

# Community Understanding Report

I-270 Corridor Improvements

September 2022

**Prepared For:**  
CDOT Region 1  
2829 West Howard Place  
Denver, CO 80204

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# Acronyms and Abbreviations

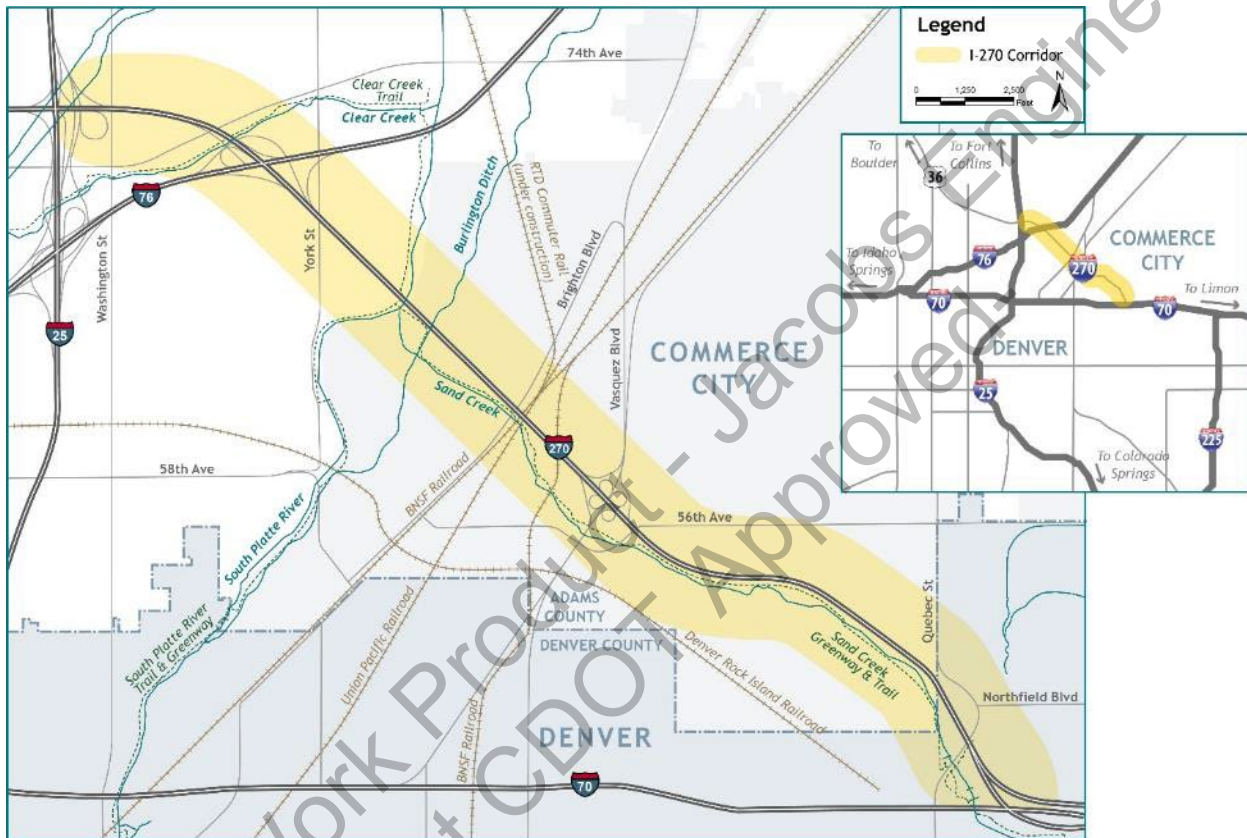
Acronym	Definition
ACS	American Community Survey
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CEQ	Council on Environmental Quality
COPD	chronic obstructive pulmonary disease
COVID-19	novel coronavirus disease of 2019
CRS	Colorado Revised Statute
DI	disproportionately impacted
DOLA	[Colorado] Department of Local Affairs
EA	Environmental Assessment
EJ	environmental justice
EJScreen	[EPA] Environmental Justice Screening and Mapping Tool
ELIL	extreme low-income levels
EO	Executive Order
EPA	United States Environmental Protection Agency
FHWA	Federal Highway Administration
GHG	greenhouse gas
GIS	geographic information systems
HUD	United States Department of Housing and Urban Development
I-25	Interstate 25
I-270	Interstate 270
I-70	Interstate 70
I-76	Interstate 76
ID	identification
MSAT	mobile source air toxic
NAAQS	National Ambient Air Quality Standards
NDCC	North Denver/Commerce City
NEPA	National Environmental Policy Act
PM	particulate matter
PM <sub>10</sub>	particulate matter less than 10 micrometers in diameter
PM <sub>2.5</sub>	particulate matter less than 2.5 micrometers in diameter

ROW	right-of-way
RTD	Regional Transportation District
SB 260	Senate Bill 260
SH-2	State Highway 2
SH-224	State Highway 224
TRAP	traffic-related air pollution
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
URA	Urban Renewal Area
US-85	United States Highway 85
U.S.C.	United States Code
USDOT	United States Department of Transportation
VMT	vehicle miles traveled

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## 1.0 Introduction

The Colorado Department of Transportation (CDOT) and the Federal Highway Administration (FHWA), in conjunction with local partners Adams County and Commerce City, are proposing improvements to 6 miles of Interstate 270 (I-270) in Adams County, Commerce City, and the City and County of Denver, Colorado, primarily between Interstate 25 (I-25) and Interstate 70 (I-70) (Figure 1). CDOT and FHWA are preparing an Environmental Assessment (EA) for this project, referred to as the I-270 Corridor Improvements project. Sections 1 and 2 of the EA and EA Appendix A contain the project setting and a detailed description of alternatives.



**Figure 1. Project Location**

Source: Jacobs

This report describes impacts to resources that are integral to understanding the communities that could be affected by the proposed improvements. These resources include land use, right-of-way (ROW), social and economic resources, and environmental justice (EJ).

The study area for all resources in this report extends 0.5 mile from the anticipated limits of permanent and temporary disturbance resulting from the construction and operation of the Proposed Action. This study area was identified as being broad enough to encompass the anticipated direct and indirect impacts from the Proposed Action. Also, 0.5 mile is commonly considered a typical watershed, a standard used in determining the walkability of an area (City of Littleton 2019; DRCOG 2013). However, resources beyond this boundary were taken into consideration where applicable, such as compatibility with local plans and access to community and employment facilities. Jurisdictional boundaries were used to determine consistency with local plans.

## 2.0 Land Use

This section describes how the alternatives would affect existing and future land use and evaluates their consistency with local government land use planning.

### 2.1 Regulatory Context

There are no specific land use regulations with which FHWA and CDOT must comply. However, the land use discussion must assess the consistency of the proposed alternatives with the comprehensive plans and other relevant plans adopted for the area.

### 2.2 Methods

This section describes the methods used to identify relevant land use information and perform an impact analysis. The analysis considers impacts to the following:

- Existing and future land use
- Consistency with local government land use planning

#### 2.2.1 Data Gathering

The following information was gathered from local governments and field verified to analyze potential impacts:

- Land use designations created by a state, county, or city; conservation easements; or urban service area boundaries
- Existing land uses based on geographic information system (GIS) data and aerial imagery where official land use designations are unavailable
- Land use plans (such as urban or suburban areas, parks, agricultural areas, pastureland, riparian corridors, or unused grassland, shrubland, or forest)
- Current zoning (such as light industry, heavy industry, commercial, retail, and residential uses, including residential density and type)
- Future land use and growth management areas; annexation plans; future development trends (including a development's physical area, type of use, density, and status)

Maps based on GIS data were developed to help visually synthesize this information with the proposed project facilities. Mapping includes land in public ownership, commercial, retail, wholesale, industrial, residential, vacant, mixed-use, and jurisdictional boundaries. Commerce City, Adams County, and City and County of Denver assessors' information was gathered to identify potentially affected parcels.

#### 2.2.2 Analysis Approach

The analysis of impacts considers how the proposed alternatives would do the following:

- Affect ongoing uses of adjacent land by identifying existing land uses that would be converted to transportation use by overlaying design plans onto land use maps and calculating the degree of change.
- Be consistent with approved local government plans by comparing expected land use changes with existing plans and identifying any discrepancies.
- Induce growth beyond that anticipated by local planning departments by comparing proposed access changes to existing access to determine whether the alternatives would change the intensity and integrity, location, or pattern of land use by changing accessibility that influences where development occurs.



## 2.3 Existing Conditions

### 2.3.1 Current Land Use

As shown on Figure 2, the South Platte River generally divides the study area into two jurisdictions. Unincorporated Adams County is northwest of the river, and Commerce City (also within Adams County) is southeast of it. A small section of the study area lies within the City and County of Denver near I-70. Figure 3 shows existing land uses within the study area, most of which are industrial uses. Welby Reservoir is adjacent to unincorporated Adams County's eastern boundary between I-270 and Interstate 76 (I-76) just west of the South Platte River. Welby Reservoir and adjacent Bambi-Walker Reservoir within Commerce City are part of Denver Water's Downstream Reservoir Water Storage Program and comprise its South Reservoir Complex, under which Denver Water stores and releases water from former gravel mines that have been converted to reservoirs (Denver Water 2020). The South Platte River and accompanying South Platte River Trail travel north-south between the two reservoirs. A large triangle of undeveloped land, indicated as Public/Quasi-Public<sup>1</sup> on Figure 3, is south of I-270 adjacent to the Metro Water Recovery plant opposite the reservoirs.

Clear Creek, which is paralleled by the Clear Creek Trail, flows between I-76 and State Highway 224 (SH-224). Sand Creek enters the South Platte River on the southern side of I-270 at Commerce City's western boundary. Sand Creek and the Sand Creek Regional Greenway Trail roughly parallel the southern side of I-270 from that point to I-70. Industrial uses and some commercial uses occupy the land south of I-270 within Commerce City and the City and County of Denver. Few residences are adjacent to I-270.

#### **Industrial Areas**

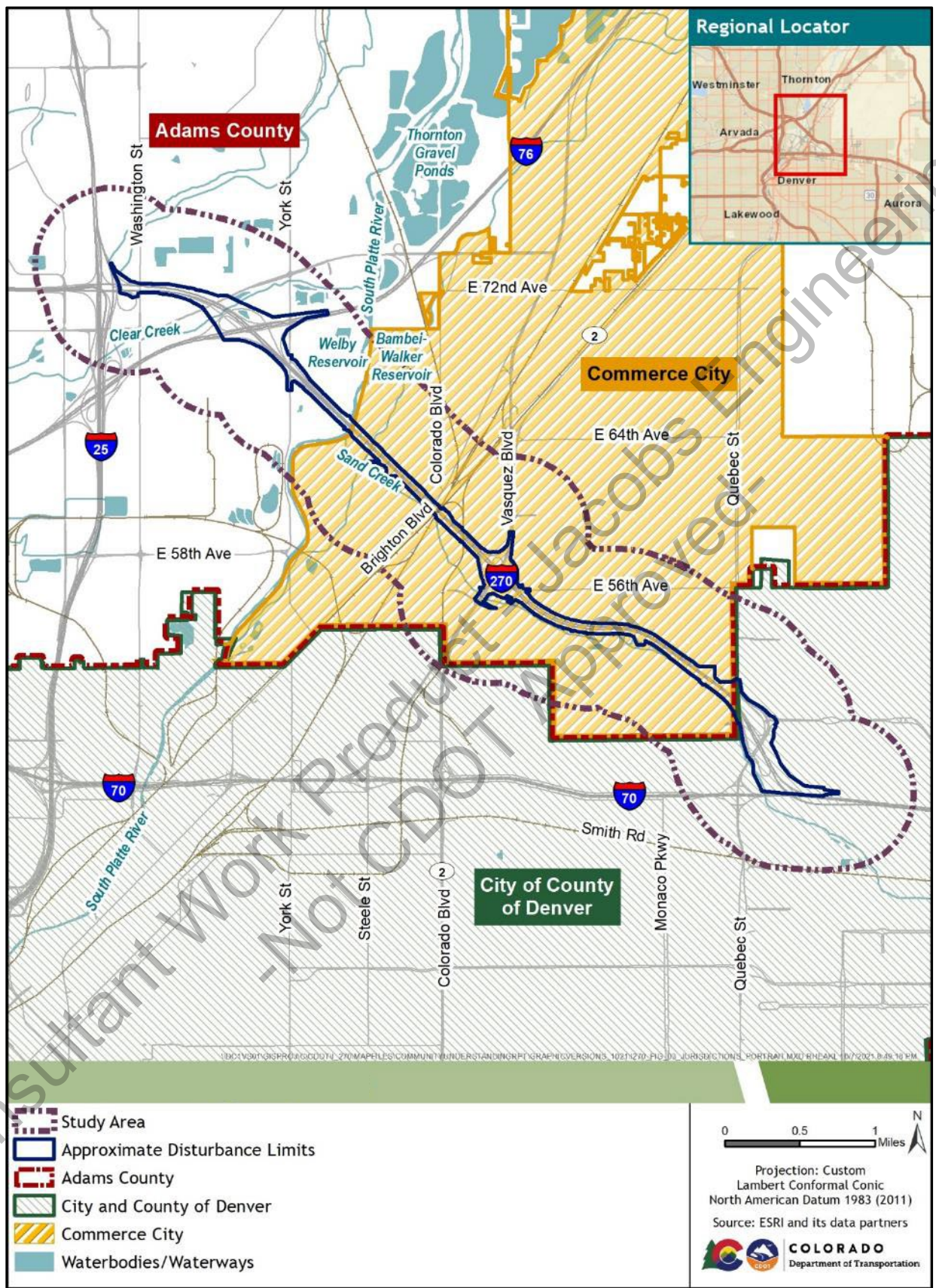
The dominant land use adjacent to I-270 is industrial (Adams County 2018). Land uses on either side of I-70 are also identified primarily as industrial (City and County of Denver 2019b).

#### **Commercial Areas**

A large commercial shopping area extends south of Northfield Boulevard to I-70, identified as a commercial land use. Small, mostly linear swaths of open space span the area. Denver's Northeast Park Hill neighborhood is west of Central Park and directly north of I-70 (City and County of Denver 2015).

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<sup>1</sup> Adams County does not define "quasi-public," but the term is generally defined to mean "facilities and spaces that are available to the general public but are privately owned, may be operated through government funding, and include non-profit and community service organizations" (LawInsider 2021).



**Figure 2. Government Jurisdictions**  
 Source: DRCOG 2020

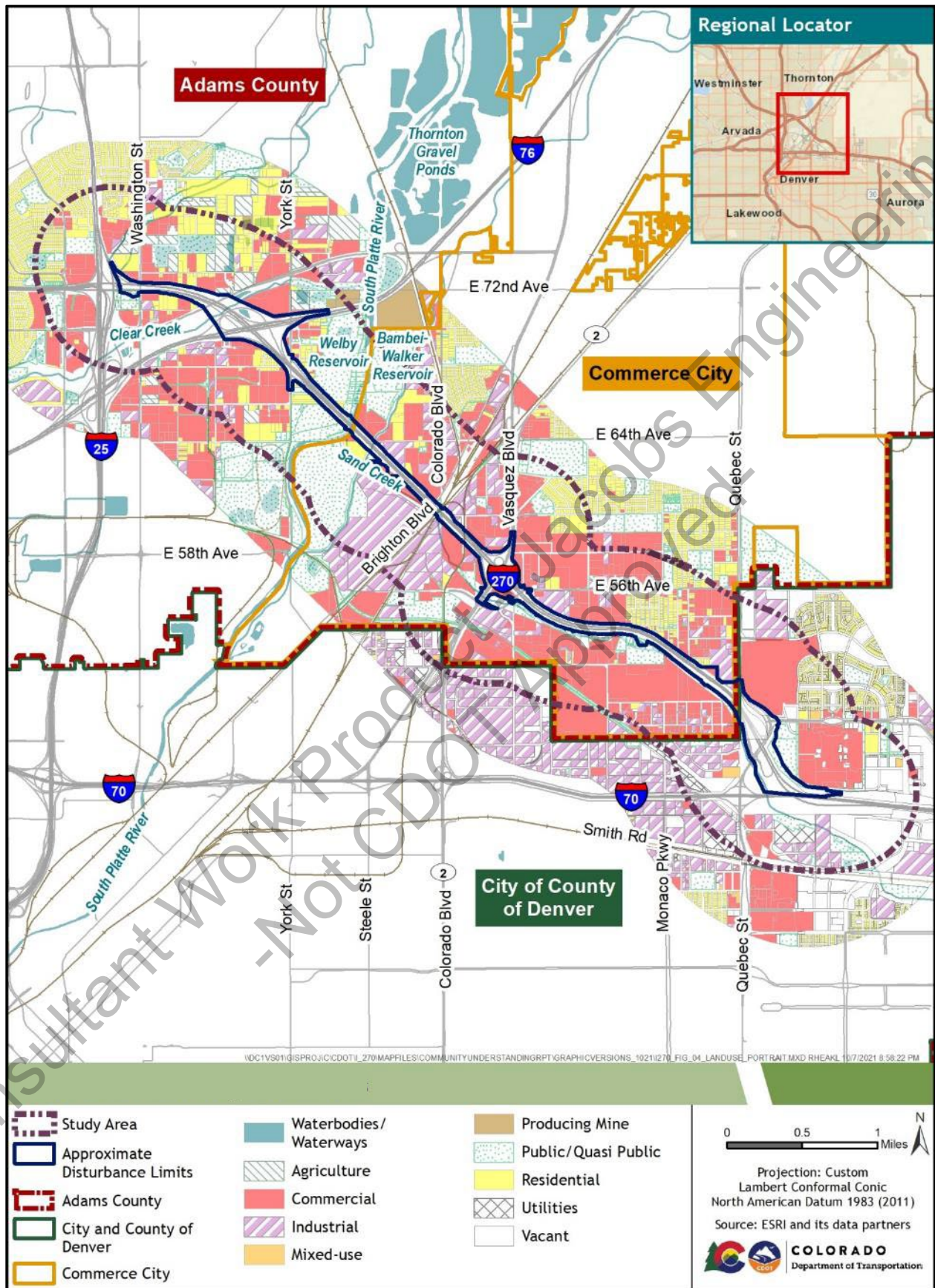


Figure 3. Current Land Uses

### **Residential Areas**

As shown on Figure 3, there are few residential areas adjacent to I-270, which include the following:

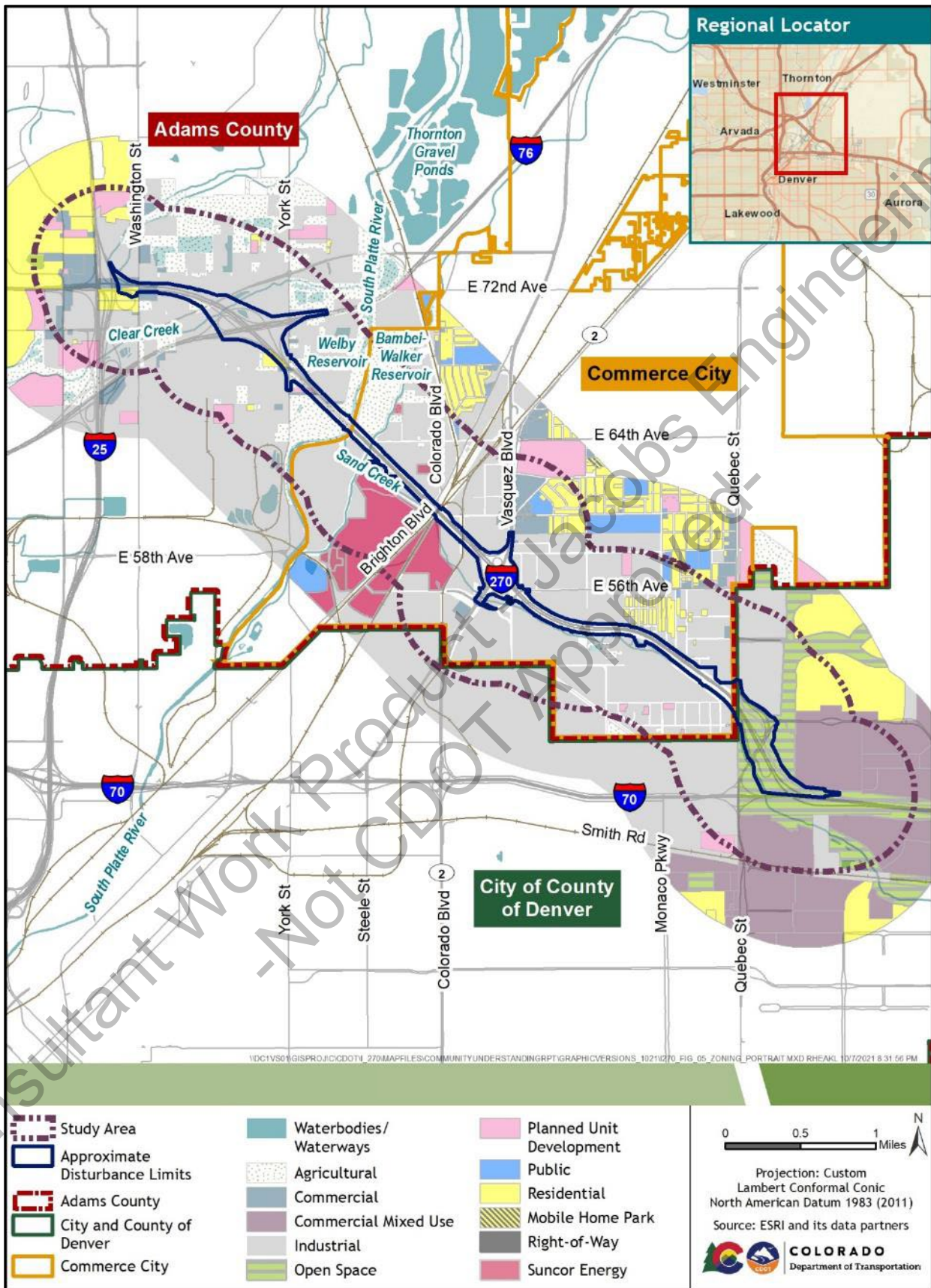
- A small residential area north of I-270 and east of I-25 along 73<sup>rd</sup> Avenue
- A small residential area along 71<sup>st</sup> Avenue between I-270 and I-76 east of I-25
- A small residential area southwest of I-76 and I-270 at Race Street and on the east end of 68<sup>th</sup> Avenue. An existing noise barrier separates these residences from I-270.
- A small residential area abutting the southern side of I-76 between I-270 and Welby Reservoir along Clayton Street. An existing noise barrier separates these residences from I-76. A few residences are also north of I-270 in this area, primarily on either side of 68<sup>th</sup> Place and Elizabeth Street.
- A larger residential area (the South Rose Hill neighborhood [Figure 13]) approximately halfway between Vasquez Boulevard and Quebec Street, extending north of I-270 to 56<sup>th</sup> Avenue; it is bordered generally by Niagara Street to the east and Krameria and Kearney Streets to the west.

Quebec Street crosses I-270 just west of the highway's intersection with I-70, traveling north to south and generally representing the City and County of Denver boundary. Denver's Central Park (formerly Stapleton) neighborhood is east of Quebec Street, within which exists Conservatory Green, a large residential area north of Northfield Boulevard primarily between Spruce Way and Central Park Boulevard (Brookfield Properties 2019, 2020).

#### **2.3.2 Future Land Use and Zoning**

Future land use and development are typically based on zoning, which divides a municipality into areas (zones) within which types of uses are permitted or prohibited. Zoning differs from existing land use in that zoning may have been applied or changed after lands began being used in other ways.

In general, zoning (Figure 4) and future land use maps adhere to existing land uses within the study area, with an even greater focus on industrial land use zoning. This industrial focus is most notable in the northwestern section of the study area, where the existing commercial land uses are zoned as industrial. The small residential land uses west of Welby Reservoir and north of I-270 to the east of I-25 are zoned as industrial. The zoning map also identifies the Suncor Energy Inc. refinery as a large, planned unit development area south of Sand Creek on both sides of the railroad tracks that converge at I-270.



**Figure 4. Zoning**

Source: Adams County 2020, City and County of Denver 2019a

### 2.3.3 Local Plans

Local governments prepare comprehensive plans to “communicate a community’s goals and objectives, provide a blueprint for future land use, and serve as the basis for zoning, subdivision, and land use codes” (University of Delaware n.d.). Commerce City’s *C3 Vision Comprehensive Plan* (2010a) identifies seven “Future Land Use Plan Big Ideas,” including “Maintain a balanced mix of land uses overall to maintain the city’s high quality of life, economic prosperity, and fiscal stability,” and “Retain lands for industry so the city will continue to have jobs and a fiscally-balanced future.” The plan also includes the following goals (Commerce City 2010a):

- Goal Land Use 4—Retain existing industrial areas and land for future jobs: “Commerce City will retain its existing industrial areas and will plan land for future high-quality, and additional living wage jobs.”
- Goal Economic Development Goal 3.3—Ensure Availability of Industrial Land and Buildings: “Limit or restrict rezoning of industrial land to residential, to preserve these areas for existing or new business and industry.”

Commerce City’s Comprehensive Plan (2010a) identifies specific focus areas (Figure 5) adjacent to the study area. Focus areas are not the same as neighborhoods, which are not identified in Commerce City’s Comprehensive Plan. Commerce City has identified the following policies for the six focus areas relevant to this project (Commerce City 2010a):

- Retain the general industrial use of the area south of I-270.
- Improve access and connectivity (including along Sand Creek Trail) and infrastructure and roadways.
- Extend Holly Street across I-270 between East 52<sup>nd</sup> and 56<sup>th</sup> Avenues.
- Focus on redevelopment around I-270 and U.S. Highway 85 (US-85) (Vasquez Boulevard).
- Improve transportation connectivity, infrastructure, and drainage in the Clermont focus area.

The plan also identifies the following relevant issues within the study area (Commerce City 2010a):

- Lack of connectivity—The area south of I-270 has poor transportation connections and few connections north over I-270.
- Land use conflicts—The residential and industrial uses north of I-270 between Quebec Street and roughly Kearney Street are randomly interspersed within the area and have developed in a haphazard way.

The southern area of I-270 is within the City and County of Denver’s Northeast Park Hill neighborhood (Figure 5). The *Park Hill Neighborhood Plan* (City and County of Denver 2000b), an amendment to the City and County of Denver’s *Denver Comprehensive Plan 2000* (2000a), includes a Land Use and Zoning action to “contain all industrial development and related uses to and within currently zoned industrial districts only.”

The *Imagine Adams County Comprehensive Plan* established policies for the existing industrial uses in the county’s southwestern area concentrated primarily along the I-76 corridor and south of SH-224/70<sup>th</sup> Avenue. Policy 14.2, Revitalize Older Industrial Areas, calls for the preservation of jobs in industrial areas (Adams County 2012b).

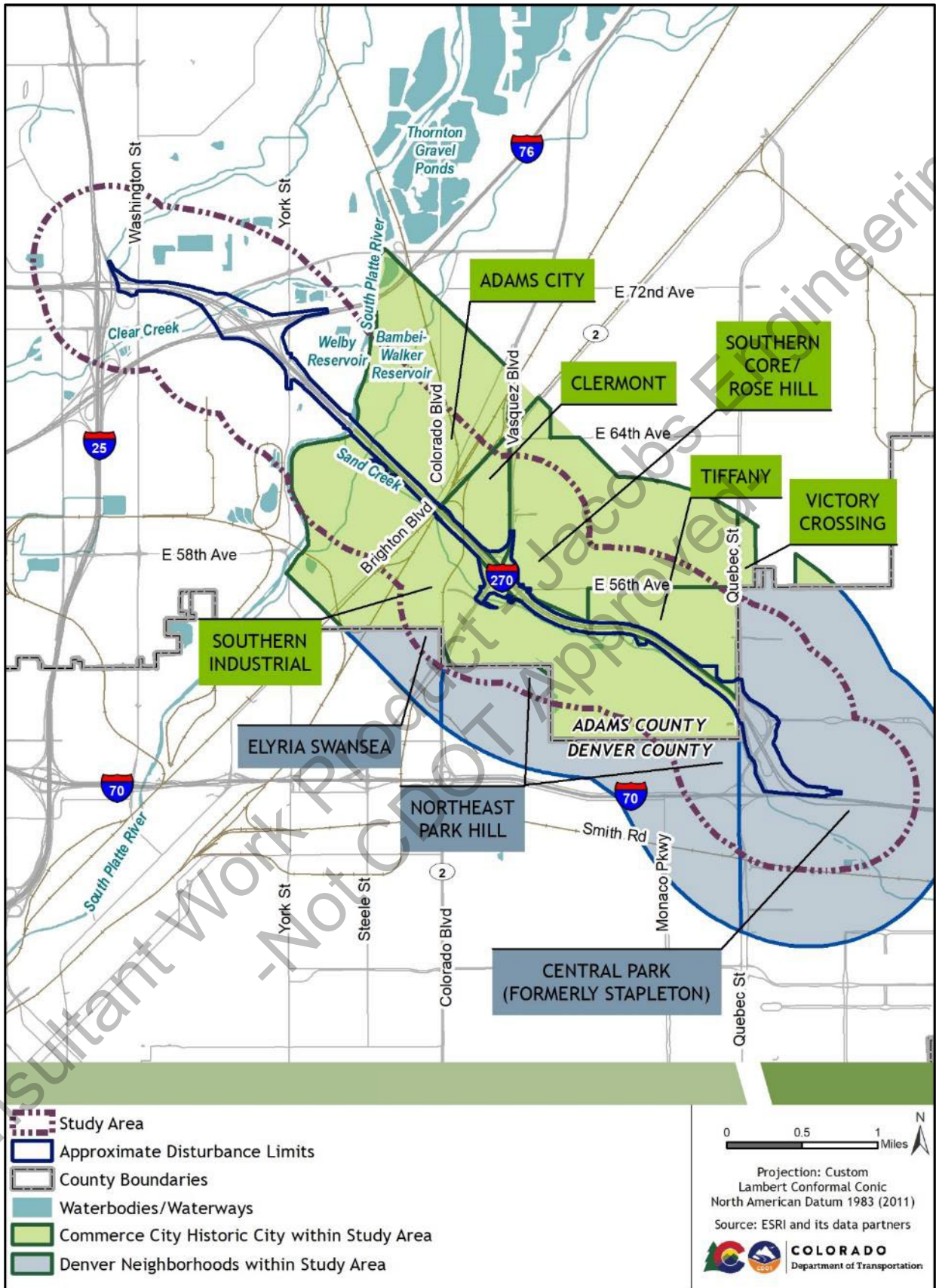


Figure 5. Denver and Commerce City Planning Areas within the Study Area

## 2.4 Impacts Assessment

### 2.4.1 No Action Alternative

Under the No Action Alternative, undeveloped land within the study area would continue to develop in accordance with future land use plans and zoning.

The No Action Alternative would partially support local land use goals, particularly those regarding maintaining existing industrial land uses, because I-270 would continue to operate under current conditions and serve existing land uses. However, this alternative would not address transportation needs on I-270 relating to travel reliability, safety, existing infrastructure, and freight efficiency. Therefore, it would not support policies outlined in the Commerce City Comprehensive Plan (2010a) to improve access, connectivity, infrastructure, and roadways overall, and to improve transportation connectivity, infrastructure, and drainage in the Clermont focus area in particular, because I-270 would not be improved to address outstanding safety and congestion issues. In addition, this alternative would not address the lack of connectivity identified in the plan related to poor transportation connections in the area south of I-270 and the few connections north of I-270.

The No Action Alternative is not expected to induce growth beyond that identified in area plans because the study area already is developed and no changes in highway capacity or existing access would occur—that is, no new interchanges or connections to I-270 would be constructed. However, continued congestion on I-270, which causes travelers to use alternative transportation routes to avoid the highway, could potentially lead to changes in land use patterns favoring areas that are more readily accessible without relying on I-270.

Although the No Action Alternative would not directly change access to jobs and area facilities, continued congestion on I-270 is expected to exacerbate use of alternate transportation routes to avoid the highway.

### 2.4.2 Proposed Action

Most of the changes included under the Proposed Action would occur within existing transportation ROW, with the exception of 3.3 acres of land required for permanent acquisition—of which 1.037 acres are zoned industrial, 1.98 acres are zoned open space, 0.03 acre is zoned planned unit development, and 0.25 acre is unknown—representing a minor change to land use (Table 1). The corridor would remain predominantly focused on industrial land use and transportation, as called for in local plans and consistent with existing conditions. This alternative would not contribute to the land use conflict identified in Commerce City's Comprehensive Plan (2010a) related to haphazard residential and industrial development, nor would it affect the *Park Hill Neighborhood Plan's* (City and County of Denver 2000b) action to contain industrial development to currently zoned industrial districts.

Local plans identify general community and neighborhood goals focused on retaining the industrial nature of the study area. Adams County in particular encourages phasing out uses that are incompatible with heavy industry to reduce the public's risk of exposure to various pollutants. The Proposed Action would support local plans by improving transportation to and from the area's industrial uses, as well as residential areas. Indirectly, this beneficial effect could further heighten industrial activity, with potential adverse effects to residents as noted by Adams County.

By improving traffic flow and safety in the study area, the Proposed Action would support the "Big Ideas," goals, and policies identified in Commerce City's Comprehensive Plan (2010a). The plan calls for maintaining a balanced mix of land uses, retaining industrial areas and land, and improving access and connectivity. Improving the interchange at I-270 and Vasquez Boulevard would also support the plan's policy to focus redevelopment around this area. The Proposed Action would address the issue identified in the plan related to lack of bicycle/pedestrian connectivity and limited connections across I-270 by providing multimodal improvements, notably at the I-270/Vasquez Boulevard interchange (refer to the



*Multimodal Technical Report* in Appendix A9 of the EA). This alternative would also support Adams County's policy to "revitalize older industrial areas to preserve jobs and take advantage of existing infrastructure" by improving traffic flow on I-270 and connectivity in the area (Adams County 2012b).

The Proposed Action would provide several transportation benefits, including reducing travel delays, increasing interstate capacity, and improving existing access. However, it would not create new access and, considering the developed nature of the study area, the Proposed Action would not induce growth beyond that anticipated by local planning departments. The intensity and integrity, location, or pattern of land use is not expected to change. Similarly, the Proposed Action would not add new access to jobs and other facilities in the study area but would improve existing access, making it easier to reach desired destinations.

## 2.5 Mitigation Measures

No mitigation measures were identified, because adverse impacts to land use are minimal and several beneficial impacts are expected.

## 3.0 Right-of-way

ROW acquisition is the direct purchase of land to be incorporated into a project, whereas an easement gives someone the right to use the property of another; it is a purchase of rights for use of the land, rather than a transfer of land ownership. Under a permanent easement, the original property owner retains ownership of the land, but cannot use it in any way that would interfere with the terms of the easement. Permanent easements for transportation projects typically include slope, drainage, utility, and transportation infrastructure easements. A temporary easement involves leasing a portion of the land for the time needed to complete the project, typically as a temporary construction easement. Full ownership of the land then reverts to the property owner at the end of the project. Both the project's permanent physical elements and temporary construction-related elements are included in this analysis.

### 3.1 Regulatory Context

For any persons whose real property interests may be impacted by this project, the acquisition of those property interests will comply fully with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act). The Uniform Act is a federally mandated program that applies to all acquisitions of real property or displacements of persons resulting from federal or federally assisted programs or projects. It was created to provide for and ensure the fair and equitable treatment of all such persons. To further ensure that the provisions contained within this act are applied uniformly, CDOT requires Uniform Act compliance on any project for which it has oversight responsibility, regardless of the funding source. In addition, the Fifth Amendment of the U.S. Constitution provides that private property may not be taken for a public use without payment of just compensation. All impacted owners will be provided notification of CDOT's intent to acquire an interest in their property, including a written offer letter of just compensation specifically describing those property interests. A ROW specialist will be assigned to each property owner to assist them with this process.

### 3.2 Methods

This section describes the methods used to identify any private properties (such as industrial, residential, or business) potentially affected by ROW acquisition and perform an impact analysis. The analysis considers impacts to the following:

- Relocations/displacements caused by property acquisition
- Property acquisition, including permanent and temporary easements

### **3.2.1 Data Gathering**

Parcel boundaries and ownership data were gathered from Adams County and the City and County of Denver.

### **3.2.2 Analysis Approach**

The analysis of impacts considers how the alternatives would do the following:

- Result in ROW acquisitions and permanent and temporary easements
- Result in relocations/displacements of residents, businesses, nonprofit associations, or agricultural operations
- Change access to jobs, educational facilities, religious institutions, health and welfare services, recreational facilities, social and cultural facilities, pedestrian facilities, shopping facilities, and public transit services as a result of relocations or acquisitions

A GIS map depicting parcel information was used to identify ROW acquisitions and permanent and temporary construction easements based on parcel data. A table was prepared to summarize the parcel data and indicate total parcel sizes, ROW acquisitions, and permanent and temporary easements in acres.

### **3.2.3 Existing Conditions**

ROW widths along I-270 are approximately 300 feet, enlarging considerably around interchanges to encompass ramps.

## **3.3 Impacts Assessment**

### **3.3.1 No Action Alternative**

The No Action Alternative is not anticipated to result in ROW acquisitions, easements, relocations, or displacements.

### **3.3.2 Proposed Action**

The Proposed Action would require temporary construction easements, permanent easements, and ROW acquisition from properties surrounding the interchange. Approximately 3.3 acres would be permanently acquired, 9.9 acres would be required for a permanent easement, and 9.7 acres would be required for a temporary construction easement (Table 1). Figure 6 and Figure 7 show general locations of these affected properties. These numbers are based on conceptual-level design and are subject to change as design progresses. None of the partial acquisitions disrupt existing business operations. No partial acquisitions would require total property acquisition. Also, no residential or commercial displacements or relocations would result from the Proposed Action.

## **3.4 Mitigation Measures**

CDOT will comply with procedures set forth in the Uniform Act, as amended (1989).

Table 1. Estimated Right-of-way Impacts by Parcel

Map #	Parcel ID	Owner Name	Total Parcel Size (Acres)	Permanent Acquisition (Acres)	Permanent Easement (Acres)	Temporary Construction Easement (Acres)	Zoning Type
1	171935303001	Washington Gardens BPT LLC Und 50% and Washington Gardens Randall LLC Und 50%	4.404	0	0	0.038	Industrial
2	171935304011	Central Connection LLC	11.292	0	0	0.019	Industrial
3	182502202030	Trustile Properties LLC	12.757	0	0	0.126	Industrial
4	182502202020	Decarlo Family Trust The	0.96	0	0	0.027	Unknown
5	182502201004	Scott Michael and Scott Lori	0.839	0	0	0.031	Unknown
6	182501204002	Antikainen Properties LLP	0.760	0	0	0.059	Industrial
7	182501200126	County of Adams The	0.24	0	0	0.002	Industrial
8	182501209001	County of Adams The	0.08	0	0	0.005	Industrial
9	182502402042	Performance Food Group Inc	8.575	0	0	0.006	Industrial
10	182501302005	Weland Todd P	0.817	0.001	0	0.038	Industrial
11	182501302006	Weland Todd P	0.463	0.052	0	0.068	Industrial
12	182501208039	City and County of Denver Acting By and Through Its Board of Water Commissioners	80.825	0.072	0	0.095	Industrial
13	182501301002	Chapman Renee/Depinto Victor and Depinto Rick	0.940	0.121	0	0.030	Unknown
14	182501301063	Metro Wastewater Reclamation district	0.918	0.076	0	0	Unknown
15	182501301064	Metro Wastewater Reclamation district	0.595	0.051	0	0	Unknown
16	182501301057	Metro Wastewater Reclamation district	2.1	0.095	0	0	Planned Unit Development
17	182501301041	Metro Wastewater Reclamation district	1.3	0.001	0	0	Commercial
18	182501301044	Metro Wastewater Reclamation district	2.87	0	0	0.022	Unknown

Table 1. Estimated Right-of-way Impacts by Parcel

Map #	Parcel ID	Owner Name	Total Parcel Size (Acres)	Permanent Acquisition (Acres)	Permanent Easement (Acres)	Temporary Construction Easement (Acres)	Zoning Type
19	182501301018	Kuhns Larry R and Kuhns Marianne C	1.76	0	0	0.012	Unknown
20	182501301065	Chaplinskiy Anatoliy and Chaplinskaya Marina	1.866	0	0	0.011	Unknown
21	182501303023	Euro JG LLC	0.907	0	0	0.013	Commercial
22	182501300006	Metropolitan Denver Sewage Disposal District No. 1	23.606	0	0	0.122	Unknown
23	182501300012	Lammers Harold R Jr	1.68	0	1.507		Unknown
24	182501300010	Public Service Co of Colorado C/O Property and Local Taxes	26.813	0	0.602	0.154	Unknown
25	182501300007	A T and W Inc	8.31	0	0.509	0	Agriculture
26	182501400022	Christenson Justin D Aka Shirley Justin D Und 3/4 Int/Klein Ben Und 1/4th Int	5.881	0	0.305	0	Agriculture
27	182501300008	City of Commerce City	2.74	0	0	0.236	Industrial
28	182512202001	City of Commerce City	9.300	0	0	0.334	Industrial
29	182512101001	Farmers Reservoir and Irrigation Co	0.27	0	0.062	0.021	Agriculture
30	182512101002	Farmers Reservoir and Irrigation Co	1.808	0	0	0.138	Agriculture
31	182512102040	City of Commerce City	5.46	0	1.513	0.003	Industrial
32	182512102041	City of Commerce City	9.951	0		0.109	Industrial
33	182512102042	City of Commerce City	4.49	0	0	0.353	Industrial
34	182512101063	Hagen Kenneth G Trust The	1.16	0	0	0.048	Industrial
35	182512101081	Waste Management of Colorado Inc C/O Waste Management	13.65	0	2.721	0	Industrial
36	182512101083	Waste Management of Colorado Inc C/O Waste Management	2.389	0	0	0.076	Industrial
37	182512101082	Waste Management of Colorado Inc C/O Waste Management	23.022	0	0	0.364	Industrial
38	182512104001	Union Pacific Railroad Company C/O Property Tax Department	0.806	0	0	0.161	Industrial

Table 1. Estimated Right-of-way Impacts by Parcel

Map #	Parcel ID	Owner Name	Total Parcel Size (Acres)	Permanent Acquisition (Acres)	Permanent Easement (Acres)	Temporary Construction Easement (Acres)	Zoning Type
39	Unknown	Burlington Northern Santa Fe Railroad Company		0	0	0.296	Industrial
40	182512402001	Suncor Energy (USA) Inc	45.667	0	0	0.252	Planned Unit Development
41	182307200070	Haase Bruce	4.645	0	0	0.373	Industrial
42	182307300011	Denver Oil LLC	0.085	0	0	0.010	Industrial
43	182307300010	Denver Oil LLC	1.363	0	0	0.084	Industrial
44	182307301007	Semmaterials Energy Partners LLC Attn Tax Department	5.083	0	0	0.087	Industrial
45	182307301045	Pepper Tank Company	3.870	0.307	0	0.198	Industrial
46	182307302015	Pepper Tank Company C/O Bkep Materials LLC	1.854	0	0	0.050	Industrial
47	182307302017	Roofing Asphalt Products Inc	0.216	0.006	0	0.007	Industrial
48	182307300040	Hooper Investments LLC	5.65	0.162	0	0.105	Industrial
49	182318200065	City of Commerce City	5.14	0	0	0.186	Industrial
50	182318200001	Beco LLC	3.56	0	0.273	3.065	Industrial
51	182318100009	City of Commerce City	0.724	0	0	0.184	Industrial
52	182318100102	City of Commerce City	9.706	0	0	0.040	Industrial
53	182317200038	City of Commerce City	5.423	0	0	0.009	Industrial
54	182317200005 & 182317200033	Rodriguez Joyce E/Hewitt Robert C/Miner Richard Lee & Mellman Gerald N et al	0.769	0	0	0.016	Industrial
55	182317200016	City and County of Denver	3.8	0	0	0.006	Industrial
56	182317213011	City and County of Denver	1.137	0	0	0.002	Industrial
57	182307406001	Fate Enterprises LLC	2.11	0	0	0.016	Industrial

Table 1. Estimated Right-of-way Impacts by Parcel

Map #	Parcel ID	Owner Name	Total Parcel Size (Acres)	Permanent Acquisition (Acres)	Permanent Easement (Acres)	Temporary Construction Easement (Acres)	Zoning Type
58	182307400070	Elk Ridge Investments LLLP	3.75	0.033	0.044	0.195	Industrial
59	182307400035	Bowling Roy E	1.69	0	0	0.140	Industrial
60	182318100096	Titco LLC	0.829	0	0	0.246	Planned Unit Development
61	182318106003	Overnite Transportation Company C/O Real Estate Dept	3.502	0	0	0.209	Industrial
62	182318106004	Overnite Transportation Company C/O Real Estate Dept	16.734	0	0.249	0.317	Industrial
63	182318101001	Wagner Equipment Co C/O Facilities Department	3.82	0	0	0.040	Industrial
64	182318101003	Direct MCR Properties LLC	5.423	0	0	0.049	Industrial
65	182317215015	Kew Realty Corporation	0.905	0	0	0.076	Industrial
66	182317215012	Kew Realty Corporation	3.722	0	0	0.007	Industrial
67	182317215013	Kew Realty Corporation	2.823	0	0	0.027	Industrial
68	182317215008	Carpenter Leasing Inc	4.342	0	0	0.061	Industrial
69	182317213007	Seader Karl	0.32	0	0	0.013	Industrial
70	182317213008	Palizzi Carl and Co Und 1/2 Int Palizzi Dolores I and Co 1/2int	0.183	0	0	0.014	Industrial
71	182317108001	Hernandez Augustine	0.135	0	0	0.023	Industrial
72	182317108002	Galindo Vilma Y	0.128	0	0	0.007	Industrial
73	182317108003	Quintana Frank D and Quintana Gloria J	0.161	0	0	0.006	Industrial
74	182317108004	Marquez Iris P	0.41	0	0	0.007	Industrial
75	182317108006	Duran Estella and Duran Anthony Alan	0.138	0	0	0.010	Industrial
76	182317400002	Oneida 270 LLC	3.37	0	1.965	0	Industrial

Table 1. Estimated Right-of-way Impacts by Parcel

Map #	Parcel ID	Owner Name	Total Parcel Size (Acres)	Permanent Acquisition (Acres)	Permanent Easement (Acres)	Temporary Construction Easement (Acres)	Zoning Type
77	182317107020	Twenty-Seven Acre LLC Attn Lorre Zygmunt	26.488	0	0.558	0.527	Industrial
78	163786611	Park Creek Metropolitan District	26.322	1.980	0	0	Open Space
<b>Total Impacts</b>				<b>2.956</b>	<b>9.955</b>	<b>9.702</b>	

Note: Acreage estimates are based on conceptual-level design and are subject to change as design progresses.

Source: Jacobs

ID = identification



Figure 6. Proposed Action ROW Impacts, West





Figure 7. Proposed Action ROW Impacts, East

## 4.0 Social and Economic Resources

Transportation improvements can impact communities and economies by influencing neighborhood changes, community composition, access to services and safety providers, growth rates, business activity, and tax revenues. Social impacts are generally related to quality of life, whereas economic impacts are generally related to changes in the accessibility of an area and changes in the local economic environment.

### 4.1 Regulatory Context

Regulations and guidance applicable to social and economic resources require that consideration be given to qualitative factors and unquantifiable amenities and values, along with social and technical considerations in decision-making. The regulations and guidance applicable to this project include the following:

- Sections 109(h) and 128, Title 23 of the United States Code (U.S.C.) on Highways (2012)—Assures that community cohesion, availability of public facilities and services, and economic and social effects are assessed during highway developments.
- FHWA Technical Advisory T6640.8A, *Guidance for Preparing and Processing Environmental and Section 4(f) Documents*—Calls for discussing foreseeable economic impacts on the regional and local economy, economic vitality, and business districts.
- Intermodal Surface Transportation Efficiency Act of 1991—Instructs federal agencies to consider the overall social, economic, energy, and environmental effects of transportation decisions.

### 4.2 Methods

This section describes the methods used to identify relevant social information and perform an impact analysis. The analysis considers impacts to the following:

- Community cohesion
- Public services and facilities accessibility (such as access to schools, hospitals, and parks and recreational facilities)
- Mobility (such as changes in travel patterns on community interaction)
- Safety and security (such as changes in travel patterns for police and emergency services)
- Changes to neighborhoods (such as bisecting, isolating, decreasing the size of, changing access to, or changing the identity of a neighborhood)
- Parks, open space, and trails
- Businesses (commercial and industrial)
- Economic development opportunities

#### 4.2.1 Data Gathering

The following information was gathered from local governments, census data, Denver Regional Council of Governments, Colorado Department of Local Affairs (DOLA), U.S. Bureau of Economic Analysis regional publications, U.S. Bureau of Labor Statistics unemployment publications, and, where applicable, relevant community or social groups to analyze potential impacts including the following:

- Population
- Designated neighborhoods
- Community vision and values
- Local planning information about demographic, social, economic, and housing characteristics
- Location of community facilities and services
- Affected businesses, residential areas, and local taxing authorities

- Employee and customer base of affected businesses
- Economic trends

Although the study area has been defined to focus on localized conditions and effects, it is acknowledged that I-270 is critical to the overall economy of Adams and Denver Counties, as well as Commerce City. Therefore, the analysis has been expanded to include additional areas within these jurisdictions when applicable. The data sources that support the social and economic analyses are typically available at larger geographical scales, such as the U.S. Census Bureau–designated census block group, tract, city, or county level. Use of census block group data, the smallest area available, was investigated to depict social and economic resources. However, the study area crosses small sections of several, sometimes quite large, census block groups (which are a subdivision of census tracts). Therefore, the block group data that extend beyond the study area boundary would be captured in the study area description and may not accurately represent the study area’s demographic characteristics. For this reason, the U.S. Environmental Protection Agency’s (EPA’s) EJScreen: Environmental Justice Screening and Mapping Tool (EJScreen) was used to collect population data for the study area by uploading a GIS file of the study area and collecting data for that area. Additional information such as major employers was gathered from local sources.

Maps based on GIS data were developed to help visually synthesize social and economic information with the proposed project facilities.

#### 4.2.2 Analysis Approach

The analysis of impacts involved incorporating design plans into GIS maps. The analysis considered how the alternatives would, from a regional and corridor level, achieve the following:

- Impact community cohesion by determining where and how access among adjacent communities would change by comparing proposed actions with existing transportation patterns.
- Change access to public services and facilities, such as schools and hospitals, by determining where and how access to these areas would change by comparing proposed actions with existing transportation patterns.
- Affect mobility by determining whether any proposed change to travel patterns would impact community interaction or the mobility of transit-dependent individuals.
- Affect travel patterns for police and emergency services by determining where and how proposed actions would affect the ability of police and emergency services to reach their communities.
- Change quality of life for affected communities by determining whether, and the extent to which, the impacts described previously would affect quality of life by evaluating the degree of change compared with existing conditions.
- Affect businesses (commercial and industrial) and residents by changing traffic patterns and access by determining where and how access between businesses and residents would change by comparing proposed actions with existing transportation patterns.
- Affect businesses and residents by changing employment opportunities by determining where and how access changes could influence employment areas by comparing them with existing transportation patterns.
- Affect regional earnings (labor earnings by sector, personal income) by summarizing existing business sectors and local income levels and determining whether proposed access changes to employment centers described previously would affect earnings and income.
- Convert taxable property to public use by referring to land use changes to identify taxable property that would be converted to transportation (public) use.

- Change the tax base affected by retail sales by determining whether any changes to businesses, employment opportunities, and regional earnings would affect retail sales and, thus, the tax base.
- Affect businesses during project construction from the following:
  - Detours
  - Circulation changes by identifying the locations of project construction activities for each phase
  - Any associated closures, detours, or circulation changes to determine the extent of changes to businesses and community services and facilities

### 4.3 Existing Conditions

Table 2 shows existing and projected population data for 2040, the time frame used for the National Environmental Policy Act (NEPA) analysis (U.S. Census Bureau 2018; DOLA 2021). Adams County is expected to experience a substantial population increase of over 70 percent by 2040, compared with 62.9 percent for Colorado overall and 52.6 percent for Denver County.<sup>2</sup>

Table 2. Existing and Projected Population Data

Area	2020	2040	Percent Change
State of Colorado	4,489,308	7,313,392	62.9
Adams County	517,421	722,807	71.5
Denver County	578,596	883,135	52.6
Commerce City	60,336	N/A	N/A
Study Area (0.5 mile from approximate disturbance limits)	4,769	N/A	N/A

Source: U.S. Census Bureau 2018, DOLA 2021, EPA 2020

N/A = not available

As noted in Section 4.2.1, EJSscreen was used to estimate population data. The population of the study area (0.5 mile from the approximate disturbance limits) is approximately 4,769 based on U.S. Census Bureau American Community Survey (ACS) 2014 to 2018 data (EPA 2020).

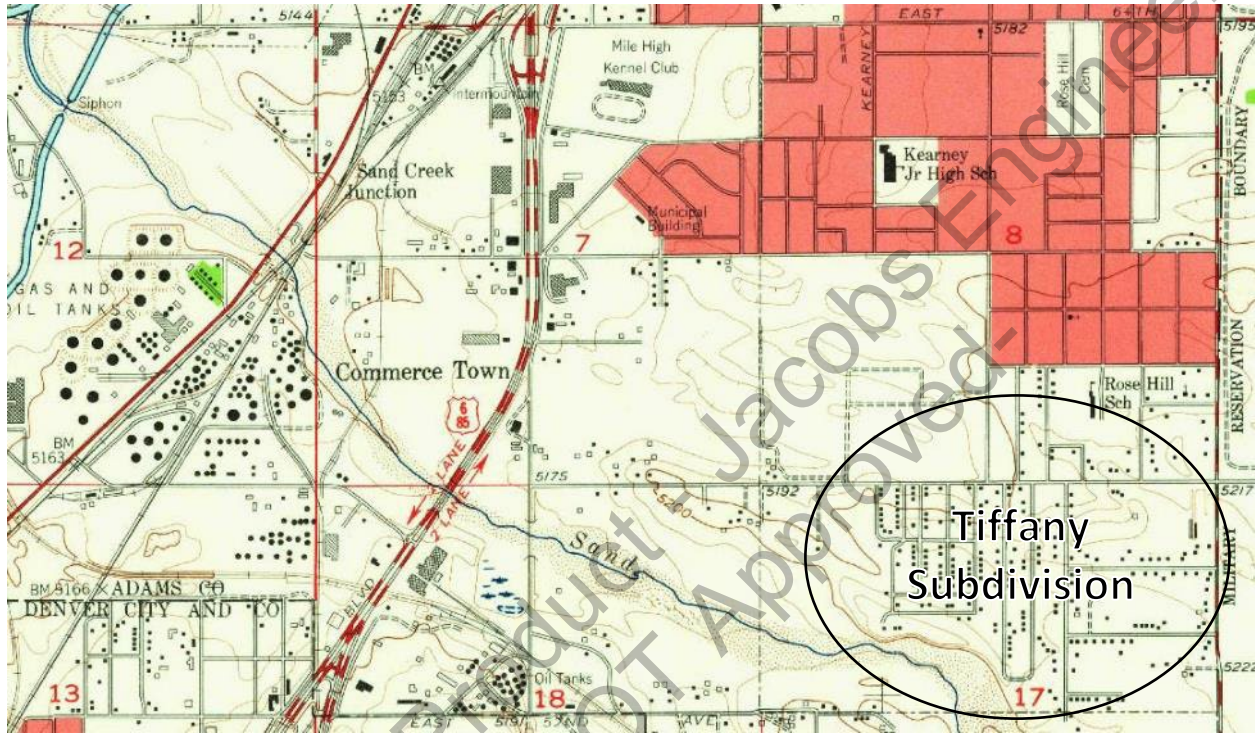
#### 4.3.1 Community Cohesion and Neighborhoods

The study area is located primarily within Adams County and Commerce City, specifically Commerce City's Historic City, one of the Strategic Planning Areas identified in the city's Comprehensive Plan (2010a). The Historic City Strategic Planning Area forms the southernmost part of Commerce City, and lies between the South Platte River and Rocky Mountain Arsenal Wildlife Refuge, and East 80<sup>th</sup> Avenue and the Denver border (Figure 12). This area includes heavy industry, residential neighborhoods, and vacant and redeveloping lands. The Historic City is the oldest part of Commerce City and includes its greatest concentration of original industry and residences (Commerce City 2010a). The Historic City predates Commerce City's incorporation.

The I-270 corridor story of community cohesion and neighborhoods is inextricably linked to the story of heavy industry. At the strategic confluence of two Class I railroad lines and three major streams, industrial development in the corridor was catalyzed in the 1930s with the construction of the Conoco oil refinery (known today as Suncor) and Metro Wastewater treatment plant. Other industries (grain elevators, manufacturing) have since spread north from Denver and along the numerous rail spurs that extend into the corridor. It is important to note that the rail lines and natural stream features predated and shaped the formation of residential areas in Commerce City, which began developing more

<sup>2</sup> U.S. Census Bureau data refer to the City and County of Denver as "Denver County."

substantial residential areas in the 1940s. According to data provided in the *Historic Residential Subdivisions of Metropolitan Denver, 1940-1965* (Front Range Research Associates, Inc. and Bunyak Research Associates 2010), approximately 3,500 residential dwellings were constructed in Commerce City between 1940 and 1965. Four subdivisions with more than 100 parcels each accounted for 725 of these dwellings, or less than 20 percent of the overall number of dwellings constructed within the city during this time period. This indicates that most of the postwar dwellings built in Commerce City were either in neighborhoods with less than 100 parcels, or as single-family residences that were not built as part of subdivisions.



**Figure 8. 1957 U.S. Quadrangle Map**

Source: U.S. Geological Survey, "Derby, CO," 1957

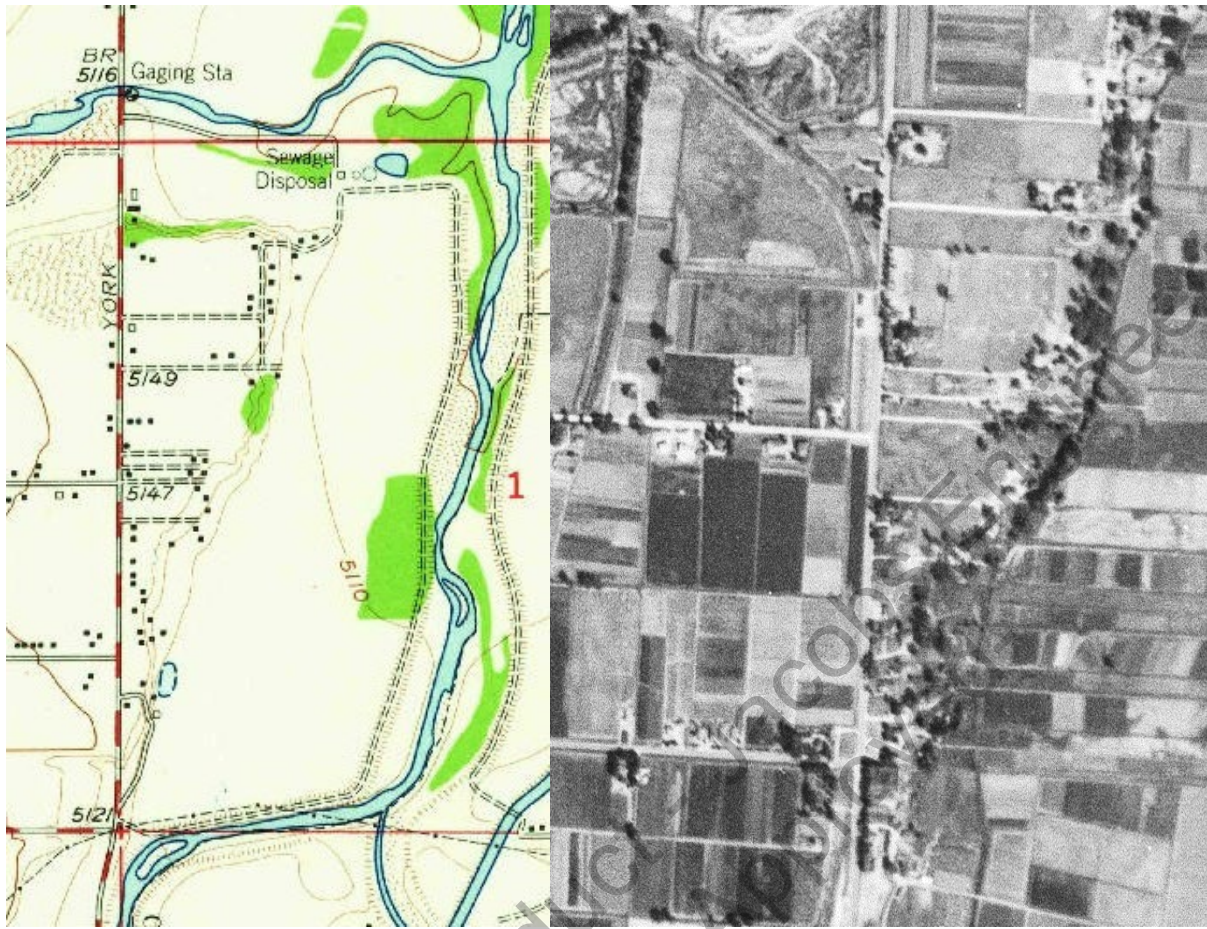


**Figure 9. 1978 Aerial Photo**

Source: U.S. Geological Survey, "ARA001260574860"

Creation of interstates, specifically I-76 in the late 1960s and I-270 in 1970, shifted industrial operations toward more transportation- and trucking-oriented businesses, resulting in zoning of properties along I-270 for industrial use. Even prior to I-270 beginning construction in 1965, land use changes had already been implemented separating the few remaining agricultural properties from residential areas and industrial areas.

West of the South Platte River, original construction of I-270 resulted in the conversion of several small agrarian properties located near what is now the I-270/York Street interchange to a transportation use. These small farms were likely owned by Italian immigrants who settled along the banks of the South Platte River. East of the South Platte River, construction of I-270 had no known impacts to the historical Tiffany neighborhood (now known as South Rose Hill) because the interstate closely follows Sand Creek in this area, an existing natural barrier to community development. The Historic Resources Inventory and Determination of Effects Report (Mead & Hunt 2021) contains the full historical context researched for the project.



**Figure 10. 1953 Aerial Photograph (right) and 1957 USGS Map (left) depicting Small Farms along York Street**  
Source: U.S. Geological Survey, "ARA001260574860"; U.S. Geological Survey, "Derby, CO"



**Figure 11. 1978 Aerial Photograph depicting the I-270 Corridor West of the South Platte River**  
 Source: U.S. Geological Survey, "AR1VEQCC0030054"

Completion of Denver International Airport and E-470 in the early to mid-1990s further transformed the area, with numerous residential developments constructed in the late 1990s, a trend that is continuing to the present day. Rental properties constitute a large percentage of these residential areas. The Historic City has a higher percentage of rental units (25 to 50 percent in 2000) than northern areas of Commerce City (Commerce City 2010a).

Although Commerce City has identified specific neighborhoods within the Historic City (Figure 13), city planners have defined goals for the specific focus areas rather than neighborhoods (Figure 14). Table 3 lists the focus areas within the project study area, as well as relevant policies and issues identified for each in the Commerce City Comprehensive Plan (2010a).



Commerce City's Comprehensive Plan (2010a) identifies Urban Renewal Areas (URAs) "that cover the southern portion of the Historic City area and the Prairie Gateway," although the exact location is not specifically defined. However, Table 3 references the URA established for the Clermont focus area mentioned in the plan. The purpose of URAs is to provide a mechanism to redevelop these areas (Commerce City 2010a).

Land west of Commerce City is unincorporated Adams County. Adams County identifies the area north of I-76 as the Welby Community, a U.S. Census Bureau designated place occupying approximately 4 square miles south of East 88<sup>th</sup> Avenue, west of the South Platte River, north of I-76, and west of I-25. The southern part of Welby, which is adjacent to the study area, has been transitioning from agricultural to industrial since the 1970s (Adams County 2014), thereby altering its community character.

The remainder of unincorporated Adams County within the study area is not designated as a specific city, community, or neighborhood. However, the *Imagine Adams County Comprehensive Plan* (Adams County 2012b) established policies for the existing industrial uses in the county's southwest area that are concentrated primarily south of the I-76 corridor in the study area. Policy 14.3.b. states, "Encourage existing uses that are incompatible with heavy industrial users and that place occupants at a higher risk for exposure to noise, pollutants, and other hazards . . . to phase out over time. Work with property and business owners . . . to identify opportunities to rezone existing residential properties to industrial as attrition occurs" (Adams County 2012b).

The southeastern part of the study area is within the City and County of Denver. Both the Central Park (formerly Stapleton) neighborhood, which is generally east of Quebec Street, and the Northeast Park Hill neighborhood, which is west of Quebec Street, are bisected by I-70. Conservatory Green is a large residential area north of Northfield Boulevard, primarily between Spruce Way and Central Park Boulevard (Brookfield Properties 2019, 2020). All of the Northeast Park Hill neighborhood north of Smith Road (and hence, I-70) is industrial; no residences exist in the area (Figure 3 and Figure 13).

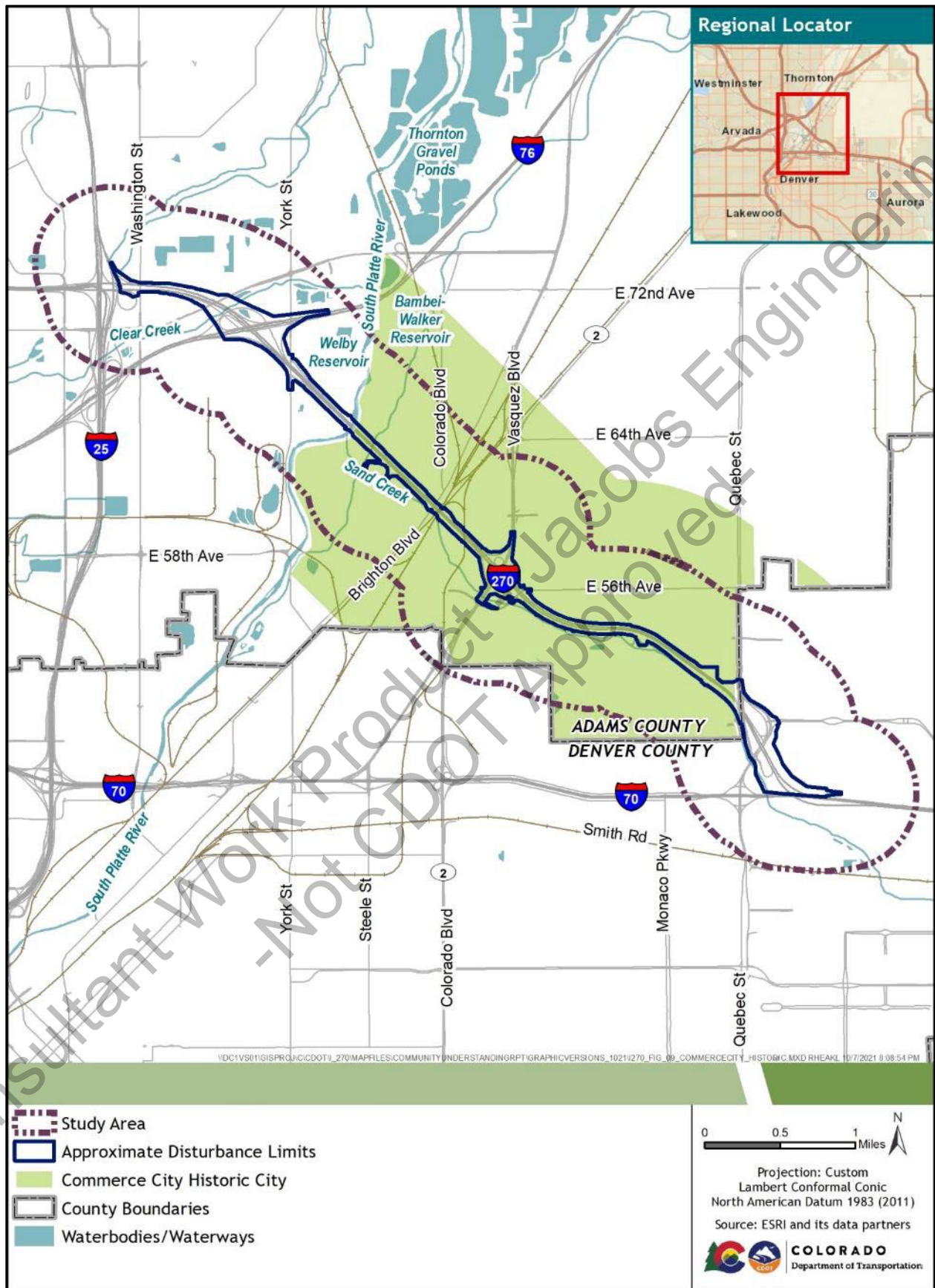


Figure 12. Commerce City Historic City Strategic Planning Area

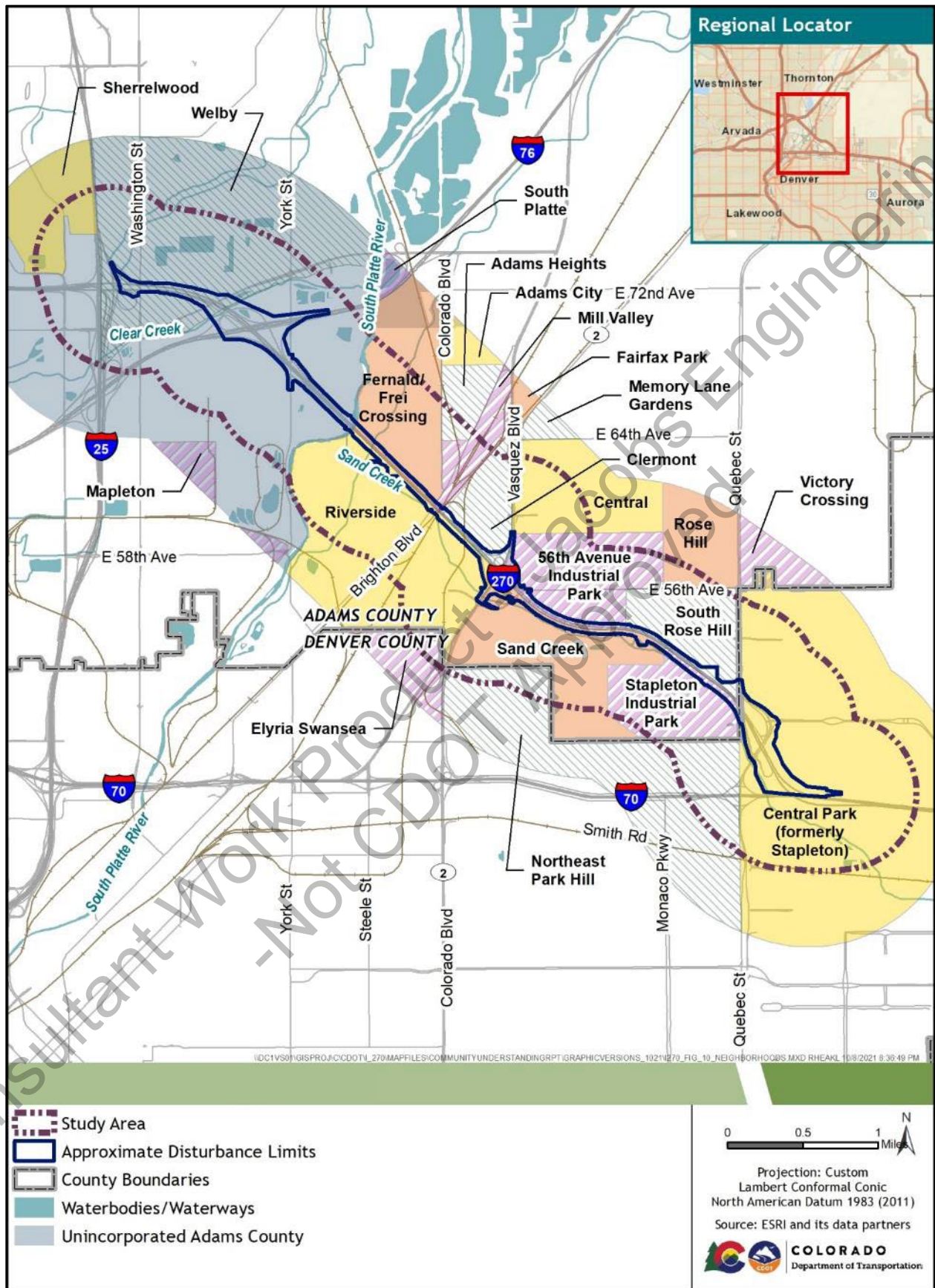


Figure 13. Study Area Neighborhoods

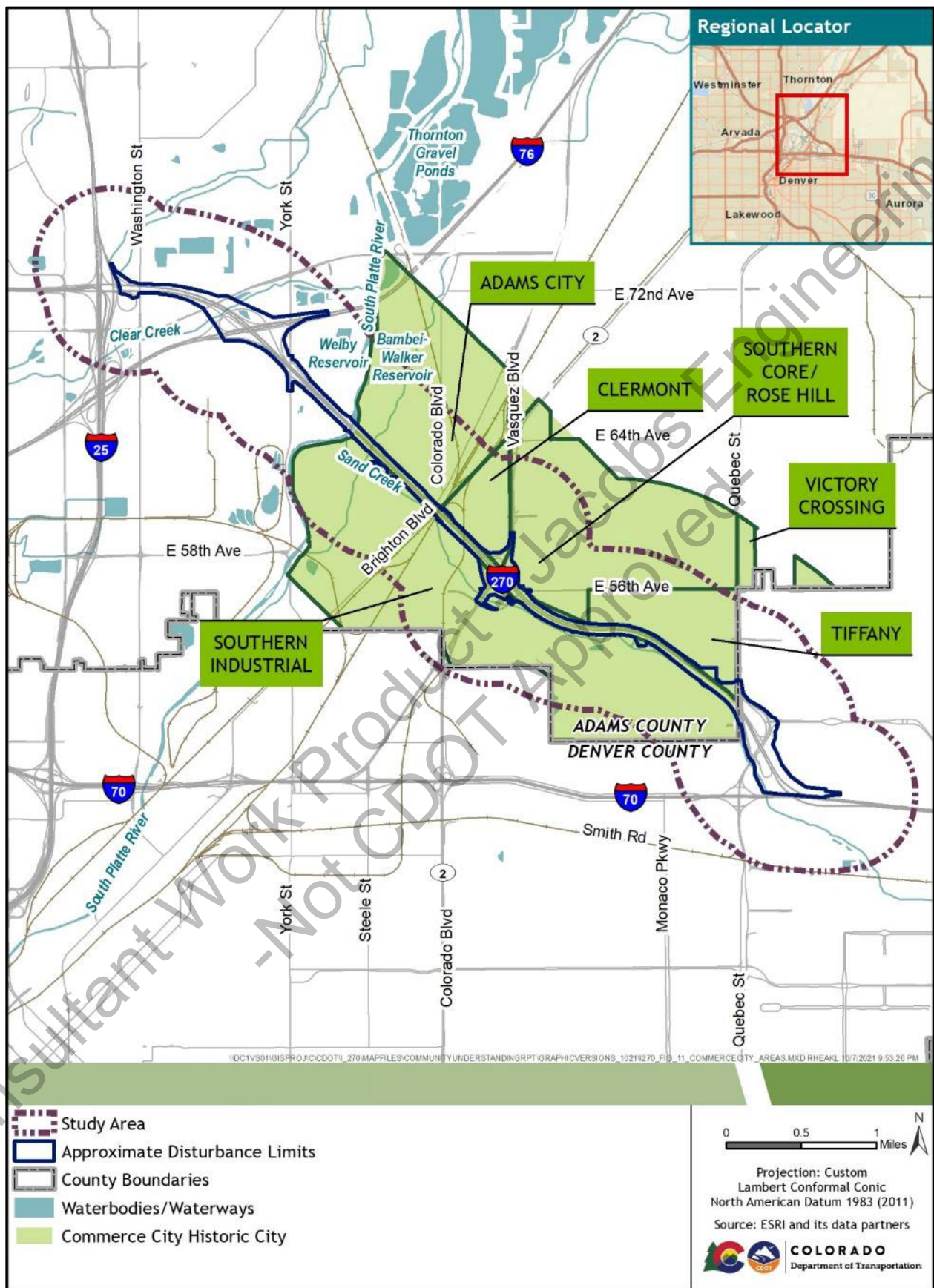


Figure 14. Commerce City Focus Areas within the Study Area

Table 3. Historic City Focus Areas

Focus Area	Location	Description	Relevant Issues	Relevant Policies
Adams City	Generally between I-270 and I-76, and Brighton Boulevard and South Platte River	Developed along Union Pacific Railroad. Contains Adams City, one of the original Commerce City agricultural communities. Arrival of industry after 1920 brought urban services, especially near railroads.	<ul style="list-style-type: none"> <li>Image from I-270 needs improvement.</li> <li>Includes formerly unregulated landfills.</li> </ul>	<ul style="list-style-type: none"> <li>Improve the area's image as seen from I-270.</li> </ul>
Clermont	Triangular area bordered by I-270, Brighton Boulevard, and Vasquez Boulevard	<p>Location of Commerce Town, one of Commerce City's original communities (1920s). Railroads converged at Sand Creek Junction to transport goods to and from Denver.</p> <p>Development in 1930s occurred with the advent of heavy industry.</p> <p>Redevelopment of marginal industrial properties began with construction of fast-food establishments near Vasquez Boulevard.</p> <p>A URA was established in 1998 to help revitalize the area and encourage additional commercial uses.</p>	<ul style="list-style-type: none"> <li>Construction of I-270 was a major transportation change that caused drainage and road alignment issues that remain challenges.</li> <li>Traffic and transportation connections.</li> <li>Image from I-270 needs improvement.</li> <li>Vacant buildings, infrastructure quality.</li> </ul>	<ul style="list-style-type: none"> <li>Focus on redevelopment around I-270 and Vasquez Boulevard, and improve the image and viability of business and industry.</li> <li>Improve transportation connectivity, infrastructure, and drainage.</li> </ul>
Southern Core/Rose Hill	Generally between I-270 and 64 <sup>th</sup> Avenue, and Vasquez Boulevard and Quebec Street	Includes some of Commerce City's original communities. Began as agricultural. Residential density started increasing in 1970s. Became city's commercial heart in 1980s.	<ul style="list-style-type: none"> <li>Traffic congestion; traffic and transportation connections across Vasquez Boulevard.</li> <li>Aging neighborhoods that need upgrades.</li> <li>Vacant commercial land (former greyhound racetrack).</li> </ul>	<ul style="list-style-type: none"> <li>Redevelop Wembley (former greyhound racing site) as a mixed-use project.</li> <li>Increase commercial and job opportunities.</li> </ul>
Southern Industrial	All of Commerce City south of I-270	Includes some of the city's heaviest industrial activities and most-recognized businesses and largest employers, including Suncor refinery, Conoco Tank Farm, UPS, and Shamrock Foods. Also includes the Stapleton Industrial Park, developed in the late 1960s and early 1970s.	<ul style="list-style-type: none"> <li>Lack of infrastructure resulting in poor connectivity.</li> <li>Few connections over I-270.</li> <li>Highly visible from I-270, resulting in poor image of Commerce City.</li> <li>Lack of commercial establishments.</li> </ul>	<ul style="list-style-type: none"> <li>Retain existing general industrial use.</li> <li>Improve image along I-270.</li> <li>Improve access and connectivity, including along Sand Creek Trail.</li> <li>Improve infrastructure and roadways.</li> <li>Extend Holly Street across I-270 between East 52<sup>nd</sup> and 56<sup>th</sup> Avenues.</li> </ul>

**Table 3. Historic City Focus Areas**

Focus Area	Location	Description	Relevant Issues	Relevant Policies
Tiffany	Between I-270 and 56 <sup>th</sup> Avenue, and Quebec Street and Park Industrial Center entrance	Mix of industrial and residential. Housing was built before the city’s incorporation and construction of I-270 and is of “generally lesser quality.”  Industrial and residential zoning changes during 1980s and 1990s created “confusion and uncertainty of the area.”	<ul style="list-style-type: none"> <li>• Lack of public amenities (schools, parks).</li> <li>• Small lot sizes make industrial development difficult.</li> <li>• Several abandoned properties close to I-270 create image issues.</li> <li>• Land use conflicts between industrial and residential uses resulted in haphazard development.</li> </ul>	<ul style="list-style-type: none"> <li>• Focus primarily on jobs and business opportunities.</li> <li>• Extend Holly Street across I-270 between East 52<sup>nd</sup> and 56<sup>th</sup> Avenues.</li> <li>• Work with CDOT and private owners to improve appearance of I-270 corridor.</li> <li>• Improve appearance from I-270.</li> </ul>
Victory Crossing, formerly Prairie Gateway	East of Quebec Street between 56 <sup>th</sup> Avenue and SH-2	Identified as community commercial center and activity center; one of Commerce City’s “largest pending developments.” Includes Commerce City Civic Center, Dick’s Sporting Goods Park, and Prairie Gateway Open Space. Potential infill development within Historic City, and new development tapping into high visitation to adjacent Rocky Mountain Arsenal National Wildlife Refuge Visitor Center.	<ul style="list-style-type: none"> <li>• Restrictions on development of housing.</li> </ul>	<ul style="list-style-type: none"> <li>• Mutually beneficial mix of uses, with Dick’s Sporting Goods Park, Commerce City Civic Center, and Rocky Mountain Arsenal National Wildlife Refuge.</li> <li>• New visitor center for Rocky Mountain Arsenal National Wildlife Refuge, space for new commercial/retail development.</li> </ul>

Source: Commerce City 2010a

### 4.3.2 Community Vision and Values

This section summarizes vision and value statements from local government community plans, focusing on statements related to the project. All plans were developed using input received as part of public outreach efforts. The Adams County 2012 *Comprehensive Plan* identifies six goals that define how the county plans to achieve its vision (which is not specifically defined) over time. The following are the goals that are relevant to social and economic resources (Adams County 2012b):

1. Promote coordinated and connected growth
2. Protect the health, safety, and welfare of Adams County's inhabitants
3. Promote economic vitality

The county also includes a transportation policy that states, "The County is committed to providing an integrated and safe multimodal transportation system that enhances the quality of life for Adams County residents, encourages economic vitality, and promotes environmental stewardship" (Adams County 2012b). Appendix E to the Adams County Comprehensive Plan contains a summary of community outreach conducted for the plan. Polling results from different events show that the following statements received the highest priority ranking across a variety of respondents (for example, local government team, steering committee, stakeholder groups, and workshop participants) (Adams County 2012b):

- "Improvements that relieve congestion on major roads in the urbanized part of the county"
- "Safety improvements at identified high-accident streets and intersections"
- "Pedestrian improvements, including sidewalk connections and improved cross-walks"

The majority of respondents rated "congestion" the highest priority in response to the question, "Rank the following six types of transportation improvements in order of priority." In addition, workshop participants identified "Sidewalks, connectivity issues, intersections and safe crossings" as an issue facing the county (Adams County 2012b).

The Commerce City Comprehensive Plan includes the following relevant text defining Commerce City's vision: "Commerce City will have a robust economy, drawing on its strength as a business-friendly city. It will have a quality natural and built environment with great neighborhoods, parks, and places in which to live, work, and play safely" (2010a).

Within the City and County of Denver, the *Stapleton Development Plan* (Forest City Development 1999) envisions Stapleton (now known as Central Park) as "a unique mixed-use community capable of supporting more than 30,000 jobs and 25,000 residents . . . Developed portions of the site will provide an integrated mix of development, housing, recreation, and access to public transportation." The plan "reinforces Stapleton's role as a regional employment center . . . through the creation of compact, accessible communities that integrate uses and create strong ties between Stapleton and the surrounding community."

The *Park Hill Neighborhood Plan* (City and County of Denver 2000b) includes a vision to "preserve and enhance the positive qualities that make the neighborhood a unique place to live, work, learn, and play," and a goal to "improve the environmental quality of the industrial corridor." The plan lists the following actions that are relevant to social and economic resources:

- "Create linkages to the future residential and business development in the new Stapleton community to enhance the economic and social impacts on Park Hill."
- "Attract high quality new businesses and retain and expand existing businesses that provide quality services, employment opportunities, and character to the neighborhood."

Public comments received for this project related to community vision and values focus on preserving the Sand Creek corridor and providing better connections to the trail, and improving safety (refer to Section 6 of the EA for details).

### 4.3.3 Mobility

Mobility issues pertain to smooth and reliable traffic conditions on freeways, major regional and principal arterials, and at-grade crossings with freight railroad tracks (DRCOG 2019). A separate *Traffic Technical Report* is included in Appendix A7 of the EA prepared for this project that includes more details. The Adams County Comprehensive Plan (2012b) defines regional strategic road corridors within the county as “arterial roadways that have the greatest regional continuity to facilitate mobility and provide connectivity between communities both within and outside Adams County (including . . . 56<sup>th</sup> Avenue [and] US 85 [Vasquez Boulevard]).” The plan states that “mobility is the predominant function for these corridors; access will be limited in order to provide safe and efficient through travel.”

According to the Commerce City Comprehensive Plan (2010a), “A number of major highways provide local, regional, and state-wide connections to jobs and commercial opportunities,” including I-270 and I-76, as well as other state highways and major local streets. The following connect to or cross I-270:

- US-85/Vasquez Boulevard (including State Highway 2 [SH-2] and U.S. Highway 6): Primarily serves industrial and commercial businesses on the western side of the Historic City and newer residential areas in the northern part of the city west of I-76. Direct access is limited to three interchanges (I-76, I-270, and SH-2) and nine signalized intersections. It is an important regional route for commuters and trucks serving northern Colorado.
- Quebec Parkway: Provides regional continuity from East 80<sup>th</sup> Avenue south across the Denver metropolitan area, and provides only northbound access to I-270; I-270 provides access to Quebec Parkway only for southbound highway users.
- 70<sup>th</sup> Avenue/SH-224: Short arterial on the western side of the Historic City that coincides with East 74<sup>th</sup> Avenue and ends at US-85. SH-224 crosses under I-270 and has an interchange with I-76.
- Brighton Boulevard/State Highway 265: Begins at I-70, enters Commerce City south of East 56<sup>th</sup> Avenue, and ends at the US-85/East 69<sup>th</sup> Avenue intersection. Brighton Boulevard crosses under I-270.
- East 56<sup>th</sup> Avenue: Provides continuity from Brighton Boulevard to east of Quebec Street, where it continues as a Denver arterial. East 56<sup>th</sup> Avenue crosses under I-270.

The Commerce City *Economic Development Strategic Plan* notes that “transportation access is of paramount importance to many businesses within Commerce City, particularly the large number of firms within the Transportation and Logistics sector.” The plan includes a strategy to “continue to preserve and enhance transportation access for cars and truck traffic.” As part of this strategy, the plan states, “To maintain the city’s transportation advantage, closely monitor and protect the community’s interests regarding connectivity and highway interchanges. This includes actively advocating for proper interstate egress and ingress, as well as other road improvements . . .” (Commerce City 2010b). Figure 15 shows “major” or “key” destinations within and adjacent to Commerce City’s Historic City and their proximity to I-270 as identified in Commerce City’s multimodal plan. Key destinations include schools, recreation centers, and shopping and business centers (Commerce City 2012b).

The *Park Hill Neighborhood Plan* (City and County of Denver 2000b) identifies Quebec Street as an arterial street, which has “the function of permitting rapid and relatively unimpeded traffic movement through the city and serving as a primary link between communities and major land use elements.” The plan includes a goal to “meet the expanding mobility needs of residents, businesses and visitors.”



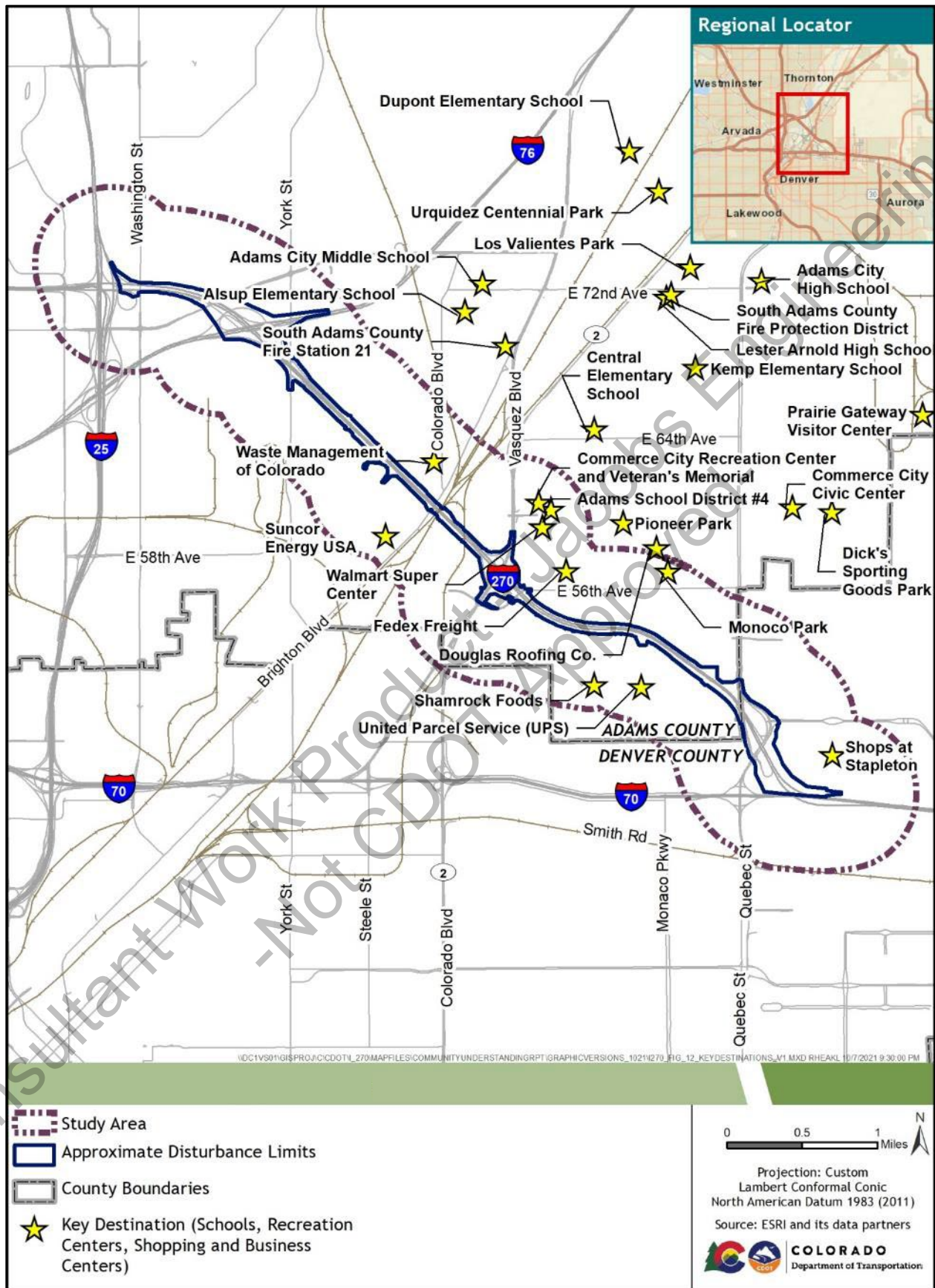
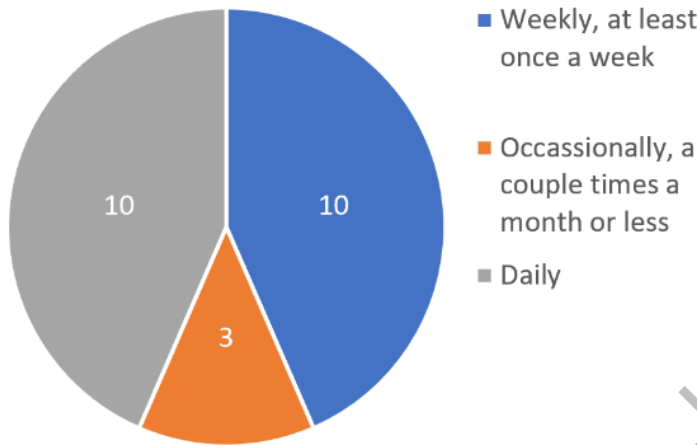


Figure 15. Key Destinations within and Adjacent to Historic City

The study team solicited feedback about how people in the overall Denver metropolitan area use the I-270 corridor. Those data were refined by zip code to capture input from populations within the study area, shown on Figure 16. This figure indicates that approximately 86 percent of respondents within the study area zip codes use I-270 weekly or daily. The majority (approximately 43 percent) of respondents also use the corridor to travel to and from work, with 17 percent using it for short trips and errands and 7 percent using it to reach their property along the highway.

### How often do you use I-270 on average?



### Which statement best describes how you use I-270?



**Figure 16. Local I-270 Use**

Source: Jacobs

#### 4.3.4 Community Services and Facilities

Table 4 and Figure 17 display the safety and public services and facilities within 2 miles of I-270, and their distances to I-270 based on Adams County and City and County of Denver GIS data. The 2-mile distance was used because facilities beyond that limit could be readily served by other transportation routes. With the exception of the Adams County Fire Rescue Training and Maintenance Facility, all of these facilities are on the eastern side of I-270 based on Adams County GIS data.

Table 4. Public and Safety Services and Facilities

Service/Facility	Address	Location	Driving Distance from I-270
<b>Fire Stations</b>			
Adams County Fire Station #1	4711 E 69 <sup>th</sup> Avenue	West of Vasquez Boulevard intersection	1.5 miles north
Adams County Fire Station #2	5650 Holly Street	Between 56 <sup>th</sup> and 58 <sup>th</sup> Avenue	0.4 mile northeast
Adams County Fire Rescue Training and Maintenance Facility	901 E 68 <sup>th</sup> Avenue	Between Washington and Downing Streets just south of I-76	0.9 mile west
Denver Fire Station: FS-39	5009 N Beeler Court	North of Northfield Boulevard and east of Central Park Boulevard	1.3 miles northeast
<b>Community and Police</b>			
Commerce City Civic Center	7887 E 60 <sup>th</sup> Avenue	Northwest corner of 60 <sup>th</sup> Avenue and Trenton Street	2.0 miles north
Denver Sheriff Department Roslyn Training Facility	5440 Roslyn Street	East of Quebec Street between 53 <sup>rd</sup> and 54 <sup>th</sup> Avenues	1.1 mile north
<b>Schools</b>			
Rose Hill Elementary	6900 E 58 <sup>th</sup> Avenue	Between 56 <sup>th</sup> and 58 <sup>th</sup> Avenues west of Quebec Street	1.5 miles north
Kearney Middle	6160 Kearney Street	Southeast corner of Kearney Street and 62 <sup>nd</sup> Avenue	1.2 miles northeast
Central Elementary	6450 Holly Street	Northeast corner of Holly Street and 64 <sup>th</sup> Avenue	1.3 miles northeast
Iglesia Bautista Emanuel (school and church)	6951 Dexter Street	North of 69 <sup>th</sup> Avenue on Dexter Street west of Brighton Boulevard	1.7 miles north
Community Leadership Academy	6880 Holly Court	Southeast corner of Holly and Highway 2	1.7 miles northeast
Alsup Elementary (formerly Adams City High School)	4413 E 68 <sup>th</sup> Avenue	Northwestern side of 68 <sup>th</sup> Avenue and Brighton Boulevard	1.0 mile northeast
<b>Medical Care</b>			
Salud Family Health Centers	6255 Quebec Parkway	Southwest corner of Quebec Parkway and 62 <sup>nd</sup> Avenue	1.9 miles north
Kids First Health Care	4675 E 69 <sup>th</sup> Avenue	69 <sup>th</sup> Avenue west of Brighton Boulevard	1.6 miles north

Source: Adams County 2018

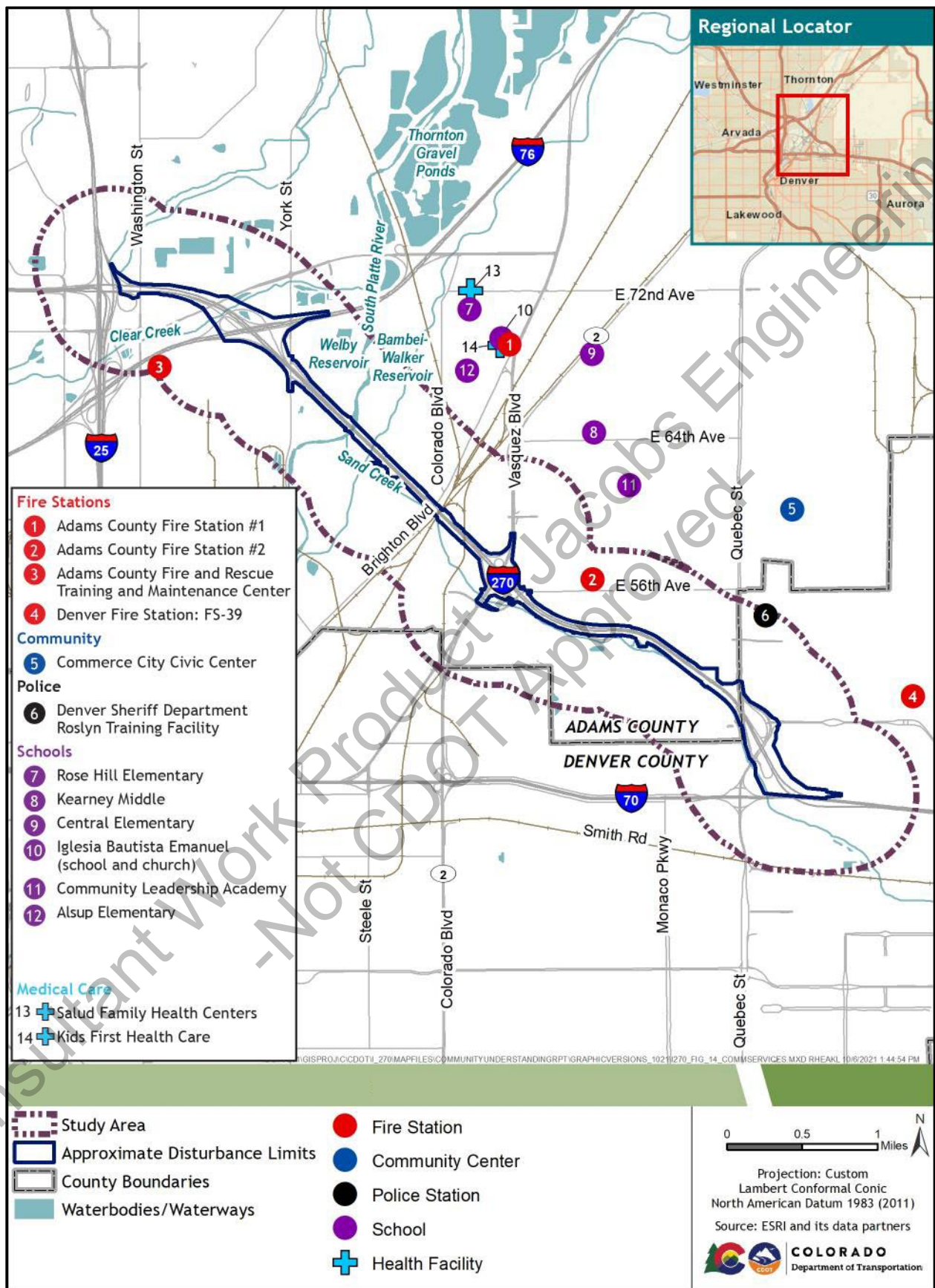


Figure 17. Community Facilities

The project team reached out to community service providers for feedback about issues and potential solutions for the corridor. This information that is captured in Section 13 of the I-270 EA is in the subsection “What Outreach and Opportunities for Stakeholder Participation Were Provided?” Appendix A of the EA includes meeting notes documenting specific discussions. Suggestions for improving the corridor were considered in the development of project alternatives, as follows. The outreach and stakeholder participation section of the EA describes how suggestions from the public were incorporated into the alternatives:

- **Fire and Emergency Response Providers:** Incident response is affected by congestion and inadequate shoulder widths. Crossing traffic on southbound Vasquez Boulevard to access eastbound 56<sup>th</sup> Avenue is problematic, and several operational issues are present at the Vasquez Boulevard interchange, such as weave distance, ramp curves, acceleration/deceleration lanes, and merge lengths. Suggested solutions include widening shoulders, increasing acceleration/deceleration lanes or adding an auxiliary lane, redesigning the Vasquez Boulevard interchange, improving signage, and adding emergency turnaround areas.
- **Community:** City and County of Denver, Commerce City, and Adams County have consistently heard from residents about needing safety improvements to pedestrian facilities in the study area. The Walmart on Vasquez Boulevard is the only grocery store for some neighborhoods, and many residents access it on foot. During the Central 70 construction, transportation support was provided to affected residents to conduct grocery shopping. Bike and pedestrian facilities should be a consideration at the I-270 and the Vasquez Boulevard intersections. Although pedestrian and bike access under I-270 is possible at 56<sup>th</sup> Avenue and Eudora Street, the sidewalks are not continuous. The intersection layout is confusing and does not provide adequate sight distance for vehicles to see crossing pedestrians. The *Multimodal Technical Report* in Appendix A9 of the EA provides details about transit stops and other multimodal considerations.
- **Schools:** Mapleton Public Schools does not use I-270 for daily transportation, but many of the parents and families of their 7,000 students likely use the I-270 corridor. Revitalizing the I-270 corridor could be an opportunity for district buses to use I-270 to reliably transport students to and from sporting events and field trips.
- **Medical Centers:** Kids First Health Care provides medical services within the schools and community clinics in Commerce City and Westminster. Those living near I-270 and Vasquez Boulevard are isolated among highways, industrial properties, and heavy trucking facilities, creating a disproportionate number of environmental, health, and safety concerns. These environmental and safety implications are accelerating because traffic avoiding the I-270 congestion uses the local transportation infrastructure that is not equipped to handle such traffic volumes. The area also has inadequate pedestrian crossings and a lack of left-turn signals at some intersections to keep traffic flowing. The *Multimodal Technical Report* in Appendix A9 of the EA provides details about transit stops and other multimodal considerations.
- **Churches:** The Assumption of the Blessed Virgin Mary Catholic Church asked about the possibility of adding sound walls along I-270. They also noted extensive backups at the York Street on-ramp in the mornings, with southbound York Street traffic trying to make the left turn onto the I-270 eastbound on-ramp. People become impatient and continue south on York Street and make a U-turn to head north to get onto the ramp. Friendly Baptist Church’s small congregation consists primarily of senior citizens. Most of the congregation does not drive and relies on public transportation; those who do drive often avoid I-270 out of safety concerns.

#### 4.3.5 Parks, Open Space, and Trails

The Adams County Comprehensive Plan (2012b) identifies the following policies and associated strategies related to parks, open space, and trails:

- Policy 9.2—Preserve Open Space: “Preserve open space to enhance the quality of life, shape urban areas, avoid development of environmentally sensitive areas . . .”
  - 9.2.b—Create Regional Open Space Connections: “The County will . . . establish an interconnected regional open space system.”
- Policy 9.3—Preserve Water Corridors and Reservoirs: “Preserve the Clear Creek [and] Platte River . . . corridors and major reservoirs . . .”
- Policy 9.5—Provide a Variety of Recreation Opportunities: “Support the implementation of the varied recreational opportunities identified in the Open Space, Parks, and Trails Plan, including, but not limited to: fishing, cycling, trail-based recreation, bird watching and wildlife viewing, and outdoor and nature education.”

The *Adams County Colorado Open Space, Parks & Trails Master Plan* (Adams County 2012a) reiterates the policies identified in the county’s Comprehensive Plan (2012b), specifically the following:

- Principle 6—Trail Connectivity:
  - “Provide a linked open space system that connects to the open space and trails systems throughout the County and to adjacent counties and communities.”
  - “Provide trail and open space linkages, where essential, along and across major vehicular circulation rights-of-way. When possible, provide for grade separated trail crossings of major roadways.”

Adams County conducted a survey of county residents about their thoughts on open space, parks, and trails in 2012. The results were captured in the *Adams County Colorado Open Space, Parks & Trails Master Plan*. Residents responded to the following relevant questions as follows (Adams County 2012a):

- “Which of these parks, open space, and trails efforts has been most successful in serving the needs of the residents?”
  - “Protecting the river and other water resources” received the majority (36 percent) of responses.
- “Which of these statements best fits your vision for the role of Adams County?”
  - “Adams County should focus on providing regional parks and open space (large in size, unique features or character, and/or are important as part of a larger system)” received the majority (51 percent) of responses.
- “Which activities most need new or improved facilities?”
  - “Walking” received the majority (66 percent) of responses.

Existing recreational facilities within or adjacent to the study area that could be affected by the proposed actions are shown in Table 5 and Figure 18. On-street bicycle and pedestrian facilities are discussed in Section 9 of the EA.

Commerce City’s *Walk.Bike.Fit* (2012b) is a “multi-modal active transportation plan” developed to create “a safe, pleasant, practical and affordable multi-modal active travel network” for Commerce City. The plan identifies an “active travel network” consisting of existing routes and proposed “catalytic projects.” Most of these facilities are on-street multimodal paths or lanes and are addressed under the *Multimodal Technical Report* in Appendix A9 of the EA. However, the Northern Range Loop Trail, a paved and crusher fine shared-use trail and greenway, is proposed to follow the O’Brien Canal service road linking the existing Second Creek Greenway Trail north to 120<sup>th</sup> Avenue and a loop off 96<sup>th</sup> Avenue (Commerce City 2012b).

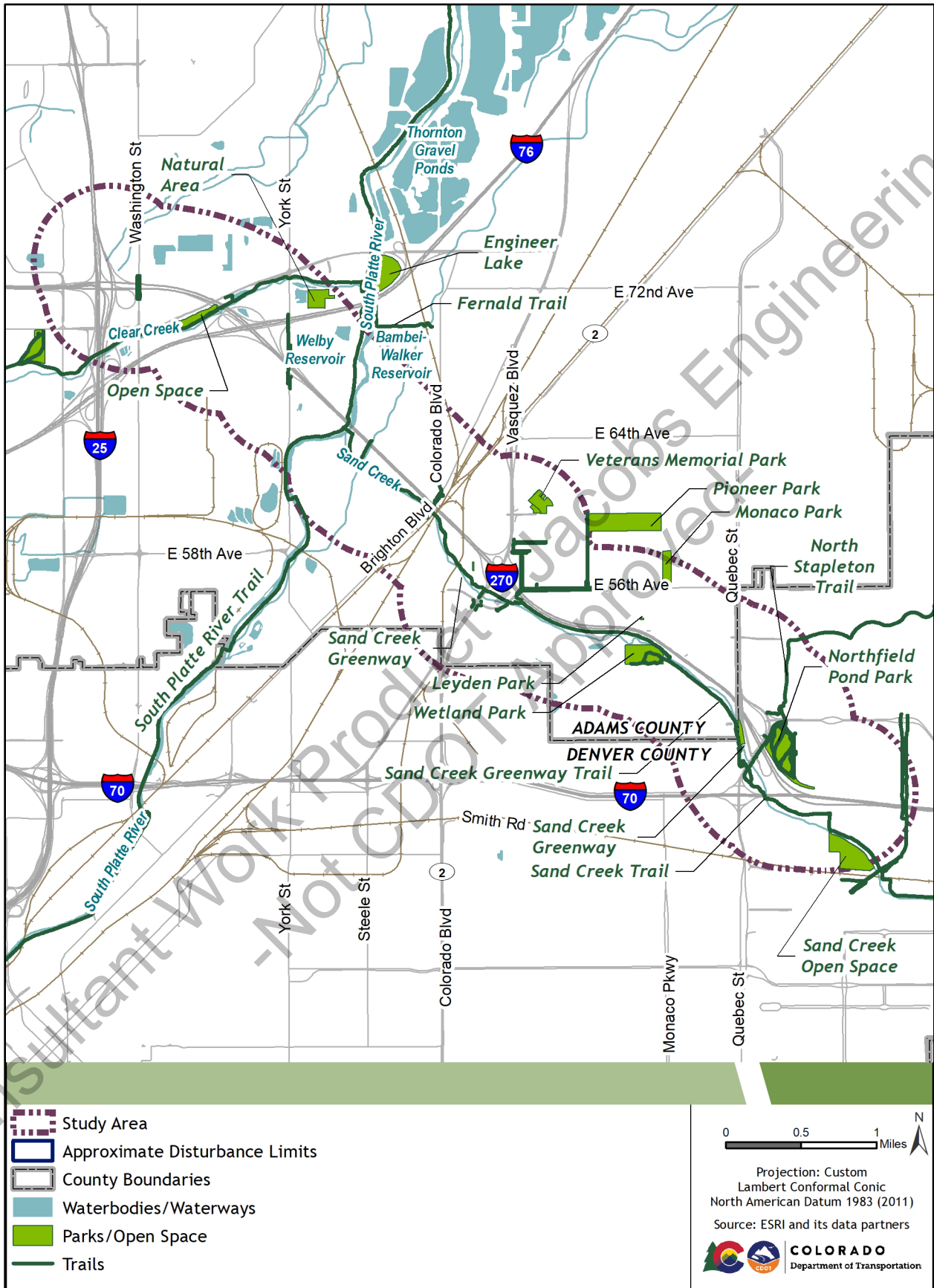


Figure 18. Parks, Open Space, and Trails

Table 5. Recreational Facilities

Recreation Resource	Location	Description	Access Points within Study Area
<b>Trails</b>			
Sand Creek Greenway	Parallels southern side of I-270 from South Platte River Trail traveling southeast, eventually terminating in Aurora; 3.75 miles from Commerce City.	Allows hiking, biking, and equestrian use; identified in <i>Adams County Colorado Open Space, Parks &amp; Trails Master Plan</i> (Adams County 2012a) as bird-watching area; plan proposes developing bird-watching facilities within it.	<ul style="list-style-type: none"> <li>Wetland Loop Trail east end of 52<sup>nd</sup> Avenue south of I-270; paved parking</li> <li>Dahlia Trailhead, intersection of 56<sup>th</sup> Avenue and Sand Creek Drive; paved parking</li> <li>Corner of 50<sup>th</sup> Avenue and Pontiac Street; no parking</li> </ul>
Northfield Park trail system (unofficial name)	Short 0.25-mile spur off Sand Creek Greenway Spur near Quebec Street parallels southern side of Quebec Street in the City and County of Denver.	Connects to unnamed trail on northern side of I-270, which leads to Northfield Pond Park and eventually Rocky Mountain Greenway Trail, Prairie Gateway Open Space, Rocky Mountain Arsenal National Wildlife Refuge, and other routes to the north.	<ul style="list-style-type: none"> <li>Sand Creek Greenway</li> </ul>
South Platte River Trail	Travels north-south from Thornton to Littleton, passing through study area along western side of the South Platte River. Crosses I-270 near confluence with Sand Creek just south of the highway.	Allows hiking, biking, and equestrian use.	<ul style="list-style-type: none"> <li>York Trailhead, intersection of 64<sup>th</sup> Avenue and York Street: Unpaved parking and trail access approximately 0.4 mile south of I-270</li> <li>Fernald Trail, intersection of Colorado Boulevard and 70<sup>th</sup> Avenue, provides access to the South Platte River Trail approximately 0.8 mile north of I-270; paved parking</li> <li>South end of Columbine Street, dead-ends at South Platte River Trail; provides unofficial access south of Welby Reservoir immediately adjacent to I-270</li> </ul>
Fernald Trail	Located south of I-76 and east of the I-270/I-76 interchange. The short trail connects Clear Creek Trail and South Platte River Trail to Engineer Lake and neighborhoods to the east via the trailhead west of the East 70 <sup>th</sup> Avenue and Colorado Boulevard intersection.	Allows hiking, biking, and equestrian use. The Fernald Trail is in Adams County jurisdiction; however, it is listed on the <i>Commerce City Park, Trail &amp; Open Space System Map &amp; Guide</i> as a multiuse path (Commerce City 2012a).	<ul style="list-style-type: none"> <li>Clear Creek Trail</li> <li>Trailhead west of the East 70<sup>th</sup> Avenue and Colorado Boulevard intersection</li> </ul>



Table 5. Recreational Facilities

Recreation Resource	Location	Description	Access Points within Study Area
North Stapleton Trail	Parallels Quebec Street on the east side, traveling from its connection with the Sand Creek Trail south of I-270, past Northfield Pond Park, and ending at the Northfield Athletic Complex	Allows hiking, biking, and equestrian use. Users of the North Stapleton Trail can access the Rocky Mountain Greenway Trail to the north, which travels to the Prairie Gateway Open Space and the Rocky Mountain Arsenal Wildlife Refuge. The City and County of Denver identifies the Northfield Stapleton Trail as an off-street, concrete bikeway (City and County of Denver 2021).	<ul style="list-style-type: none"> <li>• Sand Creek Greenway</li> <li>• Northfield Park Trail System</li> </ul>
Clear Creek Trail	Connects to South Platte River Trail just north of I-76. Parallels Clear Creek and crosses I-270 just north of the I-76 interchange.	Travels approximately 23 miles west to Golden. Allows hiking, biking, and equestrian use.	<ul style="list-style-type: none"> <li>• Fernald Trail via short segment of the South Platte River Trail</li> </ul>
Wetland Loop Trail	East end of 52 <sup>nd</sup> Avenue south of I-270	Short loop trail within Wetland Park.	East end of 52 <sup>nd</sup> Avenue south of I-270
<b>Parks and Open Space</b>			
Wetland Park	East end of 52 <sup>nd</sup> Avenue south of I-270	19.6-acre park with internal Wetland Loop Trail.	East end of 52 <sup>nd</sup> Avenue south of I-270; paved parking
Open Space	Clear Creek corridor near I-270 and the Sand Creek corridor	2016 <i>Adams County Trail Guide</i> identifies the Clear Creek corridor near I-270 and the Sand Creek corridor throughout the study area as open space (Adams County 2016).	Same as Clear Creek Trail
Northfield Pond Park	32-acre park adjacent to I-270 between Quebec Street and Yosemite Street	Managed by Denver Parks and Recreation. Provides benches, bike/pedestrian paths, and “natural areas” (Denver Parks and Recreation 2020). Part of Denver’s Stapleton (now called Central Park) Redevelopment Project, conceived as a stormwater detention and water quality facility. Open to the public as a place to observe urban wildlife (Kopperl and Lamson 2007).	<ul style="list-style-type: none"> <li>• Multiuse path paralleling Quebec and Yosemite Streets</li> <li>• Yosemite Street, but no official parking</li> </ul>
Veterans Memorial Park	2.6-acre park approximately 0.5 mile north of I-270 adjacent to the eastern side of Vasquez Boulevard between Parkway Drive and 60 <sup>th</sup> Avenue in Commerce City	Playground, picnic areas, restrooms, and 67,000-square-foot Eagle Pointe Recreation Center, which provides a variety of health, fitness, creative programs, activities, and classes (Commerce City 2020a, 2020b).	E 60 <sup>th</sup> Avenue and Parkway Drive from Vasquez Boulevard

Table 5. Recreational Facilities

Recreation Resource	Location	Description	Access Points within Study Area
Pioneer Park	37-acre park north of I-270 between Holly Street and Monaco Street south of 60 <sup>th</sup> Avenue	Commerce City's largest and "most feature-filled park," including state-of-the-art baseball/softball fields, a skate park, and Paradise Island Pool—an "outdoor game-themed leisure pool" (Commerce City 2020i, 2020i).	E 60 <sup>th</sup> Avenue from Vasquez Boulevard
Leyden Park	Located just north of I-270, on the east side of Leyden Street between East 54 <sup>th</sup> and East 55 <sup>th</sup> Avenues in Commerce City	The park is owned by Commerce City, is open to the public, and is designated as a pocket park. Amenities include a playground and picnic shelters (Commerce City 2010a). The purpose of this park is primarily for recreational activity.	East 56 <sup>th</sup> Avenue from Quebec Street
Monaco Park	9.2-acre linear area between Monaco Street and Magnolia Street, and 58 <sup>th</sup> Avenue and 56 <sup>th</sup> Avenue north of I-270	Offers a playground, shelters, and restrooms (Commerce City 2020j).	56 <sup>th</sup> Avenue and 58 <sup>th</sup> Avenue from Vasquez Boulevard or Quebec Street
Engineer Lake	West of the I-76/74 <sup>th</sup> Avenue intersection	"Passive Recreation Natural Area" (Adams County 2012a)	Fernald Trail (west side of lake)

Sources unless otherwise noted: Colorado Parks and Wildlife n.d., Adams County 2012a

The *Adams County Colorado Open Space, Parks & Trails Master Plan (2012a)* lists the O'Brien Canal Trail as a proposed "mid-term priority trail" extending nearly 8 miles from the Sand Creek Trail and South Platte River Trail junction north to 104<sup>th</sup> Avenue. The plan also identifies this trail as a primary component of proposed parks, open space, and trails development and enhancements within Adams County. However, Commerce City confirmed that it has no plans to develop this trail (Ferguson, pers. comm. 2020).

The study team reached out to parks, open space, and trail organizations for feedback about concerns and possible actions to include in the project design. This information is captured in the outreach and stakeholder participation section and Appendix A of the EA, which includes meeting notes documenting specific discussions. Suggestions addressing parks, open space, and trails within the study area were considered in the development of the Proposed Action, as described in the Alternatives section of the EA. To date, feedback has been received from the Greenway Foundation (Platte River) and Sand Creek Regional Greenway Partnership, who expressed concerns about potential project impacts to trails and waterways, including wetland habitat restoration that was undertaken by Commerce City. Desired bicycle and pedestrian improvements included trail connection improvements at Vasquez Boulevard and Dahlia Street and addition of a sidewalk along Vasquez Boulevard under I-270.

In addition, many of the recreational resources, including many of the parks and trails in the corridor, qualify as Section 4(f) properties and Section 6(f) properties as defined by the Department of Transportation Act of 1966 and the Land and Water Conservation Fund Act of 1965, respectively. Of the resources identified in Table 5, all of the trails qualify as Section 4(f) resources. Of the parks and open spaces, all qualify as Section 4(f) resources with the exception of Engineer Lake and the Northfield Pond Park—although the trail within Northfield Pond Park is a 4(f) resource. A detailed discussion of Section 4(f) and Section 6(f) properties within the corridor is included in the *Section 4(f) and Section 6(f) Resources Technical Memorandum* included in Appendix A15 of the EA.

#### 4.3.6 Businesses and Economic Environment

Based on U.S. Census Bureau 2019 ACS data, the highest percentage of people in the labor force within the counties and cities composing the study area is in Commerce City: 72.8 percent compared with 71.4 percent for Adams County and 72.3 percent for Denver County (Table 6). Employment in Commerce City (69.4 percent) is nearly identical to Denver (69.5 percent) and is slightly higher than Adams County (68.4 percent). However, unemployment is higher in Commerce City (3.2 percent) compared with Adams County (2.9 percent) and Denver County (2.7 percent). The median income for Commerce City (\$77,065) is higher than that for Adams County (\$71,202) and Denver County (\$68,592).

Table 6. 2019 Employment and Income Statistics

Variable	Adams County		Denver County		Commerce City	
	Estimate	Percent	Estimate	Percent	Estimate	Percent
Population 16 years and over	382,633	(X)	578,596	(X)	39,785	(X)
In labor force	273,313	71.4	418,232	72.3	28,958	72.8
Employed	261,893	68.4	402,046	69.5	27,595	69.4
Unemployed	10,917	2.9	15,669	2.7	1,262	3.2
Not in labor force	109,320	28.6	160,364	27.7	10,827	27.2
Median household income	\$71,202	(X)	\$68,592	(X)	\$77,065	(X)

Source: U.S. Census Bureau 2018, Table DP-03

DOLA estimates future labor force projections by county (no smaller geographic area is available), which indicates an increase of 31.2 percent for both Adams and Denver County between 2020 and 2040 (Table 7).

**Table 7. Projected Labor Force**

Labor Force Projections	2020	2040	Percent Change
Adams County	269,007	353,063	31.2
Denver County	609,343	799,740	31.2

Source: DOLA 2021

I-270 serves, and therefore potentially influences, several businesses that affect the study area's economic environment, as noted under Section 4.3.3. Policy 14.2 of the Adams County Comprehensive Plan (2012b) calls for revitalizing older industrial areas primarily south of the I-76 corridor to preserve jobs and take advantage of existing infrastructure. Similarly, the Commerce City Comprehensive Plan (2010a) identifies "its strong industrial and manufacturing base, particularly in the Historic City" as one of the city's "great strengths and unique attributes," and its geographic position along multiple interstates, highways, and railroads as one of its "biggest economic development competitive advantages." The Commerce City 2020 Economic Profile (n.d.) reinforces these perspectives, stating, "Commerce City embraces its industrial heritage while looking . . . for the next generation of high-tech companies. Being adjacent to six major highways, an international airport, three railroads and two commuter rail lines gives industry in Commerce City major transportation advantages."

The Commerce City Comprehensive Plan includes the following policies related to industrial development (2010a):

- Goal Land Use 4—Retain existing industrial areas and land for future jobs: "Commerce City will retain its existing industrial areas and will plan land for future high-quality, and additional living wage jobs."
  - Land Use 4.2—Historic City and Irondale Industrial Areas Strengthened: "Promote and strengthen industry and jobs where they are currently located in the Historic City and Irondale, particularly in the following locations:
    - Southern Industrial Area
    - Clermont
    - South of East 56<sup>th</sup> Avenue/Tiffany"
- Goal Economic Development 2—Retain and increase a strong employment base: "The city will retain and expand its existing industrial base, and attract and recruit new businesses that contribute positively to city revenues."
  - Economic Development 2.3—Strengthen Employment Land Base: "Retain and strengthen the industrial base in the Historic City . . ."
- Goal Economic Development 3—Recruit new employment and commercial development: "Attract and promote new commercial and employment uses to the Historic City that will provide jobs and services for residents and revenues for city operations. The city will reserve undeveloped lands for future commercial and employment activities."

Commerce City is home to over 1,400 companies that employ more than 32,000 people. The transportation, warehousing, and utilities sector is the largest employment sector in Commerce City, as evidenced by the list of top employers (Table 8 and Figure 19) (Commerce City 2021a).

**Table 8. Commerce City Largest Private Employers**

Company	Business Line	Employees
United Parcel Service	Global Logistics	4,128
FedEx Ground	Global Logistics	1,537
Shamrock Foods	Food Service, Distribution/Warehouse	674
FedEx Freight	Global Logistics	644
Q3 Contracting	Construction	634
Liberty Oilfield Services	Hydraulic Fracking and Engineering Services	504
Suncor Energy USA	Energy Production	470
Old Dominion Freight Line	Global Logistics	332
Walmart Stores	Retail Distribution/Warehousing	328
Douglass Colony Group	Roofing	271

Source: Commerce City 2021a

Consultant Work Product - Jacobs Engineering  
 -Not CDOT Approved-

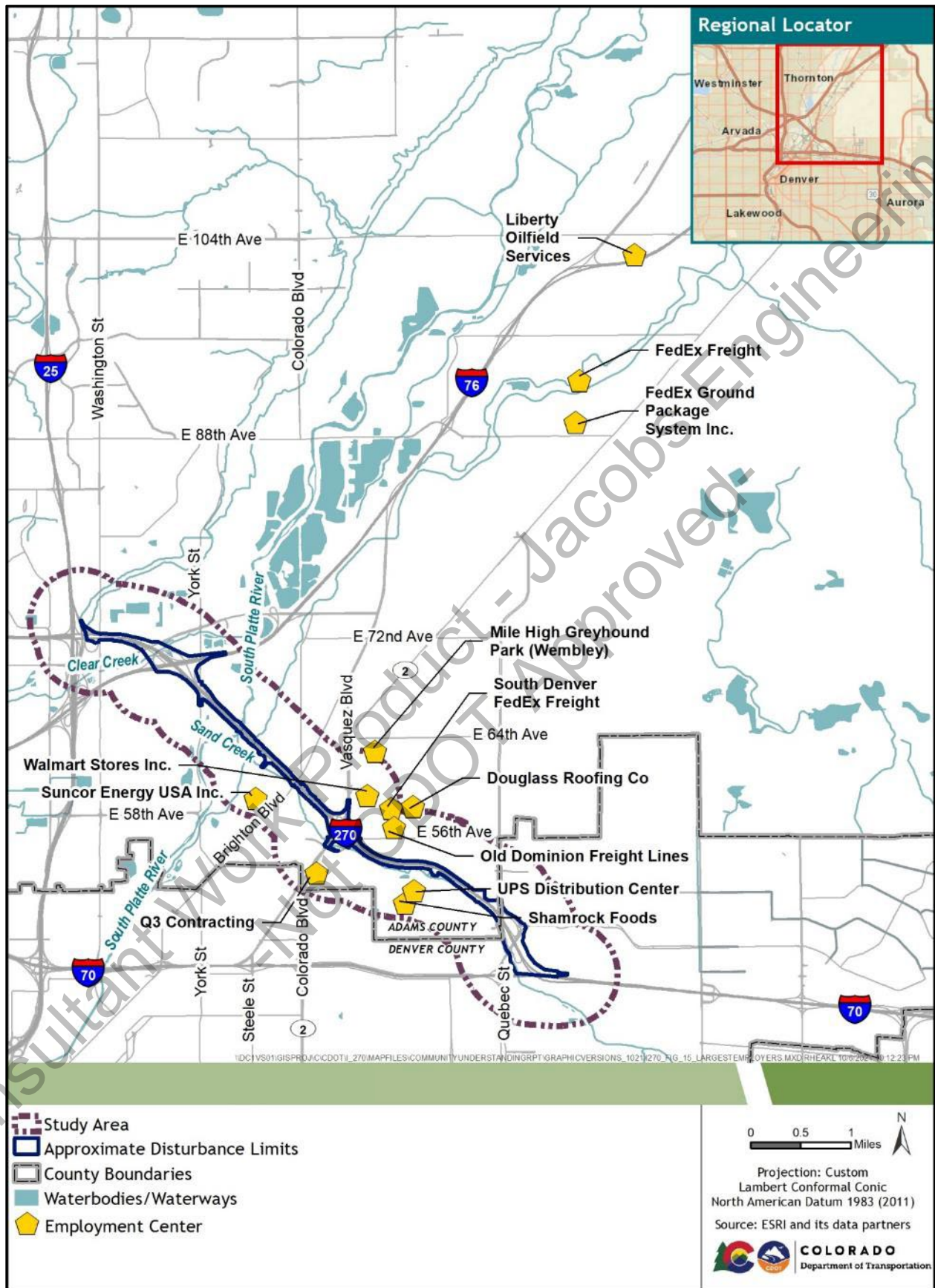
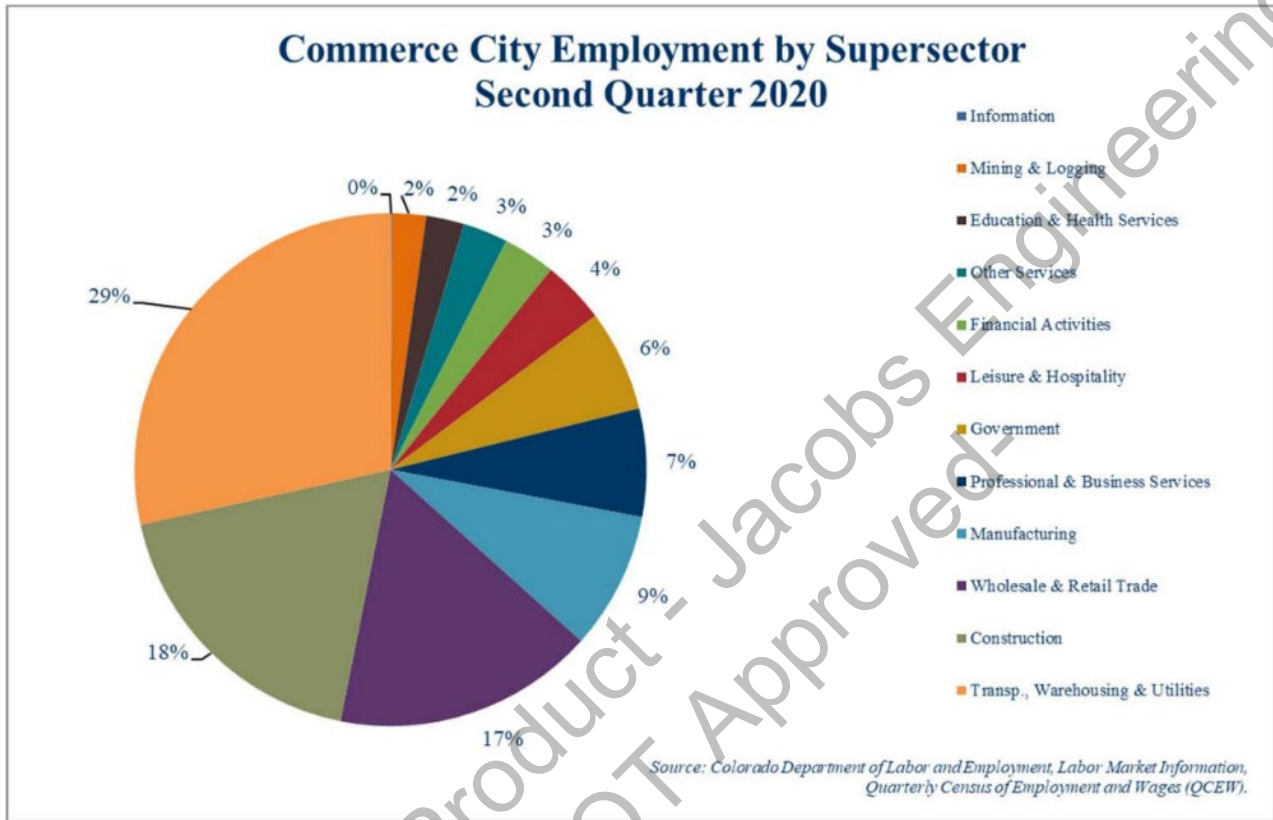


Figure 19. Commerce City Largest Private Employers

Source: Commerce City 2020e

Figure 20 depicts Commerce City’s employment percentage by supersector.<sup>3</sup> The Transportation, Warehousing, and Utilities supersector is the largest employer at 29 percent, followed by Construction at 18 percent, Wholesale and Retail Trade at 17 percent, Manufacturing at 9 percent, and Professional and Business Services at 7 percent. Of the 12 supersectors, 9 reported over-the-year increases in the number of businesses (Commerce City 2021b).



**Figure 20. Commerce City Employment by Supersector**  
 Source: Commerce City 2021b

The number of businesses throughout Commerce City increased by 123 between the second quarters of 2019 and 2020, an increase of 8.4 percent. However, during the same period, the unemployment rate in Commerce City rose 4.9 percentage points in both Commerce City and Adams County, reaching 7.5 percent and 7.6 percent, respectively. The labor force fell by 0.3 percent in both Commerce City and Adams County as well.

Warehouse distribution, which composes the majority of the study area, represented 79.2 percent of Commerce City’s industrial rentable space in the fourth quarter of 2020, representing 5.3 percent of all warehouse space in the Denver metropolitan area. Office, retail, and warehouse vacancies increased year-to-year. Warehouse vacancies rose 2.7 percentage points to 7.6 percent, while the average lease rate fell 4 percent (Commerce City 2021b). FedEx Ground Packaging Systems is planning a 16,315-square-foot expansion valued at \$6.15 million, the largest project permitted by Commerce City during second quarter 2020 (Commerce City 2020g).

Table 9 shows methods used by people in Adams County, Denver County, and Commerce City for commuting to work. For all three areas, most commuters drive alone. However, the highest percentage

<sup>3</sup> “There are twelve major industry sectors tracked by the U.S. Department of Labor’s Bureau of Labor Statistics (BLS), which are referred to as *supersectors*. These supersectors encompass all private and public jobs within the United States and businesses owned by U.S.-based companies operating in other countries” (Encyclopedia.com 2020).

of carpoolers (13.6 percent) are in Commerce City. A small percentage (1.6 percent) of commuters in Commerce City use public transportation compared with Adams County (3.6 percent) and Denver County (6.5 percent). Similarly, a small percentage (0.7 percent) of commuters in Commerce City walk to work compared with Adams County (1.1 percent) and Denver County (4.7 percent). The mean travel time to work is between approximately 26 and 30 minutes for all three geographic areas, with the highest being in Commerce City.

Table 9. Commuting to Work

Commuting to Work	Adams County		Denver County		Commerce City	
	Estimate	Percent	Estimate	Percent	Estimate	Percent
Workers 16 years and over	258,075		394,894		27,263	
Car, truck, or van -- drove alone	202,370	78.4	272,967	69.1	20,966	76.9
Car, truck, or van -- carpoled	26,840	10.4	30,309	7.7	3,708	13.6
Public transportation (excluding taxicab)	9,205	3.6	25,824	6.5	439	1.6
Walked	2,829	1.1	18,489	4.7	189	0.7
Other means	2,856	1.1	13,572	3.4	490	1.8
Worked from home	13,975	5.4	33,733	8.5	1,471	5.4
Mean travel time to work (minutes)	29.8	(X)	25.9	(X)	30.3	(X)

Source: U.S. Census Bureau 2018: ACS 5-Year Estimates detailed tables

Existing home sales fell 16.7 percent between the third quarters of 2019 and 2020, but home prices in Commerce City rose 8.8 percent.

The Commerce City *April 2020 Economic Activity Report* (2020f) identified economic trends for the first quarter of 2020. The report noted that a quarterly increase in consumer confidence reflects the monthly average during the first quarter of 2020 and states, “In March, consumers were significantly less optimistic about the short-term outlook for business conditions and the labor market due to the increased uncertainty brought on by the novel coronavirus disease of 2019 (COVID-19), and the Index is expected to decline in the coming months due to the pandemic.” The ensuing *July 2020 Economic Activity Report* (2020g) noted that Colorado reported a 37.7 percent decrease in consumer confidence between the second quarters of 2019 and 2020, but that Denver also ranked in the top 10 cities best positioned to recover from COVID-19. The 2020 fourth quarter findings in the *January 2021 Economic Activity Report* (2021b) stated that “employment in Commerce City fell 3.8 percent between the second quarters of 2019 and 2020, declining by 1,232 workers during the period. This was the first quarter where the full effects of the pandemic were represented in the data, contributing to the over-the-year decline in employment. Ten of the 12 supersectors reported over-the-year decreases in employment. The information supersector reported the largest over-the-year decrease of 50 percent, followed by mining and logging (39.3 percent), other services (15.5 percent), and professional and business services (10.3 percent). Construction reported the largest over-the-year increase of 5.2 percent, while leisure and hospitality rose 3.2 percent during the period” (Commerce City 2021b).

The Adams County Comprehensive Plan (2012b) includes the following relevant Job Creation Policy strategies:

- 4.1.a: “Through zoning and other land use authority, provide an adequate supply of both serviced and raw land suitable for commercial and industrial development and redevelopment, especially . . . along the I-70, I-25, I-76, I-270, US-85 corridors and other major highway corridors.”



- 4.1.e: “Determine how the County can best leverage existing assets, such as . . . major transportation corridors, to attract new employers and strengthen the existing businesses related to these assets.”

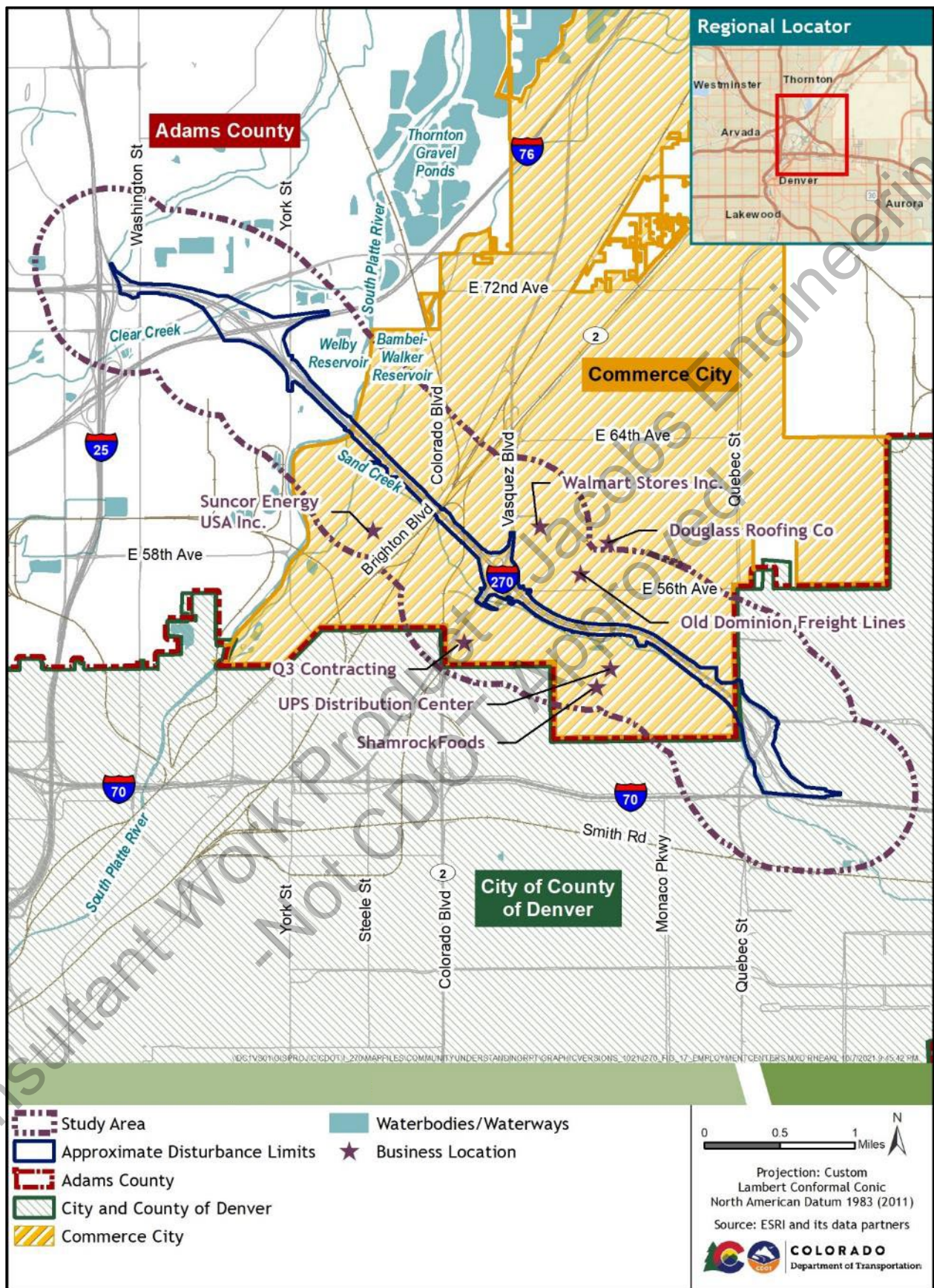
Commerce City has identified major employment/mixed-use centers in the study area, including Transit Oriented Development at the forthcoming Regional Transportation District (RTD) North Line Station at East 72<sup>nd</sup> Avenue and Colorado Boulevard, the Mile High Greyhound Park at East 64<sup>th</sup> Avenue and SH-2, and Victory Crossing (formerly Prairie Gateway) northeast of East 56<sup>th</sup> Avenue and Quebec Street (Figure 21) (Commerce City n.d.).

As part of RTD’s FasTracks program, the North Line, a commuter rail transit route that opened in September 2020, travels from Denver Union Station through the Historic City en route to Thornton. The North Line station is located in Commerce City at Colorado Boulevard and East 72<sup>nd</sup> Avenue. The station provides a transit option for residents and visitors to the redeveloped Mile High Greyhound Park/Wembley site and mixed-use development adjacent to the station (Commerce City 2013). Commerce City is improving adjacent streets in anticipation of additional vehicle traffic around the station (Commerce City 2020b). The North Line opened for service in September 2020 (RTD 2020).

Commerce City developed a plan in 2018 to redevelop the former Mile High Greyhound Park (referred to as the Wembley site). The 65-acre site is located between 62<sup>nd</sup> Avenue and 64<sup>th</sup> Avenue, and between Dahlia Street and Holly Street, immediately east of Vasquez Boulevard. Formerly “an economic engine for Commerce City, the park employed hundreds of residents and sales tax revenues were reinvested in community projects” for more than 60 years. The park’s closure in 2008 slowed visitation to, and activity in, the Historic City. The property is designated as a mixed-use zone of residential, commercial, retail, and civic infrastructure uses. Development will be phased over several years, starting with the Suncor Boys & Girls Club, which opened in 2015 at the southeast corner of the area. Project construction started on October 6, 2020 (Commerce City 2018, 2020a).

Victory Crossing, known as Prairie Gateway in the Commerce City Comprehensive Plan (2010a), is briefly described in Table 3. Victory Crossing is envisioned as a “large-scale, mixed-use destination that brings together world-class sports and recreation facilities, indoor and outdoor event space and mixed-use, office, retail and commercial flex space” (Victory Crossing 2020). Victory Crossing occupies 250 acres of a 917-acre site that was formerly part of the Rocky Mountain Arsenal, a chemical weapons manufacturing site. Existing development in Victory Crossing includes municipal facilities, retail, a visitor’s center for the Rocky Mountain Arsenal National Wildlife Refuge, offices for the U.S. Fish and Wildlife Service, and Dick’s Sporting Goods Park field complex (Dick’s Sporting Goods Park n.d., Front Porch Northeast Denver 2017, Victory Crossing 2020). Dick’s Sporting Goods Park is an 18,000-seat soccer-specific stadium owned by Commerce City and is home to the Major League Soccer Colorado Rapids. The venue houses 24 outdoor community fields and hosts international soccer and lacrosse tournaments, concerts, other sporting events, and competitions throughout the year (Commerce City 2020c, d; Dick’s Sporting Goods Park n.d.).

Several delivery companies, such as UPS, FedEx, and Old Dominion, are located along 56<sup>th</sup> Avenue. The study team reached out to freight carriers for feedback about issues and potential solutions for the corridor. Carriers located on 56<sup>th</sup> Avenue often use local streets, rather than the closer Vasquez Boulevard interchange, to access the Quebec Street interchange because the Vasquez Boulevard ramp design can result in damage to trailers. Trucks, especially those with double and triple configurations, have difficulty maneuvering through the interchange. Freight carriers also noted that the intersection at 56<sup>th</sup> Avenue at Eudora Street is poorly signed and confusing. More information about freight issues is provided in the outreach and stakeholder participation section and Appendix A of the EA, which includes meeting notes documenting specific discussions. Suggestions for improving the corridor were considered in the development of alternatives, as described in the Alternatives section of the EA. Refer to the *Multimodal Technical Report* (Appendix A9 of the EA) for details.



**Figure 21. Commerce City Designated Employment Centers/Large Mixed-use Development Opportunities**  
 Source: Commerce City n.d.

## 4.4 Impacts Assessment

### 4.4.1 No Action Alternative

#### ***Community Cohesion and Neighborhoods***

The No Action Alternative would result in continued congestion, increased travel times and accident potential, and residents choosing alternative travel routes to avoid the highway. Community cohesion could be impacted by residents choosing to avoid certain areas caused by congestion. In addition, this alternative would not address issues and policies identified in local plans related to community cohesion and neighborhoods (Table 3), such as improving traffic and transportation connections, drainage issues, infrastructure and roadways, and connectivity. The “image” along I-270 would remain “unimproved,” counter to Commerce City’s goals, possibly further discouraging development that could positively affect the local community.

#### ***Community Vision and Values***

The No Action Alternative would not support Adams County’s goals to promote connected growth, protect the health, safety, and welfare of the county’s inhabitants, or provide economic vitality because the existing safety and congestion issues would remain. Indirectly, the No Action Alternative would not support comparable goals identified by Commerce City and Denver, such as supporting jobs and residents, creating strong community ties, creating linkages to future residential and business development, and attracting “high quality new businesses” (per the *Park Hill Neighborhood Plan* [City and County of Denver 2000b]), because continued congestion could discourage attainment of such goals. Overall, quality of life in the study area would remain unchanged or degrade under a continuation of existing conditions related to congestion and safety.

#### ***Mobility***

Mobility for all travelers, including transit-dependent individuals, would continue to be impaired due to congestion and accident frequency, hindering travelers’ ability to reach their destinations, particularly the area’s key destinations. This alternative would not support local plans to “preserve and enhance transportation access” and “maintain the city’s transportation advantage.”

#### ***Community Services and Facilities***

Accessing community services and facilities would continue to be adversely impacted by travel delays. Travel patterns for police and emergency service providers would be adversely affected, impacting their ability to reach their communities. None of the changes to the corridor suggested by emergency response providers, including widening shoulders, increasing acceleration/deceleration lanes or adding an auxiliary lane, redesigning the Vasquez Boulevard interchange, improving signage, and adding emergency turnaround areas, would be implemented. In addition, by not addressing existing safety issues, the accident rate on I-270 is expected to increase, additionally straining emergency service personnel who must respond to these situations.

#### ***Parks, Open Space, and Trails***

No impacts to parks, open space, and trails would occur under the No Action Alternative.

#### ***Business and Economic Development***

Businesses would be affected by continued congestion, resulting in delays in reaching local businesses and delays in delivering products from local businesses. Decreased safety and travel times could discourage employment. However, these changes are not expected to be sufficient enough to meaningfully affect earnings and income.

This alternative would not support the goals of local plans to create jobs or revitalize the industrial areas, whose location along a strategically located highway could become increasingly detrimental if

congestion sufficiently hampers transportation. The transportation, warehousing, and utility sector, the largest employer in Commerce City, would be particularly impacted because it relies heavily on the efficient movement of materials along I-270 to adjacent interstates. Similarly, the three major employment/mixed-use centers in the study area, all of which are north of I-270, could experience adverse impacts related to growth if travel on I-270 continues to degrade.

Freight transportation would continue to experience the adverse effects currently described by carriers that drive the corridor. Use of local streets to avoid weight restrictions, congestion, and vehicle damage would continue and could become exacerbated with truckers venturing farther onto local roads not designed to handle this type of transport. This situation would become particularly aggravated near 56<sup>th</sup> Avenue if the delivery companies in that area, as well as the Suncor refinery, increase their output.

#### **4.4.2 Proposed Action**

##### ***Community Cohesion and Neighborhoods***

Adding a new 12-foot travel lane to both directions of the entire length of I-270 from I-25 to I-70 would reduce congestion on I-270. Adding eastbound and westbound auxiliary lanes between the I-270/York Street and I-270/Vasquez Boulevard interchanges, improving interchanges at I-270/York Street and I-270/Vasquez Boulevard, and replacing narrow and structurally deficient bridges along the corridor would improve traffic flow and safety. Other changes, such as widening shoulders and implementing an intelligent transportation system, would also improve traffic flow and safety. Safety improvements were requested in public comments received for this project. Although these changes would not directly change access, they would improve it, thereby improving community cohesion by encouraging movement.

The Proposed Action would address several specific issues and policies identified in local plans related to community cohesion and neighborhoods (Table 3), such as improving traffic and transportation connections, drainage issues, infrastructure and roadways, and connectivity. Improvements to the I-270/Vasquez Boulevard interchange would help address cross-highway connectivity issues in that area. This alternative would also improve connections to the Sand Creek Trail and aid in development of the area near Vasquez Boulevard and I-270 and the Wembley site, as well as improve access to Dick's Sporting Goods Park, Commerce City Civic Center, and Rocky Mountain Arsenal National Wildlife Refuge by alleviating congestion on I-270 and improving interchanges. The Proposed Action would include landscaping to address comments received that the Vasquez Boulevard interchange area has low visual quality. These benefits could indirectly lead to an increase in commercial and job opportunities. In addition, the Proposed Action would consolidate stormwater outfalls and, along with other highway improvements, would help address the "drainage and road alignment issues that remain challenges" as noted in Commerce City's Comprehensive Plan (2010a). Commerce City's issue concerning unregulated landfills would be partially addressed by the identification and treatment of contaminated soils and groundwater.

##### ***Community Vision and Values***

The Proposed Action would indirectly support community vision and values for similar reasons, specifically, Adams County's goals to promote connected growth; protect the health, safety, and welfare of the county's inhabitants; and provide economic vitality by improving the I-270 transportation corridor, increasing safety, and reducing congestion. Improving I-270 would also support comparable goals identified by Commerce City and Denver, such as supporting jobs and residents, creating strong community ties, creating linkages to future residential and business development, and attracting "high quality new businesses" per the *Park Hill Neighborhood Plan* (City and County of Denver 2000b). The Proposed Action would also help "promote environmental stewardship," as called for by the Adams County Comprehensive Plan (2012b), and "improve the environmental quality of the industrial corridor," as indicated by the *Park Hill Neighborhood Plan* (City and County of Denver 2000b), by providing water quality improvements, mitigating for wetland and natural habitat impacts, and addressing some of the

area's existing hazardous materials issues. All of these improvements would enhance the overall quality of life in the study area.

The Proposed Action would support comments received from the public that focused on improving safety and connections to the Sand Creek Greenway and preserving the Sand Creek corridor (refer to Section 6 of the EA for details).

### **Mobility**

Adding new auxiliary and travel lanes would help address the mobility issues identified by local planning jurisdictions, particularly those affecting the "large number of firms within the Transportation and Logistics section" as identified by the Commerce City *Economic Development Strategic Plan* (Commerce City 2010b). These actions would support the city's strategy to "preserve and enhance transportation access" and "maintain the city's transportation advantage." The key destinations on the southern side of I-270 would be better served by improvements to the highway. Key destinations on the northern side of I-270, which is also where the majority of community facilities are located, would additionally benefit from replacing the interchange at Vasquez Boulevard. These changes would improve mobility for all travelers, including transit-dependent individuals. These changes would also support the projected growing population, particularly Adams County's expected 90 percent increase by 2040, and the large percentage of commuters who drive, carpool, and use public transit in the study area.

New sidewalks on York Street, 56<sup>th</sup> Avenue, and Vasquez Boulevard would help address residents' requests for safety improvements to pedestrian facilities and provide improved access to the Walmart on Vasquez Boulevard from the south. An on-street bike lane on the eastern side of 56<sup>th</sup> Avenue would also address a request for a bike facility in this area. Reaching area schools, churches, and medical centers would be easier, and bus transportation on I-270 to and from these facilities would benefit as well. The improved I-270 and Vasquez Boulevard interchange would benefit residents in that area as noted by Kids First Health Care (Section 4.3.4) and would reduce the need for traffic to use local streets to avoid congestion.

### **Community Services and Facilities**

The Proposed Action would benefit fire and emergency responders, who noted that incident response is affected by congestion, inadequate shoulder widths, problems at the Vasquez Boulevard interchange, and issues related to weaving and merging. This alternative includes elements specifically requested by emergency responders, including wider shoulders, an auxiliary lane, a redesigned Vasquez Boulevard interchange, and improved signage. With the exception of the Adams County Fire Rescue Training and Maintenance Facility, all of these facilities are on the northern side of I-270; therefore, improving the Vasquez Boulevard interchange is particularly crucial. Widened shoulders would provide more room for disabled vehicles and for emergency service providers to safely work. The additional express lane would help improve time required to reach incidents. In addition, addressing existing safety issues along the corridor is expected to reduce the accident rate on I-270, thereby reducing the need to respond to as many emergency situations on the highway (refer to the *I-270 Existing Safety Conditions Report* in Appendix A8 of the EA). Implementation of an intelligent transportation system would also assist emergency service providers by alerting travelers to accidents and preparing them to approach with caution or use alternative routes.

As addressed previously under Mobility, new sidewalks would help address residents' requests for safety improvements to pedestrian facilities and provide improved access to the local Walmart. An on-street bike lane would address a request for a bike facility. Reaching local destinations would be easier, and bus transportation would also benefit.

### **Parks, Open Space, and Trails**

The Proposed Action would support the Adams County Comprehensive Plan's (2012b) policies to preserve open space, water corridors, and reservoirs, and the public's desire to preserve the Sand Creek

corridor and trail, because no change to the Sand Creek Greenway, South Platte River Trail, Clear Creek Trail, or Wetland Loop Trail/Wetland Park would occur. No permanent changes would occur to any of the resources listed in Table 5 except new trail connections included in the Proposed Action, which would improve access to several of these resources. A new sidewalk network would connect the Sand Creek Trail to the sidewalk along northbound Vasquez Boulevard, which would support the plan's goals to "establish an interconnected regional open space system" and "provide a variety of recreation opportunities," as well as the public's request for more connections to the trail (Adams County 2012b). This sidewalk network would also support the policies identified in the *Adams County Colorado Open Space, Parks & Trails Master Plan (2012a)* to provide trail connectivity, particularly grade-separated connections "along and across major vehicular circulation rights-of-way," as well as Commerce City's *Walk.Bike.Fit's (2012b)* goal to develop a multimodal active travel network. This alternative would also support the important parks, open spaces, and trails interests noted by respondents to the *Adams County Colorado Open Space, Parks & Trails Master Plan 2012* survey. In addition, the sidewalk network would address concerns identified by the Platte River Greenway and Sand Creek Greenway regarding the sidewalk under I-270 at Vasquez Boulevard and would provide better connections to Dahlia Street both north and south of I-270, as requested by the Greenway Foundation. The Proposed Action would not affect the Northern Range Loop Trail or any future plans along the O'Brien Canal. Although Veterans Memorial Park and Pioneer Park would not be directly affected by the proposed actions, access to them would be improved by improving the I-270 interchange at Vasquez Boulevard.

### ***Business and Economic Development***

Reduced congestion would support the projected growing population, particularly Adams County's expected 90 percent increase by 2040, as well as the large percentage of the study area that is in the labor force. Reduced congestion would reduce delays to reach local businesses and deliver the products they distribute. Improved safety and travel times could attract employment, although this impact, and any associated earnings or income connected to it, is expected to be slight.

By improving travel through the I-270 corridor, the Proposed Action would support the Adams County Comprehensive Plan (2012b) call for revitalizing older industrial areas primarily south of the I-76 corridor and support the area's existing "strong industrial and manufacturing base" by retaining its position along "multiple interstates, highways, and railroads as one of its biggest economic development competitive advantages." The proposed improvements would help Commerce City retain and expand its existing industrial base in the Historic City for future jobs, as well as potentially attract new employment uses, by reducing congestion and traffic problems on I-270. The transportation, warehousing, and utility sector—the largest employer in Commerce City—relies heavily on the efficient movement of materials along I-270 to adjacent interstates, including I-25, I-70, and I-76, as well as major roads such as Vasquez Boulevard, and would benefit from the improvements proposed under the Proposed Action. The four largest area employers north of I-270, two of which are freight companies, are all adjacent to Vasquez Boulevard, and would additionally benefit from improvements to the Vasquez Boulevard interchange.

Although the onset of COVID-19 in early 2020 negatively affected the business and employment increases the study area experienced before the pandemic, the positive economic trends are expected to eventually resume post-pandemic. This alternative would support the Adams County Comprehensive Plan's (2012b) Job Creation Policy strategies to "provide an adequate supply of land" along I-270 and major adjacent interstates by improving transportation to those lands, and "leverage existing assets such as major transportation corridors to attract new employers and strengthen existing businesses."

The small amount of taxable property that would be converted to transportation use (Section 2.4.2) would have a negligible effect on tax revenues collected by local jurisdictions. Slight increases to retail tax could occur if reduced congestion and improved access, such as to the Walmart Supercenter on Vasquez Boulevard and other commercial establishments in its vicinity, encourages more local shopping.

The proposed improvements to I-270 would support Adams County and Commerce City's desire to promote residential and commercial development at the three major employment/mixed-use centers in the study area, all north of I-270, such as around the North Line station and within Wembley and Victory Crossing.

Freight carriers would experience beneficial impacts resulting from improvements included under this alternative. In particular, improvements at the Vasquez Boulevard interchange would promote its use by truckers instead of local roads, including 56<sup>th</sup> Avenue, which is already heavily traveled because it serves several delivery companies and the Suncor refinery. Widening 56<sup>th</sup> Avenue and flattening the curve where it crosses beneath I-270 at Eudora Street would improve maneuverability for trucks with double and triple configurations. Improvements at 56<sup>th</sup> Avenue would also benefit the large number of freight vehicles that travel that road to and from the many delivery services and Suncor refinery along 56<sup>th</sup> Avenue. Implementation of an intelligent transportation system would also address some of the signage confusion truckers experience and would improve transport overall within the corridor.

### **Construction Impacts**

Residents, emergency responders, transit providers and users, and businesses in the study area would be adversely impacted by construction activities and detours. As detailed in the *Section 4(f) and Section 6(f) Resources Technical Memorandum* (Appendix A15 of the EA), minor trail detours would be needed at four locations along the Sand Creek Trail and one location on the South Platte Trail. Bus routes likely impacted are the Flatiron Flyer (I-270), Route 48 (Vasquez Boulevard), and Route 49 (56<sup>th</sup> Avenue under I-270). Although I-270 is expected to remain open during construction, limited overnight closures will be required to facilitate bridge construction with detours occurring on I-70 and I-25. Construction on 56<sup>th</sup> Avenue would particularly affect the Suncor refinery, which operates round-the-clock. Some business and residential accesses will be impacted during construction. Other construction impacts would include visual impacts, dust, and noise.

Construction would occur in phases and is expected to be complete within 2.5 to 3.5 years.

### **4.5 Mitigation Measures**

A traffic control plan will be developed and notices related to detours or delays will be provided to the public to minimize construction impacts. Construction best management practices will be employed that generally will restore staging areas and storage sites to their original conditions to minimize construction-related visual impacts. Best management practices will also be applied to reduce dust and noise impacts.

The contractor will coordinate with the property owners on a plan of action for maintaining access to the affected properties. Most pedestrian/trail facilities impacted by construction activities will be detoured onsite and near the original trail location. Limited overnight trail closures may be needed for bridge girder erection.

## **5.0 Environmental Justice**

### **5.1 Federal Regulatory Context**

Title VI of the Civil Rights Act of 1964, as amended, is a nondiscrimination statute. Specifically, 42 U.S.C. 2000d states that "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." EJ, a component of Title VI, is a public policy goal of promoting the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. It is grounded in the following three principles that

establish an approach to identify and address disproportionately high and adverse effects of proposed decisions on low-income and minority populations:

- “To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.”
- “To ensure the full and fair participation by all potentially affected communities in the transportation decision making process.”
- “To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.” (USDOT 2019)

Executive Order (EO) 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” further emphasized the Title VI protections of race and national origin by requiring federal agencies to identify and address disproportionately high and adverse effects of their actions on minority populations. EO 12898 and the U.S. Department of Transportation (USDOT) and FHWA orders that followed (Order 5610.2 and Order 6640.23, respectively) expanded upon Title VI to include low-income populations and ensure greater public participation in the decision-making process.

Under EO 12898, federal agencies are required to identify and address disproportionately high and adverse human health or environmental effects of the proposed actions on minority and low-income populations. The intent of EO 12898 is to ensure that procedures are in place to protect low-income and minority groups that have been traditionally underserved.

Order 5610.2 defines minority populations as “any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed [US]DOT program, policy or activity.” For purposes of these guidelines, tribal governments are also included in this definition of minority populations.

Pursuant to Order 5610.2, minority classifications include the following:

- “Black: a person having origins in any of the black racial groups of Africa”
- “Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture of origin, regardless of race”
- “Asian American: a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent”
- “American Indian and Alaskan Native: a person having origins in any of the original people of North America, South America (including Central America), and who maintains cultural identification through tribal affiliation or community recognition”
- “Native Hawaiian or Pacific Islander: a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands”

The U.S. Census Bureau classifies Hispanic as an ethnicity rather than a race because a person who self-identifies as Hispanic may be of any race, thus avoiding double counting. Therefore, subtracting the total White, non-Hispanic/Latino population from an area’s overall population yields the total minority population.

In January 2021, the Biden administration issued EO 13985 to set the stage for the new administration’s national priorities, including a renewed focus on EJ. EO 13985, “Advancing Racial Equity and Support for Underserved Communities Through the Federal Government,” includes new definitions and guidance pertaining to EJ:



- Equity—“the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.”
- Underserved Communities—“populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.”

## 5.2 State Regulatory Context

Mirroring the renewed focus on EJ at the federal level, and as part of a comprehensive transportation funding bill (Senate Bill 21-260 [SB 260]), Colorado’s legislature created new definitions pertaining to equitability. As part of its legislative declaration, SB 260 emphasizes the equitable distribution of transportation infrastructure and “addresses inequities in transportation access and the increased exposure to transportation-related air pollution for communities, including disproportionately impacted communities, communities near major roadways, and, as documented in multiple peer-reviewed scientific studies, communities where many of the residents are Black or Hispanic” (1)(b)(IV). SB 260, now codified as Colorado Revised Statute (CRS) 43-1-128, defines disproportionately impacted (DI) communities as “a community that is in a census block group . . . where the proportion of households that are low income is greater than forty percent, the proportion of households that identify as minority is greater than forty percent, or the proportion of households that are housing cost-burdened is greater than forty percent” (CRS 43-1-128(2)(c)(I)). The static thresholds for low-income and minority communities are the main substantive difference between CRS 43-1-128 and EO 12898/EO 13985, in addition to adding the category of housing cost-burdened within a DI community.

## 5.3 Methods

The following section describes the methods used to identify relevant EJ information and perform an impact analysis. The analysis considers impacts to minority and low-income populations based on CDOT and FHWA guidance in accordance with EO 12898. Also, this analysis considers the 40 percent threshold for low-income, minority, and housing cost-burdened households in accordance with CRS 43-1-128.

### 5.3.1 Data Gathering

Information was gathered from census block group levels, U.S. Department of Housing and Urban Development (HUD) thresholds of extreme low-income levels (ELIL), and HUD household size data to analyze potential impacts to minority and low-income populations. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process, an EJ outreach plan was developed that identifies targeted special-interest groups and traditionally underserved communities, as well as outreach methods designed specifically to reach EJ populations. The EJ outreach plan is summarized under Section **Error! Reference source not found.** and included in the outreach and stakeholder participation section of the EA prepared for this project.

As mentioned in Section 4.2.1, block group boundaries and corresponding data extend beyond the study area boundary and therefore may not accurately represent the study area’s demographic characteristics. For this reason, minority data were also gathered for the 0.5-mile study area using EPA’s EJScreen tool. To identify DI communities in accordance with CRS 43-1-128, CDOT’s Disproportionately Impacted Communities online mapping tool available at <https://cdot.maps.arcgis.com/apps/webappviewer/index.html?id=6694e9fa83b64da1be85cac50c0f4be2> was used. The 40 percent threshold for minority populations established by CRS 43-1-128 is lower, or more conservative, than the Adams County (49.44 percent) and Denver (46.25 percent) averages. Therefore, block groups in the study area which do not qualify as EJ may qualify as DI. Conversely, the 40 percent threshold for low-

income populations is less conservative than the Adams County (17.8 percent) and Denver (22.9 percent) averages, so block groups identified as low-income EJ would also qualify as DI in accordance with CRS 43-1-128. A separate subsection is included to address housing cost-burdened populations.

To support the assessment of the project's potential impacts on health effects of the surrounding community, information from Colorado Department of Public Health and Environment's (CDPHE's) Toxicology and Environmental Epidemiology Office, North Denver/Commerce City (NDCC), initial health analysis was used to characterize the existing health concerns specifically related to air quality (CDPHE 2020, 2022).

Data gathered and reviewed to perform the air quality analyses included existing air quality monitoring data, traffic data, data from CDPHE's Air Pollution Control Division for emissions and dispersion modeling purposes, and the regional transportation plans.

### 5.3.2 Analysis Approach

The analysis of impacts considers benefits and burdens to minority, low-income, and housing cost-burdened populations to determine whether or not there are disproportionately high and adverse effects by the following methods:

- Determine the benefits and burdens on the minority, low-income, and housing cost-burdened populations (including any disproportionately high and adverse effects) as follows:
  - Identify minority populations as defined by EO 12898 and low-income populations based on census block group data and HUD thresholds of ELIL within the study area as prescribed in the CDOT NEPA Manual (2020).
  - Identify cost-burdened populations in the study area based on CDOT's DI community tool as prescribed by CRS 43-1-128.
  - Use information gathered from the EJ outreach plan's outreach methods as supplemental data sources to further refine identification of the presence of minority and low-income populations.
  - Determine impacts by considering the interrelated social and economic effects on EJ populations resulting from changes to air quality, noise, water quality, community cohesion, economics, safety, public facilities, and services, traffic congestion, and any other applicable resource.
- Compare the burdens/benefits (impacts) to minority, low-income, and housing cost-burdened populations to the burdens/benefits of the overall population within the study area as follows:
  - Determine whether the impact would be predominantly borne by minority, low-income, and housing cost-burdened populations.
  - Determine whether the impact would be appreciably more severe or greater in magnitude than the adverse effect suffered by the non-minority, non-low-income, and non-housing cost-burdened population.
- Determine how mitigation, including possible advanced mitigation and outreach strategies, might offset disproportionately high or adverse impacts to EJ and DI populations.

CRS 43-1-128 does not include definitions, procedures, or measures to guide the analysis of potential impacts related to DI communities. Therefore, the methods described previously, which use the adverse effect and disproportionately high and adverse definitions included in USDOT Order 5610.2C, are applied to determine effects to DI communities.

While the CDPHE health assessment data is used to support the discussion of health as it relates to existing conditions and anticipated impacts of the Proposed Action in comparison to the No Action

Alternative. There is no regulatory basis or established procedures at either the federal or state levels for conducting a health analysis and drawing conclusion from that analysis.

The air quality impact analyses considered how the Proposed Action would meet requirements associated with transportation conformity, NEPA, and CRS 43-1-128. Although the Denver area is attaining the PM<sub>2.5</sub> National Ambient Air Quality Standards (NAAQS) and dispersion modeling is not required for any pollutants under CRS 43-1-128, CDOT exceeded the CRS 43-1-128 requirements and conducted additional modeling and analysis to support the EJ analysis and address any public concerns about air quality in the study area. Sensitive receptors were strategically located at community resources including schools, parks, and trailheads to concentrate the analysis in the EJ communities. The purpose of these analyses is to help disclose to the public the anticipated impacts of carbon monoxide and particulate matter (PM) emissions from the project, address public concerns, and provide quantified impacts from the Proposed Action. The approach for the PM modeling followed the EPA guidance and also included sensitive locations that are farther than 500 meters from the project. Public outreach was conducted to identify sensitive locations beyond the 500-meter boundary. To understand the degree to which I-270 is serving minority, low-income, and housing cost-burdened populations, an origins and destinations study was conducted using StreetLight data (i.e., cellphone data). The origins and destination study (conducted by Jacobs and available as part of the project record) included an equity analysis to determine the percentage of trips on I-270 that originated from or were destined for low-income, minority, or housing-cost burdened block groups.

#### 5.4 Existing Conditions

Using the analysis approach and methods previously described, low-income, minority, and housing cost-burdened populations were identified and mapped within the study area. With the exception of two Denver block groups at the eastern limit of the study area (Figure 22, Figure 23, and Figure 24) all block groups included in this analysis qualify as either low-income, minority, or housing cost-burdened. In general, the I-270 corridor can be characterized as an EJ and DI area.

As shown in Table 10, the origins and destinations analysis revealed that of the trips originating within 0.5 mile of the project using I-270, more than half originated from minority or housing cost-burdened block groups, and more than a quarter originated from low-income block groups.

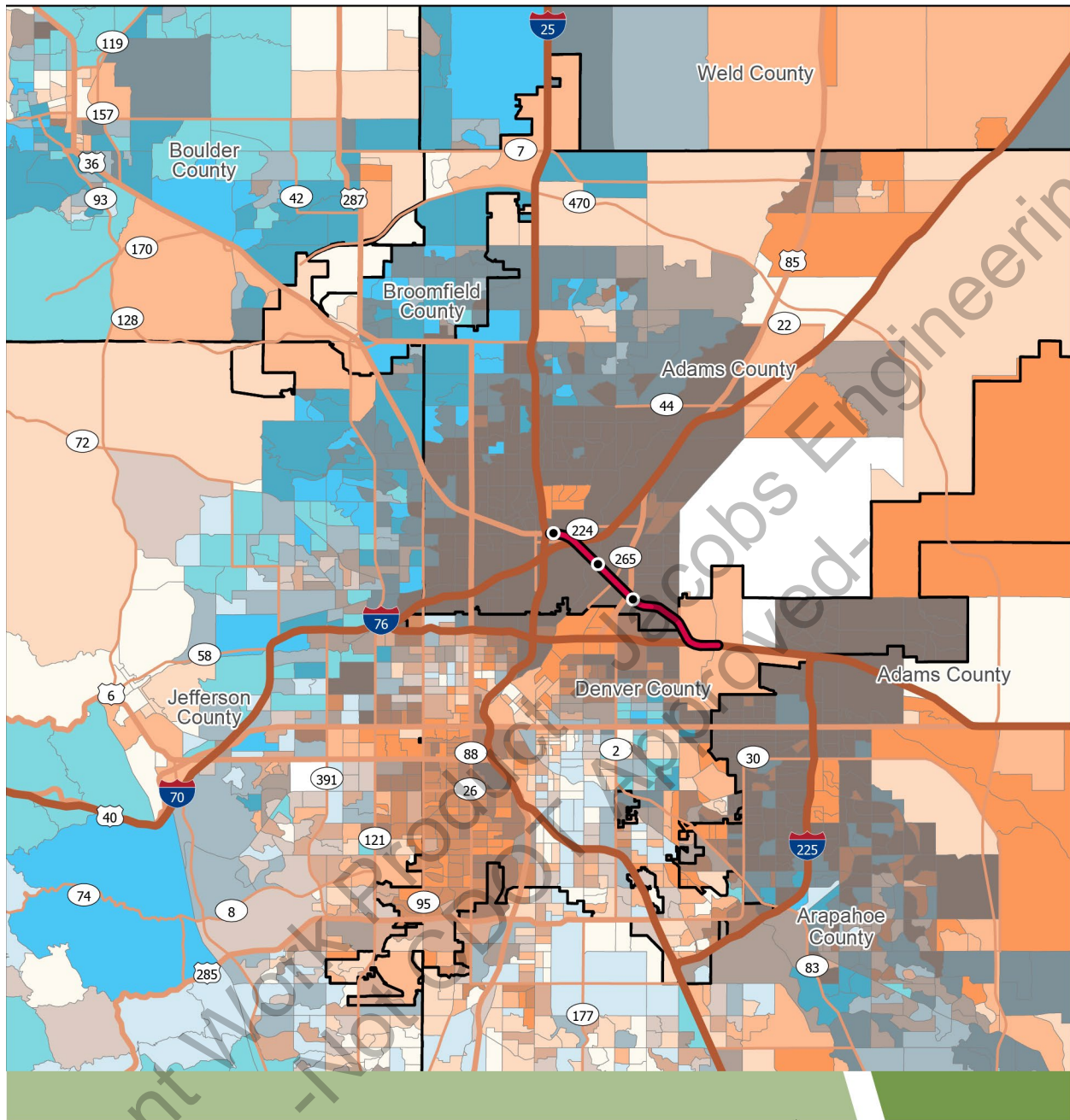
Table 10. Environmental Justice and Disproportionately Impacted Trip Share

Population Group	Number of trips	Share of I-270 Trips
Minority	8,865	63.4%
Low-Income	3,740	26.8%
Housing Cost-Burdened	7,257	51.9%
<b>Total Trips</b>	<b>13,977</b>	

Source: Jacobs 2022

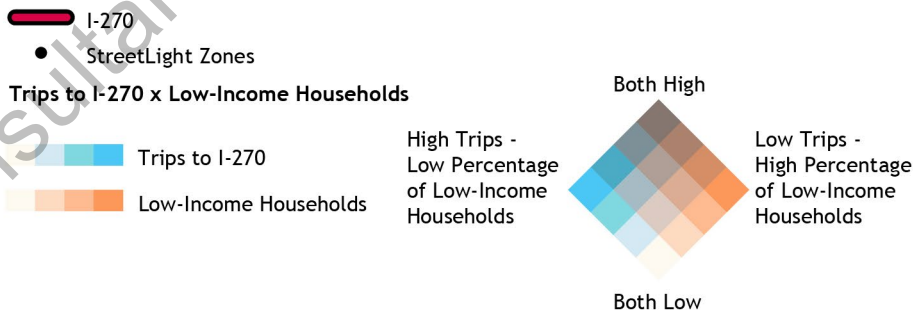
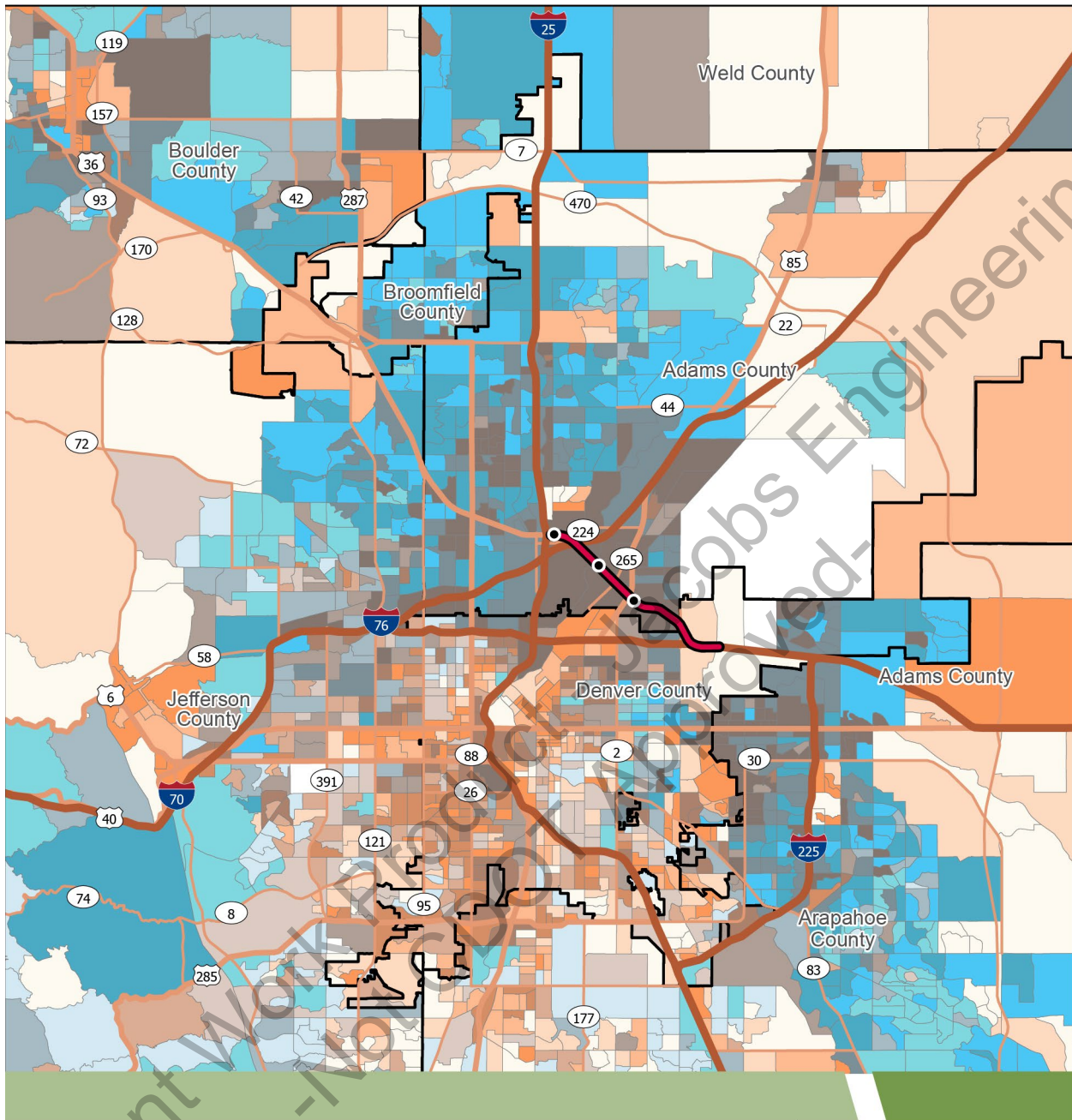
Note: The analysis period is September 1 to November 30, 2021

The origins and destinations analysis also considered a larger, 10-county area surrounding the project to understand I-270's regional impact. The equity analysis for this larger area included overlaying low-income, minority, and housing cost-burdened block groups with a graduated representation of trips. As denoted by the darker shaded areas on Figure 22, Figure 23, and Figure 24, block groups surrounding the I-270 corridor exhibit both a high percentage of the trips in the analysis period (September 1 to November 30, 2021) and a high percentage of low-income, minority, and housing cost-burdened households. These data and graphics support the finding that I-270 directly serves EJ and DI communities in the study and in a more regional context beyond the I-270 corridor.



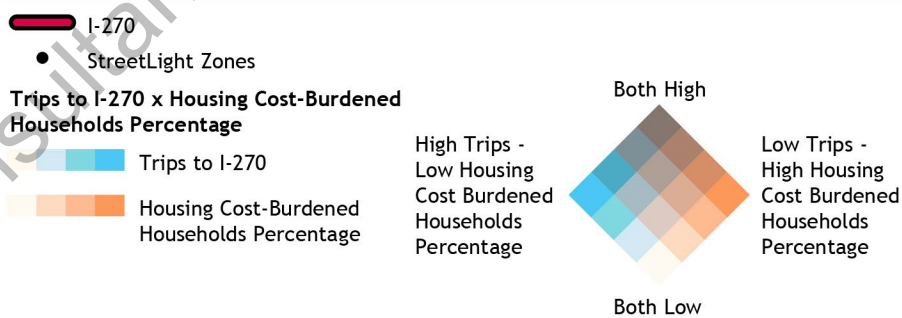
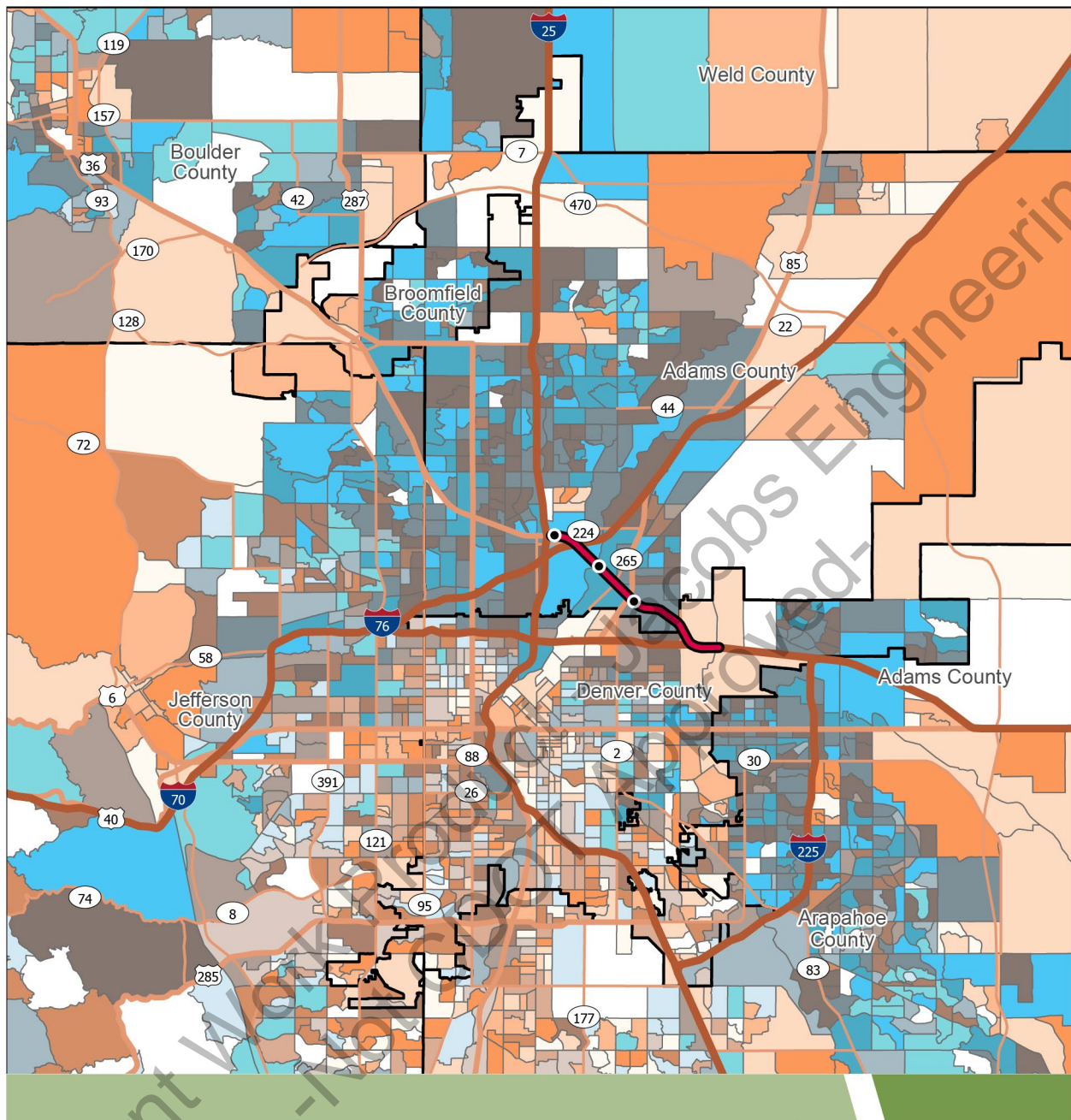
**Figure 22. Trips to I-270 and Minority Populations**

Source: Jacobs



**Figure 23. Trips to I-270 and Low-Income Households**

Source: Jacobs



**Figure 24. Trips to I-270 and Housing Cost-Burdened Households**  
 Source: Jacobs 2022

**Minority Populations**

Per CDOT policy, census block group data were obtained for the study area. A block group is the smallest geographic area for which the U.S. Census Bureau collects and tabulates census data, generally defined to contain between 600 and 3,000 people (U.S. Census Bureau 2018). Table 11 and Figure 25 depict these data for the state of Colorado, Adams County, Denver County, and the block groups within the study area by percentage. Based on these data, the populations of 17 out of 21 block groups within the study area (approximately 81 percent) are above the county minority averages. Of the four block groups that do not meet the Adams County and Denver County averages, two meet the 40 percent minority threshold established by CRS 43-1-128 and are therefore considered DI (Table 11).

Additional data were generated using EJScreen to identify minority populations within the 0.5-mile study area boundary, as follows (EPA 2020):

- Black: 9 percent
- American Indian: 1 percent
- Asian: 1 percent
- Pacific Islander: 0 percent
- Some other race: 10 percent
- Two or more races: 9 percent
- Hispanic: 57 percent

Consultant Work Product - Jacobs Engineering  
-Not CDOT Approved-

Table 11. Minority Populations in Community Study Area

Area	Total Population	Minority Populations Percentage							Total Minority
		Black/African American	Native American/ Alaska Native	Asian American	Native Hawaiian or Pacific Islander	Other Race <sup>a</sup>	Two or More Races <sup>a</sup>	Hispanic or Latino	
State	5,531,141	4.12	0.99	3.12	0.15	3.88	3.57	15.86	31.69
Adams County	497,115	3.32	1.26	3.88	0.12	5.01	3.91	31.94	49.44
Denver County	693,417	9.36	0.99	3.77	0.15	5.70	3.56	22.72	46.25
<b>Adams County Census Tract 87.09</b>									
Block Group 1	1,005	5.87	0.00	0.00	0.00	17.51	0.00	41.99	65.37
Block Group 2	1,440	4.24	2.99	1.53	0.00	11.32	2.08	44.86	67.02
Block Group 3	1,616	19.37	0.87	0.00	0.00	6.93	21.78	23.45	72.40
Block Group 4	1,290	11.32	2.25	0.00	0.00	11.71	1.86	47.36	74.50
<b>Adams County Census Tract 89.01</b>									
Block Group 1	1,061	8.01	5.00	0.75	0.00	8.58	2.92	38.08	63.34
Block Group 2	1,603	1.06	3.43	0.25	0.00	7.80	0.81	61.14	74.49
<b>Adams County Census Tract 90.02</b>									
Block Group 4	1,485	4.44	0.00	8.48	0.00	18.45	2.63	42.63	76.63
<b>Adams County Census Tract 93.07</b>									
Block Group 1	2,064	0.00	2.47	0.82	0.00	5.47	3.59	53.39	65.74
Block Group 2	1,880	3.14	5.11	0.48	0.00	8.35	0.90	56.49	74.47
<b>Adams County Census Tract 93.08</b>									
Block Group 1 <sup>b</sup>	820	0.00	0.00	0.00	0.00	26.10	0.85	19.27	46.22
Block Group 2	1,058	0.00	0.00	0.00	0.00	3.12	5.77	70.70	79.59



Table 11. Minority Populations in Community Study Area

Area	Total Population	Minority Populations Percentage							Total Minority
		Black/African American	Native American/ Alaska Native	Asian American	Native Hawaiian or Pacific Islander	Other Race <sup>a</sup>	Two or More Races <sup>a</sup>	Hispanic or Latino	
<b>Adams County Census Tract 95.53</b>									
Block Group 1	2,525	0.00	1.35	1.11	1.70	1.23	17.39	52.99	75.77
Block Group 2	1,203	5.82	1.16	0.50	0.00	1.66	1.50	63.67	74.31
<b>Adams County Census Tract 150</b>									
Block Group 1	1,883	0.21	2.60	0.00	0.00	7.59	4.83	41.42	56.65
Block Group 2 <sup>b</sup>	1,113	0.00	0.00	0.00	0.00	17.34	1.26	26.68	45.28
<b>Denver County Census Tract 35</b>									
Block Group 2	1,518	3.49	0.66	0.86	0.00	19.17	0.66	64.95	89.79
Block Group 3	1,697	1.24	0.00	0.00	0.00	21.80	4.71	56.33	84.08
<b>Denver County Census Tract 41.01</b>									
Block Group 1	2,565	20.70	0.74	1.36	0.00	4.99	10.96	27.45	66.20
<b>Denver County Census Tract 41.02</b>									
Block Group 1	1,500	27.00	0.27	1.27	0.00	5.47	6.20	27.60	67.81
<b>Denver County Census Tract 41.06</b>									
Block Group 1	12,959	8.06	1.38	3.07	0.00	1.02	4.81	8.50	26.84
<b>Denver County Census Tract 41.07</b>									
Block Group 1	11,430	7.24	0.00	6.13	0.20	1.26	4.61	8.77	28.21

Source: U.S. Census Bureau 2018

<sup>a</sup> "Other Race" and "Two or More Races" were included because they are considered to be, or to include, non-White races, and are included in the total population count.

<sup>b</sup> Block group does not meet county threshold but exceeds 40 percent minority threshold established by CRS 43-1-128.

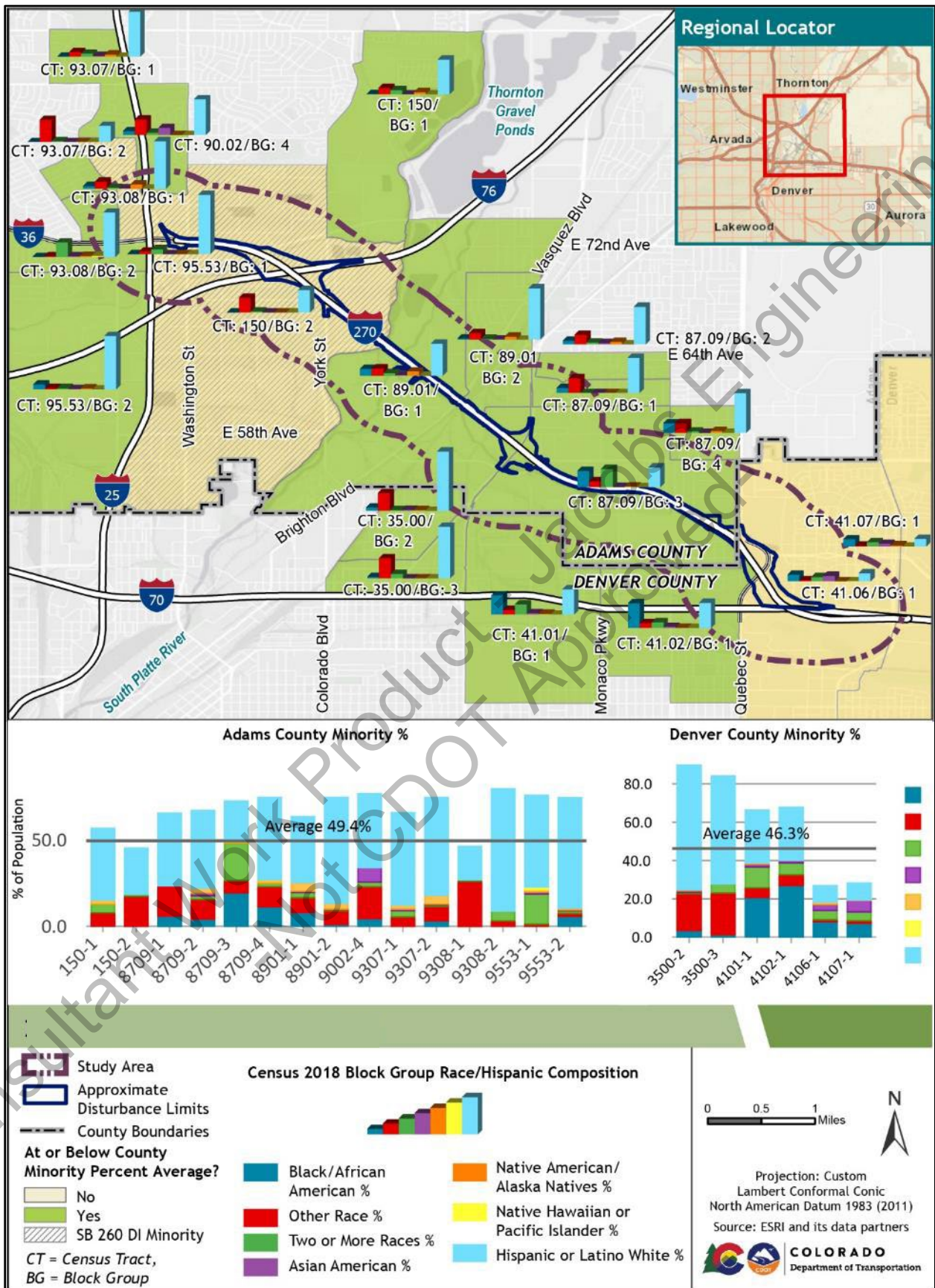


Figure 25. Minority Populations in the Study Area

### Low-income Populations

Per the CDOT NEPA Manual (2020), census data were derived from the U.S. Census 2018 ACS at the block group level. This process requires defining the ELIL, which is a household income at or below the Department of Health and Human Services poverty guidelines and is based on household size. Appendix A describes the steps performed to calculate ELIL. The ELIL is 17.8 percent for Adams County and 22.9 percent for the City and County of Denver. Table 12 and Figure 26 show those block groups at or below the ELIL, which are therefore included in the EJ analysis. Table 12 also shows the percentage of households within each block group with incomes at or below the ELIL.

Table 12. Low-income Thresholds

Area	Low-income Households (percent)
<b>ADAMS COUNTY</b>	<b>17.8</b>
<b>Census Tract 87.09</b>	
Block Group 2	50.6
Block Group 3	42.5
<b>Census Tract 89.01</b>	
Block Group 1	24.8
Block Group 2	23.4
<b>Census Tract 93.07</b>	
Block Group 2	18.4
<b>Census Tract 93.08</b>	
Block Group 1	21.2
Block Group 2	23.6
<b>Census Tract 95.53</b>	
Block Group 1	20.7
Block Group 2	30.4
<b>Census Tract 150</b>	
Block Group 1	32.0
Block Group 2	34.4
<b>DENVER COUNTY</b>	<b>22.9</b>
<b>Census Tract 35.00</b>	
Block Group 2	33.8
<b>Census Tract 41.01</b>	
Block Group 1	27.4

Source: U.S. Census Bureau 2018

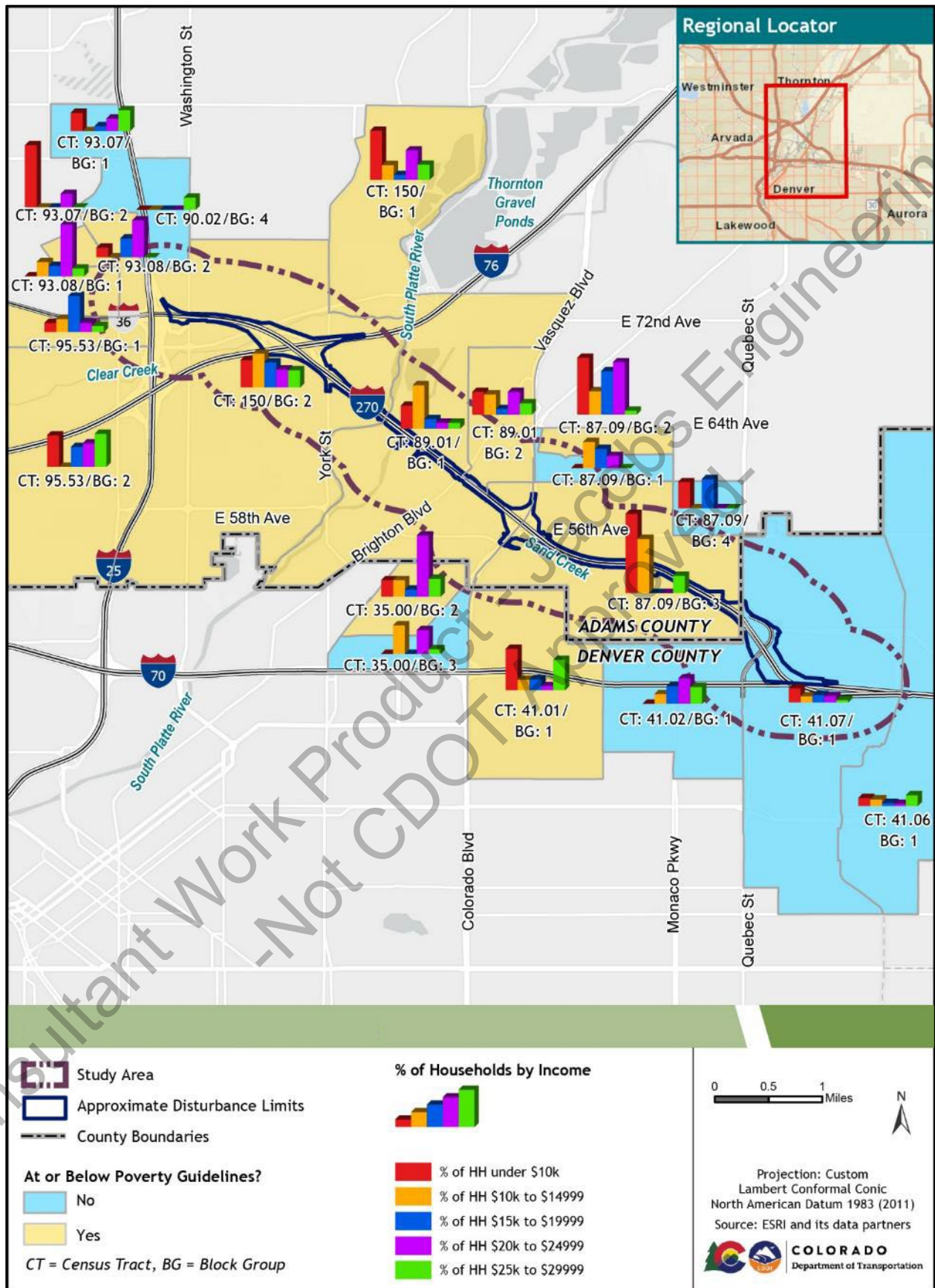


Figure 26. Low-income Populations in the Study Area

Source: U.S. Census Bureau 2018

Additional data were generated using EJScreen to identify low-income populations within the 0.5-mile study area boundary, as follows (EPA 2020):<sup>4</sup>

- <\$15,000 18 percent
- \$15,000 to \$25,000 8 percent
- \$25,000 to \$50,000 25 percent
- \$50,000 to \$75,000 19 percent
- \$75,000+ 30 percent

Census Tract 89.01 is also identified as a Federal Opportunity Zone (Commerce City n.d.), defined as “an economically-distressed community where private investments, under certain conditions, may be eligible for capital gain tax incentives. Opportunity Zones were created under the 2017 Tax Cuts and Jobs Act . . . to stimulate economic development and job creation, by incentivizing long-term investments in low-income neighborhoods” (USEDA 2020). Opportunity Funds can finance a wide variety of activities and projects, including “commercial and industrial real estate, housing, infrastructure, and existing or start-up businesses” (Urban Institute and Brookings Institution 2020).

### ***Housing Cost-burdened Populations***

In accordance with CRS 43-1-128 housing cost-burdened tracts where the percentage of housing cost-burdened equals or exceeds 40 percent were identified in the study area. CRS 43-1-128 defines housing cost-burdened as households that spend more than 30 percent of their income on housing. Of the 21 block groups in the study area, 7 are considered housing cost-burdened (Table 13 and Figure 27).

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<sup>4</sup> EJScreen does not account for range overlap; for example, \$25,000 is both the ending limit and starting limit for two range categories.

**Table 13. Housing Cost-burdened Disproportionately Impacted Communities**

Area	Total Households	Cost-burdened Households	Housing Cost-burdened Percentage
<b>Adams County Census Tract 87.09</b>			
Block Group 1	386	43	11.1
Block Group 2	561	303	54.0
Block Group 3	454	197	43.3
Block Group 4	537	200	37.2
<b>Adams County Census Tract 89.01</b>			
Block Group 1	224	48	21.4
Block Group 2	490	175	35.7
<b>Adams County Census Tract 90.02</b>			
Block Group 4	469	187	39.8
<b>Adams County Census Tract 93.07</b>			
Block Group 1	743	231	31.0
Block Group 2	445	108	24.2
<b>Adams County Census Tract 93.08</b>			
Block Group 1	307	103	33.5
Block Group 2	252	77	30.5
<b>Adams County Census Tract 95.53</b>			
Block Group 1	676	244	36.0
Block Group 2	547	241	44.0
<b>Adams County Census Tract 150</b>			
Block Group 1	685	281	41.0
Block Group 2	485	192	39.5
<b>Denver County Census Tract 35</b>			
Block Group 2	490	232	47.3
Block Group 3	404	156	38.6
<b>Denver County Census Tract 41.01</b>			
Block Group 1	1,054	488	46.2
<b>Denver County Census Tract 41.02</b>			
Block Group 1	414	194	46.8
<b>Denver County Census Tract 41.06</b>			
Block Group 1	3,863	718	18.5
<b>Denver County Census Tract 41.07</b>			
Block Group 1	5,158	1,475	28.5

Source: U.S. Census Bureau 2018

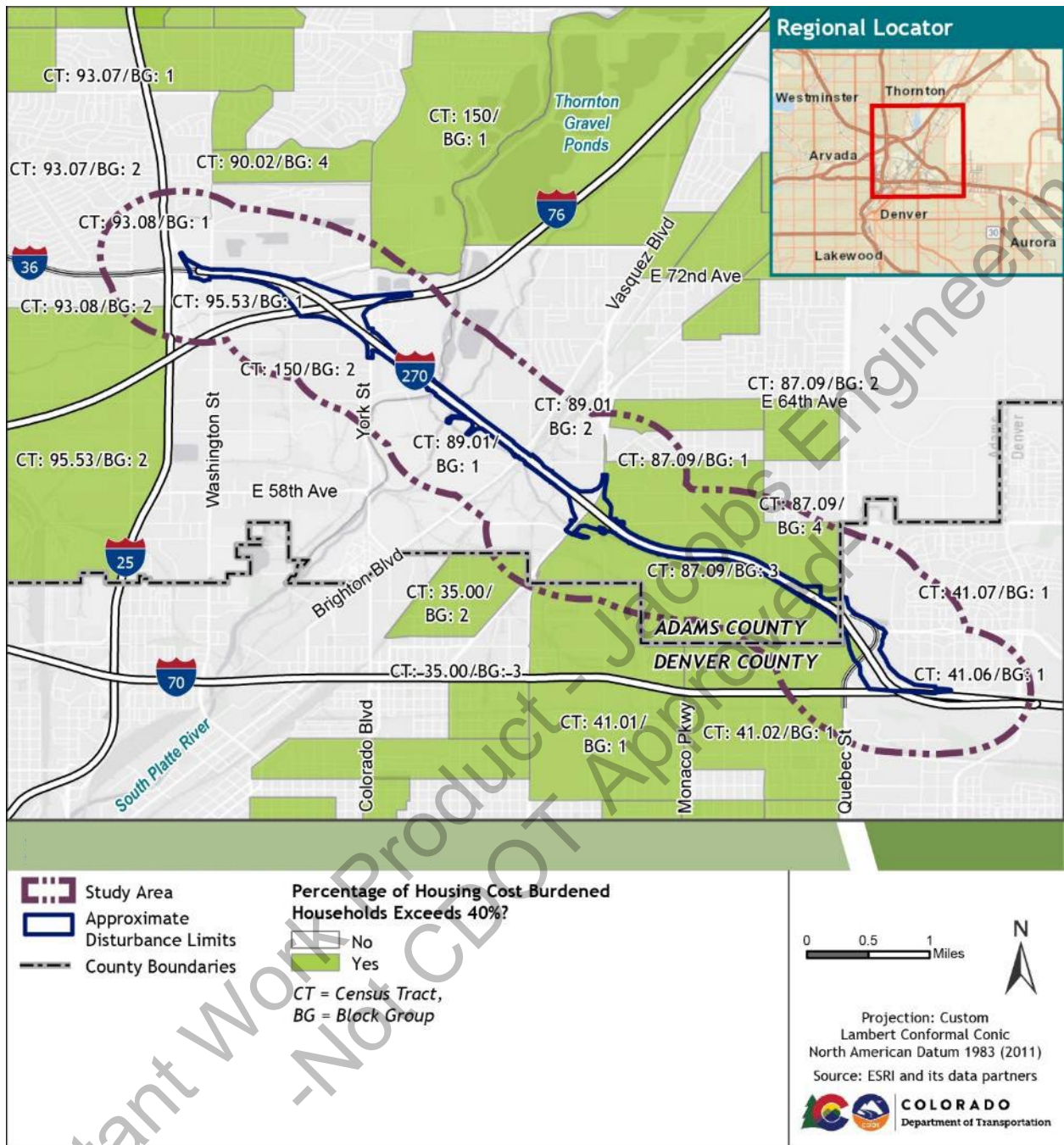
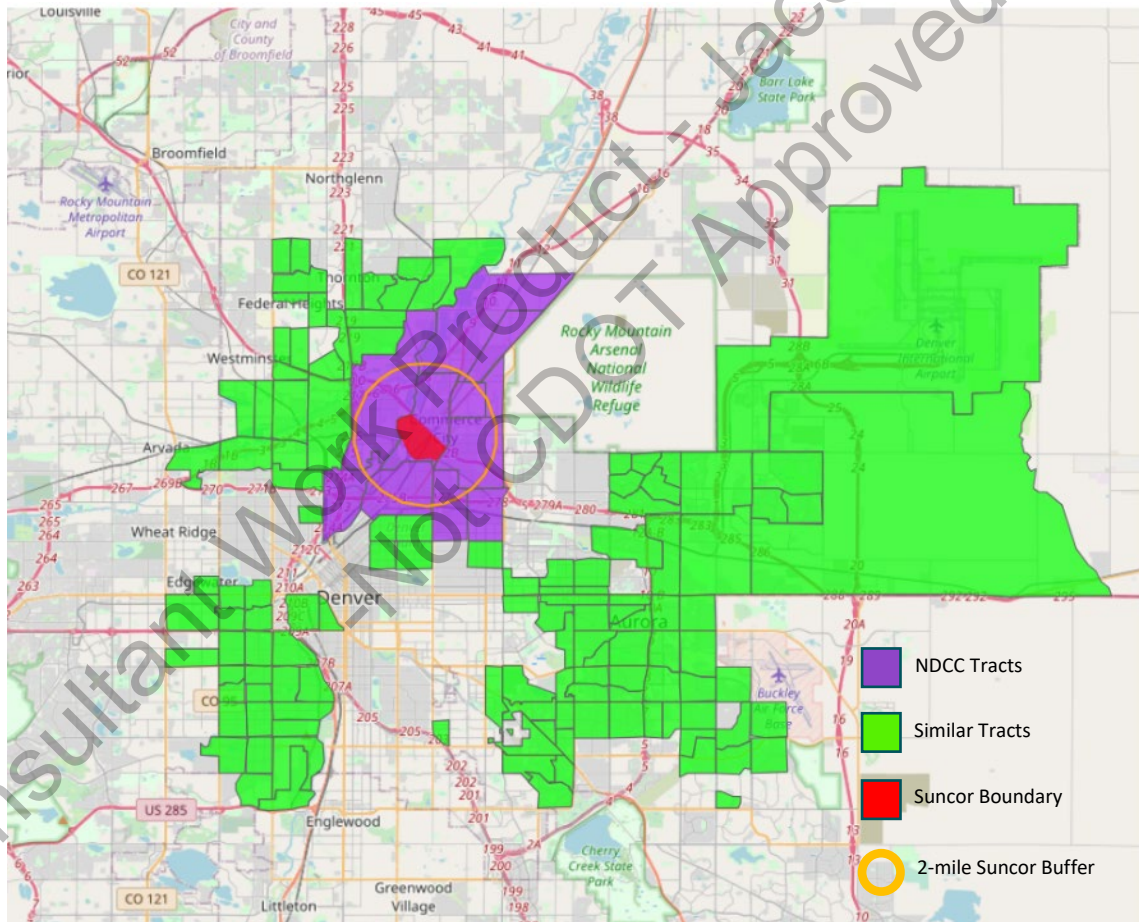


Figure 27. Cost-burdened Households

### Health Concerns

Unrelated to the I-270 Improvements Project, CDPHE conducted a health assessment of the NDCC area that serves to inform baseline health conditions in the study area. In 2020, CDPHE released an initial air quality health assessment of the NDCC area, which comprises census tracts within a 2-mile buffer of the Suncor refinery and also encompasses the study area for this project (CDPHE 2020). The air quality health assessment evaluated exposures of diesel, ozone, and PM<sub>2.5</sub> in the NDCC area and compared them with similar tracts (Figure 28). The Suncor refinery is located in the heart of the I-270 corridor, immediately adjacent to the interstate, and has a history of air quality violations. In March 2020, Colorado's Air Pollution Control Division settled 10 enforcement actions for numerous air quality violations reported since 2011. In August 2020, real-time air quality monitoring of the NDCC area became available to the public and can be accessed at <https://www.ccnd-air.com/>. The settlement addresses multiple events when Suncor emitted pollutants over established limits, as well as violations relating to facilities operations and monitoring requirements. These events began July 2017, and included "a significant increase in violations that occurred during the period from January through June 2019," according to Adams County (2021). The settlement also includes penalties for an "operational upset" and other violations that happened in December 2019. Of the total amount of the settlement, \$2,624,100 will be used for the state's Supplemental Environmental Projects to benefit the surrounding communities (Adams County 2021).

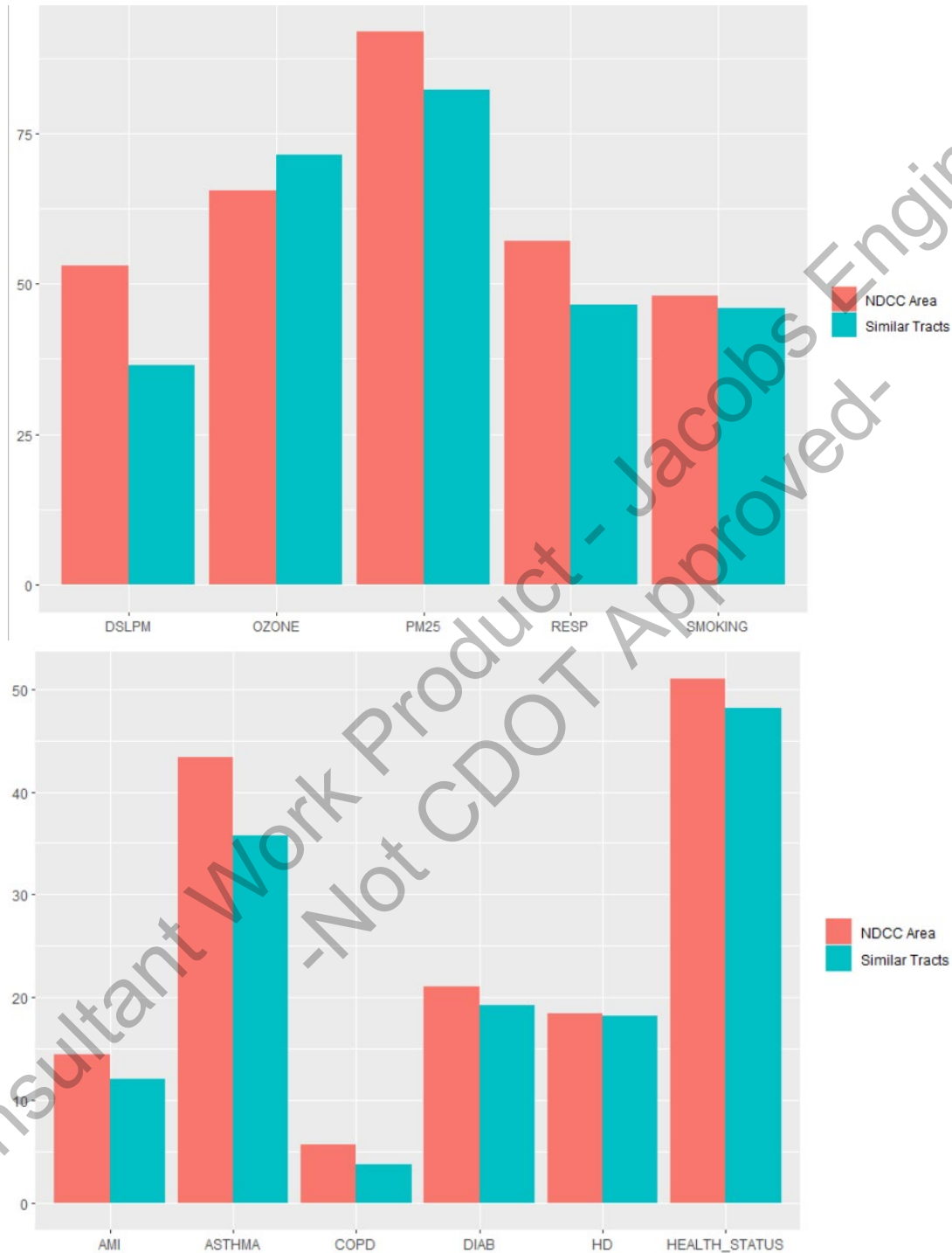


**Figure 28. North Denver and Commerce City Analysis Area**

Source: CDPHE 2020



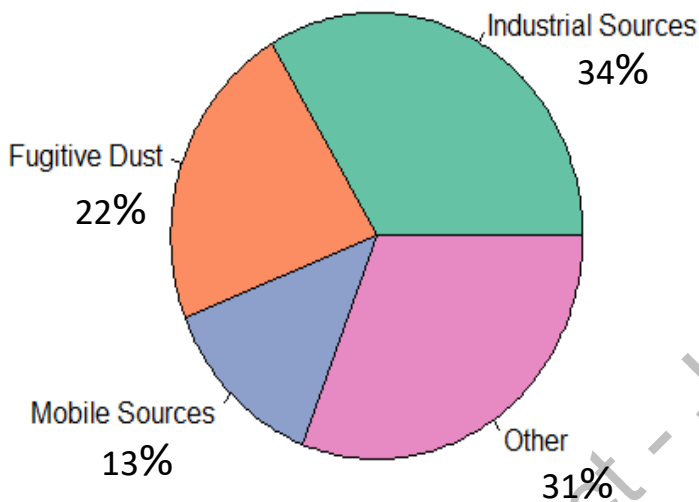
CDPHE’s study has identified that air pollution exposures in the NDCC area are high compared with other areas. PM<sub>2.5</sub> and traffic-related air pollution (TRAP) are some of the highest in the state. As shown on Figure 29, the resulting health burden consequences include notably high asthma, chronic obstructive pulmonary disease (COPD), and heart attack hospitalizations, and higher asthma, diabetes, heart disease, and obesity prevalence (CDPHE 2020).



**Figure 29. NDCC Air Pollution Exposures**

Source: CDPHE 2020

Air pollutants are thought to cause oxidative injury to the airways and immune system changes that lead to inflammation (Guarnieri and Balmes 2014). Strong evidence exists for short-term ozone, nitrogen dioxide, sulfur dioxide, PM<sub>2.5</sub>, and TRAP exposure linked to asthma and COPD symptoms. In addition, there is increasing evidence for a link between long-term exposure and new-onset asthma and COPD (especially particulate matter and TRAP). PM<sub>2.5</sub> is generally found to have a larger effect on asthma symptoms than PM<sub>10</sub>, likely due to its ability to penetrate farther into the lungs (CDPHE 2020). As shown on Figure 30, mobile sources—including cars and trucks—are the minority contributor to PM<sub>2.5</sub> in the NDCC area by percentage, with the primary source being industry.

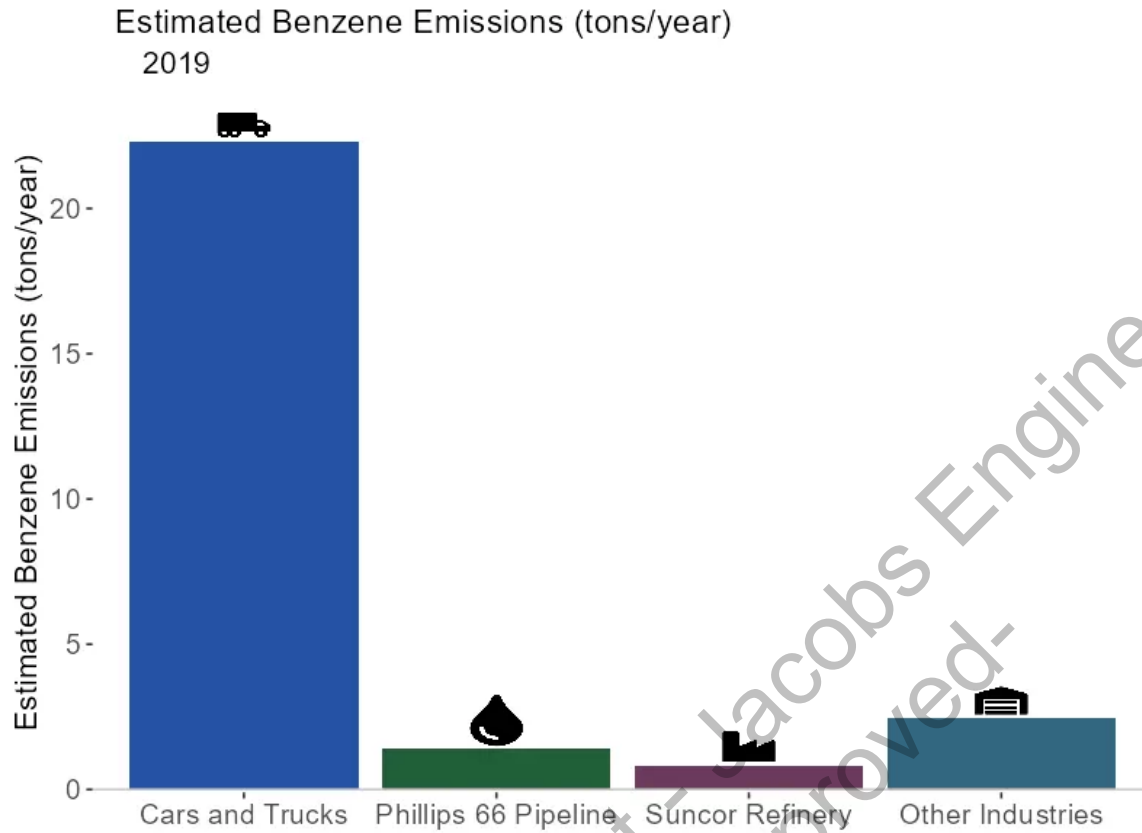


**Figure 30. Primary PM<sub>2.5</sub> Sources**

Source: CDPHE 2020 and National Emissions Inventory Collaborative 2019

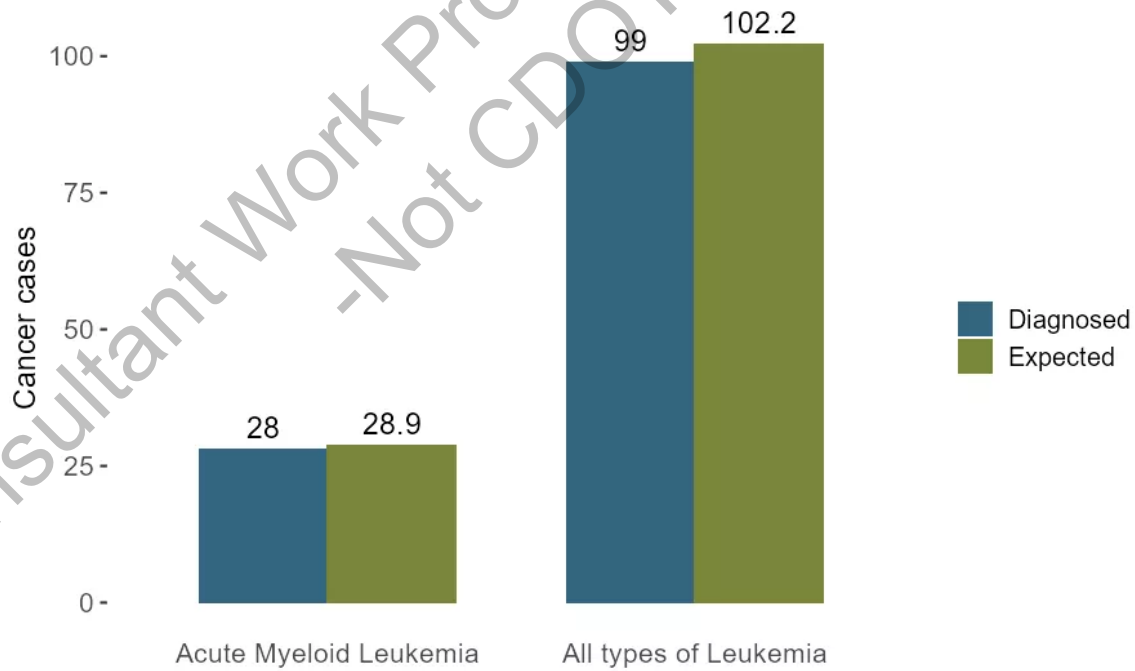
CDPHE continues to monitor the NDCC area and update air quality findings on its website (<https://coepht.colorado.gov/ccnd>). According to CDPHE, “Children in [the NDCC] area are at high risk for lead poisoning. Over time, the percentage of children with elevated blood lead levels has gone down.” Although the area has been found to have “higher fine particle pollution and more serious respiratory problems than the rest of the state” (CDPHE 2022).

The CDPHE study also included an analysis of benzene emissions. Unlike PM<sub>2.5</sub>, the primary contributor to benzene emissions are cars and trucks (Figure 31). According to CDPHE (2022), “Benzene exposure over long periods can cause anemia and leukemia. Short exposures to higher benzene levels can lead to headaches, dizziness, breathing issues, irritated skin, and irritated eyes.” Although cars and trucks are the source of the majority of benzene emissions in the NDCC area, “the levels of benzene and hydrogen cyanide that have been measured or estimated to be in the air are not expected to cause harmful health impacts” (CDPHE 2022). In addition, as shown on Figure 32, CDPHE compared diagnosed cancer cases in the NDCC area with the number of expected cases based on the statewide rates and found “The [NDCC] area had slightly fewer diagnosed cases of cancer than were expected” (CDPHE 2022).



**Figure 31. Estimated Benzene Emissions in Tons/Year**

Source: CDPHE 2022



**Figure 32. Diagnosed versus Expected Cancer Case Counts in the NDCC Area**

All genders, all races/ethnicities, 2000 to 2018

Source: CDPHE 2020 and National Emissions Inventory Collaborative 2019

In addition to benzene and the air quality pollutants discussed previously, “CDPHE has collected air samples and used computer models to figure out how much hydrogen cyanide is in the air in this area.” According to CDPHE, “breathing in high levels of hydrogen cyanide for long periods of time can harm health. It can cause breathing difficulties, chest pain, vomiting, and more. Breathing in very high levels for short periods can harm the brain and heart and can cause coma and death.” However, “the levels [recorded in the NDCC area] are not expected to harm people’s health. [CDPHE] will keep gathering information about how much hydrogen cyanide is in the air around Suncor” (CDPHE 2022).

## 6.0 Summary of Community Outreach

Public involvement strategies employed corridor-wide outreach methods aimed at I-270 users and those who live and work near the corridor, as well as more focused outreach efforts for special-interest groups and traditionally underserved members of the community; additional information to that provided here can be found in the outreach and stakeholder participation section of the EA. Virtual methods were used during a portion of this outreach to eliminate interpersonal contact during the COVID-19 pandemic that occurred during the study. In-person meetings and a bus tour were performed in the spring of 2022. Early in the study, the study team interviewed organizations to establish relationships with trusted members of the community and confirm the best outreach methods for traditionally underserved members of the community. These community organizations and nonprofits included Assumption of the Blessed Virgin Mary Catholic Church, Friendly Baptist Church, Kids First Health Care, Cultivando, and Mapleton Public Schools.

Based on input from these groups, the study team took the following steps to engage with traditionally underserved members of the community:

- All communications, the project website, and the virtual public event platform were produced in English and Spanish.
- To address concerns about lack of internet access, the study team mailed printed postcards and posted flyers and posters at local churches, convenience stores, and other locations.
- Cultivando, a community nonprofit organization, helped convene a community focus group that met with the study team to learn about the project and provide feedback.
- Project articles were included in the *Commerce City Connected* newsletter.
- Targeted digital display advertisements ran on Noticias Ya television, and paid Facebook posts were promoted for zip codes surrounding the study area.
- An I-270 corridor bus tour with community leaders was conducted to hear concerns about environmental health and community connectivity.
- One-on-one meetings were held with local community leaders and activists.

The study team provided information via email and phone conversations, as well as virtual meetings and discussions, to local community organizations, schools, churches, and other groups in the study area.

During an online meeting on October 7, 2020, with Cultivando, a “leadership, advocacy and capacity-building” nonprofit organization in Commerce City (Cultivando n.d.), attendees discussed their experience with I-270. Attendees mentioned congestion at Quebec Street, avoiding I-270 on weekends, traffic on York Street and Vasquez Boulevard (noted as particularly dangerous), unexpected road closures, and high traffic speeds (CIG 2020). The study team remained in contact with Cultivando through the remainder of the NEPA process. In addition, the study team held meetings with Mapleton Public Schools, local churches, and Kids First Health Care to connect with trusted organizations in the community who could help facilitate community outreach and engagement. Meetings were also held with the U.S. Census Bureau coordinator for Adams County to identify outreach potential based on census outreach that Adams County had recently conducted. As a result of these efforts, the team

established local contacts and identified a list of outreach methods aimed at disseminating project information to traditionally underserved populations in the study area and encouraging participation. Such methods included placing articles in the November 2020 issue of *Commerce City Connected*, which was noted by Cultivando as being well-read by the community, and releasing project information in Spanish.

Many of the community concerns centered on the poor bicycle and pedestrian connectivity in the I-270 corridor. The Proposed Action includes numerous bicycle and pedestrian improvements to improve connectivity north and south of I-270 to eliminate pedestrian/traffic conflicts. Some of these include widening sidewalks along Vasquez Boulevard from 4 feet to 10 feet, providing grade-separated bicycle and pedestrian crossings under I-270 and the on-/off-ramps, and improving access from the south side of I-270 to the Walmart and other destinations north of the highway. Sand Creek Trail connectivity would also be improved via two new connections. A 10-foot-wide sidewalk is also planned along the west side of East 56<sup>th</sup> Avenue as it crosses under I-270 to tie into the existing sidewalk along the west side of Eudora Street, providing an additional north-south connection. The study team has also coordinated with Commerce City on the City's plans to complete the missing sidewalk connection along the south side of East 56<sup>th</sup> Avenue (under a separate city project), which could be used as a temporary bicycle/pedestrian detour to maintain connectivity during construction of the Proposed Action.

Direct outreach with community members also included a site walk conducted in March 2022. The issues identified concentrated on the lack of pedestrian connectivity to Adams County High School and health concerns. Although the connectivity concerns identified are north of the project limits, CDOT noted the community concerns for consideration in future projects. Section 13 of the EA provides details on the comprehensive outreach activities conducted throughout the project.

The Proposed Action design was refined based on stakeholder input. Modifications include refining the ramp geometry at I-270/Vasquez Boulevard to better accommodate truck movements, improving landscaping to enhance visual quality, adding signage to reduce driver connection, and adding bicycle and pedestrian connections, and others.

Public comments received for this project related to EJ include opposition to tolled express lanes that “benefit . . . just those that can afford to pay tolls” and “do not benefit the community locally,” ignoring social justice and gentrification issues, and the health of the community due to poor air quality. Community members also expressed concerns about the effects of past and current land used on community health and the quality of life.

## 6.1 Impacts Assessment

### 6.1.1 No Action Alternative

Current congestion, travel delay, and safety issues adversely impact the minority and low-income populations in the study area, which includes considerably high Hispanic and low-income populations. The No Action Alternative fails to address community concerns over pedestrian safety and access, including the absence of on-street bicycle lanes and poor sidewalk connectivity, specifically in the areas described in Section **Error! Reference source not found.** Cut-through traffic on the corridor's arterial and local roadway network would worsen as the interstate becomes more congested, exacerbating conflicts among vehicles, bicyclists, and pedestrians. Related adverse effects to community cohesion, economics, and access to public facilities and services, as described within this report, would also continue or increase. Specific effects to EJ and DI communities under the No Action Alternative are also described as follows in comparison to Proposed Action effects.

### 6.1.2 Proposed Action

Construction and operation of the project would result in temporary and permanent adverse impacts to the EJ and DI communities in the I-270 corridor; however, these same areas would also experience

offsetting permanent, beneficial impacts from the project. With the exception of census tracts 41.06 and 41.07, which represent a minor portion of the corridor (Figure 25 and Figure 26), the remaining block groups in the study area have been identified as EJ or DI. Therefore, given the makeup of the I-270 corridor as composed of predominantly low-income, minority, and/or housing cost-burdened populations, temporary and permanent adverse impacts would be *predominantly borne* by EJ or DI communities. Potential impacts to these communities heavily overlap with impacts discussed in the socioeconomic impact section of this report (Section 4.4.2) but are assessed as follows through the lens of identifying any potentially disproportionately high and adverse impacts. In considering whether a disproportionately high and adverse impact is predominantly borne by minority and/or low-income populations, and consistent with the Council on Environmental Quality (CEQ) *Environmental Justice Guidance Under the National Environmental Policy Act* (CEQ 1997), this analysis considers the following:

- Whether health effects are substantial or above generally accepted norms. Adverse health effects may include bodily impairment, infirmity, illness, or death.
- Whether there is or will be an impact on the natural or physical environment with substantial and adverse impacts
- Whether the risk or rate of exposure to health hazards or environmental effects is substantial and appreciably exceeds or is likely to exceed the risk or rate to the general population or other appropriate comparison group
- Whether health or environmental effects occur in an EJ population affected by cumulative or multiple adverse exposures from environmental and health hazards

To address adverse impacts to EJ communities, FHWA Order 6640.23A states that impacts to minority and low-income populations can be addressed by “proposing offsetting benefits and opportunities to enhance communities, neighborhoods, and individuals affected by FHWA programs, policies, and activities.” The following sections summarize the adverse impacts to EJ populations based on impact categories described in CEQ EJ guidance for NEPA (1997), considering offsetting benefits and the mitigation measures discussed in Section 6.1.

### ***Bicycles and Pedestrians***

The traffic analysis for the project indicates that the Proposed Action would reduce traffic on the arterial roadways in the I-270 corridor in comparison to the No Action Alternative (Appendix A7 of the EA). Reduced arterial traffic may reduce the number of vehicle accidents in the surrounding community. Similarly, a reduction in arterial road traffic is expected to improve the safety of pedestrians and bicyclists by reducing vehicle conflicts. The improvements included in the Proposed Action would further improve safety for bicyclists and pedestrians by providing safe access routes across I-270 via new sidewalks and trails that would not exist under the No Action Alternative.

### ***Air Quality***

The ongoing air quality monitoring and health data assessments generated from the CDPHE study and described in Section 5.4 indicate higher rates of some illnesses compared with surrounding areas and statewide averages. In the NDCC area, industrial sources are a major contributor to the high levels of PM<sub>2.5</sub> emissions, whereas mobile sources, including I-270, are a minor contributor to PM<sub>2.5</sub> emissions.

The vehicle miles traveled (VMT) estimated for the Proposed Action are higher than that for the No Action Alternative because the project would add new travel lanes that attract additional trips that would not otherwise occur in the study area. Although there is an increase in VMT, criteria pollutants and mobile source air toxics (MSATs) under the Proposed Action would be lower than the No Action Alternative in the study area, except for PM emissions where approximately 75 to 80 percent are attributed to re-entrained road dust. Total greenhouse gases (GHGs) or carbon dioxide would be slightly higher under the Proposed Action compared with the No Action Alternative. However, methane and

nitrogen oxide would be slightly lower under the Proposed Action compared with the No Action Alternative. Further decreases in criteria pollutants, MSAT, and GHG emissions in the study area are likely due to emissions reductions from reduced congestion and increased vehicle speeds. MSAT emissions would be lower in other locations when traffic shifts from existing roadways to the improved I-270. In addition, the additional carbon monoxide and PM dispersion modeling conducted for the air quality analysis concluded the I-270 Corridor Improvements would not cause or contribute to new violations of the NAAQS.

Because of the link between MSAT emissions and immune system inflammation, asthma, and COPD symptoms (that is, bodily impairment and illness), it is reasonable to assume that the Proposed Action would have less impact on the health of the surrounding community than the No Action Alternative. Benzene concentrations, which are primarily associated with vehicle operations, that have been measured or estimated to be in the air are not expected to cause harmful health impacts in the NDCC area (CDPHE 2022). Therefore, the Proposed Action (1) is not anticipated to result in a disproportionately high or adverse impact to bodily impairment, infirmity, illness, or death when compared with the No Action Alternative, (2) is not anticipated to have a substantial adverse impact on the natural or physical environment, and (3) would not result in environmental effects that are substantial and appreciably exceed or are likely to exceed the risk or rate to the general population or other appropriate comparison group when compared with the No Action Alternative. Impacts to EJ and DI communities from cumulative or multiple adverse exposures from environmental and health hazards are discussed in the *Cumulative Resources Technical Memorandum* in Appendix A16 of the EA.

#### **Noise, Water Pollution, and Soil Contamination**

The Proposed Action would increase noise levels to sensitive receptors adjacent to I-270, which include single-family residences and recreational areas. As described in the *Traffic Noise Technical Report* (Appendix A5 of the EA), receptors would experience an increase in noise levels ranging from approximately 0.2 to 4.6 decibels (which is just perceptible to the human ear) due to the increased number of vehicles the Proposed Action accommodates. Using CDOT's noise policy, noise impacts were identified, but noise abatement was determined to not meet the feasible and reasonable criteria. Although noise impacts would be predominantly borne by EJ communities, noise impacts are not substantial and would not appreciably exceed noise level increases for non-EJ communities in the study area; therefore, noise impacts would not be disproportionately high.

Water pollution would decrease in comparison to the No Action Alternative because water quality treatment is being provided through new water quality ponds, and the number of outfalls to Sand Creek would be reduced (refer to the *Water Quality Technical Report* in Appendix A10 of the EA). Also, any contaminated groundwater encountered in dewatering operations would be treated on site or transported off site.

Under the Proposed Action, areas of contaminated soil encountered during construction would be excavated and backfilled with clean fill, representing a minor benefit compared with the No Action Alternative. Although Sand Creek, the South Platte River, and Clear Creek are not believed to be important fishing or recreation destinations for the I-270 communities, water is a scarce resource in the western U.S. and improving its quality is a benefit to everyone, including the EJ and DI communities in the I-270 corridor.

#### **Destruction or Disruption of Human-made or Natural Resources**

The evaluation of biological resources included potential impacts to general wildlife species, as well as migratory birds, Colorado special status species, and federally listed threatened and endangered species (refer to the *Biological Resources Report* [Appendix A12 of the EA] for the full analysis). The biological resources in the corridor are concentrated along the three major streams in the corridor: Sand Creek, South Platte River, and Clear Creek. The analysis found that because the Proposed Action would mostly

be constructed within the existing CDOT ROW, which has already been highly disturbed, 95 percent of disturbance from construction and operation of the Proposed Action would occur on barren lands that do not support wildlife. Similarly, impacts to riparian habitats would be limited and, in general, few shrubs or trees would be removed that provide nesting substrate or cover to a variety of migratory birds. Where impacts to biological resources are anticipated, they are related to where these streams intersect or closely parallel the project.

Based on the conceptual design, the Proposed Action would permanently impact approximately 2.8 acres of wetlands, whereas temporary impacts are anticipated to be approximately 0.5 acre. Most of these impacts would occur to roadside ditches and features that do not fall under Clean Water Act jurisdiction and exhibit low wetland functional values.

Adverse impacts to natural resources would occur along the I-270 corridor and therefore would be predominantly borne by EJ communities—to the extent that EJ communities experience and benefit from these resources. However, these impacts would be mitigated in accordance with state and federal permitting requirements and CDOT protocols. Proposed mitigation would restore or enhance degraded wetland and riparian areas adjacent to Sand Creek, thereby improving water quality and habitat. Vegetation disturbed during construction would be re-established in accordance with state requirements and CDOT policy. Potential impacts to migratory birds and terrestrial wildlife will be avoided and minimized in further design and compensatory mitigation provided where needed.

Compared with the No Action Alternative, improved connectivity with the Sand Creek Trail at the Dahlia trailhead would benefit recreational users and improve connectivity from the Sand Creek Trail to the Eagle Pointe Recreation Center and Walmart at the Vasquez Boulevard/60<sup>th</sup> Avenue intersection.

#### ***Destruction or Disruption of Community Cohesion or a Community's Economic Vitality***

In assessing effects to community cohesion, understanding past effects and disruption to communities can shed light on current or proposed actions. As detailed in Section 4.3.1 and the Mead & Hunt study (2021), construction of I-270 started in the mid-1960s and extended to the early 1970s. West of the South Platte River, I-270 construction of I-270 resulted in the displacement of several small agricultural properties along York Street, but did not result in a large-scale displacement of residences or businesses, or community bifurcation. East of the South Platte River, Sand Creek was the southern border of residential development in Commerce City, a characteristic that remains true today. By closely following Sand Creek east of the South Platte River, I-270 was able to avoid displacing residences from the South Rose Hill neighborhood (formerly known as the Tiffany neighborhood). Based on the available literature and historical research performed as part of this analysis, there is no indication that the construction of I-270 had more than a negligible impact on community cohesion and neighborhoods, or that operation of the interstate over the past half-century has constituted a formidable physical barrier to community cohesion.

The Proposed Action would address several specific issues and policies identified in local plans related to community cohesion and neighborhoods, such as improving traffic and transportation connections, drainage issues, infrastructure and roadways, and bicycle and pedestrian connectivity across I-270 (Section 2.3.3). Because the communities in the I-270 corridor have been identified as low-income, minority, or housing cost-burdened, addressing these issues would benefit the corridor's EJ and DI communities. The community facilities and destinations, particularly along Vasquez Boulevard with the Eagle Pointe Recreation Center and Walmart with an RTD bus stop in the parking lot, would be more accessible to bicyclists and pedestrians because of the trail and sidewalk improvements that would be constructed as part of the Proposed Action. The Vasquez Boulevard improvements would create a new local-to-regional connection between Commerce City and the Sand Creek Trail. Furthermore, the proposed York Street widening associated with the Proposed Action would fill a gap in multimodal connectivity from 58<sup>th</sup> Avenue to 88<sup>th</sup> Avenue. Providing connections at existing segments of missing sidewalk on 56<sup>th</sup> Avenue would create a continuous bicycle and pedestrian connection between 56<sup>th</sup>



Avenue and the Sand Creek Greenway. Collectively, the multimodal improvements at York Street, Vasquez Boulevard, and 56<sup>th</sup> Avenue would improve the cohesion of the corridor by improving the ability to move to and from community destinations and therefore benefit low-income, minority, and housing cost-burdened populations in the corridor (*Multimodal Technical Report* [Appendix A9 of the EA]).

The economic vitality of the I-270 corridor communities would not be destroyed or disrupted by the Proposed Action. Conversely, the Proposed Action supports the economic vitality along the corridor by improving traffic flow and travel times, which in turn benefits travel to and from businesses. This is particularly important given the high concentration of freight operations in the corridor and the transportation and land use goals in the Commerce City Comprehensive Plan (2010a), which include establishing a transportation system that supports freight movement and retains the industrial land use adjacent to I-270.

The Proposed Action would not create any disruption to the economic vitality of the I-270 corridor, which largely is based on the same types of industrial land uses that have catalyzed development in the corridor since the 1930s. Temporary out-of-direction detours may be needed during construction, but would be communicated with the community beforehand and minimized through traffic control measures (for example, using overnight hours for ramp closures). Also, lane closures and other techniques to manage traffic during construction could increase travel times to the traveling public, including EJ travelers.

#### ***Vibration***

Vibration impacts from pile driving required at bridge replacements would not likely affect EJ or DI communities because of the distances from the bridges to residents.

#### ***Adverse Employment Effects***

The Proposed Action would not result in the relocation of any businesses or access elimination and would not result in the loss of employment for any individuals. Increased mobility and access to retail and commercial areas north of I-270 would be improved and support the economic health of corridor businesses. A workforce development program implemented by CDOT and the construction contractor would improve employment opportunities to the surrounding communities. Therefore, the Proposed Action would benefit the corridor's employment characteristics compared with the No Action Alternative.

#### ***Displacement of Persons***

The Proposed Action would not result in the displacement of any persons because no residences or businesses would be displaced.

#### ***Increased Traffic Congestion, Isolation, Exclusion, or Separation of Minority, Low-income, or Housing Cost-burdened Individuals within a Given Community or from the Broader Community***

Traffic congestion on I-270 and the corridor arterials would be reduced with the Proposed Action. No neighborhoods extend across I-270 and therefore the additional lanes would not create a new community barrier or increase the presence of an existing barrier. As demonstrated in the origins and destinations analysis, a substantial number of trips on I-270 originate from the low-income, minority, and housing cost-burdened block groups in the study area. Therefore, reducing congestions and improving traffic operations on I-270 directly benefits these EJ and DI communities.

Improved crossings for pedestrians would make crossing I-270 at York Street, Vasquez Boulevard, and 56<sup>th</sup> Avenue more convenient and safer. Better facilities for pedestrians and bicycles would improve multimodal connections to destinations within the study area, particularly the grocery store, retail facilities, and Eagle Pointe Recreation Center. The Proposed Action would improve congestion and

connectivity when compared with existing conditions and the No Action Alternative. These benefits are shared by all users of I-270 and the corridor arterials, which are used most by the EJ and DI communities closest to the interstate.

***The Denial of, Reduction in, or Significant Delay in the Receipt of Benefits of FHWA/USDOT Programs, Policies, or Activities***

The receipt of beneficial FHWA/USDOT programs, policies, or activities would not be adversely affected. The Proposed Action would result in a considerable investment of federal transportation funds into the I-270 corridor.

***Economic Hardship due to the Disproportionate Economic Burden of Tolls***

Tolling raises EJ concerns because it relates to equity impacts. Per FHWA's *Environmental Justice Emerging Trends and Best Practices Guidebook* (FHWA 2011), consideration of equity issues—such as who bears the burden of road pricing charges, who benefits from the improved road, and how the toll revenues are used—is critical in calculating the road pricing to ensure that low-income populations are considered. Four principles are considered when implementing an operational strategy on a transportation facility (such as a highway) in relation to EJ. As explained in the FHWA guidebook, these principles relate to the following questions:

- Who from all sectors of the economy can use the facility?
- Will there be additional physical impacts in low-income and minority neighborhoods with implementation of this operational strategy?
- What kind of impact will this operational strategy have on those who do not have a personal vehicle but instead bike, walk, or use transit?
- How has the public been involved in the decision-making for this strategy?

Congestion is one of the primary issues that the project is seeking to address. The I-270 corridor is currently operating at or near capacity, and drivers experience substantial travel delays during the peak travel periods of 7:00 to 9:00 a.m. and 4:00 to 7:00 p.m. Traveling at the posted speed limit of 55 miles per hour, it takes roughly 6 minutes to travel the I-270 corridor from end to end. During peak travel periods in the a.m., average travel times on I-270 are currently between 15.5 and 20.2 minutes in the eastbound direction, and between 13.8 and 14.3 minutes in the westbound direction—with average vehicle speeds ranging from 20 to 28 miles per hour. Traffic projections for the year 2040 indicate longer periods of congestion, longer traffic queue lengths, reduced vehicle speeds, and increased travel times compared with existing conditions. The 2040 traffic modeling for the Proposed Action identifies that the average end-to-end corridor travel time is between 7.6 and 7.7 minutes when traveling in the express lane, compared with 18 to 20.7 minutes with the No Action Alternative (refer to the *Traffic Technical Report* in Appendix A7 of the EA). During times of congestion, the express lane would offer a congestion-free lane for those who need a reliable travel time to reach their destination. The addition of the express lane operating option would reduce peak travel time for all users, including those interstate users who choose to not use the express lane.

CDOT recognizes that tolls can represent a disproportionate financial burden to low-income individuals. Although any toll price is higher relative to income for low-income users, tolls are not expected to be cost prohibitive and would not exclude these populations from receiving the benefits associated with improved travel times throughout the corridor. However, to help offset the potential equity impacts and the higher financial burden of express lanes to the EJ communities in the study area, CDOT would establish a program to reduce or eliminate fares for lower-income residents of the community.

The tolled express lane would provide an additional choice for travelers when a faster, more reliable trip is necessary. In addition, residents (mostly minority, low-income, and housing cost-burdened

populations) would benefit from the reduction in traffic volumes on arterial roads. These improvements would also benefit emergency response times.

Express lanes would have an operational benefit for individuals and families who do not have access to a vehicle because buses would be able to use the express lane. Although there are no local RTD routes that currently use I-270, transit users of the regional Flatiron Flyer service through RTD—which does use I-270—would experience a direct benefit through improved travel time and reliability. Queue jumps at the I-270/Vasquez Boulevard interchange could benefit future RTD service if a local route is developed that uses I-270.

Two public events have been held that offered the opportunity for residents to provide their input on the Proposed Action and operation of the additional lane as an express lane. Of the approximately 260 comments received at the first public meeting, only a minor portion (6 percent) of the comments pertained to the express lane operating option and included comments both for and against. A total of 226 comments were received at the second public meeting, with 12 percent pertaining to the express lane. Comments were received at the second meeting both for and against the express lane operating option, with the majority being against the idea of tolling.

Table 14 summarizes the adverse impacts to EJ populations, considering offsetting benefits and the mitigation measures.

**Table 14. Summary of Impacts**

Does the Proposed Action Include These Adverse Effects?	Direct Adverse Impact	If an Adverse Impact Would Occur, Is It High?
Bodily impairment, infirmity, illness, or death	There is a greater potential for bodily impairment or death with the No Action Alternative because of the higher potential for vehicular or pedestrian crashes on both I-270 and the arterial roadway network, as well as increased diesel and TRAP emissions compared with the Proposed Action.	No
Air, noise, and water pollution and soil contamination	Diesel and TRAP emissions would be less than the No Action Alternative because of reduced congestion and improved safety. The Proposed Action would increase noise levels, but the increase would be just perceptible. Water pollution would decrease in comparison to the No Action Alternative because of water quality treatment and reduction in the number of outfalls to Sand Creek. Contaminated soils excavated during construction would be replaced with clean fill material.	No
Destruction or disruption of human-made or natural resources	The Proposed Action would result in impacts to wetlands and vegetation along Clear Creek and the South Platte River; however, impacts would be mitigated in accordance with CDOT and Clean Water Act permitting requirements. Human-made resources in the corridor, such as the Eagle Pointe Recreation Center and Walmart, would benefit with improved bicycle and pedestrian connectivity via new sidewalks and trails.	No
Destruction or disruption of community cohesion or a community's economic vitality	The Proposed Action would improve community connectivity by constructing new sidewalks and trails that would improve bicycle and pedestrian access to community resources in the I-270 corridor. Improved traffic flow on I-270 and the arterial roads supports efficient freight movement and travel to area businesses, which directly supports the corridor's economic vitality. Construction detours may result in minor, temporary delays in accessing community resources or businesses, but would be mitigated through traffic control and limiting closures to overnight hours.	No
Vibration	No vibration impacts are anticipated to any EJ or DI communities.	N/A

**Table 14. Summary of Impacts**

Does the Proposed Action Include These Adverse Effects?	Direct Adverse Impact	If an Adverse Impact Would Occur, Is It High?
Adverse employment effects	No. The Proposed Action would not result in the relocation of any businesses, eliminate any business access, or result in adverse employment benefits. Compared with the No Action Alternative, the Proposed Action would increase access to retail and commercial areas north of I-270, thereby supporting the economic health of the corridor. A workforce development program implemented by CDOT and the contractor would create new employment opportunities in the communities adjacent to I-270.	N/A
Displacement of persons	No. The Proposed Action would not require any residential displacements resulting in the displacement of persons.	N/A
Increased traffic congestion, isolation, exclusion, or separation of minority or low-income individuals within a given community or from the broader community	No. Traffic congestion would be reduced with the Proposed Action. No neighborhoods extend across I-270 (which has remained the condition since before the interstate was constructed in the 1970s), and therefore the additional lanes would not create a new community barrier or increase the presence of an existing barrier. As frequent users of I-270, reduced congestion directly benefits EJ and DI communities. Improved crossings for pedestrians would make crossing I-270 at York Street, Vasquez Boulevard, and 56 <sup>th</sup> Avenue more convenient, easier, and safer. Better facilities for pedestrians and bicycles would improve multimodal connections to destinations within the study area, particularly the grocery store, retail facilities, and Eagle Pointe Recreation Center.	N/A
The denial of, reduction in, or significant delay in the receipt of benefits of FHWA/USDOT programs, policies, or activities	No. The receipt of beneficial FHWA/USDOT programs, policies, or activities would not be adversely affected. The Proposed Action would result in a considerable investment of federal transportation funds in the study area.	N/A
Economic hardship due to the disproportionate economic burden of tolls	CDOT recognizes that tolls represent a disproportionate financial cost to low-income individuals. Although any toll price is higher relative to income for low-income users, tolls are not expected to be cost prohibitive and would not exclude these populations from receiving the benefits associated with improved travel times throughout the corridor, including the general purpose lanes. The tolled express lane would provide an additional choice for travelers when a faster, more reliable trip is necessary. To help mitigate the equity impacts and the financial burden of using tolled express lanes, CDOT will establish a program to reduce or eliminate fares for lower-income residents of the community.	No

N/A = not applicable  
 USDOT = U.S. Department of Transportation

**Construction**

Construction of the Proposed Action would extend for several years, so the ambient noise from construction could be a concern among the residents around the construction zone, specifically in the Tiffany neighborhood (Figure 5), former Larusso area (Figure 11), and Rose Hill neighborhood immediately (Figure 13) adjacent to I-270. As detailed in the *Traffic Noise Technical Report* (Appendix A5 of the EA), best management practices would be implemented during construction to minimize noise impacts. Construction would also comply with the Colorado Noise Statute (CRS 25-12-102) and Commerce City and City and County of Denver noise ordinances.

Construction of the Proposed Action would also result in the temporary increase in fugitive dust and diesel emissions from construction equipment and vehicles traveling to and from the construction site. The contractor would be required to follow the requirements of filing an Air Pollution Emission Notice, including obtaining a construction permit from the CDPHE Air Pollution Control Division if predicted emissions are greater than permit thresholds. Preparation of a fugitive dust control plan would be required for the implementation of best management practices during construction to control dust emissions. The *Air Quality Technical Report* (Appendix A3 of the EA) details preconstruction requirements to comply with CRS 43-1-128. In March 2021, CDOT and CDPHE began a research project along the I-270 corridor within the study area to monitor criteria pollutants prior to construction, which satisfies the CRS 43-1-128 requirement. The research project will also include conducting monitoring during construction and providing a dashboard for community education and awareness, which will satisfy the CRS 43-1-128 requirement.

## 6.2 Mitigation Measures

To help mitigate these equity impacts and the financial burden of using tolled express lanes, CDOT will establish a program to reduce or eliminate fares for lower-income residents of the community. The program could include free transponders, preloading of tolls, or other mitigation that will be determined before the opening of the tolled express lanes and with input from the local community. Eligibility criteria will include residency, financial burden, and number of vehicles per resident or household. The program will be developed with community input closer to tolling operation commencement.

To help mitigate any potential short-term employment effects caused by traffic disruption and other project effects during the construction phase, the construction contractor will implement a workforce development program targeted at employing residents in the I-270 corridor. This plan will also encourage hiring on-the-job trainees and new workers into the construction industry. The I-270 contractor will also be required to make community investment during and after the construction phase.

CDOT will provide housing mitigation for residents whose homes are close enough to the project to be impacted by construction noise and dust during particularly intense construction periods. Housing mitigation includes hotel vouchers to allow residents to vacate their homes during certain phases of construction, such as over a weekend during bridge demolition.

## 6.3 Conclusion

The project has avoided and minimized impacts to EJ and DI communities from the Proposed Action and mitigated those impacts that could not be avoided or minimized. After considering the adverse effects of the Proposed Action, along with offsetting benefits and mitigation measures, it has been determined that the Proposed Action would not cause disproportionately high and adverse effects in accordance with the provisions of EO 12898 and FHWA Order 6640.23A. No further EJ analysis is required.

## 7.0 Mitigation Summary

CDOT or its contractor would mitigate for construction-related impacts to EJ and DI populations, including ROW, air quality, noise, traffic, and natural resource impacts. Those mitigations that are identified in the ROW, air quality, noise, traffic, and natural resource technical memoranda are not duplicated in Table 15 but can be found in the mitigation tracking table included as part of the EA.

**Table 15. Mitigation Measures**

Activity triggering Mitigation	Location of Activity	Impact	Mitigation Commitment	Responsible Branch	Timing/Phase That Mitigation Will Be Implemented
Construction activities	Throughout the project area	Trail impacts during construction	Most pedestrian/trail facilities impacted by construction activities will be detoured on site and near the original trail location. Limited overnight trail closures may be needed for bridge girder erection.	CDOT Engineer, Design and Construction PMs	Design, Construction
Operation	Throughout the project area	Equity impacts and financial burden of using tolled express lanes	CDOT will establish a program to reduce or eliminate fares for lower-income residents of the community. The program could include free transponders, preloading of tolls, or other mitigation that will be determined before the opening of the tolled express lanes and with input from the local community. Eligibility criteria will include residency, financial burden, and number of vehicles per resident or household. The program will be developed with community input closer to tolling operation commencement.	CDOT Project Manager	Post Construction/ Operations
Construction activities	Throughout the project area	Disadvantaged community impacts during construction	The construction contractor will implement a workforce development program targeted at employing residents in the I-270 corridor. This plan will also encourage hiring on-the-job trainees and new workers into the construction industry. The I-270 contractor will also be required to make community investment during and after the construction phase.	CDOT Engineer, Design and Construction PMs	Construction
Construction activities	Throughout the project area	Disadvantaged community impacts during construction	CDOT will provide housing mitigation for residents whose homes are close enough to the project to be impacted by construction noise and dust during particularly intense construction periods. Housing mitigation includes hotel vouchers to allow residents to vacate their homes during certain phases of construction, such as over a weekend during bridge demolition.	CDOT Engineer, Design and Construction PMs	Construction

PM = project manager

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Appendix A  
Low-income Population Calculations

## Low-income Population Calculations

This appendix demonstrates the calculations performed to derive the low-income data used in Section 0.0.0 of this report as shown in Table A-1. The calculations are based on direction provided in the CDOT *National Environmental Policy Act Manual* (CDOT 2020) Chapter 9<sup>1</sup> and incorporate U.S. Census 2018 American Community Survey<sup>2</sup> data (the most recent available) at the census block group level, the smallest geographic area for which the U.S. Census Bureau collects and tabulates census data. This process requires defining a low-income threshold, which is a household income at or below the U.S. Department of Health and Human Services poverty guidelines, based on household size. The steps for performing the calculations are summarized as follows:

1. Determine the average household size for each block group and county within the study area:
  - a. Divide total population (**Column 2 in Table A-1**) by total households (**Column 3**).
  - b. **The results are shown in Column 4.**
2. Identify the HUD thresholds of extreme low-income levels (ELIL)<sup>3</sup> based on average household size for each county (that is, a household between one and four family members as indicated in Column 4).
  - a. These data are shown on Figure A-1, which indicates the following about the ELIL:
    - i. \$21,000 for a family (that is, household size) of one
    - ii. \$24,000 for a family of two
    - iii. \$27,000 for a family of three
    - iv. \$30,000 for a family of four
3. Calculate the appropriate ELIL for the average household size determined in Step 1.
  - a. Prorate the thresholds identified in Step 2 to account for average household sizes that fall between the ELIL ranges (for example, an average household size of 3.156):
    - i. Subtract the lower ELIL income threshold (for example, \$27,000 for a family/household size of three) from the higher ELIL income threshold (\$30,000 for a family/household size of four).
    - ii. Multiply the difference by the decimal portion of the average household size indicated in Column 4 (for example, 0.156).
    - iii. Add the result from Step 3.a.ii to the lower ELIL (for example, \$27,000).
  - b. The results are shown in Column 5.
4. Determine the total number of households with incomes at or below the ELIL.
  - a. Census data were obtained identifying the number of households within specific income ranges. **These data are shown in Columns 6 through 11.**
  - b. Blue-shaded cells **in Columns 6 through 11** indicate that they are within the ELIL thresholds identified in Column 5. For example, the maximum ELIL threshold for Adams County Census Tract 87.09 Block Group 2 is \$25,869, which is captured in Columns 6 through 10 (households with an income range up to \$29,999) and are therefore shaded blue.

<sup>1</sup> [https://www.codot.gov/programs/environmental/nepa-program/nepa-manual/09-chapter-9\\_v6\\_3-19-20.pdf](https://www.codot.gov/programs/environmental/nepa-program/nepa-manual/09-chapter-9_v6_3-19-20.pdf).

<sup>2</sup> <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>.

<sup>3</sup> [https://www.huduser.gov/portal/pdrdatas\\_landing.html](https://www.huduser.gov/portal/pdrdatas_landing.html).

5. Determine the percentage of households with incomes at or below the ELIL.
  - a. Add Columns 6 through 11 to determine the total of all households with incomes at or below the ELIL. **The results are shown in Column 12.**
  - b. Divide the total number of ELIL households (Column 12) by the total number of households overall (Column 3); multiply by 100. **The results are shown in Column 13.**
6. Compare the census block group data with the county data:
  - a. If the census block group ELIL percentage (Column 13) is higher than the county ELIL percentage, include the census block group in the environmental justice analysis. Census block groups that meet this criterion are shaded in green in **Column 13**.
  - b. The results (green-shaded cells) are summarized in Table 12 under Section 0.0.0 of this report.

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Table A-1. Low-income Threshold Calculations

1	2	3	4	5	6	7	8	9	10	11	12	13
Geographic Area	Total Population	Total Households	Average Household Size	ELIL Threshold	# Households Less than \$10k	# Households \$10k to \$14,999	# Households \$15k to \$19,999	# Households \$20k to \$24,999	# Households \$25k to \$29,999	# Households \$30k to \$34,999	Total # Households under ELIL	Percent Households under ELIL
<b>ADAMS COUNTY</b>	511,868	164,353	3.11444	27,343	6,718	5,038	5,221	5,331	6,389	7,303	29,197	17.8
<b>Census Tract 87.09</b>												
Block Group 1	1,005	406	2.475	25,425	0	30	22	14	0	0	66	16.3
Block Group 2	1,440	549	2.623	25,869	88	36	67	81	6	22	278	50.6
Block Group 3	1,616	510	3.169	27,507	114	78	0	0	25	0	217	42.5
Block Group 4	1,290	489	2.638	25,914	36	0	40	0	0	61	76	15.5
<b>Census Tract 89.01</b>												
Block Group 1	1,061	294	3.609	28,827	19	36	8	5	5	12	73	24.8
Block Group 2	1,603	436	3.677	29,031	28	25	7	28	14	35	102	23.4
<b>Census Tract 90.02</b>												
Block Group 4	1,485	441	3.367	28,101	0	0	0	0	15	19	15	3.4
<b>Census Tract 93.07</b>												
Block Group 1	2,064	659	3.132	27,396	34	0	9	23	39	70	105	15.9
Block Group 2	1,880	550	3.418	28,254	15	0	29	57	0	37	101	18.4
<b>Census Tract 93.08</b>												
Block Group 1	820	269	3.048	27,144	47	0	0	10	0	0	57	21.2
Block Group 2	1,058	275	3.847	29,541	0	11	8	40	6	22	65	23.6
<b>Census Tract 95.53</b>												
Block Group 1	2,525	700	3.607	28,821	18	26	71	18	12	25	145	20.7
Block Group 2	1,203	484	2.486	25,458	43	0	27	32	45	0	147	30.4

Table A-1. Low-income Threshold Calculations

1	2	3	4	5	6	7	8	9	10	11	12	13
Geographic Area	Total Population	Total Households	Average Household Size	ELIL Threshold	# Households Less than \$10k	# Households \$10k to \$14,999	# Households \$15k to \$19,999	# Households \$20k to \$24,999	# Households \$25k to \$29,999	# Households \$30k to \$34,999	Total # Households under ELIL	Percent Households under ELIL
<b>Census Tract 150</b>												
Block Group 1	1,883	722	2.608	25,824	100	30	10	60	31	88	231	32.0
Block Group 2	1,113	451	2.468	25,404	35	43	32	23	22	21	155	34.4
<b>DENVER COUNTY</b>	<b>716,492</b>	<b>294,358</b>	<b>2.43408</b>	<b>25,302</b>	<b>20,529</b>	<b>11,401</b>	<b>11,225</b>	<b>11,398</b>	<b>12,727</b>	<b>12,572</b>	<b>67,280</b>	<b>22.9</b>
<b>Census Tract 35.00</b>												
Block Group 2	1,500	491	3.055	27,165	23	23	10	85	25	45	166	33.8
Block Group 3	1,697	447	3.796	29,388	0	36	0	30	6	35	72	16.1
<b>Census Tract 41.01</b>												
Block Group 1	2,565	950	2.700	26,100	111	28	29	11	81	69	260	27.4
<b>Census Tract 41.02</b>												
Block Group 1	1,500	405	3.704	29,112	0	11	20	29	19	41	79	19.5
<b>Census Tract 41.06</b>												
Block Group 1	12,959	3,719	3.485	28,455	84	69	30	23	112	15	318	8.6
<b>Census Tract 41.07</b>												
Block Group 1	11,430	4,532	2.522	25,566	180	78	94	82	30	104	464	10.2

Source: U.S. Census Bureau 2018: ACS 5-Year Estimates Detailed Tables. <https://data.census.gov/cedsci/>.

Blue shading indicates households that are within the ELIL thresholds identified in Column 5.

Green shading in Column 13 indicates census block group ELIL percentages that are higher than the county ELIL percentage and should therefore be included in the environmental justice analysis.



# FY 2020 INCOME LIMITS DOCUMENTATION

[HUD.gov](https://www.hud.gov) [HUD User Home](#) [Data Sets](#) [Fair Market Rents](#) [Section 8 Income Limits](#) [MTSP Income Limits](#) [HUD LIHTC Database](#)

## FY 2020 Income Limits Summary

Selecting any of the buttons labeled "Explanation" will display detailed calculation steps for each of the various parameters.

FY 2020 Income Limit Area	Median Family Income  <input type="button" value="Explanation"/>	FY 2020 Income Limit Category	Persons in Family				
			1	2	3	4	5
Denver- Aurora- Lakewood, CO MSA	\$100,000	Very Low (50%) Income Limits (\$) <input type="button" value="Explanation"/>	35,000	40,000	45,000	50,000	54,000
		Extremely Low Income Limits (\$)* <input type="button" value="Explanation"/>	21,000	24,000	27,000	30,000	32,400
		Low (80%) Income Limits (\$) <input type="button" value="Explanation"/>	54,950	62,800	70,650	78,500	84,800

**NOTE:** Adams County is part of the **Denver-Aurora-Lakewood, CO MSA**, so all information presented here applies to all of the **Denver-Aurora-Lakewood, CO MSA**.

The **Denver-Aurora-Lakewood, CO MSA** contains the following areas: Adams County, CO; Arapahoe County, CO; Broomfield County, CO; Clear Creek



County, CO; **Denver County**, CO; Douglas County, CO; Elbert County, CO; Gilpin County, CO; Jefferson County, CO; and Park County, CO.

\* The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as established by the Department of Health and Human Services (HHS), provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may equal the very low (50%) income limits.

Income Limit areas are based on FY 2020 Fair Market Rent (FMR) areas. For information on FMRs, please see our associated FY 2020 Fair Market Rent documentation system.

For last year's Median Family Income and Income Limits, please see here:

FY2019 Median Family Income and Income Limits for Denver-Aurora-Lakewood, CO MSA

Select a different county or county equivalent in Colorado:

Adams County  
Alamosa County  
Arapahoe County  
Archuleta County  
Baca County  
Bent County

Select county or county equivalent

Select any FY2020 HUD Metropolitan FMR Area's Income Limits:

Denver-Aurora-Lakewood, CO MSA

Select HMFA Income Limits Area

Or press below to start over and select a different state:

Select a new state

Update URL For bookmarking or E-Mailing

Figure A-1. Department of Housing and Urban Development Thresholds of Extreme Low-income Levels

Source: Fiscal Year 2020 Income Limits Documentation System. <https://www.thorntonco.gov/community-connections/Documents/grant-resources/FY%202020%20Income%20Limits%20Documentation%20System%20--%20Summary%20for%20Adams%20County,%20Colorado.pdf>.