Glenwood Springs Bike and Pedestrian Transit Access Study

Prepared for

City of Glenwood Springs, CO

TRANSPORTATION CONSULTANTS, INC.

Glenwood Springs Bicycle/Pedestrian Transit Access Study

Final Report

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February 28, 2008

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CHAPTER I
Introduction

The City of Glenwood Springs contracted with LSC Transportation Consultants, Inc. to complete the Glenwood Springs Transit Access Study, a tool to be used by local decision makers related to bicycle and pedestrian access to bus stop facilities in the Glenwood Springs area.

It is essential to provide safe pedestrian facilities so that passengers may access the transit system and their ultimate destination. Similarly, safe access to schools is very important. A lack of safe pedestrian access often leads to significant traffic congestion as parents drive their children to and from local schools. These and many other considerations are important factors in the development of this transit access plan for the Glenwood Springs area.

The City of Glenwood Springs currently provides transportation services through Ride Glenwood Springs. Regional service is provided through the Roaring Fork Transportation Authority (RFTA). Ultimately, this project will assist the City of Glenwood Springs' decision-makers and local planners in understanding and improving current access to transit. Glenwood Springs can at times be overwhelmed with pedestrian activity, and there have been numerous recommendations to improve pedestrian movement and safety along the major thoroughfares. The information gained through this study provides the necessary data to make informed decisions for pedestrian improvements necessary to accommodate reasonable access to transit stops. Information can then be used wisely to allocate funding and place projects into the Capital Investment Plan.

PURPOSE OF THE STUDY

The primary goal of this project is to assist local decision-makers with a prioritized list of pedestrian-related facility improvements which will be included in the Glen-

wood Springs Capital Improvements Plan (CIP) as related to bus stop improvements and direct access to stops. These prioritized projects identify both short- and long-term investments in the area. While current and future improvements are required to provide safe and accessible pedestrian walkways (sidewalks), some historical developments in this area did not incorporate these facilities. Most current bus stops in the area are in rather good shape and meet minimum design standards.

STUDY AREA

The study area is the City of Glenwood Springs and appropriate areas surrounding current bus stop facilities. This includes the direct and adjacent access to these stops within a short distance, mainly at major street intersections and local destinations.

REPORT CONTENTS

Chapter II presents an initial field investigation of the area. This preliminary investigation included on-site visits of the area and initial inventory of existing facilities. The initial inventory identified all bus stops served by Ride Glenwood Springs and RFTA, and included a precursory investigation of these facilities.

Chapter III discusses transit-related planning considerations as they relate to bus stops in the area. This chapter also discusses Americans with Disabilities Act considerations as interpreted by the US Access Board in the recent Public Right-of-Way design considerations.

Chapter IV presents the inventory of bus-related facilities. This includes detailed maps and databases of existing bus stop facilities, shelters, and direct access to these facilities. This inventory is presented in text, tables, and graphics. Additionally, pedestrian ways were inventoried for their existence and connection to existing bus stops. The inventory indicates whether sidewalk facilities exist within approximately 500 feet of current bus stops and how these pedestrian facilities relate to accessibility to local businesses and other transit destinations. Informa-

tion was taken from existing aerial photography as well as on-site field investigations.

Chapter V presents the criteria used to determine which projects the city should invest in to obtain the greatest improvement to the pedestrian system. The criteria were developed by the LSC team and were presented to the Transportation Commission for final approval. The criteria were used to rank the projects in order of highest need and importance to the Glenwood Springs area and were used to determine the fiscally-constrained projects appropriate for inclusion in the CIP. Additionally, this presents the pedestrian and stop improvement rankings for the area.

Chapter VI presents an overview of potential funding mechanisms, and Chapter VII presents a brief review of passenger education and a rider training program which could be implemented.

Finally, Chapter VIII presents the final list of prioritized projects and additional improvements.

STUDY APPROACH

The approach to preparing a prioritized list of bus stop improvements involves both a subjective and objective means to determine the best improvements for the community. One important step toward providing community-wide acceptable recommendations involves key groups and individuals such as the Transportation Commission, local residents, key stakeholders, the Colorado Department of Transportation, current bus patrons, and others as identified throughout the study.

Project Team

An initial "kick-off meeting" was held in Glenwood Springs, Colorado on June 5, 2007. The meeting was attended by the Transportation Commission of the City of Glenwood Springs. The project team met to discuss project goals, priorities, the public participation process, and a time line for completion of the final study. The project team also discussed which local stakeholders would be critical in completing the study and how to best inform the residents of the study.

Technical reports were presented at various Transportation Commission meetings. Discussion included existing deficiencies, future operational plans, bus stop improvements, walkway improvements, safety, and bike access.

This Final Report presents a lists of projects that the city could develop over the short range (six years) for the area. This document should be reviewed by the Transportation Commission in detail.

Current Issues and Priorities

During the June kick-off meeting, the project team identified some of the issues with pedestrian access in the Glenwood Springs area. Several of the issues discussed deal with accessibility for both passengers and cyclists. Currently, the pedestrian network has some connectivity issues as well as accessibility in terms of compliance with ADA guidelines for bus stops. Additionally, connectivity with the cycling community was seen as an important issue.

Issues

The following does not represent a comprehensive list of issues in the area, but provides a preliminary list developed by the project team as well as through on-site visits:

- Some connectivity issues from subdivision to destinations.
- Schools and the connectivity and safety issues with pedestrian networks from home to school.
- A lack of design standards or policies.
- Existing barriers – US 6 limited right-of-way.
- Stops need to be ADA compliant.
- Cyclists' needs and the trail and bike network need to be examined in relation to bus activity.

Additional Community Input

A community Open House was held to solicit input on projects and improvements. While this Open House was widely advertised, it unfortunately had very low attendance. The Transportation Manager for the City of Glenwood Springs has conducted newspaper interviews, placed information on the city's website, made

contacts with local stakeholders and riders, and worked with the Transportation Commission, a group of local residents, stakeholders, and decision-makers. Several comments were received throughout the course of this project via mail, e-mail, and phone calls.

STATEWIDE GUIDE

The information presented in the following section is taken from the *Colorado Guide for the Development of Local and Regional Bicycle and Pedestrian Plans.* This document is intended to outline the state's inclusion of bicycle and pedestrian planning in the Statewide Transportation Plan. The Guidebook covers the four "Es" of planning for facilities:

- Engineering
- Education
- Enforcement
- Encouragement

Taken directly from the Guidebook, the following principles provide the foundation for providing a safe and equitable bicycle and pedestrian network throughout the state. These same principles should guide development in the Glenwood Springs area. Additionally, information presented on bus stop design guidelines, along with this information, were used through the prioritization process.

- *Accessibility* – Walking and bicycling are a free and direct means of accessing local goods, services, community amenities, and public transit and should be provided with equitable access to all transportation facilities and services. Facilities must meet all Americans with Disabilities Act rules and regulations.

- *Connectivity* – Enhance modal and intermodal transfers and connections within the transportation network.

- *Coordination* – Integrate bicycle and pedestrian transportation facilities and services with other planning and development.

- *Corridor Preservation* – Identify transportation corridors necessary for expansion or enhancement of the transportation system.

- *Customer Focus* – Address the needs and perceptions of community members through a comprehensive public involvement process.

- *Environmental Sustainability* – Be dedicated to protecting and enhancing the environment. Walking and bicycling rely on human power and have negligible environmental impact.

- *Equity* – Walking is the only mode of travel that is universally affordable and allows all people (children, adults, senior citizens, people with disabilities, and low income) to travel independently.

- *Economic Viability* – A bicycle- and pedestrian-friendly environment encourages social interaction and contributes to the economy.

- *Financial* – Identify and consider new and creative sources of funding in addition to anticipated resources.

- *Health and Well-Being* – Walking and bicycling are proven methods of promoting personal health and well-being.

- *Mobility* – Consider the movement of people, goods, services, and information.

- *Multimodal* – Consider all modes of transportation and identify the most appropriate mix of modal facilities and services.

- *Popsicle Principle* – Facilitate the ease by which an eight-year-old child can safely and happily walk or bike to a neighborhood store for a Popsicle.

- *Safety* – Incorporate appropriate measures to minimize danger, risk, or injury in the development, operation, and maintenance of transportation facilities. An environment in which people feel safe and comfortable walking increases community safety for all.

- *System Management* – Optimize the effectiveness of current transportation facilities and services.

- *System Maintenance* – Define the appropriate maintenance level for transportation facilities and services.

These principles were observed when and where appropriate when prioritizing projects in the Glenwood Springs study area.

Chapter II

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CHAPTER II

Initial Field Investigation

The LSC team made initial field investigations regarding pedestrian facilities in the study area in June 2007. These investigations were based upon preliminary analysis of existing bus stop facilities made from digital aerial photography and Geographic Information Systems (GIS) information. The current GIS database was very limited, so a completely new database was created. This section briefly outlines the initial inventory and field investigation conducted to prepare a complete bus stop inventory. This was used to map the locations of existing facilities as well as to indicate areas which need improvements. The maps and list of facilities were used to develop the priority of improvements to bus stop and pedestrian facilities in the study area.

INITIAL ANALYSIS OF FACILITY LOCATION

An initial windshield field survey of the study area was completed by both LSC and City of Glenwood Springs representatives. The study team drove the Glenwood Springs area collecting preliminary information, such as location, type, apparent issues, and initial observation of current problems. Initial notes about the facilities were taken by observers. These notes were used to update the features which were known to exist. The information was then processed in the office to develop a GIS database and to determine where additional field surveys were required. Once information was obtained on the initial condition of stops, a data collection effort was outlined, including developing a list of specific attribute information for each stop. Over 75 attributes for each stop were collected by a field team in June 2007. Additionally, City of Glenwood Springs staff collected detailed boarding information by stop and passenger type (wheelchair/bicycle) for each of the stops served by Ride Glenwood Springs. Figure II-1 provides the current location of stops served by both Ride Glenwood Springs and RFTA.

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Figure II-1
Glenwood Springs Existing Bus Stops

ride Glenwood Springs

Glenwood Springs Middle School
Glenwood Springs Elementary School
Glenwood Springs High School
Saint Stephen's School
Sopris Elementary School

- Glenwood Bus Route
- On Call Service
- Southern Bus Route
- Schools
- Parks
- Scheduled Stop
- On Call Stop

0 0.25 0.5 1 Miles

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Chapter III

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CHAPTER III

Transit Planning Considerations

Ride Glenwood Springs serves the study area with one bus route. The route stops at approximately 30 bus stops, comprised of signs and shelters. Transit planning considerations with regard to accessible and safe bus stops must carefully be addressed by any entity operating a transit system. A bus patron must travel to and from each bus stop to their final destination, whether that destination is 100 feet or one-quarter of a mile away. The connectivity to these stops is vital to allow disabled bus patrons—as well as cyclists, children, and the general public—access both to the stop as well as to their final destination. It is not only necessary to provide improvements to navigate throughout the Glenwood Springs area, but to provide safe and efficient travel ways to and from transit stops. This section provides a general discussion of the planning considerations and standards which must be addressed as part of an accessibility plan for residents.

PEDESTRIAN ACCESSWAYS

Pedestrian accessways affect the safety, comfort, and convenience of bus patrons. Well-planned accessways to bus stops are critical to passengers as all bus passengers are also pedestrians. Access must be provided for those pedestrians with disabilities according to the ADA and US Access Board. Access, however, is not strictly limited to the bus stop waiting area, but includes access to that waiting area. Adequate sidewalks must be provided which connect to waiting areas for passengers, especially those in wheelchairs, who may not otherwise be able to reach a waiting area.

Sidewalks and Curbs

Access to and from bus stops should be clearly defined and as direct as possible. Surfaces should be non-slip, well-drained, and constructed of concrete, or similar materials. Abrupt changes in grade should be avoided and, according to the US Access Board, changes in grade from approximately eight percent to 10 percent may preclude independent use of a curb ramp.

According to the Access Board:

> *"Sidewalks are walkways that parallel a street or highway within the roadway border width. The term generally implies a separated (horizontally and/or vertically) and paved surface. Sidewalks in the public right-of-way most commonly border and take the slope of adjacent roadways. Shared-use paths may also serve a pedestrian circulation/transportation function, particularly in suburban and rural rights-of-way. Where such a route is located in a public right-of-way and provides a direct pedestrian connection between neighborhoods, residential areas, schools, employment centers, and other origins and destinations, it must be accessible."*

Walkway width recommendations in current transportation industry guidelines generally exceed the three-foot minimum needed for accessible travel. The Institute of Transportation Engineers (ITE), in its 1998 recommended practice publication *Design and Safety of Pedestrian Facilities,* recommends planning sidewalks that are a minimum of five feet wide with a planting strip of two feet in residential and commercial areas. AASHTO's "Green Book" recommends a minimum paved width of approximately 10 feet for shared-use paths.

According to the Institute of Transportation Engineers and the Federal Highway Administration, sidewalks should be at least five feet wide. Even though this is a recommendation, five feet is the minimum width that allows two pedestrians to pass or walk side-by-side comfortably.

All sidewalks should be equipped with wheelchair ramps (curb cuts) at all intersections. Sidewalks should be well lit to provide an acceptable level of safety and security. When possible, the construction or major repair of sidewalks should be coordinated with roadway improvements. All new roadway projects in Glenwood Springs adhere to this standard of incorporating curb cuts at intersections.

Sidewalks are the most important element of a pedestrian-friendly environment. They provide the space that pedestrians need to safely travel within the right-of-way. Although sidewalks are mainly intended for travel, they are often used for other activities such as playing, running, skating, etc.

Sidewalks can be attached to the roadway traveled way or separated by a buffer area such as a planted strip. If there is not a buffer area, a curb should be provided, as shown in Figure III-1. The main advantage of having a buffer area is that pedestrians are kept at a greater distance from moving vehicles and therefore pedestrian safety is increased. In many cases, on-street parking can work as a buffer area. Nearly all sidewalks along the major arterials are attached

Figure III-1
Attached Sidewalk

Figure III-2
Detached Sidewalk

The buffer zone should be at least two feet wide to allow maintenance activities as illustrated in Figure III-2. However, it is desirable to have buffer zones four to six feet wide. Depending on the type of facility, the buffer zone can change. For instance, a landscaped strip could be suitable for suburban areas while space dedicated to street furniture could be the most appropriate for certain commercial districts.

The most common material used to make sidewalks is concrete. However, there are several alternative materials including asphalt, brick (as illustrated in Figure III-3), and crushed stone. Regardless of the material used, sidewalks should have a stable, firm, and slip-resistant surface. Figure III-4 shows typical roadway cross sections with attached and detached sidewalks based upon the current engineering design standards. Nearly all sidewalks in Glenwood Springs are constructed of concrete.

Figure III-3
Brick Sidewalk

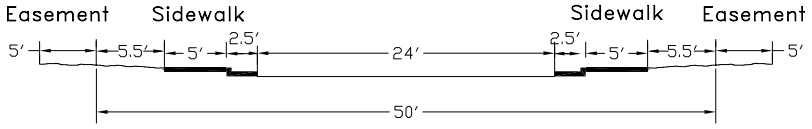
Crosswalks and raised intersections are used to delimitate conflict zones, canalize pedestrians and bicyclists crossing traffic, and increase drivers' awareness. According to CDOT, "legal crosswalks exist at all public street intersections whether marked or unmarked." Nevertheless, mid-block crosswalks should always be marked.

Figure III-4

Typical Roadway Cross Sections with Detached and Attached Sidewalks

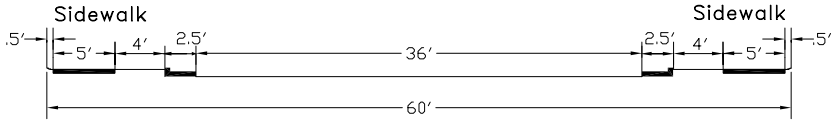
Urban Local with Attached Sidewalk

50' R.O.W.



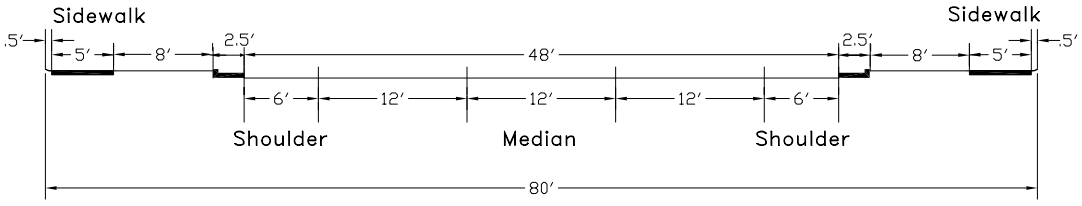
Urban Residential Major Collector with Detached Sidewalk

60' R.O.W.



Urban Non–Residential Collector with Detached Sidewalk

80' R.O.W.



Source:
El Paso County Engineering Criteria Manual (2004)

Not to Scale

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Previous research has shown that the likelihood of motor-vehicle/pedestrian crashes at uncontrolled intersections on multilane facilities with ADT above 12,000 is higher when crosswalks are marked. Apparently, pedestrians expect motor vehicles to stop for a pedestrian in a marked crosswalk and that is not always the case. Therefore, crosswalks should be used in combination with strategies such as signing and traffic calming in order to achieve better results. Current 2006 traffic volumes along Highway 83 through Glenwood Springs indicate over 27,000 vehicles per day.

Figure III-5
Raised Crosswalk

Crosswalks can also be used to increase visibility of pedestrians and bicyclists. The use of textured/ colored materials helps for this purpose. Textured crosswalks can be complemented with stripes on the sides providing color contrast that is easily seen by drivers.

Raised crosswalks, as illustrated in Figure III-5, act as traffic calming devices and greatly increase pedestrians and bicyclist visibility. However, this type of crosswalk is only recommended for low-speed facilities.

Approximate installation costs are $100 for a regular striped crosswalk, $300 for a ladder crosswalk, and $3,000 for a patterned concrete crosswalk. Maintenance of the markings must also be considered and varies by region of the country and materials used.

Crossing Distances

The distance a pedestrian has to walk from one side of the street to the other is a very important variable when designing a pedestrian-safe environment. In general, the shorter the distance, the better. This variable is closely related to the signal timing (at signalized intersections).

Crossing distances can be reduced by constructing curb bulbs and refuges. The former have the main purpose of shortening the width of the vehicle traveled way and therefore minimize the crossing time for pedestrians and bicyclists. Curb

bulbs, also called curb extensions shown in Figure III-6, improve visibility and allow room for street furniture while acting as traffic calming elements.

Refuges can be located at medians and islands, and their purpose is to provide a temporary safe place for pedestrians while crossing the road. A refuge splits crossing distances and, sometimes, its geometry is used to position pedestrians so that they can look at the oncoming traffic.

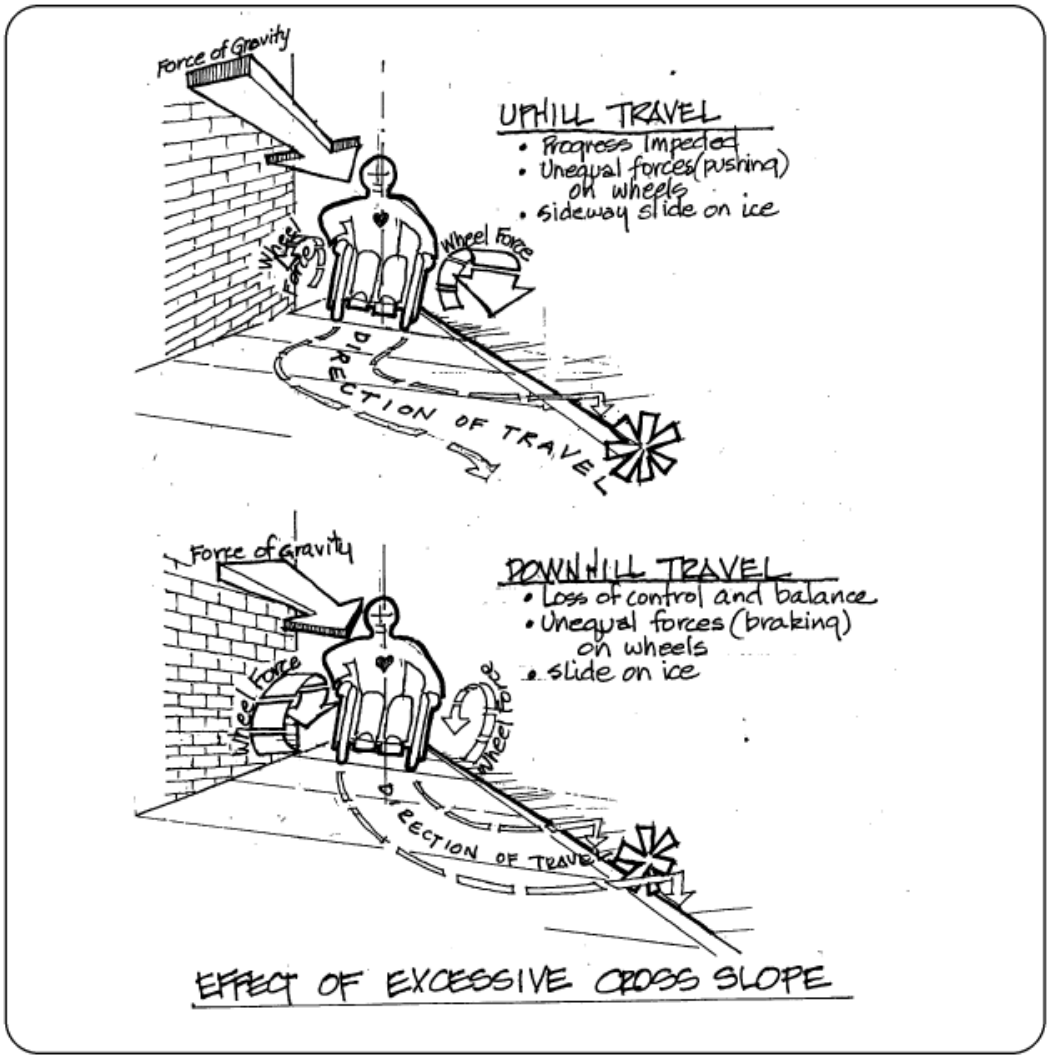
Figure III-6
Curb Extensions

Crossing distances at intersections can also be shortened by reducing the curb radius. Curb ramps provide access between the sidewalk and roadway for people using wheelchairs, strollers, walkers, crutches, handcarts, bicycles, and also for pedestrians with mobility impairments who have trouble stepping up and down high curbs. Curb ramps must be installed at all intersections and mid-block locations where pedestrian crossings exist, as mandated by federal legislation (1973 Rehabilitation Act and ADA1990). The cost is approximately $800 to $1,500 per curb ramp (new or retrofitted).

Cross Slopes

Excessive cross slope is a major barrier to travel along sidewalks for pedestrians who use wheelchairs and scooters. Sidewalk cross slope should be limited to 1:48 (two percent). Pedestrians who use manual wheelchairs and walking aids must expend additional effort to counteract the effects of cross slope. This is particularly difficult when the sidewalk running slope is steep. A wheelchair or walker needs a planar surface for travel. Where a drive wheel, caster, or leg tip loses contact with the surface, control and stability are at risk. Not only can this cause a risk of tipping, the undue stress on wheel bearings and drive motors can be a costly expense to individuals. Figure III-7 illustrates the problematic issues with excessive cross slopes.

Figure III-7
Excessive Cross Slope



U.S. Architectural and Transportation Barriers and Compliance Board, 2005.

Walled Residential Areas

Walled communities are becoming more and more prevalent in the design of modern subdivisions. These subdivisions limit the access to the areas by prohibiting, at least, vehicular traffic from entering and exiting at numerous locations. However, these walled residential areas can allow more pedestrian entries in and out of the area to provide more access specifically for pedestrian movements. These types of developments generally create barriers to bus stop access and increase the time required to travel to a stop. It is necessary that transit

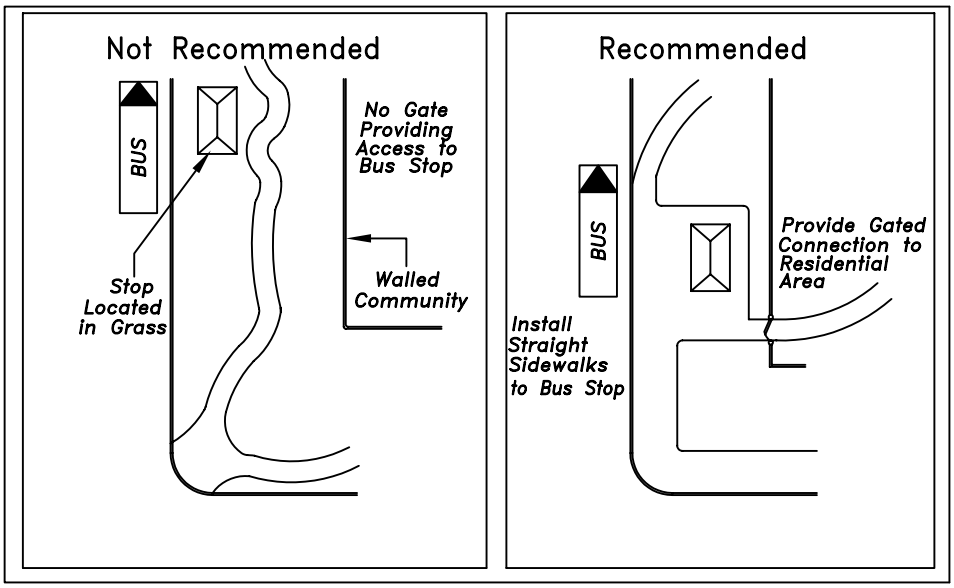
coordinators work with local developers and planners to ensure subdivision guidelines are followed and to ensure local residents have adequate access to a bus stop. Research has consistently shown that most passengers are not willing to walk more than one-quarter mile to reach a bus stop. Poor coordination between bus stops around walled communities can all but eliminate potential ridership.

These barriers must be carefully planned so that at least pedestrian ways are allowed and placed throughout the barriers so that no development is completely enclosed. The main point of the walled communities is to minimize unnecessary vehicle traffic and to incorporate a sense of place and community. While this is vitally important to those who reside in the area, it is also important to realize and understand the connectivity of a bicycle and pedestrian network. Figure III-8 illustrates examples of recommended and not recommended methods of providing bus stop access from a walled residential area.

Rural Areas

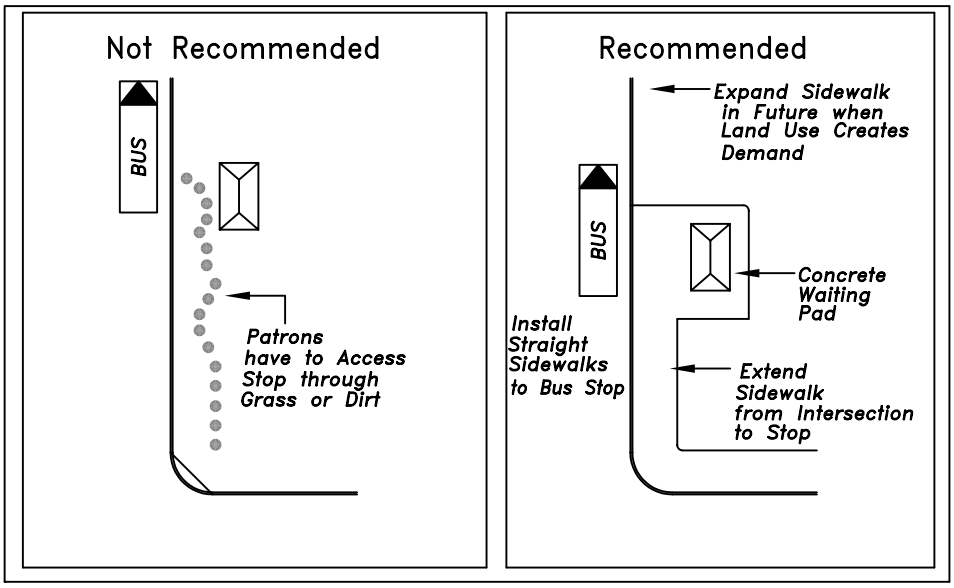
Undeveloped rural areas typically do not have sidewalks. Some areas in Glenwood Springs show signs of a rural character. Minimum standards in rural areas are that sidewalks from the nearest intersection to the bus stop be provided. As an area becomes more and more urban in nature, this minimum standard may not suffice to provide adequate and safe access to the bus stop. While each bus stop must be evaluated separately, some minimum standards for access should be established for all stops. This may include a standard of at least one concrete pedestrian way to be provided from either direction of the stop.

Figure III-8



Examples of Recommended and Not Recommended
Bus Stop Access From a Walled Residential Area

Source: TCRP Report 19, *Guidelines for the Location and Design of Bus Stops*



Examples of Recommended and Not Recommended
Bus Stop Access in a Rural Area

Source: TCRP Report 19, *Guidelines for the Location and Design of Bus Stops*

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WALLED RESIDENTIAL ACCESS & RURAL ACCESS

GENERAL STOP DESIGN GUIDELINES

In order for a bus stop to be usable, the design must incorporate various elements that relate to safety and accessibility. The recommended design provides an unimpeded pathway from the building or sidewalk being served by the transit stop and the transit vehicle. This entails positioning street furniture, landscaping, and other obstacles from protruding into the path of travel. Grade-level changes in sidewalks and platforms should also be avoided. Flat, stable surfaces and seating adjacent to pathway routes are also important. The path of travel from the designated waiting area to the vehicle must have a simple and consistent layout. The design should include unbroken travel paths from the sidewalk to the bus boarding platform as well as adequate illumination where necessary.

In portions of Glenwood Springs, particularly along Highway 6, it is not uncommon for bus stops to be located along paved roads with open ditches along the sides. Pedestrians walking to and from bus stops are often required to travel on the shoulder of the road. In these areas transit riders also must board and deboard buses without the benefit of a curb to lift them closer to the first step of the bus, and transit passengers have to get on and off a bus on a gravel or dirt surface. This boarding and unloading situation can be difficult for individuals such as the elderly or those who use wheelchairs, and should be addressed in those areas where the replacement of ditches or paved shoulders will be a long-term project.

Americans with Disabilities Act (ADA)

A key consideration of design for any public facility is the Americans with Disabilities Act (ADA) of 1990. The Americans with Disabilities Act (ADA) of 1990 is a major civil rights law prohibiting discrimination on the basis of disability and covers topics such as employment, transportation, and services provided by public entities. Under the ADA, responsibility for developing design requirements for the construction or alteration of facilities is assigned to the Architectural and Transportation Barriers Compliance Board, more commonly known as the Access Board, which is an independent federal agency. These cover both facilities in the private sector (places of public accommodation and commercial facilities) and the

public sector (state and local government facilities). In 1991, ADA Accessibility Guidelines (ADAAG) were published to serve as the basis for standards used to enforce the law and were periodically updated after adoption by the Department of Justice (DOJ) and the Department of Transportation (DOT), which are responsible for actual enforcement. In 2004, the Access Board issued updated accessibility guidelines for new or altered facilities. These new guidelines overhaul the original ADAAG—although more in format than substance when applied to transportation facilities (which include bus stops).

The guidelines also have implications under the Architectural Barriers Act (ABA) of 1968. The ABA requires access to facilities designed, built, altered, or leased with federal funds. The US Access Board has updated its guidelines for ABA facilities jointly with the new ADA guidelines so that a consistent level of access is specified under both laws. In addition, the Access Board is currently reviewing new guidelines for Public Rights-of-Way (PROW) which are expected to eventually affect bus stop requirements and access.

Existing Facilities

The ADA and ABA guidelines cover new construction and planned alterations and generally do not apply to existing facilities except where altered. Facilities built or altered according to earlier versions of the ADA or ABA standards will not necessarily have to meet the updated version except where they are subsequently altered or renovated. It is expected that the DOJ—which regulates requirements for existing facilities under the ADA—intends to address coverage of facilities built or altered according to the original ADA standards in its forthcoming rulemaking to update the standards, although it is not yet known when a formal Notice of Proposed Rulemaking (NPRM) will be issued. Another unknown is the extent to which the NPRM and final regulations will require retrofitting of existing facilities, such as the requirement for barrier removal in places of public accommodation. With respect to ABA facilities, the Board has clarified in the guidelines that facilities built to earlier ABA standards are subject to the new requirements only in relation to planned alterations. Properly located, adequately designed, and effectively enforced bus stops can improve public transportation service and expedite general traffic flow. Decisions regarding bus stop areas and locations

require careful analysis of passenger requirements and the interaction of stopped buses with general traffic flow. It is imperative that the following guidelines serve as general design principles to be interpreted and adapted to site-specific situations in each jurisdiction. The recommendations presented in the subsequent section incorporate concepts to improve passenger safety, comfort, and accessibility as well as baseline ADA requirements.

TRANSIT FACILITY DESIGN

The transit improvement design guidelines presented in this section are organized by the following topics:

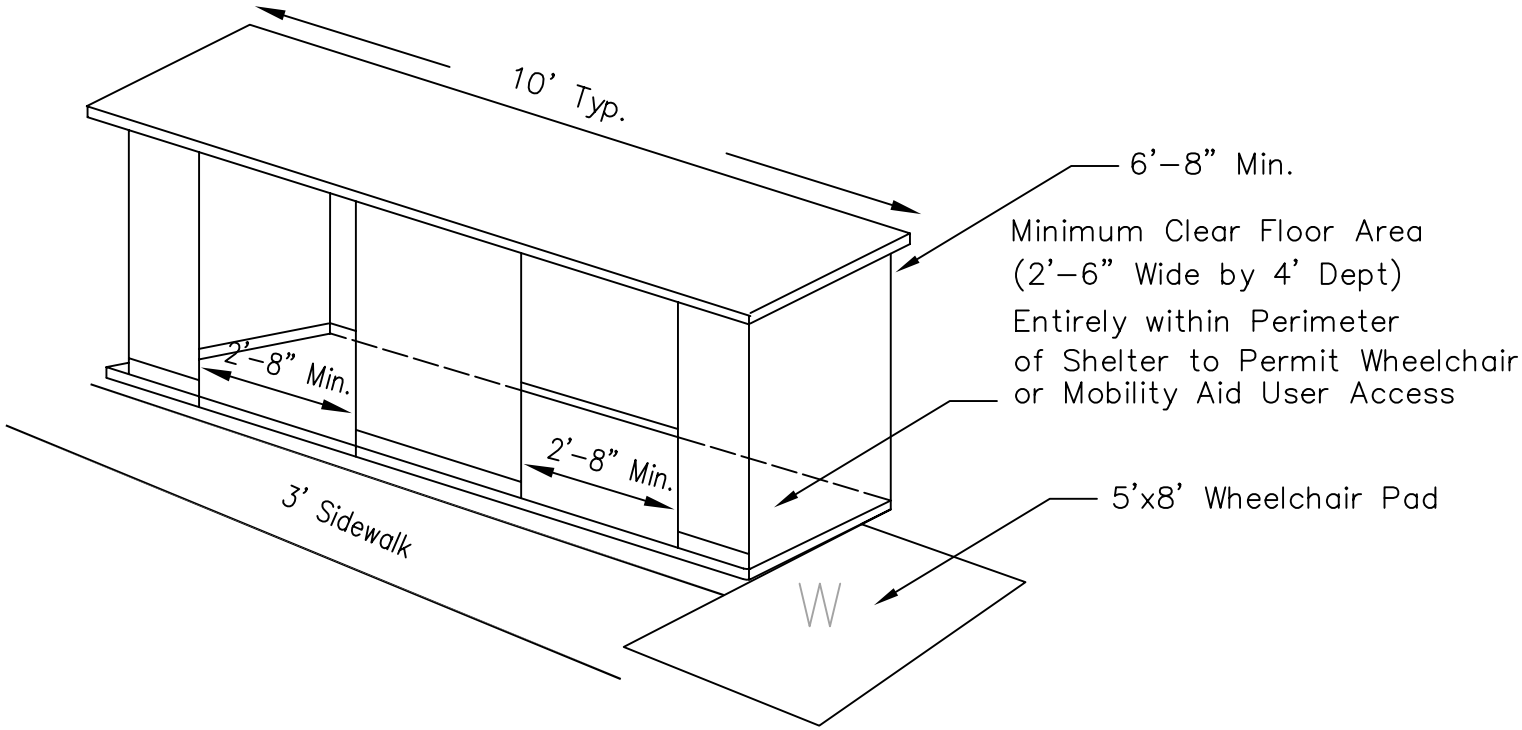
- Bus stop area, bus landing pads, and accessible paths
- Bus stop spacing
- Bus stop placement
- Bus pullouts
- Signs
- Passenger amenities (shelters, benches, trash receptacles, lighting, bicycle parking)
- Park-and-ride/multimodal facilities
- Turning radii

Bus Stop Area, Bus Landing Pads, and Accessible Paths

Figure III-9 illustrates the recommended bus stop design for either a rural or urban area. As shown, the recommended design encompasses the baseline requirements of the Americans with Disabilities Act and allows patrons to have direct access to the transit vehicle. Sidewalks are common in Glenwood Springs, and it should be feasible to have a concrete landing pad at each stop. The recommended bus stop, as illustrated, provides an accessible and comfortable waiting area for all transit users. Wheelchair users in particular require a stable, level, and unobstructed landing pad for the wheelchair lift or ramp to be deployed when boarding and alighting the bus. With respect to the waiting area, wheelchair users also require adequate spacing at the stop to wait, as well as adequate space to maneuver from the waiting area to the landing pad. Anecdotal experience throughout the country shows that a curb of some sort is usually necessary in order for a wheelchair user to be able to easily get on or off a bus with a ramp, even if the ramp is allegedly "ADA compliant." As virtually all transit passengers are also pedestrians on one or both ends of their trip, well-planned access ways that provide direct, safe, and attractive access to bus stops can significantly encourage transit use.

Figure III-9

ADA Minimum Dimensions of a Passenger Loading Pad and Shelter



SOURCE: TCRP REPORT 19, *GUIDELINES FOR THE LOCATION AND DESIGN OF BUS STOPS*

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ADA MINIMUM BUS STOP REQUIREMENTS

Accessible path design should include the following:

- Access to and from bus stops should be as direct as possible.
- The site design process for new developments should strive to reduce the length and inconvenience of pedestrian accessways between destinations and transit stops.
- A sidewalk should be provided from the nearest intersection to the bus stop to provide a minimum level of access, if possible.

Minimum ADA design implications for bus stop areas, bus landing pads, and accessible pedestrian accessways include the following:

- A minimum clear passage width of 48 inches is recommended by the Access Board's guidelines for the public right-of-way. This is especially important next to a curb drop-off.
- An accessible route from the public transportation stops to the route that is accessible for both people with disabilities as well as for the general public.
- The running slope of the accessible pathway shall not be steeper than 1:20 while the cross slope shall not be steeper than 1:48 (two percent).
- Parallel to the roadway, the slope of the boarding and alighting area shall be the same as the roadway (to the maximum extent practicable). The maximum slope perpendicular to the roadway shall not exceed 1:48 (two percent).
- The bus landing pad, when installed alone on a shoulder in a rural area, must be elevated six inches above road grade for safety and accessibility purposes.
- Stable, firm, and slip-resistant ground and floor surfaces.
- Grating spaces, or drainage grates, which are necessary for water drainage, should be no greater than 9½ inches long in one direction. Spaces longer than this would impede the use of a wheelchair.

Obstacles

All paths from the bus stop to major destinations should be examined for obstacles that may interfere with access to or from the stop. Obstacles that protrude into the access path might restrict wheelchair movements. Obstacles that are higher than 27 inches may cause problems for a person with a vision impairment who may not be able to detect an obstacle with a cane. Despite their training, it may be possible that a guide dog or other service animal may lead a person with vision impairment off of the path in order to get around the obstacle. Even though it may not be generally considered the responsibility of the transit agency to address accessibility problems along the entire access path, the agency staff should keep in mind that an obstacle may make a path inaccessible for potential patrons who have disabilities.

Bus Stop Spacing

Bus stop spacing should depend on ridership. Ridership, in turn, is typically affected by development type, such as residential, commercial, or Central Business District. It is recommended that the range of spacing between each stop in Glenwood Springs be between 660 and 880 feet on all routes in developed areas. This measurement is a guideline only, and other factors should be considered when planning the actual location of bus stops, including the availability of pedestrian access and the location of major trip generators. Bus stops shall be placed close to subdivision access points and within one block of activity centers such as shopping centers, schools, health care facilities, social service offices, apartment complexes, and mobile home parks. Studies have shown that transit use begins to drop off when potential users have to walk more than 1,000 feet. It has also been found that too many stops can impede performance of the transit system by making it unnecessarily slow.

Carefully placed stops have the potential to improve bus service for patrons. Bus stop spacing can range from 300 to 1,000 feet in Central Business Districts (CBD) or from 650 to 2,600 feet in rural areas. Typical spacing standards are established by each transit agency, but should be evaluated regularly to determine if the spacing is adequate or changes need to be made.

Spacing Standards

Currently, Glenwood Springs does not have a standard for bus stop spacing. Table III-1 provides typical bus stop spacing standards. As shown, bus stop spacing in the Glenwood Springs area is consistent with typical spacings for urban areas. However, some areas may need to have decreased spacing between stops. Also, determining the level of pedestrian access to these stops is an important function in spacing. It would not make sense to have stops every 800 feet if there are no adequate pedestrian facilities to access these stops. Figure III-10 illustrates the recommended spacing.

Table III-1
Typical Bus Stop Spacing

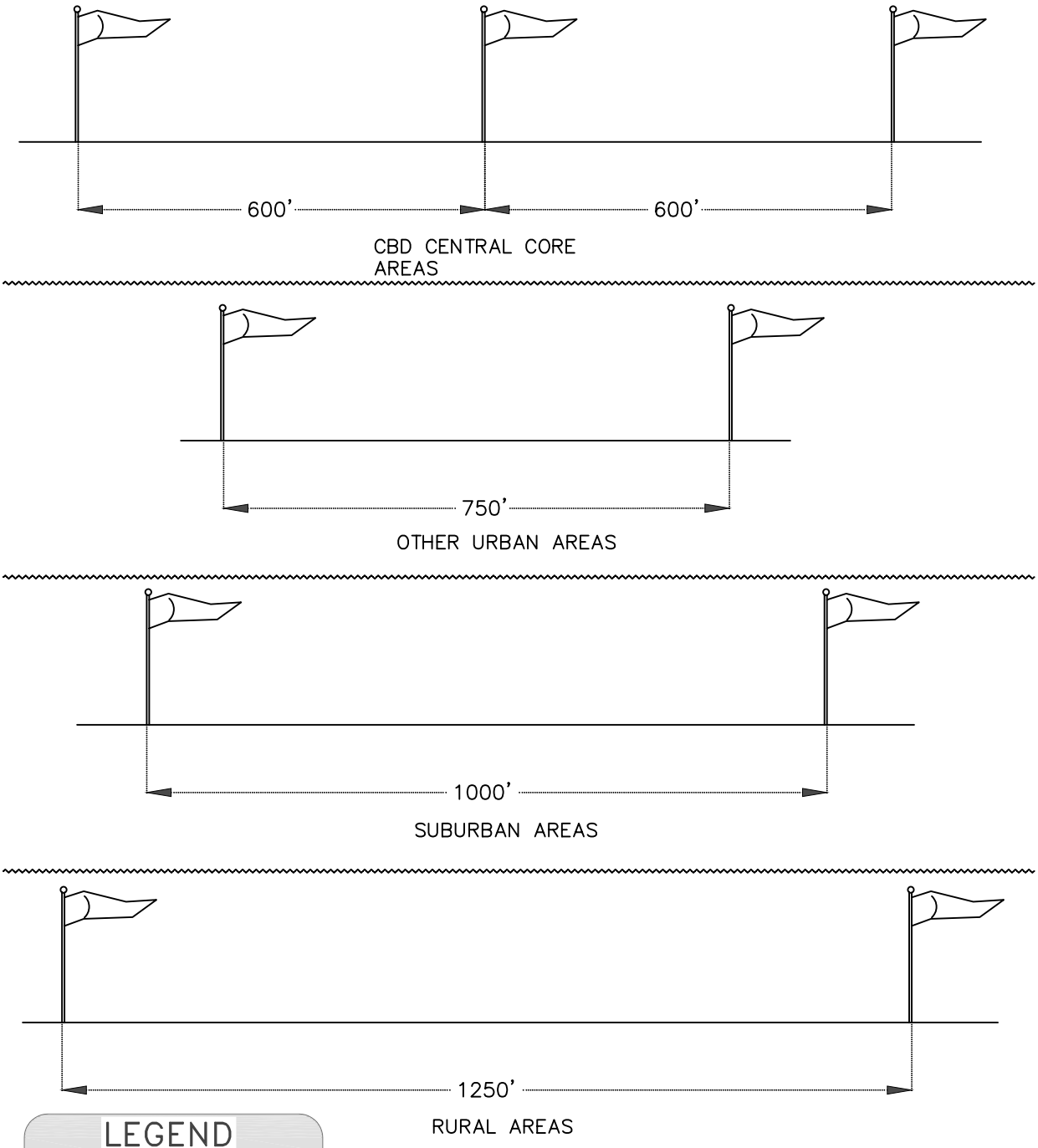
Land Use	Range of Spacing	Typical Spacing
Central Business District	300 to 1,000 feet	600 feet
Urban Areas	500 to 1,200 feet	750 feet
Suburban Areas	600 to 2,500 feet	1,000 feet
Rural Areas	650 to 2,640 feet	1,250 feet

Source: TCRP Report 19, Guidelines for the Location and Design of Bus Stops.

Bus Stop Placement (Far-Side, Near-Side, and Mid-Block Stops)

For the purpose of this report, the bus stop placement design guidelines have been based upon the design standards used in other areas across the country. Most of the recommended bus stop improvements are within either the jurisdictions of the city or the state, depending upon who owns the ROW. Therefore, any new or improved bus stop facility that is to take place along a state highway would be obligated to review the state design standards and involve CDOT representatives. Bus stops can be located far-side, near-side, or mid-block.

Figure III-10



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RECOMMENDED BUS STOP SPACING

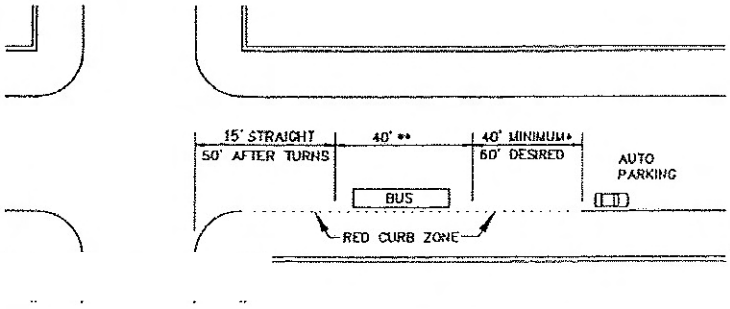
Far-side bus stops are recommended at intersections where sight distance or signal capacity problems exist, where parking conditions are critical, where right or left turns by general traffic are heavy, and where buses make left turns. In general, transit agencies and traffic engineers prefer far-side stops as the standard unless conditions indicate that near-side or mid-block stops are required. The recommended far-side bus stop is illustrated in Figure III-11. Near-side bus stops shall be the preferred alternative where buses make right turns, and shall also be an alternative at intersections where transit flows are heavy, but traffic and parking conditions are not critical. The recommended near-side bus stop is illustrated in Figure III-12.

Mid-block bus stops shall be an alternative in strip commercial areas where the block faces are longer, with multiple destinations served within the block, in downtown areas where multiple routes require long loading areas that might extend an entire block, or where traffic, physical, or environmental conditions prohibit near or far-side stops. The recommended mid-block bus stop is illustrated in Figure III-13.

When choosing among near-side, far-side, and mid-block locations, the following factors should also be considered:

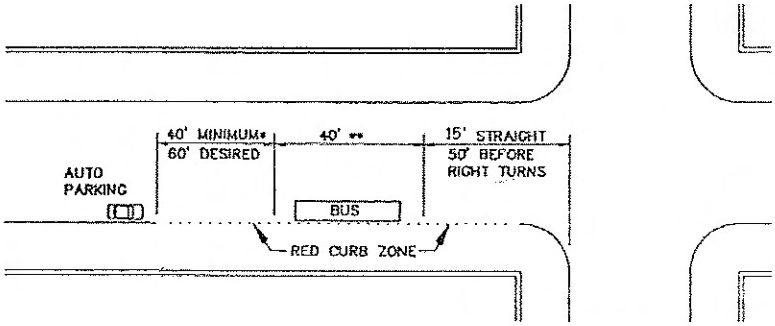
- Intersection geometry and impact on intersection operations.
- Potential need for future passenger amenities.
- Adjacent land use and activities.
- Bus signal priority (e.g., an extended green suggests far-side placement).
- Bus routing (e.g., does the bus turn at the intersection? Are there intersecting routes?).
- Parking restrictions and requirements.
- Pedestrian access, including accessibility for persons with disabilities.
- Physical roadside constraints (e.g., trees, poles, driveways).
- Ridership potential.
- Presence of bus bypass lane.
- Traffic control devices.

Figure III-11



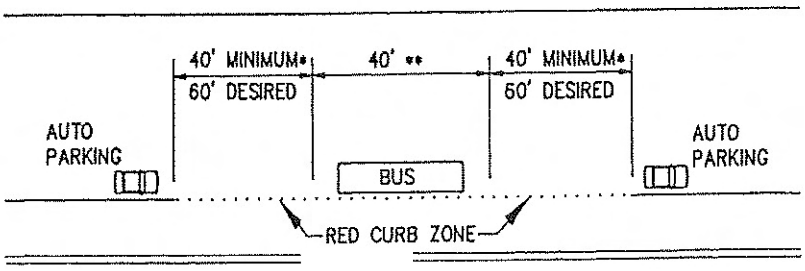
Far Side Stop

Figure III-12



Near Side Stop

Figure III-13



Mid-Block Stop

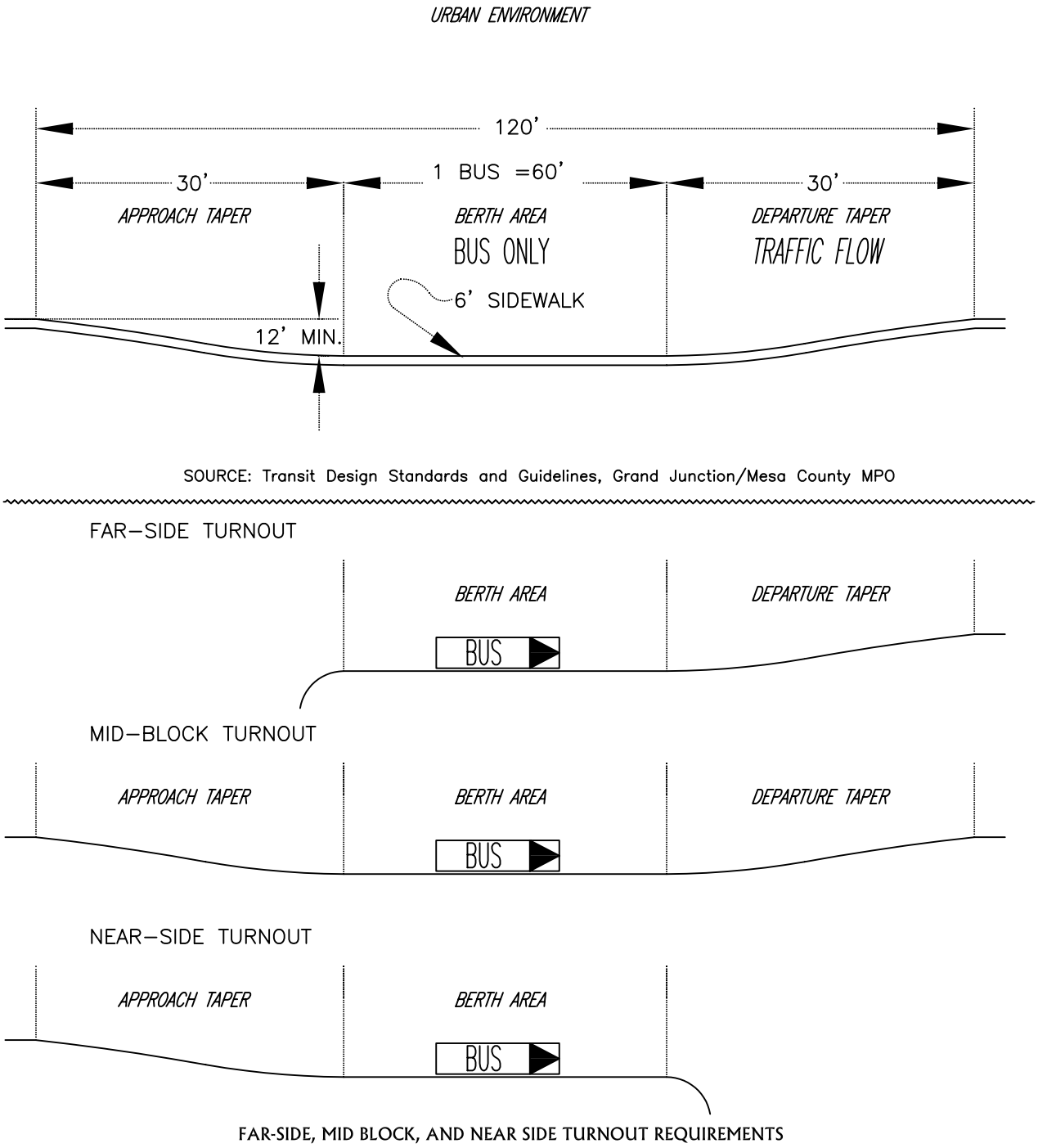
Bus Pullouts

Bus stops may be designed with a pullout, which is a specially constructed area off the normal roadway section provided for bus loading and unloading which allows the transit vehicle to board and alight passengers in an area outside the traveled way. Pullouts are appropriate where traffic conditions prohibit conventional on-facility placement of bus stops. Pullouts are also recommended in locations where it is likely to be hazardous for a bus to stop in the travel lane and are provided primarily on high-volume and/or high-speed arterials. The decision to construct a bus turnout should include an evaluation of the impact on public transportation as well as private vehicle operations. On the other hand, too many or poorly designed bus pullouts can actually impede the performance of the transit system (and other vehicles) as buses may have greater difficulty pulling out into traffic. As with most improvements, pullouts should be coordinated between transit staff and the local jurisdiction. Typically, a bus pullout is necessary at locations where it may be hazardous to stop the bus in the travel lane and no shoulder or parking lane is available. This report defines these areas in terms of Average Daily Traffic (ADT). Based on design guidelines in various areas throughout the country, roadways adjacent to bus stops with a speed limit of 35 milers per hour (MPH) or higher and a peak-hour volume of 250 or higher in the lane of travel warrant a bus turnout. Assuming a typical traffic pattern in which 10 percent of daily traffic occurs in the peak hour and daily volumes are balanced between the two directions, this corresponds to an ADT of 5,000 for a two-lane roadway and 10,000 for a four-lane roadway. Pullouts are also appropriate in the following circumstances:

- When the potential for conflicts between transit and passenger vehicles warrants separation of the two. For example, a bus stop located in a travel lane of a signalized intersection often requires a turnout to prevent the stopped bus from causing traffic to queue through the intersection.
- Under conditions with high or increasing bus or passenger volumes or on high-speed roads.

For stops located at low-speed—low-volume roadways without unusually high passenger activity—it is appropriate for transit buses to stop in the travel lane. This condition applies to many of the Glenwood Springs stops located off of the state highways or urban arterial roadways. The recommended bus pullout is illustrated in Figure III-14.

Figure III-14



Bus Pullout Design

Signs

Figure III-15
Current Signage

It is recommended that signs be posted at all bus stops. Signed stops are a key element in informing passengers where service is available. In addition, bus stop signs provide a permanent "presence" on the street that substantially increases public awareness of the transit program among riders and non-riders alike. The most common type of sign is a flag sign displaying route and passenger information. The design of bus stop signs should be standardized throughout the system so they are instantly recognizable. It is useful for signs to be double-sided (so they can be read from both directions) and reflectorized (for easy night reading). It is recommended that bright colors be used for easy bus stop identification. Characters and background of signs should have a non-glare finish however, with characters and symbols contrasting from their background. Currently, all existing Glenwood Springs signs are red, white, and blue, as shown in Figure III-15. The design elements on the sign should include the logo, a phone number for transit information, and, optionally, the major destination of the routes available at the stop. The bus stop sign should, wherever possible, be placed even with where the operator is trained to stop the front door of the bus to let patrons know where to stand. Signs closer to the curb should be positioned to face toward the sidewalk to prevent bus mirrors from hitting the signs. Placement within an existing sidewalk of four feet or less width should be avoided wherever possible. Signs can be located on existing poles, such as streetlights or other traffic information signs. Unprotected sign posts should be of the break-away type to minimize injuries and damage resulting from motor vehicle accidents.

Metal poles at bus stops should be easily recognized, especially for persons with visual disabilities. There are a few methods that can be used in order to distinguish a bus stop pole from other street poles commonly used by a public works department:

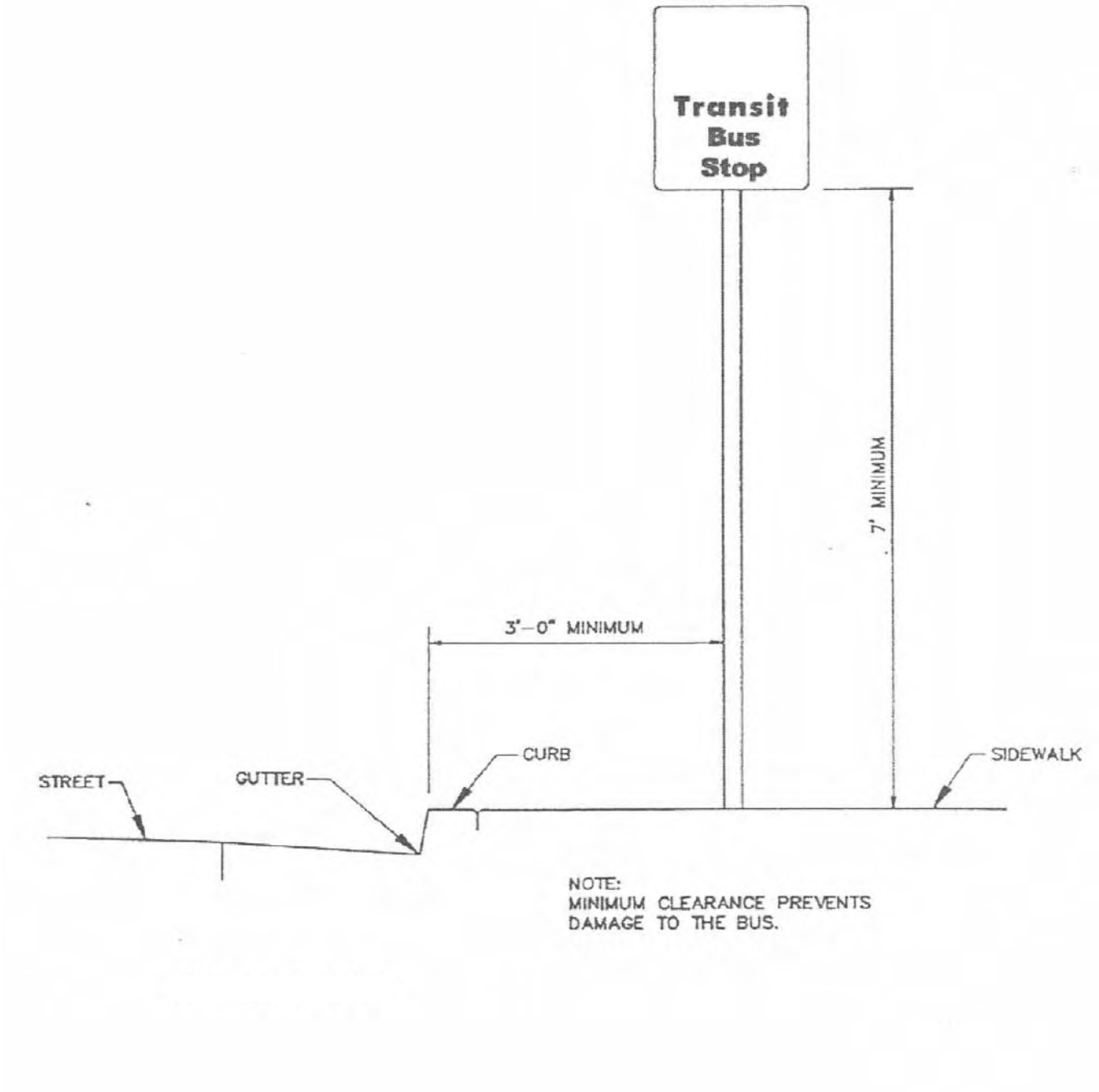
- Erect metal poles with a distinctive pattern and shape, such as a square or hollowholed pole.
- Enhance existing poles with a band of distinctive adhesive at a minimum height of four feet. This marking should be brightly colored

(ideally, the band would be the same color as the transit system), waterproof, and should possess a distinctive texture.

In light of budget constraints, it is recommended that the City of Glenwood Springs utilize the latter of the two options described above. It is also recommended that a community meeting(s) be conducted in order to determine which method is most effective for visually-impaired local patrons. Braille markings may help some passengers, but many persons with visual disabilities do not use Braille. Minimum ADA design implications apply to the installation of new or replacement signs and include the following and are illustrated in Figure III-16.

- The bottom of the sign should be at least seven feet from the ground, and the sign should not be closer to the curb than three feet. In the areas where there are sidewalks, allow at least 36 inches of clear path on the sidewalk.
- Letters and numbers to be a width-to-height ratio between 3:5 and 1:1 and a stroke-width-to-height ratio between 1:5 and 1:10.
- Characters and numbers sized according to the viewing distance from which they are to be read.
- Minimum height is measured using an upper case X. Lower case characters are permitted.
- Accompany pictograms with the equivalent verbal description placed directly below, with a border dimension of six inches (152 millimeters) minimum in height.
- Follow protruding objects requirements (described in the Accessible Path section).

Figure III-16



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Minimum Stop Sign Design

Passenger Amenities

Passenger amenities are significant elements in attracting public transportation users. Shelters provide protection from the elements and benches add comfort; trash receptacles, lighting, bicycle parking facilities, and other amenities add convenience and safety. Table III-2 presents the recommended standards with respect to the need for furniture at a bus stop. Note that these standards consider only boarding activity, as passengers alighting from a bus usually do not use the street furniture. Other considerations may include the potential of a bench or shelter to attract additional riders based on surrounding activities.

Table III-2

Transit Facility Furniture Needs

Activity	Furniture
Less than 5 Passenger Boardings per Day	None
Between 5 and 9 Passenger Boardings per Day	Bench
10 or more Passenger Boardings per Day	Shelter

Shelters

A bus shelter provides protection from the elements as well as seating. Typically, a shelter is constructed of clear side panels for visibility and safety. Standardized shelters are available that accommodate various site demands and passenger volumes. Existing shelters are typically 10 feet by 5 feet and installed at stops with 10 or more passenger boardings per day (based on prevailing standards). In a few locations, such as transfer points, larger shelters, or multiple shelters are used, such as the new park-and-ride lot in the new shopping area in west Glenwood Springs. Minimum ADA design implications apply to the installation of new or replacement bus shelters and include the following:

- A minimum clear floor area of 30 inches by 48 inches, entirely within the perimeter of the shelter.
- Maintain shelter openings to be a minimum of 36 inches to allow a wheelchair to pass through.
- Bus stop shelters should be connected by an accessible route to the bus stop landing pad.
- Bus stop shelters should not be placed on the wheelchair landing pad.
- General ADA mobility clearance guidelines should be followed around the shelter and between the shelter and other street furniture.

In addition to the number of boardings per day, other factors that Glenwood Springs may wish to consider when evaluating the installation of a shelter include:

- Climate (wind, rain, heat, etc.), which may lead to recommendations regarding whether or not to have side panels or the need for air circulation, heating, or cooling systems.
- Vandalism (broken or scribed glazings).
- The number of transfers at a stop.
- The availability of space to construct a shelter and waiting area.
- The number of elderly individuals or people with disabilities in the area.
- The proximity to major activity centers.
- The frequency of service.
- Adjacent land uses.

Benches

Current Glenwood Spring benches are approximately four feet in length, and should be installed at stops with five or more boardings per day. Minimum ADA design considerations apply to the installation of new or replacement benches and include the following:

- Clear floor or ground space for wheelchairs.
- 20 inches minimum to 24 inches maximum in "overall" depth for benches with backrests.
- Seat height: 17 inches minimum to 19 inches maximum above the floor or ground.
- Back support: Extends from a point 2 inches maximum above the seat to a point 18 inches minimum above the seat.
- Structure supporting vertical or horizontal forces of 250 pounds applied at any point on the seat, fastener, mounting device, or supporting structure.
- Exposed benches should be slip-resistant and designed to shed water.

Trash Receptacles

Litter at a bus stop is a negative image for the transit agency as well as the community. The installation of trash receptacles at bus stops can alleviate this problem. Not all bus stops require trash receptacles; the decision to include a receptacle at a stop is typically based on boarding counts. If litter is a problem at a particular stop (due, perhaps, to the presence of a fast-food outlet or a convenience store near the stop), a trash receptacle should be installed regardless of boarding counts. Trash receptacles should only be placed at those stops that the transit agency can reliably schedule for trash pickup. In some instances, communities require maintenance of transit receptacles as a condition of nearby

development. There is a mutually beneficial relationship between businesses and transit, and the need to work together with the community, particularly fast-food restaurants, to service trash receptacles.

Lighting

The lighting at a bus stop affects the safety of patrons and the use of the stop by patrons and non-patrons in the hours after sunset. A well-lit bus stop enhances the waiting passengers' comfort and security, while a dimly lit or unlit stop encourages nonpatrons to loiter at the stop. It is recommended that from two- to five-foot-candles of illumination be provided at all bus stops that will be in use after daylight hours. Lighting fixtures should be vandal-proof and easily maintained; the use of exposed bulbs and other elements that can be easily tampered with or destroyed should be avoided. When possible, bus stops should be located near existing streetlights as this is a cost-effective method of providing adequate lighting. Another option is the use of solar power to illuminate bus shelters. Typically, the power system mounts to a pole which makes it compatible with any shelter and maximizes the solar energy harvest.

Bicycle Parking

It is appropriate to provide bicycle parking at some bus stops. The provision of bike parking facilities discourages bicycle riders from locking their bikes to the bus stop structures or to structures on adjacent properties, as illustrated in Figure III-17 near Wal-Mart, and reduces visual clutter by locating bikes together in one area. Bicycle parking facilities should be located away from other activities to reduce congestion and improve safety. At lighted stops, the bike parking should be located near the lighting to offer protection from theft. The bike parking should not restrict views into the bus stop area. It is recommended that racks for bike parks be provided at bus stops where there is the potential for a high level of patrons to access by bike, such as near educational facilities.

Figure III-17
Bicycle at Stop

Park-and-Ride/Multimodal Facilities

Multimodal, or intermodal, centers are facilities designed to encourage the transfer between travel modes. Multimodal centers for the purposes of this study are those that facilitate the transfer to buses of users of other modes of transportation. Typically, park-and-ride lots and transit transfer facilities meet this criterion. Amenities that should be provided at these facilities include one or more shelters and benches, adequate lighting, an auto drop-off area, bicycle parking, motorcycle parking, toilet, kiosks, and appropriate landscaping. Figure III-18 provides a photo of the current park-and-ride lot in west Glenwood. Note, the benches should be relocated under the protective structure.

Figure III-18
Glenwood Meadows

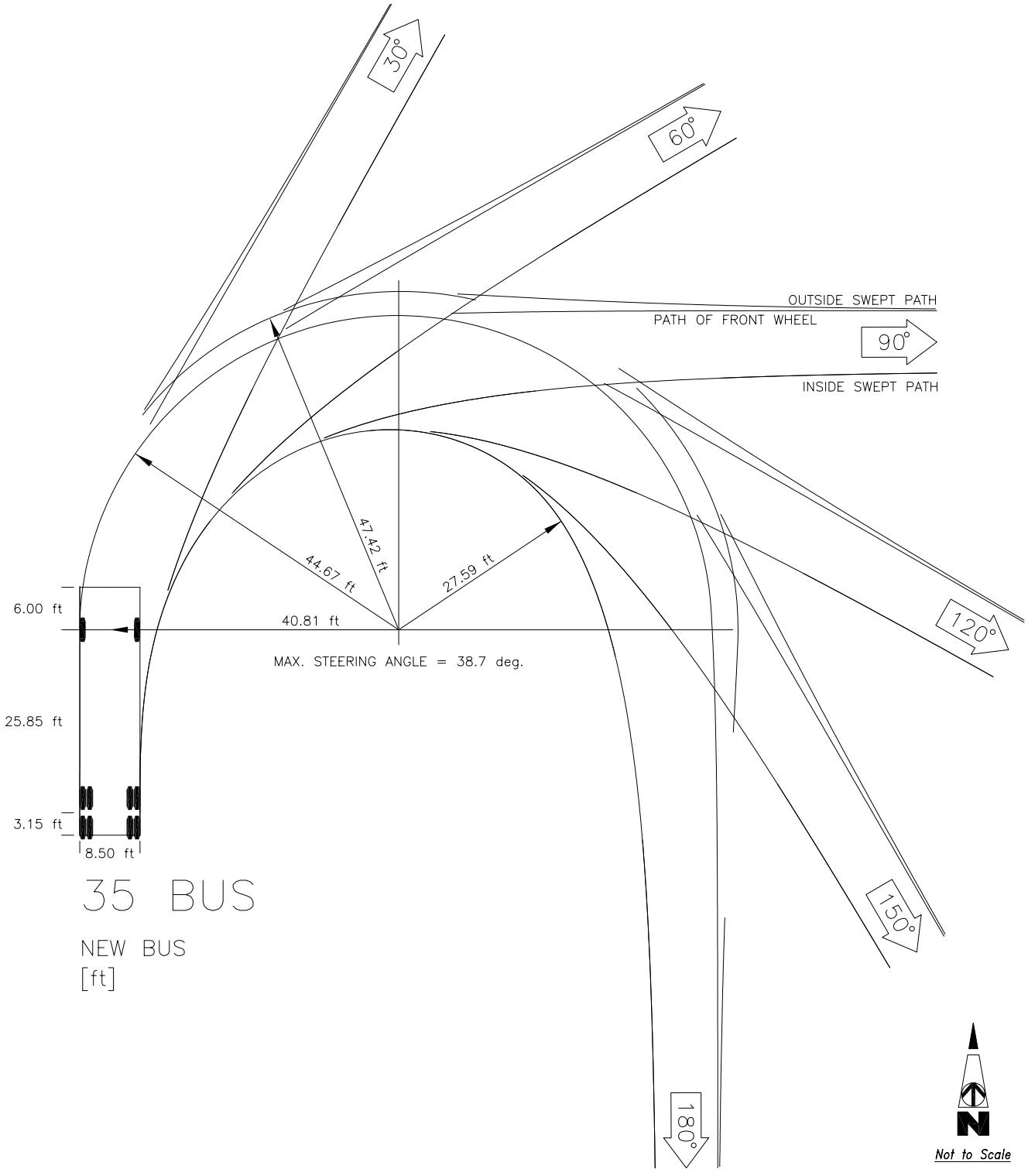
Transit Vehicle Turning Radii

It is important that intersection turning radii allow turning movements by the largest expected vehicle to be made in a safe manner, without damaging either the vehicle or the curb. Inadequate curb radii can require vehicle travel paths to swing into additional travel lanes, creating potential safety problems, while excessive requirements can increase pedestrian exposure to traffic, thereby increasing potential pedestrian safety problems.

For Glenwood Springs buses, a turning radius of 45.5 feet, measured from the outer front overhang, is recommended for a 35-foot bus as illustrated in Figure III-19. The measurement is based on the American Association of State Highway and Transportation Officials design guidelines for 40-foot buses. The same radii has been determined for 35-foot buses, accounting for a small measure of error.

Figure III-19

Minimum Bus Turning Radii



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BUS STOP PLACEMENT

The decision regarding the placement and spacing of bus stops and their amenities needs to be carefully analyzed to ensure that placement meets the needs of residents and patrons. This should be based upon passenger requirements, services provided, and the interaction of stopped buses with traffic.

Industry Standards

Standards for bus stops include, but are not limited, to the following:

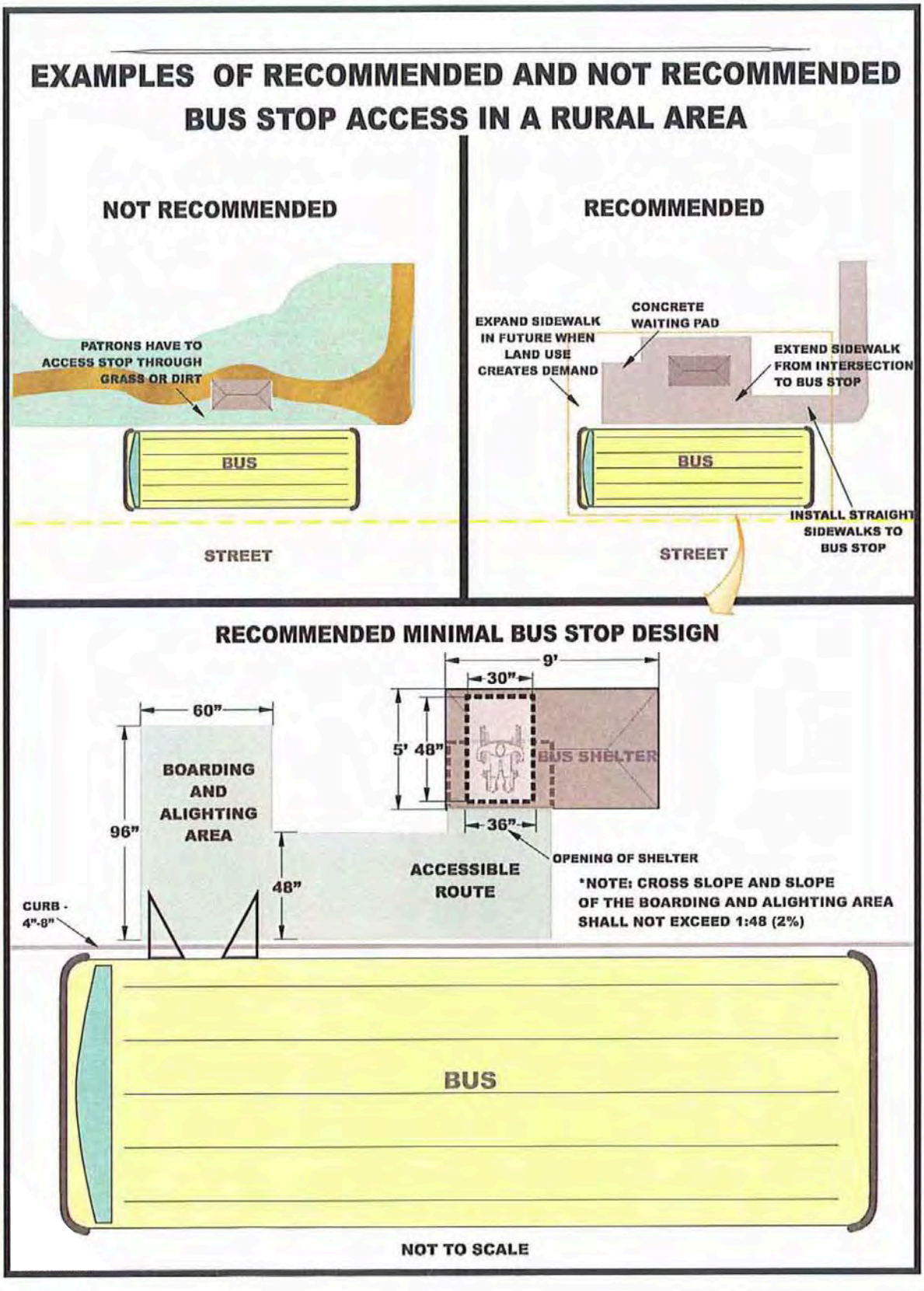
- Stops should meet minimum ADA Standards. Minimum ADA dimensions for bus stop design are provided in Figure III-20.
- Bus parking pads should be a minimum of eight feet in width, preferably ten feet. Stop pads should be constructed of concrete, especially if they are served by four or more buses per hour. Currently, no stops in Glenwood Springs are served at this high a frequency; however, concrete surfaces may have a longer life cycle than asphalt.
- If asphalt is to be used, it is recommended that a minimum of three inches of asphalt over a minimum of five inches of base materials; concrete bus pads should be a minimum of eight inches of reinforced concrete.
- Curb heights should be no less than four inches and no more than eight inches to minimize passenger falls when alighting from a bus.
- A minimum horizontal clearance of two feet should be provided between the curb and any obstruction (bench/sign).

Roadway Configurations

A number of roadway configurations can be used for bus stops. There are appropriate locations for some of these roadway treatments in the Glenwood Springs area.

- Curb-side stop: A curb-side stop is a bus stop without any alterations to the existing roadway configuration.
- Bus bays: A bus bay is a stop which is especially designed to allow the bus to pull out of the traffic lane. An acceleration/deceleration lane is included.
- Open bus bays: A bus bay that utilizes an adjacent cross street for one or both acceleration/deceleration lanes.
- Nub: A curb extension the length of a bus built into a parking lane, especially designed for buses to stop without having to pull out of and into travel lanes.

Figure III-20



Minimum Bus Stop Design

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Chapter IV

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CHAPTER IV

Initial Evaluation and Improvements

This chapter presents a review of the inventory of bus stop and pedestrian facilities in the study area. This information is presented primarily in table and graphical format. This information was used to determine where deficient facilities exist and to recommend priorities of capital improvements. This inventory was used to analyze things such as:

- Determination of location.
- The characteristics of stop, including the presence of a bus stop sign and the condition of the sign, existing "street furniture" (bench and/or bus shelter, lighting).
- ADA compliance.
- The presence of an adequate bus pullout area.
- Pedestrian access and crossing protection.
- Adjacent properties and neighboring land uses.

The LSC Team employed a bus stop checklist used by Easter Seals Project ACTION: *Toolkit for the Assessment of Bus Stop Accessibility and Safety.* Funded through a cooperative agreement with the US Department of Transportation and the Federal Transit Administration, Easter Seals Project ACTION promotes cooperation between the transportation industry and the disability community to increase mobility for people with disabilities under the ADA and beyond. The Easter Seals bus stop checklist is provided in Appendix A, and was adapted for this project. Each stop in Glenwood Springs was inventoried using this checklist. Information from the inventory was used to develop an improvements program for Glenwood Springs bus stops.

BUS STOP INVENTORY

The comprehensive inventory of bus stops consists of all bus stops within Glenwood Springs—a combination of signed stops and shelters. These stops provide residents and visitors access to both Ride Glenwood Springs and RFTA, and therefore the location of stops represents an important aspect of this study. Many of the stops are currently very well designed and meet minimum ADA

standards. Most stops are well lit with existing street lighting, provide shelter from the elements, provide basic information on route and schedules, and are well placed in safe locations. Specific issues on each stop are presented as appropriate. There are stops which have been constructed within the last year which are perfect examples of design and include all the characteristics of accessible stops. There are, on the other hand, stops which may need to be moved, stops which should be implemented, and improvements to stops not only to make them safe, but accessible and usable by bus patrons. Where appropriate, photographs are included to aid in illustrating stop issues. Additionally, direct accessability issues are presented, such as lack of curb-cuts and cross-walks. Finally, a review of the existing bicycling network is presented with a brief analysis of connectivity to transit stops.

Overall Rating

Overall, the Glenwood Springs bus stop facilities and direct pedestrian access to stops receives a good rating for facilities. This is primarily due to the fact that the bus system is relatively new and most stops have been constructed to current industry design standards. This section presents a brief review of all stops as well as general and specific issues and concerns.

Existing Stops

Ridership

Ridership counts by stop were completed in July 2007 by Glenwood Springs staff. Counts of passenger boarding were then entered into a database and mapped by type. Figures IV-1 and IV-2 provide systemwide counts of passenger activity for all stops. As shown, many of the stops are widely used, while a portion of them are hardly used.

Figure IV-1
Glenwood Springs Systemwide Boardings

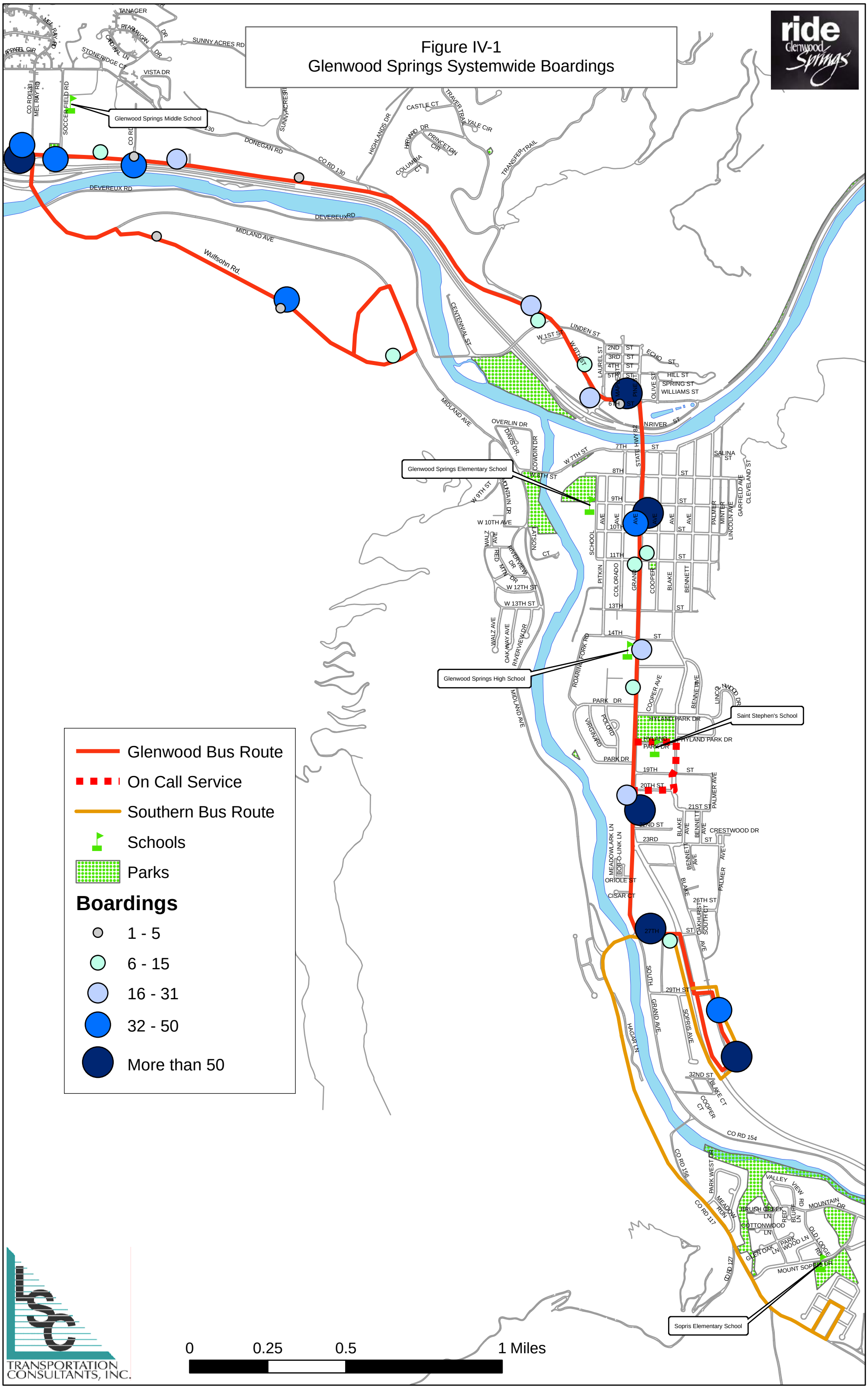

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Figure IV-2
Glenwood Springs Systemwide Alightings

ride Glenwood Springs

Glenwood Springs Middle School
Glenwood Springs Elementary School
Glenwood Springs High School
Saint Stephen's School
Sopris Elementary School

Glenwood Bus Route
On Call Service
Southern Bus Route
Schools
Parks

Alightings

1 - 5
6 - 15
16 - 30
31 - 50
More than 50

0 0.25 0.5 1 Miles

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Stops with Signage Only

As mentioned, there are a number of stops which provide only a sign. These are stops which do not have benches or shelters. Given passenger activity at some of these stops, some may require at least a passenger bench. Table IV-1 presents those stops which have only a sign and no other passenger amenities. Additionally, the passenger activity by stop is shown. Figure IV-3 illustrates the current stops which are only signed. Table IV-1 provides a summary of stops and current bus stop signage characteristics.

Table IV-1
Stops with Signage Only

Stop ID	Street	Cross Street	Landmark	Daily Boardings	% of Total Boardings
1	Blake Avenue	n/a	Wal-Mart	39	4.4%
4	27th Street	Grand Avenue	27th Street	12	1.4%
5	27th Street	South Grand	27th Street	62	7.0%
9	Grand Avenue	11th Street	Glenwood Chamber	9	1.0%
13	W 6th Street	Laurel Street	Wings and More	5	0.6%
14	W 6th Street	Laurel Street	Ramada Inn	21	2.4%
18	Wulfsohn Road		Community Center	8	0.9%
22	6th Street	Laurel Street	Glenwood Motor Inn	10	1.1%
34	n/a	n/a	Kids Plex (on-demand)		0.0%

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Figure IV-3
Glenwood Springs Stops with Signs, Shelters, or Benches

ride Glenwood Springs

Glenwood Springs Middle School

Glenwood Springs Elementary School

Glenwood Springs High School

Saint Stephen's School

Sopris Elementary School

- Glenwood Bus Route
- On Call Service
- Southern Bus Route
- Schools
- Parks
- Sign Only
- Bench or Shelter

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0 0.25 0.5 1 Miles

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Stops with Benches and/or Shelters

Figure IV-3 and Table IV-2 show the current Glenwood Springs stops with either a bench only or a shelter as well as the characteristics of those stops. Approximately half of the stops in the area have a current shelter in place. Typical shelters are illustrated in Figure IV-4. As shown, the shelters offer some protection from the elements; however, the advertisement on the shelters takes up nearly one-third of the shelter footprint. Trash receptacles are common; however, as shown, this one is in need of servicing.

Figure IV-4
Typical Shelter

Table IV-2
Stops with Benches and/or Shelters

Stop ID	Street	Cross Street	Landmark	Daily Boardings	% of Total Boardings	Proposed Improvements
2	Blake Avenue	n/a	McDonald's	67	8%	Repaint crosswalks and install crosswalk signs
3	Blake Avenue	n/a	Across Wal-Mart	0	0%	Repaint crosswalks, install tactile strips at intersection, and install crosswalk signs. Limited access to Wal-Mart.
6	Grand Avenue	20th Street	Post Independent	79	8.9%	Install curb cuts on west corner of 20th Street.
7	Grand Avenue	20th Street	Safeway	19	2.1%	Install curb cuts on the west corner of 20th Street. Curb cuts at 20th and Grand need improvement.
8	Grand Avenue	15th Street	Van Rand Business Center	13	1.5%	None
10	Grand Avenue	11th Street	Kalidoscoops	12	1.4%	Improve wheelchair accessibility, improve landing connections to sidewalk, replace crossing sign.
11	Grand Avenue	10th Street	Qwest	50	5.6%	None
12	Grand Avenue	9th Street	Forest Service	63	7.1%	None
15	Grand Avenue	14th Street	City Market	29	3.3%	None
17	7th Street		City County Bldg 2	0	0.0%	None
19	Wulfsohn Road	Target	Across Target	2	0.2%	Paint crosswalks
20	Wulfsohn Road	Target	Target	48	5.4%	Paint crosswalks
21	6th Street	Grand Avenue	Mountain Sports	62	7.0%	None
23	6th Street	n/a	Glenwood Caverns	11	1.2%	No connection with sidewalks, wheelchair obstacles, paint crosswalks.
24	State Highway 6	n/a	Traver Trail	21	2.4%	Install crosswalks, remove rocks, improve landing area connections, install curb cuts.
25	State Highway 6	n/a	Elks	5	0.6%	None
26	State Highway 6	135 Road	Across 135 Road	44	5.0%	Crosswalk needs improvements.
27	State Highway 6		West Glenwood Plaza	15	1.7%	None
28	State Highway 6		Red Mountain Inn	31	3.5%	None
29	State Highway 6		West Glenwood Mall	49	5.5%	None
30	State Highway 6		West Glenwood Mall	61	6.9%	None
31	State Highway 6		West Glenwood Park & Ride	2	0.2%	None
32	State Highway 6	135 Road	135 Road	1	0.1%	None
33	State Highway 6		Across M&M Truck Stop	36	4.1%	None

Stops Requiring Trash Receptacles, Signage, or Shelter/Bench

Table IV-3 provides a summary of stops which need improvements to trash receptacles, signage, or require either a bench and/or shelter.

There are several stops which should have a trash receptacle installed. These include the following:

- Stops 19 and 20 (Target/Meadows Mall)
- Stop 14 at Ramada Inn

These stops currently have litter on the ground around the stops and are highly used stops. Most all stops with an existing shelter have trash receptacles.

Stops requiring, or are in need of, replacement of signage/schedules/securements include the following:

- Stops 1, 3, 18, 12, and 25.
- Stops that may need signage moved include 10, 7, 9, 2, 8, 21, 25, 12, and 23. This is due to accessibility of the schedules.
- Additionally, Stop 14 needs bolts tightened on the lamp post holding the sign and the schedule/sign needs to be moved down to within 36 inches from the ground.

Based upon the daily activity at stops, there are several that should have either benches or shelters installed. This is based upon boarding activity as well as relative location to business or activity centers such as schools. Those stops that should have at least a bench include:

- Stop 9 adjacent to the Chamber of Commerce. This stop is signed only and the use of this stop and appearance of the ground where people stand to wait requires the sign to be moved to the landing area. The area is appropriate for the placement of a bench.
- Stop 18 at the Community Center is in need of at least a bench. At the time of this report, improvements were being made to this stop.
- While it was initially recommended that the stop being used by RFTA, stop 1, should include a shelter, it was further advised this stop not be used as there are shelters that RFTA could use that are a very short distance away.
- Stops 4 and 5 should have shelters due to passenger activity and location. Stop 14 is one which is highly used and should have a shelter installed near the Ramada Inn.

Table IV-3
Stops Requiring Trash Receptacles, Signage, or Shelter/Bench

Stop ID	Street	Cross Street	Landmark	Requires Trash Receptacle	Requires Signage Improvement	Requires Bench/Shelter	Boardings	% of Total Boardings
1	Blake Avenue		Wal-Mart		Sign in poor condition	Shelter	39	4.4%
2	Blake Avenue		McDonalds		Install Plexiglass over maps		67	7.6%
3	Blake Avenue		Across Wal-Mart		Sign in poor condition		0	0.0%
4	27th Street	Grand Avenue	27th Street			Shelter	12	1.4%
5	27th Street	South Street Grand	27th Street			Shelter	62	7.0%
7	Grand Avenue	20th Street	Safeway		Install Plexiglass over maps		19	2.1%
8	Grand Avenue	15th Street	Van Rand Business Center		Move down		13	1.5%
9	Grand Avenue	11th Street	Glenwood Chamber		Move pole to landing	Bench	9	1.0%
12	Grand Avenue	9th Street	Forest Service		Reposition map/schedule		63	7.1%
14	W 6th Street	Laurel Street	Ramada Inn	Yes	Tighten bolts on lamp, move signage down	Shelter	21	2.4%
18	Wulfsohn Rd.		Community Center			Bench	8	0.9%
19	Wulfsohn Rd.	Target	Across Target	Yes			2	0.2%
20	Wulfsohn Rd.	Target	Target	Yes			48	5.4%
21	6th Street	Grand Avenue	Mountain Sports		Needs secured by Plexiglass		62	7.0%
22	6th Street	Laurel Street	Glenwood Motor Inn			Shelter	10	1.1%
23	6th Street		Glenwood Caverns		Replace schedule/map holder		11	1.2%
25	State Highway 6		Elks		Sign in poor condition, replace schedule/map holder		5	0.6%

Shelters/Stops Requiring Repair or Cleaning

Shelter condition was ranked on a scale of 1 to 5. A score of "1" indicates the shelter is hazardous, while a score of "5" indicates an excellent or new stop. On average, Glenwood Springs shelters received a score of "4" indicating the stops are "good, but no immediate repair is needed." Many of the shelters were "dirty" and could use a good powerwashing of both the shelter and the landing areas. None of the shelters are in need of immediate painting, and the shelter benches are in good shape. Only one bench was in need of repainting—Stop #11. Of minor mention should be the use of cigarette butt receptacles at stops. Only a few shelters have these receptacles; however, this creates its own problems, as these receptacles are rarely used and cigarette butts litter the ground around stops. Either these should be cleaned regularly or not used at all. Additionally, graffiti is a minor problem and, while difficult to see, Figure IV-5 schedules have graffiti covering the stop times. This represents an accessibility issue as patrons may be unaware of when the next bus will arrive.

Figure IV-5 Graffiti on Schedules

Several stops have graffiti which needs attention. These stops include:

- Stops 6, 8, and 10. This may be graffiti on the shelter, trash receptacle, or the plexiglass portion of the shelter, requiring this plexiglass to be replaced.

Stops Not Meeting ADA Minimum Requirements

While the some of the aforementioned issues may not be a priority, stops and particularly shelters/landing areas which do not meet minimum ADA standards are highly important. As mentioned, Glenwood Springs has relatively new shelters which meet minimum design standards. The issue is whether there is adequate access to these stops and whether a person in a wheelchair or with other disabilities can access the bus. Table IV-4 and Figure IV-6 provide a summary of stops with ADA issues which should be addressed.

Table IV-4
Stops with ADA and Safety Issues and Preliminary Recommendations

Stop ID	Street	Cross Street	Landmark	Issue	Proposed Improvements
1	Blake Avenue		Wal-Mart	Needs curb cuts	Install curb cut @ Glen & McDonalds
2	Blake Avenue		McDonalds	Safety	Install crosswalk signage
3	Blake Avenue		Across Wal-Mart	No pedestrian crossing signs	Install pedestrian crossing signs
5	27th Street	Grand Avenue	27th Street	Intersection issues	Difficult to cross intersection
6	Grand Avenue	20th Street	Post Independent	Stop is located in a parking lot, needs curb cuts	Install curb cuts at 20th Street
7	Grand Avenue	20th Street	Safeway	Safety	Install curb cuts at 20th Street
9	Grand Avenue	11th Street	Glenwood Chamber	Access	Install landing and bench
10	Grand Avenue	11th Street	Kalidoscoops	Access and safety	Sign as no parking and stripe curb, replace crossing sign
11	Grand Avenue	10th Street	Qwest	Safety	Sign as no parking and stripe curb
12	Grand Avenue	9th Street	Forest Service	Parking	Repaint no parking stripe on curb
14	W 6th Street Street	Laurel Street	Ramada Inn	Needs landing/shelter	Install landing and shelter
18	Wulfsohn Road		Community Center	Not accessible, surface is dirt/rocks	Improve landing
19	Wulfsohn Road	Target	Across Target	Crossings	Paint crosswalks
20	Wulfsohn Road	Target	Target	Crossings	Paint crosswalks
23	6th Street		Glenwood Caverns	Doesn't connect with sidewalk/may be obstacle for wheelchairs	Improve landing
24	State Highway 6		Traver Trail	No crosswalk from sidewalk - rocks	Construct sidewalk/improve landing area connections/install curb cuts
25	State Highway 6		Elks	Less than 5 boardings per day	Relocate shelter and replace with sign only
36			Valley View Hospital2 Landing	Not accessible	Install curb cuts from landing

Figure IV-6
Glenwood Springs Stops with Accessability Issues

ride Glenwood Springs

Glenwood Springs Middle School

Glenwood Springs Elementary School

Glenwood Springs High School

Saint Stephen's School

Sopris Elementary School

- Glenwood Bus Route
- On Call Service
- Southern Bus Route
- Schools
- Parks
- Stops with Accesability Issues

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New Stops and Stops to Relocate

There are a few stops which may warrant complete replacement, relocation, or removal. Figure IV-7 provides a summary of those stops and the recommendations.

- Stop 4 should be moved adjacent to stop 5. At the time of this report this stop was being moved.

Figure IV-7 shows those locations where it may be appropriate to install a new stop along the existing route. These were discussed with the Transportation Commission and public as to the appropriateness of these stop locations.

- New stops are recommended to be placed on Midland Avenue near the mobile home park. Additionally, it was recommended that a stop be placed at the intersection of Wulfsohn Road and Midland Avenue. At the time of this report, this stop improvement has been made.
- The final new stop is along eastbound Highway 6. This stop may be difficult to implement due to CDOT right-of-way issues with I-70. The approximate location for an appropriate stop is shown. It may be feasible to re-stripe pavement to remove a middle turn lane to accommodate a signed stop. However, this actual stop location is subject to various design issues as well as needing to be coordinated directly with CDOT.

Trail and Bicycle Connectivity

Figure IV-8 presents the current Glenwood Springs bicycle and trail network. This illustrates those areas with potential trail connection issues. As shown, the city has an excellent trail and bike route network which connects to the existing transit system. It should be noted, however, that no bicycles were loaded onto Glenwood Springs buses during the counts in July. While there is an excellent trail system to use, the inherent problem with the accessibility of bikes on the Ride Glenwood system is that only two stops allow bicycles to board. Initial recommendations were made to allow bikes to board at all stops where it is safe to do so. The only area to have foreseeable safety issues is in the downtown area of Glenwood Springs from 7th to approximately 11th.

Additional Improvements

There are additional improvements which may be required throughout the area. These are identified later in this chapter. Once all improvements were identified,

projects were ranked based upon several criteria, jointly developed with input from the Transportation Commission.

Direct Accessibility Problem Areas

Upon initial evaluation, it is clear that there are a number of small problem areas within the study area. These specific areas are listed in the following descriptions, but more importantly, a picture of each problem type is presented for illustration purposes. These pictures are representative of many common areas within the study area. It may be impossible to "fix" all the types of problems listed individually. However, as roadways are improved, particularly through major road construction projects, and even in some cases, overlay maintenance programs, it is possible to bring some of these problem areas up to standard—particularly with regard to accessibility to transit stops, as this is one of the major components to creating an accessible transit system.

Figure IV-7
Glenwood Springs New Stops, Stops to Relocate

ride Glenwood Springs

Glenwood Springs Middle School
Glenwood Springs Elementary School
Glenwood Springs High School
Saint Stephen's School
Sopris Elementary School

- Glenwood Bus Route
- On Call Service
- Southern Bus Route
- Schools
- Parks
- Scheduled Stop
- On Call Stop
- New Stops
- Relocate Stop

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Figure IV-8
Glenwood Springs Current Trail Network with Routes and Stops

ride Glenwood Springs

Glenwood Springs Middle School

Glenwood Springs Elementary School

Glenwood Springs High School

Saint Stephen's School

Sopris Elementary School

- Glenwood Bus Route
- On Call Service
- Southern Bus Route
- Schools
- Parks
- Scheduled Stop
- On Call Stop
- Bike Routes
- Soft Surface Trails
- Hard Surface Trails
- RFTA Trail Connector

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Curb Cuts

Curb cuts, as illustrated in Figure IV-9, have no existing sidewalk to access. While this is not a common occurrence, it does illustrate the fact that crosswalks without curb cuts do exist. This location accesses a middle school just to the left of the photo.

Figure IV-9
Non-Existent Curb Cut

Figure IV-10 illustrates a common problem in many communities—a curb cut which leads directly into a gutter pan or not with direct access to a crossing. In this case, the crossing leads into a storm drain and the actual access is off-set from the crosswalk. This stop is directly across from Safeway food store.

Figure IV-10
Poor Curb Cut Location

Access to Transit Stops

Accessibility to transit stops is, as mentioned, a crucial part of mobility for the disabled. Figure IV-11 provides an example of poor access to a transit stop in Glenwood Springs. The current access is along the shoulder of the road which is comprised of gravel or packed stone/sand. It is currently impossible to travel to the stop in a wheelchair; the shoulder material can become soft and unnavigable during rain or snow. The shoulder also tends to have ruts or other obstacles such as larger stones which makes access difficult for those in wheelchairs. Using the road to access the stop becomes hazardous for all pedestrians.

Figure IV-11
Poor Access to Stop

Crosswalk Accessibility

Figure IV-12 presents a photograph of a pedestrian crosswalk which is not accessible. There is no existing curb cut to allow a wheelchair to mount the bus landing pad from the street. This crossing is located across from the hospital.

Figure IV-12
Lack of Curb Cuts

Figure IV-13 provides a look at a pedestrian crossing which is fully accessible to pedestrians. Curb cuts exist on both sides of the right-of-way, both of which are textured. The timing of lights at major intersections, especially those with a three-lane cross section (or more) should be carefully examined to allow for adequate crossing time.

Figure IV-13
Appropriate Crossing

Curb and Gutter

While curb and gutter tends not to have a significant impact on pedestrian movement, it does for persons in wheelchairs. The type of mountable curb shown in Figure IV-14 makes it difficult, but possible, for wheelchairs to cross the street at intersections; however, this is not an acceptable curb cut and crosswalk design. According to the US Access Board, all intersections where a pedestrian is likely to cross the street should be marked with a textured material to indicate a crossing to those who are sight impaired. This type of mountable curb is acceptable according to historic design standards; however, it would not meet new construction guidelines.

Figure IV-14
Poor Curb and Gutter

Connectivity

Connectivity is an issue which is a high priority for the Steering Committee. As shown in Figure IV-15, there are examples of this type of development in which a sidewalk abruptly ends in a subdivision. The subdivision in this illustration is directly behind the local Wal-Mart. Several pedestrians were observed using this area to access transit and Wal-Mart.

Figure IV-15
Sidewalks "that go nowhere"

Safety

Figure IV-16 shows a "ramp" to provide transition between a stop and the sidewalk. As shown, the ramp leads into a landscaped area with several large rocks which impede access via wheelchair. Additional safety elements include crossings near schools and major intersections and the lack of curb cuts.

Figure IV-16
Poor Ramp Access

Specific Commendable Characteristics

It would be erroneous to present a list of problems within an area without mentioning the commendable characteristics.

- Several of the commendable areas, of course, are those new subdivisions where increased standards have been in place. These new subdivisions typically have sidewalks which are at least five feet in width, and intersections have curb cuts which meet ADA and Access Board Guidelines.

- Bike routes are marked with appropriate pavement markings; bus stops are also clearly marked or identifiable.
- Major crosswalks adjacent to schools are well signed and marked.
- Many areas have well-defined sidewalks throughout the neighborhoods.
- Trail network is clearly defined.

PEDESTRIAN AND BICYCLE WAY INVENTORY

This section presents a review of the inventory of pedestrian and bicycle facilities in the study area. This information is presented primarily in graphical format. This information was used to determine where a lack of facilities exists and to recommend priorities of capital improvements. This inventory was used to analyze things such as access to local schools, access to public facilities, and provide baseline information for the City Engineering and Transportation Departments. One goal of this project is an understanding of how pedestrian facilities relate to public transportation and the current and future connectivity to transit. Information was inventoried based upon existing aerial photographs and on-site field investigation.

There is currently no city inventory of existing pedestrian facilities within the area. There is an inventory of existing bicycle facilities, including trails and bike routes and lanes. For the purpose of this study, LSC prepared a database of sidewalks which provide access within 500 feet of existing transit stops within the city. The purpose of this inventory is to determine where sidewalk facilities exist and to determine areas which have deficiencies in regard to bus stop access for pedestrians. The current pedestrian inventory is provided Figure IV-17. This map presents the inventory of sidewalks and the bike and trail network within the City of Glenwood Springs, as well as existing bus stops.

Map Features

As shown on the map, there are numerous pedestrian and bicycle-related features. The map shows the existing inventory of features which include:

- Sidewalks
- Bike Routes/Lanes
- Bike Paths
- Trails
- Bus Stops

Figure IV-17
Glenwood Springs Existing Pedestrian and Trail Networks

ride Glenwood Springs

Glenwood Springs Middle School
Glenwood Springs Elementary School
Glenwood Springs High School
Saint Stephen's School
Sopris Elementary School

- Glenwood Bus Route
- On Call Service
- Southern Bus Route
- Schools
- Parks
- Scheduled Stop
- On Call Stop
- Existing Sidewalks
- Trails/Bike Paths/Bike Lanes

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Chapter V

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CHAPTER V
Improvements Evaluation Criteria

This chapter presents the criteria and the general methodology that were used in the ranking process for this study. This information ranks access recommendations and bus stop facility improvements into one of three categories—"High," "Medium," and "Low."

PEDESTRIAN WAY CRITERIA

The LSC Team preliminarily selected the criteria that were used in ranking of the transportation projects. The following criteria were used in the ranking process:

- Increases safety
- Increases connections to schools
- Aims to meet ADA standards
- Increases overall accessibility
- Connection to parks/recreation
- Commission rating
- Public comment

The more important a criterion was considered to be, the greater the spread of the score. Once all criteria were scored, an Index Score was calculated. This Index Score is the summation of all weighted scores. Table V-1 provides the initial weighting for the criteria listed above. All criteria were scored using a point or no point method. That is, if an improvement met the criteria, it received a score of one. The determination of the weights assigned to each criteria were based on comments received from the Transportation Commission. The higher the weight, the greater importance the criteria represents in the overall improvement plan. For example, the "Connection to Schools" rating is something viewed as being very important. This received one of the highest weightings due to its relative importance in the community. These weights were presented to and discussed by the Transportation Commission and LSC to determine if accurate weights were assigned. By using this methodology, the criteria that are deemed of greater importance for a project receive a greater score, and therefore, yield a higher ranking among the other projects.

Table V-1
Criteria and Associated Weights

Rating Criteria	Weights
Increase Safety	60
Connection to Schools	40
Increase ADA/Access	50
Increase Overall Access to Transit	40
Connect to Parks/Rec	10
Public Comment	30
Commission Ranking	30

Aims to Meet ADA Standards

Any improvement aimed at improving a stop to meet ADA standards was given the very highest weight.

Increases Overall Access to Transit

Many of the improvements improve overall access to transit services for all bus patrons. These can include projects such as installing shelters and repair work on signage.

Connection to School

The connection to schools is a very important element of the ranking and selection process. Sidewalks should be furnished on all major roads within one-half mile of each of the schools within the area. Additionally, any stops within walking distance to any of the local schools was ranked higher in the scoring of projects.

Connection to Parks and Recreation Facilities

Connecting residents to parks and other recreation facilities, such as trail networks, is viewed as a priority in pedestrian planning. Again, similar to the connections to schools, buffers around existing park facilities was used to select projects within certain distances of both bus stops and sidewalks. If a bus stop was within one-quarter mile of an existing park facility, it received a score.

Steering Committee Scoring

Obviously, seeking input from the Transportation Committee regarding the future of the area is seen as critical. This group represents the public's interest to a large extent. This scoring was done during the presentation of the initial improvement rankings. Once the Commission scored the projects, the Index Score was changed and projects were examined again. The weight the Commission ranking receives is set at 30.

Received Public Comment

After reviewing all planning documents for the area to date, as well as soliciting public comment during open house opportunities, projects were scored whether they received a specific comment or not. A score of one represents those specific projects or improvements on which the public has commented.

PRELIMINARY COST ESTIMATES FOR IMPROVEMENTS

There are a limited number of facility improvements which can be considered appropriate in the Glenwood Springs area. Table V-2 presents suitable treatments for both urban and rural cross sections. However, many times these improvements to existing roadways are not feasible due to limits in funding the project or the actual feasibility of providing those facilities without complete reconstruction of a corridor. While there are some areas in the Glenwood Springs area which are in need of pedestrian improvements, project-specific treatments should be determined based upon factors such as:

- Projected development pattern adjacent to the facility
- Projected roadway development/redevelopment
- Financing and funding strategies
- Development characteristics from residents

Table V-2
Candidate Pedestrian Treatments

Roadway	Candidate Treatments
Urban Cross Sections (either curb or curb and gutter)	Concrete Sidewalk Asphalt Sidewalk
Rural Cross Sections	Concrete sidewalk and curb Paved shoulder Paved shoulder extension Paved gravel extension Separated paved sidewalk Separated gravel sidewalk

These loosely-defined factors contribute to the type of facility to be incorporated into the area. These "triggers" which ultimately define the timing and the type of improvement which could occur are difficult to determine. If a road corridor is likely to be redeveloped in the next several years, this obviously dictates that some type of pedestrian improvement be made and those costs are associated with that redevelopment. However, if a corridor is not likely to be redeveloped for 15 years, but the pedestrian improvements are warranted to occur prior to that time frame, the associated costs are much higher for those types of improvements. That is the reason behind scoring projects higher which are likely to coincide with a major CIP project. While Table V-2 provides appropriate candidate treatments for improvements, the preference is that pedestrian ways incorporate both curb and gutter and be separated from traffic for safety reasons. Therefore, the costs associated with pedestrian ways (new sidewalk segments) are based upon the cost of concrete paving, subgrade stabilization, and rolled curb and gutter costs. Costs do not include removal and relocation of utilities, removal of existing barriers or obstacles, fill, as well as additional project-specific elements which cannot be costed until specific engineering for the project has been done. Table V-3 provides unit cost estimates per linear foot for new facilities.

Table V-3
Estimated Unit Costs

Type of Facility [1]	Cost Estimate/Linear Foot/Unit
4" Thick Sidewalk	$40.00
6" Thick Sidewalk	$47.00
Curb/Gutter	$24.00
Bench	$1,500.00
Subgrade Preparation	$2.25
Curb Ramp	$500.00
Crosswalk (Raised/Colored)	$6,000.00
Engineering/Labor Factor	*1.25*

Notes:
[1] City of Glenwood Springs Construction Bids (Engineering Estimates)

Chapter VI

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CHAPTER VI

Funding Mechanisms

This chapter presents a brief overview of the funding mechanisms which may be available to make improvements in the Glenwood Springs area. This study will be used to incorporate projects into the Glenwood Springs Capital Improvements Plan (CIP). Information contained in this study can be used as reference material for local planners and decision makers and lead to prioritized improvements in the area.

While there is a wealth of funding for pedestrian and bicycle *planning,* there is a lack of available funding for implementing and construction of projects. Without a dedicated tax base to support improvements within the area, it is likely many of the projects will be delayed until secure sources of funding are identified. This typically occurs on a case-by-case basis as projects are developed and a time line is set for implementation. The final ranking of projects—either High, Medium, or Low—will continue to have flexibility in timing and implementation. That is to say that all projects which are grouped in one of those categories could occur at anytime. Projects within the "High" category have no distinct priority within that category and likely would occur as dictated by the available funding.

Identified funding strategies come from federal, state, and local sources. Additional sources may be available; however, these are the main sources of funding for improvements. Most are competitive in nature and require a grant to be submitted prior to the allocation of funds.

THE FUNDING PROCESS

One of the most difficult elements in bicycle and pedestrian planning occurs during implementation, specifically when programming funds. Programming of funds occurs between planning and implementation of projects. The process of programming funds identifies how and when projects are to be funded during a period of time. In this case, the Capital Improvements Plan is the programming of

available funds for an identified project. Projects usually must meet certain criteria to be eligible for funding from specific funding programs. These programs can be federal, state, local, or in some limited cases, private in nature.

Following the programming phase, funds must be then allocated by the agency controlling the funds. Generally speaking, projects are sponsored by an agency or organization—in this case the city—with a grant process ensuing (if federal or state funds are sought). Grants are processed on a competitive basis, and funds are awarded and allocated to the sponsoring agency. Allocation is usually on a reimbursement basis; however, this is not always the case. In the case of construction projects, such as a new sidewalk, funds are allocated through a phased approach, during which engineering, environmental, property acquisition (if applicable), and construction proceed through a process. Many funds have a *use or lose* provision which contractually forces the sponsor to spend the funds in a timely manner, or risk losing the allocated funds. Again, the difficulty is determining which projects are applicable to what funding source, and even more difficult is identifying the funding sources which exist as they do change. Many times, pedestrian and bicycle facilities become difficult to fund on their own merit, particularly pedestrian (sidewalk) projects. In many cases they are tied to a larger capital investment project and are not completed on their own. However, if a project can be shown to be critical to the local community, local funding sources may then become more readily available. Generally speaking, a new sidewalk *not* tied to a road reconstruction may need to largely be funded from local funds alone, including tax resources and even local bonds.

POSSIBLE FUNDING MECHANISMS

This section presents a review of several major funding mechanisms. This review is presented in Table VI-1 at the conclusion of this chapter, summarizing the key elements from these sources. As mentioned, funding sources are broken down into federal, state, local, and private/other funding sources. The main sources of funding are briefly discussed throughout the remainder of this section. In all, there are around 20 separate programs for which bicycle and pedestrian projects and programs are eligible for funds. The task of receiving these funds becomes the difficulty. Much of this information was taken directly from both the Federal High-

way Administration and the Pedestrian and Bicycle Information Center (PBIC) from the University of North Carolina Highway Safety Research Center, with funding from the US Department of Transportation and the Centers for Disease Control and Prevention.

GOVERNMENT SOURCES

Federal: Transportation

Leading the way in government funding sources is federal funding through the current Transportation Bill; the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, or SAFETEA-LU, is the successor to TEA-21the Transportation Efficiency Act for the 21st Century. TEA-21 provided federal funding for the years 1998-2003, which ultimately extended for three years until SAFETEA-LU was officially adopted in 2006. This current bill authorizes $388 billion in federal gas-tax revenue and other federal funds for all modes of surface transportation, including highways, bus and rail transit, bicycling, and walking. The State of Colorado historically received approximately $36 million from 1999 to 2005 for bike and pedestrian facilities and programs. A large portion of these funds are made available through programs for which bicycling and walking activities are eligible expenditures; however, none of these funds are dedicated solely for bicycle or pedestrian facilities or programs. The major sources from federal dollars is from the Surface Transportation Program and the Safe Routes to School Program.

Surface Transportation Program (STP)

STP funds can be used for construction or rehabilitation of facility improvements or nonconstruction projects (such as maps, brochures, and public service announcements) related to safe bicycle use and walking. Funds can be used for the modification of public sidewalks to comply with ADA regulations.

Safe Routes to School (SRTS)

To enable and encourage children (including those with disabilities) to walk and bicycle to school; to make walking and bicycling to school safe and more appealing; and to facilitate the planning, development, and implementation of projects

that will improve safety, and reduce traffic, fuel consumption, and air pollution in the vicinity of schools. Each year after deducting $3 million for the administrative expenses of the program, the Secretary shall apportion the funds to states based on their relative shares of total enrollment in primary and middle schools (kindergarten through eighth grade), but no state will receive less than $1 million.

Funds are to be administered by state departments of transportation to provide financial assistance to state, local, and regional agencies (including nonprofit organizations) that demonstrate the ability to meet the requirements of the program.

For infrastructure-related projects, eligible activities are the planning, design, and construction of projects that will substantially improve the ability of students to walk and bicycle to school. These include sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bike parking, and traffic diversion improvements in the vicinity of schools (within approximately two miles). Such projects may be carried out on any public road or any bicycle or pedestrian pathway or trail in the vicinity of schools.

Each state must set aside from its Safe Routes to School (SRTS) apportionment not less than 10 percent and not more than 30 percent of the funds for noninfrastructure-related activities to encourage walking and bicycling to school. These include public awareness campaigns and outreach to press and community leaders; traffic education and enforcement in the vicinity of schools; student sessions on bicycle and pedestrian safety, health, and environment; and training, volunteers, and managers of safe routes to school programs. In FY2006, $100 million is allocated nationally to this program. The federal share for SRTS is 100 percent. There have been local efforts directed toward SRTS in Glenwood Springs. These efforts should be closely coordinated with the city and local school district.

Colorado State Parks Grants

The Colorado State Trails Grant Program funds projects for trail planning and design, construction, maintenance, equipment, and special projects. This program

is a partnership among Colorado State Parks, the Colorado Lottery, Great Outdoors Colorado (GOCO), the federal Recreational Trails Program (RTP), the Land and Water Conservation Fund (LWCF), the Colorado Off-Highway Vehicle Registration, and the Colorado Snowmobile Registration Program.

Grant applications are accepted as submitted and rated on their own merit. There are nine grant categories. Nine Recreation Trails Subcommittees review the applications. These subcommittees are comprised of two State Trails Committee Members, a Colorado State Parks' Regional Trail Coordinator, and five to seven volunteer reviewers. These volunteers span the spectrum of trail recreation and include enthusiasts, conservation groups, and park professionals with local governments. The City of Glenwood Springs is awaiting an award of approximately $153,000 grant to construct a trail to South Canyon (Lower Valley Trail).

Transportation Enhancements

The federal Transportation Enhancements (TE) program funds 12 different types of transportation-related activities. The program began in 1992 and approximately 45 percent of the TE funds have been programmed for pedestrian and bicycle facility projects. Examples of projects that may be considered eligible include the following:

- New or reconstructed sidewalks, walkways, or curb ramps.
- Bike lane striping.
- Wide paved shoulders.
- Bike parking and bus racks.
- New or reconstructed off-road trails.
- Bike and pedestrian bridges and underpasses.

The TE program also funds programs for safety and educational activities for pedestrians and bicyclists. Examples of projects that may be considered eligible include:

- Non-construction safety-related activities, such as a safety promotional campaigns.
- Bicycle and pedestrian safety training.
- Training materials such as videotapes, brochures, and maps.
- Rent for leased space and limited/short-term staff salaries.

One good example of a successful TE project in Colorado is from RTD in Denver which had a Bike-n-Ride TE project in 1992. Denver area bike enthusiasts and

planners approached the Regional Transportation District (RTD) about installing bike racks on buses. The Bike-n-Ride program received widespread support from the bicycle community, bus drivers, and maintenance staff who encouraged the RTD to apply for a TE award in order to pay the cost of retrofitting the bus fleet with bike racks and adding bike parking racks at bus stops and transit centers. A $307,500 TE award and $100,000 local match was used to purchase 100 bike parking racks and enough bike mounts for 700 buses. The Bike-n-Ride program gives commuters the chance to ride their bikes while avoiding major traffic and congestion.

Primary contact information	*Project Facts*
Regional Transportation District	TE award: $307,500
(303) 299-2463	Other funds: $100,000
	Total cost: $407,500

Appendix B provides a historic review of Transportation Enhancement projects for the State of Colorado since 1999. This shows that the City of Glenwood Springs has received three TE projects since 2000:

- I-70 Pedestrian Bridge: $146,000 federal share
- South Canyon Trail: (2 projects) $260,000 federal share

Federal: Non-Transportation

Outside of the federal transportation programs, there are a wide range of other federal funds that can be used for bicycling and walking facilities. Some of the most common include funds through the federal land agencies such as the National Forest Service, National Park Service, or Bureau of Land Management; however, these funds are primarily for trails and must be on federal lands. Community Development Block Grants through the Department of Housing and Urban Development (HUD) are a likely source of funds for community-based projects, such as commercial district streetscape improvements, sidewalk improvements, safe routes to school, or other neighborhood-based bicycling and walking facilities that improve local transportation options or help revitalize neighborhoods.

State: Transportation

Every state raises revenue for highway and transportation infrastructure through a state motor-vehicle fuel tax. Some states also raise funds through vehicle licensing fees. In many states, the laws governing how these funds can be spent would make most bicycle and pedestrian projects and programs eligible for these funds; however, in other states, use of the funds may be limited to providing paved highway shoulders on state-owned and operated roads. The following are some examples of dedicated funding for bicycle and pedestrian projects from state transportation revenues, taken from PBIC:

- By constitutional amendment, Oregon dedicates one percent of state gas-tax revenue to providing improvements for bicycling and walking on state-managed highways. Michigan also has a one percent law.

- Illinois has a long-standing annual dedication of $1.50 out of the car title transfer tax for trail and bicycle pedestrian improvements in local communities—raising up to $5 million annually.

- California annually dedicates $7.2 million from the State Highway Account (gas tax-based) for bicycle transportation improvements, emphasizing projects intended to help bicycle commuters. The money is awarded from the state DOT to cities and counties via a competitive grant program. Maximum grants are $1.8 million.

- The California state legislature also created the Transportation Development Act, which dedicates 0.25 percent from the statewide 7.75 percent sales tax to public transit support. The funds are returned to the county of origin where the regional transportation planning agency (often the MPO) may set aside two percent of the funds for bicycle and pedestrian projects. In San Diego County, where this set-aside has been established, funding levels amount to approximately $1.7 million per year.

- New Jersey has created a bicycle and pedestrian facility set-aside in its local aid program by gubernatorial directive. Municipalities and counties can apply for these funds for local projects. The money comes from the NJ Transportation Trust Fund (mostly state gas taxes and highway toll revenue).

- California passed a new state law in 1999 that allocated 30 percent of the federal Hazard Elimination funds (a portion of the 10 percent Safety Set-Aside of Surface Transportation Program funds) to projects that encourage children to walk and bicycle to school.

- In Indiana, drivers are paying extra for special license plates that benefit greenways, open space, parks, and trails. In 1995, about $1.9 million was netted from the sale of 75,740 plates. The plates cost an additional $35, of

which $25 goes to the Indiana Heritage Trust. Maine and Florida use similar license plate fee add-ons for conservation, parks, and bicycle and pedestrian program funding.

CDOT's Bicycle/Pedestrian Program serves as a resource for current developments, standards, and practices in facility design, planning, and engineering. The program also is charged with motivating and encouraging bicycling and walking, and is responsible for educating pedestrians, bicyclists, and motorists of all ages regarding the rules of the road and trail, appropriate traffic behaviors, and how to share the road safely and cooperatively with other modes of transportation. See the Colorado 2030 Statewide Transportation Plan for more information.

In Colorado, local government revenues fund many of the state's bicycle and pedestrian facilities. Bicycle and pedestrian projects may compete through the regional planning process for Regional Priority Program funding. However, as the number of improvement projects has increased dramatically, funding amounts have declined. That is one of the main reasons why bicycle and pedestrian improvements have been largely tied into local or regional highway and bridge projects rather than as independent bicycle or pedestrian facility projects.

At the state level, Enhancement Funds continue to be the most frequently used source of federal funds for bicycle and pedestrian projects. These funds are allocated to CDOT and awarded through the regional planning process through the regional offices. In 2004, the Colorado legislature passed the Safe Routes to School (SRTS) program, which also continues to be a large source of funds for improvements as discussed previously.

State: Non-Transportation

A growing number of states are providing funds from non-transportation-related revenue streams. However, these funds are not always eligible for the full range of bicycle and pedestrian activities. Several state sources *may* exist such as through the Department of Local Affairs (DOLA). The Colorado Department of Local Affairs Local Government Financial Assistance section manages a number of grant and loan programs within DOLA specifically designed to address public facility and service needs. They manage the following programs which may have

funding available for bike and pedestrian improvements; however, these are likely limited amounts:

- Community Development Block Grants
- Community Service Block Grants
- Energy and Mineral Impact

Other examples across the nation include the following:

- Maryland uses one-half of one percent of a real estate transfer tax to fund Program Open Space, which is used to acquire land for greenways and trails.

- By referendum, Colorado dedicates a portion of its lottery proceeds to trail building.

- Maryland uses a real estate transfer tax (tax on the sale of residential and commercial property) to raise money for open space acquisition and trail building.

- The Pennsylvania and Florida state legislatures were among the first to create state funding programs for trail building and open space preservation, and make much of the funding available for local community-sponsored projects, in addition to projects of statewide interest. Many other states have and are following suit.

- The Massachusetts Department of Environmental Management (DEM) runs a Greenways and Trails Small Grants Program to award small amounts of funding to local communities with innovative greenway and trail protection projects.

Local Sources

Examples of local communities taking action on their own to create revenue streams for improving conditions for bicycling and walking are not hard to come by. Three common approaches include: special bond issues, dedications of a portion of local sales taxes or a voter-approved sales tax increase, and use of the annual capital improvement budgets of public works and/or parks agencies.

Other examples include impact fees and improvement districts (improvement districts are not widely used in Colorado). Impact fees will lead to funding new sidewalks which abut development.

Some examples follow:

- San Diego County residents voted to impose a half-cent sales tax for transportation purposes. Out of those funds ($171 million in 2000), $1 million is set aside for bicycle projects. The tax is administered by the San Diego Association of Governments and is scheduled to expire in 2008.

- The City of Albuquerque, New Mexico and Bernalillo County both have a five percent set-aside of street bond funds which go to trails and bikeways. For the city, this has amounted to approximately $1.2 million every two years for these facilities. City voters last year passed a one-quarter-cent gross receipts tax for transportation which includes approximately $1 million per year for 10 years for trail development. In addition, many of the on-street facilities are being developed as a part of other road projects and are incorporating the bike facilities in the roadway budget for new roads, or when a resurfacing project is planned.

- Pinellas County, Florida built much of the Pinellas Trail system with a portion of a one-cent sales tax increase voted for by county residents.

- Seattle, Washington and King County voters approved a $100 million bond issue to protect open space in the urban area; $33 million was set aside for trail development. The Seattle Department of Public Works used about $6 million per annum for the city's bike program.

- Denver invested $5 million in its emerging trail network with a bond issue, which also funded the city's bike planner for a number of years.

- Eagle County, Colorado (including Vail) voters passed a transportation tax that earmarks 10 percent for trails—about $300,000 a year.

- In Colorado Springs, 20 percent of the open space sales tax is designated for trail acquisition and development—approximately $5-6 million per year.

DETERMINING PROGRAM SOURCE

A matrix of typical project types has been developed by Pedestrian and Bicycle Information Center at the University of North Carolina, which can be used to determine if a program or facility is a good match with a source of funds. This matrix uses a three-step rating scale to determine project compatibility.

- "3" is your Best Bet, meaning that the project type is eligible, the program and project are an appropriate match, and typical administration of these programs is designed to accommodate such projects.

- "2" signals "Rough Sledding," meaning that the project type is eligible, the program and project are an appropriate match, but typical administration

of the program at the state or local level might make accessing the funds fairly difficult.

- "1" means Chances are "Slim to None," meaning that the activity is eligible, but most projects of this nature will not be a good match given the program's objectives and typical administrative and project selection procedures.

For more information, see the PBIC website at: http://www.walkinginfo.org/pp/funding/gov/index.htm and select ***Choosing the Federal Program that is Right for the Project.*** This will open the matrix used for determine funding compatibility.

PRELIMINARY FUNDING MECHANISMS

The following section outlines some of the preliminary funding mechanisms which may be available to implement pedestrian and bicycle improvements within the Glenwood Springs area. These funding mechanisms will be used to develop a funding plan for improvements; however, until a project is included into the CIP, these represent possible funding strategies.

Table VI-1 summarizes the key elements of numerous funding strategies. Identified funding strategies come from federal, state, and local sources. Additional sources may be available; however, these are the main sources of funding for improvements. Most are competitive in nature and require a grant to be submitted prior to the allocation of funds.

Chapter VII

TRANSPORTATION
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CHAPTER VII

Passenger Education and Training

Educating the public about transit options (and more specifically, about how to make the most out of transit services) is an important step in improving any transit program. Informing the public about available services not only increases the potential that they will use the service, but often makes them more supportive of the services for others even if they choose not to use the service themselves. Additionally, ensuring that each potential passenger has the resources available to learn to use the transit system to the fullest is the best method of ensuring passenger satisfaction and steady ridership. Passenger training also allows the transit provider to encourage the use of services which are most efficiently provided, such as training a passenger to use fixed-route service rather than door-to-door service when it is appropriate. This chapter discusses the methods and benefits of educating the public about transit services, as well as methods for training the individual passengers to make the most out of available services.

PUBLIC EDUCATION/COMMUNITY OUTREACH

Educating the public about transit services is a benefit to the public as well as a useful form of marketing. The transit provider should take advantage of community events such as fairs or Earth Day celebrations to display vehicles, hand out brochures, and present the benefits of transit. Creating high visibility for the transit system makes transit a fixture of the community and can garner support. Additionally, attending public events is an opportunity for the transit provider to explain to the public what the transit system does and how it can be used.

In addition to attending public events, the transit administrator can visit service clubs, senior centers, and social service programs to teach the benefits of transit, how to use transit, and explain to program directors the benefit of having passengers use fixed-route service over paratransit. The use of an accessible fixed-route service is far cheaper than providing the dial-a-ride paratransit service.

Community Outreach Tips

Conducting community outreach activities is critical to increasing community understanding of, and support for, a transit system. When meeting with community members, be sure to:

- Inform them of what the system has recently done or is planning to do;
- Inform them when and where the activity will take place;
- Inform them of how the activity will affect the community; and
- Inform them who will benefit from/be affected by the activity.

Incorporating a management philosophy that places the customer first can lead to improved employee cohesion as well as increase courtesy and service to customers.

Education Program for Institutional Users of the Dial-A-Ride Service

One means of improving service quality of a dial-a-ride program is a program to educate institutional users (such as social service agencies and medical offices) with regard to the requirements and limitations of the dial-a-ride program. Specifically, institutions, passengers, and the program could benefit if greater knowledge is available regarding factors such as the following:

- The availability of capacity on the service at various times of the day. The ability of institutions to take advantage of relatively "slack" periods of the day in scheduling their passengers' trips can reduce frustration with the service and can improve the overall productivity of service by providing more even demand for service.

- Reservation procedures and passenger eligibility. Providing "official" information regarding service policies will minimize the confusion generated by "word of mouth" information.

- The impact that last-minute changes in pickup times has on the system. A greater understanding of the program's difficulty in rescheduling return trips from medical appointments, in particular, would encourage more timely completion of dial-a-ride passengers' appointments.

- The costs associated with dial-a-ride service and the financial limitations of the program. This information would foster an improved understanding of the abilities and limitations of the program.

At a minimum, written information should be developed and distributed to major dial-a-ride trip destinations. Preferably, transit staff would make presentations to staff meetings and professional organizations.

PASSENGER TRAINING/TRAVEL TRAINING

Passenger training—also known as Travel Training—can take many forms, from familiar rider guides and brochures to individual training of Travel Ambassadors or buddies. The needs of specific market targets vary based on age and ability of the passenger, as described below.

Training Youth

Young people are a strong potential market for transit ridership. Children over the age of 10 are often independent enough to ride transit without an adult, and children 17 and under typically do not have a driver's license or a vehicle to drive. Furthermore, training youth to use transit can make them life-long transit riders as they become familiar and comfortable with the service.

There are a number of methods to train young people to use transit, depending on age. Grade-school children can be given coloring books with a transit theme. The children might also receive day passes for themselves and a parent so they can experience riding the bus together. The transit provider can also visit schools with a transit vehicle. Students would be encouraged to board the bus where they would be taught the basics of riding a bus by a transit representative, with the assistance of the bus driver and school teacher. The basics include ticket/fare information, rider etiquette and safety, how to request a stop, the significance of the voice annunciator, wheelchair lift, etc. This would be ideal for multiple classes at one time.

For older children, an on-site presentation might be the best training tool. Marketing staff would go into the classroom and lecture about transit services, the benefits of public transportation, and how to plan a trip using the current brochure and system map. For teenagers, it is helpful to create a hip, fashionable presentation that would create "buzz" among students in grades 6–12. It is better to limit the amount of stand-up talking and place emphasis on a presentation that

incorporates games, music, activity, and collaboration with peers. Students are likely to become bored with standard PowerPoint slides and information overload, so it is important to make the presentation lively and interactive.

Finally, encouraging school groups to take transit for field trips is a great way to teach them about the transit system. By using local bus service for school field trips, students learn important life skills. Transit staff would coordinate with teachers to organize group trips on the local routes, and provide the teachers with an itinerary and other information to help with the ride.

Instructions to group riders might include the following:
"These simple steps will help your trip go smoothly."

- Get to the bus stop at least five minutes before the bus is scheduled to arrive.
- Make sure your group is waiting in the "Safe Zone," a safe distance from the curb and street.
- When the bus pulls up, confirm that it's the bus you want to board by checking the sign above the windshield.
- Upon boarding, show the operator your Free Pass (for pre-paid or free trips) and tell him or her how many are in your group.
- If your group will not be using a pass, have the exact bus fares ready to deposit in the farebox. To expedite boarding, please arrange for one adult to deposit the fares for everyone in your group. If your group will be transferring to another bus, ask the operator for a group transfer when you deposit the fares.
- Assist your group in finding seats quickly. If you have to stand, hold onto the handrails.
- Encourage your group to observe good bus etiquette so all passengers can enjoy the ride.
- Watch for your bus stop and signal the operator a couple of blocks before you reach it.
- When possible, exit through the back doors, then move quickly into the "Safe Zone."

Training the General Public

This broad category of riders needs a broad approach for training. Whether a person is an occasional rider using transit because of car maintenance, or someone

completely dependent on transit for mobility, the general public wants information which is easily available and simple to understand. Most small transit systems find the best methods of getting information to the public is through websites, brochures, and customer service phone lines. For first time transit users, the phone line is the most successful because the customer service employee can walk the customer through each step of planning his or her first trip, from scheduling to using fares, and explain where to wait for the bus. It may be advisable for the transit provider to obtain Trip Planner software to be better prepared for new customers who call in and have their trip developed without the need to read a schedule.

Passengers who are more familiar with the bus service may be more comfortable with a well-designed website to access rider information. A website should include the following information:

- A map of the route system (for complicated or detailed maps, a zoom feature is desirable).
- An easily readable schedule.
- Information on how to ride.
- Information on dial-a-ride services.
- A phone number for additional information.
- Information on fares.
- Information on loading/unloading bicycles.
- Links to regional providers.

Brochures or rider guides should be readily available at super markets, libraries, government offices, community centers, schools, and on the bus. A well-designed brochure will include the following information and characteristics:

- Easy to read and attractive.
- A map of the routes.
- Schedule information.
- Fares.
- Contact information: phone number(s), address, website address, e-mail.
- How to load/unload bicycles.
- Transit policies (regarding food, music, etc.).

Finally, it may be appropriate to give training sessions at social clubs such as the Kiwanis, Lions, Elks, and Rotary.

Training Passengers with Special Needs

Passengers with disabilities will have varying needs depending on the type of disability. Whether a disability is physical or mental, the foremost concern in training passengers with special needs is developing the appropriate communication. New passengers with disabilities should be assisted one-on-one by a person with similar disabilities, if possible. Independent living centers and programs conducted by persons with disabilities provide the best training

Training People with Disabilities

Easter Seals Project ACTION offers a five-step training curriculum in *Training People with Disabilities to Access Public Transportation.* The steps are:

- Referral
- Assessment
- Program planning
- Training
- Evaluation and follow-up

The referral steps include a press release and brochure distributed to various agencies that provide services for persons with disabilities in the communities. In the second step, the potential user's cognitive abilities, general awareness, physical skills, interpersonal skills, and safety are assessed. From this checklist an individual program is planned (step three). The program plan identifies goals and objectives and is flexible so that either the trainer or the new user may revise the goals and objectives.

In addition to this training program, it is important to have passenger information available in Braille and on tape for passengers with visual disabilities.

Travel Training for Seniors

Travel training programs have become a popular way for transit systems to reach out to older passengers. Travel training programs are intended to acquaint older

persons with the transit system, showing them how easy it is to board the bus and ride to their destination. In many cases, a travel training program involves "classroom" time in which they learn about transit options, and "field" time in which the seniors try out riding the bus. Sometimes the transit system will park a bus at a senior center or senior facility and invite the residents to board the vehicle and try out the seating. There may also be a seminar on reading maps and schedules or a discussion of bus pass options and discounts. The most successful travel training programs take it a step further, showing the trainees that transit can be a gateway to independence and recreation.

Some Successful Travel Training Techniques

Travel Buddies – Some travel training programs encourage the participating seniors to find "travel buddies" in their group. These travel buddies will accompany each other on trips and outings, looking out for one another. The buddy system serves several purposes—it dramatically increases the comfort level for both participants, it increases the safety level for both participants, and it makes the bus trip into a social outing.

Seniors Choose the Destination – Both Great Falls Transit District (GFTD) in Montana and LIFT in San Diego report that allowing travel training participants to choose the destination for a "training trip" is a very successful selling point. Many times, the elderly participants will be surprised to find out that a bus can get them where they need to go. Additionally, it is exciting for the seniors to choose a destination which makes the training experience less strenuous and tense.

Group Leaders – An enhancement to the travel buddy system is to assign a group leader to each group of seniors that undergoes travel training. The group leader is a senior who rides transit regularly and is familiar with the system. When a group of seniors takes their first trip in the travel training process, the group leader will ride along with them to answer their questions and concerns. The leader also provides an example for the seniors, demonstrating things such as how to ask for a seat, when one should stand up to exit, and the proper way to pay the fare.

Peer Training–Travel Ambassador – In some areas, senior volunteers are employed as "travel ambassadors" to assist with travel training programs. In exchange for a year of free transit service, volunteer travel ambassadors work one-on-one with other seniors as peer trainers. Travel ambassadors assist trainees with their trip planning, answer their questions and concerns, and accompany them on the bus. Travel ambassadors often must complete a specified training session and commit to a certain amount of training service.

Follow-Up – Follow-up calls to each of the seniors participating in a travel training program are said to be important. These calls are generally made three and six months after the completion of the program. The purpose of the calls is twofold: (1) to ensure that the seniors are comfortable with riding on the system and (2) to evaluate the success of the travel training efforts.

Case Studies of Travel Training Programs

Travel Training for Older Persons at the Fort Worth Transit Authority

Customers who do not qualify for complementary paratransit service may be able to use fixed-route service for some trips. Even customers who use complementary paratransit service may be able to use fixed-route service for some trips that they currently make on paratransit service. Two elements are key in successfully encouraging customers to make the change: (1) a price incentive and (2) effective training in how to use unfamiliar, fixed-route service. The Fort Worth Transit Authority offers travel training to older persons and others to learn how to effectively use fixed-route bus service. The program began in 1994 with a grant from the Federal Transit Administration. The objective was to train customers to switch from using complementary paratransit to using fixed-route service. Since its introduction, program eligibility has been expanded to include older persons and refugees. Some older persons sign up for training because they would rather learn how to use fixed-route service than use complementary paratransit service.

Training focuses on the following:

- Conducting an initial visit with the trainee to establish familiarity and assess personal travel capabilities;
- Executing a travel training agreement that establishes trainer and trainee responsibilities;

- Taking the client on a planned trip and conducting training during the trip;
- Repeating planned trips as required to establish confidence in independent travel;
- Conducting telephone follow-up to understand and resolve concerns; and
- Observing travel without the knowledge of the client.

Whenever changes are made to routing and scheduling that may affect a client, refresher training is provided to maintain knowledge and confidence. Trainers and trainees have separate and distinct responsibilities:

THE TRAINER

- Travels with the client during the training program;
- Learns required bus routes to and from specified places of travel;
- Assists the client in understanding and correctly assuming the responsibilities of independent bus travel;
- Facilitates the client's learning in an atmosphere that promotes confidence, skills, safety, and problem-solving abilities;
- Identifies actual/potential problems and works with the client and significant others to resolve them;
- Maintains a good working relationship with the client; and
- Keeps an accurate written log of training time with a client and significant events during training.

THE TRAINEE

- Works cooperatively with the trainer to learn to travel independently;
- Accepts supervision and agrees to work to solve any problems that may arise; and
- Abides by policies, procedures, and regulations.

The Fort Worth Transit Authority has estimated the number of trips made by people who have received travel training. In the period between 1994 (when the program was started) and 1996, approximately 25,000 to 32,000 trips were made annually. In recent years, trips have increased to between 55,000 and 70,000 per year.

Travel Training in Eugene, Oregon

One of the really successful components of the Driving Decisions for Seniors (DDS) program in Eugene, Oregon was the Bus Excursion Program in which seniors trained other seniors on how to use the county transit system. One participant said, "Nobody except another senior seems to understand what it takes to get us interested [in taking the bus]." The transit system was presented to DDS participants as a highly complex technical system. Thus, those older persons who successfully navigated the system were encouraged to give themselves credit for having the skill to master a complex system. The purpose of this presentation was to "turn bus riding from a low-status act into a high status one" (Heckman and Duke, 1997). A senior volunteer who was familiar with the local transit service took other seniors on "bus excursions" to restaurants or picnic spots within walking distance of bus stops. The bus excursion leader instructed the participants on planning the trip, boarding the bus, making transfers, and enjoying the trip. Of the DDS participants studied by Heckman and Duke, 64 percent (14 out of 22) of those seniors who voluntarily surrendered their driver's licenses did so after participating in the Bus Excursion Program. The Bus Excursion Program was described as "important, if not pivotal, in their decision to quit driving."

Part of the success of this program was the transit system's support and attitude. The seniors saw that they were being treated with respect and that by understanding the service, they could make it responsive to their individual needs. DDS thus successfully overcame the common perception that many older persons "detest the bus because of what it means: one more 'demerit' toward a demotion in social status that accompanies aging in our society….[In contrast,] the Bus Excursion 'honors' bus riding by promoting intelligent transit system use as an achievement of high skill" (Heckman and Duke, 1997). One DDS participant said, "I used to think that riding the bus was so undignified…I just didn't know any better…It sure has made my life easier" (Heckman and Duke, 1997). Harper and Schatz (1998) report more common images of transit, images that were confirmed in this project's focus groups for older persons: "A few seniors viewed public transportation as an option reserved only for the lower socioeconomic classes, and most viewed it as an inconvenient option" (Harper and Schatz, 1998). Some social marketing may be needed to convince seniors and others that travel by means other

than driving or riding in an automobile has real value. Public transit is often seen as an "inferior economic good," a service for low-income and disadvantaged people including the foreign-born, foreign language-speaking, worker class. More people could be attracted to public transportation services if these services adopted a greater customer focus, a more user-friendly attitude, and began to cater to riders who ride by choice, not because they have no other choice. Travel training on how to use public transit services can be a key marketing element. The travel training program was a very successful component of the DDS program in Oregon. Travel training programs have been extremely effective in increasing the usage of public transit services among people with disabilities, including individuals in mental retardation and developmental disabilities programs.

The Easy Rider Program - Special Transit, Boulder

Special Transit in Boulder offers the Easy Rider Program, a free comprehensive travel training program for seniors and persons with disabilities on how to use public transportation (fixed-route) rather than rely on Special Transit to provide dial-a-ride service. In 2006, the program had 65 successful trainees, of which 77 percent indicated they were riding the fixed-route bus six months later. This shift in ridership from paratransit to fixed-route service represents a cost savings of approximately $70,000 annually to Special Transit. This program is one that should be contacted for more information on how to conduct and implement a travel training program in the State of Colorado.

RESPONSIBILITIES OF THE LOCAL GOVERNMENT (THE COUNCIL)

- Provide a loan to the voluntary organization to cover reasonable expenses incurred in delivering the project including administration fees agreed to between the Council and the voluntary organization;
- Provide monitoring forms for use by the volunteers;
- Liaison with the voluntary organizations and Council.

RESPONSIBILITIES OF THE VOLUNTARY ORGANIZATION

- Ensure that volunteers are insured, trained, and briefed appropriately for their task;
- Match the volunteer and the rider;
- Maintain the confidentiality of the rider;

- Reimburse volunteers for expenses incurred in accordance with usual arrangements;
- Keep a record of each journey made for monitoring purposes and make this available to the Council;
- Account for the use of loans supplied by the Council at least quarterly; and
- Make contact with the bus rider (normally by telephone) in order to arrange a mutually convenient time for journeys.

THE ROLE OF THE VOLUNTEER

- Provide reasonable physical assistance to the rider, such as pushing a wheelchair user and helping them to maneuver onto, inside, and off the bus. The type of assistance will be agreed in general terms between the user and the volunteer before the first test journey;
- Have funds available to enable bus fares to be paid (for both the volunteer and the user);
- Pay for taxi fares if necessary to complete the journey;
- Make sure that the rider gets home again after the journey;
- Complete a monitoring form for each journey to record any lessons or problems encountered along with user perceptions of the journey; and
- Claim expenses from the voluntary organization, and keep regular receipts and records.

RESPONSIBILITY OF THE RIDER

- Notify volunteers of any difficulty in maintaining an appointment and give as much notice as possible in the event of a need to cancel a journey;
- Advise the volunteer of the extent of assistance, if any, anticipated during the journey;
- Attempt to undertake all aspects of the bus journey (boarding, paying fare, taking tickets, etc.); and
- Assist with the completion of a monitoring form in order to record observations and comments on each journey.

RESPONSIBILITIES OF THE TRANSIT AGENCY

- Ask drivers to provide assistance to disabled passengers by:
  - Bringing the bus close to the curb; and
  - Using the ramps and lowering suspension if needed.

CONCLUSION

Addressing the travel preferences of the older persons of today might be the most important strategy in meeting the travel needs of older persons in the future. The travel attributes most highly valued by older persons describe transportation services that are reliable, frequent, door-to-door, low cost, comfortable, and spontaneous, and that serve a large variety of destinations over extended periods of time. This summarizes actions that transit operators can take regarding reliability, flexibility, and comfort.

Chapter VIII

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CHAPTER VIII

Final Improvement Rankings

Chapter V presented the criteria and the general methodology that were used in the ranking process for this study. Additionally, Chapter IV presented a review of existing accessability issues. This chapter provides the final rankings and recommended improvements to the area. Rankings for projects were first completed by the LSC Team and presented to the Transportation Commission for review. The Commission then was given the opportunity to provide rankings on individual projects. This information was then combined with LSC's rankings to determine projects that may need to be incorporated into the Capital Investment process. It should be mentioned that not all recommended improvements require inclusion into the Capital Investment process. The are general and specific recommendations for use by the City of Glenwood Springs to improve transit access for patrons.

PROJECT PRIORITY

Using the methodologies detailed above to score and rank the pedestrian projects, the LSC team found that the connections to schools, parks, and transit improvements have the highest scores, obviously because they have a greater weighting scheme.

This section presents a discussion on possible improvements for the Glenwood Springs area and a ranking of those improvements. Facility improvements range from simple improvements to bus stops such as pad improvements to new sidewalks. Rankings are based upon a three-tiered ranking system:

- High
- Medium
- Low

As mentioned, projects within each ranking are not prioritized in any order. A highly ranked improvement would be implemented into the Capital Improvements Plan as it reaches its "trigger." These triggers may be related to cost, planned

redevelopment of a road, or others. Each improvement must be weighted on an individual basis to determine if the improvement can feasibly be implemented when warranted. Additionally, a prudent approach to investment planning, based upon the guidelines developed by the State of Colorado and discussed in Chapter I, include elements such as:

- ✓ Maintenance of existing facilities
- ✓ Safety

GENERAL IMPROVEMENT RECOMMENDATIONS

Using these development principles (along with the others mentioned in Chapter I), prior to any new investments, one option for investment includes the preservation and maintenance of the existing facilities. Prior to investing in new construction, unless jointly constructed with new developments, priority should be given to maintaining facilities and/or bringing them back up to an acceptable level of condition.

This would be the first step in improving the Glenwood Springs area and enhancing the walking and biking experience for residents. Based upon maintenance and safety, the following general recommendations are being made:

1. It is recommended that bicycle facilities and sidewalks be routinely swept clean of debris and gravel.

2. Ensure that crosswalks and curb cuts meet existing ADA standards set forth by the US Access Board Guidelines. These facilities must be clear of gravel for access by a pedestrian in a wheelchair. Crosswalk markings should allow direct access to curb cuts.

3. Ensure that facilities are usable and accessible. It is recommended that existing barricades or obstacles be removed.

4. Enforcement of speed limits during school times should be implemented. It is recommended that routine enforcement of speed limits at each of the schools in the area be incorporated into a Safe Routes to School program. This may also help to alleviate pedestrian crossings at unmarked areas, such as at the high school.

5. All transit stops should have a schedule posted at them no higher than 36 inches from the ground. When discussing access to services, patrons need to be aware when the bus will arrive at the stop.

6. All stops should be cleaned and trash removed regularly.

7. All crosswalks accessing bus stops should be clearly visible. Many are in need of repainting.

8. Bikes should be able to be boarded at nearly all stops. The exception would be the 9th and Grand Avenue stops.

9. Painting of crosswalks, particularly at school zones, should be maintained. Adhesive striping is not as appropriate given the snow accumulation and use of snow plows. While CDOT does use adhesive striping, it can become damaged over time.

10. Passengers should be educated on how to load a bike, and information on how to use the system should be placed at key locations. This is particularly of interest to tourists.

11. Seniors and those with disabilities should be given travel training to determine if they can use the fixed-route system rather than to rely on the Traveler for service.

12. System maps should be reproduced with major destinations, schools, bike routes, and stops clearly marked.

13. Stops should all have schedules available. Additionally, major stops should have the time when the buses stop posted clearly.

14. The City should investigate Safe Routes to School for the area. This should include such elements as:
    a. Become familiar with the SRTS program and grant deadlines.
    b. Work with local schools to determine eligible projects.
    c. Attend school board meetings and form a local SRTS committee.
    d. Encourage children to use the transit system.
    e. Make information available to school officials.
    f. Determine if school zone signage is acceptable.

From an investment standpoint, these recommendations represent a small investment in safety and maintenance functions which should be looked at closely. Some of this can be funded by accessing Federal Transit Administration and state funding sources.

RANKINGS OF PRIORITIZED IMPROVEMENTS

Based upon the criteria discussed, a list of improvements for transit access has been made. The prioritized improvements rankings are presented in Figure VIII-1, which provides a description of projects, rankings, and their respective locations. Table VIII-1 provides information regarding improvements as well as a literal description and the score received through the scoring process. An estimated cost to construct or improve each facility is also presented. The final list will aid in the selection of improvements for inclusion into the Glenwood Springs CIP, updated on an annual basis, or to serve as general improvements that may not need to be included in this investment process. These improvements provide a general ranking of importance in terms of timing. However, this list should be reviewed annually to determine if changes need to be made to improvement priorities.

Improvement Overview

This section will briefly review the highlights of improvements. Again, this list is not inclusive of all improvements. Many of the improvements were mentioned separately in Chapter IV. Additionally, cost estimates are planning level cost estimates to give a scale of magnitude of projects. Each project will require more detailed cost estimation based upon design, engineering, and factors such as landscaping or material costs at that time. Additional costs, not shown in Table VIII-1 are related to minor improvements to the stops, shelters, signs, schedule holders, etc.

Additionally, one of the largest expenses shown is the installation of bus pullouts. While Grand Avenue and Highway 6 certainly warrant pullouts, these projects received a lower Commission rating. The projects are included so that if future pullouts are necessary, they continue to be documented consistent with the Transportation Master Plan. As traffic continues to increase in the area, certainly pullouts on Highway 6 may be implemented. However, it was discussed by the Commission that pullouts on Grand Avenue were not wanted due to the difficulty of getting buses back into traffic during peak hours.

Figure VIII-1
Glenwood Springs Improvement Rankings, Descriptions, and Locations

ride Glenwood Springs

Increase auto awareness of crossing pedestrians/raised crosswalk/signage

Install pullout

Install pullout

Install new stop on eastbound Highway 6

Increase auto awareness of crossing children/raised crosswalk/signage

Install pullout

Paint crosswalk

Paint crosswalk

Install bench, landing, and sidewalk

Paint crosswalk, improve landing

Install bench

Install landing, bench, or shelter

Stripe curb as No Parking

Stripe curb as No Parking

Install passenger bench

Stripe curb as No Parking, replace crossing sign, improve wheelchair accesability

Install pullout

Install two new stops on Grand including xing safety measures

Install curb cuts on west corner of 20th Street and improve curb cuts

Install curb cuts on west corner of 20th Street

Install new stop

Install shelter, increase auto awareness of pedestrians

Relocate Stop and Construct sidewalk (completed or near completion)

Install crosswalk signage, install tactile strips

Install crosswalk signage

26 5 23 6 20 10 17 16 2 22 1 7 21 11 4 25 12 24 24 3 18 14 19 13 15 8

Glenwood Bus Route

On Call Service

Southern Bus Route

Parks

Low

Medium

High

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0 0.25 0.5 1 Miles

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Table VIII-1

Major Access Projects

Project ID	Stop ID	Location	Access Improvement	Increase Safety	Connection to School Rating	Increases ADA Access	Increases Overall Accessibility	Connection to Parks/Rec	Public Comment	Commission Ranking	*INDEX*	*PRIORITY BASED ON INDEX*	Planning Cost Estimate
1	22	Glenwood Motor Inn	Install bench					1		1	**40**	***Low***	$ 1,500
2	18	Community Center	Install bench, landing, and sidewalk			1	1			-1	**60**	***Low***	$ 22,313
3	7	Safeway	Install curb cuts on west corner of 20th Street and improve curb cuts on Grand			1	1	1		-1	**70**	***Medium***	$ 1,000
4	9	Glenwood Chamber	Install passenger bench		1			1		1	**80**	***Medium***	$ 1,500
5	27	West Glenwood Plaza	Install pullout	1	1			1		-1	**80**	***Medium***	$ 25,000
6	28	Red Mountain Inn	Install pullout	1						1	**90**	***Medium***	$ 25,000
7	14	Ramada Inn	Install landing, bench, or shelter			1		1		1	**90**	***Medium***	$ 3,000
8	2	McDonalds	Install crosswalk signage			1	1			0	**90**	***Medium***	$ 1,000
9	7	Safeway	Install pullout	1				1		1	**100**	***Medium***	$ 25,000
10	32	Wulfsohn Road	Install pullout	1				1		1	**100**	***Medium***	$ 25,000
11	11	Qwest	Stripe curb as No Parking	1	1			1		0	**110**	***Medium***	$ 100
12	15	City Market	Install pullout	1	1			1		0	**110**	***Medium***	$ 25,000
13	4	27th Street and Grand	Relocate Stop and Construct sidewalk (completed or near completion)			1	1			1	**120**	***Medium***	n/a
14	n/a	S. Grand and Cisar Court	Install new stop			1	1			1	**120**	***Medium***	$ 1,500
15	3	Across Wal-Mart	Install crosswalk signage, install tactile strips	1		1	1			-1	**120**	***Medium***	$ 6,000
16	19	Across Target	Paint crosswalk	1		1	1			-1	**120**	***Medium***	$ 500
17	20	Target	Paint crosswalk	1		1	1			-1	**120**	***Medium***	$ 500
18	6	Post Independent	Install curb cuts on west corner of 20th Street			1	1	1		1	**130**	***Medium***	$ 1,000
19	5	27th Street and Grand	Install shelter, increase auto awareness of pedestrians	1		1				1	**140**	***High***	$ 4,000
20	n/a	New Stop on Hwy 6	Install new stop on eastbound Highway 6			1	1		1	1	**150**	***High***	$ 53,000
21	12	Forest Service	Stripe curb as No Parking	1	1			1	1	1	**170**	***High***	$ 100
22	23	Glenwood Caverns	Paint crosswalk, improve landing	1		1	1	1		1	**190**	***High***	$ 2,500
23	26	Across 135 Road	Increase auto awareness of crossing children/raised crosswalk/signage	1		1	1	1		1	**190**	***High***	$ 1,500
24	n/a	Sayer Park	Install two new stops on Grand including xing safety measures	1	1	1	1	1		0	**200**	***High***	$ 9,500
25	10	Kalidoscoops	Stripe curb as No Parking, replace crossing sign, improve wheelchair accessibility	1	1	1	1	1		1	**230**	***High***	$ 1,500
26	33	Across M&M Truck Stop	Increase auto awareness of crossing pedestrians/raised crosswalk/signage	1	1	1	1		1	1	**250**	***High***	$ 9,500

Total Cost ***$ 246,513***

Notes:

(1): Commission Rating based upon score of positive, negative, or neutral.

(2): Cost estimates are general planning costs and should updated to reflect actual project costs when design and engineering on a project-by-project basis are complete.

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The RFTA stop at Wal-Mart was not an accessible stop for many reasons. It was urged that this stop be served using the stops directly south of Wal-Mart closer to the McDonald's. This stop has since been removed and RFTA buses use the adjacent stops which Ride Glenwood uses.

Additional improvements, such as the Traver Trail and West Glenwood Springs Plaza were discussed by the Commission however were not viewed as necessary improvements. Nearly $100,000 worth of improvements were initially ranked as high. It is likely these projects will not all get funded or improved immediately. Therefore, these highly ranked projects should be the focus of improvements in the short term. Additionally, minor improvements can be made as they can be budgeted for or negotiated with the shelter vendor. The Traver Trail roundabout and park-and-ride lot project has been put on hold. The transit improvement initially called for a pull-out and pedestrian improvements to be made. The improvements to this stop will be incorporated into the future Traver Trail project.

While the South Glenwood route was not initially part of this study, a precursory look at the accessability to stops was made. The improvements that should be examined include crosswalk safety, which should be addressed at the Mt. Market area. Stops at Cardiff Glen are slated for the installationof a new shelter in spring of 2008. There is one bench along Midland avenue that should be removed as this is a very old bench and is not a serviced stop. Additionally, this area is lacking in access to stops due to the constraint of the existing roadway. The road is narrow and shoulders are virtually nonexistent to construct additional sidewalks. This route is being evaluated to determine its long-term feasibility.

ADDITIONAL IMPROVEMENTS

There are several improvements that are worth mentioning or were investigated through the course of this study. Additional improvements were mentioned in Chapter IV. These include:

- Possible route restructuring
- Bike accessability
- Highway 6 and 24 eastbound stop addition
- Highway 6 and 24parking
- Driver training

Possible Route Restructuring

There were two possible route additions that were investigated through this process. The first involves serving the hospital east of Grand Avenue.

Currently there are two on-call stops which are served by request only. It was investigated as to whether it would be prudent to restructure the existing route so the hospital receives service on every trip. This may allow greater access to the area for potential patients as well as employees. After discussion, however, it was determined that this would not allow the existing route to maintain its current timing and may not have high demand given the short walk and existence of on-call service. The number of on-call trips for these stops if very low and does not warrant changing the route at this point.

The second area which has received attention includes service to the Amtrak Station on 7th Street. Currently, passengers who use Amtrak and wish to access Ride Glenwood must walk over two blocks to access a bus stop. While there are two published times during the day which Amtrak serves the city, it may not be prudent to serve the rail station during these times. Currently, given that the service is suffering some on-time performance issues, it is not feasible to serve the station. The stop from which passengers can access Ride Glenwood is only a few blocks away.

It is therefore recommended that the route not serve the hospital or the Amtrak station at this time.

Bike Accessibility

During the course of this study, no buses on Ride Glenwood were bicycle rack-equipped. This greatly hinders bike accessibility. It is recommended that bike racks be installed throughout the year on all Ride Glenwood buses. Additionally, for a variety of reasons, there are only two bike loading points on the entire system. However, given the pedestrian and biking environment in Glenwood Springs, this policy should be reevaluated. Bike loading is an integral part of any transit network as it extends the ability of patrons to make longer trips to and from the transit network. The policy of restricting bicycle loading limits those who

would like to use a bicycle to access both the stop and final destination. It is recommended that bikes be allowed to board any Ride Glenwood bus at any of the stops along the route. The issue that was brought forth was that of safety and congestion. However, in most large metropolitan areas, bikes are allowed to be loaded at all stops during all times of day. There are certain issues where this policy is restricted, particularly during peak hours of operation where it may not be safe or feasible to load, however this is infrequent. While there is significant traffic during peak hours along Grand Avenue, in most cases it takes a minimal amount of time to load a bike with proper bike racks.

Highway 6 Eastbound Stop Location

Of particular interest is the location of an eastbound stop along Highway 6. This area presents a difficult challenge to siting of an eastbound stop due to right-of-way issues and I-70. In some places Highway 6 drops off immediately to I-70 with very little room for improvements. On-site visits concluded that an appropriate location for a stop is in front of Dos Hombres Restaurant or in that vicinity. *It is recommended that the City work with CDOT to investigate the feasibility of providing an eastbound stop along the current I-70 ROW.*

Highway 6 Truck Parking

One issue which needs further emphasis is the allowance of truck parking on eastbound Highway 6 and 24 near the bus stop. As depicted in the picture, the bus stop is completely blocked by a semi-trailer truck. This is a frequent occurrence that has caused problems for bus drivers and patrons. This issue has been brought to the attention of the City Council, the Transportation Commission, and CDOT.

Passenger Loading and Unloading

A brief mention is warranted of driver training as it pertains to the loading and unloading of passengers along Grand Avenue—drivers should be aware of pulling out of traffic to load passengers where that is appropriate. Understanding the difficulty of merging back into traffic buses should pull to the curb to load passengers rather than remain in the through traffic lane causing undue congestion of traffic.

Appendix A: Bus Stop Checklist

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BUS STOP CHECKLIST **PART A: IDENTIFICATION/LOCATION**

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

	PART A: IDENTIFICATION/LOCATION	
A1	Is there a bus shelter?	Yes ☐ No ☐ N/A ☐
	If YES, what is the number of the shelter?	
	If NO, is there an exterior alternative shelter nearby (i.e. - awning, overhangs, underpass)?	Yes ☐ No ☐ N/A ☐
A2	Street Name:	
A3	Nearest Cross Street (street name or landmark if mid-block):	
A4	Bus Route Direction:	

North Bound	☐	South Bound	☐	More than one direction	☐
East Bound	☐	West Bound	☐		

A5	What is the purpose of the stop?			
	Park and Ride ☐	Boarding ☐	Both Boarding and Alighting ☐	Other (specify): ☐
	Kiss and Ride ☐	Alighting ☐	Transfer ☐	

A6	What is the average number of daily boardings at the stop?	
A7	Where is the bus stop positioned in relation to the nearest intersection?	
	Nearside (Before the bus crosses the intersection)	☐
	Far Side (After the bus crosses the intersection)	☐
	Mid-block	☐
	Not near an intersection	☐
	Freeway bus pad	☐
	N/A	☐

Date	*Time:*	*Surveyor:*

BUS STOP CHECKLIST **PART A: IDENTIFICATION/LOCATION**

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

A8	Distance from bus stop pole to curb of cross street in feet:						
A9	Adjacent property address or name of business (only if readily visible):						
A10	Adjacent Property Description**:**						
	Apartment Building	☐	Industrial Site/Bldg.	☐	Park	☐	School ☐
	Day Care	☐	Library	☐	Park and Ride	☐	Supermarket ☐
	Government Building	☐	Mall/Shopping Center	☐	Place of Worship	☐	Transit station/center ☐
	Hospital	☐	Nursing Home	☐	Residence – townhouse	☐	Vacant lot ☐
	Human Service Agency	☐	Office Building	☐	Residence – detached Retail Store	☐ ☐	Other (specify): ☐
A11	Distance from previous bus stop (in feet):						

Date	*Time:*	*Surveyor:*

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

PART B: PEDESTRIAN ACCESS FEATURES

Section B-1: Landing Area Assessment

B1	Is there a landing area at least 5 feet wide and 8 feet deep adjacent to the curb/street?					Yes ☐	No ☐
B2	Where is the landing area positioned in relation to the curb/street?						
	Below street level (low ground or shoulder)	☐	Shoulder	☐	Other (specify):		☐
			Adjacent	☐			
	Sidewalk	☐	Bus Bulb	☐	Off-Road/No sidewalk		☐
B3	What is the material of the landing area?						
	Asphalt	☐	Dirt	☐	Gravel ☐	Other (specify):	☐
	Concrete	☐	Grass	☐	Pavers ☐		
B4	Are there problems with the landing area surface?					Yes ☐	No ☐
	If YES, rank resulting accessibility potential:						

	Not Accessible	Minimally Accessible	Accessible
Uneven	☐	☐	☐
Slopes up from the street	☐	☐	☐
Slopes down from the street	☐	☐	☐
Requires stepping over drain inlet	☐	☐	☐
Other (Specify)	☐	☐	☐

B5	Are there any obstacles that would limit the mobility of a wheelchair?	Yes ☐	No ☐
	*If YES, describe obstruction***:**		

Date	*Time:*	*Surveyor:*

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

B6	Additional landing area comments:	
B7	Landing area recommendations:	
	Widen sidewalk to expand landing area to 5 feet wide and 8 feet deep	☐
	Install curb bulb or remove on street parking	☐
	Move object to improve accessibility (specify where):	
	Make the following repairs (specify):	
	Other (specify):	

Section B-2: Connections (Trip Generators)

B8 What are the primary trip generators for passengers at this stop? (Check all that apply)

Apartments - large building/complex	☐	Human service agency – what kind?	☐	School –Elementary/Middle	☐
Apartments - small building	☐	Library	☐	School -High	☐
Townhomes	☐	Major Shopping/employment (Mall, Wal-Mart, Kmart, Target, other big department store)	☐	School - College/University/ Technical school	☐
Detached homes	☐	Neighborhood Shopping (supermarket, drugstore, Goodwill, strip mall with basic needs shopping)	☐	Senior center	☐
Day care/pre-school	☐	Nursing home/assisted living	☐	Transfer to other bus routes	☐
Gas station	☐	Office building/employment	☐	Transit station/center	☐
Government building	☐	Park and Ride lot	☐	Other (Specify):	☐
Hospital/major clinic	☐	Place of worship	☐		
Hotel	☐	Restaurant	☐		

Date	*Time:*	*Surveyor:*

BUS STOP CHECKLIST **PART B: PEDESTRIAN ACCESS FEATURES**

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

B9	How wide is the sidewalk?					
	No sidewalk ☐	less than 3' ☐	3'-5' ☐	5' or greater ☐	N/A ☐	
B10	Are there physical barriers that constrict the width of the sidewalk within the block on which the bus stop is located?				Yes ☐	No ☐
	If YES, what is the narrowest useable width:					
	Less than 3' ☐		3' or greater ☐			
B11	Rank the condition of the sidewalk:					
	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	
	1=hazardous – large breaks, cracks, root uplifting, someone could get hurt from normal use or use of a wheelchair would be difficult *2=in poor shape though not hazardous – very rough, some root uplifting, cracks, breaks* *3=fair – minor root uplifting, minor cracks or breaks* *4=good – not perfect but no immediate repair* *5=cosmetically excellent; new*					
B12	Does the landing pad connect to the sidewalk?				Yes ☐	No ☐
	If YES, what does the sidewalk connect to:					
	One of the trip generators listed in Question B8 ☐		The nearest intersection ☐			
B13	Where is the nearest street crossing opportunity?					
	The nearest intersection ☐		Mid-block crosswalk ☐			
B14	What pedestrian amenities are at the nearest intersection (or other crossing opportunity)?					
	Curb cuts all corners/ both sides ☐		Pedestrian crossing signal ☐		Traffic Light ☐	
	Visible crosswalk ☐		Audible crosswalk signal ☐		Crossing guard assistance ☐	
	Curb cuts at some corners/one side ☐		Accessible Pedestrian Signal (APS) ☐		Tactile warning strip on curb cut ☐	
					Other (specify): ☐	

Date	*Time:*	*Surveyor:*

BUS STOP CHECKLIST **PART B: PEDESTRIAN ACCESS FEATURES**

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

B15	Is there a companion bus stop across the street?			Yes No N/A ☐ ☐ ☐
B16	Are there connections to other transportation services at this bus stop?			Yes No ☐ ☐
	If YES, check all that apply			
	Bus services, same or other agency ☐	Local Rail ☐	Commuter Rail ☐	
	Greyhound ☐	Other (Specify): ☐		
B17	Pedestrian connection recommendations:			
	Construct sidewalk			☐
	Widen sidewalk			☐
	Improve landing area connections to sidewalk			☐
	Install curb cut(s) at:			
	Move object to improve accessibility (specify where):			
	Make the following repairs (specify):			
	Other (specify):			
B18	Additional pedestrian connection comments:			

Date	*Time:*	*Surveyor:*

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

PART C: PEDESTRIAN COMFORT AMENITIES

Section C-1: Shelters (move to Section C-2 if there is no shelter)

C1	What is the orientation of the bus shelter in relation to the street?					
	Facing towards the street					☐
	Facing on-coming traffic					☐
	Facing away from the street					☐
C2	What kind of shelter is it? Insert shelter relevant to your system.					
	Own transit agency ☐	Another transit agency (shared stop) ☐	Other (Specify): ☐			
C3	If non-standard shelter, what are the approximate dimensions (width, height and depth in feet) of the interior standing area?					
	Width:					
	Height:					
	Depth:					
C4	Does the shelter have a front center panel (i.e. two openings)?					Yes ☐ No ☐
	If YES, what are the dimensions of the opening?					
C5	Could a person using a wheelchair maneuver into the shelter?					Yes ☐ No ☐
C6	Could a person using a wheelchair fit completely under the shelter (minimum space of a common mobility device is 30 in. by 48 in. (760 mm by 1200mm))?					Yes ☐ No ☐
	What are the dimensions of the clear space in the shelter?					
C7	What is the distance of the front of the shelter from the curb in feet?					
	0 - 2' ☐	2' - 4' ☐	4' - 6' ☐	6' - 8' ☐	8' - 10' ☐	>10' ☐

Date	*Time:*	*Surveyor:*

BUS STOP CHECKLIST **PART C: PASSENGER COMFORT AMENITIES**

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

C8	Are there damages to the bus shelter?	Yes ☐ No ☐
	If YES, check all that apply:	
	Broken panels	☐
	Graffiti	☐
	Holes in the roof	☐
	Missing panels	☐
	Needs repainting	☐
	Other (specify):	☐
C9	What is the approximate age of the shelter?	
C10	Rank the condition of the shelter:	
	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐	
	1=hazardous – broken glass, unstable *2=in poor shape though not hazardous* *3=fair – needs repainting, glass panels need thorough cleaning, protruding but not hazardous bolts* *4=good – not perfect but no immediate repair need* *5=cosmetically excellent; new*	
C11	Additional shelter comments:	

Date	*Time:*	*Surveyor:*

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

C12	Shelter recommendations:	
	Remove center panel	☐
	Make the following repairs (specify):	☐
	Move object to improve accessibility (specify where):	
	Move shelter to improve accessibility (specify where):	
	Other (specify):	
Section C-2: Seating Assessment (move to Section C-3 if there is no seating)		
C13	What is the type of seating available?	
	Bench inside shelter – ***skip to question C15***	☐
	Freestanding bench	☐
	Fold down bench	☐
	Leaning bench	☐
	Other (specify):	☐
C14	If not inside shelter, what is the distance of the seating from the curb in feet?	
	0 - 2' ☐ 2' - 4' ☐ 4' - 6' ☐ 6' - 8' ☐ 8' - 10' ☐ >10' ☐	
C15	Are there problems with the seating?	Yes ☐ No ☐
	If YES, check all that apply:	
	Broken pieces	☐
	Needs painting	☐
	Graffiti	☐
	Not securely installed	☐
	Other (specify):	☐

Date	*Time:*	*Surveyor:*

BUS STOP CHECKLIST **PART C: PASSENGER COMFORT AMENITIES**

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

C16	Rank the condition of the seating:								
	1	□	2	□	3	□	4	□	5	□
	1=hazardous – broken, someone could get hurt from normal use *2=in poor shape though not hazardous* *3=fair – needs repainting, needs cosmetic attention,, protruding but not hazardous bolts* *4=good – not perfect but no immediate repair need* *5=cosmetically excellent; new*								
C17	Additional seating comments:								
C18	Seating recommendations:								
	Move seating to improve accessibility (specify where):								
	Make the following repairs (specify):								
	Other (specify):								

Date	*Time:*	*Surveyor:*

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

Section C-3: Trash Assessment (move to Section C-4 if there is no trash receptacle)		
C19	What is the type of installation for the trash receptacle?	
	Attached to the shelter	☐
	Free standing	☐
	Garbage bag	☐
	Bolted to sidewalk	☐
	Other (specify):	☐
C20	Are there problems with the trash receptacle and surrounding area?	Yes ☐ No ☐
	If YES, check all that apply:	
	Trash can very full	☐
	Graffiti at bus stop	☐
	Bus stop littered	☐
	Grocery carts left at stop	☐
	Trash can not securely installed	☐
	Adjacent property littered	☐
	Other (specify):	☐
C21	Additional Comments:	
C22	Trash recommendations:	
	Install trash can due to litter problem	☐
	Make the following repairs (specify):	
	Move trash can to improve accessibility (specify where):	
	Other (specify):	

Date	*Time:*	*Surveyor:*

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

Section C-4: Newspaper Boxes (move to Part D if there are no newspaper boxes)		
C23	Are the newspaper boxes a barrier to sidewalk use?	Yes ☐ No ☐
C24	Are the newspaper boxes a barrier to bus access/egress?	Yes ☐ No ☐
C25	Are they chained to the bus stop pole, shelter, or bench?	Yes ☐ No ☐
C26	Are they blocking access to posted bus schedule info?	Yes ☐ No ☐
C27	Additional newspaper box comments:	
C28	Newspaper box recommendations:	
	Move newspaper box to improve accessibility (specify where):	
	Other (specify):	

Date	*Time:*	*Surveyor:*

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

PART D: Safety and Security Features			
Section D-1: Traffic and Pedestrian Issues			
D1	Where is the bus stop area located?		
	In travel lane		☐
	Bus lane/pull off area		☐
	Paved shoulder		☐
	In right turn only lane		☐
	Unpaved shoulder		☐
	Off street		☐
	"No Parking" portion of street parking lane		☐
	Other (specify):		☐
D2	Is the bus stop zone designated as a no parking zone?		Yes No ☐ ☐
	If YES, indicated by:		
	One "No Parking" sign		☐
	2 or more "No Parking" signs		☐
	"Bus Only" sign		☐
	Painted curb		☐
	Painted street		☐
D3	Are cars parked between the landing area and the bus stopping area?		Yes No ☐ ☐
D4	What is the posted speed limit in MPH?	Not posted	☐
D5	What are the traffic controls at the nearest intersection for the street?		
	Traffic signals		☐
	Flashing lights		☐
	Stop/Yield sign		☐
	None		☐
	Other (specify):		☐

Date	*Time:*	*Surveyor:*

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

D6	How many total lanes are on both sides of the road?					
	1 ☐	2 ☐	3 ☐	4 ☐	Other (specify): ☐	N/A ☐
D7	Is there on-street parking permitted just before or after the bus stop zone?					Yes No N/A ☐ ☐ ☐
	If YES, what is the length of the "No Parking" area in feet:					
D8	Are there potential traffic hazards?					Yes No ☐ ☐
	Yes, *check all that apply:*					
	The bus stop is just over the crest of a hill					☐
	The bus stop is just after a curve in the road					☐
	The bus stop is near an at-grade railroad crossing					☐
	Waiting passengers are hidden from view of approaching bus					☐
	A stopped bus straddles the crosswalk					☐
	Bus stop just before crosswalk					☐
	High speed traffic					☐
	No crosswalk					☐
	Other (specify)					☐
D9	Additional traffic safety comments / recommendations:					

Section D-2: Lighting Assessment (assessment preferably taken in the evening or at night)
Go to Section D-3 if no lighting

D10	What type of lighting is available?	
	Street light	☐
	Shelter lighting	☐
	Outside light on adjacent building	☐
	Other (specify):	☐

Date	*Time:*	*Surveyor:*

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

D11	Does the light produce a glare?	Yes ☐ No ☐
D12	How even is the light distributed?	Yes ☐ No ☐
D13	Additional comments:	

Section D-3: Pay Phone

D14	Is there a pay phone within the immediate vicinity?	Yes ☐ No ☐
	If NO, skip to Question D16.	
D15	Is the pay phone within reach of a wheelchair user?	Yes ☐ No ☐
D16	If no pay phone is provided, is there a police call box?	Yes ☐ No ☐
D17	Additional comments:	

Section D-4: Landscaping Assessment

D18	Are there problems with the landscaping around the bus stop?	Yes ☐ No ☐
	If YES, check all that apply:	
	Trees/bushes encroaching on the landing area	☐
	Trees/bushes encroaching on the sidewalk	☐
	Tree branches that would hit the bus	☐
	Other (specify):	☐

Date	*Time:*	*Surveyor:*

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

D19	Additional comments:	
Section D-5: Safety Recommendations		
D20	Improve pedestrian safety by:	☐
	Trim trees or branches	☐
	Move bus stop to:	
	Other (specify):	

Date	*Time:*	*Surveyor:*

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

PART E: Information Features		
E1	Is there a bus stop sign?	Yes ☐ No ☐
	If NO, move to question E6.	
E2	What provider name is on the bus stop (*list all providers utilizing stop*)?	
	Provider 1:	
	Provider 2:	
	Provider 3:	
	Provider 4:	
E3	Are bus routes indicated on the bus stop sign?	Yes ☐ No ☐
	If YES, what routes?	
E4	How is the sign installed?	
	On its own pole	☐
	On a building	☐
	On a utility pole	☐
	On a shelter	☐
	Other (specify):	☐
E5	Are there problems with the signage?	Yes ☐ No ☐
	If YES, check all that apply:	
	Sign in poor condition	☐
	Pole in poor condition	☐
	Sign position hazardous to pedestrians	☐
	Sign not permanently mounted	☐
	Lighting on sign is poor	☐
	Other (specify):	☐

Date	*Time:*	*Surveyor:*

BUS STOP CHECKLIST **PART E: INFORMATION FEATURES**

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

E6	Is there route/schedule/map (circle as appropriate) information posted?	Yes ☐ No ☐
	If NO please move to question E9.	
E7	Where is the route/schedule/map (circle as appropriate) information posted?	
	On Pole under bus stop sign	☐
	On its own pole	☐
	On a building	☐
	On a utility pole	☐
	On a shelter	☐
	In a shelter	☐
	Other (specify):	☐
E8	Is the information at eye level of a wheelchair user?	Yes ☐ No ☐
E9	Is there a schedule rack?	Yes ☐ No ☐
	If YES, are repairs needed?	Yes ☐ No ☐
E10	Is there real time information display?	Yes ☐ No ☐
	If YES, is it at eye level of a wheelchair user?	Yes ☐ No ☐
E11	Is signage text ADA compliant (refer to the *Toolkit for the Assessment of Bus Stop Accessibility and Safety* for guidelines)?	Yes ☐ No ☐
E12	Is information provided in Braille or by a Talking Signs® transmitter for people with visual impairments?	Yes ☐ No ☐
E13	Additional signage & information comments:	
E14	Signage & information recommendations:	
	Make the following repairs:	☐
	Other (specify):	☐

Date	*Time:*	*Surveyor:*

Route Name:	*Location:*	*Weather Conditions:*	*Stop No.:*

PART F: Diagrammatic Sketch or Photograph

Sketch or photograph the layout of the bus stop area and any traffic controls. On sketch or photograph, be sure to note locations of:

Bus stop sign pole	Newspaper boxes	Traffic signals/stop signs
Other poles	Anything else installed at bus stop	Railroad tracks
Landing Pad	Sidewalks	Bus stop across the street
Shelter	Sidewalk barriers	Heating units in shelters
Bench	Crosswalks	Bike racks
Trash can	Curb cuts	North/South/East/West

Date	*Time:*	*Surveyor:*

Appendix B: Transportation Enhancement Projects

TRANSPORTATION CONSULTANTS, INC.

TE Projects: Search Results

Project Name	State	Year	TE Type*	City	County	Federal Share	Local Share	Total
Lake City Trail	CO	1999	1	Lake City	Hinsdale	$128,000	$32,000	$160,000
Fleming Bike/Ped - Phase I	CO	1999	1	Fleming	Logan	$46,704	$11,676	$58,380
Lake Estes-Phase V	CO	1999	1	Estes Park	Larimer	$85,264	$21,316	$106,580
Poudre River Trail at R Ranch Phase I	CO	1999	1	Greeley	Weld	$72,000	$18,000	$90,000
Riverside Park Bike Ped	CO	1999	1	Estes Park	Weld	$88,000	$22,000	$110,000
Schneider Park Pedestrian Bridge	CO	1999	1	Durango	La Plata	$144,800	$228,209	$373,009
Lowry Bike/Ped connection	CO	1999	1	Denver	Denver	$500,000	$1,291,000	$1,791,000
Cherry Creek Trail Upgrades	CO	1999	1	Denver	Denver	$417,000	$145,000	$562,000
Sand Creek Greenway	CO	1999	1	Commerce	Adams	$500,000	$670,000	$1,170,000
Farmer Highline Canal, 120th to Washington	CO	1999	1	Thornton	Adams	$113,000	$117,000	$230,000
Arkansas River Trail Expansion	CO	2000	1	Pueblo	Pueblo	$107,140	$26,785	$133,925
Sand Creek Trail	CO	2000	1	Colorado Springs	El Paso	$200,000	$50,000	$250,000
Foothills Trail	CO	2000	1	Colorado Springs	El Paso	$123,000	$30,750	$153,750
Rock Island Trail Academy to Murray	CO	2000	1	Colorado Springs	El Paso	$205,000	$51,250	$256,250
Blanca Main St. Enhancements PHI	CO	2007	1	Blanca	Costilla	$227,536	$56,884	$284,420
Fish Creek Road Path	CO	1994	1	Erie	Larimer	$356,000	$250,000	$606,000
Timberline Rd.-Trilby to 57th St.	CO	1994	1	Frederick	Larimer	$129,020	$71,299	$200,319
Kipling Bike Crossing	CO	1994	1	Kipling		$339,000	$69,434	$408,434
Baseline to Valmont, w/o SH 157	CO	1995	1	Boulder	Boulder	$500,000	$125,000	$625,000
30th St Colo Ave to Arapahoe Rd.	CO	1995	1	Boulder	Boulder	$245,679	$61,420	$307,099
Bike Lane, Baseline Rd./55th Ave. to Cherryvale	CO	1995	1	Boulder	Boulder	$299,439	$74,860	$374,299
Sterling Bike Lanes E & W	CO	1995	1	Platteville	Logan	$196,200	$49,050	$245,250
Cherry Creek Dam Trail	CO	1998	1		Various	$475,200	$118,800	$594,000
West Elk Byway	CO	1999	1		Gunnison	$88,000	$22,000	$110,000

Mineral Belt Bridge	CO	1999	1		Lake	$65,600	$16,400	$82,000
Edwards Ped Improvements	CO	1999	1		Eagle	$88,000	$22,000	$110,000
Mt. Crested Butte Trail Ext.	CO	1999	1	Mt. Crested Butte	Gunnison	$160,000	$40,000	$200,000
Walden Streetscaping	CO	1999	1	Walden	Jackson	$220,000	$55,000	$275,000
Heart of Trinidad Trail	CO	2000	1	Trinidad	Las Animas	$200,000	$50,000	$250,000
Centennial Trail Trailhead	CO	2000	1	Woodland Park	Teller	$79,400	$19,850	$99,250
Rosemont Trail	CO	2000	1	Woodland Park	Teller	$39,500	$9,875	$49,375
Crews Gulch Trail	CO	2000	1	Colorado Springs	El Paso	$199,000	$49,750	$248,750
Ute Pass Trail	CO	2000	1	Colorado Springs	El Paso	$37,500	$9,375	$46,875
Midland Trail Design	CO	2000	1	Colorado Springs	El Paso	$100,000	$25,000	$125,000
Carbondale Trail	CO	2000	1	Carbondale	Garfield	$98,000	$24,500	$122,500
USC Trail Link	CO	2001	1	Pueblo	Pueblo	$160,000	$40,000	$200,000
Ridgeview Trail Ph. II	CO	2006	1	Craig	Moffat	$78,932	$19,733	$98,665
I 70 Ped Bridge	CO	2006	1	Glenwood Springs	Garfield	$146,433	$36,608	$183,041
CR 38E Bike/Ped Underpass	CO	2006	1	Ft Collins	Larimer	$280,000	$70,000	$350,000
Coal Creek Trail	CO	2007	1	Wray	Weld	$200,000	$50,000	$250,000
Jay Rd.Imprv US36 to 47th St	CO	1993	1	Boulder	Boulder	$571,027	$146,125	$717,152
Denver Bike Route Signs, Ph. I	CO	1993	1	Denver	Denver	$40,000	$10,000	$50,000
Bike Rte., US 34 Bypass: SH 257 to 35th Ave.	CO	1994	1	Ft Morgan	Weld	$133,153	$33,288	$166,441
Cedaredge Overlook	CO	2000	1		Delta	$33,600	$8,400	$42,000
Enhanced Ped Link to Transfort Area	CO	2000	1	Longmont	Larimer	$76,000	$19,000	$95,000
County Road Sidewalk	CO	2001	1	Woodland Park	Teller	$136,800	$34,200	$171,000
SH 85 Streetscape (Phase IV)	CO	2001	1	Fountain	El Paso	$200,000	$50,000	$250,000
The Fair Way	CO	2001	1		Washington	$75,200	$18,800	$94,000
San Luis Streetscape	CO	2001	1	San Luis	Costilla	$446,005	$111,501	$557,506
Sand Creek Trail: Dahlia to Ivy	CO	2001	1	Commerce City	Adams	$500,000	$125,000	$625,000
Breckenridge Sidewalks	CO	2005	1	Breckenridge	Summit	$200,000	$50,000	$250,000
Manitou Springs Streetscape	CO	2005	1	Manitou Springs	El Paso	$300,000	$203,000	$503,000

STOP enhancements	CO	2005	1	Colorado Springs	El Paso	$227,000	$77,000	$304,000
Naturita Streetscapes	CO	2005	1	Naturita	Montrose	$135,584	$33,896	$169,480
Dolores Sidewalk Project	CO	2005	1	Dolores	Montezuma	$132,000	$33,000	$165,000
Telluride E. Colo Sidewalk	CO	2006	1	Telluride	San Miguel	$98,286	$65,523	$163,809
San Luis Streetscapes PHII	CO	2006	1	San Luis	Costilla	$233,581	$266,419	$500,000
Alma Drainage Improvements	CO	2006	1	Alma, Co	Park	$578,000	$120,000	$698,000
Long Horn Trail - Phase 3	CO	2006	1	Burlington	Adams	$150,000	$37,500	$187,500
Rampart Range Sidewalk	CO	2006	1	Woodland Park		$229,715	$57,428	$287,143
Sand Creek Trail	CO	2006	1	Colorado Springs		$300,000	$75,000	$375,000
Telluride E. Colo Sidewalk	CO	2006	1	Telluride	San Miguel	$98,286	$65,523	$163,809
East Pagosa Ped Bridge	CO	2007	1	Pagosa Springs	Archuleta	$210,000	$140,000	$350,000
Table Mesa/Broadway to Lehigh St.	CO	1995	1	Boulder	Boulder	$271,925	$67,994	$339,919
Hallack Jct. On-Road Bike Lane	CO	1995	1	Westminster	Adams	$364,000	$91,000	$455,000
Arapahoe Rd. - 56th - 63rd	CO	1996	1	Boulder	Boulder	$507,515	$126,880	$634,395
CO Rt. 17 Commuter Bikeway	CO	1996	1	Holyoke	Larimer	$141,500	$47,412	$188,912
Lake Estes Bike / Ped Path Ph IV	CO	1996	1	Estes Park	Larimer	$194,608	$48,652	$243,260
Bike/Ped Access under SH 93, Skunk Creek	CO	1997	1	Boulder	Boulder	$226,400	$56,600	$283,000
Elizabeth & Whedbee Bike Lanes Striping	CO	1997	1	Flemming	Larimer	$28,365	$7,066	$35,431
Eastman Park Dr., SH 257 to 7th St	CO	1994	1	Weld County	Weld	$61,685	$15,421	$77,106
Salida Bikepath	CO	1994	1	Salida	Chaffee	$116,025	$46,475	$162,500
Pagosa Springs Ped. Foot Bridge	CO	1994	1	Pagosa Springs	Archuleta	$35,000	$28,380	$63,380
Durango Bike Path Connection	CO	1994	1	Durango	La Plata	$88,000	$165,000	$253,000
Big Dry Creek Bike Trail	CO	1994	1	Littleton	Arapahoe	$280,280	$69,720	$350,000
Broadway (SH-75) Ped Walkways	CO	1994	1	Englewood	Arapahoe	$77,000	$15,771	$92,771
Dartmouth Bike Trail	CO	1994	1	Englewood	Arapahoe	$45,000	$9,217	$54,217

Project Name	State	Year	TE Type*	City	County	Federal Share	Local Share	Total
Little Dry Creek Trail	CO	1994	1	Westminster	Adams	$192,800	$57,200	$250,000
Progress Park Bike Path	CO	1994	1	Belle		$176,000	$73,533	$249,533
Walk/Bikeway to RTD Park N Ride	CO	1994	1	Broomfield	Boulder	$151,000	$47,845	$198,845
Frisco Lakefront Pathway	CO	1995	1	Frisco	Summit	$100,000	$212,980	$312,980
Fountain Creek Trail, S Nevada to Circle	CO	1995	1	Colorado Springs	El Paso	$366,400	$91,600	$458,000
Monument Creek Trail, North Segment	CO	1995	1	Colorado Springs	El Paso	$64,000	$16,000	$80,000
Runyon Bike Commuter Path, Ph. II	CO	1995	1	Pueblo	Pueblo	$200,000	$50,000	$250,000
Ute Pass Trail Study	CO	1995	1		Teller	$40,000	$10,000	$50,000
Broadway Bike/Ped Trail	CO	1995	1		Mesa	$183,305	$45,826	$229,131
Fraser-Winter Park Trail Paving	CO	1995	1	Fraser	Gilpin	$191,590	$47,897	$239,487
Montrose Cty. Trail Inventory/Planning	CO	1995	1		Montrose	$56,110	$14,027	$70,137
Bike/Ped Facilities, Regional	CO	1995	1	Larimer	Logan	$28,000	$7,000	$35,000
Island Grove Park Bike /Ped Trail	CO	1995	1	Greeley	Weld	$34,000	$8,500	$42,500
Pawnee Pioneer Trail Signage	CO	1995	1		Weld	$1,261	$315	$1,576
Regional Bike Path	CO	1995	1	Peetz	Logan	$28,000	$7,000	$35,000
Alamosa Greenway Trails - Ped Bridge	CO	1995	1	Alamosa	Alamosa	$258,117	$64,541	$322,658
Clear Creek Trail; Pecos to Clear Creek	CO	1995	1		Adams	$20,000	$5,000	$25,000
Sand Creek Trail; Quebec to Platte River	CO	1995	1	Commerce City	Adams	$32,000	$8,000	$40,000
Pike's Peak Greenway/Bikeway	CO	1996	1	Pike'S Peak	El Paso	$64,000	$16,000	$80,000
City of Delta Trails	CO	1996	1	Delta	Delta	$65,302	$16,326	$81,628
Dowd Junction Bike/Ped Trail	CO	1996	1		Eagle	$301,576	$75,394	$376,970
Bike/Ped Path along U.S. 85	CO	1996	1	Ault	Weld	$8,240	$2,060	$10,300
Skunk Creek Trail	CO	1996	1	Boulder	Boulder	$500,000	$124,750	$624,750
South Platte River Trail Pullouts	CO	1996	1		Sedgwick	$148,000	$37,000	$185,000
Limon Bike/Ped Path, Ph. II	CO	1996	1	Limon	Lincoln	$143,721	$35,930	$179,651

Bike Ped Underpass at Kipling St.	CO	1996	1		Adams	$266,704	$66,676	$333,380
Bike/Ped Bridge over I-225 at Yale Ave.	CO	1996	1		Arapahoe	$409,000	$102,500	$511,500
Bike/ Ped Connector Path	CO	1996	1	Boulder	Boulder	$151,000	$47,845	$198,845
Little Dry Creek Trail w/ 3 Underpasses	CO	1996	1		Adams	$957,330	$334,333	$1,291,663
Bike/Ped Path, Belleview & Broadway	CO	1996	1		Arapahoe	$338,035	$84,509	$422,544
Big Dry Creek Bike Trail	CO	1996	1		Arapahoe	$104,000	$26,000	$130,000
Big Dry Creek Bike Trail Segment	CO	1996	1		Arapahoe	$477,000	$119,250	$596,250
Idaho Springs Trail	CO	1997	1	Idaho Springs	Clear Creek	$174,000	$82,000	$256,000
Placer Valley Trail	CO	1997	1		Park	$185,000	$56,500	$241,500
Snake River Trail	CO	1997	1	Dillon	Summit	$274,000	$78,203	$352,203
Georgetown-Silver Plume Express	CO	1997	1	Silver Plume	Clear Creek	$460,000	$130,000	$590,000
Rock Island Trail Completion	CO	1997	1	Colorado Springs	El Paso	$32,000	$8,000	$40,000
Garnet Mesa Trail	CO	1997	1		Mesa	$48,000	$12,000	$60,000
Horizon Drive Bike/Ped Path	CO	1997	1		Mesa	$102,400	$25,600	$128,000
Lake City Inner City Trail	CO	1997	1	Lake City	Hinsdale	$60,000	$15,000	$75,000
Harmony Road Bike Lane Striping	CO	1997	1	Ft Collins	Larimer	$53,000	$13,250	$66,250
Harmony Road Bike Lane Phase 2	CO	1998	1	Ft Collins	Larimer	$75,140	$18,088	$93,228
Sanderson Gulch Bike Route	CO	1998	1		Various	$400,000	$100,000	$500,000
Goose Creek Bike / Ped	CO	1999	1	Boulder	Boulder	$500,000	$125,000	$625,000
Harmony Road Bike Lane Phase 3	CO	1999	1	Ft Collins	Larimer	$398,766	$99,691	$498,457
Logan County Road 37	CO	1999	1	Logan	Logan	$70,400	$17,600	$88,000
Timberline & LCR 32	CO	1999	1	Ft Collins	Larimer	$144,000	$36,000	$180,000
West Loveland Bike Underpass	CO	1999	1	Loveland	Larimer	$731,410	$229,462	$960,872
South Tejon Bikeway	CO	2000	1	Colorado Springs	El Paso	$55,000	$13,750	$68,750
Airport Rd Bikeway	CO	2000	1	Colorado Springs	El Paso	$45,000	$11,250	$56,250
16th St: 25th Ave to 23rd Ave	CO	2000	1	Greeley	Weld	$75,200	$18,800	$94,000

Cherry Creek Drive South at Birch Street	CO	2000	1	Glendale	Denver	$104,000	$26,000	$130,000
Wonderland Creek Underpass at SH 119	CO	2001	1	Boulder	Boulder	$500,000	$125,000	$625,000
Colo Blvd: Cherry Creek Trail	CO	2001	1	Glendale	Denver	$164,844	$78,906	$243,750
Cherry Creek Drive - South	CO	2001	1	Glendale	Denver	$102,400	$25,600	$128,000
Flintridge Bike Lanes	CO	2002	1	Colorado Springs	El Paso	$44,000	$11,000	$55,000
Mitchell Rd Bike Lanes	CO	2002	1	Monument	El Paso	$58,400	$14,600	$73,000
3rd Ave Bike Trail	CO	2002	1	Logan	Boulder	$300,000	$479,000	$779,000
Bike Lanes in Sterling	CO	2002	1	Sterling	Logan	$290,446	$72,612	$363,058
Peets Bike / Ped & Stormwater	CO	2002	1	Loveland	Logan	$68,000	$33,300	$101,300
Skunk Creek Underpass	Co	2002	1	Boulder	Boulder	$600,000	$150,000	$750,000
Lamar Pedestrian Improvements	CO	2003	1	Lamar	Prowers	$168,000	$42,000	$210,000
US24 Pedestrian Underpass	CO	2003	1	Woodland Park	Teller	$51,000	$12,750	$63,750
28th St Pearl to Iris Ped crossing	CO	2003	1	Boulder	Boulder	$395,000	$395,000	$790,000
28th St: Baseline to Arapahoe	CO	2003	1	Boulder	Boulder	$600,000	$150,000	$750,000
Broadway: Iris to Norwood	CO	2003	1	Boulder	Boulder	$550,000	$954,000	$1,504,000
Estes Park Trails	CO	2003	1	Estes Park	Larimer	$150,400	$37,600	$188,000
Sheep Draw Bike/Ped	CO	2003	1	Greeley	Weld	$167,200	$41,800	$209,000
US 287 South College Bike Lane	CO	2003	1	Ft Collins	Larimer	$372,000	$93,000	$465,000
Chaffee Counth CR 120 Shoulders	CO	2005	1	Salida	Chaffee	$280,000	$70,000	$350,000
32 1/2 Rd Pathway	CO	2005	1		Mesa	$72,000	$18,000	$90,000
Monument Road Bike Lanes	CO	2006	1		Mesa	$200,373	$50,093	$250,466
Hayden Sidewalk Extension	CO	2006	1	Hayden	Routt	$49,000	$12,250	$61,250
Eaglebend/Stonebridge Trail	CO	2006	1	Avon	Eagle	$149,458	$37,365	$186,823
US 85 Frontage Road Bike/Ped Links Phase 1	CO	2006	1	Evans	Weld	$216,000	$54,000	$270,000
SH 60 Sidewalks	CO	2006	1	Milliken	Weld	$65,000	$16,000	$81,000
Rifle Rest Area Connector	CO	1993	1	Rifle	Garfield	$302,469	$80,817	$383,286
US 287 Sidewalk Improvements	CO	1993	1	Logan	Boulder	$451,653	$112,913	$564,566

SH85 Streetscape (Fountain)	CO	1994	1	Fountain	El Paso	$12,000	$3,000	$15,000
Fruita Pedestrian Access	CO	1994	1	Fruita	Mesa	$199,120	$73,785	$272,905
Silverton Pedestrian Access & Landscaping*	CO	1994	1	Silverton	San Juan	$205,863	$51,466	$257,329
Bellview Ave. Sidewalk	CO	1994	1	Englewood	Arapahoe	$80,000	$16,385	$96,385
I-225 Ped. Crossing at Yale	CO	1994	1	Aurora	Arapahoe	$80,000	$20,000	$100,000
US 287 Sidewalks (Longmont)	CO	1995	1	Longmont	Boulder	$102,000	$25,500	$127,500
Durango Rotary Park Pedestrian Bridge	CO	1995	1	Durango	La Plata	$148,000	$37,000	$185,000
Mancos Visitor Center	CO	1995	1	Mancos	Montezuma	$52,000	$32,000	$84,000
Orchard Mesa, Foot Bridge over Colorado River	CO	1996	1	Orchard Mesa	Mesa	$168,322	$42,080	$210,402
Ped Bridge over I-25 at Speer Blvd.	CO	1996	1		Denver	$427,532	$126,883	$554,415
Bike/Ped Bridge on SH 52/S, Platte River	CO	1997	1	Akron	Weld	$104,600	$162,400	$267,000
Quebec St. Sidewalk Development	CO	1997	1		Arapahoe	$125,000	$31,250	$156,250
Yale Ave. Ped. Facility Extension	CO	1997	1		Arapahoe	$60,000	$15,000	$75,000
Hallack Junction Ped O'pass, US 36/88th Ave.	CO	1997	1		Adams	$761,000	$507,328	$1,268,328
Ped Bridge, Heritage Rd. @ West 4th Ave.	CO	1997	1		Jefferson	$21,000	$5,250	$26,250
Fruita Pedestrian Improvements	CO	1998	1	Fruita	Mesa	$16,000	$4,000	$20,000
Silverton Enhancement	CO	1999	1	Silverton	San Juan	$312,464	$78,116	$390,580
Salida Bike Path (Holman Trail)	CO	1999	1	Salida	Chaffee	$33,200	$8,300	$41,500
Antonito Sidewalks	CO	1999	1	Antonito	Conejos	$140,800	$26,200	$167,000
SH85 Streetscape (Phase III)	CO	2000	1	Fountain	El Paso	$195,646	$48,912	$244,558
Funds will be reallocated to other projects	CO	2007	1	Mancos	La Plata	$247,928	$61,982	$309,910
Ridgway Ped Project PHII	CO	2007	1	Ridgway	Ouray	$265,104	$66,276	$331,380
Blanca Main St. Enhancements PHI	CO	2007	1	Blanca	Costilla	$227,536	$56,884	$284,420
East Pagosa Ped Bridge	CO	2007	1	Pagosa Springs	Archuleta	$210,000	$140,000	$350,000

Project Name	State	Year	TE Type*	City	County	Federal Share	Local Share	Total
Mancos Shared Use Path	CO	2007	1	Mancos	La Plata	$247,928	$61,982	$309,910
Ridgway Ped Project PHII	CO	2007	1	Ridgway	Ouray	$265,104	$66,276	$331,380
Bike/Ped Bridge @ Hallock Jct. Park/Ride	CO	1993	1	Westminster	Adams	$1,125,000	$281,250	$1,406,250
Bicycle Parking - Ft Collins	CO	1994	1	Ft Collins	Larimer	$29,995	$7,499	$37,494
Bicycle Parking - Loveland	CO	1994	1	Longmont	Larimer	$25,152	$6,288	$31,440
Transfort Bike Racks	CO	1995	1	Ft Collins	Larimer	$17,527	$4,382	$21,909
Bike Parking, City of Denver	CO	1995	1	Denver	Denver	$104,000	$26,000	$130,000
Bike Parking Boulder	CO	1997	1	Boulder	Boulder	$32,000	$8,000	$40,000
RTD Bike Racks	CO	1997	1		Various	$326,400	$81,600	$408,000
Bicycle Parking	CO	1998	1	Boulder	Boulder	$37,600	$9,400	$47,000
Dowd Junct. - West Vail Bike Path	CO	1992	1	Vail	Eagle	$903,404	$107,862	$1,011,266
Williams Village Bikepath	CO	1992	1	Boulder	Boulder	$81,373	$54,626	$135,999
Dutch Creek Pedestrian Bridge	CO	1992	1		Jefferson	$259,534	$135,918	$395,452
Two Bridges, Fountain Creek Tr., Ph. I	CO	1993	1	Colorado Springs	El Paso	$153,353	$31,410	$184,763
Runyon Lake to Arkansas Rr. Trail, Ph. I	CO	1993	1	Pueblo	Pueblo	$232,000	$62,295	$294,295
Bikepath, US 40 between Milner & Hayden	CO	1993	1	Steamboat Springs	Routt	$22,063	$5,516	$27,579
Highline Canal Trail underpass of I-25	CO	1993	1	Northglenn	Adams	$99,360	$44,640	$144,000
Limon Bike/Ped Path	CO	1994	1	Limon	Lincoln	$59,414	$14,854	$74,268
East Plum Creek Trail	CO	1994	1	Castle Rock	Douglas	$316,798	$79,200	$395,998
Centennial Trail, Ph. I, Woodland Pk-Red Rk Cpgd	CO	1994	1	Woodland Park	Teller	$33,449	$19,751	$53,200
Runyon Lake to Arkansas River Pk. Trail, Ph. II	CO	1994	1	Pueblo	Pueblo	$80,000	$20,000	$100,000
Monument/Fountain Creek Trail, Ph. II	CO	1994	1	Colorado Springs	El Paso	$156,616	$39,154	$195,770
Trail, Garden of Gods to Rockrimmon	CO	1994	1	Colorado Springs	El Paso	$156,000	$39,000	$195,000
John Martin Trail	CO	1994	1		Bent	$16,000	$4,000	$20,000

Centennial Trail, Ph 2, Woodland Pk to Red Rk Cpgrnd	CO	1994	1	Woodland Park	Teller	$105,682	$26,420	$132,102
Gypsum Bike/Ped Path	CO	1994	1	Gypsum	Eagle	$60,000	$15,000	$75,000
Mt. Crested Butte Bike/Ped Path	CO	1994	1	Mt Crested Butte	Gunnison	$159,000	$39,750	$198,750
Weller Lake Trailhead & Parking*	CO	1994	1		Pitkin	$121,600	$30,400	$152,000
Steamboat Springs Bike/Ped Trail	CO	1997	1		Routt	$256,800	$64,200	$321,000
Bear Creek Trail Underpass N/O Table Mesa	CO	1997	1	Boulder	Boulder	$495,000	$123,750	$618,750
Cortez Bike Path Ph 1 Carpenter Nat Trail	CO	1997	1		Montezuma	$211,000	$70,000	$281,000
Del Norte Trails, Ph. III	CO	1997	1		Rio Grande	$58,019	$14,505	$72,524
Mountain Village Trail	CO	1997	1	Telluride	San Miguel	$68,000	$17,000	$85,000
Galloping Goose-Skunk Creek Bridge on SH145	CO	1997	1		San Miguel	$88,313	$22,078	$110,391
South Fork Trails (Phase II)	CO	1997	1	South Fork	Rio Grande	$49,000	$12,000	$61,000
Heart of Trinidad Trail (Phase II)	CO	2001	1	Trinidad	Las Animas	$180,000	$45,000	$225,000
Manitou Springs Creekwalk Trail	CO	2001	1	Manitou Springs	El Paso	$39,300	$9,825	$49,125
Rock Island ROW/Design (Murray to Powers)	CO	2001	1	Colorado Springs	El Paso	$200,000	$50,000	$250,000
Uncompahgre Riverway Trail	CO	2001	1		Montrose	$160,000	$40,000	$200,000
Paonia School Trail	CO	2001	1	Paonia	Delta	$225,000	$56,250	$281,250
Rangely Trail	CO	2001	1	Rangely	Rio Blanco	$80,000	$20,000	$100,000
Deerfield Park Trail	CO	2001	1	Rifle	Garfield	$80,000	$20,000	$100,000
Ridgeview Trail	CO	2001	1	Craig	Moffat	$161,600	$40,400	$202,000
Animas River Bridge	CO	2001	1	Durango	La Plata	$312,800	$78,200	$391,000
Cortez Bike Path Phase II (Mesa Trail)	CO	2001	1	Cortez	Montezuma	$209,646	$52,412	$262,058
School to Ft. Garland Trail	CO	2001	1	Fort Garland	Costilla	$96,000	$24,000	$120,000
Little Dry Creek Trail	CO	2001	1	Westminster	Adams/Jefferson	$501,311	$125,250	$626,561
Pedestrian bridge over I-25 on 16th Street	CO	2001	1	Denver	Denver	$2,346,000	$1,580,000	$3,926,000
Placer Valley Trail Enhancements	CO	2002	1		Park	$24,000	$6,000	$30,000
Idaho Springs Bike Path Paving	CO	2002	1	Idaho Springs	Clear Creek	$80,000	$20,000	$100,000

Fourth Street Bridge Reuse	CO	2002	1	Canon City	Fremont	$175,000	$43,750	$218,750
Southern Sand Creek Trail	CO	2002	1	Colorado Springs	El Paso	$175,000	$43,750	$218,750
Manitou Springs Creekwalk II	CO	2002	1	Manitou Springs	El Paso	$48,665	$12,166	$60,831
Santa Fe Trail Crossings	CO	2002	1	Monument	El Paso	$116,800	$29,200	$146,000
Pueblo West Trail	CO	2002	1	Pueblo West	Pueblo	$125,000	$31,250	$156,250
Fleming Bike / Ped Phase III	CO	2002	1	Firestone	Logan	$24,800	$6,200	$31,000
Iris Ave Willow's Springs to Elmer's Two Mile Ck Pk	CO	2002	1	Boulder	Boulder	$600,000	$150,000	$750,000
LCR 17 S/O Trilby Road	CO	2002	1	Laporte	Larimer	$124,000	$31,000	$155,000
St Vrain RiverTrail	CO	2002	1	Sterling	Weld	$81,600	$20,400	$102,000
UNC 11th Ave at 22nd St	CO	2002	1	Greeley	Weld	$111,200	$27,800	$139,000
8-Corners Enhancement Funds	CO	2002	1	Cdot	La Plata	$84,000	$21,000	$105,000
38th St.: Arkins Ct. to Marion	CO	2002	1	Denver	Denver	$500,000	$125,000	$625,000
Farmers Highline Canal Trail	CO	2002	1	Westminster	Jefferson	$329,000	$82,250	$411,250
Idaho Springs Trail Bridges	CO	2003	1	Idaho Springs	Clear Creek	$314,000	$78,500	$392,500
Blue River Trail Connection	CO	2003	1	Dillon	Summit	$521,000	$130,250	$651,250
Rock Island Trail Acquisition	CO	2003	1	Colorado Springs	El Paso	$200,000	$50,000	$250,000
Arkansas River Trail	CO	2003	1	Pueblo	Pueblo	$150,000	$37,500	$187,500
2nd Street Pedestrian Improvements	CO	2003	1	Monument	El Paso	$116,000	$29,000	$145,000
Wiley Pedestrian Improvements	CO	2003	1	Wiley	Prowers	$190,000	$47,500	$237,500
Eby Creek Ped. Bridge	CO	2003	1	Eagle	Eagle	$205,040	$51,260	$256,300
Cedaredge Bike/Ped. Trail	CO	2003	1	Cedaredge	Delta	$124,320	$31,080	$155,400
Ashcroft Draw Trail	CO	2003	1	Evans	Weld	$300,000	$75,000	$375,000
Fall River Phase III	CO	2003	1	Estes Park	Larimer	$191,200	$47,800	$239,000
San Juan River Walk Extension	CO	2003	1	Pagosa Spgs	Archuleta	$145,000	$60,000	$205,000
ATR-Carvon Extension	CO	2003	1	Durango	La Plata	$200,000	$376,608	$576,608
Diamond Hill: Speer to 23rd	CO	2003	1	Denver	Denver	$600,000	$150,000	$750,000
Bikeway: Cuernavaca Prk to I-25	CO	2003	1	Denver	Denver	$196,000	$49,000	$245,000

Cherry Crk Tr/ Happy Canyon Crk	CO	2003	1		Arapahoe	$365,000	$91,250	$456,250
Aurora City Center Bike Path	CO	2003	1	Aurora	Arapahoe	$56,000	$14,000	$70,000
Signal Ditch Trail Connection	CO	2003	1	Thornton	Adams	$119,000	$29,750	$148,750
Manitou Springs Creekwalk Trail I	CO	2004	1	Manitou Springs	El Paso	$121,005	$30,251	$151,256
Arkansas River Trail II & III	CO	2004	1	Pueblo	Pueblo	$217,000	$54,250	$271,250
CSU-Pueblo Trail II	CO	2004	1	Pueblo	Pueblo	$160,000	$40,000	$200,000
Carbondale Trail	CO	2004	1		Garfield	$40,000	$10,000	$50,000
Rifle Bike/Ped Trail	CO	2004	1		Garfield	$165,000	$41,300	$206,300
Fruita Landscape Trail	CO	2004	1		Mesa	$236,160	$59,040	$295,200
Yampa Valley Trail	CO	2004	1		Routt	$356,000	$89,000	$445,000
Lake City Ped Trail	CO	2004	1		Hinsdale	$67,800	$17,200	$85,000
Ridgway Pedestrian Bridge & Path	CO	2004	1	Ridgway	Ouray	$192,085	$48,021	$240,106
Bayfield CR 521 To Mill Ph I	CO	2004	1	Bayfield	La Plata	$7,200	$1,800	$9,000
Huchinson & Unnamed Crk Trail	CO	2004	1	Aurora	Arapahoe	$507,000	$126,750	$633,750
Great Plains to Horseshoe Trls	CO	2004	1	Aurora	Arapahoe	$549,000	$137,250	$686,250
Swan Mtn Reck Path--Frisco	CO	2005	1		Summit	$234,000	$58,500	$292,500
Bike/Ped Bridge	CO	2005	1	Breckenridge	Summit	$60,000	$15,000	$75,000
Midland Trail II	CO	2005	1	Colorado Springs	El Paso	$300,000	$750,000	$1,050,000
Arkansas River Trail III	CO	2005	1	Pueblo	Pueblo	$290,000	$73,000	$363,000
Woodman Bike Lanes	CO	2005	1	Colorado Springs	El Paso	$140,000	$35,000	$175,000
ART-High Bridge to Walmart	CO	2005	1	Durango	La Plata	$120,000	$30,000	$150,000
Bayfield CR 521 To Mill PH II	CO	2005	1	Bayfield	La Plata	$137,734	$34,433	$172,167
Pagosa Town Park Pedestran Bridge	CO	2005	1	Pagosa Springs	Archuleta	$110,400	$27,600	$138,000
South Canyon Trail	CO	2005	1		Garfield	$216,000	$54,000	$270,000
South Canyon Trail	CO	2005	1		Garfield	$52,886	$13,222	$66,108
Collbran Bike/Ped Trail	CO	2005	1	Collbran	Mesa	$197,200	$49,300	$246,500
SH 92 Bike/Ped Trail	CO	2005	1	Hotchkiss	Delta	$327,580	$81,895	$409,475
ART Escalante Crossing	CO	2006	1	Durango	La Plata	$203,212	$136,788	$340,000
ARKANSAS RIVER TRAIL UPGRADE & SAFETY	CO	2006	1	City Of Pueblo		$350,000	$87,500	$437,500

IMPROVEMENT PROJ (PHASE 2)								
Midland Avenue Sidewalk	CO	2006	1	Woodland Park		$20,320	$5,080	$25,400
SH12 Ped Improvements	CO	2002	1	La Veta	Huerfano	$116,000	$29,000	$145,000
Headwaters Trails (CBC)	CO	2002	1		Grand	$484,960	$121,240	$606,200
Basalt B/P trail, Old SH 82	CO	2002	1	Basalt	Eagle	$211,200	$52,800	$264,000
South Camp Trail, Phase 2	CO	2002	1	Grand Junction	Mesa	$357,600	$89,400	$447,000
Silverton Streetscapes	CO	2002	1	Silverton	San Juan	$141,600	$35,400	$177,000
Stratton Streetscaping	CO	2003	1	Stratton	Kit Carson	$275,000	$68,750	$343,750
Multi-use Trail in Elizabeth	CO	2003	1	Elizabeth	Elbert	$73,000	$18,250	$91,250
Clock Tower Pedestrian Plaza	CO	2003	1	Canon City	Fremont	$200,000	$50,000	$250,000
Citadel Transfer Point Improvements	CO	2003	1	Colorado Springs	El Paso	$198,000	$49,500	$247,500
Hancock Transit Enhancements	CO	2003	1	Colorado Springs	El Paso	$127,000	$31,750	$158,750
West Colfax: Federal to Sheridan	CO	2003	1	Denver	Denver	$130,000	$30,000	$160,000
University Blvd. Sidewalks	CO	2003	1	Englewood	Arapahoe	$116,000	$29,000	$145,000
W. Belleview Sidewalks: Federal	CO	2003	1	Englewood	Arapahoe	$112,000	$28,000	$140,000
US-285: Clarkson to Old Hampden	CO	2003	1	Englewood	Arapahoe	$297,000	$74,250	$371,250
Project Name	**State**	**Year**	**TE Type***	**City**	**County**	**Federal Share**	**Local Share**	**Total**
Cherry Crk Dr. SO.:N. Sidewalk	CO	2003	1	Glendale	Denver	$301,000	$75,000	$376,000
Fairplay Sidewalks	CO	2004	1	Fairplay	Park	$460,000	$115,000	$575,000
PPCC Trasfer Station	CO	2004	1	Colorado Springs	El Paso	$28,000	$7,000	$35,000
Ignacio Sidewalk - Town North	CO	2004	1	Ignacio	La Plata	$76,400	$19,100	$95,500
Van Bibber Creek TR. Underpass	CO	2004	1	Arvada	Jefferson	$600,000	$150,000	$750,000
Wadsworth Trail	CO	1997	1		Jefferson	$21,000	$5,250	$26,250
Burlington Bike Trail	CO	1998	1	Burlington	Kit Carson	$21,600	$6,318	$27,918
Elk Park Trail	CO	1998	1		Pitkin	$133,600	$34,400	$168,000
Olathe Bike/Ped Trail	CO	1998	1	Olathe	Montrose	$48,000	$12,000	$60,000
Rifle Creek Trail	CO	1998	1	Rifle	Garfield	$80,000	$20,000	$100,000
Yampa River Trail	CO	1998	1		Routt	$160,000	$40,000	$200,000

City of GroverBike/Ped	CO	1998	1	Greeley	Weld	$9,600	$2,400	$12,000
Co RD 30 Bike/Ped	CO	1998	1	Larimer	Logan	$95,200	$23,800	$119,000
Eastman Dr E/O SH 257 Bike Lane	CO	1998	1	Wellington	Weld	$149,521	$37,380	$186,901
Existing Bikeway Enhancements	CO	1998	1		Various	$160,000	$40,000	$200,000
Ninth Street Underpass Trail	CO	1998	1	Durango	La Plata	$95,000	$23,750	$118,750
Ouray BLM/Uncompahgre Trail	CO	1998	1	Ridgeway	Montrose	$188,800	$47,200	$236,000
Ralston Creek Trail	CO	1998	1		Jefferson	$500,000	$601,250	$1,101,250
Existing Bikeway Enhancements	CO	1998	1	Boulder	Boulder	$61,600	$15,400	$77,000
Steamboat River Trail	CO	2000	1	Steamboat Springs	Routt	$256,600	$66,400	$323,000
Horizon Trail	CO	2000	1	Grand Junction	Mesa	$204,000	$51,000	$255,000
South Camp Trail, Phase I	CO	2000	1	Grand Junction	Mesa	$176,000	$44,000	$220,000
Community Park Path	CO	2000	1	Olathe	Montrose	$128,000	$32,000	$160,000
13th St. Ped @ UPRR	CO	2000	1	Ft Morgan	Weld	$44,360	$11,090	$55,450
Fleming Bike/Ped - Phase II	CO	2000	1	Flemming	Logan	$44,920	$11,676	$56,596
Lake Estes Underpass	CO	2000	1	Estes Park	Larimer	$100,000	$32,500	$132,500
Poudre River Trail at R Ranch Phase II	CO	2000	1	Greeley	Weld	$136,928	$34,232	$171,160
Swinging Bridge to 15th Street Path	CO	2000	1	Durango	La Plata	$195,200	$48,800	$244,000
Aurora Systemwide Trail Improvements	CO	2000	1	Aurora	Adams/Arapahoe	$82,825	$44,985	$127,810
State Highway 9 Bikepath/Bridge-Parcel G	CO	2001	1		Summit	$256,000	$64,500	$320,500
Burlington Bike/Ped Trail (Phase III)	CO	2001	1	Burlington	Kit Carson	$104,000	$26,000	$130,000
Clear Creek Bikeway - Stanley Segment	CO	2001	1	Idaho Springs	Clear Creek	$280,000	$70,000	$350,000

This table is best viewed when printed in landscape format
Within the state, the data is sorted first by TE Type and then by year.

*TE Types:
1) Bicycle and pedestrian facilities
2) Bicycle and pedestrian education and safety
3) Scenic and historic acquisitions
4) Scenic and historic highway programs and welcome centers
5) Landscaping and scenic beautification
6) Historic preservation
7) Preservation of historic transportation facilities

8) Rail corridor preservation and trail development
9) Billboard removal
10) Archaeological planning and research
11) Highway runoff mitigation and wildlife crossings
12) Transportation museums

This list is maintained by the National Transportation Enhancements Clearinghouse.