



Air Quality Technical Report

FM 2642 Widening from FM 35 to SH 66

CSJ: 2658-01-013

Hunt County

Date: April 2019

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 April 16, 2014, and executed by FHWA and TxDOT.

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This Technical Report follows the Texas Department of Transportation (TxDOT) Air Quality Handbook (May 2017) and TxDOT Standard Operating Procedures for Preparing Air Quality Statements (January 2017).

Air Quality Impacts

1.1 PROJECT DESCRIPTION

In cooperation with Hunt County and the City of Royse City, TxDOT proposes to widen Farm-to-Market (FM) 2642 from FM 35 to State Highway (SH) 66 in Hunt County. The total project length is approximately 2.6 miles and includes an approximately 650-foot-long project exception with begin and end termini located on either side of the recently constructed Interstate Highway (IH) 30 interchange improvements (**Appendix A. Aerial Overview**). The proposed project consists of widening of the existing two-lane roadway to a four-lane divided roadway with a raised median which varies from 14-foot to 26-foot wide and includes median openings with left-turn deceleration lanes providing access to adjacent properties along the corridor. The proposed FM 2642 will include planned intersections at FM 2656, FM 2650, FM 2652, U.S. Highway 67/ Interstate 30, and FM 2515. These intersecting side streets would include pavement widenings and transitions on FM 2642 to meet the proposed class of roadway for each side street ROW as shown on the City Proposed Mobility Plan Map. The proposed curb and gutter type of roadway will feature 12-foot wide travel lanes, underground storm sewers, and six-foot wide sidewalks along both sides of the roadway.

The intersection of FM 2642 and FM 35 will be reconfigured to provide a north-south thoroughfare per the City of Royse City's Comprehensive Plan. A modern roundabout at the intersection of FM 35 and FM 2642 is also under consideration for which no additional right of way (ROW) would be required.

The proposed project is to be substantially constructed within the existing 100-foot to 120-foot ROW with additional 10-foot to 15-foot of ROW required at two locations along the corridor to provide right-turn deceleration lanes at connections to the IH 30 westbound frontage road, and Verandah Boulevard. Additionally, 60-foot to 80-foot wide drainage easements will be required at seven cross drain locations to convey and maintain access to historic outfall locations along Bearpen Creek. Five-foot to fifteen-foot-wide temporary construction easements will also be required to construct tie-in slopes between the back of the proposed sidewalk to existing ground.

1.2 CONFORMITY

The project is located in an area in attainment or unclassifiable for all national ambient air quality standards (NAAQS); therefore, the transportation conformity rules do not apply.

1.3 HOT SPOT ANALYSIS

The project is not located within a carbon monoxide (CO) or particulate matter (PM) nonattainment or maintenance area; therefore, a project level hot-spot analysis is not required.

1.4 TRAFFIC AIR QUALITY ANALYSIS

Traffic data for the estimated time of completion (ETC) year 2024 is not available, however, the traffic forecast volume for 2026 is 6,000 vehicles per day and for design years 2046 and 2056 is 8,500 vehicles per day and 9,400 vehicles per day, respectively (**Appendix B. TxDOT Traffic Data Analysis**). A prior TxDOT modeling study and previous analyses of similar projects demonstrated that it is unlikely that the CO standard would ever be exceeded as a result of any project with an average annual daily traffic (AADT) below 140,000. The AADT projections for the project do not exceed 140,000 vehicles per day; therefore, a Traffic Air Quality Analysis was not required.

1.5 CONGESTION MANAGEMENT PROCESS

This project is within an attainment or unclassifiable area for ozone and CO; therefore, a project level CMP analysis is not required.

1.6 MOBILE SOURCE AIR TOXICS

The purpose of this project is to address anticipated growth within the area by widening the existing roadway to accommodate four lanes of traffic. 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, Environmental Protection Agency (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 MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 45 percent (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, October 12, 2016 - http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/index.cfm). This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

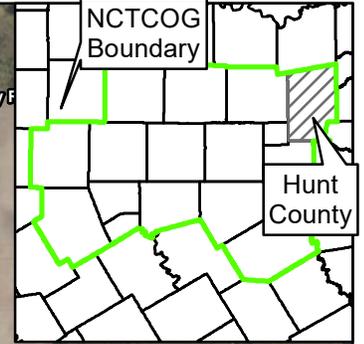
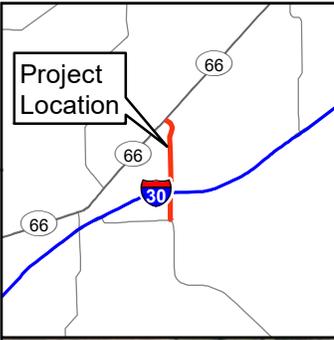
1.7 CONSTRUCTION EMISSIONS

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 particulate matter from diesel powered construction equipment and vehicles. The potential impacts of particulate matter 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

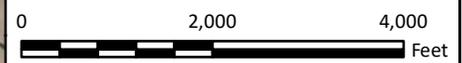
the TERP program can be found at: <http://www.tceq.state.tx.us/implementation/air/terp/>. However, considering the temporary and transient nature of construction-related emissions, the use of fugitive dust control measures, the encouragement of the use of TERP, and compliance with applicable regulatory requirements; it is not anticipated that emissions from construction of this project will have any significant impact on air quality in the area.

1.8 APPENDICES

Appendix A
Aerial Overview Map



 Project Area



FN **FREESH**
NICHOLS
4055 International Plaza, Suite 200
Fort Worth, TX 76109 - 4895
Phone - (817) 735 - 7300

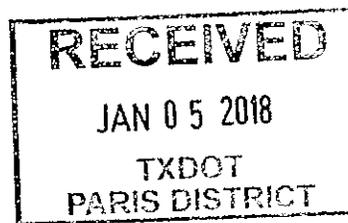
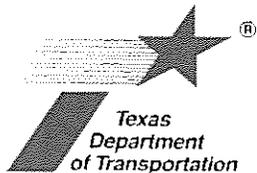


HUNT COUNTY
FM 2642 (FM 35 to SH 66)
Aerial Overview Map

FN JOB NO	HUC17463
FILE NAME	Aerial Overview_revised.mxd
DATE	12/26/2018
SCALE	1:24,000
DESIGNED	HHM
DRAFTED	HHM

1
FIGURE

Appendix B
TxDOT Traffic Data Analysis



MEMO

December 29, 2017

To: Noel Paramanatham, P.E., District Engineer
Attention: Rick Mackey, P.E., Director of TPD

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

From: Bruce R. Uphaus
Transportation Analyst, TPP

Subject: Traffic Data
CSJ: 2658-01-013
FM 2642:
From FM 35
To SH 66

Hunt County

Attached is a tabulation showing traffic analysis for highway design for the 2026 to 2046 twenty year and 2026 to 2056 thirty year design period for the described limits of the route. Included is a tabulation showing data for use in air and noise analysis.

Please refer to your original memorandum dated August 16, 2017.

If you have any questions or need additional information, please contact Bruce R. Uphaus at (512) 486-5104.

Attachment

CC: Wade Blackmon, P.E., Transportation Engineer, Paris 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.

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TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

Paris District

December 19, 2017

Description of Location	Base Year						Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2026 to 2046)			SLAB		
	Average Daily Traffic		Dir Dist %	K Factor	Percent Trucks		ATHWLD	Percent Tandem Axles in ATHWLD	Flexible Pavement		S N	Rigid Pavement
	2026	2046			ADT	DHV						
FM 2642 From FM 35 To SH 66 Hunt County	6,000	8,500	62 - 38	10.1	8.1	6.1	11,000	30	1,894,000	3	2,242,000	8"
Data for Use in Air & Noise Analysis												
Vehicle Class	Base Year											
	% of ADT											
Light Duty	91.9		% of DHV									
Medium Duty	2.6		93.9									
Heavy Duty	5.5		2.0									
			4.1									
Description of Location	Base Year						Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2026 to 2056)			SLAB		
	Average Daily Traffic		Dir Dist %	K Factor	Percent Trucks		ATHWLD	Percent Tandem Axles in ATHWLD	Flexible Pavement		S N	Rigid Pavement
	2026	2056			ADT	DHV						
FM 2642 From FM 35 To SH 66 Hunt County	6,000	9,400	62 - 38	10.1	8.1	6.1	11,100	30	3,017,000	3	3,572,000	8"

NOT INTENDED FOR CONSTRUCTION BIDDING OR PERMIT PURPOSES
 William Erik Knowles, P.E.
 Serial Number 04704

Appendix C

Hunt County Transportation Plan: Regional Mobility

Hunt County

Thoroughfare Plan Concepts: Intra-County Mobility

Legend

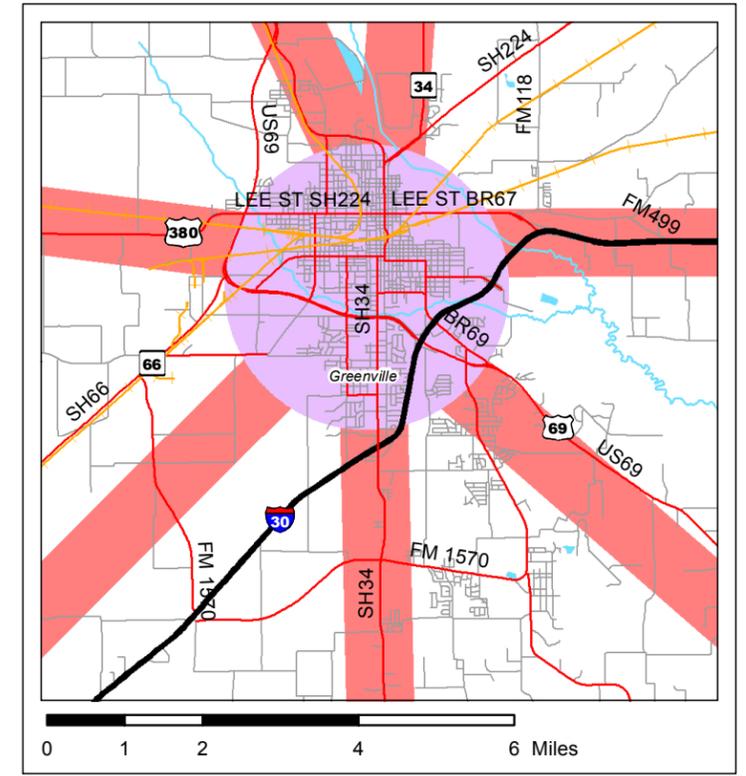
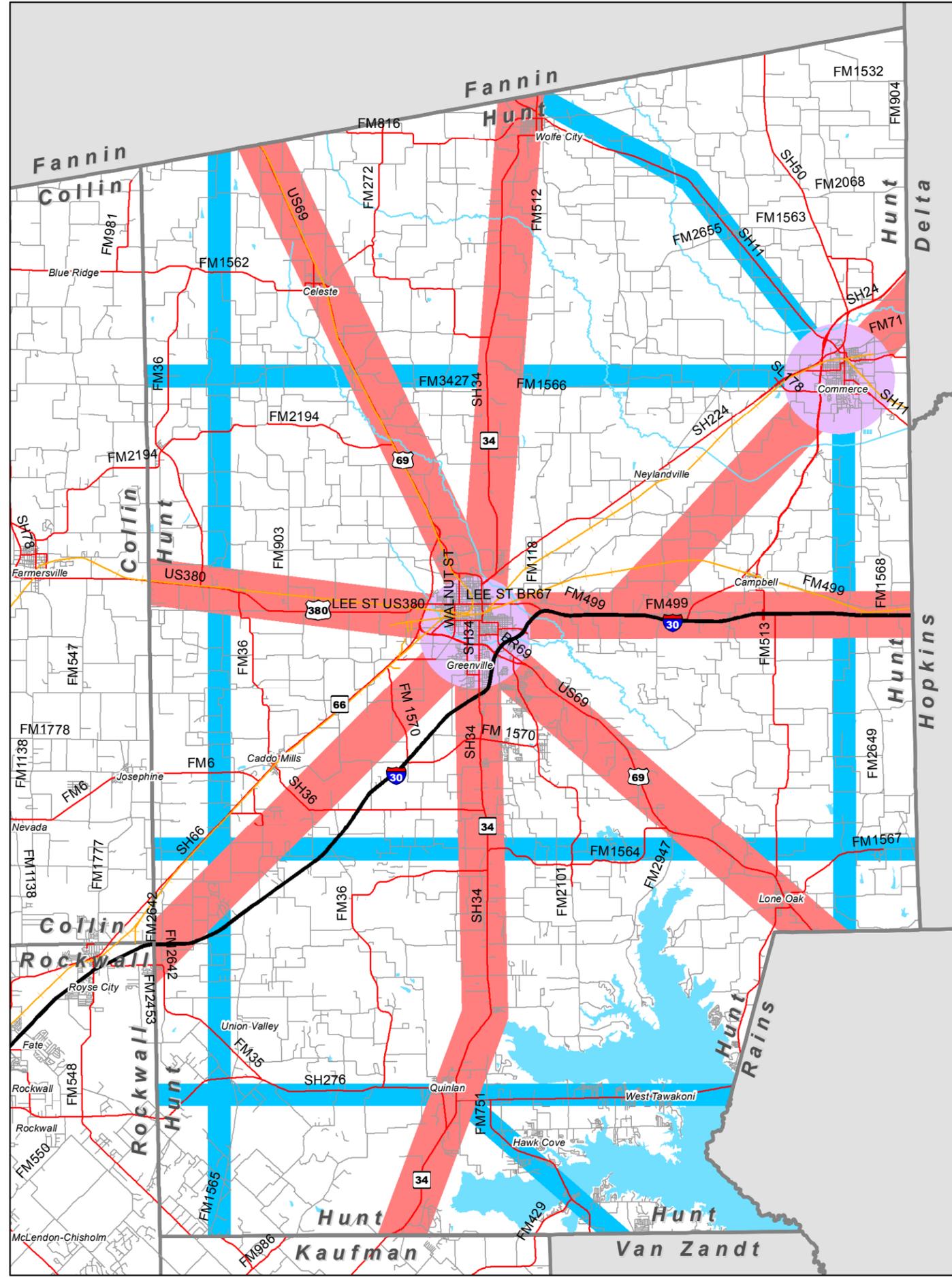
- Freeway
- Major Arterial
- Minor Arterial
- Rail Corridor
- County Boundary
- Development Centers

Corridors of County Need

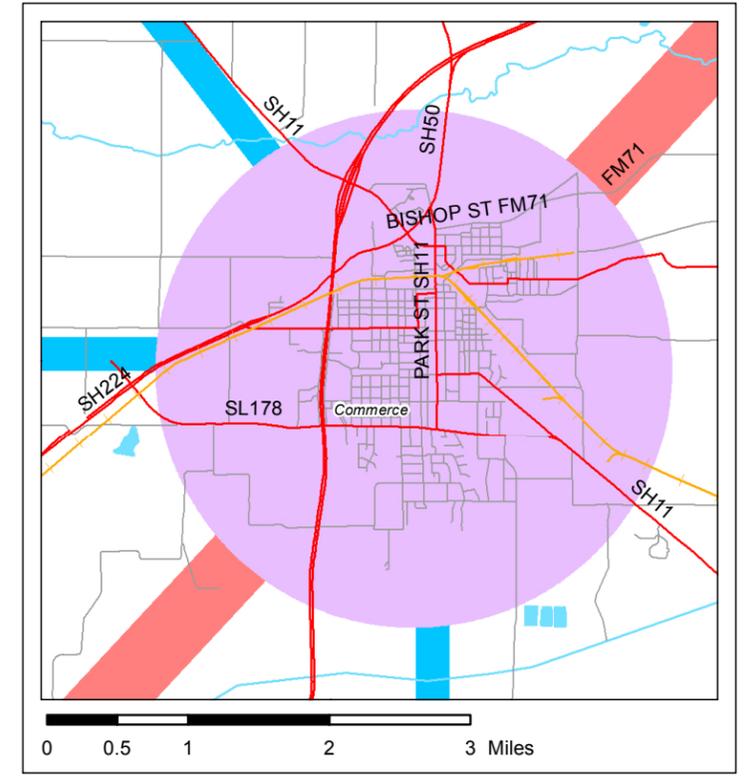
- Major Corridors
- Intermediate Corridors

North Central Texas Council of Governments Transportation

Note: Roadways as shown represent the current year RIS network. New facility locations indicate transportation needs and do not represent specific alignments.



Greenville



Commerce