



# Air Quality Technical Report

United States Highway (US) 90  
From Interstate Highway 10 (I-10) to  
Farm-to-Market (FM) 1463

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Fort Bend, Harris, and Waller Counties, Texas

CSJs: 0271-09-025, 0271-09-026, and 0271-10-011

June 2021

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

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## **1.0 Introduction**

This Air Quality Technical Report presents air quality technical information for the proposed improvements to United States Highway (US) 90, from Interstate Highway 10 (I-10) to Farm-to-Market (FM) 1463 in Fort Bend, Harris, and Waller Counties, Texas (Appendix A, *Figure 1 – Vicinity Map*).

## **2.0 Project Description**

### **2.1 Existing Facility**

US 90 is a two-lane undivided roadway with one 12-foot travel lane in each direction, 8-foot shoulders on the outside of the travel lanes, and open ditches for drainage. In the City of Brookshire, US 90 widens to four 11.5-foot travel lanes with partial curb and gutter drainage. A Union Pacific railway is north of and adjacent to the roadway right-of-way (ROW) for approximately 8 miles from near Koomey Road to FM 1463. The existing roadway ROW typically is 100 feet wide.

### **2.2 Proposed Facility**

The proposed facility improvements from I-10 to Donigan Road would be limited to pavement upgrade and striping. The proposed facility from Donigan Road to Koomey Road would include a four-lane roadway, which includes two 12-foot main lanes in each direction separated by an 18-foot raised median, and 10-foot shared-use path shoulders. The proposed facility would convert the existing open ditch drainage to a closed storm sewer system. Between Koomey Road and Kenney Street, construction will occur within the existing ROW to accommodate two 11-foot and two 12-foot travel lanes separated by a center left-turn lane. From Kenney Street to FM 1463 would include a four-lane roadway, comprised of two 12-foot main lanes in each direction separated by an 18-foot raised median. Bicycle and pedestrian facilities would include a 12-foot bikeway on the north side, and a 6-foot sidewalk on the south side. Proposed drainage features from Kenney Street to FM 1463 would include a closed storm sewer system and four storm water detention ponds. (Appendix A, *Figure 1 – Vicinity Map*).

This air quality technical report follows the Texas Department of Transportation (TxDOT) Environmental Handbook for Air Quality (May 2017), and the August 2020 TxDOT Guidance for Preparing Air Quality Statements.

## **3.0 Transportation Conformity**

The proposed project is located within an area that has been designated by the U.S. Environmental Protection Agency (EPA) as a marginal nonattainment area for the 2015 8-hour ozone National Ambient Air Quality Standards (NAAQS) and a serious nonattainment area for the 2008 8-hour ozone NAAQS; therefore, the transportation conformity rules apply. Conformity for older standards is satisfied by conformity to the more stringent 2008 and 2015 ozone NAAQS, as applicable. The proposed action is included in the Houston-Galveston Area Council Metropolitan Planning Organization's (HGAC MPO) financially constrained 2045 Regional Transportation Plan (RTP), which was initially found to conform to the Texas Commission on Environmental Quality (TCEQ) State Implementation Plan (SIP) by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) on August 2, 2019. However, the project cost and the conformity year are to be corrected in the RTP. The proposed project is included in the Fiscal Year (FY) 2021 - 2024 Transportation Improvement Program (TIP), which is not yet approved by the FHWA. TxDOT will not take final action on this environmental document until a project-level conformity determination has been obtained from the FHWA, as applicable. Copies of the RTP and TIP are included in Appendix B. All projects in the HGAC TIP that are proposed for federal or state funds were initiated in a manner consistent with federal guidelines in Section 450 of Title 23 Code of Federal Regulations (CFR) and Section 613.200, Subpart B, of Title 49 CFR.

## **4.0 Traffic and Traffic Air Quality Analysis**

The maximum projected traffic volumes for the estimated time of completion (ETC) year (2030) and design year (2045) is 17,000 vehicles per day (VPD) and 21,100 VPD, respectively (Appendix C). A prior TxDOT modeling study and previous analyses of similar projects have demonstrated that it is unlikely that the carbon monoxide (CO) standard would be exceeded as a result of any project with average annual daily traffic (AADT) below 140,000. The AADT projections for the proposed project do not exceed 140,000 VPD; therefore, a Traffic Air Quality Analysis (TAQA) would not be required.

## **5.0 Mobile Source Air Toxics**

The purpose of this project is to improve mobility and safety by constructing two additional travel lanes (one in each direction) and a continuous sidewalk and bikeway. This project has been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special mobile source air toxic (MSAT) concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause a meaningful increase in MSAT impacts of the project from that of the No-Build Alternative.

Moreover, EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES2014 model forecasts a combined reduction of over 90 percent in the total annual emissions rate for the priority MSATs from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 45 percent<sup>1</sup>. This will both reduce the background level of MSATs as well as the possibility of even minor MSAT emissions from this project.

## **6.0 Congestion Management Process Analysis**

The congestion management process is a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs. The project was developed from the HGAC's CMP, which meets all requirements of 23 CFR 450.320 and 500.109, as applicable. The CMP was adopted by HGAC on August 26, 2019.

The region commits to operational improvements and travel demand reduction strategies at two levels of implementation: program level and project level. Program-level commitments are inventoried in the regional CMP, which was adopted by the HGAC; they are included in the financially constrained RTP, and future resources are reserved for their implementation.

The CMP element of the plan carries an inventory of all project commitments (including those resulting from major investment studies) that details type of strategy, implementing responsibilities, schedules, and expected costs. At the project's programming stage, travel demand reduction strategies and commitments will be added to the regional TIP or included in the construction plans. The regional TIP provides for programming of these projects at the appropriate time with respect to the single occupancy vehicle (SOV) facility implementation and project-specific elements.

Committed congestion reduction strategies and operational improvements within or near the proposed project consist of adjacent bicycle and pedestrian facilities, which include a 12-foot bikeway on the north side, and a 6-foot sidewalk on the south side. Individual CMP and SOV relief projects located near the project corridor that were completed in recent years, are ongoing, or are planned, are listed in Table 1.

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<sup>1</sup> Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, October 2016 - [http://www.fhwa.dot.gov/environment/air\\_quality/air\\_toxics/policy\\_and\\_guidance/msat/index.cfm](http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/index.cfm)

Table 1: Congestion Management Process Strategies

Operational Improvement Projects Near the Proposed Project Area		
Location	Type	Implementation Date
FM 359 from IH-10 to US 90	Widen from 2-Lane to 4-lane divided roadway	2031
IH-10 W from FM 359 to Fort Bend County line	Widen from 6 to 8 mainlanes and reconstruct both 2-lane frontage roads	2023
Woods Road from US 90 to Fort Bend/Waller County line	Widen from 2 to 4 lanes	2024
FM 1463 from North of Westridge Creek Lane to FM 1093	Widen from 2 to 6 lanes from I-10 West to Spring Green Road and widen 2 to 4 lanes from Spring Green to North of Westridge Creek Lane. Roadway with raised median, intersection improvements and pedestrian and bicycle accommodations	2021
Katy Hockley Cutoff from US 290 to Morton Road	Widen to 4-lane divided boulevard	2023

Source: HGAC 2045 Regional Transportation Plan

In an effort to reduce congestion and the need for SOV lanes in the region, TxDOT and HGAC will continue to promote appropriate congestion reduction strategies through the Congestion Mitigation and Air Quality Improvement (CMAQ) program, the CMP and the RTP. The congestion reduction strategies considered for this project would help alleviate congestion in the SOV study boundary but would not eliminate it.

Therefore, construction of the proposed project is justified. The CMP analysis for added SOV capacity projects in the Transportation Management Area (TMA) is on file and available for review at the HGAC.

## 7.0 Construction Emissions

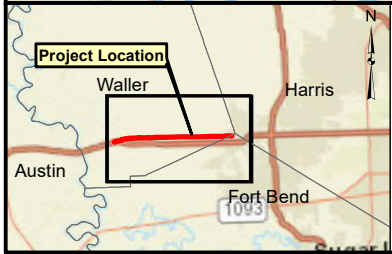
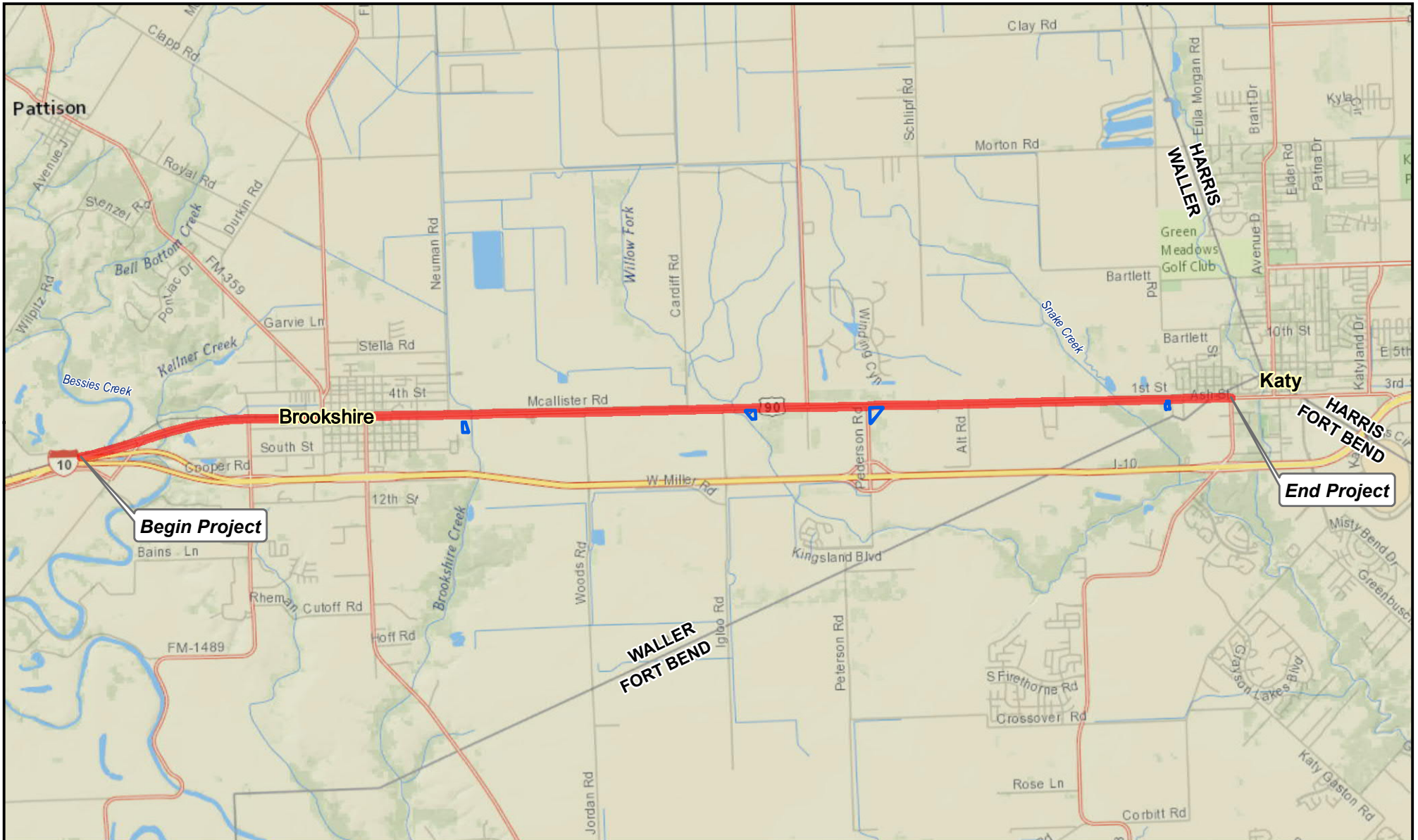
During the construction phase of this project, temporary increases in PM and MSAT emissions may occur from construction activities. The primary construction-related emissions of PM are fugitive dust from site preparation, and the primary construction-related emissions of MSAT are diesel PM from diesel-powered construction equipment and vehicles.

The potential impacts of PM emissions will be minimized by using fugitive dust control measures contained in standard specifications, as appropriate. The Texas Emissions Reduction Plan (TERP) provides financial incentives to reduce emissions from vehicles and equipment. TxDOT encourages construction contractors to use this and other local and federal incentive programs to the fullest extent possible to minimize diesel emissions. Information about the TERP program can be found on TCEQ's TERP website<sup>2</sup>.



However, considering the temporary and transient nature of construction-related emissions, the use of fugitive dust control measures, the encouragement of the use of TERP, and compliance with applicable regulatory requirements, it is not anticipated that emissions from construction of this project will have any significant impact on air quality in the area.

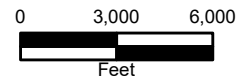
<sup>2</sup> <https://www.tceq.texas.gov/airquality/terp>

Appendix A  
Figures



**Legend**

-  Project Corridor
-  Proposed Detention



**US 90**  
from I-10 to FM 1463

**Vicinity Map**



**Appendix B**  
**Regional Transportation Plan**  
**and Transportation**  
**Improvement Program**



2045 RTP PROJECTS LIST BY COUNTY

MPOID	CSJ#	COUNTY	SPONSOR	FACILITY	FROM	TO	DESCRIPTION	LENGTH (mi)	MAIN LANES	FRONTAGE LANES	FISCAL YEAR	ANALYSIS YEAR*	TOTAL PROJECT COST (M, YOE)
18051		FORT BEND	FORT BEND COUNTY PUBLIC TRANSPORTATION	UNIVERSITY BOULEVARD	AT 14000 UNIVERSITY BOULEVARD SUGAR LAND, TX 77479	NULL	CONSTRUCT STRUCTURED PARKING GARAGE OF 2,500 SPACES WITH BUS AND PASSENGER ACCOMMODATIONS FOR A PERMANENT PARK & RIDE INCLUDING DEDICATED BUS BAYS WITH PASSENGER PLATFORMS, PASSENGER WAITING SHELTERS AND TRANSIT INFORMATION SYSTEMS.	0.50	(0,0)	(0,0)	2030	EXEMPT	\$73.08
18731	0089-09-088	FORT BEND	TXDOT HOUSTON DISTRICT	IH 69	WHARTON C/L	E OF SS 529	INSTALL NEW ITS EQUIPMENT AND INFRASTRUCTURE	12.05	(0,0)	(0,0)	2021	EXEMPT	\$4.74
18403	0271-10-011	FORT BEND	TXDOT HOUSTON DISTRICT	US 90	WALLER C/L	FM 1463	WIDEN FROM 2 LANES TO 4 LANES	0.15	(2,4)	(0,0)	2027	2040	\$5.46
16348	0027-08-180	FORT BEND	TXDOT HOUSTON DISTRICT	US 90A	AT SH 99	NULL	CONSTRUCT GRADE SEPARATION AND INTERSECTION IMPROVEMENTS	0.61	(6,6)	(0,0)	2025	2040	\$35.00
10114	0027-08-146	FORT BEND	TXDOT HOUSTON DISTRICT	US 90A	LP 762	FM 359	WIDEN FROM 4 LANES TO 6-LANES DIVIDED	1.30	(4,6)	(0,0)	2026	2030	\$28.57
17236	0027-08-137	FORT BEND	TXDOT HOUSTON DISTRICT	US 90A	SH 99	W OF SH 6	WIDEN FROM 6 LANES TO 8 LANES DIVIDED	1.30	(6,8)	(0,0)	2030	2040	\$87.17
18154		FORT BEND	TXDOT HOUSTON DISTRICT	US 90A	BAMORE RD	HARLEM RD	ACCESS MANAGEMENT TREATMENTS INCLUDE CONSTRUCTION OF NEW INTERSECTION, INSTALLATION OF RAISED MEDIANS, DRIVEWAY MODIFICATIONS, ADDITION, EXTENSION AND CLOSURE OF TURN LANES, TRAFFIC SIGNAL INSTALLATION AND TRAFFIC SIGNAL TIMING OPTIMIZATION.	10.13	(0,0)	(0,0)	2037	EXEMPT	\$20.91
13728		FORT BEND	CITY OF MISSOURI CITY	WATERS LAKE BLVD	SIENNA PKWY	FORT BEND/BRAZORIA COUNTY LINE	CONSTRUCT 4-LANE ROADWAY	3.50	(0,4)	(0,0)	2023	NRS	\$14.31
13739		FORT BEND	CITY OF MISSOURI CITY	WATTS PLANTATION	KNIGHT RD	SH 6	EXTEND 2-LANE ROADWAY	0.90	(0,2)	(0,0)	2024	NRS	\$1.51
18333		FORT BEND	FORT BEND COUNTY PUBLIC TRANSPORTATION	WESTPARK PARK & RIDE	VA	VA	BUS SUPPORT EQUIPMENT AND FACILITIES, CONSTRUCTION FOR WESTPARK PARK&RIDE: FY 2020	0.00	(0,0)	(0,0)	2021	EXEMPT	\$1.28
11538		FORT BEND	FORT BEND COUNTY PUBLIC TRANSPORTATION	WESTPARK TOLLWAY P&R	MASON RD	GRAND MISSION BLVD	CONSTRUCT 2ND 500 SPACES OF P&R TO SERVE EXPRESS BUS AND VANPOOL SERVICES TO THE ENERGY CORRIDOR, GREENWAY-GALLERIA, DOWNTOWN AND OTHER EMPLOYMENT CENTERS. ULTIMATE LOT SIZE TO INCLUDE 1,000 SPACES	0.00	(0,0)	(0,0)	2025	2030	\$3.21
11533		FORT BEND	FORT BEND COUNTY PUBLIC TRANSPORTATION	WESTPARK TOLLWAY P&R	MASON RD	GRAND MISSION BLVD	ACQUIRE 6 ADDITIONAL LARGE TRANSIT VEHICLES (PHASE 1) FOR EXPRESS SERVICES FROM WESTPARK P&R	0.00	(0,0)	(0,0)	2021	EXEMPT	\$0.55

\*Analysis Year - NRS, EREA, and EXEMPT are exempt from conformity or are not considered regionally significant under H-GAC regional emissions analysis.

**2045 RTP PROJECTS LIST BY COUNTY**

MPOID	CSJ#	COUNTY	SPONSOR	FACILITY	FROM	TO	DESCRIPTION	LENGTH (mi)	MAIN LANES	FRONTAGE LANES	FISCAL YEAR	ANALYSIS YEAR*	TOTAL PROJECT COST (M, YOE)
18114	0271-09-026	WALLER	TXDOT HOUSTON DISTRICT	US 90	FM 2855	FORT BEND C/L	WIDEN FROM 2 LANES TO 4 LANES	3.40	(2,4)	(0,0)	2029	2040	\$123.73
18328	0271-09-025	WALLER	TXDOT HOUSTON DISTRICT	US 90	IH 10	FM 2855	WIDEN FROM 2 LANES TO 4 LANES	6.30	(2,4)	(0,0)	2029	2040	\$57.79
241		WALLER	WALLER COUNTY	WOODS RD	US 90	FORT BEND/WALLER C/L	WIDEN FROM 2 TO 4 LANES	2.20	(2,4)	(0,0)	2024	2030	\$12.33

\*Analysis Year - NRS, EREA, and EXEMPT are exempt from conformity or are not considered regionally significant under H-GAC regional emissions analysis.

**2021-2024 TIP APPENDIX D - 2045 RTP PROJECTS UNDERGOING ENVIRONMENTAL ASSES MENT**

MPOID	CSJ#	COUNTY	SPONSOR	FACILITY	FROM	TO	DESCRIPTION	LENGTH (mi)	FISCAL YEAR
18348		FORT BEND	FORT BEND COUNTY PUBLIC TRANSPORTATION	FORT BEND COUNTY	VA	VA	BUS SUPPORT AND FACILITIES, MISC SOFTWARE AND HARDWARE, BUS WRAPS AND SOFTWARE MAINTENANCE: FY 2023	0.00	2025
18347		FORT BEND	FORT BEND COUNTY PUBLIC TRANSPORTATION	FORT BEND COUNTY	VA	VA	PURCHASE OF ROLLING STOCK: FY 2023	0.00	2025
11541		FORT BEND	FORT BEND COUNTY PUBLIC TRANSPORTATION	FORT BEND O&M FACILITY	SUGAR LAND AREA SITE TBD	NULL	CONSTRUCT A SECOND FORT BEND COUNTY TRANSIT OPERATIONS AND MAINTENANCE FACILITY TO SUPPORT EXPANDED TRANSIT SERVICES	0.00	2025
919		FORT BEND	FBCTRA	FORT BEND PKWY TOLL ROAD	SIENNA PKWY	SH 99	CONSTRUCT 4-LANE TOLL ROAD AND BRAZOS BRIDGE	9.25	2025
14239	3510-04-039	FORT BEND	FBCTRA	SH 99	AT FM 1093/WPT	NULL	SEG D: CONSTRUCT 2 DIRECT CONNECTORS (TOLL) (WB-NB, NB-EB)	0.50	2025
10128	3510-03-002	FORT BEND	TXDOT HOUSTON DISTRICT	SH 99	IH 69	FM 762	CONSTRUCT 4-LANE TOLLWAY WITH LIMITED 2 2-LANE FRONTAGE ROADS AND INTERCHANGES	7.39	2025
266	3510-03-001	FORT BEND	TXDOT HOUSTON DISTRICT	SH 99	FM 762	BRAZORIA C/L	CONSTRUCT 4-LANE TOLLWAY WITH LIMITED 2 2-LANE FRONTAGE ROADS AND INTERCHANGES	10.37	2025
261	0187-05-036	FORT BEND	TXDOT HOUSTON DISTRICT	SS 10	IH 69/US 59	SH 36	WIDEN FROM 2- LANES TO 4-LANES DIVIDED	4.80	2025
18403	0271-10-011	FORT BEND	TXDOT HOUSTON DISTRICT	US 90	WALLER C/L	FM 1463	WIDEN FROM A 2 LANES TO 4 LANES	0.15	2025
16348	0027-08-180	FORT BEND	TXDOT HOUSTON DISTRICT	US 90A	AT SH 99	NULL	CONSTRUCT GRADE SEPARATION AND INTERSECTION IMPROVEMENTS	0.61	2025
10114	0027-08-146	FORT BEND	TXDOT HOUSTON DISTRICT	US 90A	LP 762	FM 359	WIDEN FROM 4 TO 6-LANES DIVIDED (PHASE 3 OF 3)	1.30	2025
11538		FORT BEND	FORT BEND COUNTY PUBLIC TRANSPORTATION	WESTPARK TOLLWAY P&R	MASON RD	GRAND MISSION BLVD	CONSTRUCT 2ND 500 SPACES OF P&R TO SERVE EXPRESS BUS AND VANPOOL SERVICES TO THE ENERGY CORRIDOR, GREENWAY-GALLERIA, DOWNTOWN AND OTHER EMPLOYMENT CENTERS. ULTIMATE LOT SIZE TO INCLUDE 1,000 SPACES	0.00	2025
978		FORT BEND	CITY OF SUGAR LAND	WILLIAMS TRACE BLVD	US 59	OYSTER CREEK	WIDEN FROM 4 TO 6-LANE DIVIDED	0.32	2025
13643		FORT BEND	CITY OF MISSOURI CITY	FM 1092/MURPHY RD	CARTWRIGHT RD	SH 6	RECONSTRUCT FROM 4-LANE DIVIDED ROADWAY TO 6-LANE DIVIDED	1.20	2026

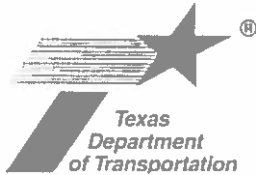
*\*Analysis Year - NRS, EREA, and EXEMPT are exempt from conformity or are not considered regionally significant under H-GAC regional emissions analysis.*

**2021-2024 TIP APPENDIX D - 2045 RTP PROJECTS UNDERGOING ENVIRONMENTAL ASSESSMENT**

MPOID	CSJ#	COUNTY	SPONSOR	FACILITY	FROM	TO	DESCRIPTION	LENGTH (mi)	FISCAL YEAR
18607		MULTIPLE	H-GAC	HOUSTON-GALVESTON TMA	VA	VA	TRAVEL DEMAND MANAGEMENT, MARKETING, OUTREACH AND PUBLIC EDUCATION: FY 2024	0.00	2025
18359		MULTIPLE	METRO	HOUSTON-GALVESTON TMA	VA	VA	REGIONAL VANPOOL PROGRAM: STBG FY 2025-2030	0.00	2025
18260	0912-00-622	MULTIPLE	H-GAC	HOUSTON-GALVESTON TMA	VA	VA	REGIONAL TRANSIT FARE COLLECTION SYSTEM (FY 2023-2026)	0.00	2025
15310		MULTIPLE	METRO	METRO SERVICE AREA	VA	VA	REGIONAL VANPOOL PROGRAM: FY 2025-2030	0.00	2025
18185		MULTIPLE	METRO	IH 45 S	NASA 1 BYPASS	S OF SH 146	CONSTRUCT TWO-WAY DIAMOND LANES	24.50	2028
18188		MULTIPLE	METRO	IH 69 S	SP 527	BW 8	CONVERSION OF EXISTING 1-LANE REVERSIBLE HOV LANE TO 2-LANES (ONE LANE IN EACH DIRECTION) HOV FACILITY	14.00	2028
10950	0543-01-054	WALLER	TXDOT HOUSTON DISTRICT	FM 359	IH 10	US 90	WIDEN FROM 2 TO 4 LANES DIVIDED	0.80	2025
17207	0523-04-019	WALLER	TXDOT HOUSTON DISTRICT	FM 1488	HARRIS C/L	W OF JOSEPH RD	RECONSTRUCT WIDEN FROM 2 TO 4 LANES DIVIDED	9.80	2027
17205	0523-01-031	WALLER	TXDOT HOUSTON DISTRICT	FM 1488	FM 1098	HARRIS C/L	RECONSTRUCT AND WIDEN FROM 2 TO 4 LANES DIVIDED	3.10	2027
17204	0409-03-012	WALLER	TXDOT HOUSTON DISTRICT	FM 1488	BS 290	FM 1098	RECONSTRUCT AND WIDEN FROM 2 TO 4 LANES DIVIDED	5.50	2027
17211	1006-02-009	WALLER	TXDOT HOUSTON DISTRICT	FM 529	FM 362	HARRIS C/L	RECONSTRUCT AND WIDEN FROM 2 TO 4 LANES	6.10	2029
18328	0271-09-025	WALLER	TXDOT HOUSTON DISTRICT	US 90	IH 10	FM 2855	WIDEN FROM A 2 LANES TO 4 LANES	6.30	2029
18114	0271-09-026	WALLER	TXDOT HOUSTON DISTRICT	US 90	FM 2855	FORT BEND C/L	WIDEN FROM A 2 LANES TO 4 LANES	3.40	2029
17235	0114-10-097	WALLER	TXDOT HOUSTON DISTRICT	US 290	FM 1371	WALLER C/L	*INFORMATION ONLY* RECONSTRUCT AND WIDEN FROM 4 TO 6 LANES AND CONSTRUCT TWO 2 LANE FRONTAGE ROADS	3.10	2030
17234	0114-11-083	WALLER	TXDOT HOUSTON DISTRICT	US 290	WASHINGTON C/L	SH 6	RECONSTRUCT AND WIDEN FROM 4 LANES TO 6 LANES	6.90	2030
17233	0114-11-077	WALLER	TXDOT HOUSTON DISTRICT	US 290	SH 6	HARRIS C/L (FM 2920/FM 362)	WIDEN FROM 4 LANES TO 6 LANES	9.80	2030
18205		WALLER	HIGH CAPACITY TASK FORCE	BS 290	NEAR FM 362	NULL	NEW PARK AND RIDE IN VICINITY OF BS 290 AND FM 362 IN WALLER	0.00	2040

\*Analysis Year - NRS, EREA, and EXEMPT are exempt from conformity or are not considered regionally significant under H-GAC regional emissions analysis.

**Appendix C**  
**Traffic Study**



# MEMO

November 8, 2019

**To:** Quincy D. Allen, P.E., District Engineer  
Attention: James Koch, P.E., Director of TPD

**Through:** William E. Knowles, P.E.  
Traffic Analysis Section Director, TPP

**From:** Lee Theobald  
Planner, TPP

**Subject:** Traffic Data  
CSJ: 0271-09-025, 0271-09-026 and 0271-10-011  
US 90:  
From I-10  
To FM 1463  
Waller and Fort Bend Counties

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Attached are diagrams depicting 2020, 2030 and 2045 average daily traffic volumes and turning movements on US 90 from I-10 to FM 1463. Also attached are tabulations showing traffic analysis for highway design for the 2020 to 2030 ten year period and 2020 to 2045 twenty five year period for the described limits of the route. Also included are tabulations showing data for use in air and noise analysis.

Due to differences in traffic volumes the project was separated into two sections.

Section 1: From I-10 to FM 359

Section 2: From FM 359 to FM 1463

Please refer to your original request dated December 13, 2018.

If you have any questions or need additional information, please contact Lee Theobald at (512) 486-5143.

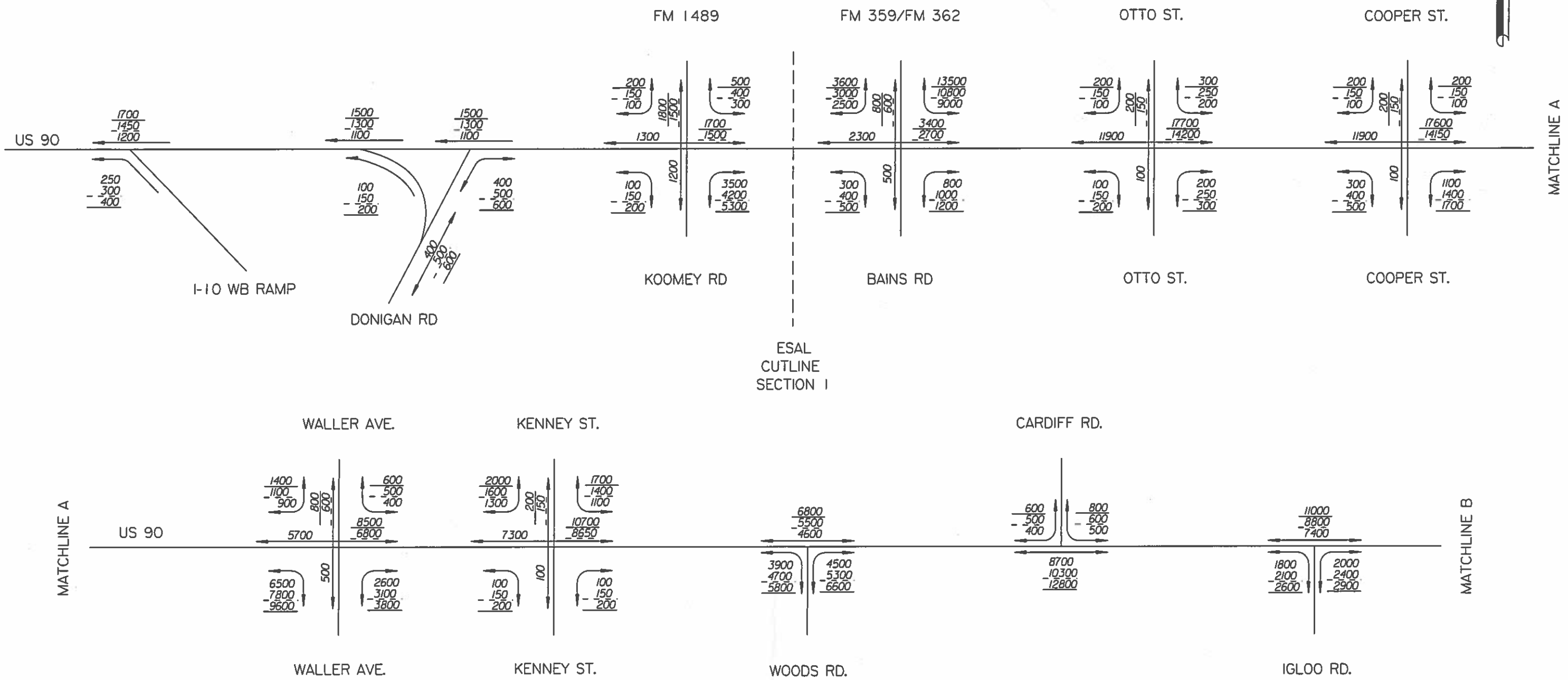
#### Attachments

**CC:** Emmanuel Samson  
Transportation Analyst, Houston District  
Design Division

OUR VALUES: People • Accountability • Trust • Honesty

OUR MISSION: Through collaboration and leadership, we deliver a safe, reliable, and integrated transportation system that enables the movement of people and goods.

An Equal Opportunity Employer

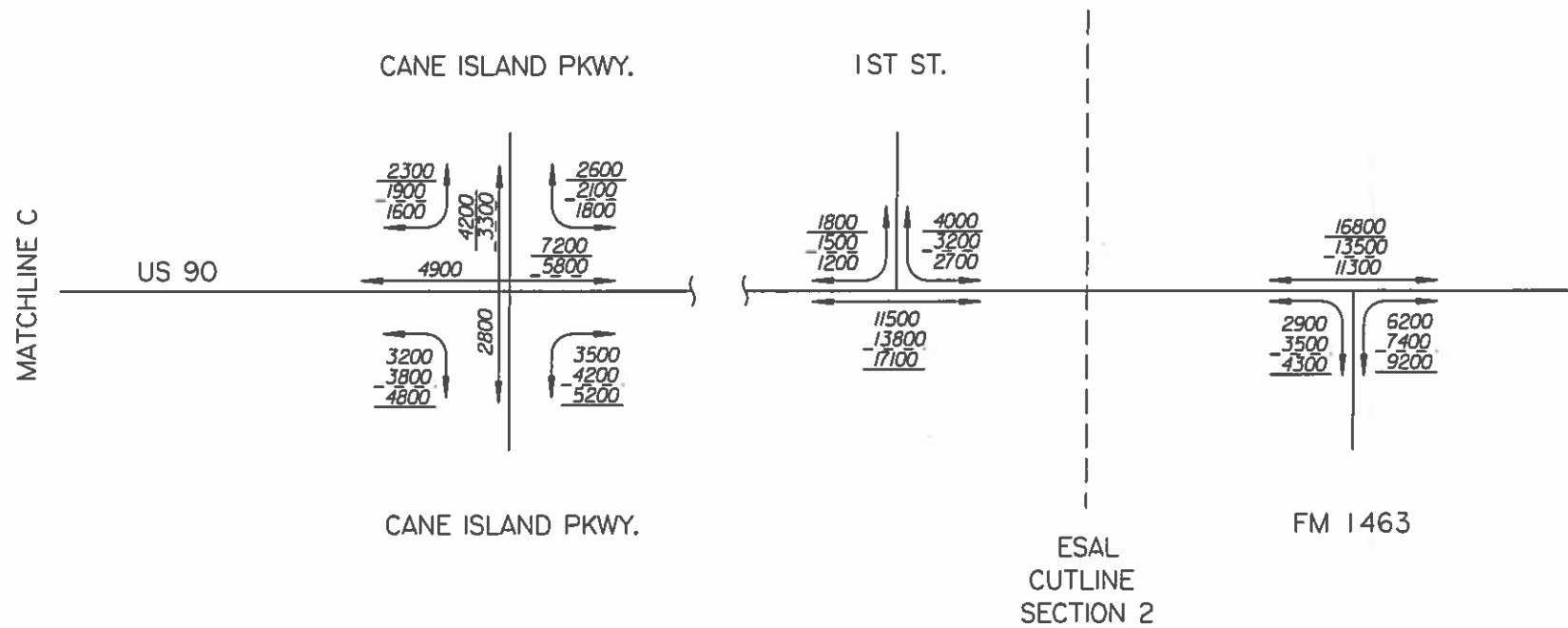
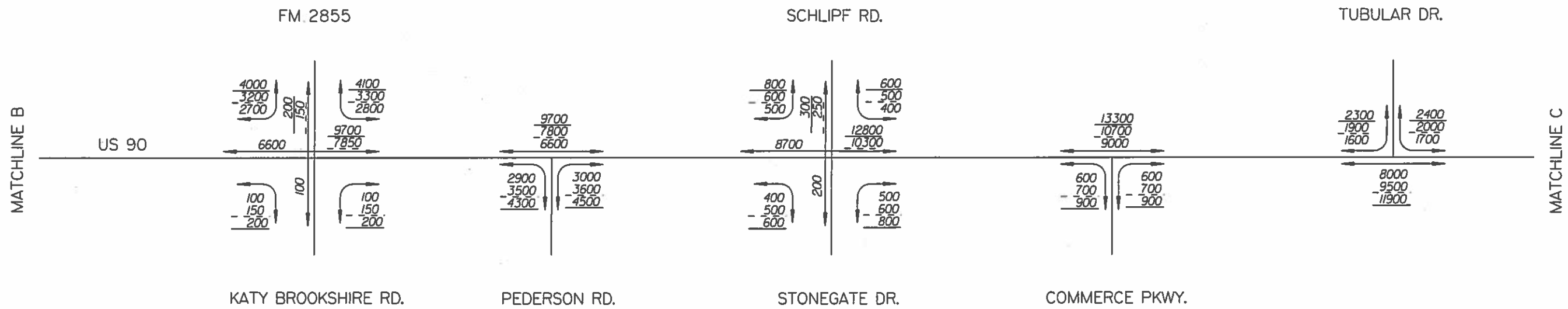


**LEGEND**  
 1000 - 2020 ADT  
 1000 - 2030 ADT  
 1000 - 2045 ADT

2020, 2030 AND 2045 ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES AND TURNING MOVEMENTS AT SPECIFIED POINTS ALONG US 90 FROM I-10 TO FM 1463

NOT INTENDED FOR CONSTRUCTION BIDDING OR PERMIT PURPOSES  
 William Erick Knowles, P.E.  
 Serial Number 91701

TRANSPORTATION PLANNING AND PROGRAMMING DIVISION  
 NOVEMBER 8, 2019



**LEGEND**  
 1000 - 2020 ADT  
 1000 - 2030 ADT  
 1000 - 2045 ADT

2020, 2030 AND 2045 ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES AND TURNING MOVEMENTS AT SPECIFIED POINTS ALONG  
 US 90 FROM I-10 TO FM 1463

**NOT INTENDED FOR CONSTRUCTION  
 BIDDING OR PERMIT PURPOSES**  
 William Erick Knowles, P.E.  
 Serial Number 94701

TRANSPORTATION PLANNING AND PROGRAMMING DIVISION  
 NOVEMBER 8, 2019



**TRAFFIC ANALYSIS FOR HIGHWAY DESIGN**

Houston District

November 5, 2019

										Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 10 Year Period (2020 to 2030)													
Description of Location	Average Daily Traffic		Base Year				ATHWLD	Percent Tandem Axles in ATHWLD	Flexible Pavement	S N	Rigid Pavement	SLAB											
	2020	2030	Dir Dist %	K Factor	Percent Trucks																		
					ADT	DHV																	
<p align="center"><u>US 90</u></p> <p align="center"><u>Section 1</u></p> <p>From I-10 To FM 359</p> <p>Waller County</p>												5,100	6,100	60 - 40	10.4	11.8	7.1	11,000	60	1,069,000	3	1,470,000	8"
<p align="center"><b>Data for Use in Air &amp; Noise Analysis</b></p>																							
<p align="center"><b>Vehicle Class</b></p>												<p align="center"><b>Base Year</b></p>											
												<p align="center">% of ADT</p>		<p align="center">% of DHV</p>									
Light Duty												88.2		92.9									
Medium Duty												3.9		2.3									
Heavy Duty												7.9		4.8									
										Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 25 Year Period (2020 to 2045)													
Description of Location	Average Daily Traffic		Base Year				ATHWLD	Percent Tandem Axles in ATHWLD	Flexible Pavement	S N	Rigid Pavement	SLAB											
	2020	2045	Dir Dist %	K Factor	Percent Trucks																		
					ADT	DHV																	
<p align="center"><u>US 90</u></p> <p align="center"><u>Section 1</u></p> <p>From I-10 To FM 359</p> <p>Waller County</p>												5,100	7,500	60 - 40	10.4	11.8	7.1	11,000	60	3,008,000	3	4,133,000	8"

NOT INTENDED FOR CONSTRUCTION  
BIDDING OR PERMIT PURPOSES  
William Erick Knowles, P.E.  
Serial Number 84704

### TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

Houston District

November 5, 2019

										Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 10 Year Period (2020 to 2030)			
Description of Location	Average Daily Traffic		Base Year				ATHWLD	Percent Tandem Axles in ATHWLD	Flexible Pavement	S N	Rigid Pavement	SLAB	
	2020	2030	Dir Dist %	K Factor	Percent Trucks								
					ADT	DHV							
<u>US 90</u>  <u>Section 2</u>  From FM 359 To FM 1463  Waller County	14,200	17,000	60 - 40	10.4	12.2	7.3	11,800	50	3,080,000	3	4,232,000	8"	
<b>Data for Use in Air &amp; Noise Analysis</b>													
Vehicle Class	Base Year												
	% of ADT		% of DHV										
Light Duty	87.8		92.7										
Medium Duty	4.1		2.5										
Heavy Duty	8.1		4.8										
										Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 25 Year Period (2020 to 2045)			
Description of Location	Average Daily Traffic		Base Year				ATHWLD	Percent Tandem Axles in ATHWLD	Flexible Pavement	S N	Rigid Pavement	SLAB	
	2020	2045	Dir Dist %	K Factor	Percent Trucks								
					ADT	DHV							
<u>US 90</u>  <u>Section 2</u>  From FM 359 To FM 1463  Waller County	14,200	21,100	60 - 40	10.4	12.2	7.3	11,900	40	8,711,000	3	11,972,000	8"	

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