



Documentation of Stakeholder/Agency Meeting

Project Location

Harris and Montgomery Counties

I-45N: BELTWAY 8 NORTH TO LOOP 336 SOUTH (CONROE)

Project Limits

I-45N: Beltway 8 North to Loop 336 South (Conroe)

Meeting Date and Time/Meeting Location

Monday, February 3, 2020

Total Number of Elected Officials in Attendance

Office of Sallie Alcorn, Houston City Council, At-Large Position 5
James Noack, Montgomery County Commissioner Place 3

Total Number of Attendees (approx.)

28

Contents

- A. Meeting Overview
- B. Invitees and Participants
- C. Meeting Materials

A. MEETING OVERVIEW

Meeting Overview

The Texas Department of Transportation (TxDOT) held a stakeholder/agency meeting on February 3, 2020, to share information and gather input on the I-45N: Beltway 8 North to Loop 336 Planning and Environmental Linkages (PEL) Study. The meeting was held from 10 A.M. to noon at the TxDOT Houston District Office located at 7600 Washington Avenue in Houston. Twenty-eight elected officials, representatives of local, state and regional agencies, and a variety of local stakeholders attended the meeting.

A total of 136 stakeholders and agencies were invited to the meeting via email and surface mail. Within a week before the meeting, a meeting reminder email was sent to all of these invitees. The invitation list (which also indicates who attended the meeting) is attached to this report as Attachment B.

TxDOT and its consultant, AECOM, made a presentation on the progress of the I-45N PEL Study since the last stakeholder meeting held in October 2019. Meeting attendees had an opportunity to ask questions, make comments, and fill out a brief survey. The meeting presentation and survey form are attached to this report as Attachment C.

B. INVITEES AND PARTICIPANTS



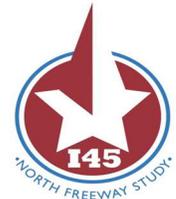
Subject: Stakeholder Meeting – AGENCY INVITATION LIST
 Project: I-45N: Beltway 8 North to Loop 336 South (Conroe)
 Planning and Environmental Linkages (PEL) Study
 CSJ: 0912-00-536
 February 3, 2020, 10 A.M. – Noon, TxDOT Houston District Office



Attended 2/3/20 mtg	Name		Title	Agency/Organization
	Greg	Budd	Major Projects Engineers	Federal Highway Administration
	Augustus	Campbell	President & CEO	West Houston Association
	Jose	Campos	Planning Team Leader	Federal Highway Administration
	Wayne	Christian	Commissioner	Railroad Commission of Texas
	Alan	Clark	Director	Houston-Galveston Area Council
	Christi	Craddick	Commissioner	Railroad Commission of Texas
	Mario C.	Diaz	Director of Aviation	City of Houston Airport System
	Joanne	Ducharme	Director	Montgomery County Community Development
	John	Elam	Area Engineer	Texas Department of Transportation
x	Kenton	Fickes	Transit Services Manager	Harris County Community Services, Office of Transit Services
	Larry	Foerster	Chairman	Montgomery County Historical Commission
	Andrea	French	Executive Director	Transportation Advocacy Group



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Attended 2/3/20 mtg	Name		Title	Agency/Organization
	Adam	Galland	Area Engineer	Texas Department of Transportation
	Carol	Haddock	Public Works Director	City of Houston
	Bob	Harvey	Greater Houston Partnership	President & CEO
x	David	Hawes	Executive Director	East Aldine District
	Justin	Kockritz	Lead Project Reviewer, Federal Programs	Texas Historical Commission
	Amy	Lueders	Regional Director	U.S. Fish & Wildlife Service
	Jerry	Mambretti	Upper Coast Regional Director	Texas Parks and Wildlife - Coastal Fisheries Field Offices
	Eli	Martinez	Communities, Tribes and Environmental Assessment	U.S. Environmental Protection Agency
	Dinah	Massie	Executive Director	Houston TranStar
	LaTrenda	McClellan	Executive Assistant	Texas Commission on Environmental Quality
	Kristin	McMillan		U.S. Army Corps of Engineers
	Tyson	Moeller	Director of Gulf Ports	Union Pacific Railroad



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Attended 2/3/20 mtg	Name		Title	Agency/Organization
	Wesley	Moorehead	Department Head	Texas A&M Forest Service
X	Connor	Murnane	District Forester IV	W.G. Jones State Forest - Texas A&M Forest Service
	Heather	Neeley	Interim City Manager	City of Oak Ridge North
x	Don	Norrell	President, General Manager	The Woodlands Township
	Katherine	Parker	Executive Director	Gulf Coast Rail District
	Robert C.	Patrick	Regional Administrator	Federal Transit Administration
x	Edmund J.	Petry	Director	METRO
	Philip	Pratt	Sr. Area Engineer	Federal Highway Administration
	George	Prescott Bush	Land Commissioner	Texas General Land Office
	Kathie	Reyer	City Administrator	City of Shenandoah
	James	Schock	Regional Director	Bureau of Indian Affairs, Southern Plains Region
x	Lela	Shepherd	Compliance Coordinator	Harris County Flood Control District
	Ryan	Sitton	Commissioner	Railroad Commission of Texas



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Attended 2/3/20 mtg	Name		Title	Agency/Organization
	Gary K.	Trietsch	Executive Director	Harris County Toll Road Authority
	Paul	Virgadamo, Jr.	City Administrator	City of Conroe
	Margaret	Wallace Brown	Director of Planning	City of Houston Planning & Development Dept.
	Mark	Wolfe	Executive Director	Texas Historical Commission
x	Don	Huml		East Aldine District



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Attended 2/3/20 mtg	Name		Title	Agency/Organization
x (rep)	Sallie	Alcorn	Council Member	City of Houston
x	Larry J.	Allen	Project Coordinator	Harris County
	Carol	Alvorado	Senator	Texas State Senate
x	Bart	Baker	Executive VP & COO	North Houston District
	Bill	Bass	Geospatial & IT Manager	Houston Advanced Research Center (HARC)
	Cecil	Bell	Representative	Texas State House of Representatives
	Alan B.	Benson	Chief	The Woodlands Township
	Evan	Besong	Chief of Staff	Montgomery County
	Paul	Bettencourt	Senator	Texas State Senate
	John	Blount	County Engineer	Harris County
	Brian	Bondy	President	Conroe/Lake Conroe Chamber of Commerce
	Sally	Bradford	Executive Director	Greater Greenspoint Redevelopment Authority/TIRZ 11
x	Marlisa	Briggs	Executive Director	North Houston Association
	Gordy	Bunch	Council Member	The Woodlands Township
	R. Jack	Cagle	Commissioner	Harris County
	Donnie	Caraway	Engineering	City of Conroe
	Nick	Cooke	District Operations	Harris County Improvement District 18



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Attended 2/3/20 mtg	Name		Title	Agency/Organization
	John	Cornyn	Senator	U.S. Senate
	Brandon	Creighton	Senator	Texas State Senate
	Maureen	Crocker	Special Advisor to the Mayor on Transportation	City of Houston
	Ted	Cruz	Senator	U.S. Senate
	Jerry	Davis	Council Member	City of Houston
x	Andrew	DuBois	Project Manager	Montgomery County, Precinct 3
x	Kenny	Eickelberg	Capital Project Director	City of Shenandoah
	Rodney	Ellis	Commissioner	Harris County
x	Doug	Emery		Harris County Roll Road Authority
	Bradley J.	England	Executive Director	Cypress Creek EMS
	Elyse	Espadas	Project Coordinator	Harris County
	Rick	Flanagan	Emergency Management Coordinator	City of Houston
	TaKasha.	Francis	Director	City of Houston
	James	Fredricks	Chief of Staff	Montgomery County Toll Road Authority
	Sylvia	Garcia	Representative	U.S. House of Representatives
	LaTonya	Goffney	Superintendent	Aldine Independent School District
	Ed	Gonzalez	Sheriff	Harris County



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Attended 2/3/20 mtg	Name		Title	Agency/Organization
	Reggie	Gray	President	Intercontinental Chamber of Commerce
x	Dru	Gutierrez	Field Service Manager	North Houston District
x	Robert	Heineman	VP Planning & Design	The Woodlands Development Company
	Rand	Henderson	Sheriff	Montgomery County
	Darren	Hess	Director	Montgomery County
	Lina	Hidalgo	County Judge	Harris County
	Dale	Hill	Manager	Union Pacific Railroad
x	J.J.	Hollie	President & CEO	The Woodlands Area Chamber of Commerce
	Jace	Houston	General Manager	San Jacinto River Authority
	Robert	Hudson	Fire Chief	South Montgomery County Fire Department
	Larry	Johnson	Founder, Chairman & CEO	Johnson Development Corp.
	Jarvis	Johnson	Representative	Texas State House of Representatives
	Keith	Kaup	Director of Transportation	Spring Independent School District
	Mike	Keeney	Director of Media Relations	Aldine Independent School District
x (rep)	Mike	Knox	Council Member	City of Houston
	Ken	Kreger	Chief	City of Conroe
	Michael	Kubosh	Council Member	City of Houston
x	Thomas	Lambert	President & CEO	METRO



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Attended 2/3/20 mtg	Name		Title	Agency/Organization
	Chris	LaRue	Transit Program Manager	The Woodlands Township
	Maria	Leon		City of Conroe Engineering Dept.
x	Bobby	Lieb	President & CEO	Houston Northwest Chamber of Commerce
x	Robert	Logan	Chief	Spring
x	Margo	McZeal	Director, Government Affairs	The Woodlands Chamber of Commerce
	Mike	Meador	Commissioner	Montgomery County
	Will	Metcalf	Representative	Texas State House of Representatives
x	Amar	Mohite	Director of Planning and Infrastructure	Harris County
	Wesley	Moorehead	Department Head	Texas A&M Forest Service
	Heather	Neeley	City Manager	City of Oak Ridge North
	Linda	Nelson	Business Advocacy Council	The Woodlands Area Chamber of Commerce
x	James	Noack	Commissioner	Montgomery County
	Robert C.	Patrick	Regional Administrator	Federal Transit Administration
	Joseph	Peart	Public Works Director	City of Shenandoah
	Leticia	Plummer	Council Member	City of Houston
	Russell A.	Poppe	Executive Director	Harris County Flood Control District
	Toby	Powell	Mayor	City of Conroe



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Attended 2/3/20 mtg	Name		Title	Agency/Organization
x	John	Powers	Asst Gen. Mgr, Community Services	The Woodlands Township
	Colin	Rice	Managing Airport Planner	City of Houston Airport System
	Charlie	Riley	Commissioner	Montgomery County
	David W.	Robinson	Council Member	City of Houston
	Pamela	Rocchi	CIP Director	Harris County
	Hugo	Sanchez	Inspector	Montgomery County
	Mark	Seals		Montgomery County /Office of Homeland Security & Emergency Management
	Joe	Sherwin	Director	City of Oak Ridge North
	Greg	Simpson	President	North Houston District
	Mark	Sloan	Emergency Management Coordinator	Harris County
x	Loyd	Smith		Harris County
x	Todd	Stephens		The Woodlands Township
	Valoree	Swanson	Representative	Texas State House of Representatives
	Senfronia	Thompson	Representative	Texas State House of Representatives
x	Lindsey	Trahan	Agency Coordinator	Harris County
	Sylvester	Turner	Mayor	City of Houston



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Attended 2/3/20 mtg	Name		Title	Agency/Organization
	Ashley K.	Wadick	Regional Director	San Jacinto River Authority
	Armando	Walle	Representative	Texas State House of Representatives
	Rodney E.	Watson	Superintendent	Spring Independent School District
	Jeffrey	Weatherford	Deputy Director	City of Houston
	Ritch	Wheeler	Mayor	City of Shenandoah
	John	Whitmire	Senator	Texas State Senate
	Douglas	Woods	Manager of Special Projects I & PP	Union Pacific Railroad
	Tommy	Woolley	Director of Capital Projects	City of Conroe
	Richard	Zientek	Director	Union Pacific Railroad

C. MEETING MATERIAL

MEETING PRESENTATION



Stakeholder Meeting No. 4

I-45N: Beltway 8 North to Loop 336 South (Conroe)
Planning and Environmental Linkages (PEL) Study

Future NEPA studies, environmental review, consultation and other actions required by applicable Federal environmental laws for projects associated with the I-45N: Beltway 8 North to Loop 336 South (Conroe) Planning and Environmental Linkages Study are being, or have been carried out by TxDOT pursuant to 23 USC 327 and a MOU dated December 9, 2019 by FHWA and TxDOT.

February 3, 2020

Safety Moment



1 Study Overview & Process

2 Past Meetings

3 Public Engagement Outcomes

4 Alternative Evaluation

5 Next Steps

6 Discussion

Study Overview



I-45N PEL Study Area

STUDY LIMITS:

Beltway 8 North to Loop 336 South

PROJECT LENGTH:

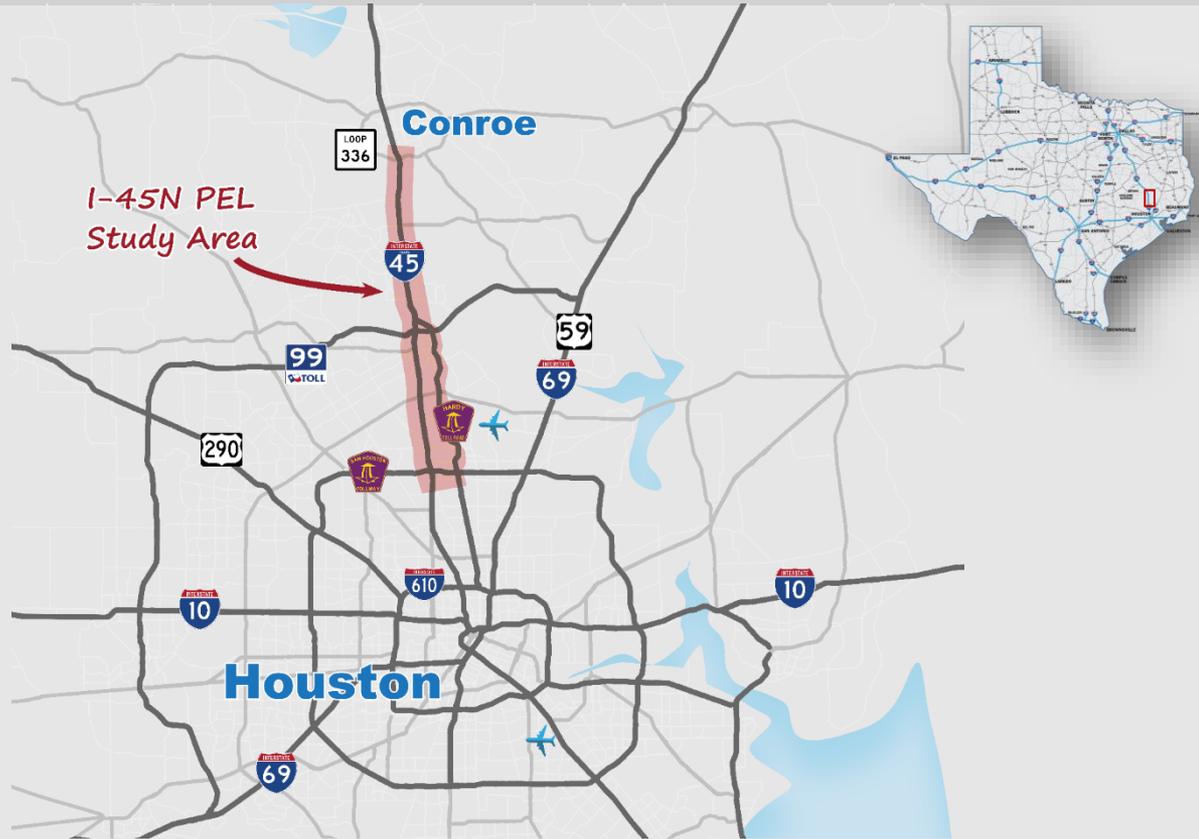
24 Miles

COUNTIES:

Harris, Montgomery

PLACES:

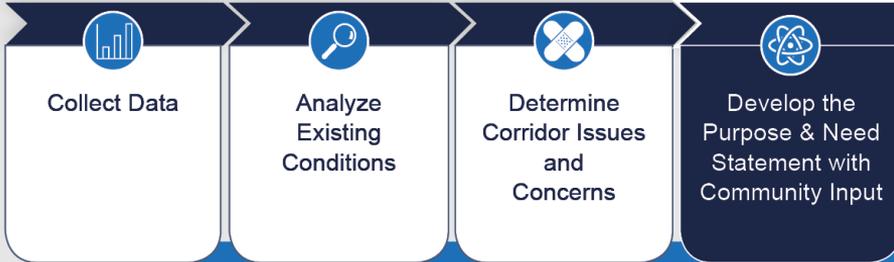
Houston, Aldine, Spring,
Oak Ridge North, The Woodlands,
Shenandoah, Conroe





PHASE 1

Spring 2017 - Fall 2018

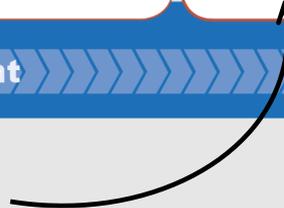


PHASE 2

Spring 2019 - Spring 2021



We are working on this step





What are the needs?

Inadequate Mobility

- Congestion on mainlanes, frontage roads, intersections
- Delays and unreliable travel times



Safety Issues

- High crash rates on mainlanes, frontage roads, intersections
- Gaps in the multimodal network, posing danger for pedestrians and bicyclists



Poor System Connectivity

- Limited accessibility and connections to other roadways and between travel modes
- Inadequate interchanges



What are we trying to do?

Improve mobility and reduce congestion

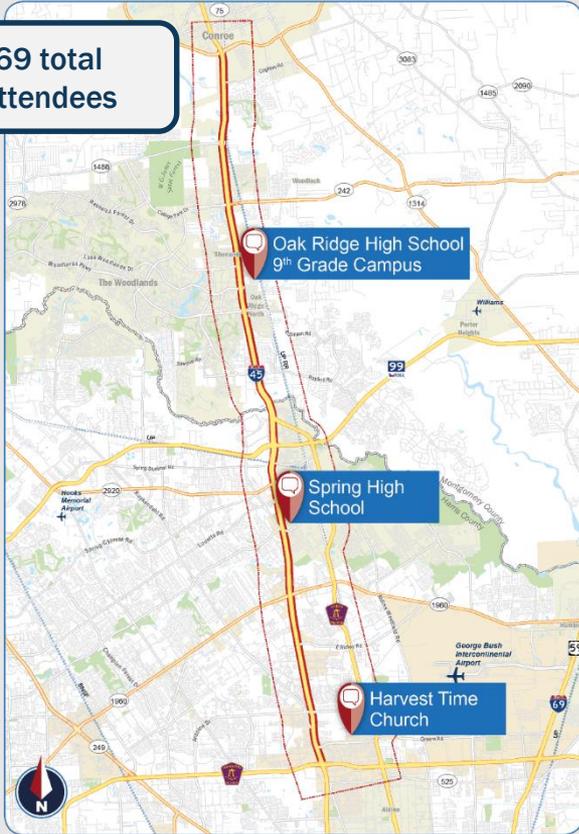
Improve safety

Improve connections across the roadway system & modes

Public Engagement



69 total attendees



October 12, 2019

Harvest Time Church
11 attendees



October 15, 2019

Spring High School
17 attendees



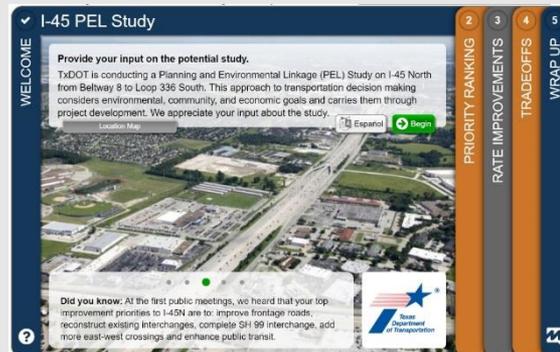
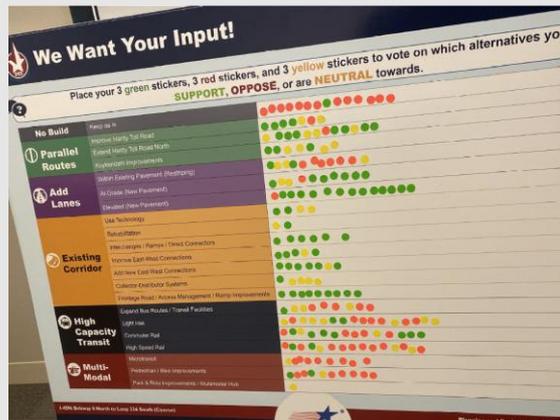
October 16, 2019

Oak Ridge High School 9th Grade Campus
41 attendees



Sources of Input:

- Public meetings
 - Interactive boards
 - Comment forms
- Stakeholder survey
- Online survey



Stakeholder Meeting Universe of Alternative Survey

TxDOT is seeking your input on which alternatives would best improve the I-45N corridor from Beltway 8 North to Loop 336 South (Conroe). Please review all alternatives and indicate with a check mark (✓) whether you support, oppose, or are neutral to each alternative.

Your Name: _____

Representing: _____

No Build <ul style="list-style-type: none"> Use Technology Rehabilitation Interchanges / Ramps / Direct Connectors Improve East-West Connections Add New East-West Connections Collector-Distributor Systems Between mainlines & frontage roads Frontage Road Improvements / Access Management / Ramps 	Add Lanes <ul style="list-style-type: none"> Within Existing Pavement (Restricting) At-Grade (New Pavement) Elevated (New Pavement)
Existing Corridor <ul style="list-style-type: none"> Improve Hardy Toll Road (including connections) Extend Hardy Toll Road North Kuykendahl Improvements 	High Capacity Transit <ul style="list-style-type: none"> Expand Bus Routes / Transit Services Light Rail Commuter Rail High-Speed Rail
Parallel Routes <ul style="list-style-type: none"> Improve Hardy Toll Road (including connections) Extend Hardy Toll Road North Kuykendahl Improvements 	Multimodal <ul style="list-style-type: none"> Microtransit Pedestrian / Bicycle Improvements Park & Ride Improvements / Multimodal Hub

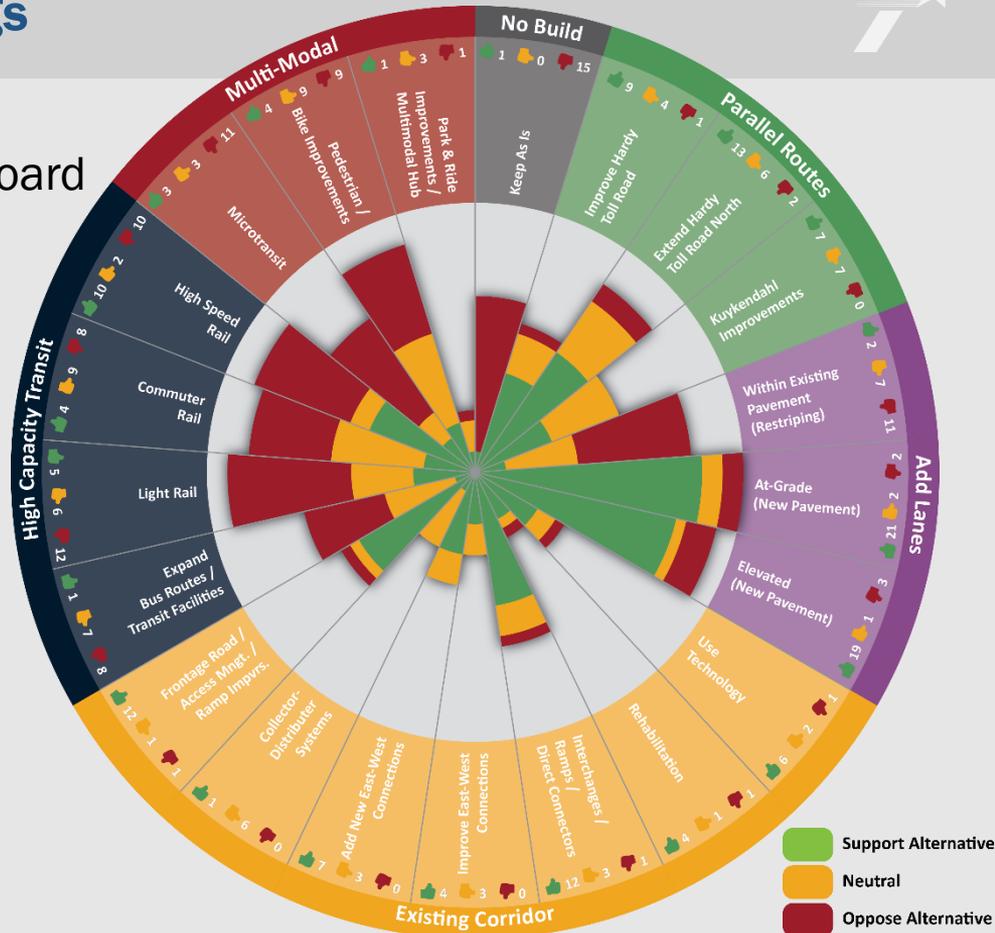
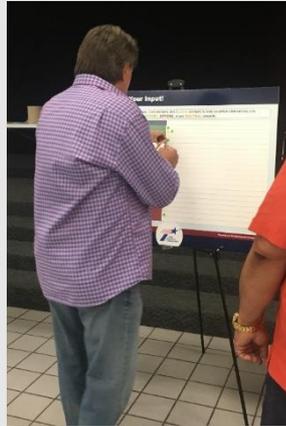
Existing Corridor

Use Technology Jurisdiction: TxDOT Check Box: <input type="checkbox"/> Support <input type="checkbox"/> Neutral <input type="checkbox"/> Oppose	Improve East-West Connections Jurisdiction: TxDOT Check Box: <input type="checkbox"/> Support <input type="checkbox"/> Neutral <input type="checkbox"/> Oppose
Frontage Road Improvements / Access Management / Ramps Jurisdiction: TxDOT Check Box: <input type="checkbox"/> Support <input type="checkbox"/> Neutral <input type="checkbox"/> Oppose	Add New East-West Connections Jurisdiction: Others Check Box: <input type="checkbox"/> Support <input type="checkbox"/> Neutral <input type="checkbox"/> Oppose
Rehabilitation Jurisdiction: TxDOT Check Box: <input type="checkbox"/> Support <input type="checkbox"/> Neutral <input type="checkbox"/> Oppose	Collector-Distributor Systems Jurisdiction: TxDOT Check Box: <input type="checkbox"/> Support <input type="checkbox"/> Neutral <input type="checkbox"/> Oppose
Interchanges / Ramps / Direct Connectors Jurisdiction: TxDOT Check Box: <input type="checkbox"/> Support <input type="checkbox"/> Neutral <input type="checkbox"/> Oppose	(Map and other visual elements)

Public Engagement – Public Meetings



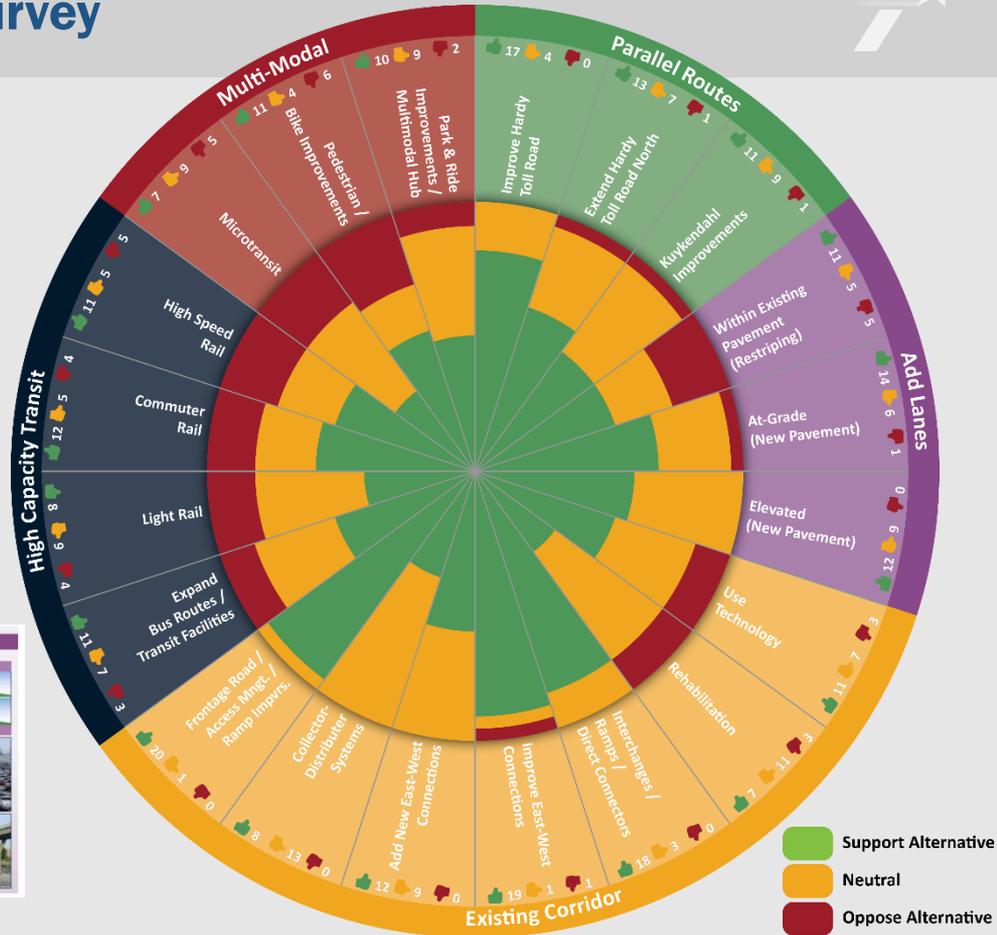
- Based on dot exercise from interactive board
- 328 responses
- Top choices:
 - At-Grade (New Pavement)
 - Elevated (New Pavement)
 - Extend Hardy Toll Rd North



Public Engagement – Stakeholder Survey



- 21 responses
- Top choices:
 - Frontage Road / Access Mgmt. / Ramp Improvements
 - Improve East-West Connections
 - Interchanges / Ramps / Direct Connectors
 - Improve Hardy Toll Road (including connections)



Existing Corridor

- Use Technology
- Frontage Road Improvements / Access Management / Ramps
- Rehabilitation

Parallel Routes

- Improve East-West Connections (including connections)
- Add New East-West Connections
- Collector-Distributor Systems
- Interchanges / Ramps / Direct Connectors

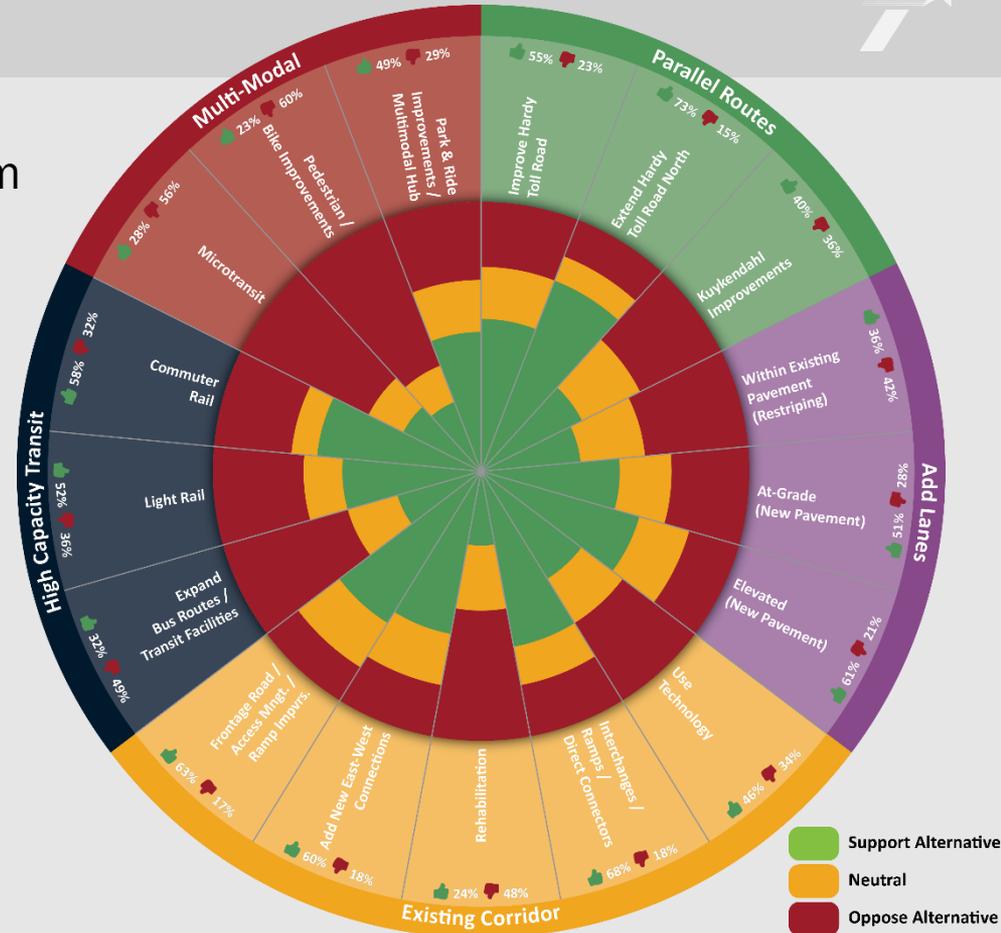
Added Capacity

- Within Existing Pavement (restriping)
- At-Grade (new pavement)
- Elevated (new pavement)

Public Engagement – Online Survey



- 640 participants on MetroQuest platform
- 8,907 data points
- Top choices:
 - Extend Hardy Toll Road North
 - Interchanges / Ramps / Direct Connectors
 - Frontage Road / Access Mgmt. / Ramp Improvements
 - Add New Elevated Lanes



Public Engagement – Combined Ratings



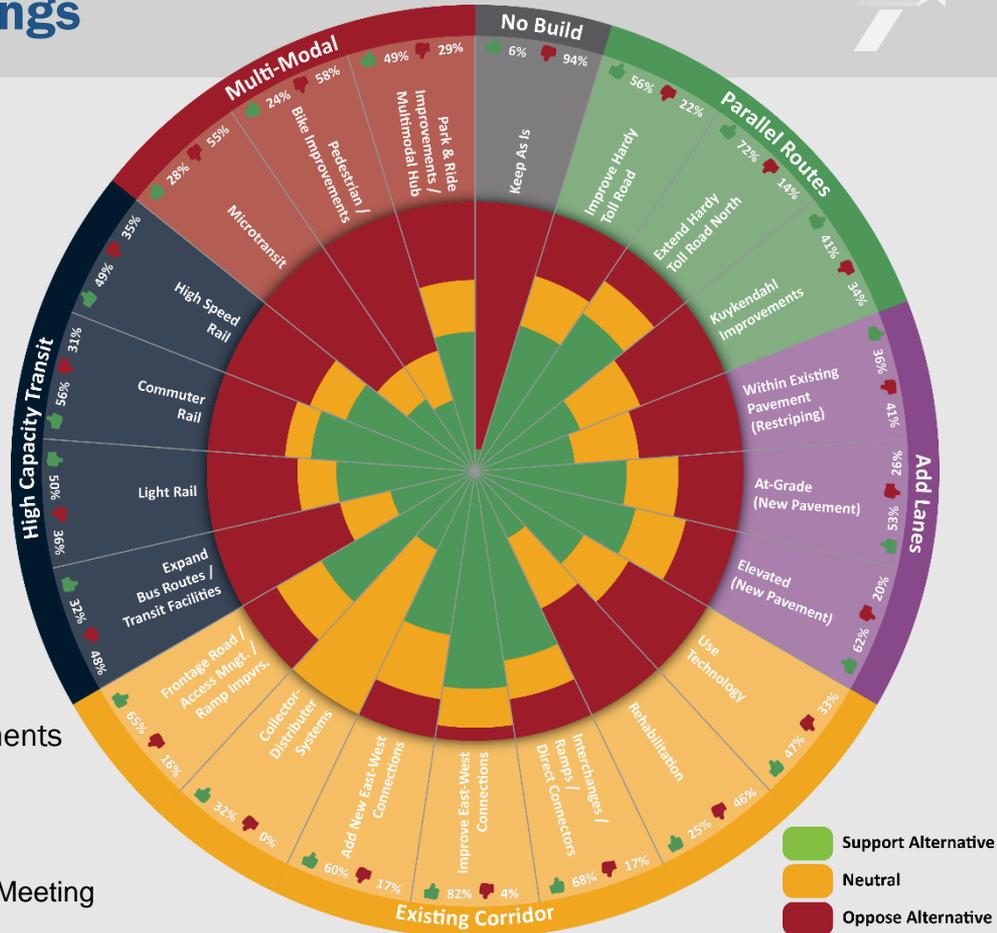
Combined public acceptance ratings* include:

- Stakeholder survey
- Public meetings
- Online survey

Top choices:

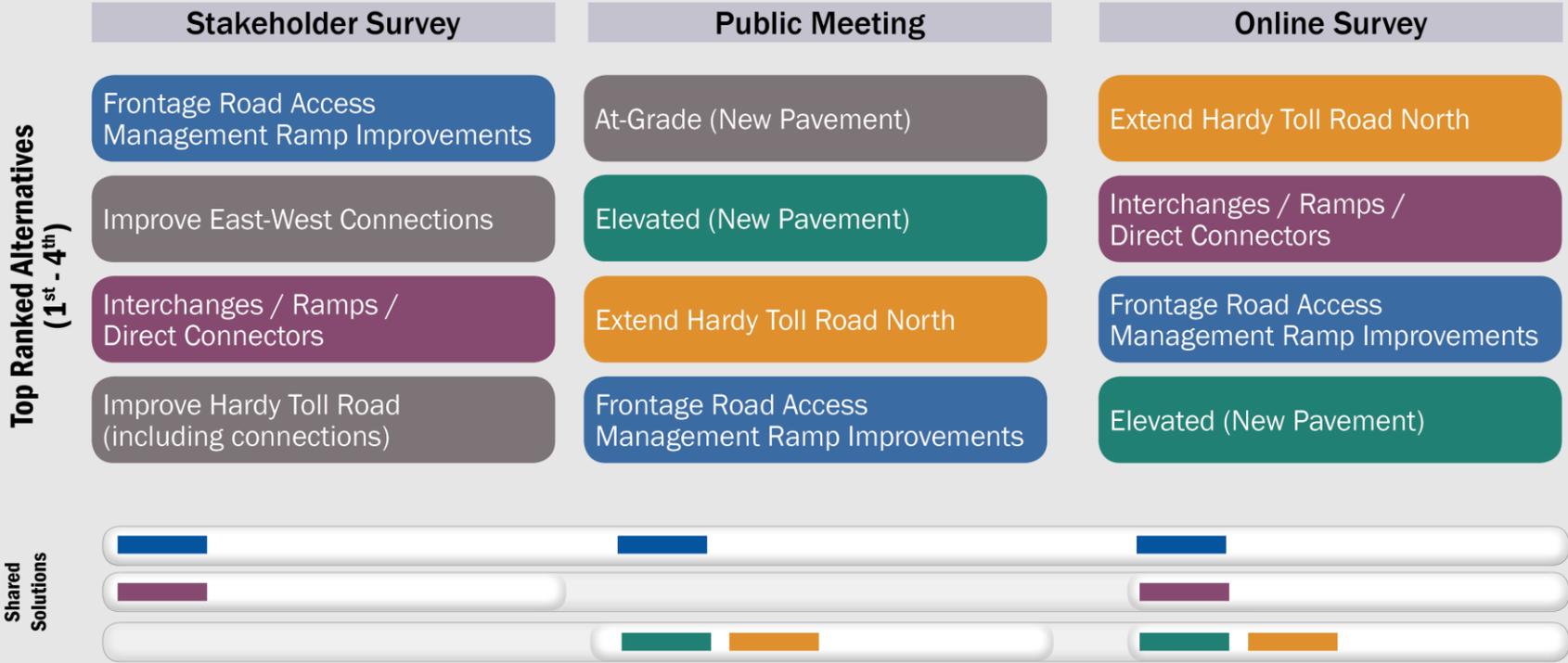
- Extend Hardy Toll Road North
- Frontage Road / Access Management / Ramp Improvements
- Interchanges / Ramps / Direct Connectors

*6,655 data points used in the combined rating summary from Public Meeting Series No. 2 held October 2019





Top choices for each outreach method, by order of preference:





Final ratings for fatal flaw analysis:

Positive

Extend Hardy Toll Rd North

Interchange / Ramps / Direct Connectors

Frontage Rd. / Access Mgmt. / Ramp Improvements

Add New Elevated Lanes

Add New East-West Connections

Improve Hardy Toll Road

Add New At-Grade Lanes

Commuter Rail

Light Rail

Neutral

Use Technology (TSM / ITS / TDM)

Kuykendahl Improvements

Improve East-West Connections

Collector-Distributor Systems

High Speed Rail

Negative

No Build

Add Lanes within Existing Pavement (re-stripping)

Expand Bus Routes / Transit Services

Rehabilitation

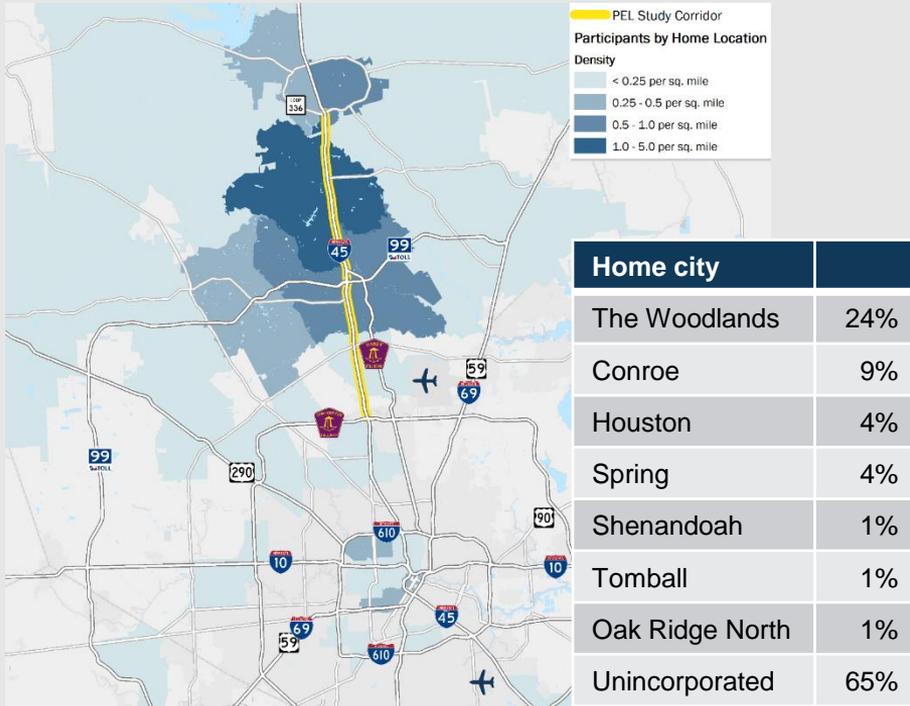
Microtransit

Pedestrian / Bicycle Improvements

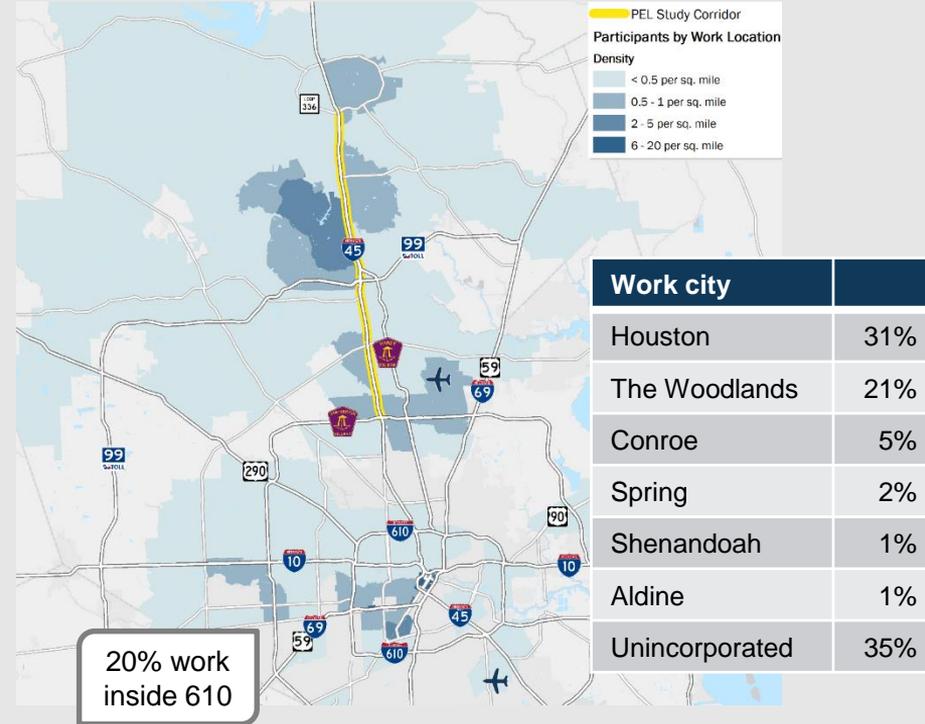
Online Survey Summary



Home Location Density



Work Location Density

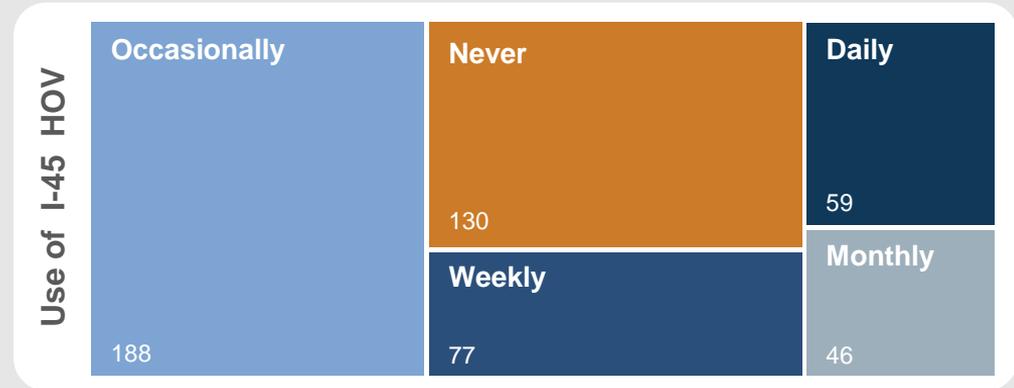




- Largest share of participants were daily users of I-45N, followed by weekly

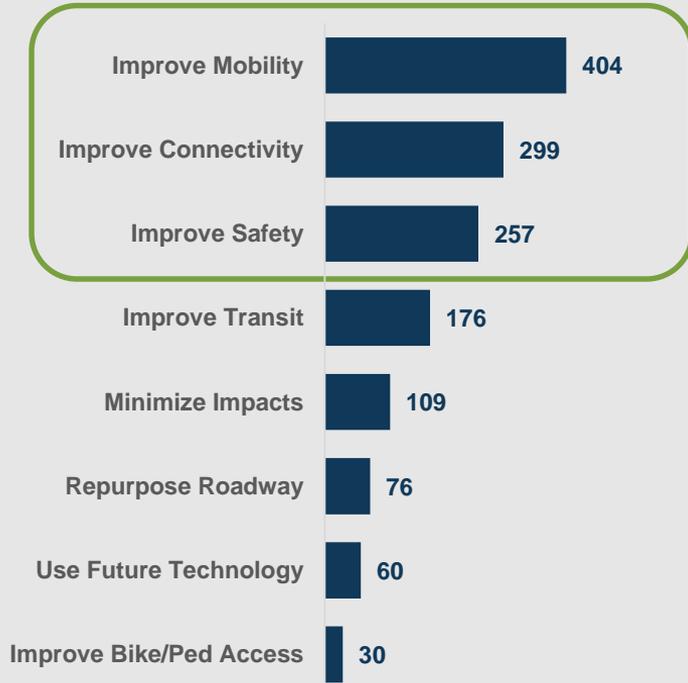


- Most common I-45N HOV use was “occasional,” followed by “never,” “weekly,” “daily”





Corridor Priority Preferences
(# of supporters)



Expressed top 3 priorities
were consistent with
Purpose and Need

2 Rank Study Priorities

PRIORITY RANKING

Order your top 3 items above this line

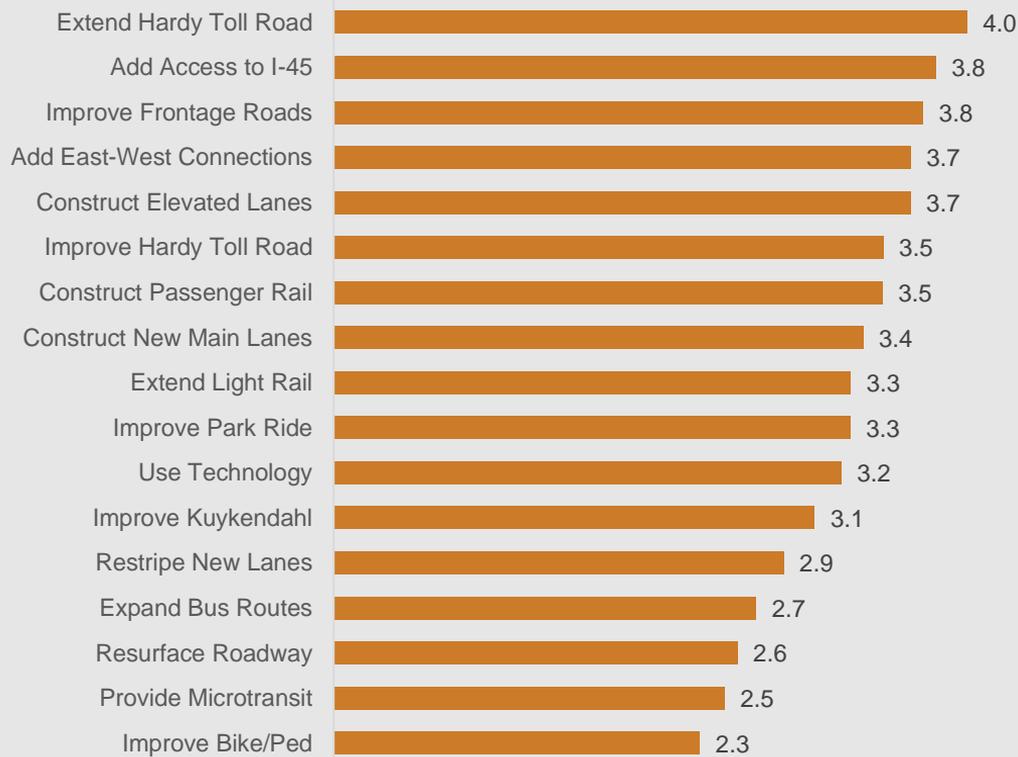
- Improve Connectivity
- Improve Bike/Ped Access
- Use Future Technology
- Improve Transit
- Improve Mobility
- Minimize Impacts
- Repurpose Roadway
- Improve Safety

To help us understand what is most important to you - we want to know your priorities to improve I-45 North. Please rank your top three roadway priorities.

Please drag 3 of the items above the line in your preferred order.

Suggest another

Public Engagement – Online Survey

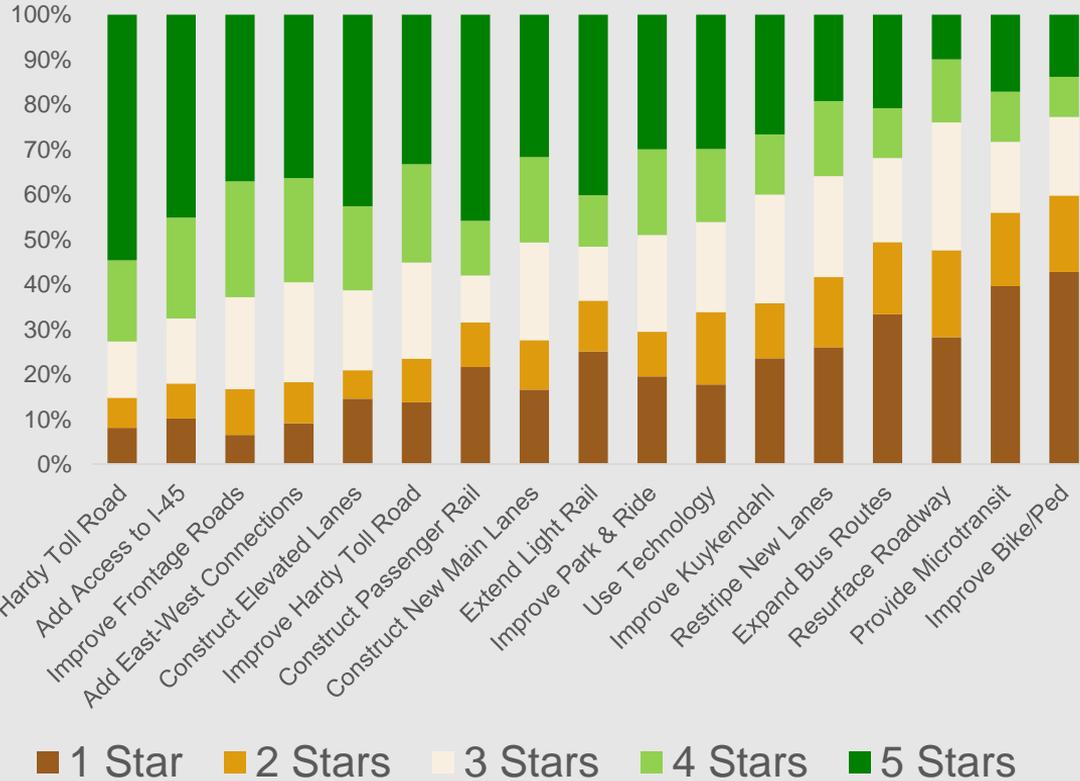


Respondents rated alternatives from



Chart shows the average star rating, ranking alternatives highest to lowest

Public Engagement – Online Survey



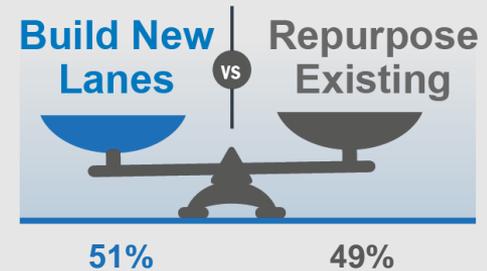
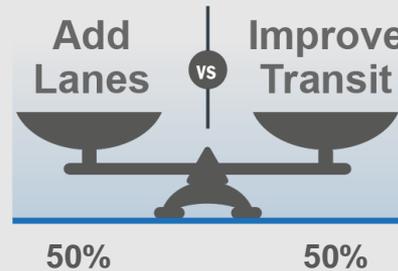
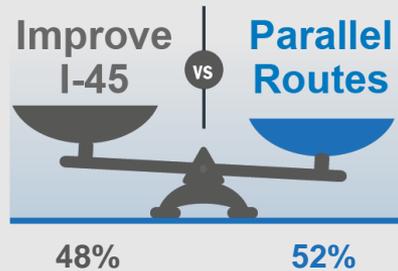
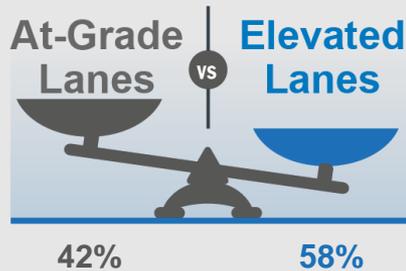
Respondents rated alternatives from



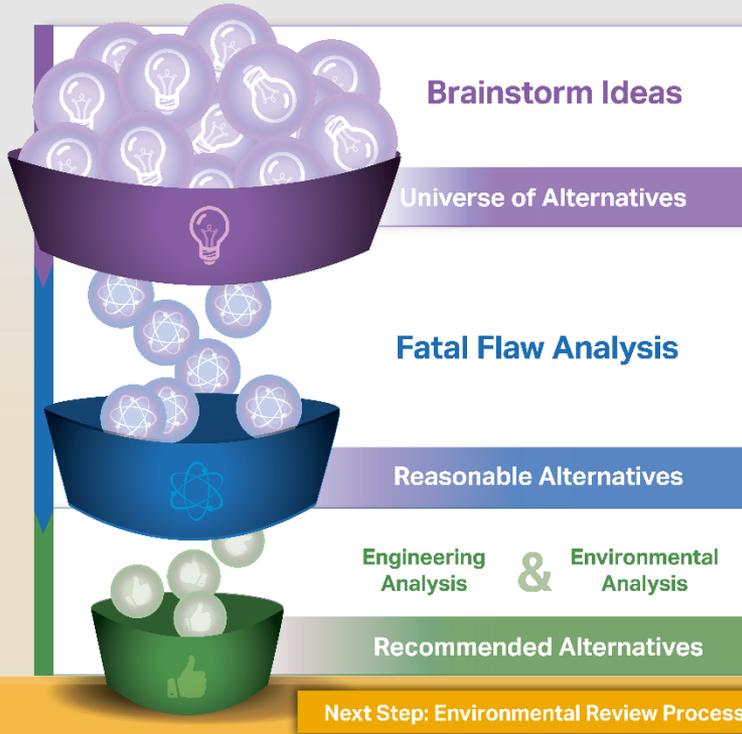
Chart shows the distribution of stars across alternatives



- Participants were asked to how much they supported one option vs. another
- Results were generally balanced, but preference was shown for **elevated lanes**, **improving parallel routes**, and **building new lanes**

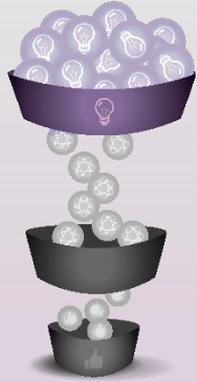


Alternative Evaluation



The only alternatives eliminated here are those shown to be not feasible based on the purpose and need or fatal flaws (i.e., features that would prohibit it from being built)



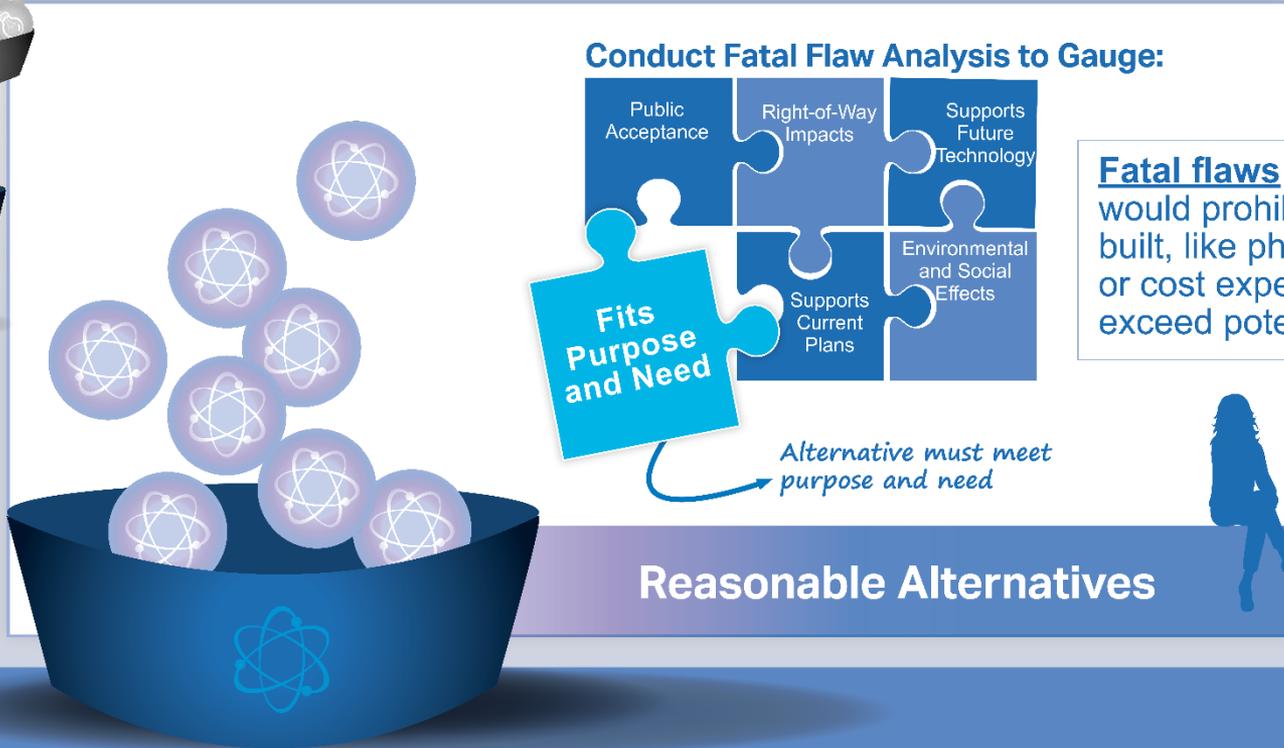


Who Contributes Ideas?

- The Public
- Study Team
- Stakeholders
- Elected Officials
- Planning Agencies
- Federal/State Agencies
- Local Governments
- TxDOT

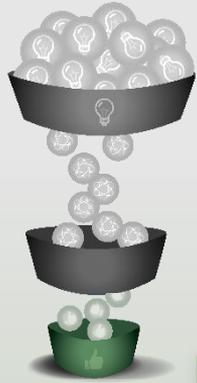
Universe of Alternatives

Alternative Evaluation Process



Fatal flaws are features that would prohibit a project from being built, like physical inconstructibility or cost expectations that vastly exceed potential funding





This stage will include analysis that is both **quantitative** (i.e., data-driven) and **qualitative** (based on engineering experience)





Categories and Alternatives



The Universe of Alternatives is made up of options to improve conditions in the Study Area

No Build

Existing Corridor

- Use Technology
- Rehabilitation
- Interchanges / Ramps / Direct Connectors
- Improve East-West Connections
- Add New East-West Connections
- Collector-Distributor Systems (between mainlanes & frontage roads)
- Frontage Road Improvements / Access Management / Ramps

Parallel Routes

- Improve Hardy Toll Road (including connections)
- Extend Hardy Toll Road North
- Kuykendahl Improvements

Add Lanes

- Within Existing Pavement (Restriping)
- At-Grade (New Pavement)
- Elevated (New Pavement)

High Capacity Transit

- Expand Bus Routes / Transit Services
- Light Rail
- Commuter Rail
- High Speed Rail

Multimodal

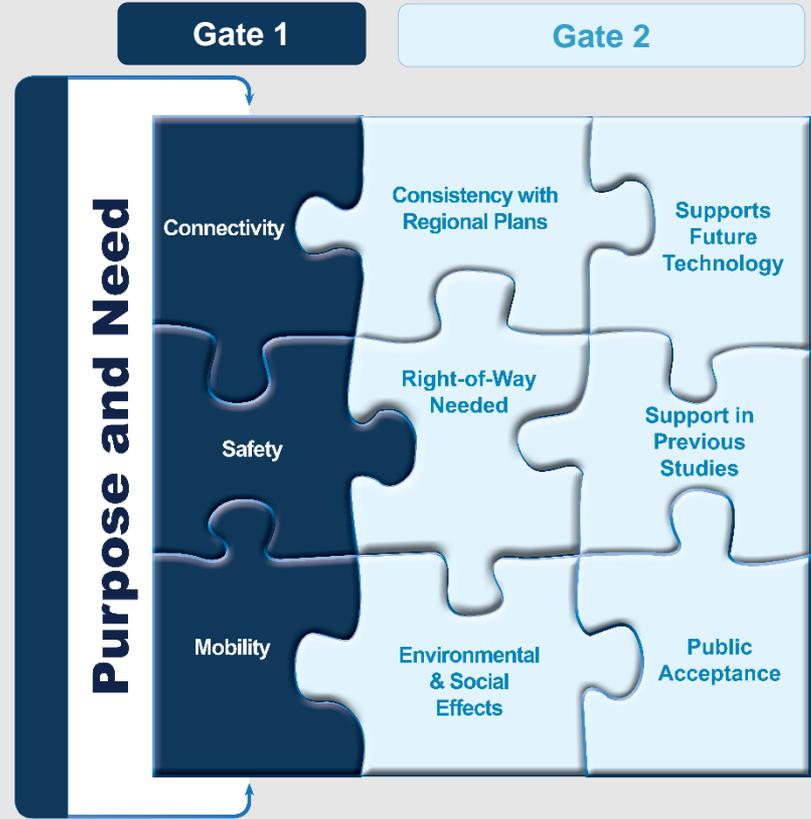
- Microtransit
- Pedestrian / Bicycle Improvements
- Park & Ride Improvements / Multimodal Hub



Nine evaluation criteria

Two-step process

- To pass Gate 1, alternative must score positive in *Purpose and Need* criteria
- To pass Gate 2, alternative is screened against remaining six criteria. Those with positive total scores advance as **Reasonable Alternatives**.





Purpose and Need

Any alternative that advances **MUST** meet the Purpose and Need



Connectivity



Safety



Mobility

Positive

Increases connectivity, be it east-west, interchange, transit, or bike/pedestrian

Expected to decrease vehicle and bike/pedestrian crash rates

Improves travel time and/or reliability, handles expected growth

Neutral

Neutral impact on connectivity

Neutral impact on crash rates

Neutral impact on travel time and reliability

Negative

Likely to decrease connectivity

Likely to increase crash rates

Alternative is insufficient to absorb expected growth

Gate 1 of Fatal Flaw Analysis requires that alternatives meet the Purpose and Need:

- Connectivity
- Safety
- Mobility

Fatal Flaw Analysis: Gate 1



● Negative ● Neutral ● Positive

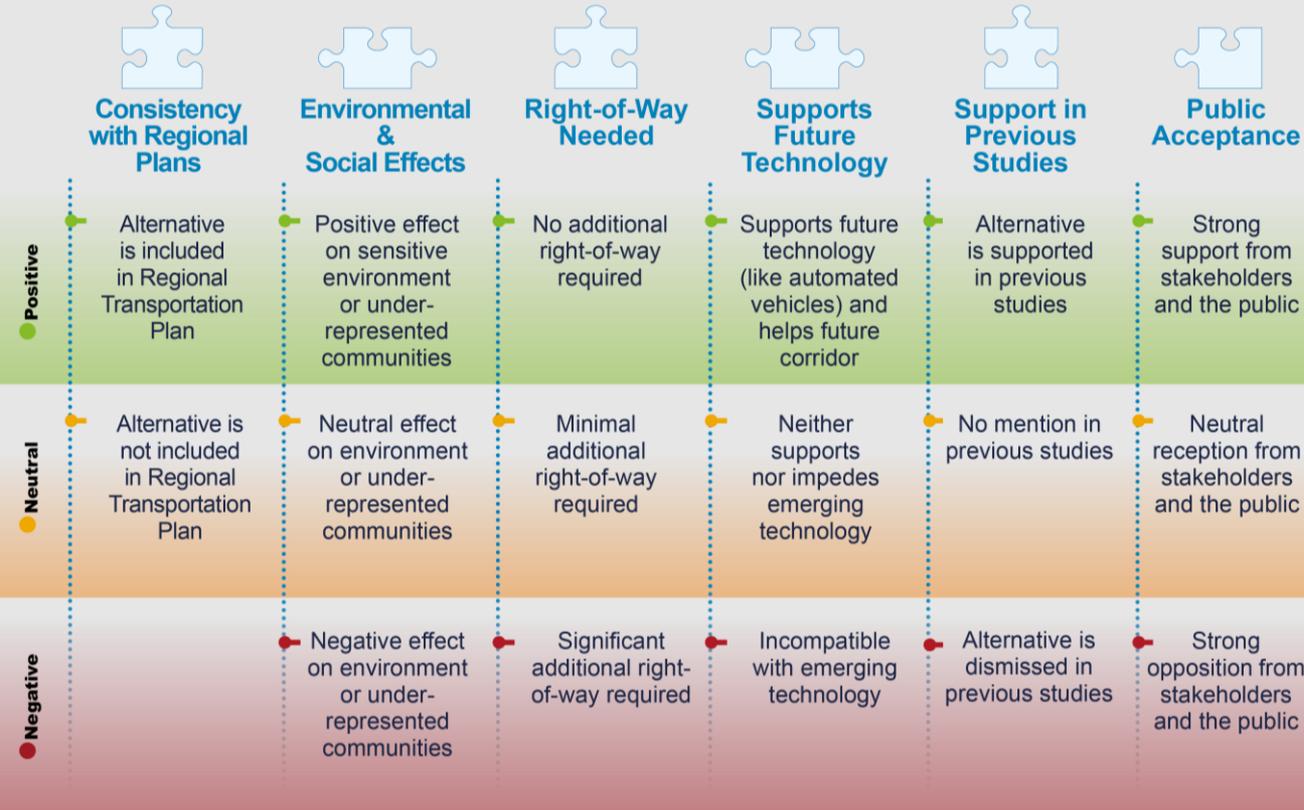
Category	Alternative	Purpose and Need			Gate 1: Purpose and Need
		Connectivity	Safety	Mobility	
No Build	Keep as is				
Parallel Routes	Improve Hardy Toll Road	●	●	●	YES
	Extend Hardy Toll Road North (New Alignment)	●	●	●	YES
	Kuykendahl Improvements	●	●	●	YES
Add Lanes	Within Existing Pavement (Restriping)	●	●	●	YES
	At-Grade (New Pavement)	●	●	●	YES
	Elevated (New Pavement)	●	●	●	YES
Existing Corridor	Use Technology (TSM / TDM / ITS)	●	●	●	YES
	Rehabilitation	●	●	●	NO
	Interchanges / Ramps / Direct Connectors	●	●	●	YES
	Improve East-West Connections	●	●	●	YES
	Add New East-West Connections	●	●	●	YES
	Collector-Distributor Systems	●	●	●	YES
	Frontage Road / Access Management / Ramp Improvements	●	●	●	YES
High Capacity Transit	Expand Bus Routes / Transit Services	●	●	●	YES
	Light Rail	●	●	●	NO
	Commuter Rail	●	●	●	NO
	High Speed Rail	●	●	●	NO
Multi-Modal	Microtransit	●	●	●	YES
	Pedestrian / Bicycle Improvements	●	●	●	YES
	Park & Ride Improvements / Multimodal Hub	●	●	●	YES

Purpose and Need requirements eliminate four alternatives:

- Rehabilitation
(will remain part of regular maintenance program)
- High speed rail
- Commuter rail
- Light rail

No Build Alternative will be carried forward through the evaluation as a baseline for comparison purposes.

Fatal Flaw Analysis: Gate 2



For an alternative to pass Gate 2, the number of positive ratings to equal or outnumber the number of negative ratings for these six criteria.

Fatal Flaw Analysis: Gate 1 & Gate 2



● Negative ● Neutral ● Positive

Category	Alternative	Purpose and Need				Consistency with Regional Plans	Environmental and Social Effect	Right-of-Way Needed	Supports Future Technology	Previous Studies	Public Acceptance	Gate 2: Reasonable Alternative
		Connectivity	Safety	Mobility	Gate 1: Purpose and Need							
No Build	Keep as is					NO RATINGS						
Parallel Routes	Improve Hardy Toll Road	●	●	●	YES	●	●	●	●	●	●	YES
	Extend Hardy Toll Road North (New Alignment)	●	●	●	YES	●	●	●	●	●	●	NO
	Kuykendahl Improvements	●	●	●	YES	●	●	●	●	●	●	YES
Add Lanes	Within Existing Pavement (Restriping)	●	●	●	YES	●	●	●	●	●	●	YES
	At-Grade (New Pavement)	●	●	●	YES	●	●	●	●	●	●	YES
	Elevated (New Pavement)	●	●	●	YES	●	●	●	●	●	●	YES
Existing Corridor	Use Technology (TSM / TDM / ITS)	●	●	●	YES	●	●	●	●	●	●	YES
	Rehabilitation	●	●	●	NO							
	Interchanges / Ramps / Direct Connectors	●	●	●	YES	●	●	●	●	●	●	YES
	Improve East-West Connections	●	●	●	YES	●	●	●	●	●	●	YES
	Add New East-West Connections	●	●	●	YES	●	●	●	●	●	●	YES
	Collector-Distributor Systems	●	●	●	YES	●	●	●	●	●	●	YES
	Frontage Road / Access Management / Ramp Improvements	●	●	●	YES	●	●	●	●	●	●	YES
High Capacity Transit	Expand Bus Routes / Transit Services	●	●	●	YES	●	●	●	●	●	●	YES
	Light Rail	●	●	●	NO							
	Commuter Rail	●	●	●	NO							
	High Speed Rail	●	●	●	NO							
Multi-Modal	Microtransit	●	●	●	YES	●	●	●	●	●	●	YES
	Pedestrian / Bicycle Improvements	●	●	●	YES	●	●	●	●	●	●	YES
	Park & Ride Improvements / Multimodal Hub	●	●	●	YES	●	●	●	●	●	●	YES

Extend Hardy Toll Road North (on new alignment) was removed from further consideration

15 alternatives passed Gate 2

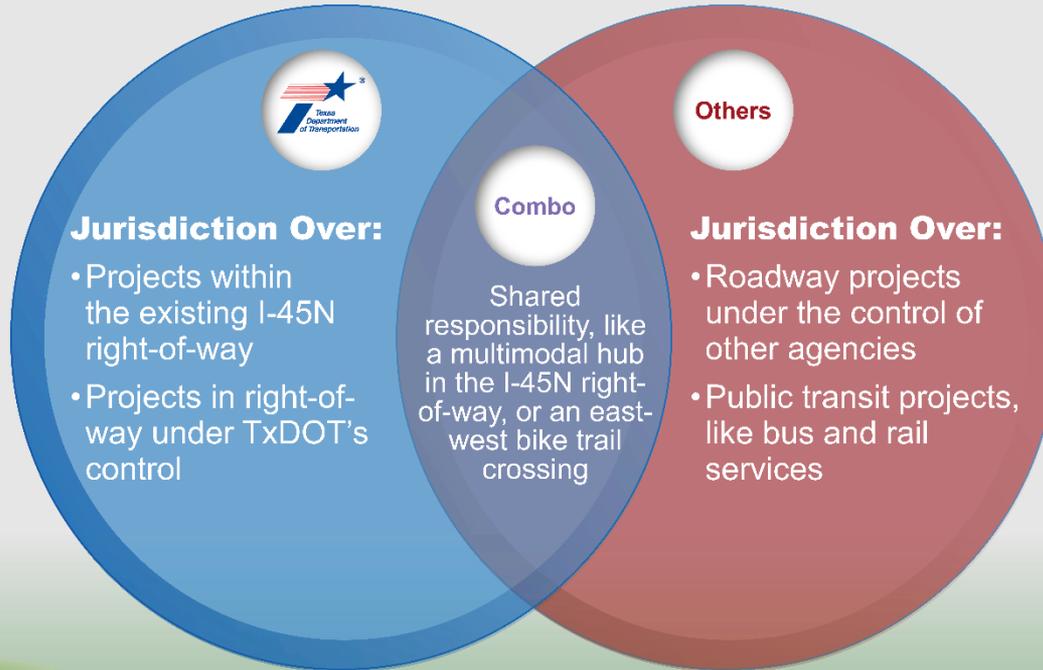


Who can implement these improvement projects?

Different agencies have jurisdiction over different types of projects



Project funding comes from the agency with jurisdiction—though other agencies can still support the project!





TxDOT or Multi- jurisdictional

Primary Alternatives:

Alternatives that can serve the corridor-wide purpose and need and are focused on the I-45N corridor.

Supplemental Alternatives:

Alternatives that only meet localized transportation needs and can supplement the proposed improvements in Primary Alternatives for the I-45N corridor.

Other jurisdiction

Alternatives by Others:

All alternatives that are outside TxDOT jurisdiction.

Reasonable Alternatives



Reasonable Alternatives		Categories			Jurisdiction		
		Primary	Supplemental	By Others	TxDOT	Multi-Jurisdictional	Others
No-Build	No-Build	•			•		
Parallel Routes	Improve Hardy Toll Road (including connections)	•				•	
	Kuykendahl Improvements			•			•
Add Lanes	Within Existing Pavement (re-striping)	•			•		
	At-Grade (new pavement)	•			•		
	Elevated (new pavement)	•			•		
Existing Corridor	Use Technology (TSM / TDM / ITS)		•		•		
	Interchanges / Ramps / Direct Connectors		•		•		
	Improve East-West Connections		•		•		
	Add New East-West Connections			•			•
	Collector-Distributor Systems		•		•		
	Frontage Road / Access Management / Ramp Improvements		•		•		
High Capacity Transit	Expand Bus Routes / Transit Services			•			•
Multi-Modal	Microtransit			•			•
	Pedestrian / Bicycle Improvements		•			•	
	Park & Ride Improvements / Multimodal Hub		•			•	

Next Steps



- **Alternative development**
 - Proposed typical sections
 - Anticipated right-of-way
 - Spot location improvements
 - Interchange reconfiguration, multi-modal hubs, new connections, etc.
- **Alternative evaluation**
 - Travel Demand Model updates
 - Traffic operational analysis
 - Built and natural environmental impacts evaluation
 - High-level cost estimate

Next Steps: Develop and Evaluate Reasonable Alternatives



- Develop screening methodology based on the study goals to evaluate alternatives

	Improve mobility and travel time reliability		Maximize use of existing right-of-way		Minimize impacts to natural and built environments
	Improve system connectivity and accessibility: <ul style="list-style-type: none">Enhance east-west connectionsImprove interchanges and access to/from the I-45N mainlanesImprove connections to parallel facilities		Reduce roadway flooding and improve roadway resiliency		Accommodate future technology to promote sustainability
			Maintain and preserve existing I-45N infrastructure		Improve functionality and resiliency of I-45N as a hurricane and emergency evacuation route
	Improve bicycle and pedestrian facilities		Incorporate cost-effective solutions		Identify and prioritize short-term solutions for quicker implementation of improvements
	Enhance economic development and strong regional economic competitiveness		Reduce frequency and severity of crashes		
			Improve transit accessibility and connections to I-45N		Achieve active stakeholder and public participation throughout study
			Improve accommodation of freight traffic		

Next Steps





- Hold one public meeting, centrally located along the corridor
 - Previous public meetings were held at three locations
- Outreach to constituents (see handout)
 - Management districts
 - Associations
 - Chamber of commerce
 - Neighborhood/community meetings
 - Civic clubs (e.g., Kiwanis, Rotary, etc.)
 - Civic/community events
 - City council meetings
 - Special interest groups
- Continue to use online survey
- Enhance online tools and information available to the public



Who can I contact?

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Sofia.Huang@txdot.gov

Visit:

www.TxDOT.gov (keyword search I-45N PEL)

MEETING SURVEY



I-45N: Beltway 8 North to Loop 336 South (Conroe) Planning and Environmental Linkages (PEL) Study



Who should we reach out to?

Are there constituents in your area that we should reach out to as part of the I-45N PEL Study public outreach? Examples could include civic clubs, management districts, associations, chambers of commerce, neighborhood groups, special interest groups, etc. All voices are encouraged in the planning process!

Please list their information below and we will provide them with information about upcoming opportunities to participate.

Organization Name

Contact Person

Phone/Email

_____	_____	_____
_____	_____	_____
_____	_____	_____

How can we ensure a better outcome for I-45N?

Do you have any comments or concerns about the Fatal Flaw analysis results or alternatives dismissed from further consideration?

Are there any additional aspects we should analyze or consider while evaluating the Reasonable Alternatives?

Future NEPA studies, environmental review, consultation and other actions required by applicable Federal environmental laws for projects associated with the I-45N: Beltway 8 North to Loop 336 South (Conroe) Planning and Environmental Linkages Study are being, or have been carried out by TxDOT pursuant to 23 USC 327 and a MOU dated December 9, 2019 by FHWA and TxDOT.