



# Regional Transportation Plan Update



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Transportation Air Quality Subcommittee – 08/04/2021

Regional Collaboration • Transportation Planning • Multimodal Mobility

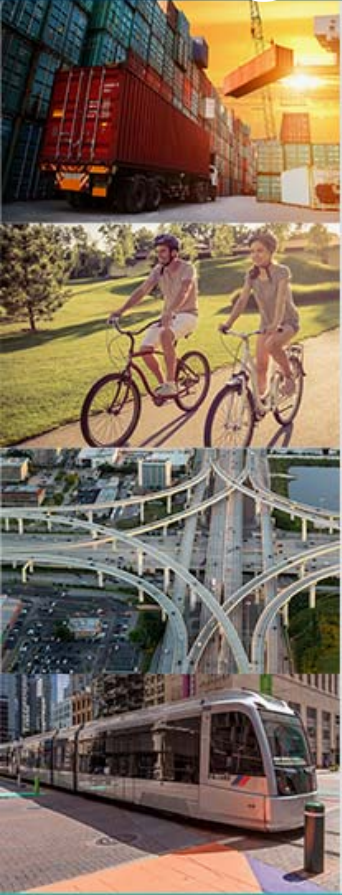


# Regional Transportation Plan (RTP) Purpose

- Federally required
- Minimum 20-year outlook
- Updated every 4 years
- Targets federal, state, local resources for transportation investments
- Aligns with federal, state, regional, local vision
- Fiscally constrained



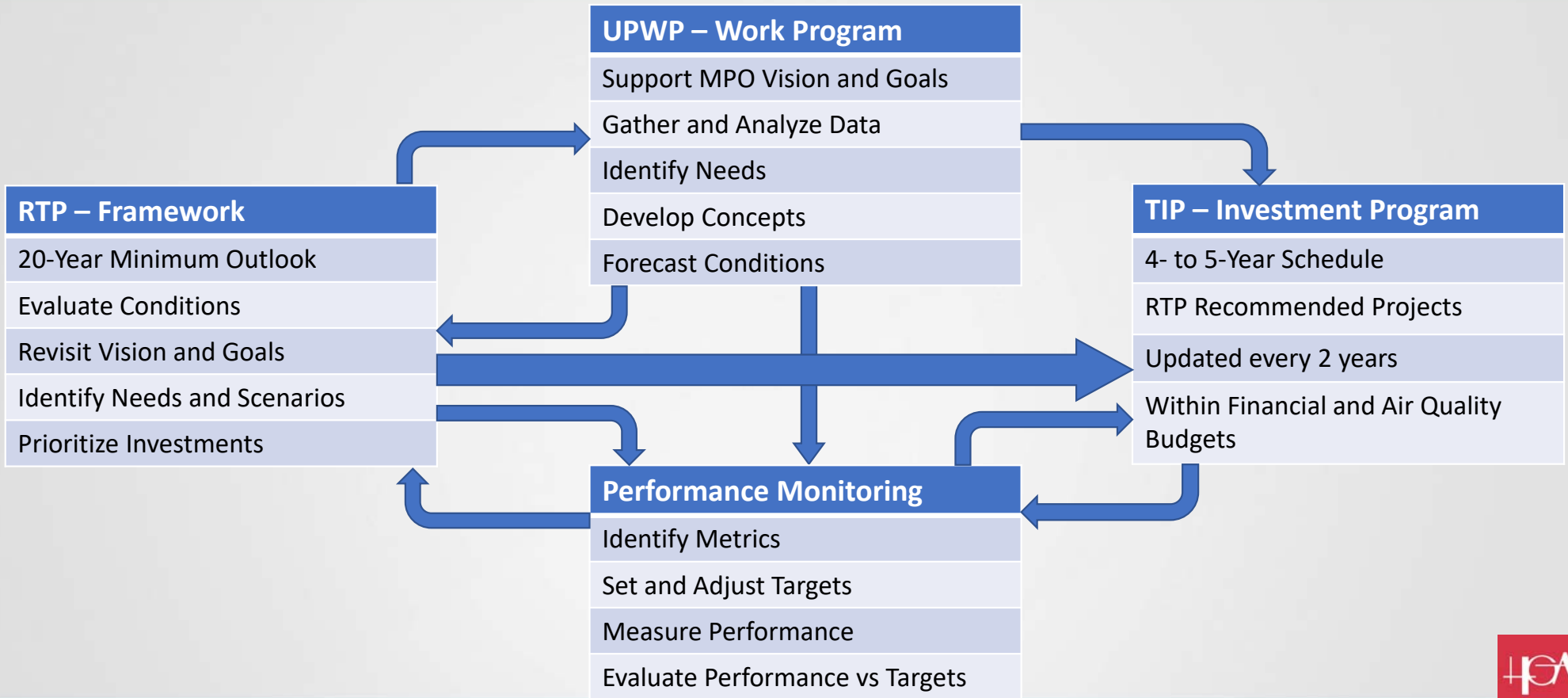
# Relationship with Other Programming Documents



## TxDOT Family of Transportation Plans



# Relationship with Other Programming Documents



# RTP Guidance

## General / Regional Vision

Planning Horizon	Identify goals, objectives, and performance measure-based needs for the <u>2050</u> planning horizon for funding schedule and air quality conformity.
Trends	Update regional demographic projections
	Update regional technological, economic, and land use projections
Outreach	Develop an on-line engagement portal ( <a href="http://engage.h-gac.com">engage.h-gac.com</a> )
	Develop strategy for traditionally-underserved populations
	Coordinate with federally required stakeholders
Needs	Identify problem areas and needs based on performance measures
Vision Statement	Develop draft to be reviewed based on qualitative and quantitative data and other regional planning efforts
	Statement should reflect transportation goals and priorities

# RTP Guidance

## Goals & Objectives

Objectives	Align with the 10 federally required planning factors (23 CFR 450.306)
	Align with established and ongoing planning efforts
	Align with regional land use and economic development efforts
Performance Measures	Describe federal and any regional PMs with rationale for targets based on vision and goals
	Include reference to the H-GAC Mobility Report
Project Evaluation	Describe data-driven approach and regional coordination that align with federal planning factors and regional vision and goals
	Update based on objectives and performance targets
	Consider regional and state capital planning priorities

# RTP Guidance

## Needs Analysis

Performance Measures	Analyze projects considered for program schedule to discern impacts on federal and regional performance measures
	Long-range scoring and targets should be set to assist decision-making
	Refer to needs analysis of supporting regional planning documents
Air Quality	Align with regional air quality conformity targets
	Consider establishing regional Greenhouse Gas (CO2) analysis and targets with Regional Air Quality Subcommittees
Title VI/EJ Analysis	Score projects in terms of their impact on Title VI and environmental justice populations using relevant tools and techniques
	Prioritize projects that are supported by public planning documents and Title VI equity analysis
	Develop discussion and mapping of equity analysis

# RTP Guidance

## Project Prioritization

Major Improvements	Anticipated regional projects that expand capacity and are over \$100M should be explicit
	Transit improvements intended for the TIP should be descriptive and explicit to allow for accurate impact analyses
Scenarios	<b>Consider alternative demographic, economic, investment, funding scenarios</b>
	Consider funding scenario of say +/- 10% change in funding outside of fiscal constraints of the UTP for decision-making; or consider an illustrative list
Fiscal Constraint	The final filter to consider when identifying projects to be programmed in the fiscally constrained RTP schedule.
	The regional vision, goals, and <u>readiness</u> should drive the prioritization of projects for the TIP years and outer bands of the RTP
	Projects outside of constraint without identified funding should be included and discussed in case funding becomes available in the future

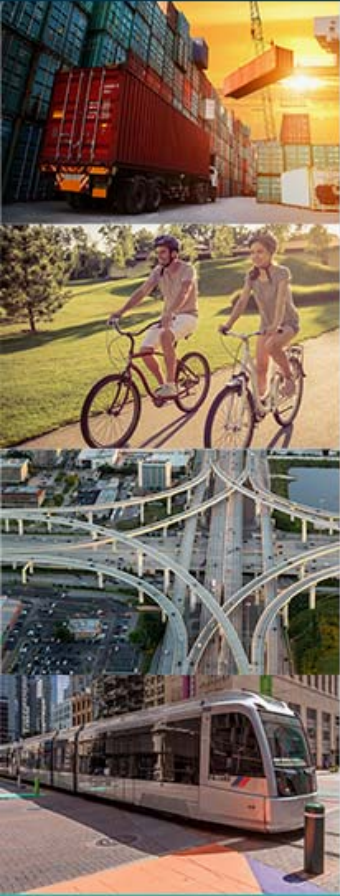


# RTP Update Schedule

- Current Plan Adopted April 24, 2019 by TPC
  - Conformity Concurrence August 2, 2019
- Expires: RTP/Conformity: August 2, 2023



# Plan Elements



- Introduction
- Public Participation Strategy
- Regional Profile
- Vision / Goals / Performance Measures
  - Safety, Maintenance, Mobility, Economy, **Environment**, Equity (?)
- Transportation Assets
  - Roadways, Transit, Freight, Active Transportation, Passenger Rail, Aviation, Waterways, Parking
- Supplemental Planning
  - **Congestion Management Process, Subregional / Thoroughfare Planning**, Livable Centers, Regional Safety, Resiliency
- Action Plan
- Air Quality Conformity
  - Federal Air Quality Standards
  - **Regional Air Quality Standards (Greenhouse Gas Emissions)?**

# Other RTP Elements – Conformity

- Federal Air Quality Budget

**Table 6.3: Conformity Analysis Results versus HGB Serious RFP MVEBs**

Year	NOx Emissions (tpd)	NOx Budget (tpd)	VOC Emissions (tpd)	VOC Budget (tpd)	VMT
2020	77.03	87.69	51.04	57.70	188,200,352
2030	43.54	87.69	33.01	57.70	228,967,318
2040	37.96	87.69	24.84	57.70	267,995,566
2045	40.25	87.69	25.32	57.70	286,876,227

# Background – Greenhouse Gases Emissions

- **Regional Performance Tracking and Potential Target Setting?**
  - US is second GHG emitter in world
  - TX is first GHG emitter in the country
  - Greenhouse gas emissions in transportation (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O)
- **What is CO<sub>2e</sub>?**
  - Combination of the pollutants that contribute to climate change adjusted using their global warming potential. These are the global warming potential factors used in MOVES:
    - Methane (CH<sub>4</sub>): 25
    - Nitrous Oxide (N<sub>2</sub>O): 298
    - Carbon Dioxide (CO<sub>2</sub>): 1

# Background – Greenhouse Gases Emissions

- United Nations 2018 Intergovernmental Panel on Climate Change
  - Special report on impacts of global warming of 1.5 °C above pre-industrial levels. Recommendations to fight against climate change, support sustainable development, and support efforts to eradicate poverty.
- Impacts of climate change:
  - Natural disasters
  - Damage/destruction of ecosystems and biodiversity
  - Extinction of species
  - Sea level rise
  - Acidity of oceans
  - Food security
  - Water supply
  - Health
  - Affecting economic growth/livelihoods

# Background – Greenhouse Gases Emissions

- Summary of Recommendations from 2018 the Intergovernmental Panel on Climate Change to the United Nations:
  - Human activity has caused about 1 °C of global warming above pre-industrial levels.
  - Likely to reach 1.5 °C by 2030-2050 if it continuous to increase at current rate.
  - To keep the increase to no more than 1.5 °C: GHGs need to decrease by 45% between 2010 and 2030, to reach net zero by around 2050.
  - To keep the increase to no more than 2 °C: GHGs need to decrease by 25% between 2010 and 2030, to reach net zero by around 2070.
  - Cannot rely in C capture / International cooperation is critical.

# Background – Greenhouse Gases Emissions

- EPA's Endangerment Finding – 2009
- Previous PM3 Performance Measure
- Other MPOs are working on GHGs
  
- European Union announced the European Climate Law – April 2021 cutting 55% emissions by 2030 and reaching net zero 2050.

# Future Work

- Calculate CO<sub>2e</sub> emission inventories for mobile sources for years 2010, 2030 and 2050.
- Review CO<sub>2e</sub> calculations with TAQ for potential target setting?



# Questions

- Contact us:

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