

# Southwest Corridor Extension Environmental Evaluation



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**ABSTRACT:** This Environmental Evaluation describes the transportation and environmental impacts associated with transit improvements in the Southwest Corridor to serve the suburban region southwest of Denver, Colorado.

The proposed action would extend existing light rail service in the Southwest Corridor by 2.5 miles and include and a new station at C-470/Lucent with potential for an Intermediate Station located near the C-470/Santa Fe Interchange. The purpose of this project is to extend transit service in the Southwest Corridor to Highlands Ranch, a 22,000-acre master planned community located in Douglas County. At full build-out around 2015, more than 100,000 people will reside in Highlands Ranch. The extension is needed to address development and growth in Douglas County and Highlands Ranch, improve local and regional travel options, address high travel demand, provide a reliable alternative to the automobile and meet the 2004 voter mandate to implement FasTracks.

Since federal funding is not connected to this project, National Environmental Policy Act (NEPA) compliance and an Environmental Assessment or Environmental Impact Statement is not a requirement. The Environmental Evaluation (EE) is RTD's approach to ensure general compliance with the National Environmental Policy Act (NEPA) and associated regulations, regardless of the source of funding, and to ensure equal treatment of all of the FasTracks Corridors. The EE process will include a community involvement process, alternative analysis (including a summary of prior studies), identification of potential impacts and recommendations to minimize and mitigate those impacts. The RTD Board of Directors will use this EE to approve the selection of the preferred alternative and commit to mitigation measures.

Two alternatives, the No Action and the Build Alternative, are considered in this Environmental Evaluation. The No Action Alternative is defined and analyzed to provide the baseline against which the Build Alternative can be compared. The potential impacts of each alternative are identified in a broad range of environmental categories including land use, zoning and farmland; social impacts and community facilities; economic development, land acquisition and relocations; cultural resources; visual and aesthetic resources; parklands and recreational resources; air quality and energy; noise and vibration; biological resources; natural resources; hazardous materials; public safety and security; utilities and transportation.

In preparing this document, RTD has coordinated extensively with CDOT, in accordance with the *FasTracks Southwest Corridor Extension: Environmental Study and Intergovernmental Agreement*. Follow-on NEPA documentation, in the form of a Categorical Exclusion, will be needed to obtain permission from the Federal Highway Administration (FHWA) for the new bridge over C-470.

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**PREFACE:** This Environmental Evaluation for the Southwest Corridor Extension project has been prepared in accordance with Regional Transportation District (RTD) guidelines, including the RTD FasTracks Environmental Methodology Manual, and provides a comparable level of analysis to environmental documentation prepared for the other FasTracks corridors.

This Environmental Evaluation is organized as follows:

**Executive Summary:** Provides a summary of the project's definition, purpose and need, impacts it is expected to cause, and recommended impact mitigation.

**Chapter 1:** Purpose and Need - Presents a discussion of corridor transportation goals as they compare to the existing transportation conditions in the local area and the region.

**Chapter 2:** Alternatives Considered - Describes the alternatives considered in the Environmental Evaluation and discusses the bus and rail operating plans.

**Chapter 3:** Affected Environment, Impacts, and Mitigation - Describes the existing social and natural environmental conditions in the study area. The discussion provides an understanding of the environment and resources within the project's study area. The section also discusses potential impacts on the built and natural environments. Potential mitigation measures to address impacts are defined, where appropriate.

**Chapter 4:** Transportation Impacts - Presents transit and highway impacts that would result from the No Action and the Preferred Alternatives. Potential mitigation measures to address impacts are defined where appropriate.

**Chapter 5:** Public Involvement - Summarizes RTD efforts to solicit agency and public comments during the Environmental Evaluation process and includes pertinent correspondence.

**Chapter 6:** References – Presents a list of references used to develop the EE.

**Appendix A:** Cultural Resource Inventory Form – Prepared for historic railroad bridge.

**Appendix B:** Public and Agency Comments and Responses – Presents the comments received on the Draft EE and RTD's responses to those comments.

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## List of Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
AMI	average median income
APCD	Colorado Air Pollution Control Commission
ARRA	American Recovery and Reinvestment Act
AST	above-ground storage tank
AWG	Agency Working Group
Blvd.	boulevard
BMP	best management practice
BNSF	Burlington Northern and Santa Fe Railroad
BP	before present
BTU	British Thermal Unit
CAAA	Clean Air Act Amendments 1990
CAQCC	Colorado Air Quality Control Commission
CDOT	Colorado Department of Transportation
CDOW	Colorado Department of Wildlife
CDPHE	Colorado Department of Health and the Environment
CDPS	Colorado Discharge Permit System
CDPS-SCP	CDPS – Stormwater Construction Permit
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	Colorado Geological Survey
CH <sub>4</sub>	methane
CLOMR	Conditional Letter of Map Revision
CNHP	Colorado Natural Heritage Program
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CPTED	Crime Prevention Through Environmental Design
CWA	Clean Water Act
CWSD	Centennial Water and Sanitation District
dB	decibels

## List of Acronyms and Abbreviations

dBa	A-weighted decibels
DOT	U.S. Department of Transportation
DRCOG	Denver Regional Council of Governments
DUS	Denver Union Station
DW	Denver Water
EAC	Early Action Compact for Ozone
EMU	Electric Multiple Units
EURV	excess urban runoff volume
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FPPA	Farmland Protection Policy Act
FE	Federal Endangered
FT	Federal Threatened
FTA	Federal Transit Administration
GESC	grading and erosion control
GHG	green house gas
GI	General Industrial
HCA	habitat conservation area
HCM	Highway Capacity Manual
HRTIP	Highlands Ranch Transportation Improvements Program
HUD	Housing and Urban Development
I-25	Interstate 25
L <sub>dn</sub>	day-night sound levels
L <sub>eq</sub>	energy equivalent levels
L <sub>max</sub>	maximum sound pressure level
LGT	Local Government Team
LOMR	Letter of Map Revision
LOS	level of service
LPA	Locally-Preferred Alternative
µg/m <sup>3</sup>	micrograms per cubic meter
LTE	LT Environmental, Inc.
Max	maximum
MESA	Modified Environmental Site Assessment

## List of Acronyms and Abbreviations

MIS	Major Investment Study
MS4	Municipal Separate Storm Sewer Systems
MSA	Metropolitan Statistical Area
MSAT	Mobile Source Air Toxic
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
MPH	miles per hour
NM	not monitored
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NRCS	Natural Resources Conservation Service
NO	nitric oxide
N <sub>2</sub> O	nitrous oxide
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	oxides of nitrogen
NURP	National Urban Runoff Program
OAHP	Office of Archaeology and Historic Preservation
O <sub>3</sub>	ozone
OPS	Division of Oil and Public Safety
PAC	Political Advisory Committee
Pb	lead
PCEA	Programmatic Cumulative Effects Analysis
PDU	Planned Development Urban
PEP	palustrine emergent persistent
PF	palustrine forest
PM <sub>2.5</sub>	particulate matter less than 2.5 microns in aerodynamic diameter
PM <sub>10</sub>	particulate matter less than 10 microns in aerodynamic diameter
ppm	parts per million
PPV	peak particle velocity
PRF	pollution reduction facilities
PSS	palustrine scrub-shrub
RCP	reinforced concrete pipe

## List of Acronyms and Abbreviations

RTD	Regional Transportation District
RTP	Regional Transportation Plan
RMS	root mean square
SCC	state species of special concern
SCP	Stormwater Construction Permit
SE	state endangered
SEL	sound exposure level
SHPO	Colorado State Historic Preservation Officer
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
ST	state threatened
SWMP	Stormwater Management Plan
TAC	Technical Advisory Committee
TIP	Transportation Improvement Program
UPRR	Union Pacific Railroad
U.S.	United States
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
UDFCD	Urban Drainage and Flood Control District
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Society
USHUD	U.S. Department of Housing and Urban Development
UST	underground storage tank
VdB	vibration velocity levels in decibels
VMT	vehicle miles traveled
VOC	volatile organic compounds
WQCC	Water Quality Control Commission
wqcv	water quality capture volume