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ACP	Access Control Plan
CDPHE	Colorado Department of Public Health and Environment
CDOT	Colorado Department of Transportation
CDOW	Colorado Division of Wildlife
CFR	Code of Federal Regulations
dB	decibels
EA	Environmental Assessment
EIS	Environmental Impact Statement
EOS	Environmental Overview Study
FAT	Fatality
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GWRR	Great West Railroad
HCM	Highway Capacity Manual
I-25	Interstate 25
INJ	Injury
LOS	Level of Service
LUST	Leaking Underground Storage Tank
MOU	Memorandum of Understanding
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFRMPO	North Front Range Metropolitan Organization
NRHP	National Register of Historic Places
NRS	National Register Status
OE	Officially Eligible
PDO	Property Damage Only
PM <sub>10</sub>	particulate matter less than 10 microns in effective diameter
RE	Recommended Eligible
ROW	right-of-way
RTP	Regional Transportation Plan
SHPO	State Historic Preservation Office



## List of Acronyms

UPRR	Union Pacific Railroad
UST	Underground Storage Tank
WCR	West County Road
WHI	Weighted Hazard Index



## PREFACE

Rapid growth and development along the North Front Range of Colorado has created the need for a transportation planning process that is responsive to future transportation needs, provides for consideration of the environment, and includes a public participation program. To successfully achieve this goal, the Colorado Department of Transportation (CDOT) developed and initiated the Environmental Overview Study (EOS) process. The EOS process is structured to provide a basis for the determination of long-term roadway improvements and to provide support for local planning decisions. The intended outcome of the process is the preservation of a corridor for future transportation improvements. In this manner, improvements to the state highway system can be integrated with other local and regional transportation plans resulting in a forward-looking transportation vision within the North Front Range.

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The EOS process was developed by CDOT Region 4 to provide a basis for the determination of long-term roadway improvements while considering the natural and built environment.

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The EOS process is intended to be open and inclusive, with all interested local and regional agencies encouraged to actively participate. Throughout the EOS process, public input is solicited to develop an understanding of the transportation deficiencies, needs, and important community values relating to the development of alternatives. Data collection, technical analysis, environmental overview, and public and agency input are all collectively used in this collaborative process to understand the nature and magnitude of the transportation issues within the corridor. Realistic solutions can then be developed to address the long-term corridor needs and carried forward for further analysis.

While the sections of an EOS are generally consistent with National Environmental Policy Act (NEPA) documentation, an EOS is not a replacement for an environmental decision document. The EOS process is designed to serve primarily as a transportation planning process with an environmental overview. The depth of focus for the environmental factors affecting the development of alternatives may vary depending upon the actual corridor that is being studied. No alternative will be selected as the recommended alternative if it is believed that there are significant environmental factors that would preclude an alternative from ever becoming a preferred alternative through a formal NEPA process.

In implementing the EOS for selected corridors it is recognized that some level of risk is involved, since any funded improvements will ultimately require more formal environmental documentation. However, it is believed that the risk of doing nothing during a time of



such rapid growth and development is far greater than the potential risk inherent in the EOS process.



The Colorado Department of Transportation (CDOT), Region 4, initiated an Environmental Overview Study (EOS) to evaluate the transportation needs along State Highway 60 (SH 60) from I-25 to Two Rivers Parkway in Weld County. This study is being conducted in response to rapid growth and development pressures within the study area and the intended outcome is to develop a recommended alternative for the corridor. The recommended alternative will serve as the basis for the determination of right-of-way to be preserved and will provide support for other local and regional planning decisions.

This EOS process was structured to engage both the community and locally affected agencies and recognizes that transportation, the environment, and land use are inextricably linked together. A total of eleven agency meetings, three public open houses, and seventeen key stakeholder interviews were conducted during the course of this project.

A recommended alternative was successfully identified and is presented in the SH 60 EOS Document and Appendices. It represents the culmination of the study effort, and has the support of the study and agency participants. The following summarize the essence of the SH 60 Recommended Alternative:

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The Recommended Alternative for SH 60 will become the basis for the determination of right-of-way to be preserved and will provide support for transportation planning in the future.

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- Transportation improvements along the corridor are not solely capacity driven, and community values and environmental context of the corridor were taken into account.
- New right-of-way delineation was developed primarily in the more undeveloped portions of the corridor. Within these areas, travel demand for the year 2030 will be met. No improvements exceed the threshold of what is required based upon the results of the North Front Range Metropolitan Planning Organization (NFRMPO) 2030 travel demand model.
- In the older residential area near downtown Johnstown, improvements will focus on a better utilization of the existing right-of-way. The width currently used for on-street parking will be converted to provide for a continuous center turn lane.
- For the established business districts of Johnstown and Milliken, no new right-of-way will be sought. There is a clear public message that residents want to preserve a small town community feel, and the local agencies of Johnstown and Milliken support that desire even though the travel demand for the corridor will not be met.
- The SH 60 Recommended Alternative has not been evaluated under the National Environmental Policy Act (NEPA). If federal funds or a federal action were to be involved to initiate transportation improvements today, a NEPA process would be required that



involves the appropriate State and Federal agencies along with public review and comment.

- Future preservation of right-of-way along the SH 60 corridor will need to be accomplished through the efforts of the local agencies of Johnstown and Milliken. As development and growth activities, or future annexation of any land occur within the study area, this EOS will serve to uniformly address the amount of future right-of-way that is needed for transportation improvements. A Memorandum of Understanding (MOU) will formalize the results of the SH 60 Recommended Alternative.

Below is a more detailed summary for each segment of the corridor. Also, the reader may refer to the SH 60 EOS Appendix (under separate cover) for graphical illustrations of the SH 60 Recommended Alternative.

The corridor was broken down into segments to facilitate transportation planning for different areas as follows:

### ***Segment 1A – from I-25 to WCR 15***

#### **Recommended Alternative – Four Lane Divided**

**Description:** The recommended roadway cross-section for SH 60 consists of two travel lanes in each direction, along with a twenty-two foot raised median. Left turn lanes would be provided at major intersections, and acceleration and deceleration lanes will be provided if traffic warrants are met.

**Benefit:** The stretch of SH 60 closest to I-25 is expected to experience the highest traffic volumes along the corridor. The recommended alternative meets the 2030 travel demand and will provide a Level of Service D during peak hour commuting times. This roadway cross-section, or treatment, is consistent with the roadway section outlined in the Johnstown Transportation Plan.

### ***Segment 1B – from WCR 15 to the Great Western Railroad***

#### **Recommended Alternative – Three Lane Cross-Section with Two Way Left Turn Lane**

**Description:** This cross-section consists of one travel lane in each direction, with a continuous center turn lane.

**Benefit:** This roadway section was selected to improve the operational characteristics to the greatest extent possible, without generating significant impacts to the existing and established residential properties that adjoin this segment of the corridor. It will improve safety and traffic flow by providing storage for left turning vehicles and removing those vehicles from the thru lanes. It will not meet the 2030 travel



SH 60 Segment 1A



SH 60 Segment 1B



demand, and improvements in future traffic flow will rely on development of the local transportation system to provide alternative routes during peak hour travel times.

### ***Segment 2 – From the Great Western Railroad to SH 257***

**Recommended Alternative – Two lane divided cross-section with a continuous accel/decel lane in the eastbound direction.**

**Description:** This cross-section consists of one travel lane in each direction, a twenty-two foot raised median, and a continuous auxiliary lane in the eastbound direction.

**Benefit:** Traffic modeling indicates this cross-section will provide a Level of Service C for the design year 2030. The raised median width will provide for left turn storage at major intersections and the need for acceleration and deceleration lanes in the eastbound direction has been addressed should they meet State Highway Access Code warrants. The physical constraints of the Great Western Railroad (GWRR) currently restrict the ability to provide access to the north side of SH 60 and the proposed treatment for this stretch reflects that condition.



SH 60 Segment 2

### ***Segment 3A – SH 257 to Alice Street***

**Recommended Alternative – Three Lane Section with Two Way Left Turn Lane**

**Description:** This is basically the same section that exists today through the downtown area of Milliken, and consists of one through lane in each direction along with a continuous center turn lane.

**Benefit:** This section preserves the small town feel of downtown Milliken. Parking and sidewalks will remain the same as they are today.



SH 60 Segment 3A

### ***Segment 3B – Alice Street to Two Rivers Parkway***

**Recommended Alternative – Two Lane Divided Section with Continuous Acceleration/Deceleration Lanes**

**Description:** This section provides for one travel lane in each direction, a twenty-two foot raised median, and continuous acceleration/deceleration lanes in both directions.

**Benefit:** Traffic modeling warrants one thru lane in each direction. Existing development and future proposed land use indicate that continuous acceleration/deceleration lanes could be warranted and would be provided to improve the operational and safety characteristics of this segment. The Historic Daniels Schoolhouse lies within this segment, and the design was modified to avoid any impacts to this property.



SH 60 Segment 3B





### 1.0 INTRODUCTION

#### 1.1 PURPOSE OF THE STATE HIGHWAY 60 ENVIRONMENTAL OVERVIEW STUDY (EOS)

State Highway (SH 60) from Interstate 25 (I-25) to Two Rivers Parkway in Weld County provides important east-west regional highway access, as well as providing regional transportation connections to the towns of Johnstown and Milliken. Rapid growth and development in the North Front Range region has spurred significant interest in the current and future operations of the state highway system in the region.

With a number of major corridors requiring evaluation, the Colorado Department of Transportation (CDOT) adopted the EOS process as a proactive approach to evaluate corridor transportation needs while considering the natural and built environment. More specifically, an EOS is a transportation planning and design process that includes an environmental overview and a formal public participation program. The EOS will benefit CDOT, local agencies, developers and the public by describing the right-of-way preservation needs for SH 60. The EOS process will also assist in the development of an Access Control Plan (ACP) linking the proposed improvements to CDOT's State Highway Access policy. Together these two companion documents provide the foundation to support local and regional planning decisions.

The primary focus of the SH 60 EOS is the SH 60 corridor from I-25 on the west to Two Rivers Parkway on the east. The character of this two-lane state highway changes significantly through the study area, ranging from a high-speed rural highway outside of the developed areas of the corridor, to a low speed urban roadway through the downtown areas of Johnstown and Milliken.

The SH 60 EOS is one of three EOS projects in the North Front Range. The other two corridors evaluated under the EOS process are US 287 and SH 392.

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CDOT adopted the EOS process as a proactive approach to evaluate corridor transportation needs while considering the natural and built environment.



In addition to I-25, the north-south county road system in this part of Weld County complements the function of SH 60 and provides the overall connecting transportation grid. Important north-south roads in the corridor that intersect SH 60 include Weld County Road (WCR) 13, WCR 15, WCR 17, WCR 19, SH 257/WCR 21, WCR 23, and Two Rivers Parkway. Of particular importance, WCR 17, SH 257 and Two Rivers Parkway provide key connections to US 34, north of the SH 60 corridor. Figure 1-1 shows the study area.

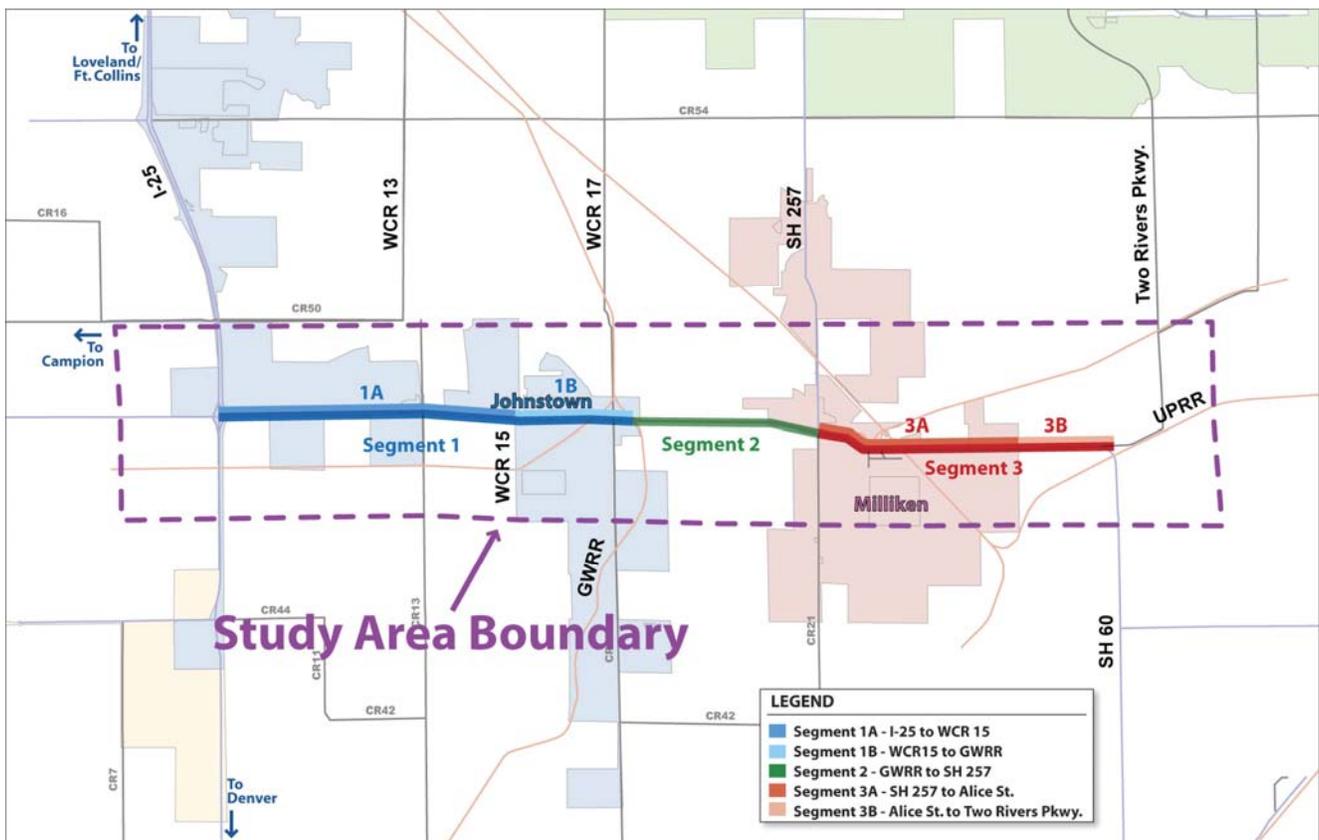


Figure 1-1  
Study Area



## 1.2 EOS PROCESS AND DEVELOPMENT OF GUIDELINES

The EOS Desk Guide was developed by the environmental unit of CDOT Region 4 as a reference on the level of detail and expectations of analysis in an EOS. This particular EOS was written using the most recent EOS guidance, which is the March 6, 2006 draft version of the EOS Desk Guide.

The intent of this guide is to facilitate consistency and foster success of all current and future EOS projects within CDOT. The content of this document is currently the best guidance available and is expected to change and be modified periodically. It is intended to provide a framework for the best possible overall coordination between state and local interests.

Applying the EOS Guidelines to the SH 60 project, Figure 1-2 illustrates the Study Process developed for this project.

# SH 60 EOS Study Process

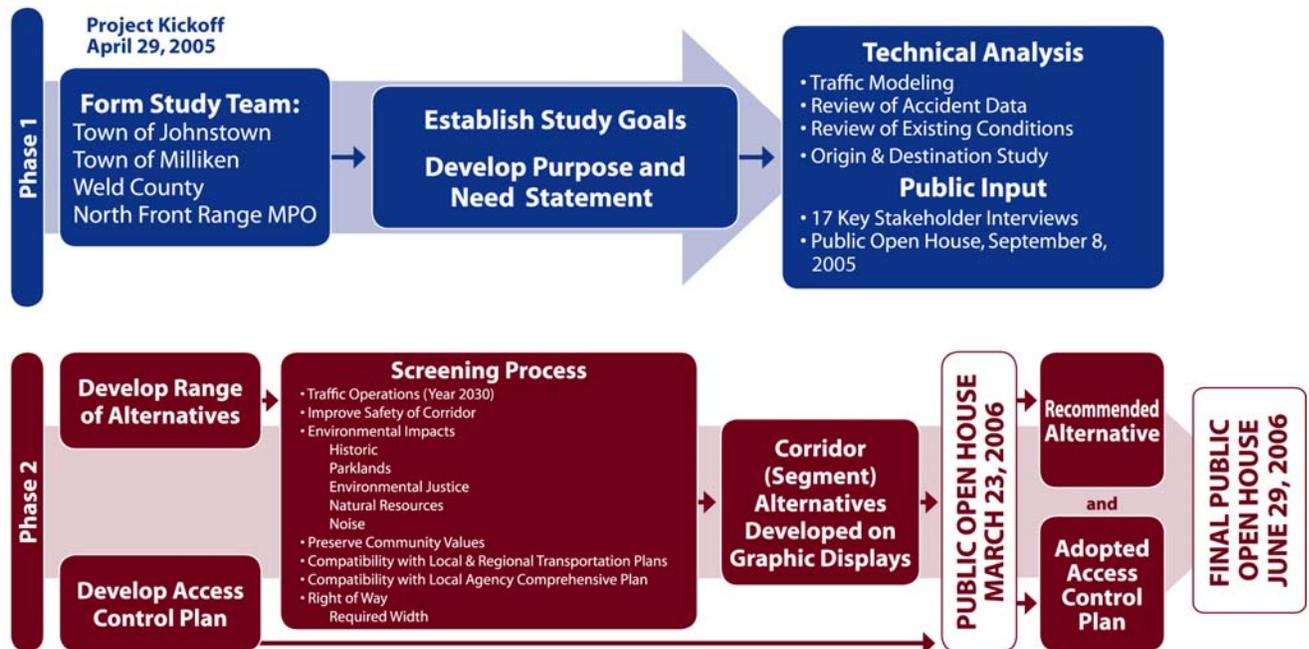


Figure 1-2  
SH 60 EOS Study Process



The SH 60 project was conducted in two phases. The primary focus of the first phase was to assess the condition of the corridor and identify the real and perceived problems. Stakeholder interviews were held prior to the first public open house meeting to assist with obtaining the pulse of the community. The second phase of the project centered around the development of alternatives that would address the study goals and broader purpose and need for this project. A screening of the ideas and alternatives along with a second public open house meeting resulted in the identification of a recommended alternative and access control plan.



## 2.0 CORRIDOR IDENTIFICATION

### 2.1 CORRIDOR VISION



Corridor Vision #15, North Front Range 2030 Regional Transportation Plan (See Reference Section to view actual size Corridor Vision Statement).

The North Front Range Metropolitan Planning Organization (NFRMPO) established a vision for the SH 60 corridor as part of its 2030 Regional Transportation Plan, dated October, 2004.

The NFRMPO corridor vision for SH 60 includes SH 56 and was developed to address the corridor from US 287 to Two Rivers Parkway. The current vision goals and objectives are stated as follows:

- Increase travel reliability and improve mobility, particularly for commuter travel
- Initiate TDM usage to reduce dependency on single occupancy vehicles

This vision identifies SH 60 and SH 56 as being local facilities on the state highway system that provide local area-wide access to higher classified facilities.

This EOS project began with that original vision and further refines the concept to a conceptual design level. The intent of the SH 60 EOS is to value the work that has been done to date, but with a new and fresh perspective, including the current thoughts and needs of the local public.

### 2.2 PURPOSE AND NEED

The Purpose and Need Statement was designed to help evaluate the alternatives to be considered and created the framework for the development of evaluation criteria later used for screening of the alternatives. A purpose and need statement typically states what the project should accomplish and why it is necessary, but should not predetermine an outcome.

For the SH 60 EOS project, a Purpose and Need Statement was drafted and approved early on by the SH 60 Agency Coordination Team. It reads as follows:

- Identify the safety and mobility improvements necessary to address the future travel demand within the SH 60 corridor for the year 2030.
- Provide an overall strategy for CDOT and the local jurisdictions for right-of-way preservation and access control necessary to allow the future implementation of improvements with respect to the environment, changes in land use, and rapid development along the corridor.



### 2.3 PROJECT GOALS

At the onset of this project, seventeen key stakeholder meetings were conducted and Section 9 of this document presents this process in more detail. The purpose of these early meetings was to develop an understanding of the corridor's operational and safety deficiencies, important community values, and public concern with respect to transportation. The information garnered through these early meetings, along with the input received at the first Open House Public Meeting, led to the development of a set of project Study Goals, as listed below:

- Improve the mobility of SH 60 travel
- Preserve the community quality of life
- Improve roadway safety along the SH 60 corridor
- Address peak hour commuter delay for side street connections on SH 60
- Improve pedestrian travel/safety

While the Purpose and Need Statement addresses the broader scope of the project, the study goals tend to localize the needs of the corridor with respect to public perception. The study goals were also valued in the development of screening criteria used for the evaluation of alternatives, and played a significant role in selecting a recommended corridor alternative.

### 2.4 LOGICAL TERMINI

The concept of logical termini is that rational endpoints are chosen for transportation improvements and a corresponding review of environmental impacts. The SH 60 project team discussed this concept at the inception of the project to ensure the proper study boundaries were being selected.

The existing NFRMPO vision for the SH 60 corridor includes the SH 56 corridor and has limits that begin at US 287 and extend to Two Rivers Parkway. SH 56 serves as the primary access into Berthoud but does not extend to the east of I-25. SH 60 is discontinuous at I-25, and the westerly extension of SH 60 at I-25 is Weld County Road 48. SH 60 does continue to the west to Campion, but that alignment is located approximately 1 mile north of the SH 60 alignment from I-25 to Two Rivers Parkway. The east and west alignments of SH 60 are currently connected either by using I-25 or by using the frontage road on the east side of I-25.



## Corridor Identification

The selection of logical termini for this project weighed heavily on the fact that the character of SH 60 on the west side of I-25 is distinctively different than on the east side of I-25. Growth and development activities along SH 60 are primarily confined to the portion of the corridor from I-25 to Two Rivers Parkway, resulting from the needs of the transportation system to connect the growing communities of Johnstown and Milliken to existing north-south corridors that provide access to regional employment centers. Therefore, the logical termini for the SH 60 EOS project are defined as being from the east ramp connection of SH 60 and I-25 east to Two Rivers Parkway.





### 3.0 PROJECT SCOPE

#### 3.1 PARTICIPATING AGENCIES



Local agency support and approval of a recommended alternative is critical for the successful outcome of this project. Since CDOT does not have any State or Federal funds identified for improvements in the near term, the mechanism for corridor preservation is through the formal adoption and implementation of this plan by the affected local agencies. In preparation for the kickoff meeting held on April 29, 2005, CDOT invited all of the potentially affected agencies to participate in this project:

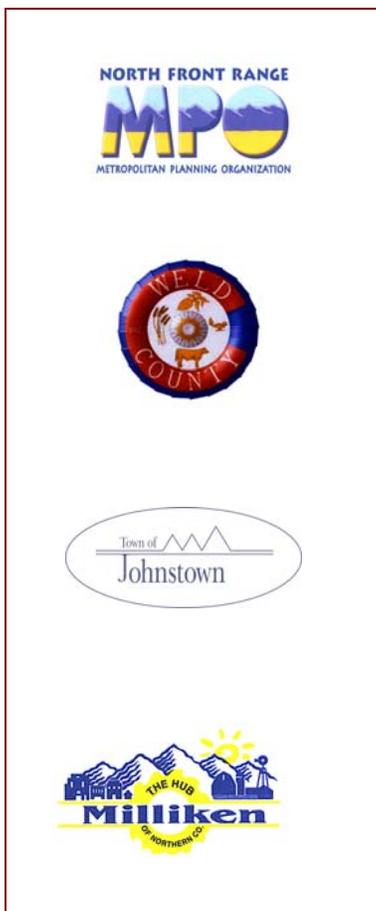
- Town of Berthoud
- Town of Gilcrest
- Town of Platteville
- Town of Johnstown
- Town of Milliken
- Weld County
- Larimer County
- North Front Range Metropolitan Planning Organization (NFRMPO)
- The Federal Highway Administration (FHWA)

The purpose of this initial kickoff meeting was to provide information relating to the Environmental Overview Study process, the project's goals and objectives, and to define the corridor limits that would likely be the focus of this project. Subsequent to this meeting, the core Agency Coordination Team emerged that would continue with the project until its completion. Those agencies are:

- Town of Johnstown
- Town of Milliken
- Weld County
- NFRMPO

The SH 60 Agency Coordination Team met on a regularly scheduled monthly basis, and a total of eleven agency meetings were held at alternating locations in Johnstown and Milliken. Just prior to the third and final public open house, meeting presentations were made to each of the Town Boards of Johnstown and Milliken for both the SH 60 Recommended Alternative and the SH 60 Access Control Plan.

The FHWA also participated in this study, in an advisory capacity.



The core SH 60 Agency Coordination Team consisted of representatives from each of these agencies



### 3.2 RELATIONSHIP TO OTHER STUDIES

As described earlier, an EOS is similar to other transportation planning studies such as feasibility studies and corridor optimization studies; however, the addition of the social, cultural, and natural resource components provides a more comprehensive package for reviewing options.

Each EOS needs to account for other ongoing project development efforts that would affect the subject corridor. To coordinate these multiple study efforts, ensure consistency and compatibility of recommendations, and avoid duplication of resource data collection CDOT initiated bi-monthly environmental project coordination meetings. The meetings were beneficial to all parties in understanding the broader scope of planning projects taking place along the North Front Range, and particularly in coordinating where adjacent projects impact one another. The US 287 and SH 392 projects were also being evaluated under the EOS process at the same time as the SH 60 EOS.

Additionally two ongoing projects that could influence the SH 60 EOS study process included:

1. **The North I-25 Environmental Impact Statement (EIS) project.** At the west end of the corridor, the SH 60 project transitions into the existing interchange at I-25. The North I-25 EIS project is significant since it would determine the location of I-25, the interchange configuration, and the frontage road system located on the east side of I-25. It also involves park and ride locations, and potential transit and rail corridors.
2. **Two Rivers Parkway realignment.** At the east end of the corridor Two Rivers Parkway ties into SH 60. As an initial intersection improvement project, CDOT will realign SH 60 and Two Rivers Parkway into a three-legged intersection. As part of a longer-range plan, Weld County proposes to connect to the north leg of this reconfigured intersection and build Two Rivers Parkway along a new alignment. Both of these projects were coordinated together with the SH 60 EOS project, resulting in a cohesive plan presented to the public at each of the public open house meetings held for this project.

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Other transportation studies that impact SH 60 include the North I-25 EIS and the Two Rivers Parkway realignment.

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#### ***Relationship to NEPA***

Although an EOS is not a NEPA study, the EOS needs to be developed using a similar process. One reason for this is to implement CDOT's Environmental Stewardship Guide and the Transportation Commission's policy of meeting the intent of NEPA even when neither direct federal funding participation nor action is involved. In addition, information developed during the EOS might be adaptable to NEPA



documentation in the future. Distinctions between an EOS study and a NEPA analysis are described under “Terminology” (Section V of the EOS Desk Guide).

It is generally understood that future improvements specific to a given corridor will require NEPA evaluation if federal funds or a federal action will be involved. During the NEPA process, the purpose and need for action could require duplication of effort conducted for the EOS and cause re-evaluation of alternatives dismissed in the EOS. CDOT seeks to avoid making significant changes to the recommendation of the EOS, unless absolutely necessary since the EOS recommendation may have already been acted-on by local agencies and developers by the time federal funds are available.

The higher the risk that the Recommended Alternative in the EOS could differ from a solution arrived at during future project-level NEPA evaluation, the greater the need to link the EOS with NEPA early on. Linking can be used to reduce the need to re-evaluate alternatives again later that were dismissed in the EOS. This concept is captured in the FHWA/Federal Transit Administration (FTA) white paper titled “*Linking the Transportation Planning and National Environmental Policy Act (NEPA) Processes*” dated February 2005.

Risk is least likely to occur where the corridor contains few reasonable options and most likely to occur where alternatives can differ significantly from one to another, such as where bypasses are considered. In the case of SH 60, few opportunities for bypasses or new alignments existed. Therefore, the risk for the project was characterized as “medium.”

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The SH 60 project was characterized as having a “MEDIUM” level of risk. This is due to the fact that there are few opportunities for bypasses or new alignments.

Source: EOS Desk Guide (Draft), March, 2006

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### 3.3 LEVEL OF ANALYSIS

The level and depth of analysis for an EOS should be sufficient to describe and analyze the environmental setting for the corridor and assist in the development of a reasonable set of alternatives. Guidelines for the level of analysis may be found in the EOS Desk Guide, and for the most part this project is consistent with those guidelines. For the SH 60 project, the level of analysis for the major study elements are summarized below:

- **Environmental.** One purpose of the environmental overview is to evaluate the potential for environmental constraints that would preclude an alternative from ever becoming a preferred alternative through a formal decision-making NEPA process. Data collection for the natural and built environment (such as wetlands, wildlife, noise, and hazardous materials) along the SH 60 corridor was generally consistent with the guidelines of the EOS Desk Guide. Most notably though for this project was the more in-depth effort



used to characterize the historical context of the corridor. The significant number of historical properties prompted the study team to review these resources through a windshield survey of every property adjacent to SH 60 within the study area and to render an unofficial evaluation of the potential for eligibility on the National Register of Historical Places. This method of historical evaluation resulted in the identification of over 50 properties (many with multiple buildings) that are potentially eligible. Refer to Section 5 of this report and the EOS Appendix (under separate cover) for more detailed information of this historical property evaluation.

- **Traffic.** Traffic data collection and modeling efforts were extensive and served as one of the primary indicators to determine the level of improvements that would be required to meet the year 2030 travel demand. The NFRMPO Travel Demand Model was used for this effort, and additional traffic data and land use information was collected to further localize this model to the SH 60 corridor. Please refer to Section 4 of this report for more information.

### 3.4 INTENDED USE AND BENEFIT OF THIS DOCUMENT

The primary and intended use of the SH 60 EOS is the preservation of right-of-way. The right-of-way envelope shown in the Appendix will accommodate construction of the recommended improvements shown for each segment.

These improvements, along with the Access Control Plan, provide for a comprehensive plan for SH 60 that can be coordinated with other local and regional transportation plans. This project is beneficial to the CDOT and to Weld County and the Towns of Johnstown and Milliken. Some of these benefits are identified below:

Benefits to CDOT:

- Defines the transportation improvements identified for SH 60 through the 2030 planning horizon.
- Provides the environmental setting as input to the level of effort required through a federal action document, such as an Environmental Assessment.
- Provides a basis for development of an Access Control Plan

Benefits to the local agencies:

- Establishes the level and type of improvements planned for the SH 60 corridor.
- Provides support for local planning decisions.

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The right-of-way envelope identified as the Recommended Alternative will accommodate the planning for developments along SH 60.

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- Provides key public input on the local sentiment relating to transportation improvements – such as traffic signals.

This document, along with its appendices, will be available through CDOT, Weld County, and the Towns of Johnstown and Milliken for public reference. Potential and interested developers may also use this document to assist in any land development planning opportunities.

### 3.5 ACCESS CONTROL PLAN

Developed in conjunction with the Environmental Overview Study, the SH 60 Access Control Plan completes the transportation plan for the SH 60 corridor. The plan provides for:

- Proposed changes, if any, to existing access locations.
- Future possible locations for public and private access in accordance with its defined access category and the *State Highway Access Code*.
- Depicts possible locations for traffic signals. As certain intersection locations meet traffic signal warrants, signals may be installed.

For more detailed information regarding the SH 60 Access Control Plan, please refer to the plan itself which may be found under separate cover.





### 4.0 TRANSPORTATION SETTING

This section documents the traffic operations and safety analyses that were undertaken to assess existing conditions and develop a forecast of future mobility issues. The purpose of these analyses was to provide the study team with a better understanding of current and future mobility and safety in the SH 60 corridor, as well as to develop a set of analysis tools that could be used to evaluate and screen potential mobility and safety solutions.

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#### SH 60 Transportation Setting:

- Existing Traffic Volumes
  - Heavy Truck Volumes
  - Traffic Operations
  - Traffic Safety
  - Travel Patterns
  - Traffic Volume Forecasts
  - Traffic Operation Forecasts
- 

#### 4.1 EXISTING TRAFFIC CONDITIONS

##### 4.1.1 Daily Traffic Volume

To understand and document current traffic demand in the SH 60 corridor, traffic volume and vehicle classification data were collected on June 28-29, 2005. Data collection locations included:

- SH 60, east of WCR 13
- SH 60, west of SH 257/WCR 21
- SH 60, west of Two Rivers Parkway
- SH 60, south of Two Rivers Parkway
- Two Rivers Parkway, immediately east of SH 60
- WCR 17, north of SH 60
- SH 257, north of SH 60



Heaviest traffic demand on SH 60 is on the west end of the corridor near I-25.

Daily traffic volumes from the June 2005 count program are shown on Figure 4-1. Along the east-west segment of SH 60, volumes are highest on the west end of the corridor, consistent with the demand between I-25 and the Towns of Johnstown and Milliken. On the east end of the corridor, the strong north-south demand between SH 60 and Two Rivers Parkway is evident from the traffic counts. Regional demand on the north-south road system is also evident, as shown by the relatively high volumes on WCR 17 and SH 257.

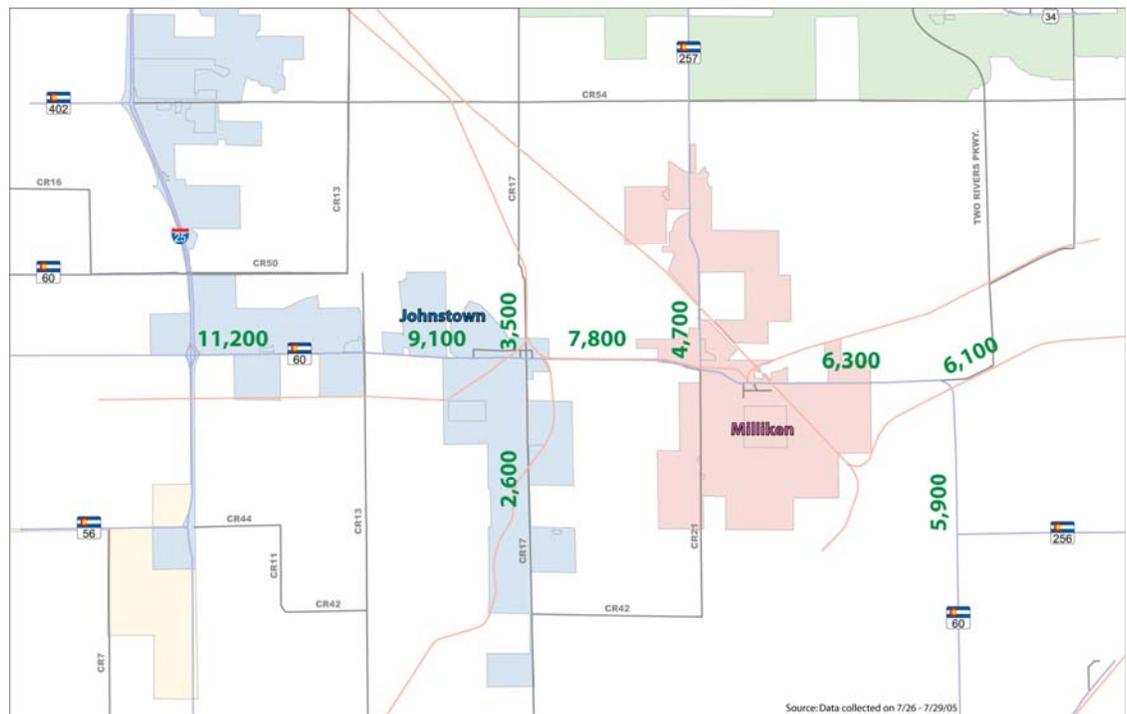


Figure 4-1  
Existing Daily Traffic



**SH 60 Commuter Pattern:**

**West End of SH 60 Corridor**

- Strong westbound flow (to I-25) in morning peak; eastbound in evening peak

**East End of SH 60 Corridor**

- Strong eastbound flow (to Two Rivers Parkway and US 85) in morning peak; westbound in evening peak

**4.1.2 Peak Hour Demand and Directional Distribution**

SH 60 serves as a primary commuter route in this portion of Weld County and the June 2005 traffic count program was designed to gain a better understanding of this commuter pattern. To assist in this analysis, hourly count data by direction was collected.

Figure 4-2 summarizes the morning and evening directional distribution at the seven locations where data was collected in the corridor. Section 4.1.3 describes in detail the patterns at several of these locations. It is clear from Figure 4-2 that SH 60 exhibits a strong commuter pattern. On the west end of the corridor, there is a significant westbound flow in the morning peak toward the I-25 corridor. The pattern reverses to a strong eastbound flow in the afternoon. On the east end of the SH 60 corridor (starting at WCR 17), the strong morning flow is to the east, toward Two Rivers Parkway (then north to Greeley) and to US 85 (toward Denver).

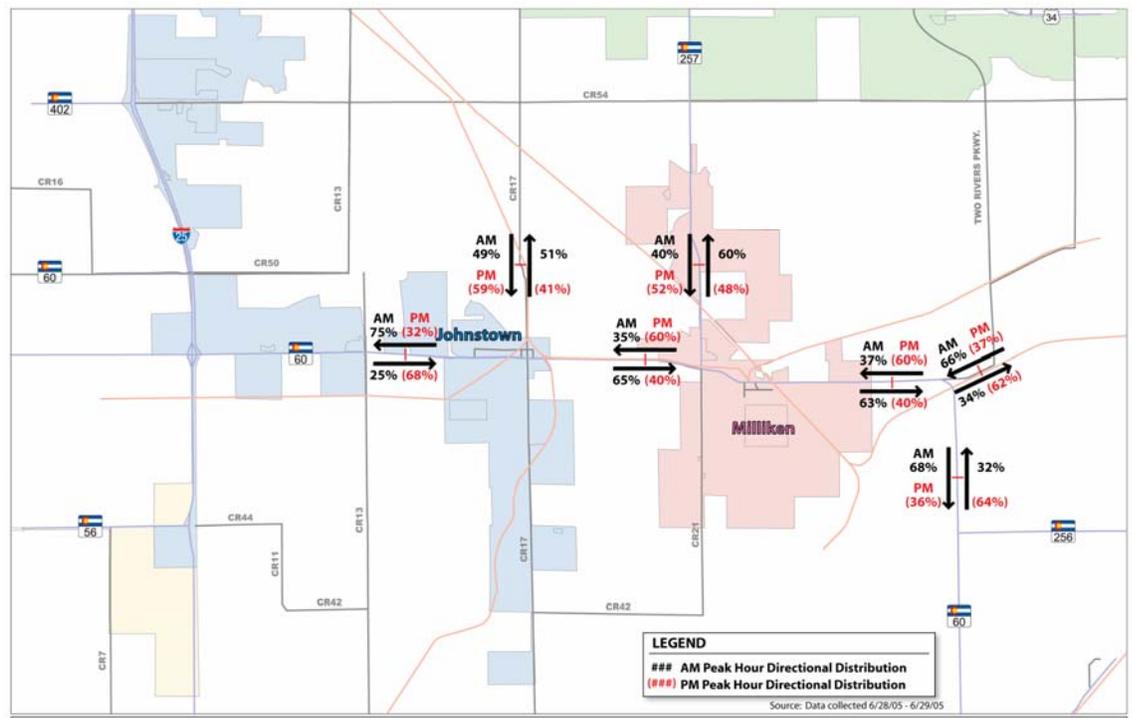


Figure 4-2  
Peak Hour Directional Splits



### 4.1.3 Count Locations

#### SH 60, East of WCR 13

In the morning peak period, there are three times the number of westbound vehicles as there are eastbound.

As expected, the west end of the SH 60 corridor exhibits the strongest commuting travel pattern as residents from the Towns of Johnstown and Milliken, as well as commuters accessing the SH 60 corridor from the north-south county road system, make their way to and from I-25.

Figure 4-3 shows this strong commuter travel pattern. In the morning peak period, there are three times the number of westbound vehicles as there are eastbound, as morning commuters head to the I-25 corridor. The pattern reverses for the afternoon peak, when returning eastbound vehicles greatly outnumber the westbound travelers. Midday shows a balanced pattern with approximately equal numbers of westbound and eastbound vehicles.

The graphic also shows the overall two-way demand on SH 60 through the day and night, with the highest two-way demand on SH 60 occurring in the afternoon peak period.

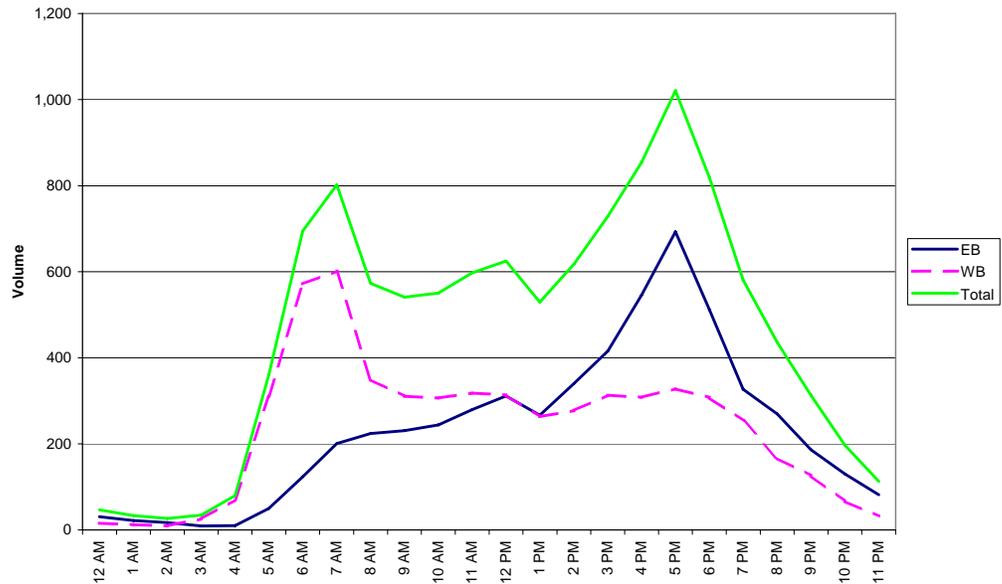


Figure 4-3  
SH 60, East of WCR 13  
Daily Volume for 6/28/05 and 6/29/05 (Averaged)



### SH 60, West of SH 257/WCR 21

While the west end of the corridor exhibits the strong commuter demand directed to and from I-25, the SH 60 corridor between the Towns of Johnstown and Milliken shows a more balanced pattern with some commuters still directed to the I-25 corridor, while others use SH 60 to access SH 257 or Two Rivers Parkway for travel north to Greeley, or to US 85 south toward Denver. As Figure 4-4 shows, the heaviest morning commuter flow in this segment of SH 60 is eastbound, reversing to the westbound in the afternoon peak period.

As in the western segment of SH 60, the highest two-way demand on this segment of SH 60 occurs in the afternoon peak period.

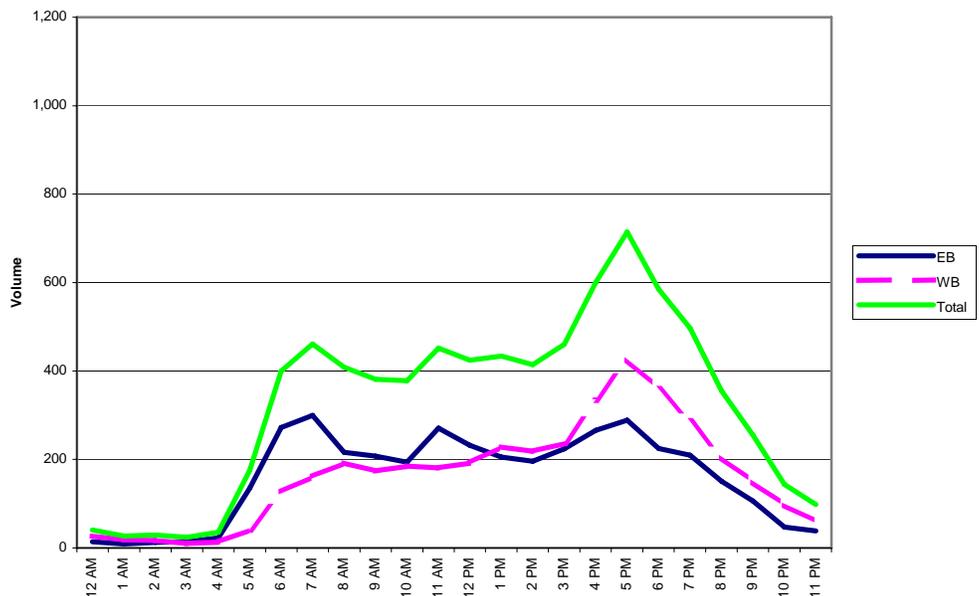


Figure 4-4  
SH 60, West of SH 257/WCR 21  
Daily Volume for 6/28/05 and 6/29/05 (Averaged)



**SH 60, East of WCR 25**

...strong eastbound trend in the morning peak period, reversing to westbound in the afternoon peak period.

The east end of the corridor exhibits the strong commuter demand to the north-south corridors of Two Rivers Parkway (to Greeley) and US 85 south toward Denver. Figure 4-5 shows the strong eastbound trend in the morning peak period, reversing to westbound in the afternoon peak period.

Consistent with the rest of the SH 60 corridor, the highest two-way demand on this segment of SH 60 also occurs in the afternoon peak period.

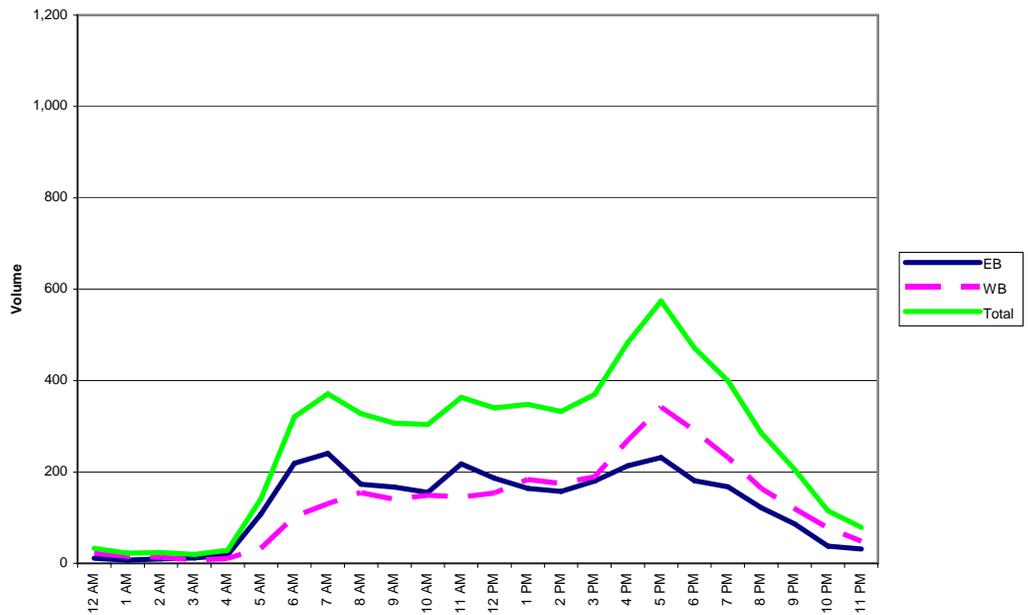


Figure 4-5  
SH 60, East of WCR 25  
Daily Volume for 6/28/05 and 6/29/05 (Averaged)



**Two Rivers Parkway, Immediately East of SH 60, and SH 60, South of Two Rivers Parkway**

At both of these locations on the east end of the SH 60 corridor, the north-south commuter pattern is evident. Figure 4-6 shows the predominant westbound (or southbound) commuter travel pattern in the morning, which reverses to eastbound (northbound) in the afternoon peak period. Midday shows a balanced pattern with approximately equal numbers of vehicles in each direction. The highest two-way demand on this segment of Two Rivers Parkway occurs in the afternoon peak period.

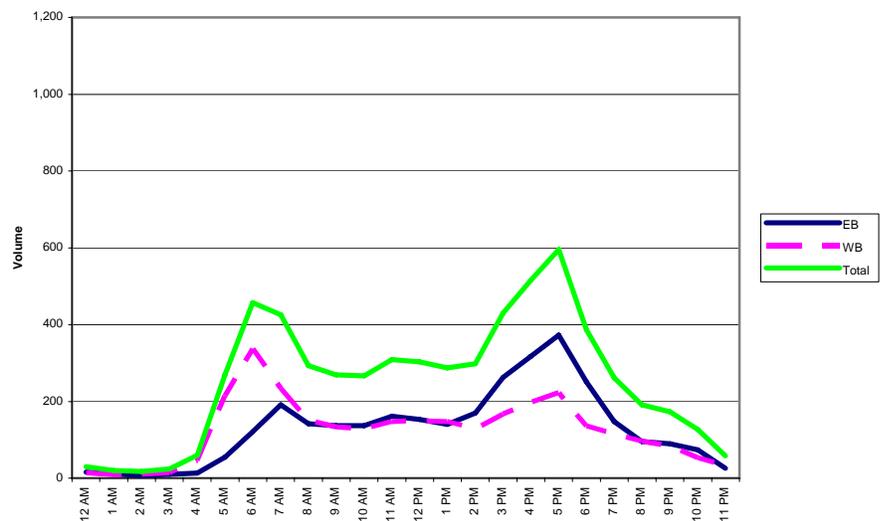


Figure 4-6  
Two Rivers Pkwy, East of SH 60  
Daily Volume for 6/28/05 and 6/29/05 (Averaged)



WCR 17 is a significant connection to the US 34 corridor.

### WCR 17, North of SH 60

Figure 4-7 shows a balanced pattern of peak period demand on WCR 17, with southbound and northbound flows about equal in the morning peak period, and a slightly higher southbound demand in the afternoon peak. WCR 17 is a significant connection to the US 34 corridor and the WCR 17/US 34 intersection is one of the few signalized intersections in the US 34 corridor west of Greeley.

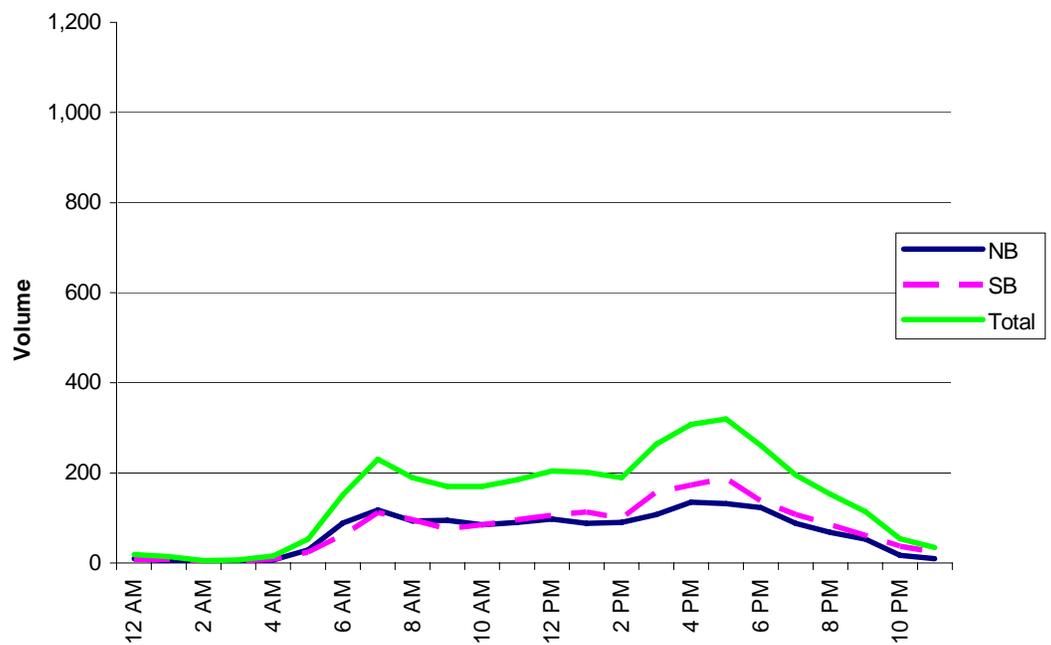


Figure 4-7  
WCR 17, North of SH 60  
Daily Volume for 6/28/05 and 6/29/05 (Averaged)



**SH 257, North of SH 60**

One of the major north-south connections in the study area, SH 257 does not exhibit the strong directional patterns of SH 60. As Figure 4-8 shows, northbound demand exceeds southbound by roughly half in the morning peak period, but the north and southbound flows are essentially equal in the afternoon peak. The highest two-way demand on this segment of SH 257 occurs in the afternoon peak period.

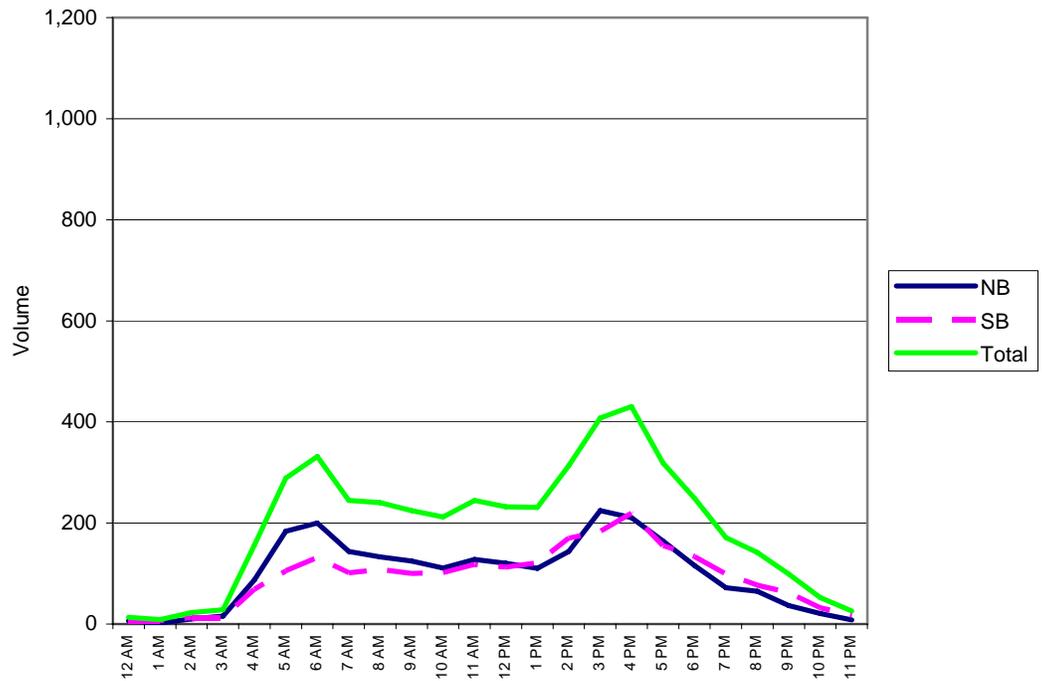


Figure 4-8  
SH 257, North of SH 60  
Daily Volume for 6/28/05 and 6/29/05 (Averaged)



Large trucks were found to represent only a small fraction of the total traffic volume of SH 60.

#### 4.1.4 Truck Demand

As a part of the June 2005 traffic count program, “vehicle classification counts” were also conducted. A vehicle classification count is designed to identify the mix of different types of vehicles (e.g., passenger vehicles, small and large trucks, and buses) that are traveling on the highway.

Table 4-1 shows the number of large trucks counted on SH 60 east of WCR 13. Large trucks (trucks with 5-axles or more) were found to represent only a small fraction of the total traffic—less than 2% of the total daily vehicles traveling this segment of SH 60. It should be noted that the traffic counts were completed in June and, given the surrounding agricultural uses, there may be seasonal increases in large truck traffic.

Table 4-1  
Daily Truck Volumes — SH 60, east of WCR 13

Type of Truck	Daily Total	Night Total*	Night Trucks as a Percent of the Total Daily Trucks
Single-Unit	184	60	33%
Tractor Trailer	143	22	15%

\* 7:00 PM to 6:00 AM

Counts taken June 2005. Source: URS Corporation



Area residents have reported large truck activity on SH 60 during nighttime hours. The traffic counts showed about 15% of the daily volume of large trucks traveled during the evening and nighttime hours. As Figure 4-9 shows, large truck volume is low in the early evening and overnight hours, rising again in the early morning hours.

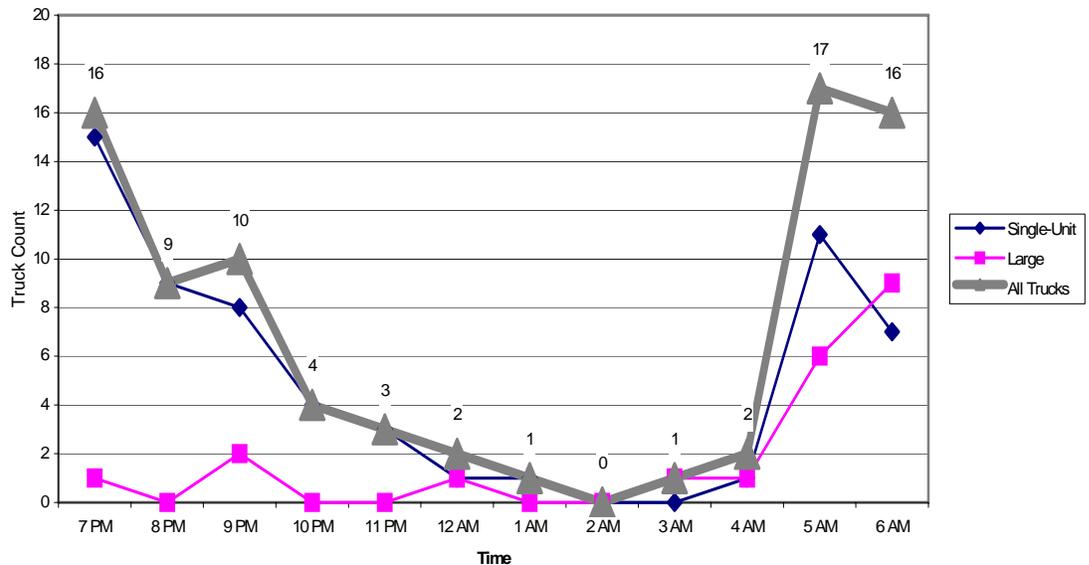


Figure 4-9  
Truck Activity at Night — SH 60, east of WCR 13

### 4.1.5 Traffic Operations

Traffic engineers have adopted the concept of “level of service” to provide a method to describe and compare traffic operations. Using a grading scale much like a student’s report card, peak hour traffic flow is scored on a scale ranging from Level of Service (LOS) A which represents the most favorable driving conditions, through LOS F, which is the least favorable (congested) condition. Unlike a student’s report card, however, LOS D is generally considered to be acceptable operations in urban (or urbanizing) areas. A wide range of factors is used for LOS calculations, including traffic volume, roadway geometry, truck volume, traffic signal spacing, presence of on-street parking, and delay.

The nationally accepted *Highway Capacity Manual (HCM)* is the basic reference for highway capacity calculations. This manual addresses a broad range of street and highway types, and provides the overall framework for analyzing and reporting traffic operations using the LOS structure. For two-lane highways, such as SH 60, the *HCM* provides

SH 60 currently operates at acceptable levels of service during peak periods (LOS D or better).



excellent procedures for higher-speed highway segments that are rural in character. The *HCM* provides fewer analysis techniques for two-lane highways in low-speed urban areas (such as through downtown Johnstown and downtown Milliken). To analyze these low-speed urban segments, URS developed project-specific analysis techniques, drawing on other respected research documents including the *Level of Service Handbook* (1998) that was developed by the Florida Department of Transportation.

Existing peak hour level of service estimates for the corridor are summarized on Figure 4-10. As shown, the corridor currently operates at acceptable peak hour levels of service, ranging from LOS D on the west end of the corridor (from I-25 through Johnstown), to LOS C and higher to the east.

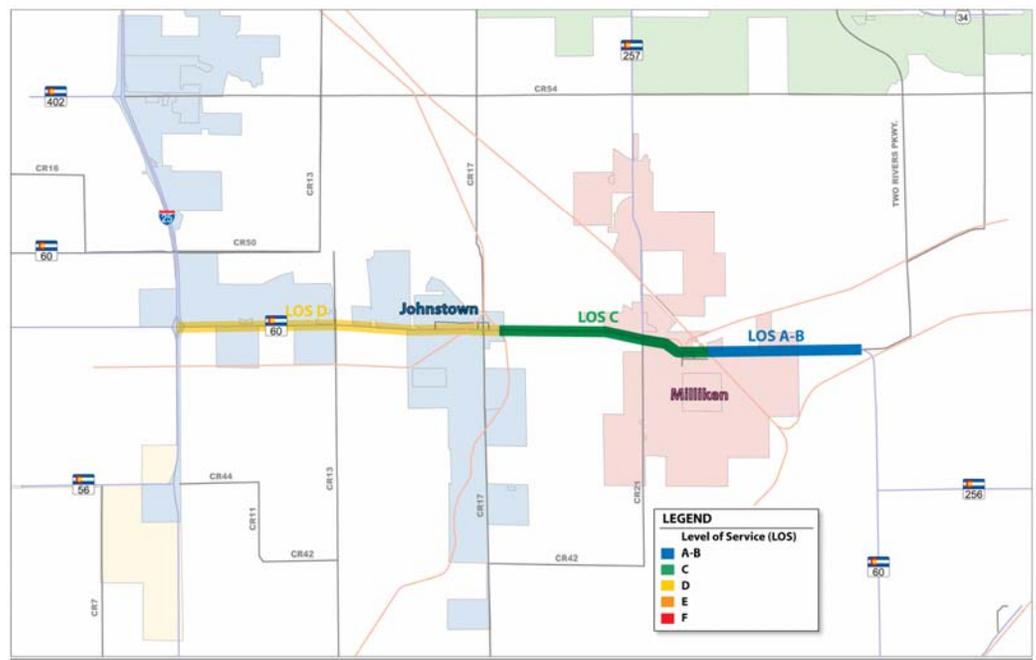


Figure 4-10  
Existing Level of Service

## 4.2 TRAFFIC SAFETY

To identify high accident locations and segments in the SH 60 corridor and to better understand the corridor accident patterns, crash records for the past three years were collected for SH 60 from CDOT. The most recent complete data sets for the SH 60 corridor are the years 2001, 2002, and 2003.



### 4.2.1 Corridor Accident History

The most basic analysis of crash records is a reporting of accident frequency and severity. As shown on Table 4-2, there were a total of 133 crashes on SH 60 (I-25 to Two Rivers Parkway) in the three-year reporting period.

Two-thirds of the crashes on SH 60 over the past three years were “property damage only” (PDO) crashes.

The severity of an accident is reported as involving either property damage only (PDO), injury (INJ) or a fatality (FAT). The most minor of the crash types, PDO crashes, was the predominant crash type in 2001-2003. Roughly two-thirds of the crashes had only property damage. The remaining crashes involved an injury. There were no fatal accidents in the 2001-2003 reporting period.

Table 4-2  
SH 60 Accident Totals

Year	PDO	INJ	FAT	Total
2001	27	6	0	33
2002	32	20	0	52
2003	28	20	0	48
Total	87	46	0	133

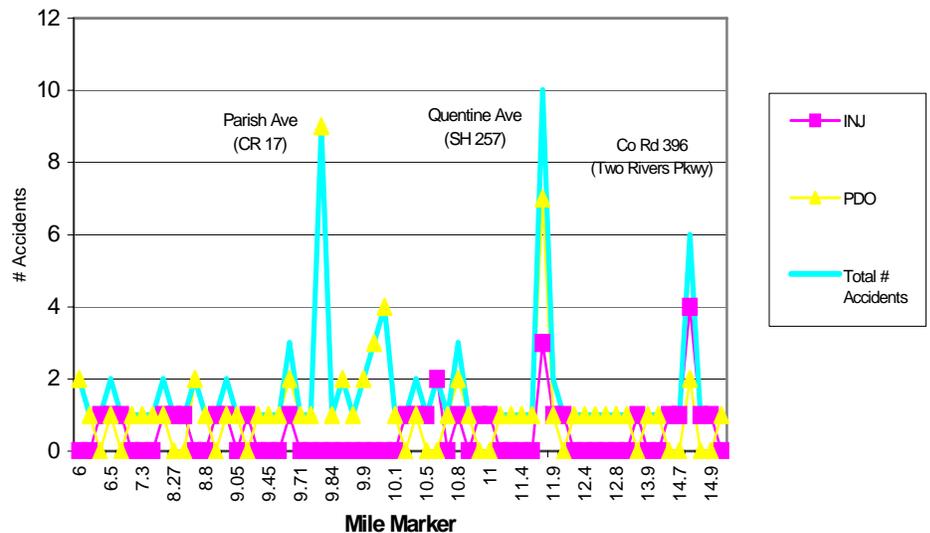
Data Source: Colorado Department of Transportation. Summary compiled by URS Corporation.



Studying the location of reported crashes can help identify accident “hotspot” locations. Figure 4-11 shows the number and severity of crashes using the CDOT mile marker numbering system for the 2001-2003 reporting period. As expected, accidents tend to cluster at the higher volume intersections in the SH 60 corridor. For this segment of SH 60, the highest volume of crashes occurred at the intersections of SH 60 with WCR 17 (Parish Avenue), SH 257/WCR 21 (Quentine Avenue), and Two Rivers Parkway.

Crashes on SH 60 cluster at the major intersections:

- WCR 17
- SH 257
- Two Rivers Parkway



Data Source: Colorado Department of Transportation. Summary compiled by URS Corporation.

Figure 4-11  
SH 60 Accident Profile by Mile Marker

### 4.2.2 Comparison to Other State Highways

CDOT uses statistical methods to compare the accident experience of similar state highways.

Simply reporting the number and severity of a highway’s crash history leads to the question—does this highway have more or less accidents than other comparable highways in Colorado? To answer this question, the Colorado Department of Transportation uses a statistical method to compare the frequency and severity of accidents on similar facilities.

CDOT uses a statistic called the Weighted Hazard Index (WHI) to compare the accident frequency, severity, and traffic volume of similar highways from around the state of Colorado. The key to this analysis is comparing similar types of highways—for example, it would not be meaningful to compare SH 60’s accident experience against I-25 in downtown Denver.

Since the character of SH 60 changes significantly between I-25 and Two Rivers Parkway, ranging from a higher speed rural highway to a low speed urban highway, the corridor was divided into a series of



segments to allow for a comparison of each segment’s accident experience with other similar highways in Colorado. These segments, along with their CDOT mile marker numbers, were:

- I-25 to WCR 13 (Mile Marker 6.00 to Mile Marker 7.90)
- WCR 13 to Kuner Avenue (Mile Marker 7.90 to Mile Marker 9.95)
- Kuner Avenue to SH 257 (Mile Marker 9.95 to Mile Marker 11.85)
- SH 257 to Alice Avenue (Mile Marker 11.85 to Mile Marker 12.85)
- Alice Avenue to Two Rivers Parkway (Mile Marker 12.85 to Mile Marker 14.80)

Table 4-3 reports the accident experience (number and severity of crashes) for each of the five segments of SH 60. The table also reports several calculations that were to compute the WHI, considering:

- The Weighted Accident Rate for each segment of SH 60 accounts for not only the number of accidents but also their severity.
- The Weighted Critical Accident Rate is based on statewide accident experience for similar roadways.

The WHI simply compares the two rates. If the Weighted Accident Rate (our study segment) is higher than the Weighted Critical Accident Rate (statewide average), then we conclude that our study segment has an accident frequency and severity higher than the statewide average and has potential for safety improvement. If the Weighted Accident Rate (our study segment) is lower than the Weighted Critical Accident Rate (statewide averages), then we conclude that our study segment has an accident frequency or severity that is lower than the statewide average.

Table 4-3  
SH 60 Accident Summary by Segment

Functional Classification	Mile Marker	Segment	Daily Traffic (2004)	Segment Length	Vehicle Miles Traveled	Accidents by Type (2001-2003)			Weighted Accident Rate	Weighted Critical Accident Rate	Weighted Hazard Index (WHI)
						FAT	INJ	PDO			
Urban Collector	6.00 to 7.90	I-25 to WCR 13	9100	1.9	18.9	0	3	7	1.16	3.60	-2.44
Urban Collector	7.90 to 9.95	WCR 13 to Kuner Ave	9030	2.05	20.3	0	7	28	3.11	3.59	-0.48
Urban Collector	9.95 to 11.85	Kuner Ave to SH 257	7500	1.9	15.6	0	8	17	3.65	3.64	0.01
Urban Collector	11.85 to 12.85	SH 257 to Alice Ave	5600	1.0	6.13	0	5	13	6.20	3.89	2.31
Rural Major Collector	12.85 to 14.8	Alice Ave to S of Two Rivers Pkwy	3900	1.95	8.33	0	9	6	6.12	2.48	3.64

Data Source: Colorado Department of Transportation. Summary compiled by URS Corporation



SH 60 Corridor Accident Experience

West end of SH 60

- Lower than statewide average for similar facilities.

East end of SH 60

- Higher than statewide average for similar facilities.

Table 4-3 and Figure 4-12 show that the two western-most segments (I-25 to WCR 13 and WCR 13 to Kuner Avenue) had a WHI that was less than zero for the past three years. This means that this segment of SH 60 had an accident frequency or severity that was lower than the statewide average for similar roadways.

The segment of SH 60 between Kuner Avenue and SH 257 had a WHI that was about equal to zero for the past three years. This means that this segment of SH 60 had an accident frequency or severity that was about the same as the statewide average for similar roadways.

On the two segments in the easternmost part of the study area (SH 257 to Alice Avenue, and Alice Avenue to Two Rivers Parkway) the WHI is greater than zero for the past three years. This means that these two segments of SH 60 had an accident frequency and severity that was higher than the statewide average for similar roadways.

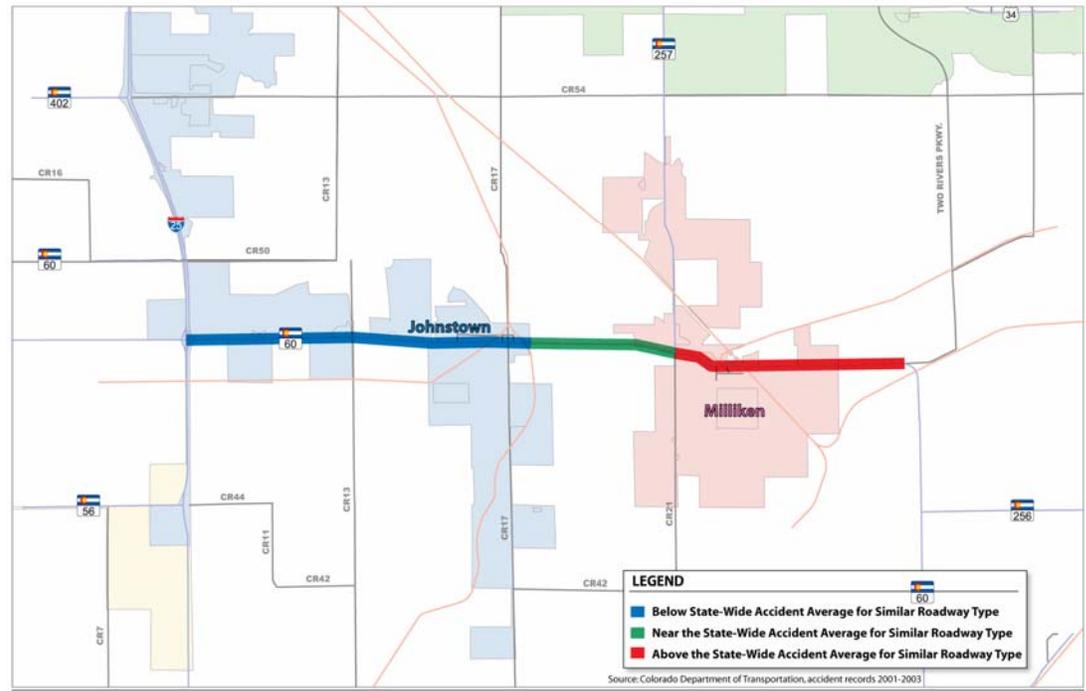


Figure 4-12  
Accident Summary

### 4.2.3 Intersection Crash Experience

Earlier in this analysis, Figure 4-11 showed the spike in crash frequency at the major intersections in the SH 60 corridor. To better understand intersection crashes in the corridor, crashes at five intersections along SH 60 (WCR 13, WCR 15, WCR 17, SH 257 and Two Rivers Parkway) were analyzed in greater detail.



Table 4-4 computes the “accident rate” at these five locations. To allow for a comparison of intersections that have different traffic volumes, an accident rate is computed as “accidents per million entering vehicles.” The relatively small number of crashes at these specific locations does not allow for many meaningful generalizations; however, consistent with the segment analysis, the locations with the highest accident frequency are on the east end of the SH 60 corridor.

Table 4-4  
Intersection Accident Rates

Location	Mile Marker	Accident Count	Accident Rate		2001-2003 Accident Rates
			PDO	INJ	Total
WCR 13	6.50	3	0.1	0.1	0.2
WCR 15	8.85	4	0.2	0.2	0.4
WCR 17	9.80	14	1.4	0.0	1.4
SH 257	11.85	13	1.1	0.7	1.8
Two Rivers Pkwy	14.70	7	0.5	1.2	1.6

Data Source: Colorado Department of Transportation. Summary compiled by URS Corporation.



Figure 4-13 summarizes the accidents by type at various locations in the corridor. For this analysis, accidents were grouped by the predominant cause of each crash (such as head-on, sideswipe, animal, etc.). The purpose of this type of analysis is to determine if a specific improvement can remedy the most common causes of crashes at a given location. Again, the relatively small number of crashes at these specific locations does not allow for many meaningful generalizations. A wide range of crash types was evident in the corridor and there were few locations where one accident type was predominant.

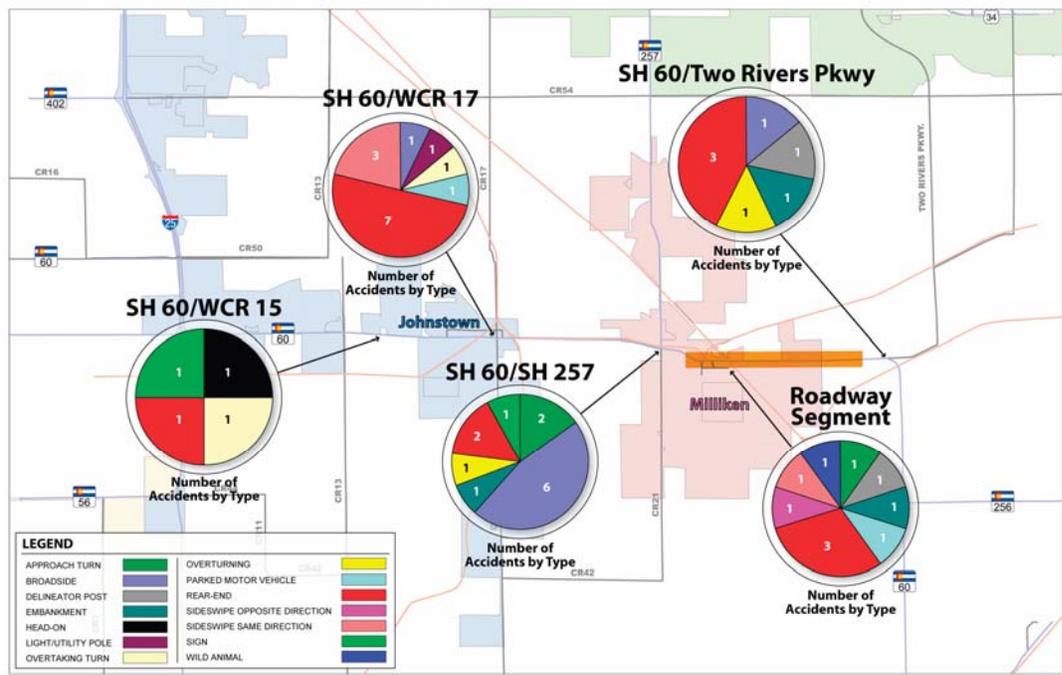


Figure 4-13  
Accident Types on SH 60

#### 4.2.4 Summary

The primary conclusion that can be drawn from this analysis of 2001-2003 accident experience is that the eastern segments of the corridor have above average accident frequency and severity when compared against similar facilities in Colorado. Accident rates at the intersections in the eastern segment are also higher than the rest of the SH 60 corridor.

The predominant type of crash (severity) is property damage only (65%) and there were no fatal accidents in this study corridor during the three-year analysis period. The limited evaluation of accidents by crash type did not reveal any predominant patterns of accidents in the corridor.



Short-term planned improvements in the SH 60 corridor may have a positive effect on the corridor's crash experience. These improvements include the reconstruction of SH 60/WCR 17 (Parish Avenue), signalization at SH 60/SH 257, and the reconstruction and signalization of the SH 60/Two Rivers Parkway intersection.

### 4.3 ORIGIN-DESTINATION STUDY

While traffic counts can help in understanding general patterns of mobility in the SH 60 corridor, it is useful to the development of alternatives to gain a better understanding of how SH 60 is used by both local and regional traffic.

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An origin-destination study was used to trace individual vehicle trips through the SH 60 study area.

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An "origin-destination" survey was conducted to trace vehicle trips within the SH 60 corridor. From this survey, travel patterns in the corridor were identified. Of primary interest was to identify the proportion of motorists that use SH 60 for locally based trips (trip origin or destination was within Johnstown or Milliken), or for external "pass-through" trips where SH 60 is used as a route to pass to/from origins and destinations that are both outside of Johnstown or Milliken.

#### 4.3.1 Data Collection

An origin-destination survey is designed to track vehicles that enter or exit a study area. As shown on Figure 4-14, data collection "stations" were set up at the major entrance and exit points to the SH 60 study area, including:

- SH 60, east of I-25 (Data Station "A")
- WCR 17, north of SH 60 (Data Station "B")
- SH 257, north of SH 60 (Data Station "D")
- Two Rivers Parkway, east and north of SH 60 (Data Station "E")
- SH 60, south of Two Rivers Parkway (Data Station "F")

Additionally, to differentiate trips that had origins or destinations within Johnstown or Milliken, another data collection station (Data Station "C") was set up between the two communities (about midway between WCR 17 and SH 257).

The data for the origin-destination study was collected on July 26, 2005, from 7:00 am to 7:00 pm. At each data collection station, a video camera recorded the vehicle license plate number and time of day for each inbound and outbound vehicle that passed the station. The video data was then entered into an electronic database so that each license plate could be "matched" between data stations, allowing vehicles to be tracked through the study area.

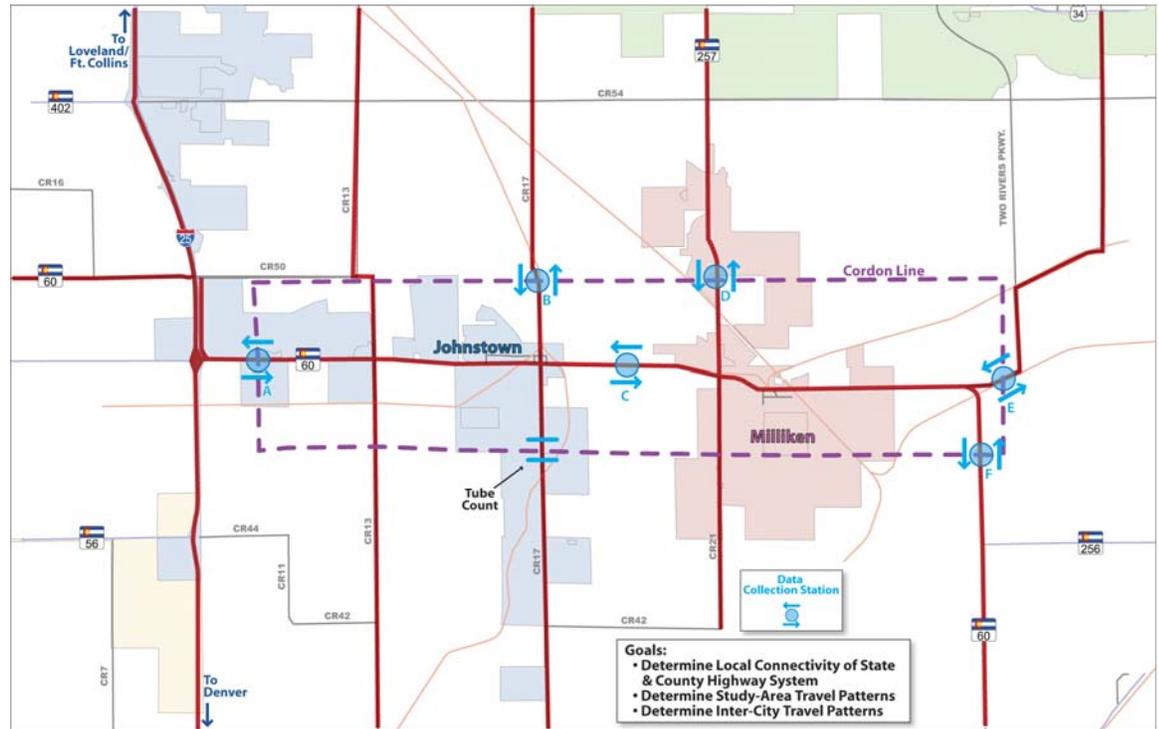


Figure 4-14  
Origin-Destination Survey Data Collection Stations

### 4.3.2 Trip Types and Patterns

The origin-destination survey was designed to identify two basic trip types:

Two basic trip types:

- Pass-through trips
- Local trips

*Pass-Through Trips* – A driver making a “pass-through” trip started his trip outside of the study area (such as Greeley) and used SH 60 to complete his trip to a destination that was also outside of the study area (such as Longmont). The license plate matching process identifies these pass-through trips by finding a license plate that is recorded as “inbound” to the study area at one of the data collection stations and shortly thereafter is recorded as an “outbound” at a different data collection station.

*Local Trips* – A driver that enters the study area and does not immediately exit the study area has made a “local” trip. Our survey found two types of local trips. In the first type, a driver enters the study area and does not have an exit recorded at any station. Example: a driver returns home from Loveland and does not leave again that day. The second type of local trip is a “round trip.” A driver is tracked entering the study area at a data collection station and is later tracked



exiting that same location. Example: a resident of Berthoud comes to work in Milliken and leaves for home later that day.

The primary value of using this type of origin-destination survey is that we get a better understanding of the proportion of trips on SH 60 that are local or regional. We can also trace specific trip routes as vehicles move through the study area. Knowledge of both of these aspects of the transportation system will be used later in the study process for developing and evaluating mobility improvement options for the SH 60 corridor.

### 4.3.3 12-Hour Origin-Destination Data Results

Table 4-5 summarizes the recorded inbound trips that were collected from all of the study area data collection stations during the 12-hour data collection period. Data Station “C”, which was located on SH 60 between Johnstown and Milliken, was used to help determine the destination of local trips.

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Most trips on SH 60 are local trips – starting or ending in Johnstown or Milliken.

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There are several interesting observations that can be made from the collected data:

- Overall, 70% of the motorists that entered the study area made locally based trips (either trips that entered the study area with no recorded exit, or motorists that made round trips). This is an expected trip pattern since many Johnstown and Milliken residents leave the area each day for employment or shopping purposes. The proportion of motorists that made local trips was highest on the west end of the corridor, where almost 90% of the motorists that were on SH 60 east of I-25 were destined for Johnstown or Milliken.
- A high proportion (roughly 80%) of trips entering the study area from the north-south regional roads (WCR 17 and SH 257) are local trips.
- On the easternmost end of the corridor, the strong north-south pattern of trips is evidenced by the high proportion of pass-through trips at the eastern stations (Data Stations E and F). This trend will be discussed in more detail later in this report when the patterns from each individual station are reviewed.
- Other than the north-south pass-through pattern on the far eastern end of the corridor, a relatively modest proportion of trips (roughly 20% or less) use the Johnstown and Milliken segments of SH 60 as a pass-through route.
- Round-trips (traffic entering the study area at a given data station and later exiting at the same station) are a relatively small



proportion of daily trips. These trips are most typically associated with motorists entering the area for employment or retail purposes.

Table 4-5  
Total (Daily) Recorded Inbound Trips

Station (Direction)	Total Recorded Inbound Trips (vehicles)	Total Percent of Local Trips (trips with no exit recorded)	Percent of Local Trips by Destination	Percent of Round Trips	Percent of Pass-Through Trips
A (SH 60 Eastbound)	4,103	67%	57% (Johnstown) 10% (Milliken)	19%	13%
B (WCR 17 Southbound)	1,093	62%	54% (Johnstown) 9% (Milliken)	17%	20%
D (SH 257 Southbound)	1,670	69%	17% (Johnstown) 42% (Milliken)	10%	25%
E (Two Rivers Pkwy Southbound)	1,605	35%	11% (Johnstown) 24% (Milliken)	9%	56%
F (SH 60 Northbound)	1,799	31%	8% (Johnstown) 23% (Milliken)	3%	66%
Total	10,270	55%		13%	32%

Data Source: URS Corporation



Daily trip patterns at each of the six data collection stations are shown graphically on Figures 4-15 through 4-20. Of particular interest:

- At Data Station A (SH 60, east of I-25), the strong local pattern of trips is evident, with about 13% of the trips passing through the study area. Pass-through trips were about evenly distributed to WCR 17, SH 257, Two Rivers Parkway and SH 60/US 85.

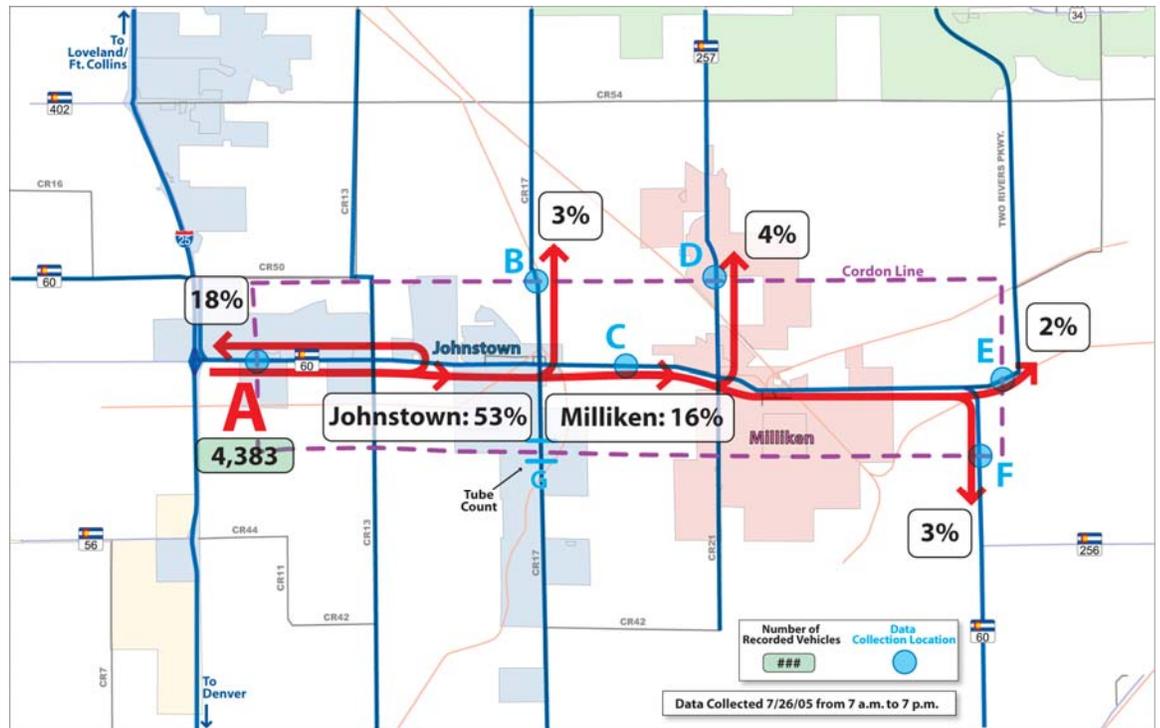


Figure 4-15  
Origin-Destination Survey  
Vehicles Entering the Study Area at Location A



- At Data Station B (WCR 17, north of SH 60), about 20% of the entering trips pass through the area, with about half of these pass-through trips destined for the I-25 corridor. Johnstown is the primary designation of locally based trips.

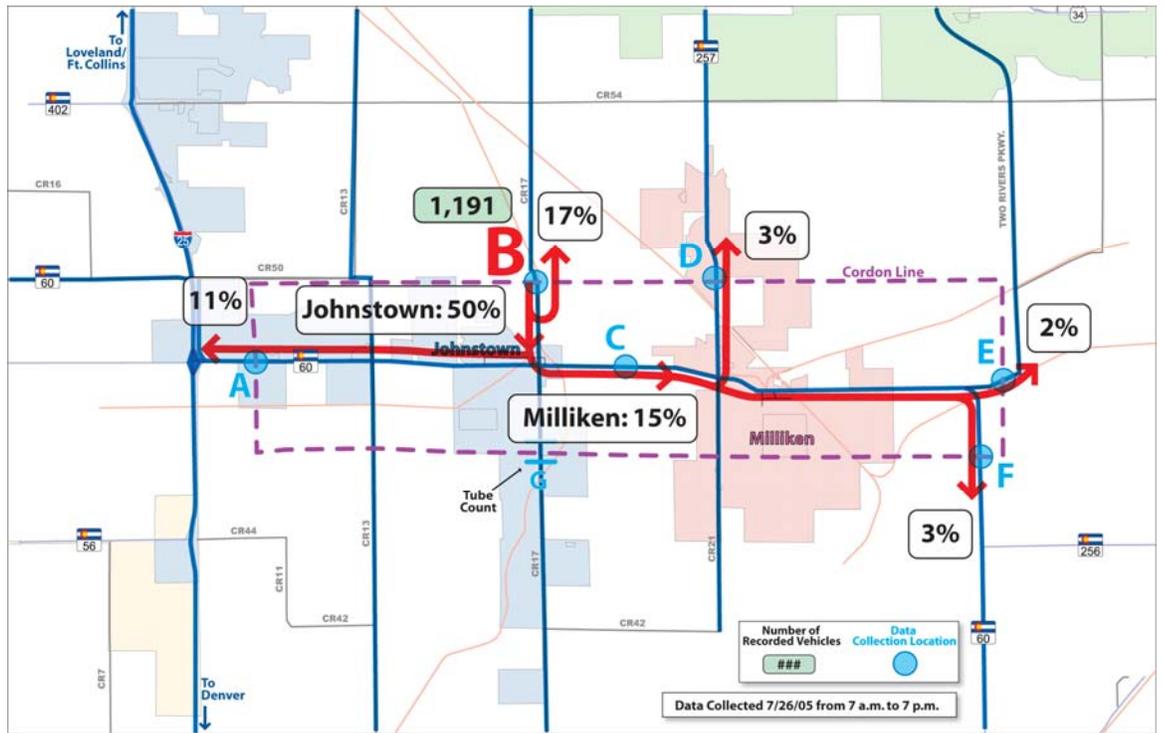


Figure 4-16  
Origin-Destination Survey  
Vehicles Entering the Study Area at Location B



- Data Station C (SH 60, midway between Johnstown and Milliken) provides some insights into the travel connections between the two communities. In either direction, about 53% of the vehicles that were recorded at Data Station C were later recorded as a pass-through trips. The remaining trips reflected travel between the two communities. About half of the westbound pass-through trips (originating in Milliken and points east) were destined for the I-25 corridor. Eastbound pass-through trips (originating in Johnstown and points west) were distributed between SH 257, Two Rivers Parkway, and SH 60/US 85, with no predominant destination.

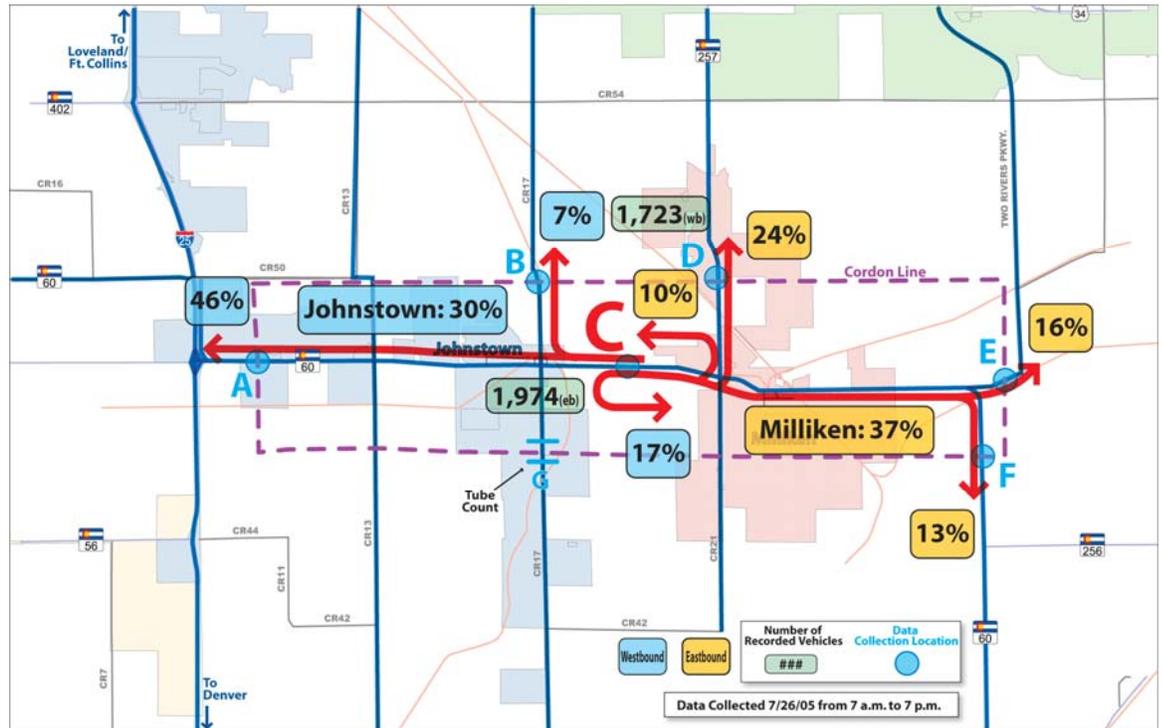


Figure 4-17  
 Origin-Destination Survey  
 Vehicles Entering the Study Area at Location C





- At Data Station E (Two Rivers Parkway, east and north of SH 60), the previously discussed north-south pass-through travel pattern is evident, with slightly more than half of the entering traffic continuing south to SH 60/US 85. Milliken is the primary destination of locally based trips.

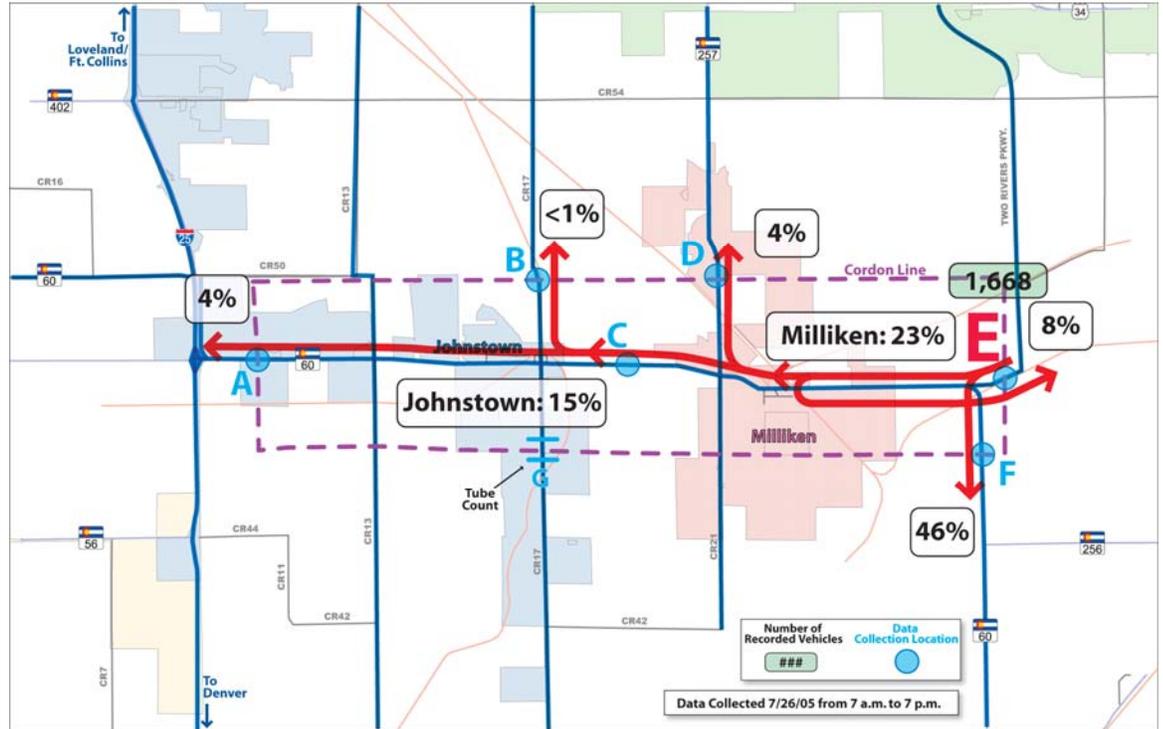


Figure 4-19  
Origin-Destination Survey  
Vehicles Entering the Study Area at Location E



- Finally, at Data Station F (SH 60, south of Two Rivers Parkway), the primary pass-through routes are to Two Rivers Parkway and SH 257. Milliken is again the primary destination of locally based trips.

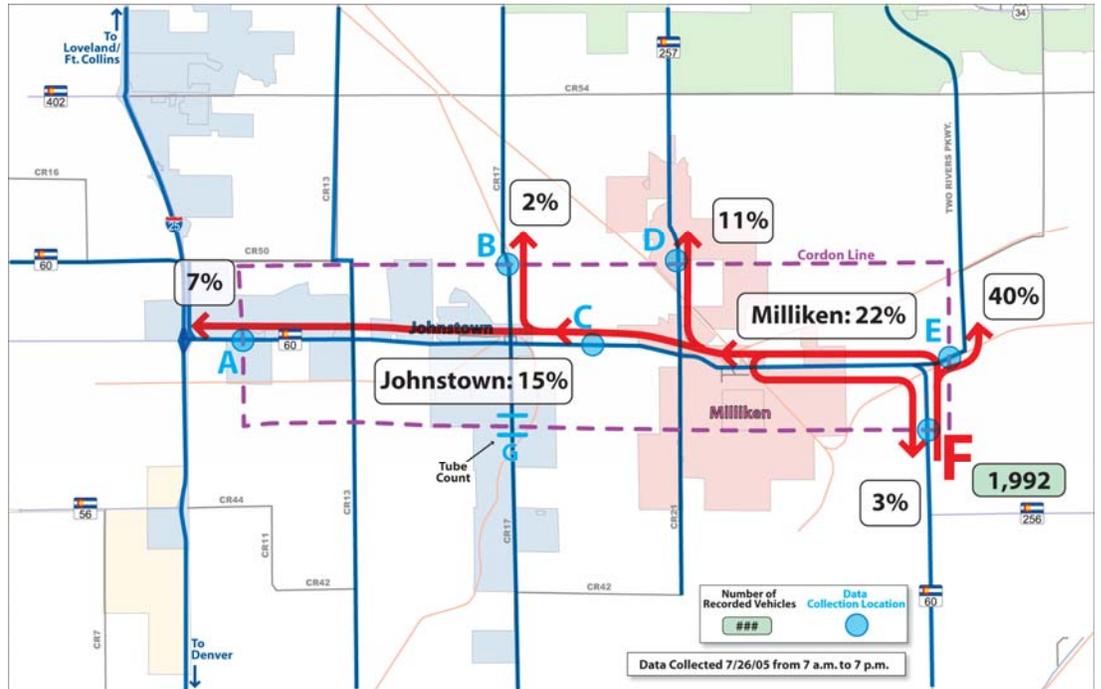


Figure 4-20  
Origin-Destination Survey  
Vehicles Entering the Study Area at Location F



### 4.3.4 Peak Hour Origin-Destination Analysis

In addition to identifying daily trip patterns, the origin-destination survey data was also used to help understand morning and evening peak commuting patterns. For this peak period analysis, data for motorists exiting Data Station A (SH 60, east of I-25) in the morning, and entering this data station in the evening were compared. Table 4-6 summarizes the results.

The peak hour pattern is consistent with the daily origin-destination findings. A large proportion of the vehicles that exit the SH 60 corridor in the morning originated in Johnstown (79%) or Milliken (18%). A very small proportion of the exiting traffic (3%) originated from outside of the study area.

Similarly, in the afternoon peak, a large proportion of vehicles that enter SH 60 near I-25 are destined for Johnstown (82%) or Milliken (11%).

Table 4-6  
Peak Hour Trips at SH 60 East of I-25 (Data Station "A")

AM Peak Hour (7-8 AM): Outbound Trips at Station A				
From Location	To Location	Count	%	
A - SH 60 east of I-25	A - SH 60 east of I-25	1	0%	
B - CR 17 north of SH 60	A - SH 60 east of I-25	3	1%	
C - SH 60 between CR 17 & SH 257 (trip originates in Milliken)	A - SH 60 east of I-25	88	18%	
D - SH 257 north of SH 60	A - SH 60 east of I-25	13	3%	
E - TWO RIVERS east and north of SH 60	A - SH 60 east of I-25	2	0%	
F - SH 60 south of TWO RIVERS PKWY	A - SH 60 east of I-25	0	0%	
None (trip originates in Johnstown)	A - SH 60 east of I-25	395	79%	
		502	100%	
PM Peak Hour (5-6 PM): Inbound Trips at Station A				
From Location	To Location	Count	%	
A - SH 60 east of I-25	A - SH 60 east of I-25	24	3%	
A - SH 60 east of I-25	B - CR 17 north of SH 60	2	0%	
A - SH 60 east of I-25	C - SH 60 between CR 17 & SH 257 (trip terminates in Milliken)	80	11%	
A - SH 60 east of I-25	D - SH 257 north of SH 60	13	2%	
A - SH 60 east of I-25	E - TWO RIVERS east and north of SH 60	5	1%	
PM Peak Hour (5-6 PM): Inbound Trips at Station A				
From Location	To Location	Count	%	
A - SH 60 east of I-25	F - SH 60 south of TWO RIVERS PKWY	6	1%	
A - SH 60 east of I-25	None (trip terminates in Johnstown)	599	82%	
		729	100%	

Data Source: URS Corporation.



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The North Front Range Metropolitan Transportation Planning Organization (NFRMPO) travel demand model was used to forecast year 2030 traffic on SH 60.

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### 4.4 TRAFFIC FORECASTING

A primary purpose of the SH 60 Environmental Overview Study is to identify the long-range transportation needs of the SH 60 corridor. To assist in that goal, year 2030 traffic forecasts were developed for the corridor.

Traffic forecasts for the SH 60 corridor were developed from the North Front Range Metropolitan Planning Organization (NFRMPO) regional travel demand model. The model uses the TransCAD software to represent land use and transportation conditions in the North Front Range region that includes parts of Larimer and Weld Counties, Fort Collins, Loveland, Greeley, Johnstown, Milliken, and other smaller cities.

The initial task of the modeling effort was to develop a baseline transportation model that would serve as the basis for evaluating transportation improvements. The “SH 60 No-Action model” (termed “no action” because it excludes any improvement options) is based on the NFRMPO’s 2030 Regional Transportation Plan (RTP) model. The SH 60 No-Action model incorporates several refinements to the NFRMPO’s model to better represent the network and planned development in and near the SH 60 corridor. These refinements included adjustments to the links that connect land use to the roadway network (called “centroid connectors” in the model) as well as the addition of some roadway links to represent existing roadways that could be paved by 2030.

The developing area of Milliken known as Centennial Crossing was also updated in the model to better represent the roads and distribution of land use in the area. Finally, the NFRMPO’s 2030 RTP roadway network includes the widening of SH 60 between I-25 and WCR 15. As is customary in environmental studies, to evaluate the effect of this proposed project on potential alternative transportation solutions, this roadway-widening project was removed from the SH 60 No-Action network. There were no changes made to the model’s population and employment in the SH 60 corridor since this study must be consistent with the NFRMPO socioeconomic regional control totals. The No-Action roadway network and socioeconomic data for the study area are found in the Appendix to this report.

The regional travel demand model was then used to generate daily traffic volume forecasts for the year 2030. PM peak hour volumes were then manually calculated using corridor-specific factors derived from current traffic counts, including the actual directional distribution of traffic and the current ratio of peak hour to daily traffic.





Forecast 2030 peak hour level of service estimates for the corridor is summarized on Figure 4-22. As expected, continued growth in the corridor causes traffic operations throughout the SH 60 corridor to decline from existing conditions. Corridor level of service ranges from LOS F from I-25 through Johnstown, improving to LOS C at the far end of the corridor.



Figure 4-22  
2030 No-Action Level of Service



Without improvements, the west end of SH 60 is forecast to operate at poor levels of service (LOS F) during the 2030 peak periods.

2030 peak hour operations for selected unsignalized intersections in the SH 60 corridor were also evaluated for north-south streets connecting to SH 60. The resulting forecast of operations is consistent with the overall corridor findings, with some cross-street traffic movements (most notably left turns) operating at poorer levels of service than the adjacent highway. The results are shown in Table 4-7. While a poor level of service for a selected traffic movement at an unsignalized intersection does not directly point to the need for a future traffic signal, it can be an indicator of which intersections warrant continued monitoring.

Table 4-7  
2030 Cross-Street Level of Service

Intersection of SH 60 with	Cross-Street Level of Service	
	Left-Turns	Through
High Plains Blvd	F	F
Carlson Blvd	F	F
WCR 13	E/F	E/F
Zack Place	E	N/A
Rolling Hills Ranch	C	N/A
WCR 15	E/F	E
WCR 19	C	C
Irene Avenue	D/F	B
Alice Avenue	E/F	C
WCR 23.5	D/E	B
WCR 25	B	N/A

Source: URS Corporation





### 5.0 PROJECT CONTEXT AND ENVIRONMENTAL RESOURCES

#### 5.1 HUMAN ENVIRONMENT

##### 5.1.1 Community

Johnstown and Milliken are located in the northern Front Range of Colorado and lie along SH 60, four and seven miles east of I-25, respectively. State Highway 60 runs east-west through the center of Johnstown and connects to the Town of Milliken to the east. SH 60 is named South First Street in Johnstown and Broad Street in Milliken. The communities are situated in close proximity to Loveland to the northwest, Greeley to the northeast, and approximately 45 miles north of the Denver metropolitan area. The towns are shown on Figure 5-1 in context to their surroundings.



The communities were generally established as early transshipment/agricultural collection points along the Great Western Railroad and as retail trade market centers for the surrounding agricultural area. The railroad has diminished in importance as an influence, however, the towns still serve as retail trade areas for the surrounding agricultural area.

Although Johnstown and Milliken have agricultural, industrial and commercial employment opportunities, they primarily serve as bedroom communities for the larger communities nearby. Much of the Front Range experienced strong economic growth over the last 15 years and it is anticipated that there will be continued growth and development pressures in the foreseeable future. As a result, both communities have experienced increased interest in residential and commercial development in recent years.



*Environmental Considerations:* Roadway improvements for SH 60 are not likely to significantly change the community character of Johnstown or Milliken.

##### 5.1.2 Socioeconomics

###### *Population*

In 2000, the population of Johnstown was 3,827 and 2,888 in Milliken (2000 U.S. Census). According to the Colorado Department of Local Affairs, the populations in both communities had grown to 6,122 and 5,214 in Johnstown and Milliken, respectively by 2004.

In 2000, the median age was 31.2 in Johnstown and 27 years in Milliken, compared to 34.3 years statewide. Approximately three-fourths of the population in both communities is 44 or less, suggesting



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In the last 6 years, population has grown in Johnstown by approximately 60 percent and in Milliken by approximately 80 percent.

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a significant number of younger families with children present in the communities. This trend is expected to continue given the residential development that is taking place in the area.

According to the 2000 U.S. Census, the racial makeup of Johnstown and Milliken is primarily Caucasian followed by a predominant minority population comprised of Hispanic or Latino citizens. At the southern edge of downtown Johnstown is an old “Spanish Colony,” an enclave of primarily Hispanic or Latino residents. This enclave was established in the early part of the 20<sup>th</sup> century as a result of housing demand for the agricultural field workers typically associated with the sugar beet industry. The community was annexed as a part of Johnstown in the early 1990s.

This EOS considers potential affects to low-income (low-income populations discussed in Section 5.1.8.b) and minority populations to ensure that these populations do not receive a disproportionately high number of adverse or human health impacts resulting from proposed improvements to SH 60. A “disproportionately high and adverse effect” is one that is predominately borne by, suffered by, or that is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority status population and/or the non-low-income status population.

*Environmental Considerations:* Currently, there are no residences that are proposed to be relocated and it is anticipated that there will be no disproportionately adverse effect to minority residents along the corridor. However, further development of alternative design may necessitate relocations in the future. If this were to occur, additional coordination with the communities and affected residents would be necessary as well as additional study on the effects to these populations.

### **Employment and Income**

Employed residents of Johnstown and Milliken are generally employed in larger employment centers outside of the immediate project area. Residents of Johnstown tend to gravitate towards I-25 where they disburse to jobs in Denver, Longmont and Ft. Collins. Residents in Milliken tend to be employed in Greeley.

In 2000, the median household income for Johnstown was \$50,404 and \$43,603 in Milliken, compared to \$42,321 in Weld County and \$47,203 in Colorado (U.S. Census Bureau 2000). According to the 2000 U.S. Census, the employment makeup of the towns of Johnstown and Milliken are primarily comprised of manufacturing, construction, educational/health and social services, and retail trade, with only a small percentage in the agricultural industry.

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Most residents of Johnstown and Milliken are employed in larger employment centers outside of the project area.

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Figure 5-2 shows the change in employment density between the year 2000 and the year 2030. In general, employment opportunities will increase to the west of Johnstown and Milliken, along the I-25 corridor.

The poverty level established by the U.S. Department of Health and Human Services in 2000 was \$8,350 for an individual and \$17,050 for a family of four. The 2000 U.S. Census reports that the percentage of individuals below the poverty level was 8.3 in Johnstown and 12.2 in Milliken, compared to 12.5 percent in Weld County and 9.3 in Colorado.

### 5.1.3 Land Use and Zoning

Both Johnstown and Milliken are experiencing rapid growth. Their comprehensive plans discuss continued residential growth over the next 20 years. Much of the land that is currently zoned agricultural will be converted to residential and commercial land uses. Even over the course of this EOS study (between the years 2005 and 2006), subdivisions have rapidly developed along SH 60. Land use plans for the two communities are shown in Figure 5-3.

There are three areas of interest in Johnstown as set forth in the Johnstown Area Comprehensive Plan. The first area of interest is the Johnstown Urban Growth Area within which actions taken by others may have an influence on the future of Johnstown and vice-versa (e.g., land use approvals by Weld County). The second area of interest is the Johnstown Planning Area (JPA) that includes planned residential neighborhoods, and commercial and industrial districts. The Johnstown Service Area is the area that includes the existing town of Johnstown. Generally, desired growth follows with infill development near the core area with gradual expansion outward. In Johnstown, the two significant commercial land use areas include the downtown area and the highway-oriented I-25/SH 60 area. A wide variety of pedestrian-oriented uses are more prevalent in the downtown area, as opposed to the highway-oriented uses associated with vehicular travel at the I-25/SH 60 area.

Milliken's Comprehensive Plan provides for a Primary Growth Area and a Secondary Growth Area. The Primary Growth Area is the area identified by the community that may be developed within the foreseeable future. The Secondary Growth Area is the area that the community has identified that may be included in Milliken at some time in the future. Cooperation with the land owners is a primary consideration for properties within the Primary Growth Area. In Milliken, the primary significant commercial land use is the downtown central business district. The Milliken Comprehensive Plan states that urban development should occur adjacent to the Town's core so that the

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The Recommended Alternative for SH 60 is compatible with the future land use plans for both Johnstown and Milliken.

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community's prime agricultural land and natural areas are preserved and public infrastructure and utilities are used as efficiently as possible.

Throughout the EOS process, CDOT sought to coordinate with the communities of Johnstown and Milliken and respect their long-term goals and land use planning. The outcome of the EOS process compliments the growth and development plans of both communities and is compatible with their existing and future land use plans.

*Environmental Considerations:* Currently, there are no planned residential or commercial relocations or removals as a result of proposed roadway improvements. However, further development of the Recommended Alternative may necessitate relocations in the future. If this were to occur, additional coordination with the communities and affected residents and/or business owners would be necessary to mitigate these impacts. In addition, the effect of roadway improvements may contribute to the intensification of development in the study area over time. Appropriate coordination with the communities will continue to ensure that proposed roadway changes meet the goals as set forth in each of the towns' Comprehensive Plans.

### 5.1.4 Parks and Recreation

The Johnstown/Milliken Parks, Trails, Recreation and Open Space Master Plan (June 2003) provides an inventory of existing parks in the study area (Figure 5-4).



Parish Park in Johnstown

The parks in Johnstown include:

- Parish Park – located at Raymond Place and Charlotte Street.
- Hays Park – located on Country Acres Drive.
- Eddie Aragon Park – located at WCR 17 and Johnstown Center Drive.

In Milliken, the parks include:

- Frank Farms #1 – located at Lilac Street and Rachel Court.
- Frank Farms #2 – located between Rachel Avenue and Tamara Avenue.
- Lola Park – located at Irene and Forest to Josephine and Forest.
- Mountain View Park – located at Juneberry and Olive streets.
- ADA Park – located on Aragon Court.
- Avila Park – located adjacent to Town Hall on Grace Avenue.

The Johnstown/Milliken Recreation Plan presents a discussion of future development of trails in the area as well as a framework for planning



and design of planned trail networks. An Arterial Transportation Corridor Trail within the right-of-way adjacent to SH 60 is planned to provide a connection between the two communities. Coordination with CDOT is noted as being required during the design and construction process.

The Recreation Plan also provides for open space protection. One such open space area planned is a “community green” envisioned to visually separate the two town centers of Johnstown and Milliken and act as a community gathering space to bring the residents together. In addition, both the Johnstown and Milliken Comprehensive Plans identify the entry routes into the towns as important visual corridors that need to be protected. State Highway 60 on both the east and west ends of each town are regarded as areas where special consideration should be shown.

*Environmental Considerations:* Proposed SH 60 roadway improvements are not anticipated to impact any of the above-named parks since they are located at distances greater than any potential right-of-way needs. One small greenway park adjacent to SH 60 in Milliken may be encroached upon as a result of widening of the roadway. However, potential affects to this park that may occur in the future would be coordinated with the Town of Milliken to ensure proper mitigation.

If a future construction project involved a NEPA analysis, impacts to a park would also require a Section 4(f) Evaluation (per 23 CFR 771.135). The Section 4(f) process requires avoidance of a Section 4(f) resource, if at all possible, followed by minimization of impact.

### 5.1.5 Cultural Resources

The project area is rich in history that includes many historic buildings and linear features such as railroads and agricultural ditches. The communities along SH 60 have fascinating pasts. A brief history of each town is provided below as provided by the Chamber of Commerce.

#### ***Brief History of Johnstown***

Johnstown was established at its present site in 1902 by Harvey Jay Parish, on land that he had homesteaded since 1883. The town was named after his son, John, who lay ill in a Denver hospital during the town’s christening. After recovering from his illness, young John returned home to the new town named after him, and later served as its mayor from 1929 to 1934.

The Town incorporated in 1907. Two important industries developed: a milk condensory and a unique year-round sugar factory that used



Historic Photo taken in Johnstown



“discard” molasses to produce high quality sugar. The Mohawk Milk Company, later the Carnation Milk Company was built in 1913 and the Great Western Sugar Factory, was built in 1925. Up until the early 1980s, Johnstown had a population of approximately 1500.

### ***Brief History of Milliken***

Milliken’s history starts with the settlement of Hillsboro in the 1860s. Hillsboro was the trade center for the immediate area and was located just adjacent to present day Milliken. Established in 1907, Milliken was named after Judge John D. Milliken, a pioneer lawyer who helped establish the Denver, Laramie, and Northwestern railroad. With the growth of the sugar beet industry and its transport, Milliken was a hub of commerce in northern Colorado.

A disastrous fire, the first of several, hit the town in 1911 and destroyed three businesses. Other fires, and a decline in railroad transport dealt their blows to the community. Many changes have happened in Milliken in the last 20 years. The streets were unpaved even into the early 1980’s. The Town continues to grow and still benefits from the land that first drew settlers and developers.

### ***Cultural Resources***

A file search, reconnaissance survey, and assessor’s records research were performed by URS for the SH 60 EOS for both historic and archaeological features. A few archaeological sites were found in the file search in the larger study area, but none were found near SH 60. The study area for historic resources (the unofficial area of potential effect) was limited to the first parcel of real property adjacent to both sides of the existing alignment of SH 60 from about one mile west of the interchange with I-25 to just south of the crossing of the South Platte River.

The site and survey files maintained by the Colorado Historical Society, office of Archaeology and Historic Preservation were searched in spring of 2005. The Weld County Assessor’s records were also reviewed to assist in establishing the age of construction of the buildings located along the corridor.

The reconnaissance survey was performed during the summer of 2005. During this survey, all properties that were at least 40 years old were assessed for integrity of design, materials and workmanship. If a property appeared to retain these elements of integrity and is a good example of an architectural type, style, or period of construction, then it was considered eligible for the National Register of Historic Places (NRHP). A designation of Recommended Eligible (RE), is used to identify these properties on the 11x 17 graphical illustrations in the EOS Appendix. A designation of “OE” means the site is already



Anderson Barn



officially eligible. “NRS” means the site has already achieved National Register status.

The file search revealed the following:

- Two previously recorded sites are listed in the NRHP – the Anderson Barn-Carlson Farm Barn (5WL.4810) is a contributing element to the Multiple Property Listing for Ornamental Concrete Block Buildings, the Daniels School (5WL.3168) is a contributing element to the Multiple Property Listing for Rural School Buildings.
- Three previously recorded sites have been officially determined eligible for the NRHP by the State Historic Preservation Officer (SHPO) –the Great Western Railroad (5WL.841.3 and 5WL.841.4), the Union Pacific Railroad (5WL.1317.5 and 5WL.1375.6), and the Thompson and Platte Ditch (5WL.2587.1 and 5WL.2587.2).
- One previously recorded site has been recommended as eligible for the NRHP by the original field recorders – the Handy and Home Supply Ditch (5WL.3149.1).
- Two previously recorded sites were not evaluated for NRHP eligibility by the original field recorders – the Morehead Apartments/Terrace Hotel (5WL.786) and the Great Western Sugar Refinery (5WL.792).
- Two previously recorded sites have been recommended as not eligible for the NRHP by the original field recorders – the Elwell Store (5WL.782) and the Condensary/Great Western Railroad (5WL.817).
- One previously recorded site has been designated as Centennial Farm, but has not been evaluated for the NRHP – the Little Thompson Ranch/Binder Family Farm (5WL.4833).



Daniels School House

A total of 115 properties were evaluated during the reconnaissance survey. These include:

- The Anderson Barn-Carlson Farm Barn (5WL.4810) that not only retains integrity to support the listing as an element of the Multiple Property Listing, but would appear to represent an individually eligible farm complex.
- The Daniels School, which retains integrity to remain eligible on the NRHP.
- The Morehead Apartments/Terrace Hotel (5WL.786) which was previously unevaluated but appears to be eligible for the NRHP.



## Project Context and Environmental Resources

- The Great Western Sugar Refinery (5WL.792), which is currently under demolition and redevelopment and will need to be re-evaluated after this is completed.
- The Little Thompson Ranch/Binder Family Farm (5WL.4833), which is recognized as a Centennial Farm and appears to be an NRHP eligible farm complex.
- The Elwell Store (5WL.782), which was previously evaluated as not eligible for the NRHP but appears to be eligible for the NRHP as a farm complex.
- The Condensary/Great Western Railroad (5WL.817), which was previously evaluated as not eligible for the NRHP, a recommendation that is concurred with herein.
- Twenty-one residential properties that were not previously recorded and appear to be eligible for the NRHP.
- Eleven commercial properties that were not previously recorded and appear to be eligible for the NRHP.
- Seven farm complexes that were not previously recorded and appear to be eligible for the NRHP.
- Two grain elevators that were not previously recorded and appear to be eligible for the NRHP.
- One barn that was not previously recorded and appears to be eligible for the NRHP.
- One shed/utility building that was not previously recorded and appears to be eligible for the NRHP.
- Sixty-one properties that were not previously recorded and appear to be not eligible for the NRHP.

The results of the cultural resources reconnaissance survey are shown on the detailed 11x17 graphical illustrations contained in the EOS Appendix and discussed in the tables included in the Appendix behind the Historic Property Evaluation tab.

*Environmental Considerations:* The project area is rich in history, and as a consequence there are many structures and features that are valued for the history they represent. If the reconstruction or expansion of SH 60 were done under NEPA, a full cultural resources evaluation would be required and the involvement of the State Historic Preservation Office (SHPO) and other interested consulting parties would be necessary. A Section 4(f) Evaluation would also be necessary to analyze impacts to historic properties. Avoidance and/or minimization of these properties would be required.

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The project area contains high numbers of structures, farm complexes and linear resources such as railroads and ditches that have historic value.

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### 5.1.6 Air Quality

Growth and development along SH 60 will result in increased traffic levels in the area. An air quality assessment has not been conducted for the corridor, however, it is not likely that increased traffic levels will cause pollutant levels to exceed National Ambient Air Quality Standards (NAAQS). It is anticipated that particulate matter (PM<sub>10</sub>) emissions will also result from construction activities along SH 60, however, they will be of a temporary nature and are not expected to be significant.

Under the Clean Air Act conformity regulations, transportation plans, programs, and projects that would cause or contribute to an air quality violation cannot be approved or funded by metropolitan planning organizations or the U.S. Department of Transportation. In areas with current or past air quality violations, these requirements ensure that federal transportation actions advance strategies to improve air quality, rather than contribute to further degradation of air quality. The conformity regulations apply to both non-attainment and attainment/maintenance areas for transportation-related pollutants: ozone, carbon monoxide, oxides of nitrogen, and PM<sub>10</sub>. The nearest urban areas with active air quality monitoring are Fort Collins and Greeley. Neither city currently violates any of the NAAQS.

Emissions from mobile sources, including highway motor vehicles, trains, aircraft, and non-road vehicles, such as snowmobiles and all-terrain vehicles, contribute to visibility degradation throughout the country. Although the relative contribution of mobile source emissions is not as great as contributions from other sources, direct emissions and re-entrained road dust from motor vehicles contribute to urban plumes that are transported for long distances. It is anticipated that any proposed project along SH 60 would generate a small incremental impact to the large-scale nature of visibility transport.

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For the year 2030, the model shows a reduction in noise levels for several locations along the corridor. This is due to the fact that noise typically increases with vehicle speed, and the reduction in vehicle speed outweighed the increase in traffic volume.

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### 5.1.7 Noise

A noise study was conducted to obtain information on how the proposed highway improvements would affect the noise receptors along the SH 60. This was accomplished by taking noise measurements of existing noise levels at selected locations, and developing a noise contour that represents a line where the noise level is at 66 decibels (dBA). This level is used by CDOT to determine if there are impacts to sensitive noise receptors such as residences and some commercial businesses such as hotels or hospitals that may have a need for quieter conditions.

A TNM model was then run to predict the noise levels for the Recommended Alternative and year 2030 traffic volumes. This future



noise contour line is shown on the 11 x 17 graphical illustrations in the EOS Appendix. Noise tends to increase with increasing traffic volumes and by the road getting physically closer to the noise receptors. However, when this project is constructed, it is very likely that traffic speeds will be reduced, which will correspond to a lower noise level. The net difference between existing noise conditions and 2030 noise forecasts is very small.

The 66 dBA contours can be used as a planning aid by Johnstown and Milliken to restrict noise sensitive development in the area between the roadway and the contours. Proper planning can help to avoid noise impacts in the future and the potential need for noise mitigation.

*Environmental Considerations:* Should the project be subject to a NEPA evaluation, a full noise analysis would need to be conducted and mitigation may be required.

### 5.1.8 Hazardous Materials

A Hazardous Material Site Review was conducted by Goodbee & Associates in July 2005 for the study area. A review of regulatory agency files of sites obtained from an environmental database search of the study area was conducted to assist in evaluating potential and recognized environmental conditions on and adjacent to SH 60. It is important to note that conditions could have changed since the time of the hazardous materials site review was conducted. Therefore, this assessment should be updated prior to construction of any of the proposed roadway improvements.

Sites with recognized environmental conditions are sites where known, existing, or past releases of hazardous substances, including petroleum products, have occurred to soil or groundwater. Sites with potential environmental conditions are sites where an environmental release may have occurred, but insufficient investigation or inspection was available to confirm a release. These sites were ranked according to distance, groundwater flow and direction, and environmental significance. A ranking of high, moderate, low or negligible was assigned to each site based on the potential for impact within the study area.

A total of 43 hazardous material sites were identified as having a potential for impact on the proposed highway improvement corridor. High-ranked and moderate-ranked sites are presented on Figure 5-5. The following information regarding the ranking and sites is presented below:

- **Four high-ranked sites:** Sites with either an existing release, previous release or high potential for release of contaminants to soil, groundwater, surface water, and/or the potential for large-scale

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A review of hazardous materials or waste is most useful prior to construction of a project. Any contaminated soil or groundwater would need to be remediated prior to construction.

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migration off site and located on or within 500 feet of the highway. The first two leaking underground storage tank (LUST) sites (H&R Auto Truck Repair and Donald T Purvis) are located in Johnstown adjacent to each other and are undergoing active remediation including soil removal and groundwater treatment. Benzene contamination in groundwater exceeded State standards at the time of the survey for this EOS. The groundwater plume appears to extend under SH 60.

The third high-ranked site is the Classical Gas LUST located in Milliken adjacent to SH 60. The site owners had not responded as of July 2005 to repeated requests from the Colorado Division of Oil and Public Safety to provide benzene contamination clean up plans for this site. The final site is the Convenience Plus #17 LUST site located in Milliken adjacent to SH 60. Contaminated groundwater associated with this site appears restricted to within the site boundaries.

- Three **moderate-ranked sites**: Sites with a potential for release or past release of contaminants to soil, groundwater, or surface water located more than 500 feet from the highway. Migration of contaminants off site was considered to be unlikely. The first site is a CDOT Johnstown underground storage tank (UST) located approximately 0.5 mile from SH 60 with an associated groundwater plume that appears stable. The second site is the Johnstown Fire Department UST and is located approximately one block south of SH 60. The final site is the LooMix UST located approximately 500 feet north of SH 60. Both the Johnstown Fire Department UST and the LooMix UST are tank registrations only with no violations on record.
- Twenty-two **low-ranked sites**: Sites with a minimal potential for a release to soil, groundwater or surface water located more than 1,000 feet from the highway. In the case of documented releases, a low potential was assigned because of the distance of the site from the highway, direction of groundwater flow, or completed remedial activities at the site. These sites demonstrated a minimal threat for impacts to the highway but are still worthy of mention due to the nature of the activities or business at that location.
- Fourteen **negligible-ranked sites**: Sites with minimal potential for release of contaminants to soil, groundwater or surface water and generally located more than 1,500 feet from the highway. Sites where remediation measures were verified to be completed, and existing documentation of the clean up were available for review were also designated negligible. Sites considered to have a



negligible ranking were not discussed in the Hazardous Material Site Review report.

### 5.2 NATURAL ENVIRONMENT

#### 5.2.1 Soils and Topography

The study area topography is characterized by flat to gently rolling slopes in most areas. The elevations generally increase to the north and south of the communities with the low-lying flat areas around Milliken and Johnstown. Bluffs are located along the north side of the Big Thompson River (north of Milliken) and northwest of the South Platte River.

The soils in the Johnstown area are comprised of alluvial deposits. According to the Soil Survey of Weld County, Colorado, Southern Part, the Nunn soils found south and southwest of the existing town generally exhibit severe shrink-swell characteristics and low strength.

The surficial soils around Milliken and approximately one mile to the south are comprised of alluvial (river) deposits. The alluvial soils consist of silty and clayey sands overlying sandy gravels and gravelly sands. These soils will compress significantly and are susceptible to erosion. Moving further south, eolian soils (wind deposited) are the major surficial soils and consist of clayey sands and sandy clays. These soils are moderately compressible, will collapse when wetted, and are moderately susceptible to accelerated erosion. They are increasingly susceptible to erosion when the vegetative cover is disturbed for development.

*Environmental Considerations:* Effects related to potential SH 60 roadway improvements include the possibility of sedimentation and erosion to nearby waterways, and fugitive dust emissions to air quality.

#### 5.2.2 Farmlands and Vegetation

The towns are situated in a valley formed by the Big Thompson and Little Thompson Rivers and are surrounded by irrigated farmland. The majority of the undeveloped area is in agricultural production. According to the Natural Resources Conservation Service, the primary farmland classifications within the study area include Farmland of Statewide Importance, Farmland of Local Importance, and Prime Farmland if irrigated (Figure 5-6). The most common crops include sugar beets, beans, onions, alfalfa, wheat and sunflowers. Undeveloped lands that are not cultivated for agriculture include the bluffs along the Big Thompson and South Platte Rivers, and riparian corridors.

The bluff areas are dominated by grass species. Common grass species native to the Colorado plains include foxtail barley, big bluestem, little



A farm along SH 60



bluestem, sand bluestem, prairie dropseed, blue grama, green needlegrass, switchgrass, red three-awn, and western wheatgrass.

Farmland in the project area is rapidly being depleted as housing developments begin to replace farms. While some of the area may maintain its rural feel and look, it is likely that many of the existing farms along SH 60 will eventually be sold to residential and commercial development.

*Environmental Considerations:* Proposed roadway improvements may affect small amounts of agricultural land that is located immediately adjacent to the roadway right-of-way. However, compared to the number of acres of agricultural land in production in Weld County, the project-related effects are anticipated to be minor. Under a full NEPA evaluation, impacts to farmlands as a result of transportation projects, would be evaluated in consultation with the Natural Resources Conservation Service.

### 5.2.3 Riparian Areas

Riparian ecosystems occur along the banks of rivers, ditches, and other bodies of flowing water. They include woodlands and marshes with various types of grasses, herbs, shrubs and trees that depend on a more or less continuous and accessible water supply. These narrow ecosystems represent a transition zone between aquatic and terrestrial ecosystems but usually have distinct vegetation and soils.

There are few riparian areas in the project area along SH 60. The South Platte River on the eastern edge of the project area is a highly valuable riparian ecosystem in the region. Trees found in the Thompson Rivers and South Platte River riparian corridors include plains cottonwood, peach-leaved willow, box elder, American elm, green ash, and Russian olive. Several shrubs that flourish are wild plum, hawthorn, currant, wild rose, snowberry and shrubby willows. Common grasses include saltgrass and sand dropseed (Figure 5-7).

*Environmental Considerations:* It is anticipated that proposed roadway improvements may affect the riparian deciduous ecosystem where SH 60 crosses the Little Thompson River west of Milliken. Because of the small amount of riparian habitat potentially affected by the proposed project, it is not anticipated that this loss would negatively affect the riparian ecosystem associated with the Thompson Rivers and the South Platte River as a whole.

### 5.2.4 Wildlife and Threatened and Endangered Species

In general, wildlife present in the study area is associated with the river corridors that provide food, cover, and shelter. Approximately 75 percent of the wildlife species known or likely to occur in Colorado are



Mule Deer



Prairie Dog

dependent upon riparian areas during all or a portion of their life cycle. This is especially significant when statistically only 1 percent of the land mass in Colorado is riparian (Colorado Division of Wildlife, Natural Diversity Information Source). Many species that historically occupied the natural habitats in the area are no longer present due to development and agricultural uses. Wildlife species that are more common, such as the black-tailed prairie dog and mule and whitetail deer, require smaller habitat ranges, or are tolerant of human disturbance remain in the study area. In addition, habitat fragmentation created by SH 60 and/or the presence of the urban areas (towns) has already occurred.

Mule and whitetail deer are abundant statewide. Whitetails have become increasingly common in streamside woodland and nearby crop lands along the rivers of the eastern plains. Mule deer occupy any “edge” habitat, including suburban residential areas. (Figure 5-8).

Black-tailed prairie dogs typically live in the grassy plains or prairies common in the Front Range and have been identified in the larger area surrounding the study area. Prairie dog towns are an integral part of prairie ecosystems and many other wildlife species interact or are dependent on the prairie dog town. Black-footed ferrets, prairie rattlesnakes, eagles, badgers, weasels and burrowing owls may all interact in a prairie dog town. At least two prairie dog towns (or “colonies”) have been identified by the Colorado Division of Wildlife within the study area, approximately one mile north of SH 60 (Figure 5-9).

The U.S. Fish and Wildlife Service maintains a database of Federally-listed and proposed, endangered (E), and threatened (T) species and habitat in Colorado by county. Because of the protected status of listed species, significant adverse effects to these species or its habitat would require consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act of 1973 as amended.

According to the 2005 listing, the species described below have been recorded within Weld County. Surveys to confirm or deny the presence of these species were not conducted for the purposes of this EOS, but may need to be if the project moves to a NEPA evaluation. A short discussion of these species and their habitat range is provided.

- **Bald Eagle (T):** Bald eagles are seldom seen far from water and, in Colorado, are often found near reservoirs, especially where there are abundant fish. According to the Colorado Division of Wildlife, two roost sites have been identified along the South Platte River, approximately one mile from SH 60 (Figure 5-10).





### Bald Eagle

- **Black-footed Ferret (E):** Black-footed ferrets have never been abundant in Colorado but they have ranged statewide. Their habitat includes the eastern plains, the mountain parks and the western valleys – grasslands or shrub lands that supported some species of prairie dog, the ferret’s primary prey. Black-footed ferrets are reported to be killed by owls and coyotes. However, it is reasonable to assume that plowing the prairie for agriculture and programs to eradicate prairie dogs drove the black-footed ferret to the verge of extinction.
- **Colorado Butterfly Plant (T):** This species is found in moist areas of floodplains. The current range of the plant is restricted to Platte and Laramie Counties in southeastern Wyoming and Weld County, Colorado.
- **Interior Least Tern (E):** The preferred nesting habitat is on sandy or pebbly beaches, well above the water line, around lakes and reservoirs or on sandy soil sandbars in river channels. In Colorado, this species is considered a casual nonbreeding summer visitor and a casual to very rare spring and fall migrant on northeastern plains.
- **Mexican Spotted Owl (T):** This species generally inhabits canyon and montane forest habitats throughout its’ range.
- **Pallid Sturgeon (E):** This species is a large river fish that has primarily been associated with the Missouri River. There is limited documentation of its use of the Platte River system.
- **Piping Plover (T):** In Colorado, piping plovers occur as migrants, arriving around the first of April. Most have passed through by the end of May. They can be found in the eastern part of the state, generally along the Arkansas and South Platte River drainages. Nesting habitat in Colorado is on sandy lakeshore beaches, sandbars within riverbeds or even sandy wetland pastures. An important aspect of this habitat is that of sparse vegetation. The plover depends on its coloration for camouflage and protection.
- **Preble’s Meadow Jumping Mouse (T):** According to the Colorado Division of Wildlife, there is suitable preble’s habitat located within the larger study area, in addition to habitat located at the intersection of State Highways 60 and 257. Figure 5-11 shows the habitat areas identified from previous studies and the locations of attempted trappings.
- **Ute Ladies’-tresses (T):** This species is a perennial terrestrial orchid that occurs at elevations below 6,500 feet, typically in wet fairly open riparian areas, alluvial meadows, floodplains of perennial streams, and edges of springs and lakes. Typical soils



Preble's Meadow Jumping Mouse



Ute Ladies'-tresses



inhabited by the orchid are silty loam alluvial soils associated with wetlands or floodplains of perennial streams in intermountain valleys. Noxious invasive weed species pose one of the greatest threats to the orchid survival by dominating an area and out competing nearby species.

- **Whooping Crane (E):** Habitat for this species is comprised of various wetland types in areas largely undisturbed by human activity. During migration the crane will use various habitats other than wetland areas, including areas of cropland.

*Environmental Considerations:* Because of existing land uses, human activity and development in the area, loss of additional disturbed habitats along SH 60 would not substantially affect wildlife populations as a whole. Land disturbance potentially affecting habitats would be within the defined study area. Habitats in areas immediately adjacent to the roads within the study area generally are of low quality and few wildlife species would be negatively affected by their loss.

### 5.2.5 Water Resources

The study area contains three rivers: The Big Thompson River, the Little Thompson River and the South Platte River. The confluence of the Big and Little Thompson Rivers is near Milliken. The confluence of the Big Thompson River and the South Platte River is just east of Milliken. These rivers are assets to the generally arid community. Each rivers hosts plains cottonwood galleries, willow thickets, forbs and grasses that provide food, cover and breeding grounds for a variety of wildlife. The rivers provide routes for animal migration and regional recreational opportunities for residents.

The Rivers are also the source of water for the numerous irrigation ditches that occur in the area. These ditches include:

- Beeline Ditch
- Thompson and Platte Ditch
- Farmers Extension Ditch
- Farmers Irrigation Canal
- Hill and Brush Ditch
- Handy Ditch
- Home Supply Ditch
- Johnstown Reservoir
- Loveland and Greeley Canal

The area also contains several small ponds and reservoirs, three of which are or will be available for public use, including the fishing ponds in Settler's Village and Colony Pointe in Milliken and Johnstown Reservoir.



Little Thompson River crossing  
at SH 60

Milliken's planning area north of Weld County Road (WCR) 54 drains to the north. The area between WCR 54 and the Big Thompson River drains south-southeasterly towards the Big Thompson River. The area northwest of the South Platte River to Milliken drains north-northeasterly towards the Little Thompson and Big Thompson Rivers. The southernmost portion of the planning area drains south into the South Platte River.

North of the Big Thompson River, Johnstown's planning area drains to the south-southwest. The portion of the planning area between the Big Thompson River and the existing town drains north-northeast to the Big Thompson River. The area between the existing town and the Little Thompson River drains south-southeast into the Little Thompson River. The planning area south of the Little Thompson River drains northeast to the Little Thompson River.

*Environmental Considerations:* The primary water quality effect related to construction or expansion of a highway is a result of disturbance of the active stream channels. Such disturbance could cause increases in suspended solids in the streams, affecting water quality downstream. Continued development within the watersheds would likely lead to additional water quality degradation both during construction of the new developments and in the long term. Erosion adjacent to proposed roadway improvements would be minimized by the use of best management practices.

### 5.2.6 Wetlands and Floodplains

Wetlands are areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted for life in saturated soils. These areas are characterized by growth of wetland vegetation such as bulrush, cattails, rushes, sedges, and willows. Wetlands generally include swamps, marshes, bogs, and similar areas.

Wetlands serve important functions in watershed management including; regulating water levels within watersheds; improving water quality; reducing flood and storm damages; providing important fish and wildlife habitat; and supporting hunting, fishing and other recreational activities. Wetlands in the study area generally consist of emergent wetlands. There is a small area of emergent wetlands located along the Little Thompson River at SH 60. The floodplains in the study area are associated with the larger water bodies flowing through the County (Figure 5-12).

Overall, even with low functions, wetlands within the study area provide diversity to the area, and are important for wildlife habitat and visual variety. It is anticipated that urban and suburban development



Wetlands of the South Platte, outside  
of the SH 60 study area



## Project Context and Environmental Resources

are the most significant contributors to degradation of the quality and diversity of the wetlands in the area.

*Environmental Considerations:* It is anticipated that proposed SH 60 roadway improvements may affect small areas of wetland within the study area where SH 60 crosses the Little Thompson River. However, these impacts are anticipated to be minor to the overall health of the system. For any impacts to wetlands associated with transportation improvements to SH 60, coordination with the US Army Corps of Engineers will be required to obtain the necessary permits.



### 6.0 ALTERNATIVES DEVELOPMENT

#### 6.1 ALTERNATIVES DEVELOPMENT PROCESS

A significant effort of the State Highway 60 EOS was the development of transportation alternatives to meet the project goals of addressing long-range corridor mobility and safety needs, and protecting community quality of life. This section describes the process that was used to identify the full range of possible solutions for the SH 60 corridor.

Working from the transportation planning context (described in Section 4) and environmental resources evaluations (described in Section 5), the process for developing corridor alternatives began with additional inventories of SH 60 itself, including detailed studies of the existing horizontal and vertical alignment. Roadway features that cross or are immediately adjacent to the highway, such as drainage facilities and railroad tracks, were also inventoried and evaluated.

As the following study process graphic (Figure 6-1) shows, another early task that was essential to the process of developing alternatives was to identify appropriate corridor segments and sub-segments. From its interchange with I-25 on the west to its connection with Two Rivers Parkway on the east, SH 60 has a wide variety of mobility, safety and community character needs. As the following narrative will describe, the process for developing alternatives recognized the diversity of the corridor. In this “context sensitive” approach, specific alternatives were developed for specific segments of the corridor, and later “mixed and matched” into appropriate packages of improvements that served the diverse needs of the corridor.

Criteria were developed to screen the developed alternatives and to identify a recommended alternative for implementation. The screening criteria were developed directly from the study’s project goals and purpose and need. The criteria used both qualitative and quantitative measures, and were designed to provide a means for the meaningful comparison of diverse alternatives and the ready identification of undesirable alternatives. Planning and engineering analyses, and the significant public and agency participation process (described in Section 9), provided the needed input to appropriately screen the alternatives and identify the recommended implementation alternative for the SH 60 corridor.

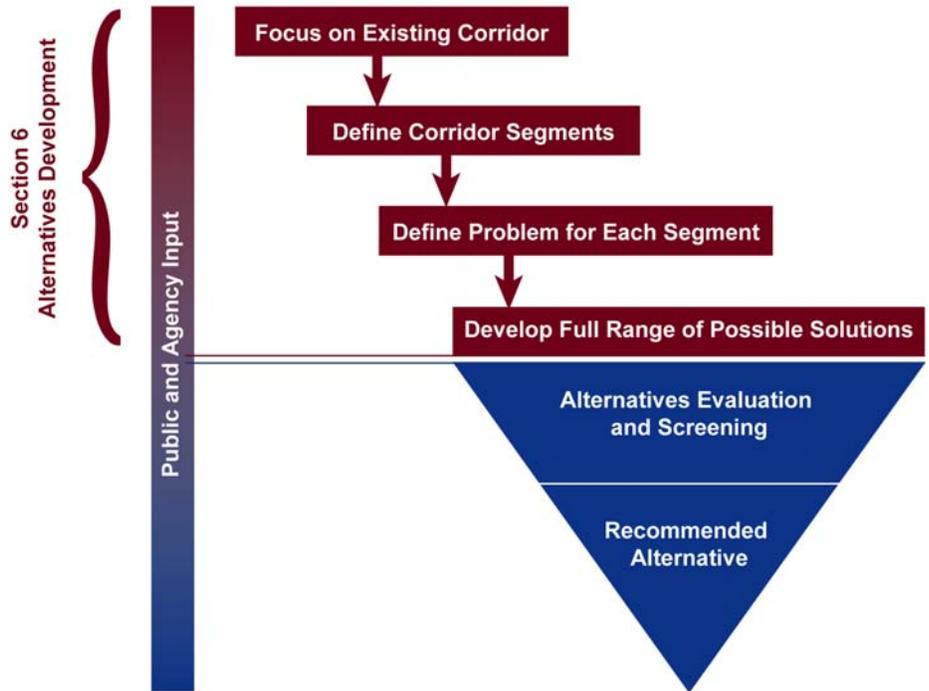


Figure 6-1  
Alternatives Development Process

## 6.2 EXISTING CORRIDOR CONDITIONS

### 6.2.1 Horizontal and Vertical Alignment



SH 60 school zone advisory signal, looking west

The existing horizontal and vertical alignment of SH 60 within the study corridor was evaluated to identify any roadway geometric conditions that could be improved as a part of the development of alternatives. As the narrative describes, the SH 60 corridor has generally gentle alignments as the roadway passes through the rural, urbanizing, and established residential and business districts of the corridor.

Between I-25 (Mile Marker 6.01) and Two Rivers Parkway (Mile Marker 14.9), the nine-mile SH 60 study corridor follows an east-west alignment. Consistent with its original design as a section line road, on the west end of the corridor, SH 60 is on a generally tangent (straight) alignment. Changes to the horizontal alignment are accomplished with small deflection angles, or large radii horizontal curves (such as at WCR 13 and WCR 15).

Approaching the Town of Johnstown, the alignment shifts slightly to the south through a series of short horizontal curves. East of Johnstown, the alignment departs from the east-west section line



Downtown Milliken



Downtown Johnstown (WCR 17),  
looking north

orientation and moves in a southeasterly direction as it intersects SH 257. SH 60's alignment changes through a series of low speed horizontal curves as it continues east into the Town of Milliken's business district. Leaving Milliken, SH 60 continues in an easterly direction until its intersection with Two Rivers Parkway where SH 60 then turns due south to connect with US 85.

Vertical grades on SH 60 are gentle, typically three percent or less. The exception to this is the stretch of SH 60 just east of WCR 15 where the high point of the corridor lies along a ridge between Madden Avenue and Harding Avenue. While the westerly approach grade to the ridge is three percent, the easterly approach grade between Harding Avenue and Greeley Avenue is approximately five percent. Operating speeds in this segment are restricted during school hours.

Although SH 60 is oriented as an east-west highway through both the Towns of Johnstown and Milliken, the role of the highway through each community differs. For Johnstown, SH 60 lies perpendicular to the major north-south arterial system of WCR 13, WCR 15, and Parish Avenue (WCR 17) which serves the older business district just to the north of SH 60.

In contrast, SH 60 essentially becomes the main street through Milliken's business district. In the Milliken area, connections to the major north-south arterials are outside of the older business district. SH 257 is on the west end of Milliken's town limits. On the east end of the corridor is the north-south leg of SH 60 (and Two Rivers Parkway) connecting to US 85 and to US 34 in west Greeley respectively.

### 6.2.2 Drainage and Structures

The location of major drainageway and drainage structures can significantly affect the overall feasibility and cost of roadway alternatives. Facilities that cross, or are immediately adjacent to, SH 60 were included in this inventory.

The SH 60 study corridor lies within the South Platte River drainage basin. SH 60 crosses the South Platte River just outside of the study area along the north-south leg of SH 60 between Two Rivers Parkway and US 85. The Little Thompson River, which is tributary to the South Platte via the Big Thompson River, crosses SH 60 just west of SH 257.

SH 60 also crosses three active irrigation ditches that serve the farming and agricultural needs of the study area.

The major drainage and irrigation structure crossings, along with their respective CDOT structure identification number, are as follows:



### **Major Drainage Structure:**

- West of SH 257 (Mile Marker 11.66), SH 60 crosses the Little Thompson River. A concrete slab and girder bridge accommodates this crossing and this structure was built in 1958. The structure identification number is C-17-C.

### **Major Irrigation Structures:**

- On the west end of the corridor between I-25 and WCR13, the Home Supply Ditch meanders and traverses under SH 60 at three locations, each through a 9 feet (span) x 3 feet (rise) concrete box culvert.
- At Mile Marker 9.55, approximately midway between Greeley Avenue and Parish Avenue (WCR 17), SH 60 crosses the Hillsboro Ditch through an 18 feet (span) x 4 feet (rise) concrete box culvert built in 1957. The structure identification number is C-17-BA.
- At Mile Marker 11.84, just west of SH 257, the Thompson and Platte Ditch flows under SH 60 through a twin concrete box culvert. This box was originally built in 1958 and was recently extended to accommodate the SH 60/SH 257 intersection improvement project. The structure identification number is C-17-M.



Hillsboro Ditch

## **6.2.3 Railroad and Utilities**

### **Railroads**

The Great Western Railroad (GWRR) and the Union Pacific Railroad (UPRR) are the two active railroads in the SH 60 corridor. Tracks operated by these railroad companies cross SH 60 at five locations. The GWRR is a local short haul railroad and within the study area operates primarily in the Johnstown area. The UPRR crosses SH 60 just east of Milliken and on the north-south leg of SH 60 near Two Rivers Parkway.

Railroad crossings in the SH 60 corridor have been upgraded, with recent improvements to the GWRR crossing on SH 257 that were completed as part of the intersection improvement project. As part of the upcoming intersection improvement project at SH 60 and Two Rivers Parkway (see Figure 6-3), the UPRR crossing will be relocated and improved with new signal gate crossings and a traffic signal interconnect.

Safety improvements such as modern crossing gates, pre-emption devices, etc. characterize the type of improvement that would be anticipated along the corridor. Traffic volume and safety analysis



indicate that grade-separation of the railroad crossings on SH 60 is not warranted.

### **Utilities**

Major utilities along the corridor include:

- A raw natural gas line begins at the collection tank of the Noble Energy Oil and Gas facilities (formerly Patina Oil and Gas) located on the south side of SH 60 just west of WCR 13,
- A 10-inch high-pressure liquid petroleum line lies along the north-south leg of SH 60 and traverses to the northwest in the vicinity of Two Rivers Parkway. This line is buried under the South Platte River on the west side of the existing bridge.
- A fiber optic line parallels SH 60 on the south side of the highway.

### **6.2.4 Planned Transportation Improvements**

In addition to the recently reconstructed intersection of SH 60/SH 257, there are two more planned intersection improvement projects along the corridor.

- **SH 60/Parish Avenue (WCR 17)** – The westerly alignment of SH 60 is being shifted to the south to better align with the east leg of SH 60 at this intersection (Figure 6-2). Project features involve a painted median, consolidation of driveways on the west leg, upgraded traffic signal equipment, and a new storm sewer line up to the first intersection to the east.

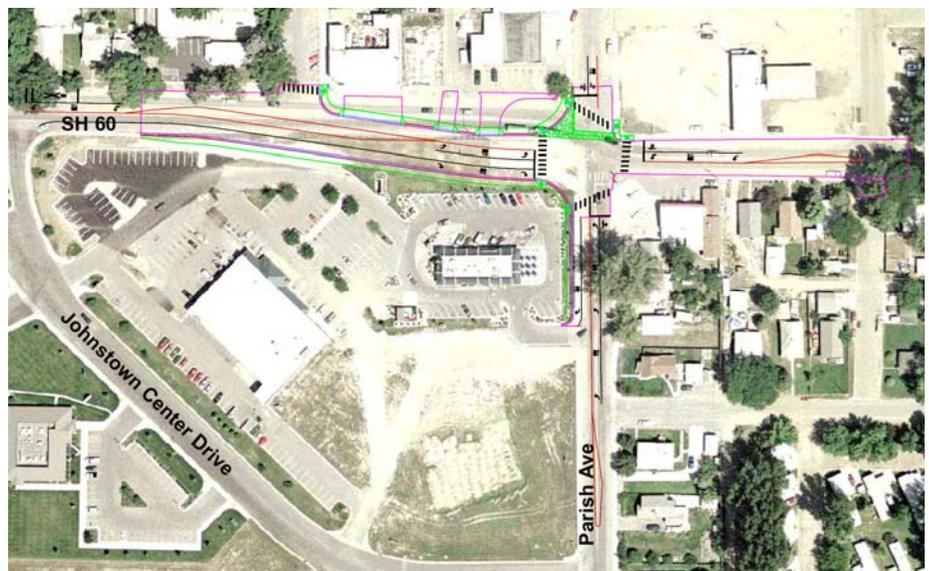


Figure 6-2  
SH 60 and Parish Avenue Intersection Improvements



The 2030 North Front Range Travel Demand Model indicates a significant increase in traffic for Two Rivers Parkway and the north-south leg of SH 60.

- **SH 60/Two Rivers Parkway** – This intersection will be reconstructed into a new tee configuration with a new traffic signal (Figure 6-3). The UPRR railroad crossing will be relocated to the east and upgraded to include improved signal gates with pre-emptive signal timing. Ultimately, Weld county is planning for a new alignment of Two Rivers Parkway to connect to the north leg of this tee intersection. This future conventional four-legged intersection provides for a direct through movement from Two Rivers Parkway to the north-south leg of SH 60. The existing east leg (old Two Rivers Parkway) will be retained for local public access. Construction for the interim tee intersection is scheduled for completion in the Summer, 2007.

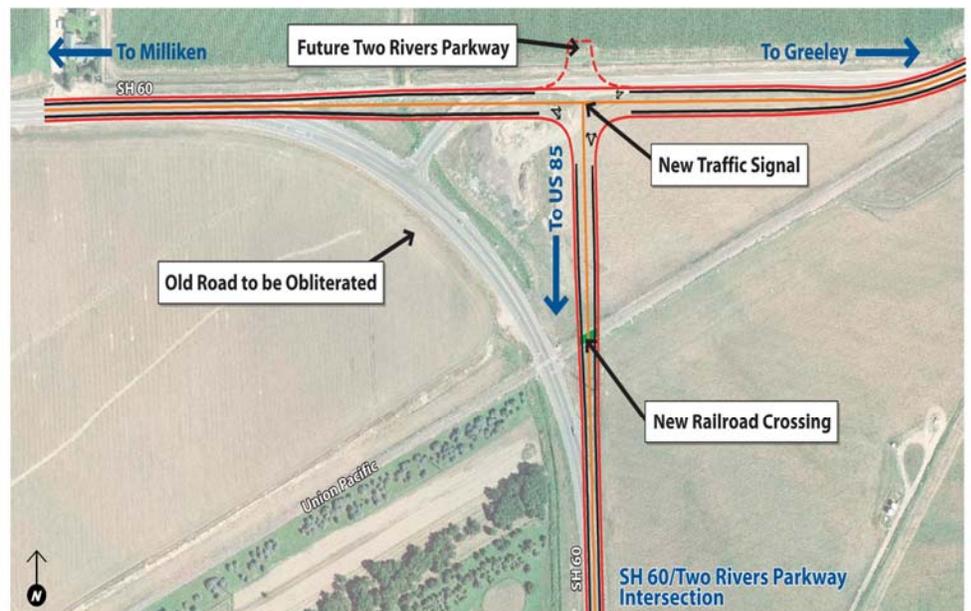


Figure 6-3  
SH 60 and Two Rivers Parkway Intersection Improvements

- **Milliken Sidewalk Enhancement Project** – Milliken plans to add sidewalk on the south side of SH 60 from the SH 60/SH 257 intersection to Josephine Avenue. This improvement will provide continuous sidewalk from SH 257 into the downtown area of Milliken.



### 6.3 CORRIDOR SEGMENTS

Mobility, safety and community character needs vary greatly along the SH 60 corridor as the adjacent land uses change from rural to established residential and business districts. Although the corridor continues to urbanize, a mix of urban and rural uses is expected to be in place through the 2030 planning horizon. Also, major changes to the core areas of both Johnstown and Milliken are highly unlikely for the 2030 planning horizon, and the narrow highway corridor through the established districts demands special design alternatives.

To allow the study team to develop corridor alternatives that closely matched the diverse mobility, safety, and community character needs of the corridor, SH 60 was divided into a series of logical segments (and in some areas, even more narrowly defined sub-segments) that grouped highway sections with similar needs and characteristics. The resulting segment definition for the development and evaluation of alternatives was as follows:

Segment No.	SH 60 Segment Limits
1A	I-25 to WCR 15
1B	WCR 15 to the GWRR crossing just east of Johnstown
2	GWRR crossing to SH 257
3A	SH 257 to Alice Street
3B	Alice Street to Two Rivers Parkway

The corridor segments are shown graphically on Figure 6-4 as follows:

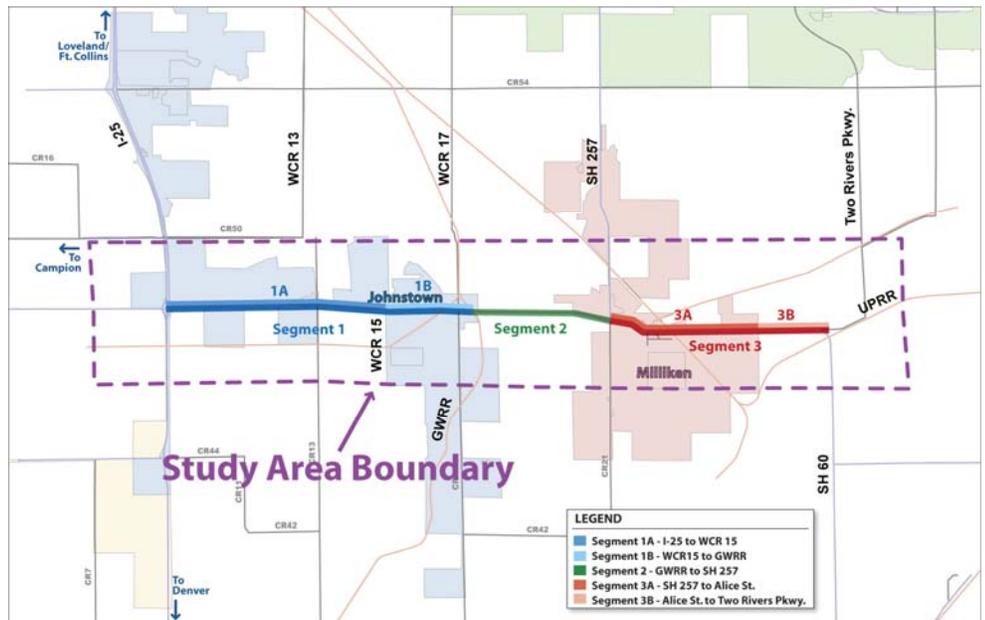


Figure 6-4  
SH 60 Corridor Segment Map



### **Segments 1A and 1B (I-25 to GWRR Crossing)**

Segment 1 begins just east of I-25 and ends near the eastern city limits of Johnstown (at the Great Western Railroad crossing). Segment 1 carries the highest existing (and forecast) traffic volume of any portion of the SH 60 study corridor. As described in Section 4 of this report, congested peak hour traffic conditions are forecast in the 2030 “No-Build” condition.

Segment 1 is broken out into two sub-segments based on its rural and urban/suburban characteristics:

**Segment 1A** begins just east of I-25 and extends to WCR 15. Mostly rural in nature, this segment of SH 60 serves as the main route to and from I-25 for Johnstown and Milliken. Consistent with the Johnstown Master Plan, growth is expected to continue to the west of Johnstown, changing the rural character of SH 60 to that of a more suburban environment. With the continuing urbanization of the SH 60 corridor, the peak hour operation of this sub-segment is estimated to be at LOS F by 2030 for the “No-Build” condition.

**Segment 1B** begins at WCR 15 and ends near the eastern city limits of Johnstown (at the Great Western Railroad crossing). This section is almost fully developed, and includes suburban and urban residential uses, and the Johnstown business district. The peak hour operation of this sub-segment is forecast to be at LOS E/F by 2030 for the “No-Build” condition.

### **Segment 2 (GWRR Crossing to SH 257)**



The former Colorado Sweet Gold, LLC industrial building lies on the south side of SH 60 in Segment 2. It is currently undergoing demolition.

Segment 2 is described as the portion of SH 60 beginning near the eastern city limits of Johnstown (at the Great Western Railroad crossing) and ending at SH 257, which is effectively the western boundary of the Town of Milliken. A transition and buffer area between the two communities, Segment 2 is mostly rural in nature, and SH 60 serves as the primary route between Johnstown and Milliken. It is expected that some growth will occur along SH 60 on this segment. Peak hour traffic operations in this sub-segment are forecast to be at LOS C by 2030 for the “No-Build” condition.

### **Segment 3 (SH 257 to Two Rivers Parkway)**

Segment 3 is described as the portion of SH 60 from SH 257 to the junction of SH 60 at Two Rivers Parkway.

Segment 3 is broken out into two sub-segments (3A and 3B) based on rural and urban/suburban characteristics:

**Segment 3A** begins at SH 257 and extends to Alice Avenue at Milliken’s eastern border. This segment is mostly urban in nature and



includes the downtown business district of Milliken. Peak hour traffic operations in this sub-segment are forecast to be at LOS D by 2030 for the “No-Build” condition.

*Segment 3B* begins at the junction of SH 60 and Alice Avenue and ends at Two Rivers Parkway. Adjacent land uses are mostly rural in nature. As per the Town of Milliken Master Plan, this segment should be an area of continued growth, changing from its rural character to more of a suburban environment. Peak hour traffic operations in this sub-segment are forecast to be LOS C by 2030 for the “No-Build” condition.

### 6.4 PROBLEM DEFINITION

While the Purpose and Need for the SH 60 EOS (Section 2.2) defined an overall framework for the study’s design and goals, the subsequent corridor inventories and traffic analyses were used to identify specific corridor needs and deficiencies that would be used to define segment-specific improvement alternatives. Key findings of the existing and 2030 “No-Build” analyses included:

- By 2030, peak hour traffic operations will degrade to LOS F on the west end of the corridor from I-25 to about WCR 17. From the Johnstown eastern city limits eastward, adequate peak hour Level of Service (LOS D or better) is forecast for the existing SH 60 corridor, suggesting that no major capacity-related improvements are required east of WCR 17.
- The eastern segments of the SH 60 corridor (east of SH 257) have above average accident frequency and severity when compared to similar roadways in Colorado.
- Existing traffic patterns exhibit a strong commuting pattern, especially on the west end of the corridor, with high westbound flows in the morning, reversing to high eastbound flows in the evening. The directional reversal in commuter flow occurs at WCR 17 in Johnstown. Although the traffic volumes are significantly lower, higher eastbound flows occur in the morning, reversing to westbound in the evening. Based on projected population and employment figures, this travel condition is expected to continue to 2030.
- A large proportion of the traffic within the SH 60 corridor is locally based trips, suggesting that SH 60 is not a significant regional route.
- Large trucks were found to represent only a small fraction of the total traffic – representing less than 2 percent of the total daily vehicles traveling on SH 60. Based on projected population and

Large trucks were found to only represent less than 2 percent of the total daily traffic volume.



employment figures, and that SH 60 is not a significant regional route, these percentages are not expected to increase.

- 2030 peak hour operations for north-south connections in the SH 60 corridor were also evaluated for streets connecting to SH 60, and reflect the overall operational findings. The current perception expressed at public meetings was one of unsafe access onto SH 60.

For each of the three segments, a problem statement was developed (Table 6-1) that summarizes the level of service, operational characteristics, and resulting quality of life projected for the corridor if no improvements are made by the year 2030 (i.e., the “No Build” scenario):

**Table 6-1**  
**Segment Problem Statements**

Segment 1 (I-25 to GWRR)	<ul style="list-style-type: none"> <li>• Without improvement, peak hour traffic operations will degrade to unacceptable levels (Level of Service F).</li> <li>• SH 60 side-street traffic will experience excessive delay.</li> <li>• Traffic congestion will have negative effect on community quality of life.</li> </ul>
Segment 2 (GWRR to SH 257)	<ul style="list-style-type: none"> <li>• Although overall traffic operations on SH 60 will remain acceptable (LOS C or better), peak hour side street delay will be excessive for left turns onto SH 60.</li> </ul>
Segment 3 (SH 257 to Two Rivers Parkway)	<ul style="list-style-type: none"> <li>• Although overall traffic operations on SH 60 will remain acceptable (LOS C or better in most segments; LOS D or better in downtown Milliken), peak hour side street delay will be excessive for left turns onto SH 60.</li> <li>• Existing accident experience poorer than comparable state highways.</li> </ul>

In summary, the safety and mobility needs for the SH 60 corridor can be described as follows:

- Increase SH 60 roadway capacity from I-25 to the Johnstown eastern city limits to accommodate the forecast 2030 travel demand.
- Improve roadway safety on SH 60 east of SH 257.

### 6.5 INITIAL SEGMENT ALTERNATIVES

Alternatives designed to resolve existing and forecast mobility and safety problems were developed for each corridor segment. A range of alternatives were developed for each segment, including the “No-Build” alternative, two- and four-lane alternatives, and innovative options such as the use of reversible lanes to minimize right-of-way requirements.



Alternatives that were developed for each corridor segment are described below and are shown graphically on Figures 6-5 through 6-12. The process for screening the alternatives is summarized in Section 7 of this report.

Consistent with the study direction received during the public and agency involvement process, all of the alternatives that were developed were focused on the SH 60 corridor. Off-corridor alternatives, such as new bypasses or the improvement of parallel roadway corridors, were not directly considered in this evaluation, however, these options are reviewed in Section 8 (Implementation Plan).

### ***Segment 1 (I-25 to GWRR Crossing)***

Alternatives identified for this segment consisted of roadway cross-sections that anticipated the capacity needed for 2030 travel demands. Segment 1 alternatives provide a minimum of two lanes in the peak direction for acceptable operation (LOS D or better).

To minimize right-of-way impacts in the constrained areas of this segment, three-lane cross-section options using reversible lanes (providing two through lanes in the peak direction) were included as alternatives.

### ***Segment 1A (I-25 to WCR 15)***

Alternatives:

1. No-Build. In this alternative, the existing roadway cross-section would be retained, with no additional through lanes or other capacity improvements.
2. Four-lane undivided cross-section (Figure 6-5). In an undivided roadway cross-section, opposing traffic lanes are separated by a paint stripe.
3. Four-lane divided\* cross-section (Figure 6-6). In a divided roadway cross-section, opposing traffic lanes are separated by a raised (curbed) or flush (paved) median. In Segment 1A, a raised median is assumed.
4. Four-lane divided cross-section with acceleration/deceleration lanes (Figure 6-6). The alternative described above is expanded in this option to provide additional auxiliary lanes for acceleration/deceleration at intersections and major driveways.

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For each of the segment alternatives, a corresponding illustration is provided on Figures 6-5 through 6-12.

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5. Three-lane cross-section section with a center reversible lane (no left turns) (Figure 6-7). Overhead signing and signals would be used to change the direction of the center lane of this cross-section to match the direction of the peak traffic demand (westbound in the morning; eastbound in the evening).
6. Three-lane cross-section with a reversible through and a reversible left turn lane (Figure 6-8). Similar to the alternative above, in this option the roadway cross-section is expanded to provide for a left turn lane in addition to the reversible though lane.

\* Identified in the Johnstown Transportation Plan for Major Arterials

### ***Segment 1B (WCR 15 to GWRR Crossing)***

Alternatives:

1. No-Build.
2. Four-lane undivided cross-section (Figure 6-5).
3. Three-lane cross-section section with a center reversible lane (no left turns) (Figure 6-7).
4. Three-lane cross-section with a reversible through and a reversible left turn lane (Figure 6-8).
5. One-way pair (Figure 6-9). The only alternative that provides for changes off of the SH 60 corridor, the one-way pair option retains the existing SH 60 pavement for traffic movement in one-direction only. The opposing direction of traffic operates on a nearby parallel roadway.
6. Three-lane cross-section with a two-way left turn lane (Figure 6-10). In this alternative, a continuous flush (paved) median is provided for left turns from either direction.

### ***Segment 2 (GWRR Crossing to SH 257)***

Two and four through lane alternatives were developed for Segment 2. Although the 2030 No-Build forecasts showed acceptable (LOS C) peak hour operation for the two-lane condition, four-lane alternatives were also considered for continuity of SH 60 travel.

Continued restriction of access to the north of SH 60 due to the Great Western Railroad was also considered in the development of alternatives in Segment 2.

Alternatives:

1. No-Build.
2. Four-lane undivided cross-section (Figure 6-5).



3. Four-lane divided cross-section with acceleration/deceleration lanes (Figure 6-6).
4. Three-lane cross-section with a two-way left turn lane (Figure 6-10).
5. Two-lane cross-section with a continuous eastbound acceleration/deceleration lane (Figure 6-12). This alternative provides continuous auxiliary lanes for acceleration/deceleration at intersections and major driveways. The lanes are provided for the eastbound direction only, anticipating that the Great Western Railroad on the north side of the highway will limit opportunities for new intersections and driveways on the north side of the corridor.

### ***Segment 3 (SH 257 to Two Rivers Parkway)***

As with Segment 2, two and four through lane alternatives were developed for Segment 3. Although the 2030 No-Build condition showed acceptable (LOS C/D) peak hour operation for the two-lane condition, four-lane alternatives were again considered for route continuity purposes. The main focus of alternatives in this segment is to improve the safety of traffic operations, rather than providing additional roadway capacity.

To minimize right-of-way impacts in the constrained areas of this segment (downtown Milliken) three-lane cross-section options were included as alternatives.

### ***Segment 3A (SH 257 to Alice Avenue)***

Alternatives:

1. No-Build.
2. Four-lane undivided cross-section (Figure 6-5).
3. Four-lane divided\* cross-section (Figure 6-6).
4. Three-lane cross-section with a two-way left turn lane (Figure 6-10).
5. Two-lane cross-section with continuous acceleration/deceleration lanes (Figure 6-11). This alternative provides continuous auxiliary lanes for acceleration/deceleration at intersections and major driveways.

\* Identified in the Milliken Transportation Plan for Major Arterials



### *Segment 3B (Alice Avenue to Two Rivers Parkway)*

Alternatives:

1. No-Build.
2. Four-lane undivided cross-section (Figure 6-5).
3. Four-lane divided\* cross-section (Figure 6-6).
4. Three-lane cross-section with a two-way left turn lane (Figure 6-10).
5. Two-lane cross-section with continuous acceleration/deceleration lanes (Figure 6-11).

\* Identified in the Milliken Transportation Plan for a Major Arterial

The next step in the Development of Alternatives process is to screen and rank the alternatives relative to a set of evaluation criteria. This process is outlined in Section 7.



# Alternatives Development

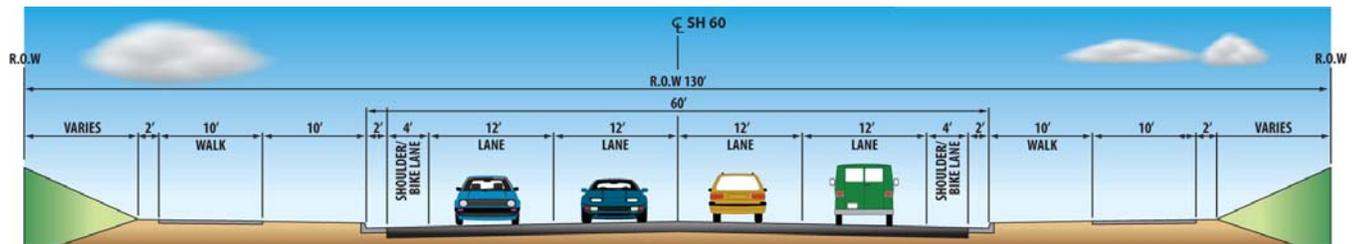


Figure 6-5  
Four-Lane Undivided

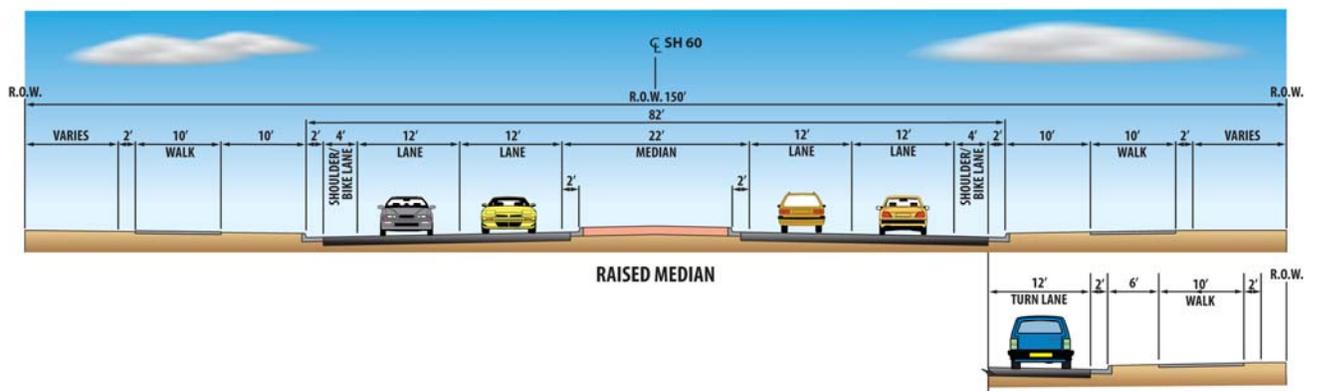


Figure 6-6  
Four-Lane Divided

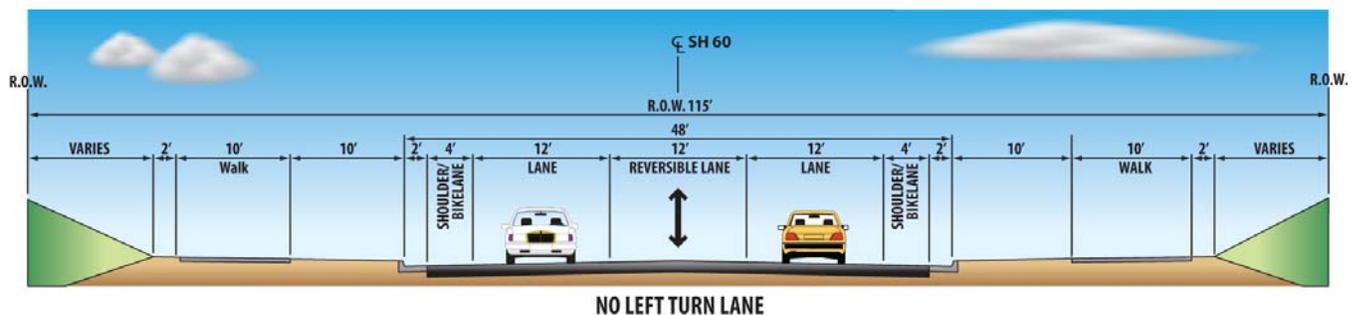


Figure 6-7  
Three Lane Section with Center Reversible Lane  
(No left turns)



# Alternatives Development

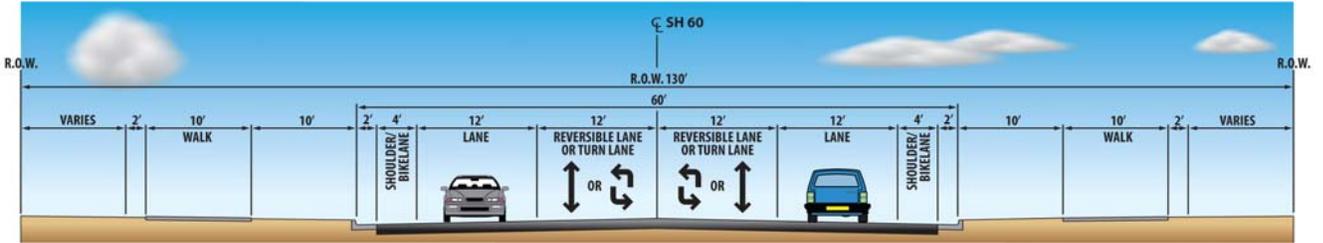


Figure 6-8  
Three Lane Section with Reversible Through  
and Reversible Left Turn Lane

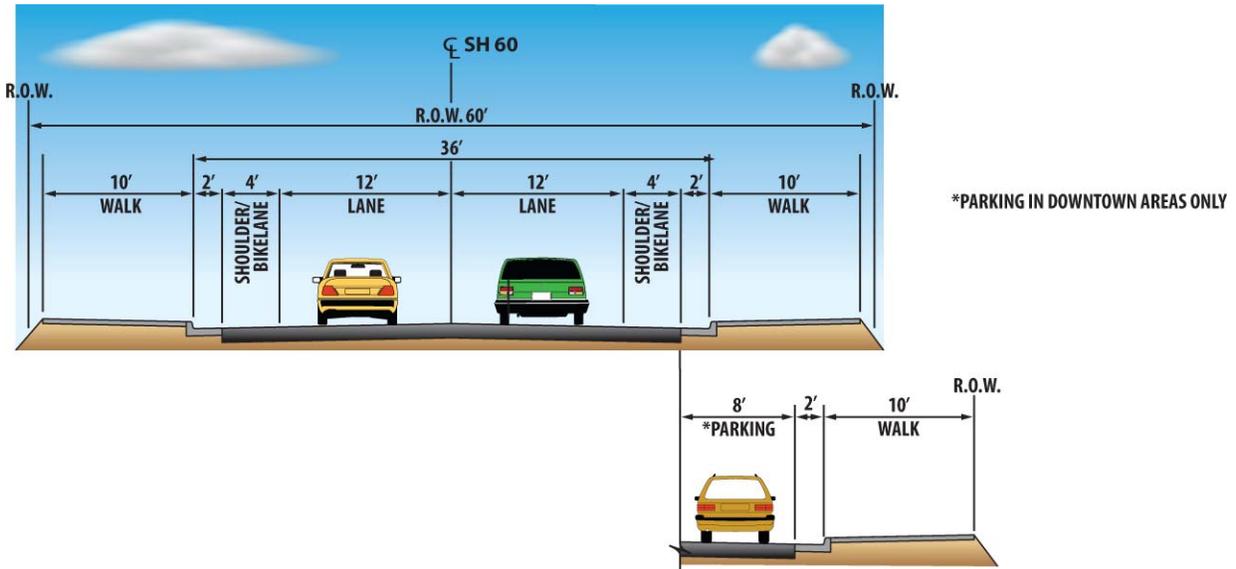


Figure 6-9  
One-Way Pair



# Alternatives Development

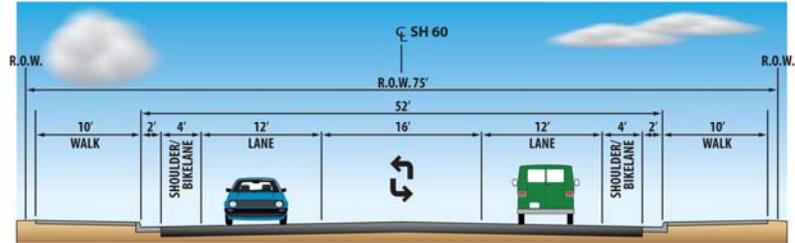


Figure 6-10  
Three Lane Section with Two Way Left Turn Lane

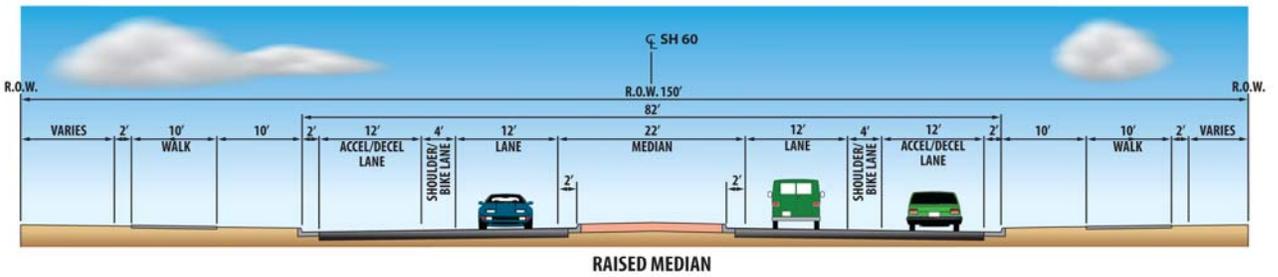


Figure 6-11  
Two Lane Section with Continuous Accel/Decel Lanes

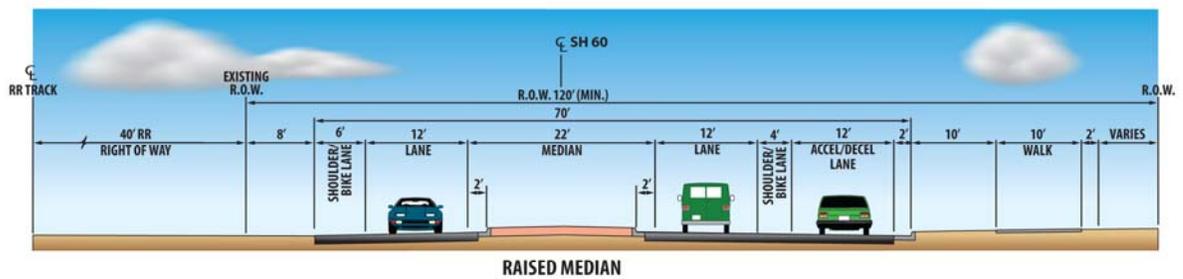


Figure 6-12  
Two Lane Section with Continuous Accel/Decel Lane, Eastbound





### 7.0 SCREENING OF ALTERNATIVES

Working with the segment alternatives described in Section 6, a two-phase screening process was used to evaluate and compare the SH 60 alternatives with the goal of identifying a recommended alternative for implementation. The screening process is described below:

- Traffic (LOS)
- Improve Safety of Corridor
- Environmental Impacts
- Preserve Community Values
- Compatibility with Local and Regional Transportation Plans
- Compatibility with Local Agency Comprehensive Plans
- Right-of-Way

SH 60 Screening Criteria used for the First Level Screening of the Segment Alternatives

- **First Level Screening.** The purpose of the first level screening process was to evaluate all of the alternatives that were developed for consideration and eliminate alternatives that were technically infeasible, had “fatal flaw” impacts, or did not provide sufficient benefits as compared against competing options. The screening process used a set of evaluation factors or criteria that helped gauge the extent to which a given alternative met the SH 60 EOS project goals.
- **Second Level Screening.** Using the results of the First Level Screening, a set of corridor alternatives are developed from the retained alternatives. Public and agency input, along with additional technical analysis, was used to define a recommended alternative.

This section details the methodology and results of the first and second level screening developed for the SH 60 EOS project. The recommended alternative is presented in Section 8 and the public and agency participation process that guided the screening effort is documented in Section 9.

#### 7.1 FIRST LEVEL SCREENING CRITERIA

Seven evaluation criteria were developed for testing the segment alternatives. The criteria reflected the SH 60 project goals, project purpose and need, and the public and agency participation process. Qualitative and quantitative measures were developed, and the overall set of screening criteria were designed to provide for the meaningful comparison of diverse alternatives and the ready identification of undesirable alternatives.

Following is a description of each of the first level screening criteria, and the guideline used by the study team analysts for scoring individual segment alternatives against the criterion.

##### Screening Criterion: 2030 Traffic Level of Service (LOS)

**Description:** Peak hour level-of-service (LOS) was computed for each roadway cross-section alternative, by segment, using a project-specific spreadsheet procedure developed from the *Highway Capacity Manual*. Traffic volumes used for the level-of-service analysis were based on the 2030 “No-Action” model that is derived from the North Front



Range Metropolitan Planning Organization's (NFRMPO) 2030 Fiscally Constrained model. The most significant difference between the roadway networks in the "No-Action" and the "Fiscally Constrained" models is that the Fiscally Constrained model assumes that SH 60 is widened to four lanes from I-25 to WCR 15. Since this widening assumption results in more conservative (higher) traffic forecasts, this scenario was used for the level-of-service assessment. Daily volumes generated by the model were manually factored to develop peak hour directional forecasts for each segment.

**Scoring Guideline:** Estimated level-of-service was reported for each cross-section alternative, by segment. For reversible lane options, level-of-service was reported for both the peak and off-peak directions since the directional capacity of this cross-section differs. For balanced sections, the reported level-of-service is for the peak hour, peak direction.

### **Screening Criterion: Improve Safety of Corridor**

**Description:** This criterion was used to evaluate whether a specific roadway cross-section alternative is anticipated to improve or degrade safety as compared against the "No-Build" alternative. Generally, alternatives that reduce congestion by providing additional roadway capacity will score higher for this criterion. Similarly, alternatives that provide for the separation of turning movements by providing exclusive turn lanes will also score higher for this criterion. Although there will be some initial driver expectancy issues, the reversible lane alternatives were not viewed as intrinsically less safe than the other alternatives, and the primary scoring of the reversible lane alternatives reflects the ability to provide turn lanes.

**Scoring Guideline:** The "No-Build" alternative is scored as "neutral" and is the baseline condition for evaluating whether a specific cross-section alternative will improve or degrade safety over the "No-Build" (baseline) condition. Alternatives are ranked as either "Less Safe," "As Safe," "Safer" or "Safest" as compared against the "No-Build" alternative. Note that the ranking of "Safest" reflects a comparison against the "No-Build" alternative as well as the other Build alternatives for a given roadway segment.

### **Screening Criterion: Environmental Impacts**

**Description:** The assessment of environmental impacts was evaluated as a broad category, rather than by each specific resource (such as air quality, water quality, etc.) as would be done in a NEPA analysis. The "No-Build" alternative always has the least environmental impact in a



traditional sense, but often has negative impacts to the human environment in terms of traffic congestion or highway safety.

**Scoring Guideline:** The “No-Build” alternative is scored as “neutral” and is the baseline condition for evaluating whether a specific alternative will improve or degrade the environment over the “No-Build” (baseline) condition.

There are few “natural” environmental considerations in the corridor such as the presence of wetlands or wildlife habitat. Therefore, there were no distinguishers amongst alternatives on the natural environment.

There are, however, many historic structures that could be impacted based on the amount of additional right-of-way needed. Alternatives that required the demolition of or impact to historic properties were ranked very negatively. Such impacts would be unacceptable to the community and would require a 4(f) evaluation if the project were to go to a NEPA analysis.

Environmental impacts to resources were scored as Low, Medium or High, which related to the difficulty or likelihood of the project proceeding given a certain environmental condition. In the example above, if an alternative impacted historic resources, it was given a ranking of “High” due to the problematic nature of preparing a 4(f) evaluation. If an environmental resource such as wetlands did not exist, it was given a ranking of “Low” since it would not impact the likelihood of the alternative being chosen.

### Screening Criterion: Preserve Community Values

**Description:** The importance of a “small town” community character was clearly communicated to the study team through the key stakeholder interview process and from feedback received at the study’s public open house meetings.

The comprehensive plans of both Johnstown and Milliken address the preservation of community values in the face of continuing residential and commercial development and a growing population. As a screening criterion for evaluating potential highway improvements, the preservation of community values was used to gauge whether a given alternative was consistent with the human scale and community character of the corridor.

**Scoring Guideline:** The “No-Build” alternative and any alternative that was confined to the existing highway right-of-way was considered to be consistent with the goals of preserving small town character. Conversely, alternatives that required additional right-of-way for the purpose of adding travel lane capacity were judged as inconsistent with the preservation of community values.



Looking north from SH 60, just west of Carlson Boulevard



### Screening Criterion: Compatibility with Local and Regional Transportation Plans

**Description:** This criterion assesses whether an alternative is consistent with the regional planning documents of the North Front Range Metropolitan Planning Organization (NFRMPO), as well as the transportation plans developed by Weld County, Johnstown and Milliken. Table 7-1 summarizes the planning documents that were referenced for evaluating this criterion.

Table 7-1  
Local and Regional Transportation Plans

Agency	Transportation Plan
North Front Range MPO	Regionally Significant Corridors
Weld County	Weld County Strategic Roadways
Town of Johnstown	Transportation Plan, August 2002
Town of Milliken	Transportation Plan, March 2000

At the regional level, the NFRMPO has developed a list of regionally significant corridors whose primary considerations are connectivity and functional classification. SH 60 is from one of those regionally significant corridors. Weld County has similarly developed a list of strategic roadways that will provide regional mobility within the county and two of these corridors, WCR 13 and Two Rivers Parkway, connect to the SH 60 corridor. Plans for Johnstown and Milliken address community traffic circulation issues and street cross-section standards.

Adjacent and planned improvements were considered as well, and these are identified as (1) the North I-25 Environmental Impact Statement (EIS) project concurrent with this project, (2) the intersection improvements at SH 60 and Parish Avenue, and (3) the intersection reconstruction improvements at SH 60 and Two Rivers Parkway.

**Scoring Guideline:** Functional classification, the number of travel lanes, median treatment, bike lanes, sidewalk width, and right-of-way width were compared to the local community design standards. Each alternative was judged either “Compatible” or “Incompatible” with these various transportation plans.

Alternatives that failed to provide acceptable 2030 peak hour levels of service were scored as “Incompatible.”

Alternatives that utilized unconventional operational characteristics (such as the reversible lane options) or unconventional alignment configuration (such as the one-way couplet option) were scored as “Incompatible.”



### Screening Criterion: Compatibility with Local Agency Comprehensive Plans

**Description:** The Comprehensive Plans of Johnston and Milliken define the role for transportation as it relates to land use and economic development. The comprehensive plans shown in Table 7-2 were reviewed to evaluate the proposed land uses, development strategies, and vision for long-range development of these communities.

Table 7-2  
Local Comprehensive Plans

Agency	Transportation Plan
Johnstown	Johnstown Comprehensive Plan, 2001
Milliken	Milliken Comprehensive Plan, 2004 Milliken Town Goals, 2004

**Scoring Guideline:** Alternatives were judged as either “Compatible” or “Incompatible” with respect to these comprehensive plans. If a proposed alternative did not provide the intended mobility improvement such as sidewalks or buffer zones, it was determined to be “incompatible.”

### Screening Criterion: Right-of-Way

**Description:** The right-of-way width that is required to implement each segment alternative was determined. The required right-of-way is the total width (or “envelope”) necessary for the construction of travel lanes, bike lanes, sidewalks, landscape strips and buffer zones.

**Scoring Guideline:** Required right-of-way was reported for each cross-section alternative, by segment. While no actual scoring was made solely on right-of-way width itself, several other screening criteria are influenced by the amount of required right-of-way.

## 7.2 FIRST LEVEL SCREENING PROCESS

Using the scoring guidelines described in the previous section, each segment alternative was evaluated against the first level screening criteria. The results of the First Level Screening are shown on Tables 7-1 through 7-5 located at the end of this section. Results were reviewed with the participating agencies through regular monthly Agency Coordination Team meetings.

Results of the screening process by individual segment are described below and are summarized on Table 7-6. For each segment, the “No-Build” alternative was also retained for comparison in the second level screening process.



### ***Segment 1A (I-25 to WCR 15)***

In Segment 1A, the following “build” alternatives were retained for additional screening:

- Four-lane divided cross-section
- Four-lane divided cross-section with acceleration/deceleration lanes

The four-lane cross-sections provided the required traffic capacity to meet long-range (2030) traffic demands. Because right-of-way is not a significant constraint in this segment, the three-lane reversible alternatives, and the four-lane undivided option were deemed less safe alternatives for this segment and were not retained. Environmental impacts were comparable between all of the build alternatives.

### ***Segment 1B (WCR 15 to GWRR Crossing)***

The only “Build” alternative retained in Section 1B was the three-lane cross-section with a two-way left turn lane.

Because of the constrained right-of-way through the developed area of Johnstown, construction of the four-lane undivided cross-section would require the removal of existing residential and commercial structures. Because of these unacceptable impacts to the community, the four-lane alternative was not retained for further consideration.

Overhead signing and signaling associated with the three-lane reversible options were deemed to be incompatible with the community character and these options were also not retained.

Although the three-lane cross-section with a two-way left turn lane does not meet the level-of-service objectives of the corridor, it was determined to be the most compatible and acceptable alternative for this segment of the corridor.

Environmental impacts were comparable between all of the build alternatives.

### ***Segment 2 (GWRR Crossing to SH 257)***

In Segment 2, two “build” alternatives were retained for additional screening:

- Two-lane cross-section with a continuous eastbound acceleration/deceleration lane.
- Four-lane divided cross-section with acceleration/deceleration lanes.

Both alternatives provide the needed operational and safety benefits in this segment. The discarded alternatives included the three-lane section (with continuous two-way left turn lane) and the four-lane undivided



cross-section. Both of these discarded options offered fewer operational and safety benefits when compared to the retained alternatives. Environmental impacts were comparable between all of the build alternatives.

### ***Segment 3A (SH 257 to Alice Avenue)***

In Segment 3A, two “build” alternatives were retained for additional screening:

- Three-lane cross-section with a two-way left turn lane
- Four-lane divided cross-section

Both sections provide for the capacity and access needs of this segment. Of the “build” alternatives, the three-lane cross-section creates the fewest environmental impacts.

The four-lane divided cross-section provides for traffic capacity beyond the 2030 needs, but since this “major arterial” configuration is a part of the Town of Milliken’s transportation plan, it was retained for more detailed evaluation.

Neither of the remaining options provided any additional operational or safety benefits over the retained alternatives.

### ***Segment 3B (Alice Avenue to Two Rivers Parkway)***

Two build alternatives were retained for Segment 3B:

- Two-lane divided cross-section with acceleration/deceleration lanes.
- Four-lane divided cross-section with acceleration/deceleration lanes.

The two-lane cross-section provides for adequate traffic-carrying capacity in this segment. The four-lane section was retained to test continuity of route operation.

The option of a continuous two-way left turn lane in this segment was not warranted due the lack of closely spaced accesses. Because right-of-way is not a significant constraint in this segment, the four-lane undivided option was deemed a less safe alternative for this segment and was not retained.

Environmental impacts were comparable between all of the build alternatives.



### 7.3 SECOND LEVEL SCREENING

The segment alternatives that were carried forward from the first level screening were then “mixed and matched” to create complete corridor alternatives for detailed evaluation.

Three corridor alternatives were developed representing progressively greater impact (and, in some cases, increased benefit) to the corridor (Figure 7-7). The three alternatives are described below.

- **Alternative 1** – This alternative represents the No-Build alternative. Under this alternative, there would be no major planned improvements, and the corridor would essentially remain the same.
- **Alternative 2** – This alternative represents the minimum impact improvement to the corridor and correlates to segment improvements that require the least amount of right-of-way. Segment alternatives that required the least amount of new right-of-way were combined together to form this lower impact alternative. In cases where the required right-of-way might be the same, the segment alternative that was perceived to be closer to the existing condition was selected. For example, the two-lane section with acceleration/deceleration lanes and the four-lane divided section require the same amount of right-of-way (150 feet). Since the two-lane highway would carry only two lanes of through traffic, it would be perceived as more of a minor improvement than a section that carries four lanes of through traffic.
- **Alternative 3** – This alternative represents the higher level of impact to the corridor. In four of the five segments, the four-lane divided section was chosen to represent this proposed improvement. In Segment 1A, 2030 traffic modeling indicated that four travel lanes would be necessary to accommodate the capacity demand. In segments 2, 3A, and 3B, it was selected because it is the same section proposed in the Johnstown and Milliken Transportation Plans. Both of these plans currently identify SH 60 as a major arterial roadway with four travel lanes.

Alternatives 2 and 3 were displayed on aerial photography mapping at the second Public Open House held on March 23, 2006. Meeting attendees were provided a handout summarizing the segment options, and asked to provide their input (Figure 7-8), along with any other written or verbal comments. A summary of the second Public Open House may be found in Section 9.

Section 8 reviews the final evaluation of alternatives and the selection of the recommended alternative. Public and agency input and response were critical to this Second Level screening process and is described in Section 9 of this report.



Factor	Segment 1A—I-25 to WCR 15					
	No Build	Three lane section w/center reversible lane (no left turns)	Three lane section w/ reversible through and rev. left turn lane	Four lane undivided	Four lane divided	Four lane divided with accel/decel lanes
<b>Traffic (LOS)</b> Year 2030	F	F (peak direction) E (off-peak direction)	D (peak direction) D (off-peak direction)	D	D	D
<b>Improve Safety of Corridor</b>	Neutral (baseline)	Less Safe (no left turn lanes)	Safer (Directional capacity)	Safer (Improved capacity)	Safer	Safest
<b>Environmental Impacts</b> Historic* Parklands Environmental Justice** Natural Resources Noise	NA NA NA NA NA	Medium NA Low Low Low	Medium NA Low Low Low	Medium NA Low Low Low	Medium NA Low Low Low	Medium NA Low Low Low
<b>Preserve Community Values</b>	Yes	No	No	No	No	No
<b>Compatibility with Local and Regional Transportation Plans</b>	Incompatible	Incompatible (no raised median)	Incompatible (no raised median)	Incompatible (no raised median)	Compatible	Compatible
<b>Compatibility with Local Agency Comprehensive Plans</b>	Incompatible	Incompatible	Compatible	Incompatible	Compatible	Compatible
<b>Right of Way Required Width</b>	Existing Width	75 Ft.	130 Ft.	130 Ft.	150 Ft.	150 Ft.
<b>Retained Alternative</b>	Yes	No	Yes	No	Yes	Yes

\* Approximately 8 parcels impacted by any of the alternatives- Anticipate a 4(f) Evaluation

\*\* Potential EJ area at Elwell

Note: Hazardous Materials were not considered to be a distinguishing criteria in choosing an alternative; therefore hazardous material sites are not shown in this matrix.

Figure 7-1  
First Level Screening (I-25 to WCR 15)



Factor	Segment 1B—WCR 15 to Great Western Railroad					
	No Build	Three lane section w/Two Way LTL	Three lane section w/ center reversible lane (no left turns)	Three lane section w/ reversible through and rev. left turn lane	One Way Pair	Four lane undivided
<b>Traffic (LOS)</b> Year 2030	F	F	D (peak direction) D (off-peak direction)	C (peak direction) C (off-peak direction)	C	D
<b>Improve Safety of Corridor</b>	Neutral (baseline)	Safer	Less Safe (no left turns)	Safer (directional capacity)	Safest	Safer
<b>Environmental Impacts</b> Historic* Parklands Environmental Justice** Natural Resources Noise	NA NA NA NA NA	Low NA Medium Low Medium***	Low NA Medium Low Medium	Medium NA Medium Low Medium	Low NA Medium Low Medium	Medium NA Medium Low Medium
<b>Preserve Community Values</b>	Yes	Yes	No	No	Yes	No
<b>Compatibility with Local and Regional Transportation Plans</b>	Incompatible	Incompatible	Incompatible	Incompatible	Incompatible	Incompatible
<b>Compatibility with Local Agency Comprehensive Plans</b>	Incompatible	Incompatible	Incompatible	Incompatible	Incompatible	Incompatible
<b>Right of Way Required Width</b>	Existing Width	75 Ft.	115 Ft.	130 Ft.	60 Ft.	130 Ft.
<b>Retained Alternative</b>	Yes	Yes	No	Yes	No	No

\* Approximately 20 parcels impacted with the widest four lane alternative-anticipate a 4(f) Evaluation

\*\* Potential EJ area from Parish to Kumar

\*\*\* Noise impacts would be slightly lower with 3 lane as compared to 4 lane

Figure 7-2  
First Level Screening (WCR 15 to Great Western RR)



Factor	Segment 2—Great Western Railroad to SH 257				
	No Build	Two lane section w/ continuous accel/decel lane, eastbound	Three lane section w/ Two Way LTL	Four Lane undivided	Four lane divided
<b>Traffic (LOS)</b> Year 2030	C	C	C	B	B
<b>Improve Safety of Corridor</b>	Neutral (baseline)	Safer (median and turn lanes)	Safer (median)	Safer (capacity)	Safest
<b>Environmental Impacts</b> Historic* Parklands Environmental Justice** Natural Resources Noise	NA NA NA NA NA	Low NA NA Medium NA	Low NA NA Medium NA	Low NA NA Medium NA	Low NA NA Medium NA
<b>Preserve Community Values</b>	Yes	No	No	No	No
<b>Compatibility with Local and Regional Transportation Plans</b>	Incompatible	Incompatible	Incompatible	Incompatible	Compatible
<b>Compatibility with Local Agency Comprehensive Plans</b>	Incompatible	Compatible	Incompatible	Incompatible	Compatible
<b>Right of Way Required Width</b>	Existing Width	150 Ft.	75 Ft.	130 Ft.	150 Ft.
<b>Retained Alternative</b>	Yes	Yes	No	No	Yes

\* Approximately 5 parcels potentially impacted - Anticipate 4(f) Evaluation

\*\* Little Thompson River runs through this segment- some potential work anticipated with riparian, wetlands, and Preble's Meadow Jumping Mouse.

Figure 7-3  
First Level Screening (Green Western RR to SH 257)



Factor	Segment 3A—SH 257 to Alice Street				
	No Build	Two lane section w/ continuous accel/ decel lanes	Three lane section w/Two Way LTL	Four Lane undivided	Four lane divided w/ accel/decel lanes
<b>Traffic (LOS)</b> Year 2030	D	D	D	B	B
<b>Improve Safety of Corridor</b>	Neutral (baseline)	Safer (turn lanes)	Safer (turn lanes)	Safer (capacity)	Safest
<b>Environmental Impacts</b> Historic * Parklands Environmental Justice ** Natural Resources Noise	NA NA NA NA NA	High Medium Medium Low Medium	Low Low Low Low Low	High High Medium Low Medium	High High Medium Low Medium
<b>Preserve Community Values</b>	Yes	No	Yes	No	No
<b>Compatibility with Local and Regional Transportation Plans</b>	Incompatible	Incompatible	Compatible	Incompatible	Compatible
<b>Compatibility with Local Agency Comprehensive Plans</b>	Incompatible	Incompatible (precludes on-street parking)	Compatible	Incompatible	Compatible
<b>Right of Way Required Width</b>	Existing Width	150 Ft.	75 Ft.	130 Ft.	150 Ft.
<b>Retained Alternative</b>	Yes	No	Yes	No	Yes

\* Approximately 18 parcels would be impacted, except for the 3 lane section which would not change the width from curb to curb  
 \*\* Firemans Park would be impacted except for the 3 lane section alternative

Figure 7-4  
 First Level Screening (SH 257 to Alice Street)



Factor	Segment 3B—Alice Street to Two Rivers Parkway				
	No Build	Two lane section w/continuous accel/ decel lanes	Three lane section w/Two Way LTL	Four Lane undivided	Four lane divided
<b>Traffic (LOS)</b> Year 2030	C	C	C	B	B
<b>Improve Safety of Corridor</b>	Neutral (baseline)	Safer (turn lanes)	Safer (turn lanes)	Safer (capacity)	Safest (capacity and median)
<b>Environmental Impacts</b> Historic* Parklands Environmental Justice** Natural Resources Noise	NA NA NA NA NA	Low NA Low Low Low	Low NA Low Low Low	Low NA Low Low Low	Low NA Low Low Low
<b>Preserve Community Values</b>	Yes	No	No	No	No
<b>Compatibility with Local and Regional Transportation Plans</b>	Incompatible	Compatible	Incompatible	Incompatible	Compatible
<b>Compatibility with Local Agency Comprehensive Plans</b>	Incompatible	Compatible	Incompatible	Incompatible	Compatible
<b>Right of Way Required Width</b>	Existing Width	150 Ft.	75 Ft.	130 Ft.	150 Ft.
<b>Retained Alternative</b>	Yes	Yes	No	No	Yes

\* Approximately 6 parcels impacted- anticipate 4(f) Evaluation

\*\* A couple of receptors may be impacted by additional noise

Figure 7-5  
First Level Screening (Alice Street to Two Rivers Parkway)



Segment No.	Segment Alternatives								
	No Build	Two lane section w/ continuous accel/decel lanes	One Way Pair	Three lane section w/ Two Way LTL	Three lane section w/ center reversible lane (no left turns)	Three lane section w/ reversible through and rev. left turn lane	Four lane undivided	Four lane divided	Four lane divided w/ accel/decel lanes
1A	R				E, NR	E, R	E, NR	E, R	E, R
1B	R		E, NR	E, R	E, NR	E, R	E, NR		
2	R	E, R		E, NR			E, NR	E, R	
3A	R	E, NR		E, R			E, NR		E, R
3B	R	E, R		E, NR			E, NR	E, R	

**LEGEND:**  
 E = Evaluated  
 R = Retained  
 NR = Not Retained  
 LTL = Left Turn Lane

Figure 7-6  
 First Level Screening Results



Alternative No.	Corridor Alternatives				
	Segment No. 1A	Segment No. 1B	Segment No. 2	Segment No. 3A	Segment No. 3B
Alternative 1	No-Build	No-Build	No-Build	No-Build	No-Build
Alternative 2 (Low)	Three lane section w/ reversible through and rev. left turn lane	Three lane section w/ two way LTL	Two lane section w/ continuous accel/decel lanes	Three lane section w/ two way LTL	Two lane section w/ continuous accel/decel lanes
Alternative 3 (High)	Four lane divided	Three lane section w/ reversible through and rev. left turn lane	Four lane divided	Four lane divided	Four lane divided
Recommended Alternative					

Figure 7-7  
SH 60 Corridor Alternatives



# Give Us Your Input on the Alternatives

Please mark and "X" indicating your selection for each segment below.

Name (optional) \_\_\_\_\_

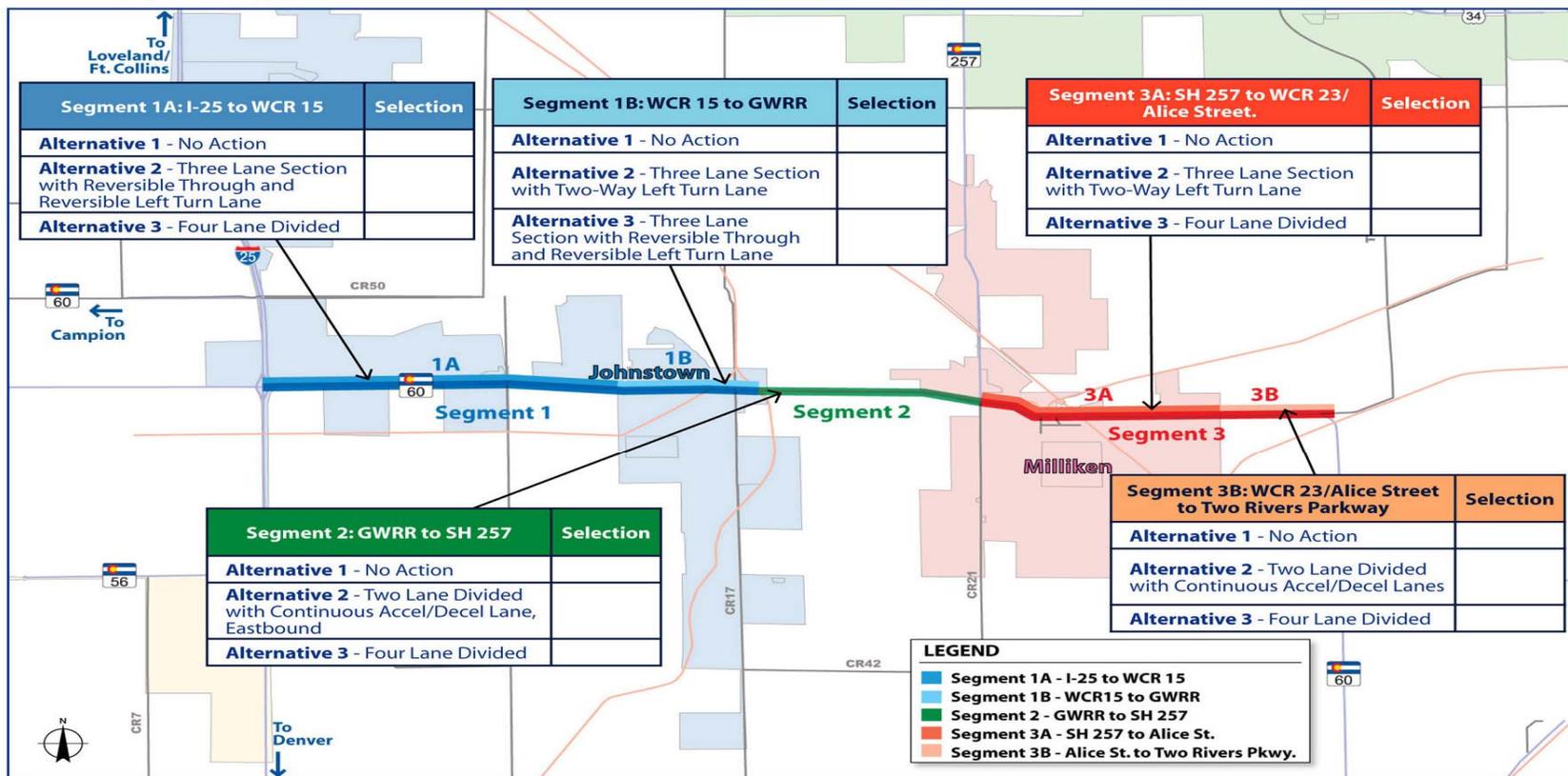


Figure 7-8  
Public Input for Segment Alternatives



### 8.0 RECOMMENDATIONS AND IMPLEMENTATION STRATEGY

As described in Section 7, three final corridor alternatives were developed representing progressively greater impact to the corridor:

- **Alternative 1** – the “No-Build” alternative.
- **Alternative 2** – minimum impact improvements that require the least amount of right-of-way.
- **Alternative 3** – higher impact improvements, emphasizing the expansion of SH 60 to four lanes.

In this section, the process for selecting a recommended alternative for implementation is documented and the “next steps” for implementing the recommended alternative is described.

#### 8.1 FINAL SCREENING PROCESS AND SELECTION OF RECOMMENDED ALTERNATIVE

##### 8.1.1 Screening Process

The final screening process of determining a recommended alternative involved the collective application of all of the study work performed to date for the project: Results of the traffic and safety analysis; physical, social, environmental, and economical impacts; and agency and public input were all considered in the development of a recommended alternative. Some of the major factors and considerations that influenced the development of the recommended alternative are summarized as follows:

- Existing and Future Traffic Demand – maintaining the existing and future mobility of the corridor was a key input criteria. In general, alternatives were retained in the screening process that met 2030 traffic demands. In the established residential and business districts of downtown Johnstown and downtown Milliken, alternatives that met 2030 traffic demands resulted in unacceptable right-of-way impacts, and narrower cross-section alternatives were retained for final screening.
- Consistency with Local Agency Transportation Plans – Segment alternatives that were retained in the final screening process were generally consistent with the current transportation plans for Johnstown and Milliken, and the future regional corridors planned for Weld County.



## Recommendations and Implementation Strategy

- Community Character – Selection of the recommended alternative took into account the social, environmental, and economical impacts of any additional widening through the established downtown areas of Johnstown and Milliken. The residents of Johnstown and Milliken want to preserve the small town character of each community, and major changes to these areas were deemed to be unacceptable to these communities.

Similarly, to protect older established neighborhoods in each community, the recommended alternative must recognize the context of these areas of the corridor, and achieve the best level of safe operation using the available right of way width that is there today. Major social and environmental impacts to these established neighborhoods were determined to be unacceptable in these areas.

- Environmental Resources – The surviving segment alternatives were tested to avoid any impacts to the Anderson Barn and Daniels Schoolhouse properties, which are already listed on the National Register of Historic Places.
- Public Input – Public input also guided the selection of the recommended alternative. During the second public open house, meeting participants were asked to comment on three SH 60 corridor alternatives. The results of that public open house meeting were tabulated and are presented in Figure 8-1. In a comparison of the recommended alternative to public input, Segments 1A, 1B, and 3A are consistent with the public responses. For Segments 2 and 3B, public input reflected nearly an equal desire for either a “No Build” scenario or a “Four lane divided highway.” These opposing visions for SH 60 may be the result of the established generations who desire to maintain a farming way of life versus the newer populations who simply want to commute faster to other regional communities for work or shopping.



# Give Us Your Input on the Alternatives

Please mark and "X" indicating your selection for each segment below.

Name (optional) \_\_\_\_\_

## TABULATION OF PUBLIC INPUT

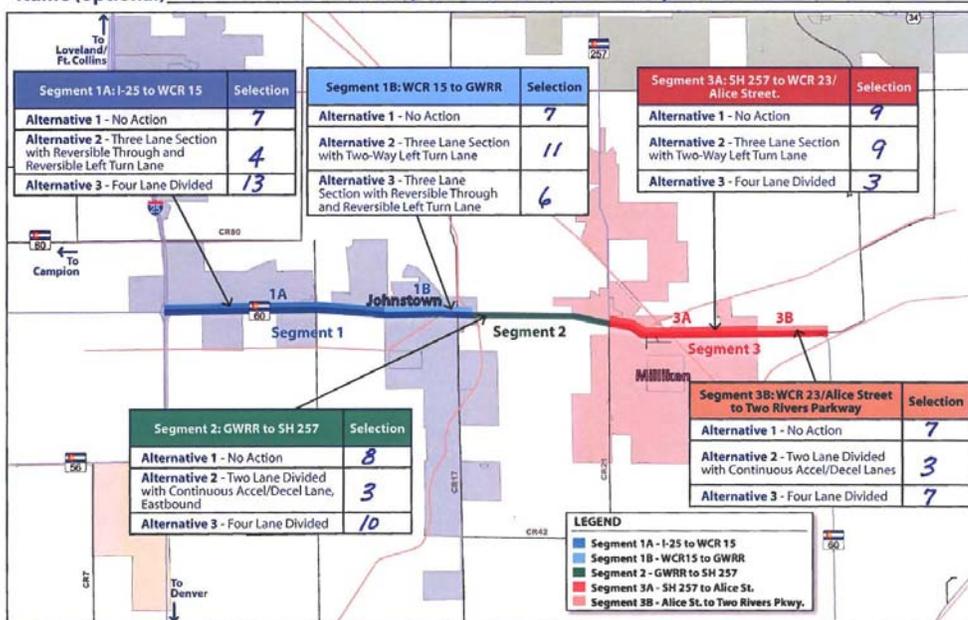


Figure 8-1  
Results of Public Input for Alternatives

### 8.1.2 Definition of the Recommended Alternative

A description of the recommended alternative (by segment), a brief summary of the basis for the alternative’s selection, and a discussion of some specific implementation issues in each segment follows. Table 8-1 provides a summary of the SH 60 Recommended Alternative cross-section treatments.

Additionally, to clearly illustrate the recommended improvements proposed for the corridor, a set of conceptual design graphic illustrations have been prepared that show the travel and turn lane configurations, median treatments, sidewalk locations, and intersection layouts. Future right-of-way that will be required to implement these improvements is also shown. The conceptual design graphic illustrations may be found in the Appendix of this study, under separate cover.



Table 8-1  
SH 60 Recommended Alternative Summary

Segment	Limits	Recommended Alternative
1A	I-25 to WCR 15	Four lane divided
1B	WCR 15 to GWRR	Three lane section with two way left turn lane
2	GWRR to SH 257	Two lane divided section with continuous accel/decel lane – eastbound
3A	SH 257 to Alice Street	Three lane section with two way left turn lane
3B	Alice Street to Two Rivers Parkway	Two lane divided section with continuous accel/decel lanes

### ***Segment 1A –I-25 to WCR 15***

**Recommended Alternative – Four-Lane Divided Cross-Section (See Figure 6-6, on Page 6-15).** In this roadway cross-section, four through lanes are provided and opposing traffic lanes are separated by a raised (curbed) median.

**Basis for Determination:** The segment of SH 60 is closest to I-25 and is expected to experience the highest traffic volumes along the corridor. The four-lane divided cross-section meets the forecast 2030 travel demand and will provide a Level of Service D operation during peak hour commuting times. This roadway cross-section, or treatment, is consistent with the roadway cross-section outlined in the Johnstown Transportation Plan.

**Implementation Issues:** The recommended right-of-way width for the four-lane divided cross-section is 150 feet. For the segment of SH 60 between High Plains Drive and Carlson Boulevard, the recommended right-of-way envelope to be preserved is expanded to 170 feet. In this segment, the Anderson Barn is listed on the National Register of Historic Places and while the barn itself is setback from the highway by approximately 190 feet, the overall property is likely to contribute to the historical significance of the barn structure. An additional 20 feet of preserved right-of-way on the south side of SH 60 will allow the highway to be shifted to the south if it is necessary (please refer to the SH 60 EOS Appendix, Sheets 3 thru 6, for graphical illustration).

### ***Segment 1B –WCR 15 to the Great Western Railroad***

**Recommended Alternative – Three-Lane Cross-Section with a Two-Way Left Turn Lane (See Figure 6-10, on Page 6-17).** In this roadway cross-section, a continuous flush (paved) median is provided for left turns from either direction.



**Basis for Determination:** This roadway section was selected to improve the operational and safety characteristics of SH 60 to the greatest extent possible, without generating significant impacts to the existing and established residential properties that adjoin this segment of the corridor. It will improve safety and traffic flow by providing storage for left turning vehicles and removing those vehicles from the through lanes.

**Implementation Issues:** The three-lane cross-section will not meet the 2030 travel demand, and improvements in future traffic flow will rely on development of the local transportation system to provide alternative routes during peak hour travel times. The implementation of this section will not require preservation of any new right of way, but will change the way that the existing right of way width is used. Of particular note, implementation of the alternative will require the removal of some on-street parking.

### ***Segment 2 –Great Western Railroad to SH 257***

**Recommended Alternative – Two-Lane Cross-section with a Continuous Eastbound Acceleration/Deceleration Lane (See Figure 6-12, on Page 6-17).** This alternative provides continuous auxiliary lanes for acceleration/ deceleration at intersections and major driveways. The lanes are provided for the eastbound direction only, anticipating that the Great Western Railroad on the north side of the highway will limit opportunities for new intersections and driveways on the north side of the corridor.

**Basis for Determination:** Traffic demand forecasts indicate that one through lane of travel in each direction will allow for peak acceptable traffic operations (LOS C) in the 2030 planning year. Turning traffic at major intersections will warrant a median to provide for left turn storage and acceleration/deceleration lanes may meet access code warrants for major intersections and approved access locations between major intersections. A continuous lane allows the acceleration/deceleration lanes for individual access points to be linked, improving traffic flow and safety.

**Implementation Issues:** For most of this segment, the Great Western Railroad (GWRR) lies to the north and adjacent to the existing SH 60 Right of Way. New at-grade crossings that would provide development access north of the tracks are generally prohibitive, and in cases where the track and highway lie in close proximity to each other there are potential operational and safety problems created with turning traffic.

The physical constraints of the GWRR currently restrict the ability to provide access to the north side of SH 60 and the proposed improvements in this segment reflect that condition. Should there be



any change in the status of the railroad in the future, a continuous acceleration/ deceleration lane could be constructed to serve development access on the north side of SH 60.

### ***Segment 3A – SH 257 to Alice Street***

**Recommended Alternative – Three-Lane Cross-section with a Two-way Left Turn Lane (See Figure 6-10, on Page 6-17).** In this alternative, a continuous flush (paved) median is provided for left turns from either direction. With some minor modifications, this alternative retains the roadway configuration that is currently in place in this segment.

**Basis for Determination:** Construction of four lanes through this constrained area is not warranted by 2030 traffic forecasts. Widening of the roadway corridor to four lanes would create undesirable environmental, economical, and social impacts. The existing three-lane section of roadway that successfully operates today is retained in this alternative..

**Implementation Issues:** This segment of SH 60 routes through the downtown area of Milliken. Downtown parking will remain the same as it is today, as will the sidewalks already in place. A new sidewalk project is planned along the south side of SH 60, from SH 257 to Josephine Avenue.

On the east end of this segment, the existing three-lane cross-section narrows to two lanes just before crossing the Great Western RR. To provide for a continuous roadway width, the recommended alternative proposes to carry the three-lane section across the railroad tracks, and then transition into Segment 3B. This work would be performed along with any new railroad signal upgrades, and additional right-of-way would likely be required.

### ***Segment 3B – Alice Street to Two Rivers Parkway***

**Recommended Alternative – Two-Lane Divided Cross-Section with Continuous Acceleration/Deceleration Lanes (See Figure 6-11, on Page 6-17).** This alternative provides continuous auxiliary lanes for acceleration/deceleration at intersections and major driveways.

**Basis for Determination:** Traffic demand forecasts indicate that one through traffic lane in each direction will allow for acceptable peak hour traffic operations (LOS C) in the 2030 planning year. The alternative provides for continuous acceleration/deceleration lanes for the safe operation of existing and future accesses to the corridor.

**Implementation Issues:** Also within this segment is the Daniels Schoolhouse, which is listed on the National Register of Historic Places. Since avoidance of this property will be required, the design



for this segment of the roadway was adjusted to avoid the school and property adjoining existing SH 60. The physical placement of the proposed roadway right-of-way is such that the proposed curb is located entirely within existing CDOT right-of-way, and any additional right-of-way would need to be obtained from the south side of SH 60. Total recommended right-of-way for this segment is 120 feet, measured from the existing right-of-way line on the north side of SH 60.

To avoid the schoolhouse property, and to also avoid the introduction of a horizontal highway curve into an otherwise straight section of road, new sidewalk would not be provided on the north side of SH 60 from WCR 21-1/2 to Two Rivers Parkway. Pedestrian traffic through this area would be routed to the sidewalk on the south side of SH 60, and then cross at WCR 21-1/2 to access the sidewalk on the north side of SH 60, west of the Daniels School property.

### 8.2 IMPLEMENTATION STRATEGY

The recommended alternative of the SH 60 EOS provides CDOT and the participating local agencies with a long-range transportation plan of agreed upon improvements for the SH 60 corridor, along with definition of the necessary right-of-way width to implement those improvements. The SH 60 EOS is intended to be implemented in conjunction with the SH 60 Access Control Plan—together these two documents provide for a comprehensive transportation improvement framework for the SH 60 corridor. The SH 60 EOS project has achieved a consensus for the recommended alternative and an MOU between this effort's public agency partners will be initiated to formalize the results and findings of this study.

There is currently no state or federal funding identified to construct the SH 60 improvements comprising the recommended alternative, and as a result it is expected that improvements will be implemented incrementally with continued growth and development in the corridor. Coordination of incremental improvements is particularly challenging to managing safety and mobility in the SH 60 corridor – each stakeholder that is engaged in SH 60 corridor development will find the SH 60 EOS to be an important implementation resource. Specifically:

**CDOT (State or Federal Funds).** For any proposed improvement to SH 60, CDOT can use the SH 60 EOS to make an early estimation of the appropriate environmental documentation required to implement a given improvement. It can also be used to determine early project development costs and conceptual construction cost estimates.

As stated in the Environmental Stewardship Guide, “CDOT has committed to complying with the intent and requirements of NEPA for all transportation activities, regardless of whether or not they are



federally funded.” Depending upon the level of environmental impacts, some activities such as an intersection or traffic signal improvement, might be implemented through a categorical exclusion in lieu of a more formal NEPA process.

**Johnstown and Milliken.** The SH 60 EOS will be a valuable resource to Johnstown and Milliken as they program improvements along SH 60 within their respective jurisdiction. Using the segment-specific cross-section and recommendations defined by the recommended alternative, Johnstown and Milliken may continue to implement roadway improvements that address safety and capacity, or other types of enhancements such as sidewalks.

The Town of Johnstown has already submitted a request to the NFRMPO for capacity improvements between I-25 and WCR 15, however, this project has not been included in the fiscally constrained plan at this time. The Town of Milliken has also applied for sidewalk enhancement funds to construct new sidewalk from SH 257 to connect into the existing sidewalk in downtown.

The SH 60 EOS study can also provide support for local planning decisions within the Towns of Johnstown and Milliken. Knowing how SH 60 is forecast to function through the 2030 year planning horizon allows for the coordination of other planned improvements to better develop a system of arterials that can work in tandem with SH 60. A system of arterials that form a logical network can provide alternate routes and relieve congestion during peak hour travel. This is a critical element of this study, since the recommended alternative does not meet the year 2030 travel demand from WCR 15 through Johnstown.

**Private Development Interests.** Even before the conclusion of this study, there were several inquiries from property owners and developers regarding proposed improvements to the highway, allowable access locations, and the amount of right-of-way that would be necessary for a given stretch of the highway. The SH 60 EOS document and companion SH 60 Access Control Plan are intended to specifically address these types of requests from private developers. The SH 60 EOS and SH 60 Access Control Plan documents can be made available through the Towns of Johnstown and Milliken for developer review, and provide the basis for the application of consistent policy for required improvements within the SH 60 corridor.

**Traffic Signals along SH 60.** The SH 60 Access Control Plan, companion document to the SH 60 EOS, defines the allowable locations for future traffic signals in the SH 60 corridor based on spacing requirements defined in the *State Highway Access Code*. This traffic signal plan helps define community expectations for signal locations and assists developers with planning the location of major



accesses. At certain locations, the Towns may require cross-access rights between adjacent property owners to maximize the value of a traffic signal in the corridor.

**Alternate Modes of Transportation.** While the SH 60 EOS has focused primarily on highway-related improvements, the study supports the continued development of transit facilities and operations to provide transportation choices and reduced peak hour vehicle demand in the SH 60 corridor. Park-n-ride lots currently exist near I-25/SH 60 and I-25/SH 56 and these facilities are currently undergoing further study as part of the North I-25 EIS study.

**Alternative Routes.** During the public process of this study, interest in alternate routes or bypasses continued to be communicated to the study team. One of the primary reasons for this may be the desire to remove the heavy truck traffic from the study corridor. Although the traffic forecasting process provided little support for a bypass route or an exclusive truck route, the continued development and improvement of the county road system within the greater Johnstown and Milliken area is of benefit to the SH 60 corridor. Improvement of facilities that are parallel to SH 60 will improve access to I-25 and US 85, as well as facilitate movement between Johnstown and Milliken. Improvement of the north-south county roads will create improved access to other important east-west roadway corridors, such as US 34.





### 9.0 PUBLIC AND AGENCY INVOLVEMENT

#### 9.1 AGENCY COORDINATION

The SH 60 EOS project process was structured to be inclusive of agency input during all phases of the project through a schedule of regular monthly agency meetings. All directly affected agencies were invited to attend a kickoff meeting at which the study process, project goals and objectives, and desired outcome were outlined. Subsequently as the project moved forward, a core agency team evolved which included the following participating agencies:

- The North Front Range Metropolitan Planning Organization (NFRMPO)
- Weld County
- The Town of Johnstown
- The Town of Milliken

This core team was actively engaged throughout the project for both the Environmental Overview Study and Access Control Plan, and as a result of their participation and effort the SH 60 study team was able to reach a consensus for a Recommended Corridor Alternative.

#### 9.2 KEY STAKEHOLDER INTERVIEWS

One of the cornerstone activities of the public outreach program was to conduct personal interviews with specific individuals that represented a broad cross-section of the community.

A stakeholder list was identified by the agency team and included 20 individuals such as minority and business leaders, police and fire chiefs, historical society members, local farmers and residents. A list of 14 questions about the transportation needs in the area was developed to facilitate continuity within each interview. Seventeen key stakeholders were actually interviewed and their responses were then codified into a summary. The summarized information was then presented at the first public open house in a way that meeting attendees could indicate their response as to whether they “Agreed,” “Disagreed,” or “Didn’t Know” with the collective responses of the key stakeholders. This outreach process provided the project team members with a better understanding of important community values and a public opinion of the critical issues and concerns regarding transportation within the SH 60 corridor. This information was utilized during the development of alternatives phase and as input to the screening criteria to evaluate the alternatives.



Partial list of questions used for stakeholder interview (See Reference Section to view actual list of questions).



### 9.3 PUBLIC MEETING PROCESS

Three public meetings were held during the SH 60 EOS process. This project utilized an “Open House” style of public meeting process and no formal presentations were given at any of the three public open house meetings. Project information was communicated through informational handouts, exhibit boards mounted on easels, and design layouts provided on aerial photography. Ample study team representatives were available to answer questions and work with citizens on an individual basis. Open house meetings were held in alternating locations with two meetings held in Johnstown and one meeting held in Milliken.

Methods for meeting advertisement included:

- The Greeley Tribune and Johnstown Breeze newspapers
- A flyer included with the Utility Newsletter in Milliken
- A flyer mailed with the Johnstown Chamber of Commerce mailing that included 5,700 residents of both Johnstown and Milliken
- A flyer that was handed out door-to-door to all adjacent properties within the corridor
- Direct mailing to meeting participants on the mailing list developed from the sign-in sheets

The meeting advertisement for the first public open house meeting included provision for a representative fluent in the Spanish language to provide interpretation for any members of the public should they desire. Although well attended, the first meeting did not have anyone request the services of a Spanish speaking representative. As a result, an interpreter was not provided for future public open house meetings and no requests for language translation were received during those meetings. The advertisement for Public Open House No. 1 is shown below in Figure 9-1.

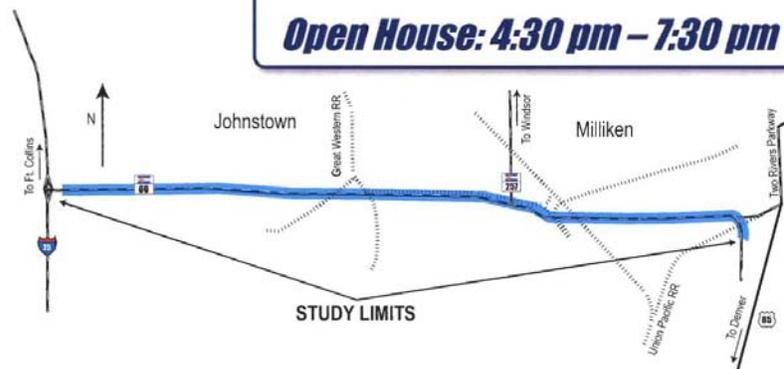


## **CDOT REGION 4 ANNOUNCES OPEN HOUSE EVENT TO STUDY SH 60 CORRIDOR**

The Colorado Department of Transportation (CDOT) invites you to attend an open house meeting to receive input concerning transportation issues along the SH60 corridor, from I-25 to Two Rivers Parkway. The Towns of Johnstown and Milliken, Weld County, and the North Front Range Metropolitan Planning Organization (NFRMPO) are all participating in an Environmental Overview Study (EOS) to determine the long-term needs of the SH60 corridor, preserve the necessary right-of-way to implement improvements in the future, and to develop an Access Control Plan.

The open house will be held:

**Thursday, September 8, 2005**  
The large Community Room at Johnstown Town Hall (101 Charlotte)  
**Open House: 4:30 pm – 7:30 pm**



The Colorado Department of Transportation is sponsoring this open house to gather public input and comments on transportation needs in your area.

Study representatives will be on hand to provide information for attendees to review, answer questions, and discuss ideas and comments.

If you are unable to attend this meeting, have any special access considerations, or would like to talk to a study representative to provide your input, please contact K.C. Collins at 303-299-7861 or our toll free number, 1-800-449-2302.

Habrá un representante de habla español para recibir sus comentarios o preguntas. Para información en español llama a Alice Torrez al número 970-350-2106.

Figure 9-1  
Public Meeting Flyer Advertisement – Public Meeting No. 1

The following contains a summary of each of the three public open house meetings.

### **9.3.1 Public Open House No. 1 – September 8, 2005**

A Public Open House was held on Thursday, September 8, 2005 in Johnstown at the Johnstown Community Center, 101 Charlotte Street, from 4:30 pm to 7:30 pm. The purpose of the meeting was to gather and record public comments on the SH 60 corridor between I-25 and



Two Rivers Parkway. Fifty-one members of the public attended the meeting. Ten (10) representatives from CDOT, one (1) representative from Weld County, and five (5) representatives from URS were on hand to record comments and answer questions.



The meeting was organized into seven subject areas as follows: Welcome, Project Overview, Traffic Data, Environmental Data, Aerial Mapping Displays (2 sets), Stakeholder Interviews and Responses, and General Follow Up. The attached appendix to this section contains a list of boards presented at Public Open House No. 1.

Meeting attendees were asked to identify how they use SH 60, to provide input or comment on issues they may have with the corridor, and to follow-up with any written comments they would like to document.

### ***Stakeholder Interview Summary***

At the stakeholder interview/comment area, meeting attendees were asked to indicate whether or not they agreed to comments collected during stakeholder interviews that were conducted prior to the meeting. Attendees were provided color sticky dots and were asked to indicate for each statement displayed on the board whether they agreed or disagreed with the statement (or did not know). The results of attendees' dot placement are presented in Table 9-1. Notice some people chose only to answer questions of interest to them, as there are not equal numbers of responses for each question. Additional comments that were recorded on the map displays, provided in writing or verbally told to the project team, are contained in the attached appendix.





Table 9-1  
Stakeholder Interview Summary Table

Comment	Agree	Disagree	Don't Know
Traffic noise has increased.	26	1	0
Motorists drive too fast along the SH 60 corridor.	17	6	1
Posted speed limits are too high west of CR 15.	4	16	2
Need to preserve the historic buildings in Milliken, such as: Hotel, Odd Fellows, Two Rivers Auto, Laundry Mat, the Police department and “mom and pop” businesses.	27	0	0
Need for continuous pedestrian and bicycle crosswalks, sidewalks and bike paths along SH 60.	23	12	1
More traffic signals will be needed along SH 60 in the future.	24	4	2
Bike trails along SH 60 would create a safety concern.	13	12	0
Safety concerns/Traffic flow issues:			
• SH 60/I-25/Frontage Road Intersection	23	1	0
• County Road/SH 60 intersections	17	5	1
• Two-Rivers Parkway/SH 60	22	0	1
• Minor roads that access SH 60	11	4	1
Transportation system works well for local day-to-day traffic needs.	6	17	0
Transportation system works well for regional traffic needs.	4	16	0
Quality of life – retain small town atmosphere/feel	25	0	0
Railroad crossings need to be improved.	18	0	1
School buses need acceleration lanes to enter back onto SH 60.	16	6	3
Need more paved alternatives to SH 60.	18	4	1
It is an issue that trucks park in public right-of-way to make deliveries.	9	8	1
Johnstown needs a truck bypass.	17	9	1
Milliken needs a truck bypass.	11	7	0
Most truck traffic is through traffic.	17	2	2
Would like to see medians and other traffic calming elements to slow down traffic.	10	17	0
Would like to see SH 60 continued to the west.	17	5	0
Would like to see public transit (buses or trains) to serve commuters and seniors.	22	8	1

**9.3.2 Public Open House No. 2 – March 23, 2006**



A Public Open House was held on Thursday, March 23, 2006 in Milliken at the Milliken Town Hall, 1101 Broad Street, in the large community room from 4:30 pm to 7:00 pm. The purpose of the meeting was to: (1) to receive public input on various design alternatives developed for the SH 60 corridor, and (2) to receive public input on an Access Control Plan for the corridor. Fifty-one members of the public attended the meeting. Six representatives from CDOT and five consultant representatives from URS were on hand to answer questions, receive public input, and record comments regarding the design alternatives and the Access Control Plan; one additional



representative from CDOT was available to answer questions regarding the upcoming SH 60/Two Rivers Parkway project planned for construction in the Summer of 2006; one representative from Weld County to discuss and share information about the preferred alternative for the future Two Rivers Parkway project, and one consultant representative to answer any questions regarding the adjacent North I-25 EIS project.



When attendees first arrived they were provided with a handout titled “Give Us Your Input on the Alternatives.” The intended purpose of this handout was to provide a delineation of improvement segments 1a, 1b, 2, 3a and 3b, along with an overview of the corridor alternatives for each segment. Attendees were asked to review the design alternatives shown on the aerial plots and then to mark an “x” indicating a given preference. Alternative 1 was designated as the “No-Build” alternative for all segments.

Two sets of aerial maps (1”=100’ scale) illustrating various design alternatives for each segment were displayed on long tables for the public to review. The design displays contained travel lane, shoulder, median, and sidewalk layout information along with the required right-of-way for each segment alternative.



The Access Control Plan displays (1”=100’) were also placed on long tables and included property ownership information, existing access disposition, possible future traffic signal locations, future access spacing, and any intersection movement restrictions (right-in/right-out, ¾ movement, etc.). The public provided comments recorded on the aerial maps, written comments and verbal comments to the project team. These are shown in the attached appendix.

A summary was developed of the public’s opinion on the best alternative for each segment of SH 60. The numbers represent the number of people who “voted” for that alternative.

### ***Results of Handout (“Give Us Your Input on the Alternatives”)***

#### **Segment 1A**

**Alternative 1** – No Action – 7 (one request for light at CR15)

**Alternative 2** – Three Lane Section with reversible through and reversible left-turn lane - 4

**Alternative 3** – Four Lane Divided - 11

#### **Segment 1B**

**Alternative 1** – No Action – 7 (one request for light at CR15)

**Alternative 2** – Three Lane Section with two-way left-turn lane - 10



**Alternative 3** – Three Lane Section with reversible through and reversible left turn lane - 5

### Segment 2

**Alternative 1** – No Action - 8

**Alternative 2** – Two-lane divided with continuous Accel/Decel Lane, Eastbound - 2

**Alternative 3** – Four Lane Divided - 9

### Segment 3A

**Alternative 1** – No Action - 9

**Alternative 2** – Three Lane Section with two-way left-turn lane - 8

**Alternative 3** – Four Lane Divided - 3

### Segment 3B

**Alternative 1** – No Action - 7

**Alternative 2** – Two-lane divided with continuous Accel/Decel Lanes - 2

**Alternative 3** – Four Lane Divided - 7



### 9.3.3 Public Open House No. 3 – June 29, 2006

A third Public Open House meeting was held on Thursday, June 29, 2006 in Johnstown at the Johnstown Town Hall (Community Room), 101 Charlotte Street, from 4:30 to 7:00 pm. The purpose of this final open house meeting was to display and discuss with meeting attendees the outcome of the SH 60 Environmental Overview Study (EOS) project. Display exhibits were shown for both the SH 60 Corridor Recommended Alternative and the final Access Control Plan (ACP). Eighty-one members of the public attended the meeting. Four representatives from CDOT and four representatives from the consultant team were on hand to answer questions, receive public input, and record any comments regarding the results of this project.

The public provided comments on the aerial maps, written comments, and verbal comments to the project team. These are shown in the attached appendix. In general, the recommended alternative was well received and accepted by the public.





### 9.4 TOWN BOARD WORK SESSIONS

Prior to the third public open house meeting, the project team presented the SH 60 Recommended Alternative and Access Control Plan to the Town Boards of Johnstown and Milliken. The meetings took place during the normal Town Board work session period and the meeting dates were as follows:

- Milliken - June 13, 2006
- Johnstown - June 26, 2006

These presentations were informal, and allowed for questions and answers from the Town Board members. A draft copy of the SH 60 EOS document and SH 60 Access Control Plan will be provided to each of these local agencies for their review and comment as part of the overall project development process.

### 9.5 PROJECT WEBSITE

The SH 60 EOS website currently contains the public information materials presented at each of the first two public open house meetings. The web site will be updated to include the recommended alternative as soon as the review and approval period have been completed. For information contained on the web site, please refer to the following web site addresses:

- CDOT – the website may be located through the SH 60 EOS link on CDOT’s main page. The web site address is:  
<http://www.dot.state.co.us/>
- NFRMPO – the SH 60 EOS website may also be found through a link on the main page of the NFRMPO website located at:  
<http://www.nfrmpo.org>



**Appendix**  
**Additional Public Involvement Material**





## Public and Agency Involvement





### Public Open House No. 1 – Presentation Boards

The list below indicates the information that was shown to the public at the meeting:

- Welcome/Sign-in station
  - Welcome and Meeting Purpose Board
- Project Overview Boards
  - Map of Study Area
  - Draft Purpose and Need
  - Information to be gathered
  - What an EOS is and is not
  - Study Schedule
- Traffic Data Boards
  - Level of Service
  - 2000 and 2030 Employment
  - 2000 and 2030 Population
  - Accident Summary
  - Accident Types
  - Origin and Destination Study
  - A Next Step – Access Control Plan
- Environmental Data Boards
  - Wetlands and Floodplain
  - Land Use- Existing and Future
  - Hazardous Materials (urban)
  - Hazardous Materials (overview)
  - Cultural Resources
- Environmental Data Handouts
  - Parks Johnstown
  - Parks Milliken
  - Farmland
  - Riparian Resources
  - Bald Eagle Habitat
  - Preble’s Meadow Jumping Mouse Habitat
  - Prairie Dogs
- Aerial Maps of Study Area (2 sets of displays at 1”=100’ scale)
- Stakeholder Interview/Comment Area Boards
  - Stakeholder Interview Process
  - Stakeholder Interview Questions
  - Stakeholder Interview Summary



- Stakeholder Interview/Comment Area Handouts
  - Detailed Stakeholder Interview Response List
  - Public Meeting Comment Sheet
- General Follow Up
  - We Need to Hear from You
  - Next Steps – Based on Tonight’s Comments
  - How to Stay Involved

(Note: All “boards” were also available to the public as handouts)



**Public Open House No. 1 – Comments Recorded on the Aerial Map Displays**

Location	Comments
I-25/SH 60	We need light at I-25 interchange. Who has right-of-way when 4 cars are at off ramp and the frontage road?
General	I usually seek alternative roads from I-25 to Milliken like CR 46 and CR 44 because of the slow speed limits and difficulty getting through Johnstown.
SH 60/High Plains Blvd. West of Rocksbury Ridge	Need Left turn lane – Acceleration lane turning left onto SH 60 from High Plains Blvd.
Weld County Road 15/SH 60	We need a stoplight here coordinated with the downtown one, so residents along the highway can pull out of driveways. Also a stop light here would help the firefighters get out.
SH 60/Harding East of Elementary School	Excessive nightly truck traffic (live stock and poultry trucks) also lots of emergency vehicle traffic makes it noisy at night along here.
Greeley Avenue/SH 60	Don't widen the highway. Put in a truck bypass and a light or two. We would like to still have backyards!
SE house of Fremont Avenue/ SH 60 (Bill Page)	Widening the highway destroys our home property value. Will you buy it?
Parish/SH 60	Bad, bad, bad Intersection!
SH 60/Two Rivers Parkway Curve	Line of sight at this stop sign is difficult. You have to turn your head far to the left to see merging traffic. I typically turn right at the other stop sign.
Weld County Road 48	Short cuts: CR 50 to CR 17 make SH 60, CR 46 from Milliken to I-25
Weld County Road 13/SH 60	Will there ever be a traffic light placed at this intersection? If SH 60 is wider it would come very close to our house – no front yard! Would they buy our house or what?
Weld County Road 15/SH 60	Very heavy traffic at CR 15/SH 60. It is difficult for the people to cross who live south of 60. Our kids go to Ledford School, which is on the north side of the highway.
Near Fremont Avenue/SH 60	Our home for 30 years is very close to the highway now. Any widening takes away our yard and traffic right outside my window will destroy value.
MP 12.709 across slightly east of Dorothy Avenue/SH 60 Milliken	Traffic backs-up extends east almost to Trader's Lane.



### Public Open House No. 1 – Written Comments Submitted

- *SH 60 is getting so busy we are worried about the safety of entering and exiting off the highway with tractors and cars, etc. The noise is so bad along with the smell of gas fumes, make us ill. We would hope you could look into slowing traffic down and maybe diverting it to another county road.*
- *Our home backs up to SH 60. In the 10 years we have lived there truck traffic has gotten so much worse. At night our house shakes at all hours due to trucks not adhering to jake brake laws. We need a truck bypass for that reason and for safety of our children, who cross the road going back and forth to school.*
- *We also hear way too many emergency vehicles pas our home late at night – they could use a bypass as well to respond to accidents on I-25. The sirens blare and all of the dogs howl – not too peaceful!*
- *We need a light at I-25 and SH 60. No one seems to know what the rule is when you have 3 cars – two on frontage, going north and south and people exiting I-25 from the south. Who has the right-of-way? Many accidents occur here – due to this and people passing north turning vehicles on the right.*
- *Do not want to see SH 60 widened behind my home – this will take a good chunk out of our backyard and make the noise issue worse. Keep Johnstown with a small town feel.*
- *A light somewhere between I-25 and Parish Avenue would help enable us to get out of our neighborhood during peak hours (commuting hours). Maybe a light would discourage some of the trucks from coming through our town.*
- *Country Acres is located south of SH 60 at CR 15. This intersection is very busy and is increasingly difficult to cross. Our children have been assigned to Letford Elementary, which is on the north side of SH 60. We are a couple of blocks away from school yet are forced to be bused. I would like to see the speed limit for the school zone (20 mph) moved west of CR 15 and a cross walk or light installed. I do not agree with your accident summary for that intersection. There are constant accidents and near misses. You can always see evidence of accidents (glass, etc) on the ground. This is also the intersection for Johnstown Fire to access SH 60. The 45 mph speed limit (cars are usually going 55 mph) makes it impossible to cross.*
- *Thanks for the opportunity to voice my comments and concerns!*



- *Need bypass for trucks in town of Johnstown and Milliken because Johnstown/Milliken is a main truck route or more light on SH 60.*
- *We think a stoplight at CR 15 and SH 60 would help tremendously. We have a very difficult time getting in and out of our driveway. The speed limit should be 30 from CR 15 through to 60 east. The subdivisions west of “old town” should all have turning/acceleration lanes available on SH 60.*
- *We would like a bypass for trucks and other through traffic.*
- *We don’t think adding a lane will solve the problem. Controlling the speed and flow will help more.*
- *The flashing school zone bunches the traffic together through town making it impossible to get into the flow of traffic. A stoplight at CR 15 would help this, we think.*
- *My concerns are speed limits on west SH 60 – people are in a hurry to get onto the interstate – traffic east has a tendency to speed since it just came off I-25.*
- *Traffic light at SH 60 and WCR 13 and WCR 15 are great ideas. Being able to turn left, going east on SH 60, at WCR 15 is difficult now.*
- *Maybe more law enforcement is need and /or a reduction in speed limits.*
- *Another problem area is turning left off SH 60 onto Two-Rivers Parkway. Maybe a caution light if not a stop light.*
- *That is a lot of money to invest in 3 traffic lights, but top priority should be identified.*



### Public Meeting No. 1 – Comments from Meeting Attendees to Project Representatives

- An attendee who lives to the south of SH 60 at CR 15 is concerned about kids crossing SH 60 to get to school. If a light is placed at Sherman it will cause gridlock, would prefer light at CR 15; backing out onto SH 60 is difficult; don't widen SH 60, it would reduce quality of life; Johnstown should regulate vehicles coming through, there are too many big trucks; the impact on property values is a concern; motorcycles are loud on SH 60.
- I-25/SH 60 NW quadrant – I-25 Gateway center is a 160 acre commercial/employment
- The area is growing; in 2000 there were approximately 400 employees; in 2005 there are 600-700 employees; at I-25/402 NE quadrant there is employment.
- Lives in Johnstown takes SH 60 to SH 257 to SH 34 to Greeley and also uses I-25.
- In Milliken, kids playing in the street is a concern.
- The I-25/SH 60 NE quadrant is zoned commercial; takes SH 60 to 50 to get to Loveland.
- CR 13-CR 17; SH 60-CR 17-SH 54; at SH 60/CR 13 intersection would like to see stop light; are you going to take right-of-way at NW quadrant of SH 60/CR13? It is hard to back out onto SH 60.
- Need a traffic signal at SH 60/CR13; takes CR 54 to SH 17 from Greeley; on foggy days takes 34 from Greeley.
- Comment that it is hard to get over SH 60/Two Rivers; SAFETY (speeding/passing on wrong side); traffic travels 55-65 mph; traffic is "horrendous," owner of house right on the highway; need an Alternative to I-25, maybe use CR 13 to SH 52.
- CR 15 backs up to highway along SH 60; there are too many trucks at night; residential traffic is increasing; concerns with kids crossing the highway; right-of-way is not maintained – weeds in backyard.
- Bought house in Milliken (Centennial Farms); wants development to occur.
- Pulling out is harder onto SH 60; in rural areas you typically wait longer to pull out onto the highway; do not widen in Milliken. At train crossing cars get backed up to a ¼ mile near Alice two times a day. School buses are a concern on the highway.
- Lots of trucks use the highway.
- Frontage road is too close to ramps, there are lots of accidents.
- Three comments "Don't widen the highway in Johnstown."



### Public Open House No. 2 – Presentation Boards

The following list of display boards indicates additional information made available to the public. (Note: an asterisk indicates that the board was available for discussion, but not displayed due to limited space).

- Welcome/Meeting Purpose
- Study Area\*
- Study Goals
- Purpose and Need
- Study Schedule\*
- Level Of Service (LOS)
- Planned Improvements for Summer 2006
- Existing & Future Traffic
- Truck Activity at Night
- Corridor Segments\*
- Study Process (including schedule information)
- Access Control Plan (ACP) Process
- Access Function
- Benefits of an ACP
- Implementing the ACP
- What we heard from you (A summary of public input at the last meeting)
- Next Steps
- How to Stay Involved



### Public Open House No. 2 – Comments Recorded on the Aerial Maps (from Sticky Notes)

Location	Comments
West of Parish Avenue	Need to provide turning lane for eastbound to north on Rutherford instead of dead space.
West of Parish Avenue	Change “Johnstown Avenue” label to “Johnstown Center Drive”
General	Red line needs to be in legend.
WCR 15	Want stoplight at WCR 15.
WCR 13	Want stoplight at WCR 13.
Carlson Blvd.	Want stoplight at Carlson Blvd.
WCR 13 and WCR 15	System analysis for light at 15 and 13.

### Public Open House No. 2 – Written Comments Submitted

The following written comments were collected at the meeting.

- *Seg. 1A – Alternative 3 should be used, Seg. 1B – Alternative 3 should be used, Seg. 2 – Alternative 3 should be used, Seg. 3 A and 3B – No selection – not familiar with town of Milliken*
- *WCR 461/2 should be a 4-lane between CR15 and CR 21.*
- *Make streets Madden Avenue, Lippit Avenue and Rutherford Avenue right-in, right-out to SH 60 in Johnstown.*
- *I totally trust CDOT’s studies. Do what seems the most right for the most growth as well as considering others opinions. You have facts. They have opinions. Thanks for listening!*
- *Please consider a highway 60 bypass to the north or to the south of town, that through traffic could use. It looks like a traffic nightmare at best, through both towns when the current and future growth occurs. Trucking is especially a concern.*
- *I appreciate all the CDOT work, and the openness for public input. Thanks.*
- *If SH 56 (Berthoud exit) was improved east of I-25 to WCR 17 it would help a lot for Milliken and Hwy 85 access to I-25.*
- *I would like to see a bypass alternative to SH 60. SH56 (west of I-25) should be extended east to WCR 17. Currently unpaved.*
- *Please encourage alternate route to lessen traffic on Highway 60. The road in from Berthoud I-25 exchange could be finished and help some people get to I-25 that way.*
- *Vote for alternative 2 – preserve the Main Street of Milliken.*



- *I strongly urge you to consider traffic lights at the following “60” intersections: I-25/Frontage Road, 15,13, Carlson Farms Blvd., entrance to Rocksbury Ridge and Flashing Yellow @ Johnstown Center Drive (very dangerous intersection). Currently, we love not having lights along SH 60 from I-25 to CR 17 – but we know that as our population grows, traffic control is a necessity. We have boasted to our east coast friends that we have only one traffic light in Johnstown! They have yet to visit our isolated community. Moved here 5/2005, from Maryland (congestion!) – But Love it here!*



### **Public Open House No. 2 – Comments from Meeting Attendees to Project Representatives**

**Discussion:** Landowner on north side of SH 60, between High Plains Blvd. and Carlson Blvd. (directly across from Patina Oil and Gas facilities). Owner indicated his concern over impacts shown on the four lane divided alternative, since he has no plans to move or sell to developers. His house was built in 1917, and will possibly be eligible for the Historic Register.

**Discussion:** Landowner on south side of SH 60, between WCR 19 and WCR 21. Owner indicated concern over impacts for either alternative, since widening through this stretch is to the south due to the proximity of the GWRR on the north side. This land is currently farmed, and he expects that his sons will take over the farm at a later date. He has no intention of selling to developers and asked “Is there anything that can be done to prevent the development of farmland along the corridor.” There are no structures at risk due to any proposed highway improvements.

**Discussion:** For the property located on the north side of SH 60 and east of High Plains Boulevard, the landowner believed that CDOT had issued an Access Permit for a new driveway into the property and that the new access should be shown on the Access Control Plan. CDOT to verify.



### Public Open House No. 3 – Presentation Boards

The following display boards were shown at the meeting as supporting information to the study project:

- Welcome/Meeting Purpose
- Study Goals
- Purpose and Need
- Level Of Service (LOS)
- Traffic Signals Along SH 60
- Accident Types on SH 60
- Accident Summary From CDOT Accident Records 2001-2003
- Origin-Destination Study – Trip Direction by Location
- Planned Improvements for SH 60
- Johnstown Transportation Plan
- Existing & Future Traffic 2030
- Truck Activity at Night
- SH 60 Environmental Overview Study Process
- What We Heard From You at the First Open House
- SH 60 Access Control Plan (ACP) Process
- Benefits of An ACP
- Implementing the ACP
- Current Access Category Designation

Fifteen of the display boards were shown at previous meetings, and three new boards were created to address the following:

- Welcome/Meeting Purpose – this board included information that this was the third and final meeting scheduled for this project.
- Traffic Signals Along SH 60 – at each of the previous two meetings, public input tended to focus on the need for additional traffic signals. This display board addressed those concerns by discussing the traffic signal warrant process and the fact that development impact fees were already being collected to provide signals if and when traffic signal warrants are met.
- Johnstown Transportation Plan – An exhibit board depicting the system of arterials planned for Johnstown was shown to address public comments regarding bypass and alternate routes. (Note: This board was provided courtesy of the Town of Johnstown.)



### Display exhibits:

Two sets of identical aerial maps (1"=100' scale) illustrating the recommended alternative for SH 60 were displayed on long tables for the public to review. The design displays contained travel lane, auxiliary lane, shoulder, median, and sidewalk layout information along with the necessary Right-of-Way to be preserved along SH 60 between I-25 and Two Rivers Parkway. These displays also contained 66 dBA noise contours for existing and 2030 projected traffic volumes.

The Access Control Plan display (1"=100') was also placed on a long table and included property ownership information, existing access disposition, potential traffic signal locations, allowable access locations, and any intersection movement restrictions (right-in/right-out,  $\frac{3}{4}$  movement, etc.).



**Public Open House No. 3 – Comments Recorded on the Aerial Maps (from Sticky Notes)**

Location	Comments
SH 60 – between WCR 15 and WCR 17	The question was asked why there are two different speeds for this segment, depending on the direction of travel. For the eastbound movement, the posted speed is 35 mph just east of WCR 15. For the westbound movement, the posted speed is 45 mph just east of WCR 15.



### Public Open House No. 3 – Written Comments Submitted

The following written comments were either collected at the meeting or have been received to date.

- *Continue Highway 60 west to 287. Johnstown needs an east to west truck bypass. Signal lights at CR 13 and CR 15. Get CR 50 paved from CR 13 west to Frontage Road (I-25). Reduce speeds from 55mph to 45 mph from I-25 east to CR 13.*
- *Do not put a stop light or sign at SH 60 and Country Acres Drive.*
- *Do put an 8-foot tall fence along the south side of Highway 60 between CR 15 and Country Acres Drive.*
- *It was a pleasure meeting both of you (Ryan Idler and Gloria Hice-Idler) yesterday at the meeting in Johnstown.*
- *We at Pratt, representing the Pratt Technology Campus at the northeast corner of I-25 and Colorado Hwy 60 are comfortable with the proposed plans for Hwy 60 improvement and access.*

*As we understand the proposal, Hwy 60 will be expanded along our southern boundary to four lanes plus turn lanes, divided highway with raised median. There will be a fully lighted intersection at Hwy 60 and Road 9 ½ (High Plains Blvd), including left turn lane and accel and decel lanes. There will be a fully lighted intersection at the intersection of the newly placed frontage road and Hwy 60, including appropriate left turn lane and accel and decel lanes as warranted. The placement of the frontage road will be as shown on our preliminary plans submitted to Johnstown during annexation and zoning, that location determined by our understanding of CDOT plans and needs. We understand the plan also contemplates a right in/right out access to our property about midway between the two lighted intersections, with final design to be determined by all parties involved including the developer, Johnstown, and CDOT.*

*We very much appreciate the consideration CDOT and Johnstown have given and continue to give to our plan for the site and our needs for the site to ensure the most productive use of the land for all involved. Thank you.*



### Public Meeting No. 3 – Comments from Meeting Attendees to Project Representatives

- *A couple that lives along SH 60 in Johnstown was concerned about the loss of parking in front of their home.*
- *A gentleman that owns the property in the SE quadrant of SH 60/Harriet questioned why the owner of his property was labeled “Weld County”.*
- *A gentleman asked us to consider designating a traffic signal location between High Plains Boulevard and the Lutheran Church to allow for safer pedestrian access to the lake (future, when area south of SH 60 develops – by him.)*
- *Continued interest (multiple comments) about adding more traffic signals along SH 60 to provide additional traffic gaps.*
- *The American Legion Hall was incorrectly labeled. It’s actually the first building to the west.*
- *Received a comment regarding disapproval of the proposed Two Rivers Parkway improvement project. The higher speed east-to-south movement should be preserved.*





### 10.0 REFERENCES

- A History of Milliken, Colorado. 2001. As Told to and Researched by Helen and Elmer Stroh.
- Colorado Department of Transportation (CDOT), Environmental Stewardship Guide, Volume 2. May, 2005.  
<http://www.dot.state.co.us/environmental/StandardsForms/ESGuide5-12-05PrePress.pdf>
- Colorado Department of Transportation (CDOT), Region 4, Environmental Unit. EOS Desk Guide (Draft), March 6, 2006.
- Colorado Department of Transportation (CDOT), State Highway Access Code, Volume 2: Code of Colorado Regulation 601-1, March, 2002.
- Colorado Division of Wildlife, Natural Diversity Information Source.  
<http://ndis.nrel.colostate.edu>
- Federal Highway Administration (FHWA). Highway Capacity Manual, 2000. Transportation Research Board, National Research Council, Washington, D.C.
- Federal Highway Administration (FHWA). March 2002. State Highway Access Code, Volume 2, Code of Colorado Regulations 601-1, State of Colorado.
- Federal Highway Administration/Federal Transit Agency (FHWA/FTA White Paper), Linking the Transportation Planning and National Environmental Policy Act (NEPA) Process, February, 2005.
- Florida Department of Transportation (FDOT), Level of Service Handbook. 1998.
- Johnstown Area Comprehensive Plan (JACP). 2000. Prepared by the Town of Johnstown.
- Johnstown Transportation Plan. 2002. Prepared by Felsburg Holt & Ullevig. Adopted October 1999, Revised August 2002
- Johnstown/Milliken Parks, Trails, Recreation, and Open Space Master Plan. 2003. Prepared by the towns of Milliken and Johnstown, and the Thompson Rivers Parks and Recreation District, in partnership with Larimer County, Weld County, Weld County School District RE-5J, Colorado Division of Wildlife, Colorado Open Lands, and Tetra Tech RMC.
- Milliken Comprehensive Plan. 2004. Prepared by the Town of Milliken and Tetra Tech RMC.



## References

- Milliken Transportation Plan. 2000. Prepared by Eugene Coppola.
- Natural Resources Conservation Service. <http://www.nrcs.usda.gov>
- North Front Range Metropolitan Planning Organization (NFRMPO), Long Range Strategic Action Plan. December, 2003.
- North Front Range Metropolitan Planning Organization (NFRMPO), Regionally Significant Corridors. August 8, 2003.
- U.S. Fish and Wildlife Service. <http://www.fws.gov>



## Corridor Vision #15: SH 60 / SH 56

<b>State Highway:</b>	SH 60A and B	<b>Planning Region:</b>	3 – North Front Range
<b>Beginning Mile Post:</b>	0		
<b>Ending Mile Post:</b>	14.867		

SH 60 from US 287 to Two Rivers Parkway, includes LCR 14 from LCR 17 to US 287, SH 56 from US 287 to I-25, and WCR 44/WCR 15/WCR 46 from I-25 to WCR 17, US 287 to Berthoud Bypass.

### **Primary Investment Need: Increase Mobility**

#### **Vision Statement**

The Vision for the SH 60/SH 56 corridor is primarily to increase mobility as well as maintain system quality and improve safety. This corridor includes SH 60 and SH 56, which are local facilities on the State Highway system, along with connecting off-system arterial roads. Together, these facilities comprise a corridor that provides local area-wide access to higher classified facilities and makes east-west connections within the Johnstown, Milliken and Berthoud areas. Future travel modes to be planned for in the corridor include passenger vehicle, bus service, and truck freight. Transportation Demand Management (TDM) would likely be effective in this corridor. The transportation system in the area serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility, transportation choices, connections to other areas, safety, and system preservation. They depend on commercial activity and residential development for economic activity in the area. The area surrounding this corridor is transitioning from agricultural to suburban, and users of this corridor want to support the movement of commuters and freight in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

#### **Goals / Objectives**

- Increase travel reliability and improve mobility, particularly for commuter travel.
- Initiate TDM usage to reduce dependency on single occupancy vehicles.

#### **Strategies**

- Improve mobility by constructing improvements, such as auxiliary lanes and wider shoulders.
- Implement appropriate TDM mechanisms.
- Promote ITS strategies, such as incident response, traveler information and variable message signs.
- Maintain and improve the existing infrastructure through enhancements, such as surface treatment, bridge repairs or replacements, improved striping paint and sign replacements.



# SH 60 Environmental Overview Study (EOS)

## Key Person Interview Questions

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Interviewee: \_\_\_\_\_ Date \_\_\_\_\_

The following list of open-ended questions are intended to help the Study Team gain a general understanding of existing transportation conditions and major issues within the study area. The depth of discussion related to each category will depend on the specialization or area of interest of the person/s being interviewed.

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### General Community Conditions

1. What are the major changes in transportation, land use, growth and development, – both positive and negative – you've seen in Johnstown/Milliken area over the last several years?
2. How would you describe the quality of life in the area? What are the strengths/best qualities of the neighborhoods?
3. How would you describe the pattern of development in Johnstown and Milliken? How is it changing?
4. What elements of the community do you hold dear and think should be protected as we begin to consider potential transportation improvements?

### Transportation Facilities

5. What do you think are the three most critical problems with the existing transportation system now? Over the next several years?
6. Do you think the transportation system – including vehicles, pedestrian, and bicycles – works well for local commerce and businesses?
7. Do you think the transportation system works well for the day-to-day needs of residents, like commuting to work, shopping, government offices, etc.?

# SH 60 Environmental Overview Study (EOS)

## Key Person Interview Questions

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8. Do you think the transportation system works well for the local and regional traffic, e.g. trucks, tourism, thru-traffic? West Greeley to SH 85 via Two Rivers Parkway?
  
9. Are you aware, or have you participated in the public process for other highway projects such as North I-25 EIS, Two Rivers Parkway, or SH392?
  
10. What is your perception of truck traffic in the study area?
  
11. What are the three roadway locations that are your biggest safety concern?
  - A.
  - B.
  - C.
  
12. Do you see the need for improved bus service in the area?
  
13. How well do the bicycle and pedestrian facilities work and where do you see the need for more?

### [Study Question](#)

14. What do you think are the best ways to involve people in the study process?

# SH 60 Environmental Overview Study (EOS)

## Key Person Interview Questions

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Notes:

SH 60 Environmental Overview Study (EOS)  
Key Person Interview Questions

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