

**WESTSHORE/WEST TAMPA
STREET NETWORK -
BASE TRAFFIC MODELING &
ANALYSIS TECHNICAL MEMORANDUM**

PREPARED FOR:



CITY OF TAMPA
306 E. JACKSON STREET, 4E
TAMPA, FLORIDA 33602



Prepared By:



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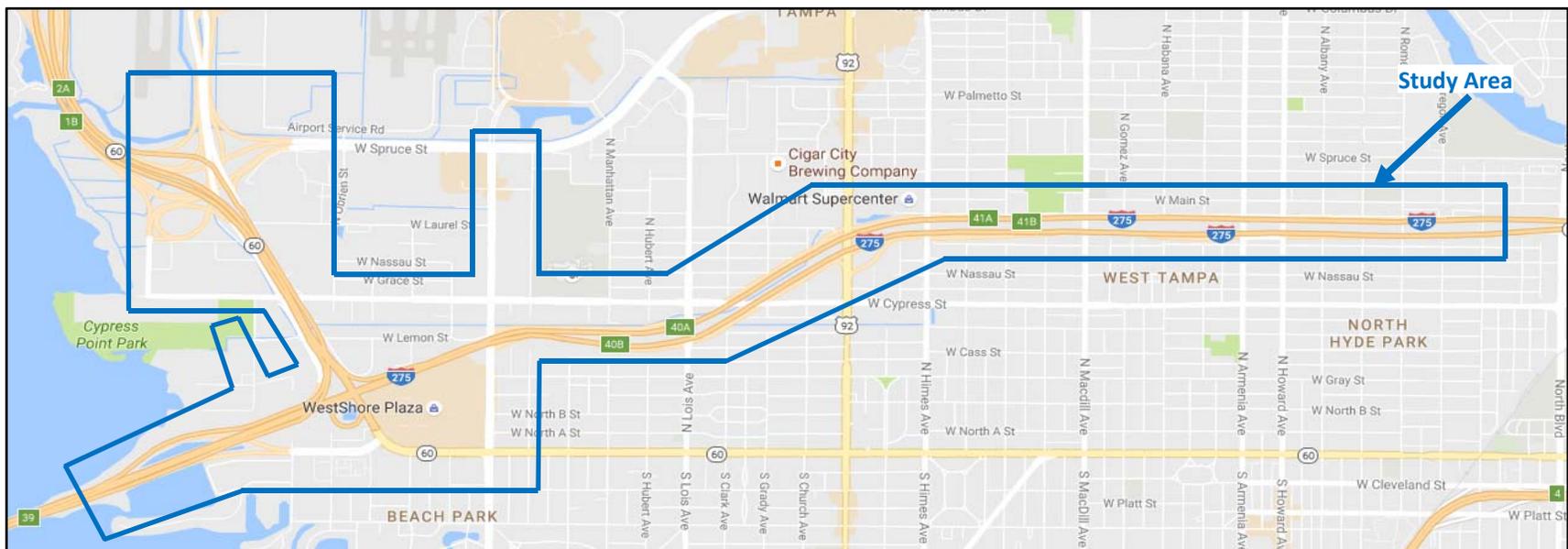
***Westshore/West Tampa Street Network
Base Traffic Modeling and Analysis
Technical Memorandum***

Presentation to Westshore Alliance

***City of Tampa
May 10, 2017***

Introduction

Purpose of the study was to evaluate future traffic conditions due to socioeconomic growth and impact of FDOT Tampa Bay Express (TBX) Lanes project on roadways within the Westshore/ West Tampa area and identify future infrastructure needs to improve traffic operation within the study area.



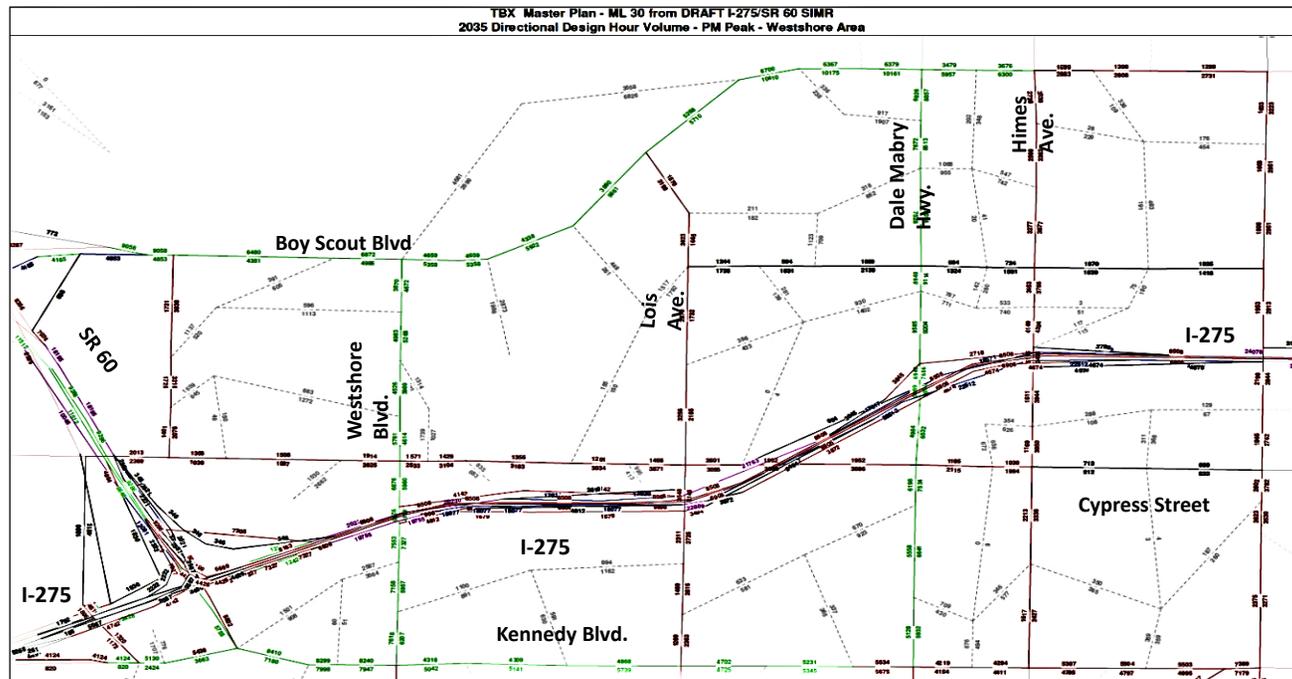
Existing Traffic Conditions and Analysis

- ❑ **30 Study Intersections identified**
 - 27 Signalized
 - 3 Un-signalized
- ❑ **29 Roadway Segments identified along 11 Study Corridors within project limits**
- ❑ Existing Data Collection
 - Turning Movement Counts conducted by City of Tampa at 18 intersections during **February, March & April 2016**
 - Turning Movement Counts at 4 intersections were conducted by Florida Department of Transportation (FDOT) – District Seven
 - Turning Movement Volumes at 8 intersections along West Shore Boulevard obtained from *West Shore Boulevard Complete Street Feasibility Study*
- ❑ Existing Year 2016 AM and PM traffic volumes developed by **seasonally adjusting** the counts
- ❑ **Traffic Methodology reviewed and approved by City of Tampa**
- ❑ Existing **Intersection and Arterial Analysis performed** using SYNCHRO 8.0 per approved traffic methodology to identify existing deficiencies

Future Traffic Volumes

Future Year 2035

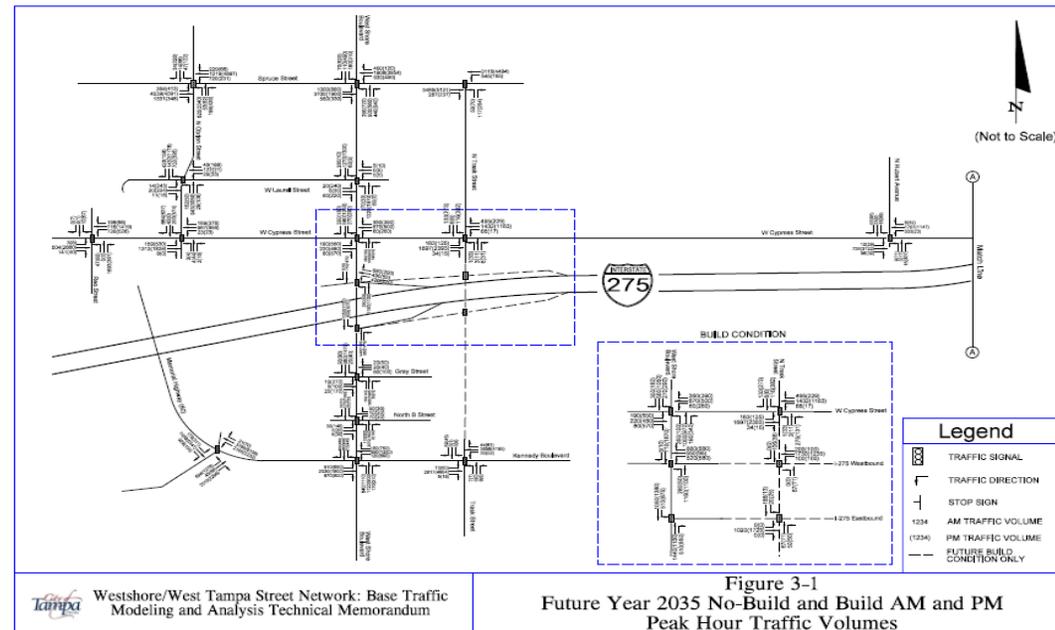
- ❑ *Time-of-Day Tampa Bay Regional Planning Model (TBRPM)* modified for TBX – Managed Lane (ML 30) was used
- ❑ The model run was obtained from FDOT – District Seven and was used for the *Draft I-275 at SR 60 Systems Interchange Modification Report (SIMR) for CONSISTENCY*



Future Traffic Volumes

Future Year 2035

- ❑ **AM and PM Directional Design Hour Volumes** obtained from the model were distributed in proportion of existing turning movement volumes at study intersections
- ❑ Reasonable adjustments were made as needed
- ❑ **Adjustments were made to Ramp on/off volumes** at West Shore Boulevard/Trask Street, Lois Avenue, Dale Mabry Highway, Himes Avenue, Armenia Avenue, Howard Avenue for consistency with *Draft Traffic Projections memorandum for I-275 SMIR Update*
- ❑ **Future volumes reviewed & approved by City of Tampa**



Future Traffic Analysis

Future Year of Analysis: 2035

Software Tool: SYNCHRO 8.0 per approved traffic methodology

Scenarios Analysed:

- ❑ ***No-Build: Results show deterioration from existing condition***

- ❑ ***Build:*** Long Range Transportation Plan Improvements (LRTP) Only
Results similar to No-Build with exception along Obrien Street
 - Source:
 - The Adopted Imagine 2040: Hillsborough LRTP
 - City of Tampa's Capital Improvement Project
 - FDOT Draft Tentative Five-Year Work Program Fiscal Years 2018 - 2022

 - **LRTP Improvements considered**
 - Trask Street – Cypress Street to Boy Scout Boulevard/Spruce Street: 2-lane undivided to 3-lane divided.
 - Trask Street – Cypress Street to Gray Street: Extend as 2-lane undivided.
 - Obrien Street – Cypress Street to Boy Scout Boulevard/Spruce Street: 2-lane undivided to 4-lane divided.
 - Cypress Street – Dale Mabry Highway to Himes Avenue – Road widening from 2/3 lanes to a 5-lane.

- ❑ ***Build: Identify needed improvements***

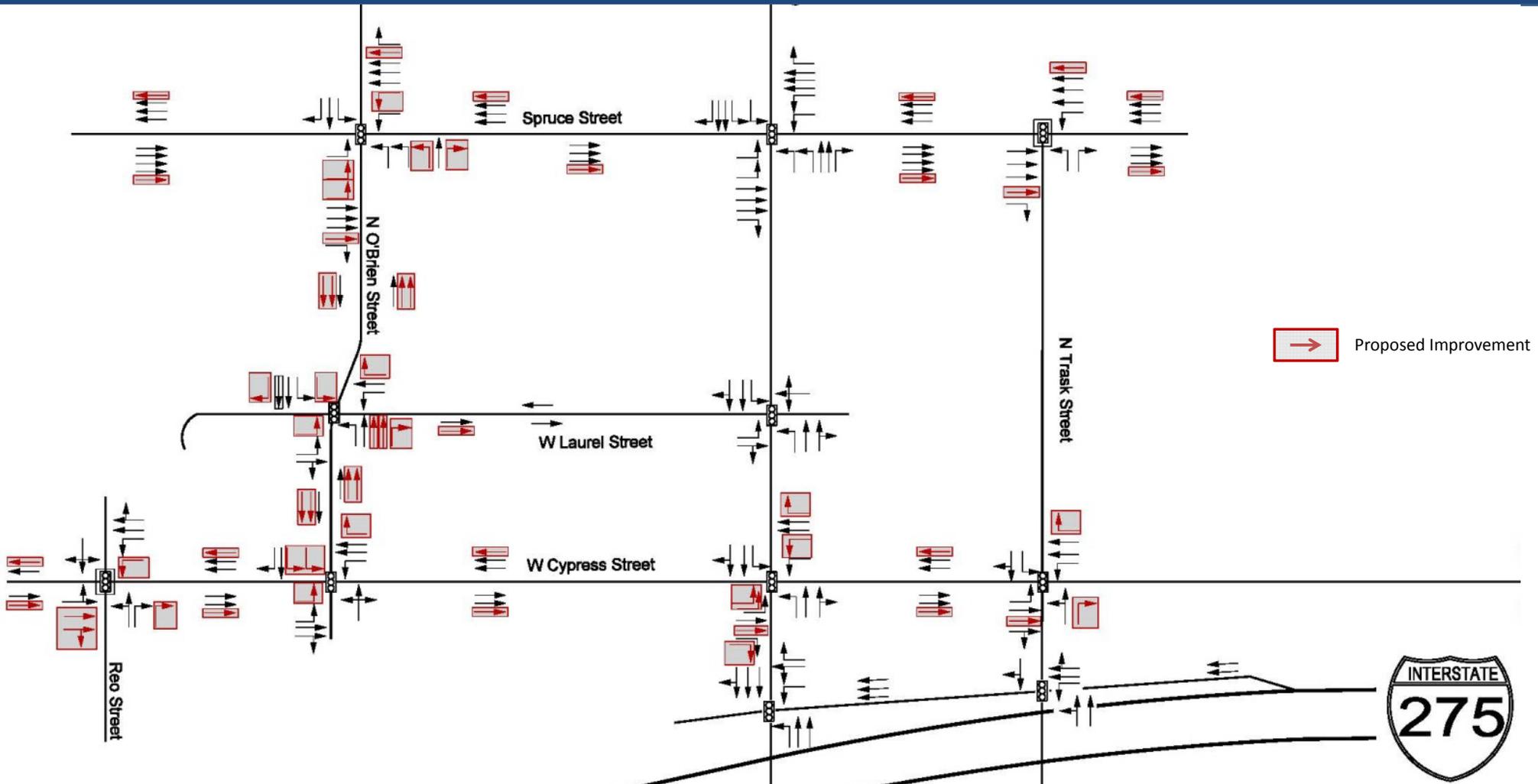
Future Traffic Analysis

Scenarios Analysed (Cont'd.):

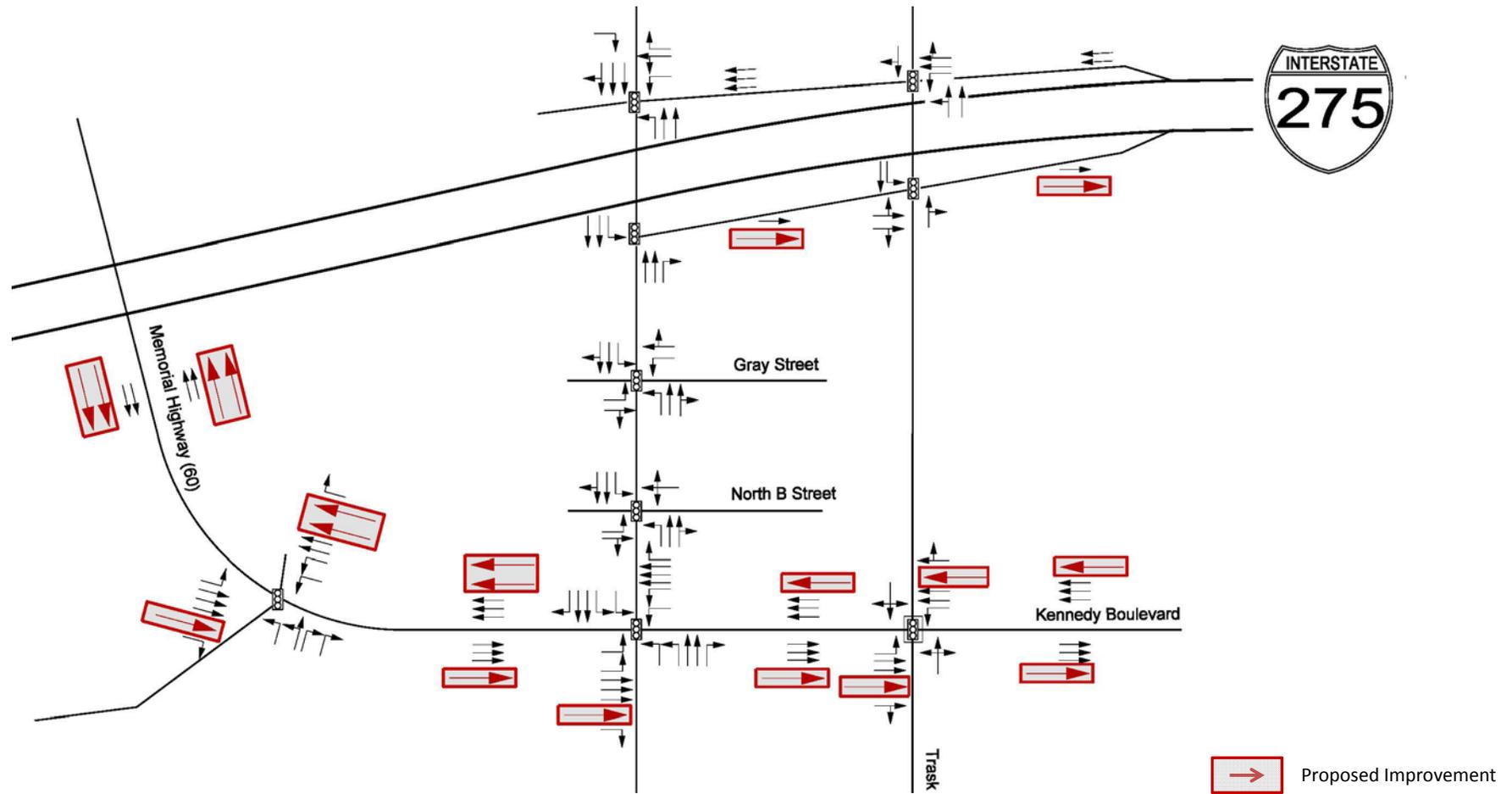
- ❑ Build: Identify needed improvements
 - Intersection turn lane improvements
 - Through lane improvements
 - 3 Intersections currently un-signalized under existing conditions have been **proposed to be signalized**
 - ❑ *Kennedy Boulevard at Trask Street*
 - ❑ *Boy Scout Boulevard/Spruce Street at Trask Street*
 - ❑ *Cypress Street at Reo Street*
 - West Shore Boulevard considered to be 4-Lanes from Kennedy Boulevard to Boy Scout Boulevard/Spruce Street based on *West Shore Boulevard Complete Street Feasibility Study*

- ❑ Proposed needed improvements ***do not*** take into account ***available ROW, constructability issues, funding or other constraints***. Will need to be evaluated during design phase of the improvements

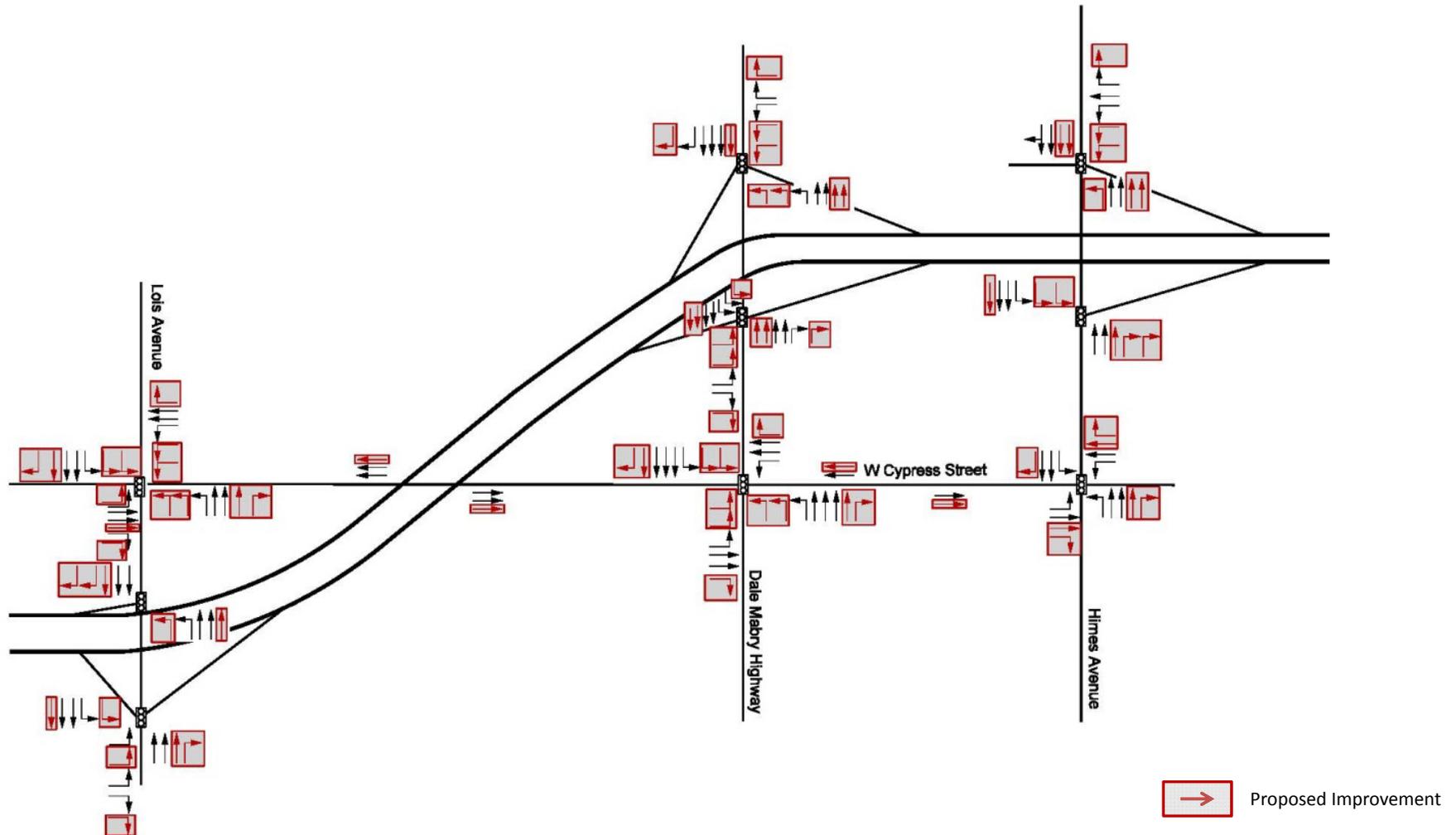
Recommendations – Proposed Future 2035 Lane Geometry



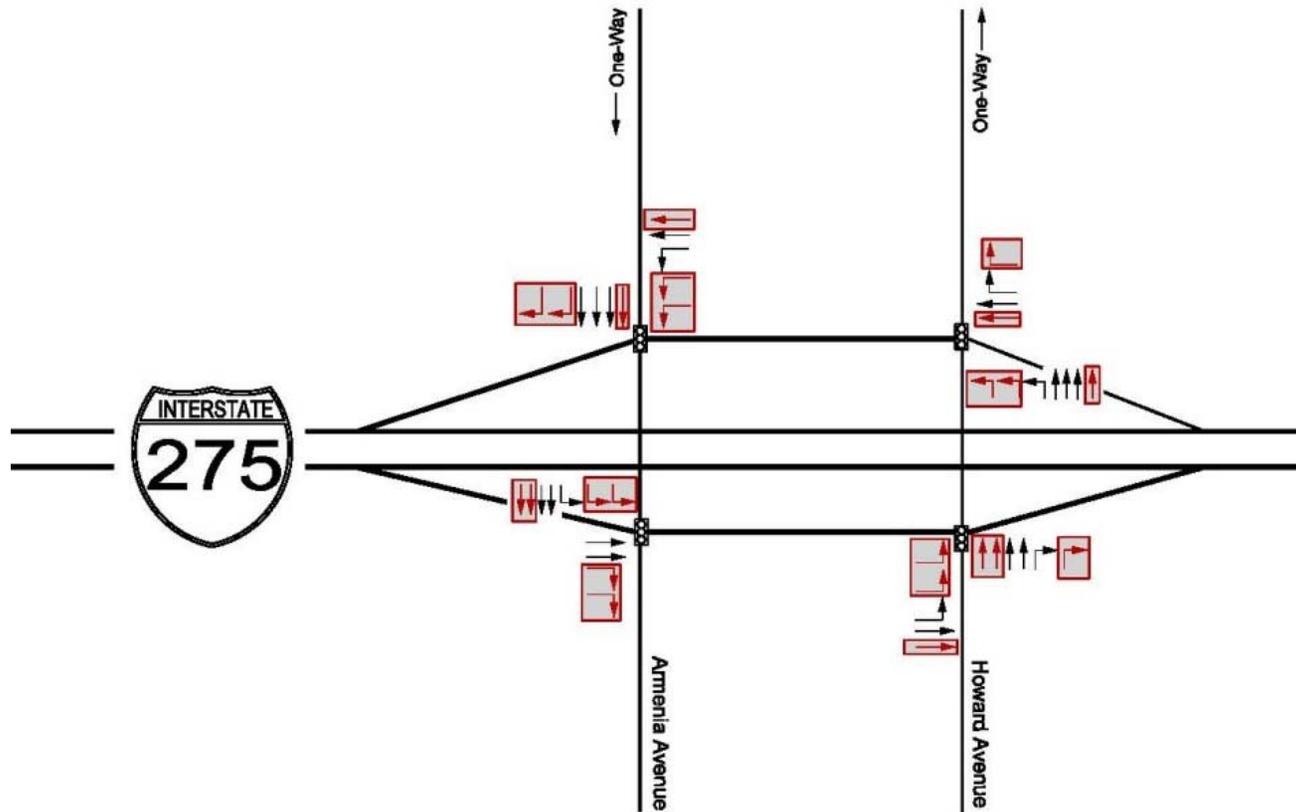
Recommendations – Proposed Future 2035 Lane Geometry (Cont'd)



Recommendations – Proposed Future 2035 Lane Geometry (Cont'd)



Recommendations – Proposed Future 2035 Lane Geometry (Cont'd)



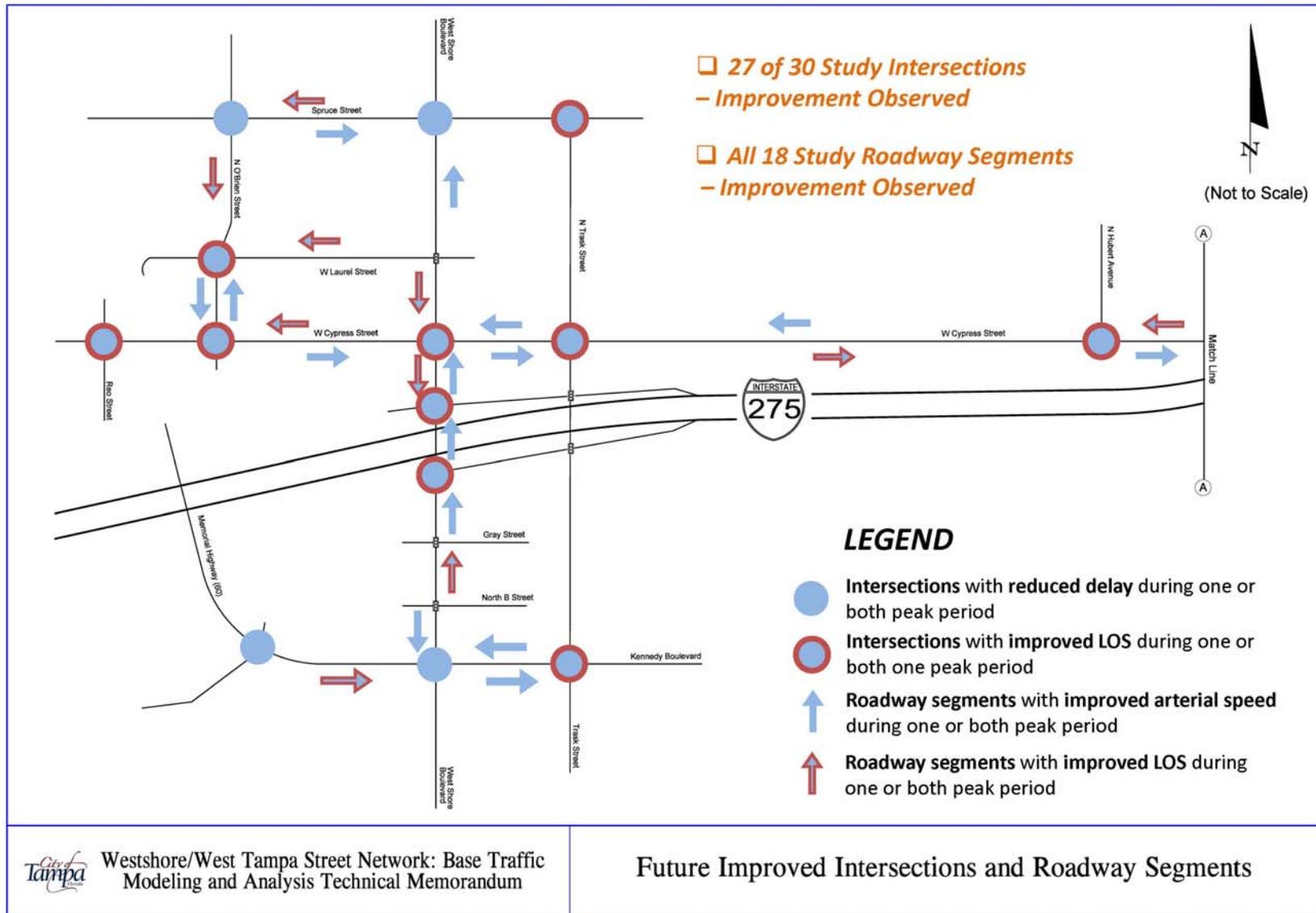
 Proposed Improvement

Conclusion

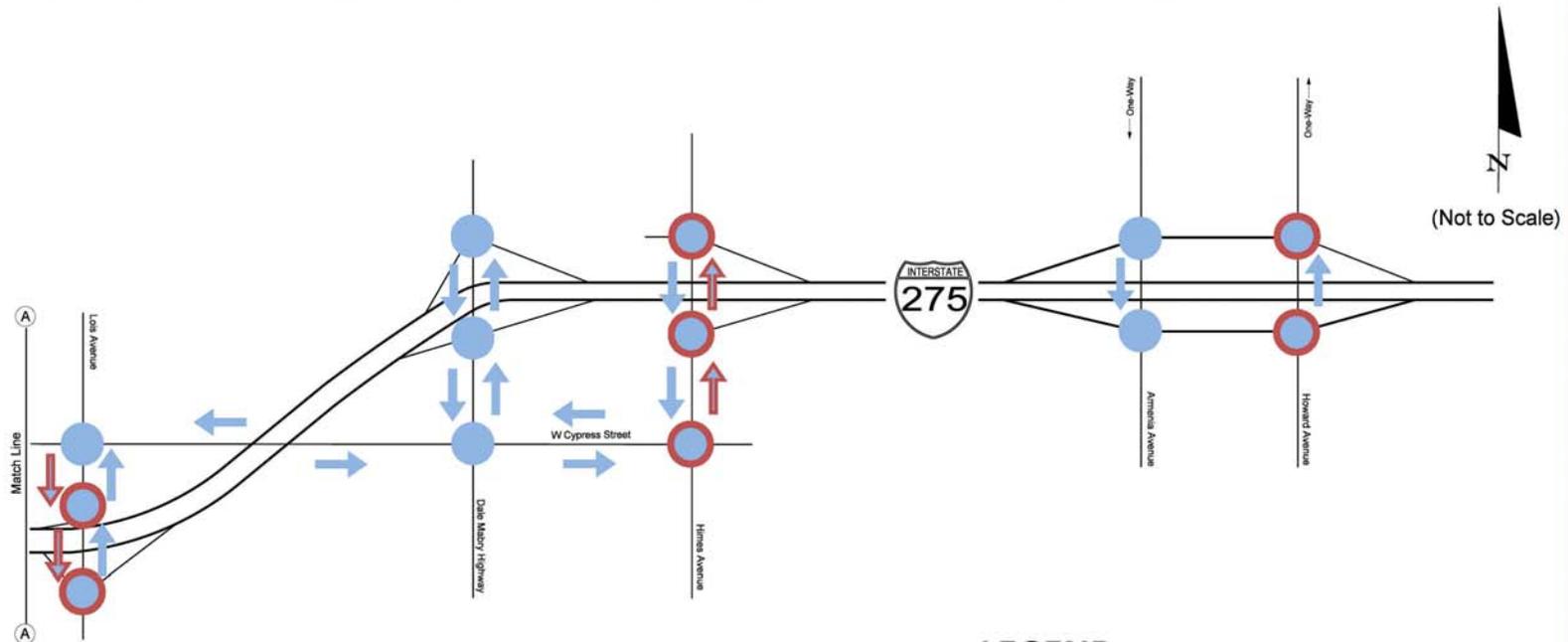
- ❑ Improved Traffic Operation with proposed needed improvements
 - **27 of 30** Study Intersections operate at improved LOS with lower delay during one or both peak period
 - **All 18** Study Roadway Segments operate with increased overall arterial speed during one or both peak period

*(Proposed needed improvements **do not take into account** available ROW, constructability issues, funding or other constraints. Will need to be evaluated during design phase of the improvements)*

Overview of Results



Overview of Results



- ❑ **27 of 30 Study Intersections**
– Improvement Observed
- ❑ **All 18 Study Roadway Segments**
– Improvement Observed

LEGEND

- Intersections with **reduced delay** during one or both peak period
- Intersections with **improved LOS** during one or both one peak period
- ↑ Roadway segments with **improved arterial speed** during one or both peak period
- ↑ Roadway segments with **improved LOS** during one or both peak period



Opportunities and Options



- ❑ ***With that much Population, Housing and Employment growth in the Westshore/West Tampa area and***
- ❑ ***With that much traffic entering the Westshore/West Tampa area something has to give!***
 - ❑ ***Revise LOS standards***
 - ❑ ***Un-Constraint Roads***
 - ❑ ***High cost of transportation improvements***
 - ❑ ***Make transit a desirable alternative to driving alone***
 - ❑ ***Increase multi-modal and transit options***

Opportunities and Options

- ❑ **Support high capacity transit systems**
 - ❑ *Increase bus headways and frequency of bus service*
 - ❑ *Increase bus route coverage and number of bus shelters (Trask Street Route)*
 - ❑ *Encourage shuttle service along Spruce, Cypress, Kennedy Trask, Westshore (parking structures to/from office) to the Westshore Multi-Modal Center and TIA Airport*
- ❑ **Support Transportation System Management (TSM) strategies**
 - ❑ *Intersection improvements*
 - ❑ *ITS and other strategies to improve traffic flow*
 - ❑ *Improve response time on incidents*
- ❑ **Promote multi-modal Transportation Demand Management (TDM) strategies**
 - ❑ *Spread out peak hour travel, flexible work hours*
 - ❑ *Carpooling - WazeRider, Uberpool, Lyft, Sidecar, telecommuting*
 - ❑ *Zip Cars*
 - ❑ *Employer sponsored transit passes*
- ❑ **Improve bike and pedestrian connections and facilities**
 - ❑ *Coast Bike Share*
 - ❑ *Connecting homes to places of work, schools, shopping, entertainment, etc.*
- ❑ **Examine existing City land use codes and polices to work in conjunction with transportation systems**
 - ❑ *Limit parking spaces in Westshore business areas*