



# Waco Bus Rapid Transit Corridor Engineering and Environmental Review

City Council Meeting - November 17, 2020

# Agenda

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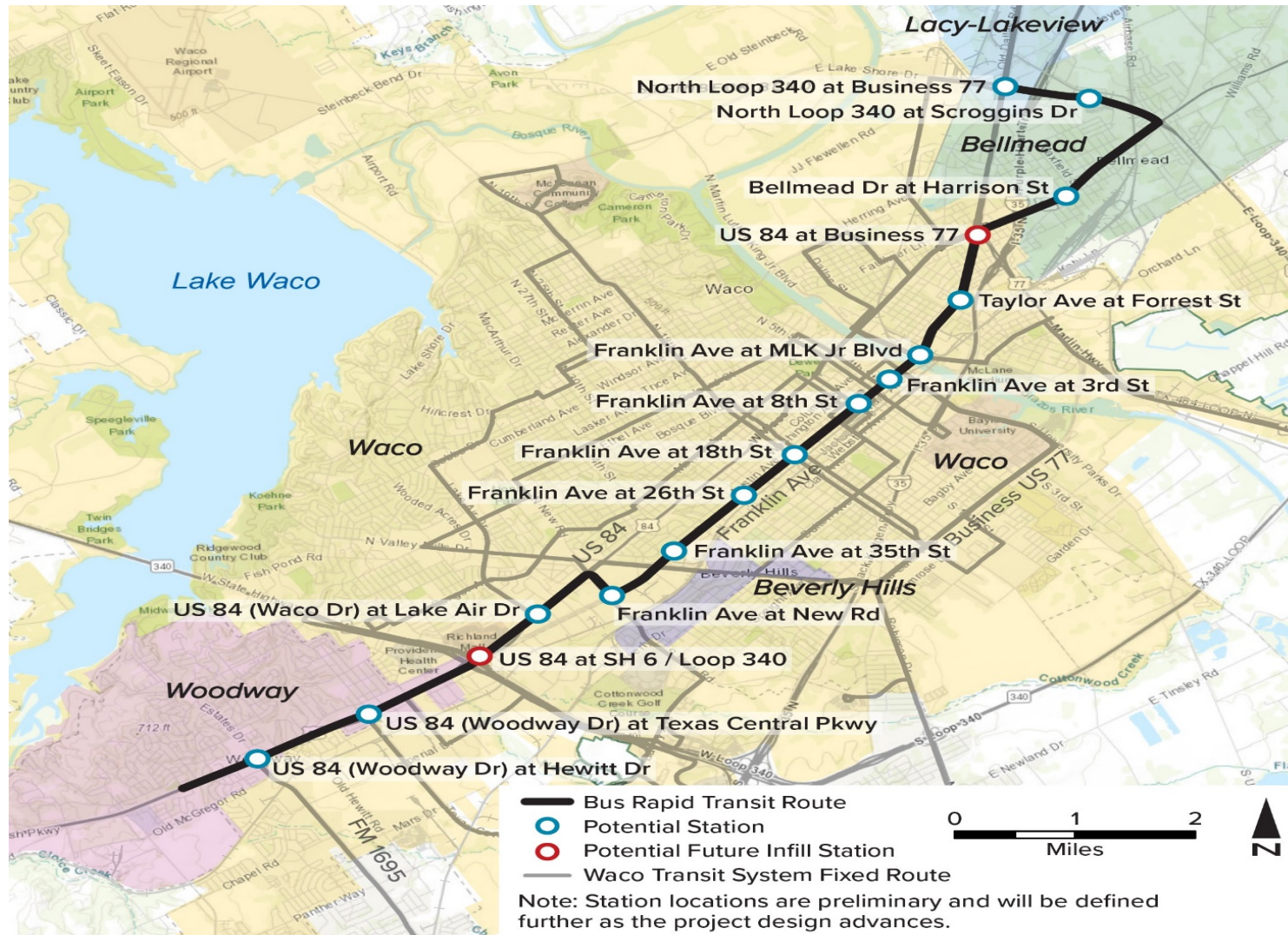
- ▶ Project Introduction and Overview
- ▶ Project Team
- ▶ Review Feasibility Study
- ▶ Project Scope and Task Overview/Status
- ▶ Public Involvement Approach and Schedule
- ▶ Questions

# Project Introduction & Overview

Waco BRT



# Project Route Map



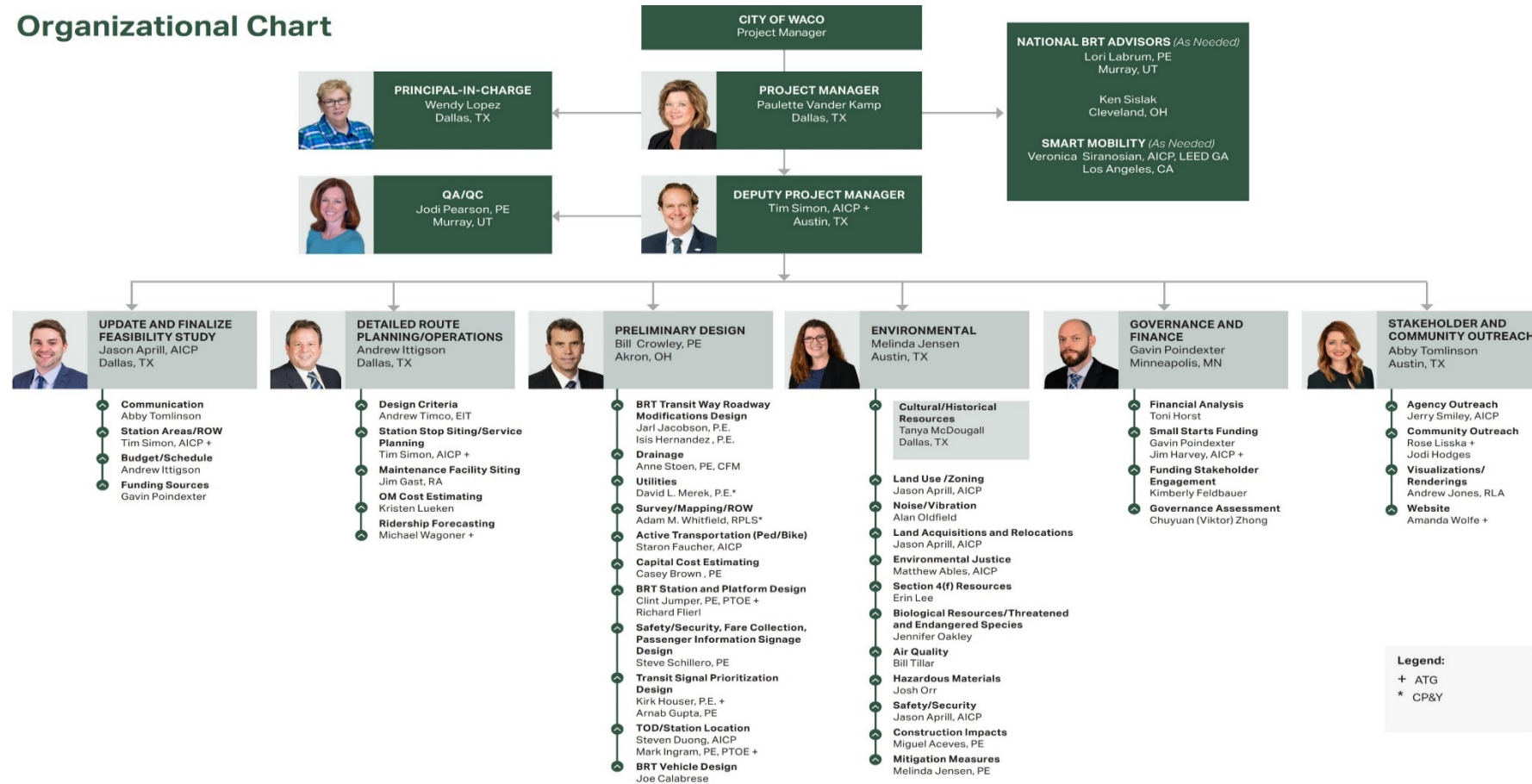


# Project Team and Project Status

Waco BRT

# Key Staff

## Organizational Chart



# Project Scope (Project Development)

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- ▶ Detailed Route Planning
- ▶ Updating the Feasibility Study
- ▶ Ridership Update
- ▶ Preliminary Design
- ▶ Environmental Review and Clearance
- ▶ Governance and Financial Assessment
- ▶ Stakeholder and Community Outreach

# Early Project Tasks

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- ▶ Draft Project Workplans
- ▶ Public Involvement Plan (PIP)
- ▶ Review GIS and CAD files
- ▶ Existing Conditions Update
- ▶ Updating Ridership
- ▶ Conduct Agency Coordination
- ▶ Develop Design Criteria (Basis of Design)
- ▶ Public Outreach to Re-Introduce the Project
- ▶ Station and Maintenance Location Siting



# Project Schedule

Waco BRT Schedule																						
Preliminary Engineering and NEPA Review	2020										2021											
	August	September	October	November	December	January	February	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec					
NTP (August 3, 2020)	*																					
Project Management																						
Purpose and Need / Existing Conditions																						
Stakeholder and Community Outreach				X		X																
Detailed Route Planning																						
Design Criteria																						
Station Stop Siting																						
Maintenance Facility Siting																						
Ridership Projections																						
Update and Finalize Feasability Study																						
Preliminary Design																						
Environmental Review and NEPA																						
Governance Plan																						
Stakeholder Financial Commitment																						
Financial Assesment (Small Starts off cycle)																						
Project Justification Ratings Analysis (off cycle)																						
Project Justification Ratings Analysis																						

X – Public Meetings

# Project Goals

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- ▶ **Project Goals (from Feasibility Study):**
  - ▶ Increase the efficiency of WTS operations and decrease overall transit travel times
  - ▶ Increase access to employment opportunities and critical services
  - ▶ Leverage available local, state and federal funding opportunities
- ▶ **Other Potential Project Goals?**
  - ▶ Provide safe and reliable transit service
  - ▶ Support and promote economic growth



# Review of Feasibility Study

Waco BRT

# What is BRT?/Why BRT?

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- ▶ **Limited stops results in faster operations**
  - ▶ Bellmead to Woodway
  - ▶ Current system: up to 110 minutes
  - ▶ With BRT: 50 to 65 minutes
- ▶ **Significantly greater service frequency**
  - ▶ Current system: 1 bus per hour, per route
  - ▶ With RTC: 1 bus every 15 minutes (peak service)
- ▶ **Stations are a focus for redevelopment efforts**
  - ▶ Transit Oriented Development (TOD)
  - ▶ Convenient transfers to other fixed routes or demand response services
- ▶ **Provides safer and more accessible service options**
  - ▶ ADA accessible stations
  - ▶ Enhanced bicycle / pedestrian accessibility





# Review of Feasibility Study

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Criteria	Alignment 2 - LPA
Mobility Impacts	Medium
I-way Travel Time	<b>65 min (NB)</b> <b>50 min (SB)</b>
'System / RTC' Ridership (year)	<b>3,990 / 900 (2023)</b> <b>4,630 / 980 (2040)</b>
Economic Development	High
Safety	High
(Conceptual) Cost	<b>\$18.3 M –</b> <b>\$19.4 M</b>
Community Support	Ongoing
Overall Rating (Aggregate)	High

# Review of Feasibility Study

## ▶ Preferred Alignment #2

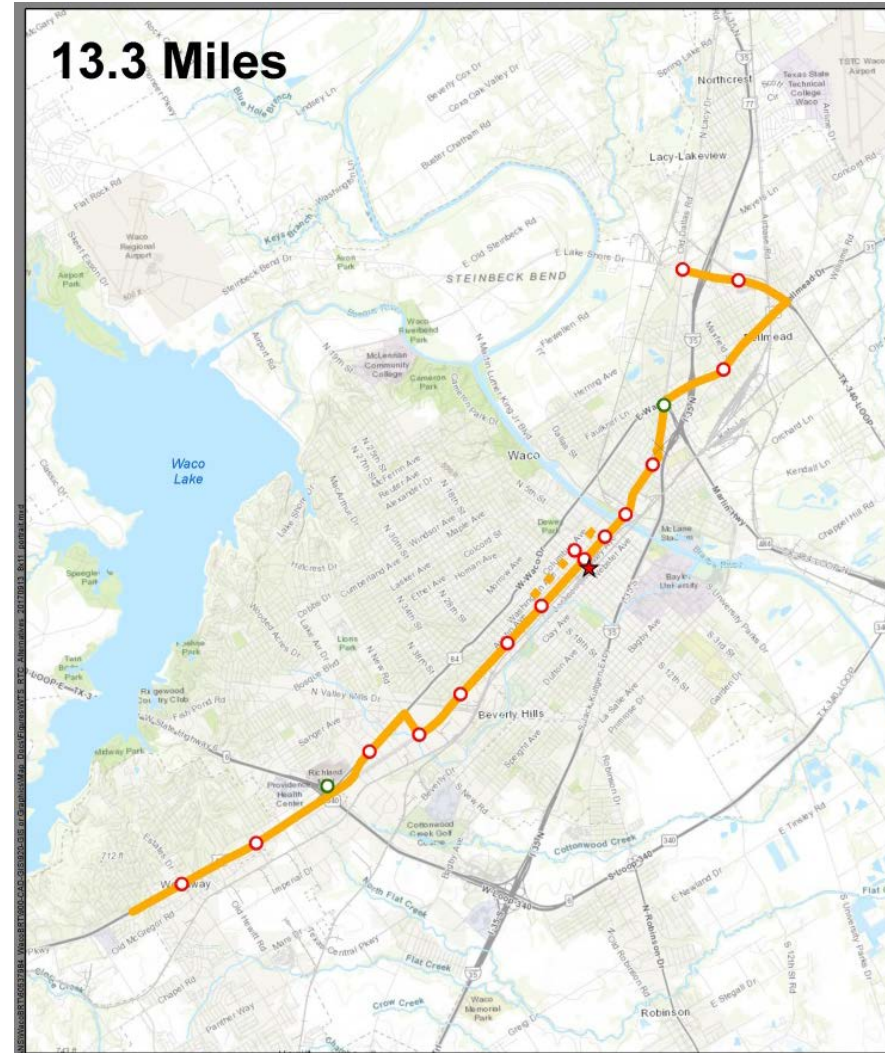
- ▶ Capital cost: \$18.3M to \$19.4M
- ▶ Annual operating cost: \$3.5M to \$4M
- ▶ Ridership (System / RTC)\* :
  - ▶ 3,990 / 900 (year 2023)
  - ▶ 4,630 / 980 (year 2040)

## ▶ 2-way operation on Franklin

- ▶ Better safety, connectivity and service operations
- ▶ More Transit Oriented Development opportunities

## ▶ Increase Hours of Operations

- ▶ Terminate at 10:00 pm weekdays
- ▶ Add Sunday service



\* - WTS fixed route bus service not optimized for RTC

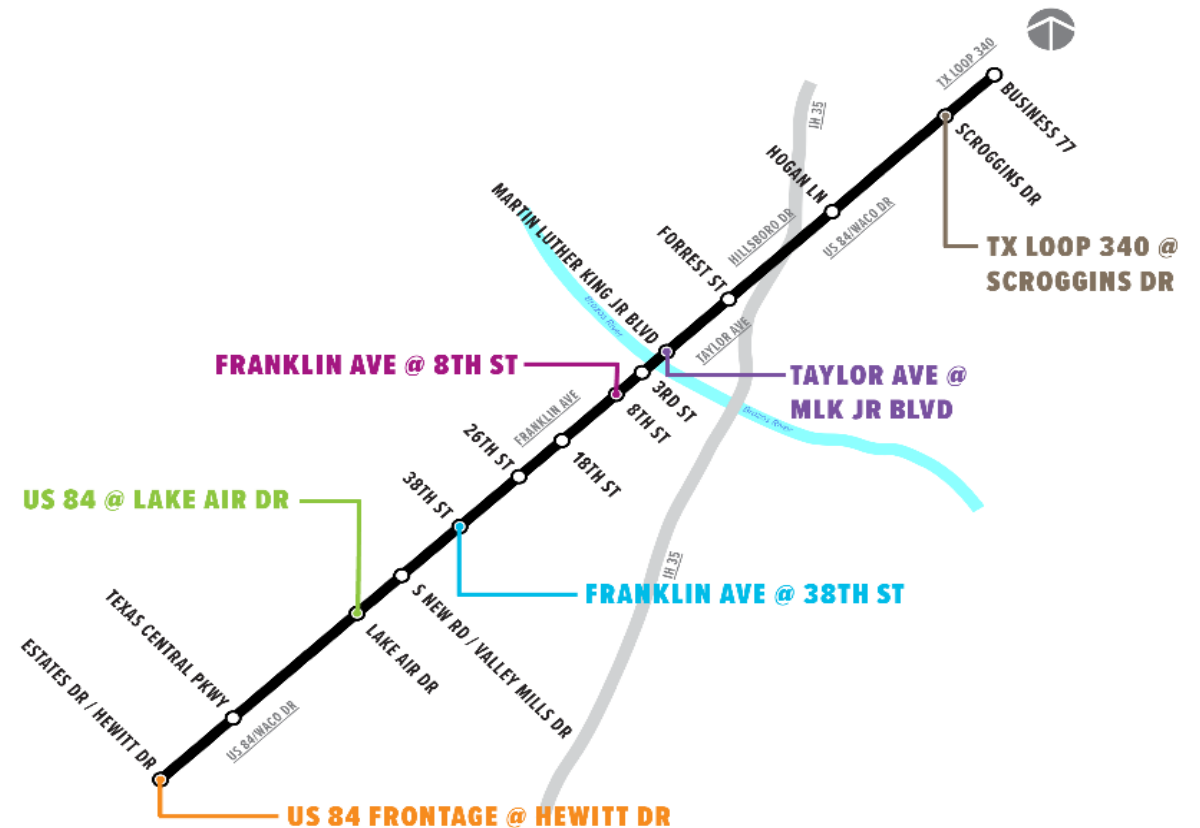


# Project Scope and Task Overview/ Status

Waco BRT

# Update Feasibility Study

- ▶ LPA approved 2018
- ▶ Purpose and Need
- ▶ Station Areas/ROW
- ▶ Funding Sources/Costs
- ▶ Ensure LPA aligns with present day conditions
  - ▶ Washington/Franklin DT couplet conversion
  - ▶ Ridership changes





# Update Feasibility Study

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## Change in Ridership All Transit Providers

Ridership (2016)



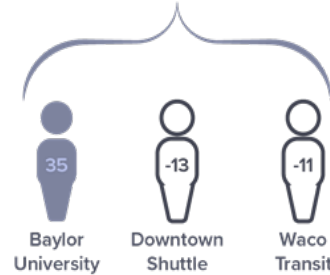
1 icon = 270 people



Ridership (2019)



% Change  
by Service

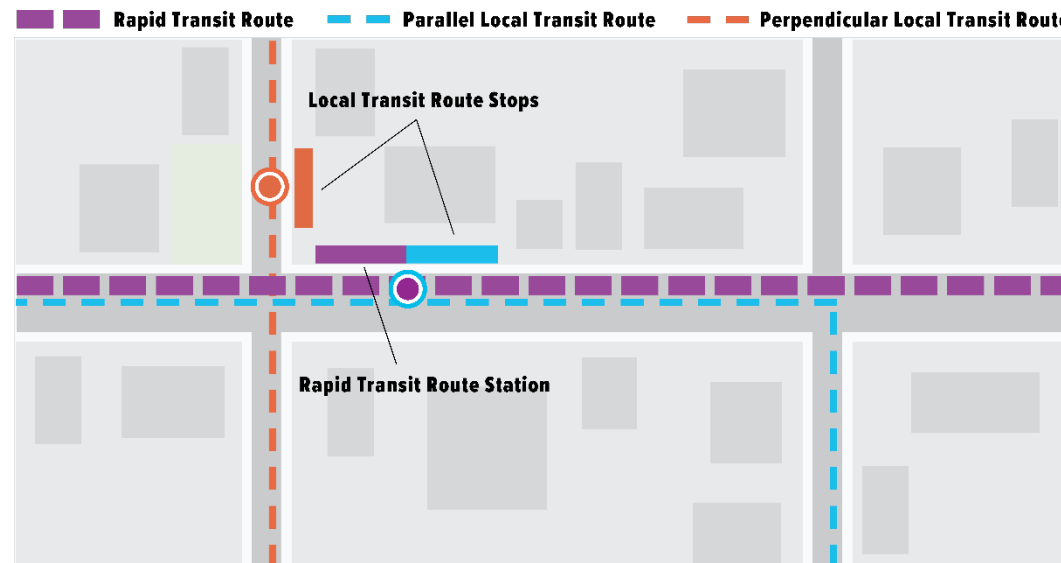


11% Increase



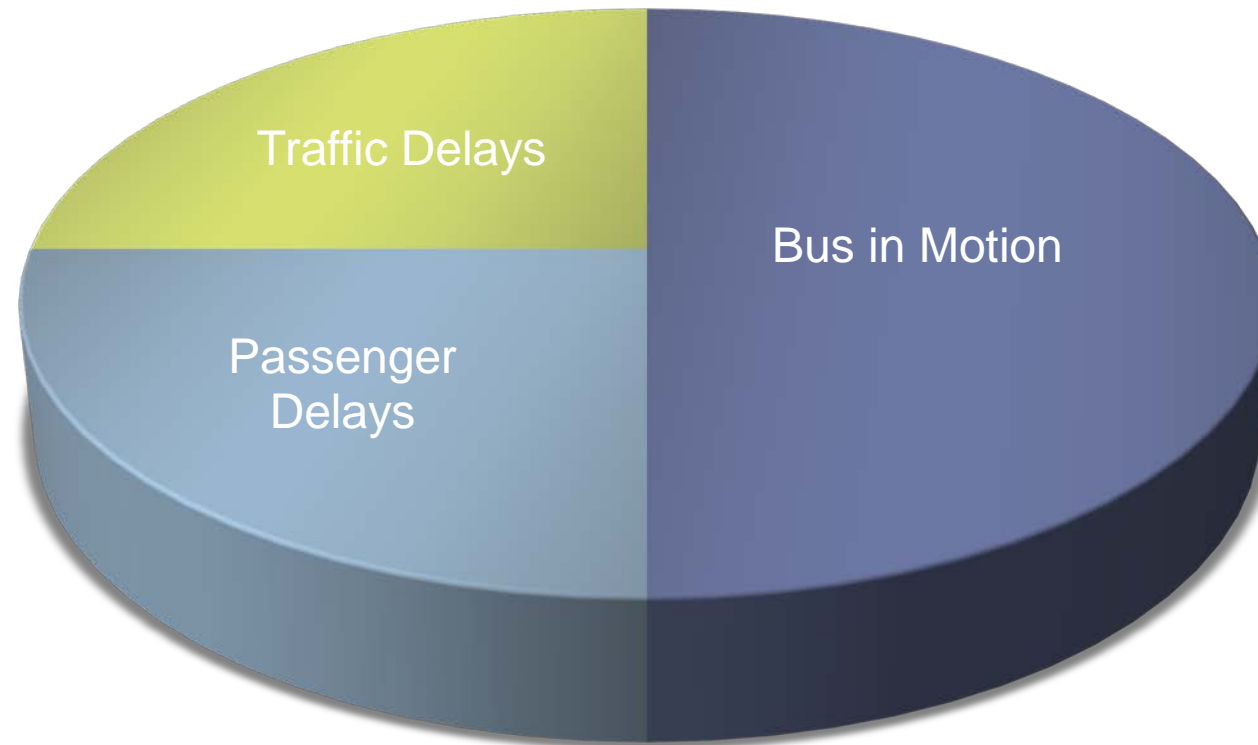
# Route Planning

- ▶ Develop BRT service plan
  - ▶ Travel time
  - ▶ Dwell/Boarding Time
  - ▶ Service hours
  - ▶ Frequency
  - ▶ Peak pullout
  - ▶ Service days
  - ▶ O&M Costs
- ▶ Assessment of existing bus service within the corridor
- ▶ Update service to connect with BRT and optimize the overall system



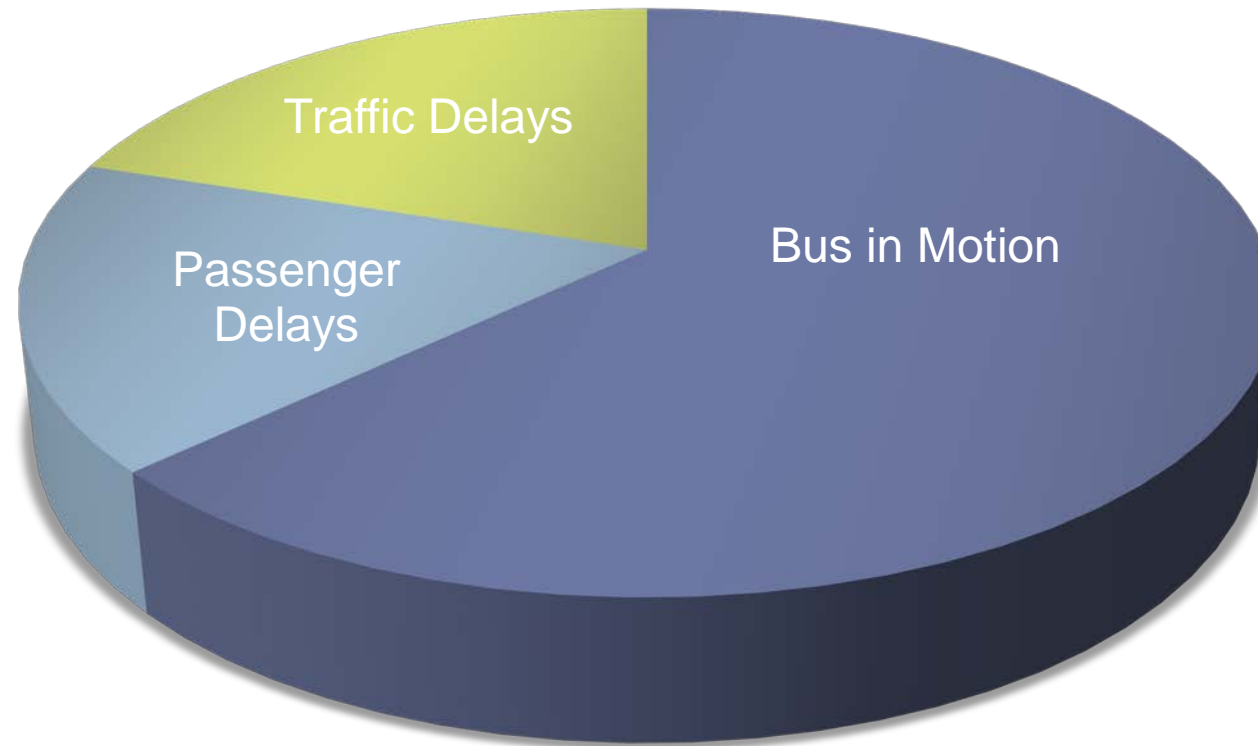
# Preliminary Engineering

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# Preliminary Engineering

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# Preliminary Engineering

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## BRT Toolbox

### Operational Improvements

Transit Signal Priority

Wider Station Spacing

Off-Board Fare Collection and Multi-Door Boarding

### Customer Amenities

Enhanced Stations

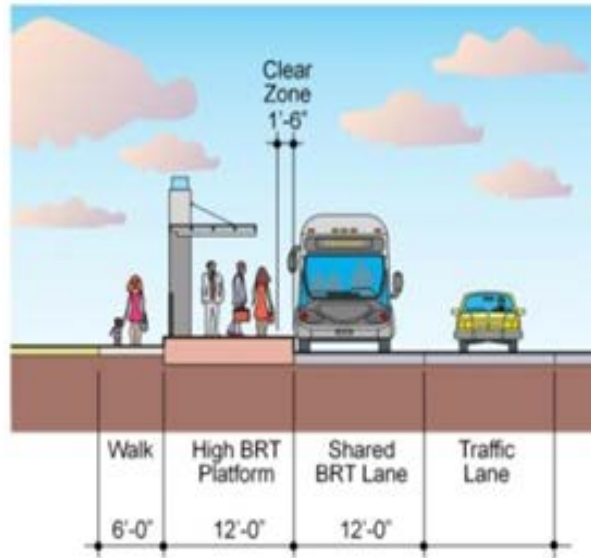
Real-Time Information

Multi-Door / Level Boarding

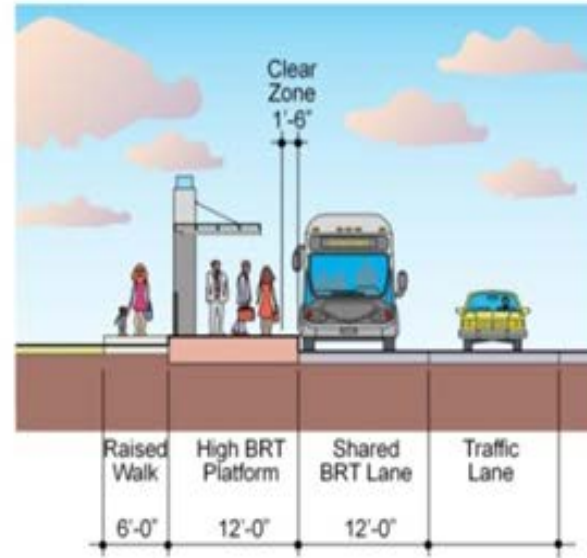
Rapid Transit Vehicles / Branding

# Preliminary Engineering

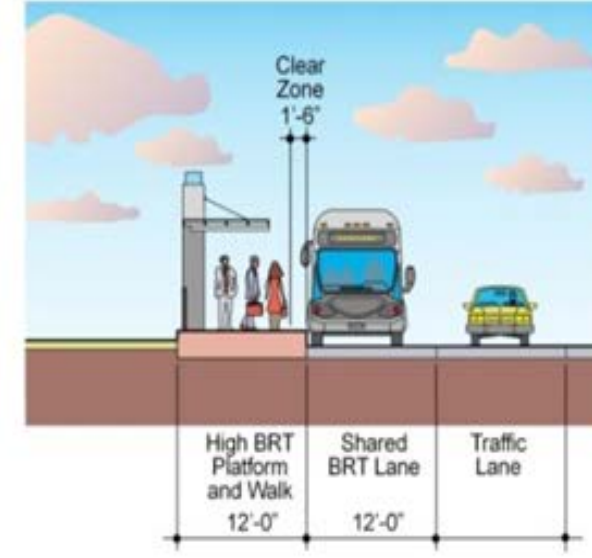
## ► Raised Platforms



High BRT Platform +  
Separate Walk



High BRT Platform +  
Raised Walk



High BRT Platform +  
Combined Walk

# Preliminary Engineering

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- ▶ **Raised Platforms costs**
  - ▶ Increase Platform Footprint
  - ▶ Require Careful Site Design
- ▶ **Raised Platforms benefits**
  - ▶ Improve Accessibility
  - ▶ Reduce Dwell Time



# Preliminary Engineering

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- ▶ Station Amenities Affect Cost
  - ▶ Capital Cost
  - ▶ Operations & Maintenance





# Preliminary Engineering

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- ▶ Battery Electric Bus
- ▶ Comfort Station



# Environmental Review / NEPA

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- ▶ NEPA – National Environmental Policy Act
- ▶ Environmental impacts anticipated to be minimal
  - ▶ Project will be primarily contained within existing ROW and maintenance facility within existing WTS property
- ▶ AECOM will complete NEPA documentation for the project in accordance with 23 CFR Part 771.118 FTA Categorical Exclusions (CE)
  - ▶ FTA Region 6's “D-list CE” is a streamlined NEPA document consisting of a worksheet with a checklist, brief narrative components and supporting documentation.

# Environmental Review / NEPA

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## Environmental Resources to be Reviewed:

Land Use/Zoning

Traffic

Noise\*/Vibration

Environmental Justice

Historic/Cultural Resources\*

Section 4(f) Resources\*

Biological Resources

Property

Acquisition/Relocations\*

Wetlands

Water Quality

Air Quality

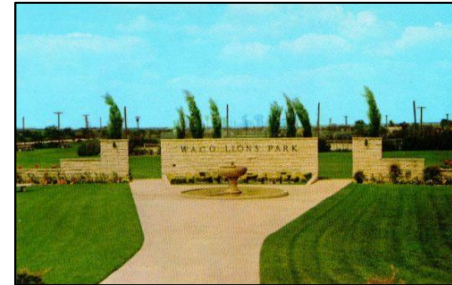
Hazardous Materials

Prime/Unique Farmlands

Safety/Security

Construction Impacts

Mitigation Measures

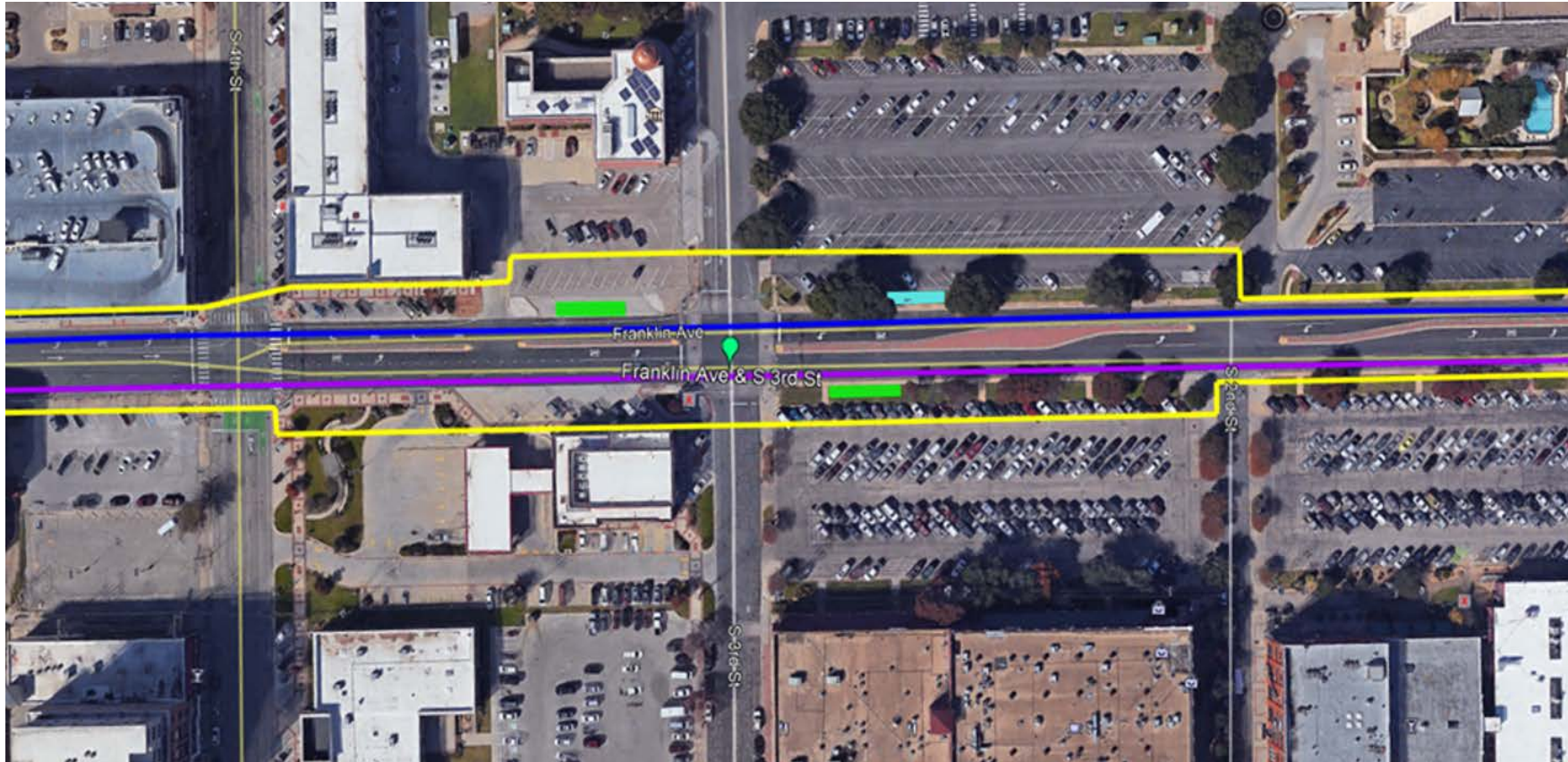


*\*May require specific supporting documentation for the D-list CE*



# Area of Potential Effects (APE)

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# Governance / Funding

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- ▶ **Governance**

- ▶ Peer Review
- ▶ Recommendations specific to Waco Transit

- ▶ **Funding**

- ▶ Financial Analysis
  - ▶ Capital and on-going O&M
  - ▶ COVID-19
- ▶ Paths to funding
  - ▶ Small Starts
  - ▶ Buses and Bus Facilities
  - ▶ Other

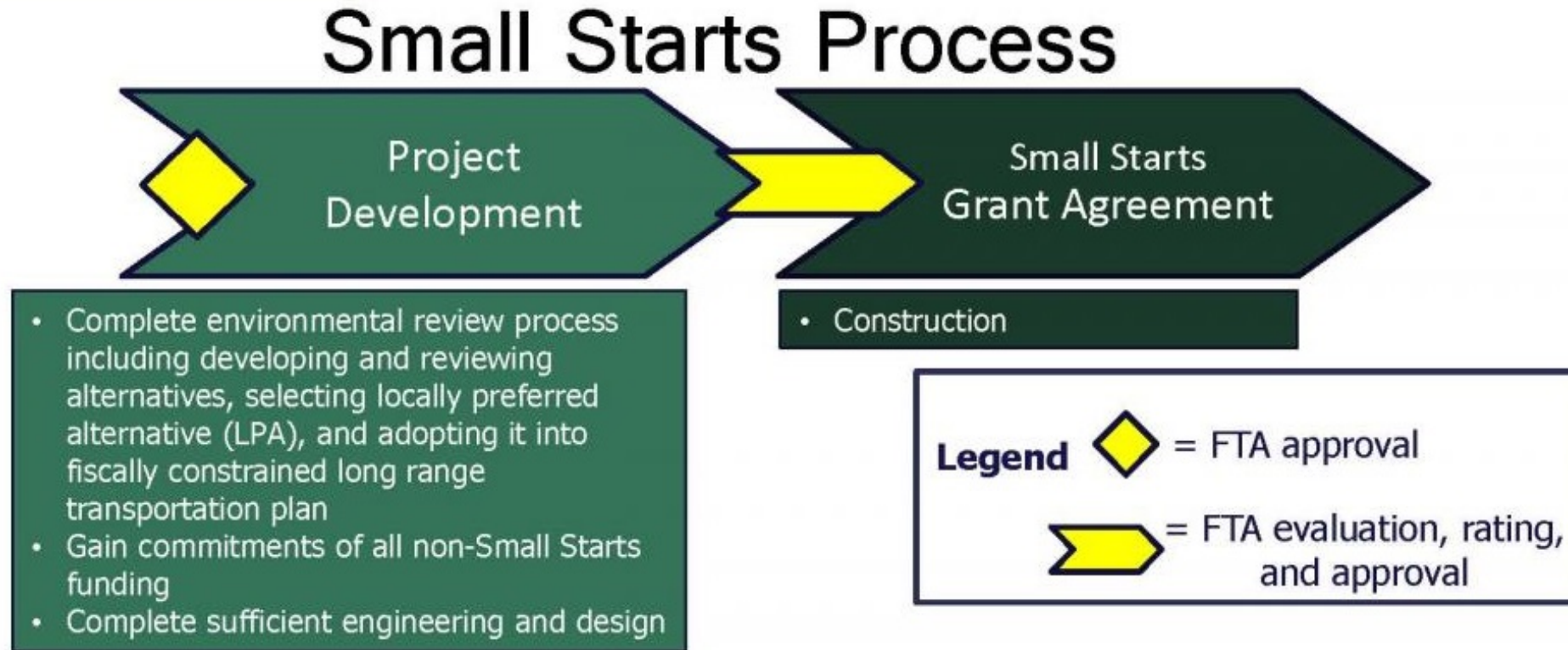
# Bus Projects Eligible for Funding through the Capital Investment Grant (CIG) Program

	Small Start
<b>Corridor</b>	A substantial investment in a defined corridor
<b>Project Features</b>	Features that emulate the services provided by rail fixed guideway public transportation systems: <ul style="list-style-type: none"><li>• defined stations</li><li>• traffic signal priority for public transportation vehicles</li><li>• short headway bidirectional services for a substantial part of weekdays and weekend days</li></ul>
<b>Guideway</b>	No requirements regarding dedicated Guideway
<b>Capital Cost</b>	Less than \$300 million
<b>CIG Funds</b>	Less than \$100 million



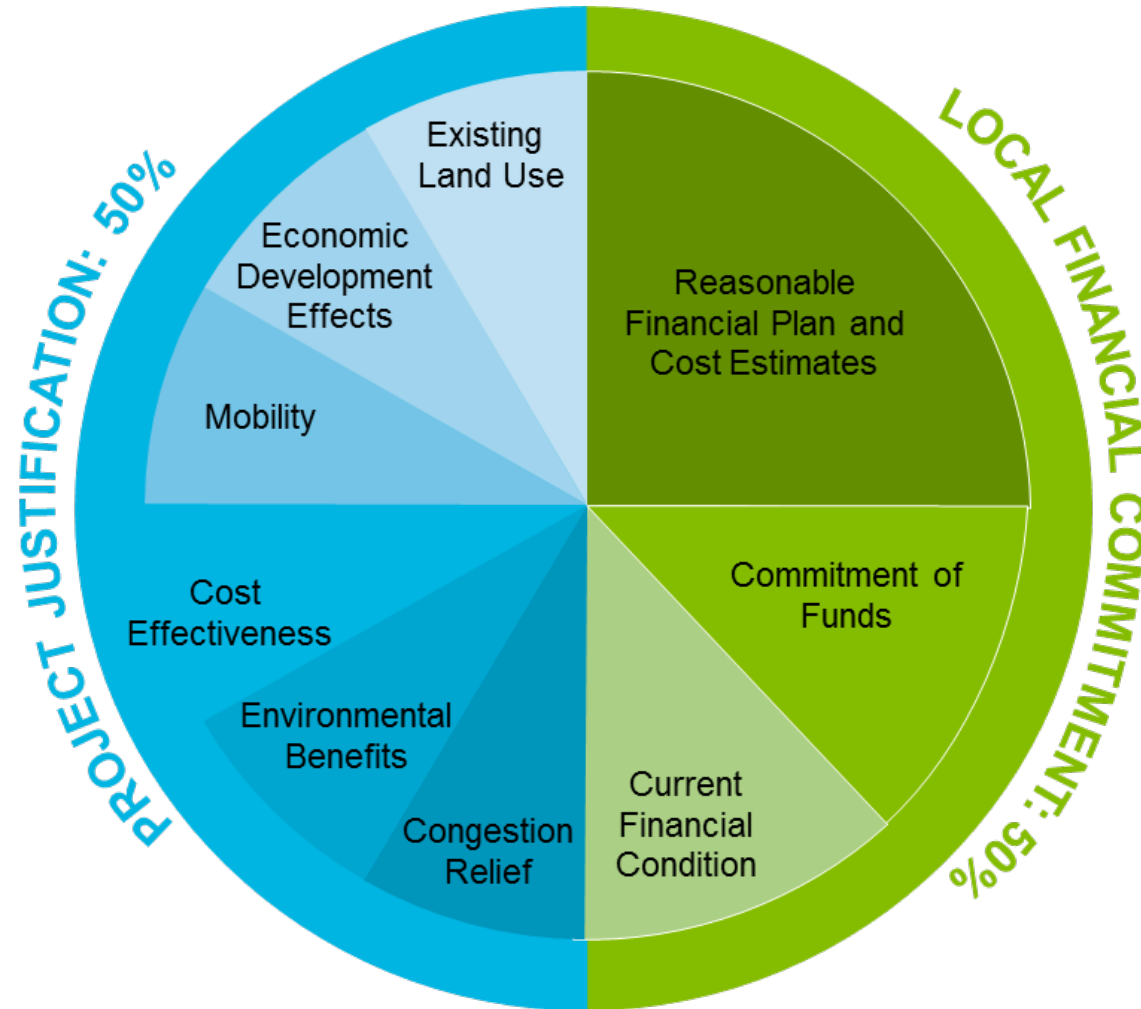
# FTA Small Starts Process

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# FTA Small Starts Evaluation

Projects must receive a **Medium rating** for both Project Justification and Local Financial Commitment



# Project Milestone Schedule

Waco BRT Milestone Schedule	2018				2019				2020				2021				2022				2023			
Selection of LPA		X																						
Request for Entry into Project Development						X																		
Pre-award Authority received for Project Development							X																	
LPA in Long Range Transportation Plan									X															
Preliminary Engineering and NEPA																								
FTA CIG Evaluation and Rating*														X										
FTA Funding Recommendation																X								
Final Design																	X							
Construction Grant Agreement																		X						
Construction and Vehicle Procurement																			X					
Revenue Service																								X

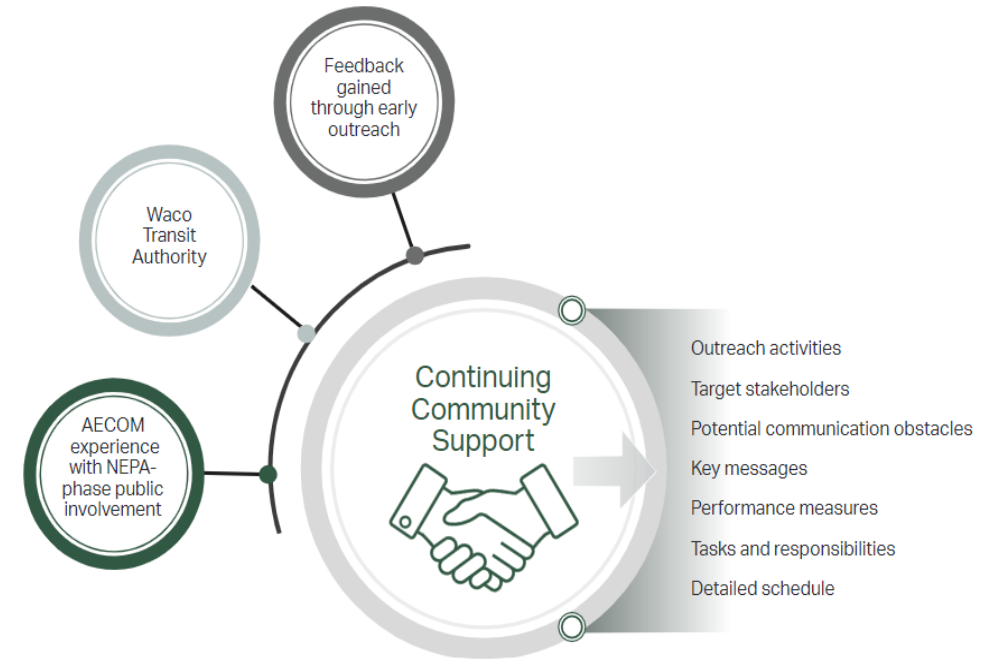


# Public Involvement

Waco BRT

# Public Involvement Scope

- ▶ Public Involvement Plan
- ▶ Outreach and Public Involvement Strategies
  - ▶ Traditional
  - ▶ Virtual (On-demand and Live)
- ▶ Key Messages
  - ▶ Education on BRT as a mode choice for the corridor
  - ▶ Project development and decision-making process
  - ▶ The role of public involvement
- ▶ Engage Stakeholders from BRT Feasibility Study
- ▶ Coordination with City of Waco, FTA and WTS



# Public Outreach Schedule

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- ▶ Schedule of outreach efforts parallels with critical project development milestones
  - ▶ Project Kickoff / Reintroduction (Mid-October)
  - ▶ Station Siting / Preliminary Engineering / NEPA Process (Early December)
  - ▶ Final Preliminary Engineering / NEPA Documentation of Environmental Analysis (Mid-February)





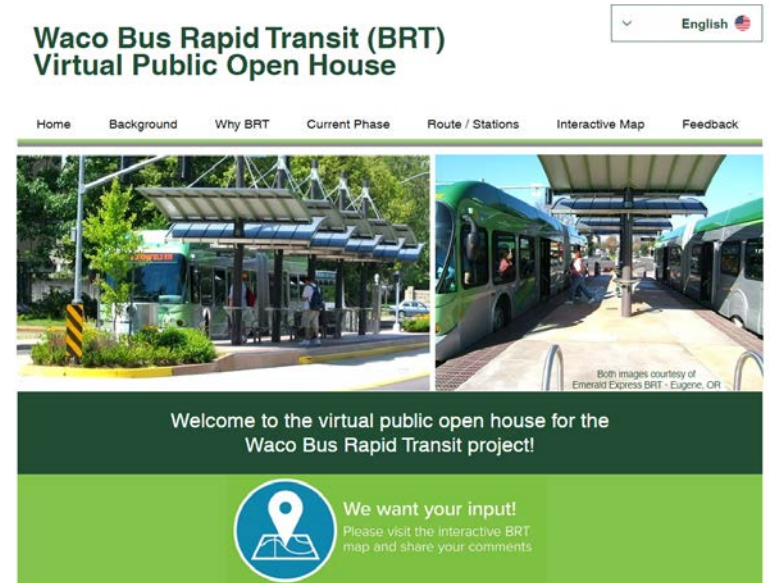
# October Engagement Activities

## ► Purpose

- Reintroduce project/recap project history
- Explain current project approach
- Preview upcoming input opportunities

## ► Virtual Public Open House

- wacoBRTopenhouse.net
- October 20 – November 3
- Received 27 public comments
- 200+ unique site visits



# October Engagement Activities, Cont'd.

## ▶ Traditional Engagement Approaches

- ▶ Poster placement inside buses, bus stations, transit terminal, libraries, community centers and city hall
- ▶ Postcard mailings
- ▶ PA system messaging at transit terminal
- ▶ Press release
- ▶ Phone/voicemail comment line

## ▶ Other Engagement Approaches

- ▶ Social media
- ▶ Earned media
- ▶ Newspaper legal advertisement



**Community members are invited to help shape Waco's first Bus Rapid Transit (BRT) project.**

**Please join us!**  
**Virtual Public Open House**

October 20 – November 3  
WacoBRTOpenhouse.net



**We want your input!**  
Please visit the interactive BRT map and share your comments

# December Engagement Activities

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## ▶ Purpose

- ▶ Review proposed station siting
- ▶ Review preliminary engineering station design
- ▶ Review National Environmental Policy Act requirements for environmental review



## ▶ Traditional Engagement

- ▶ Display boards in study area
- ▶ Posters
- ▶ Phone line with prerecorded messaging



## ▶ Virtual Engagement

- ▶ On-demand microsite with interactive map
- ▶ Live virtual event

# Waco BRT Project

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WacoBRT@gmail.com



Waco-Texas.com/transit/BRT



## Other Items / Questions

Waco BRT



Thank You

Waco BRT