Environmental Justice Analysis Technical Memorandum

New Pueblo Freeway

CDOT Project No. IM 0251-165

Project Control No. 12831

Colorado Department of Transportation

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Project Description

The Federal Highway Administration (FHWA), in cooperation with the Colorado Department of Transportation (CDOT), is preparing an Environmental Impact Statement (EIS) for the New Pueblo Freeway project, a proposal to improve a 7-mile segment of Interstate 25 (I-25) through Pueblo, Colorado. Improvements are necessary to address outdated roadway and bridges with inadequate geometrics, safety issues, and existing and future traffic demand.

Alternatives under consideration include taking no action (No Action Alternative), reconstruction of the interstate on essentially the existing alignment (Existing I-25 Alternative), and reconstruction of the interstate on existing and new alignments (Modified I-25 Alternative). The alternatives are further described as follows:

- **No Action Alternative –** This alternative provides only for minor improvements, repairs, and other maintenance actions. The existing four-lane highway will otherwise remain unchanged.
- **Existing I-25 Alternative –** This alternative consists of reconstructing I-25 to six lanes on essentially the same location, reconfiguring and eliminating access points to the interstate to improve safety, and providing other improvements to the local street system to enhance system connectivity and traffic movement near the interstate.
- **Modified I-25 Alternative** – This alternative consists of rebuilding I-25 to six lanes and providing the other improvements included in the Existing I-25 Alternative, except the alignment would be shifted to accommodate different interchange configurations.

Transportation Management strategies and design variations of grade and alignment are incorporated into the Build Alternatives.

Introduction to Environmental Justice

Environmental justice (EJ) refers to social equity in bearing the burden of adverse environmental impacts. Some ethnic minorities and low-income residents have historically experienced a disproportionate share of adverse affects resulting from large infrastructure projects such as new roadways. As stated in Executive Order 12898, "Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

—Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, 1994.

There are three fundamental environmental justice principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects (including social and economic effects) on minority 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 (FHWA, 2000).

The purpose of an environmental justice analysis is to determine whether a project will have a disproportionately high and adverse effect on minority and low-income populations. The Federal Highway Administration defines a "disproportionately high and adverse effect" as one that is predominately borne by, suffered by, or that is appreciably more severe or greater in magnitude on minority and low-income populations than the adverse effect that will be suffered by the non-minority population and/or the non-low-income population. This technical memorandum discusses the potential impacts to minority and low-income households within the study area for the New Pueblo Freeway project. It evaluates whether impacts from the project would be predominantly borne by minority and low-income populations and factors in off-setting benefits and proposed mitigation to determine whether impacts to these populations are high and adverse.

Methods and Assumptions

The Environmental Justice Analysis Technical Memorandum has been prepared in accordance with the following federal and state guidance for addressing environmental justice, including:

- Executive Order (EO) 12898*, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (Federal Register, February 11, 1994).
- *Environmental Justice Guidance Under the National Environmental Policy Act* (Council on Environmental Quality, December 10, 1997).
- United States Department of Transportation Order 5610.2, *Order To Address Environmental Justice in Minority Populations and Low-Income Populations* (Federal Register, April 15, 1997).
- Federal Highway Administration (FHWA) Order 6640.23, *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (December 2, 1998).
- U.S. Environmental Protection Agency*'s Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses* (EPA, 1998).
- CDOT's *Title VI and Environmental Justice Guidelines for NEPA Projects* – Rev. 3 (CDOT, 2004).
- United States Department of Transportation *Policy Guidance Concerning Recipient's Responsibilities to Limited English Proficient (LEP) Persons* (Federal Register, December 14, 2005).
- CDOT's *National Environmental Policy Act Manual*. Version 2. (CDOT, December 2008).

The definition for minority populations and low-income populations contained in both EO 12898 and Title VI, as well as the final *US DOT Order 5610.2 on Environmental Justice in the Federal Register* on April 15, 1997, is any readily identifiable group of low-income or minority

persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be affected by a proposed FHWA program, policy, or activity. Minorities constitute African-American, Hispanic, Asian-American, American Indian, and Alaskan Native populations. Low-income is defined as household income at or below the Department of Health and Human Services (HHS) poverty guidelines. A different threshold (e.g., U.S. Census Bureau poverty threshold or United States (U.S.) Department of Housing and Urban Development (HUD) Community Development Block Grant income thresholds) may be used as long as it is not selectively implemented and is inclusive of all persons at or below the HHS poverty guidelines.

The Council on Environmental Quality's (CEQ) *Environmental Justice: Guidance Under the National Environmental Policy Act* states that "minority populations should be identified where either (a) the minority population of the affected area exceeds 50 percent or (b) the population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographical analysis." The CEQ further adds that "The selection of the appropriate unit of geographical analysis may be a governing body's jurisdiction, a neighborhood, a census tract, or other similar unit that is chosen so as not to artificially dilute or inflate the affected minority population."

The Colorado Department of Transportation conducted a statewide study to steer the development and environmental justice planning process. Report number CDOT-DTD-R-2002-7, *Environmental Justice Research Study*, listed three optional methods of determining the presence of minority and low-income populations. A given area may be considered in an EJ analysis if it has:

- A minority population of 50 percent or more
- A higher minority or low-income population than the city or county as a whole
- Environmental Justice populations are mapped by census tract or block group by either absolute numbers or percentage of the population. Census block groups are subsets of tracts and are the smallest geographic unit at which the U.S. Census publishes demographic data.

The CDOT study opted to map the presence of EJ populations. To be consistent with the CDOT study, both the proportions of minority and low-income populations are mapped in Exhibits 1 and 2, respectively, to reveal the physical location of EJ populations for purposes of concentrating public outreach activities.

All three of this study's criteria are considered in this analysis. To account for the ethnic Hispanic population, persons that identified themselves in the U.S. Census as Caucasian (white alone) and of Hispanic ethnicity were considered minorities.

Non-white Hispanics were included with the other race category (for example, black) to avoid double counting.

EXHIBIT 1
Minority Populations within the Project Area

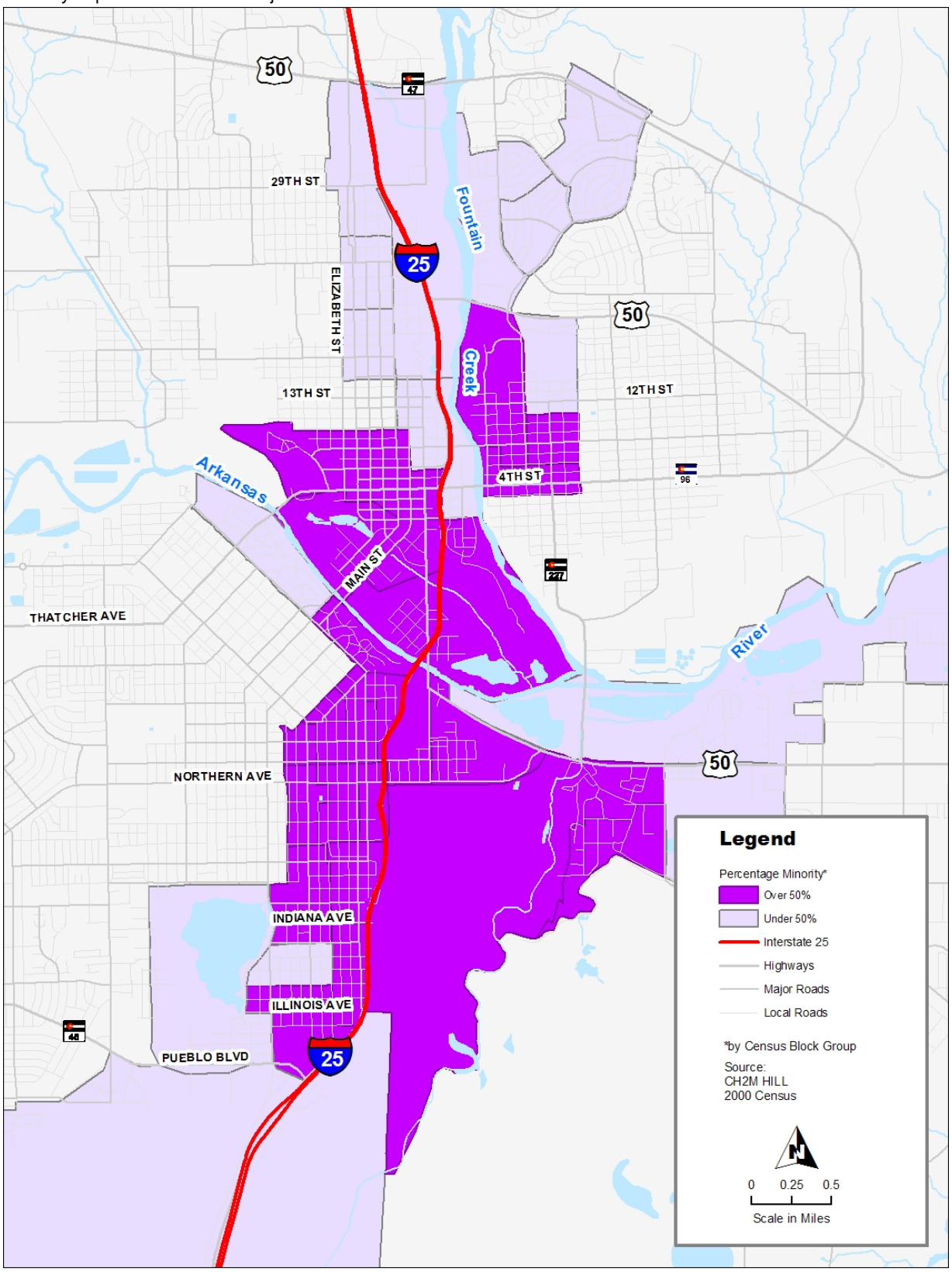
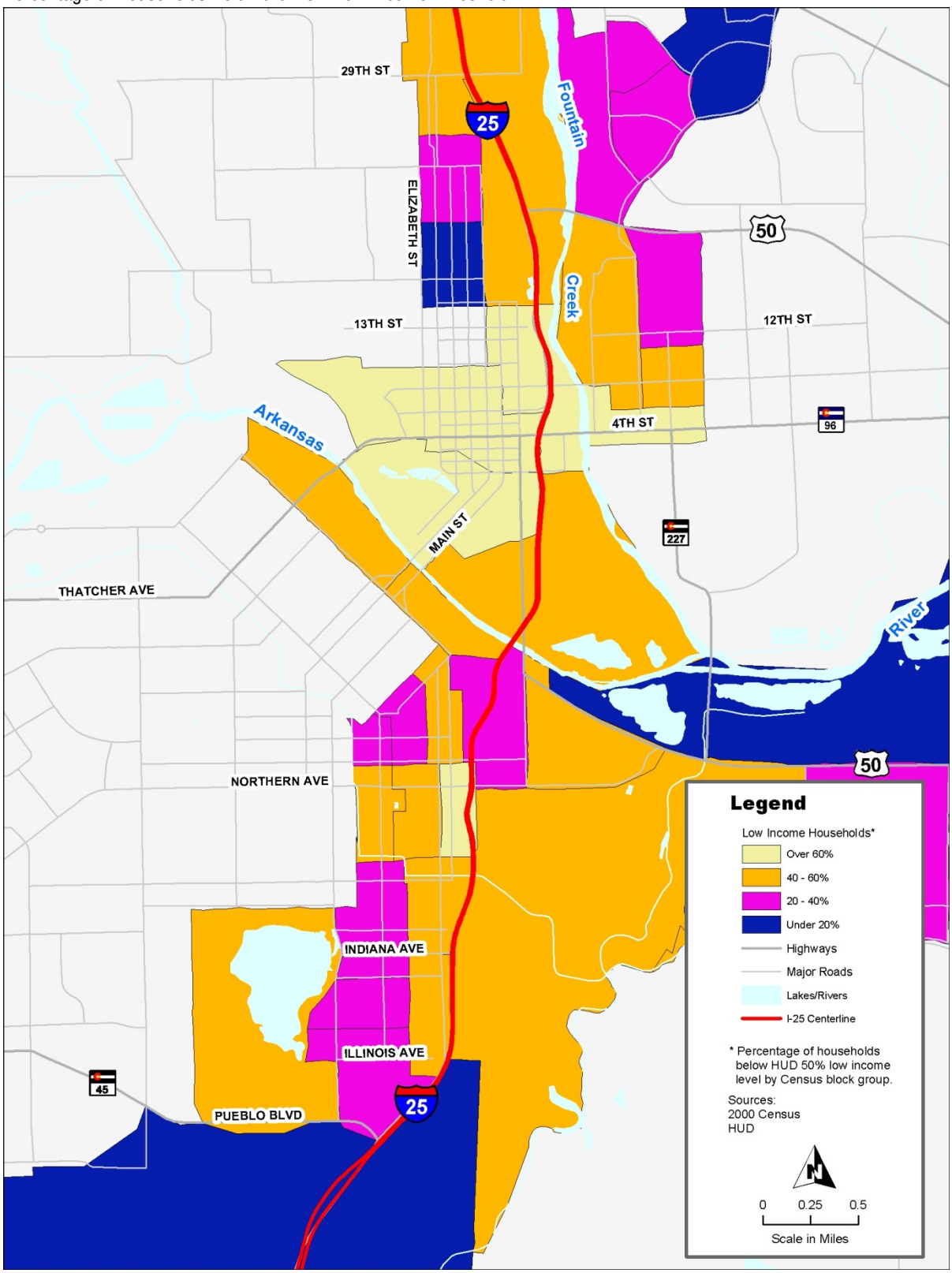


EXHIBIT 2
Percentage of Households Below the HUD Low-Income Threshold



Low-income households were determined consistent with the CDOT *Environmental Justice Research Study.* The HUD develops low-income thresholds for each county in the United States to determine the distribution of Community Development Block Grants. Low-income levels by household size were obtained from the HUD website for the year 1999 to correlate with the available 2000 U.S. Census data. These thresholds are relative to numbers of person per household and, unlike U.S. Census thresholds and HHS guidelines, are set on the basis of local standards rather than as a single number for the entire U.S. (for example, low-income is defined at a different level for Pueblo, Colorado than for San Francisco, California). Because low-income levels vary by household size, average household size and corresponding income limits were calculated for each block group in the study area to determine the block groups that fell into the HUD-defined low-income levels.

For example, to determine the low-income level for Tract 5, Block Group 1 where the average household size is 2.15, the following formula was used (amounts listed are in 1999 dollars):

Low-income threshold (3-person household) = $29,100

Low-income threshold –(2-person household) = $25,850

Difference between 2-person and 3-person households = $3,250
($29,100 − $25,850 = $3,250)

Multiply the difference by .15 (average household size greater than 2) = $488
($3,250 x .15 = $488)

Add the low-income threshold for a 2-person household to the .15 difference between a 2-person household and a 3-person household to get the low-income threshold for 2.15 average household size = $26,338

Because the median household income for this block group according to U.S. Census data is $23,261, this block group is considered low income. Additionally, the percentage of low-income households within a block group was determined based on the number of households in each U.S. Census income category. The HUD low-income threshold was rounded up to correspond to U.S. Census reporting limits. For instance, in the Block Group 1 with a low-income level of $26,338, all households below $29,999 (the nearest U.S. Census reporting limit) were considered low income for the purposes of determining percentages of low-income households.

Census tracts were also assessed to identify the number of households within the project area that are linguistically isolated, meaning that no one over 14 years of age in the household speaks English "very well." This data was particularly useful in guiding public involvement techniques.

Public Involvement and Outreach to Minority and Low-Income Populations

One of the key tenets of incorporating environmental justice principles into the National Environmental Policy Act (NEPA) process is through an inclusive and creative public

involvement process. As reiterated below, two of the six general principles outlined by CEQ guidance for environmental justice relate to public involvement:

- Agencies should develop effective public participation strategies. Agencies should, as appropriate, acknowledge and seek to overcome linguistic, cultural, institutional, geographic, and other barriers to meaningful participation, and should incorporate active outreach to affected groups.
- Agencies should ensure meaningful community representation in the process. Agencies should be aware of the diverse constituencies within any particular community when they seek community representation and should endeavor to have complete representation of the community as a whole. Agencies also should be aware that community participation must occur as early as possible if it is to be meaningful.

The project team determined early in the process that the entire length of the New Pueblo Freeway touches neighborhoods of minority and/or low-income populations and neighborhoods. Thus, from the beginning, public involvement efforts focused on developing effective methods of outreach to these populations rather than identifying neighborhoods that met the low-income and/or minority criteria. The intent of the outreach program was to encourage minority and low-income populations to articulate issues that should be addressed before they become complaints; provide easy access to project information and project team members; and provide opportunities throughout the project for meaningful involvement in the choice among alternatives, location of features, and development of designs and mitigating measures. More information regarding the extensive public involvement effort for this project can be found in **Chapter 5 of the DEIS, Comments and Coordination**. Additional details regarding outreach to non-English speaking households as well as low-income populations are included below.

Existing Conditions and Data Collection

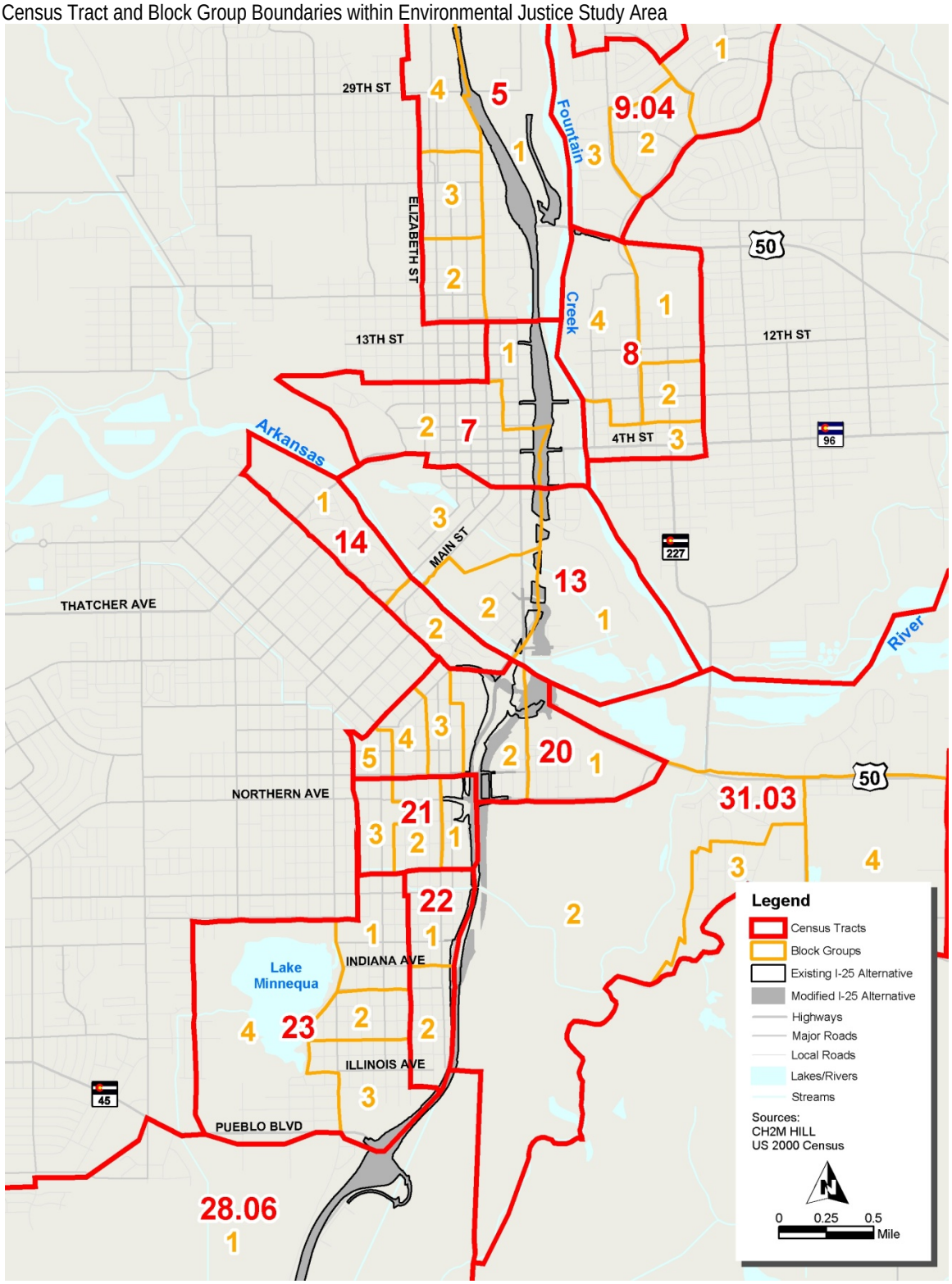
The project is in Pueblo County and travels through the City of Pueblo from north of the 29th Street interchange (milepost [MP] 102) to MP 94, a distance of approximately 8 miles. The U.S. Census 2000 Summary File 3 (SF 3) data were used for race, total population, median household income, and linguistic isolation.[1] Within Pueblo County, Census Tracts 5, 7, 8, 9.04, 12, 13, 14, 20, 21, 22, 23, and 31.03 are adjacent or very near the project area (see Exhibit 3) and, as such, are the defined study limits for EJ population analysis.[2]

The population of the study area, as defined by the Census tracts adjacent to the I-25 alignment, is 28,207 and lies almost entirely within the City of Pueblo. Data were collected at the block group level for each tract for all measures with the exception of linguistic isolation, which is available only at the tract level.

[1] Although Summary File 1 (SF 1) 100-percent data became available after the initiation of this project, the SF 3 Sample Data were used and are reported in this memorandum because (1) the calculations of minority and low-income percentages had already been completed at the Block level and (2) there is only a minor (generally less than 1 percent) difference between the two data sets.

[2] The U.S. Census defines a Tract as "a small, relatively permanent statistical subdivision of a county delineated by a local committee of census data users for the purpose of presenting data. Census tract boundaries normally follow visible features, but may follow governmental unit boundaries and other non-visible features in some instances; they always nest within counties. Designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time of establishment, census tracts average about 4,000 inhabitants. They may be split by any sub-county geographic entity."

EXHIBIT 3
Census Tract and Block Group Boundaries within Environmental Justice Study Area



Minority Populations

The City of Pueblo has a higher minority population (49 percent) than Pueblo County (42 percent). Both the City of Pueblo and Pueblo County have substantially higher minority percentages than the State of Colorado, which has an overall minority population of 26 percent. Within the study area, minorities represent approximately 56 percent of the total population. As shown in Exhibit 1, these populations are distributed in concentrated neighborhoods throughout the corridor, with 28 of the 40 block groups meeting the minority definition (that is, greater than 50 percent minority and/or greater than the city average) of an environmental justice population. This city average is used in this analysis because it is more representative of the project area. These block groups are shown in Exhibit 4. Shaded entries indicate block groups contain minority populations.

Non-English Speaking Populations

As shown in Exhibit 5, a large number of households within the project area are linguistically isolated, meaning that no one over 14 years of age in the household speaks English "very well." Within the study area, nearly all Census tracts had more linguistically isolated households than either the City of Pueblo or Pueblo County, where 3.75 percent and 3.12 percent, respectively, of households do not have any members that speak English well.

EXHIBIT 4
Minority Populations per Census Block Group
Shaded entries indicate census tracts with minority and low-income populations.

Census Tract	Block Group	Total population	White alone	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some other race	Two or more races	Hispanic – White	Proportion of Minorities
5	1	492	61.59%	0.00%	0.00%	0.00%	0.00%	15.45%	0.00%	22.97%	38.41%
	2	632	90.82%	0.00%	0.00%	0.00%	0.00%	2.69%	3.96%	2.53%	9.18%
	3	761	69.12%	0.92%	0.00%	1.05%	0.00%	9.59%	6.04%	13.27%	30.88%
	4	683	50.81%	0.00%	0.00%	1.02%	0.00%	0.00%	0.00%	48.17%	49.19%
7	1	633	54.03%	3.00%	0.00%	0.00%	0.00%	14.85%	5.85%	22.27%	45.97%
	2	922	48.59%	2.49%	0.98%	0.00%	0.00%	13.23%	4.88%	29.83%	**51.41%**
8	1	1027	52.09%	1.85%	2.43%	0.00%	0.00%	19.28%	0.68%	23.66%	47.91%
	2	893	11.20%	1.12%	2.46%	0.00%	0.00%	16.24%	0.67%	68.31%	**88.80%**
	3	843	18.39%	0.71%	0.00%	1.78%	0.00%	45.43%	5.46%	28.23%	**81.61%**
	4	582	31.27%	4.30%	1.55%	0.00%	0.00%	22.85%	6.70%	33.33%	**68.73%**
9.04	1	1651	76.38%	0.42%	0.00%	0.00%	0.00%	3.76%	4.06%	15.38%	23.62%
	2	932	62.02%	0.00%	1.18%	0.00%	0.00%	8.15%	8.26%	20.39%	37.98%
	3	1748	66.13%	0.00%	0.00%	0.00%	0.00%	3.55%	3.20%	27.12%	33.87%
12	1	486	19.75%	0.00%	1.65%	1.44%	0.00%	22.84%	0.00%	54.32%	**80.25%**
	2	652	10.28%	0.00%	0.00%	0.00%	0.00%	36.81%	7.82%	45.09%	**89.72%**
	3	401	17.21%	0.00%	3.74%	0.00%	0.00%	40.65%	4.74%	33.67%	**82.79%**
	4	542	19.37%	0.74%	1.85%	0.00%	0.00%	49.82%	2.40%	25.83%	**80.63%**
13	1	218	36.24%	6.42%	0.00%	0.00%	0.00%	38.53%	5.50%	13.30%	**63.76%**
	2	263	27.76%	0.00%	0.00%	0.00%	0.00%	32.70%	6.08%	33.46%	**72.24%**
	3	239	48.12%	0.00%	2.51%	0.00%	0.00%	12.55%	2.51%	34.31%	**51.88%**
14	1	1221	51.35%	3.77%	2.54%	0.00%	0.00%	6.31%	8.11%	27.93%	48.65%
	2	460	28.91%	0.87%	0.00%	1.30%	0.00%	11.96%	7.17%	49.78%	**71.09%**

EXHIBIT 4
Minority Populations per Census Block Group
Shaded entries indicate census tracts with minority and low-income populations.

Census Tract	Block Group	Total population	White alone	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some other race	Two or more races	Hispanic – White	Proportion of Minorities
20	1	724	42.96%	0.00%	7.73%	0.83%	0.00%	18.37%	0.00%	30.11%	**57.04%**
	2	911	28.10%	0.00%	0.00%	0.00%	0.00%	19.87%	1.10%	50.93%	**71.90%**
	3	761	18.66%	4.47%	2.63%	0.53%	0.00%	31.93%	2.50%	39.29%	**81.34%**
	4	530	35.47%	15.85%	0.00%	0.00%	0.00%	26.60%	6.60%	15.47%	**64.53%**
	5	388	37.11%	13.92%	0.00%	0.00%	0.00%	33.51%	4.90%	10.57%	**62.89%**
21	1	175	39.43%	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	20.57%	**60.57%**
	2	841	14.74%	10.58%	1.07%	0.00%	0.00%	41.14%	1.90%	30.56%	**85.26%**
	3	611	33.55%	4.42%	1.80%	0.00%	0.00%	15.06%	3.27%	41.90%	**66.45%**
22	1	939	31.63%	4.47%	5.01%	0.00%	0.00%	27.37%	6.18%	25.35%	**68.37%**
	2	811	36.13%	0.00%	4.07%	1.60%	0.00%	12.45%	6.41%	39.33%	**63.87%**
23	1	915	36.07%	3.61%	0.98%	0.00%	0.00%	22.30%	8.20%	28.85%	**63.93%**
	2	690	53.19%	3.33%	0.00%	0.00%	0.00%	9.13%	4.64%	29.71%	46.81%
	3	762	37.27%	3.28%	0.00%	0.00%	0.00%	22.97%	9.84%	26.64%	**62.73%**
	4	915	55.19%	0.00%	2.51%	0.00%	0.00%	27.21%	0.00%	15.08%	44.81%
31.03	1	877	56.67%	0.91%	2.74%	0.00%	0.00%	12.20%	6.84%	20.64%	43.33%
	2	285	9.82%	0.00%	3.16%	0.00%	0.00%	39.65%	0.00%	47.37%	**90.18%**
	3	444	25.68%	0.00%	0.00%	0.00%	0.00%	48.65%	1.35%	24.32%	**74.32%**
	4	347	54.18%	0.00%	0.00%	0.00%	0.00%	21.90%	5.76%	18.16%	45.82%

Source: U.S. Census Bureau, 2000

EXHIBIT 5
Non-English Speaking Households within Study Area Census Tracts
Shaded entries indicate census tracts with minority and low-income populations.

Census Tract	Linguistically isolated households (Spanish)	Linguistically isolated households (Other language)	Total
5	2.42%	0.99%	3.41%
7	8.35%	0.91%	9.26%
8	7.56%	0.00%	7.56%
9.04	2.32%	0.43%	2.75%
12	8.92%	0.00%	8.92%
13	15.14%	0.00%	15.14%
14	3.27%	0.95%	4.23%
20	5.43%	1.30%	6.73%
21	4.65%	0.00%	4.65%
22	3.48%	0.54%	4.02%
23	6.75%	0.00%	6.75%
31.03	3.72%	0.00%	3.72%
Pueblo County	2.74%	0.38%	3.12%
City of Pueblo	3.36%	0.39%	3.75%
State of Colorado	2.42%	0.96%	3.37%

Source: U.S. Census Bureau, 2000

Because nearly all of the non-English speaking households are Spanish speaking, efforts were focused on Spanish language outreach. All project documents and announcements were available in Spanish, and translators were present for all neighborhood meetings. Additionally, many of the public involvement techniques employed for this project were designed with non-English speakers in mind. For instance, invitations to meetings were sent in Spanish and English, meetings were advertised in the Spanish language newspaper, posters were displayed in neighborhood stores to advertise public events, and flyers were hand-delivered to announce neighborhood-focused or issue-focused meetings.

Low-Income Populations

Exhibit 6 provides information by block group for HUD-defined low-income (50 percent of area median income) households in the study area. For comparison purposes, Exhibit 6 also provides information regarding the percentage of households in poverty according to the U.S. Census thresholds. Those block groups where the percentage of low-income households exceeds the City of Pueblo percentage are shaded. As Exhibits 2 and 6 display, most (34 of 40) of the block groups in the study area have a greater percentage of low-income households than the City of Pueblo, where approximately 33 percent of households qualify as low-income under the HUD definition. Fewer households qualify as low-income in Pueblo West or Pueblo County.

EXHIBIT 6
Income and Poverty Statistics for Study Area
Shaded entries indicate block groups where the percentage of households at the low-income level exceeds the percentage for the City of Pueblo as a whole.

Census Tract	Block Group	Median Household Income	Average Household Size	HUD Low Income Level (50% AMI) for Average Household Size	Percent of HUD Low Income Households	US Census Percentage in Poverty[C]
5	1	$23,261	2.15	$16,458	40.28	27.64
	2	$40,313	2.10	$16,355	16.00	6.90
	3	$33,438	2.16	$16,478	25.97	9.86
	4	$21,563	2.64	$17,462	47.15	27.11
7	1	$11,954	1.58	$15,310	65.44	24.40
	2	$14,167	2.33	$16,827	65.12	35.31
8	1	$27,708	2.25	$16,663	36.73	19.67
	2	$20,513	2.59	$17,360	47.70	26.32
	3	$16,613	3.06	$18,320	64.60	51.98
	4	$22,557	2.72	$17,626	46.38	41.58
9.04	1	$47,600	2.50	$17,175	13.00	2.97
	2	$28,355	2.19	$16,540	29.00	13.30
	3	$27,768	1.98	$16,110	36.97	5.02
12	1	$21,310	2.48	$17,134	44.50	17.08
	2	$19,615	3.04	$18,280	51.96	39.72
	3	$15,208	2.35	$16,868	69.23	44.39
	4	$27,019	2.39	$16,950	45.71	14.02
13	1	$14,856	1.74	$15,630	51.18	22.48

[C] U.S. Census poverty measure

Census Tract	Block Group	Median Household Income	Average Household Size	HUD Low Income Level (50% AMI) for Average Household Size	Percent of HUD Low Income Households	US Census Percentage in Poverty[c]
	2	$25,391	2.25	$16,663	42.86	22.43
	3	$10,347	1.09	$14,330	71.08	36.82
14	1	$22,401	2.11	$16,376	43.65	25.82
	2	$17,031	2.70	$17,585	51.90	38.26
20	1	$25,089	2.47	$17,114	44.73	6.22
	2	$22,500	2.60	$17,380	39.83	29.42
	3	$22,692	2.77	$17,729	46.32	24.70
	4	$27,206	2.24	$16,642	35.48	24.53
	5	$23,571	2.26	$16,683	33.54	6.96
21	1	$17,143	2.28	$16,724	64.10	31.33
	2	$19,167	2.55	$17,278	50.62	38.53
	3	$18,029	2.34	$16,847	58.37	31.09
22	1	$24,000	2.39	$16,950	41.49	21.00
	2	$22,083	2.26	$18,200	46.52	20.10
23	1	$25,813	2.65	$17,483	39.40	45.59
	2	$23,462	2.10	$16,355	38.28	26.31
	3	$24,063	2.62	$17,421	38.05	26.09
	4	$17,500	1.73	$15,610	52.77	28.55
31.03	1	$42,981	2.82	$17,831	18.15	13.22
	2	$19,405	2.92	$18,036	55.00	31.88
	3	$24,821	2.42	$17,011	42.42	21.66
	4	$32,708	2.28	$16,724	31.85	9.22
Pueblo County		$32,775	2.50	$17,175	29.11	14.86
City of Pueblo		$29,650	2.42	$17,011	33.34	17.82
Pueblo West		$48,121	2.77	$17,729	12.85	5.21

Source: U.S. Census Bureau, 2000; U.S. Department of Housing and Urban Development, 2003

Exhibit 2 is a map of the relative proportion of low-income households. Many of the neighborhoods directly adjacent to I-25 have more than 40 percent of low-income households, and areas of the Northside, Downtown, Lower Eastside, and south Bessemer neighborhoods have more than 60 percent low-income households.

Outreach to low-income populations included conducting interviews with social services and community planning organizations to learn from their experience effective ways to reach out to low-income citizens. Flyers and brochures were distributed to local charities (such as Meals on Wheels) that serve low-income residents. Other recommendations that were adopted included holding meetings in consistent and convenient community locations at times that are convenient for working families as well as expanding public outreach to established community events. Meetings were held in schools, churches, and community gathering centers throughout corridor, and the project team set up booths in planned community events, such as the “Pack the Park” celebration in the Bessemer Neighborhood.

Impacts

No Action Alternative

The No Action Alternative would not impact any community facilities within the corridor and would not affect community cohesion. Areas where the construction of I-25 bisected neighborhoods and residential properties would remain unchanged will continue to act as a community barrier. The residential area east of I-25 in the Grove Neighborhood would continue to be isolated. No community improvements would be provided in the Downtown Neighborhood and Goat Hill would remain isolated. Noise from additional traffic would continue to increase and aesthetics along the interstate would not be improved. Because every neighborhood adjacent to I-25 in the adjacent area can be identified as a minority and/or low-income community, these impacts would be predominantly borne by these communities.

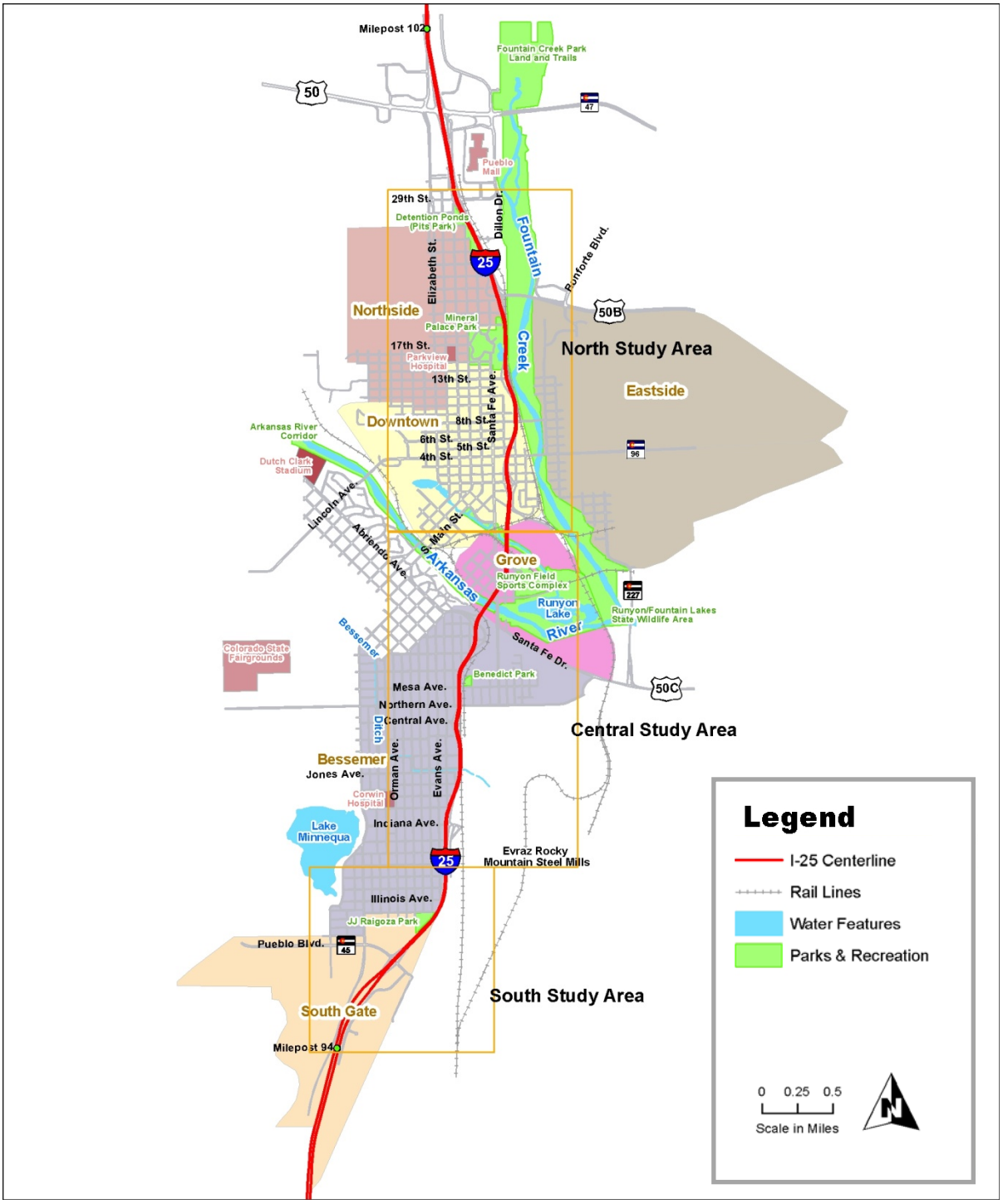
Build Alternatives

The impact analysis for all resources was reviewed to determine whether either Build Alternative would result in adverse effects on all segments of the population, including minority and low-income populations. Adverse effects relevant to the environmental justice analysis are highlighted below; these effects would occur under either Build Alternative:

- Residential and commercial acquisitions and associated impacts to employment.
- Impacts to park and recreational resources; in particular to Mineral Palace Park and Benedict Park.
- An increase in noise levels in some locations (in the absence of mitigation).
- Visual impacts resulting from the installation of retaining walls, noise barriers, structures, and other project elements.
- Disturbance of hazardous or potentially hazardous waste sites.
- Temporary construction related impacts, such as an increase in noise, fugitive dust, detours, traffic delays, and disruption in utility service.

Because all of the project improvements would occur in areas with minority and/or low-income populations, these impacts would be predominantly borne by these populations. Impacts to minority and low-income populations from each Build Alternative are described for each area of the corridor and by neighborhood (shown in Exhibit 7), where appropriate. The environmental justice impact analysis is summarized in Exhibit 8.

EXHIBIT 7
Study Area Neighborhoods and Project Areas



North Area

The Build Alternatives would provide safer and more efficient access to the interstate from areas surrounding the highway but would not introduce new transportation infrastructure to areas that do not already have access to the interstate. Because of this, impacts to population characteristics after construction of either Build Alternative are unlikely. Both Build Alternatives would relocate 24 businesses and more than 300 jobs in the North Area of the corridor. These jobs account for less than 1 percent of the total labor force in Pueblo County. With relocation, few jobs would be permanently lost. The majority of the affected businesses are not minority-owned. While more than one third of these businesses indicated that they are dependent on the local neighborhood, only a handful appear to provide services, employ neighborhood residents, or provide housing for low-income and minority workers.

The Build Alternatives would directly impact community facilities in the Northside, Eastside, and Downtown neighborhoods. Many of these facilities are utilized by residents throughout the city and would affect the general population, including minority and low-income residents. In the Northside and Eastside neighborhoods, minority and low-income populations would benefit from improved access and neighborhood connections. Minority and low-income residents would also benefit from improved access to the Downtown Neighborhood and also to the Parkview Medical Center (with the new ramp at 13th Street).

Construction of the Build Alternatives would require the acquisition of 50 feet of Mineral Palace Park along I-25. Mitigation includes a restoration plan that would increase the size of the park and restore historic features and neighborhood connections, ultimately benefiting the surrounding community, including minority and low-income residents.

Both Build Alternatives would positively impact community cohesion by improving access for motorists and pedestrians. The extension of Dillon Drive to the south would allow for improved local access to the Pueblo Mall and regional retail destinations for the Northside and Eastside neighborhoods. In addition, it would remove drivers who are making local trips from the interstate. Access would be provided to the land west of the Dillon extension, allow for commercial development to occur, and keep regional retail in this neighborhood. Construction of pedestrian trails along I-25 to the north and south and across I-25 near Mineral Palace Park would provide an additional connection for the residents of the Northside Neighborhood and Eastside Neighborhood. This would allow Northside Neighborhood residents to visit the Pueblo Mall on bicycle and connect the Eastside Neighborhood to Mineral Palace Park and the Northside Neighborhood and Downtown Neighborhood. These changes would primarily benefit local minority and low-income populations.

In the Downtown Neighborhood, the Build Alternatives would construct a split-diamond interchange that would disconnect highway ramps from local streets, provide continuous, organized, and improved access to the Downtown street network, improve signage, and create a gateway to the neighborhood at 14th Street. The construction of the northbound frontage road would require that Bradford Avenue be made into a cul-de-sac on both ends and homes in Goat Hill be acquired. Kelly Road would be extended from Santa Fe Avenue into Goat Hill, providing a second access point to the neighborhood.

South Area

As in the North Area, impacts to population characteristics after construction of either Build Alternative are unlikely. Both Build Alternatives would relocate four businesses and more than 62 jobs in the South Area of the corridor. With relocation, few jobs would be permanently lost. The majority of these businesses are not minority-owned and are not of unique importance to minority or low-income residents.

The Build Alternatives would not impact community cohesion in the South Gate Neighborhood and the southern portion of the Bessemer Neighborhood. Community facilities in the South Area would be positively impacted by the construction of pedestrian trails that would connect JJ Raigoza Park to neighborhoods as far north as the Northside Neighborhood.

Central Area

Existing I-25 Alignment

As in the North and South Areas, impacts to population characteristics after construction of the Existing I-25 Alignment are unlikely. In the Central Area of the corridor, the Existing I-25 Alternative would relocate 30 businesses that employ at least 186. With relocation, few jobs would be permanently lost. The majority of these businesses are not minority-owned and are not of unique importance to minority or low-income residents.

The Existing I-25 Alternative would directly impact community facilities in the Central Area. The construction of a split-diamond interchange between Abriendo Avenue and Northern Avenue would require the acquisition of right-of-way from Benedict. Mitigation proposed for the Existing I-25 Alternative would split Benedict Park into two areas across Mesa Avenue.

Community cohesion in the Grove Neighborhood would not be impacted under the Existing I-25 Alternative. Vehicle access into the Grove Neighborhood would remain unchanged and limited improvements would be made to trail system connections from the neighborhood. Connectivity across I-25 would remain severed for motorists and pedestrians.

Although the Existing I-25 Alternative would require the acquisition of 71 residences from the west Bessemer Neighborhood, the community would benefit from improved local roadway and trail systems that reconnect the neighborhood and restore east/west connectivity that was severed by when I-25 was built. Abriendo Avenue would be connected to Santa Fe Drive, restoring east/west connectivity in the neighborhood that was severed by the construction of I-25. The connections between I-25 and local neighborhood streets at Central Avenue, Minnequa Avenue, and Illinois Avenue would be removed and replaced with connections to major roadways including Abriendo Avenue, Northern Avenue, and Indiana Avenue providing better east/west connectivity for highway users and reserving neighborhood streets for local traffic. These improvements would primarily benefit local minority and low-income populations.

Regional pedestrian connectivity through the Bessemer Neighborhood would be improved with the construction of a trail "backbone" system that would connect JJ Raigoza Park in the south to destinations to the north such as Historic Arkansas River Project, Runyon Field Sports Complex, and Mineral Palace Park. The trails would cross I-25 at Mesa Avenue,

providing additional east-west connectivity within the neighborhood for pedestrians in minority and low-income neighborhoods.

Modified I-25 Alignment

As for the Existing I-25 Alignment, impacts to population characteristics after construction of the Modified I-25 Alignment are unlikely. The Modified I-25 Alternative would relocate 35 businesses, affecting more than 209 employees. With relocation, few jobs would be permanently lost. The majority of these businesses are not minority-owned and are not of unique importance to minority or low-income residents.

The Modified I-25 Alternative would directly impact community facilities in the Central Area by shifting the highway on to park property at Runyon/Fountain Lakes State Wildlife Area and completely acquiring Benedict Park. However, access to Runyon Field Sports Complex would be improved, allowing visitors to access the facility using the extended Stanton Avenue, a local road, rather than from the off-ramp of I-25. In addition, mitigation proposed for Benedict Park would result in a larger contiguous park that would provide a greater benefit to the surrounding community than the Existing I-25 Alternative, which proposes to reconstruct the park across Mesa Avenue. These changes would primarily benefit local minority and low-income populations.

Shifting I-25 east would acquire 34 residences in the east Grove Neighborhood, completely removing the pocket of homes that was isolated when I-25 was built. Because the Grove neighborhood would no longer be bisected by the interstate, neighborhood cohesion could be restored. In addition, the realignment of the interstate would make it possible to substantially increase both north/south and east/west connectivity throughout the Central Area. Santa Fe Avenue would be extended south of the Arkansas River to Minnequa Avenue. This extension would allow residents to use a local roadway to travel from neighborhoods in the south to the Downtown Neighborhood and Northside Neighborhood, instead of having to rely on I-25. The extension would also provide a much needed additional local street crossing of the Arkansas River, reconnecting Santa Fe Avenue to Abriendo Avenue and would restore the local street network that was severed when I-25 was built. These changes would primarily benefit minority and low-income populations.

The Modified I-25 Alternative would require the acquisition of 65 residences from the west Bessemer Neighborhood. Additional connectivity to the north and south is provided by the extension of Stanton Avenue north and west to Santa Fe Avenue and south to Santa Fe Drive. Residents of the Bessemer Neighborhood east of I-25 would be more connected to the rest of the neighborhood, as well as the community resources in the Grove Neighborhood and Downtown Neighborhood. The Stanton Avenue connection was developed directly from community input and reflects the public's desire to avoid the use of I-25 as Pueblo's main street. It also adheres to City of Pueblo long range plans, which show Stanton Avenue connecting to D Street. The overall impact of the Santa Fe Avenue and Stanton Avenue extensions would be the creation of a grid system that improves emergency access, reconnects minority and low-income neighborhoods, and improves neighborhood cohesion.

Regional pedestrian connectivity would be improved through a trail "backbone" system as described for the Existing I-25 Alternative. In addition, the Modified I-25 Alignment would improve pedestrian access through the Grove Neighborhood through the construction of trails and the new street grid network.

Mitigation Measures, Enhancements and Off-Setting Benefits

The CDOT Project Team has incorporated mitigation measures, enhancements, and off-setting benefits to reduce the severity of impacts to minority and low-income populations and avoid disproportionately high and adverse effects. These measures are described below.

Both Build Alternatives would improve safety and increase mobility and connectivity of the transportation network. The community would also benefit from reductions in air pollution emissions from mobile source air toxics (MSAT) anticipated as a result of the implementation of national policy controls. More than 10,000 feet of noise walls would be constructed, which would reduce noise impacts for some residents adjacent to the corridor. CDOT would also remediate hazardous waste sites disturbed by the project, which would lower health and safety risks. In some cases, the Build Alternatives would improve the aesthetics of the corridor.

Both Build Alternatives include changes in the transportation network that would restore east-west and north-south connectivity, improve neighborhood cohesion, and provide local network redundancy. These changes also help to alleviate some of the historic impacts that have occurred within minority and low-income neighborhoods as a result of the Arkansas River flood of 1921 and the original construction of I-25 in 1959. Local residents participated in the identification and development of many of these features.

Key project elements that improve the social and environmental justice environment are listed below:

- **Bridge Reconstruction at Mesa Avenue:** This overpass would be reconstructed as a local roadway facility with the intent of restoring connections between the Bessemer neighborhood east and west of I-25. The new ramps that would be constructed at Northern Avenue would remain disconnected from Mesa Avenue to discourage regional and cut-through traffic. The new bridge would be wide enough to accommodate pedestrian uses and neighborhood activities, such as the local farmer's market.

- **Reconstruction of Northern Avenue:** Northern Avenue would be shifted slightly south of its existing location. The new cross-section of the roadway would accommodate wide sidewalks, improving local pedestrian access across I-25 to Benedict Park on the east and local businesses on the west. A pedestrian plaza would be developed west of I-25 on the current alignment of Northern Avenue. Pedestrians would be able to access the new plaza directly from Northern Avenue.

- **Mitigation for Impacts to Mineral Palace Park and Benedict Park:** Mitigation for impacts to Mineral Palace Park and Benedict Park under either Build Alternative would expand park and recreational resources and improve the quality of the adjacent neighborhoods. The reconstructed portion of Benedict Park south of Mesa Avenue would be safer because it would be surrounded by local streets. It would also be better integrated into the adjacent neighborhoods.

- **Santa Fe Avenue Extension:** Under the Modified I-25 Alternative, Santa Fe Avenue would be extended along the current I-25 alignment. This would improve north-south connectivity and would provide local network redundancy for neighborhoods in the

south to the Downtown Neighborhood and North Side Neighborhood. A roundabout would be constructed at Central Avenue, which would provide a clear distinction between higher traffic transportation infrastructure and local neighborhood streets. The roundabout would also serve as a gateway into the neighborhood, which would improve the visibility and access to the Bessemer Historical Society.

- **Stanton Avenue Extension:** Stanton Avenue currently ends at Locust Street. This feature was designed to maintain a direct connection for the neighborhoods near Benedict Park to neighborhoods and services west of I-25 and improve access to the downtown area. The Stanton Avenue extension would be constructed only under the Modified I-25 Alternative.
- **Trail Connections:** The alley behind Evans Avenue between Minnequa Avenue and Illinois Avenue would be eliminated, and a new north-south trail would be located through this space on the west side of the proposed noise wall. This design option was reviewed and endorsed by each individual homeowner along Evans Avenue. Adding this segment of trail connects minority and low-income neighborhoods to regional and local amenities throughout the corridor. Additionally, it helps to alleviate the historic impact of the original I-25 construction, which left the back of these homes in close proximity to the edge of pavement on the highway, by providing separation through a proposed noise wall and trail feature.
- **Access Revisions:** Exit ramps at Illinois Avenue and Minnequa Avenue would be disconnected to reduce the amount of cut-through traffic in adjacent neighborhoods. In these locations, the ramps that currently route exiting highway traffic onto local roads would be disconnected. This would reduce the number of trucks traveling through these neighborhoods en route to the steel mill. Similarly, Clark Street and D Street would be disconnected from Santa Fe Avenue (converted to cul-de-sacs) to reduce cut-through traffic during events at the Runyon Field Sports Complex.

Summary

Because every neighborhood adjacent to I-25 throughout the affected area has minority and/or low-income populations, impacts from either Build Alternative would be predominantly borne by these populations. However, when off-setting benefits from the project and proposed mitigation are also considered, these impacts would not be considered disproportionately high and adverse. Efforts will continue to be made to ensure meaningful opportunities for public participation. All segments of the population (including minority and low-income populations) will have the opportunity to review the project alternatives, impacts, and any proposed mitigation during the public review and comment period for the Draft Environmental Income Statement.

EXHIBIT 8

Environmental Justice Analysis

Summary of Impacts from the Build Alternatives	Are Impacts Predominantly Borne by Minority/Low-Income Populations?	Are Impacts to Minority/Low-Income Populations Considered Disproportionately High and Adverse?
Social Resources and Economic Conditions		
❖ Changes in the transportation network would restore east-west and north-south connectivity, improve neighborhood cohesion, and provide local network redundancy (Both Build Alternatives, although impact is greater under the Modified I-25 Alternative as a result of the extension of both Stanton Avenue and Santa Fe Avenue). ❖ Acquisition of residences from both the Bessemer Neighborhood (71 under the Existing I-25 Alternative and 65 under the Modified I-25 Alternative) and the Grove Neighborhood (34 under the Modified I-25 Alternative). ❖ Acquisition of businesses (58 under the Existing I-25 Alternative and 65 under the Modified I-25 Alternative) and impacts to jobs (up to 600 jobs under either Build Alternative). ❖ Generation of direct and indirect employment during construction (Both Build Alternatives)	**Yes.** All residential and commercial acquisitions would be from minority and low-income neighborhoods.	**No.** Minority and low-income residents serve to benefit most from restored neighborhood connections and improvements in neighborhood cohesion. CDOT would mitigate property acquisitions and relocation effects by purchasing properties identified for acquisition and providing relocation assistance to displacees. In some cases property owners prefer acquisition (e.g., in the Grove Neighborhood). The majority of businesses affected by either Build Alternative are not minority-owned or of particular importance to minority or low-income populations. Local residents would benefit from additional employment opportunities and the indirect spending associated with construction. CDOT's DBE (disadvantaged business enterprise) program provides a vehicle for increasing the participation of minority businesses in their construction contracts. Typically the goal for DBE participation is identified during the bidding stage of the construction project.
Parks and Recreation		
❖ Acquisition of property from park and recreational resources; in particular, Mineral Palace Park, Fountain Creek Park Land, and Benedict Park (Both Build Alternatives). Impacts to Benedict Park would differ; the Existing I-25 Alternative would acquire 0.42 acre of the park and the Modified I-25 Alternative would acquire the entire 1.92 acre park). ❖ Potential increase in noise levels at Mineral Park, JJ Raigoza Park, and the detention ponds between 29th Street and 24th Street (Both Build Alternatives). ❖ Improved access to Runyon Sports Complex (Modified I-25 Alternative).	**Yes.** The general population of park users would experience some impacts but impacts would be greatest for the minority and low-income residents adjacent to the project corridor.	**No.** Mitigation proposed for impacts to parks and recreational resources would enhance the parks system. Mineral Palace Park would increase in size, and historic features and neighborhood connections to the park would be restored. A new pedestrian trail would be constructed between JJ Raigoza Park in the South Gate Neighborhood to the North Side Neighborhood. Benedict Park would be reconstructed under both Build Alternatives - the Modified I-25 Alternative would provide a larger contiguous park. With noise walls, noise levels at Mineral Park, JJ Raigoza Park, and the detention ponds would be lower than they are today. Minority and low-income residents would benefit most from these measures.

EXHIBIT 8

Environmental Justice Analysis

Summary of Impacts from the Build Alternatives	Are Impacts Predominantly Borne by Minority/Low-Income Populations?	Are Impacts to Minority/Low-Income Populations Considered Disproportionately High and Adverse?
Noise		
❖ Noise levels for the design year could increase up to 7 dBA over 2003 existing levels (Both Build Alternatives).	**Yes.** All of the noise impacts would occur in the minority and low-income neighborhoods adjacent to the project corridor.	**No.** Mitigation for noise impacts (walls and berms) would reduce noise levels for some residents and in some locations noise levels would be lower than they are today.
Visual		
❖ Visual impacts resulting from the installation of retaining walls, noise barriers, structures, and other project elements (Both Build Alternatives).	**Yes.** While these elements would be dispersed throughout the project corridor and would affect the travelling public, impacts would be greatest for the minority and low-income residents adjacent to the project corridor.	**No.** In some cases the Build Alternatives would improve the aesthetics of the corridor, benefiting local residents and off-setting adverse effects.
Air Quality		
❖ No adverse air quality impacts are anticipated (Both Build Alternatives).	**No.** No adverse air quality impacts are anticipated.	**No.** No adverse air quality impacts are anticipated. Minority and low-income populations would benefit from the anticipated reduction in mobile source air toxics emissions.
Construction		
❖ Temporary construction related impacts, such as an increase in noise, fugitive dust, detours, traffic delays, disturbance of hazardous waste sites, and potential disruptions in utility service (Both Build Alternatives, although under the Modified I-25 Alternative fewer major disruptions to the traveling public would be anticipated between Ilex Street and Nevada Avenue, where the highway would be constructed on a new alignment).	**Yes.** While the general population would experience some impacts throughout construction, impacts would be greatest for the minority and low-income residents adjacent to the project corridor.	**No.** The implementation of Best Management Practices throughout construction would minimize some of these impacts. The long-term benefits provided by the project would likely outweigh the remaining short-term adverse effects during construction.

Note: This analysis considers resources for which adverse effects have been identified. Impacts to natural resources (i.e., biological resources, wetlands, and floodplains) have been assumed not to have any direct impacts or indirect effects on human populations and are not included in this analysis.

CDOT = Colorado Department of Transportation
dBA = A-weighted decibel
I-25 = Interstate 25

Resources

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