

**I-70 Mountain Corridor PEIS Environmental Justice Technical Report**  
August 2010

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**Table of Contents**

**Section 1. Purpose of the Report ..... 1**

**Section 2. Background and Methodology ..... 1**

**Section 3. Description of Alternatives ..... 2**

    3.1 Minimal Action Alternative ..... 2

    3.2 Transit Alternatives ..... 3

        3.2.1 Rail with Intermountain Connection ..... 3

        3.2.2 Advanced Guideway System ..... 3

        3.2.3 Dual-mode Bus in Guideway ..... 3

        3.2.4 Diesel Bus in Guideway ..... 4

    3.3 Highway Alternatives ..... 4

        3.3.1 Six-Lane Highway 55 mph Alternative ..... 4

        3.3.2 Six-Lane Highway 65 mph Alternative ..... 4

        3.3.3 Reversible Lanes Alternative ..... 4

    3.4 Combination Alternatives ..... 4

    3.5 Preferred Alternative—Minimum and Maximum Programs ..... 6

    3.6 No Action Alternative ..... 6

**Section 4. Affected Environment ..... 6**

    4.1 Minority Populations ..... 6

    4.2 Low-Income Populations ..... 8

    4.3 Affordable Housing ..... 13

        4.3.1 Garfield County ..... 13

        4.3.2 Eagle County ..... 13

        4.3.3 Summit County ..... 14

        4.3.4 Clear Creek County ..... 14

    4.4 Public Transportation ..... 15

        4.4.1 Garfield County ..... 16

        4.4.2 Eagle County ..... 17

        4.4.3 Summit County ..... 17

        4.4.4 Clear Creek County ..... 17

**Section 5. Environmental Consequences ..... 17**

    5.1 Direct Impacts ..... 18

    5.2 Indirect Impacts ..... 19

    5.3 Construction Impacts ..... 19

    5.4 Impacts in 2050 ..... 19

    5.5 Conclusion ..... 20

**Section 6. Tier 2 Considerations ..... 20**

**Section 7. Mitigation ..... 21**

**Section 8. Specialized Outreach and Agency Coordination ..... 21**

    8.1.1 Scoping Meetings – January to June 2000 ..... 21

    8.1.2 Community Profile Research — 2001 ..... 22

    8.1.3 Environmental Justice Interviews – 2002 ..... 23

    8.1.4 Community Outreach Meetings – 2002 to 2003 ..... 24

    8.1.5 Newsletters and Event Participation – 2000 to 2004 ..... 25

    8.1.6 Collaborative Effort and Context Sensitive Solutions – 2005 to 2010 ..... 28

    8.1.7 Outreach for Revised Draft PEIS ..... 29

**Section 9. References ..... 29**

**List of Tables**

Table 1. Corridor Communities with Minority Populations Higher than County Average ..8  
Table 2. Corridor Communities with Low-Income Populations above County Average.....9  
Table 3. Socioeconomic and Demographic Variables..... 10  
Table 4. Corridor County Commuting Patterns, 2000 Census..... 15  
Table 5. Environmental Justice Research Questionnaire.....22  
Table 6. Environmental Justice Issues and Alternative Preferences Identified by  
Community Leaders ..... 24  
Table 7. Community Outreach Meetings (2002 to 2003).....25  
Table 8. Newsletter Distribution .....26  
Table 9. Newsletter Mailings .....27

**List of Figures**

Figure 1. Minority Populations across the Corridor ..... 7

**List of Charts**

Chart 1. Place of Work (2000 Census) ..... 16

## Section 1. Purpose of the Report

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This *I-70 Mountain Corridor PEIS Environmental Justice Technical Report* supports the information contained in **Chapter 3, Section 9** of the I-70 Mountain Corridor Programmatic Environmental Impact Statement (PEIS) (CDOT, 2010). It identifies

- Methods used to identify minority and low-income populations in the Corridor and determine potential impacts of alternatives.
- Coordination with local, state, and federal agencies.
- Description of the minority and low-income populations in the Corridor.
- Consequences of the Action Alternatives evaluated in the I-70 Mountain Corridor PEIS.
- Considerations for Tier 2 Processes.
- Proposed programmatic mitigation strategies for any disproportionate impacts to minority and low-income populations.

## Section 2. Background and Methodology

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On February 11, 1994, President Clinton signed Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority and Low-income Populations.” The Executive Order focuses federal attention on the environmental and human health conditions of minority and low-income populations, promotes nondiscrimination in federal programs affecting human health and the environment, and provides minority and low-income populations access to public information and an opportunity to participate in matters relating to the environment. The United States Department of Transportation (US DOT) issued an order on environmental justice in 1997 (DOT Order 5610.2), followed by the Federal Highway Administration (FHWA) in 1998 (FHWA Order 6640.23). Both of these orders address environmental justice activities and responsibilities within transportation projects. Minority and low-income populations are defined in both the US DOT and FHWA orders as follows:

- **Minority** refers to persons who are Black (having origins in any of the black racial group of Africa or African American); Hispanic (of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race); Asian American (having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or Native American Indian and Alaskan (having origins in any of the original people of North America maintaining cultural identification through tribal affiliation or community recognition). The United States Census Bureau separates Hawaiian (including people of the Pacific Islands) from Asian American. For this analysis, minority populations are indicated in Census blocks where more than 50 percent of the population is considered minority. See **Section 4.1** of this report for additional discussion.
- **Low-income** generally refers to household income at or below the Department of Health and Human Services (HHS) poverty guidelines. Low-income is defined using the Community Development Block Grant (CDBG) income guidance threshold, which considers individuals and households earning less than 50 percent of the area median income of a community to be low-income. This measure differs from the lead agencies’ standard practices to define low-income according to United States Health and Human Services (HHS) poverty guidelines or United States Department of Housing and Urban Development (HUD) income limits (established for the Section 8 program). The Colorado Department of Transportation (CDOT) used the CDBG

## Environmental Justice Technical Report

definition for this analysis because the CDBG low-income threshold is approximately 20 percent to 40 percent higher than HHS poverty guidelines and more closely reflects the economic conditions, housing market, and variability among income levels within the Corridor. See **Section 4.2** of this report for additional discussion.

The Federal Highway Administration (FHWA) views environmental justice as an extension of Title VI of the Civil Rights Act of 1964 and the Civil Rights Restoration Act of 1984. These nondiscrimination laws require that “federal-aid recipients, sub-recipients, and contractors prevent discrimination and ensure nondiscrimination in all of their programs and activities, whether these programs and activities are federally funded or not.” The factors for discrimination include race, color, national origin, sex, disability, and age. “The effort to prevent discrimination must address, but not be limited to a program’s impacts, access, benefits, participation, treatment, services, contract opportunities, training opportunities, investigations of complaints, allocations of funds, right-of-way, research, planning and design.” *Title VI of the Civil Rights Act of 1964 and the Civil Rights Restoration Act of 1984*.

The lead agencies coordinated with the Environmental Protection Agency, the Northwest Colorado Council of Governments (NWCCOG), and representatives from the five Corridor counties during the scoping period and developed the following approach for evaluating environmental justice:

- Establish a geographic boundary for the analysis that includes Garfield, Eagle, Summit, Clear Creek, and Jefferson counties.
- Identify the percentage of minority populations in the Corridor counties and communities using 2000 Census datasets at the Census block level.
- Identify the percentage of low-income populations in the Corridor counties and communities using 2000 CDBG data sets. A threshold of 50 percent of AMI for a household of four people was established because the CDBG data sets define low-income as incomes at or below 50 percent of AMI. This is also the threshold used by the Colorado Department of Transportation in their statewide environmental justice analysis.
- Identify the communities with an AMI less than the county average.
- Map the 2000 Census block groups for Corridor communities that exceeded the county average for low-income populations.
- Coordinate with the NWCCOG on affordable housing in Eagle, Summit, Grand, and Pitkin counties and on the threshold used to define low-income.

Although the United States Census Bureau and CDBG datasets gave a demographic profile of the study area, further research was carried out to identify “pockets” of minority and/or low-income individuals that may have been overlooked by aggregated demographic data. This involved coordination with municipal planners, county representatives, housing authorities, health and human services, and school superintendents throughout the Corridor. These efforts are detailed in **Section 8** of this report.

## Section 3. Description of Alternatives

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This section summarizes the alternatives considered in the I-70 Mountain Corridor PEIS. A more complete description of these alternatives is available in **Chapter 2** of the PEIS and in the *I-70 Mountain Corridor PEIS Alternatives Screening and Development Technical Report* (CDOT, August 2010).

### 3.1 Minimal Action Alternative

The Minimal Action Alternative provides a range of local transportation improvements along the Corridor without providing major highway capacity widening or dedicated transit components. The Minimal

Action Alternative includes elements of the Transportation System Management family and the Localized Highway Improvements family, including: transportation management, interchange modifications, curve safety modifications, and auxiliary lanes. These elements are also incorporated into the other Action Alternative Packages.

## 3.2 Transit Alternatives

Four Transit alternatives are considered in the PEIS as a reasonable range representing the Fixed Guideway and Rubber Tire Transit families:

- Rail with Intermountain Connection Alternative
- Advanced Guideway System Alternative
- Dual-Mode Bus in Guideway Alternative
- Diesel Bus in Guideway Alternative

### 3.2.1 Rail with Intermountain Connection

The Rail with Intermountain Connection Alternative would provide rail transit service between the Eagle County Regional Airport and C-470. Between Vail and C-470 the rail would be primarily at-grade running adjacent to the I-70 highway. The segment between Vail and the Eagle Count Airport would be constructed within the existing Union Pacific Railroad right-of-way. A new Vail Transportation Center, including new track, would be constructed between Vail and Minturn to complete the connection between the diesel and electric trains. This alternative also includes auxiliary lane improvements at eastbound Eisenhower-Johnson Memorial Tunnels to Herman Gulch and westbound Downieville to Empire and the other Minimal Action Alternative elements except for curve safety modifications at Dowd Canyon, buses in mixed traffic and other auxiliary lane improvements.

### 3.2.2 Advanced Guideway System

The Advanced Guideway System Alternative would provide transit service between the Eagle County Regional Airport and C-470 with a 24-foot-wide, 118 mile, fully elevated system. The Advanced Guideway System Alternative would use a new technology that provides higher speeds than the other Fixed Guideway Transit technologies studied for the PEIS. Any Advanced Guideway System would require additional research and review before it could be implemented in the Corridor. Although the Federal Transit Administration-researched urban magnetic levitation system is considered in the PEIS, the actual technology would be developed in a Tier 2 process. This alternative includes the same Minimal Action elements as described previously for the Rail with Intermountain Connection Alternative.

### 3.2.3 Dual-mode Bus in Guideway

This alternative includes a guideway located in the median of the I-70 highway with dual-mode buses providing transit service between the Eagle County Regional Airport and C-470. This guideway would be 24 feet wide with 3 foot high guiding barriers and would accommodate bidirectional travel. The barriers direct the movement of the bus and separate the guideway from general purpose traffic lanes. While traveling in the guideway, buses would use guidewheels to provide steering control, thus permitting a narrow guideway and providing safer operations. The buses use electric power in the guideway and diesel power when traveling outside the guideway in general purpose lanes. This alternative includes the same Minimal Action Alternative elements as described previously for the Rail with Intermountain Connection Alternative.

### 3.2.4 Diesel Bus in Guideway

This includes the components of the Dual-mode Bus in Guideway Alternative except that the buses use diesel power at all times.

## 3.3 Highway Alternatives

Three Highway alternatives are advanced for consideration in the PEIS as a reasonable range and representative of the Highway improvements, including Six-Lane Highway 55 mph, Six-Lane Highway 65 mph, and Reversible/HOV/HOT Lanes. The Highway alternatives considered both 55 and 65 mph design speeds to 1) establish Corridor consistency and 2) address deficient areas within the Corridor. The 55 mph design speed establishes a consistent design speed throughout the Corridor, which currently does not exist. The 65 mph design speed further improves mobility and addresses safety deficiencies in key locations such as Dowd Canyon and the Twin Tunnels. Both the 55 mph and the 65 mph design speed options are augmented by curve safety improvements, but the 65 mph design speed constructs tunnels in two of the locations: Dowd Canyon and Floyd Hill/Hidden Valley.

### 3.3.1 Six-Lane Highway 55 mph Alternative

This alternative includes six-lane highway widening in two locations: Dowd Canyon and the Eisenhower-Johnson Memorial Tunnels to Floyd Hill. This alternative includes auxiliary lane improvements at eastbound Avon to Post Boulevard, both directions on the west side of Vail Pass, eastbound Frisco to Silverthorne and westbound Morrison to Chief Hosa, and the Minimal Action Alternative elements except for buses in mixed traffic and other auxiliary lane improvements.

### 3.3.2 Six-Lane Highway 65 mph Alternative

This alternative is similar to the Six-Lane Highway 55 mph Alternative; it includes the same six-lane widening and all of the Minimal Action Alternative elements except the curve safety modification at Dowd Canyon. The higher design speed of 65 mph alternatives requires the curve safety modifications near Floyd Hill and Fall River Road to be replaced with tunnels.

### 3.3.3 Reversible Lanes Alternative

This alternative is a reversible lane facility accommodating high occupancy vehicles and high occupancy toll lanes. It changes traffic flow directions as needed to accommodate peak traffic demands. It includes two additional reversible traffic lanes from the west side of the Eisenhower-Johnson Memorial Tunnels to just east of Floyd Hill. From the Eisenhower-Johnson Memorial Tunnels to US 6, two lanes are built with one lane continuing to US 6 and the other lane to the east side of Floyd Hill. This alternative includes one additional lane in each direction at Dowd Canyon. This alternative includes the same Minimal Action Alternative Elements as the Six-Lane Highway 55 mph Alternative.

## 3.4 Combination Alternatives

Twelve Combination alternatives, combining Highway and Transit alternatives are considered in the PEIS. Four of these alternatives involve the buildout of highway and transit components simultaneously. Eight alternatives include preservation options, the intent of which is to include, or not preclude, space for future modes in the I-70 Mountain Corridor. The Combination alternatives all include the Six-Lane Highway 55 mph Alternative for highway components.

**Combination Rail and Intermountain Connection and Six-Lane Highway Alternative**—This alternative includes the 55 mph six-lane highway widening between Floyd Hill and Eisenhower-Johnson Memorial Tunnels, the Rail and Intermountain Connection transit components, and most of the



components of the Minimal Action Alternative. The exception is that only one of the Minimal Action auxiliary lane improvements (from Morrison to Chief Hosa westbound) is included.

**Combination Advanced Guideway System and Six-Lane Highway Alternative**—This alternative includes the 55 mph six-lane highway widening between Floyd Hill and Eisenhower-Johnson Memorial Tunnels and the Advanced Guideway System transit components. It includes the same Minimal Action Alternative elements as the Combination Rail and Intermountain Connection and Six-Lane Highway Alternative.

**Combination Bus in Guideway (Dual-Mode) and Six-Lane Highway Alternative**—This alternative the 55 mph six-lane highway widening between Floyd Hill and Eisenhower-Johnson Memorial Tunnels and the dual-mode bus in guideway transit components. It includes the same Minimal Action Alternative elements as the Combination Rail and Intermountain Connection and Six-Lane Highway Alternative.

**Combination Bus in Guideway (Diesel) and Six-Lane Highway Alternative**—This alternative includes the 55 mph six-lane highway widening between Floyd Hill and Eisenhower-Johnson Memorial Tunnels and the diesel bus in guideway transit components. It includes the same Minimal Action Alternative elements as the Combination Rail and Intermountain Connection and Six-Lane Highway Alternative.

**Combination Rail & Intermountain Connection and Preservation of Six-Lane Highway Alternative**—This alternative includes the Rail and Intermountain Connection Alternative and preserves space to construct the Six-Lane Highway 55 mph at a later point.

**Combination Advanced Guideway System and Preservation of Six-Lane Highway Alternative**—This alternative includes the Advanced Guideway System and preserves space to construct the Six-Lane Highway 55 mph at a later point.

**Combination Bus in Guideway (Dual-Mode) and Preservation of Six-Lane Highway Alternative**—This alternative includes the Combination Bus in Guideway (Dual-Mode) Alternative and preserves space to construct the Six-Lane Highway 55 mph at a later point.

**Combination Bus in Guideway (Diesel) and Preservation of Six-Lane Highway Alternative**—This alternative includes the Bus in Guideway (Diesel) Alternative and preserves space to construct the Six-Lane Highway 55 mph at a later point.

**Combination Preservation of Rail and Intermountain Connection and Six-Lane Highway Alternative**—This alternative includes the Six-Lane 55 mph Highway Alternative and also preserves space to construct the Rail and Intermountain Connection at a later point.

**Combination Preservation of Advanced Guideway System and Six-Lane Highway Alternative**—This alternative includes the Six-Lane 55 mph Highway Alternative and also preserves space to construct the Advanced Guideway System at a later point.

**Combination Preservation of Bus in Guideway (Dual-Mode) and Six-Lane Highway Alternative**—This alternative includes the Six-Lane Highway Alternative and also preserves space to construct the Bus in Guideway (Dual-Mode) at a later point.

**Combination Preservation of Bus in Guideway (Diesel) and Six-Lane Highway Alternative**—This alternative includes the Six-Lane Highway Alternative and also preserves space to construct the Bus in Guideway (Diesel) at a later point.

### 3.5 Preferred Alternative—Minimum and Maximum Programs

The Preferred Alternative provides for a range of improvements. Both the Minimum and the Maximum Programs include the Advanced Guideway System Alternative. The primary variation between the Minimum and Maximum Programs is the extent of the highway widening between the Twin Tunnels and the Eisenhower-Johnson Memorial Tunnels. The Maximum Program includes six-lane widening between these points (the Twin Tunnels and the Eisenhower-Johnson Memorial Tunnels), depending on certain events and triggers and a recommended adaptive management strategy.

### 3.6 No Action Alternative

The No Action Alternative provides for ongoing highway maintenance and improvements with committed funding sources highly likely to be implemented by the 2035 planning horizon. The projected highway maintenance and improvements are committed whether or not any other improvements are constructed with the I-70 Mountain Corridor project. Specific improvements under the No Action Alternative include highway projects, park and ride facilities, tunnel enhancements, and general maintenance activities.

## Section 4. Affected Environment

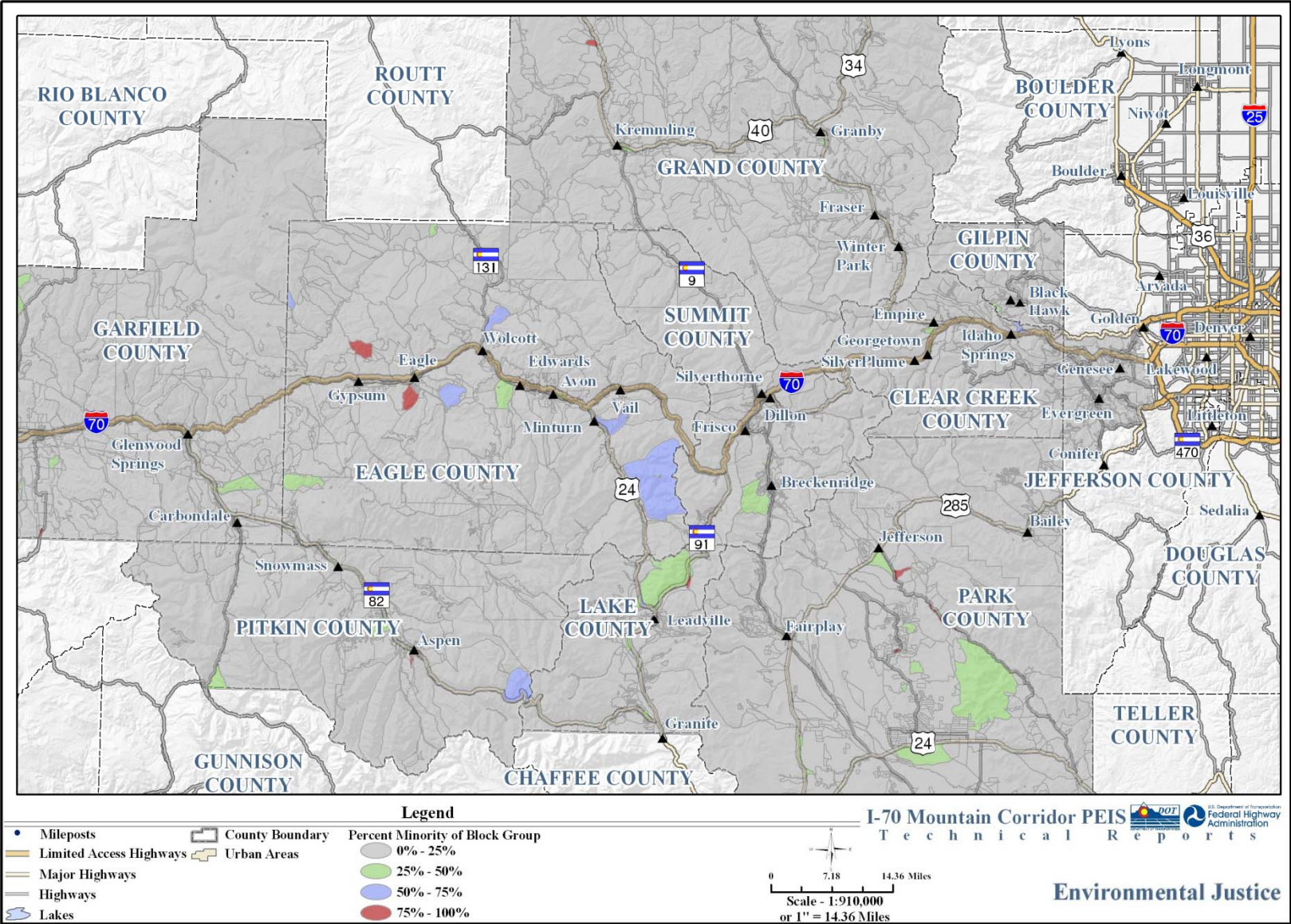
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### 4.1 Minority Populations

In recent years, the number of minority residents has increased within the Corridor. This growth has resulted primarily from large numbers of Hispanics (and a small number of Eastern European and West African immigrants) arriving in the Corridor to fill service industry and construction jobs. The increase in minority populations has occurred primarily in Garfield and Eagle counties and, to some degree, Summit County. According to United States Census Bureau data from 2007, Clear Creek County has not experienced a similar rise in the number of minority residents.

Census 2000 data indicate a low percentage of minority populations in the Corridor, ranging from 2 percent to 30 percent, and averaging 9 percent across the Corridor. Because much of the Corridor consists of public lands, populations (and corresponding Census block groups) tend to be concentrated in established communities. The 2000 Census data indicate that minorities are dispersed throughout the communities and do not number more than 50 percent in any block group in the Corridor (see **Figure 1**). Those communities adjacent to the I-70 highway that have minority populations greater than the county average are shown in **Table 1**.

Figure 1. Minority Populations across the Corridor



**Table 1. Corridor Communities with Minority Populations Higher than County Average**

County/Community	Minority Population (Percentage)
Eagle County Average	14.6
Gypsum	19.0
Eagle	Below average
Avon	28.4
Eagle-Vail	Below average
Vail	Below average
Summit County Average	8.2
Dillon	17.7
Clear Creek County Average	3.6
Silver Plume	16.7
Lawson, Downieville, and Dumont	8.2
Idaho Springs	5.3

More recent data from the United States Census Bureau (2007) indicates that minority populations in the Corridor have remained less than 50 percent of the overall population. Data show that Garfield and Eagle counties continue to have the higher percentage of minority populations (28 percent and 31 percent, respectively). Minority populations in all of the Corridor counties range from 10 percent to 31 percent. This demonstrates that in connection with the overall rise in population, the minority populations have also risen.

Although the United States Census Bureau data do not indicate the presence of minority populations in the Corridor (defined for this study as Census blocks where more than 50 percent of the population is considered minority), county and municipal officials report that a large number of undocumented workers residing within Eagle and Garfield counties are not reflected in Census figures and should be considered in the analysis.

## 4.2 Low-Income Populations

Percentages of low-income households in the five counties range from 17 percent in Eagle County to 21 percent in Garfield County. Low-income households for towns within the counties range from 9 percent (Dotsero and Lawson, Downieville, and Dumont) to 27 percent (Silver Plume). More recent data suggest that Silver Plume may have a higher percentage of low-income households than is represented by the 2000 Census and the Town of Silver Plume has indicated that households along the south side of Water Street and Madison Avenue, which back up to the north edge of the I-70 highway, represent low-income households in Silver Plume near the I-70 highway (Colorado Department of Local Affairs, 2004). Those updated data do not change the relative comparison of low-income populations in the Corridor, as Silver Plume has the highest number of low-income households in the Corridor under both measures. Both the lowest and highest percentage communities for the entire Corridor are found in Clear Creek County. The communities adjacent to the I-70 highway that have low-income populations greater than the county average are shown in **Table 2**.

**Table 2. Corridor Communities with Low-Income Populations above County Average**

County/Community	Low-Income (Percentage)
Eagle County Average	16.78
Gypsum	Below average
Eagle	19.27
Avon	21.31
Eagle-Vail	17.88
Vail	20.46
Summit County Average	19.23
Dillon	20.11
Clear Creek County Average	18.74
Silver Plume	27.03
Lawson, Downieville, and Dumont	Below average
Idaho Springs	21.39

Although the United States Census Bureau and CDBG data do not indicate the presence of low-income populations in the Corridor (defined for this study as individuals and households earning less than 50 percent of the AMI of a community), small groups of low-income populations might be found in areas not recognized by the data. However, the small number does not substantially change the percentages identified that are relevant at this first tier of analysis. It is also possible that smaller “pockets” of low-income populations could be present and not reflected in the United States Census Bureau data because the block groups account for larger geographic and population areas. Affordable low-income housing might be located close to highway facilities, as these locations are less desirable (and thus more affordable) than areas located farther from the highway

. details the demographic variables used to evaluate the presence of minority and low-income populations in the Corridor. The data indicate that minority and low-income residents are distributed throughout the Corridor and that no discrete or concentrated areas of minority or low-income populations exist along the Corridor.

Table 3. Socioeconomic and Demographic Variables

Counties and Towns*	Population & Housing					Low Income Population				Government Assistance			Housing Occupancy				Rental Costs	
	Population	Housing Units	Number of Households	Average Household Size	Minority Population	Median Household Income (\$)	CDBG 50% of Median Income (\$)	Number of Households at or Below 50% of Median Household Income **	Percentage of Households at or Below 50% of Median Household Income **	Households Receiving Social Security Income	Households Receiving Supplemental Security Income	Households Receiving Public Assistance Income	Housing Units Vacant	Housing Units Owner Occupied	Housing Units Renter Occupied	#Units Available <60% of AML for Single Family (sf) and Condos & Townhomes (ct)	Median Rent Paid (\$)	% of Household Income Paid in Median Gross Rent
<b>Garfield County</b>	43,791	17,336	16,229	2.65	4,397	47,016	23,508	3,415	21.04	3,028	374	297	1,107	10,572	5,657	74 sf 9 ct	576	25.8
Glenwood Springs	7,736	3,353	3,216	2.37	824	43,934	21,967	498	15.21	683	65	27	131	1,802	1,472		641	26.4
<b>Eagle County</b>	41,659	22,111	15,148	2.73	6,101	62,682	31,341	2,542	16.78	1,221	114	193	6,963	9,655	5,493	0 sf 4 ct	952	24.7
<b>Dotsero</b> (Block Group)	650	286	204	3.19	194	41,667	20,833	19	9.27	31	0	0	78	147	58		683	17.2
Gypsum	3,654	1,210	1,187	3.17	695	59,671	29,835	166	14.26	81	13	52	65	864	300		785	23.0
Eagle	3,032	1,116	1,064	2.80	315	62,750	31,375	201	19.27	130	3	13	53	685	358		738	24.1
<b>Wolcott</b> (BlockGroup)	748	266	250	2.99	7	81,564	40,782	24	9.72	23	0	0	12	220	27		738	18.8
Edwards	8,257	3,953	2,852	2.89	240	70,869	35,434	475	16.35	191	13	19	1,033	2,071	835		1,057	23.8
Avon	5,561	2,557	1,890	2.81	1,578	56,921	28,460	391	21.31	85	0	27	702	899	936		954	30.4
Eagle-Vail	2,887	1,482	1,083	2.66	197	87,297	43,648	199	17.88	43	3	0	394	766	347		1,279	24.1
Minturn	1,068	448	399	2.68	192	51,736	25,868	85	20.78	37	6	8	49	219	190		734	23.7
Vail	4,531	5,389	2,165	2.09	235	56,680	28,340	441	20.46	197	20	17	3,231	1,136	1,019		904	24.2
<b>Summit County</b>	23,548	24,201	9,120	2.48	1,922	56,587	28,293	1,754	19.23	698	48	85	15,081	5,382	3,738	10 sf 97 ct	818	24.5
Frisco	2,443	2,727	1,053	2.32	11	62,267	31,133	159	15.57	80	16	8	1,736	565	456		954	22.3
Silverthorne	3,196	1,582	1,103	2.90	567	58,839	29,419	188	17.15	50	0	14	470	580	516		850	25.3
Keystone	825	2,606	327	2.23	60	43,654	21,827	73	23.62	38	0	8	2,259	61	248		349	14.6
Dillon	802	1,280	369	2.17	32	49,821	24,910	73	20.11	53	1	16	914	197	166		736	25.9

Counties and Towns*	Population & Housing					Low Income Population				Government Assistance			Housing Occupancy				Rental Costs	
	Population	Housing Units	Number of Households	Average Household Size	Minority Population	Median Household Income (\$)	CDBG 50% of Median Income (\$)	Number of Households at or Below 50% of Median Household Income **	Percentage of Households at or Below 50% of Median Household Income **	Households Receiving Social Security Income	Households Receiving Supplemental Security Income	Households Receiving Public Assistance Income	Housing Units Vacant	Housing Units Owner Occupied	Housing Units Renter Occupied	#Units Available <60% of AMI for Single Family (sf) and Condos & Townhomes (ct)	Median Rent Paid (\$)	% of Household Income Paid in Median Gross Rent
<b>Clear Creek County</b>	9,322	5,128	4,019	2.31	338	50,997	25,498	753	18.74	603	89	45	1,109	3,052	967	17 sf 15 ct	575	25.7
Bakerville/ Graymont (includes S. Georgetown)	647	441	310	1.95	18	43,438	21,719	50	16.23	47	11	2	132	180	128		531	23.7
Silver Plume	203	134	93	2.18	34	35,208	17,604	30	27.03	4	2	2	30	45	66		508	28.1
Georgetown	1,088	670	503	2.08	17	42,969	21,484	74	15.26	78	11	5	167	282	203		580	25.9
Empire	355	179	163	2.18	9	32,159	16,079	32	20.00	17	3	0	22	102	58		422	28.4
Lawson, Downieville, and Dumont	364	156	143	2.55	30	47,813	23,906	13	8.72	33	8	0	17	131	18		725	27.5
Fall River / St. Marys / Alice (Block Group)	476	391	202	2.36	5	51,042	25,521	37	18.32	31	0	5	180	192	10		1,125	50.0
Idaho Springs	1,889	904	841	2.25	100	39,643	19,822	181	21.39	180	29	26	67	489	357		571	25.4
Floyd Hill Area (Block Group)	2,326	1,069	959	2.43	94	70,300	35,150	194	20.04	114	20	5	116	866	102		943	24.6
<b>Jefferson County</b>	527,056	212,488	206,067	2.52	49,602	57,339	28,670	41,634	20.20	37,911	4,302	2,887	6,421	149,395	56,672	18 sf 183 ct	695	25.9
Evergreen	9,216	3,840	3,591	2.56	314	79,380	39,690	742	20.66	473	5	34	241	2,938	653		634	24.3
Kittredge	954	426	400	2.39	34	55,982	27,991	71	17.07	82	3	19	41	298	118		N/A	22.5
Genesee	3,699	1,562	1,511	2.45	68	132,077	66,039	211	14.02	216	9	9	55	1421	84		850	24.5

## Environmental Justice Technical Report

Counties and Towns*	Population & Housing					Low Income Population				Government Assistance			Housing Occupancy			Rental Costs	
	Population	Housing Units	Number of Households	Average Household Size	Minority Population	Median Household Income (\$)	CDBG 50% of Median Income (\$)	Number of Households at or Below 50% of Median Household Income **	Percentage of Households at or Below 50% of Median Household Income **	Households Receiving Social Security Income	Households Receiving Supplemental Security Income	Households Receiving Public Assistance Income	Housing Units Vacant	Housing Units Owner Occupied	Housing Units Renter Occupied	#Units Available <60% of AML for Single Family (sf) and Condos & Townhomes (ct)	Median Rent Paid (\$)

\* Communities listed in red are sampled from 2000 Census Block Group information. This information may or may not include a portion of the incorporated towns listed. Census Block Group geographies are large and do not necessarily represent the characteristics of the specific unincorporated towns listed.

\*\* Median household income levels in the 2000 Census are reported in \$5,000 increments up to \$50,000; after \$50,000, the income levels increase incrementally (by \$10,000, \$15,000, \$25,000, and \$50,000). The CDBG 50% of median income levels were rounded to the nearest \$5,000 increment to derive the number of households and percentage of households at or below poverty. This information is derived from data interpolated from an average of a 1/6th sampling for the areas in questions. These numbers are estimates and do not necessarily represent the exact number of households at or below the CDBG 50% of median income poverty levels established for the project.



## 4.3 Affordable Housing

Lack of affordable housing is a concern for low-income households in the Corridor. The United States Department of Housing and Urban Development considers housing to be affordable if housing costs (rent or mortgage plus utilities) account for no more than 30 percent of household income. According to the Colorado Department of Local Affairs 2009 population estimates, population in Garfield and Clear Creek counties is projected to increase by more than 89,000 and 5,500, respectively (more than triple the existing population in Garfield County) by 2035, while employment is projected to grow by only 37,200 and 1,450, respectively (The I-70 Mountain Corridor PEIS Social and Economic Values Technical Report (CDOT, August 2010) contains detailed information about the methodology and results for population and employment projections in the Corridor). Conversely, Summit County is projected to have higher employment growth (27,300) as compared to population growth (12,400). The increase in population and the demand for second homes in some of the counties have escalated land and home prices, decreasing the availability of affordable housing. Research conducted by the NWCOG indicates that the possibility of home ownership is becoming less likely for the workforce in areas where these increases are occurring. Housing costs are even more of a problem for the lowest income workers who are being pushed out of affordable rental units because workers with higher incomes cannot afford to purchase homes themselves. Employers are considering the value of providing employer-assisted housing and employee housing units to retain workers and avoid serious labor shortages. Also recommended is the development of employee housing units for both seasonal workers and year-round workers to provide a stable community environment. Employer assisted housing includes programs in which the employer provides down payment assistance, homebuyer education, damage deposit loans/guarantees, and employer sponsored new developments.

Federal programs, such as Section 8 certificates and vouchers, provide tenant-based subsidies for rents paid by low- and very low-income (30 percent of adjusted median income) households. Tenant payments are based on income. Section 8 rental subsidies cover the difference between tenant payments and the unit's market rent. As of January 2010, very few Section 8 housing exists within the Corridor. Riverview Apartments in Avon is the only Section 8 complex in Eagle County and has a 6-year waiting list.

**Sections 4.3.1** through **Section 4.3.4** summarize affordable housing programs in four of the five counties in the study area for environmental justice (Garfield, Eagle, Summit, and Clear Creek). Jefferson County is not included in the discussion because its economy and housing trends are tied to the Denver metropolitan area rather than to the Corridor. Further, the housing affordability issues within the Corridor, such as a rising demand for second homes and increasing housing costs are not reflected in Jefferson County.

### 4.3.1 Garfield County

Garfield County's Unified Land Use Resolution (effective January 1, 2009) requires all new developments to provide units that are affordable to families with incomes equal to or less than 80 percent of the county median income. Specific guidelines are outlined in the Unified Land Use Resolution. In 2008, the Garfield County Affordable Housing Program worked with a builder to sell 20 homes in 2008 in the Ironbridge Mountain Community (Garfield County, 2008).

### 4.3.2 Eagle County

Eagle County has a number of programs in effect and each town within the county has an affordable housing program. There is for-sale housing, which is deed-restricted to limit occupancy to persons who work in the county. A rental subsidy program is available for very low-income residents, and programs are available to provide housing assistance to qualifying Eagle County homebuyers. As of January 2010, Section 8 housing in Avon (Riverview) had a 6-month to 2-year waiting list. Affordable housing is also

## Environmental Justice Technical Report

provided by Lake Creek Village (an affordable rental complex in Edwards) and for seniors and disabled persons, by the Golden Creek Eagle Senior Apartments.

### 4.3.3 Summit County

In 2009, Summit County completed an updated County Master Plan to identify potential locations for affordable workforce housing. In this plan, Summit County is divided into four basin areas, each with an individual Master Plan. These Master Plans were adopted in October 2009. The Corridor is located within the Lower Blue, Snake, and Ten Mile Basins Master Plans (Summit County, 2009). Each basin Master Plan provides information on the existing inventory of local resident housing, identifies the location of potential affordable workforce housing sites, and contains guidelines for those locations and specific affordable workforce housing policies/actions.

The Summit Combined Housing Authority was formed to assist Summit County residents with homebuyer education, down payment assistance, and home rehabilitation loans. The Housing Authority also is charged with the administration of the Housing Choice Section 8 Voucher Program (although there is no designated Section 8 Housing in Summit County).

Summit County has mortgage credit certificates to eligible borrowers. The Summit County works with persons holding vouchers for Section 8 by assisting with commuting to Summit County and buys and sells deed restricted attainable housing. Summit County has also instituted a countywide 0.125 percent affordable housing tax (with an exemption on food).

### 4.3.4 Clear Creek County

Clear Creek County does not have a housing authority, however, the Clear Creek Commissioners completed an affordable housing study and sponsored a work session in 2003 to address affordable housing in Clear Creek County. The top priorities for worker housing in Clear Creek County include:

- Developing a public policy in conjunction with the municipalities, school district and sanitation district regarding where workforce housing should be developed.
- Creating a housing rehabilitation program to increase the quality of the county's supply of older single-family homes.
- Developing new mobile home parks on sites more appropriate for residential use and converting existing park sites along I-70 to commercial uses.
- Allowing accessory dwelling units in the county.
- Developing new mid-level units for homeownership.
- Promoting small to moderate scale infill development on parcels served by existing infrastructure.
- Establishing a positive set of conditions under which housing development can take place including a clearinghouse for developers, a project review and support system, streamlined processing, incentives, and modification of subdivision and zoning codes.
- Addressing zoning and other barriers to the renovation of existing units; creating an overlay zoning district to encourage landlords to renovate units.
- Setting up a homeownership training and credit counseling program for potential homebuyers that network them with below-market interest rate mortgages and down payment assistance (Clear Creek County Commissioners, 2003).

## 4.4 Public Transportation

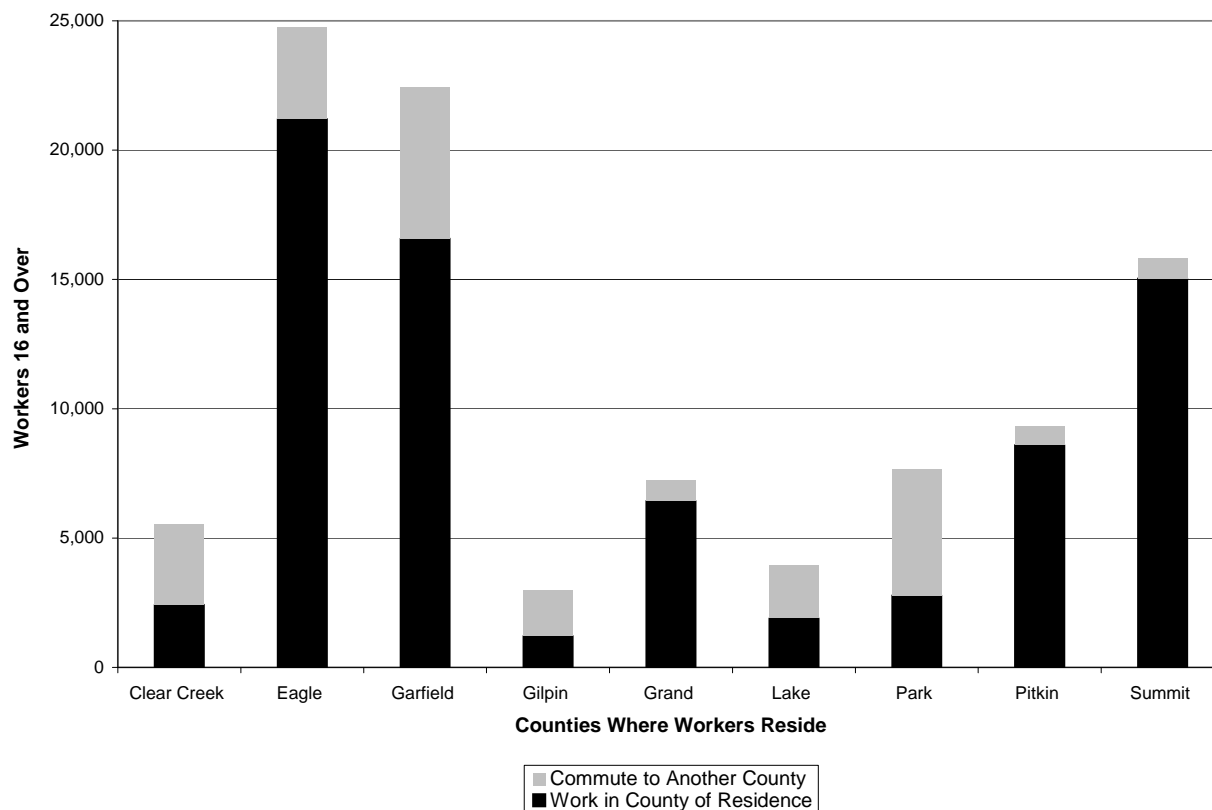
Overall employment is expected to increase more than 100 percent by 2035. County-by-county increases vary considerably. Garfield and Eagle counties are expected to have the greatest increases with 143 percent and 127 percent respectively (more than 37,200 and 45,100 additional workers), and Pitkin and Summit counties are expected to require an additional 12,100 and 27,300 workers, respectively. In Summit County, employment growth will far exceed population growth, and many of the workers will need to commute to their workplaces from outside the county because of lack of available and affordable housing. Eagle and Summit counties face unique challenges in terms of employee labor shortage, due in part to lack of affordable housing. As described in the *I-70 Mountain Corridor PEIS Social and Economic Values Technical Report (CDOT, August 2010)*, more than 13,500 daily commuters travel between Pitkin, Summit, Eagle, and Garfield counties, as well as other adjacent counties. The inflows of Corridor commuting patterns are shown in **Table 4 Chart 1** illustrates place of work and residence comparison by county.

**Table 4. Corridor County Commuting Patterns, 2000 Census**

County	Primary Destinations	Net Inflow/ Outflow	Primary Originations	Primary Routes
Garfield	Pitkin, Eagle	Outflow	Eagle, Pitkin	SH 133, SH 82, I-70
Eagle	Pitkin, Garfield	Inflow	Garfield, Lake, Pitkin, Summit	I-70, SH 133, SH 82, US 24
Summit	Eagle	Inflow	Park, Lake, Grand, Front Range (Denver metropolitan)	SH 91, SH 9, I-70
Clear Creek	Front Range (Denver metropolitan), Gilpin	Outflow	Jefferson	I-70, US 6
Pitkin	Garfield, Eagle	Inflow	Garfield, Eagle	SH 82, SH 133, I-70
Lake	Eagle, Summit	Outflow	<i>Negligible Inflow</i>	US 24, SH 91, I-70
Park	Front Range (Denver metropolitan), Summit	Outflow	Front Range (Denver metropolitan)	US 285, SH 9, I-70
Grand	Summit	N/A	<i>Negligible Inflow</i>	N/A
Gilpin	Front Range (Denver metropolitan)	Inflow	Front Range (Denver metropolitan)	US 6, I-70

Source: United States Census Bureau, 2000

Chart 1. Place of Work (2000 Census)



Source: United State Census Bureau, 2000

Section 4.4.1 through Section 4.4.4 detail public transportation services in four of the five counties in the study area for environmental justice (Garfield, Eagle, Summit, and Clear Creek). Jefferson County is not included in the discussion because its employment and commuting trends are primarily tied to the Denver metropolitan area rather than to the Corridor.

### 4.4.1 Garfield County

Garfield County estimates that 80 to 90 percent of the county’s minority and low-income workers cannot afford to live where they work and must commute between 20 and 90 minutes daily to get to their place of employment. This demonstrates a concern not only regarding transportation options but also affordable housing. The Roaring Fork Transportation Authority is assessing a Bus Rapid Transit project. This project is in the planning/public information stage and has various phases. The following elements are already in place or are in progress to support the implementation of the Bus Rapid Transit:

- **2004** – High Occupancy Vehicle lanes, Basalt to Buttermilk.
- **2006** – Adoption of vision to implement Bust Rapid Transit by 2017; implementation of outbound bus lanes in Aspen, from Garmisch to 7th on Main Street; new park and ride opens in West Glenwood.
- **Summer 2006** – Regional service increased to 30-minute frequency between El Jebel to Glenwood Springs/Carbondale to match upvalley headways.
- **2007** – Creation of Project Development Team to refine details of Bus Rapid Transit operational and facility enhancements.
- **September 2007** – New park and ride opened in Carbondale.

- **November 2007** – Land in New Castle purchased for new park and ride.
- **2007** –50 percent of the Roaring Fork Transportation Authority fleet are Americans with Disabilities Act compliant low-floor buses that are considered to be Bus Rapid Transit-compliant due to speedier boarding feature.
- **2008** – Construction of new bus lanes in Aspen completed from Buttermilk to Maroon Creek roundabout; queue bypass lane from Airport Business Center to Owl Creek Road.

Existing transit services within Garfield County include Ride Glenwood, which provides local services in the town of Glenwood Springs. Local transit is also available on the Village Shuttle in Snowmass. The Roaring Fork Transportation Authority provides service to the Aspen/Pitkin County Airport, to Snowmass Village, and between the towns of Aspen, Basalt, El Jebel, Carbondale, and Glenwood Springs. Aspen provides local employers with transportation options that help employees find carpool opportunities that allow them to use High Occupancy Vehicle (HOV) lanes and free parking in town. In the winter, Roaring Fork Transportation Authority provides free skier shuttle to all four area mountains, and in the summer, Roaring Fork Transportation Authority is the only way to get into the Maroon Bells during peak hours.

### 4.4.2 Eagle County

Local transit is available in Avon, Beaver Creek, and Vail. The Eagle County Regional Transportation Authority provides connecting services with local bus systems at the Vail Transportation Center, Avon Transit, and Beaver Creek Upper Plaza. The Eagle County Regional Transportation Authority serves the communities of Glenwood Springs, Dotsero, Gypsum, Eagle, Wolcott, Edwards, Avon, Beaver Creek, Vail, Minturn, Red Cliff, and Leadville. One-way fares per person from Vail or Beaver Creek to Edwards, Minturn, Dotsero, Gypsum, and Eagle cost \$3.00. The Avon/Beaver Creek Transit is the only intra-city bus service in the Vail Valley. The Town of Avon has its own town shuttle service, as well as a shuttle that takes skiers and snowboarders to the Beaver Creek ski slopes.

### 4.4.3 Summit County

Local transit service is available in Breckenridge. Summit Stage provides free public transportation year round to area residents and visitors to most ski areas, shopping centers, medical centers, and some residential areas. The transit portion of the local sales tax finances this system. Service is provided to Silverthorne, Dillon, Keystone, Frisco, Copper Mountain, and Breckenridge with transfer stations in Frisco and Silverthorne.

### 4.4.4 Clear Creek County

Clear Creek County public transportation is limited to private carriers and special purpose providers such as the Evergreen Senior Resource Center and the Idaho Springs Center, which offer demand-response services for senior citizens.

The Regional Transportation District provides public transportation to and from downtown Denver with stops at the Genesee Park park-and-Ride and along US 40 and the I-70 highway. There is no local transit system between Clear Creek County and the western portion of the Corridor.

## Section 5. Environmental Consequences

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Executive Order 12898 establishes a federal policy to avoid, to the extent practicable, disproportionate high and adverse human health or environmental impacts on minority or low-income populations. The Federal Highway Administration defines a disproportionate impact as being predominately borne by a minority population and/or a low-income population that is appreciably more severe or greater in

## Environmental Justice Technical Report

magnitude than the adverse effect that will be suffered by the nonminority and/or non-low-income population (FHWA Order 6640.23).

As previously noted, County and municipal officials believe that a large number of undocumented workers reside within Eagle and Garfield counties and are not reflected in Census figures. With the exception of Clear Creek County, officials indicated that the majority of low-income residents in their communities were also minority residents. For this reason, discussions of potential impacts from increasing transportation access include both minority and low-income populations within the Corridor. Impacts specific to Clear Creek County residents refer primarily to nonminority, low-income residents, as 2000 Census figures indicate.

Clear Creek County and the Town of Silver Plume have expressed concern about the potential for impacts to households along the south side of Water Street and Madison Avenue, which back up to the north edge of the I-70 highway. While impacts will be minimized along Madison Avenue by relocating the westbound exit ramp, there is the potential for impacts on households along the south side of Water Street. Because the Tier 1 level study addresses the Corridor as a whole, this site-specific information will be addressed in more detail at Tier 2 processes.

### 5.1 Direct Impacts

The No Action Alternative neither provides additional travel options nor addresses congestion or travel delays in the Corridor. In this respect, it is the least beneficial to the employees that rely on the highway to commute to their jobs.

Action Alternatives, including the Preferred Alternative, that reduce commute times or provide additional commuting options, such as public transportation, are a benefit to low-income populations and lessen the impact of the housing and employment disparity. Generally, the Combination Alternatives and the Preferred Alternative (both the minimum and maximum program) provide the greatest commuting benefits to low-income residents by offering a range of transportation choices, but also have the greatest negative effect on affordable housing because improved access could disperse demand for housing and increase the cost of housing in outlying areas that are now more convenient to affluent second home residents. The Minimal Action Alternative has little effect on congestion or commuting travel time but improves options by including a Corridor wide bus service in mixed traffic with connections to existing transit operators. Overall, the adaptive management approach of the Preferred Alternative offers a range of improvements that best fit a community's needs and reflect growth trends and transportation needs at the time of implementation.

Under all but the Highway alternatives, the efficiency of local, municipal transit service is improved, including the bus in mixed traffic option that is included as part of the Minimal Action Alternative. Alternatives that maintain additional transportation options benefit low-income residents who do not own a car or who depend on public transportation for commuting to work, shopping, and medical facilities.

The Transit, Combination, and Preferred alternatives provide transit options for minority and low-income residents along the Corridor commuting to regional destinations and connecting to existing transit services in Eagle and Summit counties where the majority of jobs occur. These alternatives also allow second home residents and some permanent residents to commute greater distances, which could continue to exacerbate the problem of affordable housing by increasing housing prices in outlying areas.

Alternatives that include transit potentially benefit minority and low-income residents who spend a high percentage of their income on automobile-related commuting expenses. Public transit could meet their needs if the provided service met their schedules and improved direct access to destinations in the Corridor where they travel.

## 5.2 Indirect Impacts

According to the REMI® (Regional Economic Models, Inc.) model (discussed in the *I-70 Mountain Corridor PEIS Social and Economic Values Technical Report [CDOT, August 2010]*), the No Action and Minimal Action alternatives likely suppress economic conditions in the five-county Corridor region due to increased highway congestion and reduced access to recreational and tourist amenities. Under all of the alternatives, including the No Action Alternative, lack of affordable housing near places of employment continues to be a problem in the Corridor. The availability of affordable housing and public transportation are indirect impacts that could accrue differently between low-income or minority populations and non-low-income or non-minority populations. Increased transportation access and capacity could induce growth and may create more demand for second home ownership and general population growth. As land values increase, low-income residents could be faced with insufficient affordable housing options within a reasonable distance of destinations where they need to travel. The *I-70 Mountain Corridor PEIS Land Use Technical Report* and the *I-70 Mountain Corridor PEIS Social and Economic Values Technical Report* further discusses indirect impacts (CDOT, August 2010).

The Minimal Action Alternative provides Corridor wide bus service in mixed traffic with connections to municipal transit providers to improve access and mobility for commuters. The potential for induced growth would be greater for the Combination alternatives than for the Highway or Transit alternatives alone. Under the Preferred Alternative (Minimum Program), the potential for induced growth would be similar to the Transit alternatives. Under the Preferred Alternative (Maximum Program), the potential for induced growth would be similar to the Combination alternatives. Induced growth results in a greater demand for affordable housing as available land is converted to second homes and industries that support this growth. Induced growth potentially increases job opportunities in the construction- and service-related positions that are often filled by minority and low-income workers. *The I-70 Mountain Corridor PEIS Land Use Technical Report and the I-70 Mountain Corridor PEIS Social and Economic Values Technical Report* further discuss these impacts (CDOT, August 2010).

## 5.3 Construction Impacts

Construction of any of the Action alternatives creates community disruption throughout the Corridor:

- Access and travel through the Corridor is more challenging for Corridor residents.
- Restricted access and construction-related traffic congestion affect revenues.
- Construction-related noise, dust, and equipment emissions increase.

Affordable housing may be located closer to the highway, and residents living closer to the I-70 highway could be disproportionately affected by noise, dust, and access restrictions during construction. Some or many of these residents may be lower income. The distribution of construction related impacts will be determined during Tier 2 processes.

## 5.4 Impacts in 2050

The No Action and Minimal Action alternatives suppress economic growth, and that suppression likely continues to 2050. These circumstances may result in minority and low-income households relocating to other areas of the state in response to a sluggish jobs market.

As suggested in the *I-70 Mountain Corridor PEIS Social and Economic Values Technical Report (CDOT, August 2010)*, construction has a negative effect on economic growth. Delaying construction or spreading it over a longer period of time likely decreases the intensity of the economic impacts but causes Corridor communities to be affected by construction over a longer period.

Economic growth continues to place pressure on the real estate market, and without established regulatory mechanisms, affordable housing options remain limited in Summit and Eagle counties. By 2050, the

## Environmental Justice Technical Report

effects on minority and low-income households from the alternatives likely have less influence than other growth-limiting factors, such as water availability and community controls on growth and land use planning. The *I-70 Mountain Corridor PEIS Cumulative Impacts Technical Report (CDOT, August 2010)*, provides additional analysis of the alternatives in relation to past and current trends and other reasonably foreseeable future actions and events.

### 5.5 Conclusion

Based on what is known at this programmatic level, the alternatives are not expected to cause disproportionately high and adverse effects on any minority or low-income populations, as per Executive Order 12898 regarding environmental justice. However, this conclusion cannot be made definitively at this level of analysis. Additional analysis will be conducted in Tier 2 processes (see **Section 6** for more information). Efforts to identify pockets of minority and low-income populations at the local level will be conducted as will a resource specific assessment of the potential for disproportionate impacts. Some of the issues that will be considered include noise impacts, air quality, neighborhood and community impacts, property acquisitions and relocations, access to improvements, and the potential for effects to local economies. Particular emphasis will be placed on the distribution of impacts and off-setting benefits for the general population when compared to identified minority and low-income populations. Additional outreach will also be conducted at the local level with minority and low-income residents with regards to Tier 2 processes.

## Section 6. Tier 2 Considerations

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This report provides an overview of the minority and low-income populations from a Corridor perspective. As described in **Section 4.2**, Clear Creek County and the Town of Silver Plume highlighted particular areas of concern (households along Water Street and Madison Avenue) that will be evaluated on a local level in Tier 2 processes. Most, if not all, of the Tier 2 processes can and will reference updated United States Census Bureau data as the 2000 Census is replaced with the 2010 Census.

Tier 2 processes will use the most current data and guidance, including updated data on affordable housing, to analyze impacts on minority and low-income populations. During Tier 2 processes, the lead agencies will:

- Develop specific and more detailed mitigation strategies and measures
- Develop best management practices specific to each project
- Adhere to any new laws and regulations that may be in place when Tier 2 processes are underway
- Continue to directly coordinate with local government entities and social services to identify low-income and minority populations along the Corridor
- Coordinate with the Colorado Minority Business Office to obtain a listing of minority-owned business enterprises that register with the office in Colorado and are located along the study Corridor

During Tier 2 processes, the potential for disproportionate impacts on environmental justice communities will be assessed. At that time, mapping will be updated and coordination will occur with community leaders and social services. It is assumed that the phasing of the Preferred Alternative will provide the opportunity to re-assess and refine alternatives to maximize benefits and minimize negative impacts on minority and low-income populations.

Clear Creek County and the Town of Silver Plume have expressed concern about the potential for disproportionate impacts. The Colorado Department of Transportation recognizes this as an area that will be carefully evaluated for disproportionate impacts during Tier 2 processes. Households along the south



side of Water Street and Madison Avenue, which back up to the north edge of the I-70 highway, are considered an indication of low-income households in Silver Plume near the I-70 highway. While impacts will be minimized along Madison Avenue by relocating the westbound exit ramp, the project would likely impact households along the south side of Water Street, through property acquisition, noise, and visual effects. Since impacts have not yet been assessed at the local level, specifics are not yet known. Because the Tier 1 level study addresses the Corridor as a whole, these site-specific issues will be addressed in more detail at Tier 2 processes.

Tier 2 processes will develop public involvement to ensure full and fair participation by all potentially affected communities in the transportation decision-making process.

## Section 7. Mitigation

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At the Corridor level, no disproportionate adverse impacts on minority or low-income populations were identified, but mitigation strategies will apply to all communities in the Corridor and also will benefit minorities and low-income populations. If Tier 2 processes conclude that disproportionately high or adverse impacts will occur on low-income or minority populations, the CDOT will work to avoid, minimize, or mitigate such impacts. Tier 2 processes that occur in populated areas will consider pockets of minority and/or low income populations that may require additional attention and/or mitigation for issues such as:

- Localized air quality impacts
- Noise impacts
- Shading from elevated structures or walls
- Residential and business relocations
- Changes in access or travel patterns
- Loss of community cohesion

## Section 8. Specialized Outreach and Agency Coordination

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Specialized outreach to minority and low-income populations was conducted, as well as coordination with local officials to aid in the identification of environmental justice populations. These community outreach efforts included a variety of formats, timeframes, and approaches (listed below), to provide opportunities for minority and low-income populations to participate in the PEIS process:

- Scoping meetings – January to June 2000
- Community interviews – May 2000
- Community profile research – 2001
- Environmental justice interviews – 2002
- Community outreach meetings – 2002 to 2003
- Newsletters and event participation – 2000 to 2004

### 8.1.1 Scoping Meetings – January to June 2000

Public outreach began with public scoping, which was conducted during the early project stages to inform and educate the public and agencies about the PEIS, and to solicit their input and perspectives on the issues that should be addressed in the PEIS. A total of 1,251 comments were received during the four agency scoping meetings and five open houses that began in January 2000 and ended in May 2000. Issues identified for environmental justice during scoping included the following:

- Potential displacement/relocation of minority and low-income residents

## Environmental Justice Technical Report

- Availability of affordable housing and low-income housing
- Impact on local commute times and availability of public transportation
- Increase in noise levels
- Potential for separating or bisecting low-income and/or minority communities and neighborhoods

These issues were identified by the general population (including minority and low-income residents) and local agencies with knowledge of community population characteristics and distribution. See the *I-70 Mountain Corridor Public and Agency Involvement Technical Report* (CDOT, August 2010) for more information.

### 8.1.2 Community Profile Research — 2001

Interviews were conducted in 2001 with county planners, school superintendents, housing authorities, and health and human services providers for Garfield, Eagle, Summit, Clear Creek, and Jefferson counties to gather information, identify the community profile for minority and low-income populations, and determine the availability and location of low-income housing (Section 8 Housing). In addition, this process provided information for continued public outreach approaches for each county. The questionnaire shown in **Table 5** was initially mailed to representatives of each county and followed up with phone interviews.

Research results were assembled into a data summary. This research provided insight into developing criteria for establishing the low-income thresholds for each county. Results were the identification of the percentage of low-income populations for counties and communities on or near I-70 using 2000 Census data, and a threshold of 50 percent of AMI for a household of four people using 2000 CDBG data sets.

Data collected from the questionnaire also guided community outreach techniques. For example, Spanish translation was made available at all public open houses because respondents from Garfield, Eagle, Summit, and Clear Creek counties indicated it would be useful. Newsletters were distributed to local Home Owners Associations based on input received from Eagle County planners. School district superintendents in Eagle, Summit, and Clear Creek counties all suggested distributing project information to local schools as a way to reach minority and low-income residents. Mailings were also targeted to residents of Clear Creek County and all residents within 1 mile of the I-70 highway throughout the Corridor based on input received from Clear Creek County and the Town of Silver Plume that indicated the presence of minority populations adjacent to the I-70 highway within the Corridor. **See Section 8.1.5** for more information regarding newsletter distribution.

Data received from the questionnaire (primarily question 10) directed the project team to additional resources for the analysis such as the Department of Labor, public health agencies, and local law enforcement.

**Table 5. Environmental Justice Research Questionnaire**

Low-income questions
1. According to the federal 2000 poverty guidelines as defined by the Department of Health and Human Services, low-income is defined as \$17,050 for a family of four. Do you feel this is an accurate definition of low-income, or is there a more appropriate definition for your community?
2. What are the program eligibility criteria for a family of four and formula used to determine low-income?
3. According to the Environmental Protection Agency maps, which are based on 1990 Census Data Block Groups, does this create an accurate picture of low-income communities?
4. Do you own any Section 8 Housing within or near the I-70 right-of-way?

Minority questions
5. According to the Environmental Protection Agency maps, which are based on 1990 Census Data Block Groups, does this create an accurate picture of minority communities? 6. What is the percent minority in terms of overall community according to your records and statistics? 7. What is the percent minority in terms of program eligibility? What are those minority groups and their percentage of the population?
Additional information
8. Are there any meetings, newsletters, schools, or frequented community areas to best display information about the study? 9. Is there a sufficient amount of the population that speaks a different language than English that would warrant a translation? 10. Is there anyone else you would recommend we speak to that has knowledge in this area?

### 8.1.3 Environmental Justice Interviews – 2002

A series of 25 interviews were conducted in 18 communities in the Corridor in March 2002. The interviews targeted the pockets of minority and low-income populations identified in the Corridor and were held with community leaders with knowledge of environmental justice. The individuals interviewed were identified by municipal, county, and community members. The purpose of these interviews was to identify issues associated with work and quality of life for minority and low-income communities along the Corridor. The following is a summary of issues and alternative preferences.

#### Environmental Justice Issues

- A. Affordable housing for minority and low-income populations
- B. Transportation alternatives are needed to address commuter needs
- C. Alternatives will increase traffic noise
- D. Growth and development are important to the community and must be carefully planned
- E. The minority and low-income populations contribute to the need for a stable work force

#### Alternative Preferences

- F. Improvement to local transportation system
- G. Fixed guideway system that will benefit the workers as well as tourists
- H. Rubber tired transit system is more affordable than monorail or fixed guideway
- I. Bus system would be the most beneficial for low-income commuters
- J. Highway improvements would be better for commuters from Garfield and Lake counties
- K. Some combination form of highway and transit system for immediate and long-term commuter needs
- L. Preference for Minimal Action Alternative

**Table 6** illustrates the association of the environmental justice issues A – E and the alternative preferences F – L listed previously with each of the communities, based on the interview process. This summary indicates that issues related to the need for affordable housing (A), transportation alternatives for commuting workers (B), and growth (D) are common to most of the Corridor.

**Table 6. Environmental Justice Issues and Alternative Preferences Identified by Community Leaders**

Interview Locations and Number of interviews	Environmental Justice Issues					Alternative Preferences						
	A	B	C	D	E	F	G	H	I	J	K	L
<b>Garfield County</b>												
Carbondale (1 interview)	x	x							x			
Glenwood Springs (3 interviews)	x	x								x	x	
Parachute (1 interview)				x		x						
Silt (1 interview)				x		x						
<b>Lake County</b>												
Leadville (2 interviews)	x	x		x					x	x		
<b>Eagle County</b>												
Avon (2 interviews)	x	x		x			x			x	x	
Basalt (1 interview)		x					x					
Eagle (1 interview)	x			x		x	x					
Edwards (1 interview)	x	x		x								
Gypsum (1 interview)			x			x	x					
Vail (1 interview)	x						x					
<b>Summit County</b>												
Breckenridge (1 interview)	x	x					x	x				
Dillon (3 interviews)	x	x	x				x	x				
Frisco (1 interview)	x						x					
Silverthorne (1 interview)	x	x					x		x			
<b>Clear Creek County</b>												
Empire (2 interviews)	x			x	x							
Idaho Springs (1 interview)	x		x		x		x					x
Silver Plume (1 interview)	x		x	x			x					

### 8.1.4 Community Outreach Meetings – 2002 to 2003

The project team met individually with town managers, county officials, and city planners along the Corridor in late 2002 and 2003 to provide an update on the project and to ensure that community outreach efforts were being taken with appropriate community members (see **Table 7**). While these meetings addressed community outreach in general, specific issues important to minority and low-income populations such as the status of affordable housing were also discussed.

**Table 7. Community Outreach Meetings (2002 to 2003)**

County	Community Represented	Date
Eagle	Eagle	May 15, 2003
	Eagle	January 31, 2003
	Eagle	January 9, 2003
	Eagle	March 28, 2003
Summit	Frisco	November 26, 2002
Clear Creek	Clear Creek County	December 5, 2002
	Clear Creek County	November 21, 2002
	Georgetown	November 19, 2002
	Idaho Springs	November 7, 2002
Jefferson	Golden	November 13, 2002

Community outreach suggestions from these meetings included project team participation at special events. **Section 8.1.5** of this report lists special event participation. Availability of affordable housing has been identified as a key issue, particularly in Summit and Eagle counties. As reported in the socioeconomic analysis conducted for the PEIS, the increase in population and the demand for second homes in these counties have escalated land and home prices, decreasing the availability of affordable housing for the local workforce. This has resulted in the need for many workers to commute to their workplaces. These trends were confirmed through the Summit and Eagle County meetings. Employers in each of these counties are developing employee housing opportunities, and are providing discounts for workers to use public transportation.

### 8.1.5 Newsletters and Event Participation – 2000 to 2004

**Table 8** identifies the six newsletters that were distributed during the PEIS process. Each mailing increased in distribution, with the last newsletter being sent to more than 11,000 individuals. Newsletter distribution was targeted to locations that would reach minority and low-income residents. These locations were identified by community leaders in the interviews described in **Section 8.1.3**. Key stakeholders across the Corridor who received newsletters included the following:

- State, county, and municipal elected officials (requested by Garfield County as a way to disseminate information to minority and low-income residents).
- Eagle, Summit, and Jefferson County homeowners associations (suggested by Eagle County planners as away to disseminate information to minority and low-income residents).
- All residents with post office boxes in Clear Creek County (based on input received from Clear Creek County that indicated the presence of minority and low-income populations within the county).
- All residences residing within 1 mile of the I-70 highway throughout the Corridor (based upon input received from the Town of Silver Plume that indicated the presence of minority and low-income populations adjacent to the Corridor).

## Environmental Justice Technical Report

- Each public repository of the PEIS (based on input received from the Clear Creek County school superintendent and Eagle County planners that these locations, which included libraries and post offices would be a good way to disseminate information to minority and low-income residents).
- All other members of the public who requested to be on the mailing list

The March 2001 newsletter and a supplemental article were distributed to communities throughout the Corridor in English and Spanish. These materials were also hand-distributed and passed out at community events and posted in public places before the third set of open houses in March 2001 to solicit input on the alternatives. Limited feedback following the distribution of this newsletter indicated that Spanish translation of written materials was not effective and therefore, was not provided for the remaining newsletters. However, translation remained available at all project open houses.

**Table 8. Newsletter Distribution**

Newsletter Date	Main Topics Discussed	Means of Delivery
December 1999	PEIS process and schedule	Mailed
September 2000	Need for transportation improvements, Level 1 screening results, and summary of scoping comments	Mailed
March 2001	Summary of the Purpose and Need statement, Clear Creek County tour, Level 1 screening results, Level 2 screening criteria, and upcoming open houses	Dropped off and mailed <i>(with a Spanish version)</i>
June 2001	Level 2 screening results	Mailed
Summer 2003	Description of alternatives retained for PEIS	Mailed
July 2004	Key frequently asked questions, PEIS schedule and tasks, preferred and other alternatives, tradeoffs among alternatives, and comparison factors	Mailed

In March 2001, the project team visited and spoke to numerous residents along the Corridor. Project team members delivered the newsletters with a summary attached in Spanish encouraging people to attend open houses to express any concerns and issues that they may have had. This outreach involved hand-delivering or mailing out approximately 900 newsletters to the locations shown in **Table 9**. Locations for newsletter distribution were identified through data collection as well as input from community planners, school district superintendents, and representatives from local Housing Authorities and Health and Human Services agencies. Locations were selected for their importance to the community and their potential to reach minority and low-income residents.

**Table 9. Newsletter Mailings**

County/City	Locations
<b>Garfield County</b>	
Glenwood Springs	Defiance Thrift Store
<b>Eagle County</b>	
Avon	Eaglebend Apartments Riverview Apartments Avon Public Library Aspen Mobile Home Village
Vail	Best Western Vail Town Library
Edwards	Eagle River Village Mobile Home Park
Eagle	Eagle Valley Library District Colorado West Mental Health Services Eagle County Housing Authority Eagle County School District
Gypsum	Gypsum Public Library
<b>Summit County</b>	
Frisco	Tienda Munoz (Spanish speaking store in Frisco) Frisco Chamber of Commerce County Commons; Frisco Library, Social Security Office, and Environmental Office
Dillon	Family and Intra-Cultural Resource Center, Dillon Town Center (Proceeds from the thrift store support FIRC) Summit Thrift and Treasure (Proceeds from the thrift store support FIRC) Mountain Creek Summit County School District
Silverthorne	Summit County Central Reservation (newsletter distribution to service employee mail boxes) Silverthorne Library Chamber of Commerce, Summit Place Villa Sierra Madre
Copper Mountain	Copper Mountain Resort Bus, Communications Director
Breckenridge	Summit County Library Courts, Justice Center, Breckenridge Breckenridge City Courthouse Pine Wood Village, Breckenridge

## Environmental Justice Technical Report

County/City	Locations
<b>Clear Creek County</b>	
Idaho Springs	Idaho Springs Library Idaho Springs Visitor Center Idaho Springs City Hall Clear Creek County School District
Georgetown	Georgetown Library Georgetown Justice Center

A local cable television station (ROPIR Cablevision, Eagle County) ran public announcements in Spanish and English about each of the open houses. All four open houses also were advertised in English and Spanish in the following newspapers:

- *Clear Creek Courant* (Clear Creek County)
- *Vail Trail* (Vail)
- *Vail Daily* (Vail)
- *Summit Daily News* (Summit County)
- *Aspen Times Daily* (Aspen)
- *Canyon Courier* (Evergreen)
- *Daily Sentinel* (Grand Junction)

Community planners, school district superintendents, county Housing Authorities, and Health and Human Services agencies interviewed during the environmental justice outreach identified these publications as those with the widest distribution to minority and low-income populations throughout the Corridor.

The project team attended special events to distribute project information, gather input, and give the public additional opportunities to ask questions about the project or provide input. Special event participation included the following:

- Cinco de Mayo, Eagle County Fairgrounds – May 5, 2003
- Fourth of July Festival, Georgetown – July 4, 2003
- Eagle County Fair and Rodeo – July 30 and August 3, 2003
- Empire Blues Festival, Empire – September 6, 2003

### 8.1.6 Collaborative Effort and Context Sensitive Solutions – 2005 to 2010

The development of the Preferred Alternative uses an engaged process called the Collaborative Effort. The Collaborative Effort team, a 27-member group representing varied stakeholders of the I-70 Mountain Corridor, works closely in evaluating and discussing the results of the alternatives development, evaluation, and screening process to formulate not only a Preferred Alternative but also a long-term stakeholder engagement process to guide transportation improvements into the future. The Collaborative Effort process is inclusive and included a diverse group of stakeholders. Numerous public meetings and workshops were held to develop the final recommendation. The group was mindful of potential environmental justice issues.

Closely related to the Collaborative Effort is a commitment by CDOT to use the principles of Context Sensitive Solutions for the I-70 Mountain Corridor. The Colorado Department of Transportation invited an inclusive group of stakeholders to participate in the Context Sensitive Solutions process. These



stakeholders—which included counties, towns, national forests, ski resorts, residents, business owners, truckers, and commuters—became the Context Sensitive Solutions Corridor Team.

The *I-70 Mountain Corridor Public and Agency Involvement Technical Report* (CDOT, August 2010) contains a complete accounting of the public involvement efforts conducted throughout the PEIS.

### 8.1.7 Outreach for Revised Draft PEIS

Additional identification of “pockets” of low-income and minority populations is being conducted in order to solicit comments from minority and low-income communities on the Draft PEIS. This information will be included in the Final PEIS.

## Section 9. References

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- Clear Creek County Commissioners. 2003. Implementing Attainable Housing Strategies, Memorandum from Melanie Rees, Rees Consulting, Inc. and Kathy McCormick, McCormick and Associates, Inc. to Clear Creek County Commissioners, Affordable Housing Task Force Members. September 30. Accessed online at URL: [http://www.co.clear-creek.co.us/Projects/housing\\_memo.htm](http://www.co.clear-creek.co.us/Projects/housing_memo.htm).
- Eagle County. No Date (a). Affordable Housing. URL: <http://www.eaglecounty.us/housing/housing.cfm>, and <http://www.eaglecounty.us/housing/riverview.cfm>. Accessed January 2010.
- . No Date (b). Riverview Apartments. URL: <http://www.eaglecounty.us/housing/riverview.cfm>. Accessed January 2010.
- Eagle County Transit: URL: [http://www.eaglecounty.us/ECO\\_Transit/fares.cfm](http://www.eaglecounty.us/ECO_Transit/fares.cfm).
- Eagle County Regional Transportation Authority (ECO). 2008. ECO Fares & Policies. URL: [http://www.eaglecounty.us/ECO\\_Transit/fares.cfm](http://www.eaglecounty.us/ECO_Transit/fares.cfm). Accessed January 2010.
- Garfield County. 2008. URL: <http://www.garfield-county.com/Modules/ShowDocument.aspx?documentid=4887>. Accessed January 2010.
- . 2009. Garfield County Unified Land Use Resolution. URL: <http://www.garfield-county.com/Index.aspx?page=578>. Accessed January 2010.
- Northwest Colorado Council of Governments. 2004. 2004 Cost of Living Summary Report. URL: [http://www.nwc.cog.co.us/docs/resources/nwccog\\_reports\\_studies/2004%20COL%20Report.pdf](http://www.nwc.cog.co.us/docs/resources/nwccog_reports_studies/2004%20COL%20Report.pdf). Accessed January 2010.
- Roaring Fork Transportation Authority (RFTA). 2008. RFTA’s Regional Bus Rapid Transit (BRT) Project. URL: <http://www.rftabrt.com/>. Accessed January 2010.
- . 2003. 2030 Intermountain Regional Transit Element. URL: <http://www.lscs.com/projects/intermountainte/index.htm>. Accessed January 2010.
- Summit County. No Date. Summit Combined Housing Authority. URL: <http://www.summithousing.us/>. Accessed January 2010.

## Environmental Justice Technical Report

- 2009. Adopted County Master Plans. URL: [http://www.co.summit.co.us/planning/MasterPlans/masterPlans\\_longRange.html](http://www.co.summit.co.us/planning/MasterPlans/masterPlans_longRange.html). Accessed December 2009.
- 2008. 2008 Sales Tax Information. URL: [http://www.co.summit.co.us/Finance/tax\\_info.htm](http://www.co.summit.co.us/Finance/tax_info.htm). Accessed January 2010.
- Affordable housing links: 2008 Copper Mountain Affordable housing project: URL: <http://www.co.summit.co.us/Planning/CurrentProjects/documents/53110PercentAMIJustification.pdf>. Accessed January 2010.
- Affordable housing tax URL: [http://www.co.summit.co.us/Finance/tax\\_info.htm](http://www.co.summit.co.us/Finance/tax_info.htm). Accessed January 2010.