Rule 14-57.010, F.A.C.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RAILROAD GRADE CROSSING APPLICATION

725-090-66
RAIL
01/12

ROAD NAME OR NUMBER	COUNTY/CITY NAME
NW 2nd Street	Broward / Fort Lauderdale

A. IDENTIFICATION

Submitted By:

Applicant: Florida East Coast LLC.

Office: Engineering

Telephone: (904) 279-3182

Address: 7150 Phillps Highway

Jacksonville, Fl. 32256

Application For:

☒ **Closing** a public highway-rail grade crossing by:
- ☒ roadway removal
- ☐ rail removal

☐ **Opening** a public highway-rail grade crossing by:
- ☐ new rail line construction
- ☐ new roadway construction
- ☐ conversion of private to public highway-rail grade crossing

B. CROSSING LOCATION

FDOT/AAR Crossing Number: 272554D

Jurisdiction for Street or Roadway by Authority of: ☒ City ☐ County ☐ State

Local Popular Name of Street or Roadway: NW 2nd Street

Railroad Company: Florida East Coast Railroad

Railroad Mile Post: 340.91

Submitted for the Applicant by: Andrew G. Fowler Jr. Chief Engineer DATE: 5/28/14
Name and Title Signals & Communications

Application FDOT Review by: J. Bordelon DATE: 6/9/14
Central Rail Office

REFERENCES:
(Specific Legal Authority) 334.044 F.S., 120.57 F.S.
(Law Implemented) 335.141 F.S.
(Administrative Rule) 14-57.012 F.A.C.

CLOSING APPLICATION QUESTIONNAIRE

Maps, aerials, and supporting documentation must be provided with the application.

If all parties, Applicant, Railroad, and Department, fail to agree to the rail crossing closure through a Stipulation of Parties, the Applicant must establish the closure meets the criteria found in Rule 14-57.012, Florida Administrative Code. This questionnaire will assist the Department in evaluating the criteria and is not intended to be an exclusive list of factors.

Florida Administrative Code criteria:

A) Safety

a-1. How will the crossing closure affect safety to drivers, pedestrians, cyclists, and rail personnel? The crossing closure will have minimum affect on the safety to drivers, pedestrians, cylclists and rail personnel. At NW 2nd Street the eastbound drivers, pedestrians and cyclists will need to travel north 700' along NW 5th Ave. to NW 4th Street to cross the tracks. The westbound drivers, pedestrians and cyclists will need to travel south 670' along NW 1st Ave. to Broward Blvd. to cross the tracks. The safety to the rail personnel will be improved due to the reduced potential for an incident occuring at the crossing.

a-2. What, if any, safety measures are proposed for adjacent crossings? The signalization at the adjacent crossings are being upgraded to constant warning.

a-3. Identify all highway traffic control devices and highway traffic signals at adjacent crossings that may be improved or upgraded if the subject crossing is closed. The adjacent crossing are at NW 4th St. and Broward Blvd. There are no highway traffic signals at the intersections near the NW 4th St. crossing. The highway traffic signals at the intersections west of the tracks on Broward Blvd. are relatively new and there are no plannned upgrades for the highway signals or traffic control devices.

a-4. What is the distance from the subject crossing to the nearest intersection? Identify the street. 670' to Broward Blvd.

a-5. Are there structures, fences, or vegetation near the subject crossing that inhibits sight distance? No.

a-6. Identify major traffic generators (i.e., businesses, shopping malls, recreational areas, special events, etc.) in this area. Specify type, location, and distance to subject crossing. Riverfront (shopping, 1,600' south), Downtown Fort Lauderdale (businesses/entertainment, 3,000' south and east), Broward Center for Performing Arts (entertainment, 2,300' south & west).

a-7. Is the crossing located on a designated evacuation route? No.

a-8. Provide a traffic operations and safety analysis, with traffic issues evaluated for the railroad crossing closure. This analysis should include all adjacent rail crossings and roadways in the immediate vicinity and the increase in traffic predicted on these roadways from rerouting. See attached "Traffic Impact analysisfor NW 2nd Ave Connector Fort Lauderdale, Florida &Traffic Reevaluation".

B) Necessity for rail and vehicle traffic

b-1. Is the crossing necessary to access property? No.

b-2. Provide description of land use on each side of the rail crossing. Mixed use but primarily Commercial on both sides.

b-3. Are there any churches, schools, or hospitals within a mile or less of the subject crossing? Please list by name and location. Yes. See attached lists.

b-4. Annual Average Daily Traffic (AADT) at the crossing? Per latest data available (2011) ADT=4,770.

b-5. Level of service at the crossing? Level B

b-6. Percentage of truck traffic? Estimated at less than the typical 2%.

b-7. Do trucks carrying hazardous materials use the crossing? No info available. If so, approximately how many trips per day or week?

b-8. How many school buses use the crossing daily? None.

b-9. What is the estimated number of pedestrians and bike riders that use the subject crossing (daily/weekly)? Estimated at 5+/- per day and 30+/- per week.

b-10. Is the subject crossing on a local transit route? No.

b-11. Please provide any corridor studies or other preliminary traffic engineering studies that pertain to this crossing. See attached "Traffic Impact analysisfor NW 2nd Ave Connector Fort Lauderdale, Florida & Traffic Revaluation".

C) Alternate Routes

c-1. Are there access roads available to property owners if the crossing is closed? Yes.

c-2. Name routes that can be used if the crossing is closed? Eastbound traffic will travel north on NW 5th Ave. to NW 4th St., east on NW 4th St. to NW 1st Ave. then south to NW 2nd St. Westbound traffic will travel south on NW 1st Ave. to Broward Blvd. west on Broward Blvd. to NW 2nd Ave then north to NW 2nd St. Initially, a temporary road closue is proposed pending final roadway design and installation to be performed in conjuction with the station development (see attached Plan Sheet No. 118-A).

c-3. Are there traffic signals on these routes? Only at NW 1st St. and Broward Blvd.

c-4. How does the proposed crossing closure impact the AADT at nearby public crossings? Provide estimated traffic count changes. By 2035 the traffic counts along Broward Blvd.are estimated to increase between 96 and 337 above current levels (an impact of 0.17 % to 0.61%). Along NW 6th St. the estimated increase in traffic counts is between 48 and 77 above current levels (an impact of 0.13% to 0.29%).

c-5 By driving alternate routes, during peak times, calculate the additional travel time and distance between two points (nearest intersection or major access) on either side of the subject crossing. Provide calculated times, routes, and distances. Traveling from NW 2nd St. on NW 5th Ave. to NW 4th St. to NW 1st Ave. to NW 2nd St. is 2,800' and will take approximately 6 min. (due to right turns). Traveling from NW 2nd St. on NW 1st Ave. to Broward Blvd. to NW 2nd Ave. to NW 2nd St. is 1,750' and will take approximately 5 min. (due to right turns).

D) Effect on rail operations and expenses

d-1. Provide current number and type of rail tracks at the subject crossing. 2 Tracks

d-2. Are there rail sidings or switches in the location of the subject crossing? No.

d-3. Is there a nearby rail yard? No. If so, what is the distance of the yard to the subject crossing. N/A

d-4. Provide the current number of daily train movements (number of switching or thru trains; number of passenger or freight trains). No current passenger or switching trains. Daily freight train movements are 12 (6 northbound and 8 southbound).

d-5. Provide the approximate times during the day and evening that the crossing is blocked. On an average of once every 2 hours.

d-6. Provide the approximate length of time (i.e., minutes) that the crossing is blocked. 5 Minutes.

d-7. Provide minimum and maximum train speeds at the subject crossing. 60 mph maximum for freight.

d-8. What is the anticipated expansion of tracks and/or train movements? 1 additional track.

d-9. What is the distance from the subject crossing to adjacent public crossings? (Identify adjacent crossings by road name and crossing number.) 700' north to NW 4th St. (# 272553W) and 680' south to Broward Blvd (# 272556S).

E) Excessive restriction to emergency type vehicles resulting from closure

e-1. Provide response from the Sheriff/Police Chief and Fire Chief to the proposed crossing closure. Forthcoming pending meeting with city officials.

e-2. Based on observation, the response from the City/County, or traffic studies, is this a route that emergency rescue would typically use? No.

e-3. How many emergency rescue vehicles have used the crossing to respond to calls in the past 2-3 years? Forthcoming pending meeting with city officials.

F) Design of the grade crossing and road approaches

f-1. Identify and describe the condition of: crossing surface, rail warning devices (including pavement markings, signs, and highway traffic signals), sidewalks, bike lanes, and approaches on each side of subject crossing. The rail crossing surface, gate mechanisims and signs are in good condition. The pavement surface and markings approaching the crossing are in poor condition. Sidewalks in the area are in good condition, however the shoulder pavement between the ends of the sidewalks and the crossing is in poor condition.

f-2. Is the crossing surface and track higher than either side of the road (i.e., hump crossing)? Yes. 15"+/- on each side.

f-3. What is the vehicular design speed at the subject crossing? 25 mph.

f-4. Number of lanes at the crossing? 2 lanes

f-5. Width of crossing? 42'

f-6. Condition of roadway? Fair.

G) Presence of multiple tracks and their effect upon railroad and highway operations

g-1. Please confirm the number of tracks at the location and identify each track. 2 tracks for freight.

g-2. How many train movements occur on each track and the types of trains that run on each track (passenger, thru freight, or switching freight and the number of cars)? 6 northbound and 6 southbound freight movements with approximately 150 cars each.

Railroad Grade Crossing Application

Location: NW 2nd Street, Ft Lauderdale, FL

Crossing Number: 272554D

Mile Post: 340.91

Documentation in response to Item b-3

Churches

1) First Baptist Church, 301 E Broward Blvd. Fort Lauderdale, FL, 33301
2) First United Methodist Church, 101 SE 3rd Avenue, Fort Lauderdale, FL, 33301
3) Saint Anthony Catholic Church, 901 NE 2nd Street, Fort Lauderdale, FL 33301
4) First Lutheran Church ELCA, 441 NE 3rd Ave., Fort Lauderdale, FL , 33301
5) All Saints Episcopal Church, 333 Tarpon Dr., Fort Lauderdale, FL 33301
6) United Pentecostal Church of Hollywood, Broward Blvd, Fort Lauderdale, FL 33301
7) New Hope Baptist Church, NW 6th Street, Fort Lauderdale, FL, 33301
8) 5th Ave Temple Church of God, 211 NW 5th Ave, Ft Lauderdale, FL 33311
9) St Christopher Episcopal Church, 318 NW 6th Ave, Ft Lauderdale, FL 33311
10) St Luke Baptist Church, 210 NW 6th Ave. Ft Lauderdale, FL 33311
11) Mt Herman AME Church, 401 NW 7th Terrace, Ft Lauderdale, FL 33311
12) New Mount Olive Baptist Church, 401 NW 7th Terrace, Ft Lauderdale, FL 33311
13) Seven Day Adventist Church of Pompano Beach, NE 2nd Street, Ft Lauderdale, FL 33311
14) Downtown Jewish Center Chabad, 900 East Broward Blvd, Ft Lauderdale, FL 33301
15) Full Gospel Church of Living God, NW 6th Street, Ft Lauderdale, FL 33301
16) Shaw Temple AME Zion Church, 522 NW 9th Ave. Ft Lauderdale, FL 33311
17) Pompano Beach Presbyterian Church, NW 2nd Ave., Ft Lauderdale, FL 33311
18) First Ebenezer Missionary Church, 312 NW 7th Street, Ft Lauderdale, FL 33311
19) Grace Baptist Church, 812 NW 3rd Street, Ft Lauderdale, FL 33311
20) Emmaus Baptist Church, 701 NW 2nd Ave., Ft Lauderdale, FL 33311
21) Muhammad Mosque 82, 1021 NW 6th Street, Ft Lauderdale, FL 33311
22) Assembly of God-Evangel Church, NW 4th Street, Ft Lauderdale, FL 33311

Schools

1) Stranahan High School, 1800 Southwest 5th Place, Ft Lauderdale, FL 33312
2) Broward College, 225 East Las Olas Boulevard, Ft Lauderdale, FL 33301
3) Florida Atlantic University, 111 East Las Olas Blvd Ft Lauderdale, FL 33301
4) St Anthony Catholic School, 820 Northeast 3rd Street, Ft Lauderdale, FL 33301
5) Ft Lauderdale High School, 1600 NE 4th Avenue, Ft Lauderdale, FL 33305
6) South Florida Montessori Academy, 642 NW 3rd Avenue, Ft Lauderdale, FL 33311
7) Walker Elementary School, 1001 NW 4th St, Fort Lauderdale, FL 33311
8) Virginia Shuman Young Elementary School, 1001 NW 4th St., Ft Lauderdale, FL 33311
9) Gospel Arena Christian School, 613 NW 3rd Ave, Ft Lauderdale, FL 33311
10) Barry University, 201 Southeast 1st Ave, Ft Lauderdale, FL 33301
11) Bethany Christian School, 615 SE 9th Street, Ft Lauderdale, FL 33316

Hospitals

1) Boca Raton Regional Hospital, 790 East Broward Blvd, Ft Lauderdale, FL 33301

PROPOSED TRI-RAIL COASTAL LINK LOW LEVEL PLATFORM (14'-11" WIDE MAX)

PROPOSED AAF HIGH LEVEL PLATFORM (35' WIDE)

℄ PROP. TRI-RAIL TRACK

PROPOSED TRI-RAIL COASTAL LINK LOW LEVEL PLATFORM (17' WIDE)

N

0 5 20
Feet

+67.55
25.63' LT

CONST. TYPE 'K' TEMP. BARRIER WALL

+71.60
19.88' LT

CONST. TYPE 'K' TEMP. BARRIER WALL

S 8" SAN

20-4" BT

NW 2ND STREET

2+00

3+00

4+00

4" FOC

℄ CONST. NW 2ND ST.

12" WM

+71.85
17.62' RT

7.6KV

+67.47
36.87' RT

10" SAN

8" WM

2-4" BT

PHASE 1 WORK

FUTURE WORK

NW 2ND STREET
CITY OF FORT LAUDERDALE
MP 340.91
DOT# 272554D

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GIUSEPPE G. VAN OORDT, P.E.
P.E. LICENSE NUMBER 76923
URS CORPORATION SOUTHERN
7800 CONGRESS AVENUE, SUITE 200
BOCA RATON, FL 33487
CERTIFICATE OF AUTHORIZATION EB 00000002

ALL ABOARD FLORIDA

AAF CONTRACT	SECTION	COUNTY
	2ND	BROWARD

ROADWAY PLAN

SCALE: 1"=20'

4/30/2014

SHEET NO. 118-A

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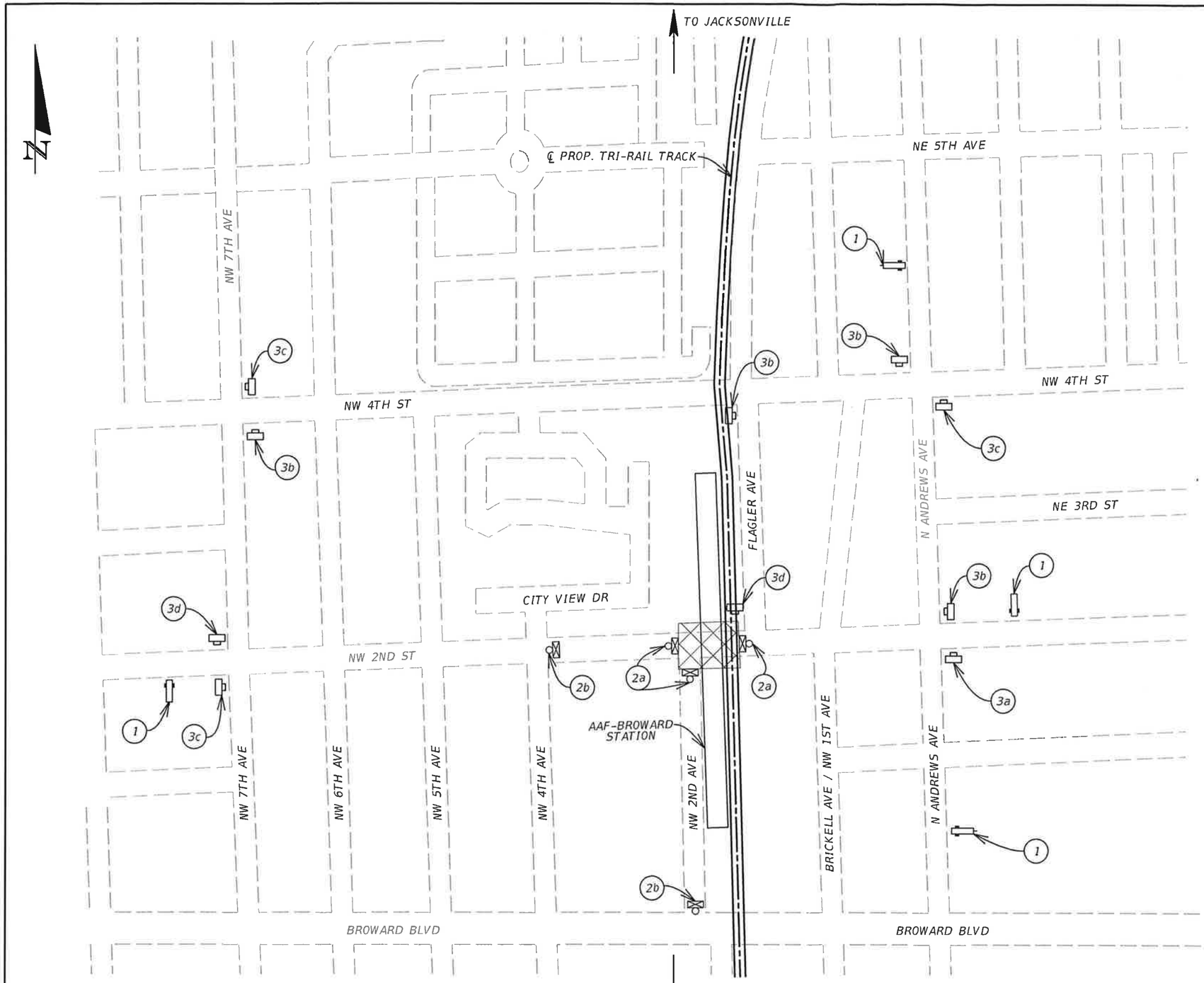

WORK ZONE - ROAD CLOSURE

(1) VARIABLE MESSAGE SIGN

NW 2 ST R.R. CROSSING — CLOSED DETOUR AHEAD

(2) TYPE III BARRICADE

(a) WITH "ROAD CLOSED" SIGN

(b) WITH "ROAD CLOSED TO THRU TRAFFIC" SIGN

(3) WORK ZONE SIGN ASSEMBLY

(a) DETOUR ↑

(b) DETOUR →

(c) DETOUR ←

(d) END DETOUR

℄ PROP. TRI-RAIL TRACK

NW 2ND STREET DETOUR - M.P. 340.91

REVISIONS							
DATE	DESCRIPTION	PATSY FUSCHETTO, P.E. P.E. LICENSE NUMBER 70364 URS CORPORATION SOUTHERN 7800 CONGRESS AVENUE, SUITE 200 BOCA RATON, FL 33487 CERTIFICATE OF AUTHORIZATION EB 00000002	ALL ABOARD FLORIDA			PHASE I TRAFFIC CONTROL PLAN	SCALE: N.T.S.	SHEET NO.
			AAF CONTRACT	SECTION	COUNTY		4/29/2014	109
				2ND	BROWARD			

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All Aboard Florida

Development of Passenger Rail Service from Downtown West Palm Beach to Downtown Miami

Traffic Reevaluation for the proposed Fort Lauderdale Station Location Change

1. Introduction

All Aboard Florida-Stations LLC and All Aboard Florida-Operations LLC (AAF) is proposing to develop passenger rail service from downtown West Palm Beach to downtown Miami. The service will include stations at West Palm Beach, Fort Lauderdale, and Miami. **The** rail service will provide intercity passenger service for business and leisure passengers with a new convenient, cost-effective, and environmentally friendly mode of transportation connecting South Florida with Central Florida. An evaluation of traffic impacts associated with the proposed rail service and each of the train station was documented in the Environmental Assessment (EA) completed approved by the federal agencies in October 2013.

Initially (in the EA) the Fort Lauderdale rail station was proposed along the east side of the Florida East Coast (FEC) rail corridor between Broward Boulevard to the south and NW 4th Street to the north. However the proposed station location has been moved to along the west side of the Florida East Coast (FEC) rail corridor between Broward Boulevard to the south and NW 4th Street to the north. Figures 1 and 2 shows the original proposed location and the revised proposed location for the Fort Lauderdale rail station. As seen from these figures the station is merely being shifted from one side of the FEC rail to the other side within 150 feet from the original proposed location.

The purpose of this memorandum is to document any new traffic impact resulting from this change and to demonstrate that the analysis and the impacts documented in the EA are still valid. Detailed evaluation is contained in the EA and no changes are proposed for the stations at West Palm Beach and downtown Miami. Although two alternative locations were studied for the Fort Lauderdale rail station in the EA, this reevaluation only refers to the preferred Fort Lauderdale-North station and compares it to the revised station location.

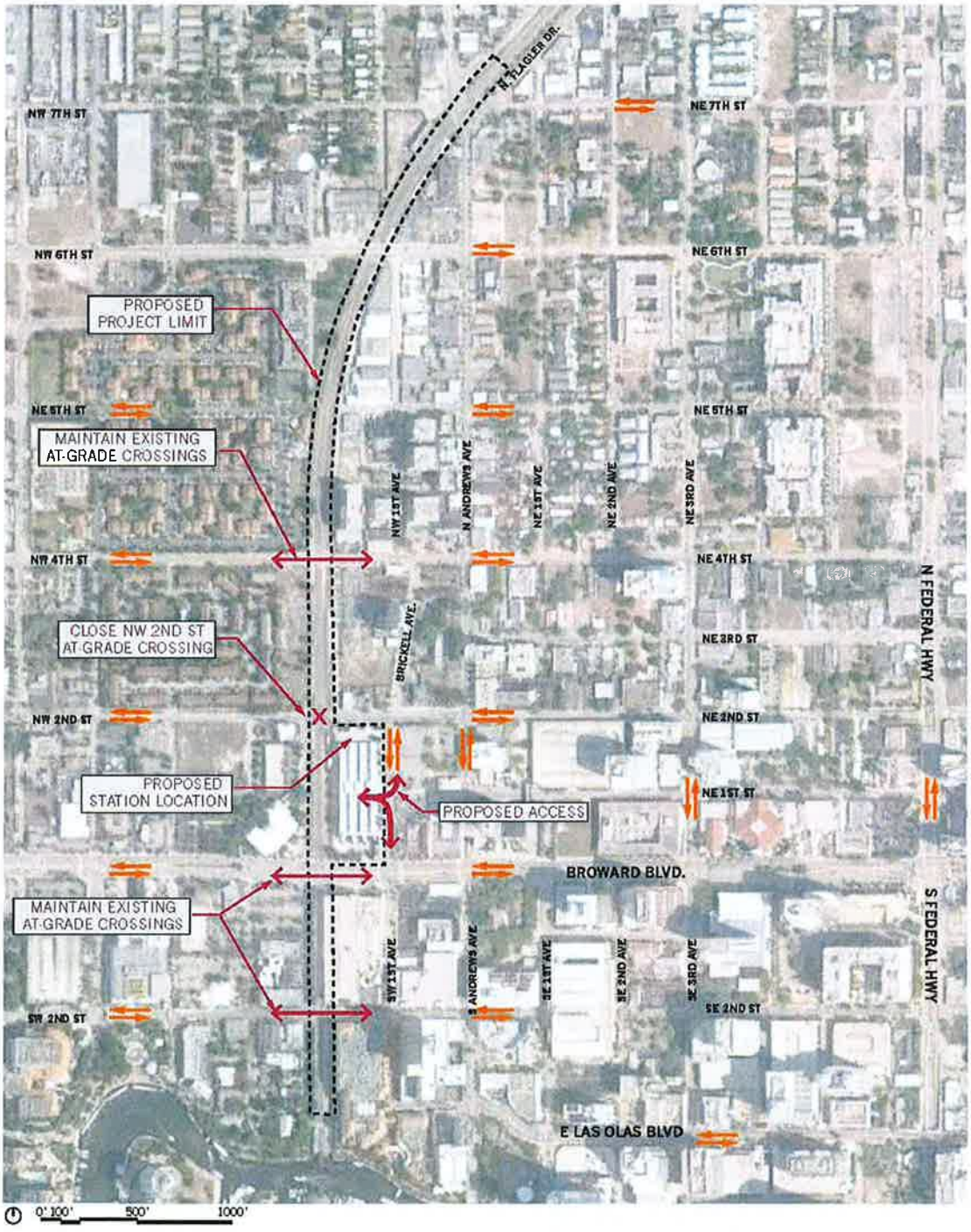

Figure 3
Original Proposed Ft. Lauderdale Station Location
Vehicular Circulation

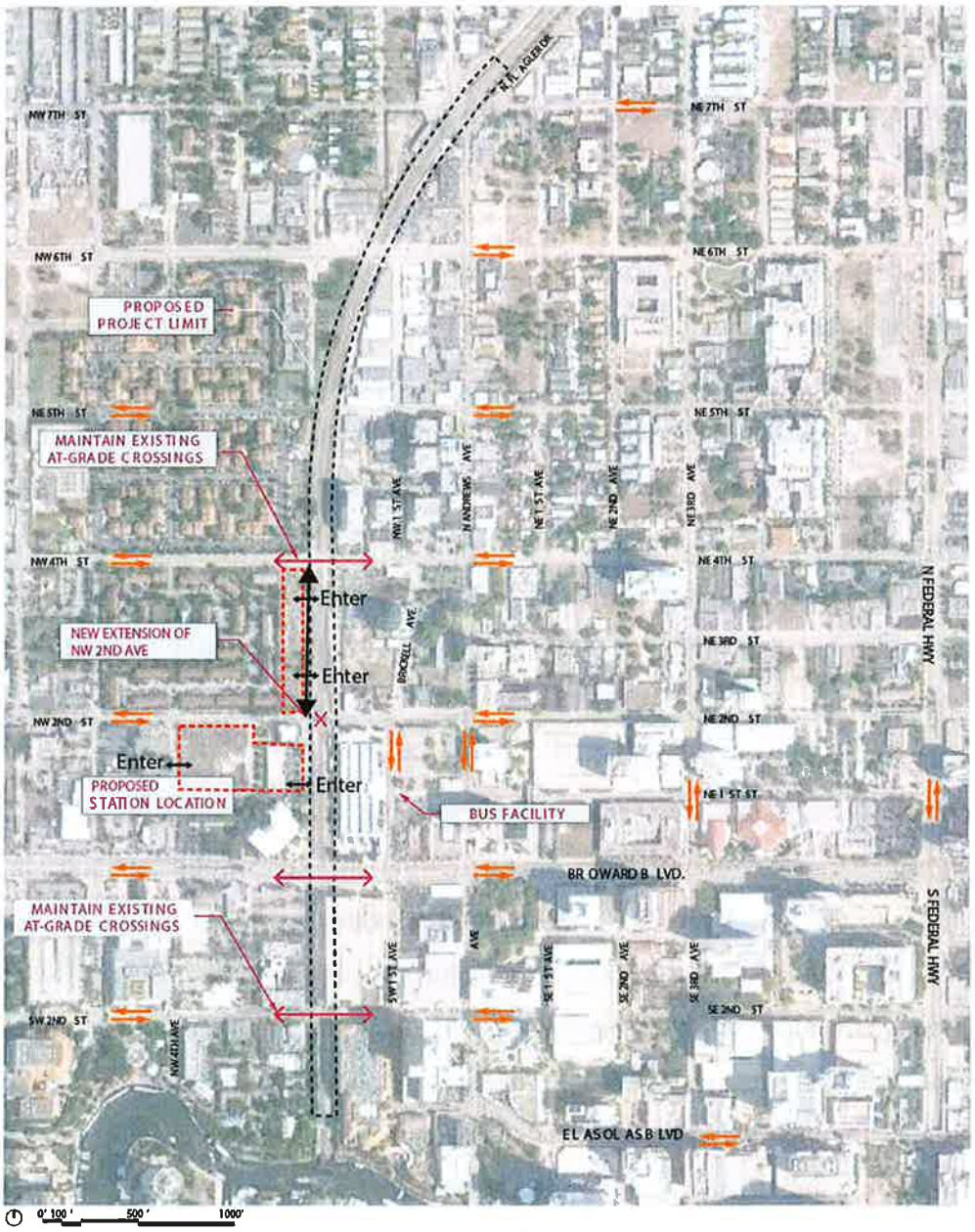

Figure 4
New Proposed Ft. Lauderdale Station Location
Vehicular Circulation

3. Daily Boarding and Ridership

No change to daily boarding and ridership is expected to result from the proposed revision to Fort Lauderdale Station location.

4. Trip Generation

No change to trip generation is expected to result from the proposed revision to Fort Lauderdale Station location.

5. Trip Distribution

The changes in trip distribution resulting from the proposed revision to Fort Lauderdale Station location are limited to NW 1st Avenue and NW 2nd Avenue. NW 1st Avenue, which provided direct access and served lot of the station related traffic in the original station location, will no longer serve it. Therefore the traffic impacts to 1st NW Avenue will be reduced. In the revised station location, most of the station related traffic is served by NW 2nd Avenue. FEC is proposing to extend NW 2nd Avenue to connect to NW 4th Street to the north. Please refer to the attached traffic study for detailed distribution of traffic in the vicinity of the revised station location.

6. Traffic Analysis

In the EA, roadway segments were analyzed for opening year 2015 and build out year 2035. Future background traffic volumes were obtained from the 2035 Southeast Florida Regional Planning Model (SERPM). Year 2015 background volumes were developed by interpolating existing and 2035 volumes. Once the background traffic was developed, the project trips based on distribution were added to background trips to obtain total future volume on each link. Reasonableness checks were completed to make sure the future volumes were higher than existing volumes for all roadway segments. Total daily volumes were compared to roadway capacities based on number lanes and Florida Department of Transportation *Generalized Service Volumes* applicable for urbanized areas. Level of service for each of the segment was determined by comparing the total daily volume on the segment to daily capacity from FDOT generalized tables.

To evaluate the impact of the station on each of the study area roadway segments, the percentage of the total capacity consumed by the project traffic was calculated. The segments along which project traffic consumes 5% or more of the capacity were identified as being impacted.
Since no changes are occurring to land use, boarding and ridership data, the traffic impact from the Fort Lauderdale Station to the adjacent roadway network are expected to be same as those documented in the approved EA. In addition, attached traffic impact study conducted specifically for the revised Fort Lauderdale Station location shows that all the intersections in the vicinity of the station would operate at or better than acceptable LOS.

7. Summary

Based on the assessment of the new location for the Fort Lauderdale Station and comparing it to the evaluation in the approved EA, it is apparent that the traffic impact from the station on the adjacent roadway network are consistent with those documented in the EA and the station will have no significant impact on the roadway network.

- There are no changes to land use and ridership projections, which makes the trip generation associated with the station to be same as what was presented in the EA.
- The proposed station location is being moved from east side of the FEC railroad to west side a mere distance of 150 feet. Therefore the difference in traffic assignment and circulation to the adjacent roadway network to be minimal except for the roads that are providing direct access to the station (NW 1st Avenue and NW 2nd Avenue).
- Consistent with the EA assessment the Fort Lauderdale Station would have no significant impact on the adjacent roadway network, even with the revised site location.
- A detailed traffic study conducted for the proposed station location shows that all the adjacent intersection are expected operate at or better than acceptable LOS even with the future background and station related traffic.

In addition FEC proposes to extend the NW 2nd Avenue to connect NW 4th Street and Broward Boulevard. This will improve roadway connectivity and access in the vicinity of the station especially since the at-grade crossing for NW 2nd Street is proposed to be closed. Furthermore, the NW 2nd Avenue connector is expected to provide Pedestrian and Bicycle Connectivity,

Enhance local vehicular circulation, complete the roadway grid network, and improve local resident and business mobility.

Traffic Impact Analysis

NW 2nd Avenue Connector
Fort Lauderdale, Florida

Kimley-Horn and Associates, Inc.

September 2013
043537000

Traffic Impact Analysis

NW 2nd Avenue Connector
Fort Lauderdale, Florida

Prepared for:

All Aboard Florida, Inc.
Coral Gables, Florida

Prepared by:

Kimley-Horn and Associates, Inc.
Fort Lauderdale, Florida

Kimley-Horn and Associates, Inc.

September 2013
043537000

John J. McWilliams, P.E.
Florida Registration Number 62541
Kimley-Horn and Associates, Inc.
5200 NW 33rd Avenue, Suite 109
Fort Lauderdale, FL 33309
CA # 00000696

EXECUTIVE SUMMARY

All Aboard Florida, Inc. is proposing the construction of a passenger train station in the City of Fort Lauderdale as part of the proposed All Aboard Florida passenger rail service connecting Miami, Fort Lauderdale, West Palm Beach, and Orlando. The rail service will provide intercity passenger service for business and leisure passengers with a new convenient, cost-effective, and environmentally friendly mode of transportation connecting South Florida with Central Florida.

The proposed Fort Lauderdale station is located along the west side of the Florida East Coast (FEC) Railway between Broward Boulevard to the south and NW 4th Street to the north. In order to accommodate the proposed station platform, the existing railroad grade crossing at NW 2nd Street will be closed. The impact of the closure on the area roadway network was analyzed as background conditions. To improve roadway connectivity and access in the vicinity of the station, an extension of NW 2nd Avenue between NW 2nd Street and NW 4th Street is being contemplated. The NW 2nd Avenue connector was analyzed as future total conditions.

All study intersections are expected to operate at LOS D or better during A.M. and P.M. peak hours under existing, background, and future total conditions. Furthermore, the NW 2nd Avenue connector is expected to have the following benefits on the local area:

1. **Pedestrian and Bicycle Connectivity** – Currently no pedestrian or bicycle route/path/sidewalk connects NW 4th Street and NW 2nd Street between NW 5th Avenue and FEC Railway. The NW 2nd Avenue connector will provide a connection for both pedestrians and bicyclists.
2. **Enhanced Local Vehicular Circulation** – The NW 2nd Avenue connector will provide connectivity for east-west traffic to connect to NW 4th Street as an alternative to Broward Boulevard, an already congested roadway.

3. **Completion the Roadway Grid Network** – The NW 2nd Avenue connector will complete a missing segment of the area roadway grid.
4. **Improved Local Resident and Business Mobility** – The rail station will provide improved mobility for local residents and will help local businesses by providing additional exposure and visibility to potential customers.

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INTRODUCTION

All Aboard Florida, Inc. is proposing the construction of a passenger train station in the City of Fort Lauderdale as part of the proposed All Aboard Florida passenger rail service connecting Miami, Fort Lauderdale, West Palm Beach, and Orlando. The rail service will provide intercity passenger service for business and leisure passengers with a new convenient, cost-effective, and environmentally friendly mode of transportation connecting South Florida with Central Florida.

The proposed Fort Lauderdale rail station is located along the west side of the Florida East Coast (FEC) rail corridor between Broward Boulevard to the south and NW 4th Street to the north. A project location map is included as Figure 1. In order to accommodate the proposed station platform, the existing railroad grade crossing at NW 2nd Street will be closed. To improve roadway connectivity and access in the vicinity of the station, an extension of NW 2nd Avenue between NW 2nd Street and NW 4th Street is being contemplated. The purpose of this analysis is to review the traffic impacts of the proposed connector on the local roadway network.

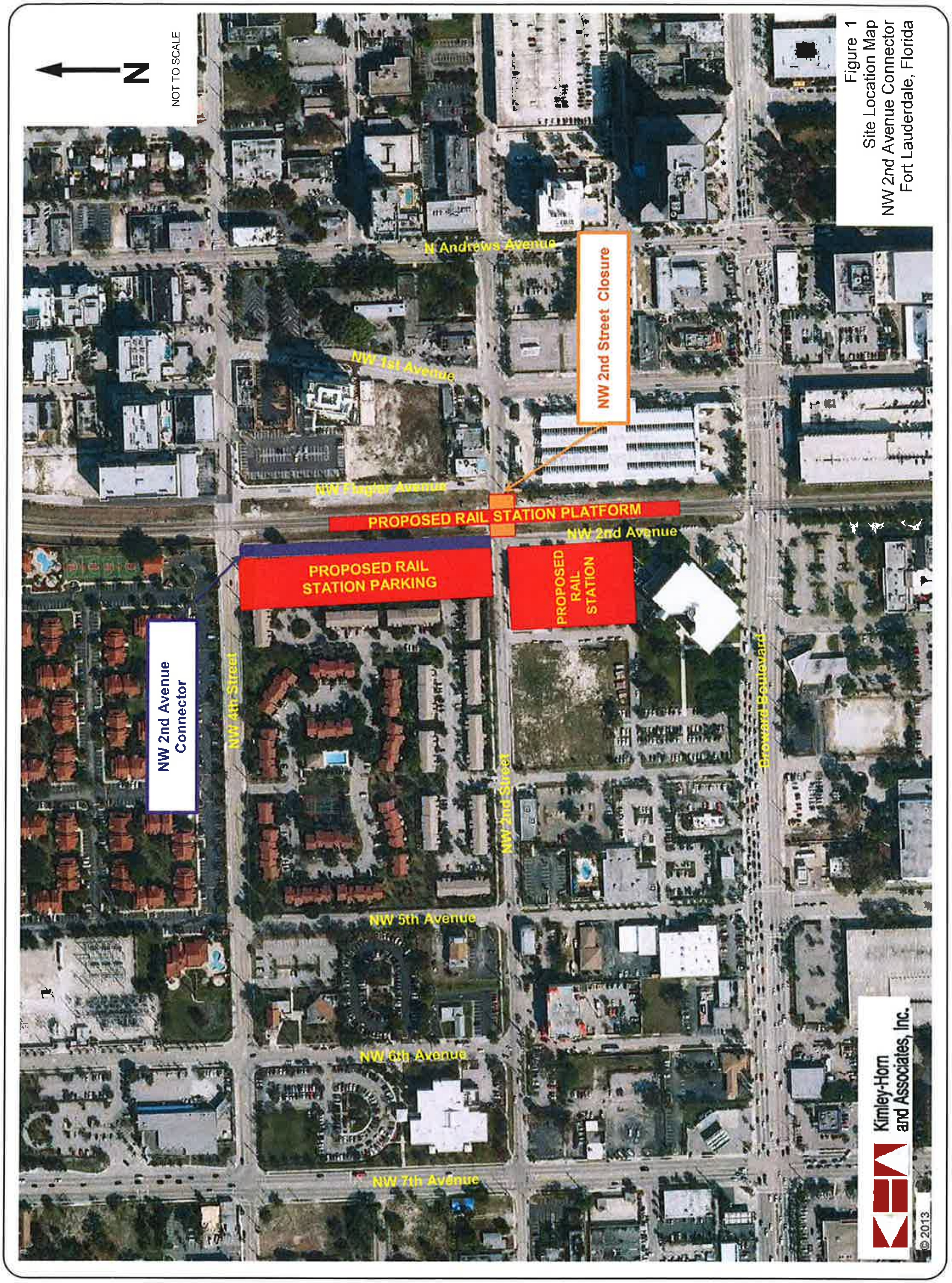


Figure 1
Site Location Map
NW 2nd Avenue Connector
Fort Lauderdale, Florida

EXISTING TRAFFIC VOLUMES

Turning Movement Count Data

A.M. (7:00 to 9:00 A.M.) and P.M. peak period (4:00 to 6:00 P.M.) turning movement counts were collected in August 2013 at the following intersections:

- NW 5th Avenue at Broward Boulevard
- NW 2nd Avenue at Broward Boulevard
- NW 1st Avenue at Broward Boulevard
- NW 5th Avenue at NW 2nd Street
- NW 2nd Avenue at NW 2nd Street
- NW Flagler Avenue at NW 2nd Street
- NW 1st Avenue at NW 2nd Street
- NW 5th Avenue at NW 4th Street
- NW Flagler Avenue at NW 4th Street
- NW 1st Avenue at NW 4th Street

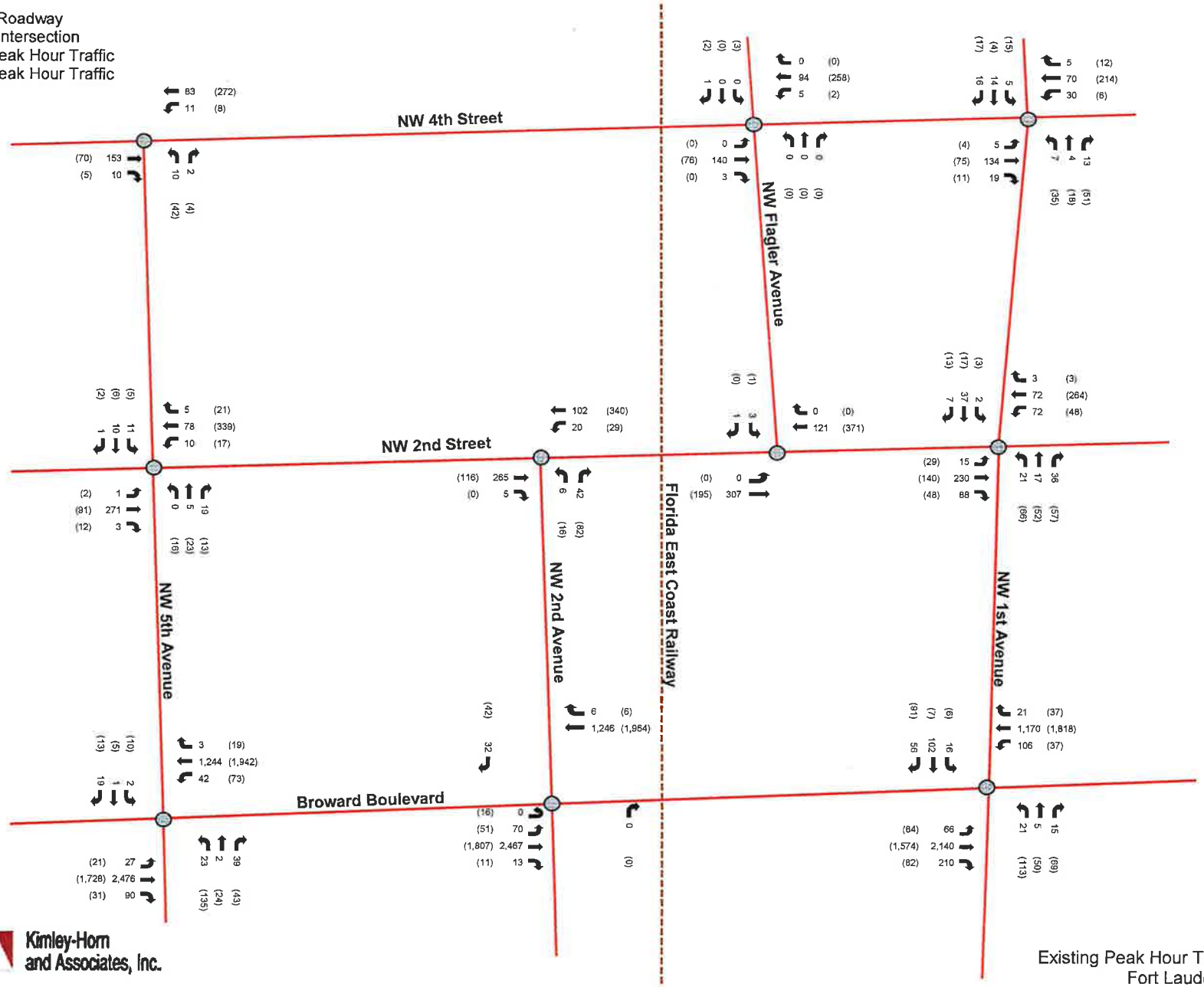
The volumes were collected in 15-minute intervals and the peak hour was determined for each intersection. The FDOT peak season conversion factor was applied to the traffic counts to adjust the traffic to peak season volumes. The appropriate peak season conversion factor for the weeks when the traffic counts were collected is 1.06. The turning movement counts, FDOT peak season factor category report, and signal timing data provided by Broward County Traffic Engineering Division are included in Appendix A. Figure 2 present the existing turning movement volumes at the study intersections during the weekday A.M. and P.M. peak hour.

Roadway Volume Data

Continuous 24-hour roadway counts were collected in August 2013 on NW 2nd Street between NW 2nd Avenue and Flagler Avenue, NW 2nd Avenue between NW 2nd Street and Broward Boulevard, and NW 4th Street just west of the FEC Railway. Table 1 summarizes the daily traffic volumes with the peak season conversion factor applied to the roadway segments. Roadway segment counts are provided in Appendix A.

Table 1: Daily Peak Season Roadway Segment Traffic Volumes

Roadway Segment	Peak Season Daily Volume
NW 2nd Street between NW 2nd Avenue and Flagler Avenue	5,095 vpd
NW 2nd Avenue between NW 2nd Street and Broward Boulevard	1,212 vpd
NW 4th Street just west of the FEC Railroad	2,599 vpd



Kimley-Horn and Associates, Inc.

Figure 2
Existing Peak Hour Traffic Volumes
Fort Lauderdale, Florida

FUTURE BACKGROUND TRAFFIC VOLUMES

Future background traffic conditions are defined as the expected traffic conditions on the study roadway network in the Year 2016 (corresponding to total build-out year of the All Aboard Florida Fort Lauderdale station) with the closure of the railroad grade crossing at NW 2nd Street without the NW 2nd Avenue connector. The background traffic volumes are the sum of the existing traffic and additional "background" traffic to account for expected traffic growth in the study area.

Background Area Growth

Future traffic growth on the transportation network was determined based upon historic growth trends at nearby FDOT traffic count stations. Table 2 provides a summary of the analysis. The following FDOT count stations referenced for this analysis were:

- Count station no. 7367 – Broward Boulevard east of SW 7th Avenue
- Count station no. 200 – Broward Boulevard west of SW 7th Avenue
- Count station no. 7368 – Broward Boulevard west of SE 3rd Avenue
- Count station no. 7746 – Andrews Avenue south of Broward Boulevard
- Count station no. 9029 – NW 7th Avenue north of Broward Boulevard
- Count station no. 9026 – SW 7th Avenue south of Broward Boulevard

Table 2: Background Growth Rate Summary

FDOT Count Station	5-year Historical Trend Analysis
7367	-4.00%
200	-1.05%
7368	-4.35%
7746	1.41%
9029	0.91%
9026	-5.39%
Average	**-2.08%**

As indicated in Table 1, the 5-year growth rate at the nearby traffic count stations is negative. Therefore, to provide a conservative analysis, an annual compound growth rate of 0.50 percent (0.50%) was used in the analysis. Historical traffic count data and growth trend calculations are included in Appendix B.

Figure 3 present the A.M. and P.M. peak hour future background intersection volumes. Volume development worksheets for the study intersections are included in Appendix C.

Committed Development

The City of Fort Lauderdale was contacted regarding approved developments in the immediate study area. The City did not identify any committed projects to be included as part of background conditions.

Background Traffic Reassignment

Traffic that crosses the FEC Railway on NW 2nd Street was reassigned to either Broward Boulevard or NW 4th Street. Based on the existing intersection turning movement counts along NW 2nd Street, currently over 90 percent (90%) of the traffic on NW 2nd Street between NW 5th Avenue and NW 1st Avenue travels through the corridor within the study area. Only a small portion of the traffic on NW 2nd Street is localized traffic with an origin or destination within the study segment.

Based on the assumption that the majority of traffic currently using NW 2nd Street has an origin or destination to the north of Broward Boulevard, seventy percent (70%) of the traffic crossing the FEC Railway on NW 2nd Street was reassigned to NW 4th Street between NW 5th Avenue and NW 1st Avenue. The remaining 30 percent (30%) of NW 2nd Street traffic was reassigned to Broward Boulevard. Background traffic reassignment volumes and volume development worksheets for the study intersections are included in Appendix D.

All Aboard Florida Station Traffic Assignment

Trip generation, trip distribution, and trip assignment was prepared for the All Aboard Florida Fort Lauderdale station accounting for the closure of the NW 2nd Street railroad grade crossing. Detailed trip generation, trip distribution, and trip assignment calculations are provided in Appendix D. Future traffic volumes with the NW 2nd Street closure and All Aboard Florida Downtown Fort Lauderdale station are provided as Figure 4.

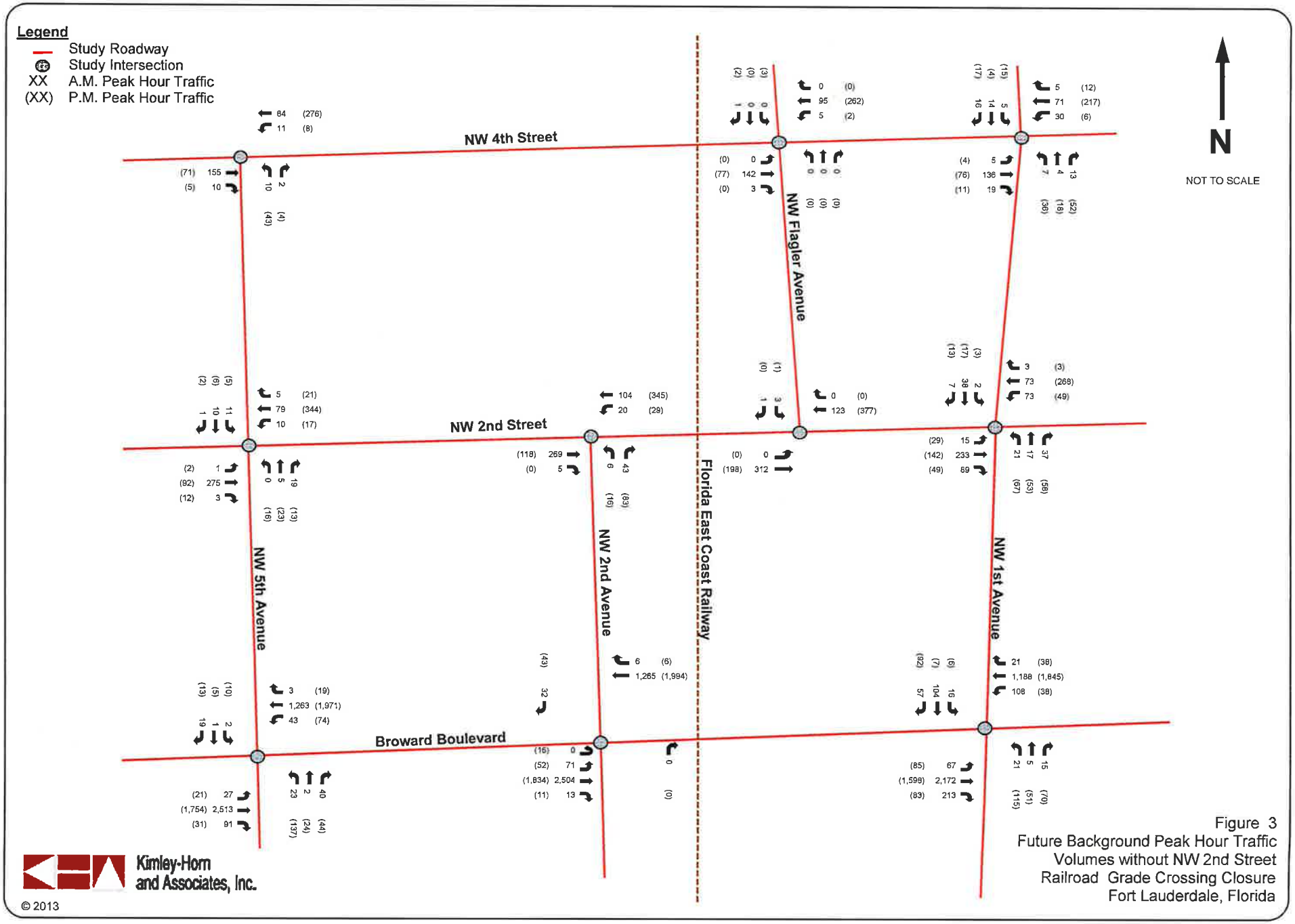
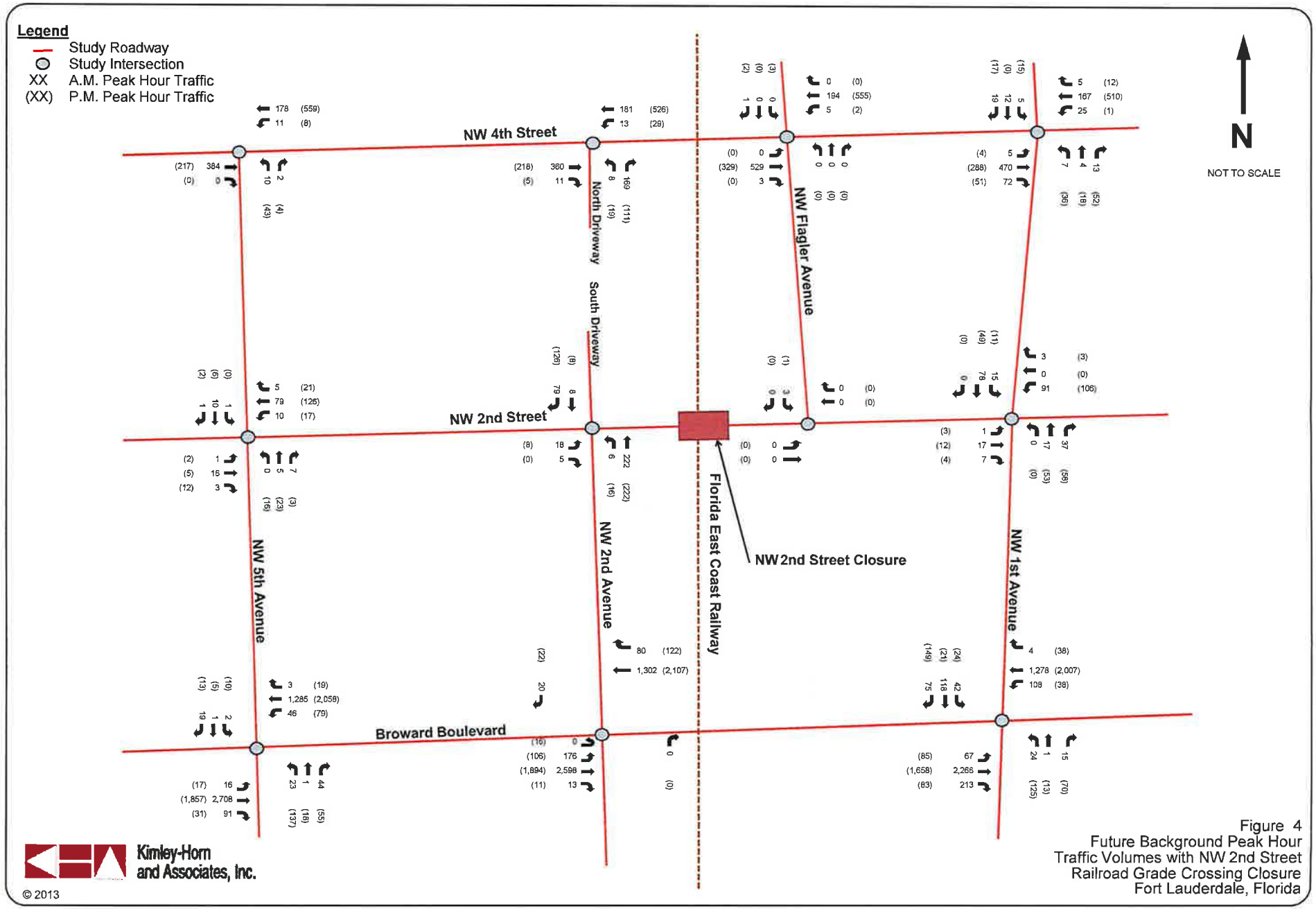


Figure 3
Future Background Peak Hour Traffic Volumes without NW 2nd Street Railroad Grade Crossing Closure
Fort Lauderdale, Florida



Kimley-Horn and Associates, Inc.

Figure 4
Future Background Peak Hour
Traffic Volumes with NW 2nd Street
Railroad Grade Crossing Closure
Fort Lauderdale, Florida

FUTURE TOTAL TRAFFIC VOLUMES

A new roadway (NW 2nd Avenue) between NW 2nd Street and NW 4th Street is being contemplated to improve roadway connectivity and access in the vicinity of the proposed All Aboard Florida station. Future total traffic volumes are defined as future background traffic volumes with the closure of the railroad grade crossing at NW 2nd Street and with the NW 2nd Avenue connector.

Traffic Reassignment

The NW 2nd Avenue connector is expected to be utilized by traffic that was previously reassigned to NW 4th Street in future background conditions. All reassigned traffic in future background conditions to NW 4th Street between NW 5th Avenue and NW 1st Avenue was rerouted back to NW 2nd Street via the NW 2nd Avenue connector. Traffic reassignment volumes and volume development worksheets for the study intersections are included in Appendix E.

All Aboard Florida Station Traffic Reassignment

Trip redistribution, and trip reassignment was prepared for the All Aboard Florida Downtown Fort Lauderdale station assuming that NW 2nd Street closure and construction of the NW 2nd Avenue connector. Detailed trip redistribution, and trip reassignment calculations are provided in Appendix E. Future traffic volumes with the NW 2nd Street railroad grade crossing closure, NW 2nd Avenue connector, and All Aboard Florida Downtown Fort Lauderdale station are provided as Figure 5.

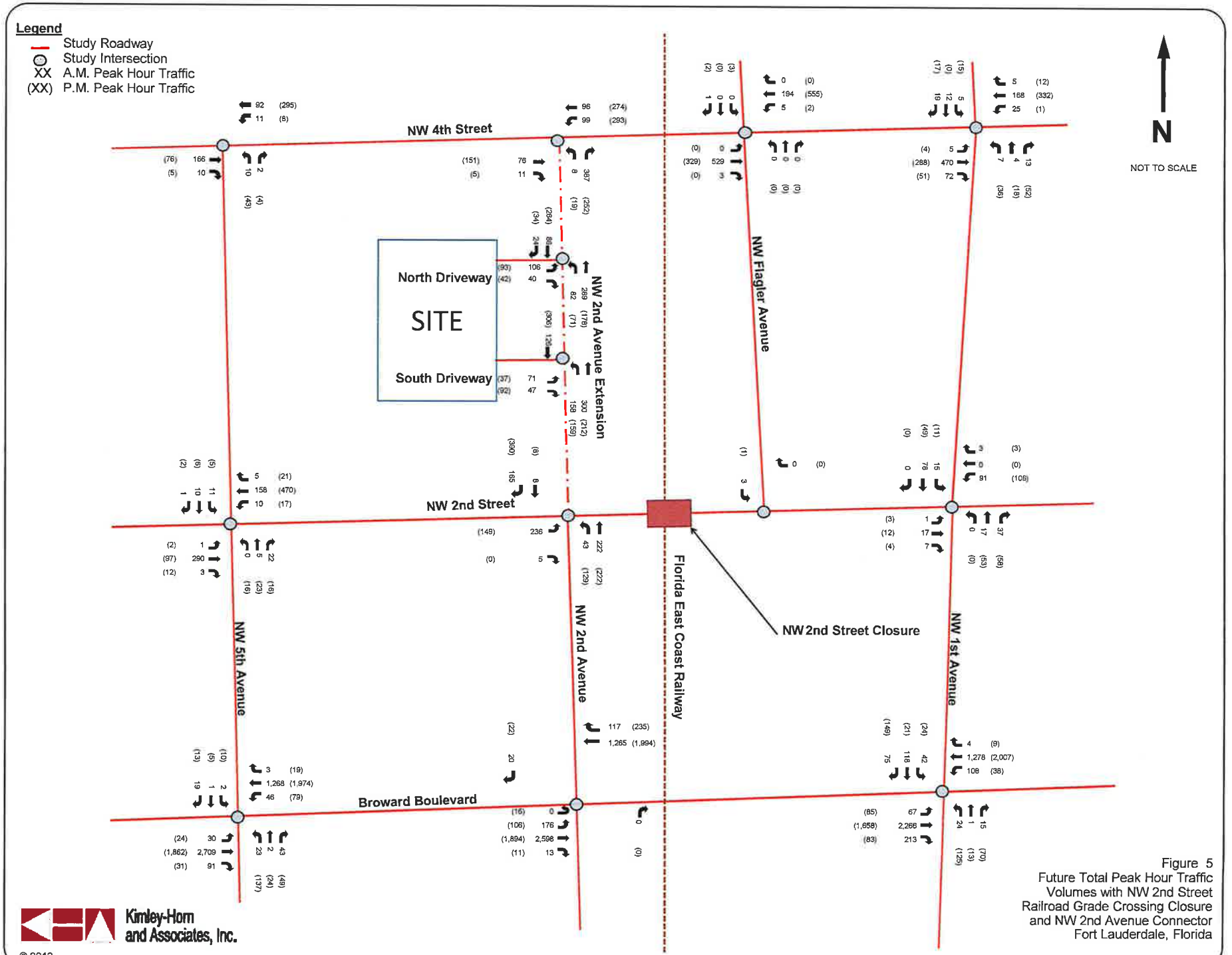


Figure 5
Future Total Peak Hour Traffic Volumes with NW 2nd Street Railroad Grade Crossing Closure and NW 2nd Avenue Connector
Fort Lauderdale, Florida

Kimley-Horn and Associates, Inc.

INTERSECTION CAPACITY ANALYSIS

The operating conditions for the study intersections were analyzed for three (3) scenarios (existing conditions, future background conditions [with NW 2nd Street railroad grade crossing closure], and future total conditions [with NW 2nd Street railroad grade crossing closure and NW 2nd Avenue connector]). Operating conditions were analyzed using Trafficware's *SYNCHRO 8.0* software, which applies methodologies outlined in the *Highway Capacity Manual,* 2010 Edition. Synchro worksheets for the study intersections are included in Appendix F. A summary of the intersection analyses during the A.M. and P.M. peak hours is presented in Table 3. All study intersections are expected to operate at LOS D or better during A.M. and P.M. peak hours under existing, background, and future total conditions.

Table 3: A.M. and P.M. Peak Hour Intersection Capacity Analysis

Intersection	Traffic Control	Overall LOS/Delay (sec)	Approach LOS				Overall LOS/Delay (sec)	Approach LOS				Overall LOS/Delay (sec)	Approach LOS			
			EB	WB	NB	SB		EB	WB	NB	SB		EB	WB	NB	SB
		Existing Conditions A.M. Peak Hour (P.M. Peak Hour)					*Future Background Conditions with NW 2nd Street Railroad Grade Crossing Closure A.M. Peak Hour (P.M. Peak Hour)*					*Future Total Conditions with NW 2nd Street Railroad Grade Crossing Closure and NW 2nd Avenue Connector A.M. Peak Hour (P.M. Peak Hour)*				
Broward Boulevard at NW 5th Avenue	Signalized	B/13.9 (A/9.5)	B (B)	A (A)	D (D)	D (D)	B/15.7 (A/9.8)	C (B)	A (A)	D (D)	D (D)	B/15.8 (A/10.0)	C (B)	A (A)	D (D)	D (D)
Broward Boulevard at NW 2nd Avenue	Two-Way Stop-Controlled	(1)	(2)	(2)	A (A)	C (D)	(1)	(2)	(2)	A (A)	C (D)	(1)	(2)	(2)	A (A)	C (D)
Broward Boulevard at NW 1st Avenue	Signalized	A/4.6 (A/7.3)	A (A)	A (A)	E (E)	E (D)	A/5.3 (A/8.7)	A (A)	A (A)	E (E)	E (E)	A/5.3 (A/8.7)	A (A)	A (A)	E (E)	E (E)
NW 2nd Street at NW 5th Avenue	Two-Way Stop-Controlled	(1)	(2)	(2)	B (B)	B (B)	(1)	(2)	(2)	A (B)	A (B)	(1)	(2)	(2)	B (C)	B (C)
NW 2nd Street at NW 2nd Avenue	One-Way Stop-Controlled	(1)	(2)	(2)	B (B)	-	(1)	B[3] (B)[3]	-	(2)	(2)	B/11.7[4] (C/15.8)[4]	B (B)	-	B (C)	A (C)
NW 2nd Street at NW Flagler Avenue	One-Way Stop-Controlled	(1)	(2)	(2)	-	B (B)	(1)	-	(2)	-	(2)	(1)	-	(2)	-	(2)
NW 2nd Street at NW 1st Avenue	Two-Way Stop-Controlled	(1)	(2)	(2)	B (C)	B (C)	(1)	A[5] (B)[5]	B[5] (B)[5]	(2)	(2)	(1)	A[5] (B)[5]	B[5] (B)[5]	(2)	(2)
NW 4th Street at NW 5th Avenue	One-Way Stop-Controlled	(1)	(2)	(2)	B (B)	-	(1)	(2)	(2)	B (D)	-	(1)	(2)	(2)	B (B)	-
NW 4th Street at NW Flagler Avenue	Two-Way Stop-Controlled	(1)	(2)	(2)	A (A)	A (B)	(1)	(2)	(2)	A (A)	A (C)	(1)	(2)	(2)	A (A)	A (C)
NW 4th Street at NW 1st Avenue	Two-Way Stop-Controlled	(1)	(2)	(2)	B (B)	B (B)	(1)	(2)	(2)	C (C)	B (C)	(1)	(2)	(2)	C (C)	B (C)
NW 2nd Avenue at North Driveway	One-Way Stop-Controlled	(6)	(6)	(6)	(6)	(6)	(1)	(2)	(2)	B (B)	-	(6)	(6)	(6)	(6)	(6)
NW 4th Street at NW 2nd Avenue	One-Way Stop-Controlled	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(1)	(2)	(2)	B (B)	-
NW 2nd Avenue at North Driveway	One-Way Stop-Controlled	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(1)	C (C)	-	(2)	(2)
NW 2nd Avenue at South Driveway	One-Way Stop-Controlled	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(1)	C (C)	-	(2)	(2)

Note: (1) Overall intersection LOS is not defined, as intersection operates under stop-control conditions.
(2) Approach operates as free-flow. Therefore, approach level of service is not provided.
(3) With NW 2nd Street railroad grade crossing closure, eastbound approach is stop controlled.
(4) With NW 2nd Street railroad grade crossing closure and NW 2nd Avenue Connector the intersection will operate under all-way stop-controlled conditions.
(5) Based on the Wave Streetcar project, the eastbound and westbound approaches will operate under stop-control conditions in the future after the NW 2nd Street railroad grade crossing closure.
(6) Intersection not part of analysis scenario

CONCLUSIONS

This traffic operations analysis assesses operational benefits of the proposed NW 2nd Avenue connector between NW 2nd Street and NW 4th Street. The proposed All Aboard Florida Fort Lauderdale station will provide intercity passenger service for business and leisure passengers with a new convenient, cost-effective, and environmentally friendly mode of transportation connecting South Florida with Central Florida.

In order to accommodate the proposed station platform, the existing railroad grade crossing at NW 2nd Street will be closed. The impact of the closure on the area roadway network was analyzed as background conditions. To improve roadway connectivity and access in the vicinity of the station, the NW 2nd Avenue connector between NW 2nd Street and NW 4th Street is being contemplated. The NW 2nd Avenue connector was analyzed as future total conditions.

All study intersections are expected to operate at LOS D or better during A.M. and P.M. peak hours under existing, background, and future total conditions. Furthermore, the NW 2nd Avenue connector is expected to have the following benefits on the local area:

1. **Pedestrian and Bicycle Connectivity** – Currently no pedestrian or bicycle route/path/sidewalk connects NW 4th Street and NW 2nd Street between NW 5th Avenue and FEC Railway. The NW 2nd Avenue connector will provide a connection for both pedestrians and bicyclists.
2. **Enhanced Local Vehicular Circulation** – The NW 2nd Avenue connector will provide connectivity for east-west traffic to connect to NW 4th Street as an alternative to Broward Boulevard, an already congested roadway.
3. **Completion the Roadway Grid Network** – The NW 2nd Avenue connector will complete a missing segment of the area roadway grid.
4. **Improved Local Resident and Business Mobility** – The rail station will provide improved mobility for local residents and will help local businesses by providing additional exposure and visibility to potential customers.

APPENDIX A:
Intersection Turning Movement Counts, Roadway Segment Counts, Peak Season Factor Category Report, and Signal Timing Data

229 pages of support data available upon request.

3.1 Human Environment

For purposes of this document, the Human Environment will be defined as those concerns related to the human, built environment. These include transportation, land use, environmental justice, barriers to the elderly and handicapped, public health and safety, contaminated sites and hazardous materials, cultural resources, Section 4(f) and recreational resources, municipal service, energy resources and aesthetics.

3.1.1 Transportation

The potential for transportation impacts has been evaluated for both rail transportation networks, regional roadway transportation networks, and local roadway transportation networks. All tables that appear in this section along with further detail can be found in Appendix I – Transportation.

3.3.1.1 Rail Transportation

The proposed Project is approximately 70 miles long following an existing, privately-owned ROW between West Palm Beach and Miami. The existing freight train operations consist of 10 through-freight trains per day, in addition to 4 local freight trains, with each train approximately 8,800 feet in length within the Project Area. Passenger rail service currently does not exist within the FEC corridor; however, Tri-Rail operates in a separate corridor west of the FEC corridor. The Tri-Rail system operates between West Palm Beach and Miami but does not directly service the central business districts (CBDs) of Miami, West Palm Beach, and Fort Lauderdale. The characteristics of the proposed FEC passenger rail service are significantly different from the Tri-Rail in terms of speeds, travel times, frequency, number of stops and target patrons and service areas. The proposed FEC passenger service trains would travel at an average of 60 mph, has only three stations, and a maximum frequency of one train per hour per direction. The frequency and types of service for 2006 base year, the 2015 opening year and the 2035 build out year are shown in Table 3-3.1. As shown in Table 3-3.1, the operational characteristics, such as speed of the freight trains, are expected to improve which, in turn, would decrease the time needed for trains to clear a railroad crossing.

The ***No-Build Alternative*** would not significantly impact rail transportation within the Project Area. As defined above, the ***No-Build Alternative*** has been analyzed as a system that will maintain the existing infrastructure without the introduction of the proposed passenger train service. It includes freight trains only (freight local and through), including the expected growth in freight based on the understanding that the frequency and/or length of the trains would be adjusted to meet the market demand and expected growth into the future. The No-Build Alternative would not be expected to result in any delays or impacts related to construction of stations or other infrastructure required for the proposed Project.

The ***Preferred Build Project Alternative*** (which, as defined above, includes the ***Preferred Build System Alternative*** and the ***Preferred Build Station Alternatives***) will be designed to have no impact on freight rail transportation system. The provision of a mostly two track new railroad (in place of the existing mostly single track railroad) is likely to enhance freight reliability and capacity, in addition to accommodating the proposed passenger service. Current freight rail operations on the FEC corridor would not be affected by the 16-19 additional daily passenger train round trips because additional capacity will be gained through the double tracking of the approximately 70-mile corridor. Track

construction, improvements and rehabilitation needed to implement the ***Preferred Build System Alternative*** would be performed according to best management practices to have minimal temporary impacts to existing freight operations during construction.

Table 3-3.1
FEC Railroad Crossing Delay Estimates

FEC RAILROAD CROSSING DELAY ESTIMATES-2006 BASE CONDITION

Service Type	Time to activate and close the gate (Sec)	Length (Feet)	Speed (mph)	Time to Clear (Sec)	Time to bring the gate back up (Sec)	Total time to activate and clear (Sec)	Crossings per Day	Delay per Day (Min)	Maximum crossings per hour	Max delay per Hour (Min)
	PALM BEACH									
Freight	30	6750	28.5	161	15	206	27	92.7	2	6.9
	BROWARD									
Freight	30	6750	22.6	204	15	249	27	112.1	2	8.3
	MIAMI-DADE									
Freight	30	6750	29.5	156	15	201	27	90.5	2	6.7

Note: Freight service includes 4 local freight trains and 23 through freight trains

FEC RAILROAD CROSSING DELAY ESTIMATES-2015 OPENING YEAR CONDITION

Service Type	Time to activate and close the gate (Sec)	Length (Feet)	Speed (mph)	Time to Clear (Sec)	Time to bring the gate back up (Sec)	Total time to activate and clear (Sec)	Crossings per Day	Delay per Day (Min)	Maximum crossings per hour	Max delay per Hour (Min)
	PALM BEACH									
Freight	30	8837	30.5	198	15	243	14	56.7	1	4.1
Passenger	30	600	60.1	7	15	52	12	10.4	1	0.9
Total								67.1		5.0
	BROWARD									
Freight	30	8837	30.5	198	15	243	14	56.7	1	4.1
Passenger	30	600	60.1	7	15	52	12	10.4	1	0.9
Total								67.1		5.0
	MIAMI-DADE									
Freight	30	8837	31.3	192	15	237	14	55.3	1	4.0
Passenger	30	600	60.1	7	15	52	12	10.4	1	0.9
Total								65.7		4.9

Note: Freight service includes 4 local freight trains and 10 through freight trains

FEC RAILROAD CROSSING DELAY ESTIMATES-2035 YEAR CONDITION

Service Type	Time to activate and close the gate (Sec)	Length (Feet)	Speed (mph)	Time to Clear (Sec)	Time to bring the gate back up (Sec)	Total time to activate and clear (Sec)	Crossings per Day	Delay per Day (Min)	Maximum crossings per hour	Max delay per Hour (Min)
	PALM BEACH									
Freight	30	12795	39.5	221	15	266	22	97.5	1	4.4
Passenger	30	600	60.1	7	15	52	16	13.9	1	0.9
Total								111.4		5.3
	BROWARD									
Freight	30	12795	38.5	227	15	272	22	99.7	1	4.5
Passenger	30	600	60.1	7	15	52	16	13.9	1	0.9
Total								113.6		5.4
	MIAMI-DADE									
Freight	30	12795	33.2	263	15	308	22	112.9	1	5.1
Passenger	30	600	60.1	7	15	52	16	13.9	1	0.9
Total								126.8		6

Note: Freight service includes 4 local freight trains and 10 through freight trains

Notes:

1 FRA regulations require 20 seconds to activate and close the gate prior to the train entering the railroad crossing and 10 seconds to bring the gate back up. FDOT uses 30 seconds to activate and close the gate prior to the train entering the railroad crossing and 15 seconds to bring the gate back up. To accoutn for the worst-case scenario, FDOT timings were used in this analysis

2 Time taken for the train to clear the railroad crossing is calculated using the length of the train and speed of the train.

3 A maximum of two trains would cross per hour (Northbound and Southbound combined)

4 To account for freight growth from 2016 to 2035, a 3% per year growth was assumed. The length of the train was increased 3% per year to account for this growth. The number of trains was kept constant.

Restored double track and new crossover and track work would be done using planning and construction practices that would minimize impact on freight or passenger traffic during construction. AAF is aware of similar projects (such as The Union Pacific Railroad in northern California) where the upgrades and double tracking work was completed without any impact to passenger and freight services during construction. AAF intends to follow similar construction techniques to minimize such impacts.

The ***Preferred Build System Alternative*** would have a positive impact to passenger rail transportation in the FEC corridor by providing new service between West Palm Beach and Miami's CBD with far fewer stops than Tri-Rail (Tri-Rail has about 18 stations where as the proposed FEC service will have just 3 stations). The ***Preferred Build Project Alternative*** would not have any impact on the existing freight service because the proposed stations are anticipated to serve passengers only.

3.3.1.2 Regional Roadway Network

A regional roadway network consists of major roadways that serve regional traffic (across counties and states). Freeways, state highways, and county arterials are generally part of a regional transportation network. The primary north-south roadways that serve the vehicular travel between West Palm Beach and Miami are I-95 and Florida's Turnpike. Both the I-95 and Turnpike corridors are already congested and are projected to experience increased delays -- especially during peak hours of travel. US 1 also serves regional traffic along this Project Area and is also heavily congested.

The ***No-Build Alternative*** has the potential to contribute to future adverse impacts on the I-95 and Florida's Turnpike corridors. Over time, these already congested and physically constrained facilities would only continue to impede the traveling public's ability to move between West Palm Beach and Miami. Under the ***No-Build Alternative***, the proposed passenger service would not be available to the residents and tourists of southeast Florida as a travel option.

The ***Preferred Build Project Alternative*** (which, as defined above, includes the ***Preferred Build System Alternative*** and the ***Preferred Build Station Alternatives***) would have an overall, positive impact on the regional roadway network (especially I-95 and Florida's Turnpike corridors) by providing a new transportation alternative for residents and tourists in southeast Florida that would be easily accessible to residents and visitors to the Florida in the CBDs of West Palm Beach, Fort Lauderdale and Miami. It is anticipated that the traffic on I-95 and the Florida turnpike that parallel the FEC corridor would be reduced if the proposed ***Preferred Build Project Alternative*** were implemented.

3.3.1.3 Local Vehicular Transportation

Analysis and evaluation of impacts to local vehicular transportation was divided into two distinct scenarios: (1) potential impacts along the corridor at crossings resulting from the ***Preferred Build System Alternative***, and (2) potential impacts specific to station locations resulting from the station alternatives considered under this EA, including the ***Preferred Build Station Alternatives***. The following sections summarize those findings.

Potential Impacts at Crossings

The ***Preferred Build System Alternative*** is planned within an area of the FEC corridor that currently crosses 183 roadways at signalized/gated crossings traversing nearly 70 miles and three counties. No new crossings are proposed for construction/operation as part of the ***Preferred Build System Alternative***.

To assess the impact of the proposed passenger service on the existing crossings, first the delay estimates at a typical crossing were developed, and then two representative crossings were analyzed in detail for each affected county, for a total of six investigated crossings. These crossing were selected at major arterial roadways that have significant traffic volumes compared to other roadways with railroad crossings. Adjacent signalized intersections within 500 feet from the crossing were also included in the analysis to study the impact of the train crossing event on intersection traffic operations. It is expected that if the impact is minimal at a major arterial crossing (with higher traffic volumes) then the impact would be minimal at minor roadway crossings. Therefore these crossing represent worst-case scenario in terms of traffic delay and LOS.

The methodology and analysis of a typical crossing are based on the following assumptions and are described in detail below:

- Length of the train, speed, and clearance time requirements for closing and opening of the gates at the crossings are based on information from FEC, and in accordance with FRA and FDOT guidelines (See, e.g., 49 CFR 234). Details of train characteristics, frequency and clearance time are provided in Table 3-3.1, above.
- Two railroad crossing events (one passenger and one freight movement) are assumed to take place during the PM peak hour, one in each direction, resulting in two crossings per hour. This constitutes a worst case condition, since the traffic conditions on adjacent roadways would represent the highest delay/congestion during pm peak period.
- Based on the speed, length and clearance time, the proposed passenger train is anticipated to take approximately fifty two (52) seconds to clear the crossing. The freight trains take much longer (anywhere from 237 seconds to 308 depending on the County) to clear the crossing.

Table 3-3.1 also shows how much delay would be caused by freight and passenger trains at a typical crossing such as those being studied based on various parameters. The delay estimates provide comparison by type of service and other operational characteristics for year 2006 and future years 2015 and 2035. The year 2006 only has freight service while the opening year of 2015, and future build-out year of 2035 includes both freight and passenger service. It can be seen from these delay estimates that the delay caused by a passenger train crossing event (52 seconds) is much less than the delay from a freight train crossing event (266-308 seconds). This generalized analysis of a typical crossing is shown in Table 3-3.1.

Study Crossings

Based on the above discussed criteria and parameters, the following major arterials with FEC at-grade crossings were selected to be analyzed:

- **Palm Beach County**
  - Forest Hill Boulevard Crossing
  - Linton Boulevard Crossing
- **Broward County:**
  - Hillsboro Boulevard Crossing
  - Broward Boulevard Crossing
- **Miami-Dade County:**
  - US 1/Biscayne Boulevard Crossing
  - NW 20th Street Crossing

These crossings along with any adjacent intersections to these crossings were analyzed for the opening year of 2015 and the build out year of 2035.

Traffic Data

Traffic data used in this analysis was obtained from Palm Beach County, Broward County, Dade County and FDOT sources. Some counts used in the analysis were conducted by URS in 2010. The opening year (2015) and build out year (2035) traffic volumes were developed by using a 1% per year growth rate from existing counts. It should be noted that most of the Project Area is built out and has experienced either no growth or negative growth in the past 5 years. Therefore this 1% growth assumption represents worst-case future year traffic volumes.

Traffic Operational Analysis:

Capacity analyses for all the crossings and intersections in the Project Area were conducted in accordance with the methodology presented in the Highway Capacity Manual utilizing the Synchro/Simtraffic software, version 7. Level of Service qualitatively relates capacity to operational conditions. LOS ranges from "A" to "F", with "A" being the best operating condition and "F" being the worst. Generally, LOS "E" or better is considered acceptable for CBDs and developed urbanized areas. LOS for signalized intersections is measured by control or signal delay per vehicle. Table 3-3.2 provides the delay ranges for LOS "A" through "F".

Table 3-3.2
Level of Service (LOS) Criteria

Level of Service	Delay (seconds/vehicle)
A	<10
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	> 80.0

Source: Highway Capacity Manual (HCM) 2000

For this analysis of the Project the selected six intersections and railroad crossings were analyzed for the p.m. peak hour conditions to represent the maximum traffic volumes during the day. The p.m. peak hour generally takes place between 4:00 p.m. and 6:00 p.m. The crossing operation includes a clearance phase prior to the arrival of the train to clear any queues present on the railway and adjacent approaches. Gates will then be closed and the train crossing event will run. During this phase, the traffic movements not affected by the crossings will continue to operate normally at the adjacent intersections. After the train event, the intersections revert back to normal phase operations for the rest of the peak hour.

The analysis involved following steps:

- The peak hour operations at the crossing were divided in to three cycles. The first cycle represents no train crossing event, second cycle represents freight train crossing event, and the third cycle represents passenger train crossing event. Delay was calculated for each of these cycles and the average delay was calculated as the weighted hourly average delay of the signal cycles with no train crossing, with freight train crossing, and with passenger train crossing. Under this analysis, a typical peak hour would have one freight train crossing, one passenger train crossing, and rest of the hour will have normal signal cycles where there will not be any delay caused by gate closure at the crossing. The no train crossing event delays are included in the average because the delays calculated represent average delay for the peak hour.
- Delays and levels of service were also calculated and reported for the affected cycle when railroad crossings are anticipated to take place. Queue lengths were obtained from 95th percentile queue lengths reported by the Synchro Software. The 95th percentile queue represents the queue length that is not expected to be reached 95% of the time. A similar procedure was applied for estimating queue lengths on the approaches to the rail crossing when the train is present.
- Levels of service (LOS) for the roadways and intersections in the influence area of the crossing was calculated using the weighted average of the delay for all signal cycles during the peak hour with and without the train crossing events. For illustration purposes, the LOS is also presented for the affected cycles when the railroad crossings take place.
- All traffic signals are assumed to have pre-emption capabilities and standard signal coordination in place allowing traffic to clear out and/or hold vehicles until the train clears. The signal operation at adjacent intersections would be coordinated in such a way that they would not be providing green time to movements that approach the crossings. This coordination and preemption would prevent the vehicles from being trapped between the crossing location and the intersection.

Palm Beach County

In Palm Beach County, the at-grade crossings at Forest Hill Blvd. and Linton Blvd. were analyzed for opening year (2015) and the build out year (2035). Results of the analysis are summarized in Table 3-3.3. This table shows detail comparison of delay, LOS, and queuing under normal signal cycle, freight train crossing cycle and passenger train crossing cycle.

Forest Hill Blvd.:

This crossing was analyzed along with the adjacent signalized intersection at Georgia Avenue. As seen in Table 3-3.3, the delay increase between normal signal operation and the weighted average delay including the freight train, and passenger train crossing events for the build out year of 2035 is minimal (3.4 sec/veh) and the intersection would continue to operate at acceptable LOS (LOS E or better) during the peak hour. Also the delay during the passenger train crossing cycle is much less than the delay during the freight train crossing cycle. The analysis results indicate that the impact on the arterial in terms of delay and queuing is limited to the signal cycles immediately following a train crossing event. Such delay and queuing impacts would dissipate as the signal operation returns to normal cycle and the weighted average impact during the peak hour is minimal. Therefore, the ***Preferred Build System Alternative*** is not expected to significantly impact the traffic operations at this crossing. The delay impact was higher in the build out year (2035) compared to the opening year (2015) as the traffic volumes and freight activity grow from 2015 to 2035.

Linton Blvd.:

This crossing is located very close (about 50 feet) to the intersection of Dixie Highway and the crossing. Therefore the crossing and the intersection were analyzed as a single signal operation. As seen in Table 3-3.3, the delay increase between normal signal operation and the weighted average delay including the freight train, and passenger train crossing events for year 2035 is minimal (52.4 sec/veh to 67.4 sec/veh) and the intersection would continue to operate at acceptable LOS (LOS E or better) during the peak hour. Therefore, the ***Preferred Build System Alternative*** is not expected to signficantly impact the traffic operations at this crossing. The delay impact was higher in the build out year (2035) compared to the opening year (2015) as the traffic volumes and freight activity grow from 2015 to 2035.

Table 3-3.3
Mainline Railroad Crossing
PM Peak Hour Delay and LOS
Palm Beach County

Forest Hill Blvd Crossing_Opening Year 2015 Conditions

Approach/Movement	AADT	Lanes	Normal Signal Cycle				Freight Train Crossing Cycle				Passenger Train Crossing Cycle				Weighted Average		
			Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	Queue	LOS
Forest Hill Blvd @ Georgia Ave																	
Overall Intersection			11.8	B		54	187.9	F		1	36.6	D		1	15.4		B
EB Approach			8.8	B	150	54	240.4	F	1225	1	33.6	C	275	1	13.4	175	B
WB Approach			10.4	B	175	54	157.6	F		1	35.4	D		1	13.5		B
Forest Hill Blvd @ FEC RR Crossing	18,800	4															
EB Approach			0.0	A	0	54	106.7	F		1	10.0	B		1	2.1		A
WB Approach			0.0	A	0	54	238.5	F	1200	1	32.8	C	275	1	4.8	25	A

Forest Hill Blvd Crossing_Build Out Year 2035 Conditions

Approach/Movement	AADT	Lanes	Normal Signal Cycle				Freight Train Crossing Cycle				Passenger Train Crossing Cycle				Weighted Average		
			Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	Queue	LOS
Forest Hill Blvd @ Georgia Ave																	
Overall Intersection			13.0	B		53	224.3	F		1	45.8	D		1	17.4		B
EB Approach			10.4	B	225	53	379.4	F	1700	1	47.7	D	375	1	17.8	250	B
WB Approach			11.7	B	225	53	89.4	F		1	39.0	D		1	13.6		B
Forest Hill Blvd @ FEC RR Crossing	22,500	4															
EB Approach			0.0	A	0	53	224.6	F		1	11.9	B		1	4.3		A
WB Approach			0.0	A	0	53	380.2	F	1700	1	46.4	D	375	1	7.8	50	A

Linton Blvd Crossing_Opening Year 2015 Conditions

Approach/Movement	AADT	Lanes	Normal Signal Cycle				Freight Train Crossing Cycle				Passenger Train Crossing Cycle				Weighted Average		
			Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	Queue	LOS
Linton Blvd @ Dixie Hwy/FEC RR	30,000	6															
Overall Intersection			37.4	D		33	365.0	F		1	103.1	F		1	48.6		D
EB Approach			28.0	C	275	33	323.0	F	1000	1	81.3	F	400	1	38.0	300	D
WB Approach			41.6	D	350	33	486.9	F	1700	1	80.1	F	475	1	55.4	400	E

Linton Blvd Crossing_Build Out Year 2035 Conditions

Approach/Movement	AADT	Lanes	Normal Signal Cycle				Freight Train Crossing Cycle				Passenger Train Crossing Cycle				Weighted Average		
			Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	Queue	LOS
Linton Blvd @ Dixie Hwy/FEC RR	35,900	6															
Overall Intersection			52.4	D		33	475.5	F		1	153.8	F		1	67.4		E
EB Approach			39.6	D	400	33	349.3	F	1300	1	120.8	F	500	1	50.8	425	D
WB Approach			56.9	E	525	33	557.6	F	2175	1	119.3	F	600	1	73.0	575	E

Notes:
1.Delay measured in sec/veh;
2.LOS-Level of Service during the PM Peak Hour
3.Queue lengths shown are in feet rounded to nearest 25 feet.
4. To obtain 2015 and 2035 volumes, existing volumes were grown at 1% per year growth rate

Both the crossings analyzed in Palm Beach County are expected to operate at LOS E or better in the year 2035 under the preferred build alternative. There would be no significant impact to traffic operations at these locations as a result of the ***Preferred Build System Alternative***.

Broward County

In Broward County, the at-grade crossings at Hillsboro Blvd. and Broward Blvd. were analyzed for the opening year of 2015 and the build out year of 2035. Results of the analysis are summarized in Table 3-3.4. This table shows detail comparison of delay, LOS, and queuing under normal signal cycle, freight train crossing cycle and passenger train crossing cycle.

Table 3-3.4
Mainline Railroad Crossing
PM Peak Hour Delay and LOS
Broward County

Hillsboro Blvd Crossing_Opening Year 2015 Conditions

Approach/Movement	AADT		Normal Signal Cycle				Freight Train Crossing Cycle				Passenger Train Crossing Cycle				Weighted Average		
			Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	Queue	LOS
Hillsboro Blvd @ FEC RR	47,200	6															
Overall Intersection			0.0	A		53	299.2	F		1	28.4	C		1	6.0		A
EB Approach			0.0	A	0	53	233.7	F	1600	1	25.4	C	350	1	4.7	25	A
WB Approach			0.0	A	0	53	353.2	F	2150	1	30.9	C	475	1	7.0	50	A

Hillsboro Blvd Crossing_Build Out Year 2035 Conditions

Approach/Movement	AADT		Normal Signal Cycle				Freight Train Crossing Cycle				Passenger Train Crossing Cycle				Weighted Average		
			Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	Queue	LOS
Hillsboro Blvd @ FEC RR	56,100	6															
Overall Intersection			0.0	A		53	489.1	F		1	44.8	D		1	9.7		A
EB Approach			0.0	A	0	53	403.3	F	2325	1	29.8	C	450	1	7.9	50	A
WB Approach			0.0	A	0	53	559.8	F	3026	1	57.1	E	675	1	11.2	75	B

Broward Blvd Crossing_Opening Year 2015 Conditions

Approach/Movement	AADT	Lanes	Normal Signal Cycle				Freight Train Crossing Cycle				Passenger Train Crossing Cycle				Weighted Average		
			Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	Queue	LOS
Broward Blvd @ FEC RR	59,900	6															
Overall Intersection			0.0	A		52	571.3	F		1	41.3	D		1	11.3		B
EB Approach			0.0	A	0	52	651.0	F	3475	1	52.7	D	925	1	13.0	75	B
WB Approach			0.0	A	0	52	474.4	F	2700	1	27.5	C	600	1	9.3	50	B

Broward Blvd Crossing_Build Out Year 2035 Conditions

Approach/Movement	AADT	Lanes	Normal Signal Cycle				Freight Train Crossing Cycle				Passenger Train Crossing Cycle				Weighted Average		
			Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	Queue	LOS
Broward Blvd @ FEC RR	62,600	6															
Overall Intersection			0.0	A		52	841.0	F		1	93.2	F		1	17.3		B
EB Approach			0.0	A	0	52	943.7	F	4750	1	132.0	C	1225	1	19.9	100	B
WB Approach			0.0	A	0	52	716.0	F	3725	1	45.8	D	900	1	14.1	75	B

Notes:
1. Delay measured in sec/veh;
2. LOS-Level of Service during the PM Peak hour
3. Queue lengths shown are infact rounded to nearest 25 feet.
4. To obtain 2015 and 2035 volumes, existing volumes were grown at 1% per year growth rate

Hillsboro Blvd.:

This crossing was as a standalone intersection. As seen in Table 3-3.4, the year 2035 delay at the crossing for normal signal cycle (no train crossing event) is 0.0 sec/veh, and the weighted average delay including the freight train and passenger train crossing events is 9.7 sec/veh and the intersection would operate at acceptable LOS (LOS E or better) during the peak hour. Also the delay during the passenger train crossing cycle is much less than the delay during the freight train crossing cycle. Therefore, the ***Preferred Build System Alternative*** is not expected to significantly impact the traffic operations at this crossing. The delay impact was higher in the build out year (2035) compared to the opening year (2015) as the traffic volumes and freight activity grow from 2015 to 2035.

Broward Blvd.:

This crossing was as a standalone intersection. The results (shown in Table 3-3.4) were similar to Hillsboro Blvd and impact is expected to be minimal on the peak hour basis and the intersection would continue to operate at acceptable LOS (LOS E or better) during the peak hour.

Both the crossings analyzed in Broward County are expected to operate at LOS E or better in the build-out year of 2035 under the ***Preferred Build System Alternative***. There would be no significant impact to traffic operations at these locations as a result of the ***Preferred Build System Alternative***.

Miami-Dade County

At-grade crossings at US 1/Biscayne Blvd. and NW 20th St. were analyzed. In Miami-Dade County, the at-grade crossings at US 1/Biscayne Blvd. and NW 20th St. were analyzed for the opening year of 2015 and build out year of 2035. Results of the analysis are summarized in Table 3-3.5. This table shows detail comparison of delay, LOS, and queuing under normal signal cycle, freight train crossing cycle and passenger train crossing cycle.

US 1/Biscayne Blvd.:

This crossing was analyzed along with the adjacent signalized intersection at NE 6th Ave. As seen in Table 3-3.5, the delay increase between normal signal operation and the weighted average delay including the freight train, and passenger train crossing events for year 2035 is minimal (10 sec/veh) and the intersection would continue to operate at acceptable LOS (LOS E or better) during the peak hour. Also the delay during the passenger train crossing cycle is much less than the delay during the freight train crossing cycle. The analysis results indicate that the impact on the arterial in terms of delay and queuing is limited to the signal cycles immediately following a train crossing event. Such delay and queuing impacts would dissipate as the signal operation returns to normal cycle and the weighted average impact during the peak hour is minimal. Therefore, the ***Preferred Build System Alternative*** is not expected to significantly impact the traffic operations at this crossing. The delay impact was higher in the build out year (2035) compared to the opening year (2015) as the traffic volumes and freight activity grow from 2015 to 2035.

Table 3-3.5
Mainline Railroad Crossing
PM Peak Hour Delay and LOS
Miami-Dade County

US 1/Biscayne Blvd Crossing_Opening Year 2015 Conditions

Approach/Movement	AADT	Lanes	Normal Signal Cycle				Freight Train Crossing Cycle				Passenger Train Crossing Cycle				Weighted Average		
			Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	Queue	LOS
US 1 Biscayne Blvd @ NE 6th St																	
Overall Intersection			14.9	B		38	98.0	F		1	28.4	C		1	17.3		B
NB Approach			11.6	B	200	38	139.0	F	1125	1	21.3	C	275	1	15.0	225	B
SB Approach			18.2	B	125	38	84.1	F		1	25.7	C		1	20.0		B
US 1 Biscayne Blvd @ FEC RR Crossing	18,200	6															
NB Approach			0.0	A	0	38	257.8	F		1	37.2	D		1	7.4		A
SB Approach			0.0	A	0	38	102.2	F	475	1	15.6	B	125	1	2.9	25	A

US 1/Biscayne Blvd Crossing_Build Out Year 2035 Conditions

Approach/Movement	AADT	Lanes	Normal Signal Cycle				Freight Train Crossing Cycle				Passenger Train Crossing Cycle				Weighted Average		
			Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	Queue	LOS
US 1 Biscayne Blvd @ NE 6th St																	
Overall Intersection			18.0	B		35	370.6	F		1	36.6	D		1	28.0		C
NB Approach			14.4	B	250	35	562.8	F	1850	1	22.9	C	350	1	29.5	300	C
SB Approach			20.3	C	175	35	355.4	F		1	52.8	D		1	30.2		C
US 1 Biscayne Blvd @ FEC RR Crossing	22,700	6															
NB Approach			0.0	A	0	35	808.0	F		1	40.6	D		1	22.9		C
SB Approach			0.0	A	0	35	176.4	F	650	1	16.1	B	150	1	5.2	25	A

NW 20th St Crossing_Opening Year 2015 Conditions

Approach/Movement	AADT	Lanes	Normal Signal Cycle				Freight Train Crossing Cycle				Passenger Train Crossing Cycle				Weighted Average		
			Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	Queue	LOS
NW 20th St @ Miami Ave																	
Overall Intersection			9.0	A		35	46.3	D		1	20.6	C		1	10.3		B
EB Approach			9.6	A	125	35	132.6	F	775	1	16.3	B	200	1	13.1	150	B
WB Approach			8.6	A	75	35	11.9	B		1	1.6	A		1	8.5		A
NW 20th St @ FEC RR Crossing	6,900	4															
EB Approach			0.0	A	0	35	76.6	E		1	17.2	B		1	2.5		A
WB Approach			0.0	A	0	35	106.7	F	300	1	14.7	B	75	1	3.3	25	A

NW 20th St Crossing_Buildout Year 2035 Conditions

Approach/Movement	AADT	Lanes	Normal Signal Cycle				Freight Train Crossing Cycle				Passenger Train Crossing Cycle				Weighted Average		
			Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	LOS	Queue	Cycles/Hour	Delay	Queue	LOS
NW 20th St @ Miami Ave																	
Overall Intersection			10.6	B		35	199.3	F		1	22.4	C		1	16.0		B
EB Approach			11.8	B	200	35	445.7	F	1500	1	17.1	B	250	1	23.7	225	C
WB Approach			10.1	B	100	35	402.0	F		1	1.7	A		1	20.5		C
NW 20th St @ FEC RR Crossing	8,500	4															
EB Approach			0.0	A	0	35	264.5	F		1	17.2	B		1	7.6		A
WB Approach			0.0	A	0	35	155.8	F	450	1	15.0	B	100	1	4.6	25	A

Notes:
1.Delay measured in sec/veh;
2.LOS-Level of Service during the PM Peak Hour
3.Queue lengths shown are in feet rounded to nearest 25 feet.
4. To obtain 2015 and 2035 volumes, existing volumes were grown at 1% per year growth rate

NW 20th St.:

This crossing was analyzed along with the adjacent signalized intersection at Miami Ave. As seen in Table 3-3.5, the delay increase between normal signal operation and the weighted average delay including the freight train, and passenger train crossing events for year 2035 is minimal (5.4 sec/veh) and the intersection would continue to operate at acceptable LOS (LOS E or better) during the peak hour. Therefore, the ***Preferred Build System Alternative*** is not expected to significantly impact the traffic operations at this crossing. The delay impact was higher in the build out year (2035) compared to the opening year (2015) as the traffic volumes and freight activity grow from 2015 to 2035.

There would be no significant impact to traffic operations at these locations as a result of the ***Preferred Build System Alternative***.

Summary

Based on the analysis of the opening year of 2015 and the build out year of 2035 with and without the train service traffic operations at the six crossings at major arterial roadways in the Project Area, the following conclusions were reached:

- The passenger train is expected to clear the crossing in 52 seconds and have one such crossing event in the peak hour. The analysis indicates that the additional delay at the crossing caused by the introduction of passenger rail service on the adjacent roadway network is minimal.
- Since the analysis was conducted for the peak hour, any event taking place during non-peak hours would have less impact on traffic operations.
- The traffic operations and LOS at adjacent intersections are anticipated to continue to operate at similar LOS with the introduction of the passenger rail service compared to LOS with already existing freight service. Therefore the additional impact from the passenger rail service is minimal. During a train crossing event, traffic movements not affected by the train will be operated normally to minimize the impact on delay and queues.
- It should be noted that some of the crossings have intersections within close proximity of the crossing and queues will back up to and over the FEC railway at these intersection. These queues must be cleared before the rail crossing event under the pre-emption signal cycle operation. Proper signage and traffic controls to alert drivers about the railroad crossings will be in place in accordance to local City, County and State standards.

The ***No-Build Alternative*** (which includes freight service only) would not have a significant impact on local vehicular transportation at crossings in the tri-county Project Area.

The ***Preferred Build System Alternative*** (which has been analyzed to include impacts resulting from existing freight service, as well as projected freight growth and the proposed passenger service) would not have a significant impact on traffic operations at railroad crossings in the tri- county Project Area because the ***Preferred Build System Alternative*** would not lower the LOS on roadways proximate to existing crossings from an acceptable LOS to a failing LOS. The impact on delay, queuing, and LOS as result of the ***Preferred Build System Alternative*** is limited to signal cycles immediately following a train crossing event and are minimal on a peak hour basis. The passenger train is proposed clear a typical crossing in 52 seconds. With only one such crossing event during peak hour the impact on traffic operations on adjacent roadways is expected to be minor. Signal and circuit upgrades performed as part of the track construction, improvement and rehabilitation would occur within the FEC ROW, and would not substantially impact traffic on intersecting roadways.

Potential Impacts at Stations

Based on the results of the *All Aboard Florida Ridership Study* (Louis Berger, July 2012) and trip generation resulting from the proposed development plans at the three station locations included within the ***Preferred Build Station Alternatives***, a Traffic Impact Analysis was performed. The land uses, trip generation and traffic impact from the stations are described in the following sections.

Proposed Land Uses

Following land uses are being proposed at the stations:

- **West Palm Beach Station:**
  - 10,000 square foot retail within the station
- **Fort Lauderdale Station:**
  - 10,000 square foot retail within the station
- **Miami Station:**
  - 60,000 square foot station depot
  - 30,000 square foot retail within the station
  - 75,000 square foot transit-oriented retail
  - 300,000 square foot office
  - 200-room hotel
  - 400-resdential units
  - 1,050 parking spaces, approximately

Station Access

Station access points for each of the stations are as follows:

- West Palm Beach North-Access to Quadrille St and 6th St
- West Palm Beach Central-Access to Evernia St
- Fort Lauderdale North-Access to Brickell Ave
- Fort Lauderdale South-Access to SE 2nd St
- Miami Central Elevated-Access to NW 1st Ave
- Miami South At-grade-Access to NW 1st Ave/NE 1st St

Exhibits showing the access and conceptual plans for the stations are provided in Appendix I-Transportation.

Daily Boarding and Ridership

Daily boarding forecast for the year 2030 for the proposed stations are based on *All Aboard Florida (AAF) Ridership and Revenue Forecasts*. Year 2030 daily boarding volumes by station access mode are presented in Table 3-3.6.

Table 3-3.6
2030 Daily boardings at AAF stations
Station Access, Mode Split and Volumes

Station	Daily Boardings	Private Auto Park and Ride	Private Auto Drop-Off	Total Private Auto	Taxi	Transit/ Shuttle	Walk	Bike	Total
West Palm Beach		22%	13%	35%	2%	24%	37%	2%	100%
Fort Lauderdale		18%	9%	27%	2%	37%	32%	2%	100%
Miami		16%	6%	22%	4%	38%	34%	2%	100%
West Palm Beach	1,998	440	260	700	40	480	739	40	1,998
Fort Lauderdale	1,827	329	164	493	37	676	585	37	1,827
Miami	1,868	299	112	411	75	710	635	37	1,868
Total	5,693	1,068	536	1,604	151	1,865	1,959	114	5,693

1. Source: Daily Boardings from AAF Ridership and Revenue Forecast
2. Station Access Modal Split adapted from Transit Cooperative Research Report 153 - Guidelines for Providing Access to Public Transportation Stations, 2012.

Trip Generation

Trip generation estimates at each station consists of trips generated by the proposed land uses at each station and the trips associated with the forecasted boarding and ridership data. Trips for retail, office, and hotel land uses were estimated using the *Institute of Transportation Engineers (ITE) Trip Generation, 8th Edition.* Summary of the trip generation for each of the stations is presented in Table 3-3.7. A detailed Trip Generation Memorandum was also prepared.

Trip Distribution

Traffic from the proposed train stations was manually distributed to surrounding roadways based on surrounding land uses, roadway network and existing traffic characteristics. All roadways within half-mile radius from proposed stations were studied. At the proposed railroad stations where at-grade crossings are proposed to be closed, the vehicular traffic is re-routed to the adjacent streets. For example, in the proposed Miami At-grade Station, the at-grade crossing at NW 3rd Street, between NW 2nd Avenue and NW 1st Avenue is proposed to be closed. The traffic from NW 3rd Street where the at-grade crossing is proposed to be closed is rerouted to NW 2nd Avenue south to NE/NW 1st Street and north to NE 5th Street continuing eastward to NW 1st Avenue where it connects with 3rd Street.

Table 3-3.7
Trip Generation Summary for Proposed Stations (NET new trips)

Description	Daily			AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
WEST PALM BEACH STATION									
Retail Trips	182	182	364	24	16	40	16	17	33
Ridership/Boarding Trips	771	771	1,542	231	231	463	231	231	463
TOTAL	**953**	**953**	**1,906**	**255**	**255**	**503**	**247**	**248**	**496**
FORT LAUDERDALE STATION									
Retail Trips	182	182	364	24	16	40	16	17	33
Ridership/Boarding Trips	575	575	1,150	173	173	345	173	173	345
TOTAL	**757**	**757**	**1,514**	**197**	**189**	**385**	**189**	**190**	**378**
MIAMI STATION									
Office/Retail/Hotel/ Residential Trips	4,591	4,591	9,182	612	263	875	364	557	921
Ridership/Boarding Trips	533	533	1,066	160	160	320	160	160	320
TOTAL	**5,124**	**5,124**	**10,248**	**772**	**423**	**1,195**	**524**	**717**	**1,241**

1. See the attached trip generation sheets for detailed trip generation, internal capture, and pass-by calculations.
2. Daily Boardings information is obtained from AAF Ridership and Revenue Forecast
3. Station Access Modal Split adapted from Transit Cooperative Research Report 153 - Guidelines for Providing Access to Public Transportation Stations, 2012.
4. Peak hour boardings are assumed to be 30% of the daily boardings based on the information from TRB's Commuter & Light Rail Transit Corridors, March 1996.

Traffic Analysis

Roadway segments were analyzed for the opening year of 2015 and the build out year of 2035. Future background traffic volumes were obtained from the 2035 Southeast Florida Regional Planning Model (SERPM). Year 2015 background volumes were developed by interpolating existing and 2035 volumes. Once the background traffic was developed, the project trips based on distribution were added to background trips to obtain total future volume on each link. Reasonableness checks were completed to make sure the future volumes were higher than existing volumes for all roadway segments. In cases where the model has predicted negative growth rate, the future volumes were adjusted to grow at 1% per year growth rate. Total daily volumes were compared to roadway capacities based on number lanes and Florida Department of Transportation *Generalized Service Volumes* applicable for urbanized areas. Level of service for each of the segments was determined by comparing the total daily volume on the segment to daily capacity from FDOT generalized tables. Worksheets showing the analysis results for each of the stations are attached to this memorandum.

All the segments that were within half mile radius from the stations were studied for impact. Given the CBD nature of the study areas surrounding the stations and presence of transit services, LOS E is considered acceptable LOS. To evaluate the impact of the station on each of the study area roadway segments, the percentage of the total capacity consumed by the project traffic was calculated. The segments along which project traffic consumes 5% or more of the capacity were identified as being impacted. Out of these segments that are identified as being impacted by the project traffic, the

segments on which the project traffic causes the LOS to degrade from acceptable LOS (LOS E or better) to LOS F would be considered as significantly impacted. For such segments further detailed analysis would be required to determine if any improvement are needed. For the segment on which the project traffic consumes less than 5% of the capacity the project related impact is considered not significant and no further analysis or improvements are needed. These guidelines are consistent with those used by FDOT and counties in Florida for the traffic analysis related to Development of Regional Impacts (DRIs) and Traffic Impact Studies (TIS) to evaluated the impact of developments on regional roadway network.

West Palm Beach-North

The proposed **West Palm Beach-North** station would not have a significant impact on the local roadway network in the opening year of 2015 or in the future build-out year of 2035. There are no segments within the analysis area on which the project traffic would consume more than 5% of the capacity. On average the West Palm Beach-North station would create vehicular volumes that would occupy 0.62% of the 2035 capacity of the local roadway network. Therefore, this alternative has no significant impact on the surrounding roadways. Detailed analysis is provided in Table 3-3.8.

West Palm Beach-Central

The proposed **West Palm Beach-Central** station, which is the ***Preferred Build Station Alternative*** for this city, would not have a significant impact on the local roadway network in the opening year of 2015 or in future build-out year of 2035. There are no segments within the analysis area on which the project traffic would consume more than 5% of the capacity. On average the West Palm Beach-North station would create vehicular volumes that would occupy 0.56% of the 2035 capacity of the local roadway network. Therefore, this ***Preferred Build Station Alternative*** has no significant impact on the surrounding roadways. Detailed analysis is provided in Table 3-3.9 and Figure 3-3.1.

Fort Lauderdale (North and South)

The proposed **Fort Lauderdale-North (**the ***Preferred Build Station Alternative*** for this city) and **Fort Lauderdale-South** station locations are geographically proximate and share the same development plan. As such, results of this analysis is discussed together.

Neither of the proposed Fort Lauderdale stations would have a significant impact on the local roadway network in the opening year of 2015 or in future build-out year of 2035. There are no segments within the analysis area on which the project traffic would consume more than 5% of the capacity. On average the West Palm Beach-North station would create vehicular volumes that would occupy 0.51% of the 2035 capacity of the local roadway network. Therefore, neither project alternative considered for the City of Fort Lauderdale, including the ***Preferred Build Station Alternative***, would have significant impact on the surrounding roadways. Detailed analysis is provided in Table 3-3.10 and Figure 3-3.2.

Miami-South At-grade

The project traffic from the proposed **Miami-South at-grade** station consumes more than 5% of the capacity on 16 of the 74 roadway segments analyzed by the year 2035. These segments are considered impacted by the project traffic. On average the Miami-South at-grade station would create vehicular

volumes that would occupy 3.50% of the 2035 capacity of the local roadway network. However the project traffic does not cause the LOS on any of these links to degrade from actable LOS (LOS E or better) to failing LOS (LOS F). Therefore, the Miami-South At-grade station alternative has no significant impact on the surrounding roadways. Detailed analysis is provided in Table 3-3.11.

Miami-Central Elevated

The project traffic from the proposed **Miami-Central Elevated** station (which is the ***Preferred Build Station Alternative*** for this city) consumes more than 5% of the capacity on 15 of the 74 roadway segments analyzed by the year 2035. These segments are considered impacted by the project traffic. On average, the Miami-South at-grade station would create vehicular volumes that would occupy 3.70% of the 2035 capacity of the local roadway network. However, the project traffic does not cause the LOS on any of these links to degrade from actable LOS (LOS E or better) to failing LOS (LOS F). Therefore, the this ***Preferred Build Station Alternative*** has no significant impact on the surrounding roadways. Detailed analysis is provided in Table 3-3.12 and Figure 3-3.3.

Based on the analysis, the project traffic generated by the proposed stations is minor compared to existing traffic and roadway capacities in the study area. Therefore, none of the station alternatives considered under this EA, including the ***Preferred Build Station Alternatives***, would have any significant impact on adjacent roadways except for one segment near the Miami station. Summary of the results is provided below:

- West Palm Beach Stations-No significant impact
- Fort Lauderdale Stations-No significant impact
- Miami Stations-Significant impact on several segments but no adverse effect on any segments and therefore no mitigation is required.
- The roadways segments that provide direct access to the proposed station may require access management traffic analysis during the design phases.

Table 3-3.8
West Palm Beach North Alternative – Existing and Future LOS

Roadway	From	To	Existing				2015 Opening				2035 Buildout									
			Lanes	Capacity	ADT	LOS	Background	Project	Total	LOS	Background	Lanes	Capacity	LOS without Project	Project%	Project	Total	LOS with Project	Project Impact %	Significant Impact?
Quadrille Blvd	Okeechobee Blvd	Fern St	4	36700	12300	B	14100	191	14291	B	26300	4	36700	B	10%	191	26491	B	0.52%	NO
	Fern St	Banyan Blvd	4	36700	9600	B	11100	381	11481	B	21000	4	36700	B	20%	381	21381	B	1.04%	NO
	Banyan Blvd	Flagler Memorial Bridge	4	36700	10900	B	11800	191	11991	B	18100	4	36700	B	10%	191	18291	B	0.52%	NO
Banyan Blvd/1st St	Tamarind Ave	Quadrille Blvd	4	36700	11600	B	13500	191	13691	B	26300	4	36700	B	10%	191	26491	B	0.52%	NO
	Quadrille Blvd	Flagler Dr	4	36700	9300	B	10100	133	10233	B	15500	4	36700	B	7%	133	15633	B	0.36%	NO
Clematis St	Tamarind Ave	Quadrille Blvd	2	16500	2800	B	2900	191	3091	B	3500	2	16500	B	10%	191	3691	B	1.16%	NO
	Quadrille Blvd	Flagler Dr	2	16500	3400	B	3500	286	3786	B	4100	2	16500	B	15%	286	4386	B	1.73%	NO
Fern St	Tamarind Ave	Quadrille Blvd	2	16500	2000	B	2500	381	2881	B	6000	2	16500	B	20%	381	6381	B	2.31%	NO
	Quadrille Blvd	Flagler Dr	2	16500	1500	B	1700	191	1891	B	3200	2	16500	B	10%	191	3391	B	1.16%	NO
Okeechobee Blvd	Tamarind Ave	Dixie Hwy	8	73800	40000	B	46600	191	46791	B	90500	8	73800	F	10%	191	90691	F	0.26%	NO
	Dixie Hwy	Flagler Dr	6	55300	19600	B	20600	95	20695	B	27500	6	55300	B	5%	95	27595	B	0.17%	NO
Palm Beach Lakes Blvd	Tamarind Ave	Dixie Hwy	4	36700	22900	B	23200	191	23391	B	25400	4	36700	B	10%	191	25591	B	0.52%	NO
	Dixie Hwy	Flagler Dr	4	36700	6700	B	7000	57	7057	B	9200	4	36700	B	3%	57	9257	B	0.16%	NO
Tamarind Ave	Okeechobee Blvd	Evernia St	4	36700	14800	B	16400	133	16533	B	27300	4	36700	B	7%	133	27433	B	0.36%	NO
	Evernia St	Palm Beach Lakes Blvd	2	16500	6100	B	6300	191	6491	B	7700	2	16500	B	10%	191	7891	B	1.16%	NO
Dixie Hwy	Okeechobee Blvd	Banyan Blvd / 1st St	2	22020	7500	B	9200	114	9314	B	20500	2	22020	D	6%	114	20614	F	0.52%	NO
	Banyan Blvd / 1st St	Quadrille Blvd	4	36700	8900	B	10200	57	10257	B	18700	4	36700	B	3%	57	18757	B	0.16%	NO
	Quadrille Blvd	Palm Beach Lakes Blvd	4	36700	21000	B	21800	114	21914	B	27000	4	36700	B	6%	114	27114	B	0.31%	NO
Olive Ave	Okeechobee Blvd	Banyan Blvd / 1st St	2	22020	13700	C	14500	133	14633	C	20100	2	22020	D	7%	133	20233	F	0.60%	NO
	Banyan Blvd / 1st St	Quadrille Blvd	2	22020	4200	B	5900	76	5976	B	16900	2	22020	D	4%	76	16976	C	0.35%	NO
	Quadrille Blvd	Palm Beach Lakes Blvd	2	16500	2600	B	4100	114	4214	B	13900	2	16500	C	6%	114	14014	C	0.69%	NO
Flagler Dr	Okeechobee Blvd	Banyan Blvd / 1st St	4	36700	15000	B	15500	95	15595	B	18500	4	36700	B	5%	95	18595	B	0.26%	NO
	Banyan Blvd / 1st St	Quadrille Blvd	4	36700	21500	B	22100	95	22195	B	26400	4	36700	B	5%	95	26495	B	0.26%	NO
	Quadrille Blvd	Palm Beach Lakes Blvd	4	36700	21500	B	22100	114	22214	B	26400	4	36700	B	6%	114	26514	B	0.31%	NO

Notes:

1. Existing ADTs are obtained from FDOT and Palm Beach County sources. Some counts are from 2010 and 2011.
2. Future background ADT is obtained from 2035 Southeast Florida Regional Planning Model (SERPM).
3. Project traffic was manually distributed to surrounding roadways considering future background traffic, land uses, and roadway connectivity.
4. Where the future background volume was lower than the existing count, the future background volume was manually adjusted with a growth rate of 1% per year
5. Opening year background volume was obtained by interpolating existing and future volumes.
6. Project traffic for opening year was assumed to be same as build out year as most of the land uses are expected to built by opening year.
7. Capacity is based on FDOT's Generalized Annual Average Daily Volumes for urbanized areas.
8. Project impact is the percentage of roadway capacity consumed by project trips
9. Impact was assumed to be significant if it is more than 5%.
10. Capacities and LOS are based on daily volumes
11. For 2015, number of lanes are assumed same as existing. For 2035 number of lanes are based on the cost-feasible SERPM model

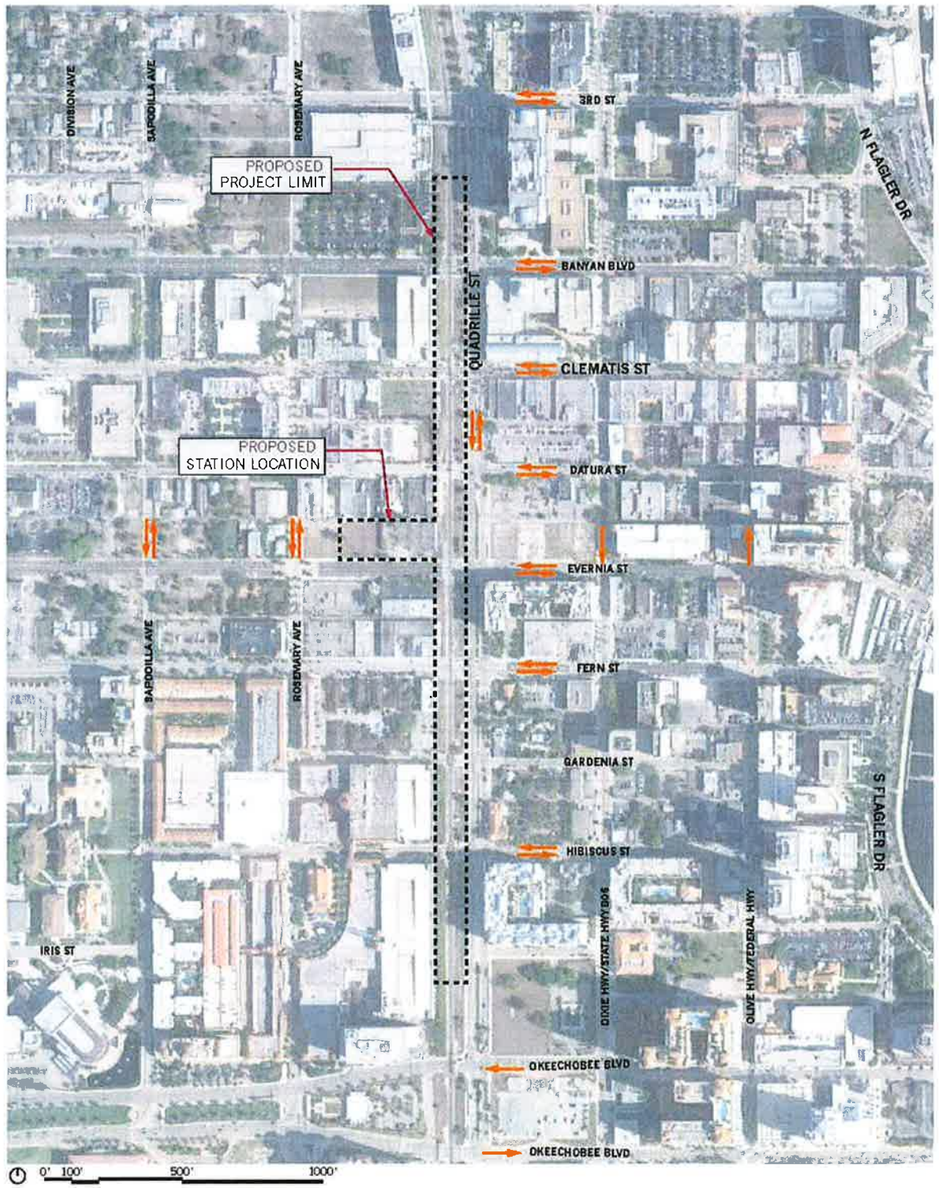
Table 3-3.9
West Palm Beach Central Alternative - Existing and Future LOS

Roadway	From	To	Existing				2015 Opening				2035 Buildout									
			Lanes	Capacity	ADT	LOS	Background	Project	Total	LOS	Background	Lanes	Capacity	LOS without Project	Project%	Project	Total	LOS with Project	Project Impact %	Significant Impact?
Quadrille Blvd	Okeechobee Blvd	Fern St	4	36700	12300	B	14100	191	14291	B	26300	4	36700	B	10%	191	26491	B	0.52%	NO
	Fern St	Banyan Blvd	4	36700	9600	B	11100	381	11481	B	21000	4	36700	B	20%	381	21381	B	1.04%	NO
	Banyan Blvd	Flagler Memorial Bridge	4	36700	10900	B	11800	191	11991	B	18100	4	36700	B	10%	191	18291	B	0.52%	NO
Banyan Blvd/1st St	Tamarind Ave	Quadrille Blvd	4	36700	11600	B	13500	191	13691	B	26300	4	36700	B	10%	191	26491	B	0.52%	NO
	Quadrille Blvd	Flagler Dr	4	36700	9300	B	10100	133	10233	B	15500	4	36700	B	7%	133	15633	B	0.36%	NO
Clematis St	Tamarind Ave	Quadrille Blvd	2	16500	2800	B	2900	191	3091	B	3500	2	16500	B	10%	191	3691	B	1.16%	NO
	Quadrille Blvd	Flagler Dr	2	16500	3400	B	3500	286	3786	B	4100	2	16500	B	15%	286	4386	B	1.73%	NO
Fern St	Tamarind Ave	Quadrille Blvd	2	16500	2000	B	2500	381	2881	B	6000	2	16500	B	20%	381	6381	B	2.31%	NO
	Quadrille Blvd	Flagler Dr	2	16500	1500	B	1700	191	1891	B	3200	2	16500	B	10%	191	3391	B	1.16%	NO
Okeechobee Blvd	Tamarind Ave	Dixie Hwy	8	73800	40000	B	46600	191	46791	B	90500	8	73800	F	10%	191	90691	F	0.26%	NO
	Dixie Hwy	Flagler Dr	6	55300	19600	B	20600	95	20695	B	27500	6	55300	B	5%	95	27595	B	0.17%	NO
Palm Beach Lakes Blvd	Tamarind Ave	Dixie Hwy	4	36700	22900	B	23200	191	23391	B	25400	4	36700	B	10%	191	25591	B	0.52%	NO
	Dixie Hwy	Flagler Dr	4	36700	6700	B	7000	57	7057	B	9200	4	36700	B	3%	57	9257	B	0.16%	NO
Tamarind Ave	Okeechobee Blvd	Evernia St	4	36700	14800	B	16400	133	16533	B	27300	4	36700	B	7%	133	27433	B	0.36%	NO
	Evernia St	Palm Beach Lakes Blvd	2	16500	6100	B	6300	191	6491	B	7700	2	16500	B	10%	191	7891	B	1.16%	NO
Dixie Hwy	Okeechobee Blvd	Banyan Blvd / 1st St	2	22020	7500	B	9200	114	9314	B	20500	2	22020	D	6%	114	20614	F	0.52%	NO
	Banyan Blvd / 1st St	Quadrille Blvd	4	36700	8900	B	10200	57	10257	B	18700	4	36700	B	3%	57	18757	B	0.16%	NO
	Quadrille Blvd	Palm Beach Lakes Blvd	4	36700	21000	B	21800	114	21914	B	27000	4	36700	B	6%	114	27114	B	0.31%	NO
Olive Ave	Okeechobee Blvd	Banyan Blvd / 1st St	2	22020	13700	C	14500	133	14633	C	20100	2	22020	D	7%	133	20233	F	0.60%	NO
	Banyan Blvd / 1st St	Quadrille Blvd	2	22020	4200	B	5900	76	5976	B	16900	2	22020	D	4%	76	16976	C	0.35%	NO
	Quadrille Blvd	Palm Beach Lakes Blvd	2	16500	2600	B	4100	114	4214	B	13900	2	16500	C	6%	114	14014	C	0.69%	NO
Flagler Dr	Okeechobee Blvd	Banyan Blvd / 1st St	4	36700	15000	B	15500	95	15595	B	18500	4	36700	B	5%	95	18595	B	0.26%	NO
	Banyan Blvd / 1st St	Quadrille Blvd	4	36700	21500	B	22100	95	22195	B	26400	4	36700	B	5%	95	26495	B	0.26%	NO
	Quadrille Blvd	Palm Beach Lakes Blvd	4	36700	21500	B	22100	114	22214	B	26400	4	36700	B	6%	114	26514	B	0.31%	NO

Notes:

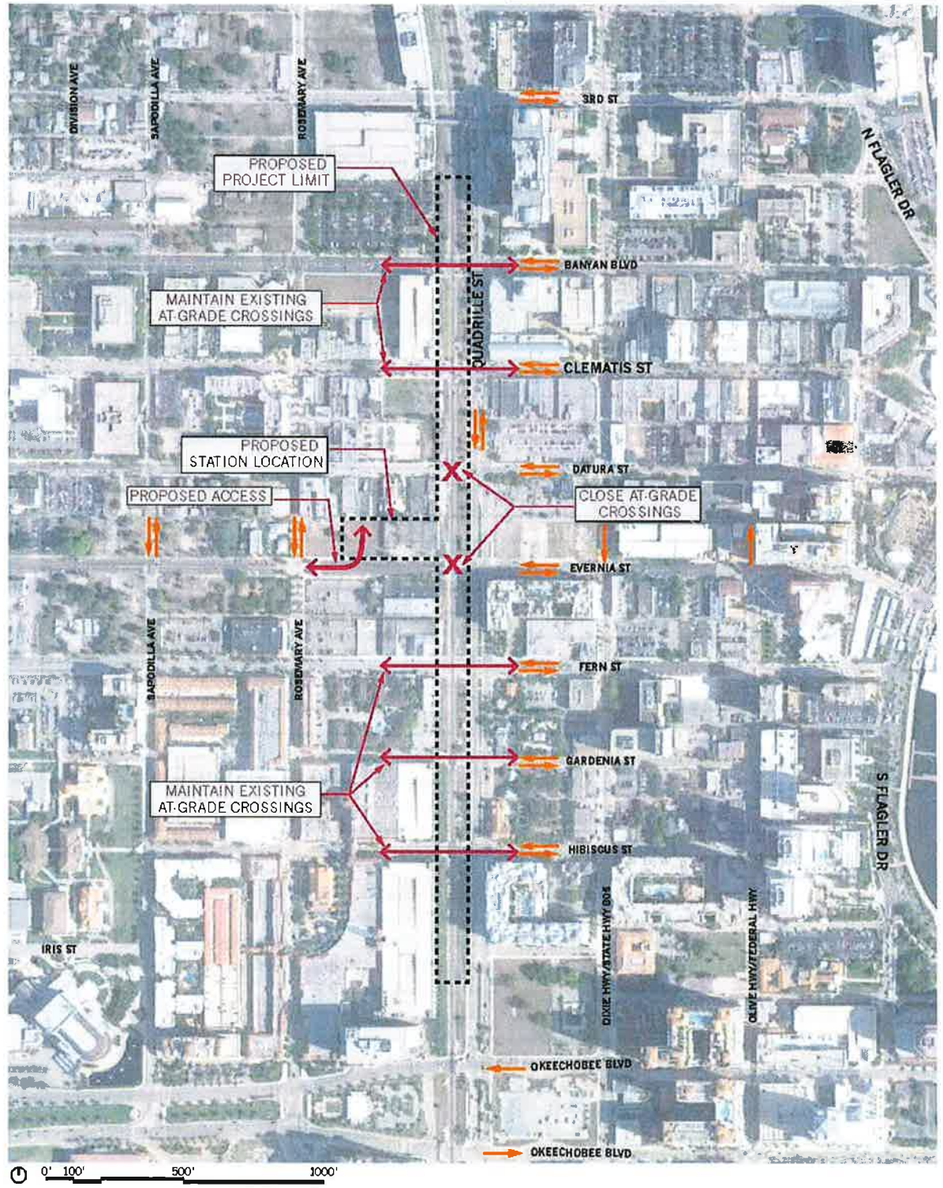
1. Existing ADTs are obtained from FDOT and Palm Beach County sources. Some counts are from 2010 and 2011.
2. Future background ADT is obtained from 2035 Southeast Florida Regional Planning Model (SERPM).
3. Project traffic was manually distributed to surrounding roadways considering future background traffic, land uses, and roadway connectivity.
4. Where the future background volume was lower than the existing count, the future background volume was manually adjusted with a growth rate of 1% per year
5. Opening year background volume was obtained by interpolating existing and future volumes.
6. Project traffic for opening year was assumed to be same as build out year as most of the land uses are expected to built by opening year.
7. Capacity is based on FDOT's Generalized Annual Average Daily Volumes for urbanized areas.
8. Project impact is the percentage of roadway capacity consumed by project trips
9. Impact was assumed to be significant if it is more than 5%.
10. Capacities and LOS are based on daily volumes
11. For 2015, number of lanes are assumed same as existing. For 2035 number of lanes are based on the cost-feasible SERPM model

Figure 3.3-1
West Palm Beach - Central



September 7, 2012

WEST PALM BEACH - CENTRAL
EXISTING VEHICULAR CIRCULATION PATTERN



September 7, 2012

WEST PALM BEACH - CENTRAL
PROPOSED CHANGES TO VEHICULAR CIRCULATION

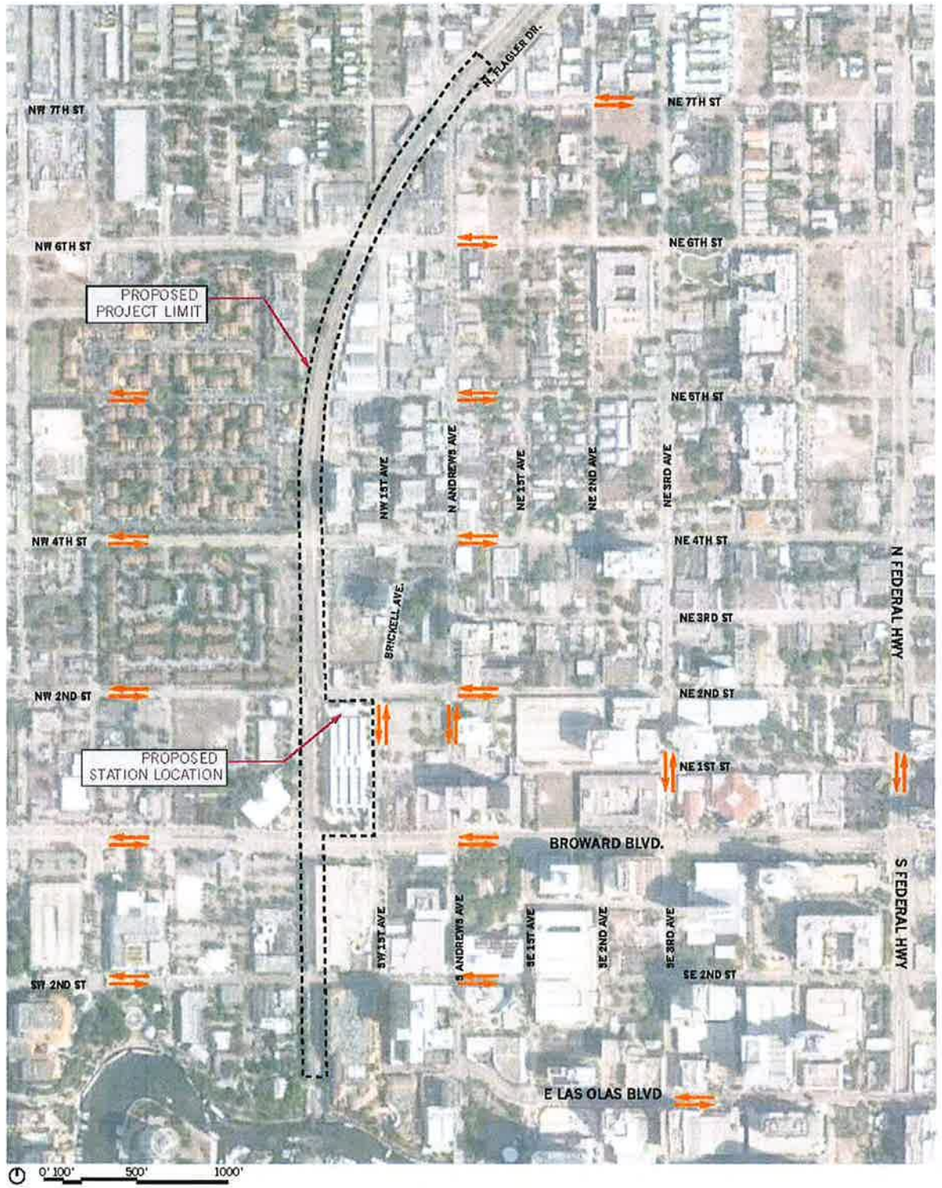
Table 3-3.10
Fort Lauderdale Alternatives - Existing and Future LOS

Roadway	From	To	Existing				2015 Opening				2035 Buildout									
			Lanes	Capacity	ADT	LOS	Background	Project	Total	LOS	Background	Lanes	Capacity	LOS withou	Project%	Project	Total	LOS with Project	Project Impact %	Significant Impact?
Broward Blvd	NW 9th Ave	Avenue of the Arts	6	55300	57000	F	58700	151	58851	F	70100	6	55300	F	10%	151	70251	F	0.27%	NO
	Avenue of the Arts	S Andrews Ave	6	55300	50500	C	52000	454	52454	C	62100	6	55300	F	30%	454	62554	F	0.82%	NO
	S Andrews Ave	NE 3rd Ave	6	55300	33500	B	34500	530	35030	B	41200	6	55300	B	35%	530	41730	B	0.96%	NO
	NE 3rd Ave	S Federal Hwy	6	55300	37000	B	38100	303	38403	B	45500	6	55300	B	20%	303	45803	C	0.55%	NO
NW 6th St	NW 9th Ave	Avenue of the Arts	4	36700	16200	B	17900	76	17976	B	29300	4	36700	C	5%	76	29376	C	0.21%	NO
	Avenue of the Arts	S Andrews Ave	4	36700	12400	B	15200	121	15321	B	33900	4	36700	C	8%	121	34021	C	0.33%	NO
	S Andrews Ave	NE 3rd Ave	2	16500	4700	B	6400	76	6476	B	17800	2	16500	F	5%	76	17876	F	0.46%	NO
	NE 3rd Ave	S Federal Hwy	2	16500	4700	B	5700	76	5776	B	12200	2	16500	C	5%	76	12276	C	0.46%	NO
SW 2nd St	S Andrews Ave	S Federal Hwy	2	16500	7100	B	7600	106	7706	B	11100	2	16500	C	7%	106	11206	C	0.64%	NO
E Las Olas Blvd	S Andrews Ave	NE 3rd Ave	4	36700	9700	B	9800	227	10027	B	10600	4	36700	B	15%	227	10827	B	0.62%	NO
	NE 3rd Ave	S Federal Hwy	4	36700	14600	B	15600	76	15676	B	22000	4	36700	B	5%	76	22076	B	0.21%	NO
SE 7th St	S Andrews Ave	NE 3rd Ave	2	16500	3600	B	4500	121	4621	B	10600	2	16500	C	8%	121	10721	C	0.73%	NO
	NE 3rd Ave	S Federal Hwy	2	16500	3600	B	4600	76	4676	B	10900	2	16500	C	5%	76	10976	C	0.46%	NO
S Andrews Ave	SE 7th St	Broward Blvd	4	36700	20400	B	21500	530	22030	B	28800	4	36700	B	35%	530	29330	C	1.44%	NO
	Broward Blvd	NW 6th St	4	36700	20400	B	21000	303	21303	B	24800	4	36700	B	20%	303	25103	B	0.83%	NO
NE 3rd Ave	SE 7th St	Broward Blvd	4	36700	23000	B	25000	76	25076	B	38600	4	36700	F	5%	76	38676	F	0.21%	NO
	Broward Blvd	NW 6th St	4	36700	23000	B	23400	227	23627	B	26000	4	36700	B	15%	227	26227	B	0.62%	NO
Avenue of the Arts	SE 7th St	Broward Blvd	4	36700	14800	B	18300	151	18451	B	41600	4	36700	F	10%	151	41751	F	0.41%	NO
	Broward Blvd	NW 6th St	4	36700	16800	B	19600	151	19751	B	38400	4	36700	F	10%	151	38551	F	0.41%	NO
NW 9th Ave	Broward Blvd	NW 6th St	2	36700	3400	B	4700	76	4776	B	13200	2	36700	B	5%	76	13276	C	0.21%	NO
S Federal Hwy	E Las Olas Blvd	Broward Blvd	6	55300	42500	B	43900	106	44006	B	53600	6	55300	C	7%	106	53706	D	0.19%	NO
	Broward Blvd	NW 6th St	6	55300	41500	B	42800	151	42951	B	51100	6	55300	C	10%	151	51251	C	0.27%	NO

Notes:

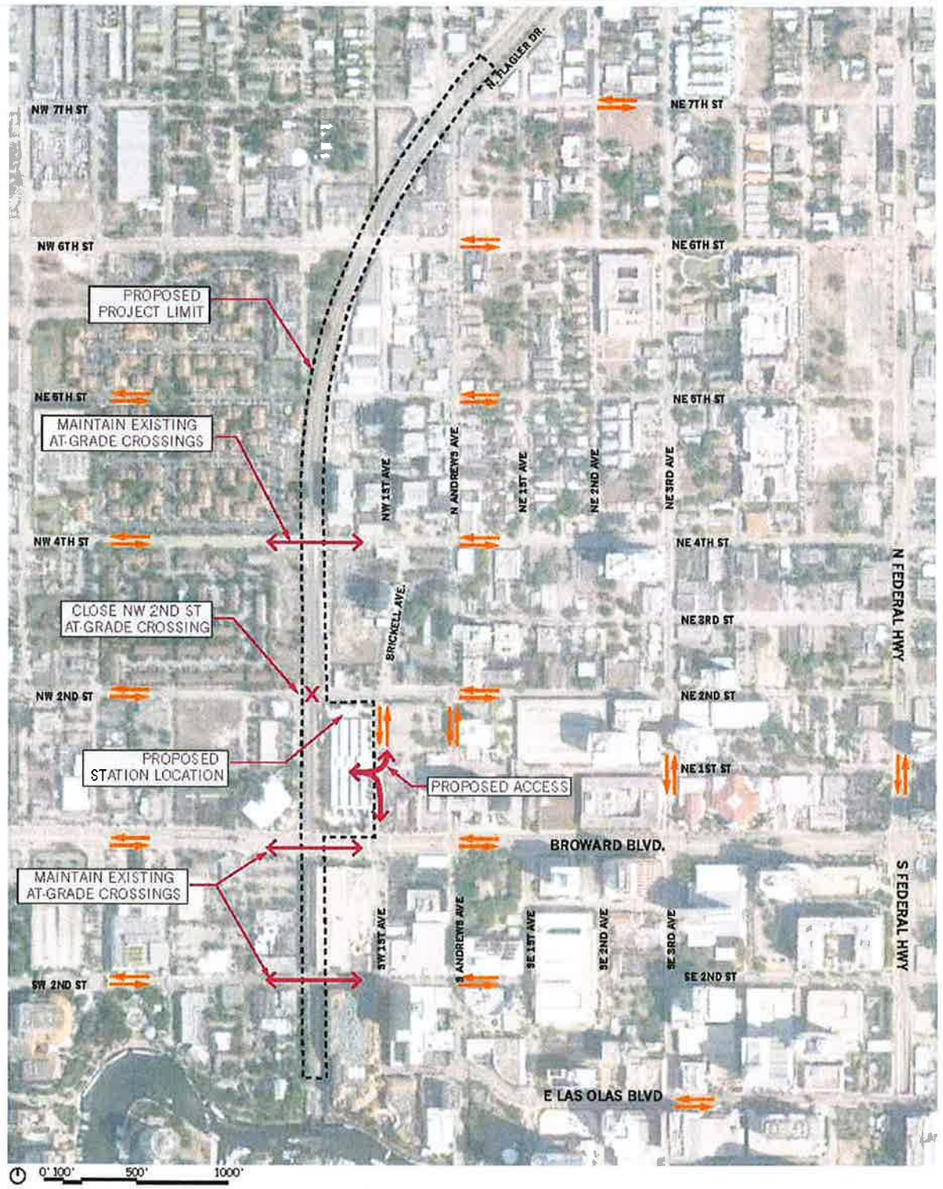
1. Existing ADTs are obtained from FDOT and Broward County sources. Some counts are from 2010 and 2011.
2. Future background ADT is obtained from 2035 Southeast Florida Regional Planning Model (SERPM).
3. Project traffic was manually distributed to surrounding roadways considering future background traffic, land uses, and roadway connectivity.
4. Where the future background volume was lower than the existing count, the future background volume was manually adjusted with a growth rate of 1% per year
5. Opening year background volume was obtained by interpolating existing and future volumes.
6. Project traffic for opening year was assumed to be same as build out year as most of the land uses are expected to built by opening year.
7. Capacity is based on FDOT's Generalized Annual Average Daily Volumes for urbanized areas.
8. Project impact is the percentage of roadway capacity consumed by project trips
9. Impact was assumed to be significant if it is more than 5%.
10. Capacities and LOS are based on daily volumes
11. For 2015, number of lanes are assumed same as existing. For 2035 number of lanes are based on the cost-feasible SERPM model

Figure 3.3-2
Fort Lauderdale North and South



September 7, 2012

FT. LAUDERDALE - NORTH
EXISTING VEHICULAR CIRCULATION PATTERN



September 7, 2012

FT. LAUDERDALE - NORTH
PROPOSED CHANGES TO VEHICULAR CIRCULATION

Table 3-3.11
Miami at grade – Existing and Future LOS

Rail Station	Direction of Travel	Road	Segment From	Segment To	Daily Background Traffic (AADT) 2011 (3)	2015 (2)	2035 (4)	Daily Traffic (AADT) With Project Project % (5)	Project	2015 Total	2035 Total	Level of Service (LOS) Lanes	Capacity (8)	2011	2015	2035	Project Traffic % of Capacity	Significant Impact (6) (Yes/No)	Adverse Impact (7) (Yes/No)
Miami At Grade Station	E/W	Flagler St.	NW 2nd Ave.	NW 1st Ave.	15,400	16,200	20,200	10%	1,025	17,225	21,225	4	25,500	D	D	D	4.0%	Na	Na
			NW 1st Ave.	Miami Ave.	15,600	16,400	20,500	20%	2,050	18,450	22,550	4	25,500	D	D	D	8.0%	Yes	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	14,000	14,700	18,400	20%	2,050	16,750	20,450	4	25,500	D	D	D	8.0%	Yes	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	12,000	12,600	15,800	15%	1,537	14,137	17,337	4	25,500	D	D	D	6.0%	Yes	Na
			2nd Ave.	US 1	8,700	9,100	11,400	10%	1,025	10,125	12,425	4	25,500	D	D	D	4.0%	Na	Na
	E/W	NW 1st St.	NW 2nd Ave.	NW 1st Ave.	4,600	7,000	19,200	5%	512	7,512	19,712	4 (one-way) WB	36,900	B	B	D	1.4%	Na	Na
			NW 1st Ave.	Miami Ave.	7,100	7,500	9,400	10%	1,025	8,525	10,425	4 (one-way) WB	36,900	B	B	B	2.8%	Na	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	6,700	7,000	8,800	20%	2,050	9,050	10,850	2 (one-way) WB	22,000	B	B	B	9.3%	Yes	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	6,800	7,200	9,000	15%	1,537	8,737	10,537	2 (one-way) WB	22,000	B	B	B	7.0%	Yes	Na
			2nd Ave.	US 1	3,200	3,400	4,200	10%	1,025	4,425	5,225	2 (one-way) WB	22,000	B	B	B	4.7%	No	No
	E/W	NE 3rd St	NW 3rd Ave	NW 2nd Ave.	9,200	9,700	12,100	0%	0	9,700	12,100	2	16,500	C	C	C	0.0%	Na	Na
			NW 2nd Ave. (1)	NW 1st Ave. (1)	6,800	7,100	8,900	0%	0	7,100	8,900	2	16,500	B	B	B	0.0%	Na	Na
			NW 1st Ave.	Miami Ave.	9,100	9,600	12,000	0%	0	9,600	12,000	2 (one-way) WB	22,000	B	B	B	0.0%	Na	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	10,400	11,000	13,700	0%	0	11,000	13,700	2 (one-way) WB	22,000	B	B	B	0.0%	Na	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	8,200	8,600	10,800	0%	0	8,600	10,800	2 (one-way) WB	22,000	B	B	B	0.0%	Na	Na
			2nd Ave.	US 1	2,000	2,100	2,600	0%	0	2,100	2,600	2 (one-way) WB	22,000	B	B	B	0.0%	Na	Na
	E/W	NE 5th St.	NW 3rd Ave.	NW 2nd Ave.	14,400	15,100	18,900	0%	0	15,100	18,900	3 (one-way) EB	27,500	B	B	B	0.0%	Na	Na
			NW 2nd Ave. (1)	NW 1st Ave. (1)	15,900	16,700	20,900	10%	1,025	17,725	25,825	3 (one-way) EB	27,500	B	B	D	3.7%	Na	Na
			NW 1st Ave.	Miami Ave.	19,400	20,400	25,500	10%	1,025	21,425	26,525	3 (one-way) EB	27,500	B	C	E	3.7%	Na	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	10,500	11,000	13,800	10%	1,025	12,025	14,825	3 (one-way) EB	27,500	B	D	D	3.7%	Na	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	9,100	9,800	12,000	10%	1,025	10,825	13,025	3 (one-way) EB	27,500	B	D	D	3.7%	Na	Na
			2nd Ave.	US 1	9,900	11,000	16,300	10%	1,025	12,025	17,325	3 (one-way) EB	27,500	B	D	D	3.7%	Na	Na
	E/W	NE 8th St.	NW 2nd Ave.	NW 1st Ave.	3,900	5,000	16,900	10%	1,025	6,025	17,925	2 (one-way) WB	22,000	B	B	C	4.7%	Na	Na
			NW 1st Ave.	Miami Ave.	17,600	18,600	23,200	10%	1,025	19,625	24,225	2 (one-way) WB	22,000	C	C	F	4.7%	Na	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	17,300	18,200	22,700	10%	1,025	19,225	23,725	2 (one-way) WB	22,000	B	C	F	4.7%	Na	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	13,500	14,600	19,800	10%	1,025	15,625	20,825	2 (one-way) WB	22,000	B	B	C	4.7%	Na	Na
			2nd Ave.	US 1	23,700	25,000	31,200	5%	512	25,512	31,712	3 (one-way) WB	27,500	C	E	F	1.9%	Na	Na
	E/W	NE 10th St.	NW 3rd Ave.	NW 2nd Ave.	4,900	5,900	10,700	0%	0	5,900	10,700	2 (one-way) EB	22,000	B	B	B	0.0%	Na	Na
			NW 2nd Ave.	NW 1st Ave.	2,000	4,500	12,000	0%	0	4,500	12,000	2 (one-way) EB	22,000	B	B	B	0.0%	Na	Na
			NW 1st Ave.	Miami Ave.	10,900	11,400	14,300	10%	1,025	12,425	15,325	2 (one-way) EB	22,000	B	B	B	4.7%	Na	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	7,500	7,900	9,900	10%	1,025	8,925	10,925	2 (one-way) EB	22,000	B	B	B	4.7%	Na	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	7,400	7,800	9,700	10%	1,025	8,825	10,725	2 (one-way) EB	22,000	B	B	B	4.7%	Na	Na
			2nd Ave.	US 1	12,200	12,900	16,100	5%	512	13,412	16,612	2 (one-way) EB	22,000	B	B	B	2.3%	Na	Na
	E/W	NE 11th St.	NW 2nd Ave.	NW 1st Ave.	1,900	3,400	10,800	10%	1,025	4,425	11,825	2 (one-way) WB	22,000	B	B	B	4.7%	Na	Na
			NW 1st Ave.	Miami Ave.	9,500	10,000	12,500	5%	512	10,512	13,012	2 (one-way) WB	22,000	B	B	B	2.3%	Na	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	9,800	10,300	12,900	5%	512	10,812	13,412	2 (one-way) WB	22,000	B	B	B	2.3%	Na	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	10,500	11,000	13,800	5%	512	11,512	14,312	2 (one-way) WB	22,000	B	B	B	2.3%	Na	Na
			2nd Ave.	US 1	9,100	9,600	12,000	5%	512	10,112	12,512	2 (one-way) WB	22,000	B	B	B	2.3%	Na	Na
	N/S	US 1	SE 1st St	Flagler St.	36,800	39,100	50,400	5%	512	39,612	50,912	8	64,700	D	D	D	0.8%	Na	Na
			Flagler St.	NW 1st St.	38,500	40,500	50,600	5%	512	41,012	51,112	8	64,700	D	D	D	0.8%	Na	Na
			NW 1st St.	NW 3rd St.	39,700	41,800	52,200	5%	512	42,312	52,712	8	64,700	D	D	D	0.8%	Na	Na
			NW 3rd St.	NE 5th St.	38,900	41,000	51,200	5%	512	41,512	51,712	8	64,700	D	D	D	0.8%	Na	Na
			NE 5th St.	NE 6th St.	43,500	45,800	57,200	5%	512	46,312	57,712	8	64,700	D	D	D	0.8%	Na	Na
			NE 6th St.	NE 10th St.	44,000	46,600	59,400	10%	1,025	47,625	60,425	8	64,700	D	D	E	1.6%	Yes	Na
			NE 10th St.	NE 11th St.	41,200	43,400	54,200	5%	512	43,912	54,712	8	64,700	D	D	D	0.8%	Na	Na
	N/S	SE 2nd Ave.	NW 1st St.	NW 3rd St.	18,500	19,500	24,400	5%	512	20,012	24,912	3 (one-way) SB	27,500	D	D	E	1.9%	Na	Na
			NW 3rd St.	NE 5th St.	22,800	24,000	30,000	10%	1,025	25,025	31,025	3 (one-way) SB	27,500	D	D	F	3.7%	Yes	Na
Miami At Grade Station		SE 2nd Ave.	NE 5th St.	NE 6th St.	26,300	27,700	34,600	0%	0	27,700	34,600	3 (one-way) SB	27,500	D	D	F	0.0%	Yes	Na
			NE 6th St.	NE 10th St.	19,000	20,100	25,700	0%	0	20,100	25,700	3 (one-way) SB	27,500	D	D	D	0.0%	Na	Na
			NE 10th St.	NE 11th St.	24,500	25,800	32,200	0%	0	25,800	32,200	3 (one-way) SB	27,500	D	D	F	0.0%	Yes	Na
	N/S	SE/NE 1st Ave/17St.	SE 2nd St	SE 1st St	12,400	13,000	16,300	5%	512	13,512	16,812	3 (one-way) NB	27,500	D	D	D	1.9%	Na	Na
			SE 1st St	Flagler St.	14,300	15,000	18,800	10%	1,025	16,025	19,825	3 (one-way) NB	27,500	D	D	D	3.7%	Na	Na
			Flagler St.	NW 1st St.	13,100	13,800	17,200	20%	2,050	15,850	19,250	3 (one-way) NB	27,500	D	D	D	7.5%	Yes	Na
			NW 1st St.	NW 3rd St.	13,200	13,900	17,400	0%	0	13,900	17,400	3 (one-way) NB	27,500	D	D	D	0.0%	Na	Na
			NW 3rd St.	NE 5th St.	11,900	13,700	22,600	0%	0	13,700	22,600	3 (one-way) NB	27,500	D	D	D	0.0%	Na	Na
			NE 5th St.	NE 6th St.	17,800	18,700	23,400	0%	0	18,700	23,400	3 (one-way) NB	27,500	D	D	D	0.0%	Na	Na
			NE 6th St.	NE 10th St.	16,000	17,300	24,000	0%	0	17,300	24,000	3 (one-way) NB	27,500	D	D	D	0.0%	Na	Na
			NE 10th St.	NE 11th St.	18,400	19,400	24,200	0%	0	19,400	24,200	3 (one-way) NB	27,500	D	D	D	0.0%	Na	Na
	N/S	Miami Ave.	SE 2nd St	SE 1st St	12,800	13,400	16,800	5%	512	13,912	17,312	3 (one-way) SB	27,500	D	D	D	1.9%	Na	Na
			SE 1st St	Flagler St.	10,400	11,000	13,700	10%	1,025	12,025	14,725	3 (one-way) SB	27,500	D	D	D	3.7%	Na	Na
			Flagler St.	NW 1st St.	6,500	6,900	8,600	10%	1,025	7,925	9,625	3 (one-way) SB	27,500	C	C	C	3.7%	Na	Na
			NW 1st St.	NW 3rd St.	12,800	13,400	16,800	0%	0	13,400	16,800	3 (one-way) SB	27,500	D	D	D	0.0%	Na	Na
			NW 3rd St.	NE 5th St.	16,700	17,600	22,000	10%	1,025	18,625	23,025	3 (one-way) SB	27,500	D	D	D	3.7%	Na	Na
			NE 5th St.	NE 6th St.	4,400	5,400	10,300	10%	1,025	6,425	11,325	3 (one-way) SB	27,500	C	C	D	3.7%	Na	Na
			NE 6th St.	NE 10th St.	11,000	11,600	14,500	10%	1,025	12,625	15,525	3 (one-way) SB	27,500	C	D	D	3.7%	Na	Na
			NE 10th St.	NE 11th St.	7,700	8,100	10,100	0%	0	8,100	10,100	3 (one-way) SB	27,500	C	C	C	0.0%	Na	Na
	N/S	NW 1st Ave./Arena Blvd.	SE 2nd St	SE 1st St	800	800	1,000	0%	0	800	1,000	4	31,900	C	C	C	0.0%	Na	Na
			SE 1st St	Flagler St.	900	1,000	1,200	50%	5,124	6,124	6,324	4	31,900	C	C	C	16.1%	Yes	Na
			Flagler St.	NW 1st St.	1,800	1,900	2,400	50%	5,124	7,024	7,524	4	31,900	C	C	C	16.1%	Yes	Na
			NW 1st St. at Miami Station	NW 3rd St.	6,200	6,300	6,600	50%	5,124	11,424	11,724	4	31,900	C	C	C	16.1%	Yes	Na
			NW 3rd St. (1)	NE 5th St. (1)	5,100	5,400	6,700	50%	5,124	10,524	16,624	4	31,900	C	C	D	16.1%	Yes	Na
			NE 5th St. (1)	NE 6th St. (1)	9,000	9,400	11,800	30%	3,074	12,474	14,874	4	31,900	C	C	D	9.6%	Yes	Na
			NE 6th St.	NE 10th St.	14,900	16,900	26,700	20%	2,050	18,950	28,750	4	31,900	C	C	E	6.4%	Yes	Na
			NE 10th St.	NE 11th St.	9,600	10,100	12,600	10%	1,025	11,125	13,625	2	16,500	B	C	C	6.2%	Yes	Na

Notes:

[1] With closing of 3rd St., the background traffic is rerouted from 3rd St. located west of NW 1st Ave. to 2nd Ave. north to NW 5th St. and south to NW 1st St.

[2] Where traffic counts are not available, the 2011 and 2015 background traffic is derived by applying a 1% annual reduction of the 2035 AADT road segment volume

[3] Traffic Counts obtained from FDOT's 2011 Florida Transportation Information database and counts taken in 2011 for the FEC railroad traffic operational study.

[4] Future 2035 background ADT is obtained from the 2035 Cost Affordable Southeast Florida Regional Planning Model (SERPM Version 6.5.2.e

[5] Project traffic was manually distributed based upon roadways considering future background traffic, land use, and road connectivity

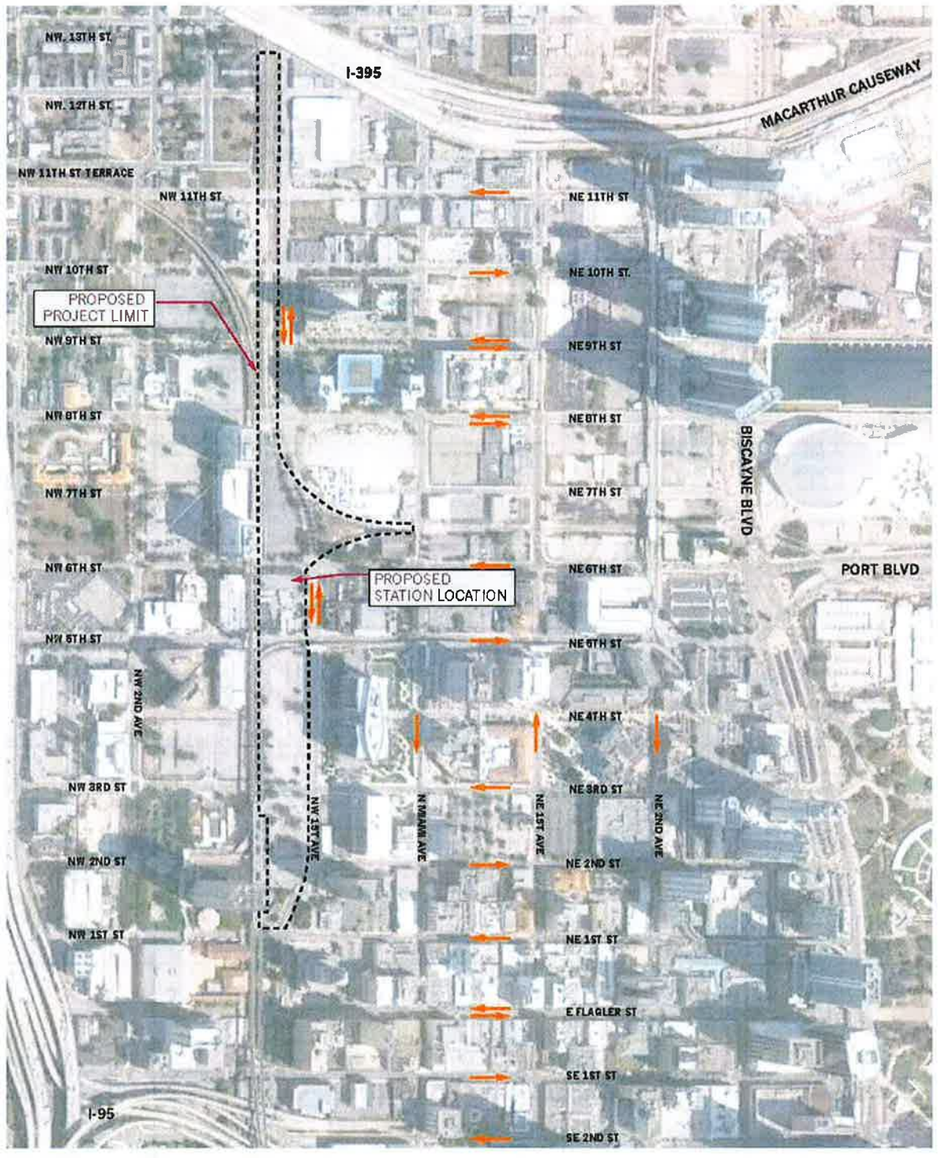
[6] Significant Impact is where the project consumes 5% or more of the road capacity

[7] Adverse Impact is where the project consumes 5% or more of the road capacity, unless mitigation is committed to in the FEIS and ROD

Table 3-3.12
Miami Elevated – Existing and Future LOS

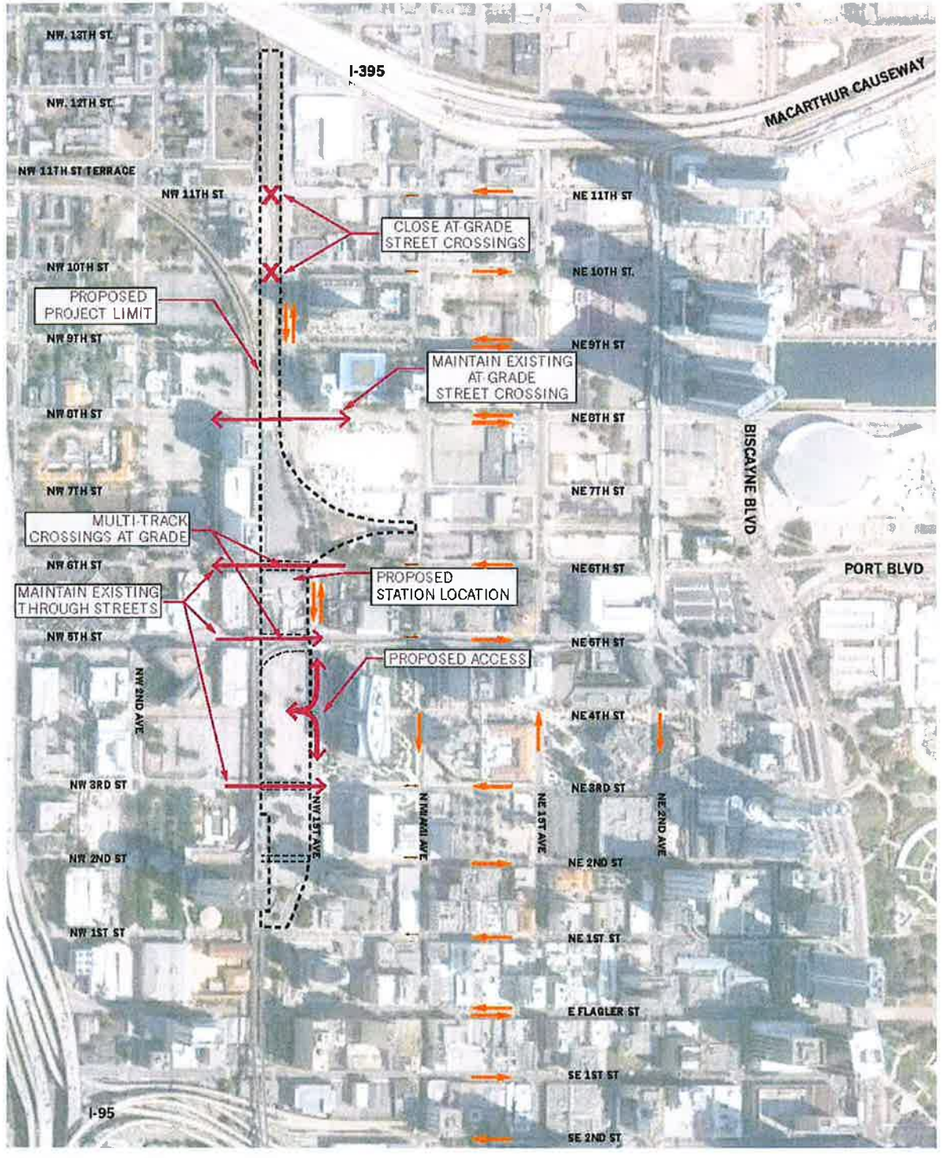
Rail Station	Direction of Travel	Road	Segment From	Segment To	Daily Background Traffic (ADT) 2011 (3)	Daily Background Traffic (ADT) 2015 (2)	Daily Background Traffic (ADT) 2035 (4)	Daily Traffic (ADT) With Project Project % (5)	Daily Traffic (ADT) With Project Project	Daily Traffic (ADT) With Project 2015 Total	Daily Traffic (ADT) With Project 2035 Total	Level of Service (LOS) Lanes	Level of Service (LOS) Capacity (8)	Level of Service (LOS) 2011	Level of Service (LOS) 2015	Level of Service (LOS) 2035	Project Traffic % of Capacity	Significant Impact (6) (Yes/No)	Adverse Impact (7) (Yes/No)
Miami Central Elevated Station	E/W	Flagler St.	NW 2nd Ave.	NW 1st Ave.	15,400	16,200	20,200	10%	1,025	17,225	21,225	4	25,500	D	D	D	4.0%	Na	Na
			NW 1st Ave.	Miami Ave.	15,600	16,400	20,500	20%	2,050	18,450	22,550	4	25,500	D	D	D	8.0%	Yes	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	14,000	14,700	18,400	20%	2,050	16,750	20,450	4	25,500	D	D	D	8.0%	Yes	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	12,000	12,600	15,800	15%	1,537	14,137	17,337	4	25,500	D	D	D	6.0%	Yes	Na
			2nd Ave.	US 1	8,700	9,100	11,400	10%	1,025	10,125	12,425	4	25,500	D	D	D	4.0%	Na	Na
	E/W	NW 1st St.	NW 2nd Ave.	NW 1st Ave.	4,600	7,000	19,200	5%	512	7,512	19,712	4	lane-way WB	36,900	B	B	D	1.4%	Na	Na
			NW 1st Ave.	Miami Ave.	7,100	7,500	9,400	10%	1,025	8,525	10,425	4	lane-way WB	36,900	B	B	B	2.8%	Na	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	6,700	7,000	8,800	10%	1,025	8,025	9,825	2	lane-way WB	22,000	B	B	B	4.7%	Na	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	6,800	7,200	9,000	10%	1,025	8,225	10,025	2	lane-way WB	22,000	B	B	B	4.7%	Na	Na
			2nd Ave.	US 1	3,200	3,400	4,200	10%	1,025	4,425	5,225	2	lane-way WB	22,000	B	B	B	4.7%	Na	Na
	E/W	NE 3rd St.	NW 3rd Ave.	NW 2nd Ave.	9,200	9,700	12,100	5%	512	10,212	12,612	2		16,500	C	C	C	3.1%	Na	Na
			NW 2nd Ave. (1)	NW 1st Ave. (1)	6,800	7,100	8,900	10%	1,025	8,125	9,925	2		16,500	B	B	B	6.2%	Yes	Na
			NW 1st Ave.	Miami Ave.	9,100	9,600	12,000	10%	1,025	10,625	13,025	2	lane-way WB	22,000	B	B	B	4.7%	Na	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	10,400	11,000	13,700	10%	1,025	12,025	14,725	2	lane-way WB	22,000	B	B	B	4.7%	Na	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	8,200	8,600	10,800	10%	1,025	9,625	11,825	2	lane-way WB	22,000	B	B	B	4.7%	Na	Na
			2nd Ave.	US 1	2,000	2,100	2,600	10%	1,025	3,125	3,625	2	lane-way WB	22,000	B	B	B	4.7%	Na	Na
	E/W	NE 5th St.	NW 3rd Ave.	NW 2nd Ave.	14,400	15,100	18,900	0%	0	15,100	18,900	3	lane-way EB	27,500	B	B	B	0.0%	Na	Na
			NW 2nd Ave.	NW 1st Ave.	15,900	16,700	20,900	10%	1,025	17,725	21,925	3	lane-way EB	27,500	B	B	D	3.7%	Na	Na
			NW 1st Ave.	Miami Ave.	19,400	20,400	25,500	10%	1,025	21,425	26,525	3	lane-way EB	27,500	B	C	E	3.7%	Na	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	10,500	11,000	13,800	10%	1,025	12,025	14,825	3	lane-way EB	27,500	B	D	D	3.7%	Na	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	9,100	9,600	12,000	10%	1,025	10,625	13,025	3	lane-way EB	27,500	B	D	D	3.7%	Na	Na
			2nd Ave.	US 1	9,900	11,000	16,300	10%	1,025	12,025	17,325	3	lane-way EB	27,500	B	D	D	3.7%	Na	Na
	E/W	NE 6th St.	NW 2nd Ave.	NW 1st Ave.	3,900	6,100	16,900	10%	1,025	7,125	17,925	2	lane-way WB	22,000	B	B	C	4.7%	Na	Na
			NW 1st Ave.	Miami Ave.	17,600	18,600	22,200	10%	1,025	19,625	24,225	2	lane-way WB	22,000	C	C	F	4.7%	Na	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	17,300	18,200	22,700	10%	1,025	19,225	23,725	2	lane-way WB	22,000	B	C	F	4.7%	Na	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	13,500	14,600	19,800	10%	1,025	15,625	20,825	2	lane-way WB	22,000	B	B	C	4.7%	Na	Na
			2nd Ave.	US 1	23,700	25,000	31,200	5%	512	25,512	31,712	3	lane-way WB	27,500	C	F	F	1.9%	Na	Na
	E/W	NE 10th St.	NW 2nd Ave.	NW 1st Ave.	4,900	5,900	10,700	0%	0	5,900	10,700	2	lane-way EB	22,000	B	B	B	0.0%	Na	Na
			NW 2nd Ave.	NW 1st Ave.	2,000	3,700	12,000	0%	0	3,700	12,000	2	lane-way EB	22,000	B	B	B	0.0%	Na	Na
			NW 1st Ave.	Miami Ave.	10,900	11,400	14,200	10%	1,025	12,425	15,325	2	lane-way EB	22,000	B	B	B	4.7%	Na	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	7,500	7,900	9,900	10%	1,025	8,925	10,925	2	lane-way EB	22,000	B	B	B	4.7%	Na	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	7,400	7,800	9,700	10%	1,025	8,825	10,725	2	lane-way EB	22,000	B	B	B	4.7%	Na	Na
			2nd Ave.	US 1	12,200	12,900	16,100	5%	512	13,412	16,612	2	lane-way EB	22,000	B	B	B	2.2%	Na	Na
	E/W	NE 11th St.	NW 2nd Ave.	NW 1st Ave.	1,900	3,400	10,900	10%	1,025	4,425	11,825	2	lane-way WB	22,000	B	B	B	4.7%	Na	Na
			NW 1st Ave.	Miami Ave.	9,500	10,000	12,500	5%	512	10,512	13,012	2	lane-way WB	22,000	B	B	B	2.3%	Na	Na
			Miami Ave.	SE/NE 1st Ave/17th St.	9,800	10,300	12,900	5%	512	10,812	13,412	2	lane-way WB	22,000	B	B	B	2.3%	Na	Na
			SE/NE 1st Ave/17th St.	2nd Ave.	10,500	11,000	13,800	5%	512	11,512	14,312	2	lane-way WB	22,000	B	B	B	2.3%	Na	Na
			2nd Ave.	US 1	9,100	9,600	12,000	5%	512	10,112	12,512	2	lane-way WB	22,000	B	B	B	2.3%	Na	Na
	N/S	US 1	SE 1st St.	Flagler St.	36,800	39,100	50,400	5%	512	39,612	50,912	8		64,700	D	D	D	0.8%	Na	Na
			Flagler St.	NW 1st St.	38,300	40,500	50,600	5%	512	41,012	51,112	8		64,700	D	D	D	0.8%	Na	Na
			NW 1st St.	NW 3rd St.	39,700	41,800	52,200	5%	512	42,312	52,712	8		64,700	D	D	D	0.8%	Na	Na
			NW 3rd St.	NE 5th St.	38,900	41,000	51,200	5%	512	41,512	51,712	8		64,700	D	D	D	0.8%	Na	Na
			NE 5th St.	NE 6th St.	43,500	45,800	57,200	5%	512	46,312	57,712	8		64,700	D	D	D	0.8%	Na	Na
			NE 6th St.	NE 10th St.	44,000	46,600	59,400	10%	1,025	47,625	60,425	8		64,700	D	D	E	1.6%	Na	Na
			NE 10th St.	NE 11th St.	41,200	43,400	54,200	5%	512	43,912	54,712	8		64,700	D	D	D	0.8%	Na	Na
	N/S	SE 2nd Ave.	NW 1st St.	NW 3rd St.	18,500	19,500	24,400	5%	512	20,012	24,912	3	lane-way SB	27,500	D	D	E	1.9%	Na	Na
			NW 3rd St.	NE 5th St.	22,800	24,000	30,000	10%	1,025	25,025	31,025	3	lane-way SB	27,500	D	D	F	3.7%	Yes	Na
		SE 2nd Ave.	NE 5th St.	NE 6th St.	26,300	27,700	34,600	0%	0	27,700	34,600	3	lane-way SB	27,500	D	D	F	0.0%	Yes	Na
			NE 6th St.	NE 10th St.	19,000	20,100	25,700	0%	0	20,100	25,700	3	lane-way SB	27,500	D	D	D	0.0%	Na	Na
			NE 10th St.	NE 11th St.	24,500	25,800	32,200	0%	0	25,800	32,200	3	lane-way SB	27,500	D	D	F	0.0%	Yes	Na
	N/S	SE/NE 1st Ave/17St.	SE 2nd St.	SE 1st St.	12,400	13,000	16,300	5%	512	13,512	16,812	3	lane-way NB	27,500	D	D	D	1.9%	Na	Na
			SE 1st St.	Flagler St.	14,300	15,000	18,800	10%	1,025	16,025	19,825	3	lane-way NB	27,500	D	D	D	3.7%	Na	Na
			Flagler St.	NW 1st St.	13,100	13,800	17,200	20%	2,050	15,850	19,250	3	lane-way NB	27,500	D	D	D	7.5%	Yes	Na
			NW 1st St.	NW 3rd St.	13,200	13,900	17,400	0%	0	13,900	17,400	3	lane-way NB	27,500	D	D	D	0.0%	Na	Na
			NW 3rd St.	NE 5th St.	11,900	12,700	22,600	0%	0	12,700	22,600	3	lane-way NB	27,500	D	D	D	0.0%	Na	Na
			NE 5th St.	NE 6th St.	17,800	18,700	21,400	0%	0	18,700	21,400	3	lane-way NB	27,500	D	D	D	0.0%	Na	Na
			NE 6th St.	NE 10th St.	16,000	17,300	24,000	0%	0	17,300	24,000	3	lane-way NB	27,500	D	D	D	0.0%	Na	Na
			NE 10th St.	NE 11th St.	18,400	19,400	24,200	0%	0	19,400	24,200	3	lane-way NB	27,500	D	D	D	0.0%	Na	Na
	N/S	Miami Ave.	SE 2nd St.	SE 1st St.	12,800	13,400	16,800	5%	512	13,912	17,312	3	lane-way SB	27,500	D	D	D	1.9%	Na	Na
			SE 1st St.	Flagler St.	10,400	11,000	13,700	10%	1,025	12,025	14,725	3	lane-way SB	27,500	D	D	D	3.7%	Na	Na
			Flagler St.	NW 1st St.	6,500	6,900	8,600	10%	1,025	7,925	9,625	3	lane-way SB	27,500	C	C	C	3.7%	Na	Na
			NW 1st St.	NW 3rd St.	12,800	13,400	16,800	10%	1,025	14,425	17,825	3	lane-way SB	27,500	D	D	D	3.7%	Na	Na
			NW 3rd St.	NE 5th St.	16,700	17,600	22,000	10%	1,025	18,625	23,025	3	lane-way SB	27,500	D	D	D	3.7%	Na	Na
			NE 5th St.	NE 6th St.	4,400	5,400	10,300	10%	1,025	6,425	11,325	3	lane-way SB	27,500	C	D	D	3.7%	Na	Na
			NE 6th St.	NE 10th St.	11,000	11,600	14,500	10%	1,025	12,625	15,525	3	lane-way SB	27,500	C	D	D	3.7%	Na	Na
			NE 10th St.	NE 11th St.	7,700	9,100	10,100	0%	0	9,100	10,100	3	lane-way SB	27,500	C	C	C	0.0%	Na	Na
	N/S	NW 1st Ave./Arena Blvd.	SE 2nd St.	SE 1st St.	800	800	1,000	0%	0	800	1,000	4		31,900	C	C	C	0.0%	Na	Na
			SE 1st St.	Flagler St.	900	1,000	1,200	50%	5,124	6,124	6,324	4		31,900	C	C	C	16.1%	Yes	Na
			Flagler St.	NW 1st St.	1,800	1,900	2,400	50%	5,124	7,024	7,524	4		31,900	C	C	C	16.1%	Yes	Na
			NW 1st St.	NW 3rd St.	6,200	6,300	6,600	40%	4,099	10,399	10,699	4		31,900	C	C	C	12.9%	Yes	Na
			NW 3rd St. at Miami Station	NE 5th St.	5,100	5,400	6,700	30%	3,074	8,474	9,774	4		31,900	C	C	C	9.6%	Yes	Na
			NE 5th St.	NE 6th St.	9,000	9,400	11,800	30%	3,074	12,474	14,874	4		31,900	C	C	D	9.6%	Yes	Na
			NE 6th St.	NE 10th St.	14,900	16,900	26,700	20%	2,050	18,950	28,750	4		31,900	C	C	E	6.4%	Yes	Na
			NE 10th St.	NE 11th St.	9,600	10,100	12,600	10%	1,025	11,125	13,625	2		16,500	B	C	C	6.2%	Yes	Na

Figure 3.3-3
Miami Elevated



September 7, 2012

MIAMI - CENTRAL ELEVATED
EXISTING VEHICULAR CIRCULATION PATTERN



September 7, 2012

MIAMI - CENTRAL ELEVATED
PROPOSED CHANGES TO VEHICULAR CIRCULATION