DALLAS FORT WORTH INTERNATIONAL AIRPORT

DRAFT GENERAL CONFORMITY DETERMINATION

RUNWAY 18L/36R REHABILITATION PROJECT

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Acronyms and Abbreviations

ACEIT	Airport Construction Emissions Inventory Tool
ACRP	Airport Cooperative Research Program
AEDT	Aviation Environmental Design Tool version 3g
AOA	Airfield Operations Area
AP-42	Compilation of Air Pollutant Emissions Factors
APU	Auxiliary Power Unit
ASPM	Aviation System Performance Metrics
CAA	Federal Clean Air Act
CFR	Code of Federal Regulations
CTA	Central Terminal Area
CO	Carbon Monoxide
CY	Calendar Year
DCE	Diesel Construction Equipment
DFW	Dallas Fort Worth International Airport
EA	Environmental Assessment
EAD	Environmental Affairs Department
eCUP	Electric Central Utility Plant
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
FAA	Federal Aviation Administration
FAA Handbook	FAA Aviation Emissions and Air Quality Handbook version 4
FR	Federal Register
FY	Fiscal Year
GCD	General Conformity Determination
GSE	Ground Support Equipment
LFA	Lead Federal Agency
LTO	Landing and Takeoff Operation
MOVES5	MOtor Vehicle Emission Simulator Version 5
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
NSR	New Source Review
$\mu g/m^3$	Micrograms per Cubic Meter
Pb	Lead
PM_{10}	Particulate Matter Less Than 10 Microns in Diameter
$PM_{2.5}$	Particulate Matter Less Than 2.5 Microns
ppb	Parts per Billion
ppm	Parts per Million
RACM	Reasonably Available Control Measures
RACT	Reasonably Available Control Technologies
RFP	Reasonable Further Progress
SIP	State Implementation Plan
SO_2	Sulfur Dioxide

TAF	Terminal Area Forecast
TexN2.5	Texas NONROAD version 2.5
TCEQ	Texas Commission on Environmental Quality
TIP	Transportation Improvement Program
tpd	Short Tons per Day
tpy	Short Tons per Year
TRB	Transportation Research Board
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound

Executive Summary

Pursuant to the requirements of the National Environmental Policy Act, the Federal Aviation Administration (FAA) has prepared a Draft Environmental Assessment to assess the Runway 18L/36R Rehabilitation project (the "Proposed Action") at Dallas Fort Worth International Airport (DFW).

The Proposed Action is located in the Dallas-Fort Worth Air Quality Control Region (AQCR 215) nonattainment area for the ozone (O_3) national ambient air quality standard. Section 176(c) of the Clean Air Act, known as the General Conformity Rule [42 U.S. Code [USC] 7506(c)], requires federal actions in nonattainment areas conform to the purpose of the applicable State Implementation Plan (SIP). Federal actions occurring in a nonattainment or maintenance area that are not covered under the Clean Air Act Transportation Conformity rules must be evaluated under General Conformity. The General Conformity Rules are not applicable to certain federal actions, such as those that would result in no emissions increase or an increase that is clearly *de minimis,* actions where the emissions are not reasonably foreseeable, actions on a list of Presumed to Conform, and actions that implement a decision to conduct or carry out a conforming program. In addition, General Conformity determinations are not required for portions of actions that include major new or modified stationary sources that require a permit under the New Source Review program. The FAA has determined that the General Conformity Rules are applicable to the Runway 18L/36R Rehabilitation project. As this document shows, the project-related emissions would exceed the General Conformity Rule *de minimis* thresholds for O_3 precursors: volatile organic compounds (VOCs) and nitrogen oxides (NO_X); thus, a General Conformity Determination has been prepared for this Proposed Action.

This Draft General Conformity Determination documents the methods by which General Conformity was evaluated for the DFW Runway 18L/36R Rehabilitation project, in accordance with the Federally approved SIP. The current applicable SIP developed by the Texas Commission on Environmental Quality (TCEQ), is the *SIP Revision: Dallas-Fort Worth and Houston-Galveston-Brazoria Serious Classification Reasonable Further Progress (RFP) for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard [Project No. 2019-079-SIP-NR; 04 March 2020]*. .

The general methodology for developing the emission inventories are documented in the Construction Emissions and Operational Emissions Technical Reports, in **Appendix A**. **Table ES**.1 compares the total direct and indirect project-related emissions to the applicable *de minimis* thresholds under the current severe designation for the Dallas-Fort Worth Ozone Nonattainment Area. In accordance with the General Conformity Rule, a *de minimis* level has been established for each nonattainment and maintenance designation for the O_3 precursors: NO_X and VOCs. For the DFW region, that *de minimis* level is 25 tons per year (tpy) of each NOx and VOCs. The annual estimated emissions from the Proposed Action would exceed the *de minimis* thresholds of 25 tpy for NO_X in years 2026 and 2027; while the VOC *de minimis* threshold of 25 tpy would not be exceeded in either of the two years studied.

A General Conformity Determination is required when emissions are above the *de minimis* thresholds. Conformity under the General Conformity Rules can be demonstrated by the following approaches:

1) Conformity Approach A: A written determination from the state/local air quality agency stating that the emissions from the proposed action, together with all other emissions in the nonattainment or maintenance area would not exceed the emissions budget in the SIP.
2) Conformity Approach B: A written commitment from the Governor, or the Governor's designed for SIP actions, to include the emissions in a revised SIP (this automatically results in a call for a SIP revision).
3) Conformity Approach C: Offsetting or mitigating proposed action emissions so there is no net increase within the nonattainment or maintenance area.
4) Conformity Approach D: The applicable Metropolitan Planning Organization determines that the emissions from the project or portion of the project, are included in a conforming transportation plan and transportation improvement program.

Table ES.1 Proposed Action Total Direct and Indirect Project-Related Emissions Compared to General Conformity *De Minimis* Thresholds

Year	Project Activity	Pollutant Emissions (tons/yr)	
		NO_X	VOC
2026	On-Road (Construction)	7.83	0.72
	Non-Road (Construction and Aircraft)	36.67	17.39
	Total Project-related Emissions	**44.50**	**18.11**
	De Minimis Threshold	25.0	25.0
	Does Project-related Emissions Exceed *De Minimis*?	Yes	No
2027	On-Road (Construction)	5.22	0.48
	Non-Road (Construction and Aircraft)	37.16	15.66
	Total Project-related Emissions	**42.38**	**16.14**
	De Minimis Threshold	25.0	25.0
	Does Project-related Emissions Exceed *De Minimis*?	Yes	No

Sources: 40 Code of Federal Regulations (CFR) 93.153(b), HDR, 2025, and HMMH 2025.

DFW Airport staff met with TCEQ to review the Proposed Action and its expected emissions. During those coordination meetings, TCEQ noted the attainment year emissions inventories approved in the SIP (*Dallas-Fort Worth and Houston-Galveston-Brazoria Serious Classification RFP SIP Revision for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard [Project No. 2019-079-SIP-NR; 04 March 2020]*) as well as the quantification of overall excess creditable RFP emissions reductions available after meeting the milestone-year emissions reduction targets for NO_X and VOC and establishing motor vehicle emissions budgets for transportation conformity (40 CFR §93.101). To assess conformity to the SIP for the Proposed Action, TCEQ allocated the overall excess creditable RFP emissions reductions quantified in the applicable SIP according to source categories based on the RFP emissions reductions attributed to each source category. TCEQ compared emissions for the Proposed Action to those allocations. TCEQ confirmed that the maximum available excess emission reductions in the applicable SIP are 27.85 tpd for NOx and 17.10 tpd for VOC. This accounts for previously submitted federal actions that relied on 40 CFR §93.158(a)(5)(i)(a) to demonstrate conformity with the DFW 2008 Ozone NAAQS Serious RFP SIP.

As summarized in **Table ES-1**, project-related VOC emissions would not exceed the applicable *de minimis* threshold and therefore under the General Conformity rules, no further review is required for VOC emissions. Project-related NOx emissions would exceed the applicable *de minimis* threshold and are therefore subject to the General Conformity Rule and determination. In accordance with the Texas SIP, the annual projected-related emissions were translated into daily NOx emissions listed below:

- **2026**:
  - On-Road Emissions: 0.021 tpd NOx [*i.e., 7.83 tpy divided by 365 days per year*]
  - Non-Road Emissions: 0.100 tpd NOx [*i.e., 36.67 tpy divided by 365 days per year*]
- **2027**:
  - On-Road Emissions: 0.014 tpd NOx [*i.e., 5.22 tpy divided by 365 days per year]*
  - Non-Road Emissions: 0.102 tpd NOx [*i.e., 37.16 tpy divided by 365 days per year*]

On October 20, 2025, DFW and FAA submitted the Draft General Conformity Determination to TCEQ for review; on December 4, 2025, DFW and FAA resubmitted the revised Draft General Conformity Determination. On December 17, 2025, TCEQ provided a letter to FAA stating that TCEQ concurs that the Proposed Project conforms to the Texas SIP.

1. Introduction

Pursuant to the requirements of National Environmental Policy Act (NEPA), the Federal Aviation Administration (FAA), as the Lead Federal Agency (LFA), has overseen Dallas Fort Worth (DFW) International Airport's preparation of the Draft Environmental Assessment (EA) of potential environmental impacts associated with the proposed Runway 18L/36R Rehabilitation Project (Proposed Action) at DFW. The Proposed Action is located in the Dallas-Fort Worth Air Quality Control Region (AQCR 215) nonattainment area (NAA) for the ozone (O_3) National Ambient Air Quality Standard (NAAQS). Federal actions triggering NEPA review must be evaluated under federal Clean Air Act (CAA) conformity rules if located in a nonattainment or maintenance area.

The purpose of this Draft General Conformity Determination (GCD) and accompanying appendices is to present the supporting analysis and methodology for evaluating air emissions from the proposed Runway 18L/36R Rehabilitation project and demonstrate how the project conforms to the Texas State Implementation Plan (SIP).

The emissions inventory presented in this Draft GCD are the estimated project-related emissions in short tons per year (tpy) reflecting emissions to rehabilitate (construct) the runway and operate aircraft during the rehabilitation. The emissions inventory was prepared in accordance with the guidelines provided in FAA Order 1050.1G, *Environmental Impacts: Policies and Procedures*; FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*; and FAA's *Aviation Emissions and Air Quality Handbook Version 4*.

1.1 Purpose

The purpose of the proposed Runway 18L/36R Rehabilitation Project is to extend the runway's structural life and reduce operational impacts and maintenance costs.

1.2 Need

The proposed Runway 18L/36R Rehabilitation Project is needed to reinstate Runway 18L/36R to good condition and reduce the number of unplanned runway closures of this mission-critical asset. Furthermore, the Proposed Action is needed to update the runway and adjacent taxiways to meet the current FAA design standards and FAA Advisory Circular (AC) guidelines. Runway 18L/36R supports more than 40 percent of all departing aircraft operations at DFW. In 2023, Runway 18L/36R served more than 156,000 departure operations, representing approximately 46 percent of all departures at DFW. As air travel demand continues to grow, Runway 18L/36R is projected to support over 208,000 annual departure operations by 2038. Pavement Condition Index (PCI) surveys conducted in 2020 indicated that the original (1974) runway pavement was deteriorating and required rehabilitation to restore and preserve the asset.

1.3 Project Description

The Runway 18L/36R Rehabilitation Project includes the reconstruction and rehabilitation of select pavement panels, and the installation of an asphalt overlay that will provide a reliable operational surface and standard maintenance cycle that aligns with the previous runway rehabilitation projects. The Proposed Action consists of a closure of the runway from May 2026 through April 2027. During the period when the runway is closed, all aircraft operations would be moved from Runway 18L/36R to other DFW runways. This change in runway utilization operations will be temporary during construction. The proposed Runway 18L/36R Rehabilitation project will be completed in two phases listed below; the detailed project scope is included in **Section 3.1.2**.

Phase 1 includes contractor mobilization, setup of project support locations, night closures of Runway 18L/36R, the relocation of the Runway 36R threshold, and the partial demolition of Runway 36R Run-Up Area. The temporary relocated threshold would maintain a usable runway length of approximately 9,000 feet. Phase 1 is scheduled to start in May 2026 and finish in August 2026. ***Phase 2*** includes the closure of the entire runway, construction of additional project support locations, the demolition and reconstruction of the runway and connecting taxiways, and the rehabilitation of the Northwest Hold Pad (NWHP). Phase 2 would be scheduled to start in August 2026 and finish in April 2027.

2. Conformity Rules and Criteria

Section 176(c) of the CAA (42 United States Code (USC) 7506(C)), known as the General Conformity Rule, requires any entity of the federal government that engages in, supports, or in any way provides financial support for, licenses or permits, or approves any activity, to demonstrate that the action conforms to the applicable SIP required under Section 110(a) of the CAA (42 USC 7410(a)). In this context, conformity means federal actions must be "consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of those standards." Federal agencies, including FAA, must determine that any action proposed by the agency "conforms" to the applicable SIP by ensuring that the action does not:

- Cause or contribute to any new violations of any NAAQS;
- Increase the frequency or severity of any existing violations of any NAAQS;
- Delay the timely attainment of any NAAQS or any required interim emission reductions or other milestones.

Federal actions subject to conformity are divided into two categories: *Transportation Conformity* actions and *General Conformity* actions. The Transportation Conformity Regulations (40 CFR Part 51 and Part 93 Subpart A[1]) cover certain highway and transit surface transportation actions. General Conformity regulations (40 CFR Part 93 Subpart B)[2] cover all other federal actions in nonattainment and maintenance areas that are not covered by Transportation Conformity Regulations.

2.1 Transportation Conformity Requirements

As described in 40 CFR 51 and 93, issued by the U.S. Environmental Protection Agency (EPA), the Transportation Conformity Rule applies to highway or transit surface transportation projects that receive Federal funding or require a Federal decision/ approval. The Transportation Conformity Rule does not apply to the proposed Runway 18L/36L Rehabilitation Project because it is not a highway or transit project. However, because the Dallas-Fort Worth metropolitan area is designated as a nonattainment area, the Proposed Action must be evaluated under the General Conformity Rule.

2.2 General Conformity Requirements

Federal actions that are not covered under Transportation Conformity are evaluated under General Conformity, a stepwise process that contains the following elements:

1. Determining if the project is exempt (40 CFR 93.153(c)(2)).
2. Determining if the project is presumed to conform (72 Federal Register (FR) 41565).
3. Completion of an applicability analysis that compares the total direct and indirect project-related emissions to the regulation's *de minimis* thresholds.
4. Preparation of a general conformity determination for projects that exceed a *de minimis* threshold.

To streamline federal decisions and approvals for airport projects, the FAA has a list of actions that would result in minimal criteria air pollutant emissions and would not cause new violations of air quality standards or interfere with the maintenance of existing standards (conform to the applicable SIP). The FAA's list is known as the *Federal Presumed to Conform Actions Under General Conformity*.

2.3 General Conformity Applicability

General Conformity applies to any criteria pollutants for which an area is designated as nonattainment or maintenance. Per 40 CFR 93.102, an applicability analysis under General Conformity consists of preparing

[1] eCFR: 40 CFR Part 93 Subpart A -- Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 U.S.C. or the Federal Transit Laws.

[2] eCFR: 40 CFR Part 93 Subpart B -- Determining Conformity of General Federal Actions to State or Federal Implementation Plans.

an emissions inventory for all project-related direct and indirect emissions and comparing those results with the respective *de minimis* thresholds. The Dallas-Fort Worth metropolitan area Air Quality Control Region (AQCR 215) is designated as *Severe* nonattainment for O_3. Therefore, an inventory of total direct and indirect project-related emissions must be modeled and then compared to the applicable *de minimis* thresholds for O_3 precursors: NOx and VOCs. 40 CFR Part 93.159(d) notes that when comparing emissions to *de minimis* thresholds, the following requirements must be considered:

a. Emissions in the year of attainment or the farthest year for which emissions are projected in the maintenance plan.
b. The year in which the total of direct and indirect emissions from the action are expected to be the greatest on an annual basis.
c. Any year for which the SIP has an applicable emissions budget. If total direct and indirect project-related emissions in all of these scenarios are less than *de minimis*, no further analysis is needed. If total direct and indirect project-related emissions are above *de minimis*, a General Conformity Determination is required.

If the total annual project-related emissions are below the applicable *de minimis* thresholds for the reasonably foreseeable horizon, then all three requirements listed above are also met. If emissions in any of these years are above *de minimis,* a General Conformity Determination is required.

As described in 40 CFR Part 51 and 40 CFR Part 93, the General Conformity analysis evaluates both direct emissions and indirect emissions. Per 40 CFR § 93.152:

> "Direct emissions are those that occur at the same time and place as the Federal action. Indirect emissions are defined as emissions or precursors that are caused or initiated by the Federal action and originate in the same nonattainment or maintenance area but occur at a different time or place from the action, are reasonably foreseeable, that the agency can practically control, and for which the agency has continuing program responsibility."

The focus of the General Conformity analysis is on these direct and indirect project-related emissions during the proposed temporary construction and operational changes in 2026 and 2027.

2.4 State Implementation Plan

Per the General Conformity Rule, the applicable SIP for general conformity purposes is: "the portion (or portions) of the SIP or most recent revision thereof, which has been approved under section 110(k) of the Act … and which implements the relevant requirements of the Act." Per TCEQ[3], the *Dallas-Fort Worth Serious Classification Reasonable Further Progress (RFP) SIP Revision for the 2008 Eight-Hour O_3 National Ambient Air Quality Standard*, SIP Revision adopted by the TCEQ on 4 March 2020, approved by the EPA on 24 April 2023, and effective 24 May 2023, currently qualifies as applicable for General Conformity purposes in the Dallas-Fort Worth area designated as *Severe* nonattainment for the 2008 O_3 standard. TCEQ adopted and submitted an *Attainment Demonstration SIP Revision for the Dallas-Fort Worth, 2008 Eight-Hour Ozone Severe Area on April 24, 2024* and as of October 20, 2025, EPA has not yet approved the SIP Revisions.

[3] TCEQ, FAA, and DFW Coordination Meeting, September 23, 2025.

3. Description of Proposed Federal Action

This Draft GCD and the supporting construction and aircraft emissions analyses technical reports in **Appendix A** present an overview of the technical approach for the General Conformity analysis. This document was reviewed by the DFW Airport, FAA, TCEQ, and any other stakeholders designated by the FAA. The air quality analysis approach and technical methodologies for this Draft GCD received consensus from the applicable State and Federal agencies. The Alternatives analyzed in this Draft GCD include the No Action Alternative, and the two-phase Proposed Action Alternative (Phase 1-partial closure and relocation of the runway threshold; Phase 2- full closure of the runway).

3.1 No Action Alternative

Under the No Action Alternative, DFW would not implement the proposed Runway 18L/36R Rehabilitation Project; the project-related construction and operational emissions would not occur. The runway would continue to deteriorate and DFW would not be able to preserve the structural integrity of the runway. Furthermore, the potential for Foreign Object Debris (FOD) would increase which would impact safe airfield operations. The No Action Alternative does not meet the stated purpose and need for this project. The No Action Alternative itself is not subject to General Conformity. However, the quantification of emissions associated with the No Action enables the identification of the project-related emissions when the two alternatives are compared; the project-related emissions are determined by subtracting the emissions of the No Action from that of the Proposed Action Alternative.

3.2 Proposed Action Alternative

The Proposed Action Alternative includes the rehabilitation of Runway 18L/36R. It would consist of a closure of the runway from May 2026 through April 2027 during which time all aircraft operations would be moved from Runway 18L/36R to other DFW runways. **Figure 3.1** shows the general airport location and surroundings and Error! Reference source not found. shows the Proposed Action project phasing plan. The project-related change in runway utilization operations would be temporary, during the construction period only. The Proposed Action would be constructed in two phases: ***Phase 1,*** scheduled to start in May 2026 and finish in August 2026, and ***Phase 2*** scheduled to start in August 2026 and finish in April 2027. The Proposed Action includes the following scope items:

- Pavement rehabilitation and select panel replacement, joint seal, and spall repair
- Modification of the runway width from 200 feet to 150 feet
- Full-depth reconstruction of shoulder pavements to meet FAA AC 150/53000-13B Change 1 requirement
- Full-depth reconstruction of the blast pad to meet ADG VI runway design standards
- Application of 6-inch Hot Mix Asphalt (HMA) overlay
- Non-FAA and FAA Circuit rehabilitation
- Installation of Touchdown zone, centerline, and edge light emitting diode (LED) upgrades
- Replacement of manholes with junction can plazas
- Replacement of in-pavement can-lights, requisite signage, and temperature sensors
- Electrical box relocation (ADG-VI obstruction)
- Removal of old electrical infrastructure in the Southwest Holdpad (SWHP)
- Modification, relocation, and/or upgrade of FAA-owned NAVAIDS
    - Runway 18L/36R Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) systems: Approach light plane adjustment due to new runway surface/grading with new MALSR field equipment to be provided by the FAA for installation by DFW contractor as a target of opportunity collaboration. Work includes new underground infrastructure including foundations and electrical ductbank from MALSR shelter to light lane (Station 10+00) and between the threshold and Station 24+00. As part of this project, a new runway MALSR equipment shelter will be replaced as funds allow.

- Runway 18L/36R Precision Approach Path Indicator Lights (PAPI) systems: Due to the reduction in runway width, both PAPIs will be relocated closer to the runway requiring new underground infrastructure which includes foundations and electrical ductbank. Due to the new runway surface/grading, both PAPIs will require vertical adjustments of lamp housing assemblies due to new runway surface height.
- Runway 18L/36R Runway Status Light System (RWSLs) will be removed and replaced in-kind throughout the rehabilitated pavement areas for both runway and taxiway surfaces.
- Runway 18L/36R Glideslope (GS) systems shelter, antenna and tower – old facilities to be removed and replaced as funds allow.

- Utility improvements and rehabilitation of runway stormwater drainage including relocation of stormwater inlets
- Installation of runway hold position markings
- Rehabilitation of the Northwest Holdpad (NWHP)
- SWHP Taxiway Design Group (TDG) 6 fillet modifications
- Taxiway fillet modifications and select panel replacement of all taxiways and high-speed taxiway exits within the Runway 18L/36R Object Free Area (OFA)
- Demolition of taxiway pavement on Taxiway WK between Taxiways E and F, Taxiway G8 between Taxiways E and F, Taxiway WL between Taxiways E and F, and Taxiway F4 between Runway 18L/36R and Taxiway F
- Rehabilitation of Taxiway WF pavement south of taxiway centerline
- Construction of the Northwest End Around Taxiway (NW EAT) pavement stubs, north of Runway 18L within Runway Safety Area (RSA)
- Partial demolition of the Runway 36R run-up threshold
- Installation of no-taxi islands east and west of the Runway 18L and 36R thresholds
- Installation of the Runway 18L/36R Runway Weather Information System (RWIS) to effectively monitor pavement and weather conditions and support maintenance operations
- Final site-area grading, topsoil, seed/sod, and other erosion controls, as necessary (limits of grading, topsoil, and sodding to encompass areas beyond the inlets/drains to mitigate infield problem areas)
- Temporary lighting, signage, and pavement markings installation, as necessary, to support temporary taxiway routing during various phases of construction

3.3 Connected Actions

Connected actions per 40 CFR 1508.25, are actions,

> "… that are closely related and therefore should be discussed in the same impact statement. Actions are connected if they: (i) automatically trigger other actions which may require environmental impact statements, (ii) cannot or will not proceed unless other actions are taken previously or simultaneously, or (iii) are interdependent parts of a larger action and depend on the larger action for their justification."

DFW has looked at other actions that occur simultaneously as supporting actions to the Proposed Action or would occur near the Proposed Action, either before or immediately after. These connected actions include: Project support locations (PSLs) which include proposed staging areas, contractor yards, and batch plant sites for the Proposed Action construction (**Figure 3.3**).

3.4 Proposed Action Implementation Schedule

The proposed rehabilitation of Runway 18L/36R is anticipated to begin in May 2026 and be completed in April 2027. It is assumed that 60% of the construction activities would occur in 2026 and 40% of the construction activities would occur in 2027. There would be two main phases: shorten runway phase and full runway closure phase. The breakdown of the two phases by calendar year are shown in **Table 3.1**. The phases shown in **Table 3.1** are discussed in more detail in **Appendix A**.

Table 3.1 Project Construction Schedule

Phase, Year, and Activity	Estimated Start and End Dates	Duration (days)
Phase 1 - 2026: Mobilization and Shortened Runway	5/1/2026 to 8/13/2026	60 days
Phase 2 -2026: Full Runway Closure	8/14/2026 to 12/31/2026	140 days
Phase 2- 2027: Full Runway Closure	1/1/2027 to 4/30/2027	133 days

Source: DFW Airport Planning and DCC Departments 2025

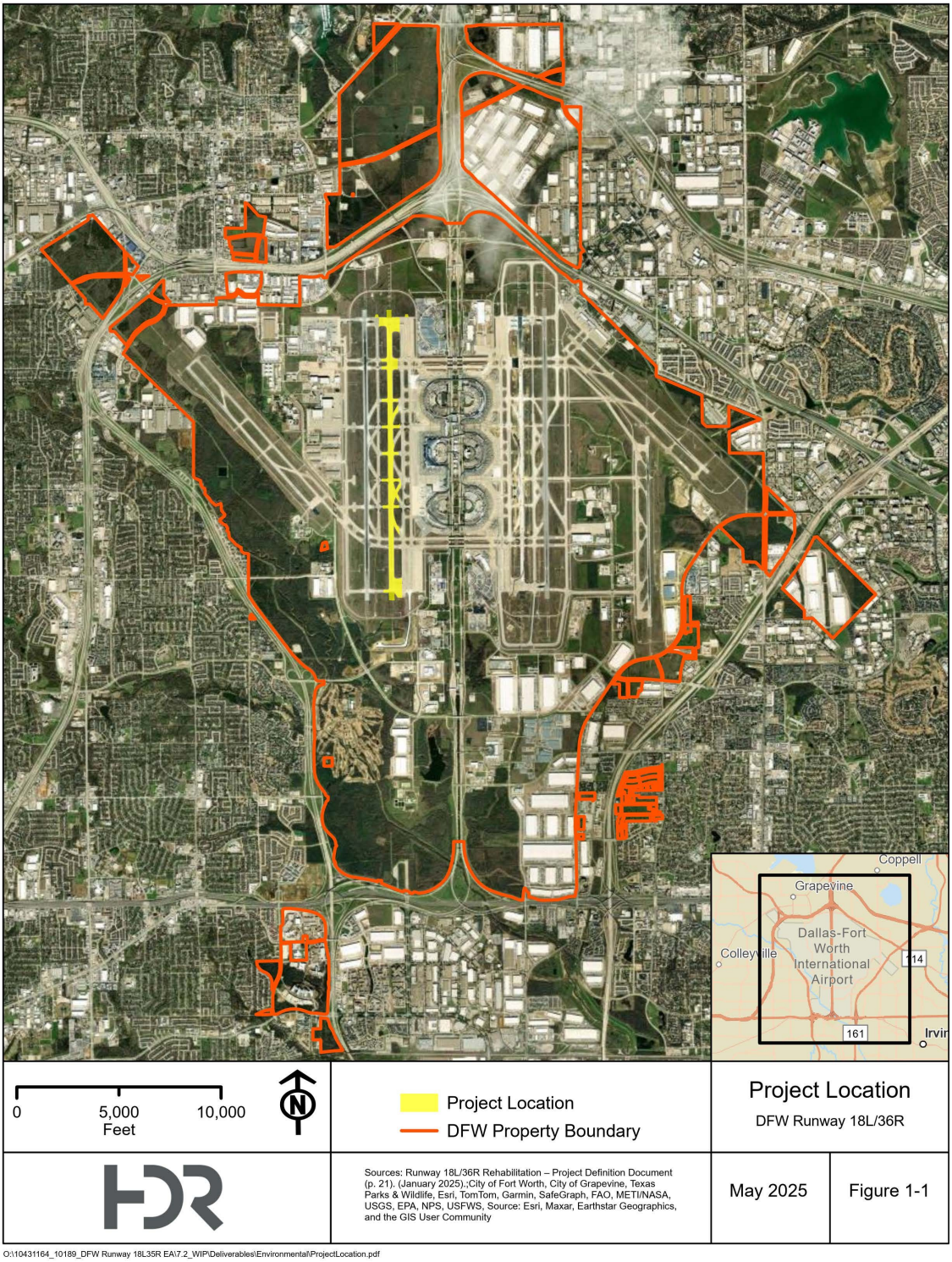

Figure 3.1 DFW General Location

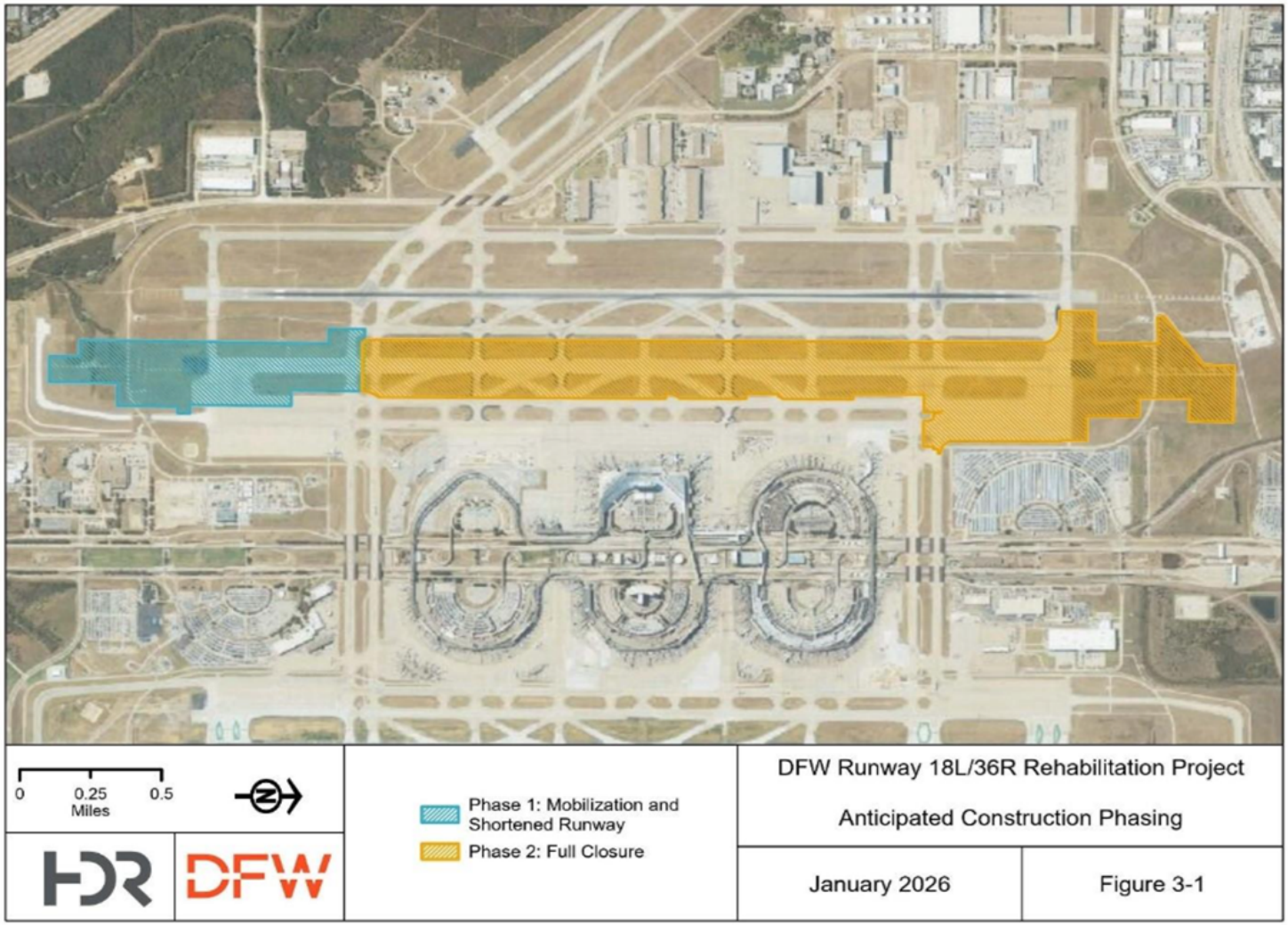

Figure 3.2 Runway 18L/36R Rehabilitation Project Construction Phasing

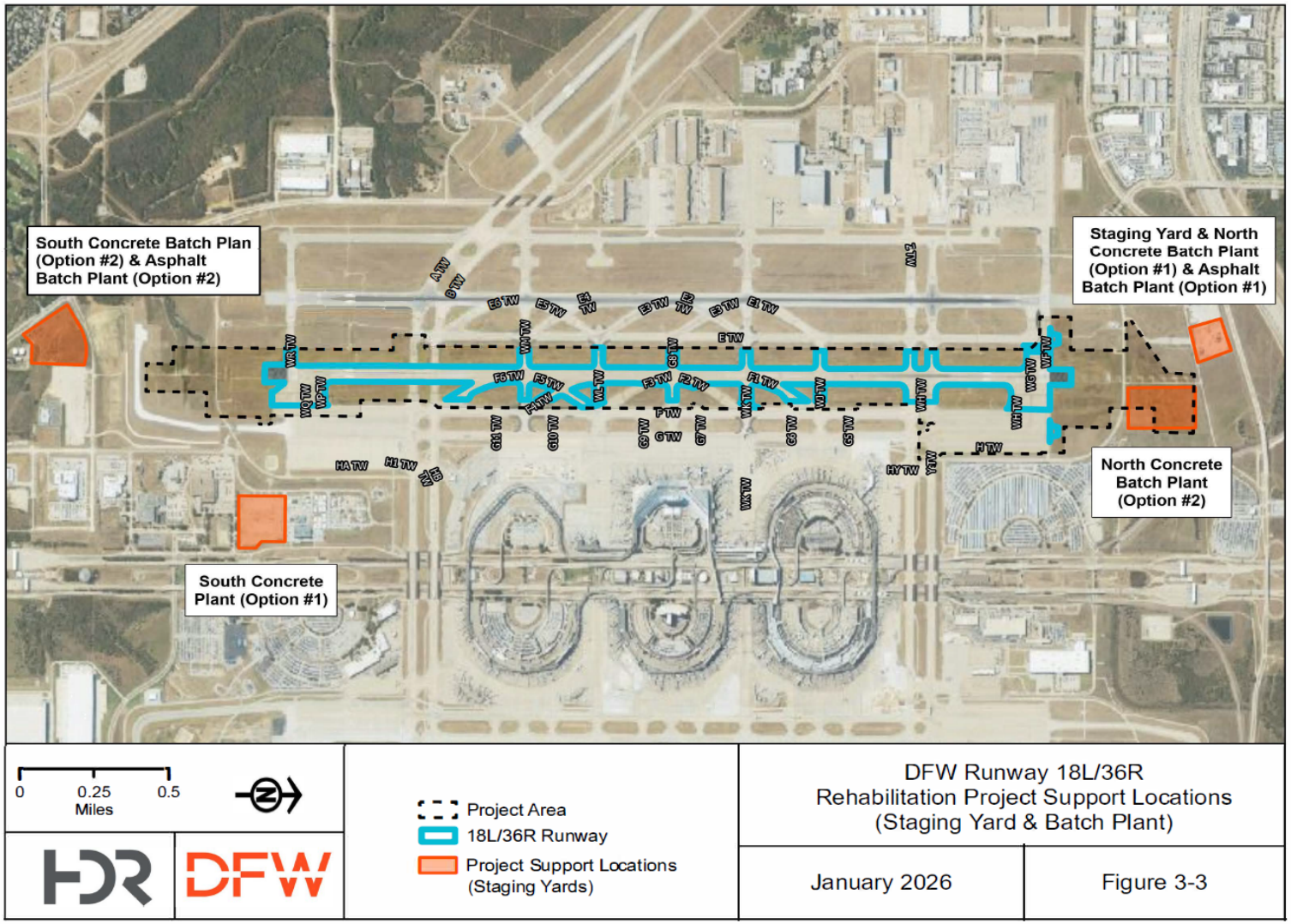

Figure 3-3. Runway 18L/36R Project Support Locations

4. General Conformity Applicability Analysis

As stated above, for the applicability analysis, the impacts to air quality due to the Proposed Action were evaluated under NEPA in accordance with the guidelines provided in the FAA *Aviation Emissions and Air Quality Handbook Version 4* (FAA Handbook); FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*; and FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*.

Criteria pollutant emissions associated with construction and operation of the Proposed Action in 2026 and 2027 were estimated for the applicability analysis. Proposed Action construction emission estimates were developed based on (i) construction equipment activity estimates for vehicles and non-road equipment, and project dimensions provided by DFW and based on the Airport Construction Emissions Inventory Tool ACEIT) and (ii) emission factors from the EPA Motor Vehicle Emission Simulator, version 5 (MOVES5) and EPA AP-42 guidance. The TCEQ Texas NONROAD version 2.5 (TexN2.5 Utility) model was used to estimate Texas-specific (at the county level) emissions from nonroad mobile sources. Proposed Action operational emission estimates were developed based on (i) aircraft, ground support equipment (GSE), auxiliary power unit (APU), and vehicle traffic activity estimates for the Proposed Action and No Action and (ii) FAA's Aviation Environmental Design Tool (AEDT) Version 3g. Net operational emissions were evaluated by comparing the Proposed Action and the No Action Alternative. The Proposed Action construction and operational emissions technical reports are included in **Appendix A.**

In performing the applicability analysis, resulting emissions from the Proposed Action are examined as required by 40 CFR 51 and 93 and once *de minimis* is exceeded, conformity with the SIP can be demonstrated the following ways:

1. A written determination from the state/local air quality agency stating that the emissions from the proposed action, together with all other emissions in the nonattainment or maintenance area would not exceed the emissions budget in the SIP.
2. A written commitment from the Governor, or the Governor's designed for SIP actions, to include the emissions in a revised SIP (this automatically results in a call for a SIP revision).
3. Offsetting or mitigating proposed action emissions so there is no net increase within the nonattainment or maintenance area.
4. The applicable Metropolitan Planning Organization (MPO) determines that the emissions from the project or portion of the project, are included in a conforming transportation plan and transportation improvement program.

4.1 Attainment Status of the Dallas-Fort Worth Area - Air Quality Control Region 215

The Dallas-Fort Worth metropolitan area has been designated as an attainment area for all EPA criteria pollutants except for O_3 based on air quality monitoring data collected by the TCEQ[4,5]. The Dallas-Fort Worth AQCR 215 ozone nonattainment area is shown in **Figure 4.1**. The current air quality design values and attainment statuses are shown in **Table 4.12**. The Dallas-Fort Worth metropolitan area is designated as a "*Severe*" nonattainment area for the 2008 8-hour, 0.075 parts per million (ppm) O_3 standard. The Dallas-Fort Worth metropolitan area is also designated as a "serious" nonattainment area under the 2015 8-hour, 0.070 ppm Ozone standard.

4.2 Exemptions from General Conformity Requirements

The General Conformity requirements apply to Federal actions in nonattainment or maintenance areas if the total criteria pollutant or precursor emissions would equal or exceed the *de minimis* thresholds, except for the exemptions under 40 CFR Part 93 Subpart B as summarized below[6]:

[4] TCEQ. 2022. Texas Air Monitoring Information System (TAMIS) Web Interface. Site List. Available online: https://www17.tceq.texas.gov/tamis/index.cfm?fuseaction=report.site_list. Accessed: August 2023.

[5] EPA. 2023. Design Value Interactive Tool. Available: https://www.epa.gov/air-trends/design-value-interactive-tool. Accessed: August 2023.

[6] EPA. 40 CFR Part 93 Subpart B. Available at: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-93/subpart-B.

- Actions, such as administrative actions and routine maintenance and repair, which would result in no emissions increase or an increase in emissions that is clearly below the *de minimis* threshold.
- Actions where the emissions are not reasonably foreseeable.
- The portion of an action that include major or minor stationary sources that require a permit under the New Source Review (NSR) program or the prevention of significant deterioration program.
- Actions in response to emergencies or natural disasters.
- Actions, such as air quality research and investigations, which would incur no environmental detriment.
- Actions that include alteration and addition of existing structures as required by environmental legislation or regulations.
- Actions that include direct emissions from remedial and removal measures carried out under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and other applicable regulations.

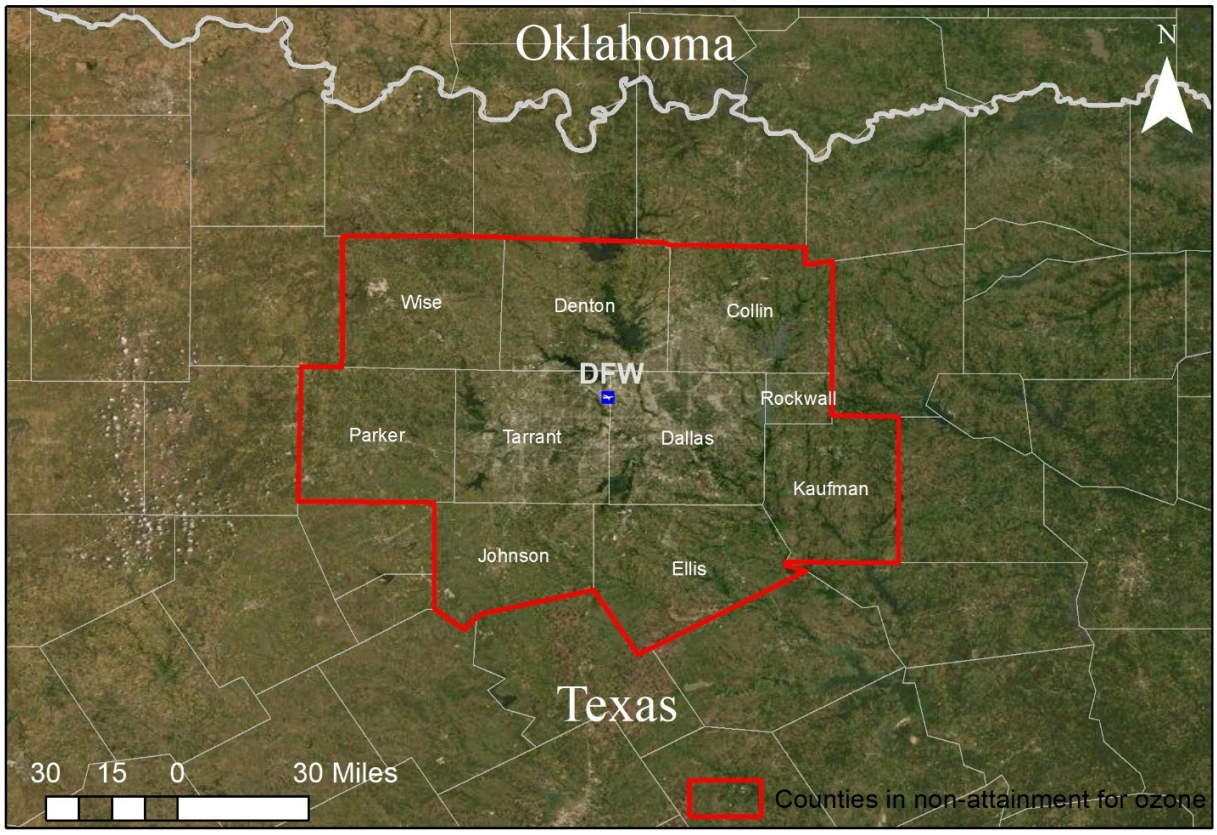

Figure 4.1 Location of DFW Airport within the Dallas Fort-Worth AQCR 215

The proposed Runway 18L/36R Rehabilitation Project includes pavement demolition, reconstruction and rehabilitation along with other infrastructure updates such as relocating stormwater inlets, replacing manholes, and improving utilities. The Proposed Action is not Presumed to Conform. Two (2) concrete batch plants and one (1) asphalt batch plant are included in the construction activities. Batch plants are stationary sources of air emissions permitted through the TCEQ NSR permit program. The NSR permit process would be completed and approved for each batch plant before construction begins. Emissions from permitted stationary sources are accounted for in the SIP and are therefore not included in the General Conformity analysis.

Table 4.12 Current Air Quality at Dallas-Fort Worth-Arlington, Texas

Pollutant	Federal Standard	Design Value	Monitoring Years	Current Status
Carbon Monoxide (CO)	9 ppm (8-hour)	1.3 ppm	2023-2024	Attainment[a]
	35 ppm (1-hour)	3.7 ppm	2023-2024	Attainment
Lead (Pb)	0.15 µg/m^3 (3-month)	0.08 µg/m^3	2022-2024	Attainment
Nitrogen Dioxide (NO_2)	53 ppb (annual)	9 ppb	2024	Attainment
	100 ppb (1-hour)	48 ppb	2022-2024	Attainment
Ozone (O_3)	0.070 ppm (8-hour)	0.083 ppm	2022-2024	Severe Nonattainment[b] (2008 Standard)
Fine Particulate Matter ($PM_{2.5}$)	15 µg/m^3 (annual)	10.1 µg/m^3	2022-2024	Attainment
	35 µg/m^3 (24h primary)	25 µg/m^3	2022-2024	Attainment
Coarse Particulate Matter (PM_{10})	150 µg/m^3 (24-hour)	N.A.[c]	N.A.	Attainment
Sulfur Dioxide (SO_2)	75 ppb (1-hour)	15 ppb	2022-2024	Attainment
	0.5 ppm (3-hour)	N.A.	N.A.	Attainment

Source**:** EPA 2025 and EPA 2022.

Notes:
ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter
$PM_{2.5}$ = particulate matter with a diameter less than 2.5 micrometers (µm); PM_{10} = particulate matter with a diameter less than 10 micrometers (µm)
[a] An attainment area is a geographic area that meets or does better than the primary standard defined in the NAAQS.
[b] A nonattainment area is a homogeneous geographical area (usually referred to as an air quality control region) that is in violation of one or more NAAQS and has been designated as nonattainment by the EPA.
[c] N.A.= Not available; no design value is available for the monitoring location. An area with no design value available is automatically in attainment since design values are used to classify nonattainment areas.
EPA Design Value Interactive Tool. Available: https://www.epa.gov/air-trends/design-value-interactive-tool.

4.3 De minimis Thresholds

The General Conformity regulations, under Section 176(c) of the CAA, dictate the process federal agencies use to demonstrate how their actions will not interfere with the prevention and control of air pollution within states' and tribes' nonattainment and maintenance areas for timely attainment of the NAAQS. In accordance with General Conformity regulations, the maximum annual potential Project emissions were compared against *de minimis* thresholds for NOx and VOCs (see **Table 4.3**). As of October 2025, the Dallas-Fort Worth nonattainment area is designated as a "*Severe*" O_3 nonattainment area for the 2008 8-hour O_3 standard; therefore, the 25 tpy *de minimis* threshold for either VOCs or NOx applies.

Table 4.3 General Conformity *De Minimis* Thresholds for Nonattainment Areas

Pollutant	*De Minimis* Threshold[7] (tons/year)
O_3 (VOCs or NOx):	
Serious NAA's	*50*
Severe NAA's	*25*
Extreme NAA's	*10*
Other O_3 NAA's outside an O_3 transport region	*100*
Other O_3 NAA's outside an O_3 transport region:	
VOC	*50*
NOx	*100*
Carbon Monoxide: All maintenance areas	100
SO_2 or NO_2: All NAA's	100
PM_{10}:	
Moderate NAA's	*100*
Serious NAA's	*70*
$PM_{2.5}$ (direct emissions, SO_2, NOx, VOC, and Ammonia):	
Moderate NAA's	*100*
Serious NAA's	*70*
Pb: All NAA's	25

Source: 40 CFR Part 93.153(b)

[7] EPA *de minimis* thresholds are available at https://www.epa.gov/general-conformity/de-minimis-tables. Accessed: August 2023.

5. Applicability Analysis for the Proposed Federal Action

The Dallas-Fort Worth metroplex is classified as a Severe NAA under the 2008 eight-hour Ozone standard, and the resulting *de minimis* level is 25 tons per year (tpy) for NOx or VOCs. The emissions associated with DFW operations have been quantified by TCEQ as part of the SIP development and approval process (TCEQ 2015). This General Conformity Determination evaluates ozone precursor emissions (NOx and VOC), because the Dallas-Fort Worth area is only designated as nonattainment for ozone. In preparing the applicability analysis, two key types of emissions are included: direct (construction of the Proposed Action) and indirect (operation of the facilities once completed). The total direct and indirect project-related emissions is then compared to the applicable *de minimis* threshold for the purposes of determining if a General Conformity Determination is required.

Per the General Conformity Rule, the technical analysis for projects in the Dallas-Fort Worth ozone nonattainment area are:

- Quantification of NOx and VOC emissions during construction
- Quantification of NOx and VOC emissions resulting from project-related changes in aircraft operations
- Comparison of annual project-related emissions to the *Severe* nonattainment area *de minimis* thresholds[8]

Construction and operational emissions inventories associated with temporary construction activities and changes in runway utilization are discussed in **Section 4.1** and **Section 4.2**. Air dispersion modeling is not anticipated. The general methodology for developing the Proposed Action's construction and operational emission inventories are summarized in **Appendix A**. Additionally, on Tuesday September 23, 2025, TCEQ and FAA met together with DFW team members and TCEQ concurred with utilizing the General Conformity previously developed for recent DFW airport projects. Therefore, the emissions inventories and General Conformity evaluation have been prepared in accordance with the *DFW Airport General Conformity Protocol Documents* reviewed and accepted by TCEQ for recent DFW airport projects (in 2023 and 2024).

5.1 Sources of Emissions

In general, sources of airport air emissions include construction equipment, motor vehicles (employees and passenger vehicles, airport fleet, etc.), heating and cooling systems, aircraft taxiing, ground support equipment (GSE), and auxiliary power units (APU).

Emissions from the proposed Runway 18L/36R Project are expected to include emissions from construction equipment, motor vehicles (employee trips and material delivery), construction site disturbance (fugitive dust), aircraft taxi-in and taxi-out, GSE, and APU. Both construction emissions and operational emissions are subject to the CAA General Conformity requirements.

5.2 Construction Emissions Analysis

The Proposed Action would result in temporary air quality effects during the demolition and construction activities. The Proposed Action construction emissions were analyzed for anticipated construction years 2026 and 2027. Generally, construction activities would involve heavy-duty construction equipment, haul truck trips, and vehicle trips made by construction workers and vendors traveling to and from the project site. NO_X and VOCs (O_3 precursors) are generated by project-related construction activities, such as asphalt drying and mobile source exhaust. Construction emissions depend on the activity levels of on-road mobile and off-road source categories; therefore, both are included in this analysis. Mobile source exhaust and fugitive dust emissions would be generated from on-road vehicles and construction equipment, including but not limited to dump trucks, mixers, passenger vehicles, flatbed trucks, and tractor trailers. Fugitive VOC emissions would be generated by asphalt drying.

[8] EPA. General Conformity De Minimis Tables. Available at: https://www.epa.gov/general-conformity/de-minimis-tables.

A construction emissions inventory was prepared in accordance with the requirements outlined in the latest *FAA Air Quality Handbook and Guidance Document* (version 4), which provides both regulatory context and technical direction for completing airport-related air quality impact assessments. Construction emissions were modeled using TexN2.5 Utility and MOVES5.

Table 5.1 presents the estimated NOx and VOC emissions associated with all construction elements of the Proposed Action by emissions source and year. The details of the construction emissions inventory are provided in **Appendix A**. As shown in **Table 5.1**, the estimated maximum annual emissions associated with the construction of the Proposed Action would be well below the *Severe* nonattainment ozone *de minimis* threshold of 25 tpy for NO_X or VOC. Concrete and Hot-Mix Asphalt batch plants would be necessary to support the construction of the Proposed Action. The batch plants would be authorized under the TCEQ NSR permitting program and are therefore not evaluated under the General Conformity requirements (40 CFR 93.153 (d)(1)).

Table 5.1 Project-Related Construction Emissions Inventory

Project Year and Emissions Source	Construction Emissions (tpy)	
	NOx	VOCs
2026 Non-Road	7.83	0.72
2026 On-Road	6.41	3.41
Asphalt Fugitives	-	2.54
2026 Total Emissions	**14.24**	**6.67**
2027 Non-Road	5.22	0.48
2027 On-Road	4.27	2.27
Asphalt Fugitives	-	1.70
2027 Total Emissions	**9.49**	**4.45**

Source: HDR, 2025

5.3 Operational (Aircraft) Emissions Analysis

To identify potential operational air emissions from the Proposed Action, an emissions inventory was prepared using FAA's AEDT 3g. The Proposed Action is expected to result in changes in aircraft operational emissions as a result of temporary changes in runway utilization and aircraft taxi times during construction. Also, during construction, Runway 18L/36R will be temporarily closed for an extended time; as such, departing aircraft would need to use other DFW runways, thus slightly changing the taxiing times and fuel-burn. The operational emissions from aircraft for the No Action and Proposed Action Alternatives were evaluated for years 2026 and 2027. The operational emissions inventory for the No Action Alternative are summarized in **Table 5.2** and the total airport operational emissions, inclusive of the Proposed Action, are summarized in **Table 5.3.** Aircraft emissions during the Proposed Action are expected to increase when compared to the No Action Alternative. However, GSE and APUs are projected to stay the same when comparing the emissions under the No Action and the Proposed Action Alternatives. **Table 5.4** presents the net project-related operational emissions (see **Appendix A** for the detailed operational emissions analysis).

Table 5.2 No Action Alternative Estimated Operational Emissions

Year	Operational Category	Pollutant (tons per year)	
		NO_x	VOC
2026	Aircraft	4,580.71	501.73
	GSE LTO	32.57	24.58
	APU	131.40	9.99
	Total	**4,744.68**	**536.30**
2027	Aircraft	4,713.17	508.72
	GSE LTO	28.63	21.17
	APU	133.23	10.34
	Total	**4,875.03**	**540.23**

Source: HMMH, 2025

Table 5.3 Total Airport Operational Emissions including the Proposed Action Alternative's Estimated Operational Emissions

Year	Operational Category	Pollutant (tons per year)	
		NO_x	VOC
2026	Aircraft	4,610.97	513.17
	GSE LTO	32.57	24.58
	APU	131.40	9.99
	Total	**4,774.94**	**547.73**
2027	Aircraft	4,746.06	520.40
	GSE LTO	28.63	21.17
	APU	133.23	10.34
	Total	**4,907.92**	**551.91**

Source: HMMH, 2025

Table 5.4 Project-Related Operational Emissions Inventory[9]

Year	Alternative	Pollutant (tons per year)	
		NO_x	VOC
2026	Total Airport Operations including the Proposed Action	4,774.94	547.73
	No Action Alternative	4,744.68	536.29
	Net Change (Proposed Action Ops Emissions)	**30.26**	**11.44**
2027	Total Airport Operations including the Proposed Action	4,907.92	551.91
	No Action Alternative	4,875.03	540.22
	Net Change (Proposed Action Ops Emissions)	**32.89**	**11.69**

Source: HMMH 2025

[9] Emissions totals represent the net operational emissions (i.e., Proposed Action minus No Action operational emissions).

5.4 Total Project-related Emissions

As shown in **Table 5.5**, in 2026, the project-related construction and aircraft operations would result in approximately 44.50 tons of NO_X emissions and 18.11 tons of VOC emissions. In 2027, the construction and aircraft operations would result in approximately 42.38 tons of NO_X emissions and 16.14 tons VOC emissions.

Table 5.5 Estimated Total Proposed Action Construction and Operational Emissions

Calendar Year	Emissions Category	NO_x (tpy)	VOC (tpy)
2026	On-Road	7.83	0.72
	Non-Road	6.41	3.41
	Fugitives	-	2.54
	Aircraft	30.26	11.44
	Total	**44.50**	**18.11**
2027	On-Road	5.22	0.48
	Non-Road	4.27	2.27
	Fugitives	-	1.70
	Aircraft	32.89	11.69
	Total	**42.38**	**16.14**

Source: HDR, 2025 and HMMH, 2025

5.5 Comparison to the de minimis Thresholds

As previously stated, the Dallas-Fort Worth metropolitan area is designated as "severe" nonattainment for the 2008 8-hour O_3 standard, and the resulting *de minimis* thresholds is 25 tpy for each ozone-precursor pollutant: NO_X or VOCs. As shown in **Table 5.6,** the Proposed Action-related emissions were compared to the applicable *de minimis* threshold. As is noted in **Table 5.6**, peak year of project-related emissions would expected to be 44.50 tons of NOx in 2026. While the *de minimis* threshold for VOC would not be expected to be exceeded in the reasonably foreseeable horizon, the *de minimis* threshold for NOx would be exceeded beginning in year 2026. Thus, a General Conformity Determination is required for NOx.

The combined direct and indirect project-related NO_X emissions from the Proposed Action are expected to exceed the *de minimis* thresholds for 2026 and 2027, which triggers the need for a General Conformity Determination for NO_X. The detailed construction and operational emissions inventories are reported in the September 2025 Air Quality Assessment Technical Report, included in **Appendix A**. **Table 5.6** below compares net project-related emissions to the applicable *de minimis* thresholds.

Table 5.6 Net Project-Related Emissions

Year	Source	NO_X (tpy)	VOCs (tpy)
2026	Total Construction and Operational Emissions	44.50	18.11
	De Minimis Threshold	25.0	25.0
	Does Project-related Emissions Exceed *De Minimis*?	**Yes**	**No**
2027	Total Construction and Operational Emissions	42.38	16.14
	De Minimis Threshold	25.0	25.0
	Does Project-related Emissions Exceed *De Minimis*?	**Yes**	**No**

Source: HMMH, 2025 and HDR, 2025

6. Draft General Conformity Determination

As discussed in **Section 5.4.**, the air emissions associated with the proposed Runway 18L/36R Rehabilitation Project would exceed the applicable *de minimis* threshold for NOx; therefore, a General Conformity Determination is required. This section discusses the approach and methods used to evaluate the Proposed Action and demonstrate conformity with the current SIP.

6.1 Designation of Applicable SIP

The applicable SIP for general conformity purposes in the Dallas-Fort Worth ozone nonattainment area is the *Dallas-Fort Worth Serious Classification RFP SIP Revision for the 2008 Eight-Hour O_3 NAAQS*, SIP Revision adopted by the TCEQ on 4 March 2020, approved by the EPA on 24 April 2023, and effective 24 May (also referred to as the 2020 *Serious* RFP SIP Revision *Project No. 2019-079-SIP-NR; 04 March 2020*). TCEQ adopted and submitted an *Attainment Demonstration SIP Revision for the Dallas-Fort Worth, 2008 Eight-Hour Ozone Severe Area on April 24, 2024* and; as of October 20, 2025, EPA has not yet approved the SIP Revisions.

6.2 Comparison to the Applicable SIP for General Conformity

DFW Airport staff met with TCEQ to review the Proposed Action estimated emissions. During those coordination meetings, TCEQ noted the attainment year emissions inventories approved in the 2020 *Serious* RFP SIP as well as the quantification of overall excess creditable RFP emissions reductions available after meeting the milestone-year emissions reduction targets for NOx and VOC and establishing motor vehicle emissions budgets (MVEB) for transportation conformity (40 CFR §93.101).

To assess the Proposed Action's conformity to the SIP, TCEQ will allocate the overall excess creditable RFP emissions reductions quantified in the applicable SIP according to source categories based on the RFP emissions reductions attributed to each source category and accounting for previously proposed federal actions that relied on the current applicable SIP revision to demonstrate conformity. TCEQ will compare emissions for the Proposed Action to those allocations. TCEQ confirmed that the maximum available excess emission reductions in the applicable SIP are 27.85 tpd for NOx and 17.10 tpd for VOC. This accounts for previously submitted federal actions that relied on 40 CFR §93.158(a)(5)(i)(a) to demonstrate conformity with the DFW 2008 Ozone NAAQS Serious RFP SIP Revision.

To identify whether the Proposed Action-related emissions are less than the 2020 *Serious* RFP SIP excess emissions, the total project-related NO_X emissions in tpy were converted to an average annual day in tpd. VOC emissions are not included in the conformity determination because the project-related VOC emissions are well below the *de minimis* threshold. **Table 6.1** shows the average annual day's NO_X emissions associated with the Proposed Action. To calculate the average daily pollutant emissions, annual emissions were divided by 365 days for example: *36.67 tpy divided by 365 days per year* equals 0.100 tpd. **Table 6.1** also compares the average annual day pollutant emissions to the available excess creditable RFP emission reductions. The total direct and indirect project-related NO_X and VOC emissions were compared to the excess emissions for all years. The Proposed Action would exceed applicable *de minimis* thresholds for NO_X in 2025 through 2036 and for VOCs in 2031 through 2036. Based on the comparison, the Proposed Action-related non-road and on-road emissions are less than the 2020 *Serious* RFP SIP excess emissions for the respective source category emissions.

Table 6.1 Project-Related NO_x Emissions

Source of Project Emissions	Total Emissions		Available Excess Creditable RFP Emissions Reductions (tpd)
	Annual Emissions (tpy)	Daily Emissions (tpd)	
2026			
Non-Road Mobile Sources	36.67	0.100	27.85
On-Road Mobile Sources	7.83	0.021	

Source of Project Emissions	Total Emissions		Available Excess Creditable RFP Emissions Reductions (tpd)
	Annual Emissions (tpy)	Daily Emissions (tpd)	
2027			
Non-Road Mobile Sources	37.16	0.102	17.10
On-Road Mobile Sources	5.22	0.014	

Source: HDR 2025, HMMH 2025, and TCEQ 2025

Notes: The current applicable SIP is the 2020 Dallas-Fort Worth *Serious* RFP SIP Revision under the 2008 NAAQS. Currently available excess emissions reductions for general conformity use under 2020 Dallas-Fort Worth *Serious* RFP SIP revision are: 27.85 tpd NOX (10,166.35 tpy) and 17.10 tpd VOC (6,240.90 tpy). This accounts for previously submitted federal actions that relied on 40 CFR §93.158(a)(5)(i)(a) to demonstrate conformity with the DFW 2008 Ozone NAAQS Serious RFP SIP Revision

- 2026: On-Road Emissions: 7.83 tpy divided by 365 days per year = 0.021 tpd NOx.
- 2026 Non-Road Emissions: 36.67 tpy divided by 365 days per year = 0.100 tpd NOx
- 2027 On-Road Emissions: 5.22 tpy divided by 365 days per year = 0.014 tpd NOx
- 2027 Non-Road Emissions: 37.16 tpy divided by 365 days per year = 0.102 tpd NOx

6.3 Comparison to the NAAQS

Conformity means that a proposed federal action will: (1) not cause or contribute to any new violation of any NAAQS; (2) not increase the frequency or severity of any existing violation of any NAAQS; and (3) not delay timely attainment of any NAAQS or any required interim emissions reductions or other milestones (42 USC 7506(c)(1)(B)).

General conformity regulations (40 CFR 93.158(a)(3) and 40 CFR 93.158(a)(4)(i)) allow the use of local and/or area-wide air quality modeling results to demonstrate that conformity requirements are met in support of a General Conformity Determination. Project-related construction and operational emissions were modeled using MOVES5, TexN2.5, and AEDT 3G, and the emissions inventory results indicated that there could be a *de minimis* exceedance for the ozone precursor NOx, in both 2026 and 2027. The project-related VOC emissions would not exceed the *de minimis* threshold.

6.4 Consistency with Requirements and Milestones in the Applicable SIP

The General Conformity Regulations state that, notwithstanding the other requirements of the rule, a Proposed Action may not be determined to conform unless the total of direct and indirect emissions from the action complies or is consistent with all relevant requirements and milestones in the applicable SIP (40 CFR 93.158(c)). This includes but is not limited to such issues as reasonable further progress schedules, assumptions specified in the attainment or maintenance demonstration, prohibitions, numerical emission limits, and work practice standards. This section briefly addresses how the Proposed Action was assessed for SIP consistency for this evaluation.

6.4.1 Applicable Requirements from the EPA

The EPA has promulgated and will continue to promulgate numerous requirements to support the goals of the CAA, with respect to the NAAQS. Typically, these requirements take the form of rules regulating emissions from significant new sources, including emissions standards for major stationary point sources and classes of mobile sources, and permitting requirements for new major stationary point sources. Since states have the primary responsibility for implementation and enforcement of requirements under the CAA and can impose stricter limitations than the EPA, the EPA requirements often serve as guidance to the states in formulating their air quality management strategies.

6.4.2 Consistency with Applicable Requirements

In operating the airport, the DFW Airport Board already complies with, and will continue to comply with the rules and regulations implemented and enforced by federal, state, regional, and local agencies to protect and enhance ambient air quality in the AQCR 215. DFW Airport will continue to comply with all existing

applicable air quality regulatory requirements for activities over which it has direct control and will meet, in a timely manner, all regulatory requirements that become applicable in the future. Likewise, DFW Airport actively encourages all tenants and users of its facilities to comply with applicable federal, state, and local air quality requirements.

6.5 Conclusions

Within areas designated nonattainment or maintenance for any of the NAAQS, the CAA requires that federal agencies ensure that their actions conform to the applicable SIP. The requirements for determining conformity to SIPs, including preparing air emission inventories are detailed in 40 CFR 51 and 40 CFR 93. In accordance with Section 176(c) of the CAA, the FAA has assessed whether pollutant and pollutant-precursor emissions (in this case NO_x or VOCs) that would result from the FAA's actions with respect to the Proposed Action are in conformance with the SIP.

The emission estimates in this Draft GCD were prepared using the latest project-planning assumptions, the most accurate emission estimation techniques, and based on the applicable air quality models, databases, and other requirements specified in the most recent version of the *EPA's Guideline on Air Quality Models*, including supplements. Based on the emissions modeling and the results of the evaluation, the total project-related emissions of NO_X are accounted for in the excess creditable RFP emissions reductions available after meeting the milestone-year emissions reduction targets for NO_X and VOC, establishing MVEB for transportation conformity (40 CFR §93.101), and after considering previously proposed federal actions that relied on the current applicable SIP revision to demonstrate conformity.

The Draft GCD will be published concurrently with the Draft EA to provide interested members of the public and agencies to comment on the Draft NEPA and General Conformity documentation. While the Draft EA and the Draft GCD are evaluating the same Proposed Action, these documents are being prepared to satisfy the requirements of NEPA and the CAA, respectively. The conformity status of a federal action automatically lapses after a period of five years (from the date a Final General Conformity Determination is reported) unless the federal action has been completed or a continuous program has been commenced to implement the federal action within a reasonable time. Additionally, if, after the Final General Conformity Determination is made, the federal action is changed so that there is an increase in the total direct or indirect project-related emissions, above the *de minimis* levels, a new General Conformity Determination would be required.

On October 20, 2025, DFW and FAA submitted the Draft General Conformity Determination and estimated project emissions to TCEQ for review. On December 4, 2025 DFW and FAA resubmitted the revised Draft General Conformity Determination. TCEQ reviewed the Draft General Conformity Determination and supporting data showing that the Proposed Action would result in NOx emissions exceeding the 25 tpy *de minimis* threshold in 2026 and 2027. TCEQ compared the estimated project-related emissions with the overall excess creditable reasonable further progress (RFP) emissions reductions in the applicable SIP revision that would be available after (i) meeting the 2020 RFP emissions reduction target, (ii) establishing a motor vehicle emissions budget safety margin for transportation conformity (40 CFR §93.101), and (iii) accounting for previously proposed federal actions that relied on the current applicable SIP revision to demonstrate conformity. TCEQ confirmed that the maximum available excess emission reductions in the applicable SIP are 27.85 tons per day (tpd) for NOx and 17.10 tpd for VOCs (see **Table 6.1**). In a letter to FAA, dated December 17, 2025, TCEQ issued written concurrence stating that the emissions from the proposed action, together with all other emissions in the nonattainment or maintenance area would not exceed the emissions budget in the SIP. TCEQ's concurrence letter stating that the proposed Runway 18L/36R Rehabilitation project conforms to the Texas SIP is included in **Appendix C.**

7. Public and Agency Participation

The General Conformity Regulation (40 CFR Part 93.156) has a requirement for public participation that is similar to the NEPA process. Section 93.156 (b) states:

> *A federal agency must make public its draft conformity determination under Section 93.158 by placing a notice by prominent advertisement in a daily newspaper of general circulation in the area affected by the action and by providing 30 days for written public comment prior to taking any formal action on the determination. This comment period may be concurrent with any other public involvement, such as occurs in the NEPA process.*

FAA and DFW have committed to publishing the Draft General Conformity Determination concurrently with the Draft EA and will provide adequate time for the public to review and submit written comments prior to taking formal action on the determination.

Section 93.155 (Reporting Requirements) states:

> *(a) A federal agency making a conformity determination under Sec. 93.158 must provide to the appropriate EPA Regional Office(s), State and local air quality agencies and, where applicable, affected Federal land managers, the agency designated under section 174 of the Act and the MPO a 30-day notice which describes the proposed action and the federal agency's draft conformity determination on the action.*
>
> *(b) A Federal agency must notify the appropriate EPA Regional Office(s), State and local air quality agencies and, where applicable, affected federal land managers, the agency designated under Section 174 of the Clean Air Act and the MPO within 30 days after making a final conformity determination under Sec. 93.158.*

To meet these requirements, the Draft General Conformity Determination will be included as an appendix to the Draft EA. A public notice of availability of the Draft EA and determination will be published in the following local publications: *Dallas Morning News, Fort Worth Star Telegram, Fort Worth Report* (if they publish notices), and *Al Día*. This notification will mark the beginning of the public review and comment period (**Appendix B**).

Additionally, the Draft EA, with the Draft General Conformity Determination may be sent to the EPA Region 6 Office, and TCEQ. The General Conformity Rules (40 CFR 93.155) require notifying federal land managers of Class 1 lands within 100 km of the determination. There are currently no federal Class 1 lands within 100 kilometers of the Proposed Action project and study area.

8. List of Preparers

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APPENDIX A: AIR QUALITY TECHNICAL REPORT

- Appendix A1: Construction Emissions Analysis Summary
- Appendix A2: Aircraft Emissions Analysis Memo

Appendix A1: DRAFT DFW Runway 18L/36R Rehabilitation Project Construction Emissions Summary

August 2025

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Executive Summary

This technical report provides an assessment of the construction air quality impacts associated with the Runway 18L/36R Rehabilitation Project (proposed action) at Dallas Fort Worth International Airport (the Airport or DFW). The proposed project consists of airside improvements to Runway 18L/36R that would involve demolition of existing taxiway pavement, installation of an asphalt overlay and no-taxi islands, utility improvements, and rehabilitation of runway stormwater drainage.

HDR evaluated impacts to air quality due to the proposed project for National Environmental Policy Act (NEPA) purposes in accordance with the guidelines provided in the Federal Aviation Administration (FAA) Aviation Emissions and Air Quality Handbook Version 4 (FAA Handbook); FAA Order 5050.4B: *NEPA Implementing Instructions for Airport Actions*; FAA Order 1050.1G: *NEPA Implementing Procedures*, and FAA Order 1050.1 *Desk Reference, Environmental Impacts: Policies and Procedures*.

HDR estimated criteria air pollutant (CAP) emissions associated with construction of the proposed project during the years 2026 and 2027. Proposed project construction emission estimates were developed based on 1) activity estimates for vehicle, nonroad equipment, and fugitive dust provided by DFW and 2) emission factors from the United States Environmental Protection Agency (USEPA) Motor Vehicle Emission Simulator (MOVES5), Texas Commission on Environmental Quality (TCEQ) TexN2.5, and USEPA AP-42 guidance.

HDR evaluated the proposed project's significance with respect to air pollutant emissions by comparing the estimated emissions to applicable USEPA *de minimis* levels under General Conformity Rules (40 CFR 93, Subpart B). As of September 3, 2025, DFW is in a Severe Ozone Non-Attainment Area for the 2008 8-hour ozone standard. Therefore, the proposed project is subject to 25 tons per year (tpy) volatile organic compounds (VOC) and nitrogen oxides (NO_x) *de minimis* thresholds under the General Conformity Rules. This analysis was initiated to determine compliance with the Clean Air Act (CAA) and the TCEQ Dallas-Fort Worth Eight-Hour Ozone State Implementation Plan (SIP). Executive Summary **ES: Table** 1 shows that annual construction emissions from the proposed project are below applicable *de minimis* thresholds of 25 tpy for NOx or VOCs. However, when the construction and aircraft operational emissions are combined, the total project emissions would exceed the *de minimis* thresholds for NOx and VOCs. Aircraft operational emissions were modeled using the FAA Aviation Environmental Design Tool (AEDT version 3g). The aircraft operational emissions were modeled by HMMH and are detailed in the Operational Emissions Technical Report (Appendix B)

ES: Table 1. Proposed Project Construction Emissions

Project Year	Project Emissions (tpy)		General Conformity De Minimis Threshold1 (tpy)	
	NO_x	VOC	NO_x	VOC
2026	14.24	6.68	25	25
2027	9.49	4.45	25	25

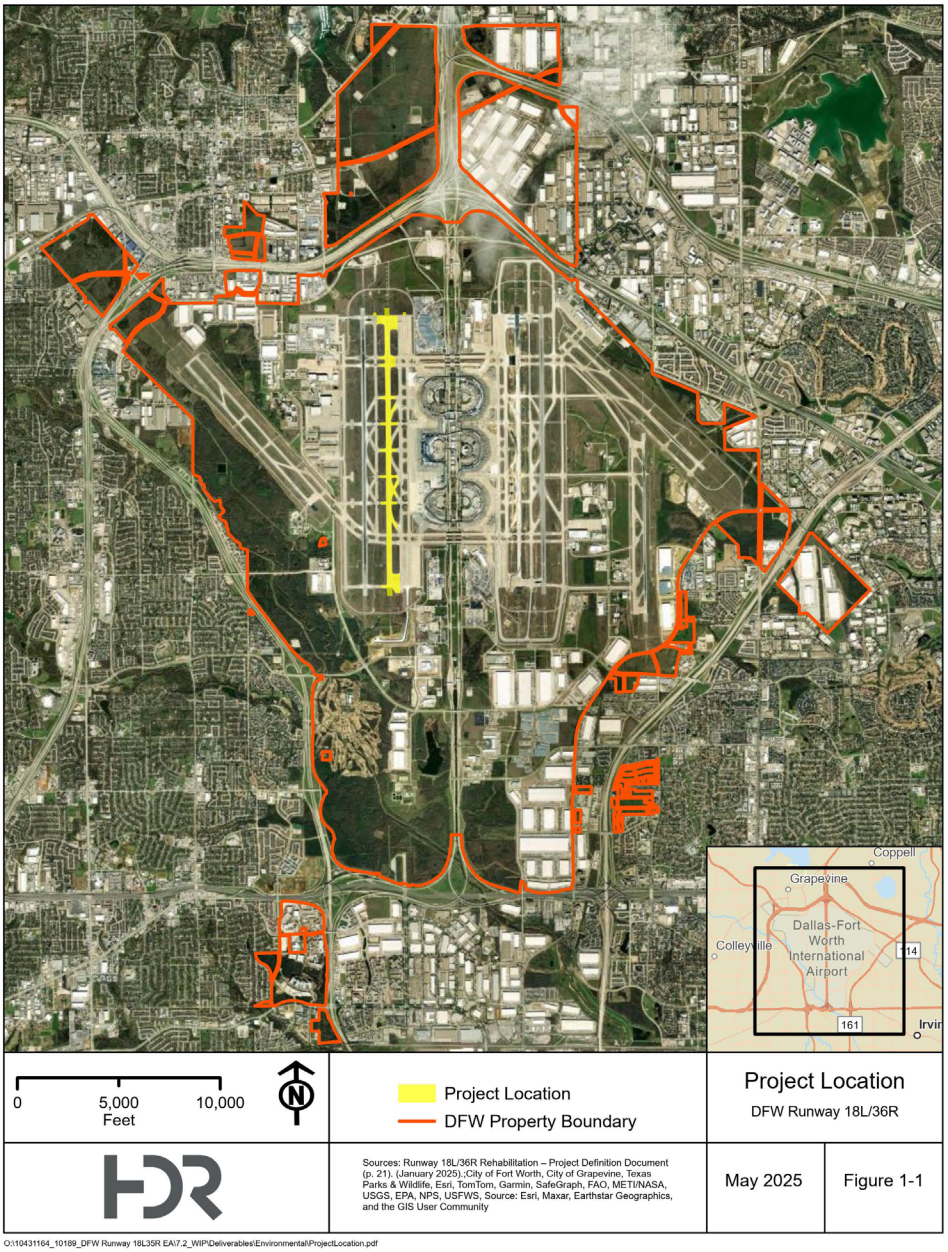
Source: HDR 2025

1 Introduction

This construction emissions technical report presents the construction emissions modeling results for the proposed Runway 18L/36R Rehabilitation Project at DFW, located in Dallas and Tarrant counties, Texas (**Figure 1**). This summary report provides an assessment of the air quality impacts associated with the construction of the proposed project. This summary report describes the scope and methodology for evaluation of air quality from construction sources and compares the construction emissions to the standards of significance identified by the Federal Clean Air Act. The estimated construction emissions were calculated using the TexN2.5 Utility which is compatible with USEPA's MOVES5. The analysis was completed based on the Civil Design Plans and other project data provided by the DFW Airport team, on behalf of the project developer.

The purpose of the summary report is to support compliance with the NEPA and other applicable federal, state, and location regulatory requirements.

Figure 1. Project Location Map



1.1 Overall Approach and Regulatory Setting

NEPA provides for an environmental review process to disclose the potential impacts, including on air quality, from a proposed federal action on the human environment. Per the USEPA, NEPA's policy is to assure that all branches of government properly consider the environment prior to undertaking any major federal action that significantly affects the environment.

The impacts to air quality due to the proposed project for NEPA purposes are determined in accordance with the guidelines provided in the FAA Handbook; FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions; and FAA Order 1050.1G, Environmental Impacts: Policies and Procedures. Potential air quality impacts are required to be analyzed per these orders and guidance.

FAA 1050.1F, Exhibit 4-1, Significance Determination for FAA Actions, defines the significance threshold for air quality as when "[t]he action would cause pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards (NAAQS), as established by the USEPA under the CAA, for any of the time period analyzed, or to increase the frequency or severity of any such existing violations." This analysis develops emissions inventories to determine the projected net annual increase in emissions consistent with the FAA Handbook. The General Conformity Rule ensures that federal activities do not cause or contribute to a violation of NAAQS.

The CAA requires adoption of NAAQS, which are periodically updated, to protect public health and welfare from the effects of air pollution. Current federal standards are set for sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns ($PM_{2.5}$), and Lead (Pb). The NAAQS are expressed in terms of pollutant concentration measured over a defined period of time and are two-tiered, with the primary standard intended to protect public health and the secondary standard intended to protect public welfare and the environment. The primary and secondary NAAQS standards for the CAPs are shown in **Table 2**.

Table 2. National Ambient Air Quality Standards

Pollutant	Averaging Time	Primary Standards	Secondary Standards
CO	Eight-hour	9 parts per million (ppm)	None
	One-hour	35 ppm	None
Pb	Rolling Three-Month Average	0.15 µg/m^3	Same as Primary
NO_2	Annual Arithmetic Mean	53 parts per billion (ppb)	Same as Primary
	One-hour	100 ppb Note 2	None
O_3	Eight-hour (2015 standard) Note 4	0.070 ppm	Same as Primary
$PM_{2.5}$	Annual Arithmetic Mean	9 µg/m^3 Note 5	15 µg/m^3
	24-hour	35 µg/m^3	Same as Primary
PM_{10}	24-hour	150 µg/m^3 Note 1	Same as Primary
SO_2	One-hour	75 ppb Note 3	None
	Three-hour	None	10 ppb

Source: USEPA. 2025. NAAQS Table. Available at: https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed: September 2025.

Notes:

1. For PM_{10}, the 24-hour standard is not to be exceeded more than once per year on average over three years. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or are less than the standard.
2. To attain this standard, the three-year average of the 98th percentile of the daily maximum one-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).
3. Final rule signed June 2, 2010. To attain this standard, the three-year average of the 99th percentile of the daily maximum one-hour average at each monitor within an area must not exceed 75 ppb.
4. US EPA updated the NAAQS for O_3 to strengthen the primary eight-hour standard to 0.07 ppm on October 1, 2015. An area will meet the standard if the fourth-highest maximum daily eight-hour O_3 concentration per year, averaged over three years is equal to or less than 70 ppb.
5. US EPA strengthened the annual PM2.5 standard to 9 µg/m^3 on February 7, 2024. https://www.epa.gov/newsreleases/epa-finalizes-stronger-standards-harmful-soot-pollution-significantly-increasing

Specific geographic areas are classified as either "attainment" or "non-attainment" areas for each pollutant, based on comparing ambient air monitoring data with NAAQS. Those areas designated as "non-attainment" for purposes of NAAQS compliance are required to prepare regional air quality plans, which set forth a

strategy for bringing an area into compliance with the standards. These regional air quality plans are developed to meet federal requirements and are included in an overall program referred to as the SIP.

The proposed DFW Runway 18L/36R Rehabilitation Project site is located in Dallas County, within the Dallas-Fort Worth metropolitan area and according to the USEPA, the Dallas-Fort Worth metropolitan area is designated as:

- *Attainment or Unclassified* for CO (1-hour (hr), 8-hr), NO_2 (1-hr, Annual), Sulfur Dioxide (SO_2) (1-hr, 3-hr.), PM_{10} (24-hr), $PM_{2.5}$ (24-hr, Annual), and Pb (Rolling 3-month average)
- *Severe Nonattainment* [1] for O_3 under the 2008 standard 8-hr averaging period
- *Serious Nonattainment* for O_3, under the 2015 standard 8-hr averaging period

As indicated above, the *Nonattainment* designation for the project area is limited to O_3, a secondary air pollutant formed in the atmosphere when NO_x and VOCs react under exposure to solar radiation. O_3 is considered a regional pollutant because NO_x and VOC emissions throughout the airshed are involved in the formation of O_3. A regional photochemical model that considers emissions throughout the airshed is used to model ozone concentrations. The potential project related impacts to ozone concentrations are typically based on estimates of annual or daily emissions of NO_x and VOC, measured in tpy or grams per day (gpd).

1.2 Existing Conditions

DFW is a commercial service airport that currently encompasses 17,207 acres (approximately 27 square miles) in Dallas and Tarrant counties. In the National Plan of Integrated Airport Systems, the FAA classifies the Airport as a large hub primary commercial service airport[2]. DFW's airfield system consists of seven runways (13L/31R, 13R/31L, 17C/35C, 17L/35R, 17R/35L, 18L/36R, and 18R/36L) separated by a spine road, International Parkway, into the east and west airfield complexes. DFW has five passenger terminals named Terminals A, B, C, D, and E.

Runway 18L/36R is 13,401 foot long and serves as DFW's west airfield primary departure runway. Runway 18L/36R is 200 feet wide with 40-foot-wide asphalt shoulders and accommodates Airplane Design Group (ADG) VI. The Runway 18L/36R Rehabilitation Project is part of DFW's Comprehensive Runway Rehabilitation Program, which started in 2018. This comprehensive rehabilitation program started with the rehabilitation of Runway 17C/35C from May 2018 to March 2019. In June 2020, DFW then initiated a project to rehabilitate Runway 18R/36L, which was completed in April 2021. In August 2023, DFW started the Runway 17R/35L Rehabilitation Project and completed it in October 2024. Runway 18L/36R is the fourth runway in the rehabilitation program; based on the 2019 pavement condition index (PCI) report, the condition of the keel section received a "fair" score of 66 and needed rehabilitation to restore the asset to good condition, reduce the number of unplanned runway closures and reduce maintenance costs. Since 2019, the Runway 18L/36R pavement has continued to deteriorate and evaluations of the pavement conditions sered signs of continued distress and deficiencies attributed to age infrastructure and inadequate drainage conditions. Similar to the recently completed projects in Comprehensive Runway Rehabilitation Program, the Runway 18L/36R Rehabilitation Project will also include installation of an asphalt overlay that will provide a reliable operational surface and standard maintenance cycle that aligns with the previous runway rehabilitation projects.

1.3 Project Description

Under the proposed project, the rehabilitation of Runway 18L/36R would consist of a closure of the runway from May 2026 through April 2027. During the period when the runway is closed, all aircraft operations would be moved from Runway 18L/36R; this change in aircraft operations and runway

[1] USEPA. Greenbook. 2024. Texas Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Available at: https://www3.epa.gov/airquality/greenbook/anayo_tx.html. Accessed: November 2024.

[2] FAA. Appendix A: List of NPIAS Airports. 2024. Available at: https://www.faa.gov/sites/faa.gov/files/airports/planning_capacity/npias/current/ARP-NPIAS-2025-2029-Appendix-A.pdf. Accessed September 2025.

utilization operations would be temporary, during the construction period only. The proposed project would include two phases:

- ***Phase 1*** would generally consist of construction of the PSLs at the north end of the project area. Near the end of Phase 1, Runway 18L/36R would be closed nightly for partial depth saw cutting. Phase 1 would also include the relocation of the Runway 36R threshold and partial demolition of Runway 36R Run-Up Area. The temporary relocation of the threshold would maintain a usable runway length of approximately 9,000 feet for ADG-III operations. Phase 1 would be scheduled to start in May 2026 and finish in August 2026.
- ***Phase 2*** would consist of the construction of an additional PSL and the demolition and reconstruction of the runway, connecting taxiways and rehabilitation of the NWHP. This phase would require the full closure of the runway. Taxiway WM would remain open at all times. Phase 2 would be scheduled to start in August 2026 and finish in April 2027.

The detailed project scope includes the following:

- Pavement and rehabilitation
    - Select panel replacement, joint seal, and spall repair
    - Reduce width of runway from 200 feet to 150 feet
    - Full-depth reconstruction of shoulder pavements to meet FAA AC 150/53000-13B Change 1 requirement
    - Full depth reconstruction of the blast pad to meet ADG VI runway design standards
    - Application of 6-inch Hot Mix Asphalt (HMA) overlay
- Non-FAA circuit rehabilitation (will be removed and either moved to a new location or returned to current location)
    - Touchdown zone, centerline, and edge light emitting diode (LED) upgrades
    - Manholes replaced with junction can plazas
    - Replacement of in-pavement can lights including taxiways
    - Non-standard signs with pig tails
    - Temperature sensors
    - Electrical box relocation (ADG-VI obstruction)
    - Removal of old electrical infrastructure in the Southwest Holdpad (SWHP)
- Utility improvements and rehabilitation of runway stormwater drainage
    - Relocate stormwater inlets
    - Relocate stormwater inlets within Taxiway F safety area
- Reset runway hold position markings
- Northwest Holdpad (NWHP) Rehabilitation and Taxiway Design Group (TDG) 6 Fillet Modifications
- SWHP TDG 6 Fillet Modifications
- TDG 6 fillet modifications and select panel replacement of all taxiways and high-speed taxiway exits within the Runway 18L/36R Object Free Area (OFA)
- Demolition of existing taxiway pavement on Taxiway WK, between Taxiways E and F
- Demolition of taxiway pavement on Taxiway G8, between Taxiways E and F
- Demolition of taxiway pavement on Taxiway WL, between Taxiways E and F
- Demolition of taxiway pavement on Taxiway F4, between Runway 18L/36R and Taxiway F
- Rehabilitation of Taxiway WF pavement, south of taxiway centerline
- Construction of the Northwest End Around Taxiway (NW EAT) pavement, north of Runway 18L within Runway Safety Area (RSA)
- Partial demolition of the Runway 36R run-up threshold
- Installation of No-Taxi islands at the following locations:
    - East of the Runway 18L threshold between Taxiway WF and Taxiway WG
    - East of the Runway 18L threshold between Taxiway WG and Taxiway WH
    - West of the Runway 18L threshold between Taxiway WF and Taxiway WG
    - East of the Runway 36R threshold between Taxiway WP and Taxiway WQ
    - East of the Runway 36R threshold between Taxiway WQ and Taxiway WR
    - East of Runway 18L/36R, between Taxiway Y and Taxiway Z
- Construction of requisite utilities and improvements to lighting, signage, and stormwater drainage infrastructure

- Final site-area grading, topsoil, seed/sod, and other erosion controls, as necessary. Limits of grading, topsoil, and sodding to encompass areas beyond the inlets/drains to mitigate infield problem areas; and
- Temporary lighting, signage, and pavement markings installation, as necessary, to support temporary taxiway routing during various phases of construction.

1.4 Project Construction Schedule

The construction of the proposed rehabilitation of Runway 18L/36R is anticipated to begin in May 2026 and be completed in April 2027. It is assumed that 60% of the construction activities would occur in 2026 and 40% of the construction activities would occur in 2027. There would be two main phases: shorten runway phase and full runway closure phase. The breakdown of the two phases by calendar year are shown in **Table 3**.

Table 3. Project Construction Schedule

Phase (Year)	Estimated Start and End Dates	Duration (days)
Shorten Runway (2026)	5/1/2026 to 8/13/2026	60 days
Full Runway Closure (2026)	8/14/2026 to 12/31/2026	140 days
Full Runway Closure (2027)	1/1/2027 to 4/30/2027	133 days

Source: DFW Airport Planning and DCC Departments

2 Methodology and Inventory

2.1.1 Air Quality Assessment Procedure

The FAA Handbook lays out steps needed to complete an air quality assessment under NEPA. This assessment process is intended for projects requiring a Federal Action, which are defined as aviation-related projects that require FAA funding, licensing, permitting, or approval. The NEPA air quality assessment can determine if Federal Action-generated emissions would exceed one or more of NAAQS and provide sufficient documentation of that assessment. The following steps are as follows:

1. Determine if the Federal Action falls within an exemption to General Conformity.
2. Does the Federal Action qualify as Presumed to Conform?
3. Determine if the Federal Action is in an EPA-designated nonattainment area or maintenance area
4. Evaluate if Attainment Screening Criteria is exceeded[3].

The proposed project is neither exempt nor presumed to conform. The proposed project is located in a severe nonattainment area for ozone. Therefore, based on the results of Steps 1 through 4 above, an air quality assessment has been conducted.

2.1.2 Construction Scenario Evaluated

HDR evaluated the ozone precursors, NO_x and VOCs, emissions associated with construction of the proposed project. The proposed project, which is the only scenario evaluated, would include demolition of taxiway pavement, pavement and circuit rehabilitation, and utility improvements. Construction emissions depend on activity levels for heavy-duty construction equipment, truck haul trips (bulk deliveries and demo debris to local landfill), and vehicle trips made by construction workers and vendors/material deliveries (cement mixer) traveling to and from the proposed project site.

2.1.3 Construction Emissions Inventory

Construction of the proposed project would generate emissions from construction equipment, material delivery trips, concrete and asphalt haul trips, construction worker- and vendor trips, asphalt drying, and

[3] FAA. 2024. Aviation Emissions and Air Quality Handbook Version 4. Available at: https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook/files/airquality_handbook_version_4.pdf. Accessed: September 2025

concrete storage and batching. Emissions would be generated from on-road vehicles and nonroad construction equipment, including but not limited to excavators, rollers, compressors, skid steer loaders, rubber tire loaders, concrete saws, pumps, bore drill rigs, trenchers, striping machines, backhoes, hoe rams, paint sprayers, cement mixers, cement delivery trucks, water trucks, passenger vehicles/trucks, and heavy-duty dump trucks. A full list of construction equipment and vehicles is included in **Appendix A**. The project details, construction schedule, and design plans were provided by DFW.

2.1.4 Emission Factors

For this analysis, emission factors were generated using MOVES5 and the TexN2.5 database to develop on-road and nonroad emission factors specific to Dallas County. These emission factors were applied to estimates of vehicle miles traveled (VMT) and construction equipment (hours, horsepower, load factor), respectively, for each construction activity and year. Spreadsheet calculations for construction are presented in **Appendix A**.

2.1.4.1 On-Road Equipment

HDR used MOVES5 to estimate on-road equipment emission factors for calendar year 2026. It is conservatively assumed that emission factors in 2027 would be similar to 2026. MOVES5 was run at a default (national) scale for Dallas County. Emissions and activity were output from MOVES by vehicle type, fuel type, road type, and process type for each calendar year. Passenger vehicles (light duty trucks and cars) are assumed to be gasoline fueled while dump trucks are assumed to be diesel fueled. One way trip lengths were assumed to be 20 miles to the nearest landfill and 30 miles for vendor and worker trips. Emissions were aggregated over several emission process types to facilitate application to activity for development of proposed project emissions.

2.1.4.2 Nonroad Equipment

To model the proposed project construction emissions from nonroad equipment, HDR used TexN2.5 with MOVES5 for calendar year 2026. It is conservatively assumed that emission factors in 2027 would be similar to 2026. TexN2.5 was run at a default scale for Dallas County. HDR utilized the construction schedule and project activity data such as equipment operating hours, equipment types, fuel types, and equipment size (horsepower). Most equipment provided was from model year 2000-2007. DFW-provided equipment activity was cross referenced to TexN2.5 equipment types based on name matching and experience in assigning appropriate types. Equipment emission factors matching those equipment proposed for the project were taken from the TexN2.5 database by dividing emission quantities by activity hours.

2.1.4.3 Fugitive VOC Emissions

Fugitive VOC emissions would be generated during the asphalt drying process, as VOCs are released when asphalt is laid at high temperatures and cools down. These fugitive VOC emissions were calculated using the FAA Handbook.

2.1.4.4 PM Emissions

PM_{10} and $PM_{2.5}$ emissions would be generated during concrete storage and batching. PM emissions were calculated using emission factors from AP-42 Section 11.12 “Concrete Batching” and the volume of asphalt for the proposed project.

2.1.4.5 Dust Emissions

Both fugitive dust and resuspended road dust emissions were calculated. Fugitive dust emissions were estimated using the Western Governors’ Association Western Regional Air Partnership (WRAP) Handbook. WRAP Level 1, which relies on the acreage affected, was used to determine PM emissions from soil disturbance and wind erosion. WRAP Level 4, which relies on mileage, was used to determine PM emissions from vehicle travel on unpaved roads. A limited 1/2 mi of on-site haulage (on unpaved work areas) is assumed for each dump truck roundtrip. DFW typically does not allow unpaved roads on the Airport Operations Area. For travel on paved roads, resuspended road dust emissions were calculated using AP-42 Section 13.2.1 “Paved Roads”.

3 Significance Thresholds

This section discusses the criteria and general methods used to evaluate the proposed Project's significance with respect to air quality impacts under NEPA. Emissions inventories are used to determine a proposed project's potential impact on air quality. The emissions inventories are compared to pollutant-specific *de minimis* thresholds established by the EPA. Per FAA Order 1050.1 Desk Reference, a significant air quality impact occurs when the proposed project *would cause pollutant concentrations to exceed one or more of the NAAQS, as established by the EPA under the CAA [Clean Air Act] section 176(c)146*, *for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations*[4].

The CAA conformity requirement integrates air quality planning on the state level with project planning on a federal level, to protect the integrity of state plans for improving air quality in in areas that do not meet the NAAQS—nonattainment and maintenance areas. The General Conformity Rule ensures that federal actions, such as airport development projects in nonattainment or maintenance areas, comply with the CAA and do not cause or contribute to a violation of NAAQS. When performing a General Conformity analysis, the FAA considers a range of factors, including:

- If action will occur in a Non-attainment or Maintenance Area
- If specific exemptions in the General Conformity Rule apply
- If the action is on the federal agency's list of "presumed to conform" activities
- If total emissions exceed General Conformity *de minimis* levels, and
- If an EPA-approved SIP has an emissions budget for which emissions with the action could be compared

As previously stated, the DFW metropolitan area is designated as a *Severe* nonattainment area for O_3, based on the 2008 eight-hour ozone standard and *Serious* nonattainment area for O_3, based on the 2015 eight-hour ozone standard. The applicable de minimis threshold based on the *Severe* nonattainment area designation is 25 tpy for each ozone precursor pollutant (NO_x and VOCs).

4 Results

4.1 Estimated Construction Emissions Inventory Results

HDR estimated NO_x and VOCs emissions associated with construction of the proposed DFW Runway 18L/36R Rehabilitation Project. The construction emissions inventory was developed using construction activity data provided by DFW on behalf of the project developer and emission factors from the TexN2.5 model. The proposed project's estimated emissions were compared to applicable *de minimis* thresholds (25 tpy for each ozone precursor), to determine compliance with the CAA and conformance to the TCEQ Dallas-Fort Worth Eight-Hour Ozone SIP, as required by the General Conformity Rule (40 CFR 93, Subpart B).

Table 4 shows that estimated NOx and VOC emissions that would result for the construction of the proposed DFW Runway 18L/36R Rehabilitation Project. As shown in Table 4 the estimated Runway 18L/36R Rehabilitation Project annual construction emissions are below applicable *de minimis* thresholds for 2026 and 2027. However, the estimated project aircraft operational emissions detailed in the **Runway 18L/36R Rehabilitation Project Aircraft Emissions Analysis Memorandum (Appendix A2)** exceed the applicable *de minimis* threshold. Aircraft operational emissions were modeled using the FAA Aviation Environmental Design Tool (AEDT version 3g). The aircraft operational emissions were modeled by HMMH and are detailed in the Operational Emissions Technical Report. As detailed in the Operational Emissions Technical Report the estimated emissions associated with the changes in aircraft operations due to the proposed project are as follows:

- In calendar year 2026 the estimated NOx emissions would be 30.26 tpy and the estimated VOCs emissions are 11.44 tpy.

[4] FAA. 2020. 1050.1 Desk Reference. Available at: https://www.faa.gov/sites/faa.gov/files/about/office_org/headquarters_offices/apl/1-air-quality.pdf. Accessed: September 2025

- In calendar year 2027 the estimated NOx emissions would be 32.89 tpy and the estimated VOCs are 11.68 tpy.

When the construction and aircraft operational emissions are combined, the total project-related emissions would exceed the applicable *de minimis* thresholds for NOx and VOCs in 2026 and 2027. Therefore, the proposed project would be subject of General Conformity Determination; Under the federal General Conformity Rule, DFW must submit a General Conformity Determination for the Proposed Action. The General Conformity Determination must demonstrate that emissions from the Proposed Action would not exceed the emissions budgets in the SIP for the years when the proposed project's emissions exceed applicable *de minimis* thresholds. The General Conformity Determination must be reviewed and approved by TCEQ.

Table 4. Summary of Emissions and Comparison to General Conformity *de minimis* thresholds.

Project Year and Emissions Source	Construction Emissions (tpy)		General Conformity *De Minimis* Threshold (tpy)	
	NOx	VOCs	NOx	VOC
2026 Non-Road	7.83	0.72	**25 tpy**	**25 tpy**
2026 On-Road	6.41	3.41		
Asphalt Fugitives	-	2.54		
2026 Total Emissions	**14.24**	**6.68**		
2027 Non-Road	5.22	0.48		
2027 On-Road	4.27	2.27		
Asphalt Fugitives	-	1.70		
2027 Total Emissions	**9.49**	**4.45**		

Note: Totals may not add up due to rounding.

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Appendix A. Project Data Inputs and TexN2.5, MOVES Output Tables – **Available Upon Request**

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Appendix A2: Runway 18L/36R Rehabilitation Project Aircraft (Operational) Emissions Analysis Memorandum

To:	Esther Chitsinde HDR Inc.
From:	Robert C. Mentzer, Jr. Kate Larson
Date:	September 17, 2025
Subject:	DRAFT - Dallas Fort Worth Airport Runway 18L/36R Rehabilitation Environmental Assessment: Aircraft Emissions Inventory DRAFT
Reference:	HMMH Project Number 23-0095C.003

As a subconsultant to HDR, Harris Miller Miller & Hanson Inc. (HMMH) is assisting Dallas-Fort Worth Airport (DFW) with the aircraft noise and emissions elements of the Environmental Assessment (EA) for the Runway 18L/36R Rehabilitation Project. The purpose of this technical memorandum is to provide the aircraft operations emissions inventory results for the existing conditions (calendar year 2024) and forecast conditions for the construction years (2026 and 2027).

The remainder of this memo is written for inclusion in HDR's Air Quality Technical Report with minimal editing required.

Air Quality: Aircraft Operational Emissions

This section provides the description of current and forecast aircraft operations at DFW used for the development of existing emission inventories. The existing condition inventory represents a 12-month period from the calendar year of 2024 (January 1 – December 31). The construction period is expected to begin in 2026 and end in 2027, so there are two forecast analysis years. The forecast emissions analysis compares No Action pollutant calculations to the Proposed Action calculations for each year, calculated using the Federal Aviation Administration's (FAA's) Aviation Environmental Design Tool (AEDT), Version 3g[1], in compliance with FAA Order 1050.1G and FAA Order 5050.4B.

1.0 Existing Conditions

The existing aircraft emission inventory for DFW was evaluated based upon the calendar year 2024 aircraft operations and the associated airport operational characteristics. Flight track and aircraft identification data from DFW's Noise and Operations Monitoring System (NOMS) and provided the aircraft fleet mix and runway use. The fleet mix developed from the DFW NOMS data was grouped into FAA operational categories (Air

[1] AEDT Version 3g released on August 28, 2024. FAA: AEDT Support Website

Carrier, Air Taxi, and General Aviation) and the totals were scaled to match the tower count for that period, provided by the FAA's Operational Network (OPSNET) operational data.

1.1 Aircraft Fleet Mix and Operations

During the existing conditions period, 743,203 annual operations occurred at DFW. **Table 1** presents the annual operations modeled in the AEDT for the existing conditions, where arrivals and departures are counted as separate operations. **Table 2** provides the annual operations, by AEDT aircraft type, that were used in AEDT to represent the existing conditions. The arrivals and departures are divided into day and night categories for the purposes of noise assessment, listed here in the same manner for consistency.

Table 1. Existing Conditions Annual Operations

Category	2024 Operations
Air Carrier Cargo	16,573
Air Carrier Passenger	705,825
Air Taxi Cargo	4,290
Air Taxi Passenger	10,580
General Aviation	5,724
Military	211
Total	**743,203**

Sources: DFW NOMS, FAA OPSNET, *HMMH analysis, 2025*

Table 2. DFW Modeled Annual Operations for Existing Conditions (Calendar Year 2024)

Tower Category	Propulsion Category	AEDT Aircraft Type	Arrivals Day	Arrivals Night	Departures Day	Departures Night	Total
Air Carrier Cargo	**Jet**	747400	304	148	298	154	905
		7478	344	246	375	215	1,180
		757PW	299	33	288	44	664
		757RR	435	42	417	60	954
		7673ER	2,012	933	1,569	1,376	5,890
		777300	645	402	405	642	2,094
		A300-622R	916	69	849	136	1,970
		MD11GE	405	322	444	283	1,454
		MD11PW	370	361	456	275	1,462
Air Carrier Passenger	**Jet**	737700	6,406	956	6,735	627	14,723
		737800	74,609	10,267	77,160	7,716	169,753
		7378MAX	2,826	970	3,418	378	7,593
		747400	324	135	323	136	917
		7478	22	95	74	43	235
		777200	2,109	267	2,268	108	4,753
		7773ER	1,953	14	1,699	268	3,934
		7878R	2,112	913	2,998	27	6,050
		7879	3,373	542	3,376	539	7,831
		A319-131	23,959	2,410	23,972	2,397	52,737
		A320-211	6,765	1,219	6,960	1,024	15,968
		A320-232	10,972	1,535	11,297	1,210	25,014
		A320-270N	8,045	3,045	8,123	2,967	22,180

Tower Category	Propulsion Category	AEDT Aircraft Type	Arrivals Day	Arrivals Night	Departures Day	Departures Night	Total
		A321-232	64,216	10,589	66,193	8,612	149,610
		A330-301	302	3	24	281	609
		A330-343	148	-	146	2	297
		A340-211	181	-	181	-	363
		A350-941	1,120	10	891	239	2,260
		A380-841	321	2	308	15	647
	Regional Jet	CRJ9-ER	30,118	4,602	31,760	2,960	69,439
		EMB170	12,205	1,659	12,581	1,283	27,728
		EMB175	55,668	5,563	56,228	5,003	122,462
		EMB190	359	2	358	3	722
Air Carrier total			**313,845**	**47,354**	**322,176**	**39,023**	**722,398**
Air Taxi Cargo	Non-jet	1900D	361	17	255	123	756
		CNA208	1,014	243	1,108	149	2,514
		DHC6	268	5	227	46	546
		SF340	149	88	214	23	474
Air Taxi Passenger	Jet	CL600	298	21	296	23	637
		CNA55B	549	31	548	32	1,160
		CNA560XL	308	13	311	10	643
		CNA680	842	48	855	35	1,779
	Regional Jet	CL600	368	3	368	3	742
		EMB145	243	2	243	2	490
		EMB14L	669	-	666	3	1,338
	Non-jet	CNA208	1,870	25	1,846	49	3,790
Air Taxi total			**6,939**	**496**	**6,937**	**498**	**14,870**
General Aviation	Jet	CL600	318	19	321	16	673
		CL601	740	49	765	24	1577
		CNA55B	355	10	333	32	730
		CNA560XL	593	28	581	40	1242
	Non-jet	CNA172	210	69	174	105	557
		CNA208	257	13	249	21	540
		DHC6	202	0	186	16	405
General Aviation Total			**2,674**	**188**	**2,608**	**254**	**5,724**
Military	Jet	C17	52	-	46	6	103
		LEAR35	38	3	41	-	82
	Non-jet	C130AD	13	-	13	-	26
Military Total			**103**	**3**	**100**	**6**	**211**
Grand Total			**323,561**	**48,041**	**331,821**	**39,781**	**743,203**

Note: Totals may not match exactly due to rounding
Sources: DFW NOMS, FAA OPSNET, FAA TAF, HMMH analysis 2025

Other parameters used in the AEDT model inputs which do not change from the existing to the forecast scenarios (aircraft noise and performance profile selection, flight tracks, meteorological, and terrain data) are described in the noise assessment documentation. Specific aircraft engine types and taxi times are needed to determine air quality pollutant emissions and to make fuel burn calculations. Since there is no change in aircraft operations between the No Action and Proposed Action scenarios, ground support equipment and auxiliary power unit usage are modeled using AEDT default assignments. The following two sections discuss the runway use and taxi-times inputs which would be affected by the proposed project.

1.2 Runway Use

DFW has two runway complexes: the east side and west side, comprised of seven runways; four to the east and three to the west. Aircraft typically arrive on the outermost main north/south runways as well as some of the outboards and depart on the innermost runways main north/south runways (inboards). Aircraft normally take off and land into the wind. Choice of runway can be affected by aircraft type, type of activity, and where applicable, airport runway use plans. Historic data shows that DFW has two main operating configurations—south flow (departing to the south and arriving from the north) approximately 70 percent of the time and north flow (departing to the north and arriving from the south) approximately 30 percent of the time.

Table 3 summarizes the runway usage AEDT inputs developed from the DFW NOMS data for a recent 12-month period without any extended runway closures: October 2021 through September 2022, which is fiscal year (FY) 2022. DFW has had several runway reconstruction projects in the past two years, with the latest completed in October 2024. The air quality analysis for the EA should reflect typical annual runway use; therefore, the study team determined that FY 2022 rates would be used. The aircraft operations, separated into jets and non-jets, departures and arrivals, and day and nighttime periods determine the runway use distribution. The FY 2022 usage was normalized to the historical north flow (30 percent), south flow (70 percent) split.

Table 3. Runway Use Percentages, Existing Condition

Propulsion	Runway	Arrivals		Departures	
		Day	Night	Day	Night
Jet	13L	0%	0%	<1%	0%
	13R	3%	<1%	<1%	0%
	17C	27%	32%	<1%	1%
	17L	11%	1%	<1%	0%
	17R	<1%	7%	39%	33%
	18L	<1%	4%	31%	31%
	18R	28%	24%	<1%	6%
	31L	<1%	0%	<1%	0%
	31R	<1%	<1%	<1%	0%
	35C	11%	14%	<1%	<1%
	35L	<1%	3%	16%	15%
	35R	5%	<1%	<1%	0%
	36L	12%	10%	<1%	2%
	36R	<1%	1%	14%	13%
	SUBTOTAL	**100%**	**100%**	**100%**	**100%**
Non-Jet	13L	<1%	0%	<1%	<1%
	13R	28%	<1%	<1%	0%
	17C	9%	16%	3%	2%
	17L	23%	<1%	<1%	0%
	17R	<1%	4%	38%	15%
	18L	<1%	5%	24%	18%
	18R	9%	44%	5%	34%
	31L	<1%	0%	9%	2%
	31R	13%	0%	<1%	0%
	35C	2%	8%	2%	<1%
	35L	<1%	1%	15%	7%
	35R	3%	<1%	0%	0%
	36L	12%	18%	<1%	15%
	36R	<1%	1%	3%	5%
	SUBTOTAL	**100%**	**100%**	**100%**	**100%**

Sources: DFW NOMS FY2022, HMMH analysis 2025

1.3 Taxi-Times

DFW Design Code and Construction (DCC) provided the average taxi times (in minutes) for this analysis, which are shown in **Table 4**, supplemented with FY 2022 average taxi times obtained from the FAA Aviation System Performance Metrics (ASPM) database[2]. Annual aircraft taxiing emissions are a function of the number of aircraft operations, expressed as landing and takeoff (LTO) cycles, the aircraft fleet mix (specific types of aircraft/engines used), and the length of time aircraft spend in the taxiing mode of operation defined in AEDT.

[2] FY 2022 taxi times (and runway usage) were used in this analysis because FY 2022 is a recent 12-month period with no extended runway closures.

Table 4. Existing Condition Taxi Times, by Runway End

Scenario	Runway End	Taxi-In Time (Minutes)	Taxi-Out Time (Minutes)
Existing Condition and No Action	13L	11.2	16.0
	13R	14.2	16.0
	17C	12.8	8.4
	17L	14.7	16.4
	17R	7.0	17.5
	18L	8.2	16.9
	18R	10.5	9.6
	31L	14.2	24.6
	31R	11.1	40.1
	35C	12.3	16.7
	35L	8.4	18.4
	35R	14.9	17.8
	36L	11.7	16.5
	36R	11.4	17.7

Sources: DFW DCC, FAA Aviation System Performance Metrics (ASPM), accessed on July 14, 2025, HMMH analysis 2025

1.4 Aircraft-Related Operational Emissions

AEDT can calculate operational emissions from aircraft operations, ground service equipment (GSE), and auxiliary power units (APU). AEDT default data for APU and GSE equipment and duration was used in the modeling. The pollutant inventory calculations include aircraft emissions associated with taxi-in, taxi-out, and in-flight operations below mixing height[3]. **Table 5** provides the calculated operational emissions for the existing conditions, based on the operations in **Table 2**.

Table 5. Total Operational Emissions for Existing Conditions

Year	Operational Category	Pollutant (tons per year)						
		NO_x	CO	$PM_{2.5}$	PM_{10}	SO_x	VOC	CO_2
2024	Aircraft	3,988.80	4,077.97	38.553	38.553	442.90	451.25	1,468,172.40
	GSE LTO	25.67	727.28	1.388	1.494	0.22	19.64	14,881.56
	APU	122.70	106.33	16.135	16.135	16.45	8.81	60,000.21
	Total	**4,137.16**	**4,911.58**	**56.08**	**56.18**	**459.58**	**479.71**	**1,543,054.17**

Source: HMMH AEDT analysis, 2025

2.0 Forecast Years Conditions

The Proposed Action Alternative is comprised of the rehabilitation of Runway 18L/36R and its shoulders, upgrades to the electrical systems and components, and a full asphalt overlay. The Proposed Action Alternative would cause temporary changes in runway use, during construction only. As the construction is not expected to affect the number and type of aircraft operations using the airport, the only aircraft-related emissions changes would stem from changes in taxi times for the affected runways and changes in airport-

[3] The AEDT Default mixing height of 3,000 feet above field elevation was used.

wide runway usage rates during the construction period. The analysis years, 2026 and 2027, include periods prior to construction and after construction is completed when runway usage and taxi times are assumed to be the same as for the existing conditions. Once construction is complete in 2027, runway use and taxi times would return to normal conditions.

The Runway 18L/36R Rehabilitation is expected to be completed in three construction phases. Phase 1 would include all the preparation work and staging (not impacting runway operations) needed to begin Phase 2. Phases 2 and 3 would involve reduced length or full runway closures and are the subject of this emission inventory. Together, Phase 2 and Phase 3 cover 12 months from May 2026 to April 2027.

- Phase 2 – Runway 36R end closure – May 1, 2026 through July 31, 2026 (3 months)
- Phase 3 – Full Closure of Runway 18L/36R – August 1, 2026 to April 30, 2027 (9 months)

2.1 Aircraft Fleet Mix and Operations

An operational forecast prepared in the early stages of this EA was submitted to FAA for approval on July 7, 2025, including detailed operations tables for AEDT noise and emissions modeling for calendar years 2026 and 2027. The forecast operations are based on the FAA's 2024 Terminal Area Forecast (TAF) issued in January 2025 for DFW. The No Action and Proposed Action Alternatives assume the same level of operations for both scenarios because the Proposed Action is a runway rehabilitation project that does not alter the length of the runway or its expected use in the future. **Table 6** provides the proposed level of operations to be modeled for the EA forecast years 2026 and 2027, in comparison to the existing conditions year, 2024.

Table 6. Forecast Annual Operations

Category	2024 Existing Conditions	2026 Forecast (No Action and Proposed Action)	2027 Forecast (No Action and Proposed Action)
Air Carrier Cargo	16,573	26,727	28,189
Air Carrier Passenger	705,825	773,887	794,319
Air Taxi Cargo	4,290	4,676	4,738
Air Taxi Passenger	10,580	11,584	11,693
General Aviation	5,724	6,233	6,252
Military	211	197	197
Total	**743,203**	**823,304**	**845,388**

Sources: DFW NOMS, FAA OPSNET, *HMMH analysis, 2025*

Table 7 lists the annual operations, by AEDT aircraft type, that were input to AEDT to represent the two forecast years' operations, respectively. The fleet mix for each forecast year (2026, 2027) was initially based on the 2024 fleet mix operations. Overall flights were scaled proportionally to the future year's total operations by category and then air carrier fleets were adjusted to reflect expected increased use of newer aircraft models. For example, from 2024 to 2026, the air taxi category share of the regional jet activity is expected to decrease (e.g., CRJ-200 modeled as the CL600), and the air taxi jet category to increase (e.g., CL35 modeled as the CL600). From 2026 to 2027, the air taxi category share of the regional jet activity is predicted to decrease further, while the air taxi jet category is expected to increase further. The general aviation and military fleet mix is assumed to remain largely unchanged from 2024 to 2027. For additional information on the forecast, see Appendix xx.

Table 7. DFW Modeled Forecast Operations for Construction Years (2026 and 2027)

Tower Category	Propulsion Category	AEDT ANP Type	2026 Operations	2027 Operations
Air Carrier Cargo	Jet	747400	3,843	3,852
		7478	1,204	1,216
		757PW	664	664
		757RR	954	954
		7673ER	8,039	9,263
		777300	7,137	7,354
		A300-622R	1,970	1,970
		MD11GE	1,454	1,454
		MD11PW	1,462	1,462
Air Carrier Passenger	Jet	737700	16,022	16,525
		737800	169,455	167,402
		7378MAX	11,597	13,255
		747400	917	917
		7478	235	235
		777200	4,753	4,753
		7773ER	4,979	5,268
		7878R	7,965	8,593
		7879	10,309	11,122
		A319-131	51,526	51,122
		A320-211	13,947	13,193
		A320-232	21,739	19,914
		A320-270N	30,087	33,089
		A321-232	166,371	171,994
		A330-301	609	609
		A330-343	297	297
		A340-211	359	358
		A350-941	2,975	3,210
		A380-841	647	647
	Regional Jet	CRJ9-ER	69,439	69,439
		EMB170	27,728	27,728
		EMB175	161,210	173,928
		EMB190	722	722
Air Carrier Total			**800,614**	**822,508**
Air Taxi Cargo	Non-jet	1900D	756	756
		CNA208	2,900	2,962
		DHC6	546	546
		SF340	474	474
Air Taxi Passenger	Jet	CL600	735	751
		CNA55B	1,338	1,367
		CNA560XL	742	757
		CNA680	2,052	2,096
	Regional Jet	CL600	536	456
		EMB145	485	482
		EMB14L	1,325	1,318
	Non-jet	CNA208	4,372	4,466
Air Taxi Total			**16,260**	**16,431**

Tower Category	Propulsion Category	AEDT ANP Type	2026 Operations	2027 Operations
General Aviation	Jet	CL600	733	735
		CL601	1,717	1,723
		CNA55B	795	797
		CNA560XL	1,352	1,356
	Non-jet	CNA172	607	609
		CNA208	588	590
		DHC6	441	442
General Aviation Total			**6,233**	**6,252**
Military	Jet	C17	96	96
		LEAR35	77	77
	Non-jet	C130AD	24	24
Military Total			**197**	**197**
Grand Total			**823,304**	**845,388**

Note: Totals may not match exactly due to rounding.
Sources: DFW NOMS, FAA OPSNET, FAA TAF, HMMH analysis 2025

2.2 Runway Use

2.2.1 No Action Alternative

Under the No Action Alternative, the runway rehabilitation project would not occur and there would be no changes to the typical runway use at DFW for 2026 and 2027. Therefore, the runway use provided in **Table 3** for the existing conditions was used to represent the runway use in both forecast years' No Action scenarios.

2.2.2 Proposed Action Alternative

At DFW the outboard runways (Runways 17L/35R, 13R/31L, and 13L/31R) are open daily until 11 p.m. The modeled runway percentages includes the assumption that the outboard runways are not typically used between 10 p.m. or before 6 a.m. Nighttime runway utilization reflects the predominant use of the main parallel runways for arrivals and departures[4].

The Proposed Action assumes a 12-month active construction period in two phases for the Runway 18L/36R rehabilitation, following completion of the Phase 1 preparatory work. During Phase 2 (three months), the runway threshold for the Runway 36R end would be relocated 4,128 feet northward (to Taxiway WM) to allow the runway to continue departure operations on the remaining 9,273 feet while the south end is under construction. Runway use for construction Phase 2 is assumed to be the essentially same as for the Existing Conditions but with the few arrivals that would normally occur to Runway 18L/36R shifted proportionally to other runways. Runway use for construction Phase 3 (full closure of Runway 18L/36R for nine months) was provided by DFW for arrivals and departures overall. During Phase 3, arrivals would shift mainly to Runways 17L/35R, 17C/35C, and 13R while departures would shift to Runways 17R/35L, 18R/36L, and 31L. HMMH determined the separate day and night percentages for this period by applying the day/night proportions as seen in the Existing Conditions usage. **Table 8** presents the runway use percentages for each construction phase.

[4] Per FAA, nighttime operations are defined as 10:00 p.m. to 6:59 a.m. in the calculation of DNL.

Table 8. Runway Use Percentages, Forecast Years 2026 and 2027, Proposed Action Scenario

Category	Runway	During Construction Phase 2				During Construction Phase 3			
		Arrivals		Departures		Arrivals		Departures	
		Day	Night	Day	Night	Day	Night	Day	Night
Jet	13L	0%	0%	<1%	0%	0%	0%	0%	0%
	13R	3%	1%	<1%	0%	11%	2%	0%	0%
	17C	27%	34%	<1%	1%	27%	50%	0%	0%
	17L	11%	2%	<1%	0%	26%	5%	0%	0%
	17R	<1%	8%	39%	33%	0%	0%	60%	9%
	18L	**0%**	**0%**	**31%**	**31%**	**0%**	**0%**	**0%**	**0%**
	18R	28%	26%	<1%	6%	7%	12%	10%	60%
	31L	<1%	0%	<1%	0%	0%	0%	7%	0%
	31R	1%	<1%	<1%	0%	3%	<1%	0%	0%
	35C	11%	15%	<1%	<1%	11%	22%	0%	0%
	35L	<1%	3%	16%	15%	0%	0%	21%	3%
	35R	5%	1%	<1%	0%	11%	2%	0%	0%
	36L	12%	11%	<1%	2%	4%	6%	2%	27%
	36R	**0%**	**0%**	**14%**	**13%**	**0%**	**0%**	**0%**	**0%**
	SUBTOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Non-Jet	13L	<1%	0%	<1%	<1%	0%	0%	0%	0%
	13R	28%	<1%	<1%	0%	12%	<1%	0%	0%
	17C	9%	17%	3%	2%	26%	46%	0%	0%
	17L	23%	1%	<1%	0%	27%	1%	0%	0%
	17R	1%	5%	38%	15%	0%	0%	54%	12%
	18L	**0%**	**0%**	**24%**	**18%**	**0%**	**0%**	**0%**	**0%**
	18R	9%	47%	5%	34%	5%	23%	16%	58%
	31L	<1%	0%	9%	2%	0%	0%	7%	<1%
	31R	13%	0%	<1%	0%	4%	0%	0%	0%
	35C	2%	9%	2%	<1%	9%	25%	0%	0%
	35L	<1%	1%	15%	7%	0%	0%	21%	4%
	35R	3%	1%	0%	0%	12%	2%	0%	0%
	36L	12%	19%	1%	15%	5%	4%	2%	26%
	36R	**0%**	**0%**	**3%**	**5%**	**0%**	**0%**	**0%**	**0%**
	SUBTOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Note: Runway 18L/36R in Bold - it would only handle departures in construction Phase 2, woudl be closed during construction Phase 3.

2.3 Taxi-Times

2.3.1 No Action Alternative

Under the No Action Alternative, the runway rehabilitation project would not occur and there would be no changes to the typical taxi times at DFW for 2026 and 2027. Therefore, the taxi times data provided in **Table 4** for the existing conditions was used to represent the taxi times in both forecast years' No Action scenarios.

2.3.2 Proposed Action Alternative

For runway ends where taxi times are anticipated to be changed in the Proposed Action, DFW DCC provided the taxi times to be used. **Table 9** presents the average taxi-in and taxi-out times by runway end for both phases of active construction. From the existing condition to construction phase 2 (partial closure of Runway

18L/36R), changes in average taxi times are generally less than 1 minute for any given runway, with the greatest change being a two-minute decrease in taxi out time for Runway 36R departures, due to its temporarily relocated runway threshold. From construction phase 2 to phase 3 (full closure of Runway 18L/36R), the most notable change in taxi-in times is an additional four minutes for arrivals to Runway 13R; changes for all other runways are one minute or less. Taxi-out time changes from construction phase 2 to phase 3 are expected to be larger, with increases of about one minute for several runways, over six additional minutes for Runway 36L departures and over 11 additional minutes for Runway 18R departures. The taxi-out time for Runway 31L departures is expected to decrease by over 6 minutes.

Table 9. Proposed Action Alternative Construction Period Taxi Times, by Runway End

Scenario	Runway End	Taxi-In Time	Taxi-Out Time
Proposed Action Phase 2 (Partial Closure)	13L	11.2	16.0
	13R	13.5	16.0
	17C	13.0	8.3
	17L	14.8	16.4
	17R	7.0	18.4
	18L*	N/A	16.5
	18R	10.1	9.8
	31L	14.2	24.6
	31R	11.2	40.1
	35C	12.5	16.7
	35L	8.4	19.2
	35R	15.4	17.8
	36L	11.4	16.5
	36R*	N/A	15.7
Proposed Action Phase 3 (Full Closure)	13L	11.2	16.0
	13R	17.7	16.0
	17C	13.0	9.6
	17L	14.6	16.4
	17R	7.0	19.6
	18L**	N/A	N/A
	18R	10.4	21.0
	31L	14.2	18.3
	31R	12.2	40.1
	35C	12.6	17.3
	35L	8.4	20.5
	35R	15.0	17.8
	36L	10.4	22.8
	36R**	N/A	N/A

Notes: * Departures only during partial runway closure.
**Not available during full runway closure.
Sources: DFW DCC, FAA Aviation System Performance Metrics (ASPM), accessed on July 14, 2025, HMMH analysis 2025

2.4 Aircraft-Related Operational Emissions

2.4.1 No Action Alternative

As was done for the Existing Conditions analysis, AEDT default data for APU and GSE equipment and duration were used in the modeling for the No Action Alternative and the pollutant inventory calculations include

aircraft emissions associated with taxi-in, taxi-out, and in-flight operations below mixing height. **Table 10** provides the calculated operational emissions for the No Action Alternative, based on the operations in **Table 7** and the same assumptions for runway use and taxi times as the existing condition.

Table 10. Total Operational Emissions for Construction Years, No Action Alternative

Year	Operational Category	Pollutant (tons per year)						
		NO_x	CO	$PM_{2.5}$	PM_{10}	SO_x	VOC	CO_2
2026	Aircraft	4,580.71	4,614.51	40.906	40.906	497.53	501.73	1,651,241.75
	GSE LTO	32.57	805.45	1.788	1.903	0.24	24.58	18,096.52
	APU	131.40	118.39	18.159	18.159	17.88	9.99	64,895.18
	Total	**4,744.68**	**5,538.34**	**60.85**	**60.97**	**515.65**	**536.29**	**1,734,233.44**
2027	Aircraft	4,713.17	4,721.09	41.201	41.201	509.08	508.72	1,690,187.25
	GSE LTO	28.63	779.51	1.374	1.492	0.25	21.17	16,428.47
	APU	133.23	121.87	18.734	18.734	18.24	10.34	66,002.95
	Total	**4,875.03**	**5,622.48**	**61.31**	**61.43**	**527.57**	**540.22**	**1,772,618.67**

Source: HMMH AEDT analysis, 2025

2.4.2 Proposed Action Alternative

As was done for the Existing Conditions analysis, AEDT default data for APU and GSE equipment and duration were used in the modeling for the Proposed Action Alternative and the pollutant inventory calculations include aircraft emissions associated with taxi-in, taxi-out, and in-flight operations below mixing height. **Table 11** provides the calculated operational emissions for the Proposed Action Alternative, based on the operations in **Table 7** and the construction-phase runway use and taxi times applicable to portions of each forecast year described in Sections 2.2 and 2.3.

Table 11. Total Operational Emissions for Construction Years, Proposed Action Alternative

Year	Operational Category	Pollutant (tons per year)						
		NO_x	CO	$PM_{2.5}$	PM_{10}	SO_x	VOC	CO_2
2026	Aircraft	4,610.97	4,765.44	41.533	41.533	506.58	513.17	1,672,612.50
	GSE LTO	32.57	805.45	1.788	1.903	0.24	24.58	18,096.52
	APU	131.40	118.39	18.159	18.159	17.88	9.99	64,895.18
	Total	**4,774.94**	**5,689.27**	**61.48**	**61.59**	**524.71**	**547.73**	**1,755,604.19**
2027	Aircraft	4,746.06	4,881.88	41.874	41.874	518.85	520.40	1,713,091.00
	GSE LTO	28.63	779.51	1.374	1.492	0.25	21.17	16,428.47
	APU	133.23	121.87	18.734	18.734	18.24	10.34	66,002.95
	Total	**4,907.92**	**5,783.26**	**61.98**	**62.10**	**537.33**	**551.91**	**1,795,522.42**

Source: HMMH AEDT analysis, 2025

2.4.3 Difference between No Action and Proposed Action Alternatives

Table 12 presents the calculation of the differences in emissions between the No Action and Proposed Action Alternatives. Because the modeling for each of the scenarios assumes no change to the number and mix of

aircraft flight operations in the year, the differences stem from the runway use changes and the associated taxi times changes.

Table 12 . Difference in Aircraft-Related Operational Emissions for Construction Years

Year	Alternative	Pollutant (tons per year)						
		NO_x	CO	$PM_{2.5}$	PM_{10}	SO_x	VOC	CO_2
2026	Proposed Action	4,774.94	5,689.27	61.48	61.59	524.71	547.73	1,755,604.19
	No Action	4,744.68	5,538.34	60.85	60.97	515.65	536.29	1,734,233.44
	Difference	**30.26**	**150.93**	**0.63**	**0.63**	**9.05**	**11.44**	**21,370.75**
2027	Proposed Action	4,907.92	5,783.26	61.98	62.10	537.33	551.91	1,795,522.42
	No Action	4,875.03	5,622.48	61.31	61.43	527.57	540.22	1,772,618.67
	Difference	**32.89**	**160.78**	**0.67**	**0.67**	**9.76**	**11.69**	**22,903.75**

Source: HMMH AEDT analysis, 2025

APPENDIX B: PUBLIC NOTICE

Notice of Availability of the Draft Environmental Assessment and Draft General Conformity Determination for the Proposed Runway 18L/36R Rehabilitation Project at Dallas Fort Worth International Airport

Agency: Federal Aviation Administration (FAA)

Airport Sponsor: Dallas Fort Worth International Airport Board

FAA Unique Identifier: EAXX-021-12-ARP-1755678924

In accordance with the National Environmental Policy Act of 1969, as amended (NEPA), FAA Order 1050.1G, FAA Order 5050.4B, and the Clean Air Act (CAA) General Conformity requirements in 40 CFR Part 93 (CAA Section 176(c)), the FAA is announcing the availability of and requesting comments on the Draft Environmental Assessment (Draft EA) and Draft General Conformity Determination for the Proposed Runway 18L/36R Rehabilitation Project at Dallas Fort Worth International Airport (DFW).

DFW Airport is proposing to complete the Runway 18L/36R Rehabilitation Project (Project). Runway 18L/36R is a mission critical asset, and the proposed rehabilitation will extend its structural life, improve safety, reduce costs, and reduce operational impacts associated with maintenance activities.

The Draft EA evaluates the potential environmental effects of the Proposed Project, in accordance with NEPA, FAA Order 1050.1G, and FAA Order 5050.4B. The Draft EA includes an analysis of reasonable alternatives, potential environmental impacts, and mitigation measures. Because the Proposed Project is in an area designated as nonattainment for Ozone, the FAA has also prepared a Draft General Conformity Determination pursuant to Section 176(c) of the Clean Air Act and 40 CFR Part 93. The Draft General Conformity Determination evaluates whether the project conforms to the applicable Texas State Implementation Plan (SIP).

From February 1, 2026 to March 3, 2026, the Draft EA and Draft General Conformity Determination will be available for public review online at https://www.dfwairport.com/business/about/publications/ and in person, during normal business hours, at the DFW Environmental Affairs Department located at 3003 S. Service Road, Annex A, DFW Airport, Texas 75261. Please call 972-973-5560 to schedule an appointment for an in-person review. Additionally, hard copies of the Draft EA and Draft General Conformity Determination are available at the public libraries listed below; please contact the local library to schedule viewing times.

1. West Irving Library at 4444 W Rochelle Road, Irving, Texas 75062, Phone: (972) 721-2600
2. Valley Ranch Library at 401 Cimarron Trail, Irving, Texas 75063, Phone: (972) 721-4669
3. Dallas College North Lake Campus Library, 5001 N MacArthur Boulevard, Irving, Texas 75038, Phone: (972) 273-3400
4. Cozby Library and Community Commons, 177 N Heartz Road, Coppell, Texas 75019, Phone: (972) 304-3658
5. Euless Library, 201 N Ector Drive Euless, Texas 76039, Phone: (817) 685-1400
6. Grapevine Public Library, 1201 Municipal Way Grapevine, Texas 76057, Phone: (817) 410-3400
7. Southlake Public Library, 1400 Main Street #130 Southlake, Texas 76092, Phone: (817) 748-8243

FAA and DFW invite the public to review and comment on the Draft EA and Draft General Conformity Determination. Comments can be submitted electronically using the online comment form, or via e-mail at publiccomment@dfwairport.com, or by postal mail to the address provided on the comment form. The public comment period extends from February 1, 2026 through March 3, 2026. All comments on the Draft EA and Draft General Conformity Determination must be received by 11:59 p.m. Central Standard Time (CST) on March 3, 2026, to be considered. Substantive comments received during the public comment period will be thoroughly reviewed and taken into consideration in the preparation of the Final EA.

APPENDIX C: TCEQ LETTER OF CONCURRENCE WITH THE DRAFT GENERAL CONFORMITY DETERMINATION

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 17, 2025

John MacFarlane
Federal Aviation Administration
Airports Division, Planning and Programming Branch
10101 Hillwood Parkway, Fort Worth, TX 76177
VIA EMAIL

Subject: General Conformity Concurrence for the Dallas-Fort Worth International Airport Runway 18L/36R Rehabilitation Project

Dear John MacFarlane:

The Texas Commission on Environmental Quality (TCEQ) completed its review of the Draft General Conformity Determination for the Dallas-Fort Worth International Airport (DFWIA) Runway 18L/36R Rehabilitation Project received October 20, 2025, with final revisions received December 4, 2025. The draft determination was prepared by DFWIA for the Federal Aviation Administration (FAA). TCEQ reviewed the action in accordance with the general conformity requirements established in Title 40 Code of Federal Regulations (CFR) Part 93, Subpart B and concurs that the project conforms to the Texas State Implementation Plan (SIP).

The proposed action is located in the Dallas-Fort Worth (DFW) ozone nonattainment area, which is currently classified by the U.S. Environmental Protection Agency as severe for the 2008 eight-hour ozone standard and serious for the 2015 eight-hour ozone standard. The general conformity demonstration for this action relies on 40 CFR §93.158(a)(5)(i)(a), and the applicable SIP revision is the DFW portion of the *Dallas-Fort Worth and Houston-Galveston-Brazoria Serious Classification Reasonable Further Progress State Implementation Plan Revision for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard* (DFW 2008 Ozone NAAQS Serious RFP SIP Revision), adopted March 4, 2020, and approved by the EPA effective May 24, 2023 (88 FR 24693).

DFWIA presented data showing that the proposed action would result in nitrogen oxides emissions exceeding the 25 tons per year *de minimis* threshold for general conformity in 2026 and 2027. Based on comparing the emissions estimated for this action with the quantification of overall excess creditable reasonable further progress (RFP) emissions reductions in the applicable SIP revision that would be available after meeting the 2020 RFP emissions reduction target, establishing a motor vehicle emissions budget safety margin for transportation conformity (40 CFR §93.101), and accounting for previously proposed federal actions that relied on the current applicable SIP revision to demonstrate conformity, TCEQ concurs with the determination.[1]

[1] TCEQ provided general conformity concurrence on two previous FAA actions at the Dallas-Fort Worth International Airport and one action at the McKinney National Airport that relied on 40 CFR §93.158(a)(5)(i)(a) to demonstrate conformity with the DFW 2008 Ozone NAAQS Serious RFP SIP Revision.

If you require further assistance on this matter, please contact Sarah Thomas of the Air Quality Division at 512-239-4939 or sarah.thomas@tceq.texas.gov.

Sincerely,

Donna F. Huff

Digitally signed by Donna F. Huff
Date: 2025.12.17 16:21:51 -06'00'

Donna F. Huff
Deputy Director Air Quality Division

cc: Melanie Magee, U.S. Environmental Protection Agency, Region 6