

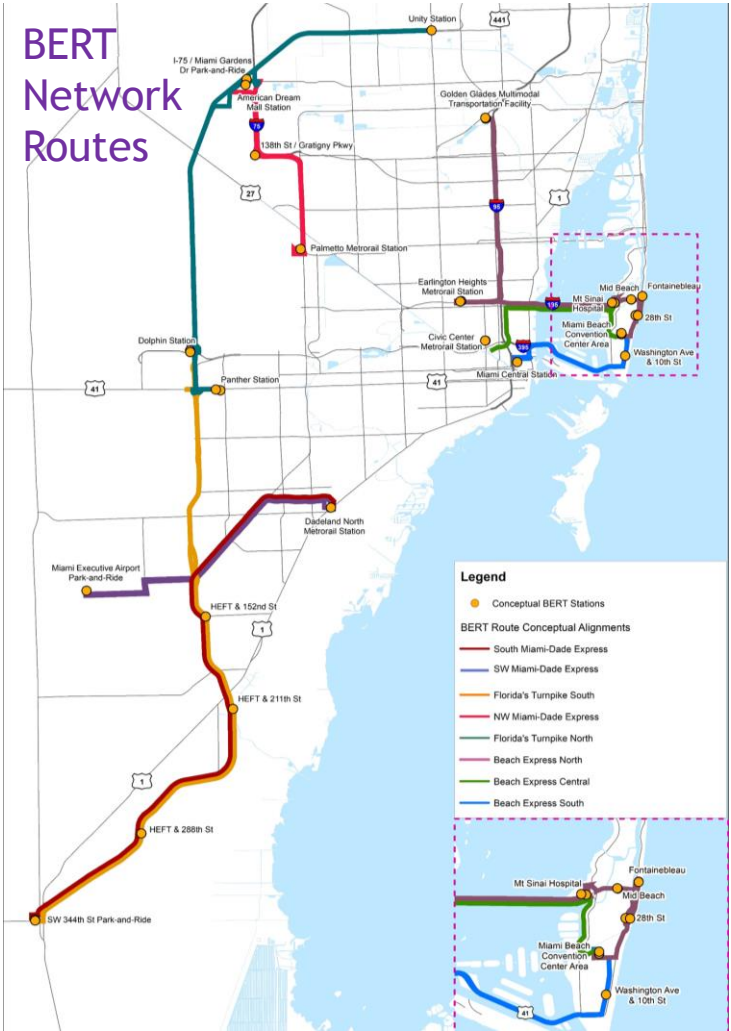
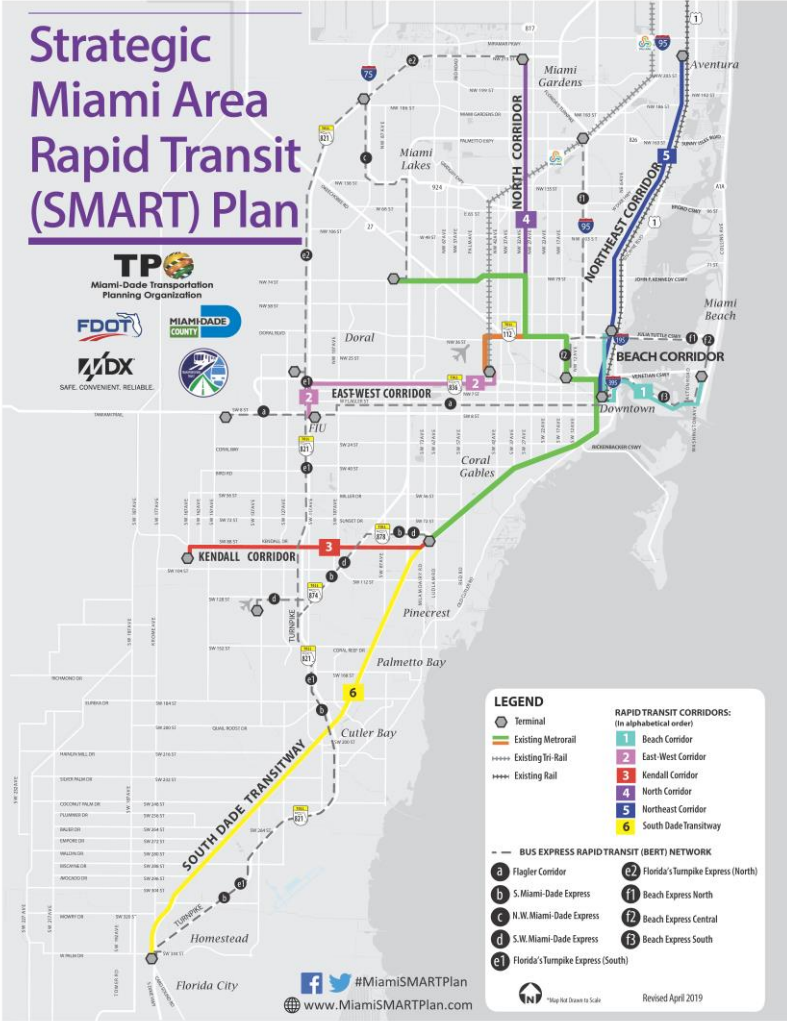
Miami-Dade County SMART Plan

Bus Express Rapid Transit (BERT) Network

Implementation Plan

Miami-Dade County Department of Transportation and Public Works
Status Update
July 28, 2020

SMART Plan



Bus Express Rapid Transit System

BERT Network

- Express bus on freeways and express lanes
 - Extends SMART corridors
 - Planned using mostly existing infrastructure and ROW, limited infrastructure improvements

Route	Name	Start/End	Interim Stop	Proposed Facility
B	S Miami-Dade Express	344 St. Busway Station –Dadeland North Metrorail Station	HEFT/288th St. Park-and-Ride, HEFT/211th St., HEFT/SW 152nd St.	FTP Managed Lanes
C	NW Miami-Dade Express	Palmetto Metrorail Station - I-75/Miami Gardens Dr Park-and-Ride	American Dream Station	I-75 & SR 826 Express Lanes
D	SW Miami-Dade Express	Miami Executive Airport Park-and-Ride - Dadeland North Metrorail Station	-	SR 874, SR 878
E1	Florida Turnpike (South)	344 St. Transitway Station - Dolphin Station	PNR at HEFT/288th St, HEFT/211th St., HEFT/SW 152nd St, Panther Station	FTP Managed Lanes
E2	Florida Turnpike (North)	Panther Station – Unity Station	I-75/Miami Gardens Dr. Park-and-Ride, American Dream Station	FTP Managed Lanes
F1	Beach Express North	Golden Glades Intermodal Terminal - Miami Beach Convention Center	Earlington Heights Metrorail Station and Mt. Sinai Terminal	I-95 Express Lanes, I-195 shoulder
F2	Beach Express Central	Civic Center - Miami Beach Convention Center Terminal	Mt. Sinai Terminal	I-195 shoulder
F3	Beach Express South	Miami Central - Miami Beach Convention Center Terminal	-	I-395/ MacArthur Causeway

BERT Route Estimated Implementation

Route	Name	Estimated Implementation Year	Assumptions
B	S Miami-Dade Express	2021	Completion of HEFT Managed Lanes SW 184th St to SW 104th St Spring 2020
C	NW Miami-Dade Express	November 18, 2019	-
D	SW Miami-Dade Express	2023	Assumes terminal can be completed by 2023
E1	Florida Turnpike (South)	2021	Completion of HEFT Managed Lanes SW 40th St to SR 836 Spring 2021; interim FIU Panther stop anticipated completion in 2022
E2	Florida Turnpike (North)	TBD	HEFT Managed Lanes north of SR 836 currently in bid review; prior estimate 2027
F1	Beach Express North	2023*	Completion of the I-195 inside shoulder construction (FDOT) delayed due to I-395
F2	Beach Express Central	2023	Completion of I-195 inside shoulder construction (FDOT) delayed due to I-395; also assumes terminal activity can be accommodated in Civic Center
F3	Beach Express South	2023	Assumes terminal activity can be accommodated in Convention Center area

**Interim service is proposed for the Beach Express North Route, projected to start in early 2021.*

BERT Implementation Analysis - Progress

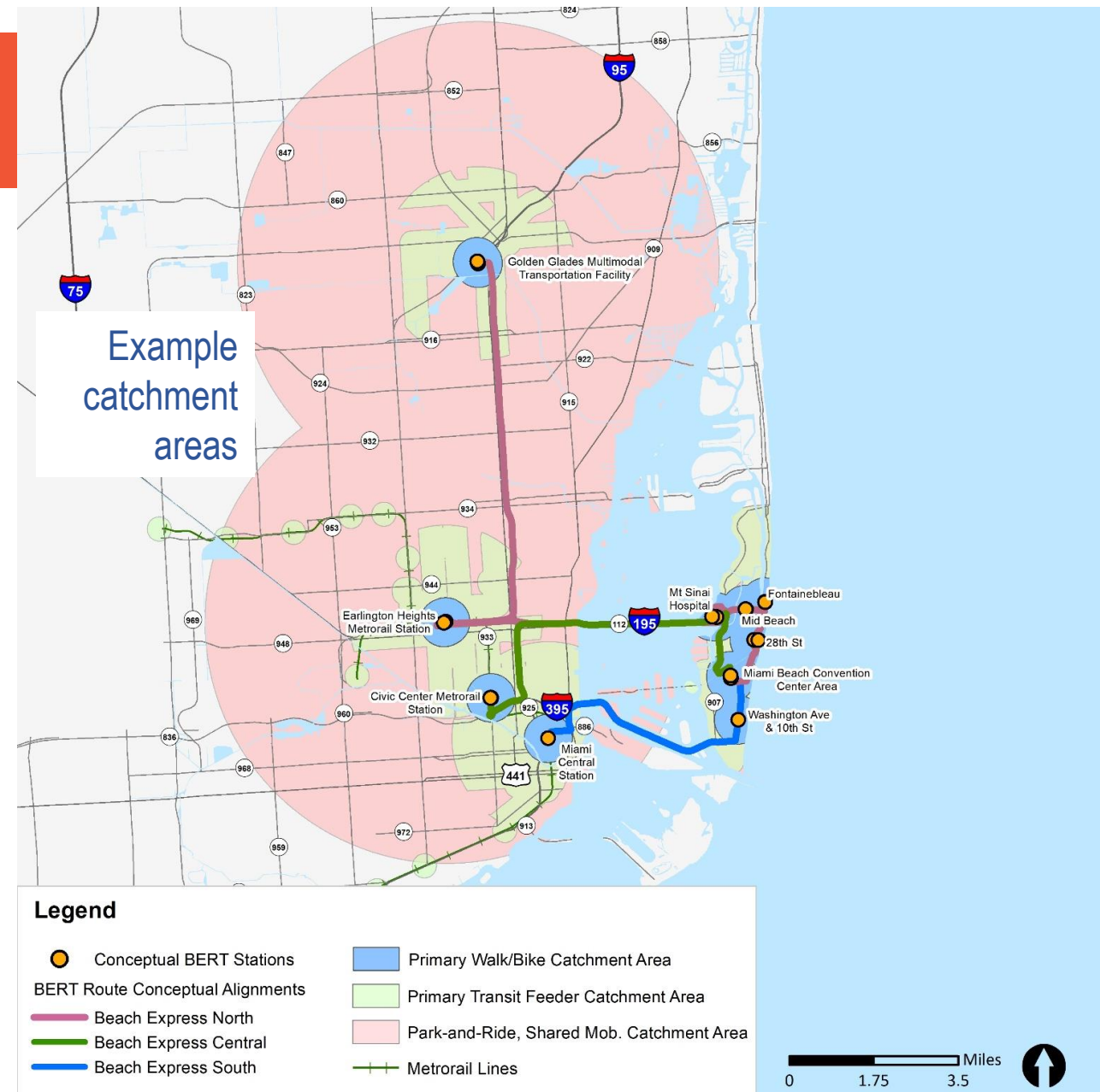
	Beach North (f1)	BERT Network
– Market analysis	✓	✓
– Travel times	✓	✓
– Ridership estimates	✓	✓
– Service plan refinement	✓	✓
– Community coordination	→	→
– Terminal operations	✓	→
– Engineering and Traffic analysis	✓	→
– Environmental analysis	✓	→
– Vehicle needs	✓	✓
– Cost estimates	✓	✓

KEY
✓ Completed
→ Ongoing

Market Analysis

- Socioeconomic profile
 - Demographics
 - Transit propensity
- Commute Patterns
 - LEHD (Census)
- Transit Propensity
 - Findings

High	Route f1- Beach Express North Route f3 - Beach Express South
Moderate	Route f2- Beach Express Central Route b - South Miami-Dade Express Route e1- Florida's Turnpike South
Low	Route d - Southwest Miami-Dade Express Route c - Northwest Miami-Dade Express Route e2 - Florida's Turnpike North

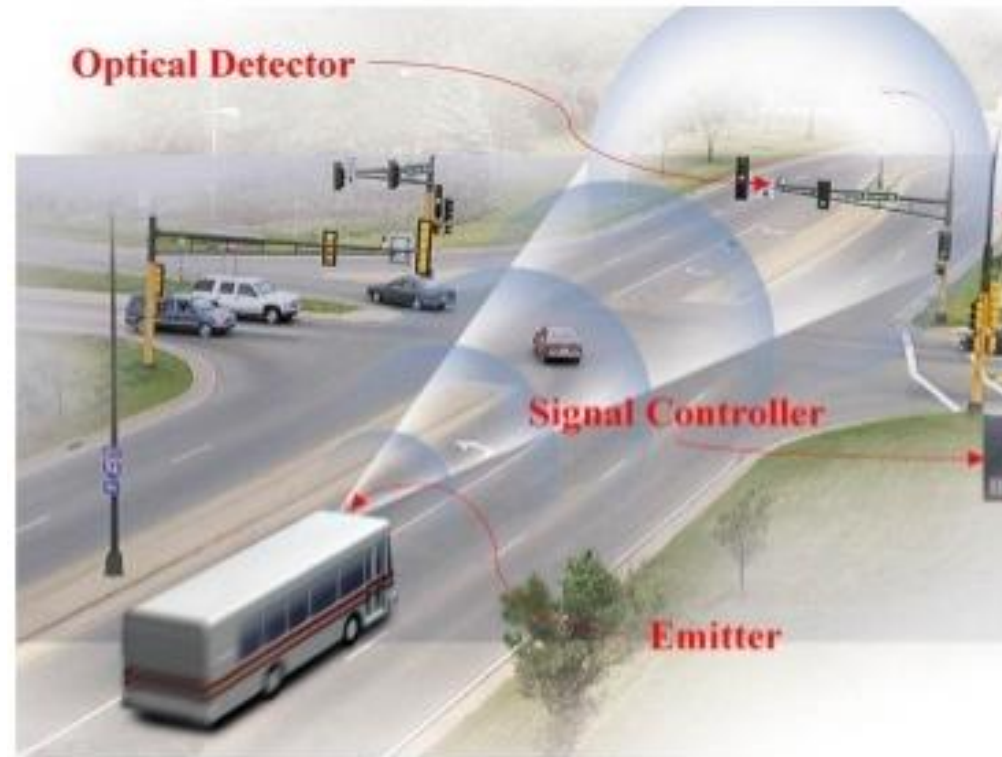


Service Frequency and Ridership Estimates

BERT ROUTE MAP ID	BERT Route	Frequency		2015 STOPS Ridership Range
		Peak Hour	Off-Peak	
B	South Miami-Dade Express	10	30	8,500
C	Northwest Miami-Dade Express	20	n/a	500
D	Southwest Miami-Dade Express	20	n/a	1,600
E1	Florida's Turnpike South	15	30	500
E2	Florida's Turnpike North	20	n/a	200
F1	Beach Express North	10	20	8,000
F2	Beach Express Central	15	30	1,400
F3	Beach Express South	15	15	2,300

Transit Signal Priority - Early Green/Green Extension

Early Green/Green extension is a form of Transit Signal Priority. This phase is only activated by a transit vehicle, it is not a pre-programmed signal phase.



Kamila Widulinski and Matthew Lapointe (2013)

- Green extension
Early Green
- (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

Traffic Signal Recommendations

Route	Intersection	Recommendation
South Miami Dade Express	<ul style="list-style-type: none"> HEFT @ 117th and 152nd Avenues 	Early green/green extension
Beach Express North (same signal recommendations for Beach Express Central for City of Miami Beach)	<ul style="list-style-type: none"> Old Alton Rd @ 41 Street 41 Street @ Indian Creek Dr Collins Ave @ 17th St 	Early green/green extension Early green/green extension Early green/green extension
SW Miami Dade Express	<ul style="list-style-type: none"> SW 137th Avenue @ SW 128th Street 	Early green/green extension
Northwest Miami Dade Express	<ul style="list-style-type: none"> SR 826 @ NW 74 street On/Off ramps NW 77 Ct. @ NW 74 Street 	Signal phase insertion for transit use Early green/green extension
Turnpike Express South	<ul style="list-style-type: none"> HEFT @ SW 8th Street ramps Snapper Creek Rd. @ SW 8th Street SW 8th Street @ SW 109 and SW 112 Ave 	Early green/green extension Early green/green extension Early green/green extension
Turnpike Express North	<ul style="list-style-type: none"> HEFT @ NW 27th Avenue ramps 	Early green/green extension
Beach Express Central	<ul style="list-style-type: none"> NW 12th Avenue @ NW 14 and NW 12 St 	Early green/green extension
Beach Express South	<ul style="list-style-type: none"> Biscayne Blvd. @ NE 8th, 9th, 10th, 13 St and 11 Terrace TSP at each Miami Beach signalized intersection 	Early green/green extension

Traffic Signal Recommendations



Beach Express North Transit Signal Priority

Early Green/Green extension
activated by bus.

- Old Alton Rd @ 41 Street
- 41 Street @ Indian Creek Dr
- Collins Ave @ 17th St

Beach Express North – Interim Service Update

- DTPW coordinating with cities of Miami Beach & Miami, FDOT and FHWA to implement Route F1 interim service prior to official launch in 2023.
- Interim service for Route F1 contingent on following:
 - DTPW & cities to confirm route for interim service
 - DTPW to prepare Concept of Operations to justify use of shoulders with FHWA,
 - FDOT to prepare outside shoulder for safe operations,
 - DTPW to conduct outreach with cyclists to notify of the reserved use of the outside shoulder for transit operations,
 - DTPW will provide buses for interim service,
 - Funding for the O&M costs for the interim service is still pending.

Service anticipated to begin early 2021, or upon completion of above.
Ridership forecast: 8,000



For more information

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