



# Regional Transit Feasibility Plan

A ROUTE MAP TO IMPLEMENTATION

Hillsborough MPO  
CAC Update  
February 14, 2018

1

What are the projects to be built?



**Regional Transit  
Feasibility Plan**  
A ROUTE MAP TO IMPLEMENTATION

(Emphasis of the Regional  
Transit Feasibility Plan)

2

How is it funded?

3

Who is responsible for building and  
maintaining it?

# PLAN PURPOSE

- ✓ Define and validate a *regional transit vision*.
- ✓ Identify a *catalyst* that begins building the vision
- ✓ Identify a *catalyst* that has the *greatest potential to be built* (compete for state and federal grants)

# THE PLAN IS NOT

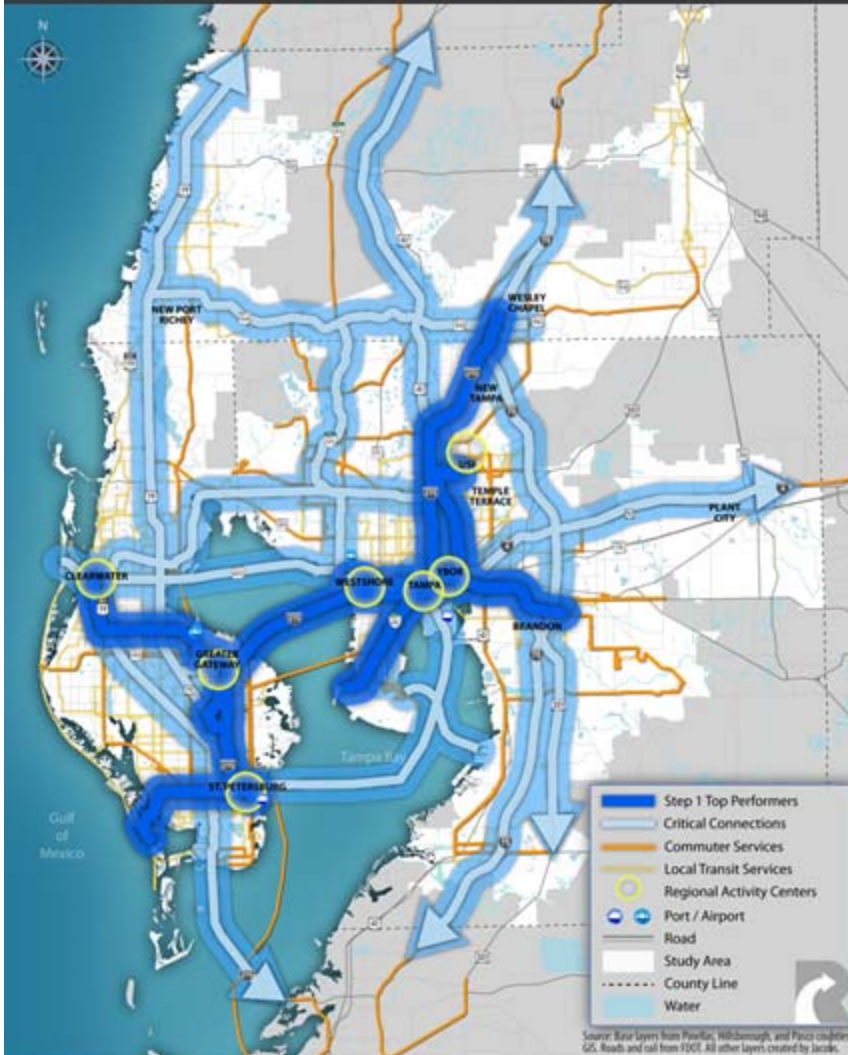
- ❌ Another study for the shelf
- ❌ A replacement for the Long Range Transportation Plan or a Transit Development Plan

# THE CATALYST IS NOT

- ❌ A replacement for future transit projects
- ❌ The only transit recommendation for Tampa Bay

# REGIONAL TRANSIT VISION

THE **TOP PERFORMERS** AND CRITICAL REGIONAL CONNECTIONS WOULD SERVE THE FOLLOWING WITHIN ½ MILE OF EACH CONNECTION BY 2040



SERVES APPROX.  
**6 IN 10**  
JOBS (2040)

SERVES APPROX.  
**5 IN 10**  
RESIDENTS (2040)



SERVES APPROX. **2,100**  
JOBS PER MILE (2040)

SERVES APPROX. **3,000**  
RESIDENTS PER MILE (2040)



SERVES APPROX.  
**6 IN 10**  
RESIDENTS WITHOUT CARS  
(2040)

Source: Base layers from Pinellas, Hillsborough, and Pasco counties GIS. Roads and rail from ESRI. All other layers created by Jacobs.

# CHOOSING MODES

Understanding the travel needs of riders along and near each of the top connections illustrates which modes best serve that need.

## Ferry and Aerial Propelled Transit



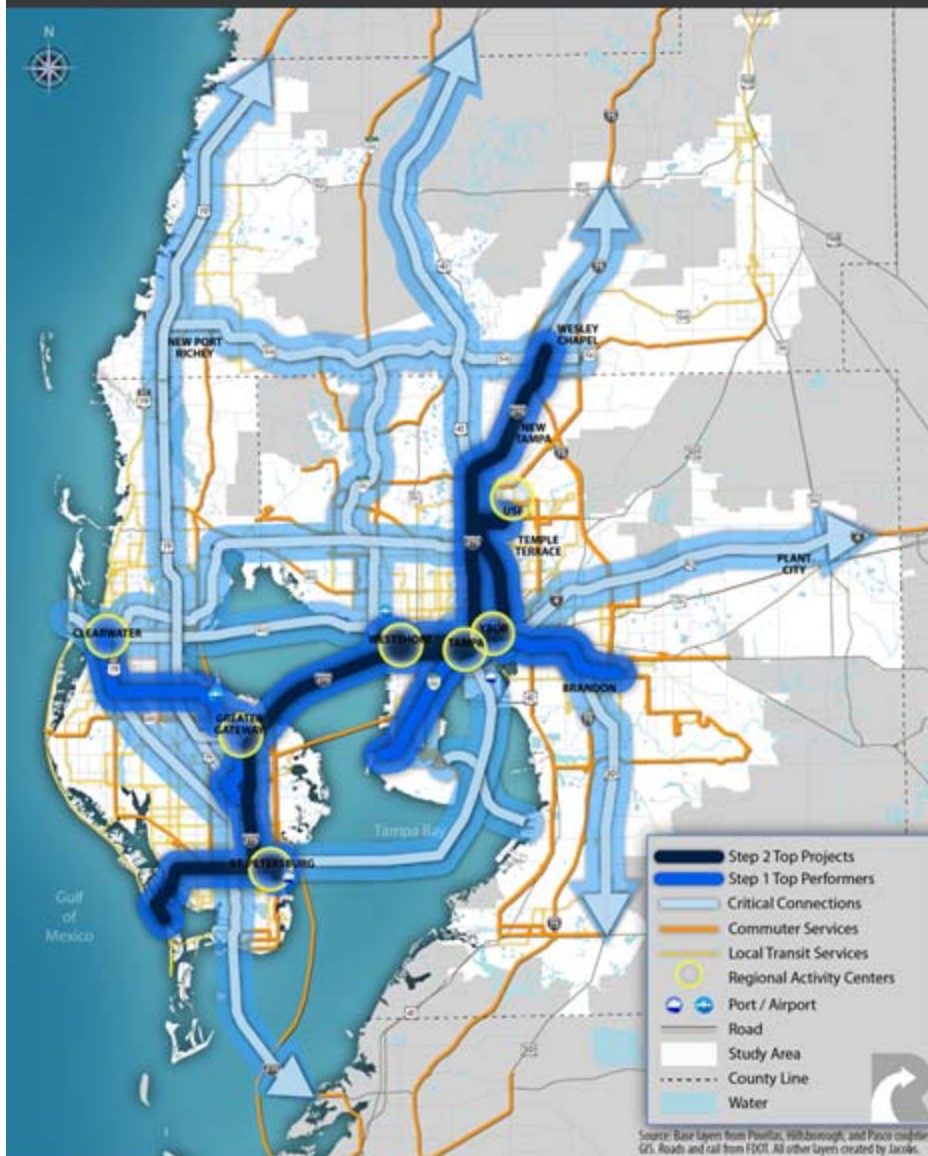
## Steel Wheel or Rail Transit



## Rubber Tire Rapid Transit



# STEP 3 EVALUATION: FIVE ALTERNATIVES



- ✓ I-275 Rubber Tire
- ✓ I-275 Urban Rail
- ✓ CSX Rubber Tire
- ✓ CSX Urban Rail
- ✓ CSX Commuter Rail

## 2017 LAND USE

- Employment
- Population density

## 2017 MOBILITY AND CONGESTION

- New riders
- Annual ridership

## 2017 ENVIRONMENTAL BENEFITS

## 2017 COST EFFECTIVENESS

## STEP 3: EVALUATION RESULTS

FTA COST EFFECTIVENESS (New Starts Medium Rating)

**\$10 OR BETTER**

Not Final Recommendations

	2017 TOTAL PROJECT CAPITAL	2017 COST PER TRIP
I-275 RUBBER TIRE	<b>\$2.3B - \$2.9B</b>	<b>\$45</b>
I-275 URBAN RAIL	<b>\$3.9B - \$5.1B</b>	<b>\$51</b>
CSX RUBBER TIRE	<b>\$340M - \$420M</b>	<b>\$11</b>
CSX URBAN RAIL	<b>\$800M - \$1B</b>	<b>\$17</b>
CSX COMMUTER RAIL	<b>\$520M - \$650M</b>	<b>\$21</b>

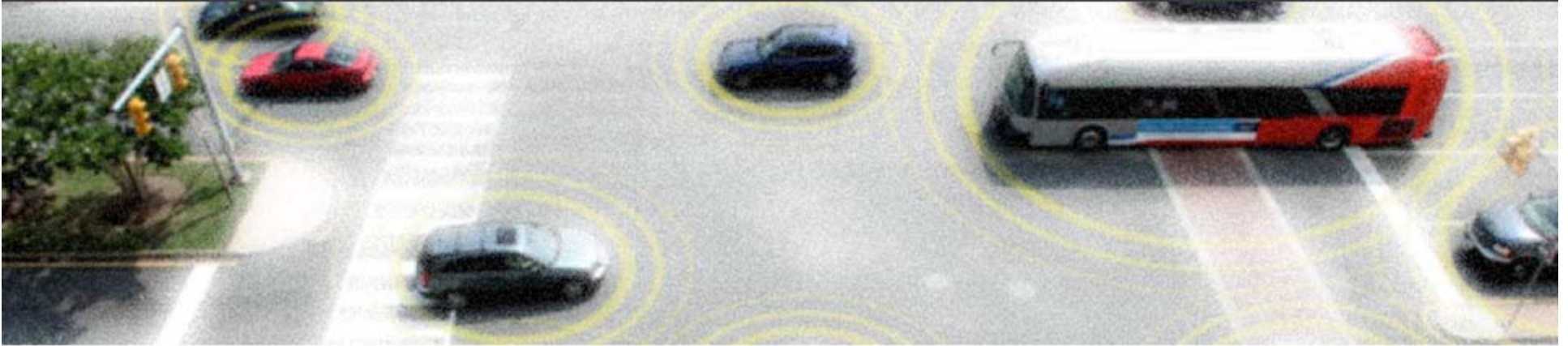
Estimates are calculated in 2017 dollars and do not include inflation or financing. These are planning level cost estimates that are subject to change as the project moves towards implementation.





VALUE ENGINEERING

# VALUE ENGINEERING: PROJECT COSTS



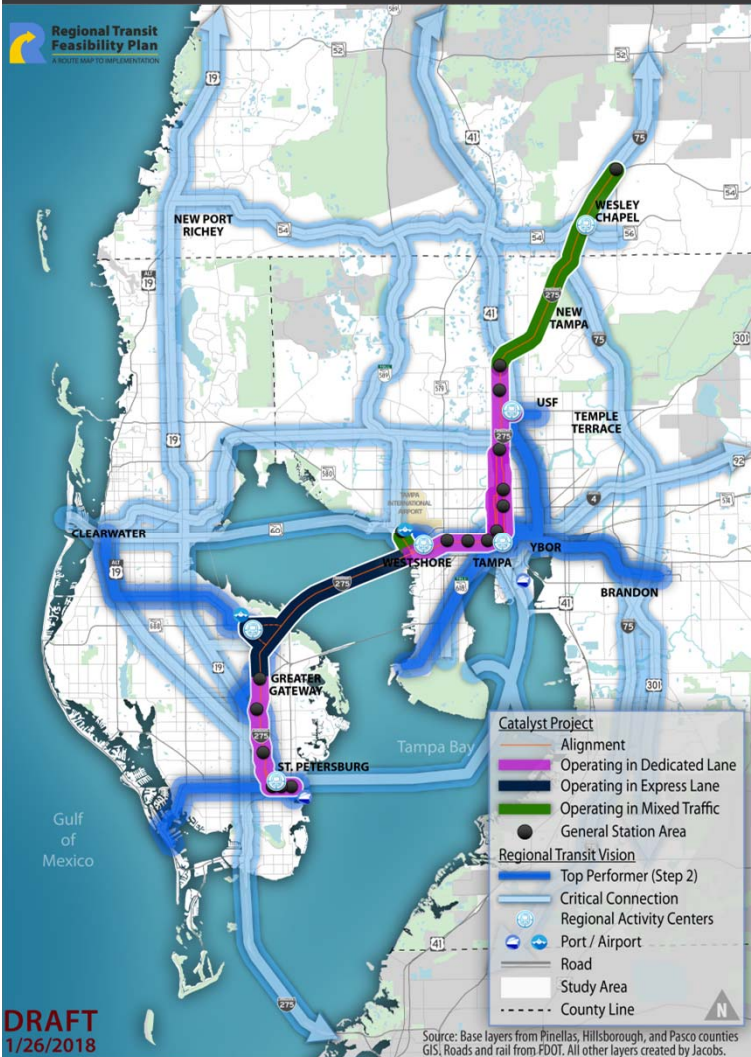
**How much capital investment does the ridership support?**

$$\text{COST PER TRIP} = \frac{\text{Annual capital + operations}}{\text{Annual ridership}}$$

# PROJECT CONCEPT: I-275 RUBBER TIRE

## WESLEY CHAPEL TO ST. PETERSBURG

- Combination of dedicated transit lane and mixed traffic operations
- **NO RIGHT-OF-WAY NEEDED** (except stations)
- 21 stations (**19 at-grade/street level, 2 elevated**)
- 80-95 minutes to travel from Wesley Chapel to St. Petersburg



# PROJECT CONCEPT: I-275 RUBBER TIRE

## ST PETERSBURG TO GREATER GATEWAY AREA



### Stations:

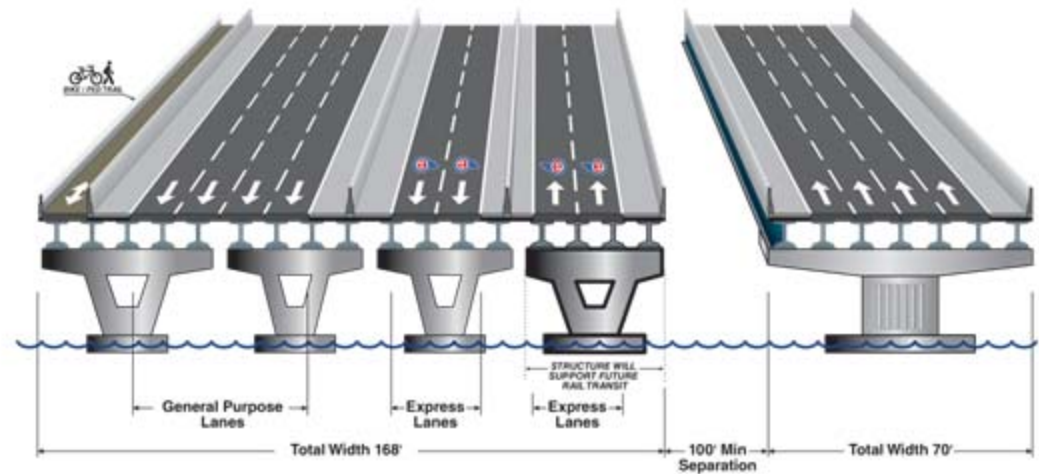
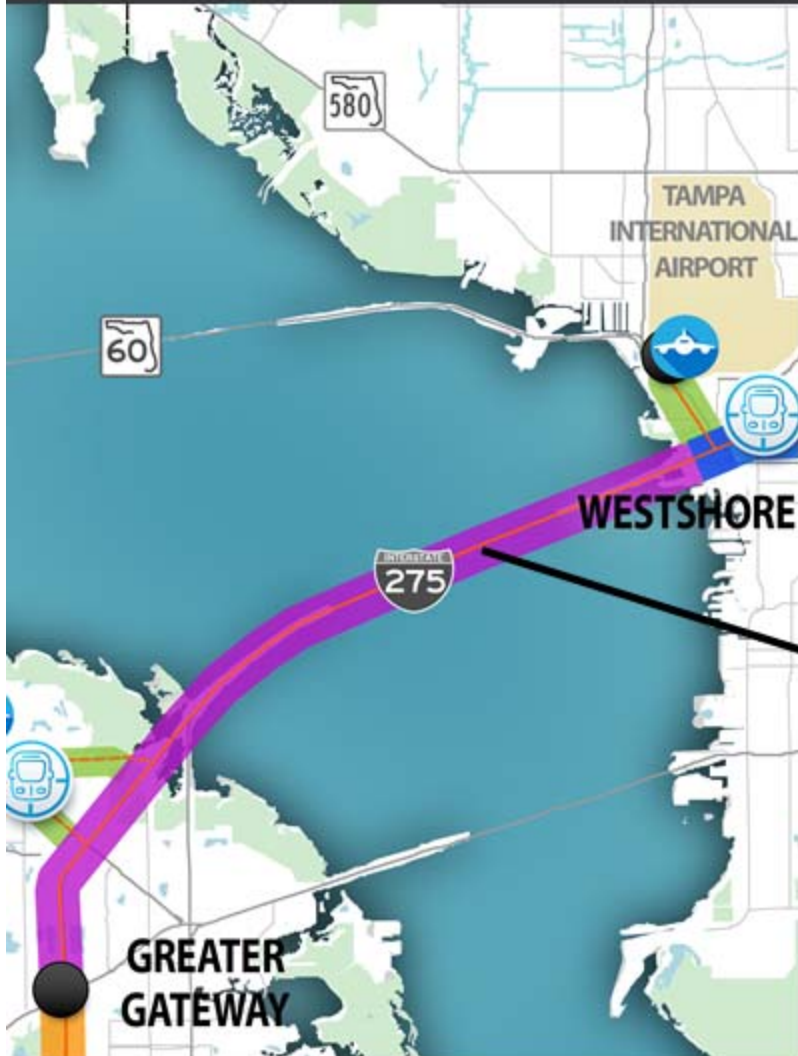
- 4<sup>th</sup> Street
- 8<sup>th</sup> Street
- Tropicana Field
- 27<sup>th</sup> Ave
- 62<sup>nd</sup> Ave
- Gateway
- Carillon

Dedicated transit lane on shoulder

Connect with PSTA Central Avenue BRT and use same lane

# PROJECT CONCEPT: I-275 RUBBER TIRE

## HOWARD FRANKLAND BRIDGE



Use planned improvement for bridge, significant transit project cost reduction

# PROJECT CONCEPT: I-275 RUBBER TIRE

## AIRPORT AND WESTSHORE

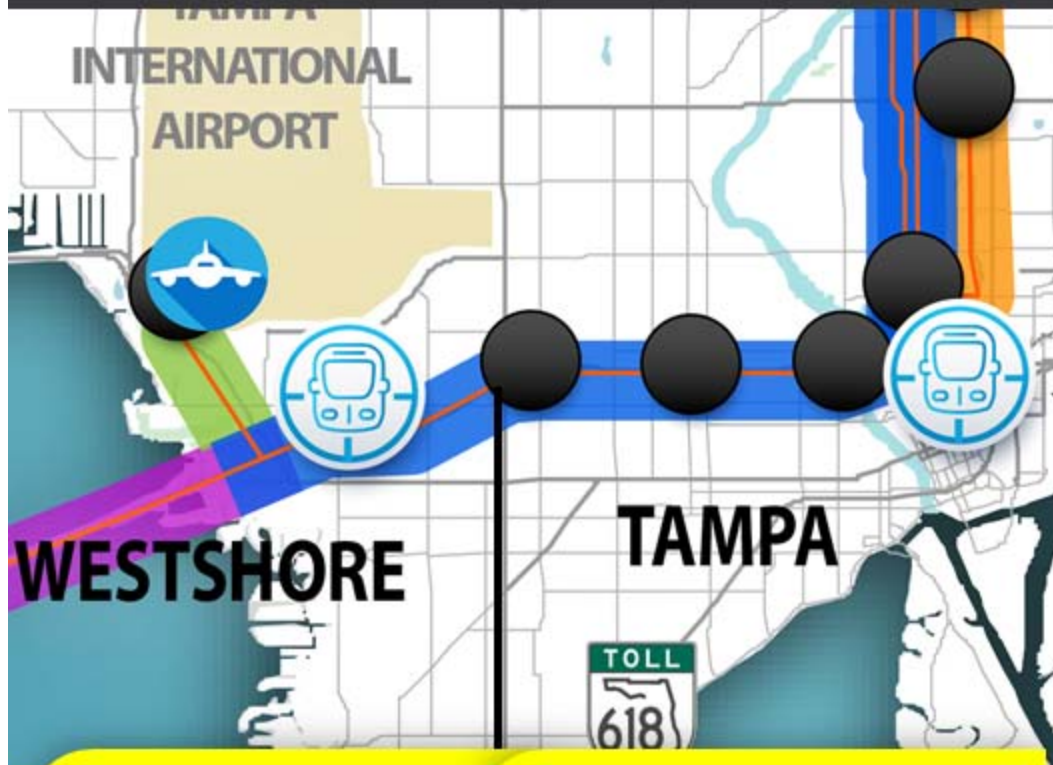


Direct connection to airport using planned SR 60 improvements

Connection to Westshore Intermodal Center

# PROJECT CONCEPT: I-275 RUBBER TIRE

## WESTSHORE TO TAMPA



### Elevated Stations:

- Westshore
- Howard - Armenia

### Street Level Stations:

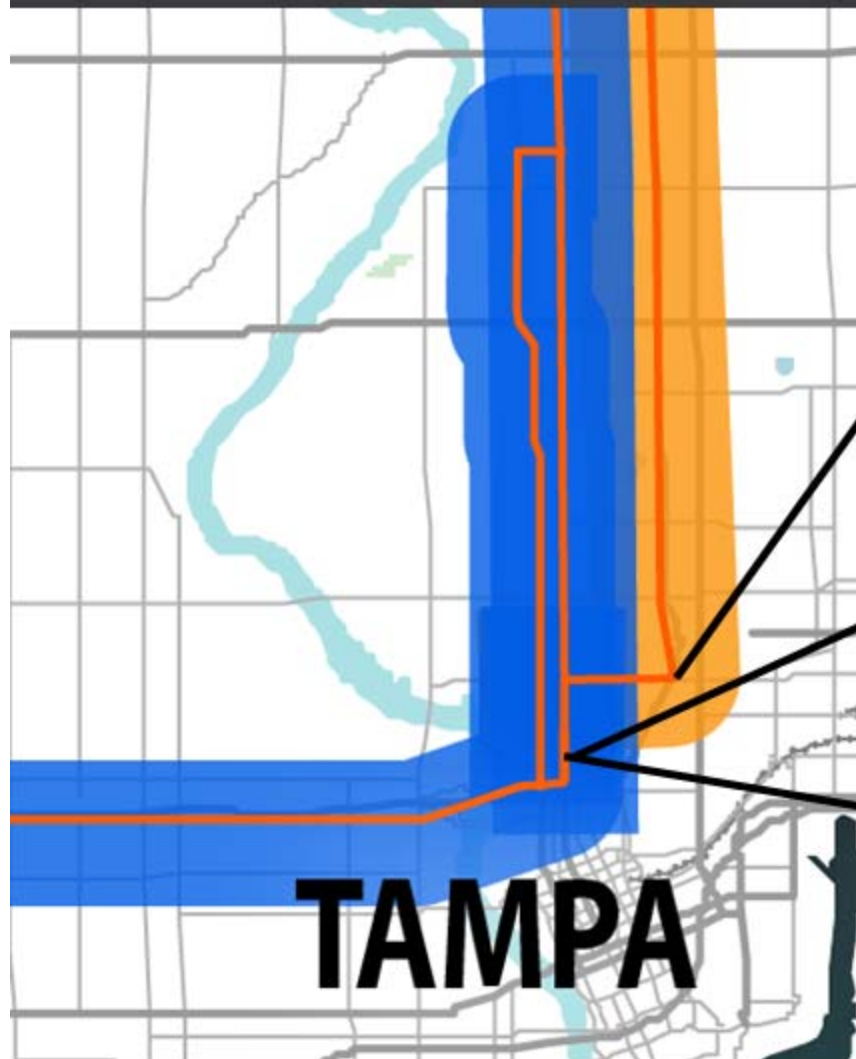
- Himes
- North Blvd.
- Tampa

Use preserved transit corridor for median running dedicated transit lane



# PROJECT CONCEPT: I-275 RUBBER TIRE

TAMPA



Opportunity to make Floribraska a transit only access point to interstate

Connects with and could share a dedicated lane with City of Tampa Streetcar Extension

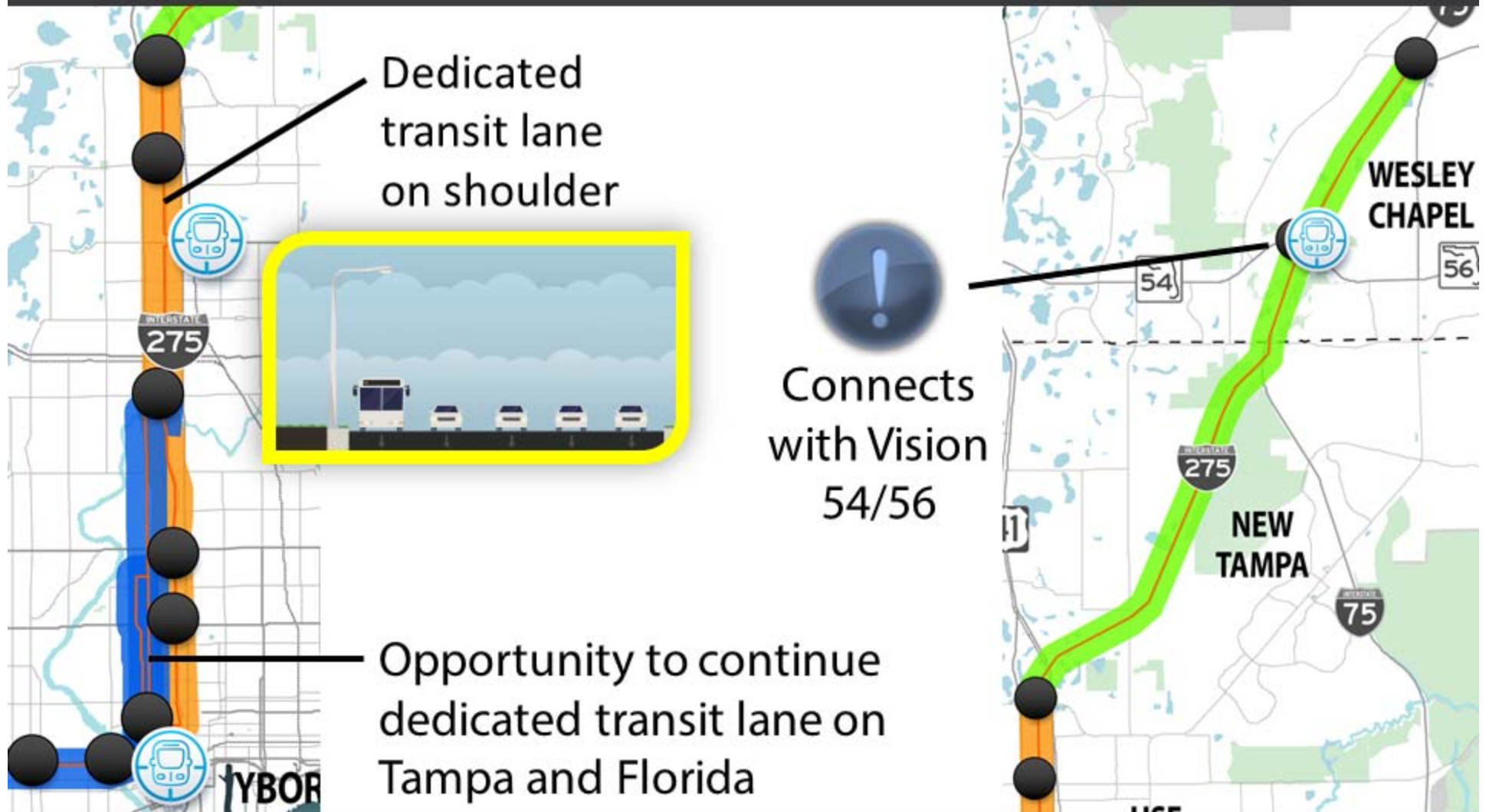


Dedicate a transit lane on Tampa and Florida



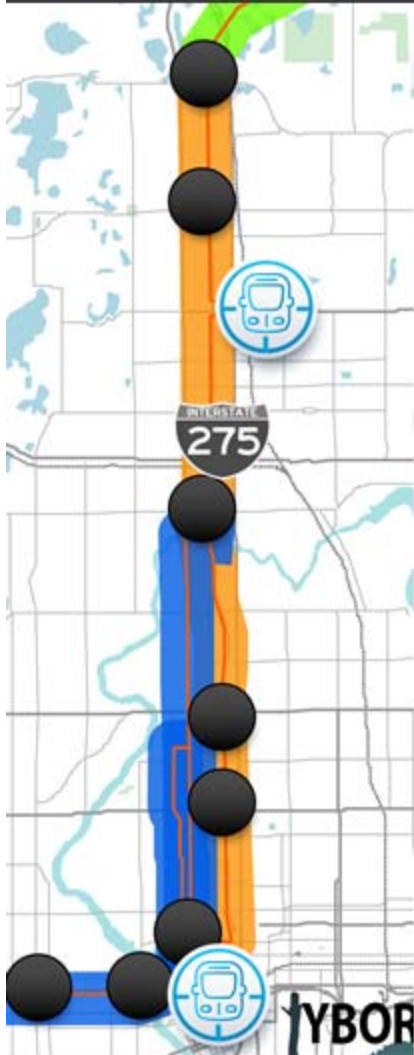
# PROJECT CONCEPT: I-275 RUBBER TIRE

## TAMPA TO WESLEY CHAPEL



# PROJECT CONCEPT: I-275 RUBBER TIRE

## TAMPA TO WESLEY CHAPEL



### Stations:

- Downtown Tampa
- Floribraska
- MLK
- Hillsborough
- Waters
- Fowler
- Fletcher
- Bearss
- SR 56
- SR 54



# PROJECT CONCEPT: I-275 RUBBER TIRE

## SHOULDER RUNNING DEDICATED TRANSIT LANE

Serves three counties

COST

I-275 END TO END <b>MEDIAN RUNNING</b> RUBBER TIRE	<b>\$2.3B- \$2.9B</b>
I-275 <b>SHOULDER RUNNING</b> CONCEPT	<b>\$1.3B- \$1.6B</b>
I-275 <b>SHOULDER RUNNING</b> CONCEPT INTERGRATED WITH FUTURE INTERSTATE MODERNIZATION PLANS	<b>\$380M - \$455M</b>



Source: Sweden, Super Bus, Wikipedia



Source: Las Vegas, MAX BRT, Wikipedia

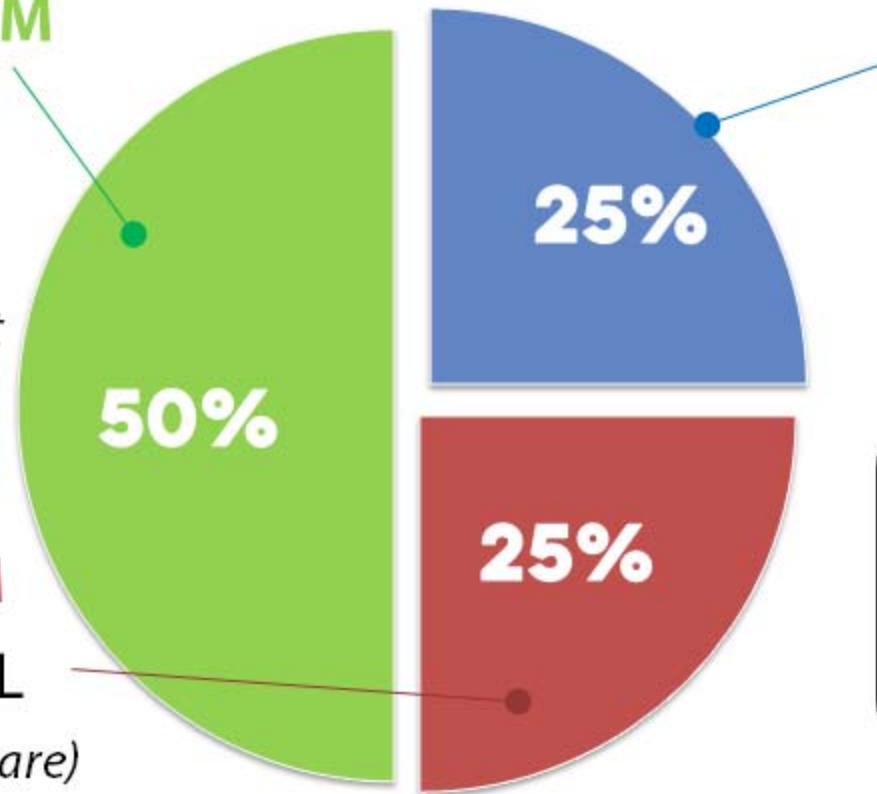
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# PROJECT CONCEPT: I-275 RUBBER TIRE

## 2017 CAPITAL COST BREAKDOWN

**\$188M-\$227M**

**FEDERAL CAPITAL**  
*(FTA Capital Investment Grant Program)*



**\$94M-\$114M**

**LOCAL CAPITAL**

**\$94M-\$114M**

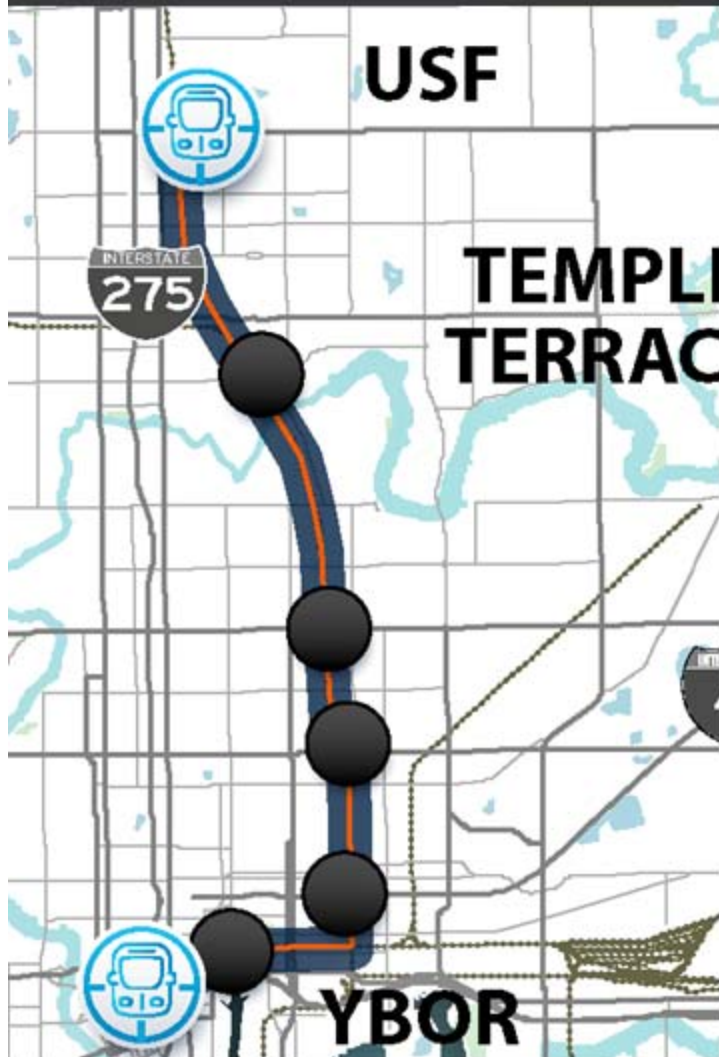
**STATE CAPITAL**  
*(match of local share)*

**\$7M**  
**LOCAL ANNUAL OPERATIONS AND MAINTENANCE**

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# PROJECT CONCEPT: **CSX URBAN RAIL**

## DOWNTOWN TAMPA TO USF



### Electric/Diesel Multiple Unit

Stations:

- Tampa
- 21<sup>st</sup> Street
- MLK
- Hillsborough
- Waters
- Fowler



Germany  
(Courtesy of Bombardier)



New Jersey  
(upload.wikimedia.org/wikipedia/commons/5/50/GTW\_riverline.JPG)



Texas  
(By Mike Bernier, CC BY-SA 4.0, https://commons.wikimedia.org)

# PROJECT CONCEPT: **CSX URBAN RAIL**

## ELECTRIC/DIESEL MULTIPLE UNIT

Uses existing freight rail corridor

COST

DOUBLE TRACKED URBAN RAIL	<b>\$800M - \$1B</b>
EMU/DMU URBAN RAIL SINGLE TRACK WITH SIDINGS	<b><u>\$490M - \$620M</u></b>

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Germany

(Courtesy of Bombardier)



France

(www.railpictures.com)

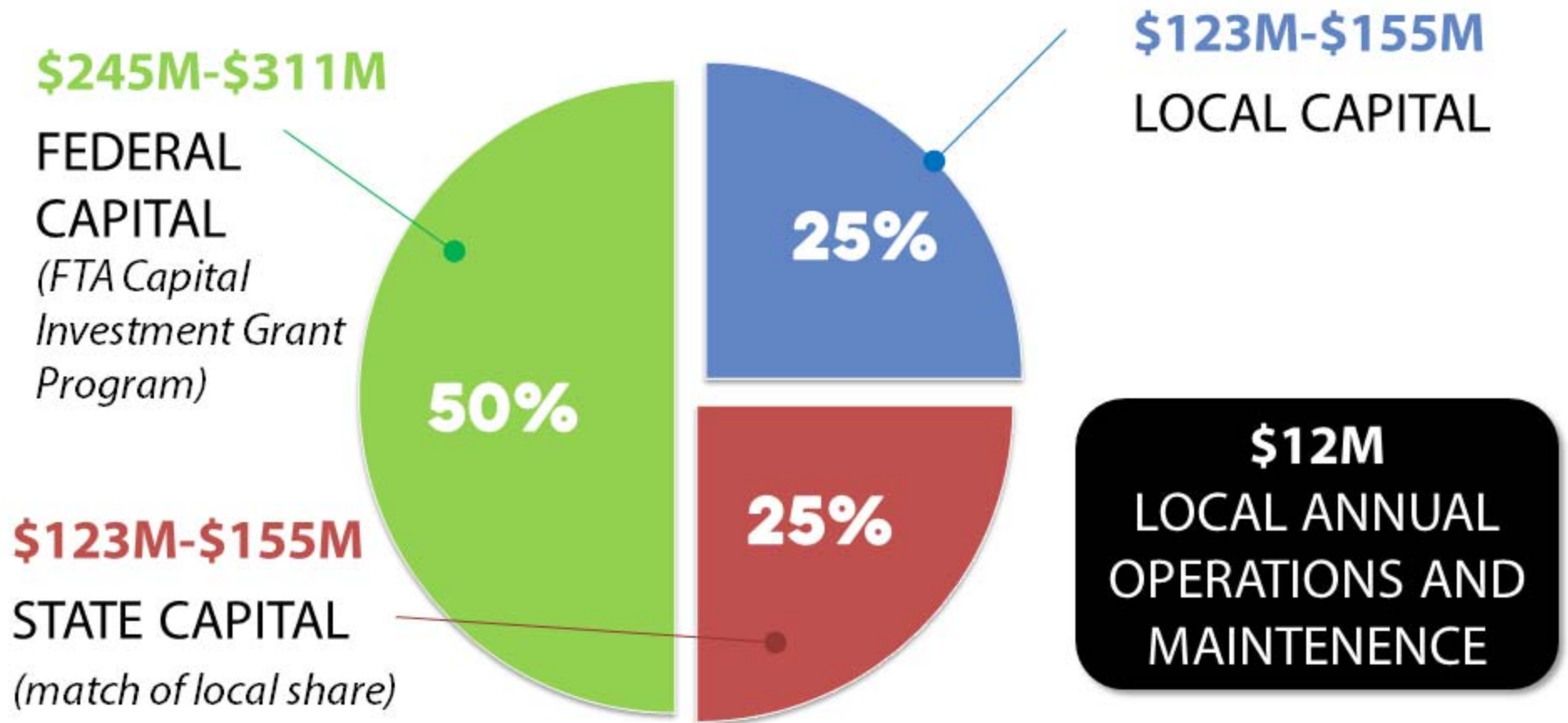


Texas

(By Mitchell Beiers, CC BY-SA 4.0, <https://commons.wikimedia.org>)

# PROJECT CONCEPT: CSX URBAN RAIL

## 2017 CAPITAL COST BREAKDOWN



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CATALYST



# CATALYST: RECOMMENDATION

I-275 SHOULDER RUNNING RUBBER TIRE

CSX URBAN RAIL

	I-275 SHOULDER RUNNING RUBBER TIRE	CSX URBAN RAIL
COMPETITIVE FOR FEDERAL & STATE FUNDS	<b>YES</b>	<b>YES</b>
COST PER TRIP	<b>\$8-\$10</b>	<b>\$11-\$13</b>
TOTAL CAPITAL COST	<b>\$380M - \$455M</b>	<b>\$490M - \$620M</b>
RIGHT-OF-WAY NEEDED	<b>NO</b> (EXCEPT FOR STATIONS)	<b>YES</b> (CSX CORRIDOR)
TIME TO CONSTRUCT	<b>~5 YRS*</b>	<b>~10 YRS**</b>

**CATALYST**

\*NOTE: Would be impacted by interstate modernization plans

\*\*NOTE: Would require negotiations with CSX

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# CATALYST: RECOMMENDATION

	I-275 SHOULDER RUNNING RUBBER TIRE	CSX URBAN RAIL
LENGTH	<b>41 MILES, 3 COUNTIES</b>	<b>9 MILES, 1 COUNTY</b>
2017 CAPITAL COST PER MILE	<b>\$9.3M - \$11.1M PER MILE</b>	<b>\$54.4M - \$68.9M PER MILE</b>
ANNUAL LOCAL OPERATIONS & MAINT.	<b>\$7M</b>	<b>\$12M</b>
2017 JOBS (Jobs within ½ mile of project)	<b>83,500</b>	<b>42,300</b>
2017 POPULATION (Households within ½ mile of project)	<b>65,000</b>	<b>34,800</b>

**CATALYST**

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# CATALYST: **RECOMMENDATION**

## **GOLD STANDARD, PREMIUM SERVICE ASPIRATIONS**



Source: Las Vegas MAX BRT, EricWeber-flickr

# CATALYST: **RECOMMENDATION**

## **AS FAST AS A TRAIN**



Source: Metz, France METTIS BRT system, Wikipedia user Occitandu34

# CATALYST: RECOMMENDATION

## PASSENGER AMENITIES



Source: Mexico City, Institute for Transportation & Development Policy

# CATALYST: RECOMMENDATION

## BYPASSES CONGESTION



 METROLINX | **VIVAnext**

A Metrolinx vivaNext Project

# CATALYST: RECOMMENDATION

## MUCH LESS COST



Source: Alstom manufacturer, [i.pinimg.com](http://i.pinimg.com)

# CATALYST: **RECOMMENDATION**

## **INVEST IN STATIONS**



Source: Orange Line Minneapolis Lake Station Concept



# CATALYST: **RECOMMENDATION**

## **INVEST IN THE FUTURE**



Source: 2GetThere

# CATALYST: **RECOMMENDATION**

## **SUPPORTS AND NEEDS SUPPORT FROM LOCAL SERVICES AND PLANS**

- PSTA Central Avenue BRT
- City of Tampa Streetcar Extension and Modernization
- USF and Westshore Circulators
- Wesley Chapel, USF, Tampa, Westshore, Gateway, and St. Petersburg Intermodal Centers Study

# SCHEDULE

- Community vetting of Draft Plan
- Incorporate public comment to finalize Plan

Spring/Summer '18

Summer/Fall '18



# GET INVOLVED

[WWW.TBREGIONALTRANSIT.COM](http://www.tbregionaltransit.com)



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## WATCH OUR VIDEO: TRANSIT MODES

This video highlights the transit modes being considered for the Regional Transit Feasibility Plan. They include rubber tire, steel wheel, water, air, and autonomous solutions!

[Check it out here!](#)



[www.TBRegionalTransit.com](http://www.TBRegionalTransit.com)

PUBLIC INVOLVEMENT



# Regional Transit Feasibility Plan

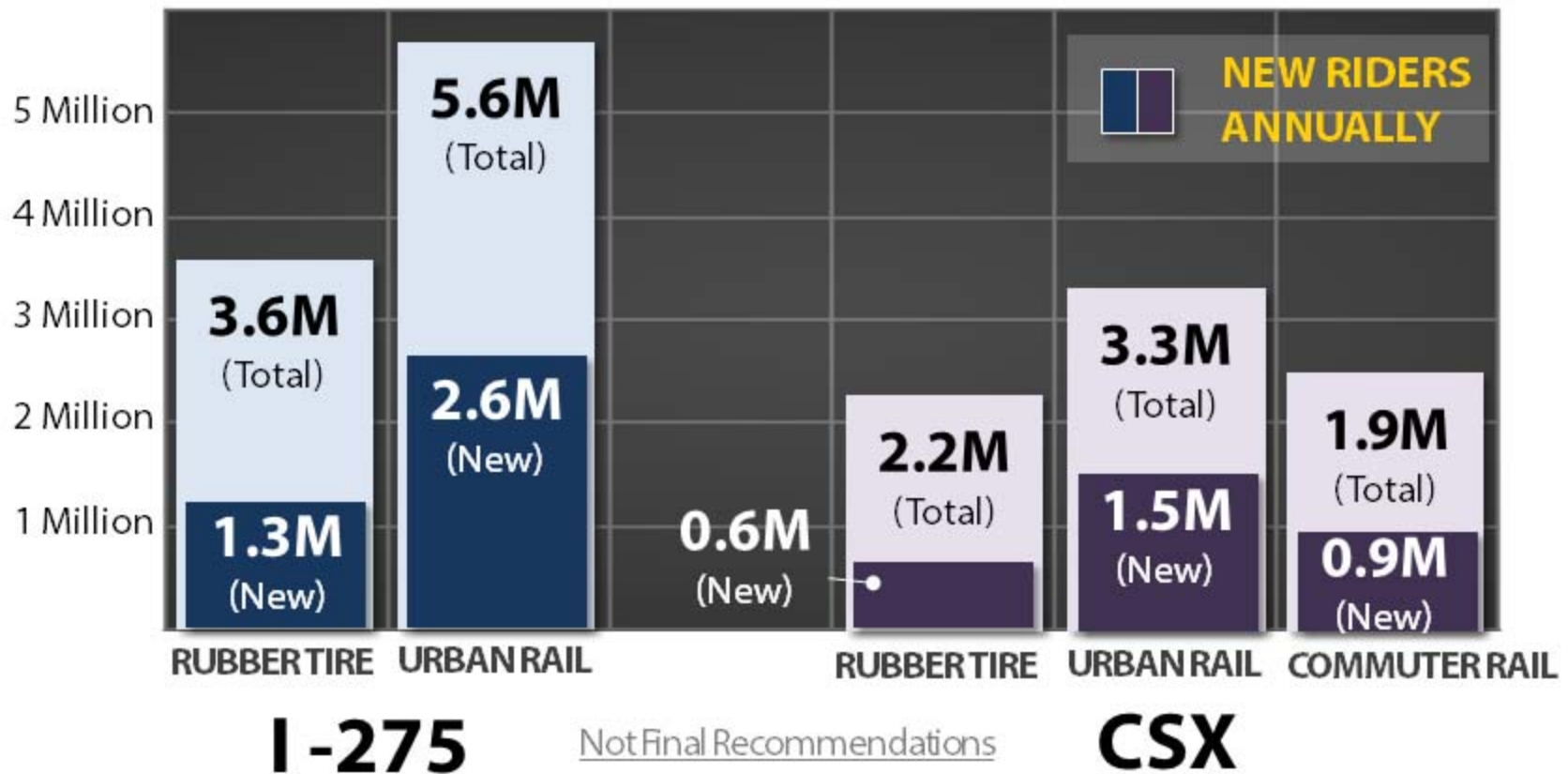
A ROUTE MAP TO IMPLEMENTATION

# STEP 3: EVALUATION RESULTS

## 2017 TOTAL AND NEW RIDERS ANNUALLY

Using FTA STOPS model by mode

(Source: FTA STOPS model, total ridership weighted per FTA guidance)

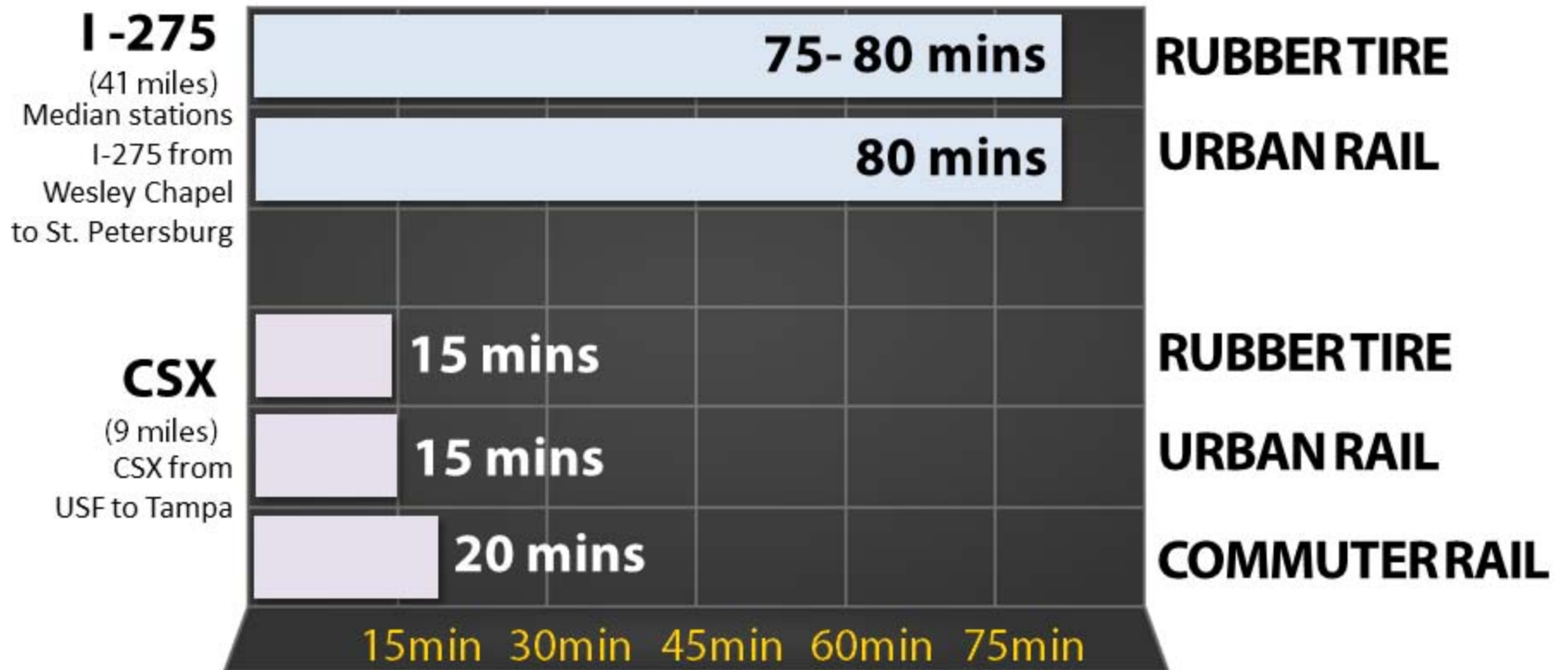


# STEP 3: EVALUATION RESULTS

## TRAVEL TIME

Assumes service arrives every 15 minutes during peak commuter periods

Not Final Recommendations



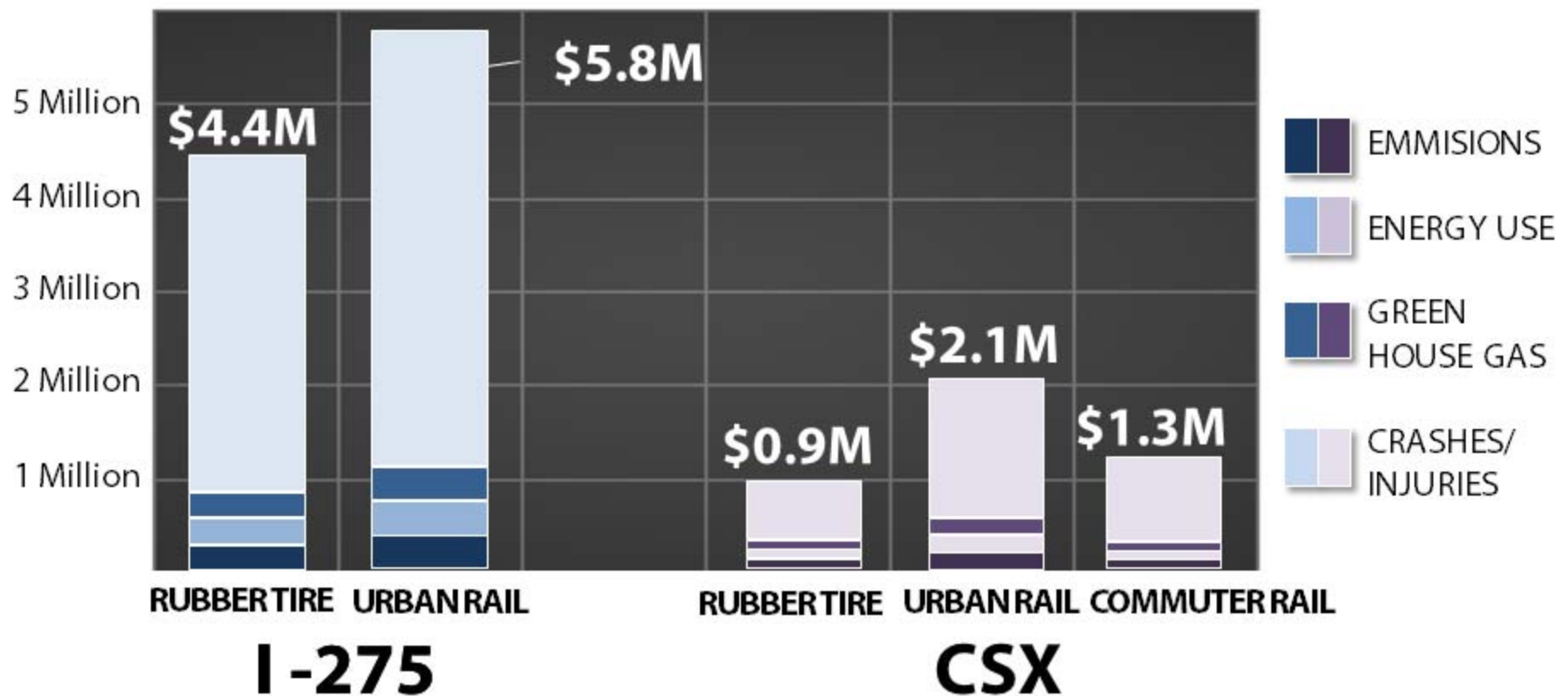
# STEP 3: EVALUATION RESULTS

2017

## GROSS PROJECT BENEFITS ANNUALLY(ROI):

Using FTA STOPS model by mode

(Source: FTA STOPS model and VMT Reduction as a result of the project, does not include impact of project)



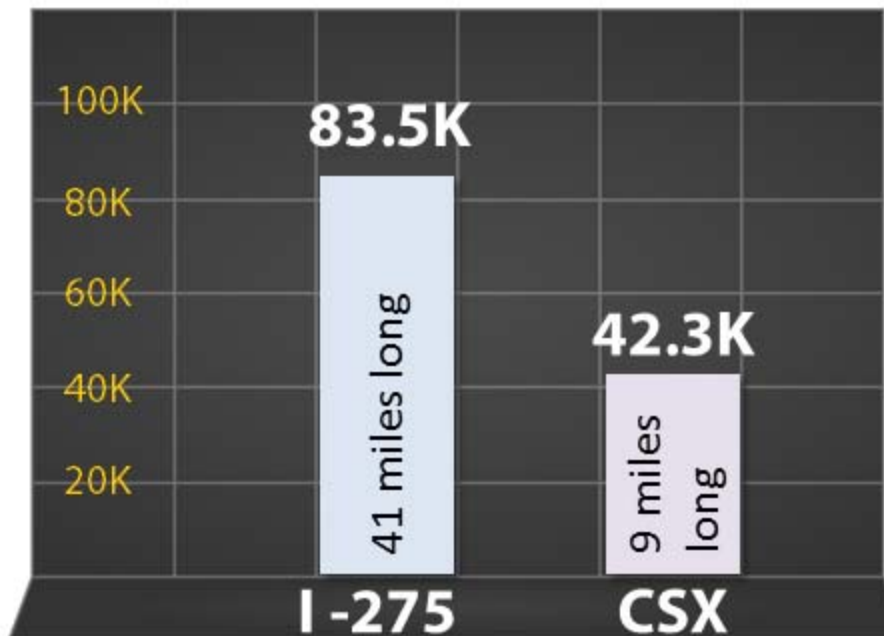


# STEP 3: EVALUATION RESULTS

2017

## EMPLOYMENT:

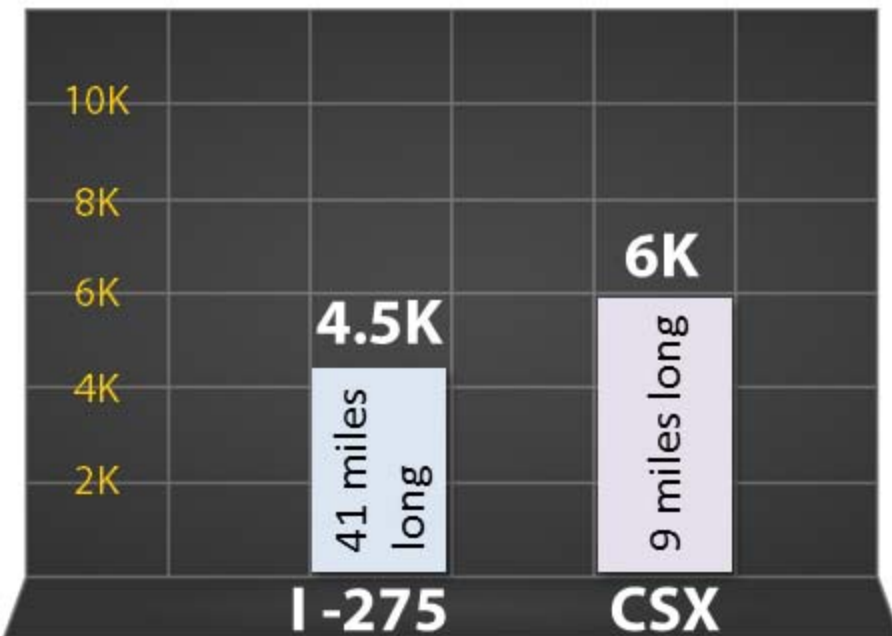
Total employees within ½ mile of corridor  
(Per FTA guidance)



2017

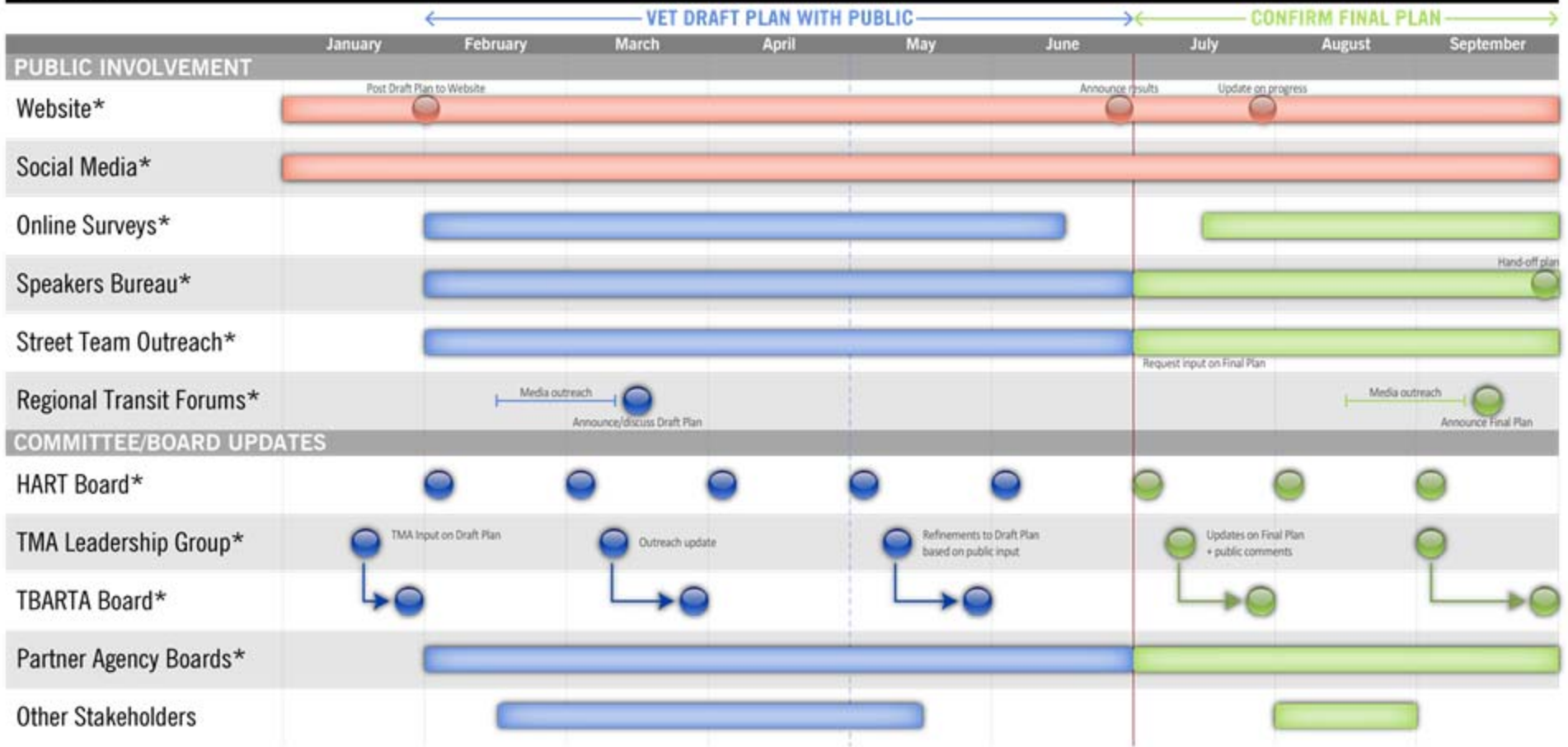
## POPULATION DENSITY:

Station area population density  
(persons/sq mi)



# PUBLIC INVOLVEMENT SCHEDULE

## YEAR 2



\* Public comment opportunity

*Draft – subject to change*