

3.8 Social and Economic Values

3.8.1 What are the social and economic values of concern to this project and why are they important?

Social and economic values reflect the economic setting of the counties and communities in the Corridor and the social setting relating to housing, income, employment, and commuting. The Colorado Department of Transportation (CDOT) evaluates these values to determine the effects of a transportation action on a community and its quality of life. The I-70 highway plays an important role in the economic activity and quality of life of surrounding counties. It is the primary access to communities and the abundant recreation resources in the Corridor, both for local Corridor residents and for the Denver metropolitan area and out-of-state visitors. Tourism, the primary industry in the Corridor, generates 41 percent of jobs and 38 percent of income; these numbers are even higher in the resort counties of Eagle and Summit. Visitor access to Corridor counties via the I-70 highway strongly influences the Corridor economy, and the lead agencies must analyze changes to the I-70 transportation system for potential economic effects.

3.8.2 What study area and process was used to analyze social and economic values?

Because the I-70 Mountain Corridor influences the regional mountain economy, the study area is made up of nine counties primarily accessed by the I-70 highway or whose workforce supports counties primarily accessed by the I-70 highway. They include Garfield, Eagle, Pitkin, Summit, Lake, Park, Grand, Gilpin, and Clear Creek counties (see **Figure 3.8-1**). Jefferson County was not included in the study area because its economy is tied to the Denver metropolitan area rather than to tourism in the Corridor.

The Colorado Department of Transportation obtained historic and projected demographic information to characterize the existing socioeconomic conditions in the Corridor and understand growth trends. Sources of data for population, employment, housing, commuting, and economic conditions are listed below:

- Demography Section of the Colorado Department of Local Affairs
- Denver Regional Council of Governments (DRCOG)
- Northwest Colorado Council of Governments (NWCCOG)
- Corridor counties

Most of the data gathered for this analysis provided information on Corridor conditions as they existed in year 2000, and provided projections for conditions as they would be in 2025, the original planning horizon for this study. As the study progressed, CDOT continued to evaluate new data and extended the planning horizon to 2035. However, CDOT determined that because Corridor socioeconomic conditions have been stable, 2010 U.S. Census data are not available, and the programmatic nature of impact evaluation at the Tier 1 level focuses on trends and comparative differences among alternatives, the year 2000 and 2025 (rather than 2035) planning horizon provided a reasonable baseline for a comparative analysis of the social and economic impacts of alternatives.

The lead agencies predicted the economic impacts of alternatives using the REMI[®] (Regional Economic Models, Inc.) model. The model relies on Department of Local Affairs population and employment data and predicts economic impacts across the nine-county Corridor region. The Department of Local Affairs projections assume that transportation and other public infrastructure can and will expand in step with demographic trends. The REMI[®] model, in turn, modifies those projections by considering the influence of traffic congestion and other constraints of the I-70 highway on those long-term population and employment projections (that is, how the Action Alternatives might suppress or induce growth). The

3.8. Social and Economic Values

REMI[®] model and its outputs are described in **Section 3.8.5** and detailed in the *I-70 Mountain Corridor PEIS Social and Economic Values Technical Report* (CDOT, March 2011).

In 2009, the Department of Local Affairs developed population and employment forecasts for year 2035, and revised their initial estimates of population and employment for years 2000 and 2025. These updated estimates were used primarily to qualify and validate the original REMI[®] model projections. Evaluation of the updated estimates confirmed that the initial estimates are still valid for the broad decision making at Tier 1.

3.8.3 What agencies have CDOT and FHWA coordinated with and what are their relevant issues?

The Colorado Department of Transportation coordinated with the Department of Local Affairs, NWCCOG, DRCOG, and Corridor communities to obtain and evaluate demographic data and to discuss issues of growth, build-out assumptions, tourism, and second homes. The team also met with the Colorado Department of Budgeting and Long-Range Planning and State Demographer's Office to obtain feedback and corroborate study results and conclusions. The Environmental Protection Agency suggests a need for CDOT and Corridor communities to develop regional strategies to avoid and minimize land use impacts on the environment. The agency has indicated an interest to work with local and regional entities on considering the environment in land use planning.

3.8.4 What are the areas of social and economic interest identified in the Corridor?

Population and traffic have been increasing in the Corridor since the initial construction of the I-70 highway. Clear Creek, Gilpin, Pitkin, Park, and Grand counties experienced steady, moderate growth in recent decades, where Garfield, Eagle, and Summit counties experienced dramatic growth every year since about 1970. By 2035, the Department of Local Affairs projects the permanent population of the nine Corridor counties to reach almost 420,000, more than doubling the year 2000 population. **Figure 3.8-1** provides a reference for the social and economic conditions discussed here.

Population and traffic growth are correlated directly to improvements on the I-70 highway, which opened access to Corridor communities. The earliest construction of the I-70 highway occurred in the late 1950s and early 1960s, moving east to west. Between 1970 and 1980, most of the major features of the I-70 highway, including the Twin Tunnels, Eisenhower-Johnson Memorial Tunnels, and Vail Pass, were constructed. The last segment in Glenwood Canyon was completed in the mid-1990s.

The bulk of regional economic activity in the Corridor is concentrated among the central and western counties of the Corridor: Eagle, Summit, Pitkin, and Garfield. These four counties account for approximately 85 percent of the nine-county region's Gross Regional Product.

What is the relationship among second homes, affordable housing, employment, and commuting patterns?

The Northwest Colorado Council of Governments found that second homeowners account for more than 50 percent of home ownership in Eagle, Pitkin, Grand, and Summit counties. Numerous Corridor communities are projected to experience steep increases in the percentage of second homes. This type of development is generally rural and dispersed and is expected to reach expansion limits in resort areas by 2025. The effects of second homes are summarized by NWCCOG:

Increasing numbers of second homes have begun absorbing large amounts of land in an area where land available for development is limited by terrain and the public domain. The consequence is a growing impact on real estate prices and the cost of living, as well as increasing demands for service from local government. (NWCCOG, 2004)

Eagle and Summit counties are experiencing the greatest pressure from second-home ownership, which increases land values, makes it difficult for local workers and residents to find affordable housing, and influences commuting patterns from neighboring counties. Approximately 64 percent of the housing in Summit County is owned by second homeowners, and the lack of affordable housing for local residents is an important concern that the county Comprehensive Plan (2009 revision) provides strategies to correct. Summit County aims to lower the ratio of second home to permanent home ownership to 60:40. The slumping housing market in recent years helped narrow the housing affordability gap for local residents.

Employment trends in the Corridor are also on the rise, with overall employment expected to grow more than 200 percent between 2000 and 2035. Park County employment is expected to grow the most (261 percent), followed by Garfield (243 percent), Eagle (227 percent), and Summit (217 percent). Employment in counties east of the Continental Divide is expected to grow the least. Employment is expected to grow 127 percent in Gilpin County and 137 percent in Clear Creek County. Tourism and industries related to the second home market (construction, real estate) account for more than half of the Corridor employment. These types of jobs do not support the housing prices in the Corridor, and nearly half of workers in some counties must commute from outlying areas to employment centers. This trend, which is expected to continue into the future, strongly affects commuting patterns in the Corridor. At the east end of the Corridor in Gilpin and Clear Creek counties, this pattern exists too but relates to residents commuting to jobs in the Denver metropolitan area rather than to tourist-related jobs that dominate the western end of the Corridor. See **Section 3.9, Environmental Justice**, for information on how these conditions affect low-income and minority households in the Corridor.

How do emergency services operate in the Corridor?

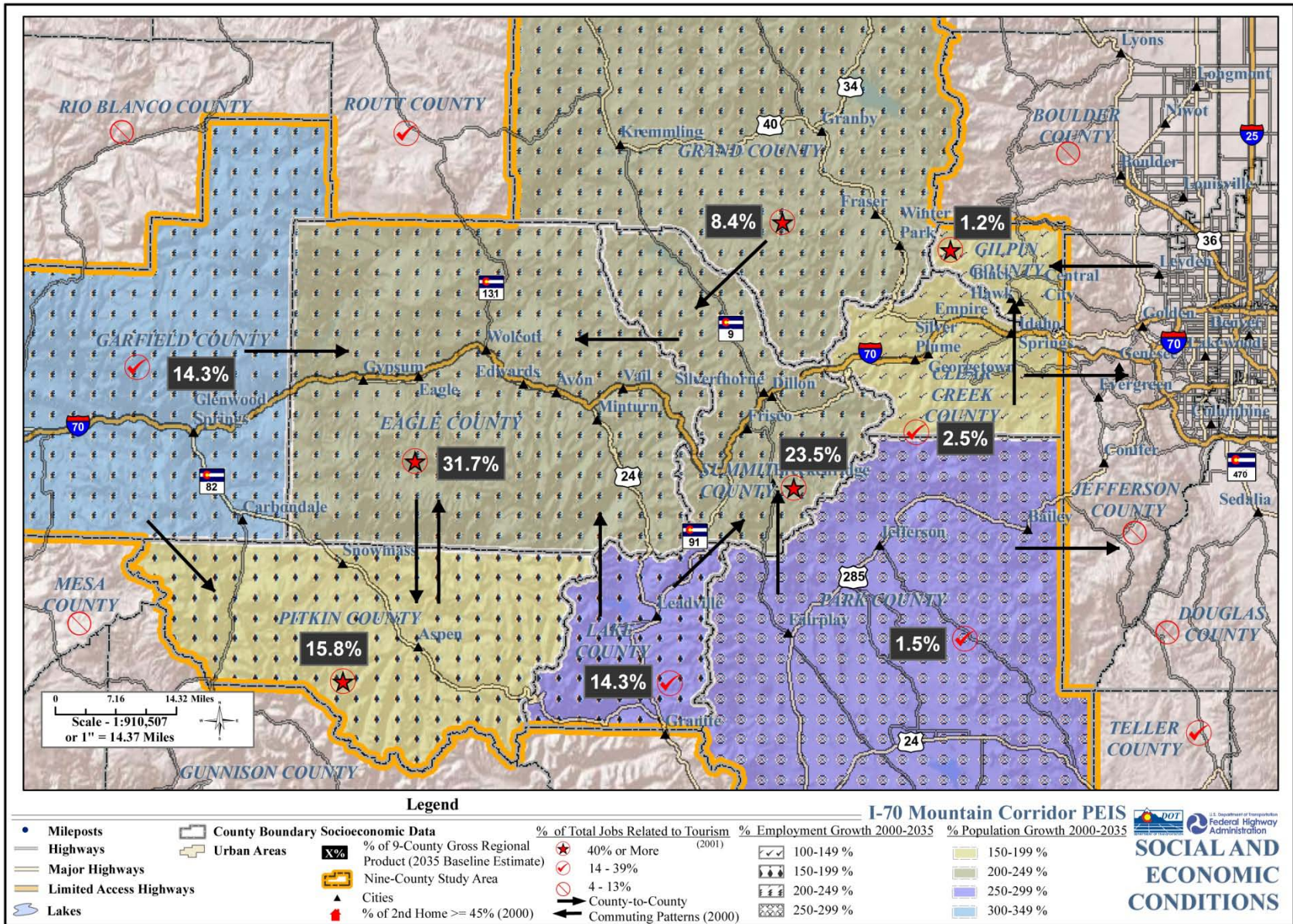
Ambulances and emergency care facilities are limited, and Corridor communities are called to respond to crashes and medical issues on the I-70 highway. Crashes on the I-70 highway account for 13 percent of medical emergency calls in Eagle County and 25 percent each in Summit County and Clear Creek County. Clear Creek County's emergency response expenses are disproportionately high. The county has no hospital to respond to emergencies and must transport injured persons to medical facilities outside the county (typically Jefferson County).

3.8.5 How do the alternatives potentially affect social and economic values?

Alternatives primarily affect social and economic values through indirect and construction impacts on the Corridor economy. The Colorado Department of Transportation examined direct and indirect impacts on emergency services as well. The No Action and Minimal Action alternatives suppress economic growth. Generally, the Combination alternatives provide the greatest economic benefits in the nine-county Corridor region; however, they also create the greatest growth and commuting pressures. The Highway alternatives have similar impacts, but to a lesser extent; and Transit alternatives' impacts fall somewhere in between. The Preferred Alternative is expected to have impacts similar to those of the Transit alternatives, resulting from the Minimum Program of Improvements. Later phases of the Preferred Alternative under the Maximum Program of Improvements, if implemented, have impacts similar to those of the Combination alternatives.

3.8. Social and Economic Values

Figure 3.8-1. Social and Economic Conditions in the Corridor



How do the alternatives affect emergency services?

The Highway alternatives, Combination alternatives, and the Preferred Alternative address highway safety issues. Therefore, they likely have beneficial direct impacts on emergency services because they reduce emergency calls related to the I-70 highway. This improvement in highway safety especially benefits Clear Creek County because the county's I-70 highway-related emergency response expenses are disproportionately high. The No Action, Minimal Action, and Transit alternatives, for the most part, do not address highway safety issues and do not likely affect the I-70 highway emergency-related calls. Emergency service response time on the I-70 highway improves under all Action Alternatives, except the Minimal Action Alternative, because they reduce congestion and, therefore, travel time delays.

How do the alternatives indirectly affect social and economic values?

The Colorado Department of Transportation first conducted a growth analysis to determine induced or suppressed population growth by alternative (see the *I-70 Mountain Corridor PEIS Land Use Technical Report* [CDOT, March 2011]). Then an economic analysis was conducted to determine the effects of each alternative on tourism, employment, commuting patterns, and other economic indicators. See the *I-70 Mountain Corridor PEIS Social and Economic Values Technical Report* (CDOT, March 2011).

How do the alternatives indirectly affect growth in the Corridor?

As discussed in **Section 3.7, Land Use and Right-of-Way**, and **Chapter 4, Cumulative Impacts Analysis**, the growth analysis found that the No Action and Minimal Action Alternatives likely suppress growth for all Corridor counties except Clear Creek County. In Eagle County, the Transit alternatives, the Combination alternatives, and the Preferred Alternative likely increase growth pressure; the Highway alternatives also do so, but to a lesser extent. In Summit County, the Combination alternatives, including the Preferred Alternative induce the greatest growth pressure. Growth in Garfield County is susceptible to changes in Eagle County because of the number of residents commuting to Eagle County for employment. The analysis found growth in the remaining Corridor counties to be less dependent on transportation conditions along the I-70 highway, and the alternatives do not likely induce growth in those counties.

Regardless of alternative, the Department of Local Affairs projects that job needs will greatly exceed worker supply in Gilpin and Pitkin counties and will be relatively high compared to worker supply in the resort counties of Eagle and Summit. Although conditions are improving in Summit and Eagle counties, where the lack of affordable housing is an ongoing issue being addressed through planning strategies, most workers must seek affordable housing in adjacent counties where housing values are lower. This situation increases commuting issues, growth pressure in adjacent counties, and housing requirements in counties where many commuting workers reside, such as Garfield and Lake counties. These issues are even greater with those alternatives that increase growth pressure in resort counties (the Transit alternatives, Combination alternatives, and Preferred Alternative).

Induced growth indirectly impacts emergency services by increasing crashes and emergency calls in Corridor counties susceptible to induced growth. Although Clear Creek County, which is not as susceptible to induced growth, has a high per-capita call rate and lack of in-county medical destination facilities, indirect impacts on that county's emergency services are unlikely since measurable induced growth in the county is not anticipated, and highway safety in Clear Creek County is improved under most Action Alternatives.

How do the alternatives indirectly affect economic conditions in the Corridor?

The economic impact analysis used the REMI[®] model to evaluate changes in tourism spending, congestion (translated as the value of a driver's or passenger's time), and construction on the Corridor economy.

3.8. Social and Economic Values

According to the REMI[®] model, the No Action Alternative likely suppresses economic conditions in the nine-county Corridor region when compared to the Action Alternatives (except the Minimal Action), due to increased highway congestion and reduced access to recreational and tourist amenities.

The Action Alternatives likely suppress economic growth during construction, due to worsening travel conditions on the I-70 highway. Construction is phased and occurs in different areas of the Corridor at different times during the construction period. Dispersing construction activities throughout the Corridor over time minimizes economic hardship. Once CDOT completes construction of the alternatives, economic conditions improve throughout the Corridor. By 2035, the REMI[®] model predicts that all Action Alternatives except the Minimal Action Alternative meet or surpass a Gross Regional Product of approximately \$45 billion per year. The Combination alternatives have the greatest positive effect on economic conditions; the Transit alternatives have a slightly lesser effect, and the Highway alternatives have the least effect. The Preferred Alternative is expected to affect economic growth similar to the Transit alternatives under the Minimum Program. If additional improvements of the Preferred Alternative Maximum Program are implemented by 2035, economic growth begins to be more similar to that of the Combination alternatives.

Measuring Economic Impacts

Under the Action Alternatives (with the exception of the Minimal Action Alternative), the Gross Regional Product would be approximately \$45 billion by year 2035. The No Action Alternative would depress the Gross Regional Product by nearly \$10 billion per year, a factor of more than one-fifth the potential level of economic activity for the region

Because Eagle, Summit, Pitkin, and Garfield counties have the greatest share of the Corridor tourism industry, they also have the greatest vulnerability to suppressed visitor trips arising from chronic traffic congestion, and the largest numbers of intercounty commuting workers, exacerbating congestion in the Corridor.

Because of the interdependency of the Corridor counties, economic analysis was conducted for the nine-county region as a whole. It cannot be assumed, however, that all counties benefit equally from the Action Alternatives or that all areas within Corridor counties experience benefits equally. Historic trends indicate, for example, that Clear Creek County has not received the economic benefits of growth related to past improvements to the I-70 highway in proportion to the benefit received by Corridor counties to the west. Clear Creek County is not expected to see as much economic (or population) growth as other Corridor counties in the future due to the Action Alternatives (with the exception of the Minimal Action Alternative) because land areas are constrained, not developable due to slopes and geologic hazards, and a large portion of the county consists of National Forest System lands and other public lands.

How does construction of the alternatives affect social and economic values?

Construction likely suppresses visitor trips and causes congestion and delay for resident and local commuter trips on the I-70 highway. The REMI[®] model, explained above, factors construction activities into the analysis and thus accounts for the suppressed economic activity that occurs. Although construction suppresses economic activity, the entire Corridor is not under construction all at once, and construction would affect different locations at different times (rather than one location for the duration). The model predicts that if construction is complete by year 2025, then by year 2035, economic activity surpasses the Gross Regional Product of the No Action Alternative by \$10 billion. However, depending on when construction is complete, the economic benefits could be delayed.

Clear Creek County raised the concern that construction impacts on Corridor communities in Clear Creek outweigh the benefits to other counties from any of the Action Alternatives. Construction impacts on Clear Creek communities are primarily borne by resident commuters and resident local travelers, who experience congestion and delay from construction activities; and by retail businesses, which are affected

by restricted visitor access from the I-70 highway. The effects on the county economy of employing construction workers are likely small, as most construction workers commute from the Denver metropolitan area to worksites in Clear Creek County.

The Highway alternatives and highway portion of the Combination alternatives have greater construction impacts on Clear Creek County communities, due to the wider construction footprint needed, than the Transit alternatives. The Preferred Alternative increases capacity along only 4 miles of the highway at the east end of Clear Creek County under the Minimum Program of Improvements; if the Maximum Program is implemented, the phased approach allows ongoing opportunities to avoid, minimize, and mitigate economic impacts.

What are the project effects on social and economic values in 2050?

The REMI[®] model predicts that all Action Alternatives, except the Minimal Action Alternative, meet or surpass a Gross Regional Product of \$45 billion by year 2035. The model takes into account the effects of construction, during which time economic growth slows down, in comparison to the period after construction when the rate of growth increases. Presumably, the period of construction is a smaller portion of the overall period between now and 2050, allowing the economies more time to grow without the effects of construction. The No Action and Minimal Action Alternatives suppress economic growth, and that suppression likely continues to 2050.

The beneficial economic growth under the Action Alternatives, except the Minimal Action Alternative, could have either positive or negative effects on social values, depending on local planning policies. Economic growth places pressure on property values, community services, and other social infrastructure. These pressures could negatively affect quality of life, community services and infrastructure, and commuting patterns if local planning efforts and mitigation measures do not adequately address them.

The adaptive management approach of the Preferred Alternative allows improvements to be implemented over time, which may allow communities to manage the indirect effects associated with those improvements better. Future changes such as fuel types, resource availability, climate change, and water availability could substantially affect the social and economic fabric of the Corridor communities. The Action Alternatives could either suppress economic conditions or increase anticipated Gross Regional Product. **Chapter 4, Cumulative Impacts Analysis** provides additional analysis of the alternatives in relation to past and current trends and other reasonably foreseeable future actions and events.

3.8.6 What will be addressed in Tier 2 processes?

The lead agencies will conduct further analysis of local county economic impacts during future project-specific Tier 2 processes, and will develop information about county-level travel demand, project phasing, time-phased estimates of capital expenditures, worksite locations and scheduling, and sourcing of materials, equipment, services, and labor for use in the analysis. The REMI[®] model, which has the ability to incorporate travel demand data with a robust economic impact analysis engine, could be useful for local economic modeling during Tier 2 processes if it is used. With regard to construction impacts, Tier 2 processes will provide information about work duration, detours, lane closures, and other disturbances that would occur. The I-70 Mountain Corridor Context Sensitive Solutions Guidance, described in the **Introduction** to this document, will be followed during Tier 2 processes.

The lead agencies will conduct the following activities during Tier 2 processes:

- 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

3.8. Social and Economic Values

3.8.7 What are the approaches to programmatic mitigation planning for social and economic values?

The phased approach of the Preferred Alternative allows ongoing opportunities to avoid and minimize economic impacts, establish effective mitigation, and employ I-70 Mountain Corridor Context Sensitive Solutions. Corridorwide coordination, state involvement and support, and localized efforts to control growth and maintain quality of life would improve the ability of Corridor communities to maintain and protect and social and economic values.

The lead agencies will coordinate a variety of construction mitigation strategies to avoid and minimize construction impacts on Corridor communities. This may include the development of a Tier 2 Public Involvement and Marketing Plan or other strategies. Some of the construction mitigation strategies that would be considered are listed below. This list is not inclusive, and the lead agencies will develop specific mitigation strategies, in concert with the Corridor communities, during Tier 2 processes in response to specific impacts.

- Not permitting lane restrictions in the peak direction during peak periods.
- Providing optimal spacing between work zones would allow traffic flow to recover between work zones.
- Requiring contractors to demonstrate that there is no reasonable alternative to a proposed lane closure. When lane restrictions and closures are required, CDOT will work with local communities to minimize impacts on local traffic and transit services. If actual total closure and/or stoppage of traffic are needed, they will be advertised and communicated to the public in advance of when they would occur.
- Maintaining community and business access to the highest degree possible. Information technologies, such as well-placed and highly visible signs, provide safe and efficient access during construction activities.
- Determining an appropriate scheduling approach to day versus night work during Tier 2 processes.
- Considering public concerns about local mobility in CDOT construction contracts and traffic control strategies.
- Holding public meetings at critical construction phases to provide information and discuss mitigation strategies. Providing construction information exchange centers in the Corridor for public input and up-to-date construction information.
- Including as public information strategies media advisories, variable message signs, advance signs, a telephone hotline, real-time web cameras, the use of intelligent transportation systems and technology in construction work zones, a construction project website, and alternate route advisories.
- As each construction phase is undertaken, working with communities to identify community representatives. These persons will partner in the construction traffic control program and provide assistance/feedback to the traffic control team.
- Providing emergency responders traffic control contact information. In an emergency, responders contact the traffic control office, provide their approximate arrival time at the construction zone, and traffic control could provide a clear path through the construction zone.
- Providing effective directional signage.
- Being sensitive to blockage during prime business hours.
- Providing outreach to impacted businesses as early as possible before any construction.

3.8. Social and Economic Values

- Identifying business relocation opportunities.
- Coordinating with local chambers and town economic offices to help develop promotional strategies during construction.
- Establishing a specialized website for businesses to access construction schedules that might affect their businesses.

Mitigation will consider strategies to address the disparity in the distribution of benefits and impacts that might result from construction activities. Tier 2 processes will include strategies to avoid and minimize construction impacts on Clear Creek communities, including but not limited to:

- Considerations for peak seasonal traffic (e.g., cessation of construction activities during ski season weekends)
- Accessibility to Idaho Springs businesses
- Assisting the county with historic tourism marketing
- Developing a site-specific Tier 2 interpretive signage plan.

The lead agencies will address safety issues on the I-70 highway, which will reduce the number of crashes on the highway. This will reduce the frequency of emergency response to crashes on the I-70 highway, which, in turn, will reduce local community emergency services costs.

3.8. Social and Economic Values

This page intentionally left blank.