



Linking H-GAC's Vision and Goals to Transportation Project Selection



Houston ITE Chapter
May 11, 2023

Why a New Project Selection Process?

- Last “Call for Projects” Process was in 2018-2019
 - Programmed about \$650 million
 - All projects scored on same factors
- After Final Approval of Projects (March 2019):
 - TPC concerns about effectiveness, fairness, and outcomes of process
 - TPC Workgroup formed to make recommendations
- Workgroup developed Goals, Priorities, and Policies (2020)
- TPC unanimously adopted recommendations (2020)

TPC Guidance: Goals

Goal/Priority/Policy
Goal
Align with Regional Transportation Plan goals
<ul style="list-style-type: none"> Improving traveler safety Efficient movement of people and goods Maintenance of a state of good repair Strengthening regional economic competitiveness Conserving and protecting natural and cultural resources while reducing vehicle generated air pollutants
Align with Regional Transportation Plan public comments
<ul style="list-style-type: none"> Create a truly, multimodal transportation network that supports the appropriate use by transit, bicycle, pedestrian, active transportation and freight Support greater investment in the management and maintenance of current transportation facilities and services Be responsive to community/neighborhood quality of life concerns (e.g., environmental quality, health, housing availability and affordability, parks, libraries, and other unique cultural qualities of our neighborhoods and communities)
Create a resilient transportation network by reducing inoperability for significant time periods due to:
<ul style="list-style-type: none"> Flooding, erosion, or damage from severe weather events Infrastructure damaged by collisions with vehicles such as trucks, ships and barges Vehicle crash rates and crash clearance times
Increase the resources available to implement the Regional Transportation Plan with public and private funding partnerships

TPC Guidance: Priorities

Goal/Priority/Policy
Priority
The reduction and elimination of severe injuries due to vehicle crashes
Improve safe and reliable goods movement within and through the region:
<ul style="list-style-type: none"> • identify and mitigate congestion and crash hot spots for commercial trucks • accelerate freight delivery by autonomous vehicles • promote off peak and overnight freight delivery including off peak use of exclusive freight lanes
Focusing on operational improvements and congestion management, including projects that address railroad/roadway safety and delays
Promote public/private, coordinated planning in high growth areas (areas with high population and/or commercial development growth) to reserve right of way and development of facilities that will avoid future congestion and support continued economic development
Recognize the benefit of regional, multijurisdictional projects to the larger transportation network
Improve access and affordable transportation choices to communities with high concentration of low income, disabled, elderly, or minority households
Develop a multi-modal transportation network that provides
<ul style="list-style-type: none"> • connectivity between modes • transit access to more destinations • facilities that serve pedestrian, bicycle, and other active transportation modes • reduce the delay created by the delay at rail/highway crossings

TPC Guidance: Policies (part 1)

Goal/Priority/Policy
Policy
<p>Consider the larger, complete project if proposed implementation will be a phased multi-jurisdictional project, parts of which may be developed separately with or without future federal funding.</p> <p>Evaluation of potential transportation investments should include:</p> <ul style="list-style-type: none"> • Multi-modal transportation needs (auto, freight, transit, active transportation) to alleviate congestion and improve mobility • Travel impact of existing and announced economic development/redevelopment • Impact on natural and cultural resources • Connectivity to other transportation projects • Potential for crash reduction, particularly those causing serious and severe bodily injury and death • Crash rates • Hurricane evacuation and disaster preparedness
<p>Enhance environmental benefits through the addition of alternative transportation modes, the provision of low or no emission vehicles and the conservation of natural and cultural resources</p>
<p>All highway-funded pedestrian, bicycle, and other active transportation investments should facilitate essential trip-making</p>
<p>Proposed projects should document the extent to which they provide essential network access, connectivity and continuity</p> <ul style="list-style-type: none"> • Candidate projects should describe how the proposed project supports critical connectivity to jobs, education, medical facilities, and other travel needs • Projects in high density areas should not be prioritized based simply on their location

TPC Guidance: Policies (part 2)

Goal/Priority/Policy
Policy
Project sponsors are encouraged to consider non-federal highway funding sources for aesthetic considerations beyond those normally accommodated by the State. This could include more expansive landscaping, special decorative lighting, street furniture, and other amenities
Balance qualitative benefits of a project with quantitative benefits
<ul style="list-style-type: none">• Consider quality of life improvements (narrative benefits) for projects such as active transportation and local transit expansion projects• Major investment projects should describe potential economic benefits resulting from project implementation
If Benefit Cost analysis is used, evaluate using total project cost (include all required costs such as environmental determination, right of way acquisition, design, construction, etc.)
<ul style="list-style-type: none">• Additional benefits will not be given to projects that provide more than the required local match• Useful life of projects by type must be established and published along with the evaluation criteria. As such, forecasted travel demand for the useful life of a proposed project should be considered for calculating potential benefits

TPC Guidance: Policies (part 3)

Goal/Priority/Policy
Policy
Selected projects should be supported by local communities and affected agencies/jurisdictions
<ul style="list-style-type: none">• Multijurisdictional projects (projects crossing multiple city/county boundaries) should provide support letters from all jurisdictions (cities and counties)• Projects sponsored by special districts such as management districts, redevelopment authorities should be supported by governmental entity(ies) in which they are located• Proposed projects should provide support letters for the on-going maintenance of the investment
Creative financing (tax abatements, funding partnerships, 380 agreements, TIRZs, etc.) should be considered as potential tools for private participation or new source for local match requirements
Consider projects proposing to implement automated and connected vehicle technologies and infrastructure based on expected benefits
Advance projects that have demonstrated project readiness for earlier implementation when possible

Highlights of Project Selection Process

- Developed over more than two years of meetings, workshops, proposals, revisions, and eventual final approval in January 2023
- **Address** all elements of TPC's guidance
- **Evolve** project selection process
- Focus on **Outcomes** with “investment categories” for projects
- **Invest** approximately \$1.2 billion in mix of existing and new projects
 - Start process in March 2023
 - First projects approved by TPC as early as Sep 2023
 - Final projects approved by TPC by May 2024

How Much Will Be Programmed?

- Approximately \$1.2 to \$1.5 billion available
 - Federal and State Sources
 - Not yet including some IIJA funds
 - Not including carryover balances in STBGP and CMAQ
- Approximate Investments (at \$1.2 billion)
 - ~\$150M requested for current projects
 - ~\$800M for projects smaller than \$100M
 - ~\$250M for major projects larger than \$100M
- Additional funding for Safety and Resiliency TBD

Implementing TPC's Guidance

- Investment Categories
- Scoring criteria
 - Investment Category-focused scoring
 - Planning factors
 - Benefit-cost analysis
 - Two types of scoring
 - Qualitative assessments based on narratives
 - Quantitative measures
- Application requirements
- All Goals, Priorities and Policies are incorporated

Project Selection Process

Process Description

Proposed Process: Key Elements

- Projects will be selected based on 8 investment categories
- Project selection for different investment categories will be conducted separately
 - Different scoring criteria; developed to identify the best projects that meet TPC's guidance related to that category
- TPC will establish funding instructions for each investment category
- Selection process based on Statements of Project Interest
 - All Statements of Interest will be considered for each investment category
 - MPO will maintain open solicitation for Statements of Interest
- Selection process will be interactive with sponsors, with additional information requested as projects advance through each screening
- Scoring includes quantitative and qualitative assessments of planning factors

Investment Categories: Purpose

Investment Category	Description and Purpose (“Identify, develop, and fund...”)
Regional Goods Movement	Projects that most effectively enhance or improve safe and reliable freight mobility throughout the region.
High-Growth Area Needs	Projects that most effectively address mobility, accessibility, and congestion mitigation needs in areas experiencing rapid or significant growth in population or other demographic measures, economic development, travel demand, or other indicators identified by local agencies.
Major Projects	Projects that are regional in scope, most effectively address goals and priorities of the Transportation Policy Council or identified in the Regional Transportation Plan and exceed \$100 million in total estimated costs.
Resiliency & State of Good Repair	Projects that most effectively help the transportation system avoid or recover quickly from events that create delays, closures, or other impacts, and projects that provide maintenance of current transportation facilities and services.
Operational Improvements & Congestion Management	Projects that most effectively deliver traffic management and other operational improvements, as well as mitigate current congestion.
Transit	Projects that most effectively provide, expand, or enhance transit infrastructure throughout the region.
Active Transportation	Projects that most effectively enhance or improve walking and bicycling for essential trip-making in the region.
Safety **	Projects that most effectively will reduce or eliminate crashes that result in fatalities and serious injuries.

Investment Categories: Project Types

Investment Category	Intended Project Types and Priorities
Regional Goods Movement	Roadway projects that are located on highways classified as CUFC or CRFC or intermodal connectors; Projects proposed on roadways that provide connectivity to large warehouses, big box stores etc.; Projects located on facilities with high truck volumes
High-Growth Area Needs	Development of facilities that will avoid future congestion in high growth areas; Projects that address safety, congestion, or multimodalism in high growth areas; Projects that promote coordinated planning in high growth areas and support continued economic development
Major Projects	All projects with an estimated cost of \$100 million or more **
Resiliency & State of Good Repair	Projects focused on resiliency improvements and extending useful life of the facility (Details TBD pending full PROTECT guidance)
Operational Improvements & Congestion Management	Projects that reduce congestion and reduce travel delay (Including HOV expansions and BRT projects)
Transit	All transit projects (may include HOV expansions and BRT)
Active Transportation	On and off-road bicycle & pedestrian projects that facilitate essential trip making including universal accessibility projects for transit
Safety **	Projects focused solely on safety improvements in high crash areas (details TBD pending recommendations of Safety Task Force)

Statements of Project Interest

- Open to All Potential Project Sponsors
 - Seek basic project information from sponsors
 - Prepares for consolidated initial screening
 - ALL Statements of Interest screened for relevance to ALL Investment Categories
 - Provides information for Funding Instruction
- Additional Information Needed:
 - Does sponsor want project considered?
 - What phase of activity are they seeking?
 - If Construction, basic readiness information
 - Which Investment Categories does *sponsor* identify as likely/preferred?

Statements of Interest Summary

Timeframe	# of Projects	Consider In PSP*	Cost (\$B)
Short term (0-5 Years)	310	259	\$7.3
Medium term (6-10 Years)	192	141	\$15.6
Long term (> 10 Years)	120	61	\$10.1
Total	622	461	\$33

- Include already programmed projects (may become TIP amendments)
- Some duplicate projects
- New projects submitted (for Project Selection Process)

Project Selection Funding Instructions

- Develop a recommendation for Transportation Policy Council to instruct level of investment in an Investment Category
- **Funding Instruction Purpose:**
 - Implement TPC's Priorities and Desired Regional Outcomes
 - Balance Investment Decisions with Requested Projects
- Staff's potential recommendations are a combination of approaches 1 & 2

Funding Instruction Alternatives

Investment Category	Initial Recommendation	Draft Funding Instructions			
		New Projects	No Fed/State	All	Adjusted
Regional Goods Movement	12%	11%	12%	14%	11%
Operational Improvements & Congestion Management	13%	22%	19%	19%	16%
High-Growth Area Needs	25%	19%	20%	21%	25%
Active Transportation	7.5%	10%	6%	6%	7.5%
Transit	7.5%	11%	13%	14%	7.5%
Major Projects	30%	17%	20%	19%	25%
Resiliency & State of Good Repair	5%	9%	9%	7%	8%
Safety **	TBD; ~\$30M/year				

Criteria and Scoring Basics

- Performance/Investment categories
- Application requirements
- Scoring criteria
 - Investment Category-focused scoring
 - Planning factors
 - Benefit-cost analysis
 - Two types of scoring
 - Qualitative assessments based on narratives
 - Quantitative measures

Scoring Point Distribution

Scoring Factor	Investment Category					
	Regional Goods Movement	Operational Improvements	High-Growth Area Needs	Active Transportation	Transit	Resiliency & SOGR
Regional Goods Movement	50	4	3	3	3	5
Operational Improvements	6	50	4	4	3	5
High-Growth Area Needs	5	4	50	4	4	5
Active Transportation	2	3	4	50	5	5
Transit	3	4	5	5	50	5
Resiliency & State of Good Repair	4	5	4	4	5	50
Planning Factors	30	30	30	30	30	30
TOTAL POINTS	100	100	100	100	100	100



Regional Goods Movement

Investment Category Focused Criteria	Max 50 Pts
Project is recommended as a priority in a statewide, regional or a local freight plan.	Up to 10 Pts
Project is located on critical urban/rural freight corridor (CUFC/CRFC) or regional freight corridor or on a facility that carries significant daily truck traffic (truck %).	Up to 10 Pts
Narrative explaining how proposed project improve regional goods movement.	Up to 5 Pts
Project provides new or improves existing first-mile last-mile connectivity to Ports/airports or other freight generators (such as big box store, warehouses, etc.).	Up to 10 Pts
Project sponsor is considering strategies to promote off-peak and overnight delivery.	Up to 5 Pts
Project is located on a designated hurricane evacuation route by state, regional or local hurricane evacuation plans or a facility that functions as an alternative route to a hurricane evacuation route.	Up to 10 Pts

Regional Goods Movement

Benefits to Other Investment Categories	Max 20 Pts
Narrative explaining how the proposed project will improve daily traffic operations (Truck only lanes, interchange, intersection improvements, etc.)	Up to 6 Pts
Narrative explaining how the proposed project will benefit high growth area needs (Project addressing economic development, expansion of ports, new land-use development, etc)	Up to 5 Pts
Narrative explaining how the proposed project will improve walking and or biking conditions	Up to 2 Pts
Narrative explaining how the proposed project will improve traffic conditions for transit users	Up to 3 Pts
Narrative explaining how the proposed project will reduce inoperability for significant periods due to infrastructure damaged by collision with vehicles such as trucks, ships and barges. And Narrative explaining how the proposed project improves the state of good repair and extends the service life of the facility.	Up to 4 Pts

Planning Factors Point Distributions

Planning Factor	Investment Category					
	Regional Goods Movement	Operational Improvements	High-Growth Area Needs	Active Transportation	Transit	Resiliency & SOGR
Safety	7	7	7	7	7	7
Resiliency	5	5	5	5	5	5
Access/Connectivity	5	5	5	5	5	5
Environmental Justice	5	5	5	5	5	5
Impact on Cultural/Natural	5	5	5	5	5	5
Innovation	3	3	3	3	3	3
Planning Factors Total	30	30	30	30	30	30
TOTAL POINTS	100	100	100	100	100	100
Screening Factor						
Planning Coordination						

Planning Factors Scoring Elements

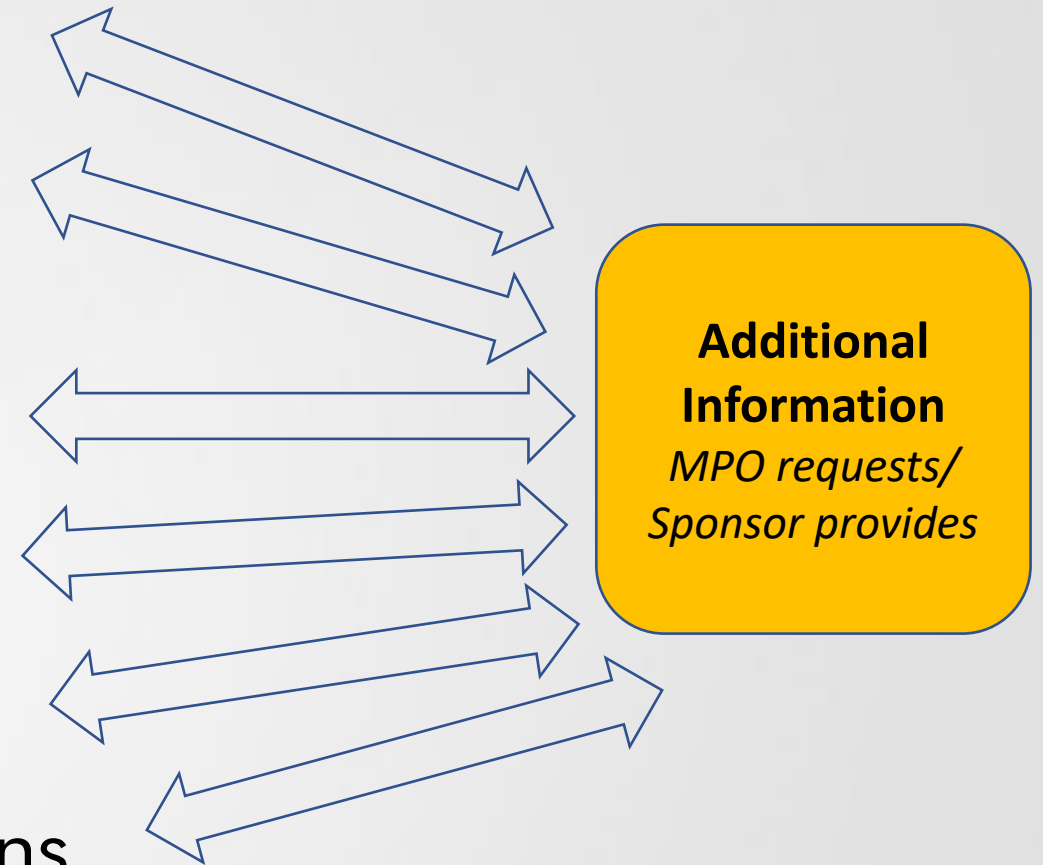
Planning Factor	Scoring Elements
Safety (7 points)	<ul style="list-style-type: none">• Historic fatality and severe injury crash rates within a 0.1 mile buffer of the proposed project location (quantitative data)• Potential fatality and severe injury crash rates (quantitative data as well as qualitative (sponsor narrative))
Resiliency (5 points)	<ul style="list-style-type: none">• Criticality of the street/highway facility where proposed project is located (high/medium/low score from the Regional Resiliency Tool as well as qualitative descriptions (sponsor narrative))• Vulnerability of proposed project location to flooding of street/highway facility (high/medium/low score from regional resiliency tool as well as qualitative descriptions (sponsor narrative))• Proposed reduction of vulnerability to flooding of the street/highway facility where proposed project is located (qualitative (sponsor narrative))
Access/Connectivity (5 points)	<ul style="list-style-type: none">• Improvement to accessibility and connectivity of existing and planned land uses (as documented by official city or county future growth plans) to jobs, medical facilities, schools, colleges, and social services after the proposed project is implemented/constructed (quantitative as well as qualitative (sponsor narrative))• Improvements to accessibility and connectivity to low-income and minority households

Planning Factors Scoring Elements

Planning Factor	Scoring Elements
Environmental Justice (5 points)	<ul style="list-style-type: none">• Number of low-income and minority households within a ¼ mile buffer of the project location (quantitative)• Sponsor narrative explaining how the proposed project provides benefits to vulnerable populations• Sponsor narrative explaining how the proposed project avoids or mitigates adverse effects to vulnerable populations
Impact on Cultural/Natural Resources (5 points)	<ul style="list-style-type: none">• Potential NOx (Nitrogen Oxides) and VOC (Volatile Organic Compounds) emissions reductions as a result of the proposed project (quantitative)• Sponsor narrative explaining how proposed project avoids or mitigates impacts to natural or cultural resources such as historical sites, archeological sites, flood plains, wetlands
Innovation (3 points)	<ul style="list-style-type: none">• Implementation of new infrastructure or technologies intended to enhance accessibility, mobility, multimodalism, resiliency, or reliability, or traffic operations. Installation of new technology such as autonomous/connected vehicle technology

Screening Steps & Sponsor Interactions

- Consider for Investment Category
- Investment Category Cut-Offs
 - At least 50 total points
 - 250% of TPC's funding instruction
- Sponsor opportunity to "challenge" quantitative scores
- Benefit-Cost Analysis
 - Must be greater than 1.0*
- Project Readiness Assessment
- Final Sort into Selection Classifications
- Ranked List and Funding Cut-Off



Project Screening Outcomes

Multi-Step
Project
Review
Process

Projects Needing
Further Refinement

Projects that need further refinement will not be awarded funding. These projects will be sent back to the project sponsor for further refinement before being eligible to re-compete for funding in the project selection process.

Project Placed on
Unfunded List

Projects placed on the unfunded list will not receive federal funds through the project selection process. However, these projects may be used for other funding programs (e.g., federal discretionary grant programs). Also, these projects will be reconsidered during future reviews of each investment category.

Projects Selected for
Planning Activities

Projects selected for planning efforts will be inventoried for planning funding in the Unified Planning Work Program for further planning and study. Project recommendations developed during the study will have to compete for funding in the future. They will receive additional points during project selection cycles.

Project Selected for
Development

Projects selected for development will be amended into the Regional Transportation Plan and project sponsors may continue to further develop the project. Once ready for construction, the project will be reviewed for readiness and programmed into the Transportation Improvement Program and the H-GAC 10 Year Plan. **Project development activities such as design and row-of-way may be funded and programmed in advance of construction.**

Project Selected for
Construction

Anticipate that projects selected for construction will begin in the next 2 to 10 years. Projects will be programmed into the Transportation Improvement Program and the H-GAC 10 Year Plan, and Regional Transportation Plan at the next available opportunity.

Project Selection Process

Addressing
TPC's Guidance

Implementation of TPC Guidance: Goals

Goal/Priority/Policy	Investment Category	Qualitative Scoring	Planning Factor Scoring	Benefit Cost Analysis	Application Requirements	Process Design
Goal						
Align with Regional Transportation Plan goals						
• Improving traveler safety						
• Efficient movement of people and goods						
• Maintenance of a state of good repair						
• Strengthening regional economic competitiveness						
• Conserving and protecting natural and cultural resources while reducing vehicle generated air pollutants						
Align with Regional Transportation Plan public comments						
• Create a truly, multimodal transportation network that supports the appropriate use by transit, bicycle, pedestrian, active transportation and freight						
• Support greater investment in the management and maintenance of current transportation facilities and services						
• Be responsive to community/neighborhood quality of life concerns (e.g., environmental quality, health, housing availability and affordability, parks, libraries, and other unique cultural qualities of our neighborhoods and communities)						
Create a resilient transportation network by reducing inoperability for significant time periods due to:						
• Flooding, erosion, or damage from severe weather events						
• Infrastructure damaged by collisions with vehicles such as trucks, ships and barges						
• Vehicle crash rates and crash clearance times						
Increase the resources available to implement the Regional Transportation Plan with public and private funding partnerships						

Implementation of TPC Guidance: Priorities

Goal/Priority/Policy	Investment Category	Qualitative Scoring	Planning Factor Scoring	Benefit Cost Analysis	Application Requirements	Process Design
Priority						
The reduction and elimination of severe injuries due to vehicle crashes						
Improve safe and reliable goods movement within and through the region:						
<ul style="list-style-type: none"> • identify and mitigate congestion and crash hot spots for commercial trucks 						
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Focusing on operational improvements and congestion management, including projects that address railroad/roadway safety and delays						
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Implementation of TPC Guidance: Policies (part 1)

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• Crash rates						
• Hurricane evacuation and disaster preparedness						
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• Projects in high density areas should not be prioritized based simply on their location						

Implementation of TPC Guidance: Policies (part 2)

Goal/Priority/Policy	Investment Category	Qualitative Scoring	Planning Factor Scoring	Benefit Cost Analysis	Application Requirements	Process Design
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Implementation of TPC Guidance: Policies (part 3)

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Advance projects that have demonstrated project readiness for earlier implementation when possible						

Project Selection Process

Regional Transportation Plan

2045 RTP Update – Funding Schedule



- Identified need
- Concept is supported
- Needs additional planning:
 - Needs refined scope of work
 - Needs refined cost estimate
- OR project cost is too great for programming at this time

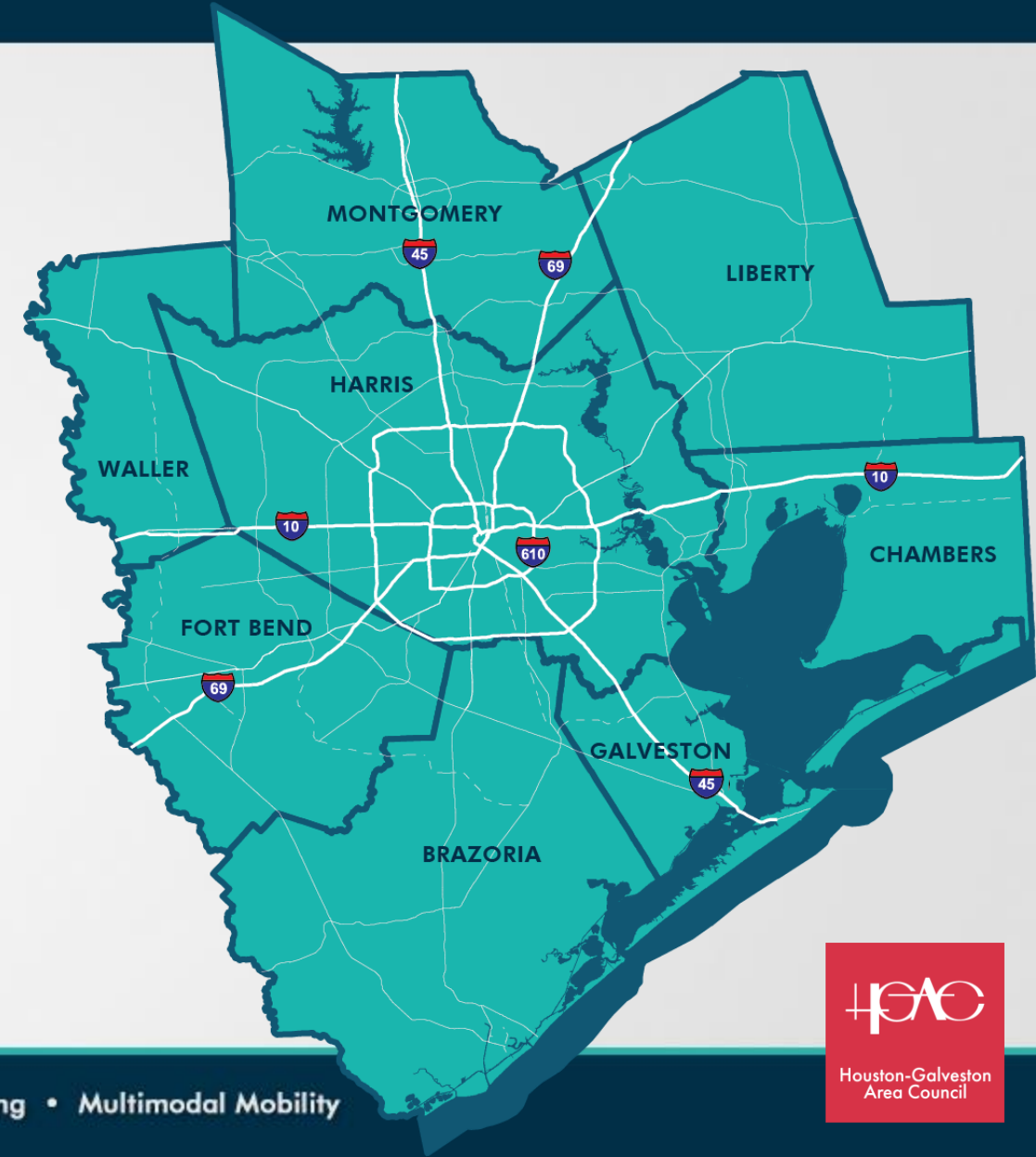
- Programmed for funding in future year:
 - Not a TIP project
 - Within 20+ years
- Need is identified
- Planning has started or about to start
- Scope is well defined
- Cost is within long-range anticipated funding

- Funded in next 4 years
- Planning is complete
- Design is initiated
- Scope is well defined
- Cost is within funded budget

- Project is LET or in LET schedule

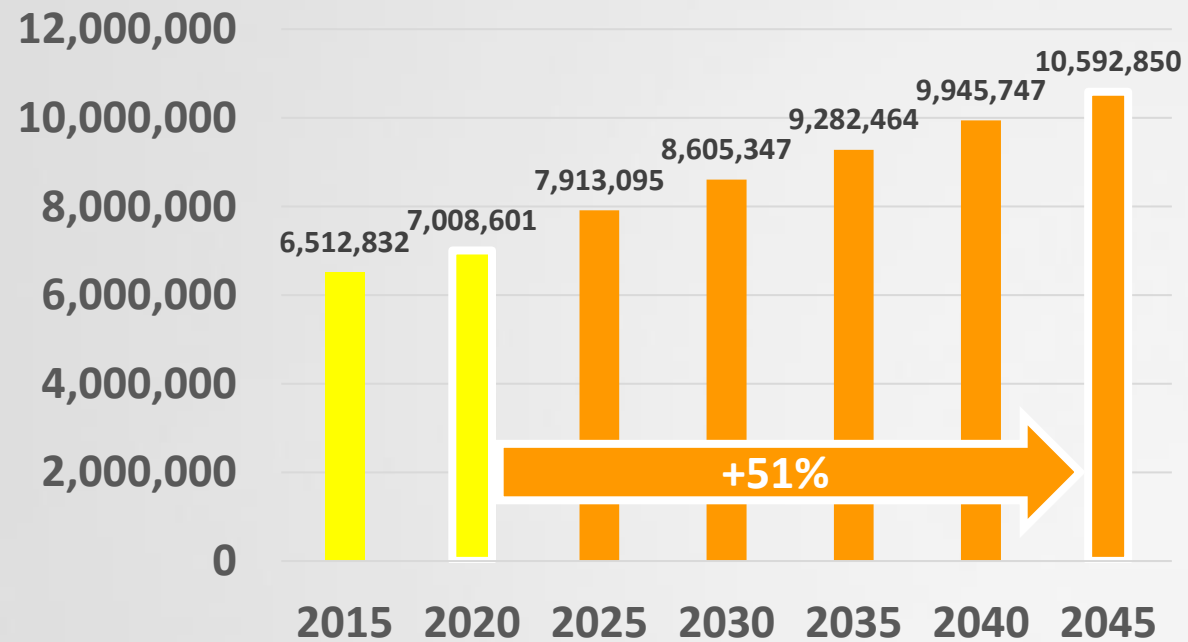
What is the Regional Transportation Plan (RTP)?

- The Transportation Future for our Region
- 20+ year outlook, updated every 4 years
- Aligns with Federal, State, and Local vision
- Assessment of Needs and Priorities
- Financially constrained Action Plan
- Required to receive Federal funding

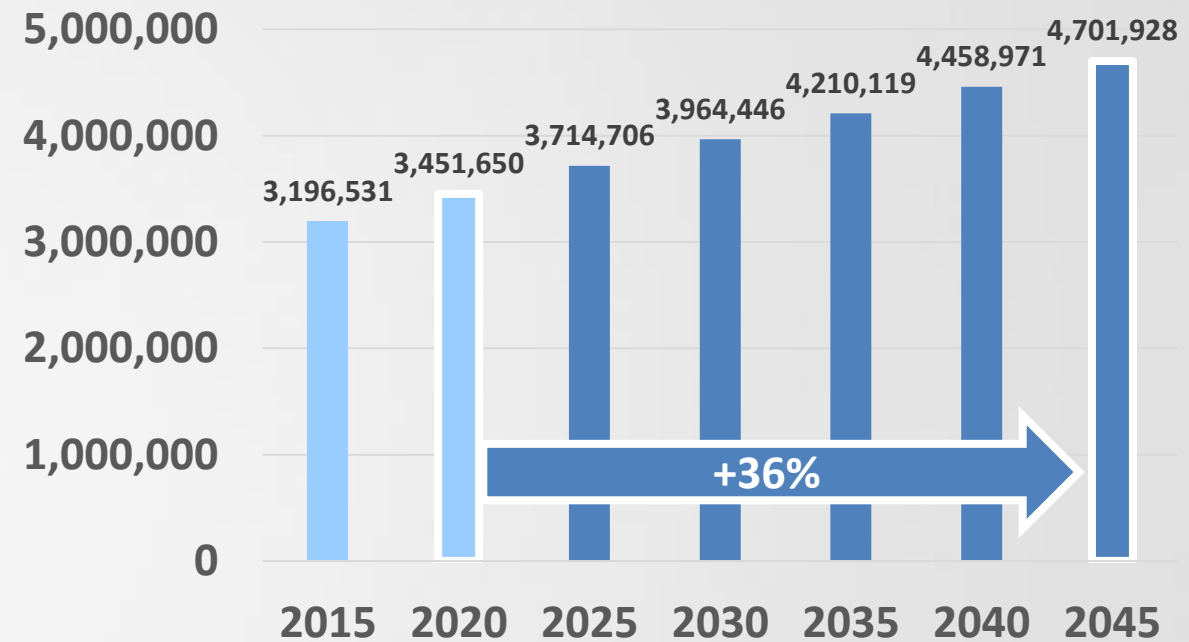


Household Population and Jobs 2020 and 2045

Regional Household Population



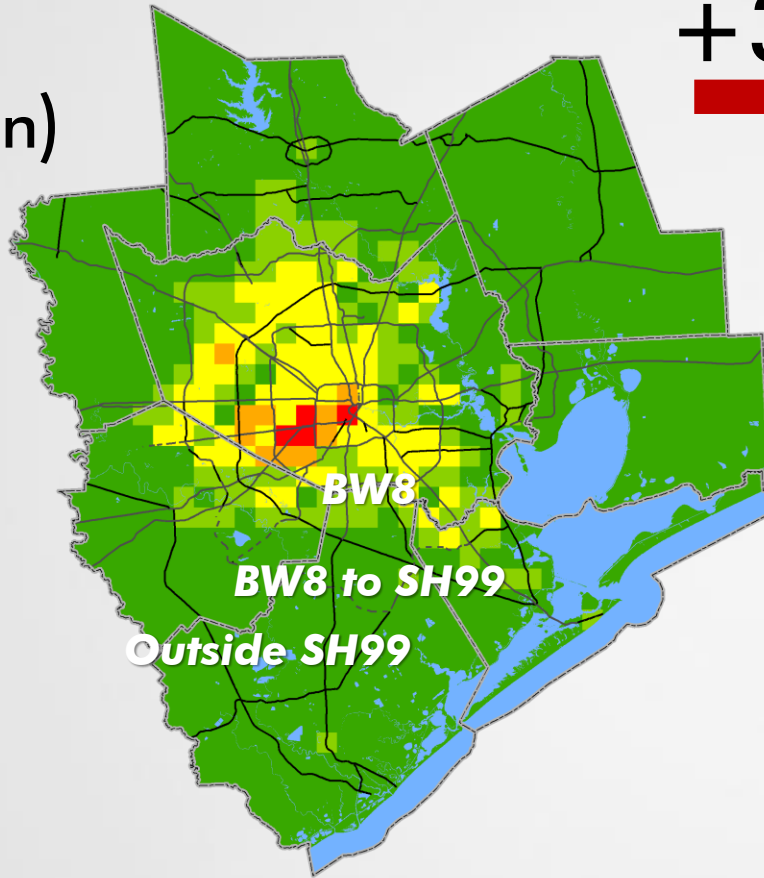
Regional Jobs



Where do the region's RESIDENTS live?

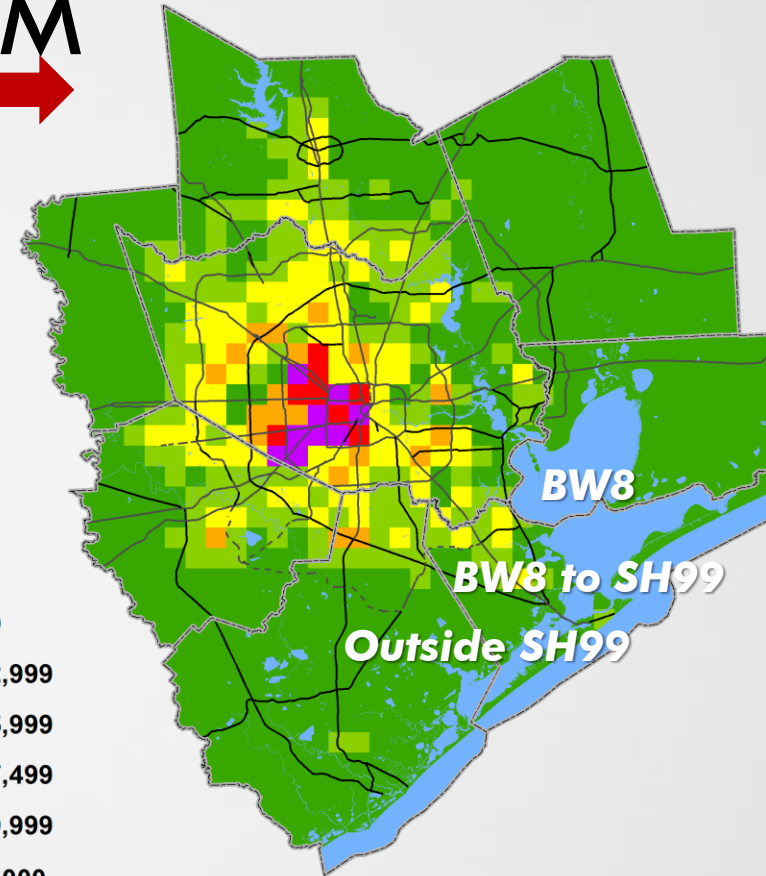
Household Population by 3 Mile Grids

2020
(7.0 Million)

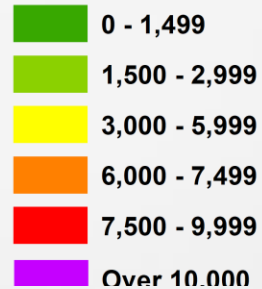


+3.59 M
→

2045
(10.59M)

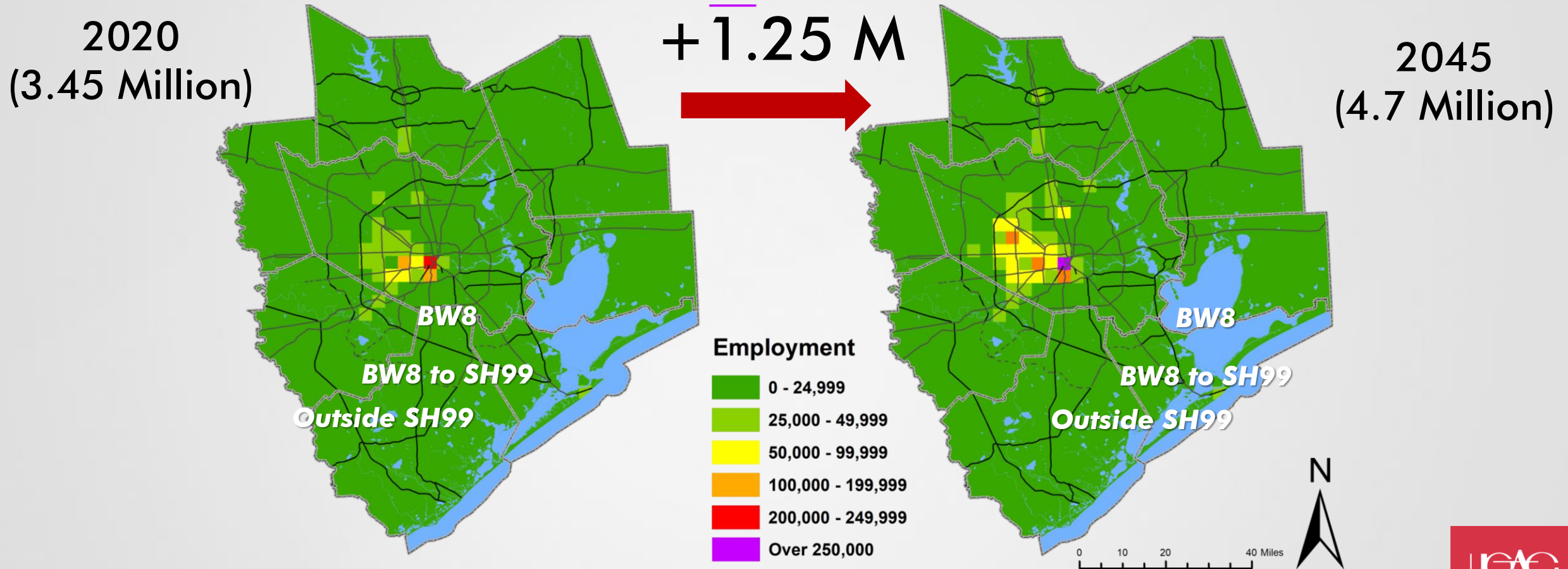


Population



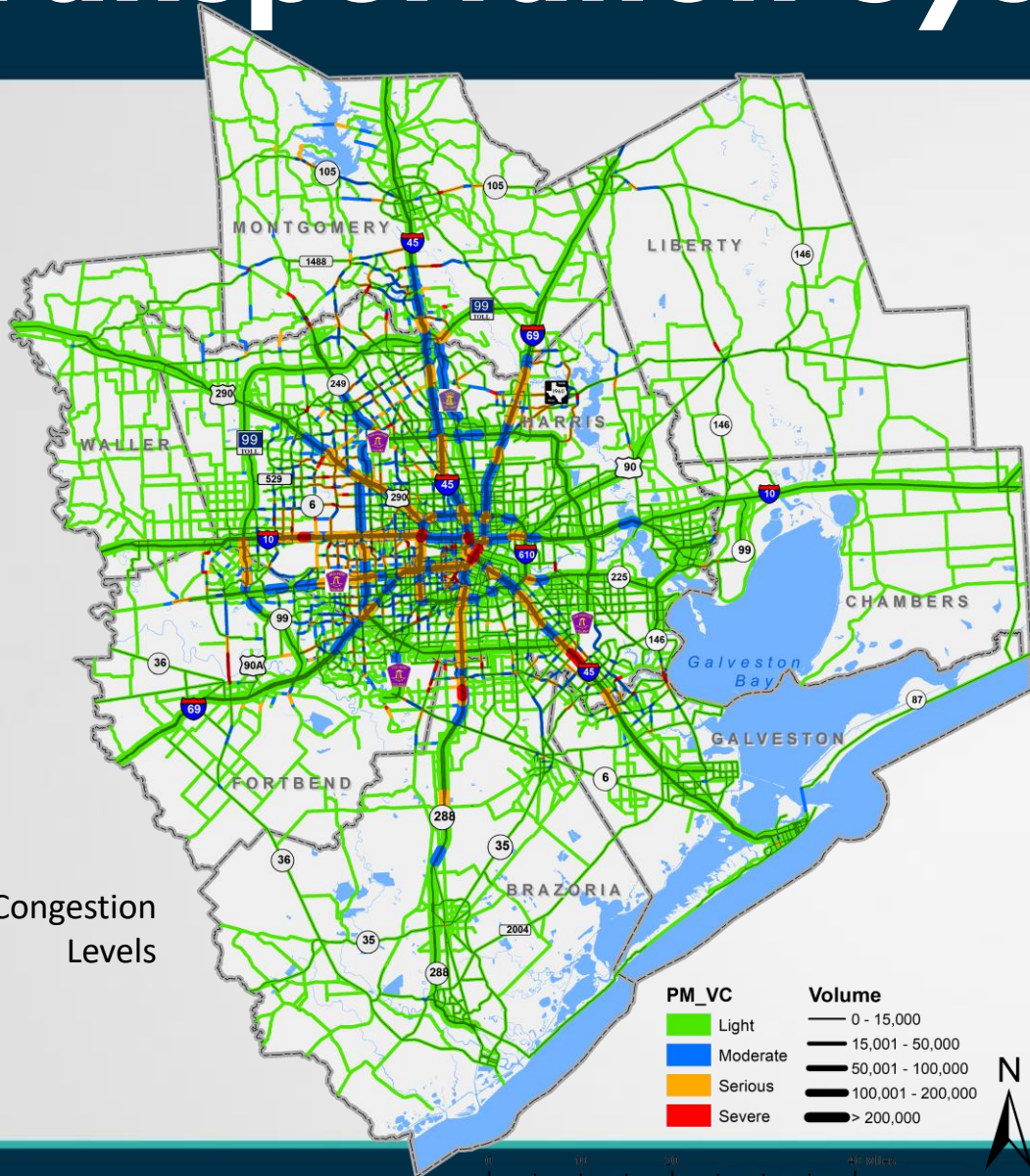
Where are the region's JOBS?

Total Jobs by 3 Mile Grids

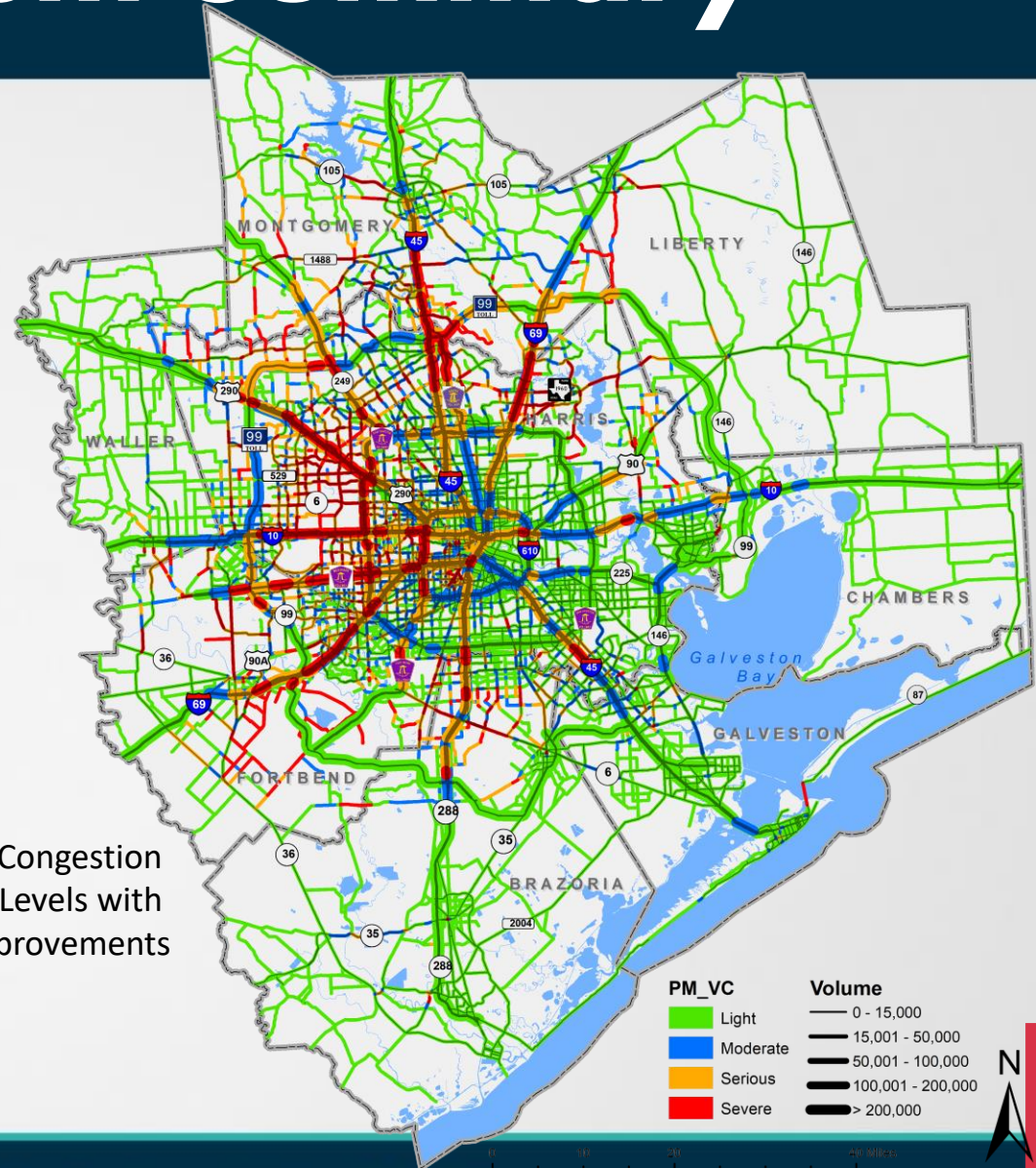


Transportation System Summary

2020 Congestion Levels



2045 Congestion Levels with Improvements



Visioning Outreach – What we heard



- Safety
 - Respondents want to travel safer, not faster
- Mobility Options
 - Inside Beltway 8 – need better quality roads and variety of travel options
 - Outside Beltway 8 – need shorter commutes, convenient public transportation
- Congestion
 - Reliable travel times is a primary concern
- Proximity
 - Preference for affordable living near work, shopping, and services



Summary of Challenges



- Safety: SOVs, Active Transportation, Freight
- Bottlenecks: Congestion and Connectivity
- Condition of facilities
- Lack of Transit Access & Reliability
- Limited Active Transportation
- Increasing Freight Network Demands and Limited Funding
- Parking scarcity and increased demand

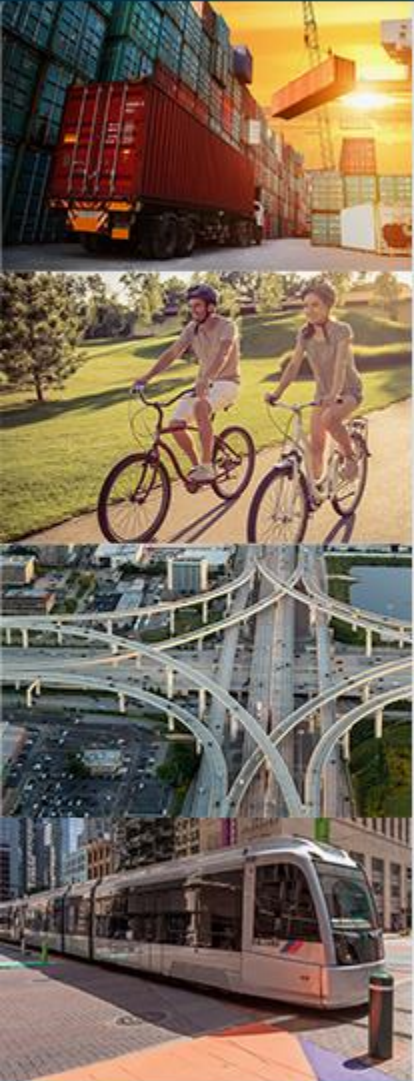
Importance of RTP Vision

RTP = New & Updated
Guidance

Vision, Goals, and Desired Outcomes

Vision	A Safe, Resilient, Equitable, and Reliable Multimodal Transportation System That Contributes to a Livable Region				
Goals	Improve Safety	Achieve and Maintain a State of Good Repair	Move People and Goods Reliably and Efficiently	Strengthen Regional Economic Competitiveness	Conserve and Protect Natural and Cultural Resources
Performance Measure Area	Reduce Fatalities and Serious Injuries for All Modes	Pavement and Bridge Condition Transit Asset Management	Increase Reliability Expand Multimodal Network Improve Incident Response	Increase Truck Travel Time Reliability Increase Non-Single Occupancy Vehicle Travel	Emission Reductions Reduce Impacts Requiring Mitigation
Desired Outcome	ZERO Roadway Fatalities by 2050	Roads, Bridge, and Transit Facilities in GOOD Condition	RELIABLE Commute Options and Incident Response Times	RELIABLE Freight Movement with Alternatives to Driving Alone	MINIMAL IMPACTS to Natural Environment and Historic Integrity

Current System Recommendations



- Roadways
- Public Transportation
- Active Transportation
- Freight
- Aviation Facilities
- Ferry Operations
- Parking

Summary of Recommendations: Roadways

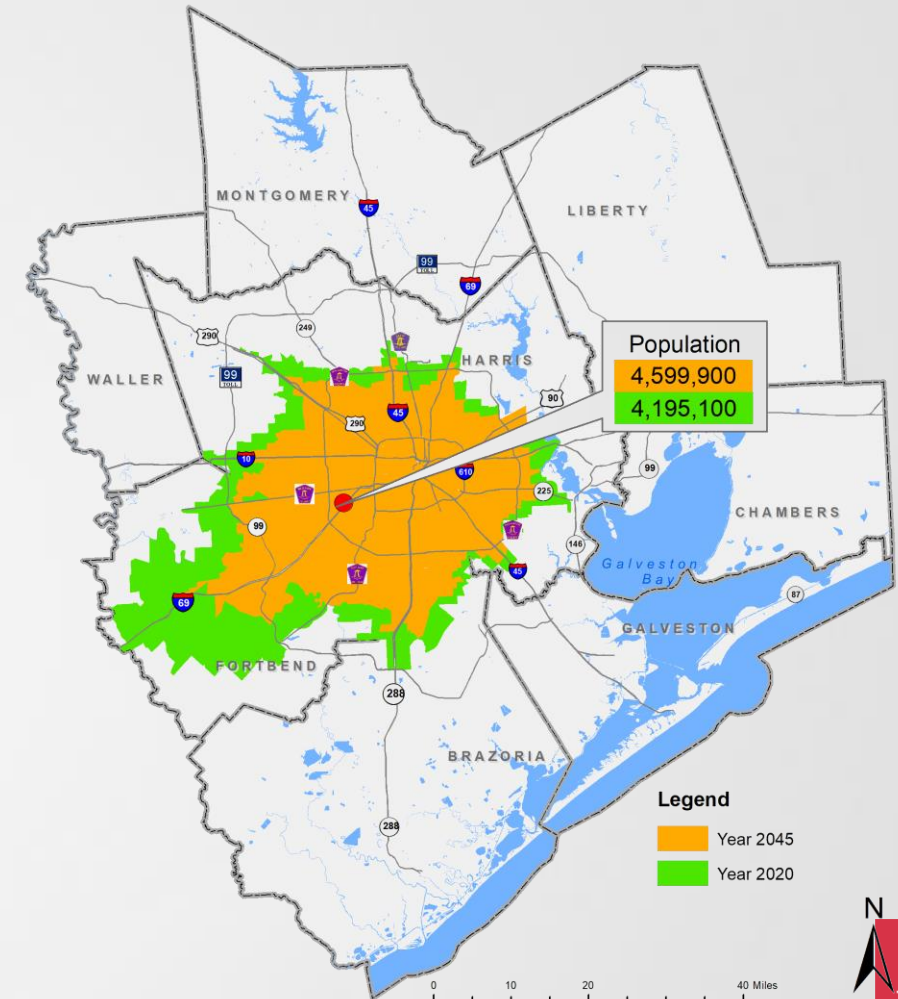
2020 PM4hr Vehicle Travel Time from Sharpstown

Action Plan Elements

- Summary of Major Corridor and Subregional Investments
- Corridor Summary Sheets, Appendix G
- Demographic & Modeling maps, Appendix H

Other Recommendations

- Included in other Action Plan programs



Summary of Recommendations: Public Transportation

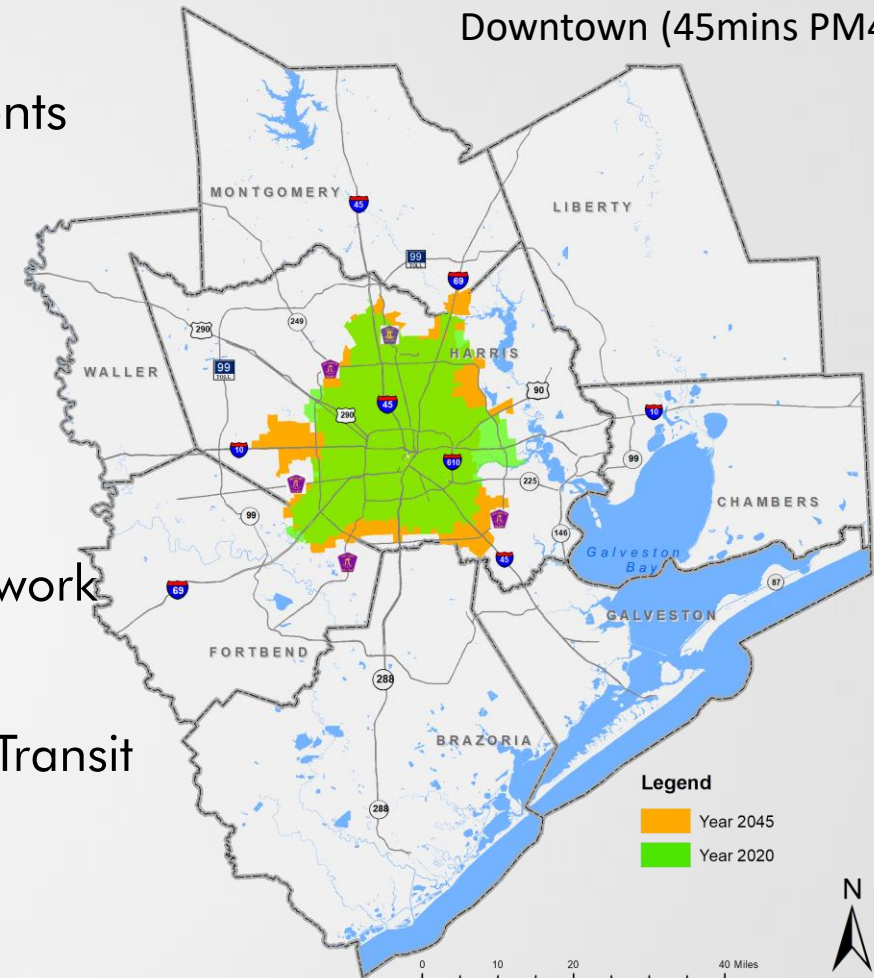
■ Action Plan Elements

- Summary of Major Corridor and Subregional Investments
- Implementation of the High-Capacity Priority Network
- Encourage the concepts and policies that support the increased use of transit

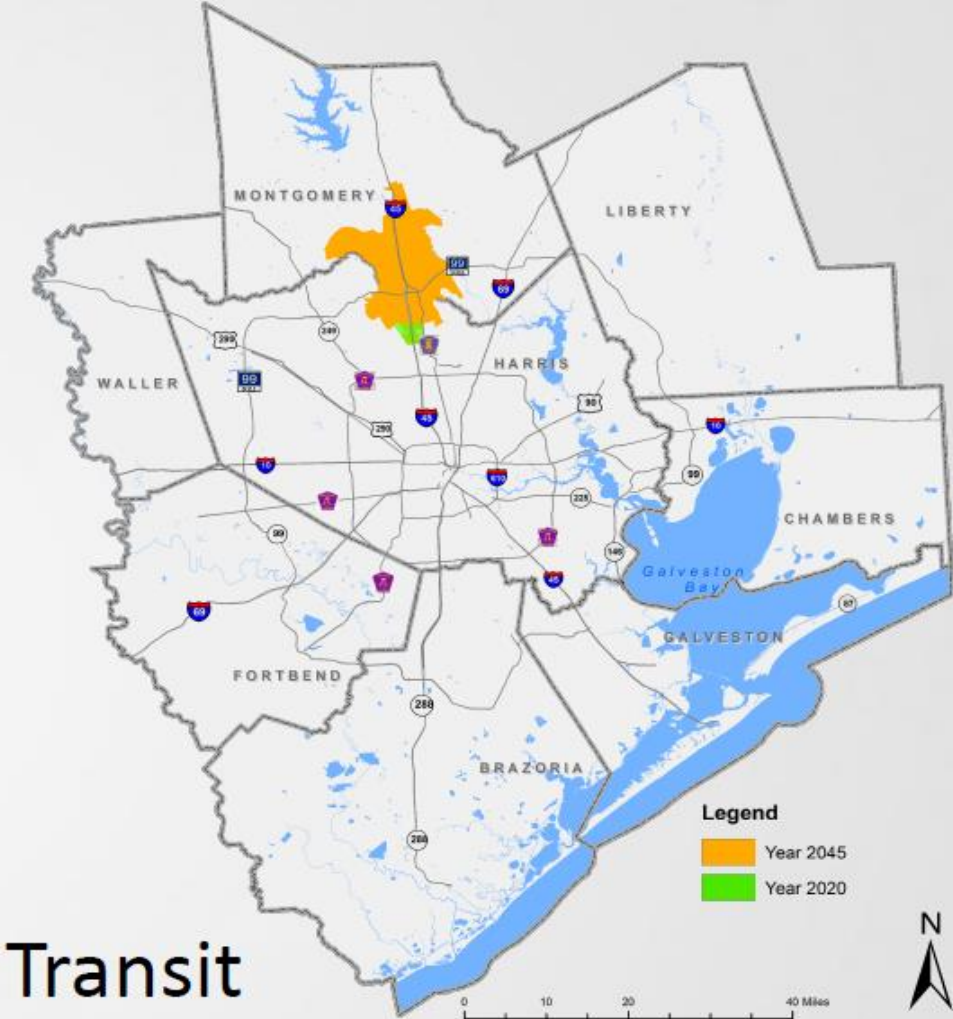
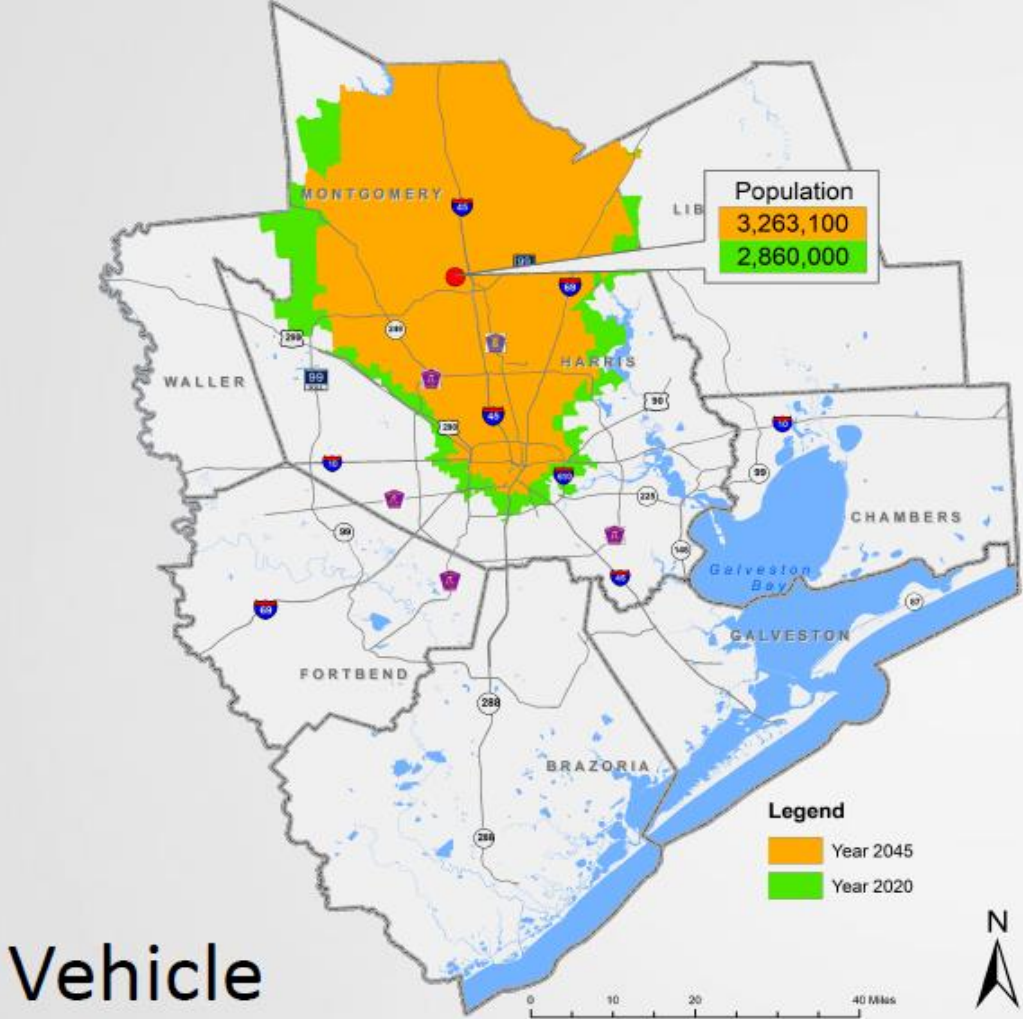
■ Other Recommendations

- Evaluate impacts of growth scenarios on HCT Priority Network
- Study feasibility for additional service outside Beltway 8
- Identify priority development opportunities around future Transit Centers / Park and Ride locations

Transit Travel Time from
Downtown (45mins PM4hr)



Vehicle and Transit Travel Time



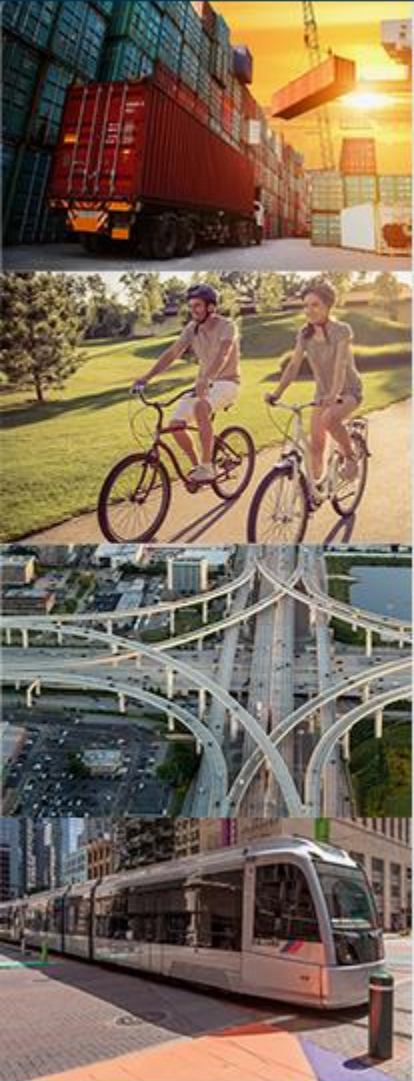
Summary of Recommendations: Freight

■ Action Plan Elements

- Summary of Major Corridor and Subregional Investments
- Collaborate with regional partners to mitigate short-term deficiencies on the freight-significant network, including at-grade railroad crossings
- Develop a concept of operations for a freight ITS program
- Improve flow of containers through a virtual container yard to reduce truck trips
- Provide access to growing economic centers outside the urban core



Corridor-based and Subregional – Investments

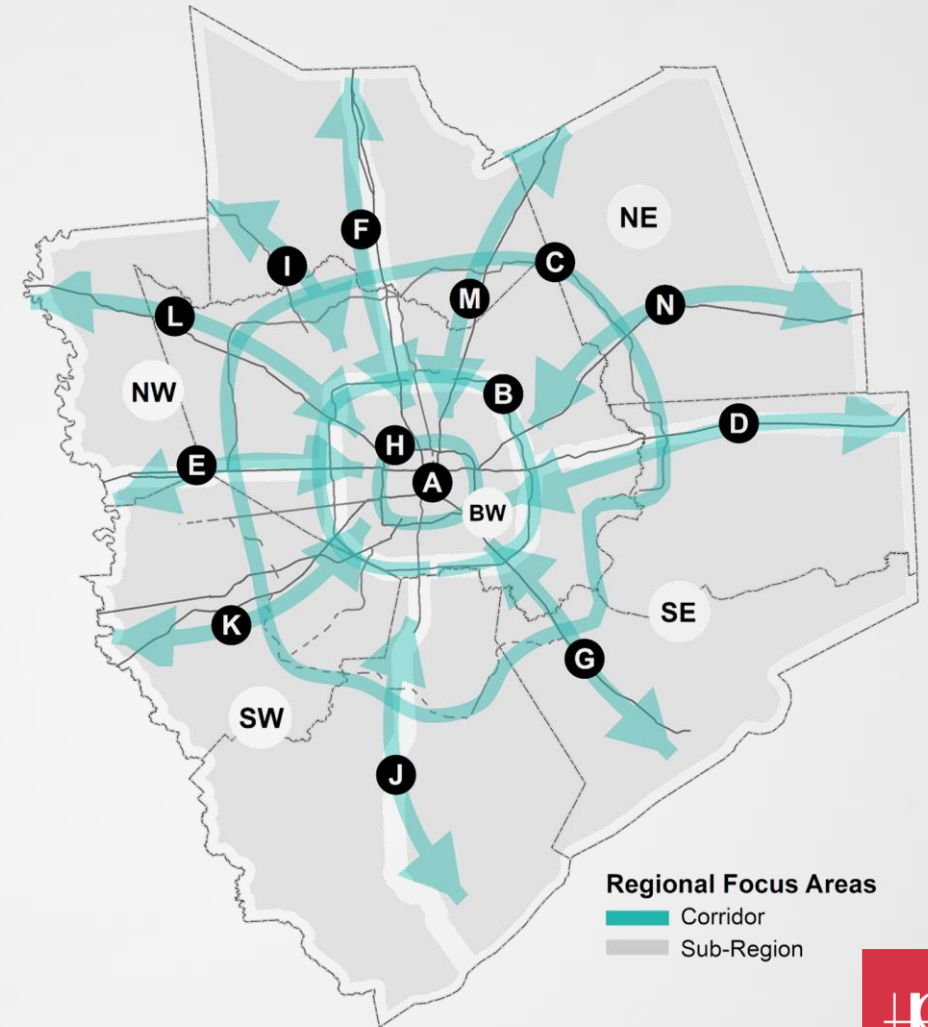


- Summary Table includes:

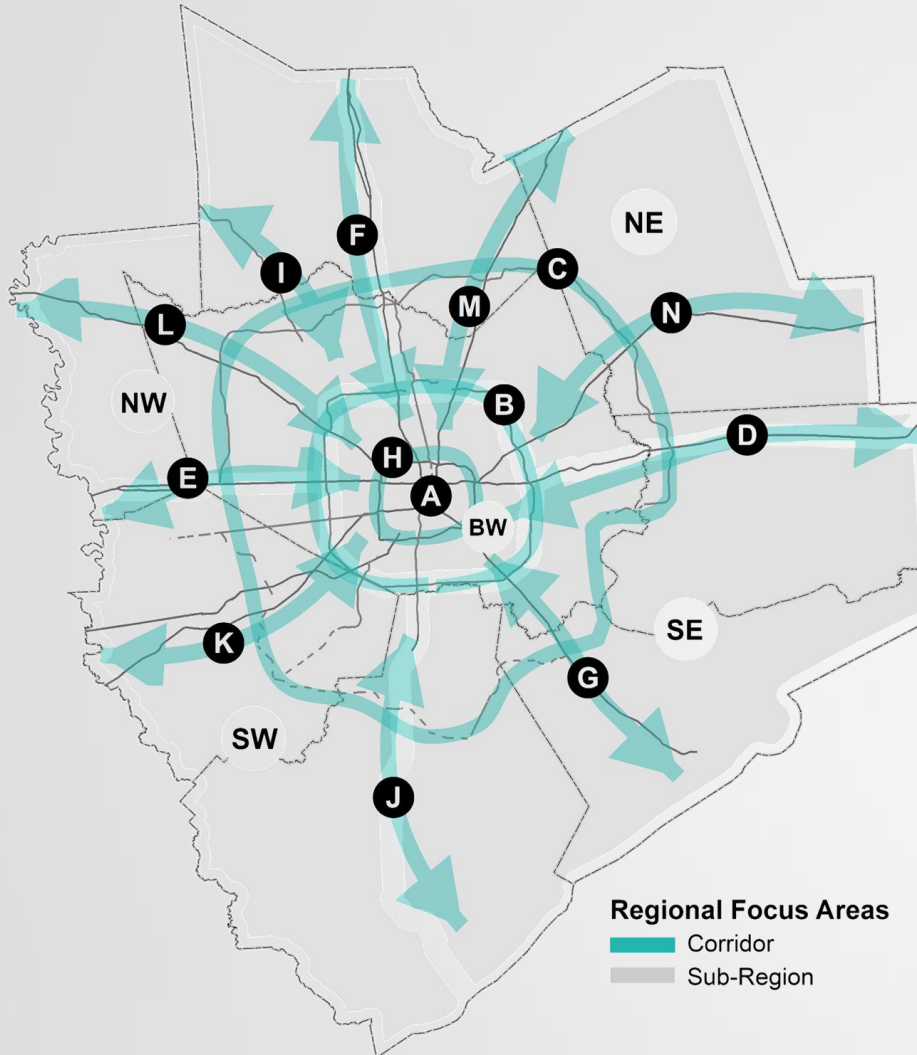
- Corridors / Subregions
- Type of Investment
 - Roadway, Transit, etc.
- Amount for each facility

- Summary Sheets

- Located in Appendix



Corridor Overview



Investment Corridor or Sub-Region	Estimated Investment
A. Downtown Houston	\$5.2 Billion
B. BW 8	\$1.8 Billion
C. Grand Parkway	\$2.7 Billion
D. IH 10 E Corridor	\$1.5 Billion
E. IH 10 W Corridor	\$7.2 Billion
F. IH 45 N Corridor	\$4.4 billion
G. IH 45 S Corridor	\$961 Million
H. IH 610 Loop	\$530 Million
I. SH 249 Corridor	\$301 Million
J. SH 288 Corridor	\$950 Million
K. IH 69 Corridor	\$9.7 Billion
L. US 290 Corridor	\$11.4 Billion
M. IH 69 N Corridor	\$194 Million
N. US 90	\$115 Million
BW. Inside BW 8	\$9.5 Billion
NE. Northeast Subregion	\$3.7 Billion
NW. Northwest Subregion	\$1.4 Billion
SE. Southeast Subregion	\$3.5 Billion
SW. Southwest Subregion	\$3.5 Billion

INVESTMENT CATEGORIES

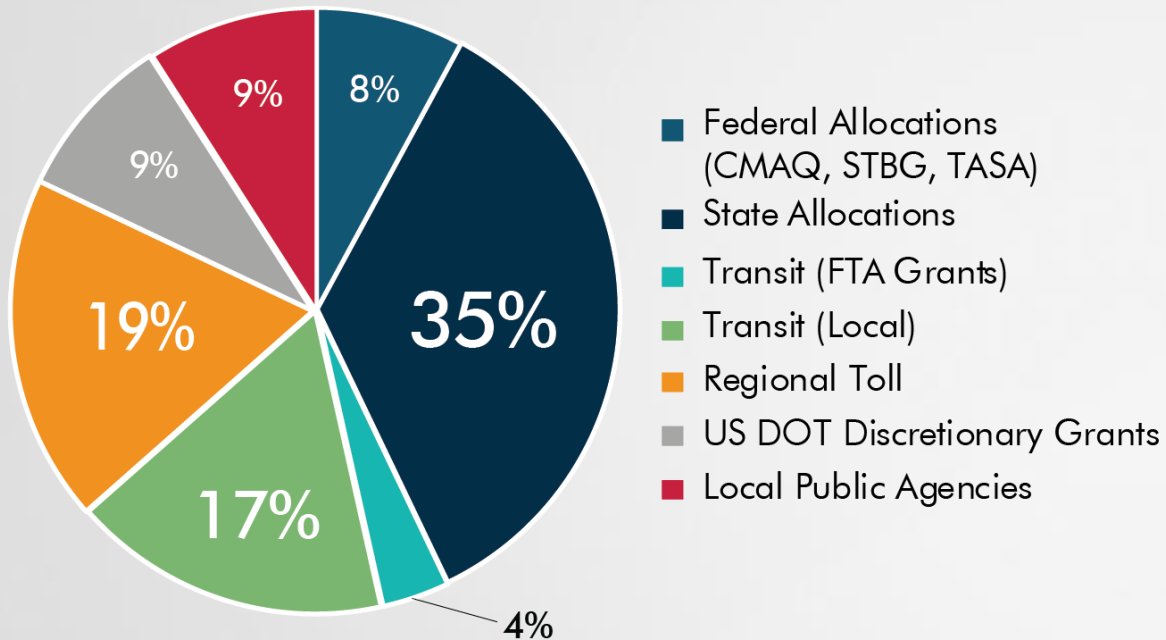
Investment Corridor	Total Investment in Millions	INVESTMENT CATEGORIES									
		Regional Goods Movement	Operational	High Growth Area Needs	Active	Transit	Major Projects	Resiliency & State of Good Repair	Safety	Air Quality	Planning/ Study
A. Downtown Houston	\$6,942	■	■	■	■	■	■	■	■		
B. BW 8	\$1,858	■	■	■		■	■	■	■		
C. Grand Parkway	\$3,937	■	■	■			■	■	■		
D. IH 10 E Corrdor	\$2,301	■	■	■		■	■	■	■		
E. IH 10 W Corridor	\$7,139	■	■	■		■	■	■	■		
F. IH 45 N Corridor	\$4,230	■	■	■	■	■	■	■	■		
G. IH 45 S Corridor	\$1,455	■	■			■	■	■	■		
H. IH 610 Loop	\$641	■	■	■			■	■	■		
I. SH 249 Corridor	\$487	■	■	■		■	■	■	■		
J. SH 288 Corridor	\$1,534	■	■	■			■	■	■		
K. IH 69 S Corridor	\$12,780	■	■	■	■	■	■	■	■		
L. US 290 Corridor	\$8,468	■	■	■		■	■	■	■		
M. IH 69 N Corridor	\$211	■	■	■		■	■	■			
N. US 90	\$200	■	■	■				■	■		
SUBREGIONS AND REGIONAL PROGRAMS											
BW. Inside BW 8	\$6,635	■	■	■		■	■	■	■		
NE. Northeast Subregion	\$1,387	■	■	■	■	■	■	■	■		
NW. Northwest Subregion	\$3,597	■	■	■	■	■	■	■	■		
SE. Southeast Subregion	\$3,496	■	■	■	■	■	■	■	■		
SW. Southwest Subregion	\$3,709	■	■	■	■	■	■	■	■		
Air Quality	\$290									■	
Transit	\$6,144		■		■	■	■	■		■	■
Regional Other	\$177		■		■	■	■	■	■		■
Regional Highway, Transit Operations & Maintenance	\$31,639		■			■	■	■	■		
TOTAL INVESTMENT:	\$109,257										

Corridor & Subregional Investments

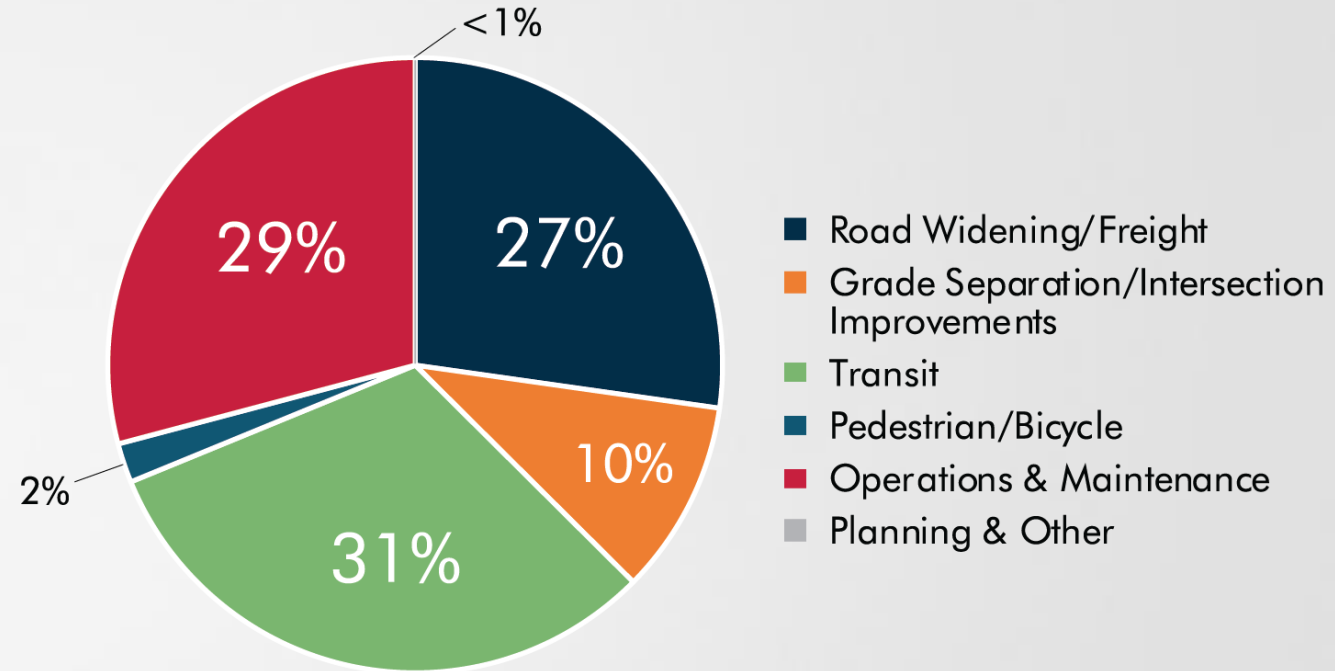


Fiscal Constraint

2045 RTP Update Revenue by Source
Total: \$141 Billion



2045 RTP Update Expenditures by Type
Total: \$109 Billion



Project Selection Process

Open Discussion