

# North-South Transportation Needs for the Coastal Communities

## **Feasibility Study**

### Executive Summary



**TPO**  
Miami-Dade Transportation  
Planning Organization



June 2020



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Miami-Dade TPO GPC-VII #4



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# Executive Summary

The North-South Transportation Needs for the Coastal Communities Feasibility Study provides context and direction for the development of the multimodal transportation network for Miami-Dade County's coastal communities. The intent of the study is to evaluate transportation needs and assess the feasibility of implementing transit and complementary options to improve mobility along the State Road (SR) A1A corridor and mainland connections. The effort was informed by previous and on-going studies/plans as well as the project's Study Advisory Committee (SAC), in order to provide an integrated future vision.

## Background

The primary north-south roadway within the coastal communities is SR A1A, traversing mostly Collins Avenue. The character of SR A1A varies greatly and includes sections with three, four and six lanes, divided and undivided cross sections, with and without on-street parking. The character of the abutting land uses varies as well from commercial and tourist-oriented sections to high-end residential. In terms of multimodal facilities, there are continuous sidewalks throughout, along with intermittent bicycle facilities. Bus service is provided by the Miami-Dade County Department of Transportation and Public Works (DTPW) along the corridor, as well as community circulators for seven of the eight communities.

## Study Area

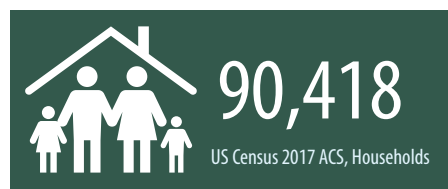
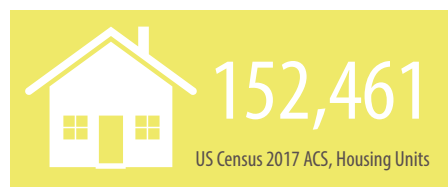
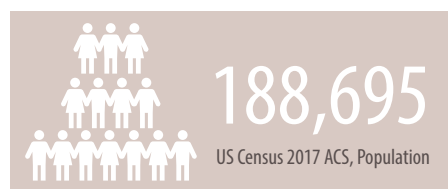
The study area for the Coastal Communities in Miami-Dade County is approximately 14 miles long from the Miami-Dade/Broward County Line to the South Pointe district of Miami Beach. The Coastal Communities are comprised of portions of unincorporated Miami-Dade



County and the following eight cities: City of Aventura, Bal Harbour Village, Town of Bay Harbor Islands, Town of Golden Beach, City of Miami Beach, North Bay Village, City of Sunny Isles Beach and Town of Surfside.

## Existing Conditions Snapshot

The existing conditions analysis involved the assembly and review of a wide menu of transportation network characteristics as well as a literature review of various transportation plans, programs, and studies. The results of the existing conditions analysis are summarized below.



### Coastal Communities Generations Defined

#### The Millennial Generation

Born: After 1980  
Age in 2017: 20 to 36  
Share of adult population: 33%

#### Generation X

Born: 1965 to 1980  
Age in 2017: 37 to 52  
Share of adult population: 18%

#### The Baby Boom Generation

Born: 1946 to 1964  
Age in 2017: 53 to 71  
Share of adult population: 37%

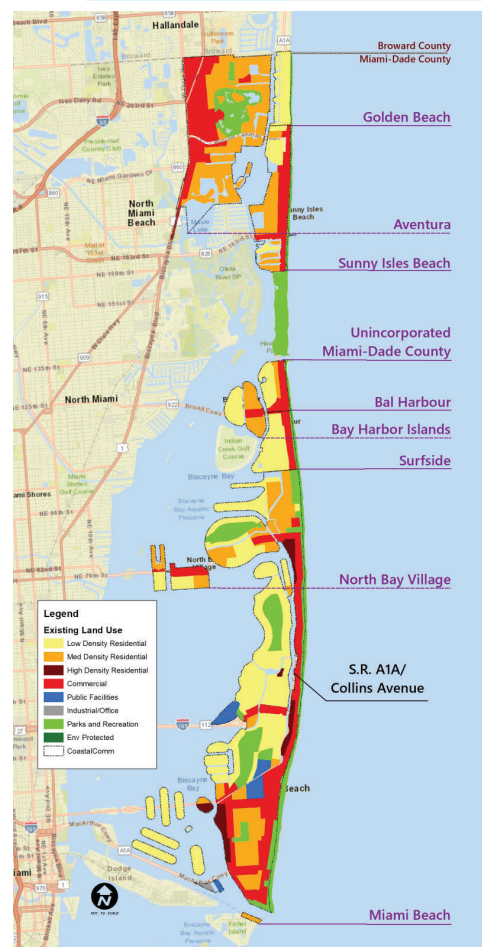
#### The Silent Generation

Born: 1928 to 1945  
Age in 2017: 72 to 89  
Share of adult population: 8%

#### The Greatest Generation

Born: Before 1928  
Age in 2017: 90 to 102  
Share of adult population: 4%

Existing Land Use	Cumulative Percentage
Residential	54%
- Low Density	29%
- Med Density	23%
- High Density	2%
Commercial	24%
Recreational	20%
Conservation	1%



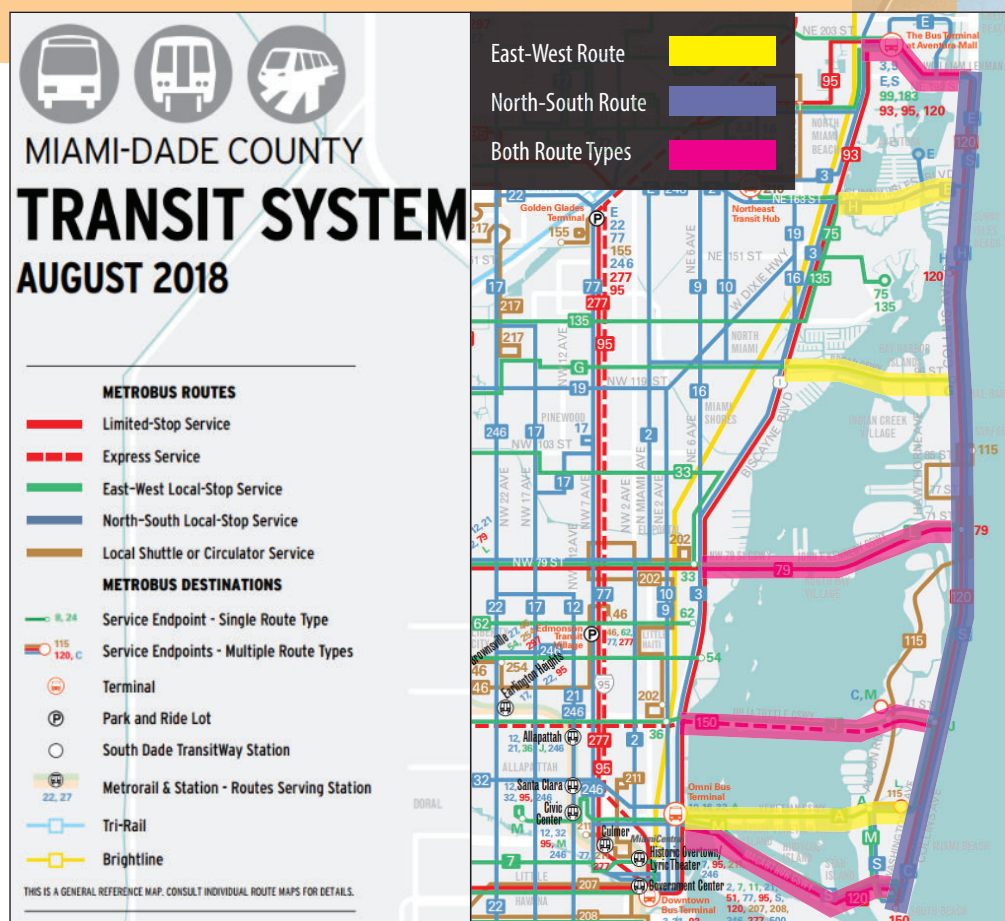
Travel Mode						
Total	68,840	9,196	6,899	6,300	2,517	3,407
Percent	71%	9%	7%	6%	3%	4%

US Census 2017 ACS, Mode of Travel to Work



## Transit Services

The study area is served by Metrobus, Metrorail, and Metromover via north/south routes, east/west routes, and local circulators.



Coastal Communities transit system map.

## Upcoming Developments and Projects

The following list of proposed projects were identified in other plans relevant to the study area:

Roadway		
Collins/Harding-Abbott Avenues	Convert to 2-way from 63rd to 87th	Plan NoBe
41st Street	Complete Streets concept from SR A1A to Alton Road	City of Miami Beach plans
Transit		
Collins Avenue	Exclusive bus lane from 63rd to 87th	Plan NoBe
Harding-Abbott Avenue	Exclusive bus lane from Indian Creek Drive to 87th Street	Plan NoBe
SR A1A	Exclusive curb transit lane throughout City	Miami Beach Transportation Master Plan
17th Street	Reconfiguration from Washington Avenue to Meridian Avenue	Beach Corridor PD&E Study (BRT Option)
MacArthur Causeway / 5th Avenue	Possible reconfiguration from mainland to Washington Avenue	Beach Corridor PD&E Study
71st Street / Normandy Drive	Exclusive transit lanes from SR A1A to Miami Beach city limits	Plan NoBe
Bicycle & Pedestrian		
SR A1A	Enhanced sidewalks and crossings throughout	City of Miami Beach & City of Sunny Isles Beach plans
Harding-Abbott Avenue	Protected bike lanes from Indian Creek Drive to 87th Street	Plan NoBe
71st Street / Normandy Drive	Protected bike lanes from SR A1A to Miami Beach city limits	Plan NoBe
I-195	Shared-use Path from mainland to Alton Road	I-195 Master Plan
Dade Boulevard	Shared-use Path from Venetian Causeway to 23rd Street	City of Miami Beach
71st Street / Normandy Drive	Protected bike lanes from SR A1A to Miami Beach city limits	Plan NoBe
Miami Beach Citywide	Install bike lanes and designate greenways	Miami Beach Bicycle Pedestrian Master Plan & Street design Guide



## Mobility Enhancements

Through the study process the following multimodal deficiencies and needs were identified:

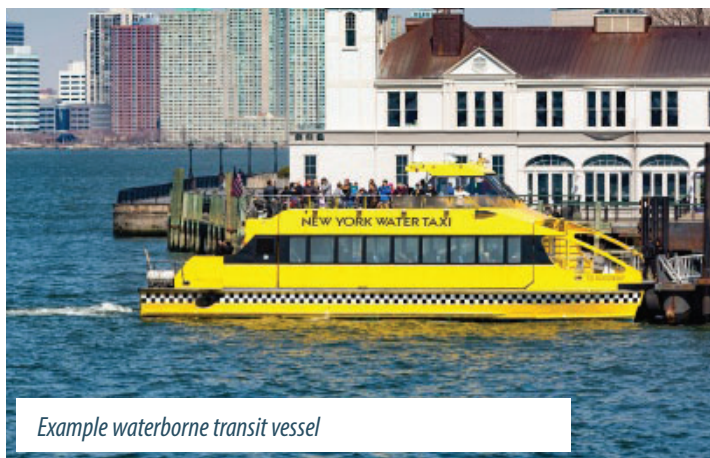
- Need for dedicated transit on SR A1A linking all communities, with transit hubs in walkable areas
- Bicycle facility deficiencies including gaps in the north-south network and the need for east-west bicycle facilities linking to the mainland
- Need for enhanced pedestrian facilities such as improved shade along the corridor, enhanced crosswalks at intersections, and mid-block crossings

To address these needs, a series of mobility enhancements were developed. They are described below.

### Waterborne Transit Service

Implementing a waterborne transit service would provide an alternative mode to potentially improve travel time and accessibility to Downtown Miami and the Coastal Communities. The concept of waterborne transit in the Miami area is not new, and a pilot effort was initiated by Miami-Dade DTPW recently. The waterborne transit service envisioned in this study contemplates four stops in the coastal area and one stop along the mainland. Proposed stops include:

- Bayfront Park (Miami)
- Maurice Gibb Memorial Park (Miami Beach)
- Grandview Palace Marine (North Bay Village)
- Haulover Park (Miami-Dade County)
- Bella Vista Park (Sunny Isles Beach)



Proposed improvements map



## Transit Hubs

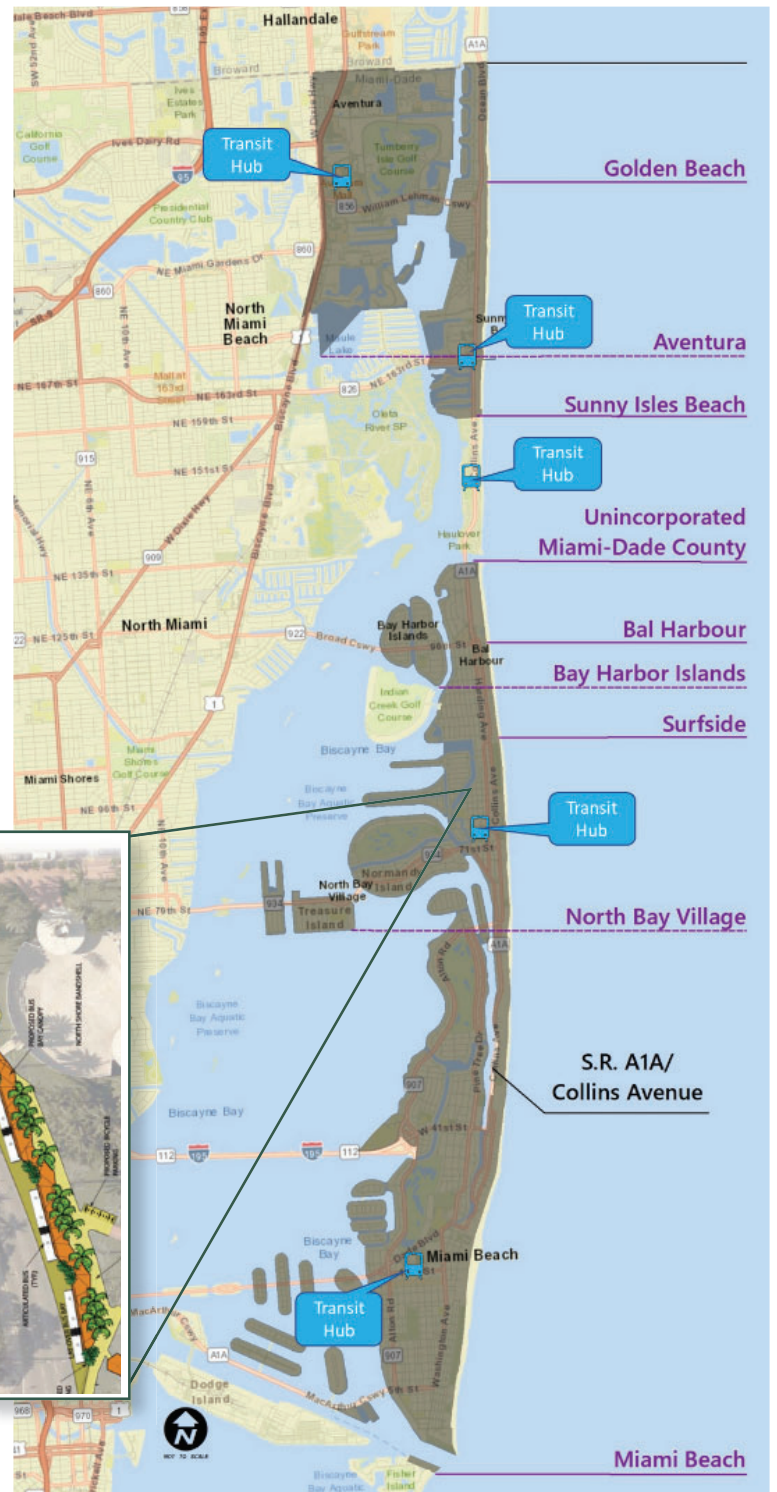
The purpose of a transit hub is to efficiently transport people and goods through multiple modes of travel. Transit hubs within the study area will provide connectivity between community circulators, local and express bus routes, premium transit, and micromobility services. Each of the hubs envisioned in this study have been identified by others previously, and several have been evaluated for feasibility and/or implementation. Transit Hubs for the corridor are proposed at the following locations:

- Convention Center (Miami Beach), consistent with the SMART Plan Beach Corridor Terminus
- Between 72nd & 73rd Streets (Miami Beach)
- Haulover Park (Miami-Dade County)
- NE 163rd Street near Bella Vista Park (Sunny Isles Beach)
- Aventura Mall Bus Terminal – Existing hub expanded to connect with Virgin Trains Aventura Station

Many of these proposed hubs have had some conceptual design completed, so the next steps would be final design and securing funding.



Between 72nd and 73rd Streets (Miami Beach); Miami Beach Intermodal Hubs Feasibility Study, 2018.



Map of transit hubs

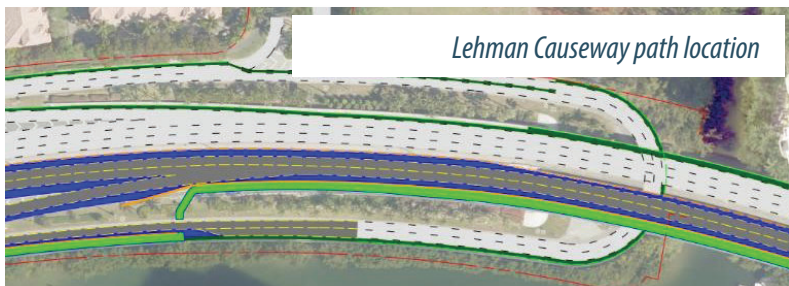


## Lehman Causeway Shared-Use Path

The William Lehman Causeway (SR 856) connects Biscayne Boulevard (US 1) with SR A1A. As this is a controlled-access facility, there are no sidewalks and limited bicycle facilities. The concept developed in this study includes:

- 10-12 foot wide shared use path on the south side of the Causeway
- No changes to westbound lanes, maintaining evacuation capacity
- Possible connection to Virgin Trains Aventura Station

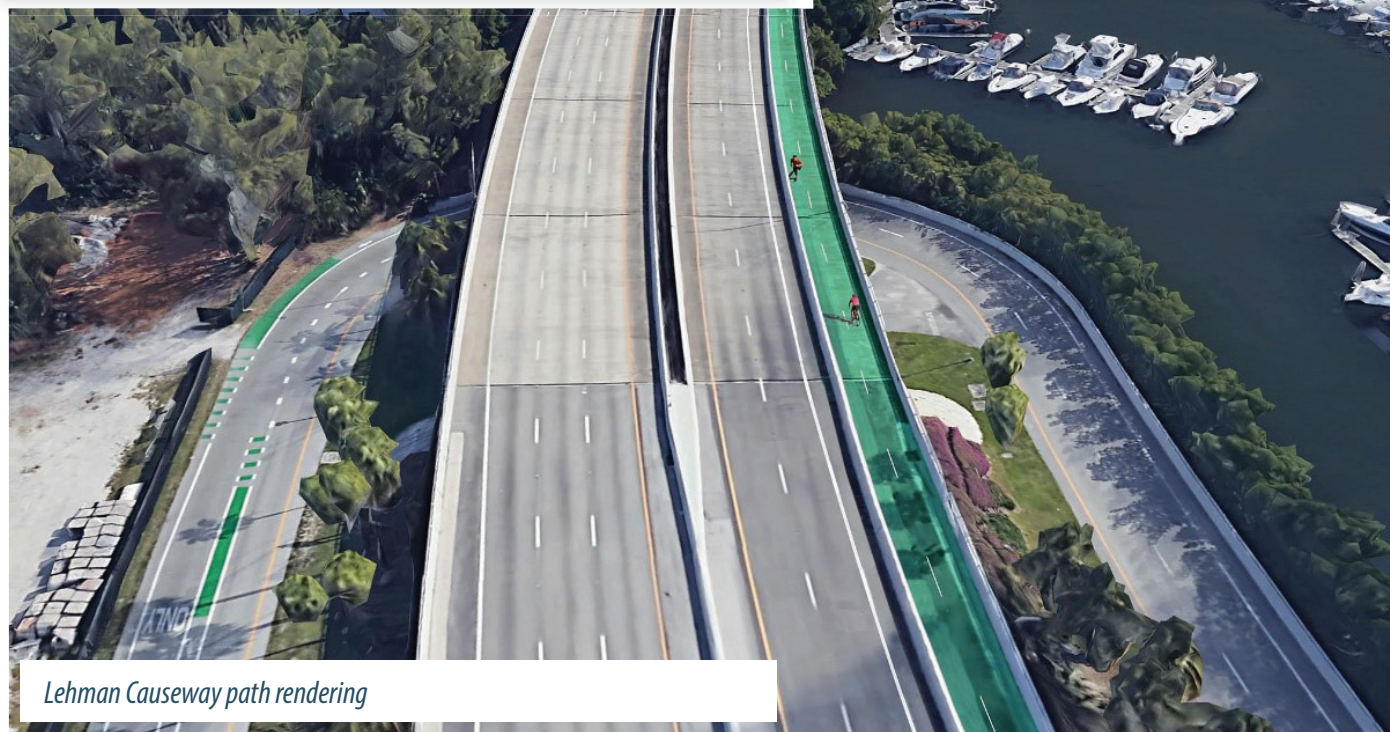
The cities of Aventura and Sunny Isles Beach will need to work closely with FDOT District 6, and may need to conduct a lane elimination analysis prior to this concept moving forward. If it is found that the shared-use path as envisioned can not be implemented, other alternatives that accommodate pedestrian and bicycle traffic between Sunny Isles Beach and Aventura will need to be considered.



*Lehman Causeway path location*



*Virgin Trains Aventura Station*



*Lehman Causeway path rendering*



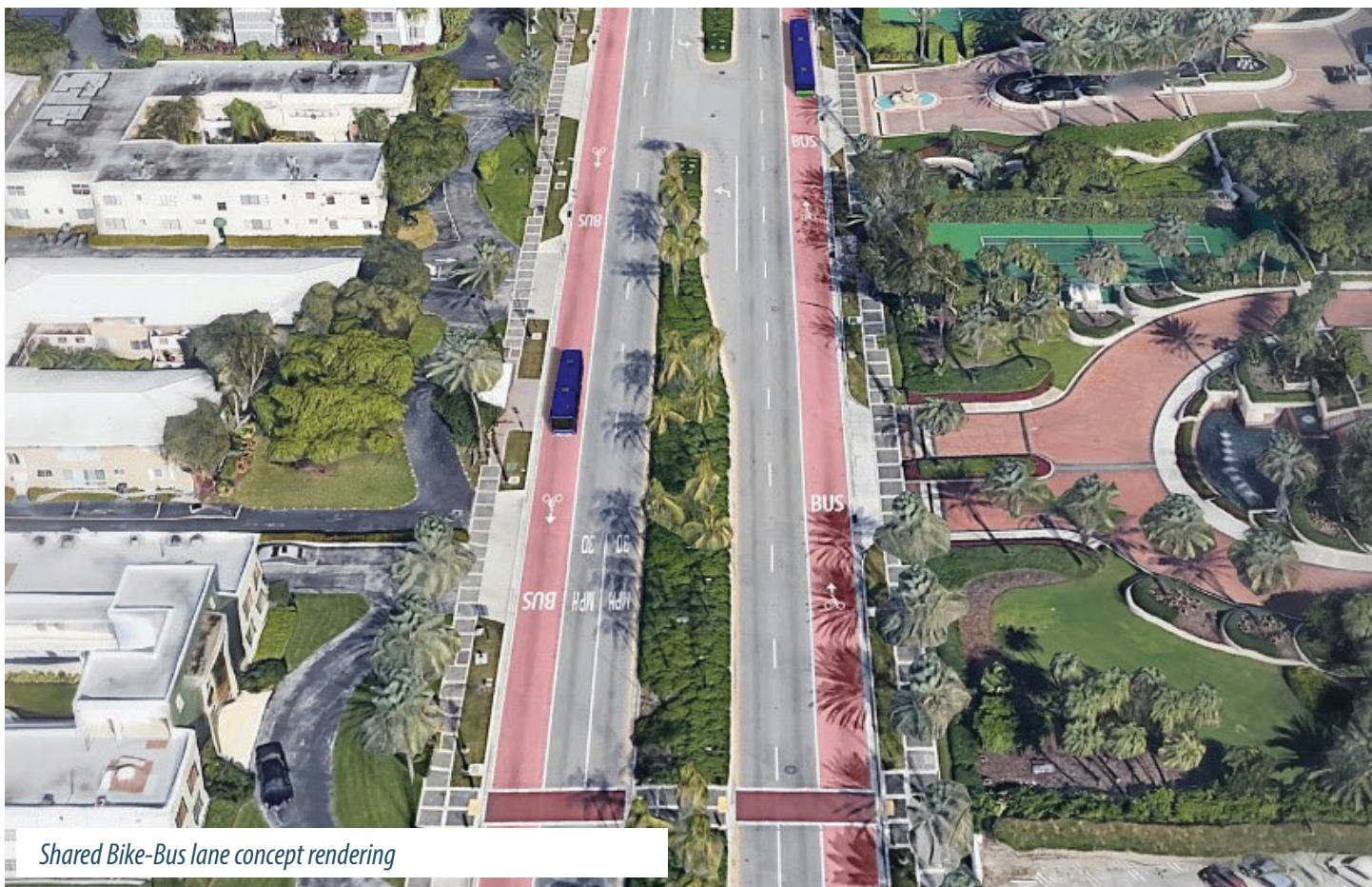


## SR A1A Shared Bike-Bus Lanes

A shared bike-bus lane is a traffic lane dedicated for exclusive use by buses, bicyclists, and typically right-turning vehicles. Shared bike-bus lanes tend to be implemented where street right-of-way constraints exist and are a solution for better accommodating buses and bicycles. The provision of dedicated bus lanes often increases urban transport system efficiency and ridership. The SR A1A Shared Bike-Bus Lanes concept extends from the Lehman Causeway on the north to 17th Street on the south, with limited areas of mixed-traffic, as detailed below:

- A1A from Lehman Causeway to 189th Street - Mixed Traffic
- A1A from 189th Street to Bayview Drive - Dedicated Lane
  - Small southbound segment just north of 163rd Street - Mixed Traffic
  - Small northbound segment just south of 163rd Street - Mixed Traffic
- A1A from Bayview Drive to Harbor Way - Mixed Traffic (Haulover Park section)
- A1A from Harbor Way to 17th Street (Convention Center) - Dedicated Lane
- Washington Avenue from 17th Street to 5th Street – Mixed Traffic

As proposed, the shared bike-bus lanes would be implemented through conversion of the outside travel lane in both northbound and southbound directions. The coastal communities will need to coordinate with FDOT District 6 and the Miami-Dade TPO to further advance this idea.



*Shared Bike-Bus lane concept rendering*



## MID-TERM CATALYTIC PROJECTS – KENNEDY CAUSEWAY – PROPOSED C4 – Urban General FDOT Context-Sensitive Designation



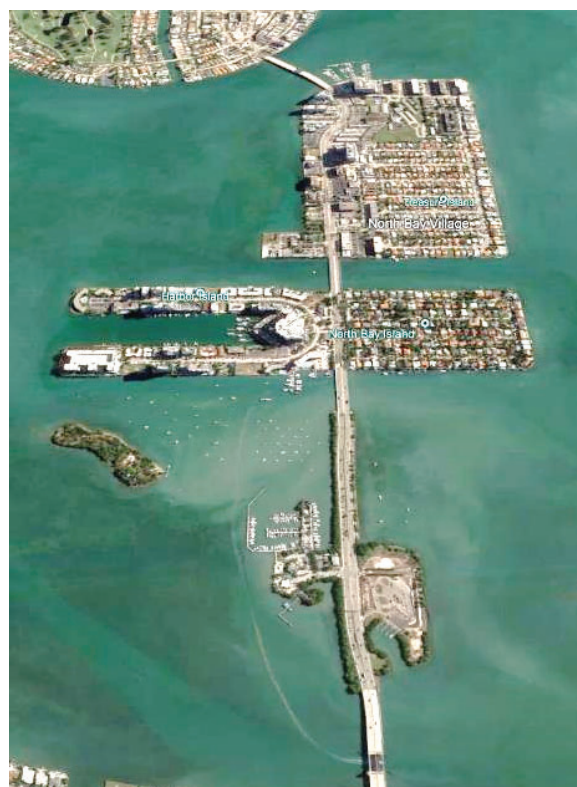
*Example of buffered bike lane*

### Northeast 79th Street Complete Street

A Complete Street concept has been proposed by North Bay Village along the SR 934/79th Street/Kennedy Causeway. The causeway connects Bayshore Court in Miami to Bay Drive in Miami Beach, but modifications would be focused on a one-mile segment traversing North Bay Village. Potential concepts were developed as part of a city visioning process and could include the following elements:

- Lane reduction from 6 lanes (3 in each direction) to 4 lanes (2 in each direction)
- Wider sidewalks/bicycle paths
- Wider median
- Transit amenities
- On-street parking

Further analysis and coordination with FDOT and the Miami-Dade TPO is needed prior to implementation. Since this is a state roadway, a lane elimination analysis may need to be completed. North Bay Village is already coordinating with FDOT on these analysis requirements, as well as the potential for adding bike lanes to the causeway connecting to and from the mainland. Furthermore, coordination with Miami-Dade County DTPW regarding signalization and enhanced safety for pedestrians crossing 79th Street at key intersections is also recommended.



*North Bay Village*



## Other Pedestrian, Bicycle, and Transit Improvements

In addition to the major concepts highlighted, there are a series of smaller bicycle, pedestrian, and transit improvements that could be made along the corridor to enhance mobility. As there is a complete sidewalk network on SR A1A, pedestrian enhancements on the corridor are focused on crossing the roadway. Proposed projects include:

- Pedestrian Bridges (Sunny Isles Beach)
  - Collins Ave @ 163rd St, @ 174th St, and @ 180th St
  - Collins Ave @ Heritage Park
- Signalized Crosswalks
  - Collins Avenue and 36th Street, Flashing Beacon
  - Collins Avenue between 43rd and 44th Streets, Flashing Beacon
  - Collins Avenue and 79th Street, New Traffic Signal
  - Collins Avenue and 83rd Street, Flashing Beacon
  - Collins Avenue and 87th Street, Flashing Beacon
- Providing leading pedestrian intervals at signals along SR A1A and SR 934 through Miami Beach and North Bay Village

In order to enhance bicycle mobility and safety, the City of Miami Beach has identified the need for protected bike lanes on several roadways, including:

- Washington Ave from South Pointe Drive to Dade Boulevard
- Along SR A1A / Collins Ave from South Point Drive to 63rd Street (two-way cycletrack)
- Along SR A1A One-Way Pairs from 63rd Street to 87th Street
- Along I-195 / Julia Tuttle Causeway
- Along I-395 / MacArthur Causeway

It should also be noted that the City has been investing in their beachfront promenade, recently branded the Miami Beach Walk. The final phase will replace the existing boardwalk from 23rd Street to 45th Street. Once complete, the beachfront promenade will offer a continuous, smooth surface path for walkers, joggers/runners, cyclists, and rollerbladers from South Pointe Drive to 87th Street.

Finally, to maximize the potential of the dedicated bus lanes on SR A1A, transit service improvements are necessary. While there is no specific requirement regarding service frequency for dedicated bus lanes, research suggests that a goal of 5-minute average bus frequency is preferred. Transit amenity investments should also be made, with shelters and benches provided at all stops.

## Implementation

As noted in the preceding Mobility Enhancements section, many of the projects outlined in this study require further analysis and evaluation prior to moving into implementation phases. Close coordination between the cities, Miami-Dade TPO, Miami-Dade DTPW, and FDOT District 6 is necessary. Funds will need to be programmed and some of the projects outlined will need to be included in the Miami-Dade TPO's Long Range Transportation Plan (LRTP) and Program Priorities. Furthermore, several of the projects involve replacing vehicular travel lanes with space dedicated for transit, bicycles, and pedestrians. As they are state roadways, FDOT will likely require that lane elimination analyses be completed. Like many of the SMART Plan initiatives, a philosophical shift away from vehicular mobility to personal mobility is paramount to building consensus and a sense of public ownership for the concepts envisioned in this study.