



# Transportation Emission Reduction Plan (TERP) TxDOT Annual Report

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87th Legislature, House Bill 4472

Transportation Planning and Programming Division

September 20, 2023

## Background

House Bill 4472 from the 87<sup>th</sup> legislative session included new provisions to expand projects eligible for funding under the Texas Emissions Reduction Plan (TERP), revised allocations from the TERP fund and account, and made other changes to TERP programs. House Bill 4472 amended the Health and Safety Code to require the Texas Commission on Environmental Quality (TCEQ) and the Comptroller of Public Accounts, under TERP, to provide funding for remittance of funds to the state highway fund for use by the Texas Department of Transportation (TxDOT) for congestion mitigation and air quality improvement projects in nonattainment areas and affected counties. This change became effective September 1, 2021.

*Sec. 386.057. HEALTH AND SAFETY CODE is amended by adding Subsection (e) to read as follows: (e) Not later than October 1 of each year, the Texas Department of Transportation shall report to the commission the following information for all congestion mitigation and air quality improvement projects in nonattainment areas and affected counties that are planned to be funded, or received initial funding during the preceding 10 years, from money received by the department under this chapter:*

- 1) projects to mitigate congestion and improve air quality that are currently planned;*
- 2) projects to mitigate congestion and improve air quality that have been completed;*
- 3) estimated emissions reductions for all planned and completed congestion mitigation projects; and*
- 4) estimated cost per ton analysis of reduced emissions of nitrogen oxides, particulate matter, or volatile organic compounds for each congestion mitigation project planned or completed.*

## Fiscal Year 2023

During fiscal year 2023, \$95,054,042.00 was transferred from the TERP Fund to the credit of the state highway fund for use by TxDOT on projects to mitigate congestion and improve air quality in non-attainment areas.

From the pool of eligible projects, the full TERP balance was applied to the construction costs of six projects in three Metro districts: Austin, Houston, and San Antonio. See **Table 1** for project information and details on emission reduction and cost-effectiveness estimates for each project.

Fiscal Year 2023 is the second year that funding from TERP was made available to TxDOT for congestion mitigation and air quality improvement projects. These projects have been funded by other Categories established in the Unified Transportation Program (UTP) in previous years.

Table 1: Emission Reduction and Cost-Effectiveness Estimates for project funded by TERP (FY 2023)

Control Section Job	Project Description	TERP Funds	Analysis Description No Build/Build Scenarios	Project Limits	AADT (Vol/Day)	Emissions Reduced (tons/day)			Projects' Emission Reduction Cost-Effectiveness (dollar/ton)		
						NOx	VOC	PM10	NOx	VOC	PM10
0253-04-138	Expand to 6 lane expressway with frontage roads -4 general purpose & 2 HOV lanes	\$44,341,314.37	The no-build scenario is a four-lane freeway, and the build scenario considers a six-lane freeway with two HOV lanes. Emission benefits calculated for HOV-lane (decrease in single occupancy vehicle trips) and speed improvements in general purpose (GP) lanes.	US 281 from Loop 1604 to Bexar/Comal County Line	90,245	0.037	0.007	0.007	\$614.51	\$3,089.39	\$3,364.98
0683-01-056	Construct New 4-Ln Overpass at Georgetown RR and Lake Creek With Roundabout And Collector Roads	\$6,305,155.76	The emissions benefits calculation was conducted using the changes in vehicle idling at the RR intersection due to signal delay. There are two no-build scenarios: without a direct connector and with a direct connector. The traffic data are collected from TxDOT Traffic Count Database (TCDS).	RM 620 from Deep Wood Dr to IH 35	39,047	0.00039	0.00004	0.00001	\$10,907,025.31	\$106,343,496.74	\$425,373,986.96
0700-03-145	4-lane divided rural surfaced median with continuous left turn lane with shoulders	\$7,754,140.26	The emissions benefits calculation was conducted using the reduction in idling emissions due to less on-road delay. The traffic data are collected from the TxDOT Traffic Count Database (TCDS). The on-road delay reduction is calculated from a regression equation conducted by previous simulation research.	SH 71 from Blanco County Line to 0.4 Miles West of RM 2322	13,562	0.00000421	0.00000028	0.00000007	\$467,239,872.70	\$7,076,991,791.25	\$29,711,928,035.75
0016-05-119	Ramp revisions, intersection, and frontage road operational improvements	\$18,469,520.31	The emission benefits calculation was conducted using the MOSERS 6.1 Park-and-Ride New Parking Strategy. The traffic data are partially collected from TxDOT CSJ 0016-05-114. Assumptions and state default data were used in the calculation.	IH 35 from FM 2252 to Schwab Rd	126,675	0.00004	0.00009	0.00013	\$125,545,118	\$48,234,849	\$35,178,553

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						NOx	VOC	PM10	NOx	VOC	PM10
0016-04-117	Ramp revisions, intersection operation improvements, and converting frontage roads to one-way	\$7,251,190.50	The emissions benefits calculation was conducted using the reduction in idling emissions due to less on-road delay. The traffic data are collected from the TxDOT Traffic Count Database (TCDS). The on-road delay data are collected from TxDOT CSJ 0016-04-112 analysis.	IH 35 from FM306 to Hays/Comal County Lane	115,968	0.00225	0.00025	0.00005	\$4,754,049	\$42,786,444	\$213,932,219
0912-72-391	Reconstructing the roadway with a raised median in the center of the road, installing sidewalks, upgrading subsurface public utilities, upgrading existing traffic signals, replacing storm sewer system	\$10,932,720.80	The emission benefits calculation was conducted using the MOSERS 5.1 Traffic Signalization Strategy. The traffic data are collected from the TxDOT Traffic Count Database (TCDS). Assumptions and state default data were used in the calculation.	Memorial Dr from Beltway 8 to East of Tallowood Rd	146,791	0.00015	0.00027	0.00035	\$38,367,762	\$20,748,096	\$15,962,812