



TABLE OF CONTENTS

	<u>Page</u>
4.2 SOCIAL CONDITIONS.....	4.2-1
4.2.1 Affected Environment	4.2-1
4.2.1.1 Demographic Characteristics.....	4.2-1
4.2.1.2 Neighborhood Integrity/Community Cohesion	4.2-4
4.2.1.3 Community Facilities/Resources	4.2-9
4.2.2 Environmental Consequences	4.2-11
4.2.2.1 No Action Alternative	4.2-11
4.2.2.2 Impacts Common to All Build Alternatives.....	4.2-11
4.2.2.3 Freeway Alternative.....	4.2-13
4.2.2.4 Tollway Alternative	4.2-16
4.2.2.5 Regional Arterial Alternative.....	4.2-19
4.2.2.6 Combined Alternative (Recommended Alternative)	4.2-21
4.2.3 Suggested Mitigation	4.2-24
4.2.3.1 Short-Term Construction Impacts	4.2-24
4.2.3.2 Property Acquisitions and Displacements.....	4.2-24
4.2.3.3 Access/Circulation	4.2-24
4.2.3.4 Neighborhood Integrity/Community Cohesion.....	4.2-25
4.2.4 Summary.....	4.2-25



LIST OF FIGURES

	<u>Page</u>
Figure 4.2-1 Potentially Affected Neighborhoods in the Study Area	4.2-8
Figure 4.2-2 Community Facilities.....	4.2-10

LIST OF TABLES

	<u>Page</u>
Table 4.2-1 Population Growth by Area, 1990 - 2000.....	4.2-2
Table 4.2-2 Households and Housing Units in the Study Area	4.2-3



4.2 SOCIAL CONDITIONS

INTRODUCTION

This section discusses the social characteristics of the region and study area. It describes the area's population composition, housing characteristics, public safety providers, and community facilities. Information for this section was derived from the U.S. Census Bureau, DRCOG, Colorado Demography Office, Colorado Department of Local Affairs, Cabela's of Wheat Ridge Project Information Site, City and County of Boulder, Jefferson County, City of Arvada, City and County of Broomfield, City of Golden, City of Lafayette, City of Lakewood, City of Louisville, Town of Superior, City of Westminster, and City of Wheat Ridge.

The study area includes Boulder, Broomfield, and Jefferson counties. There are nine municipalities in the study area: Arvada, Broomfield, Golden, Lafayette, Lakewood, Louisville, Superior, Westminster, and Wheat Ridge. Much of the western half of the study area is open space or sparsely populated unincorporated areas, while the eastern part is composed of residential and commercial areas.

Public concerns expressed through the public involvement process regarding social conditions include potential impacts to the Mitchell Elementary School and the Golden Pond retirement/assisted living community, both along SH 93 in the City of Golden. **Section 4.2.2.2, Section 4.2.2.3, Section 4.2.2.4, Section 4.2.2.5, and Section 4.2.2.6** address these concerns.

4.2.1 AFFECTED ENVIRONMENT

4.2.1.1 DEMOGRAPHIC CHARACTERISTICS

The population of Colorado, Boulder County, and Jefferson County has increased every year from 1985 to 2000 at an average rate of 2.02 percent, 2.23 percent, and 1.45 percent respectively. According to Colorado Department of Local Affairs (DOLA), the population of Colorado will increase by 21 percent between 2005 and 2015, and by 27 percent between 2015 and 2030. The strong national economy and the decentralization of California's population and employment are reasons for growth in Colorado (DOLA, 2003).

Population growth in Boulder and Jefferson counties will occur more slowly than in Colorado as a whole. The population of Boulder County will increase by 12 percent between 2005 and 2015 and by 19 percent between 2015 and 2030 (DRCOG, 2004). The population of Jefferson County will increase by 11 percent between 2005 and 2015 and by 18 percent between 2015 and 2030 (DRCOG, 2004).

Broomfield County was established in 2001; therefore, no past population statistics are available. Its population is projected to increase at a faster rate than that of the state: by 24 percent between 2005 and 2015 and by 34 percent between 2015 and 2030 (DRCOG, 2004).

All of the municipalities associated with the study area have experienced population growth from 1990 to 2000 (see **Table 4.2-1**). During this period, Superior's population increased by 3,433 percent. This growth is largely the result of the expansion of the Rock Creek Planned Unit Development, which began in 1990 and now consists of approximately 2,700 single-family homes and 1,800 multi-family homes. Population growth in Superior is also a result of new residential development within annexations.

The total population in the study area is approximately 247,132.



Table 4.2-1 Population Growth by Area, 1990 - 2000

Area	1990	2000	Change
Colorado	3,294,394	4,301,261	30.6 percent
Boulder County	225,339	291,288	29.3 percent
Unincorporated Boulder County	44,168	45,295	2.6 percent
Broomfield County*	N/A	N/A	N/A
Jefferson County	438,430	527,056	20.2 percent
Unincorporated Jefferson County	142,138	181,666	27.8 percent
City of Arvada	89,235	102,153	14.5 percent
City of Broomfield	24,638	38,272	55.3 percent
City of Golden	13,116	17,159	30.8 percent
City of Lafayette	14,548	23,197	59.5 percent
City of Lakewood	126,481	144,126	14.0 percent
City of Louisville	12,361	18,937	53.2 percent
Town of Superior	255	9,011	3433.7 percent
City of Westminster	74,625	100,940	35.3 percent
City of Wheat Ridge	29,419	32,913	11.9 percent

Note: *County statistics not available because Broomfield became a county in 2001.

Sources: U.S. Census Bureau, 1990. 1990 Census; U.S. Census Bureau, 2000. 2000 Census; Colorado Department of Local Affairs (DOLA). 2005. Website data tables available at <http://dola.colorado.gov/demog/demog.cfm>.

HOUSING

A variety of housing units provide a wide range of accommodations for residents within the study area. The total number of housing units, along with the number of units that are owner occupied, renter occupied, and vacant are presented in **Table 4.2-2** for each municipality. Of the 101,390 housing units, 66 percent are owner occupied, 31 percent are renter occupied, and 3 percent are vacant. There are 98,398 households in the study area with an average household size of 2.6 persons.



Table 4.2-2 Households and Housing Units in the Study Area

Area	Housing Units				Households	
	Total	Owner Occupied	Renter Occupied	Vacant	Total	Average size
Unincorporated Boulder County	140	117	18	5	135	2.8
Unincorporated Jefferson County	11,750	9,088	2,320	342	11,408	2.6
City of Arvada	33,582	24,552	8,409	621	32,961	2.7
City of Broomfield	5,946	3,956	1,824	166	5,780	2.7
City of Golden	7,146	4,238	2,639	269	6,877	2.4
City of Lafayette	452	405	28	19	433	2.4
City of Lakewood	14,297	7,135	6,556	606	13,691	2.4
City of Louisville	2,496	1,852	575	69	2,427	2.7
Town of Superior	3,754	1,971	1,410	373	3,381	2.9
City of Westminster	11,753	8,322	3,162	269	11,484	2.9
City of Wheat Ridge	10,074	5,309	4,512	253	9,821	2.4
Total	101,390	66,945	31,453	2,992	98,398	2.6

Sources: U.S. Census Bureau, 2000, 2000 Census.

TRANSPORTATION-DISADVANTAGED PERSONS

On February 24, 2004, President George W. Bush signed Executive Order 13330 *Human Service Transportation Coordination*. Executive Order 13330 (EO 13330) was enacted to enhance access to transportation to improve mobility, employment opportunities, and access to community services for persons who are transportation disadvantaged. EO 13330 defines transportation-disadvantaged persons as those who qualify for federally conducted or federally assisted transportation-related programs or services due to disability, income, or advanced age. Because these populations rely on a responsive, comprehensive, and coordinated community transportation system to participate fully in their community, transportation within and between communities should be as available and affordable as possible. Persons of advanced age and persons with disabilities are present within the study area as described below. **Section 4.3**, Environmental Justice includes an analysis of low-income populations within the study area.

Persons of Advanced Age

The limits of advanced age are not federally defined. For this study, advanced-age persons are defined as persons 65 years of age and older. This is consistent with the U.S. Census Bureau's definition of "older Americans" (those aged 65 and over). There are approximately 22,835 persons of advanced-age within the study area, which represents 10 percent of its total population. The advanced-age population has grown by 25 percent since 1990 and is expected to be 13 percent of the total population by 2020 (DOLA, 2004).

Persons with Disabilities

The Americans with Disabilities Act (ADA) defines a disability as, "a physical or mental impairment that substantially limits one or more of the major life activities of such an individual; a record of such an impairment; or being regarded as having such an impairment."

According to the U.S. Census Bureau people five years old and over are considered to have a sensory, physical, mental, or self-care disability if they have one or more of the following: (a) blindness, deafness, or a severe vision or hearing impairment; (b) a substantial limitation in the ability to perform basic physical activities, such as walking, climbing stairs, reaching, lifting, or carrying; (c) difficulty learning, remembering, or concentrating; or (d) difficulty dressing, bathing, or getting around inside the home. People aged 16 and older are considered to have a go-outside home disability if they experienced difficulty going outside the home to shop or visit the doctor because of a physical, mental, or emotional condition and an employment disability if they have difficulty working at a job or business because of a physical, mental, or emotional condition. There



are approximately 25,374 persons with disabilities within the study area, which represents 10 percent of the study area's total population. As shown in **Table 4.2-3**, the most common disabilities are physical and employment

4.2.1.2 NEIGHBORHOOD INTEGRITY/COMMUNITY COHESION

Neighborhoods can be difficult to characterize; many jurisdictions do not define the term “neighborhood” or establish neighborhood boundaries. While there are over one hundred subdivisions within the study area, subdivisions represent subdivided land and should not be mistaken for residential communities or neighborhoods. Some features that characterize a neighborhood are the presence of adjacent properties, community facilities, and informal meeting spaces for example, cafés or plazas.

Development within the study area ranges from organized subdivisions to scattered rural parcels. In the Interlocken area, development is primarily commercial with some high-density housing. Along much of SH 93, from Boulder to Golden, development is primarily rural with isolated large lot residences. In Golden, along SH 93 and US 6, development consists of mainly organized subdivisions and some commercial outlets. Much of the development adjacent to Indiana Street/McIntyre Street is rural, with small residential neighborhoods and some large-lot residences.

Community cohesion is the degree to which residents within a community network, cooperate, and interact. Amenities within the community that encourage interaction among residents promote community cohesion. An aesthetically pleasing community that provides bicycle and pedestrian facilities is more likely to support community interaction. Traffic patterns, accessibility to community facilities, and the presence of neighborhood activity centers are also important components of community cohesion.

Each municipality within the study area and the neighborhoods within them that are located within one-half mile of the proposed transportation improvements is described below. Special attention is given to those areas that would be affected by the proposed transportation improvements. Neighborhoods delineated by local jurisdictions as well as residential areas that, although not formally named or delineated, display characteristics of an organized neighborhood are identified (see **Figure 4-2.1**). Because of the difficulty in characterizing neighborhoods, all other residential areas are described in general terms and are not identified in **Figure 4-2.1**. An evaluation of community cohesion is also included.

UNINCORPORATED BOULDER COUNTY

Located northwest of Denver on the eastern slope of the Rocky Mountains, Boulder County is home to over 290,000 people, within both rural and urban settings. Covering approximately 741 square miles, Boulder County contains eleven cities and towns. Those within the study area include Lafayette, Louisville, and Superior. The unincorporated portion of Boulder County that falls within the study area is undeveloped with no neighborhoods or residential subdivisions.

UNINCORPORATED JEFFERSON COUNTY

Jefferson County spans 4 to 18 miles west to east and 54 miles north to south and contains twelve cities and towns. Those within the study area include Arvada, Lakewood, Golden, Superior (the southernmost portion), Wheat Ridge, and Westminster. The unincorporated portions of Jefferson County within the study area are rural in character. Parcel data indicates more than 35 residential subdivisions within one-half of a mile of the proposed build alternatives. Most of these are rural residential developments.

Subdivisions at the intersection of W. 58th Avenue and SH 93 make up the Parkview Villas at Golden and Table Rock neighborhood area. This newly constructed residential community is a relatively isolated neighborhood with no visible connections to the town of Golden (other than access to SH 93). There are no commercial/retail services or community facilities (other than a community pool) to encourage community interaction. An area of Jefferson County open space on the west side of the intersection is most likely an amenity for the community, as are the mountain views. However, the existing SH 93 alignment is a barrier to this open space and there are no existing bicycle or pedestrian amenities to encourage a connection between this neighborhood and the open space area. Development and construction within this neighborhood is on



going with additional residential structures, an elementary school, and trail system proposed. Although the community does not yet exhibit a strong sense of cohesion, this is likely to change as development continues and community interaction increases.

CITY OF ARVADA

The City of Arvada is located northwest of Denver. It has many diverse neighborhoods, as well as several large office and business parks, retail centers, and recreational amenities. One recreational amenity is the Apex center, with two ice rinks, an indoor water playground, climbing wall, and gymnasium located at the intersection of W. 72nd Avenue and Alkire Street. Historic Olde Town Arvada is a main street community offering shopping, dining, and entertainment. Substantial growth has occurred in the west area of Arvada, which has generated interest in accommodating future growth as infill development. SH 93 is an important employment and commercial corridor for the community of Arvada. The corridor is the planned location for the Jefferson Center Development Area, which involves two major commercial centers at future interchange sites (SH 72 and W. 64th Avenue).

Eastern Arvada contains a number of older neighborhoods with homes built in the 1950s, 1960s, and 1970s. The area surrounding Indiana Street/McIntyre Street is rural in character and is typified by large lots, horses, barns, agriculture, and rural accessory activities (such as boarding kennels). Relatively stable rural residential developments are present along Indiana Street north of 72nd Avenue. Along this stretch of roadway, there are no sidewalks, neighborhood activity centers, or visible indications of community interaction.

In the southeast quadrant of the SH 72/Indiana Street intersection, the Village of Five Parks is a newer residential community with an assortment of neighborhoods, each framing one of five parks. While construction is on going, the ultimate goal is to create a self-sufficient, walkable community with public parks providing all necessary recreation. Although the community does not yet exhibit a strong sense of cohesion, most residents in this community anticipate neighborhood interaction and community cohesion. Access to SH 72 connects the neighborhood to surrounding communities

CITY AND COUNTY OF BROOMFIELD

The City and County of Broomfield is located between Denver and Boulder along the US 36 corridor. Although a strong market for residential development exists, large strip malls and big-box retail developments have made up the bulk of new development in Broomfield. The Interlocken Business Park is a 963-acre development to the west and north of the Wadsworth Boulevard interchange along US 36 that employs over 20,000 people (Broomfield Land Use Accounting Summary of 2002). The portion of Broomfield that is located within the study area consists predominantly of commercial development (associated with Interlocken), with some undeveloped land and three residential areas. Of these, two residential areas are located within one half of a mile of the proposed transportation improvements:

- **Stonegate Apartments:** approximately 350 units, located on Ridge Parkway at SH 128. Surrounded by open space, these apartments have high quality city and mountain views. Although the apartment complex itself is isolated, employment and retail services are available from the Interlocken/Flatirons commercial area.
- **Camden Interlocken Apartments:** approximately 340 units, located on Eldorado at SH 128. Surrounded by open space, these apartments have high quality mountain views and are adjacent to the Omni Golf Course. Employment and retail services are available from the Interlocken/Flatirons commercial area.

Amenities and pathways in these apartment communities encourage interaction, but do not generate a strong sense of community cohesion.



CITY OF GOLDEN

The City of Golden is located just west of Denver. It has an independent small town feel and is located just below the foothills of the Rocky Mountains. Golden has a variety of land uses, neighborhoods, housing and job options, as well as many recreational choices. Neighborhood connectivity and community cohesion is evident in Golden's pedestrian friendly atmosphere. The Colorado School of Mines contributes to the community's identity. Some student housing is located within the study area west of SH 93. Golden's Central Business District is at the core of the city and provides a main street, downtown character that attracts residents and encourages interaction. The downtown area is surrounded by old and historic neighborhoods, with newer residential neighborhoods strategically planned and located in the northern portion of the city. Although access to the downtown area is provided from SH 93, the roadway acts as a barrier between the neighborhoods west of the highway and the central downtown area. While mountain views and sidewalks encourage some level of interaction, these communities are somewhat isolated by the surrounding undeveloped land and the absence of neighborhood focal points or gathering places. The Golden Pond retirement/assisted-living community is located in this area along SH 93 between Pine Ridge Road and Golden Gate Canyon Road.

Notable neighborhoods within one half of a mile of the proposed build alternatives include:

- **Mesa Meadows:** a single-family neighborhood located on the east side of the SH 93/Pine Ridge Road intersection.
- **The North Forty:** a single-family neighborhood of approximately 60 homes located east of SH 93 between Golden Gate Canyon Road and Washington Avenue.
- **The Village at Mountain Ridge:** a single-family neighborhood of approximately 300 homes located on the northwest corner of the SH 58/SH 93 intersection.
- **Parfet Estates:** a single-family neighborhood located on the northwest corner of the 19th Street/SH 93 intersection. This neighborhood is relatively isolated but has high quality views. Signage for bicycles indicate that bicyclists from Golden may use this roadway informally to access the mountains. Near the entrance of the community is a small park that encourages community interaction
- **The Village at Golden Ridge/Eagle Ridge:** an aesthetically pleasing neighborhood of several subdivisions west of US 6 at Heritage Road. This neighborhood offers a variety of housing types and services. Attractive pathways and local retail and community services most likely encourage community interaction.
- **Canyonside Condominiums/Canyon Point Villas:** condominiums and single-family homes located on the northeast corner of the SH 58/SH 93 intersection. A small park, mountain views, and a few sidewalks are likely amenities for residents. However, this neighborhood does not have any community gathering places or services that would otherwise encourage interaction. Mitchell Elementary School may create some level of interaction and community.

CITY OF LAFAYETTE

The City of Lafayette is located northwest of Denver and east of Boulder in southeastern Boulder County. Only the southernmost portion of Lafayette falls within the study area. Development in Lafayette is primarily residential. Commercial development and employment growth in the surrounding communities of Boulder, Broomfield, and Louisville have made Lafayette an attractive location to settle. The portion of Lafayette that falls within the study area is largely undeveloped and contains only one neighborhood, a single-family subdivision just south of Empire Road at US 287. This neighborhood is more than one mile from the proposed transportation improvements.

CITY OF LAKEWOOD

The City of Lakewood is located west of Denver. Only the southwestern portion of Lakewood falls within the study area. Denver West Office Park, located at Denver West Boulevard and I-70, is 1.5 million square



feet of office space in 21 buildings, surrounded by miles of pedestrian walkways and green space. Adjacent to the Denver West Office Park to the south is Colorado Mills, a 200-acre shopping, dining, and entertainment destination featuring more than 200 shops and restaurants. Residential homes in the area range from small post-World War II construction to large custom homes in the neighborhoods of Applewood, Creighton, Daniels, Denver West, Edgewood, Eiber, Molhom/Two Creeks, Morse Park, North Alameda, and Union Square. These neighborhoods are located south of 26th Avenue and East of Simms Street, more than two miles from the proposed transportation improvements.

CITY OF LOUISVILLE

The City of Louisville is located northwest of Denver and east of Boulder. Only the southernmost portion of Louisville falls within the study area. The residential areas of the city are almost fully built. Centennial Valley and the Colorado Technical Center are anticipated to promote commercial and industrial growth. Sun Microsystems has proposed a redevelopment of its campus from a former manufacturing site to a mixed-use neighborhood with over 1,000 residential units and 1 million square feet of office and retail space. The plan would require Louisville to annex 80 acres in unincorporated Boulder County. The portion of Louisville that falls within the study area is largely undeveloped with no neighborhoods or residential subdivisions.

TOWN OF SUPERIOR

The Town of Superior is located northwest of Denver and southeast of Boulder. Development in Superior is primarily residential with plans for additional multifamily units and single-family homes. Some commercial and retail development is also planned. There are more than 40 residential subdivisions within the Town of Superior. Of these, the southern portion of one (Rock Creek) is located within one half of a mile from the proposed transportation improvements. A variety of housing types, shared open spaces, views of the Flatirons and Rocky Mountains, and a community website encourage interaction and create a sense of identity and community cohesion among Rock Creek residents.

CITY OF WESTMINSTER

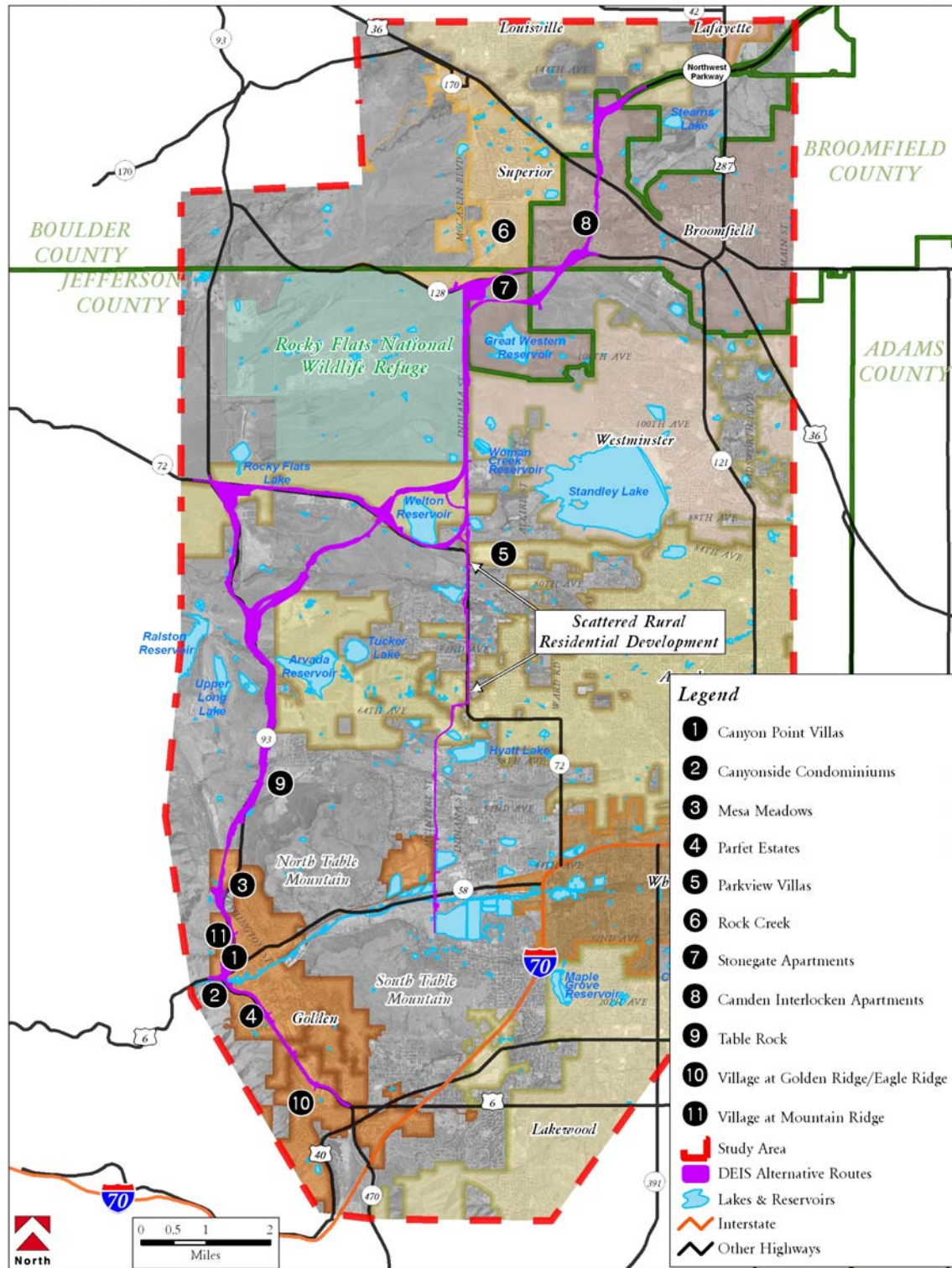
The City of Westminster is located northwest of Denver and southeast of Boulder. The western portion of Westminster is located within the study area and includes Standley Lake. Development in this growing city is predominantly residential with low-density single-family subdivisions. The city also contains retail and commercial developments that are easily accessible from both Denver and Boulder. Large areas of land have been designated as open space within the city limits.

Seven broad neighborhood-planning areas have been identified by Westminster. These include Standley Lake/Oakhurst, Betty Adams/Semper, Sheridan Green/Ryan, College Hill, Rocky Mountain/Sunset Ridge, South Westminster, and North Westminster. The Standley Lake/Oakhurst neighborhood area abuts Indiana Street between West 96th Avenue and West 108th Avenue. Residential development within this neighborhood is located more than one mile from the proposed transportation improvements.

CITY OF WHEAT RIDGE

The City of Wheat Ridge is located west of Denver. Only the western portion of Wheat Ridge is located within the study area. Surrounding municipalities limit the opportunity for boundary expansion and development. One exception is Cabela's, a planned shopping destination near I-70 and SH 58. Slated to open in September of 2007, Cabela's will bring over 450 jobs to the area. Suburban neighborhoods are located throughout Wheat Ridge with concentrations extending outward from the Clear Creek greenway. These neighborhoods are located more than two miles from the proposed transportation improvements.

Figure 4.2-1 Potentially Affected Neighborhoods in the Study Area



Source: Compiled by FHU, 2007.



4.2.1.3 COMMUNITY FACILITIES/RESOURCES

Community facilities and public resources promote interaction and provide services for members of the community. Notable facilities within the study area include 84 schools, 4 public libraries, 117 places of worship, 4 recreation centers, 5 hospitals, 3 police stations, and 19 fire stations.

Three school districts serve the study area: Boulder Valley RE-2, Jefferson County R-1, and Adams 12 Five Star Schools (formerly Northglenn-Thornton 12). Of the 84 schools within the study area, one (Mitchell Elementary) is located near the proposed transportation improvements on Rubey Drive, approximately 225 feet from the existing SH 93 alignment, with an enrollment of 537 students. The Colorado School of Mines is a public research university devoted to engineering and the applied sciences. Established in the 1870s, the Colorado School of Mines has had a lasting influence in Golden. Total enrollment was over 3,500 in 2004.

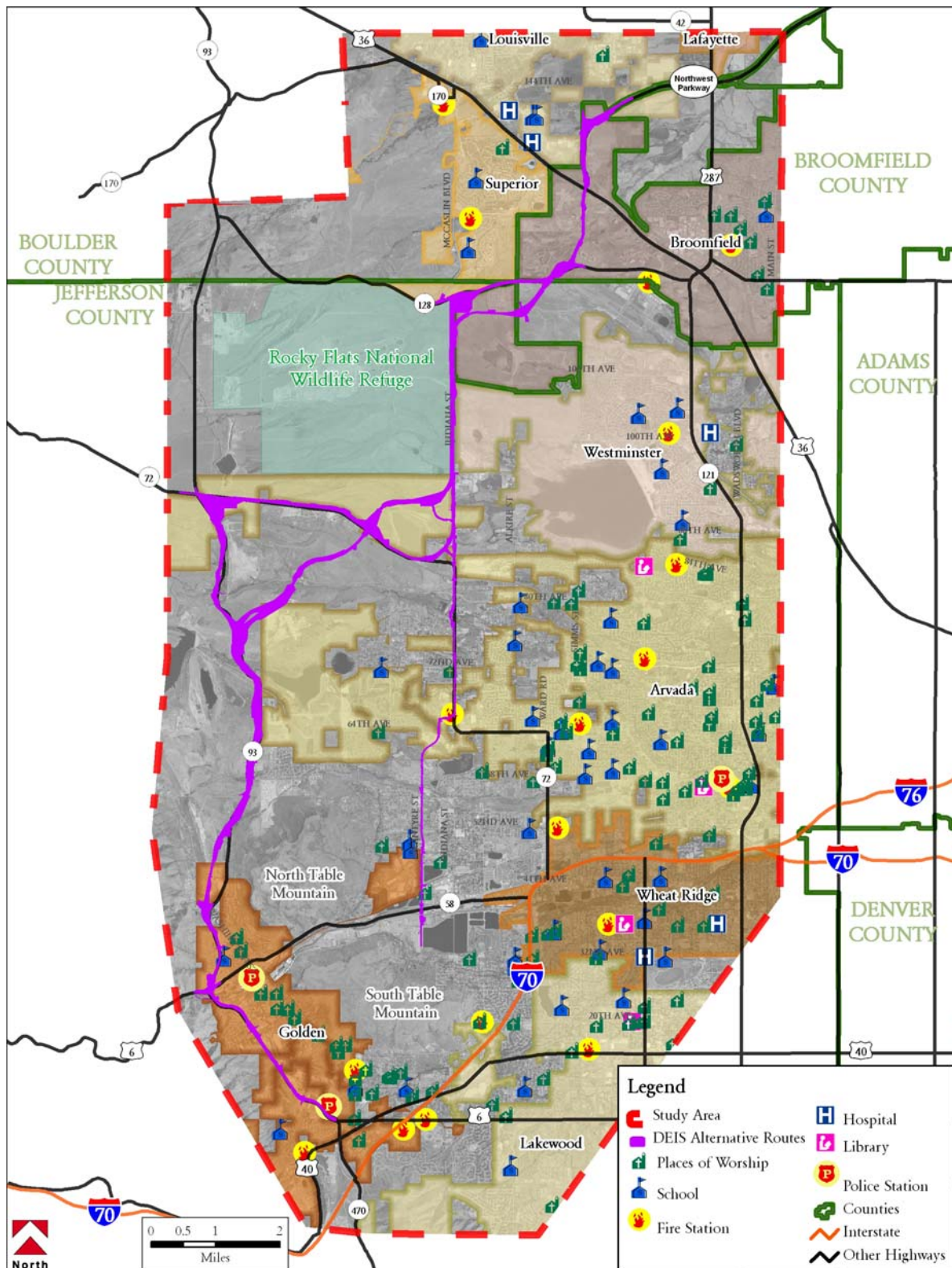
The Boulder County Sheriff, Jefferson County Sheriff, and police departments in the cities of Arvada, Boulder, Broomfield, Golden, Lafayette, Lakewood, Louisville, Westminster, and Wheat Ridge provide law enforcement services within the study area. The Boulder County Sheriff provides service to unincorporated Boulder County and the Town of Superior and the Jefferson County Sheriff provides service to unincorporated Jefferson County.

Nine entities provide fire protection in the study area. Fire departments within these districts provide several services, such as emergency medical service, fire prevention, hazardous materials response, fire safety education, and wildland fire management:

- Arvada Fire Protection District—protects the City of Arvada
- Cherryvale Fire Protection District—protects the Town of Superior and parts of the City of Boulder
- North Metro Fire Rescue District—protects the City and County of Broomfield as well as parts of unincorporated Boulder County and Jefferson County
- West Metro Fire Protection District—protects the City of Lakewood and parts of the City of Golden
- Boulder Fire Department—protects the City of Boulder
- Golden Fire Department—protects the City of Golden
- Lafayette Fire Department—protects the City of Lafayette
- Louisville Fire Department—protects the City of Louisville
- Westminster Fire Department—protects the City of Westminster
- Wheat Ridge Fire Department—protects the City of Wheat Ridge

Neighborhoods within the study area are generally well served by these community facilities and public resources (see **Figure 4.2-2**).

Figure 4.2-2 Community Facilities



Source: Compiled by FHU, 2007.



4.2.2 ENVIRONMENTAL CONSEQUENCES

4.2.2.1 NO ACTION ALTERNATIVE

Given the relatively limited scope of the No Action Alternative, impacts would be less substantial than the impacts described below for the build alternatives. However, certain adverse effects on social conditions in the study area would arise as a result of unmet transportation needs left by the No Action Alternative. These would include the direct impacts and indirect effects on communities that are typically caused by traffic congestion and impaired mobility, including increased air pollution and noise, longer travel times, neighborhood traffic intrusion, deteriorating safety conditions, and lengthened emergency response times.

4.2.2.2 IMPACTS COMMON TO ALL BUILD ALTERNATIVES

SHORT-TERM CONSTRUCTION IMPACTS

Construction activities for all of the build alternatives would result in temporary, periodic, site-specific disruptions to the communities in the study area. These disruptions are the result of construction-related equipment in the area, lane closures, increased noise and vibration, lights and glare, and changes in air emissions (see **Section 4.6**, **Section 4.7**, **Section 4.12**, and **Section 4.20**). Disruptions to study area travel patterns would be temporary and managed through construction traffic planning coordinated with local communities.

PROPERTY ACQUISITIONS AND DISPLACEMENTS

All of the build alternatives would require residential and commercial property acquisitions for transportation purposes (see **Section 4.5**). All of the build alternatives would also require the acquisition property associated with community facilities. For the Freeway, Tollway, and Regional Alternatives, this would entail two partial acquisitions of property with no effect on buildings or programs. In addition to these partial acquisitions, the Combined Alternative (Recommended Alternative) would require the acquisition of one community facility. The acquisitions and displacements for each build alternative are summarized below.

ACCESS/CIRCULATION

The build alternatives would result in modifications to access and circulation. In some locations where access to roadways is currently unlimited, there would be limited access and permanent local rerouting. For example, motorists entering a property or an area with existing direct access to a roadway would instead have to travel to and from a limited access facility by means of a frontage road. This would potentially involve some incremental increase in travel time and distance. For local trips, this could be viewed as an inconvenience; however, for those making trips via the new limited access facilities, travel-time savings on a less congested, more reliable new roadway would offset any delay associated with local-rerouting. Each of the build alternatives would decrease vehicle hours of travel relative to the No Action Alternative. This indicates improved mobility due to a reduction in congestion, with less time required to reach community facilities and places of employment throughout the study area.

Local access and circulation also would change where some streets intersect an improved roadway (primarily freeway and tollway facilities). Underpasses and overpasses would allow cross-traffic to be maintained, but not every intersecting street would have access to the improved roadway. In these instances, it would be necessary to travel local streets to reach an adjacent interchange. This traffic would have adverse effects on adjacent neighborhoods in terms of noise, air pollution and safety, especially in areas where existing traffic volumes are low.

Changes in access and circulation would be of particular importance to certain public facilities and services. Modified access to and from some schools in the study area would require changes to bus and pedestrian routes. In particular, access to Mitchell Elementary School would become more difficult for local residents. The existing entrance to this school is located on Rubey Drive. Existing access to Rubey Drive from SH 93 is from Iowa Street or Washington Avenue. For all build alternatives, SH 93 would be grade separated with no access at Iowa Street. Under the Freeway Alternative, local residents would access Iowa Street via SH 58 or



Golden Gate Canyon Road. Under the Tollway Alternative, local residents would access Iowa Street from SH 93 or SH 58 via slip ramps from the tollway mainline. Under the Regional Arterial Alternative and Combined Alternative (Recommended Alternative), local residents would access Iowa Street via SH 58 or Washington Avenue.

Emergency services providers (i.e., police, sheriff, state patrol, fire, emergency medical service) would potentially have to utilize different emergency response routes in locations where access modifications occur. None of the emergency providers within the study area would lose access because of the proposed transportation improvements; however, access may need modification and routes may need to be changed. Such access modifications will be addressed in detail during the next phase of the project. Emergency service providers would also benefit from any reductions in congestion and greater mobility afforded by the build alternatives as compared to the No Action Alternative.

The Golden Pond retirement/assisted-living community is located along SH 93 between Pine Ridge Road and Golden Gate Canyon Road. For all of the build alternatives, the proposed roadway improvements would veer away from the existing alignment at Golden Gate Canyon Road. The existing roadway alignment of SH 93 would remain in place, serving as a frontage road, so access to the Golden Pond facility would not change.

NEIGHBORHOOD INTEGRITY/COMMUNITY COHESION

All of the build alternatives would affect the integrity of neighborhoods and cohesiveness of communities in the study area. While none of the build alternatives would construct a new roadway on a new alignment through an existing neighborhood, all would involve the conversion of certain minor arterials to principal arterials, regional arterials, freeways, and/or tollways. The sheer increase in pavement width and urban structures (such as interchanges and retaining walls) would increase the present psychological barrier effect of SH 93. Existing neighborhoods and community facilities adjacent to roadway improvements would experience traffic-related impacts such as noise, air pollution and visual obstructions. In many cases, the improved roadway facilities would move closer to these existing neighborhoods, increasing the intensity of the impacts.

All of the build alternatives would reduce traffic on residential streets by drawing local traffic from local collectors to improved arterials and/or highway facilities. All of the build alternatives would also, to varying degrees, entail access and circulation modifications that would reroute local traffic to, from, and through some neighborhoods. Insofar as this could be viewed as something ranging from a minor inconvenience to a potential threat to the quality of life, neighborhood integrity and community cohesion would be affected adversely. Conversely, some would consider the changes in local access and circulation to be beneficial, especially if they were part of a larger transportation improvement program that provided congestion relief, improved mobility, and better connectivity among neighborhoods and communities.

Travel to some neighborhoods from a limited access facility would require the use of a frontage road or local roadways by way of grade-separated interchanges. This local traffic would have adverse effects on adjacent neighborhoods in terms of noise and safety, especially in areas where existing traffic volumes are low. This would also potentially involve some incremental change in travel time and distance. For local trips, this may be an inconvenience; however, inter-regional and regional travelers would benefit from travel-time savings on a less congested, more reliable roadway. Each of the build alternatives would decrease vehicle hours of travel relative to the No Action Alternative. This indicates improved mobility, with less time required to reach places of employment throughout the study area.

In locations where access would be improved or capacity would be added, property values would likely increase. It is also possible that property values would decrease at some locations where proximity to improved transportation facilities would result in noise, air emissions, visual impacts, or access changes due to resulting out-of-direction travel. Improved access and capacity, and the ensuing increase in property values, could also encourage redevelopment to higher densities in rural areas (e.g., Indiana Street). Near proposed interchanges (e.g., SH 72 and SH 93), the effect could be a similar transformation from rural development to



large-scale “big box” development. While some of these areas are already planned for commercial activity, higher land values could intensify development and changes in community character. Impacts to land use and community character are explained in more detail (see **Section 4.1**).

Development is expected to occur in the study area with or without the build alternatives. This development would create a demand for new or expanded public services and facilities. However, given the lack of consensus about the role that transportation improvements might play in shaping such growth, it cannot be determined how the build alternatives would specifically affect the demand. Presumably, local and regional service providers will take into account the factors they deem relevant to growth and development in their respective communities as part of their comprehensive planning efforts and in their decision-making process about new or expanded facilities and services.

The impacts of the build alternatives on minority or low-income populations are described (see **Section 4.3**). None of the build alternatives would result in impacts to other traditionally underserved or disadvantaged groups (e.g., persons with disabilities and those of advanced age) that would be substantially different than for the general population.

4.2.2.3 FREEWAY ALTERNATIVE

SHORT-TERM CONSTRUCTION IMPACTS

The Freeway Alternative would require the construction of numerous bridge structures and retaining walls. The greatest amount of disruption would occur with more complicated and longer construction operations, such as new grade-separated interchanges, bridge structures, cut-and-fill slopes, and retaining walls. Construction of the pass-through structures in the Interlocken area would create impacts that would be greater than those alternatives that would only widen Interlocken Loop (Regional Arterial Alternative and Combined Alternative). The construction of the Freeway Alternative along the existing alignment of US 6 and SH 93 would result in temporary traffic disruptions.

PROPERTY ACQUISITIONS AND DISPLACEMENTS

Residential

The Freeway Alternative would require the full acquisition and displacement of three residences in the central portion of the study area. These residences are isolated in nature and do not belong to an organized neighborhood; therefore, the integrity and cohesion of any community would not be affected. Given the small number of displacements in relation to the total amount of comparable housing stock available in the region, no effect on local and regional housing demand would be expected.

Non-Residential

The Freeway Alternative would require the full acquisition and displacement of two businesses. One of these businesses is a construction company that is located in the northernmost portion of Golden. Located outside of central Golden, this business is unconnected to any particular neighborhood community. The second business acquisition is part of the Canyon Point Commercial Center, a neighborhood commercial center serving the north Golden area and Boulder/Golden commuters traveling along SH 93. Acquisition consists of one parcel that contains a gas station and convenience store. Approximately ten additional parcels containing various office and commercial enterprises make up the Canyon Point Commercial Center. Although one parcel would be acquired under the Freeway Alternative, the commercial center would retain its presence and continue to serve the north Golden area. Given the small number of displacements in relation to the total number of comparable commercial properties available in the region, no effect on local and regional demand for commercial property would be expected (see **Section 4.5**).

Community Facilities

The Freeway Alternative would not require the full acquisition of any community facilities. Two partial acquisitions of undeveloped property from the Jefferson County Government Center would be necessary, but there would be no effect on buildings or programs.



ACCESS/CIRCULATION

The current transportation system has a higher level of access than the Freeway Alternative. The Freeway Alternative would implement a limited access facility. The access control for this alternative would be through interchanges only and no other driveways or curb cuts would be provided. In some areas, frontage roads would be provided by utilizing SH 93, Indiana Street, or other existing streets. In other areas, new facilities will need to be constructed in order to provide access to an interchange. A description of the cross streets, interchange locations, and frontage roads associated with the Freeway Alternative is available (see **Chapter 2**).

The Freeway Alternative would convert several segments of US 6 and SH 93 from unlimited access facilities to a limited access freeway. This would occur along US 6 and SH 93 through Golden. Access to and from the freeway would only be permitted at interchanges (see **Chapter 2**). Travel on intersecting cross streets without interchanges would be accommodated with underpasses and bridges.

Eldorado Boulevard would connect to SH 93 from a new interchange. This would require minor out-of-direction travel for residents of the Camden Interlocken Apartments. Access for residents of the Stonegate Apartments would be maintained from the existing SH 93 alignment. However, residents would have to merge onto the freeway alignment to access employment and services in Broomfield.

Between 64th Avenue and south of Leyden Road, the existing SH 93 would become a two-lane frontage road on the west side of the freeway, retaining access to properties in this location. This would require some changes in circulation for traffic to and from Boulder. Motorists on SH 93 could connect to the freeway by a single-lane ramp and could reconnect with the SH 93 frontage road at the 64th Avenue interchange.

At 58th Avenue, the existing SH 93 alignment would be converted to a frontage road that would run west along the freeway. This would retain existing connections to SH 93 for the Parkview Villas at Golden and the Table Rock neighborhood. However, some out-of-direction travel would be required to access the freeway. Residents would have to travel north to 64th Avenue or south to Golden Gate Canyon Road via the frontage road to reach a freeway access point.

The Freeway Alternative would not provide access at Washington Avenue, Iowa Street or Pine Ridge Road. Access to the Canyon Point Commercial Center and local communities, such as the Village at Mountain Ridge, Golden Pond retirement/assisted living community, Mesa Meadows, and the North Forty would be from the Golden Gate Canyon Road interchange by the frontage road configuration in this area. Between just south of 58th Avenue and Golden Gate Canyon Road, the existing SH 93 alignment would serve as a frontage road that would run east along the freeway, providing direct access to local neighborhoods and the Golden Pond retirement/assisted living community. While there would be some out-of-direction travel and rerouting, this configuration would allow access to be maintained in its current location along SH 93.

Current access to the Canyonside Condominiums is provided directly from US 6 just south of the intersection of US 6 and SH 58. Access from the Freeway Alternative would require out-of-direction travel by rerouting traffic to an access road off the west leg of US 6 from the US 6/SH 58 interchange.

An interchange at 19th Street would provide access to Parfet Estates as well as other communities within Golden and the Colorado School of Mines. These alterations to the local circulation system would result in some out-of-direction travel and rerouting.

Emergency Services

As described below, the Freeway Alternative would require emergency service providers (i.e., police, fire, ambulance) to modify response routes. In some areas, this would mean more circuitous travel and increased response times. In other areas, the freeway would provide a faster and more direct emergency response route. Emergency providers immediately adjacent to SH 93 would experience the greatest impacts. Jefferson County Sheriff's Office (200 Jefferson Parkway) would have full access to the freeway facility from an interchange at Heritage Road. Golden Fire Station #1/Golden Police Department (911 10th Street) would have to travel three blocks north to access the freeway from SH 58. A representative of the project team contacted these agencies to ask for input in January 2006. The primary concerns identified related to the potential for



increases in response time during and following construction and access changes. Coordination with these local agencies would be essential to avoid or minimize adverse effects to emergency responders. This coordination would occur during the final design phase of the project.

Schools

The Freeway Alternative would also affect access to and from schools. At Mitchell Elementary School along SH 93 in Golden, the freeway would be about 190 feet from the northwest corner of the school (i.e., about 37 feet closer than the existing highway), potentially causing access, noise, and visual effects associated with the closer proximity (see **Section 4.7** and **Section 4.12**). The existing entrance to this school is located on Rubey Drive with access from Iowa Street or Washington Avenue from SH 93. The Freeway Alternative would provide access to Mitchell Elementary via a new frontage road from the Golden Gate Canyon Road interchange or via Washington Avenue from the US 6/SH 58 interchange. To maintain access to the school for students living west of the highway, the existing pedestrian walkway across SH 93 would either remain or be replaced by a similar facility.

NEIGHBORHOOD INTEGRITY/COMMUNITY COHESION

The Freeway Alternative would either follow existing roadway alignments, primarily along Indiana Street and SH 93, or would traverse vacant and very low-density open space and agricultural areas. In the vacant and less developed areas, few if any effects on neighborhood integrity and community cohesion would be expected since these areas are so sparsely populated. Effects would be more likely in more developed areas.

At the Memorial Garden, which is on the grounds of the Jefferson County Government Complex, this alternative would be located out of view of the Memorial Garden, adjacent to the proposed West Corridor light rail tracks and the relocated City of Golden bike path. This will preserve the Memorial Garden as a relatively contemplative area similar to its current use.

The Freeway Alternative would not cut through any residential neighborhoods on a new alignment. As more drivers use the freeway facility, the Freeway Alternative would reduce congestion along Indiana Street, benefiting the Village of Five Parks development and rural residences along this roadway. As previously discussed, the existing SH 93 alignment would be converted to a frontage road for much of the area between Leyden Road and Golden Gate Canyon Road. Aside from maintaining existing access, residents immediately adjacent to the frontage road would benefit from reductions in traffic and traffic-related impacts (noise, air quality, visual, and safety) that would occur as a result of through traffic utilizing the new freeway alignment.

The Freeway Alternative would, however, substantially intensify the transportation activity in the US 6 and SH 93 corridor. Residents and local officials have indicated in public meetings and correspondence that this larger, broader facility would impose a physical and psychological barrier between neighborhoods. The existing highway already forms a barrier and is becoming increasingly more characteristic of an urban roadway with high-volume, high-speed traffic.

The Village at Mountain Ridge, Canyonside Condominiums/Canyon Point Villas, Parfet Estates, and the Village at Golden Ridge/Eagle Ridge (all west of US 6 and SH 93) are primarily residential with little or no commercial activity or community facilities present. Consequently, residents to the west must utilize businesses and services on the east side of the highway. Important business and community service centers include the Colorado School of Mines and the downtown Golden commercial center. Placing a high-speed, limited access freeway between the residences and the businesses and services they need would magnify the barrier created by the existing SH 93 alignment. Residents of these neighborhoods would feel more isolated and less connected to the greater Golden community.

Changes to the visual environment in this section of Golden would also contribute to actual or perceived degradation of community cohesion. The analysis of visual impacts finds that the more substantial band of concrete that would be placed in the area would form a visual barrier (see **Section 4.12**). This

impact would be experienced primarily by the homes closest to SH 93 or higher up along the mountainside in the Village at Mountain Ridge, Canyonside Condominiums, Parfet Estates, the Village at Golden Ridge/Eagle Ridge, the North Forty, and Mesa Meadows.

As previously discussed, access to the Golden Pond retirement/assisted-living community would be maintained from the existing SH 93 alignment, which would be converted to a frontage road at this location. Because the new roadway facilities would be located farther to the west than the existing roadway, traffic-related noise levels would likely decrease for community residents. The Freeway Alternative would construct an interchange at Golden Gate Canyon Road (south of the Golden Pond community) that would be elevated approximately 26 feet from existing ground resulting in a community impact. The bridge structure, elevated roadway, and associated ramps would adversely affect residents' mountain views to the west.

For some people in the study area, particularly in parts of Golden, the more intensive transportation use, the visual intrusion, and the greater level of urbanization they would signify would adversely affect their sense of community cohesion. Others, however, might be less sensitive to such change and could perceive it as something neutral or even beneficial.

4.2.2.4 TOLLWAY ALTERNATIVE

SHORT-TERM CONSTRUCTION IMPACTS

The Tollway Alternative is similar to the Freeway Alternative in that it would require the construction of numerous bridge structures and retaining walls. The greatest amount of disruption would tend to occur with more complicated and longer construction operations, such as new grade-separated interchanges, bridge structures, cut-and-fill slopes, and retaining walls. Construction of the pass-through structures in the Interlocken area would create impacts that would be greater than those alternatives that would only widen Interlocken Loop (Regional Arterial Alternative and the Combined Alternative). Maintaining access from cross streets to US 6 and SH 93 would be difficult during construction of the tolled lanes adjacent to existing lanes.

PROPERTY ACQUISITIONS AND DISPLACEMENTS

Residential

The Tollway Alternative would require the full acquisition and displacement of three residences within the central portion of the study area. These residences are isolated in nature and do not belong to an organized neighborhood therefore, the integrity and cohesion of any community would not be affected. Given the small number of displacements in relation to the total amount of comparable housing stock available in the region, no effect on local and regional housing demand would be expected.

Non-Residential

The Tollway Alternative would require the full acquisition and displacement of seven businesses. One of these businesses is a construction company (previously discussed under the Freeway Alternative) and the other six are located within the Canyon Point Commercial Center in north Golden. Although six of the businesses within the commercial center would be acquired, the commercial center would retain its presence and continue to serve the north Golden area. By acquiring five additional businesses more than the Freeway Alternative, the Tollway Alternative would have a greater impacts to the commercial center. Given the small number of displacements in relation to the total number of comparable commercial properties available in the region, no effect on local and regional demand for commercial property would be expected (see **Section 4.5**).

Community Facilities

The Tollway Alternative would not require the full acquisition of any community facilities. Two partial acquisitions of property from the Jefferson County Government Center would be necessary, but there would be no effect on buildings or programs.



ACCESS/CIRCULATION

The current transportation system has a higher level of access than the Tollway Alternative. The Tollway Alternative would implement a limited access facility. The access control for this alternative would be through interchanges and slip ramp connections with US 6 and SH 93. Other driveways or curb cuts would not be provided. A description of the cross streets and interchange locations associated with the Tollway Alternative is available (see **Chapter 2**).

The Tollway Alternative would not change the access situation from US 6 or SH 93 to any of the major cross streets along the alignment. However, the access road to the Canyonside Condominiums would be relocated off the west leg of US 6 from the existing intersection of US 6 and SH 58. Slip ramps would provide access from the existing roadways of US 6 and SH 93 to the Tollway Alternative mainline. Access to and from the tollway would be permitted at interchanges from cross streets and slip ramps along existing roadways (see **Chapter 2**). The number of interchanges under this alternative would be four fewer than the Freeway Alternative, one greater than the Regional Arterial Alternative, and two fewer than the Combined Alternative. Underpasses and bridges would be provided to maintain travel on intersecting cross streets without interchanges.

Financial access to a tolling facility is an issue that often emerges when addressing the impacts of express lanes. To use the new express lanes, tollway users would be required to pay for their travel. Equity studies conducted on express lane projects implemented in California and Texas reveal that economically disadvantaged drivers use express lanes voluntarily and are not necessarily excluded, although more frequent use is often exhibited by higher-income drivers. Most users, even those from higher-income households, choose the express lanes judiciously when they need to benefit the most from reduced congestion. Currently free travel lanes on SH 93 and US 6 would be maintained in this area. Local roadways and regional arterials providing alternative routes would also be retained. In addition, improvements in circulation and mobility would benefit all motorists. Therefore, the Tollway Alternative would not adversely affect access to transportation for economically disadvantaged persons (see **Section 4.3**).

Emergency Services

The Tollway Alternative would require emergency service providers (i.e., police, fire, ambulance) to modify response routes. In some areas, this would mean more circuitous travel and increased response times. In other area, the Tollway Alternative would provide a faster and more direct emergency response route. Emergency providers immediately adjacent to US 6 and SH 93 would experience the greatest impacts. Jefferson County Sheriff's Office (200 Jefferson Parkway) would have full access to the tollway facility through slip ramps at Jefferson Parkway. Golden Fire Station #1/Golden Police Department (911 10th Street) would have to travel three blocks north to access the tollway via slip ramps near SH 58. Existing lanes on US 6 and SH 93 would also be available for use. A representative of the project team contacted these agencies to ask for input in January 2006. The primary concerns identified related to the potential for increases in response time during and following construction and access changes. Coordination with these local agencies would be essential in order to avoid or minimize adverse effects to emergency responders. This coordination would occur during the final design phase of the project.

Schools

The Tollway Alternative would affect access to and from schools. At Mitchell Elementary School along SH 93 in Golden, the Tollway Alternative would be about 190 feet from the northwest corner of the school (i.e., about 37 feet closer than the existing highway), potentially causing access, noise, and visual effects associated with the closer proximity (see **Section 4.7** and **Section 4.12**). The existing entrance to this school is located on Rubey Drive with access from Iowa Street or Washington Avenue from SH 93. The Tollway Alternative would be grade separated with tunnels under Iowa Street and 28 foot bridges (approximate height) crossing over the existing profile of Washington Avenue. Access to Iowa Street and Washington Avenue via SH 93 would be provided from a new interchange at 64th Parkway from the north and slip ramps from the south. To maintain access to the school for students living west of the highway, the existing pedestrian walkway across SH 93 would either remain or be replaced by a similar facility.



NEIGHBORHOOD INTEGRITY/COMMUNITY COHESION

Similar to the Freeway Alternative, the Tollway Alternative would either follow existing roadway alignments, primarily along Indiana Street and SH 93, or would traverse vacant and very low-density open space and agricultural areas. In the vacant and less developed areas, few if any effects on neighborhood integrity and community cohesion would be expected since these areas are so sparsely populated. Effects would be more likely in more developed areas. With the Tollway Alternative, some drivers would take alternative routes to avoid the cost associated with using a tollway, resulting in an increase in traffic and traffic-related impacts (noise, air quality, visual, and safety) on parallel routes, such as Indiana Street/McIntyre Street. This would primarily impact the Village at Five Parks and rural residential development along these roadways.

The Tollway Alternative would result in a noticeable impact to the Memorial Garden areas located on the grounds of the Jefferson County Government Complex. Its wider footprint will push the proposed West Corridor light rail tracks and the relocated City of Golden bike path closer to the Memorial Garden. Some of the Memorial Garden trees and perhaps the gazebo would be displaced. The current contemplative nature of the area would be disturbed by these intrusions.

As previously discussed, the existing SH 93 alignment would be converted to a frontage road for much of the area between Leyden Road and Golden Gate Canyon Road. Aside from maintaining existing access, residents immediately adjacent to the frontage road would benefit from reductions in traffic and traffic-related impacts (noise, air quality, visual, and safety) that would occur as a result of through traffic utilizing the new facility.

The Tollway Alternative would substantially intensify the transportation activity in the US 6 and SH 93 corridor. Residents and local officials have indicated in public meetings and correspondence that this larger, broader facility would impose a physical and psychological barrier between neighborhoods. The existing highway already forms a barrier and is becoming increasingly more characteristic of an urban roadway with high-volume, high-speed traffic.

The Village at Mountain Ridge, Canyonside Condominiums/Canyon Point Villas, Parfet Estates, and the Village at Golden Ridge/Eagle Ridge all west of US 6 and SH 93 are primarily residential with little or no commercial activity or community facilities present. Consequently, residents to the west must utilize businesses and services on the east side of the highway. Important business and community service centers include the Colorado School of Mines and the downtown Golden commercial center. Placing a high-speed, limited access facility between the residences and the businesses and services they need would magnify the barrier created by the existing SH 93 alignment. Residents of these neighborhoods would feel more isolated and less connected to the greater Golden community.

Changes to the visual environment in this section of Golden would also contribute to actual or perceived degradation of community cohesion. The analysis of visual impacts finds that the more substantial band of concrete that would be placed in the area would form a visual barrier (see **Section 4.12**). This impact is greatest for the Tollway Alternative since it has the widest pavement section of all the alternatives. The magnitude of this change means that the current “feel” of the road would be substantially changed. This impact would be experienced primarily by the homes closest to SH 93 or higher up along the mountainside in the Village at Mountain Ridge, Canyonside Condominiums, Parfet Estates, the Village at Golden Ridge/Eagle Ridge, the North Forty, and Mesa Meadows.

Access to the Golden Pond retirement/assisted-living community would be maintained from the existing SH 93 alignment, which would be converted to a frontage road at this location. Because the new toll facilities would be located farther to the west than the existing roadway, traffic-related noise levels would likely decrease for community residents. The Tollway Alternative would construct bridge structures over both Pine Ridge Road and Golden Gate Canyon Road. The bridge structures would be elevated approximately 25 and 34 feet, respectively, from existing ground level. The bridge structures and elevated roadway would adversely affect residents' mountain views to the west.



4.2.2.5 REGIONAL ARTERIAL ALTERNATIVE

SHORT-TERM CONSTRUCTION IMPACTS

Construction of the Regional Arterial Alternative would result in short-term, intermittent disruptions consistent with those common to all build alternatives. For areas in proximity to new improvements that involve longer or more complex construction (e.g., interchanges, bridges, cut and fill slopes, retaining walls), impacts would be more noticeable than elsewhere. This alternative would construct between one and five fewer interchanges compared to the other build alternatives, thereby limiting some of the most disruptive construction impacts.

PROPERTY ACQUISITIONS AND DISPLACEMENTS

Residential

The Regional Arterial Alternative would require the full acquisition and displacement of six residences within the central portion of the study area. The six residences displaced within the central portion are isolated in nature and do not belong to an organized neighborhood. Therefore, the integrity and cohesion of any community would not be affected. Given the small number of displacements in relation to the total amount of comparable housing stock available in the region, no effect on local and regional housing demand would be expected.

Non-Residential

The Regional Arterial Alternative would require the full acquisition and displacement of three businesses. One of these businesses is a construction company (previously discussed under the Freeway Alternative), one is located within the Canyon Point Commercial Center (also discussed under the Freeway Alternative), and the other is a warehouse located off SH 72 in Arvada. The warehouse is isolated and not connected to any particular neighborhood community. Given the small number of displacements in relation to the total number of comparable commercial properties available in the region, no effect on local and regional demand for commercial property would be expected (see **Section 4.5**).

Community Facilities

The Regional Arterial Alternative would not require the full acquisition of any community facilities. Two partial acquisitions of property from the Jefferson County Government Center would be necessary, but there would be no effect on buildings or programs.

ACCESS/CIRCULATION

The Regional Arterial Alternative would have a greater number of access points than the Freeway Alternative and the Tollway Alternative, but would still have less access points than the current transportation system in some areas. The access control for this alternative would be through interchanges, intersections, and driveways. In some areas, frontage roads would be provided to minimize the number of driveway access points. A description of the cross streets, interchanges, and frontage roads associated with the Regional Arterial Alternative is provided (see **Chapter 2**).

The existing intersection at Eldorado Boulevard would remain an at-grade crossing maintaining the existing access for residents of the Camden Interlocken Stonegate Apartments.

Access to the Golden Pond retirement/assisted living community, Mesa Meadows, and the North Forty would be from the Golden Gate Canyon Road interchange by the frontage road configuration in this area. Between 58th Avenue and Golden Gate Canyon Road, the existing SH 93 alignment would serve as a frontage road that would run east along the major regional arterial. While there would be some rerouting of traffic to these neighborhoods, this configuration would maintain access along existing SH 93.

The Regional Arterial Alternative would provide no access at Iowa Street. Access to the Canyon Point Commercial Center and local communities, such as the Village at Mountain Ridge would be retained at Washington Avenue.



Current access to the Canyonside Condominiums is provided directly from US 6 just south of the intersection of US 6 and SH 58. Access from the Regional Arterial Alternative would require out-of-direction travel by rerouting traffic to an access road off the west leg of US 6 from the US 6/SH 58 interchange.

An interchange at 19th Street would provide access to Parfet Estates as well as other communities within Golden and the Colorado School of Mines. These alterations to the local circulation system would result in some out-of-direction travel and rerouting.

The expected reduction in congestion and improved mobility associated with roadway and intersection improvements would potentially result in some beneficial effects on access and circulation.

Emergency Services

To the north of Golden, the Regional Arterial Alternative would not make substantial changes in local access and circulation patterns, no change in emergency response routes would be expected other than some improvements in travel times and safety associated with congestion reduction and increased mobility.

In Golden, the Regional Arterial Alternative would require emergency service providers i.e. police, fire, ambulance to modify response routes. In some areas, this would mean more circuitous travel and increased response times. In other areas, the regional arterial would provide a faster and more direct emergency response route. Emergency providers immediately adjacent to SH 93 would experience the greatest impacts. Jefferson County Sheriff's Office (200 Jefferson Parkway) would have full access to the regional arterial facility from an interchange at Heritage Road. Golden Fire Station #1/Golden Police Department (911 10th Street) would have to travel three blocks north to access the regional arterial from SH 58. A representative of the project team contacted these agencies to ask for input in January 2006. The primary concerns identified related to the potential for increases in response time during and following construction and access changes. Coordination with these local agencies would be essential to avoid or minimize adverse effects to emergency responders. This coordination would occur during the final design phase of the project.

Schools

The Regional Arterial Alternative would provide access to and from schools that is similar or better than existing conditions. At Mitchell Elementary School along SH 93 in Golden, the regional arterial would be about 190 feet from the northwest corner of the school (i.e., about 37 feet closer than the existing highway), potentially causing access, noise, and visual effects associated with the closer proximity (see **Section 4.7** and **Section 4.12**). The existing entrance to this school is located on Rubey Drive with access from Iowa Street or Washington Avenue from SH 93. The Regional Arterial Alternative would cross over the existing profile of Iowa Street with no access connection. The mainline roadway would intersect Washington Avenue providing a full-movement signalized intersection. Washington Avenue would remain a two-lane roadway and would be reconstructed approximately 200 feet east and west on the intersection. Access to the elementary school from the regional arterial would be provided from the intersection at Washington Avenue.

NEIGHBORHOOD INTEGRITY/COMMUNITY COHESION

The Regional Arterial Alternative would substantially intensify the transportation activity in some residential areas along US 6 and SH 93 through Golden. The impacts would be similar to those of the Freeway Alternative in this area, but to a somewhat lesser extent due to the use of some signalized intersections north of SH 58. All roadway improvements would follow existing alignments and would construct fewer intrusive features such as grade separations and interchanges (see **Chapter 2**). Thus, no physical barriers would be placed between or through neighborhoods. Given the relatively modest physical changes in the transportation system, the potential psychological or perceptual effects on community cohesion likely would be limited compared to the other alternatives.

The Memorial Garden, which is on the grounds of the Jefferson County Government Complex, would be located out of view of the Regional Arterial Alternative and adjacent to the proposed West Corridor light rail tracks and the relocated City of Golden bike path. This will preserve the Memorial Garden as a relatively contemplative area similar to its current use.



As more drivers use the Regional Alternative, congestion along Indiana Street would lessen, benefiting the Village of Five Parks development and rural residences along this roadway. As previously discussed, the existing SH 93 alignment would be converted to a frontage road for much of the area between Golden Gate Canyon Road and just south of Leyden Road. Aside from maintaining existing access, residents immediately adjacent to the frontage road would benefit from reductions in traffic and traffic-related impacts (noise, air quality, visual, and safety) that would occur as a result of through traffic utilizing the regional arterial.

Access to the Golden Pond retirement/assisted-living community would be maintained from the existing SH 93 alignment, which would be converted to a frontage road at this location. Because the regional arterial facility would be located farther to the west than the existing roadway, traffic-related noise levels would likely decrease for community residents. The Regional Arterial Alternative would relocate the existing Golden Gate Canyon Road intersection (south of the Golden Pond community) approximately 600 feet to the west where the regional arterial crosses the existing Golden Gate Canyon Road. A full-movement signalized intersection would connect the regional arterial with Golden Gate Canyon Road. Increased pavement associated with the widened roadway would create visual impacts for residents of the Golden Pond community. However, since the roadway at this location would not be elevated, visual impacts would be minimal.

4.2.2.6 COMBINED ALTERNATIVE (RECOMMENDED ALTERNATIVE)

SHORT-TERM CONSTRUCTION IMPACTS

Construction of the Combined Alternative (Recommended Alternative) would result in short-term, intermittent disruptions consistent with those common to all build alternatives. For areas in proximity to new improvements that involve longer or more complex construction (e.g., interchanges, bridges, cut-and-fill slopes, retaining walls), impacts would be more noticeable than elsewhere. There would be some construction-related impacts along Indiana Street/McIntyre Street that would only occur with this alternative and not the three other build alternatives.

PROPERTY ACQUISITIONS AND DISPLACEMENTS

The Combined Alternative (Recommended Alternative) would require the full acquisition and displacement of 29 residences. Of these, three are located along SH 93 and 26 are located on the Indiana Street/McIntyre Street alignment. These residences are either isolated in nature or are dispersed rural residences that do not belong to an organized neighborhood. Given the small number of displacements in relation to the total amount of comparable housing stock available in the region, no effect on local and regional housing demand would be expected.

Non-Residential

The Combined Alternative (Recommended Alternative) would require the full acquisition and displacement of nine businesses. One of these businesses is a construction company (previously discussed under the Freeway Alternative), one is located within the Canyon Point Commercial Center (also discussed under the Freeway Alternative), and the other seven are located along Indiana Street/McIntyre Street. These businesses consist of a nursery, animal hospital, and several industrial companies. They are located in primarily rural environments and are not connected to any particular neighborhood community. Given the small number of displacements in relation to the total number of comparable commercial properties available in the region, no effect on local and regional demand for commercial property would be expected (see **Section 4.5**).

Community Facilities

The Combined Alternative (Recommended Alternative) would require acquisition of one community facility, Arvada Fire Station #8 (see **Emergency Services**). Two partial acquisitions of property from the Jefferson County Government Center would be necessary, but there would be no resulting effect on buildings, programs, or services.

ACCESS/CIRCULATION

The Combined Alternative (Recommended Alternative) would have a higher degree of access than the Freeway Alternative and the Tollway Alternative but would have a lower degree of access than the current



transportation system in some areas. Along the Indiana Street/McIntyre Street alignment, the Combined Alternative (Recommended Alternative) would have similar access to the current transportation system. The access control for this alternative would be through interchanges, intersections and driveways. In some areas, frontage roads would be provided to minimize the number of driveway access points. A description of the cross streets, interchanges, and frontage roads associated with the Combined Alternative (Recommended Alternative) is available (see **Chapter 2**).

As with the Freeway Alternative and the Tollway Alternative, there would be segments of roadways with presently unlimited local access that would have limited access under the Combined Alternative (Recommended Alternative). This would occur on the tollway portion of the alternative, along SH 93 north of Golden. Access to and from the tollway would only be permitted at interchanges and slip ramps. Underpasses and bridges would accommodate cross-street traffic from one side of the roadway to the other.

Between 58th Avenue and Golden Gate Canyon Road, the existing SH 93 alignment would serve as a frontage road that would run along the east side of the major regional arterial. Access to Mesa Meadows and the North Forty neighborhoods would be provided via this frontage road from the intersection just south of 58th Avenue or the intersection at Golden Gate Canyon Road. While there would be some rerouting of traffic to these neighborhoods, this configuration would maintain access along existing SH 93.

Similar to the Regional Alternative, no access would be provided at Iowa Street. Access to the Canyon Point Commercial Center and local communities, such as the Village at Mountain Ridge would be retained at Washington Avenue.

Current access to the Canyonside Condominiums is provided directly from US 6 just south of the intersection of US 6 and SH 58. Access from the Combined Alternative (Recommended Alternative) would require out-of-direction travel by rerouting traffic to an access road off the west leg of US 6 from the US 6/SH 58 interchange.

An interchange at 19th Street would provide access to Parfet Estates as well as other communities within Golden and the Colorado School of Mines. These alterations to the local circulation system would result in some out-of-direction travel and rerouting.

The expected reduction in congestion and improved mobility associated with roadway and intersection improvements would potentially result in some beneficial effects on access and circulation.

Emergency Services

In Golden, the Combined Alternative (Recommended Alternative) would require emergency service providers (i.e., police, fire, ambulance) to modify response routes. In some areas, this would mean more circuitous travel and increased response times. In other areas, the regional arterial would provide a faster and more direct emergency response route. Emergency providers immediately adjacent to SH 93 would experience the greatest impacts. Jefferson County Sheriff's Office (200 Jefferson Parkway) would have full access to the regional arterial facility from an interchange at Heritage Road. Golden Fire Station #1/Golden Police Department (911 10th Street) would have to travel three blocks north to access the regional arterial from SH 58.

Construction of the Combined Alternative (Recommended Alternative) would potentially require the acquisition of Arvada Fire Station #8 (6551 Indiana Street). Station 8 frequently hosts community meetings, local seminars, and emergency service trainings and is primarily responsible for providing emergency services in an area bordered by 58th Avenue on the south, SH 72 on the north, Ward Road on the east, and SH 93 on the west. As such, the area protected by Station 8 is the largest geographic area served by any of Arvada's eight fire stations. Multiple parcels of undeveloped land are located within a quarter of a mile of the current site for Station 8. While it is impossible to predict with certainty whether this land will be available once a Recommended Alternative is selected and constructed, it is assumed that the fire station could be relocated in close proximity to its current location. A nearby location would allow the fire station to maintain its services, limiting impacts to the surrounding community.



A representative of the project team contacted potentially affected emergency service providers to ask for input in January 2006. The primary concerns identified related to the potential for increases in response time during and following construction and access changes. Coordination with these local agencies would be essential in order to avoid or minimize adverse effects to emergency responders. This coordination would occur during the final design phase of the project.

Schools

The Combined Alternative (Recommended Alternative) would provide access to and from schools that is similar or better than existing conditions. At Mitchell Elementary School along SH 93 in Golden, the regional arterial would be about 190 feet from the northwest corner of the school (i.e., about 37 feet closer than the existing highway), potentially causing access, noise, air pollution and visual effects associated with the closer proximity (see **Section 4.7** and **Section 4.12**). The existing entrance to this school is located on Rubey Drive with access from Iowa Street or Washington Avenue from SH 93. The Combined Alternative (Recommended Alternative) would cross over the existing profile of Iowa Street with no access connection. The mainline roadway would intersect Washington Avenue providing a full movement signalized intersection. Washington Avenue would remain a two lane roadway and would be reconstructed approximately 200 feet east and west on the intersection. Access to the elementary school from the regional arterial would be provided from the intersection at Washington Avenue.

Other Community Facilities

Except for temporary construction-related detours, the Combined Alternative (Recommended Alternative) would not affect access for the Applewood Community Church at 10555 W. 44th Avenue. Existing access is from W. 44th Avenue and would remain the same. The intersection of McIntyre Street and W. 44th Avenue would remain signalized. Construction that would occur on W. 44th Avenue would occur approximately 200 feet west of the church. If access to W. 44th Avenue were restricted during construction, motorists might exit McIntyre Street at Arapahoe Road and take Loveland Street to reach W. 44th Avenue.

NEIGHBORHOOD INTEGRITY/COMMUNITY COHESION

The effects of the Combined Alternative (Recommended Alternative) on neighborhood integrity and community cohesion would be generally similar to those associated with the Tollway Alternative. No roadway improvements would be constructed on new alignments between or through any neighborhoods, but there would be a substantial intensification of transportation activity in the corridor. Isolation of neighborhoods in Golden, whether physical or psychological, would be less likely under this alternative compared to the Freeway Alternative or Tollway Alternative, since no freeway or tollway would be constructed along SH 93 south of Golden Gate Canyon Road. This would benefit the Village at Mountain Ridge, Canyonside Condominiums/Canyon Point Villas, Parfet Estates, and the Village at Golden Ridge/Eagle Ridge west of SH 93 that rely on community facilities and services east of SH 93 in Golden. This alternative would support the development of and community interaction within the Parkview Villas at Golden/Table Rock and the Village of Five Parks.

The Memorial Garden, which is on the grounds of the Jefferson County Government Complex, would be located out of view of the Combined Alternative (Recommended Alternative) and adjacent to the proposed West Corridor light rail tracks and the relocated City of Golden bike path. This will preserve the Memorial Garden as a relatively contemplative area similar to its current use.

As previously discussed, the existing SH 93 alignment would be converted to a frontage road for much of the area between Golden Gate Canyon Road and just south of Leyden Road. Aside from maintaining existing access, residents immediately adjacent to the frontage road would benefit from reductions in traffic and traffic-related impacts (noise, air quality, visual, and safety) that would occur as a result of through traffic utilizing the new facility.

Access to the Golden Pond retirement/assisted-living community would be maintained from the existing SH 93 alignment, which would be converted to a frontage road at this location. Because the regional arterial facility would be located farther to the west than the existing roadway, traffic-related noise levels would likely

decrease for community residents. The Combined Alternative (Recommended Alternative) would relocate the existing Golden Gate Canyon Road intersection (south of the Golden Pond community) approximately 600 feet to the west where the regional arterial crosses the existing Golden Gate Canyon Road. A full-movement signalized intersection would connect the regional arterial with Golden Gate Canyon Road. Increase pavement associated with the widened roadway would create visual impacts for residents of the Golden Pond community. However, since the roadway at this location would not be elevated, visual impacts would be minimal.

The Combined Alternative (Recommended Alternative) would require 26 residential acquisitions along Indiana Street/McIntyre Street alignment. Although these residences do not belong to organized neighborhoods, their loss would impact the integrity of the rural community.

4.2.3 SUGGESTED MITIGATION

4.2.3.1 SHORT-TERM CONSTRUCTION IMPACTS

Basic mitigation measures that could be implemented for construction projects are outlined in CDOT's Standard Specifications for Road and Bridge Construction (2005) and CDOT's Construction Manual (2002). Appropriate application of these mitigation strategies could be defined during the final engineering phase of this project.

To minimize the potential effects of construction activities associated with all build alternatives, a construction management plan could be developed and implemented in coordination with local stakeholders as part of the final design phase of the project.

The plan would include, but not necessarily be limited to, these key elements:

- A comprehensive public information program utilizing news media, direct mail, internet project website, posted signs, and door-to-door contact.
- Construction site barriers to reduce noise, light and glare, and dust.
- Safe detour routes with adequate directional signs.

4.2.3.2 PROPERTY ACQUISITIONS AND DISPLACEMENTS

To minimize the effects of property acquisitions and displacements associated with projects utilizing federal or state funding, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and other applicable relocation assistance programs would be implemented to assist eligible displaced residents. Coordination with the Arvada Fire Department will ensure that fire protection services continue to be provided to those served by Fire Station #8.

4.2.3.3 ACCESS/CIRCULATION

Effects on access and circulation resulting from all build alternatives were considered during alternative development. To minimize the construction-related effects of all build alternatives on access and circulation, the construction management plan described above could be implemented in coordination with local stakeholders. Where necessary, site-specific measures could be implemented to ensure local access and circulation are maintained during the construction period, particularly for schools and emergency service providers.

Underpasses, bridges, and frontage roads have been developed for areas where access and circulation patterns would be limited or otherwise substantially modified. Specific coordination with schools and emergency services providers could ensure that safe access is provided to and from community facilities. Neighborhood traffic management plans could be developed and implemented with the assistance of local agencies, residents, and businesses to ensure that cut-through traffic and out-of-direction travel are minimized.



4.2.3.4 NEIGHBORHOOD INTEGRITY/COMMUNITY COHESION

Effects on access and circulation resulting from all build alternatives were considered during alternative development. Physical barriers between or through neighborhoods were minimized during the development of the build alternatives. Grade separations will provide cross-street traffic access from one side of the facility to the other. Existing trails will be maintained and replaced as necessary where they would be encroached upon by the build alternatives. The existing City of Golden on-street system will be used to convey bicyclists and pedestrians from Washington Avenue to 19th Street. Under the Combined Alternative (Recommended Alternative), the new principal arterial would accommodate sidewalks on both sides of the roadway. These improvements will benefit the community by providing additional facilities for bicycles and pedestrians, opportunities for recreation, and alternative modes of transportation. Additional design modifications could be considered that would further minimize any site-specific physical and/or perceived barriers that would harm community cohesion.

4.2.4 SUMMARY

The Freeway Alternative and Tollway Alternative would have similar impacts to social conditions. Both of these alternatives would limit access to the transportation facility through the use of interchanges. In terms of community and neighborhood impacts, both the Freeway Alternative and Tollway Alternative would result in an intensification of transportation activity in residential areas and create physical and psychological barriers (due to a broader structure, the use of retaining walls, and limited access). The Tollway Alternative would have a somewhat greater degree of impacts to social conditions because it would provide fewer access points along US 6 and SH 93 in Golden. In addition, its wider footprint would push the proposed West Corridor light rail tracks and the relocated City of Golden bike path closer to the Memorial Garden, disturbing the contemplative nature of the area.

The Regional Arterial Alternative would provide access through interchanges, intersections and driveways. Since this alternative would contain fewer intrusive features such as grade separations and interchanges, the physical changes to the transportation system would be modest, and community and neighborhood impacts would be minor compared to the other build alternatives. For this reason, the Regional Arterial Alternative would have the fewest impacts to social conditions.

The Combined Alternative (Recommended Alternative) would have the greatest impacts to social conditions, given the number of residential acquisitions (29) as well as the displacement of an important community facility (Arvada fire station #8).

Suggested mitigation would primarily consist of a comprehensive construction management plan, relocation assistance to eligible displacees, and consultation with schools and emergency service providers about access modifications. The implementation of these suggested mitigation measures would lessen impacts to social conditions. However, some community and neighborhood impacts (physical and psychological barriers, limited access, visual impairments due to retaining walls, and intensification of transportation activity in residential areas) would still occur and would not be able to be mitigated.

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