

Master Development Plan for the TxDOT North Tarrant Express Project Segments 2-4

Chapter 15: Promoting Positive Air Quality and Reducing Greenhouse Gases



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15. Promoting Positive Air Quality and Reducing Greenhouse Gases

15.1. Introduction

Chapter 1 of the Master Development Plan (*Key Parameters and Assumptions*, Section 1.6) discusses the Project's compliance with State and regional air quality initiatives as well as the air quality benefits inherent in improving mobility, reducing stop-and-go traffic and encouraging carpooling through provision of HOV lanes.

This chapter focuses on the additional measures to be taken to promote positive air quality and reduce greenhouse gases during Construction, Operations and Maintenance activities on NTE Facilities.

15.2. Regulatory Background

The Clean Air Act of 1970 (42 USC 7401 et seq.) established National Ambient Air Quality Standards (NAAQS) for six regulated air pollutants and identified levels of concentration which have been determined to be harmful to human health and the environment. The Clean Air Act mandated the development of State Implementation Plans (SIPs) and local Transportation Improvement Programs (TIPs) to reduce emissions in areas that do not meet the NAAQS, including the Dallas-Fort Worth area, which is a Nonattainment Area for ozone.

The State Implementation Plan (SIP) produced by the Texas Commission on Environmental Quality (TCEQ), as well as the local Transportation Improvement Program (TIP) produced by the NCTCOG contain requirements and standards for reducing emissions from a variety of sources, including heavy vehicles and construction activities.

Construction equipment produces approximately 10 percent of all ozone-causing emissions in North Texas. The main pollutants associated with construction activities are ozone, carbon monoxide, and particulate matter. The Concessionaire and Design-Build Contractor shall take a variety of measures to prevent and reduce emissions in accordance with the regulations above and the requirements set out in each Facility's Facility Agreement.

15.3. Air Quality Analysis Summary

The NEPA process for Segments 2-4 includes carbon monoxide (CO) modeling and an assessment of the potential for releases of Mobile Source Air Toxics (MSATs). Ozone modeling will not take place as part of the NEPA process, as it requires collection of

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complex data beyond the scope of a typical Environmental Assessment for a highway project.

The Texas Commission on Environmental Quality (TCEQ) continuously monitors the DFW area for ozone-forming pollutants and conducts ozone modeling from the data collected for the purpose of compliance with the Clean Air Act and State Implementation Plan (SIP).

Proposed DFW-area highway projects must be programmed into the NCTCOG's Transportation Improvement Program (TIP). Projects included in the TIP must be found to conform with the Clean Air Act prior to acceptance, approval and funding. For a project to remain in compliance with the TIP, the design concept and scope of the Project that was in place at the time of the conformity finding must be maintained throughout implementation.

The conclusions of the air quality analyses conducted to date for each Segment are summarized in Table 15-1. **This information is subject to change**, as the NEPA process is not yet complete for Segments 3A, 3B, 3C and 4.

Table 15-1: Air Quality Analysis Summary (Subject to Change)

Seg.	Ozone	Carbon Monoxide	MSAT ¹
2E	Project is consistent <i>Mobility 2030 – Amended 2009</i> , approved August 31, 2009 and the 2008-2011 TIP.	Local concentrations of CO are not expected to exceed national standards at any time.	Emissions of total MSATs are predicted to decrease by approximately 60 percent in 2030 Build Scenario compared with 2007 levels.
3A	Project is consistent with <i>Mobility 2030</i> that was found to conform to the ozone SIP for DFW.	Local concentrations of CO are not expected to exceed national standards at any time.	Emissions of total MSATs are predicted to decrease by approximately 61 percent in 2030 Build Scenario compared with 2007 levels.
3B & 3C	Project is consistent with <i>Mobility 2030</i> that was found to conform to the ozone SIP for DFW.	Local concentrations of CO are not expected to exceed national standards at any time.	Emissions of total MSATs are predicted to decrease by approximately 61 percent in 2030 Build Scenario compared with 2007 levels.
4 ²	Project is consistent with <i>Mobility 2025 – updated January 27, 2003</i> and the 2002-2004 TIP.	Local concentrations of CO are not expected to exceed national standards at any time.	Not covered in 2004 EA (see footnote 2 below).

¹ Predicted MSAT reductions are attributable to strengthening of federal vehicle and fuel regulations, coupled with fleet turnover.

² The EA/FONSI for IH 820 (Pipeline Road to Randol Mill Road), which includes Segment 4, was approved in April 2004, but did not include a managed lane option. This Segment will require a NEPA re-evaluation, subject to FHWA agreement.

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15.4. Air Quality Mitigation Requirements

As specified in the NEPA documents for the Project, the control of emissions emanating from various construction activities shall be in accordance with TCEQ regulations and the SIP/TIP. Specific air quality control measures specified in the SIP and TIP are discussed below.

15.4.1 Idling of Construction Vehicles

Texas Administrative Code 30 § 114.510-517, *Locally Enforced Motor Vehicle Idling Limitations*, is enforced in Tarrant County. This law limits idling of gas and diesel vehicles with a gross vehicle weight rating of 14,000 pounds or greater to no more than five minutes, unless the idling is applicable to one or more of the following exceptions:

- a) is being used for emergency response purposes;
- b) is idling as a necessary component of mechanical operation, maintenance, or diagnostic purposes; or
- c) is idling for the health or safety of the equipment operator.

The Concessionaire will limit idling of construction and maintenance vehicles to the extent possible, in accordance with this law.

15.4.1 Vehicle Inspection and Maintenance

Texas Administrative Code 30 § 114, Subchapter C, *Vehicle Inspection and Maintenance* requires all motor vehicles to undergo an annual emissions inspection. Vehicles operated in association with the Project shall be inspected annually in accordance with this law.

15.4.1 Texas Low Emission Diesel (TxLED) Program

Texas Administrative Code 30 §114.6, Subchapter A requires that diesel fuel sold in the DFW Nonattainment Area contain less than 10 percent by volume of aromatic hydrocarbons and must have a cetane number of 48 or greater. All diesel fuel used to perform work on the Project shall comply with Texas Low Emission Diesel (TxLED) program requirements.

15.4.1 TCEQ Permit for Project-Specific Location

Should a project-specific location (PSL) concrete batch plant be necessary for the Project, a TCEQ air quality standard permit will be acquired and maintained. The Environmental Compliance and Mitigation Plan will be updated regularly to incorporate any new air quality mitigation measures required as a result of such a permit.

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15.5. Additional Measures

15.5.1 Dust and Particulate Control

A combination of watering, chemical stabilization, and vehicle speed reductions will be implemented as necessary to minimize and control dust and other potential air quality impacts during construction. Watering and other mitigation measures to minimize air quality impacts will be increased as necessary; based on construction traffic, forecasted wind speeds, and persistent dry weather conditions.

To the extent possible, equipment shall be staged away from, and operations minimized, near sensitive receptors such as fresh air intakes, hospitals, schools, licensed day care facilities, and residences.

Post-construction measures shall involve assurance of revegetation along the Project Right-of-Way.

15.5.2 Air Quality Training

All non-administrative personnel shall receive environmental training prior to beginning on-site work, whether engaged in design-build or operations and maintenance activities. This training will include an air quality component that covers legal requirements, best practices and procedures for protecting air quality. The goal of this training is to ensure a proper response from all on-site workers in preventing and responding to fugitive emissions.

Air quality training will focus on ways to avoid and minimize the generation of dust, particulate matter and engine emissions from construction, operations and maintenance activities. The training will provide workers with information on dust control techniques, limitations on vehicle speed and engine idling, required vehicle maintenance and ways to reduce impacts on sensitive receptors, as well as the regulatory background to understand the importance of dust control and control of emissions from construction vehicles.