SOUTHEAST FLORIDA REGIONAL TRANSPORTATION PLAN 2050

Miami-Dade • Broward • Palm Beach

Technical Memorandum

April 18, 2025 Project# 27613

To: Regional Technical Advisory Committee (RTTAC)

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RE: 2050 RTP Accessibility Analysis

INTRODUCTION

The purpose of the 2050 RTP Accessibility Analysis is to evaluate how well transit currently supports regional transportation across the three-county region and the potential of proposed projects to improve access for residents. The analysis evaluated the level of access Southeast Floridians have under the current (2024) operating transit network and the 2050 transit network. Broadly, the goal of this evaluation is to understand how existing transit services and future planned services connect the region and support the travel needs of current and future residents.

This memorandum documents the regional destinations assumed in the analysis, the scenarios analyzed, the analysis methodology, and findings.

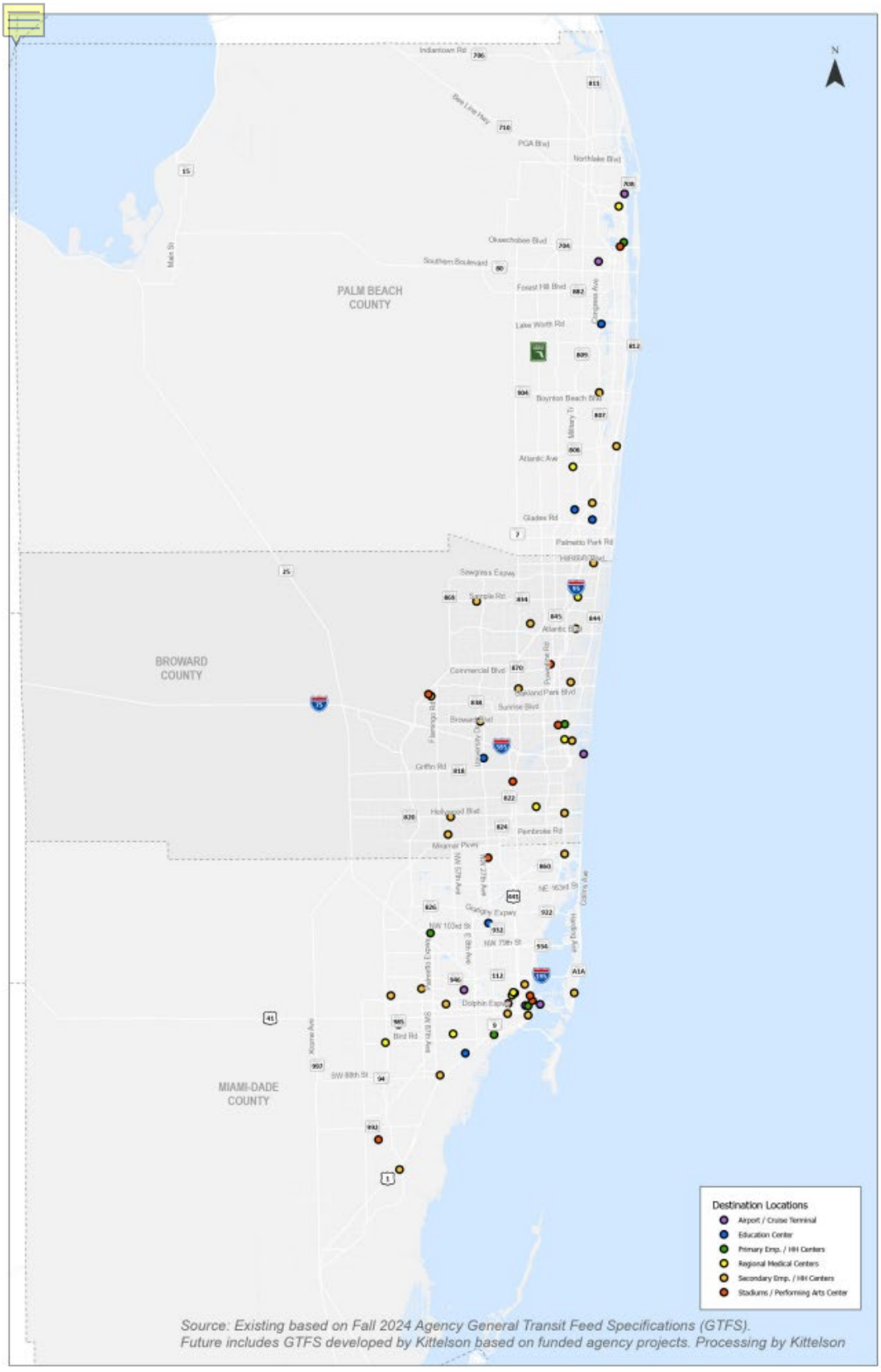
REGIONAL DESTINATIONS

The starting point for defining location categories was the 2040 RTP transit plan. The list was then refined based on feedback from the RTTAC and organized into six categories of locations described in **Table 1**. The specific locations are depicted in **Figure 1**.

Table 1: Regional Destination Categories

Category	Locations	Description
Primary Centers	5	Locations with the highest concentrations of people and jobs
Secondary Centers	25	Regionally important destinations where people and jobs are concentrated
Airport / Cruise Terminals	6	Airports and cruise terminals that connect residents and visitors to destinations outside of Southeast Florida
Stadium / Performance Centers	10	Locations that draw a regional audience to sports and entertainment events
Education Centers	7	State Colleges and Universities
Regional Medical Centers	10	Specialty medical centers and hospitals with level 1 trauma centers

Figure 1: Regional Destinations



ANALYSIS SCENARIOS

Regional accessibility was evaluated for two scenarios, defined below:

- **Current Network:** The existing operating transit system in Miami-Dade County, Broward County, and Palm Beach County as of fall 2024.
- **Future Network**: The Current Network plus the future 2050 LRTP planned transit in Miami-Dade TPO's Cost Feasible Plan, in Broward MPO's Illustrative Plan, and Palm Beach TPA's Cost Feasible Plan.

Transit schedules used in the analysis use Fall 2024 schedule data as reported in each agency's general transit feed specifications (GTFS). GTFS is the standard dataset form used by transit agencies to report transit schedules for travel planning services, such as google maps.

For the Future Network, new and improved transit routes were identified and modeled using the transit planning application Remix. For each route, service plans were developed using the available data about planned service, including stop location or stop spacing, route alignment, frequency of service, and overall vehicle speed. Table 2 summarizes the new and improved services added for the Future Network.

The analysis evaluates travel time based on transit schedules. Travel times do not consider changes in roadway conditions that could impact the accuracy of published schedules.

Table 2: Future Network Added Service

County	Service	Name
Miami-Dade	Rail	Extends Dadeland South Metrorail Station to Florida City
Miami-Dade	Rail	Extend Metrorail to North Corridor
Miami-Dade	Rail	Metromover Beach Corridor and Trunkline
Miami-Dade	Bus	Bus Rapid Transit Routes along: • SR 825 / SW 137 Street • SR 826 • SR 860 / NW 183rd Street • SR 9 / 27th Avenue • SR 932 / NW 103rd Street • SR 934 / 79th Street • SR 948 / 36th Street • SR 992 / SW 152 • SR A1A / Alton Road • US 27 / Okeechobee Road • US 441 / NW 7th Avenue • Kendall Drive
Broward / Miami-Dade	Rail	Commuter Rail between Broward and Miami along the FEC Rail Corridor
Broward	Bus	Bus Rapid Transit along Oakland Park Blvd
Broward	Bus	Bus Rapid Transit along US 441 / SR 7
Broward	Light Rail	Light Rail Train, Airport-Seaport-Convention & Downtown Connector
Palm Beach	Bus	Enhanced Bus Service along Routes 40 / 43

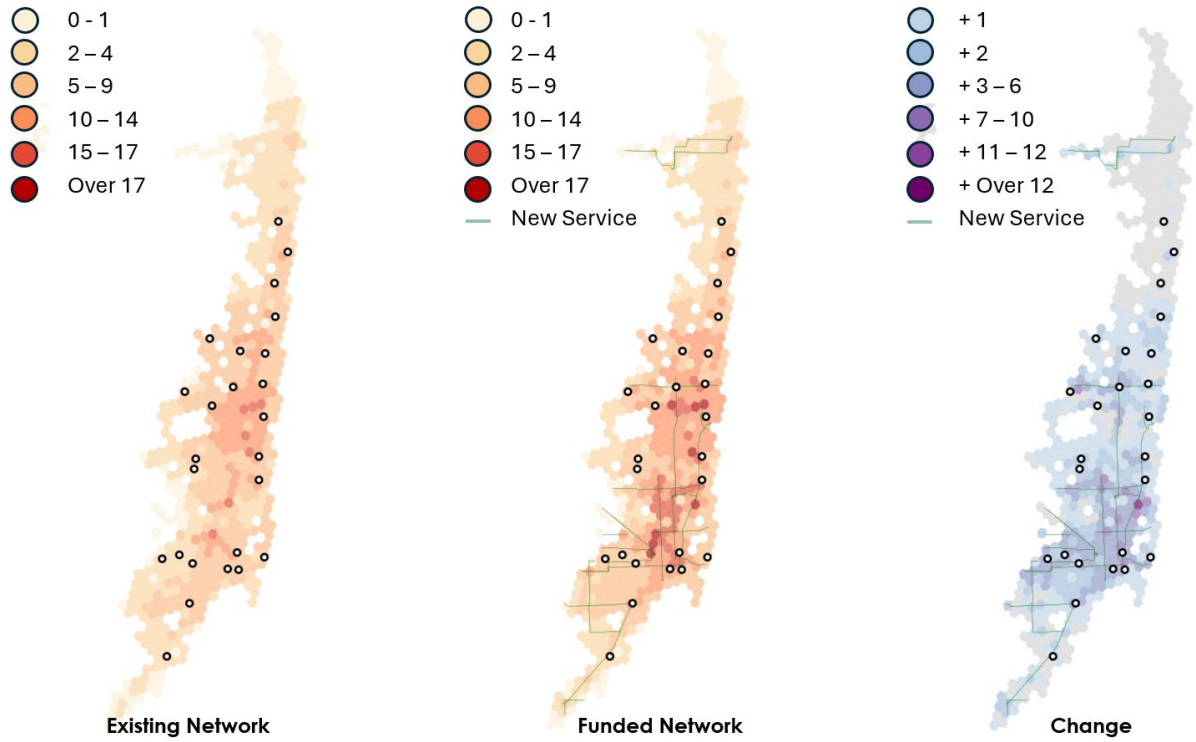
ANALYSIS METHODOLOGY

Step 1: Measure Travel Time

For each regional destination shown in Figure 1, travel times were calculated for the weekday AM Peak traveling to bus stops within a quarter mile or train stops within a half mile of the destination from all other transit stops in SE Florida. Trips were reviewed to identify the shortest route between equally spaced locations across the region to the destination, creating a "transit shed" around each destination. Travel times do not include travel time to and from stations to and from true trip origins or destinations. The focus of the analysis is on larger connectivity and travel time to stations is impacted by factors such as choice of travel mode that varies by individual (e.g., driving to a Metrorail station is faster than walking).

Travel time was then aggregated for each regional destination to identify how many regional destinations by category can be reached in under 30 minutes, 31 to 60 minutes, and 61 to 90 minutes across SE Florida. For example, how many Primary Centers can be reached in 30, 60, or 90 minutes for areas across SE Florida. **Figure 2** shows the number of Primary Centers that can be accessed under the Current Network and Future Network in under 90 minutes (i.e., this aggregates totals for under 30 minutes, 31 – 60, and 61 – 90 minutes).

Figure 2: Primary Employment / Household Locations within 90 Minute Transit Service



Step 2: Create Accessibility Score

Step 1 results were then used to create a composite Access Score. First, the results were summarized for spaced locations across SE Florida. **Table 3** to **Table 5** provide examples of the data for three areas describing the number of locations accessible by time for each destination category.

Table 3: West Palm Beach Example (Palm Beach County)

Category	Current Network Scenario 0 – 30 / 31 – 60 / 61 - 90			Future Network Scenario 0 – 30 / 31 – 60 / 61 - 90		
Primary Centers	1	1	1	1	1	1
Secondary Centers	0	2	5	0	2	6
Airport / Cruise Terminals	0	0	1	1	0	1
Stadium / Performance Center	1	1	0	1	1	0
Education Centers	0	1	1	0	2	1
Regional Medical Centers	0	2	2	0	2	2

Table 4: Hollywood Example (Broward County)

Category	Current Network Scenario 0 – 30 / 31 – 60 / 61 - 90			Future Network Scenario 0 – 30 / 31 – 60 / 61 - 90		
Primary Centers	0	1	2	0	3	2
Secondary Centers	2	3	7	3	6	8
Airport / Cruise Terminals	0	0	1	0	2	2
Stadium / Performance Center	0	2	1	0	6	4
Education Centers	0	0	3	0	3	3
Regional Medical Centers	1	1	4	2	3	5

Table 5: Wynwood / Miami Design District Example (Miami-Dade County)

Category	Current Network Scenario 0 – 30 / 31 – 60 / 61 - 90			Future Network Scenario 0 – 30 / 31 – 60 / 61 - 90		
Primary Centers	2	0	2	2	0	2
Secondary Centers	1	3	2	2	5	8
Airport / Cruise Terminals	2	1	0	2	1	0
Stadium / Performance Center	3	0	2	3	2	2
Education Centers	0	2	0	2	0	0
Regional Medical Centers	3	0	3	3	1	4

Next, a scoring matrix was created to assign an accessibility score based on the number, type, and travel time of the destinations to a location (see **Table 6**). The scoring gives more points for primary and secondary centers as these represent more frequently visited destinations than the other location types, which are regionally important but visited either less frequently or used by a smaller subset of the population. For each destination type and travel time, the number of corresponding destinations was multiplied by the number of locations and aggregated to create a single accessibility score.

Table 6: Points Assigned for each Location by Transit Travel Time

Category	Pts per Location 0 – 30 Minutes	Pts per Location 31 – 60 Minutes	Pts per Location 61 – 90 Minutes
Primary Centers	5	4	3
Secondary Centers	3	2	1
Airport / Cruise Terminals	2	1	0.5
Stadium / Performance Center	2	1	0.5
Education Centers	2	1	0.5
Regional Medical Centers	2	1	0.5

Scores across SE Florida were then reviewed and grouped to create defined Access Levels for comparing relative access for the Existing Network and Funded Network. The levels are summarized in **Table 7** with descriptions for clearly communicating results to a public audience.

Table 7: Transit Access Groupings

Category	Range
Highest Access	Over 55 points
High Access	41 to 55 points
Medium Access	31 to 40 points
Low Access	15 to 30 points
Limited Access	Under 15 points

FINDINGS

Figure 3 shows transit accessibility under the Current Network and Funded Network. **Figure 4** shows the change in accessibility scores with notes highlighting specific changes. Access is a product both of quality and coverage of transit service and the density of destinations. The highest accessibility is found in density rich locations, such as downtown Miami; however, the map of changes shows that changes in access are greatest just outside of the core areas where improved transit provides increased access to destination rich areas and rail service.

Changes in regional access are particularly notable along several corridors. Figure 4 is annotated with number that correspond to the numbers used below for reference:

1. [Bus Service] **Palm Beach** – Service increases speed of east-west connection. Overall accessibility benefits are smaller than in Broward and Miami-Dade, because there are relatively fewer regional destinations in Palm Beach.
2. **Oakland Park BRT, Broward County** – Service increases speed of east-west connection, improving accessibility to destinations in the eastern part of the County and connections to north-south regional rail services.
3. **[Name 1, Name 2, Name 3, Name 4], Miami-Dade** – East-West Routes increases the speed of connections to the eastern part of the three-county area where there is a higher density of destinations and faster regional rail service, including Tri-Rail and Brightline.
4. **Extend Dadeland South Metrorail Station to Florida City, Miami-Dade** – Service creates faster connection to Miami and communities along South Metrorail. Accessibility improvements are concentrated around planned stations.
5. **Extend Metrorail to North Corridor and Commuter Rail along FEC Rail Corridor, Miami-Dade** - Services create new and faster North-South connections between communities along each corridor.

In addition to specific corridors, there are more generalized impacts that are less obvious in the figures:

- Throughout Miami-Dade County, the proposed network of bus rapid transit and improved north-south rail provides faster travel. By adding both east-west and north-south corridors, the proposed projects allow for efficient trips that use two complementary routes.
- Note that some projects do not provide substantial increases in regional accessibility. This is either because benefits are targeted towards faster service in a local congested area (Fort Lauderdale Light Rail) or because the area has relatively fewer regional destinations (east / west bus Palm Beach).

Figure 3: Current Network and Future Network Accessibility Score Maps

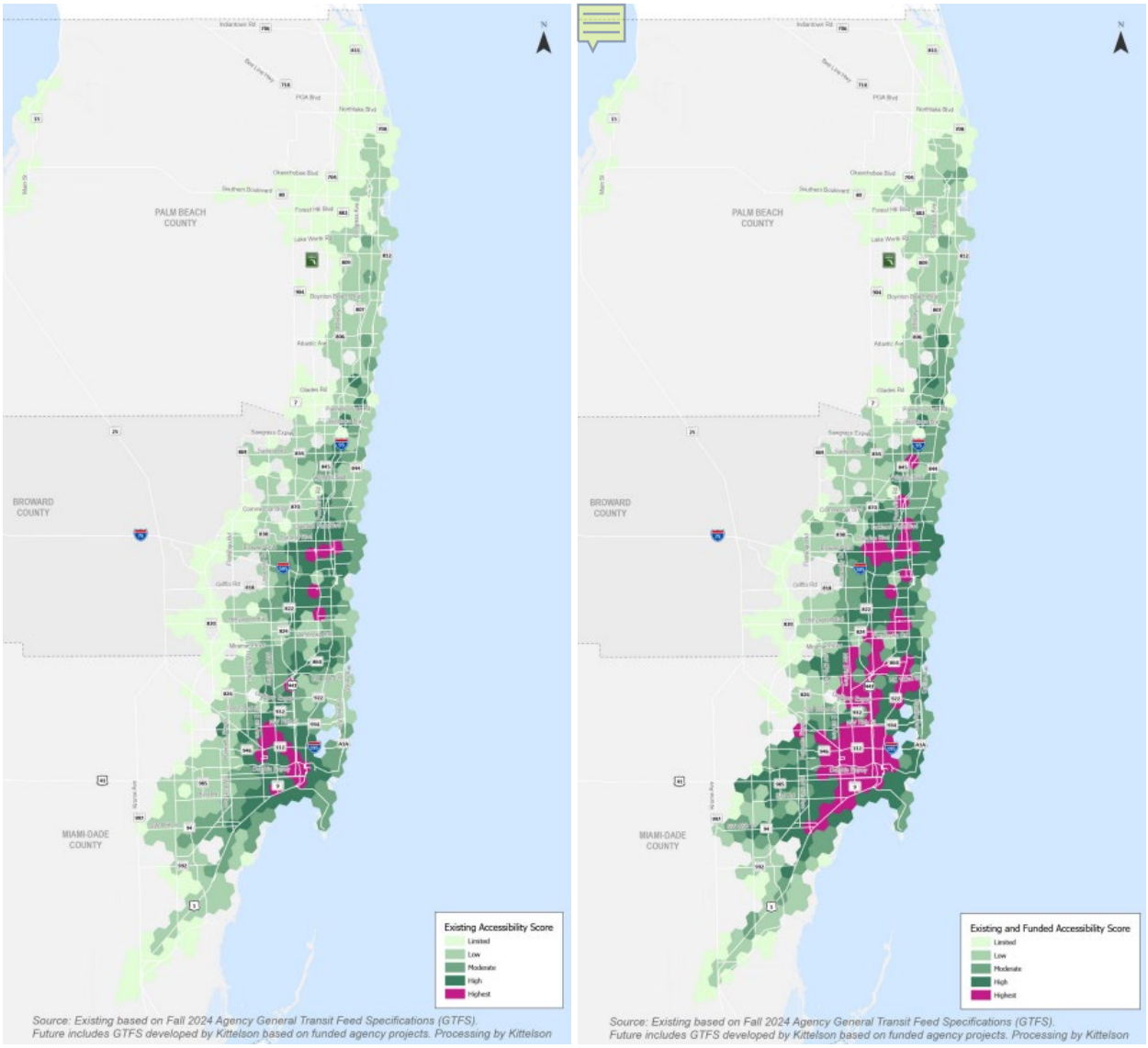
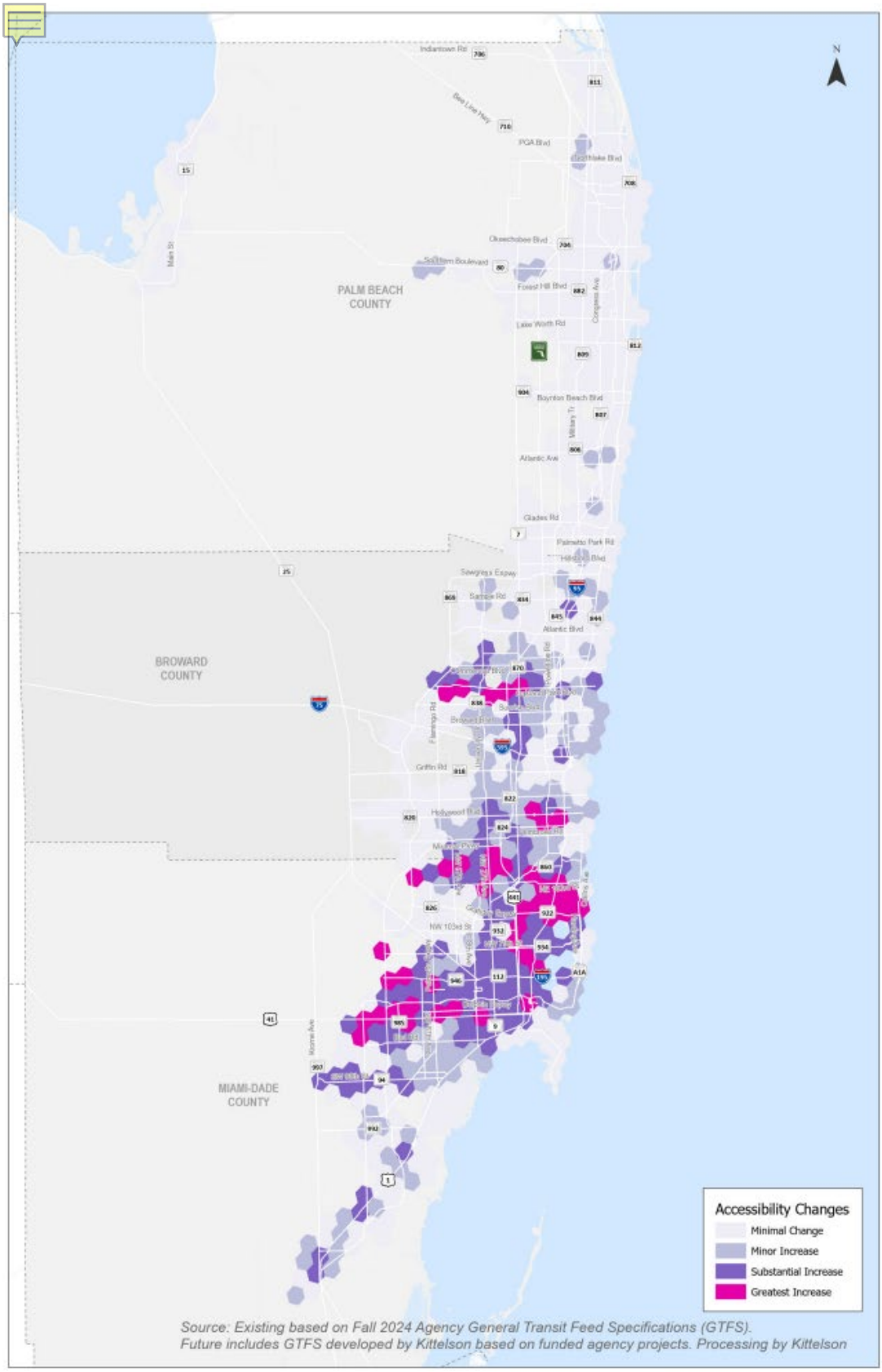


Figure 4: Accessibility Score Change (between Current Network and Future Network)



Transit accessibility scores were then combined with population data developed for the 2050 model year in the Southeast Florida Regional Transportation Model Version 9 (SERPM9) to measure how residents will be impacted by the new services under the Funded Network. The analysis was completed by overlaying TAZs from SERPM9 with the accessibility scores. Each TAZ was scored by categorizing the TAZ based on the overlapping accessibility scores. If multiple scores overlapped with a single TAZ, Kittelson assigned the score from the highest score. **Table 8** summarizes the 2050 population by accessibility group for the Existing Network and Funded Network and change by group.

Table 8: Population by Accessibility

Category	Existing Network	Funded Network	Change
Population with Highest Access	**451,000**	**1,466,000**	**+ 1,015,000**
Population with High Access	**1,122,000**	**1,408,000**	**+ 286,000**
Population with Medium Access	1,138,000	1,215,000	- 77,000
Population with Low Access	2,712,000	1,835,000	- 877,000
Population with Limited Access	2,065,000	1,564,000	- 501,000
Total	**7,488,000**	**7,488,000**	**-**

Source: Kittelson developed transit accessibility scores with SERPM9 population projections for 2050.

The results indicate that the funded transit projects broadly increase the number of people that have access to major regional destinations via transit. The implementation of planned cost-feasible and illustrative transit services in the region will result in 1.3 million residents gaining access to regional destinations using public transit. Understanding impacts on existing and future residents is critical for understanding transit project impacts as population density is not uniform across the three-county region and the funded transit projects are in areas of existing or planned higher population density.