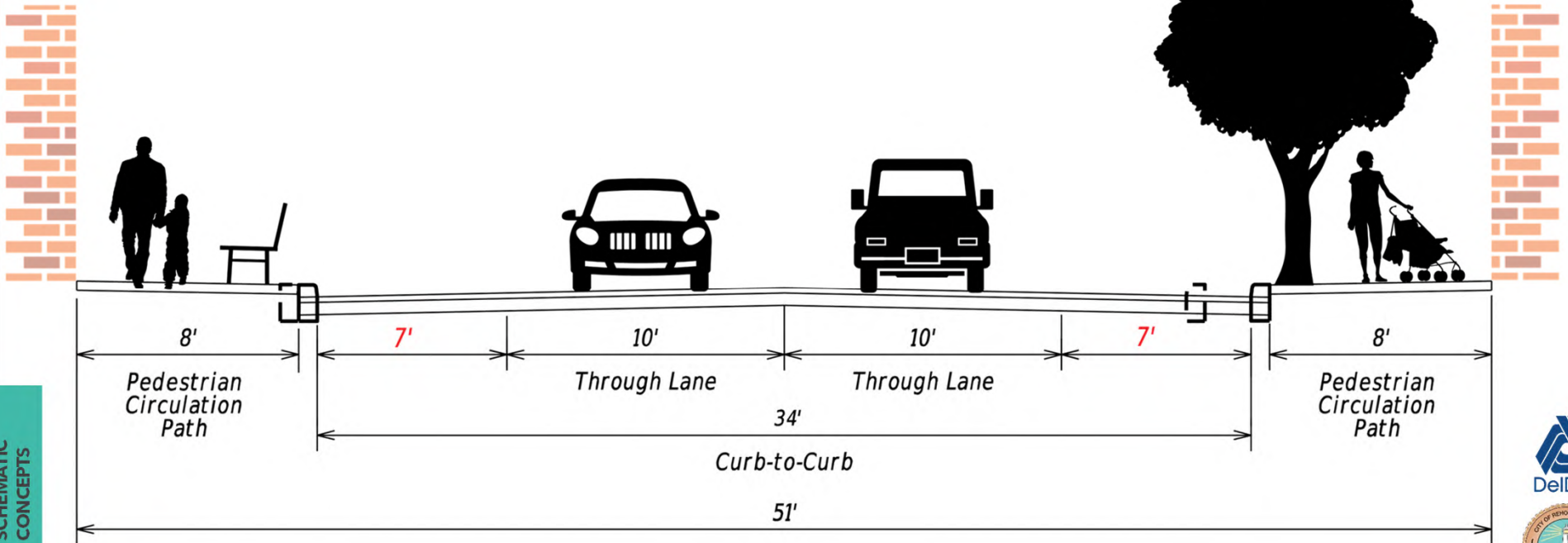
Each schematic would impact parking

Schematic Concept 1A

- Expands the Pedestrian Circulation Path to meet the minimum desired width of eight feet.
- Does not include bike facilities within the Study Area



Concept 1A – Baltimore Avenue



SCHEMATIC
CONCEPTS





Concept 1A – Baltimore Avenue (west)



Legend

- Pedestrian Circulation Path
- Bicycle Facility
- Driveway/No Parking Area
- Curb
- Property Line*

*Property Lines are approximate





Concept 1A – Baltimore Avenue (east)



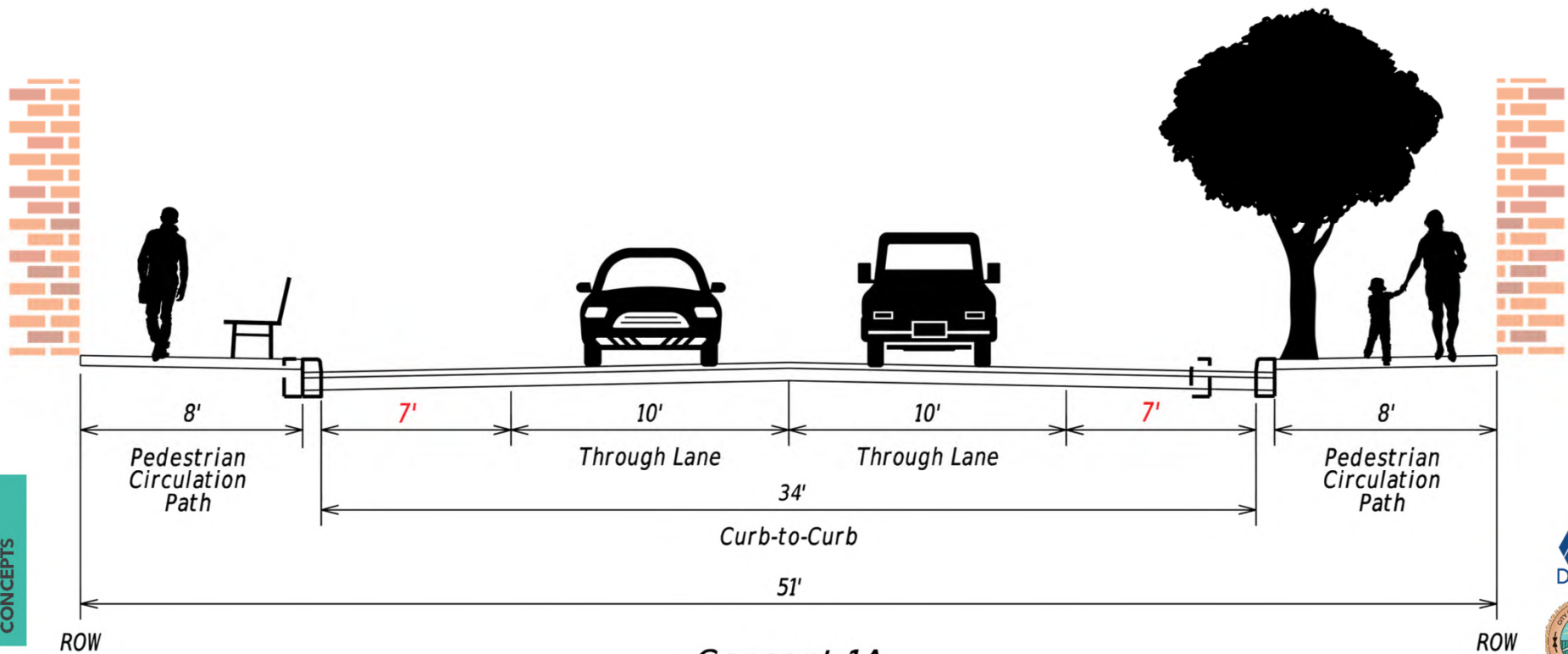
Legend

- Pedestrian Circulation Path
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- Driveway/No Parking Area
- Curb
- Property Line*

*Property Lines are approximate



Concept 1A – Wilmington Avenue



Concept 1A
Enhanced Pedestrian Circulation



Concept 1A – Wilmington Avenue (west)



Legend

- Pedestrian Circulation Path
- Bicycle Facility
- Driveway/No Parking Area
- Curb
- Property Line*






*Property Lines are approximate



Concept 1A – Wilmington Avenue (east)

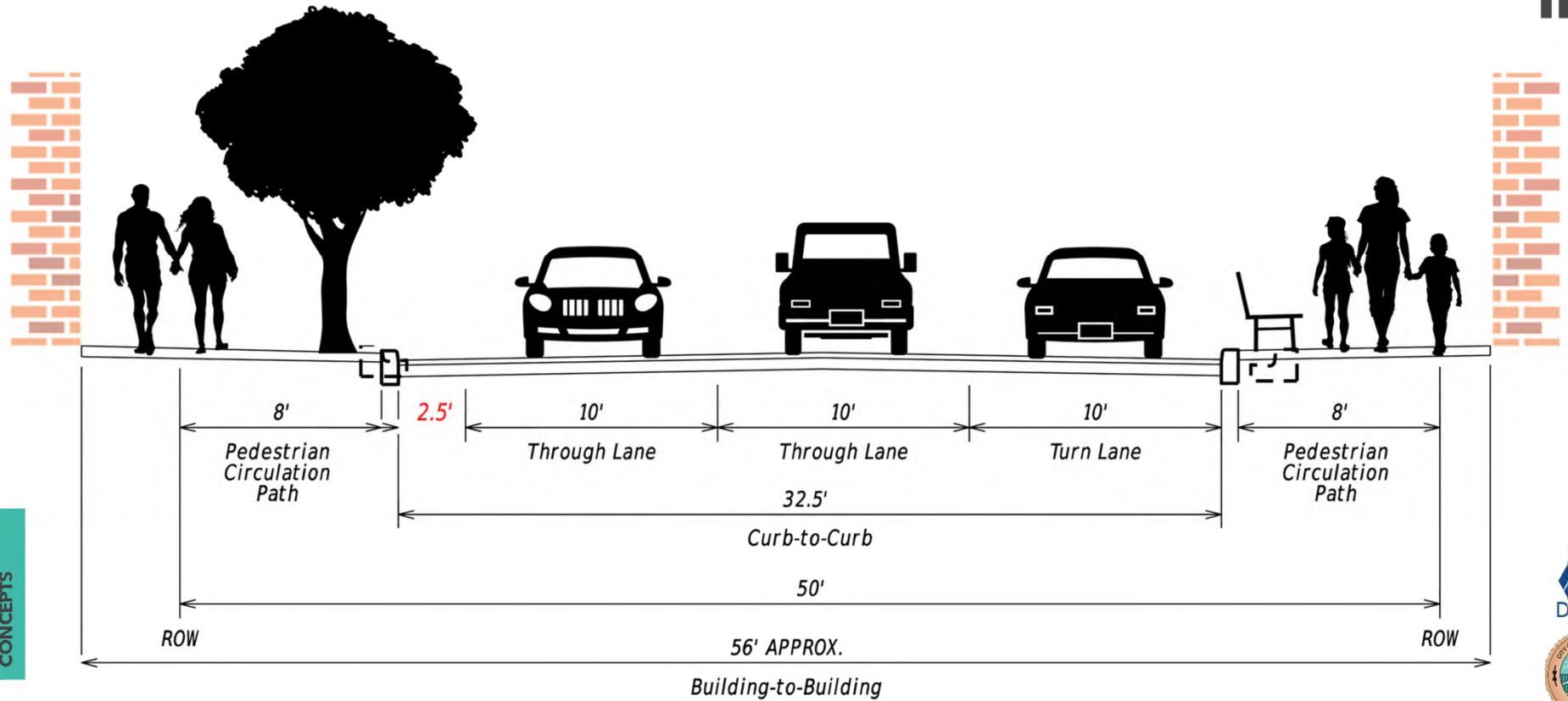


Legend

-  Pedestrian Circulation Path
-  Bicycle Facility
-  Driveway/No Parking Area
-  Curb
-  Property Line*

*Property Lines are approximate

Concept 1A – First Street



Building-to-Building

Concept 1A
Enhanced Pedestrian Circulation

Concept 1A – First Street

North



South



Legend

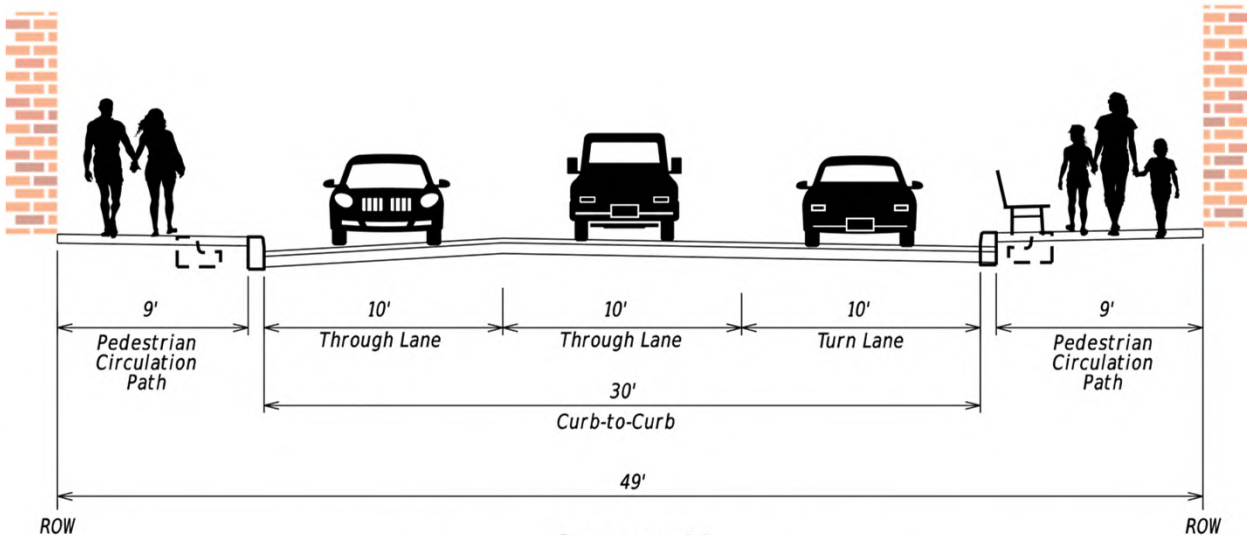
- Pedestrian Circulation Path
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- Curb
- Property Line*

*Property Lines are approximate





Concept 1A – Second Street



Concept 1A
Enhanced Pedestrian Circulation

Legend

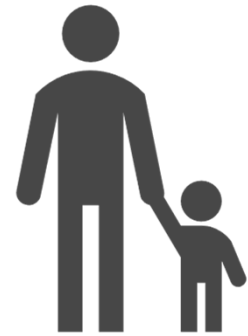
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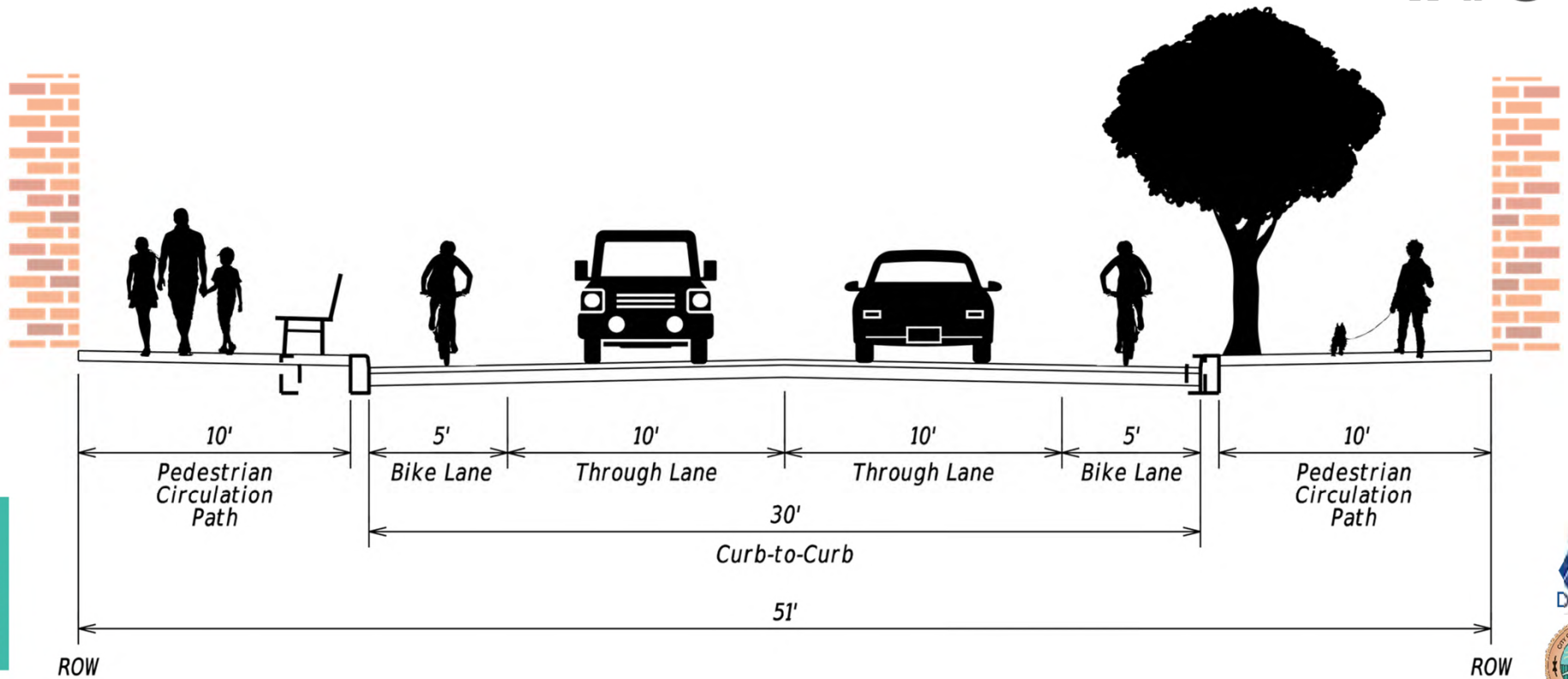


Schematic Concept 1B

- Similar pedestrian enhancement as in 1A
- Some pedestrian circulation paths widths are less than desired 8' widths (due to ROW constraints)
- Five-foot bike lanes on Baltimore and Wilmington Aves
- Shared Roadway on First and Second Streets
 - 4' striped shoulder with 10' travel & turn lanes due to ROW constraints
 - On First Street this is compatible with *Rehoboth Beach Pedestrian and Bicycle Plan* (2012)



Concept 1B – Baltimore Avenue



Concept 1B
*Enhanced Pedestrian Circulation
with Bicycle Facilities*



Concept 1B – Baltimore Avenue (west)



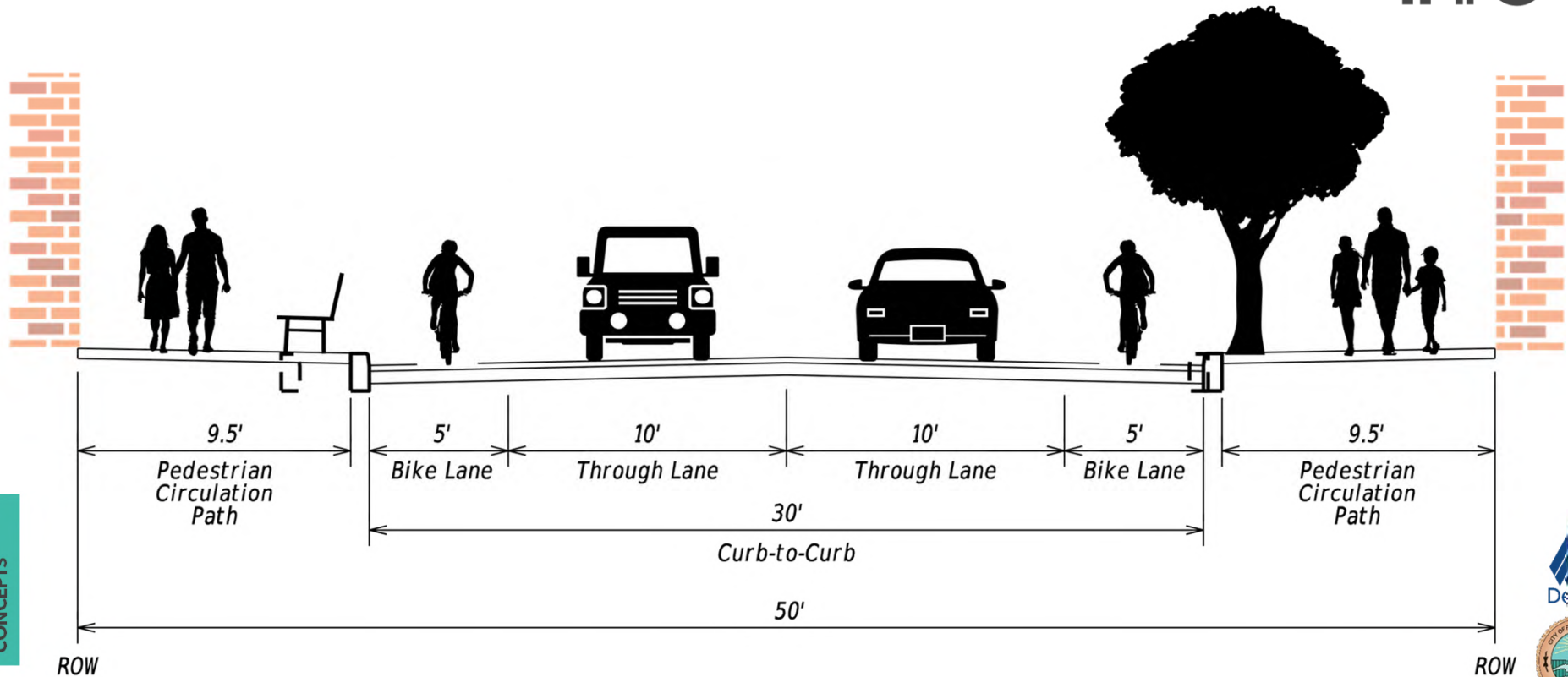
Legend

- Pedestrian Circulation Path
- Bicycle Facility
- Driveway/No Parking Area
- Curb
- Property Line*

*Property Lines are approximate



Concept 1B – Wilmington Avenue



Concept 1B
*Enhanced Pedestrian Circulation
with Bicycle Facilities*



Concept 1B – Wilmington Avenue (west)



Legend

- Pedestrian Circulation Path
- Bicycle Facility
- Driveway/No Parking Area
- Curb
- Property Line*

*Property Lines are approximate



Concept 1B – Wilmington Avenue (east)

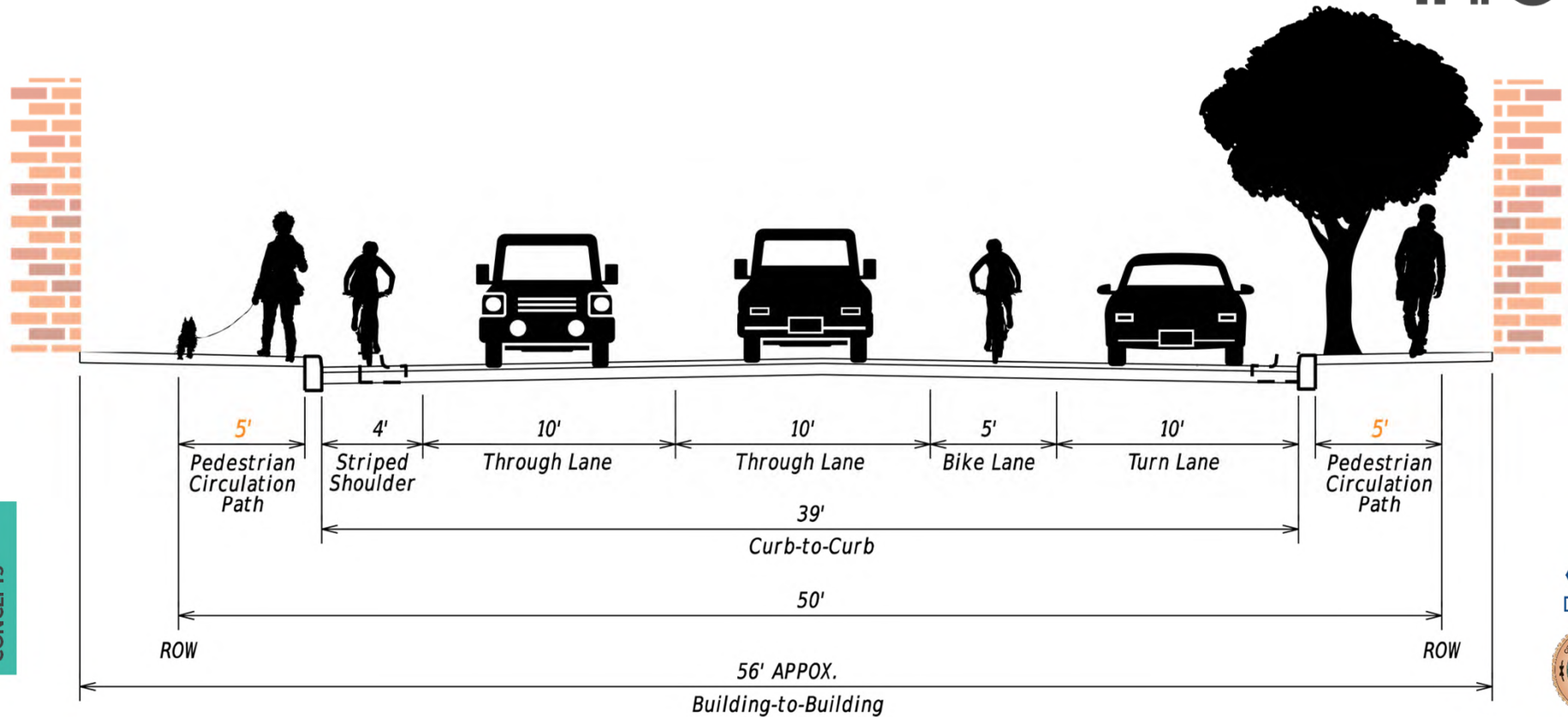


Legend

- Pedestrian Circulation Path
- Bicycle Facility
- Driveway/No Parking Area
- Curb
- Property Line*

*Property Lines are approximate

Concept 1B – First Street



Concept 1B
*Enhanced Pedestrian Circulation
with Bicycle Facilities*

Concept 1B – First Street

North



South



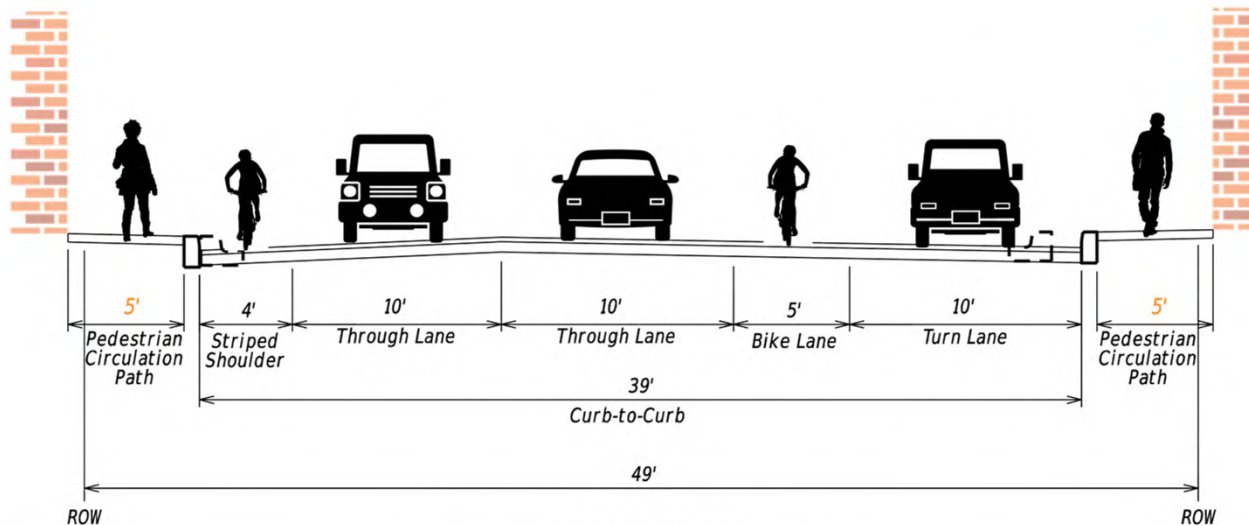
Legend

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- Curb
- Property Line*

*Property Lines are approximate



Concept 1B – Second Street



Concept 1B
Enhanced Pedestrian Circulation
with Bicycle Facilities

Legend

- Pedestrian Circulation Path
- Bicycle Facility
- Driveway/No Parking Area
- Curb
- Property Line*

*Property Lines are approximate

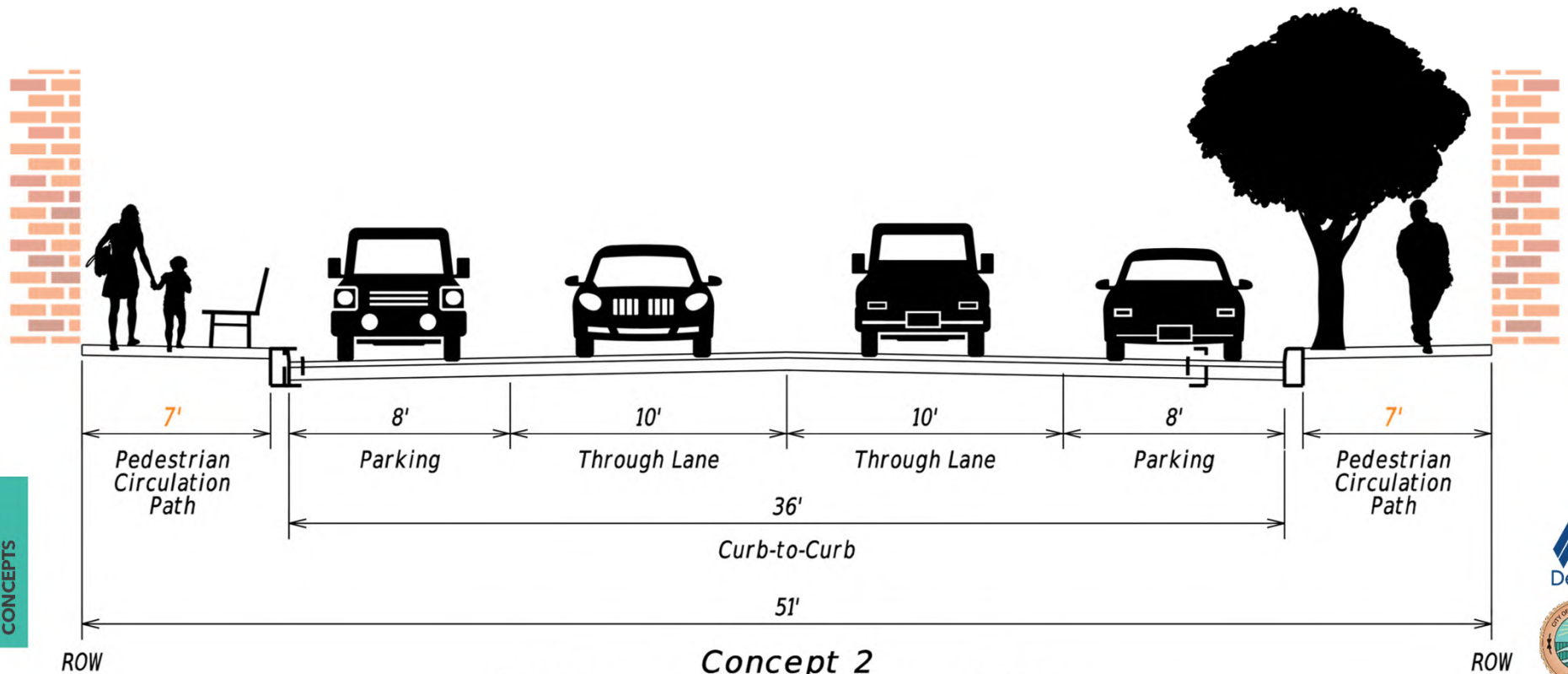


Schematic Concept 2

- Expands travel lane and parking widths to meet minimum standards
- Provides the 5' minimum recommended Pedestrian Circulation Path
- Does not include bike facilities within the Study Area



Concept 2 – Baltimore Avenue



Concept 2
Enhanced Vehicle Accommodations



Concept 2 – Baltimore Avenue (west)



Legend

- Pedestrian Circulation Path
- Bicycle Facility
- Driveway/No Parking Area
- Curb
- Property Line*

*Property Lines are approximate





Concept 2 – Baltimore Avenue (east)

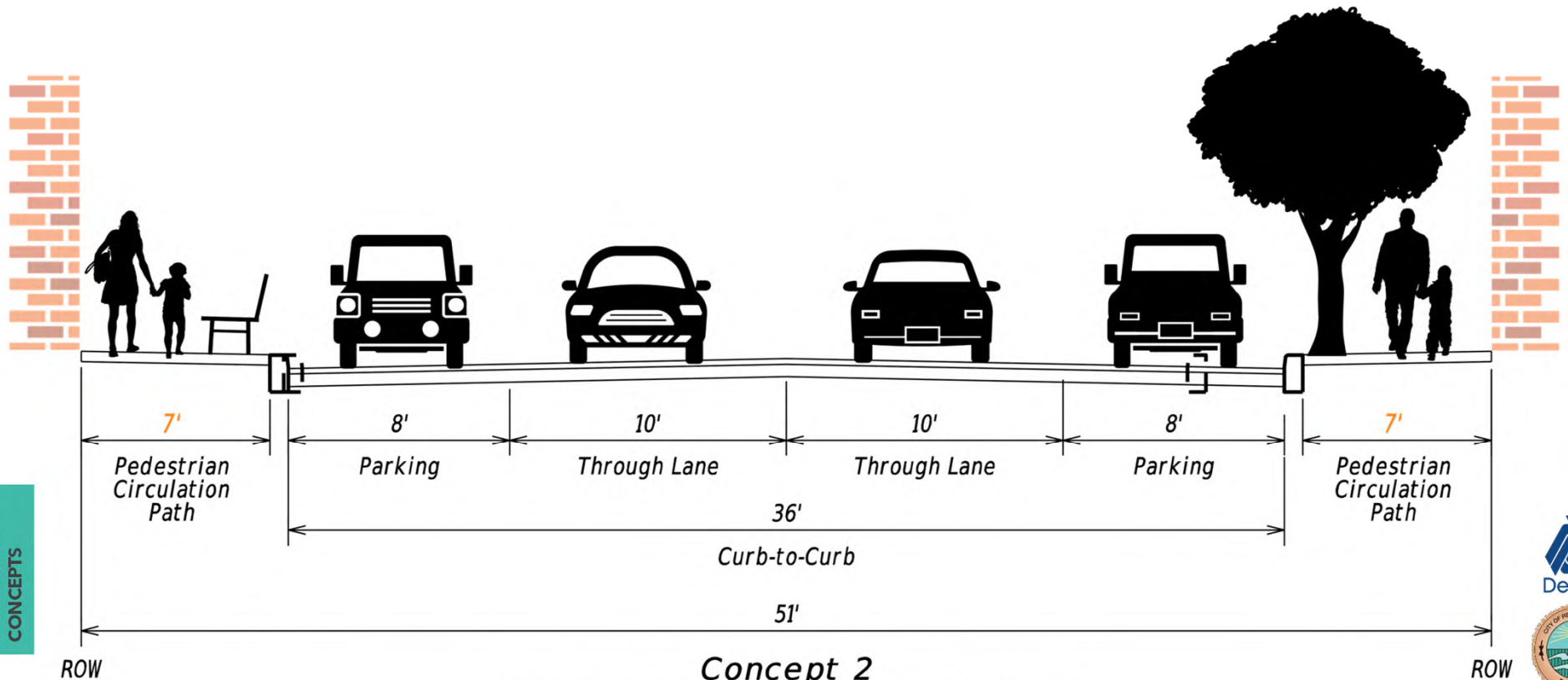


Legend

- Pedestrian Circulation Path
- Bicycle Facility
- Driveway/No Parking Area
- Curb
- Property Line*

*Property Lines are approximate

Concept 2 – Wilmington Avenue



Concept 2
Enhanced Vehicle Accommodations



Concept 2 – Wilmington Avenue (west)



Legend

- Pedestrian Circulation Path
- Bicycle Facility
- Driveway/No Parking Area
- Curb
- Property Line*

*Property Lines are approximate





Concept 2 – Wilmington Avenue (east)

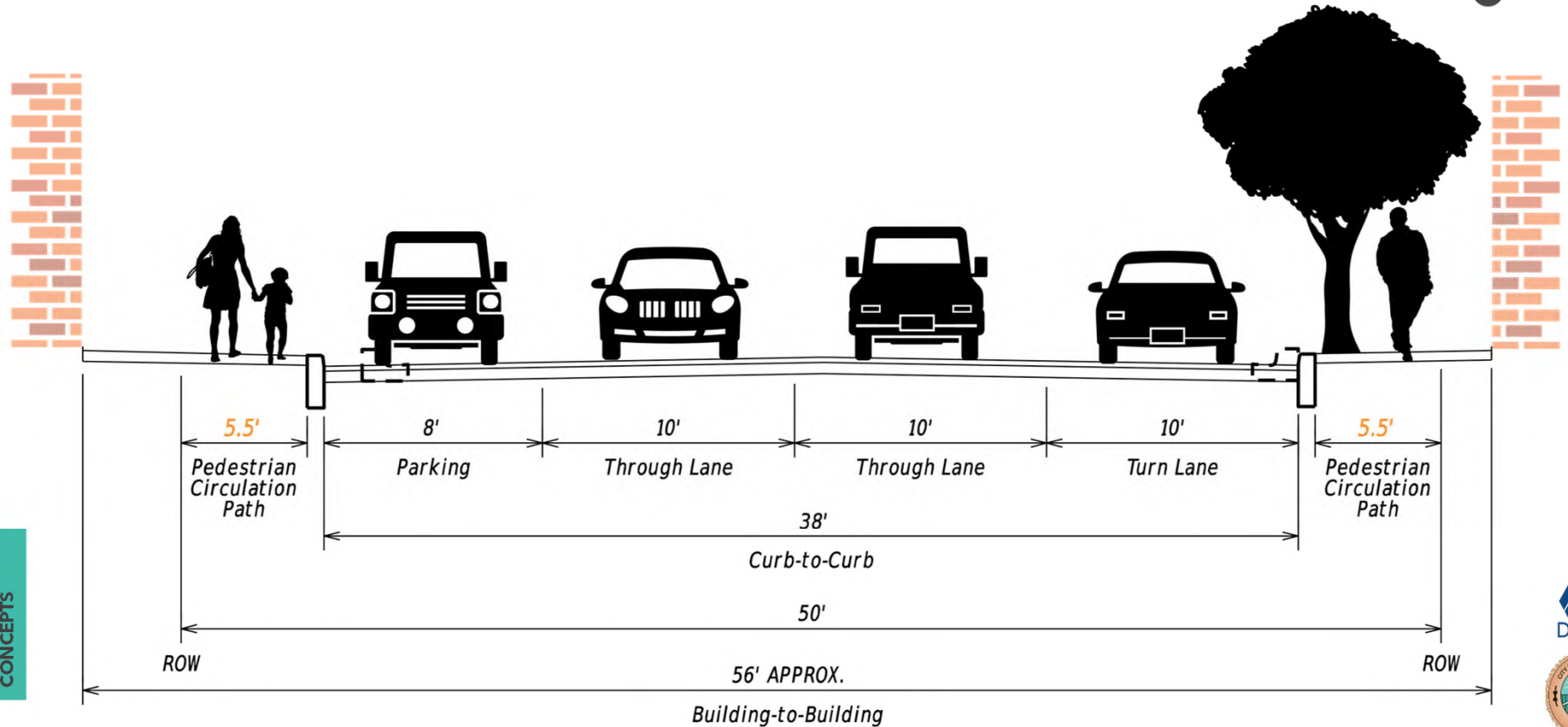


Legend

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- Driveway/No Parking Area
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*Property Lines are approximate

Concept 2 – First Street



*Concept 2
Enhanced Vehicle Accommodations*

Concept 2 – First Street



North



South

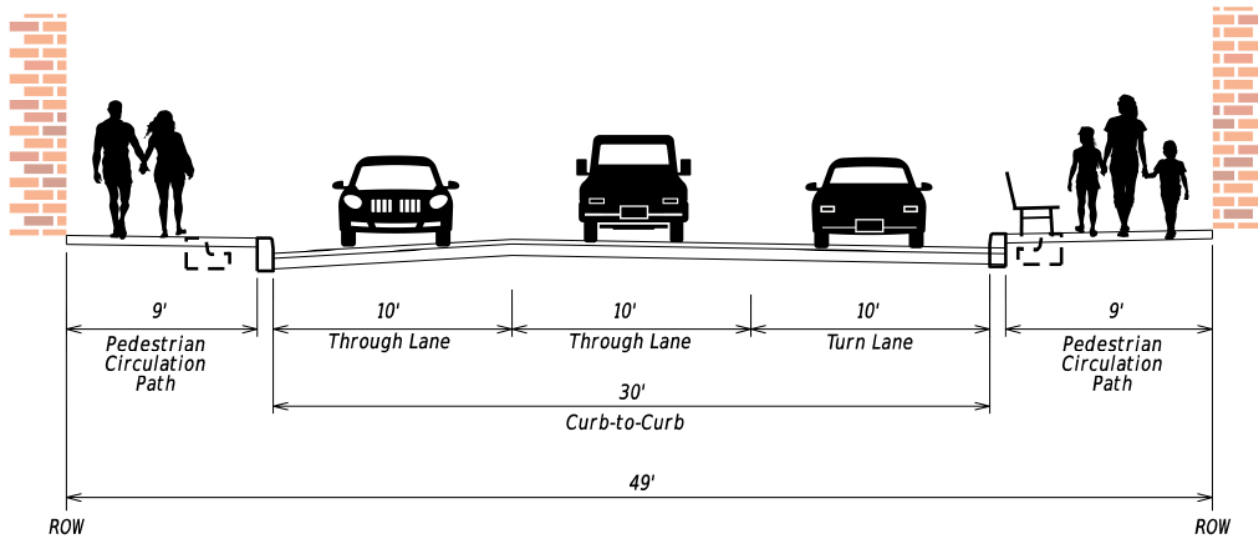


Legend

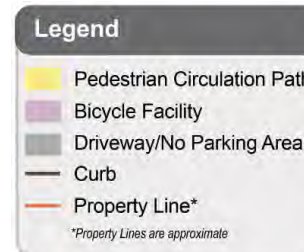
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- Driveway/No Parking Area
- Curb
- Property Line*

*Property Lines are approximate

Concept 2 – Second Street



- Same footprint as Concept 1A
- No existing parking on this section of Second Street





Next Steps

For Task Force Consideration



“What is the focus?”

“Who should the commercial downtown attract?”

- Select schematic/combination of schematics as the Draft Concept – it’s OK to mix-n-match
- Pedestrian generators (walk-up windows, outdoor dining, shopping)
- Bike use generators (Bike Shops/Rentals)
- Provide bike continuity within a corridor
- Placement of transformers

For Task Force Consideration



“What is the focus?”

“Who should the commercial downtown attract?”

- Concept 1B on First Street is most compatible with Comprehensive Development Plan (2010) and Pedestrian and Bicycle Plan (2012)
- Parking impacts have not been quantified, but Concept 1B would have the greatest impact on parking

Draft Concept Development

- One Concept/Schematic – may be combo
- Limited Vehicle Access Zones
- Intersections & Crosswalks
- Utilization of the Pedestrian Circulation Path
- Right-of-Way vs. Building Façade

Draft Concept Development

Feasibility of Limited Vehicle Access Zones

- First blocks only nearest the beach
- Expand options for pedestrian amenities
- Provide access for EMS and deliveries
- Provide drop off, turn around, but no parking
- Compatibility with Baltimore Avenue Beach Patrol Improvements

Draft Concept Development

Intersections & Crosswalks

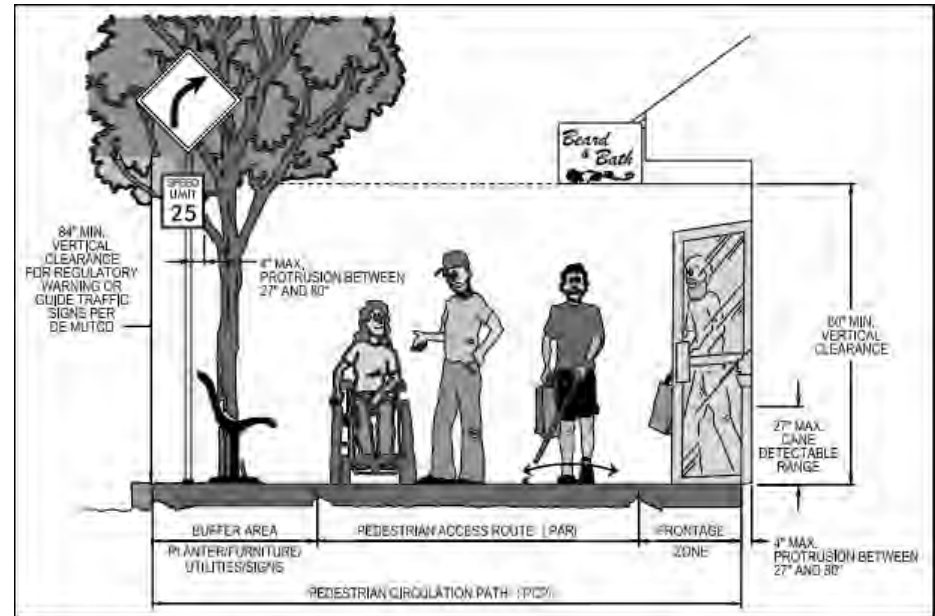
- Increase pedestrian safety
- Improve crosswalk visibility
- Consider bumpouts
- Allow for large vehicles to turn



Draft Concept Development

Utilization of the Pedestrian Circulation Path

- Define Pedestrian Access Route (PAR)
- Integrate bumpouts
- Driveways/fire lanes

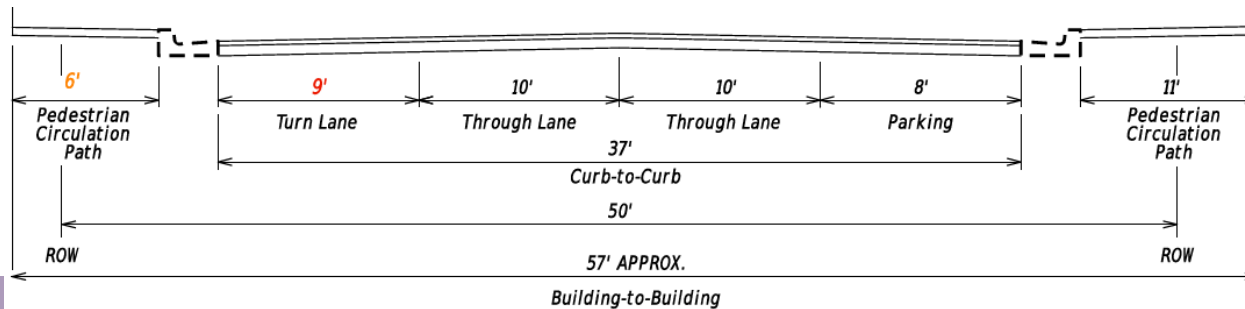


Source: DelDOT Pedestrian Accessibility Standards (2018)

Draft Concept Development

Right-of-Way vs Building Façade

- Where frontage zone is outside of ROW
- City to discuss potential agreements with individual property owners



First Street - Existing Conditions North of Rehoboth Avenue



Detail looking south from Baltimore Avenue

Schedule

TIMEFRAME	MILESTONE / EVENT
February 26, 2021	Kickoff Meeting & Site Visit
March 31, 2021	Kickoff with Task Force & Present Existing Conditions
May 26, 2021	Task Force Presentation - Schematics
July 28, 2021 <i>[tentative]</i>	Task Force Presentation - Draft Concept and Cost Estimate
September 29, 2021 <i>[tentative]</i>	Task Force Presentation - Final Concept & Cost Estimate
September TBD 2021	Streetscape Concept Public Meeting
October 27, 2021	Task Force Presentation - Draft Summary Report
November 2021	Finalize Report/Task Complete



Decision Points and Dates

June 11, 2021

- Identification of Schematic Concept for Draft Concept Development (see Slides 29-61)

July 28, 2021

- Next Task Force Presentation
- Presentation of Draft Concept

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- Estimated Transformers, per City discussion with Delmarva Power

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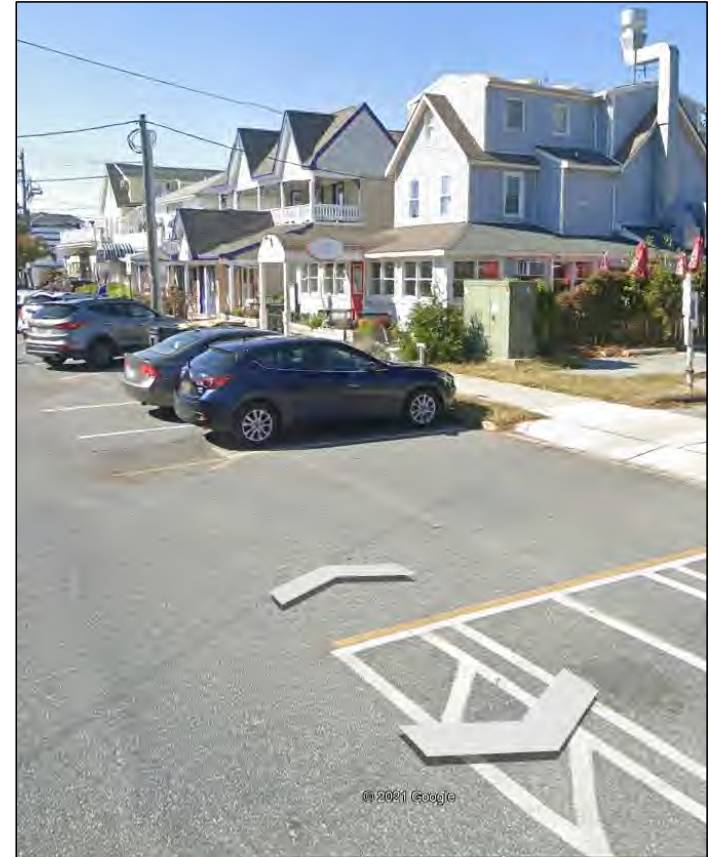


Image from Google Maps



Consider Utility Undergrounding

Concept 1B – Baltimore Avenue (west)



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