



DRIVE LESS.LIVE MORE.



Beach Express North and Tuttle Shuttle

City of Miami Beach
Finance and Economic Resiliency Committee
September 24, 2021



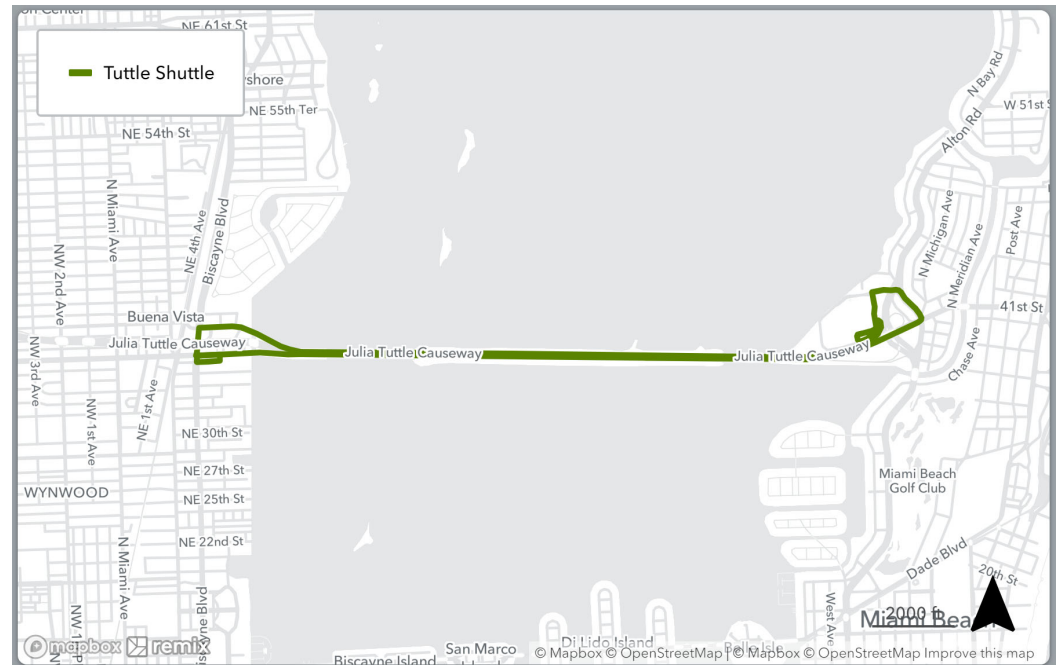
BUS ON SHOULDER

- Bus will use shoulder to bypass congested traffic on Julia Tuttle Causeway
- Can travel up to 35 mph
- Improve speed and reduce delay for bus passengers
- Bus only signs – roadside and trailers; enforced by Florida Highway Patrol
- Buses will initially use the outside shoulder
 - *Bikes can use alternate Causeways (Venetian and MacArthur)*
- From 2023, buses will use the inside shoulder



M TUTTLE SHUTTLE

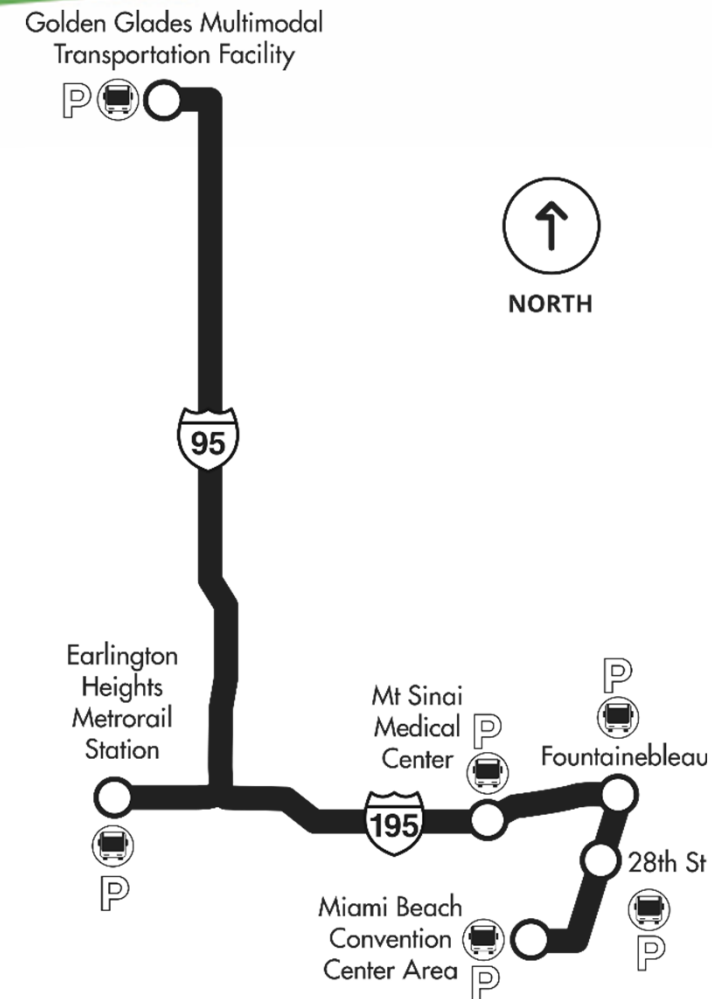
- Interim use of the I-195 outside shoulders to bypass congestion (Fall 2021)
- From existing Biscayne Blvd to Mt. Sinai Medical Center (approx. 4 miles one way)
- No Interim stops
- Approx. 11 months of service





BEACH EXPRESS NORTH ROUTE

- From existing Golden Glades Multi Modal Terminal to Miami Beach Convention Center (approx. 17 miles one way)
- Interim stops at existing MIC Earlington Heights Metrorail Station, proposed Mt. Sinai Medical Center, Fontainebleau Hotel, 28th Street existing bus stop
- Use of the I-195 inside shoulders for local buses to bypass congestion (2023)





MT SINAI MEDICAL CENTER PROPOSED PARK AND RIDE

- Proposed improvements:
repave an existing parking lot and expand an existing bus stop to include four bus bays
- Preliminary environmental analysis completed - no adverse impacts
- Total parking spaces: 83





SERVICE PLAN AND RIDERSHIP

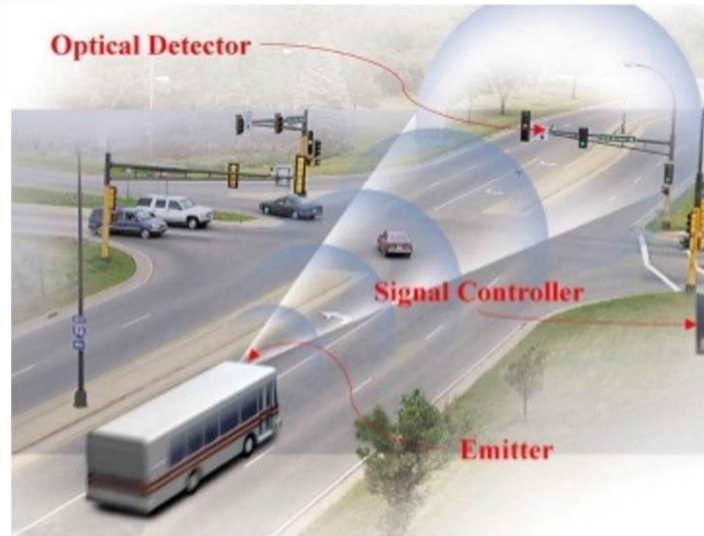
		Beach Express North	Tuttle Shuttle
Service Days		7 Days	
Span		5AM to Midnight	
Frequency	Peak Hour	10	15
	Off-Peak Hour	20	15
Route Length (one way)		~19 mi.	~4 mi.
Ridership		7,800-8,100	500 (peak period)



TRAFFIC SIGNAL PRIORITY RECCOMENDATIONS

EARLY GREEN/GREEN EXTENSIONS

- Early Green/Green Extension is a form of Transit Signal Priority (TSP)
- This phase is only activated by a transit vehicle - it is not a pre-programmed signal phase



Kamila Widulinski and Matthew Lapointe (2013)

- (a) An onboard priority request generator
TSP request is sent when:
1) on-route,
2) doors are closed, and
3) >30 seconds late.
- (b) A detection system that receives the priority request and informs the traffic controller

(c) A priority control strategy at the signal controller determines whether to grant a TSP phase, which TSP phase should be granted, and when the TSP phase should start and end

Route	Intersection	Recommendation
Beach Express North (<i>same signal recommendations for Beach Express Central for City of Miami Beach</i>)	Old Alton Road @ 41 Street 41 Street @ Indian Creek Drive Collins Ave @ 17 th Street	Early green/green extension Early green/green extension Early green/green extension



BERT Route	Route Name	Estimated Implementation Year	Total Buses	(2020 \$) in Millions		
				Buses ²	O&M ³ Cost	Park and Ride Facilities Capital Cost
f1	Beach Express North	2023 ¹	18	\$16.62	\$7.48	\$ 1.67 Mt. Sinai Medical Center
N/A	Tuttle Shuttle	2021	3	\$3.90 ⁴	\$1.314	- N/A
Total			21	\$20.52	\$8.794	\$1.67
¹ Interim service is proposed for this route. The details of the interim service are currently in the planning phase.						
² Vehicle cost based on 60-ft CNG bus at \$900,000 each, 20% spare vehicles ratio added						
³ Operations and Maintenance						
⁴ Vehicle cost based on 60-ft electric bus at \$1,300,000 each, 20% spare vehicles ratio added						



FOR MORE INFORMATION

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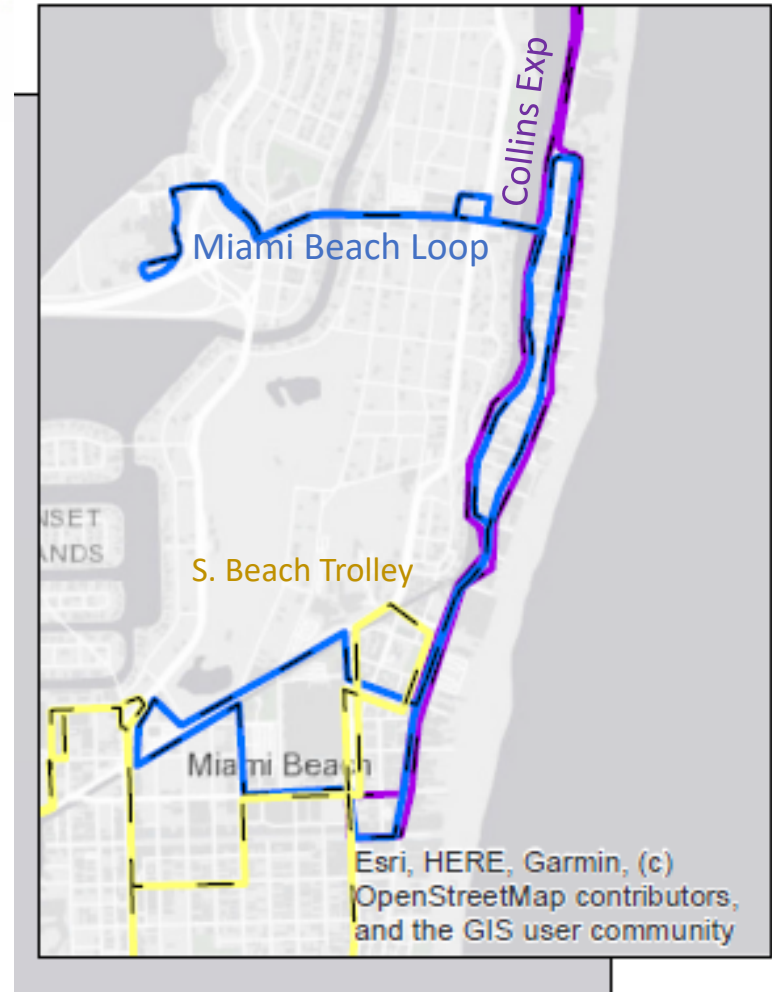
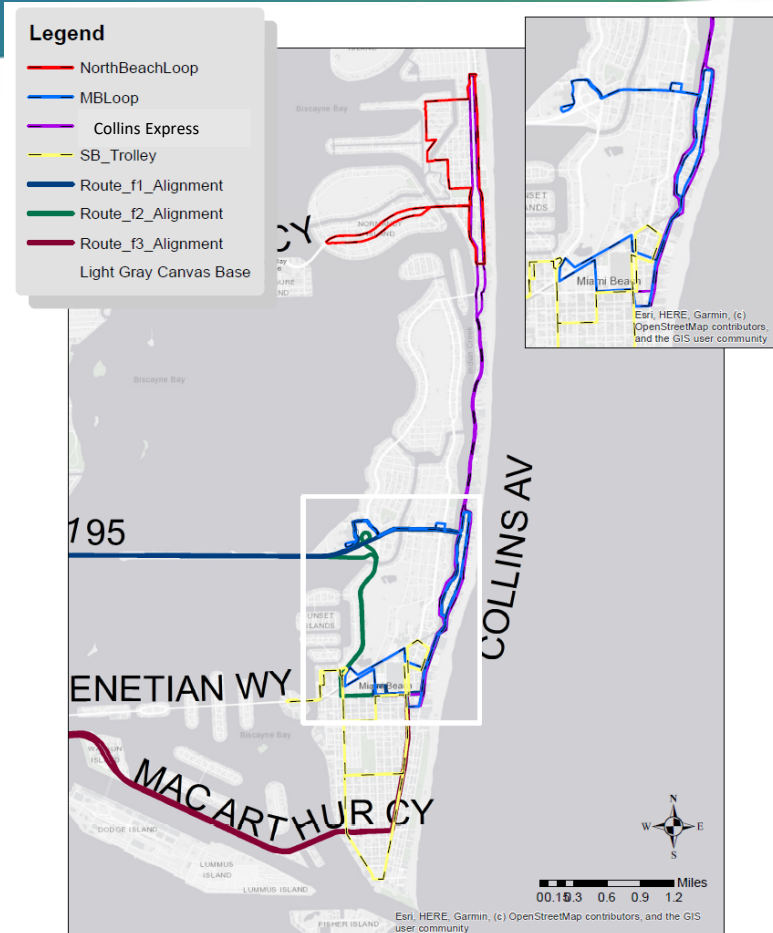


TUTTLE SHUTTLE ROUTE ALTERNATIVES

Tuttle Shuttle Route Alternatives	Interim Stop	Potential Park and Ride Locations
Full Route: Golden Glades to Convention Center	Earlington Heights, ¶Mt. Sinai, ¶Fountainbleu	Earlington Heights, Mt. Sinai
I-95 Alternative: Golden Glades to Mt. Sinai	Earlington Heights	Earlington Heights
Miami Intermodal Center to Miami Beach Convention Center	Earlingotn Heights, ¶Mt. Sinai, ¶Fountainbleu	Earlington Heights, Mt. Sinai
Earlington Heights to Miami Beach Convention Center	Mt. Sinai, ¶Fountainbleu	Earlington Heights, Mt. Sinai
Earlington Heights to Fountainbleu	Mt. Sinai	Mt. Sinai
Earlington Heights to Mt. Sinai	N/A	Earlington Heights
Denny's (Biscayne) to Mt. Sinai	N/A	N/A



MIAMI BEACH TROLLEY CONNECTIONS



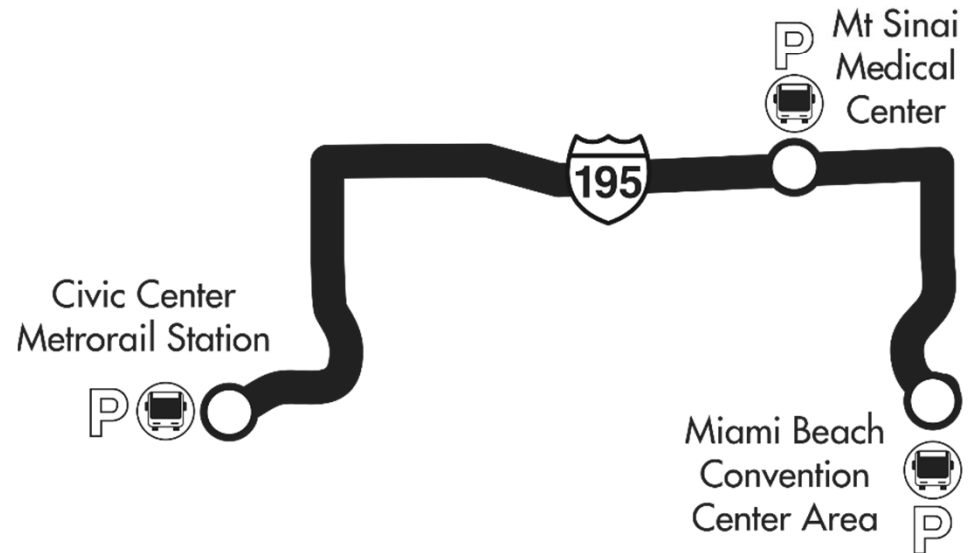


BEACH EXPRESS CENTRAL ROUTE

- From existing Civic Center Metrorail Station to Miami Beach Convention Center (approx. 9 miles one way)
- Interim stop at proposed Mt. Sinai Medical Center Park and Ride
- Ultimate use of the I-195 inside shoulders for buses to bypass congestion (2023)



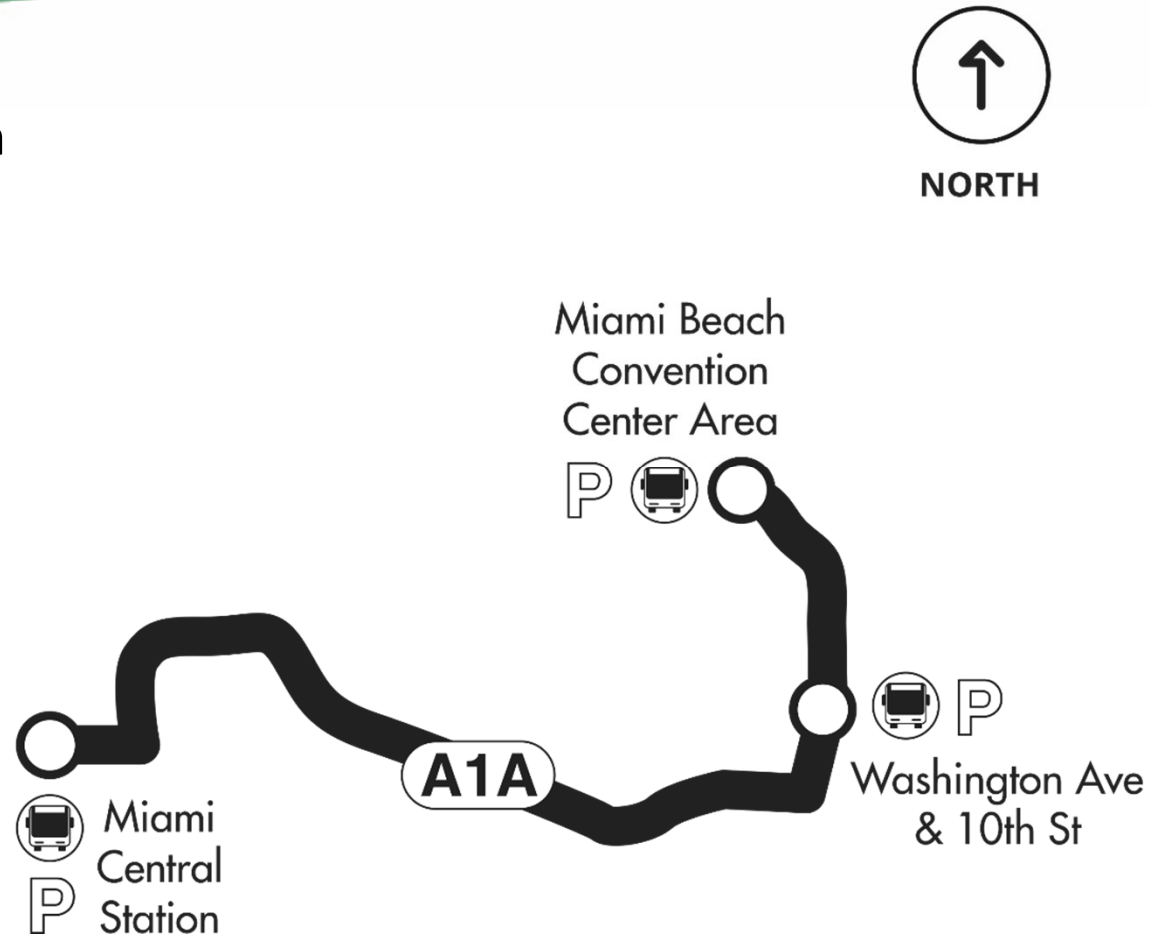
NORTH





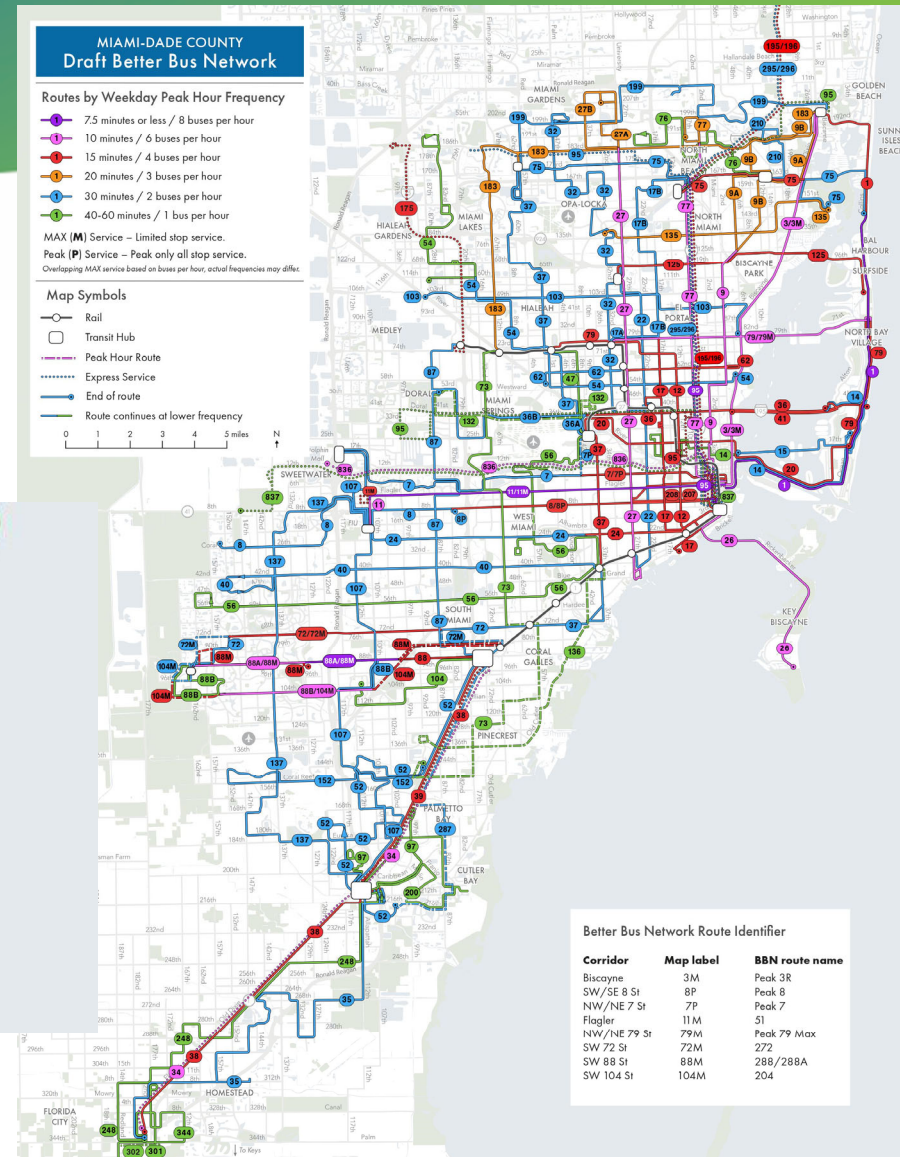
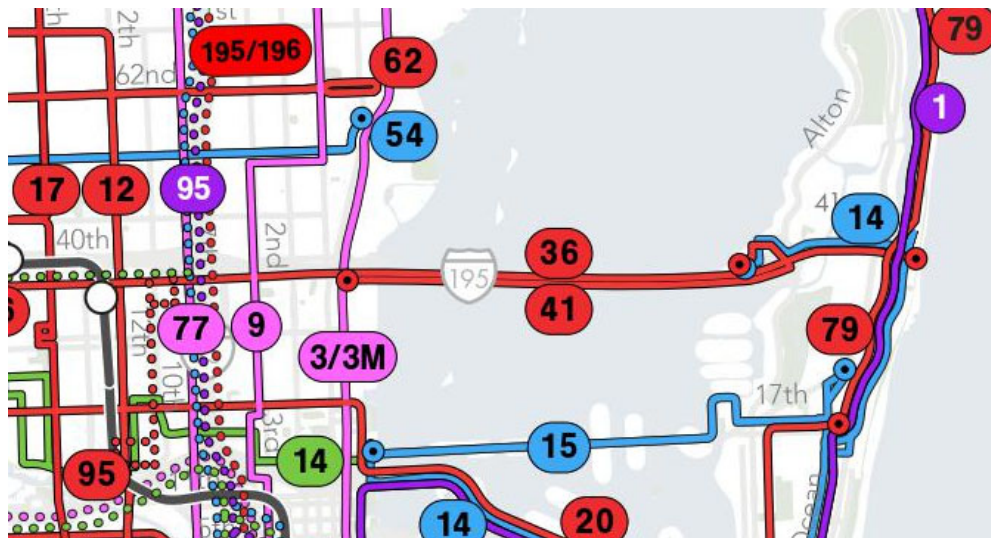
BEACH EXPRESS SOUTH

- From existing Miami Central Station to Miami Beach Convention Center (approx. 6.5 miles one way)
- Interim stop at existing Washington Avenue and 10th Street Bus Stop
- Use of dedicated lanes on Washington Avenue from 5th Street to Convention Center (funded with Florida Department of Transportation funds)
- Service anticipated 2023





FINAL PROPOSED BETTER BUS NETWORK





OVERVIEW

- Eight express bus routes connecting to SMART Plan premium transit corridors
- Along existing expressways and Transit Signal Priority (TSP)
- Limited stops
- Service to major origins/destinations
- Frequency from 10 – 20 minutes
- Existing and proposed Park and Rides

