

# Forecast of Funding Using Common Assumptions

Item 10c - UTP (2010-2020)

Item 10d - MTP (2021-2035)

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**John Barton and James Bass**

**Texas Department of Transportation Commission Meeting**

**November 19, 2009**



# 2010-2020 UTP- CFO 2021-2035 TRENDS- TTI REVENUE

FY	Total Revenue
2010	\$6.23
2011	\$6.18
2012	\$6.58
2013	\$6.73
2014	\$6.71
2015	\$6.96
2016	\$6.82
2017	\$6.95
2018	\$7.04
2019	\$7.12
2020	\$7.22
<b>Total (UTP)</b>	<b>\$74.54</b>

FY	Total Revenue
2021	\$7.26
2022	\$7.24
2023	\$7.20
2024	\$7.14
2025	\$7.06
2026	\$7.00
2027	\$6.88
2028	\$6.78
2029	\$6.67
2030	\$6.55
2031	\$6.49
2032	\$6.44
2033	\$6.41
2034	\$6.38
2035	\$6.37
<b>Total ('21-'35)</b>	<b>\$101.87</b>

<b>Total Revenue (2010-2035) (Billions)</b>
<b>\$176.41</b>

## 2010-2020 UTP Assumptions-CFO

- Motor Fuel Tax Growth
  - +0.5% in FY 2010
  - +1.0% in FY 2011-FY 2020
- Vehicle Registration Fee Growth
  - +4.5% per year
- Misc. Revenue
  - +1.0% per year

# Funding by Category (2010-2020)-CFO

Category	UTP Total by Category SCENARIO A	UTP Total by Category SCENARIO B Staff Recommendation
1 – Preservation	\$11.930	\$10.616
2 - Metro Mobility	\$2.020	\$2.020
3 - Urban Mobility	\$0.401	\$0.401
4 - Statewide Mobility	\$0.056	\$0.056
5 - CMAQ	\$1.246	\$1.246
6 - Bridge	\$1.888	\$2.813
7 - STP Metro Mob/Rehab	\$2.106	\$2.106
8 - STP Safety (HES)	\$1.055	\$1.444
9 - STP Enhancement	\$0.676	\$0.676
10 - Supplemental Trans.	\$0.768	\$0.768
11 - District Disc.	\$0.728	\$0.728
12 - Strategic Priority	\$0.176	\$0.176
<b>Total</b>	<b>\$23.050</b>	<b>\$23.050</b>

# 2021-2035 TRENDS Assumptions-MPO, TxDOT, TTI

- Population
  - Use State Data Center 0.5 Scenario per MPO workgroup recommendation
- Fuel Efficiency
  - Estimated at 34 mpg fleet fuel efficiency in 2030.
- Minimal Increase in Non-letting expenses per year
  - Engineering, ROW, administration, retirement contributions, travel, payments to other agencies: +0.1%
  - Maintenance, Ferry Ops, GIWW, Transit, vehicle registration: + 3.0%

# Funding by Category (2021-2035) Using TRENDS Assumptions-TTI

<b>Category</b>	<b>FY 2021-2035 Total by Category</b>
1 – Preservation	\$11.630
2 - Metro Mobility	\$0.000
3 - Urban Mobility	\$0.000
4 - Statewide Mobility	\$0.000
5 - CMAQ	\$2.230
6 - Bridge	\$3.750
7 - STP Metro Mob/Rehab	\$3.140
8 - STP Safety (HES)	\$1.950
9 - STP Enhancement	\$0.900
10 - Supplemental Trans.	\$0.490
11 - District Disc.	\$0.940
12 - Strategic Priority	\$0.000
<b>Total</b>	<b>\$25.030</b>

# Funding by Category (2010-2035)

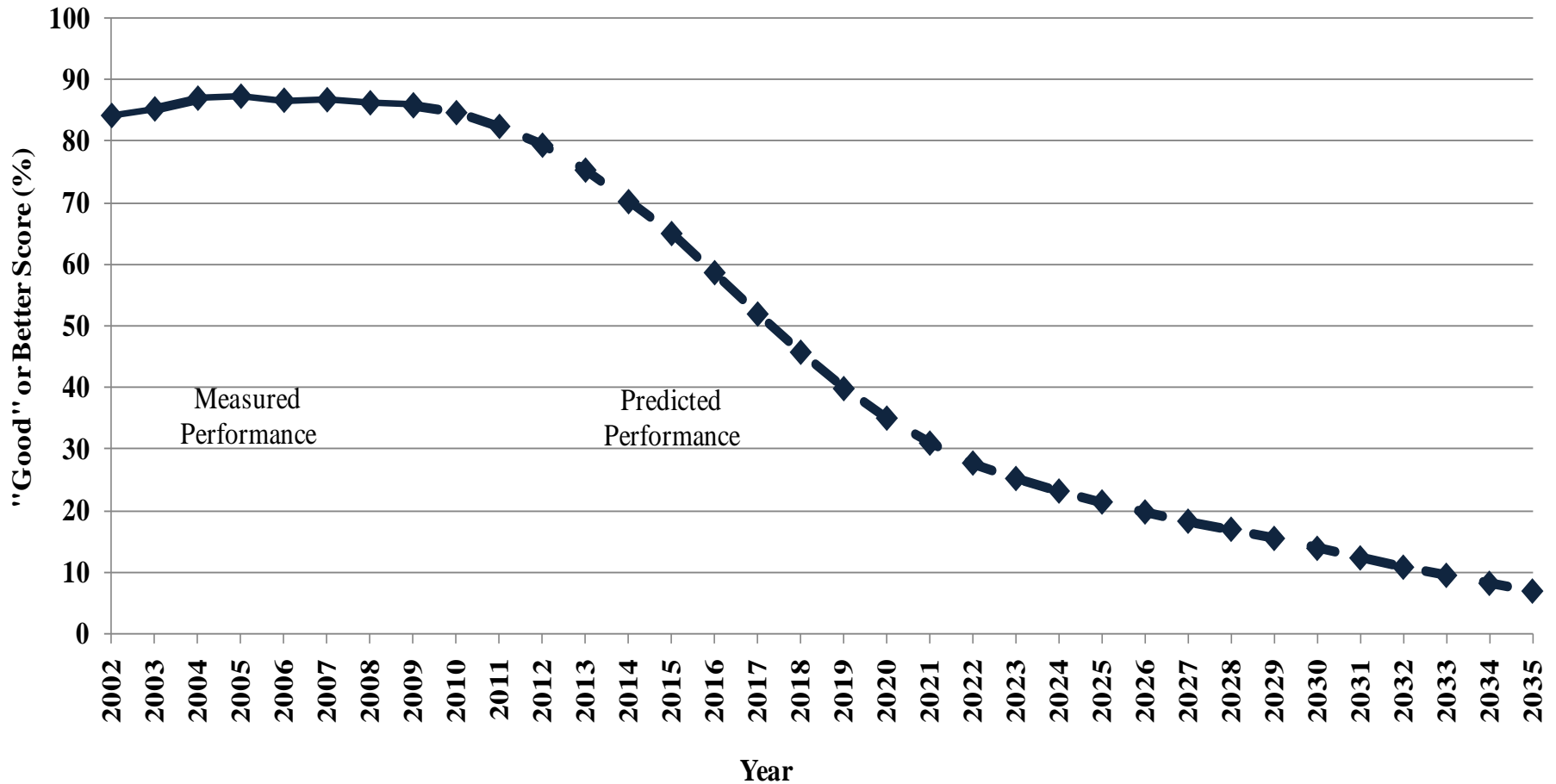
Category	2010-2020 UTP Scenario B	2021-2035 MTP Forecast	2010-2035 Combined Total
1 – Preservation	\$10.616	\$11.630	\$22.246
2 - Metro Mobility	\$2.020	\$0.000	\$2.020
3 - Urban Mobility	\$0.401	\$0.000	\$0.401
4 - Statewide Mobility	\$0.056	\$0.000	\$0.056
5 - CMAQ	\$1.246	\$2.230	\$3.476
6 - Bridge	\$2.813	\$3.750	\$6.563
7 - STP Metro Mob/Rehab	\$2.106	\$3.140	\$5.246
8 - STP Safety (HES)	\$1.444	\$1.950	\$3.394
9 - STP Enhancement	\$0.676	\$0.900	\$1.576
10 - Supplemental Trans. Projects	\$0.768	\$0.490	\$1.258
11 - District Disc.	\$0.728	\$0.940	\$1.668
12 - Strategic Priority	\$0.176	\$0.000	\$0.176
<b>Total</b>	<b>\$23.050</b>	<b>\$25.030</b>	<b>\$48.080</b>

# Statewide Revenue Enhancements above baseline revenue forecast

- If an MPO assumes additional enhancements above baseline revenue for MTP development
  - MPO should vote on each revenue enhancement prior to inclusion in MTP.
  - MTPs must show projects funded from revenue enhancements separate from projects funded from baseline revenues.

The same procedure would apply to regional and local revenue enhancement assumptions.

# Pavement Quality Predictions with this Funding Level- CTR



# FUNDING THE FUTURE

## A Forecast of Transportation Finance

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# FUNDING THE FUTURE CONTRIBUTORS

## TEMPO/TxDOT Workgroup

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## Research and Development Assistance

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# WORKGROUP CHARGE

***“To develop a transportation revenue forecasting model, a range of reasonable model input assumptions, and to utilize this model to develop estimates of future available funding for capacity improvements.”***

# TRENDS MODEL

**T**ransportation  
**R**evue  
**E**stimator and  
**N**eeds  
**D**etermination  
**S**ystem

## **Advancements in Revenue Forecasting**

Provides rapid multiple-scenario forecasts based on user input assumptions.

Captures the impact of future fuel efficiency on transportation revenue.

Accounts for the diversion of transportation revenues to non-transportation uses.

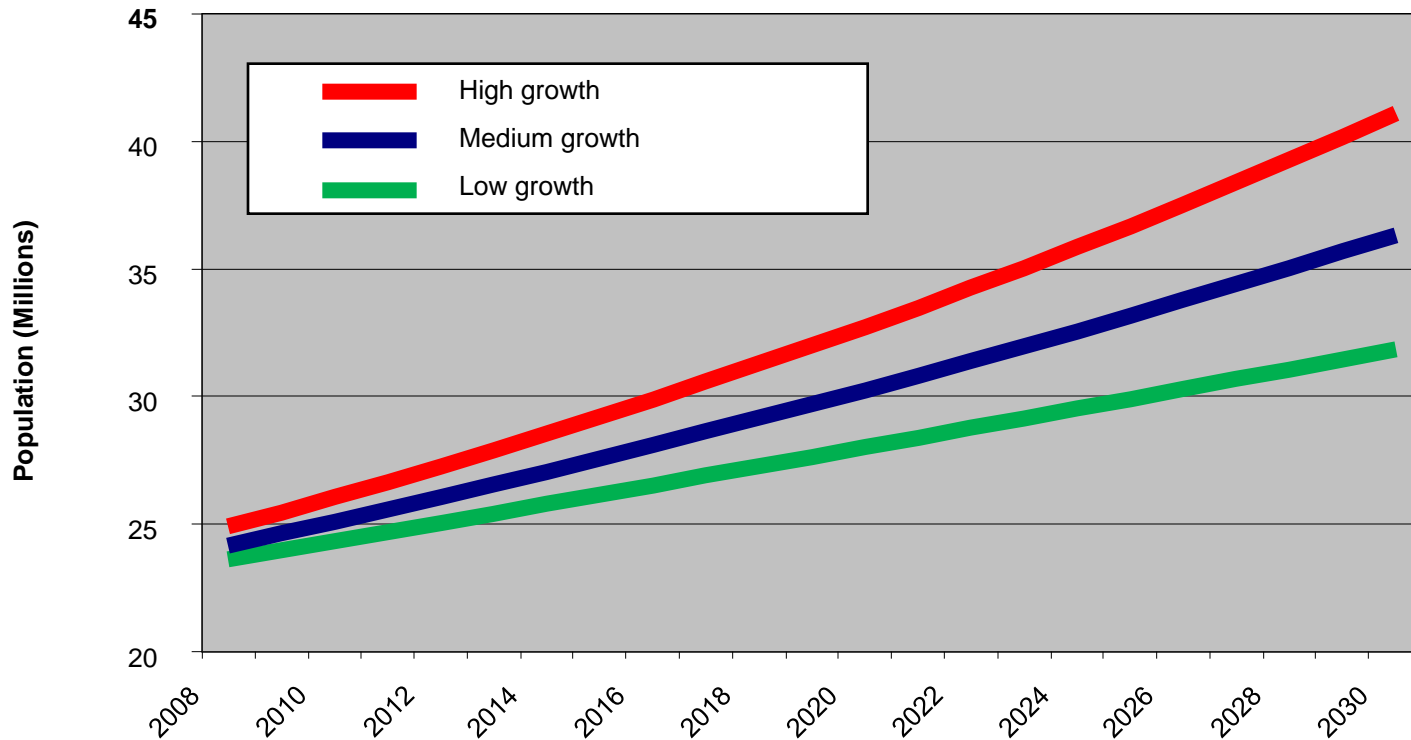
Allows for user-specified level of investment in system maintenance.

Serves as a web-based tool for evaluating current and future revenue strategies.

# TRENDS MODEL

Captures Population Growth Impacts and Provides Flexibility for Evaluating Future Scenarios

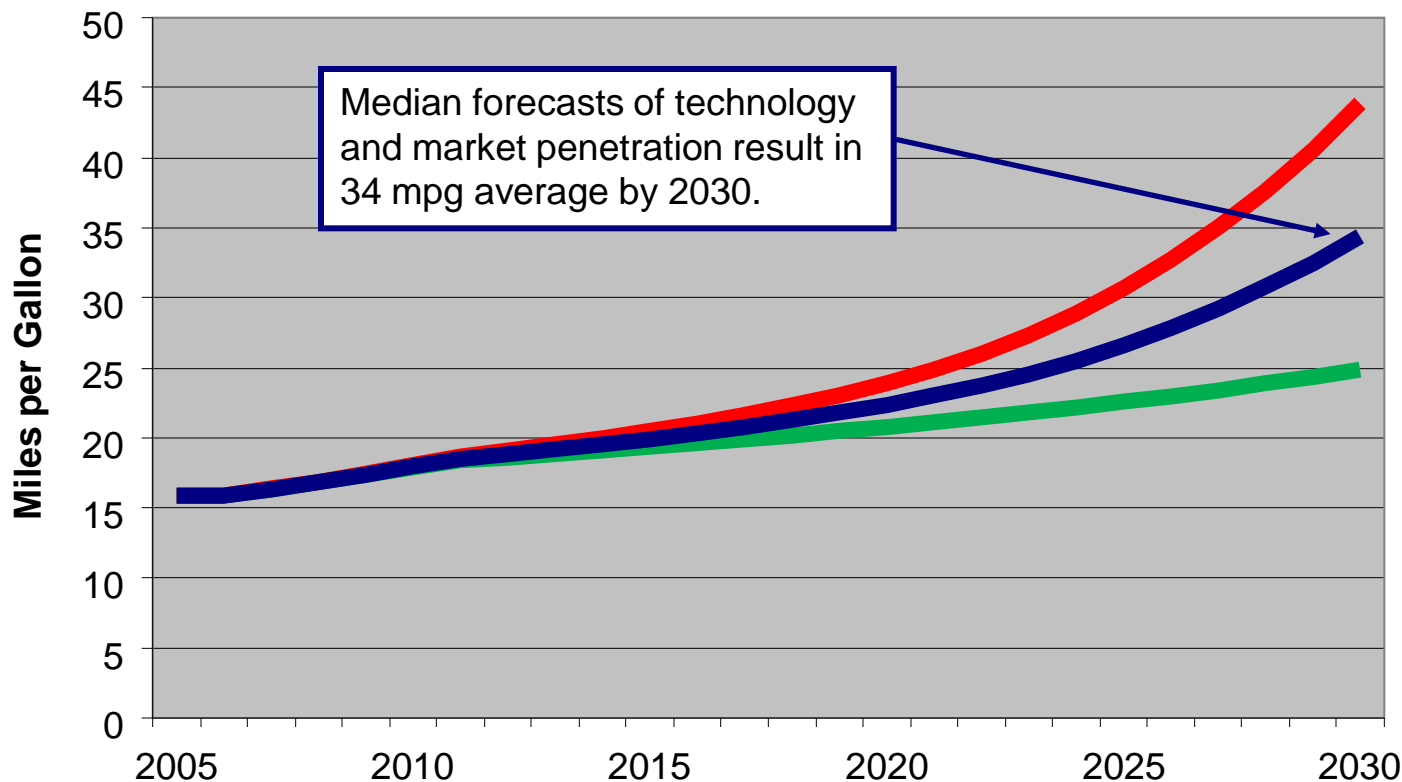
## Texas Population Growth



# TRENDS MODEL

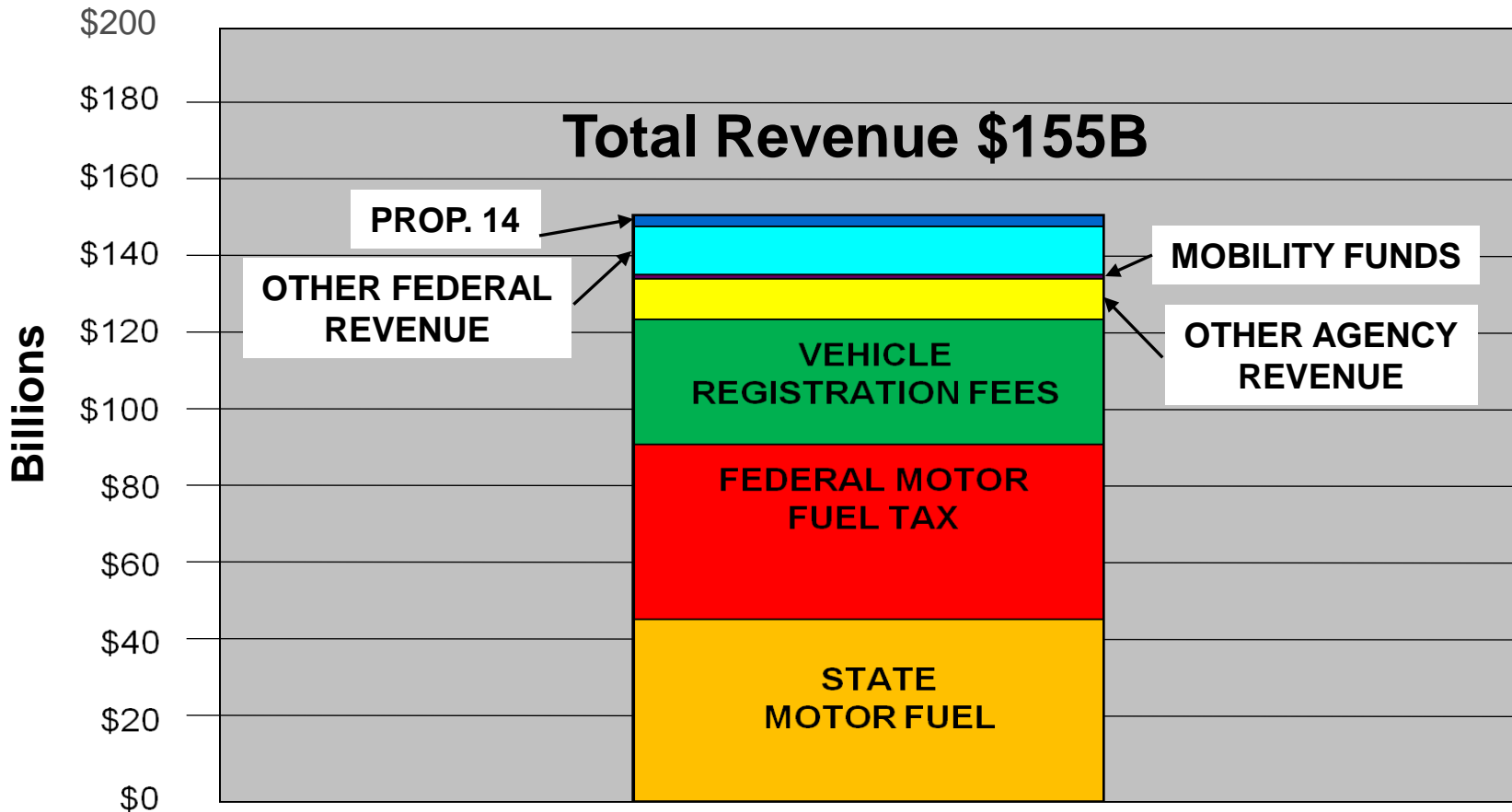
Captures Fuel Efficiency Impacts and Provides Flexibility for Evaluating Future Scenarios

## Fuel Efficiency Scenarios



# FUNDING THE FUTURE

## Provides a Baseline Revenue Forecast

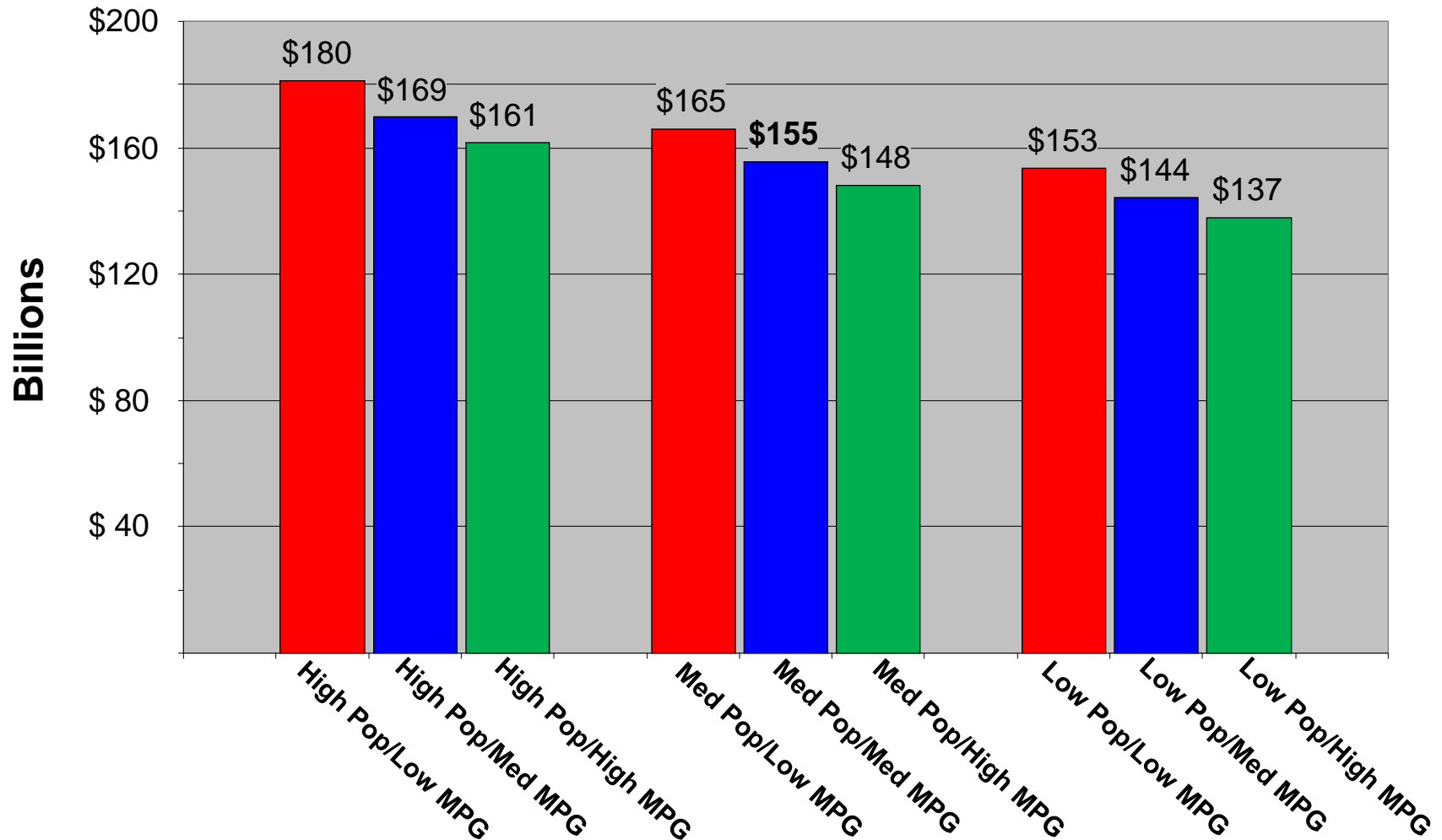


Baseline revenue forecast in nominal dollars, 2009 to 2030 (adjusted for inflation)

# FUNDING THE FUTURE

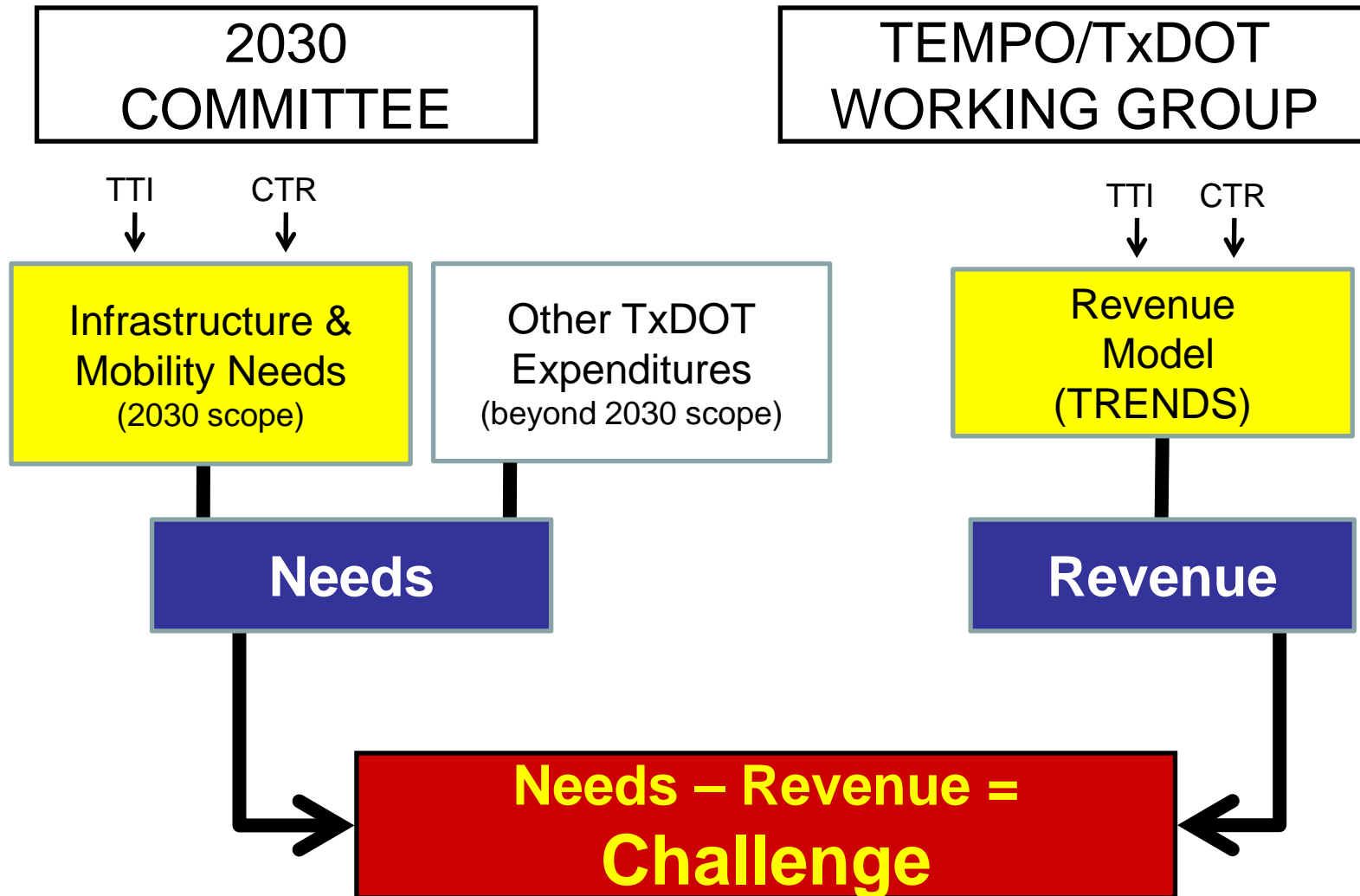
Provides a Range of Revenue Estimates  
Through Combined Scenarios

## Range of Possible Revenues (2009 to 2030)

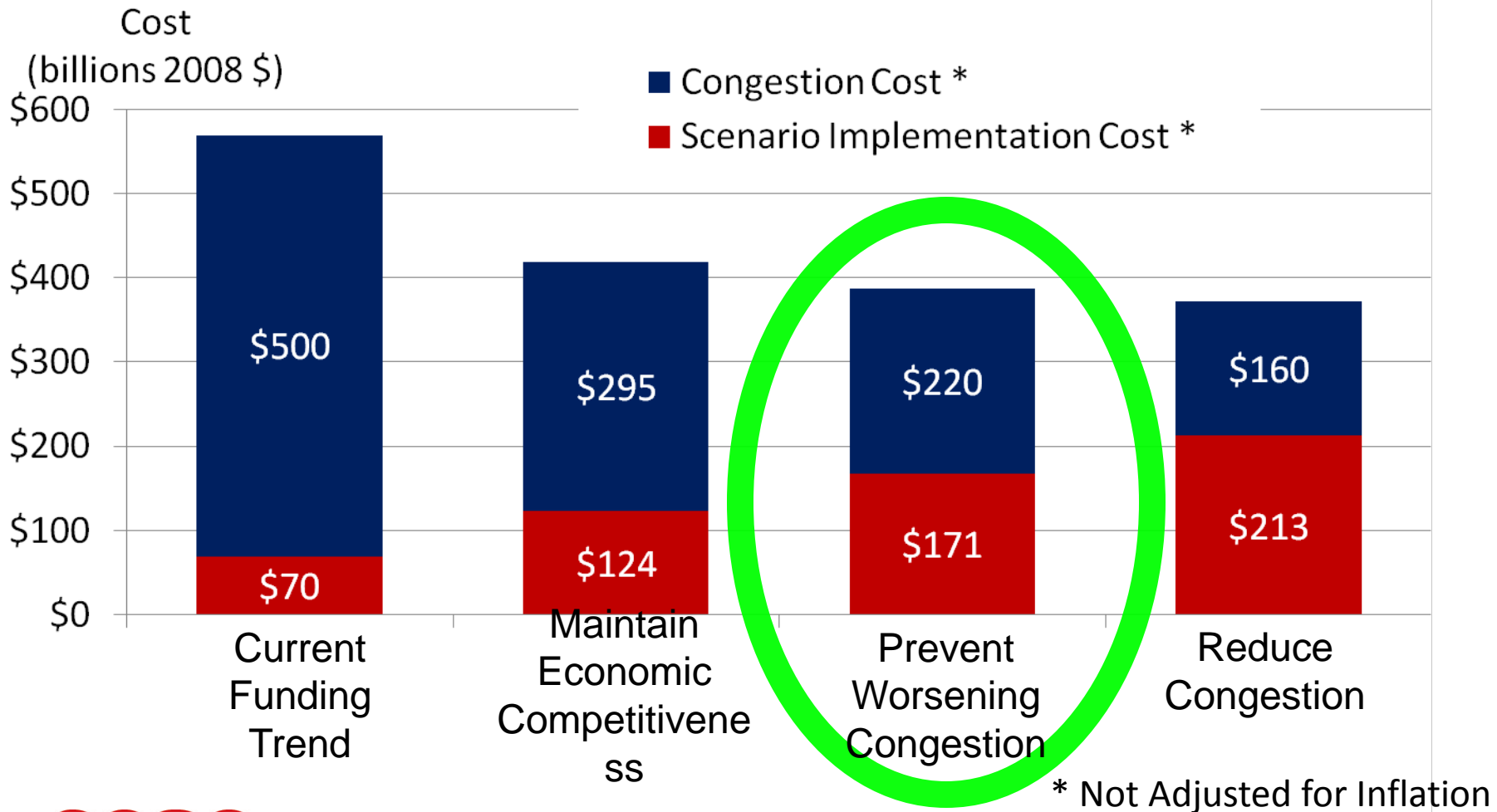


# FUNDING THE FUTURE

## Needs Versus Revenue



# 2030 Committee Scenario Implementation and Congestion Costs



# Translating 2030 Report

## Adjusting for Inflation and State Share of Needs

<b>2030 Total Investment Needs (2009-2030)</b>	<b>Constant 2008 Dollars (billions)</b>	<b>Inflation Adjusted (billions)</b>	<b>State Share (billions)</b>
<b>Pavements</b>	\$ 89	\$138	\$138
<b>Bridges</b>	\$ 36	\$ 55	\$55
<b>Urban Mobility *</b>	<b>\$171</b>	\$266	\$165
<b>Rural Mobility &amp; Safety</b>	\$ 19	\$ 29	\$ 29
<b>Total</b>	<b>\$315</b>	<b>\$488</b>	<b>\$387</b>

\* Historically, 2/3 of mobility is State investment

TMMP/TUMP estimate of need = \$584B

# Components of 2030 Needs Forecast

**Total Needs: \$487B**

**Pavements  
\$138**

**Other TxDOT  
Functions  
\$71 \***

**Bridges  
\$55**

**Other  
Agencies  
\$29 \***

**Rural Mobility  
& Safety  
\$29**

**Urban &  
Metro Mobility  
\$165**

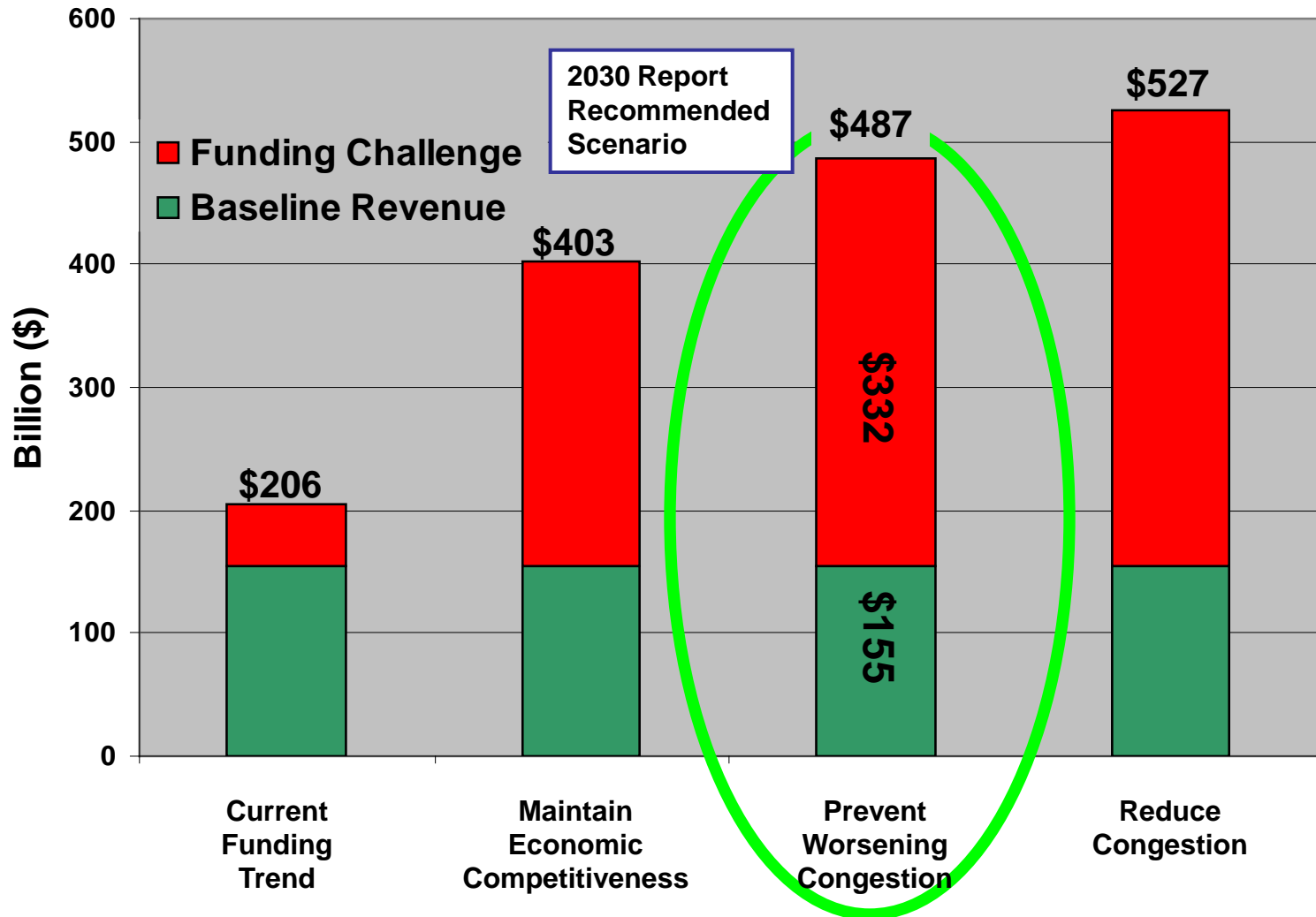


\* Other TxDOT Functions and Other Agencies Amount To \$100 Billion of Future Encumbrances.

# FUNDING THE FUTURE

## Needed Revenue Challenge

### 2030 Committee Investment Scenarios



Total revenue needs increased by \$100B to include anticipated TxDOT encumbrances.

# FUNDING THE FUTURE

## TRENDS Model Revenue Variables

State Gasoline and Diesel Taxes

Federal Gasoline and Diesel Taxes

Indexing State and Federal Motor Fuels Tax

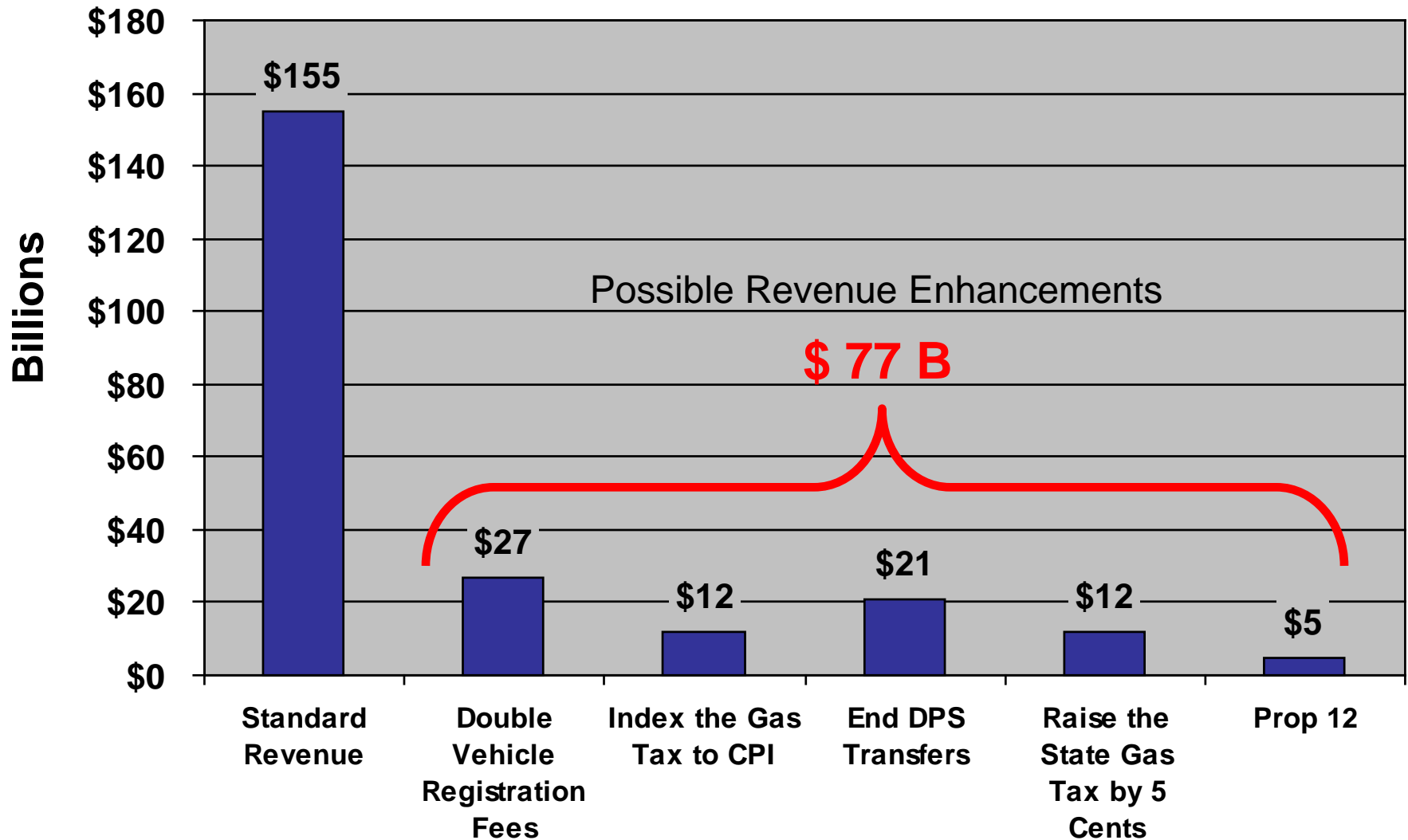
Vehicle Registration Fees

Vehicle Miles of Travel (Distance-based)  
Tax

Levels of Bond Financing

# FUNDING THE FUTURE

Provides Funding Estimates from Possible Revenue Enhancements



# FUNDING THE FUTURE

## TEMPO / TxDOT Ongoing Initiatives

- Use the TRENDS model to develop a 2035/2040 baseline revenue forecast with statewide consensus for development of upcoming Metropolitan Transportation Plans, Texas Transportation Plan, TxDOT Unified Transportation Program (UTP), and Transportation Improvement Programs/Statewide Transportation Improvement Program
- Provide TRENDS model to all 25 MPOs
- Develop local option TRENDS model for 25 metro areas

# FUNDING THE FUTURE

## TEMPO/TxDOT Workgroup Next Steps

- Update/Monitor TRENDS model to account for:
  - Changes in State and Federal Legislation (Diversions)
  - Population Growth and Fuel Efficiency
  - Allocation of Funding to Maintenance Activities
- Collaborate with TxDOT Finance Division on bridging the gap between cash flow estimates (short term) and TRENDS revenue forecasts (mid-range to long term)
- Provide assistance to State Legislature in evaluating future revenue options for the 82<sup>nd</sup> Legislative Session

# Questions?

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