
DRAFT
ENVIRONMENTAL ASSESSMENT

Airport Expansion and Development Program

Austin-Bergstrom International Airport
Austin, Texas

Prepared for

City of Austin Airport Advisory Commission
and
U.S. Department of Transportation
Federal Aviation Administration

As lead Federal Agency pursuant to the National Environmental Policy Act of 1969 *Prepared*

by:

RS&H, Inc.

February 2022

This Environmental Assessment becomes a Federal document when evaluated, signed and dated by the Responsible Federal Official.

Responsible Federal Official

Date

THIS PAGE INTENTIONALLY LEFT BLANK

DETAILED TABLE OF CONTENTS

Chapter 1 Purpose and Need	1-1
1.1 Introduction	1-1
1.2 Background Information	1-1
1.3 Proposed Project Purpose and Need.....	1-14
1.4 Description of Proposed Project.....	1-19
1.5 Requested Federal Actions	1-26
Chapter 2 Alternatives	2-1
2.1 Introduction	2-1
2.2 Identification of Potential Alternatives.....	2-1
2.3 Screening Process	2-9
2.4 Screening Step 1: Can the Alternative Achieve the Objective of the Purpose and Need for the Proposed Project?.....	2-10
2.5 Screening Step 2: Is the Alternative Practical and Feasible to Implement?	2-13
2.6 Alternatives Retained for Analysis in This EA.....	2-15
2.7 Federal Laws and Regulations Considered in This Analysis	2-16
Chapter 3 Affected Environment and Environmental Consequences	3-1
3.1 Introduction	3-1
3.2 Study Areas	3-2
3.3 Environmental Resources Not Affected	3-2
3.4 Air Quality.....	3-5
3.5 Biological Resources	3-14
3.6 Climate.....	3-23
3.7 Department of Transportation Section 4(f)	3-28
3.8 Hazardous Materials, Solid Waste, and Pollution Prevention	3-30
3.9 Historical, Architectural, Archeological, and Cultural Resources	3-37
3.10 Land Use.....	3-41
3.11 Natural Resources and Energy Supply.....	3-47
3.12 Noise and Noise-Compatible Land Use	3-50
3.13 Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety Risks	3-62
3.14 Water Resources.....	3-78
Chapter 4 Consultation	4-1
4.1 Introduction	4-1
4.2 Agency and Organization Coordination.....	4-1
4.3 Public Involvement.....	4-1
4.4 Distribution of Draft EA	4-2
4.5 Final EA	4-2
Chapter 5 References	5-1
5.1 Introduction	5-1
5.2 Purpose and Need Chapter	5-1
5.3 Alternative Chapter	5-1
5.4 Affected Environment and Environmental Consequences	5-2
Chapter 6 List of Preparers	6-1

6.1 Introduction6-1
 6.2 Federal Aviation Administration.....6-1
 6.3 Principal Preparers6-1

LIST OF TABLES

Table 1-1 Barbara Jordan Terminal Facilities1-2
 Table 1-2 South Terminal Facilities1-7
 Table 1-3 Historical and Forecast Operations at the Airport.....1-9
 Table 1-4 Historical and Forecast Passenger Enplanements at the Airport.....1-12
 Table 1-5 Terminal Components Meeting Existing and Future Standards1-15
 Table 1-6 Aircraft Gate Requirements1-17
 Table 1-7 Proposed Project Components and Identification of Associated Federal Actions
1-27
 Table 2-1 Aircraft Operations and Enplanements Under the No Action Alternative in
 20272-7
 Table 2-2 Aircraft Operations and Enplanements Under the No Action Alternative in
 20322-9
 Table 2-3 Summary of Step 1 Screening Process.....2-13
 Table 2-4 Summary of Step 2 Screening Process.....2-15
 Table 2-5 Federal Laws and Regulations Considered in this Analysis2-16
 Table 3.4-1 National Ambient Air Quality Standards (NAAQS)3-6
 Table 3.4-2 Aircraft Operational Emissions Inventory Under the No Action Alternative3-8
 Table 3.4-3 Construction Emission Inventory – Proposed Project.....3-9
 Table 3.4-4 Aircraft Operational Emissions Inventory Under the Proposed Project Compared
 to the No Action Alternative.....3-10
 Table 3.4-5 Operational Emissions Inventory of the Net Change in Central Utility Plant
 Emissions.....3-11
 Table 3.4-6 Operational Emissions Inventory of the Additional Ground Access Vehicles .3-12
 Table 3.4-7 Operational Emissions Inventory of the Additional Parking Areas3-12
 Table 3.4-8 Net Operational Emission Changes Compared to the De Minimis Thresholds3-13
 Table 3.5-1 Wildlife Species Habitats Summary3-16
 Table 3.6-1 GHG Emissions Associated with Aircraft Operations for the No Action
 Alternative and the Proposed Project3-25
 Table 3.6-2 GHG Emissions Associated with Construction and Demolition for the Proposed
 Project.....3-26
 Table 3.6-3 City of Austin Climate Equity Plan Provisions Related to the Airport3-27
 Table 3.7-1 Change in Noise for Section 4(f) Properties in General Study Area.....3-33
 Table 3.10-1 Airport Overlay Zone Land Use Restrictions3-45
 Table 3.12-1 2019 Existing Conditions Noise Contours Population, Housing, and Area ..3-50
 Table 3.12-2 Part 150 Noise / Land Use Compatibility Guidelines3-54
 Table 3.12-3 2027 No Action Alternative Noise Contours Population, Housing, and Area 3-59
 Table 3.12-4 2032 No Action Alternative Noise Contours Population, Housing, and Area 3-59
 Table 3.12-5 2032 Proposed Project Noise Contours Population, Housing, and Area3-62
 Table 3.13-1 Population and Housing Characteristics in Project Study Area and General
 Study Area3-67

Table 3.13-2 Unemployment Rate in Project Study Area, General Study Area, Travis County, and State of Texas 3-68

Table 3.13-3 Existing (2019) Measures of Effectiveness 3-70

Table 3.13-4 2027 Measures of Effectiveness..... 3-72

Table 3.13-5 2032 Measures of Effectiveness..... 3-73

Table 3.13-6 Environmental Justice Populations in Project Study Area, General Study Area, City of Austin, and Travis County 3-74

Table 3.14-1 Field Identified Wetlands 3-81

Table 4-1 Draft EA Available Locations 4-2

LIST OF EXHIBITS

Exhibit 1-1 Regional Location of Airport..... 1-3

Exhibit 1-2 FAA Airport Diagram..... 1-4

Exhibit 1-3 Passenger Terminal Buildings at AUS..... 1-5

Exhibit 1-4 Barbara Jordan Terminal Layout 1-6

Exhibit 1-5 South Terminal Layout..... 1-8

Exhibit 1-6 Historical and Forecast Aircraft Operations at Airport 1-10

Exhibit 1-7 Historical and Forecast Passenger Enplanements at Airport 1-13

Exhibit 1-8 Proposed Project..... 1-21

Exhibit 2-1 Alternative 1: Maximum Capacity of Barbara Jordan Terminal 2-2

Exhibit 2-2 Alternative 2: Expanded Barbara Jordan Terminal 2-4

Exhibit 2-3 Alternative 3: New/Expanded Arrival/Departure Hall with New Pier Concourse and Concourse B..... 2-5

Exhibit 2-4 Alternative 4: New/Expanded Arrival/Departure Hall with Concourse B 2-6

Exhibit 2-5 No Action Alternative Hardstand Locations 2-8

Exhibit 2-6 Alternatives Screening Process 2-10

Exhibit 3.2-1 Project Study Area and General Study Area 3-3

Exhibit 3.5-1 Wildlife Resources in the General Study Area 3-21

Exhibit 3.7-1 Section 4(f) Properties in the General Study Area..... 3-31

Exhibit 3.10-1 Existing Land Use 3-43

Exhibit 3.10-2 Airport Overlay Zones 3-44

Exhibit 3.12-1 2019 Existing Conditions Noise Contours 3-51

Exhibit 3.12-2 2027 No Action Alternative Noise Contours 3-57

Exhibit 3.12-3 2032 No Action Alternative Noise Contours 3-58

Exhibit 3.12-4 Residential Land Uses in 65+ Noise Contours Under No Action Alternative in 2032 3-60

Exhibit 3.12-5 2032 Proposed Project Noise Contours 3-63

Exhibit 3.12-6 2032 Proposed Project Noise Contours Compared to 2032 No Action Alternative Noise Contours 3-64

Exhibit 3.12-7 Residential Land Uses in 65+ Noise Contours Under Proposed Project in 2032 3-65

Exhibit 3.13-1 Census Tracts in Project Study Area and General Study Area 3-66

Exhibit 3.14-1 Wetlands in Project Study Area and General Study Area 3-79

Exhibit 3.14-2 Wetlands in Vicinity of Project Components in U-2 and U-3..... 3-83

Exhibit 3.14-3 Floodplains in Project Study Area and General Study Area 3-85

APPENDICES

Appendix A – REDIM Analysis A-1
 Appendix B – Project Components B-1
 Appendix C – Regulatory Texts C-1
 Appendix D – Air Quality and Noise Reports..... D-1
 Appendix E – Texas Parks and Wildlife CorrespondenceE-1
 Appendix F – List of Rare, Threatened, and Endangered Species in General Study Area ...F-1
 USFWS Species List – Austin Ecological Services Field Office..... F-1
 Travis County Endangered Species Report – Texas Parks and Wildlife Dept. F-9
 Appendix G – Asbestos Surveys and Abatement Activities.....G-1
 Appendix H – Surface Traffic Counts and Models H-1
 Traffic Counts by GRAM Traffic Counting H-1
 Diamond Interchange Capacity Utilization H-57
 Appendix I – Consultation and Public Outreach I-1

ABBREVIATIONS AND ACRONYMS

A	
AC	Advisory Circulars
ACEIT	Airport Construction Emissions Inventory Tool
ACERT	Airport Carbon Emission Reporting Tool
ACRP	Airport Cooperative Research Program
ADG	Airport Design Group
AEDT	Aviation Environmental Design Tool
ALP	Airport Layout Plan
AO	Airport Overlay
AOA	Air Operations Area
APE	Area of Potential Effect
ARFF	Aircraft Rescue and Fire Fighting
ATCT	Air Traffic Control Tower
Atlas	Texas Historical Commission's Archeological Sites Atlas
AUS	Austin-Bergstrom International Airport
B	
BAFB	Bergstrom Air Force Base
BCC	Birds of conservation concern
BJT	Barbara Jordan Terminal
BMPs	Best Management Practices

BTU	British Terminal Units
C	
CEQ	Council of Environmental Quality
CERHB	Center for Environmental Research at Hornsby Bend
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂ e	Carbon dioxide Equivalents
CONRAC	Consolidated Rental Car Facility
CZMA	Coastal Zone Management Act
D	
dB	Decibel
DNL	Day-Night Average Sound Level
DOT	U.S. Department of Transportation
E	
EA	Environmental Assessment
EBFR	Eastbound Frontage Road
EBS	Environmental Basewide Survey
EO	Element Occurrence
EO	Executive Order
EPA	U.S. Environmental Protection Agency

ESCs	Erosion and sedimentation controls		
			<u>M</u>
		MAP	Million Annual Passengers
		MOS	Modification of Standards
		MOVES	Motor Vehicle Emissions Simulator
		MSA	Metropolitan Statistical Area
		MWs	Megawatts
			<u>N</u>
		NAAQS	National Ambient Air Quality Standards
		NEPA	National Environmental Policy Act
		NHD	National Hydrography Agency
		NO ₂	Nitrogen Dioxide
		NPIAS	National Plan of Integrated Airport Systems
		NRHP	National Register of Historic Places
		NWI	National Wetland Inventory
			<u>O</u>
		O ₃	Ozone
		OFA	Object Free Area
			<u>P</u>
		PALs	Planning Activity Levels
		Pb	Lead
		PCBs	Polychlorinated Biphenyls
			<u>L</u>
			<u>I</u>
			<u>H</u>
			<u>G</u>
			<u>F</u>
FAA	Federal Aviation Administration		
FEMA	Federal Emergency Management Agency		
FPPA	Farmland Protection Policy Act		
FRS	Facility Registry Service		
GAO	Government Accountability Office		
GHG	Greenhouse Emissions		
GIS	Geographical Information System		
GSE	Ground Surface Equipment		
GTC	Ground Transportation Center		
HBBO	Hornsby Bend Bird Observatory		
IPaC	Information for Planning and Conservation		
IPCC	International Panel on Climate Change		
LOS	Level of Service		

PFCs	Passenger Facility Charges	TAF	Terminal Area Forecast
ppm	Parts Per Million	TCE	Trichloroethylene
ppb	Parts Per Billion	TCEQ	Texas Commission on Environmental Quality
PM	Particulate Matter	TDS	Texas Disposal Systems
	<u>R</u>	THC	Texas Historical Commission
REDIM	Runway Exits Interactive Design Model	TPDES	Texas Pollution Discharge Elimination System
RON	Remain Overnight	TPWD	Texas Parks and Wildlife Department
ROT	Runway Occupancy Time	TRB	Transportation Research Board
RTEST	Rare, Threatened, and Endangered Species	TSS	total suspended solids
	<u>S</u>	TxDOT	Texas Department of Transportation
SAC	Strategic Air Command	TxNDD	Texas Natural Diversity Database
SGCN	State Listed Species of Greatest Conservation Need		<u>U</u>
SH	State Highway	USACE	U.S. Army Corps of Engineers
SIP	State Implementation Plan	USFWS	U.S. Fish and Wildlife Service
SO ₂	Sulfur Dioxide	USGS	U.S. Geological Survey
SPCC	Spill Prevention Control and Countermeasure Plan		<u>W</u>
SWMM	Stormwater Management Model	WBFR	Westbound Frontage Road
SWMU	Solid Waste Management Unit		
SWPPP	Stormwater Pollution Prevention Plan		
	<u>I</u>		
TAC	Tactical Air Command		

THIS PAGE INTENTIONALLY LEFT BLANK