



Walkability Task Force Recommendations

August 20, 2008



City of
Golden

911 10TH Street, Golden, CO 80401



City of
Golden

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TABLE OF CONTENTS

Resolution No. 1837	5
Section 1: Overview.....	7
Background.....	7
Process.....	8
Executive Summary	8
Section 2: Capital Improvement Plan Recommendations.....	11
Priority #1: Jackson Street Corridor Improvements (13thSt to 24th St.)	11
Priority #2: 19th Street/U.S. 6 intersection	12
Priority #3: Ford Street (7th to 10th St.).....	13
Priority #4: Enhance Pedestrian Crossings where multi-use trails cross major streets	13
Priority #5: Enhance Walkability of South Golden Road (Johnson Rd. to Ulysses St.)	14
Priority #6: South Golden Road (Johnson Rd. to GHS roundabout)	15
Priority #7: Washington Avenue (10th St. to S.H. 93) including crosswalks at 2nd & 5th Sts.....	16
Priority #8: 24th Street (Illinois St. to East St.)	16
Priority #9: Northwest corner of 19th Street and Illinois St.....	17
Priority #10: 8th Street (Washington Ave. to Golden Recreation Center).....	17
Priority #11: Sidewalks on West Colfax Ave. and Rooney Rd. to soccer fields	18
Priority #12: 10th Street (Washington Ave. to Lions Park/Golden Community Center)	18
Priority #13: Northeast and Northwest Corners at 12th St. and Jackson St.....	19
Priority #14: Golden Ridge Rd./U.S. 6 Overpass to new light rail station	19
Priority #15: West 10th Avenue (Ulysses St. to Jefferson County Parkway).....	20
Section 3: Other Capital Improvement Plan Recommendations.....	21
Honorable Mentions.....	21
Section 4: Policy Recommendations.....	23
Priority Policy Recommendations.....	23
Other Policy Recommendations	24
ADA recommendations	24
Section 5: Next Steps	27

Appendix A: Roundabout Design Improvements
Appendix B: Crosswalk and Signage Improvements
Appendix C: Recommended Street Cross Sections
Appendix D: ADA Recommendations by Jerry Ganiere

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RESOLUTION NO. 1837

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF
GOLDEN ESTABLISHING THE CITY OF GOLDEN
WALKABILITY TASK FORCE**

WHEREAS, the City of Golden is a very special place and has been blessed with an abundance of natural beauty and interest; and

WHEREAS, the Golden City Council recognizes that the citizens of Golden enjoy outdoor activities; and

WHEREAS, walking is one of the most popular of the outdoor activities; and

WHEREAS, walking can be a viable alternative to driving where pedestrian routes are safe, attractive, and well-designed; and

WHEREAS, the City has been judged to be one of the best places in the country for walking and pedestrian traffic; and

WHEREAS, further enhancing the City's walkability can help improve the health and safety of our residents, improve mobility for residents who cannot or prefer not to drive, decrease the costs associated with the construction and maintenance of roads and parking facilities, and improve the vitality of our downtown and other parts of town; and

WHEREAS, the City Council is committed to make the City even more walkable for its citizens; and

WHEREAS, the City Council is about to undertake what could be a major revision of the 10-year Capital Improvement Plan; and

WHEREAS, Council would like to encourage some new and innovative ideas and input from citizens.

**THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF GOLDEN,
COLORADO**

Section 1. The purpose of this Task Force is to: a) identify the major remaining walkability barriers in the community and the major opportunities for enhancing walkability; and b) to provide specific recommendations to the Golden City Council and staff for the 2009-2018 Capital Improvement Plan that will make it easier for citizens of all ages to walk for recreation and as an alternative method of transportation.

Section 2. The Task Force will submit recommendations in their recommended priority order.

Section 3. In considering projects for inclusion, the Task Force will look first to walkability to schools, secondly toward walkability as an alternative method of transportation and thirdly as additional recreational opportunities. The Task Force will consider the recommendations in the Parks and Recreation Master Plan, the Downtown Area Improvement Plan, the Comprehensive Plan and the

completed Neighborhood Area Plans. The Task Force will make a good faith effort to ensure that its recommendations are consistent with those of these other plans, and will identify in its final report any significant inconsistencies.

Section 4. The Task Force will hold all meetings in public with advance public notice and have an extensive public comment and participation component.

Section 5. The City Manager will provide appropriate staff support for this committee and Council will provide a supplemental appropriation of up to \$25,000 for necessary engineering and other consulting services as authorized by the City Manager.

Section 6. The Task Force will submit recommendations to City Council on Thursday, August 21, 2008 and Council will hold a formal public hearing and consider adoption of the recommendations at its regular business meeting on August 28, 2008.

Section 7. This Task Force will terminate after the City Council meeting on August 28, 2008.

Section 8. This Task Force will consist of seven members who are citizens, business owners, students, property owners or employees of businesses within the City of Golden.

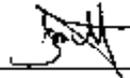
Section 9. In forming the Walkability Task Force, Council desires to encourage participation from people who have traditionally not been active on City boards or commissions. Council also desires to have a geographical and demographic diversity. To meet these objectives, Council will appoint the Task Force members in the following manner:

- a. The openings on the Task Force will be advertised by the City in its usual manner,
- b. Council members will also encourage applications from people who they know to have an interest,
- c. The people desiring to serve on the Task Force will submit an application for appointment to the Task Force. Copies of these written applications will given to all of Council.
- d. Each of the four Ward Council members shall appoint one member to the Task Force who lives within their Ward. An appointee from a Ward with a vacant Council seat will be appointed by the Mayor and the District Councilor for that Ward.
- e. District Council members and the Mayor shall collectively appoint three people, at least one of whom shall be a student at Golden High School, who lives within the City and preferably has attended Bell Middle School and either Mitchell Elementary School or Shelton Elementary School. In making the other two appointments, these same members of Council shall strive to achieve diversity and shall try to ensure that at least one of the seven members of the Task Force is a parent of small children.

Adopted this 14th day of February, 2008.



Jacob Smith
Mayor



Section 1

OVERVIEW

BACKGROUND

In early 2008, the Golden City Council embarked on a new era of citizen input and engagement. City Council identified three specific areas of policy where there was an opportunity to employ appointed citizen task forces in the review of a specific policy issue and the development of citizen based recommendations that would be transmitted directly to City Council. The three identified policy topics for these proposed task forces were “walkability”, “housing affordability”, and the update of the City’s Bicycle Master Plan. Council set a number of goals for the three proposed task forces, including the engagement of a new and broader segment of the community to add to the citizens that traditionally volunteer for standing boards and commissions, and the demonstration of transparency and accessibility of Council to citizen groups and interests.

The first of the task forces to be appointed was the Walkability Task Force. The Walkability Task Force was created by City Council Resolution 1837 on February 14, 2008. In creating this Task Force, City Council charged the Task Force to:

- a. Identify the major remaining walkability barriers in the community and the major opportunities for enhancing walkability;



Task Force members performing the “rubberband planning” exercise

- b. Provide specific recommendations to the Golden City council and staff for the 2009-

2018 Capital Improvement Plan that will make it easier for citizens of all ages to walk for recreation and as an alternative method of transportation.

City Council further directed the Task Force in its consideration of projects for inclusion in a prioritized list to look first to walkability to schools, secondly toward walkability as an alternative method of transportation, and thirdly as additional recreational opportunities. The Task Force was to consider the recommendations in the Parks and Recreation Master Plan, the Downtown Area Character Plan, the Comprehensive Plan, and the completed neighborhood plans.



The Task Force touring downtown Golden

Following the February 14, 2008 adoption of Resolution 1837, City Council solicited written applications for the seven positions on the Task Force. On March 27, 2008, City Council appointed the Task Force, with each of the three sitting Ward Councilors appointing one member, the Mayor and District 2 Councilor appointing an individual for the vacant Ward 4 seat, and the District Councilors and the Mayor collectively appointing three people.

The Task Force began meeting on April 15, 2008, and met weekly until the completion of this report on August 14, 2008. As directed by Resolution 1837, the Walkability Task Force was to terminate following formal presentation of

recommendations at the August 28, 2008 City Council meeting. The Task Force has requested the opportunity to secure a brief consultant evaluation of three design and policy issues that will be presented as an addendum report to City Council prior to the end of November, 2008.

PROCESS

At their first meeting, the Walkability Task Force consulted with Dan Burden, Director of Walkable Communities for the firm Glattig Jackson Kercher and Anglin. The consultant firm was first hired by the City during its sustainability initiative in 2007 and, after making an assessment of Golden’s pedestrian amenities, declared Golden one of the nation’s most walkable communities in 2007.



A pedestrian bridge over Tucker Gulch

The Task Force spent three weeks performing an exercise called “Rubberband Planning” by Mr. Burden, which identified important destinations within the community and the routes citizens would likely use to get to those locations. Looking at aerial photographs, the group narrowed a list of important routes in each of the areas within the City. The Task Force spent a week each on schools, alternative transportation hubs, and popular recreational trail connections. A fourth week was spent in overlaying these three main issues and finding pedestrian routes that ultimately became the basis for the priorities. The Task Force also created a citizen survey that was posted on the City’s website. Citizen input from the study was factored into the recommendations of the Task Force.

Subsequent to the identification of the main priority routes, the Task Force spent the next four weeks out walking different areas of the City. The first walking tour was done downtown, with special attention to the walkability of Washington Avenue and connections to Clear Creek. The group also looked at needs of the Astor House/Clear Creek Museum tours along 11th and Arapahoe Streets. The second week spent walking looked at the Jackson Street corridor, Golden High School needs along 24th Street, South Golden Road and the Bell Middle School area. The third week analyzed the north neighborhoods (Canyon Point, Mountain Ridge, Mitchell Elementary School, and areas north of State Highway 58), while the fourth week looked at the south neighborhoods, including Golden Ridge, Eagle Ridge, Heritage Dells, the West 3rd Area and Colfax Avenue.

Lastly, the Task Force consolidated the information collected from the walking tours and prioritized a comprehensive list of all possible pedestrian improvements. After using a system of ranking the projects in order of importance based on their needs in terms of improvement for schools, access to alternative transportation, and connection to recreational trails, the Task Force identified fifteen top priorities. These top fifteen are described in detail within Section 2, with other projects that received listed in Section 3. The Task Force also ranked the top 10 policy recommendations to improve walkability. A weighted ranking was used to pull out those projects the Task Force believed would make the most significant improvements to pedestrian walkability.

EXECUTIVE SUMMARY

While Section 2 describes in greater detail the top fifteen priorities for the CIP budget, the following is a condensed version of the priorities:

Top Priorities for CIP budget	
Rank	Project
1	Jackson Street Corridor (13th to 24th)
2	19th Street/U.S. 6 intersection
3	Ford Street (7th to 10th)
4	Enhanced signage of trail crossings

Top Priorities for CIP budget	
Rank	Project
5	Pedestrian walkability of roundabouts
6	South Golden Road (GHS to Johnson Rd.)
7	Washington Avenue (10th to S.H. 93)
8	24th Street (Illinois to East)
9	Northwest corner of Illinois/19th Street
10	8th Street (Washington Ave. to GCC)
11	Sidewalks on Colfax to Rooney Road
12	10th Street (Washington Ave. to Lyons Park)
13	Intersection of 12th and Jackson Street
14	U.S. 6 overpass to new Light Rail Station
15	West 10th Ave. (Ulysses St. to Jefferson County Pkwy)

The Task Force agreed that the City of Golden should be commended for the many public improvements it has made over the years that create a more pedestrian-friendly physical environment. This includes the widened sidewalks and landscape improvements on Washington Avenue and the downtown core, as well as the expanding network of multi-use pedestrian paths.

While these actions have helped improve the walkability of Golden, the city faces many obstacles—both in physical infrastructure and in policy-level guidance—to greater walkability for our students walking to school, for recreation within Golden and for moving about the community on foot and alternative transport.

- The city’s “arterial” network of roads often feature insufficient and/or incomplete sidewalks, forcing pedestrians to walk in streets or much closer to high-traffic streets than would be advisable
- The city’s trail network is incomplete, containing gaps that inhibit recreational access throughout the community and between various recreational destinations
- The physical design of streets remains focused on moving automobiles, with some auto-focused improvements, most notably roundabouts - posing distinct challenges for pedestrians, cyclists and other forms of alternative transportation

- City-wide policy does not affirmatively push for greater walkability improvements, as for example allowing developments to be built that do not offer complete pedestrian improvements and access to other parts of the city, or repairing inadequate sidewalks rather than replacing them with facilities of a higher standard
- Finally, traffic infrastructure generally appears to be built to national standards rather than exploring whether those standards can be improved upon to create a more pedestrian-friendly environment.

Addressing these infrastructure and policy obstacles to greater walkability can be improved greatly by the City Council supporting a change in philosophy.

1. Build it and they will come. Many of the capital improvement projects recommended by the Task Force are designed to create a more comfortable environment for pedestrians. We believe that pedestrians will respond to these improvements by walking in greater numbers. To help see whether this is true, the Task Force recommends that the city conduct pedestrian counts before and after the capital improvements are made to see whether in fact they have contributed to greater walkability.



The Task Force encourages the City to adopt best practices that enhance a culture of walkability.

2. Pedestrian “safety” does not necessarily equal pedestrian “friendly.” While Golden has been fortunate to not have had many pedestrian/motor vehicle accidents, the lack of such accidents does not necessarily mean that Golden is viewed as a “comfortable” or “walkable” community by its residents. A city where all residents stay indoors or only get around town by car would have an enviable pedestrian safety record, but would not be considered a comfortable or walkable community.

3. View national standards as “floors” for minimum requirements rather than “ceilings.” While national manuals may prove effective at noting minimally acceptable design standards for infrastructure and/or signage, the Task Force believes these standards should not necessarily limit improvements that could create a more walkable and pedestrian-friendly community. The physical improvements in the downtown core—wide sidewalks, brick accenting, large landscaped planters, etc.—are not required by any national manual or standards, yet they contribute to a vibrant, pedestrian-friendly environment. Similarly, we would encourage the city to consider going beyond national manuals and standards if it would contribute to greater pedestrian walkability.

4. Establish the goal that Golden become one of the most pedestrian friendly communities in the nation. Promoting a more walkable community is a key component to achieving community goals regarding sustainability, reduced pollution and fostering the health of its citizens. Rather than having pedestrian access and comfort play a secondary goal to enhancing the free flow of automobiles, the Task Force believes that the city should affirmatively adopt an approach that facilitates, encourages and celebrates pedestrian walkability as a top transportation goal that will play into other plans to promote a healthier citizenry and more sustainable community.



Sidewalk disconnect at the GURA parking garage, 12 th and Jackson Sts.

Section 2

CAPITAL IMPROVEMENT PLAN RECOMMENDATIONS

The City's sidewalk and trail system has had numerous phases of development over the years. Sidewalks built in the 1960's tended toward smaller widths, reflective of that period's value and availability of funds, as well as the dominance of the automobile. As more residential subdivisions were built in the 1990's, sidewalks were enlarged and constructed by developers as each project was built. Historically, the policy of the City has been that homeowners are responsible for snow and ice removal of the city sidewalk adjacent to their property and the construction of new sidewalks if none exist currently. The challenge of improving the City's sidewalk system is in how to balance the need to upgrade existing facilities versus expanding new areas to encourage more people to use sidewalks and trails.



The Walkability Task Force identified almost 80 capital improvement projects that would improve walkability in Golden. Members ranked their top 15 projects, which in turn were combined using a weighted ranking system to elicit the Task Force's top 15 capital improvements priorities for inclusion in the 2008 Capital Improvement Plan budget. The top fifteen were ranked in terms of importance for access to schools, alternative transportation hubs, and recreational trails.



#1: Jackson Street Corridor

Priority #1: Jackson Street corridor improvements (13th St to 24th St, including transition from Ford/13th St.)

Problem: Jackson Street (including the transition from southbound Ford St. at 13th) is a major north-south transit corridor for motor vehicles, buses, cyclists and pedestrians connecting the downtown core to Golden High School and points south, as well as a barrier for pedestrians seeking to walk downtown from the East St. neighborhood. The infrastructure is not appropriately scaled for all possible users. There are three motor vehicle travel lanes, yet insufficient or non-existent sidewalks and no bike lanes. The lack of a signalized intersection between 12th/Ford and 12th/Jackson to 19th/Jackson contributes to excessive vehicle speeds. Bicycle travel—especially through the northern transition area—is particularly dangerous. The high volume and speed of motor vehicles combined with the excessive width makes Jackson a particularly difficult pedestrian crossing and makes it one of the only locations in the city to have seen a pedestrian/motorist fatal accident.



#1: Inconsistent sidewalk widths along Jackson Street

Recommendations: The Task Force recommends that in-street infrastructure improvements similar to those proposed earlier by the city in the Jackson Street Master Plan be adopted. The

Task Force also recommends that the corridor be expanded to include the transition corridor starting at 13th/Ford Street. Specific concepts include:

- Narrow Jackson Street by removing one traffic lane and use the space gained for wider sidewalks, a marked bike lane and streetscape improvements, including plantings.
- Utilize enhanced signage and/or lights at the crossing by Safeway at 17th Street.
- Build complete sidewalks along both sides of Jackson St., including through the transition from the intersection of Ford/13th Street.
- Provide a continuous bike lane on Jackson St and the transition from the intersection of Ford/13th Streets.
- Provide a crossing island and improved alignment at 13th/Ford Street.
- Improve the bus stop at 17th/Jackson Street, which is the only one for the GS bus between 13th/Ford Street and 24th/Jackson Street.



#1: Excessive street widths on Jackson Street are less than pedestrian-friendly

Priority #2: 19th Street/US6 Intersection

Problem: Very heavy and fast traffic (37,355 vehicles daily on US6 and 14,342 on 19th) combined with a very long crossing distance (more than 150 feet) and some of the highest pedestrian and cyclist traffic make this intersection extremely dangerous for pedestrians and cyclists. When Colorado School of Mines (CSM) is in session, many college students use this intersection 2-4 times a day to travel from the student housing to campus. If the crossing were better protected, children could use the US 6 regional path to get to Splash and Shelton Elementary school. This intersection is also the principal way hikers access the Chimney Gulch Trail and cyclists access Lookout Mountain Road, both of which are very popular recreation areas. Once the extension of the US6 trail from 19th Street to Clear Creek is completed and light rail is extended to the County center, a safer intersection would provide alternate transportation connections for cyclists, students and transit users.



#2: The intersection of 19th St. and U.S. Highway 6

Recommendations: This intersection has received extensive study due to its high incidence of accidents, the large number of pedestrians and cyclists using this crossing, and since it is part of the proposed alignment of the regional beltway. Alternatives to improve safety of this intersection include an underpass, an overpass, as well as at-grade improvements.

A grade separated crossing—either underpass or overpass—was the Task Force’s ideal solution. The Task Force understands that an overpass at the intersection was not deemed feasible in a previous study for engineering reasons and that a survey of CSM students indicated that students would not make use of an overpass if it were not sited directly at the intersection. However, with the extension of



#2: Enhanced right turn protection for lanes entering and exiting U.S. 6/19th Street intersection

the US6 trail from 19th Street to Clear Creek (including a spur to the CSM campus), an overpass would more directly connect student housing to campus and downtown. The Task Force believes that if connected to the campus and the trail, an overpass or underpass would see heavy use.

Since an overpass or underpass would be among the most expensive projects recommended—and given the uncertainty posed by the broader beltway controversy—less expensive, at-grade improvements for improving safety and walkability should be pursued. These include:

- Pork chop islands
- Countdown timers on the walk signal
- Enhanced crosswalk markings and signage—especially since the US6 multi-use trail will now cross 19th
- Enhanced right-turn protection improvements to protect the crossing of 19th St since high volumes of traffic turn right against crossing pedestrians/cyclists when entering and exiting US6

Priority #3: Ford Street (7th to 10th Streets)

Problem: There are no sidewalks on the east side of Ford Street between 7th and 10th. There is a narrow, two-foot sidewalk on the west side, but the sidewalk is confined between the CoorsTek building and a guardrail, and is obstructed by several utility poles. Reaching the pedestrian bridge at 9th Street from Ford Street is difficult due to the absence of sidewalks on the east side of the street and the lack of a crosswalk to help pedestrians cross Ford Street safely. This section of Ford Street presents a barrier to walking between the Ford Street neighborhood north of State Highway 58 and downtown. In addition, vehicles travel at high speeds down the hill on Ford Street to the intersection at 10th Street. The City should ensure that utility poles are not built in the middle of sidewalks.

Recommendations: Utilize underground utility fund to bury lines and eliminate utility poles in the middle of the sidewalk. Add a sidewalk on the east side of the street. If size allows, expand width of west side sidewalk. Add a crosswalk to help pedestrians reach the pedestrian bridge.

Priority #4: Enhanced pedestrian crossings where multi-use trails cross major streets. Add a marked crosswalk at 9th St. and Ford St. and Washington Ave.

Problem: Multi-use trails encourage pedestrian use because they are separated from traffic in most locations. However, locations where heavily used trails cross major streets present tremendous potential



#3: Utility poles obstructing sidewalk along Ford Street



#3: Sidewalk ends along the east side of Ford Street

opportunities for accidents as large numbers of pedestrians (and cyclists) intersect with large numbers of motor vehicles. While some trail crossings go under the main traffic streets, some crossings are at grade and seasonal closures of bypass trails necessitate at grade crossings in other locations.

Locations:

- Clear Creek Trail crossings at Washington Ave. and Ford St.
- Tucker Gulch Trail crossings at 10th St and 7th Pl.
- US6 Trail crossings at Jefferson County Pkwy and 19th St.
- Clear Creek Spur trail crossing at 8th St.
- Bridge access to Tucker Gulch Trail crossing at 9th St/Ford St. and 9th St./Washington Ave.
- Kinney Run Trail crossing at Kimball Ave.
- C-470 Trail crossing at West Colfax Ave.

Recommendations: To proactively address these potential problem spots, the Task Force recommends that a higher standard of signage and surface treatment be employed to denote these trail crossings. Treatment could include:

- “Yield to pedestrians in crosswalk” signs and/or bollards, which studies show improve motorists yielding to pedestrians in crosswalks
- Double-wide crosswalk markings or the colored rubber/thermoplastic in-street inlays
- Curb extensions at mid-block trail crossings
- Raised, signed and striped right-turn crossings if the trail crosses at a signalized intersection where traffic may seek to turn right when pedestrians have the light (US6/Heritage Rd/ Jefferson County Parkway, US6/19th St, CO93/Iowa, and CO93/ Washington)

Priority #5: Enhance Walkability of South Golden Roundabouts from Johnson Road to Ulysses Street

Problems: Hazardous crossing conditions for pedestrians. Insufficient lighting at pedestrian crossings. Missing sidewalk. Missing crosswalk markings.

Pedestrian interface issues: Pedestrians feel apprehensive due to a sense of increased exposure due to close proximity of vehicles entering and in particular exiting the roundabouts. Crosswalks are too close to the roundabout leaving little decision time for vehicles and vehicles that choose to stop for pedestrians on exit block traffic in and entering the roundabout. When the vehicle closest to the pedestrian stops, it occludes the second lane and often a second lane vehicle does not stop, sometimes in the process of avoiding



#4: Crossing Washington Avenue at 9th Street



#4: Use of “yield” bollards and signs to more effectively note major trail crossings

rear ending the vehicle stopped in the first lane. Pedestrians have no way to alert or interrupt traffic other than to enter pedestrian crossing. It was learned that several pedestrians cross away from the roundabouts where they are more visible (a long standing issue with pedestrians and roundabouts). All these issues are much worse in low light and dark conditions. Also some private and some public property crossings are unmarked. In consideration of roundabout design, it should be understood that crosswalks at roundabouts are very different from crosswalks at signalized intersections. Give equal weight to pedestrian and vehicle hazards and benefits when designing roundabouts. Pedestrian crossings at roundabouts require more driver awareness and pedestrian crossing alerts, signage and markings are critical.

Recommendations: The Task Force is contracting with Gladding Jackson to hold a workshop to develop more specific recommendations regarding improvements at roundabouts. However, potential improvements include signaling pedestrian crossings (being reasonable with effective signage and some prudent visual alerts. Provide additional marked crossings further away from the roundabouts such as mid block. Complete sidewalk on the northeast corner of Utah and South Golden Road. Install pedestrian crosswalk markings and signage as appropriate.

Priority #6: South Golden Road (Johnson Road to new roundabout at High School)

Problem: South Golden Road, from the high school roundabout to the Johnson Road roundabout, is very wide and difficult to cross. This section of road is five lanes wide, with no pedestrian crossings over its entire length. Pedestrians wishing to cross this road (to reach RTD bus stops, the golf course pedestrian trail, or the four-foot attached sidewalk on the west side) from the East Street neighborhood (at either Grand Ct., Sunset Dr., or Rimrock Dr.) are forced to cross either five lanes of fast-moving traffic or go out of their way to one of the roundabouts. This section of South Golden Road sees both high traffic volume and speeds. The east side of the road has narrow, two-foot attached sidewalks - often times impeded by overgrown vegetation - and no shade trees. This section of South Golden Road presents a barrier to walking between the East Street neighborhood and the South neighborhoods. Because the East Street neighborhood has no neighborhood parks, many families walk to the Splash Water Park and to Ulysses Park. It also presents a barrier between the high school and South Golden Road businesses.

Recommendations: Install traffic calming devices, island refuges, and enhanced pedestrian crossings, especially near the bus stops and at intersections with Grand Ct., Sunset Dr., and Rimrock Dr. This will help to slow traffic entering downtown Golden, and



#5: Enhanced signage and lights may be needed to improve walkability of roundabout crosswalks



#6: South Golden Road needs improved pedestrian crossings and wider sidewalks



#6: pedestrian crossing at the GHS roundabout

will connect the East Street neighborhood with businesses on South Golden Road as well as to the new light rail station (when constructed). A bike lane should be added on both sides of the road. The narrow sidewalks on both sides of the road should be replaced with detached, six-foot sidewalks with shade trees.

Priority #7: Washington Avenue (10th Street to State Highway 93), including Crosswalks on Washington at 2nd and 5th Streets

Problem: Washington Avenue is the main transportation arterial between the downtown core and the northern edge of the city. While it is ideally suited as the main pedestrian arterial between the northern neighborhoods and the downtown core, in many locations it possesses no or inadequate sidewalks—especially given the volume and speed of motor vehicle traffic. Between 2nd Street and CO 58, the street features an additional vehicle lane. The significant elevation drop between the intersection at CO 93 and 10th St. leads to excessive vehicle speed. With inadequate sidewalks and no marked bike lanes, the street is quite dangerous to cyclists. Washington Avenue is a major barrier between neighborhoods to the west and Mitchell School, with only one marked crosswalk, which is staffed during primary student crossing times.

Recommendations: The Task Force believes the Washington Avenue Master Plan previously developed by the City needs to be expanded in scope so that it extends from CO 93 on the northern edge and 10th Street on the southern end. Complete sidewalks need to be installed on both sides of the street to facilitate pedestrian access—ideally 8+ feet in width. Given the large numbers of students crossing such a high traffic street, the task force recommends that crossings be narrowed and that enhanced signage (including the use of pedestrian-activated lights), striping and/or street treatments be used to make the existing crosswalk at 2nd Street more visible. A similar enhanced crosswalk should be installed at 5th Street. Enhanced police presence for enforcement of the crosswalk is also warranted. A striped bike lane on both sides should be added to facilitate bike access. As is described elsewhere, enhanced right turn protections should be used on both directions at the intersection of CO 93 and Washington Avenue due to the number of vehicles turning from or to CO 93.

Priority #8: 24th St. (Illinois to East Street)

Problem: Narrow sidewalks west of Jackson to Illinois make walking difficult and unsafe, forcing pedestrians to walk in the street if more than one person is walking and if cars are parked along the sides of the streets. At the intersection of Jackson and 24th and continuing east to East St., there are homes, businesses, RTD bus stops, and dead space needing attention to



#7: Crosswalks at 2nd Street



#7: Sidewalks along Washington Ave. from Iowa to State Highway 93 need to be completed



#8: 24th Street looking east near GHS

ensure safe, easy, and pleasant walking conditions, especially in relation to the new high school, roundabout, and other Jackson St. improvements.

Recommendations: Consider making 24th look like Illinois St. with wide detached sidewalks on at least one side, possible addition of bike lanes, and alternative parking arrangements. Install an enhanced crosswalk across Ford St. and Jackson St. at 24th for students reaching Golden High School from the East St. neighborhood. Students will not walk out of their way to the new roundabout to cross. Also, think through connections from the high school to surrounding neighborhoods, to Illinois/Kinney Run Trail, 6th Ave. bike trail, Splash trail, Johnson Rd. tennis courts, bus/light rail, Ulysses Park, Discovery Park, and Fossil Trace Golf Course. The placement of the new high school opens up a tremendous scenic vista and greenway looking toward the Fossil Trace Clubhouse, Jefferson County campus, and southeastern portions of Golden. There is an opportunity to radiate out from the high school with walkways that would be uninterrupted from having to cross major streets, thus providing safe and pleasant walking with a greener, more campus-like ambiance. This should be coordinated with Jeffco schools with regard to the planned parking, landscaping, and other components.



#9: Missing sidewalk at NW corner of 19th and Illinois Street

Priority #9: Northwest corner of Illinois and 19th Street

Problem: Many CSM students use this corner to walk to school, and an informal trail has been worn in the grass along the west side of Illinois St. Car traffic at this intersection is high - 14,342 daily on 19th @ Elm. It is narrow and can be muddy and messy in inclement weather.

Recommendations. Complete sidewalk along Illinois Street from 18th to the stoplight at the northwest corner. Coordinate with CSM as they may be responsible. Ensure that sidewalk connectivity is reviewed when improvements are made.



#10: Inconsistent street widths on 8th Street

Priority #10: Eighth Street (Washington Avenue to Golden Recreation Center)

Problem: Eighth Street is excessively wide, yet possesses insufficient or non-existent sidewalks despite the presence of multi-family housing on both sides of the street. There is concern that the excessive width of the street contributes to high traffic speed. The pedestrian overpass over CO 58 ends at the street with no sidewalk. If the street was more pedestrian friendly, the overpass would be better used and more pedestrians would walk to the Community Center.

Recommendations: Narrow the street and add sidewalks.

Priority #11: Sidewalks on West Colfax Ave and Rooney Rd to soccer fields

Problem: Colfax is a wide, high-speed and high-volume traffic street with no sidewalks, which presents a crossing hazard for people reaching the bus stops, as well as walking along Colfax. Additionally, there are presently no sidewalks along Rooney Rd. to the many soccer fields being constructed at the old landfill, which will be a major generator of activity for young people.

Recommendation: There is an immediate need to narrow the mid-block crossing or put in crossing islands between the path's terminus and the bus stops. If sufficient funding becomes available, construct sidewalks along Colfax between Zeta St. and the entrance to Interplaza complex. As is described in Priority #4, add an enhanced crosswalk as the C-470 path crosses West Colfax. Extend sidewalks along at least the west side of Rooney Rd from Colfax to the soccer fields to provide pedestrian access from the nearby neighborhoods and to connect to the C-470 multi-use trail.



In addition to the sidewalks along West Colfax Ave., sidewalks should also be constructed along Rooney Road.

Priority #12: 10th Street (Washington Ave. to Lions Park/Golden Community Center)

Problem: Tenth Street is a major gateway to the Clear Creek corridor area, the library and museum, the summer farmers market and the city government complex, all of which generate significant pedestrian traffic. Despite this tremendous visibility and high pedestrian use, there are few pedestrian amenities, insufficient (and in some cases substandard) sidewalks and no crosswalk at an important location.

Recommendations: Wider sidewalks should be installed along 10th Street—especially on the south side of the street by Lions Park and the tennis courts. Given the prominent location, brick or painted concrete with additional plantings would help improve the appearance of this prominent gateway. The current in-street plantings should be reviewed to determine whether



#12: Crossings at 10th Street to ballfields and Clear Creek trails

further enhancements can help narrow the crossing distance for pedestrians and provide more pedestrian-friendly crossing islands. A marked crosswalk is needed at Cheyenne near the library, which sees high use—particularly during the farmers market.

Priority #13: Northeast and Northwest Corners at 12th and Jackson Street

Problem: The curb ramps on the northwest and northeast corners of the intersection of 12th St. and Jackson St. are too steep to be comfortably negotiated by people in wheelchairs. The curb extensions extend too far into the street, making it hard for vehicles to negotiate, while the curb extensions make pedestrians more visible, some pedestrians feel the curb extensions place them too close to moving traffic. The sidewalks and ramps are in a high-use area of downtown that services many shops, parking lots and public facilities such as the post office.

Recommendations: Reconfigure the curb ramps to provide flat entries into streets for safety and ease of crossing streets, and have flat bypasses for those going past and around the corners so they do not have to traverse extraneous cross slants or other obstacles which present both safety and comfort issues. The Northwest corner at 12th and Jackson can benefit from studying the design of the Northwest corner at 12th and Ford. Employment of perpendicular curb ramp locations, but utilizing parallel construction concepts for the curb entries may be beneficial.

The Northeast corner might best be served by retention of the diagonal curb ramp location, coupled with construction of a ramp with railings on both sides on the inside part of the wider than usual sidewalk already installed there.

Priority #14: Golden Ridge Rd./US6 Overpass to new light rail station

Problem: The sidewalks along Golden Ridge Rd. are of inconsistent sizes and locations—some are attached, some are detached—and do not create a continuous sidewalk from Heritage Rd. up to the location of a planned bridge linking the Golden Ridge area to the planned RTD light rail station near the Jefferson County building.

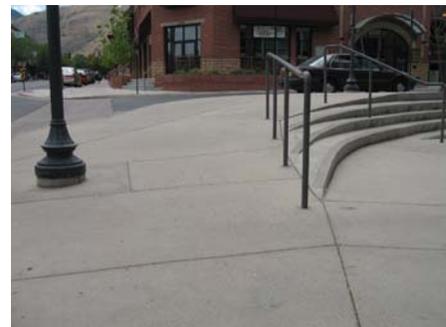
Recommendation: The arrival of the RTD light rail line to Golden is one of the most significant alternative transportation improvements currently envisioned. Construction of a bridge connecting the Golden Ridge area to the new light rail station will dramatically improve pedestrian access from the neighborhoods south of Heritage Rd. The Walkability Task Force urges that the



#12: 10th Street crossing to Lyons Park



#13: Northwest corner



#13: Northeast corner



#13: Suggestion for using ramp with railing to fix Northeast Corner

city work with RTD to ensure a pedestrian/bike bridge across U.S. 6 is constructed. City staff should ensure that proper right-of-way rights are preserved across undeveloped private lands to access the bridge. To help expand pedestrian access into the neighborhoods, the inconsistent sidewalks along Golden Ridge Rd. should be made consistent and complete for current and future construction..

Priority #15: West 10th Avenue (Ulysses St. to Jefferson County Parkway)

Problem: Lack of continuous sidewalks on West 10th from Ulysses St. in front of Bell Middle School to Johnson Rd. and Jefferson County Parkway. There is a lot of traffic in the area, a major intersection at 10th and Johnson, a bus stop, and the need to make pedestrian improvements regarding access to the light rail station. There is also inadequate lighting in the area given the location of the jail and Ulysses St./Ulysses Park, as well as the frequent pedestrian traffic along West 10th Avenue between the jail and the bus stop next to the King Soopers roundabout.

Recommendations: Sidewalks and crossings should be completed in front of Bell Middle School. There is a hill by the entrance to Ulysses Park that can create a visibility and safety hazard. Better lighting would improve security in the area, and signage would help work release participants and visitors navigate more successfully from the county campus (RTD, both existing bus and light rail) into and around Golden. Xcel/RTD should be consulted about sidewalk construction and bus stop improvements at Johnson and 10th. It will be very important to coordinate carefully with Jeffco and RTD upcoming light rail project.

NOTE: The Task Force initially ranked the U.S. 6 trail connection between 19th Street and the Clear Creek trail as its #5 priority. However, when it was learned that this project was already funded and design work underway, the Task Force opted to remove the project from its rankings.

Recommendations: The U.S. 6 trail should have at least one spur connection to the CSM campus. Similarly, if possible, the trail should connect with the underpass/culvert that runs under U.S. 6 and connects with the Chimney Gulch hiking trail. If possible, the underpass should be expanded in size and lighting provided.



#14: Discontinuous sidewalks along Golden Ridge Road



#15: West 10th Ave. in front of Bell Middle School



#15: View of West 10th showing need for sidewalks along Xcel property

Section 3

OTHER CIP RECOMMENDATIONS

The Walkability Task Force identified almost 80 projects of which 34 received votes from the Task Force members, that are in need of improvements. Although these noteworthy projects were not considered a top priority, Council may be able to find funding for these smaller projects that would enable them to still be completed.

Honorable Mentions

Rank	Project	Description
16	Arapahoe Street (11th to 14th)	wider sidewalks, enhanced signage
17	Crawford St. across from Shelton Elementary	missing sidewalk; remove posts
18	Wier Street	new trail for cut through access
19	Clear Creek corridor	upgrades for ADA compliance and usability
20	South Golden Road trail	enhanced signage
21	Ulysses Street roundabout	bus stop and signage improvements
22	West 4th Avenue & Zeta Street	sidewalks needed
23	Johnson Street Post Office	sidewalk needed from street
24	6th Avenue (19th to Kinney Run)	new trail needed on west side
25	Emergency call boxes downtown	
26	Kimball Avenue	narrow street to expand sidewalks
27	S.H. 93 and Pine Ridge Road	crosswalk enhancements
28	Ulysses Street batting cage entrance	add sidewalk for continuity
29	South Illinois Street trail	finish trail; add yield to pedestrian signs
30	Heritage Road (Golden Ridge Dr. to U.S. 40)	install sidewalks on east side; relocate Golden Ridge sign to remove ped obstruction
31	S.H. 58 at Illinois Street	add pedestrian bridge overpass
32	10th Street at East Street	reconfigure trail crossing
33	S. H. 93 at Washington Ave. & Pine Ridge Rd.	
34	Washington Avenue/Iowa Street bus stop	connect stop to sidewalk
<u>Other Projects Considered But Received No Votes</u>		
	Kinney Run social trail from end of W. 4th to Shelton Elementary	Build sidewalks on 2nd St. from Washington Ave. to Mitchell Elementary; remove utility poles from sidewalks at 2nd/Cheyenne
	Sidewalk extension to signal light buttons on northwest corner of US6/Johnson Rd. (Work w/ RTD re: light rail construction)	Build sidewalk on north side/expand sidewalk on south side of 1st St from west path to N. Ford St.
	ADA ramp at southeast corner of Washington Ave. and 11th St	Build sidewalks on Garden Street
	Extend north side Clear Creek Trail from Parfet to Vanover Parks	Build sidewalks into East St from 13th St. to intersection with South Golden Rd.

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Section 4

POLICY RECOMMENDATIONS

PRIORITY RECOMMENDATIONS

The Walkability Task Force identified 10 high priority policy changes that are needed to facilitate improvements to pedestrian amenities and foster a culture of walkability.

1. Ensure all new developments, including GURA projects, are built with complete sidewalks, even if current projections for use are not pedestrian focused. This should address the problems noted on north Washington (Canyon Point apartments/condos) where sidewalks were not built because development planned for the corner of Highway 93/Washington was not thought to be pedestrian oriented. Similarly, this will deal with the Pine Ridge Rd. development that is now homes, but in initial planning envisioned as industrial.
2. Sidewalks replacement plan. When sidewalks are being replaced, they should be replaced with spans that match widths desired for the location, which may mean replacing for an entire block, rather than just the cracked squares. This is likely to be a long term project because of scope and costs; Newly constructed sidewalks should all be made compliant with ADA.
3. Signal Timing
 - Use signal timing to offer pedestrians head start at major intersections
 - a) A pedestrian head start in most major signalized intersections.
 - b) Explore the use of an all walk option in the downtown core during high pedestrian days/times.
4. Ideal Sidewalk Design
 - The taskforce supports curb designs with 90 degree angles (perpendicular to road surface) rather than the angled curb that is common throughout much of the city. Cracked sidewalk blocks could be replaced at desired widths as unequal widths might possibly be tolerated until all are replaced.
- Sidewalk width for a trail should be at least 10 feet.
- Sidewalk width for walking routes other than quiet residential neighborhoods should be a minimum of 8' for detached sidewalks and preferably 10' feet for shy space and/or next to parking, especially for diagonal parking.
- Other sidewalks must be at least 5' wide and preferably 6' wide to permit passage of two of wheelchairs and/or stroller or combinations.
5. Snow removal
 - Remove snow (or enforce requirement that residents do so) within 24 hours of snow events for walking routes to all schools and major pedestrian routes within the city.
6. Signage
 - To increase driver awareness of pedestrians, install signs near the entrances to downtown to read "entering pedestrian zone" and throughout Golden (where needed) "please stop for pedestrians."
7. Maps
 - Develop a free color map for annual distribution in Informer and at Golden businesses that shows pedestrian trails through town and recreational trailheads.
8. Double-width crosswalk striping should be used (like those found on CDOT-maintained state highways) in higher use pedestrian crosswalks (including signalized intersections) to make the crossings more visible. The single width stripes frequently blend into the road striping and are difficult to see.
9. RTD Bus Stops

- Work with RTD to ensure all new and existing bus stops have lighting and connect with sidewalks

10. Multi-use trail signs. Install small signs throughout town where trails turn or cross roads to help pedestrians follow trails where they cross or join roads. Install signage on Clear Creek trail (perhaps with a map) to show that the trail continues after the trail crossing under U.S. 6.

OTHER POLICY RECOMMENDATIONS

As with the capital improvement project recommendations, the following items received votes from Task Force members but were not among the top 10 policy recommendations to Council:

11. Protect pedestrian right-of-way access on Washington Avenue and throughout downtown

- Pedestrians should be allowed to walk straight rather than around restaurant seating or smoking areas. Outdoor seating areas should not block sidewalks.
- Prevent obstructions within five feet of all first floor entrances downtown to facilitate better ADA Access, and specifically to facilitate wheelchair users to open doors.
- Don't approve license agreements in the right-of-ways to preserve future ability to add detached walks.
- Any future decisions regarding placement of sandwich boards and other obstacles in the right-of-way should ensure they do not inhibit pedestrian traffic.

12. Zoning

- Require first floor retail use to downtown to prevent "dead zones" of inactivity.

13. Alternative Transportation Coordination

- Consider implementing a local bus system to facilitate access to RTD stops, Park & Ride lots, and light rail.

14. Plantings

- Better maintenance of plants in islands and similar traffic control features.

- Xeriscape plants should be used to conserve water.
- Adopt a median program for maintenance.

15. Bike Racks

- Install bike racks at trailheads (S. Table Mountain, N. Table, Mt. Galbraith, etc).

16. Crossing light buttons should be placed on the interior side of light poles - especially on corners like 13th/Washington, 10th/Washington and 10th/Ford where bus/truck right turns often scrape off the signal buttons, making it impossible to trigger the crossing light.

17. Lighting

- The City should report burned out lightbulbs in pedestrian areas quickly to Xcel Energy for replacement.

18. Pedestrian Traffic Counts

- Perform routine pedestrian traffic counts in the City (as opposed to only counting cars)

19. Enforcement. Stronger enforcement of vehicle violations of crossing at Washington Avenue & 2nd Street (when cars do not stop for school crossing guard).

20. Local Improvement District Communication Brochure/Plan. Educate residents on how they can create their own improvement district to cost-share sidewalk improvements in their immediate neighborhood.

ADA RECOMMENDATIONS

The Task Force benefitted immensely from the participation of Jerry Ganiere, a paraplegic wheelchair user who attended virtually all meetings and site visits. Jerry raised the Task Force's awareness of ADA access issues. He prepared a document outlining his concerns and recommended actions for improving access within the City.

Since Jerry's report addressed issues beyond the relatively narrow focus of City Council's

ordinance for the Task Force, his document is being submitted outside of this report, as Appendix D. The Walkability Task Force has not reviewed this document for accuracy, nor has it endorsed his report. Nevertheless, it may contain valuable insights that help the City of Golden address ADA access issues.

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Section 5

NEXT STEPS

The Walkability Task Force has hired Dan Burden of Glatting Jackson to assist the Task Force with three issues. The Task Force determined that additional expertise will be needed on the following:

- Improvements to facilitate the safe crossing of pedestrians within roundabouts (Recommendations and further refinements to CIP #5)
- Crosswalk design improvements including signage (Recommendations and further refinements to CIP #4)
- Ideal street section design (Recommendations and further refinements to Policy #4)



To this end, the Task Force is planning to meet with Mr. Burden in September 2008 to review their concerns with these items and make recommendations. Upon completion of Mr. Burden's review and recommendation, the Walkability Task Force would like to again meet with City Council to review the results and make further recommendations.

CONTINUED INVOLVEMENT

The Task Force request that its members be apprised of future Council action on capital improvement projects that are implemented from its list of priorities. The Task Force also recommends that pedestrian issues and needs be included in future policy decisions and in all public and private development projects. Finally, the Task Force also suggests that Council reconvene a walkability task force at least semi-annually to review implementation of these capital improvement and policy recommendations, as well as to ensure that pedestrian needs are kept in consideration of CIP financial considerations.

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Appendix A

ROUNDBABOUT DESIGN IMPROVEMENTS

South Golden Road from Johnson Road to Ulysses Street

Pedestrian Crossing Observations:

- The crosswalks are too close to the roundabouts for drivers and pedestrians to have sufficient reaction time.
- Nearly all pedestrian median refuges are surrounded by foliage which makes pedestrians difficult to see. See Figure 1
- Pedestrians waiting to cross are in a direct line only a few feet from the point where vehicles frequently hit the curbsings on exit from a roundabout (due to poor egress flaring). See Figure 2

All conditions are worse at night and better lighting at pedestrian crossings is strongly indicated. Snow and ice would amplify these problems.



Figure 1



Figure 2

16 of 61 parties interviewed regarding Walkability issues had been on South Golden Road as pedestrians. One person was neutral and the remaining 15 had concerns which are represented in Observations above. No one reported favorably. During four on site sessions it was observed that pedestrians, joggers and cyclists chose a point downstream from the pedestrian crossing to cross where they were safely further away from the roundabout and were more visible to drivers. It was also observed that when a vehicle stopped to let someone cross, more often than not vehicles in the second lane did not also stop. Two serious near misses and several awkward incidents caused by these conditions were observed during the on site sessions. Pedestrian success depends largely on drivers and pedestrians basically negotiating how and when crossings can safely occur in a topologically complicated and completely un-signalized low visibility environment. So people have learned to move away from the roundabout and cross outside of the designated pedestrian walkway.

Recommendation 1: Install pedestrian crossings midway between roundabouts and further away from roundabouts in the remaining locations.

Recommendation 2: Install a flashing pedestrian crossing sign facing both directions in the pedestrian refuge that is activated from either side of the street. see Figure 3

Recommendation 3: Reduce foliage and maintain remainder for heightened visibility for both vehicles and pedestrians.



Figure 3

Sidewalks:

1. Complete sidewalk at South Golden Road and Ulysses. See Figure 4



Figure 4

2. Complete sidewalk at South Golden Road and Utah. See Figure 5



Figure 5

3. Paint pedestrian crossing stripes at South Golden Road and Ulysses. See Figure 6



Figure 6

South Golden Road from Johnson Road to Ulysses Street

Problems: Hazardous crossing conditions for pedestrians. Insufficient lighting at pedestrian crossings. Missing sidewalk. Missing crosswalk markings.

Pedestrian interface issues: Pedestrians feel apprehensive due to a sense of increased exposure due to close proximity of vehicles entering and in particular exiting the roundabouts. Crosswalks are too close to the roundabout leaving little decision time for vehicles and vehicles that choose to stop for pedestrians on exit block traffic in and entering the roundabout. When the vehicle closest to the pedestrian stops, it occludes the second lane and often a second lane vehicle does not stop, sometimes in the process of avoiding rear ending the vehicle stopped in the first lane. Pedestrians have no way to alert or interrupt traffic other than to enter pedestrian crossing. It was learned that several pedestrians cross away from the roundabouts where they are more visible (a long standing issue with peds and roundabouts). All these issues are much worse in low light and dark conditions. Some private and some public property crossings are unmarked.

Policy implications: Understand that crosswalks at roundabouts are very different from crosswalks at signalized intersections. Give equal weight to pedestrian and vehicle hazards and benefits when designing pedestrian crossings at roundabouts. Pedestrian crossings at roundabouts require more driver awareness and pedestrian crossing alerts, signage and markings are critical.

Physical Improvement: Signalize pedestrian crossings. Provide additional marked crossings further away from the roundabouts such as mid block. Complete sidewalk on the northeast corner of Utah and Ulysses on South Golden Road. Install pedestrian crosswalk markings and signage as appropriate.

Appendix B

CROSSWALK AND SIGNAL IMPROVEMENTS

Washington Avenue Downtown Pedestrian Crossing Signals

Observations: Two one hour observation sessions showed that pedestrians used the Washington Avenue walk signal buttons 34% of the time at 12th Street and 26% of the time at 13th Street. Most people walked on the green traffic light regardless of the walk signal status.

Interviews at these locations determined: That most people disregard the walk buttons. Fewer were unaware they were even there. Almost no one knew what the buttons actually do. It was an amazing range of answers, but it shows that they are not performing as intended. There's a lot of frustration and confusion. Why this has not been determined long before now may mean this study is flawed because this is a safety use issue that would not have escaped even weak prior scrutiny. People frequently step out into right turning traffic and left turning traffic. The signal timings were referred to often as frustrating and are completely inconsistent and unpredictable for drivers and pedestrians. Many pedestrians crossed on red when traffic was not immediately present. It's hard to tell with assurance where cars are going to be coming from next particularly due to left turn signal (arrow) on/off and timing variations.

Recommendation 1: All traffic stops moving for 18 seconds between direction changes if and only if at least one crossing button has been pushed and only then can pedestrians walk straight across or diagonally. They can not legally cross at any other time. One button per corner with a sign that says "Push to Cross".

Recommendation 2: It can be shown that variable demand signal timing in a tight urban grid is always sub-optimal in the real world. Get an independent traffic and vehicle study of what actually is going on at these intersections and optimize flow with predictable regularized signal timings. It's not hard to do.



Crossing at Ulysses St.



Crossing at 10th St.



Crossing Jackson St. near 17th Street

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Appendix C

RECOMMENDED STREET CROSS SECTIONS

September Walkability Workshop

The Walkability Task Force held a workshop on September 4, 2008 with Glatting Jackson principal Dan Burden to refine three elements of our initial report: 1) pedestrian walkability of Golden's roundabouts, 2) enhanced crosswalk treatments and signage for major trail crossings and 3) developing "ideal" street profiles for different traffic volume streets.

The attached report from Glatting Jackson contains follow-up materials from that workshop. A few points recorded in notes from other attendees were not reflected in these materials, which are listed below.

1. Roundabout Walkability

All Roundabouts

- a) Crosswalks should be two car lengths back of the yield line in a two-lane roundabout. Most of Golden's roundabouts appear to be 1 to 1.5 car lengths,
- b) the crosswalks should be well striped (or of a different color pavement) so that, as Mr. Burden noted, "non-yielding motorists will feel terribly guilty,"
- c) possibly add camber to aid in slowing traffic through roundabouts. Vehicle yielding behavior diminishes greatly at higher speeds,
- d) use operational features (such as pavement scoring) to keep vehicles from crossing over the middle line and keeping speeds in check,
- e) add rumble strips or other sound attenuating devices to help visually impaired people gauge traffic speed and location. Color contrasted crossings are also helpful for older people or sight-impaired pedestrians,
- f) install raised crosswalks on the exit side of the roundabouts,
- g) lower vegetation in planting strips prior to the crossings which screens people--particularly kids--in the crosswalks,
- h) install vegetation by exit curbs to better define the turn radius and to keep pedestrians from crossing in locations other than the marked crosswalk, and
- i) use conventional pedestrian-activated flashing lights by the pedestrian crosswalks rather than the HAWK lights, which are confusing.

South Golden Road/Johnson Road Roundabout

- a) Add a marked crosswalk, or at minimum, an engineered crossing, on the east side (W 16th Ave).
- b) Narrow the exit from the roundabout to Johnson Rd. from two lanes to one to remove a conflict lane. (Dan Hartman agreed with this concept.)

2. Signage and Treatment of Trail Crossings at Major Streets

Crosswalks Generally

- a) Minimum 12' width for marked crosswalks,
- b) narrow crossing width to 22',
- c) place pedestrian islands,
- d) tighten street as much as possible,
- e) grind down street for crosswalk stripes to reduce scraping off of stripes by snow removal equipment,
- f) create angled islands to put pedestrians/cyclists at a position looking at on-coming traffic when leaving the island,
- g) use of "yield to pedestrian" paddles installed in the street next to a crosswalk received high yielding behavior,
- h) use of raised crossings and pulsating or pedestrian activated lights at high-use crosswalks,

- i) force both vehicles on the street and pedestrians/cyclists on the path into single-file crossing lanes at intersections of paths and roads, and
- j) camera activated trail crossings in Tempe kept cyclists in speed at crossings and shortened the motorist stop time on red.

Crosswalk at Clear Creek by Buffalo Bill Statue

- a) Vegetation and the statue's stone base screen pedestrians in the crosswalk from southbound traffic on Washington Ave. A pedestrian-activated LED sign would alert drivers to the presence of pedestrians,
- b) extend the sidewalk at southern end of the bus parking area with the bow occurring later (thereby narrowing the crossing and putting pedestrians in a more visible location for northbound traffic on Washington Ave.).

3. Street profiles

No specific notes included on this item.

September Walkability Workshop

Each mid-block and roundabout crossing should be evaluated on its own merit and suggestions are given for each roundabout and the mid-block crossing at Clear Creek near the Buffalo Bill statue (See attached aerial photographs and street sections with annotations).

Some general recommendations Dan Burden made during his presentation at the workshop were as follows:

- Minimum 12' width for marked crosswalks
- Narrow crossing width to 22'
- Use yield to pedestrian paddle signage in the center of crosswalks on mid-blocks
- Crosswalks at roundabouts should be 2 car lengths behind the stop bar (generally 20' to 50')
- Curbs are an important part of the street infrastructure and should be 6" in height. Roll over curbs are a tripping hazard for the visually impaired
- Sidewalks should be at least a minimum of 6' wide attached to curb, a minimum 5' wide detached to accommodate two people walking together

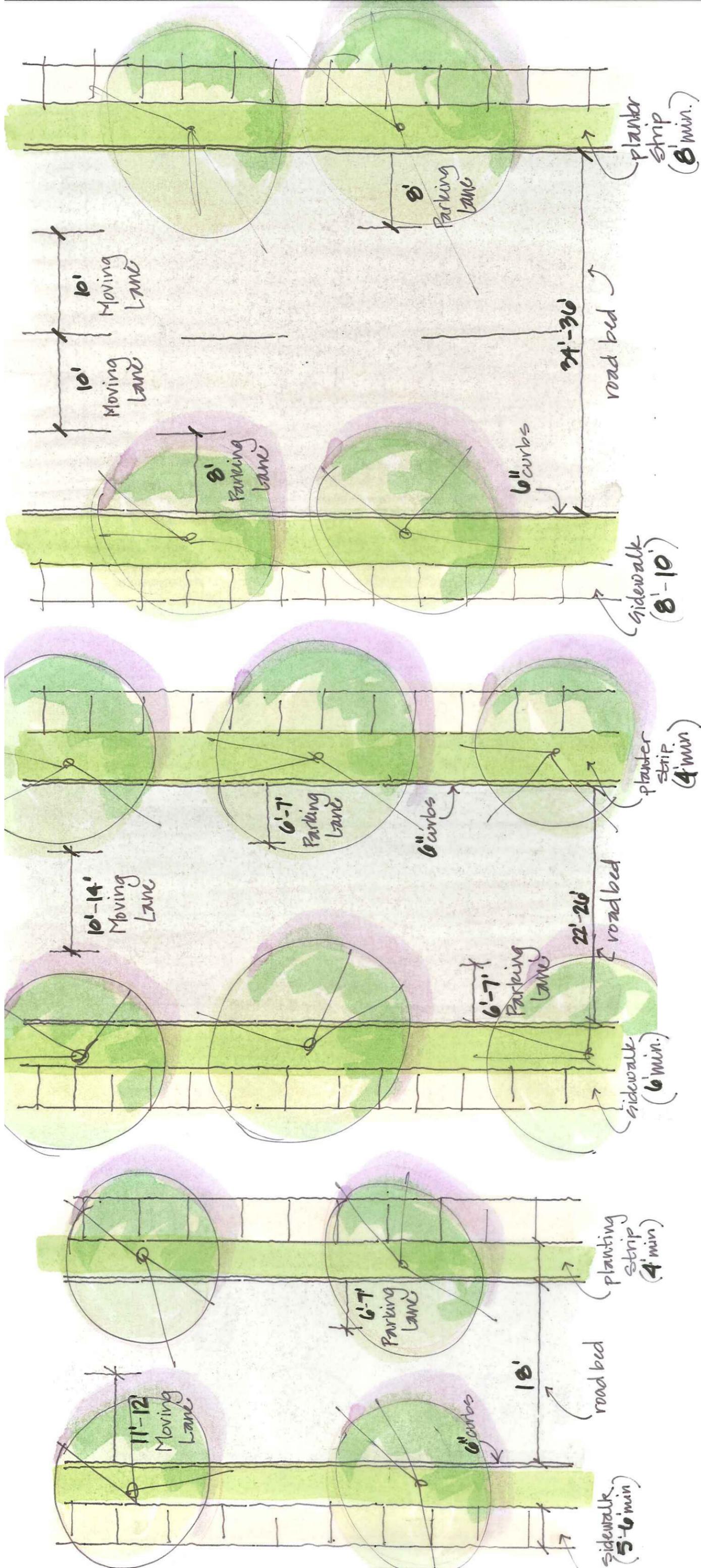
or passing one another. All sidewalks should be designed to ADA standards

- Sidewalk widths should be determined by pedestrian volume not to street size or proximity. (ie Single family neighborhoods and low density commercial areas, pedestrian demand is met by 5'/6' widths)
- Sidewalk widths should be 8' or wider for townhome density or higher
- Landscaping materials should be no taller than 18" in the visual path of motorists (see attached Federal Highway guidelines)
- Planting strip dimensions should vary on low volume streets based on streetscape expectations
- Planting strips on high volume/high speed streets should be a minimum of 8'

Ford and Washington

A significant percentage of residential streets in Golden are sized between 30' - 32' wide with attached undersized sidewalks. There are three options to improve the walkability of these streets:

1. Remove on street parking and restripe the road with bike lanes
2. Remove on street parking and rebuild the street with 6' attached sidewalks
3. Study the streets pedestrian use and widen the sidewalk to 6' on high pedestrian volume side



LOCAL STREET

Parking not expected or restricted to one side

Low speed two-way traffic

LOCAL STREET

Parking on both sides

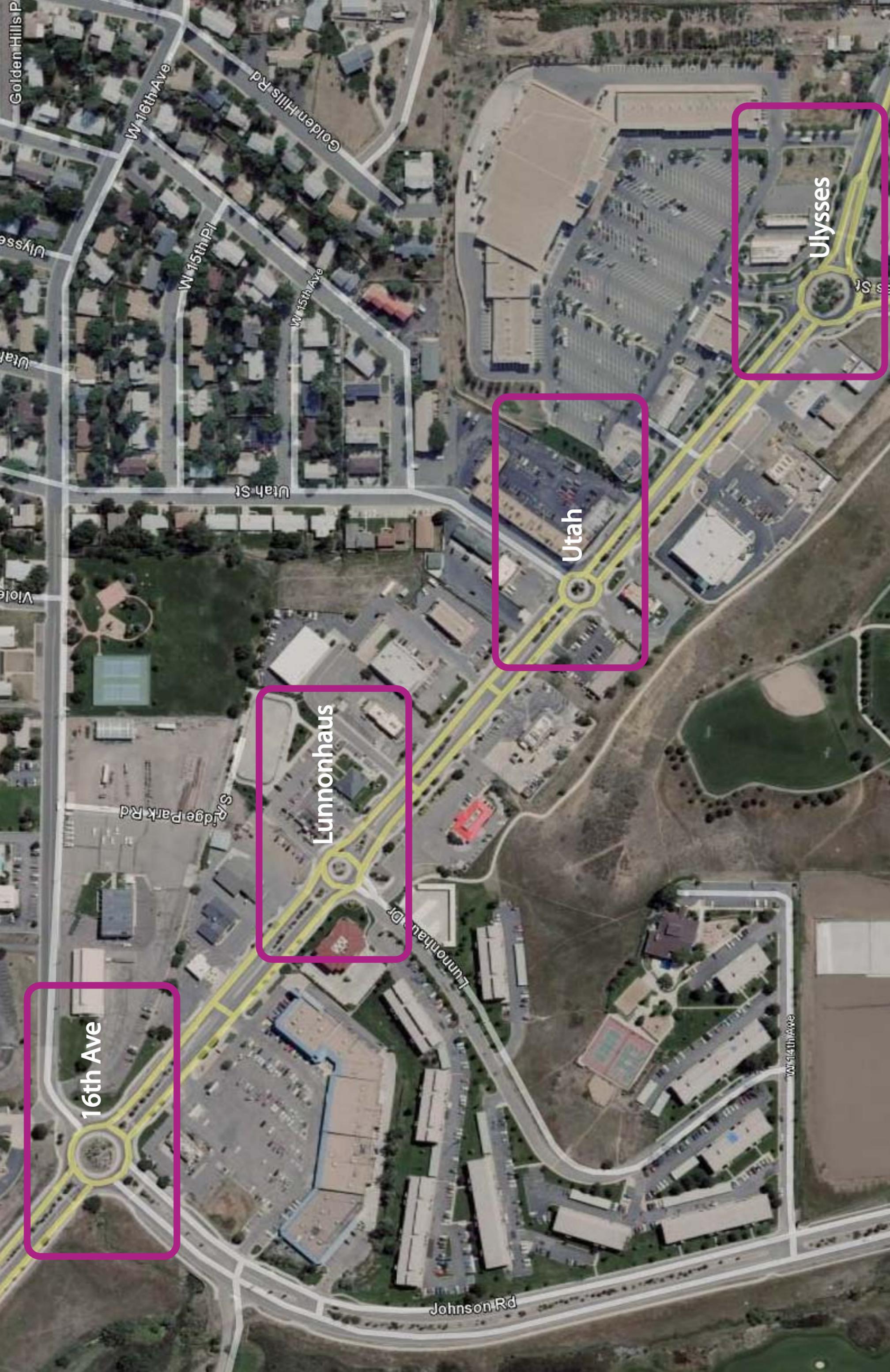
Low speed two-way traffic

If sidewalk is attached 6'-0" min.

RESIDENTIAL COLLECTOR

Parking on both sides

Low speed two-way traffic



Ulysses

Utah

Lunnonhaus

16th Ave

Golden Hills Pl

W 16th Ave

Golden Hills Rd

Ulysses

W 15th Pl

W 15th Ave

Utah

Utah St

Violet

Ridge Park Rd

S

Lunnonhaus Dr

Johnson Rd

W 14th Ave

Keep landscaping low at the entrance to the roundabout. Use 12 - 18" high shrubs to buffer the edges of the sidewalks.

All crosswalks should be 20' - 50' behind the stop bar

Paint is worn as traffic crosses over the lines for a 'straight shot' through the intersection

EXISTING GEOMETRY

NEW GEOMETRY NEEDED

Dan Burden's observations at W 16th and S. Golden were as follows: The worn paint suggested the deflection of traffic was not sufficient due to the incorrect sizing of the radii for this intersection. This existing geometry increases vehicle speeds and does not allow for the safe crossing of pedestrians or cyclists. The crosswalks should be located further back from the intersection but, they were not the major problem here, rather the geometry of the roundabout. Also, take caution with landscaping so that it does not obscure the presence of pedestrians.

See attached referenced document from the Federal Highway Administration's Roundabout Design for specific radii construction and landscaping guidelines.

Keep landscaping low at the entrance to the roundabout. Use 12 - 18" high shrubs to buffer the edges of the sidewalks.

All crosswalks should be 20' - 50' behind the stop bar

Paint is worn as traffic crosses over the lines for a 'straight shot' through the intersection

EXISTING GEOMETRY

NEW GEOMETRY NEEDED

Dan Burden's observations at Lunnonhaus Dr and S. Golden were as follows: The worn paint suggested the deflection of traffic was not sufficient due to the incorrect sizing of the radii for this intersection. This existing geometry increases vehicle speeds and does not allow for the safe crossing of pedestrians or cyclists. The crosswalks were not the major problem here, but rather the geometry of the roundabout. Also, take caution with landscaping so that it does not obscure the presence of pedestrians.

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All crosswalks should be 20' - 50' behind the stop bar

Paint is worn as traffic crosses over the lines for a 'straight shot' through the intersection

EXISTING GEOMETRY

NEW GEOMETRY NEEDED

Dan Burden's observations at Lunnonhaus Dr and S. Golden were also applicable at this intersection as follows: The worn paint suggested the deflection of traffic was not sufficient due to the incorrect sizing of the radii for this intersection. This existing geometry increases vehicle speeds and does not allow for the safe crossing of pedestrians or cyclists. The crosswalks were not the major problem here, but rather the geometry of the roundabout. Also, take caution with landscaping so that it does not obscure the presence of pedestrians.

See attached referenced document from the Federal Highway Administration's Roundabout Design for specific radii construction and landscaping guidelines.

Keep landscaping low at the entrance to the roundabout. Use 12 - 18" high shrubs to buffer the edges of the sidewalks.

Crosswalks should be added where they are not currently

All crosswalks should be 20' - 50' behind the stop bar

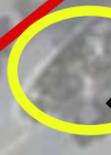
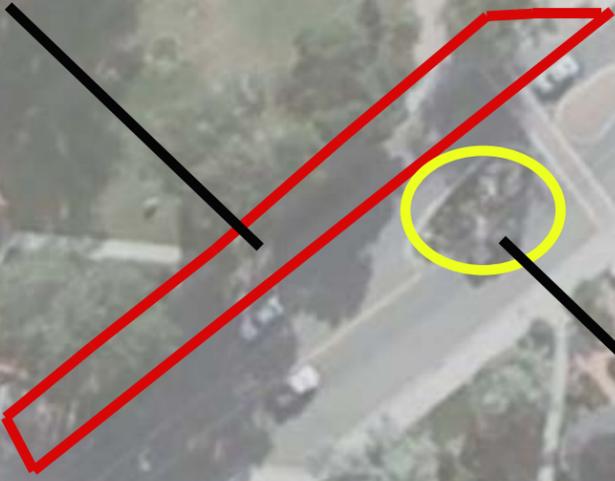
Worn paint suggests the geometry is not sufficient to slow traffic

Keep landscaping low at the entrance to the roundabout. Use 12 - 18" high shrubs to buffer the edges of the sidewalks.

Dan Burden's observations at Ulysses and S. Golden were as follows: The worn paint suggested the deflection of traffic was not sufficient due to the incorrect sizing of the radii for this intersection. This existing geometry increases vehicle speeds and does not allow for the safe crossing of pedestrians or cyclists. The crosswalks were not the major problem here, but rather the geometry of the roundabout. Also, take caution with landscaping so that it does not obscure the presence of pedestrians.

See attached referenced document from the Federal Highway Administration's Roundabout Design for specific radii construction and landscaping guidelines.

RELOCATE BUS QUEUING TO SIDE STREET SO THAT PEDESTRIANS AREN'T OBSCURED BY BRIDGE AND LANDSCAPING.



STATUE AND CENTER MEDIAN LANDSCAPING ALSO OBSCURE PEDESTRIANS.

Washington Ave

11th St

239 ft

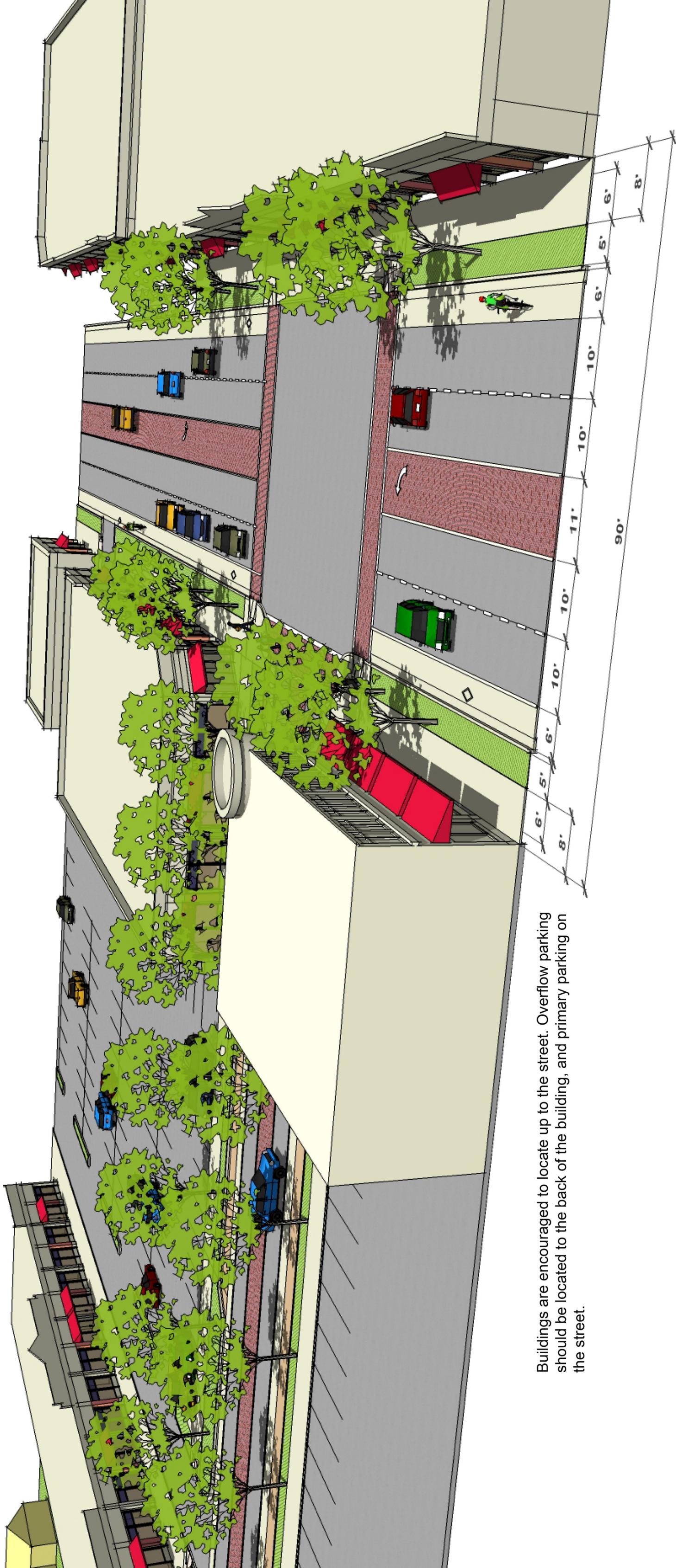
39°45'24.64" N 105°13'21.46" W

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Jul 31, 2007

Eye alt 840 ft

Google



Buildings are encouraged to locate up to the street. Overflow parking should be located to the back of the building, and primary parking on the street.

Appendix D

ADA RECOMMENDATIONS BY JERRY GANIERE

1990 Americans With Disability Act (ADA) Issues

BACKGROUND AND PROJECT PROTOCOL FOR ADA

LEGAL ADA PROGRAM REQUIREMENT RECOMMENDATIONS

ADA Coordinator
Self Evaluation
Designating Standards and Guidelines
Assure Accessible Program Operations
Initial 1990 ADA Physical Requirements
ADA Communications and Notices
ADA Compliance Audits
Grievances and Complaints
DOJ Approval of Certification for the City of Golden Levied ADA Requirements
Contract Administration
Other ADA Actions
ADA Liaison

SPECIFIC ADA ELEMENTS POLICY RECOMMENDATIONS

Handicapped Parking Spaces
Playground for disabled Children
Community Preference Procedure
Sidewalks
Sidewalk Zip Joints
Sidewalk Cross Slope Grades
Pedestrian Bridges
Powered Door Openers
Paved Trails in Parks
Driveways
Signage Directions
Innovative Designs
Highlighting and Colors
Dual Railings
Privately Owned Buildings and Structures
Front Lip On Entry Ramps and Street Junctures
Curb Heights
Ramps, Curb Ramps, Walks, Slopes

Facility
Element
Circulation Path
Accessible Route

Ramp
Curb Ramp
Running Slope
Cross Slope
Walk
Automatic Door
Power-assisted Door

Test

BACKGROUND AND PROJECT PROTOCOL FOR ADA

I am a 66 year old paraplegic from birth, and throughout my life I have experienced an ever changing level of disability, largely due to the aging process. After reaching an undesirable low in mobility 8 or 9 years ago, I started using a wheelchair, and using it showed me how to get around in the world again, and that there is no need to be a recluse. I also "stumbled" upon the paved path winding through the Clear Creek Corridor. I immediately saw how wonderful using these types of paths could be; but, I also noted some shortcomings, that if fixed, would make a super place for other disabled and elderly people to also visit and enjoy. Then I saw the advertisement for the Walkability project, and I found it to be a possible way to get improvements made, and to entice more disabled and elderly to again take more of a part in the world outside like I did. So, here I am.



Author Jerry Garniere

As one travels about the beautiful City of Golden,

it quickly becomes clearly apparent that many laudable attempts to provide accessibility features and elements in buildings, facilities, and structures of many types are quite evident, and the City is to be congratulated and can take pride in the progress it has made in this area. However, it is also evident that some of these features and elements in buildings and structures may not meet minimum ADA requirements and specifications for accessibility, and in other cases, these features are either missing or may not be usable. In addition, there are apparently few or no written records maintained of actual measurements of items in terms of ADA standards, or at least none were noted or provided or officially recorded for the record.

In this regard, accessibility either exists or it does not exist. There is no such thing as being almost accessible, or that the presence of a required ramp means it is an accessible ramp. Without records, it would seem that audits are needed to determine compliance, and no record of audits seemed to be available either. With respect to usability, some items were tested for usability by a person in a wheelchair (myself) as part of this current study, and some items were found to be usable and some not, at least not for the average disabled and elderly users. But, again, this type of testing also does not provide any concrete evidence, or any other evidence for that matter, of ADA compliance or noncompliance.

The city of Golden is growing and changing. It looks forward to new construction, reconstruction, and repair of streetscapes – both public and private. Space and/or geographic limitations will affect the degree to which any new or reconstructed building, facility, or structure meets or is able to meet ADA standards and the ideal. But, thoughtfulness about ADA requirements in addition to engineering design and architectural principles applied at the beginning of the process – and reflected in city plans, codes, and contract specifications – should help maximize the usability and safety of streetscape features everyone uses, including skaters and skateboarders, caregivers with strollers or wheelchairs, users of wheelchairs, walkers and crutches, shoppers with grocery carts, material movers, all types of workers, etc.

Then too, while accessible type streetscape features are widespread in Golden – an indication of the commitment of the city to maximizing access for the disabled -- they include designs of widely varying vintages and user-friendliness. The Americans with Disabilities Act (ADA) and associated legislation dictate the minimum design measurements of these various streetscape features; but, even within ADA constraints there may be a wide range of usability, and innovation to create equivalent or better alternate designs, and such efforts are encouraged by the ADA. In addition, inclusion of users in determining designs and features is invaluable, and input from ADA advocacy groups is essential and should be a mandatory planning requirement, as well as progress monitoring assistance, and post audit participation too.

The importance of good contract management policies and procedures is absolutely essential to assuring that ADA responsibility and liability is levied where it should be levied, and in common sense terms, in assuring that the City of Golden isn't left holding the liability bag!. All of these planning, control, and management tools and processes, when applied properly to ADA and in advance, can result in enormous monetary savings because the right parties will be held accountable and liable, and expensive redoing of inadequately planned, noncompliant, and unusable projects and elements can be avoided by doing it right the first time.

The newest and most ideal approach is to employ the concepts and principles of universal design which is simply designing programs and facilities to be usable by all people, to the greatest extent possible, without separate or segregated access for people with disabilities. Universal design policy is that all new and reconstructed facilities, programs, and associated elements are to be accessible to the greatest extent possible -- period. This commitment often exceeds the minimum requirements of the accessibility guidelines. The result of universal design is independence, integration, and dignity for everyone.

However, from a practical perspective, the place to start a viable ADA program which meets and/or exceeds the needs and requirements of the covered disabled and elderly in any community

is with the law – the 1990 ADA itself. This law prescribes the actions, processes, methods, and policies required to establish and operate a viable and successful program for the covered disabled and elderly people throughout the United States to include state and local agencies, governments, and communities; and it also covers private and public programs, entities, and organizations. The ADA has been codified and incorporated into the Code of Federal Regulations (CFR), and the CFR's pertinent to the ADA are based on the American with Disabilities Act Accessibility Guidelines (ADAAG) which, of course, stem from the ADA itself. The specific legal and regulatory references are provided later in pertinent parts of this document

A number of questions relative to City of Golden specific written ADA policy, plans, processes, and other ADA issues were asked of appropriate City personnel, but no formal response was received. In addition, the City and other Master Plans and documents were searched to try to locate ADA information. Some informal discussions on this issue were noted as well. One individual stated that all work accomplished by his department was ADA compliant except for 2 items -- the Southeast corner of 11th and Washington St (no curb ramp), and the paved walk/ramp leading west from the Northwest corner of Vanover Park down under the Ford St bridge (too steep). Another department indicated they were reviewing ADA audit possibilities so they could better determine ADA status of their facilities because they knew there was need for improvements. Another informal discussion indicated there is no designated ADA coordinator. Based on this information, it is felt that the City of Golden does not have some of the specific and formalized written ADA plans and policies required by the law.

Nevertheless, as noted above, Golden has an abundance of accessible routes and elements for the disabled and elderly that coincide with common circulation paths used by the nondisabled, and achievements in this area are many and notable. It is clear that Golden leaders, managers, and employees know and care about ADA, and ADA appears to be at the forefront of thinking for projects requiring consideration of ADA. It is clear that Golden wants to manage its resources, services, and actions in a way that

does consider the needs of the disabled and elderly, and the actual accomplishments and current plans of Departments like the Parks and Recreation Department appear to be particularly notable and definitely headed in the right direction. The Park and Recreation Master Plan seems to exemplify this attitude and desire for formal documentation and program assessment.

The BOTTOM LINE: The ADA became law in 1990, and it contains legal and binding mandates to implement its provisions. The main deficiency in Golden with respect to ADA is the seeming lack of formal compliance with the law. That is, there is a seeming lack of and few written and documented plans, policies, processes, evaluations, and audits, some of which are required by law, but still absent. These formalized and written procedures are recommended to be implemented as soon as possible, as it is a proven fact that this type of approach works and is monetarily wise by actually saving dollars by doing it right the first time. It is relatively inexpensive to assure a newly constructed building is accessible as part of the construction process, while redoing construction to add accessibility after the building is completed and found to be deficient is extremely expensive. Of course, project possibilities will often need to be tempered by geographic anomalies and difficult terrains in the area.

The Walkability Project is intended to cover all citizens of Golden, and since this includes the disabled and elderly, it also includes their walking and their forms of movement comparable to walking. This means it includes those who use wheelchairs, crutches, canes, braces, and any other assistive devices for ambulation, and in some areas, even the Segway is coming into use. The Walkability project therefore includes the provisions of the Americans with Disabilities Act (ADA) of 1990 which cover activities, buildings, structures, etc., and the means to provide accessibility for ADA covered individuals. This section includes requirements impacting these citizens of Golden and their ability to "walk" and be included in this Walkability project. The individual elements that follow reflect recommendations that incorporate compliance with the ADA. The main emphasis is on elements of ADA for Golden that are missing, not yet implemented, or need improvement, although some related issues may need to be mentioned

for clarity and understanding.

ADA IS THE PICTURE OF CHANGE



HERE IS PART OF A CIRCULATION PATH BEFORE APPLYING ADA



HERE IS PART OF AN ACCESSIBLE ROUTE AFTER APPLYING ADA

High curbs should be designed to provide access for both walking pedestrians and wheelchair users.

ADA can often work even when it appears to be very difficult.

LEGAL ADA PROGRAM REQUIREMENT RECOMMENDATIONS

The recommendations in this section are based on information I obtained by reviewing various documents on the Golden web site, information contained in a variety of ADA documents, and information provided by various City of Golden employees. Some of that information was noted in the previous section of this report.

Other specific information about Golden's ADA policy that was found on the Golden web site and included the following statement about ADA access to the web site: "The City of Golden is committed to compliance with the Americans with Disabilities Act (ADA). It does not discriminate on the basis of disability in the admission or access to, or treatment or employment in, its services, programs or activities. Upon request, reasonable accommodation will be made to allow individuals with disabilities access to communications regarding City services, programs or activities set forth on the City's web site."

In addition, Golden's Special Events application packets require sponsors to assure that their event meets certain ADA requirements as follows: "Handicapped Accessibility: Event-holders must establish ADA compliant ways for handicapped persons to park, access the event and ADA accessible restrooms, and note them on the event site plan sketch."

The Parks and Recreation Department is very committed to ADA and their Master Plan contains many references to that commitment to ADA, and they have the strongest statements found in any of Golden's planning documents. Constant references to ADA are found in the minutes of their meetings, and their desire to begin an ADA audit process of their park sites and systems is also often noted.

One area of particular focus was the Clear Creek Corridor as Golden's greatest asset, with the emphasis being on how Golden can protect and make it better for future generations. Areas looked at along the corridor included how and what types of trails are used, how to provide a variety of experiences and how to make all of the areas cohesive, and how to assure ADA accessibility standards are met or exceeded. Provision of accessible children's playgrounds is always at the forefront of their planning process.

However, the Parks and Recreation Department is not the official or designated ADA coordinator for the city, and little in the way of city-wide formal documents and written plans were found or provided. The attention otherwise given to ADA is notable but apparently lacks formality as far as I was able to determine. It should also

be noted that this effort to find ways to improve Walkability for the disabled and elderly in the manner described above was in no way intended to be or amount to any formal program review of the City of Golden's ADA program. A formal program review was not my intent or desire, and would be well beyond any charge to do so. All of the program recommendations made in this section are really for Golden to consider for implementation, if not already accomplished and implemented. On the other hand, the recommendations made in this section are those actions required based on legal definitions drawn from the 1990 ADA and subsequent development of guidelines, standards, and regulations.

Therefore, these recommendations are for Golden to determine if they have met the formal legal requirements, and if not, it is recommended the City of Golden do so. Legal and helpful references are provided in the appropriate paragraphs and in an attachment. In addition, as a matter of convenience, a copy of the latest interactive CD developed by the Disability Rights Section, Civil Rights Division, U.S. Department of Justice, titled ADA Technical Assistance CD-ROM (Vol. Four – 6/2008), is included. It contains a valuable array of documents in PDF, HTML, and Text formats. These documents include, ADA Regulations, Standards for Accessible Design, Technical assistance Manuals and Publications, and a full text of the Law.

Following are recommended actions derived from the ADA and related law, and as expounded upon in governing documents and regulations:

ADA Coordinator. It is recommended that Golden establish an ADA Coordinator to coordinate and provide comprehensive ADA planning which is then recommended to be incorporated into the City of Golden Master plan as a separate section under Part II, it should also be included as appropriate in other parts of the Master Plan, as well as any other City plans or objectives, such as the Park and Recreation Master Plan, Neighborhood plans, etc., as appropriate. It is necessary to assure that ADA requirements are included in all aspects of ADA planning impacting the people of Golden's living, working, and recreating needs and goals. The requirement for an ADA Coordinator to act for the City of Golden to coordinate its efforts to comply and carry out

the City's ADA responsibilities, is in accordance with 28 C.F.R. § 35.107(a). The ADA Coordinator should accomplish or oversee and coordinate the accomplishment of the actions and responsibilities listed in the paragraphs below to meet Golden's ADA requirements. These plans and actions should be accomplished in writing and reviewed and approved by appropriate city authority (City Council and Mayor).

While a consultant is one possible way to accomplish this action,, it is recommended that the appointment of an employee directly responsible to City leadership and management is believed to be the best approach by far. Initially, a time limited project type appoint might be the best approach to assure the employee is fully dedicated to completing this vital program development and implementation task.

[Note: If any of these actions and requirements have already been formally accomplished – I had no knowledge of them and had not been made aware of them. This statement applies to each of the mandated actions in this section.]

Self Evaluation: The City of Golden should conduct a self-evaluation of its services, policies, and practices by July 26, 1992, and make modifications necessary to comply with the Department's Title II regulation (28 C.F.R. Part 35), 28 C.F.R. § 35.105. If this was not done, the Coordinator should be directed to research the issue to determine how this omission is to be corrected and accomplished currently. The ADA Coordinator should review the full scope of ADA laws and regulations to assure that the City of Golden is aware of and fulfills its full range of responsibilities under the ADA. A transition plan outlining the corrective steps and actions needed, along with a timetable for completion, should be developed based on self evaluation findings and determination of needs. An internal team of representatives from the various organizational functions might be a good approach for assisting with this action mandated by the ADA.

Designating Standards and Guidelines: The Department of Justice (DOJ) Title II regulations for state and local governments are found at Title 28, Code of Federal Regulations. Part 35 (abbreviated as 28 CFR pt.35). The ADA Standards for Accessible Design are located in Appendix

A of Title 28, Code of Federal Regulations. Part 36 (abbreviated as 28 CFR pt. 36 app. A). The ADAAG contains guidelines based on the ADA of 1990. The ADA Standards are enforceable. The guidelines are not. The other set of Standards is Uniform Federal Accessibility Standards (UFAS) based on the Architectural Barriers Act. The ADA Coordinator should recommend to the City Council which of the two ADA sets of standards will be used by the City of Golden, and also consider recommending that the ADA Guidelines be adopted to complement whichever set of standards is chosen by the City Council (only one of the 2 sets may be chosen).

Assure Accessible Program Operations: Operate each City of Golden program, service, or activity so that, when viewed in its entirety, it is readily accessible to and usable by individuals with disabilities, 28 C.F.R. § 35.150(a). Provide delivery of services, programs, or activities in alternate ways, including, for example, redesign of equipment, reassignment of services, assignment of aides, home visits, or other methods of compliance, if current methods are not effective in making the programs accessible, 28 C.F.R. § 35.150(b).

Initial 1990 ADA Physical Requirements: Certain physical changes to buildings were required to be made by January 26, 1995, in accordance with the Department Justice Title II regulation, 28 C.F.R. § 35.151, and the ADA Standards for Accessible Design ("Standards") or the Uniform Federal Accessibility Standards ("UFAS"). Ensure that facilities for which construction or alteration was begun after January 26, 1992, are readily accessible to and usable by people with disabilities, in accordance with 1) the Department's title II regulation and 2) the Standards or UFAS, 28 C.F.R. § 35.151.

ADA Communications and Notices: The City of Golden must provide notices of ADA requirements to the citizens of Golden, and to notify applicants, participants, beneficiaries, and other interested persons of their rights and the City's obligations under Title II and the Department's regulation, 28 C.F.R. § 35.106. The city must ensure that communications with applicants, participants, and members of the public with disabilities are as effective as communications with others, including furnishing

auxiliary aids and services when necessary, 28 C.F.R. § 35.160. The city must provide information for interested persons with disabilities concerning the existence and location of the County's accessible services, activities, and facilities, 28 C.F.R. § 35.163(a). TTY communication ability must be provided for general services, 911 calls, and other communications as necessary. Provide for operating computer modems, 28 C.F.R. § 35.162; and for communicating with individuals who have hearing or speech impairments, 28 C.F.R. § 35.161.

ADA Compliance Audits: The ADA Coordinator should establish audit procedures and identify facilities and structures to be audited, prioritize the order of such audits, enforce and assure that audit findings and corrective actions identified are made and completed, and coordinating the efforts of any additional ADA coordinators or teams established to work on ADA issues, problems, or audits in the City of Golden. under title II of the Americans with Disabilities Act of 1990 ("ADA"), 42 U.S.C. §§ 12131-12134, and the Department's implementing regulation, 28 C.F.R. Part 35.

Grievances and Complaints: Establish a grievance/complaint procedure for resolving complaints of violations of Title II, 28 C.F.R. § 35.107(b). Assure it meets notice requirements so people know this process exists and is available for them to use if they have a complaint they feel they need action on.

DOJ Approval of Certification for the City of Golden Levied ADA Requirements: Title III of the ADA authorizes the Department of Justice to certify that State laws, local building codes, or similar ordinances meet or exceed the ADA Standards for Accessible Design for new construction and alterations. Title III applies to public accommodations and commercial facilities, which include most private businesses and non-profit service providers. Examples of covered businesses are restaurants, banks and commercial lending institutions, movie theaters, stadiums, grocery and convenience stores, health care facilities and professional medical offices to name a few. Congress, by authorizing the certification of State and local accessibility requirements under title III, recognized the important role that state and local building codes and standards may play

in achieving compliance with the building-related aspects of accessibility. The ADA Coordinator should assess the value and benefits of obtaining certification (and the benefits are many including a rebuttable presumption in court cases), and making a recommendation to City Council and the Mayor.

Contract Administration: The ADA Coordinator should establish a comprehensive plan for conducting necessary pre-contract, contract award, contract progress reviews, and product acceptance reviews with respect to ADA requirements, establishing Golden policy for applying guidelines and standards for accessibility to places of public accommodation and commercial facilities both private and public which are covered by the ADA and for which Golden has an interest such as partial or complete funding and usage, and which are for use by individuals with disabilities and the elderly when covered buildings and facilities are being designed, constructed, and altered. The benefits of this are many also, and a number of aspects in this regard are also found in the preceding paragraphs.

The ADA Coordinator should coordinate the efforts of any additional ADA coordinators or teams established to work on ADA issues or problems in the City of Golden.

Other ADA Actions: ADA Liaison. The ADA Coordinator will maintain liaison with ADA advocacy groups, disabled and elderly people in the Golden community, and ADA technical advisory agencies both governmental and private as needed. The Coordinator will seek input and advisory assistance from these groups, and especially from local disabled and elderly persons, to assist in evaluating existing, proposed, and newly constructed or modified buildings and structures, and to advise on and assist with formal compliance audits or simple usability surveys as necessary. This could include both volunteer and paid local consultants as determined necessary.

SPECIFIC ADA ELEMENTS POLICY RECOMMENDATIONS

The first issue is to provide some important basic definitions of terms.

Facility. All or any portion of buildings, structures, site improvements, complexes, equipment, roads, walks, passageways, parking lots, or other real or personal property located on a site.

Element. An architectural or mechanical component of a building, facility, space, or site, e.g., telephone, curb ramp, door, drinking fountain, seating, or water closet.

Circulation Path. An exterior or interior way of passage from one place to another for pedestrians, including, but not limited to, walks, hallways, courtyards, stairways, and stair landings. For those circulation paths that do not meet accessibility standards, the amount of traffic a path gets can help you decide those in most need of being made accessible.

Accessible Route. A continuous unobstructed path connecting all accessible elements and spaces of a building or facility. Interior accessible routes may include corridors, floors, ramps, elevators, lifts, and clear floor space at fixtures. Exterior accessible routes may include parking access aisles, curb ramps, crosswalks at vehicular ways, walks, ramps, and lifts. Amount of traffic will help you prioritize accessibility needs.

Ramp. A walking surface which has a running slope greater than 1:20. A ramp with a rise greater than 6 inches or a length greater than 72 inches must have dual hand railings. Ramps must have 60 inch flat landings at the top and bottom of the ramp. A slope of 1:12 is probably very difficult for the average disabled person. Voluntary use of hand railings are encouraged wherever it appears they would be useful. Anytime hand railings are used they should meet ADA guidelines.

Curb Ramp. A short ramp cutting through a curb or built up to it. Never use the latter type where the ramp is built up to the curb from the street.

Running Slope. The slope that is parallel to the direction of travel (see cross slope). A running slope with a rise of 30 inches should have a landing at least every 30 feet in length.

Cross Slope. The slope that is perpendicular to the direction of travel (see running slope).

Walk. An exterior pathway with a prepared surface intended for pedestrian use, including general pedestrian areas such as plazas and courts.

Automatic Door. A door equipped with a power-operated mechanism and controls that open and close the door automatically upon receipt of a momentary actuating signal. The switch that begins the automatic cycle may be a photoelectric device, floor mat, or manual switch (see power-assisted door).

Power-assisted Door. A door used for human passage with a mechanism that helps to open the door, or relieves the opening resistance of a door, upon the activation of a switch or a continued force applied to the door itself.

Handicapped Parking Spaces: The running slope on handicap parking should not exceed 2 % for perpendicular parking spaces. There a number of handicapped parking spaces in parking lots that are not in compliance with slopes not being over 2%. An ADA audit should be conducted and parking spaces made to be compliant with ADA requirements. A corrective plan should be developed. This is likely to be a long term project to make all corrections because of possible scope and costs, but newly constructed handicapped parking spaces should all be made compliant or better than ADA guidelines for drainage slopes. A grade of 1/4 to 1/2%, or even 1% maximum is preferred for the slopes.

Playground for disabled Children: The playground for disabled children being considered by the Parks and Recreation Advisory Board, is supported as another notable ADA project attributable to the efforts of the Parks and Recreation Department. Depending on size requirements, possible locations for this playground might include space that could be provided by elimination of Illinois Street; or perhaps the vacant area south and west of Clear Creek and the Billy Drew Bridge; or maybe even a spot like in Vanover Park to bring it more into the system as opposed to just another park at the end of the line. A location somewhere in the Clear Creek Corridor would be one more bright addition to this prominent and highly admired system of parks. Of course, I fully realize there are

many plans already in place for some of these areas that I am not aware of.

Community Preference Procedure: Establish a procedure for the City of Golden to express and enforce to the maximum extent reasonable and possible, citizen or City preferences when more than one solution or method is possible to meet or exceed needs and requirements such as desired curb structures, widths of sidewalks, door opening assistive devices, etc. This can probably be done via establishment of additional city codes or obtaining certification authorities such as ADA approval authority from the Department of Justice.

Sidewalks: An ADA compliance audit needs to be conducted on sidewalks in Golden for a sufficiently significant portion of sidewalks to determine relative overall noncompliance with ADA Standards, and a corrective plan needs to be developed. As with other projects like this, scope, size, and cost may make this a very long term project.



No wonder there's a superstition about stepping on the cracks!

Sidewalk Zip Joints: Expansion joints in the sidewalk create hardships for wheelchairs and strollers by giving a significant jolt to the conveyance every time a sidewalk crack is passed over. The constant bumping is also hard on the ears, and causes more wear than necessary on the conveyance itself (not to mention the rider or passenger). Use "Zip Joints" from now on instead of the old standard expansion joints. The tighter Zip Joints provide a smoother, less noisy, and less wearing all around ride.



Look Ma! No cracks!

Sidewalk Cross Slope Grades: A fairly large number of sidewalks in Golden are probably ADA noncompliant by exceeding the 2% cross slope maximum for drainage purposes. However, it is preferred that these cross slopes should be made minimal and try to keep them at less than 2%, such as 1/4 to 1/2 %, or even 1%. Cross slope is, of course, the slope perpendicular to the primary direction of the sidewalk, i.e., for the sidewalk running along the street, the cross slope is usually towards the ditch or gutter for drainage. However, the cross slope causes the wheel chair to pull in that direction, so you can see the less the cross slope, the better for the wheelchair. But the sidewalk needs to drain and not puddle. So some sloping is necessary.

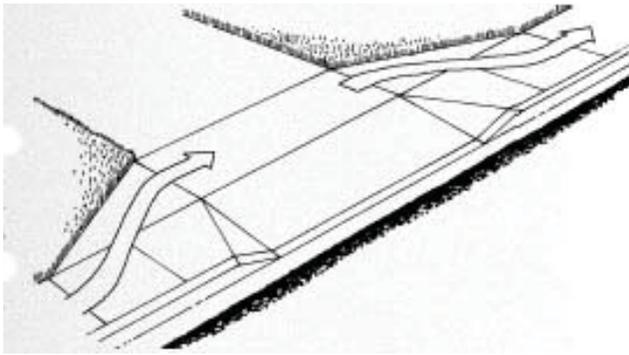
Pedestrian Bridges: It is recommended that flat pedestrian bridges be used for future construction for new bridges of this type, or for repair of old bridges if it can be done as flat in a reasonable manner. It's recognized that there is added natural strength in Arch type construction design structural support; but, a flat walking surface can still be feasible with adequate strength. However, if Arch design is truly felt to be necessary, an attempt should be made to keep the grade to the minimum, and landings should also be used in this case, if possible.

Powered Door Openers: A very long range goal is to have all buildings and structures with doors that house any type of business with private, government, shared, etc, ownership, for which one or more members of the public will require exterior entry at some time, must have at least

one powered door opener, with signage at other doors directing people to the powered door; however, it is preferred that all exterior doors have a powered or power assisted device. This policy also applies to businesses whose public entry is to a door inside a building and they must also adhere to this policy. This policy does not apply to private living quarters, including houses, hotel rental quarters and similar establishments. Fully powered doors are required for heavy public use businesses such as grocery stores, department stores, hardware stores, large health clubs, hotels, electronics and appliance stores, etc. Push button power assisted doors are required for all other types of businesses. Hopefully, existing businesses will install power doors as soon as possible, but must do so when remodeling, renovation, additions, or modifications are made. Extensions may be requested in cases of hardship. For new owners or new construction, power doors must be installed at the time construction occurs.

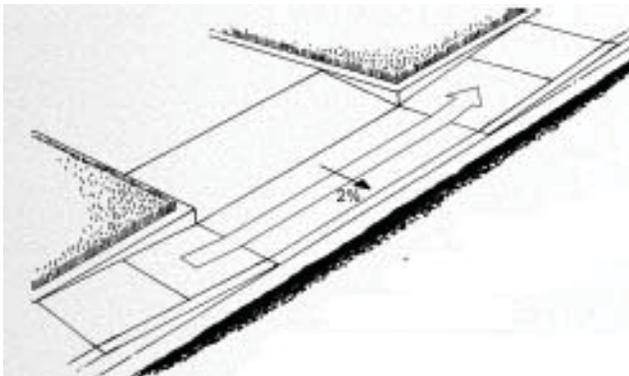
Paved Trails in Parks: Sidewalks for all paved trails should be a uniform standard of 10' or greater. Changes in direction should be designed so that there is room to prevent backup blockages for heavy traffic times. For example, right angled turns should have sharp corners rounded and/or widened to possibly ease congestion at high usage times. Of course, zip joints should be used as well.

Driveways: Wherever possible, consider constructing driveways with angled blocks of pavement lined up to the upper corners on both sides of driveways to provide a flat paved path around the sloped part of the driveway that leads into the street. This is to prevent having to traverse lengths of pavement in a tilted mode. See the diagram below provided depicting this requirement.



GOOD DESIGN: Securing additional right-of-way from the adjacent property is a good strategy for improving pedestrian access on narrow sidewalks.

OR



ACCEPTABLE DESIGN: Parallel driveway crossings enhance pedestrian access at a driveway crossing when there is no room to provide a level landing. Parallel driveway crossings are not as desirable as other accessible driveway crossings because users are forced to negotiate two ramps instead of a level surface.

The first picture above is preferable. The second is ok too, but you need to assure that the 2 slopes on the sides of the driveway opening are stretched to present a minimal grade, and it's an uncommon design which may not be readily accepted.

Signage Directions: Provide signage at all inaccessible entrances to each of its facilities, directing users to an accessible entrance or to information about accessible facilities, 28 C.F.R. § 35.163(b).

Innovative Designs: Creativity in designs to meet accessibility needs is encouraged wherever such designs would provide solutions that meet or exceed equivalent ADA specifications in standards and adopted guidelines. See pictures

below for examples. This is especially encouraged wherever slopes and grades can be reduced even to a small degree, or even better if eliminated. Grades and hills are perhaps the most common difficulties faced by disabled and elderly people, and any relief is welcome. Making grades that go beyond ADA standards is applauded – that is – making even less of a grade than mandated.



Here is a stretch of concrete that required an opening at both ends. So a ramp was built at each end. The concrete could have been removed instead and the sidewalk made level with the pavement, leaving the curb, but reinforced. Or better, use a row of bollards. That would provide 2 less slopes to negotiate. Think.



This is a fairly steep slope and tilts too far down to the left (more so than the picture portrays). And the fence is no help as it is decorative and not a qualified hand railing.



Looking in the same place and direction but slightly different angle, it can be seen if the paved trail had begun just at the bottom right center of this picture and extended straight through where the rock with butterfly is (they could be moved) and connected to the path directly beyond the rock, the path could have been nearly level with an acceptable grade and no tilt. Think.

Highlighting and Colors: Consider using highlighting and colors that are not used for other meanings or directions to help identify and provide visibility for ADA elements, notices, changes, entry spaces/places, landings, aides, tools, signs, turns, pointers, and anything else of this nature. Try to avoid unwarranted garishness, clashes with atmosphere and senses, and confusion or conflict with other types of elements and aides. And, those white diagonal lines inside parallel white lines are always cool, and too many entry curb cuts don't have them and they are then often blocked by parked vehicles.

Dual Railings: When it is determined that a railing on one side of a trail, sidewalk, path, etc., is needed, a railing on the other side opposite the needed railing ought to be installed. If a hand railing is installed, even if voluntarily, and not as a mandatory ADA standards element, such railings still must comply with 28 CFR Pt. 36, App A, 4-26.



In addition to the railing in front stopping too short, there is no flat landing at the end of the railing. Also, if there were edges on the ramp, this type of railing would not prevent a wheel from slipping off the edge.



Is this perfect, or what?

Privately Owned Buildings and Structures: Don't let the word "private" stop you from applying ADA Standards and adopted Guidelines. Title II includes and is covered by 28 CFR Part 35: Nondiscrimination on the Basis of Disability in

State and Local Government Services: and Title III includes and is covered by 28 CFR Part 36: Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities. The ADA covers public and private buildings and structures just as it does government facilities in State and Local government agencies. However, Federal facilities are covered elsewhere.

Front Lip On Entry Ramps and Street Junctures: It seems that most existing ramp entries into the street (curb ramps, entry ramps, driveways, etc.)

have a lip at the juncture of the ramp and street. Change this practice immediately so that all junctures are level with no lip.

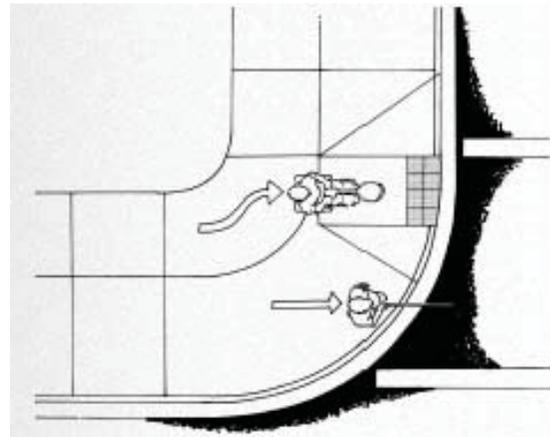
Curb Heights: Recommend that curb heights be 6 inches or less, unless special requirements or necessary designs mandate something other than 6 inches or less.

Ramps, Curb Ramps, Walks, Slopes, etc: For the purposes and issues covered in this Section on ADA Issues, this is the most complex set of related elements, and it is probably the area that has the most number of different acceptable designs.

There are several types of curb ramps. The three most common seems to be the corner diagonal, perpendicular, and parallel ramps. Three others are the combination curb ramp (this is obviously a combination of 2 or more of the various types), the built-up curb ramp, and the depressed corner. All of these are discussed in detail in Chap 7, Part 2, Designing Sidewalks and Trails for Access, Federal Highway Administration.

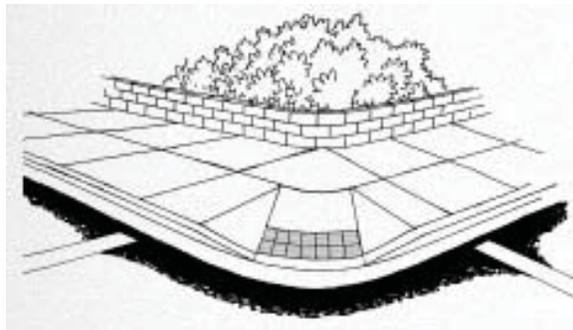
Two of the features on a corner of a street are the entry into the street, and the bypass for persons not wanting to cross the street. Both of these features are best if they are made to be flat, except for an allowed 2% cross slope for drainage. I urge the construction people to try for 1% or less cross slope but to use what's necessary up to 2% to assure drainage and avoid puddling.

The two most common side panels/blocks/shapes to the entry ramp are the triangular shaped diagonal flares, and the rectangular or square shaped block ramps. The diagonal flares are generally short and steep, while the rectangular ramps can be as long and as gentle a grade as available distance will reasonably allow. All of these elements have advantages and disadvantages, and each of these three, and other types of curb ramps/entries/cuts, may be better or best depending on the geography, obstacles, objectives, and amount and types of traffic.



Perpendicular Curb Ramps/Entries

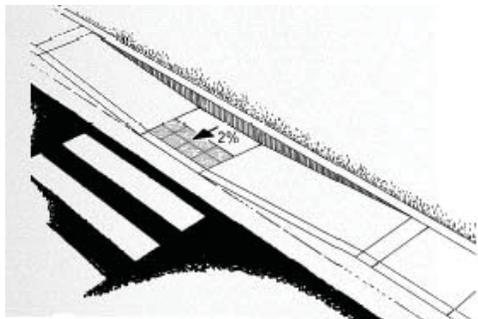
In addition to the recommendations of others, I am recommending what I consider to be the best all around setup and methods considering as many different types of needs as I can envision based on my experiences which are at several different levels of disability. My preference is the perpendicular locations with the parallel construction for a flat entry on both sides of the corner. The perpendicular locations puts the entries into the street where the traditional crosswalks are. It avoids level changes going in and out of gutters that extend across the full width of the street and other impediments, doesn't risk getting in other lines of traffic, and follows the circulation path that the vast majority of all the other pedestrians use (in the crosswalks).



Diagonal Corner Ramp

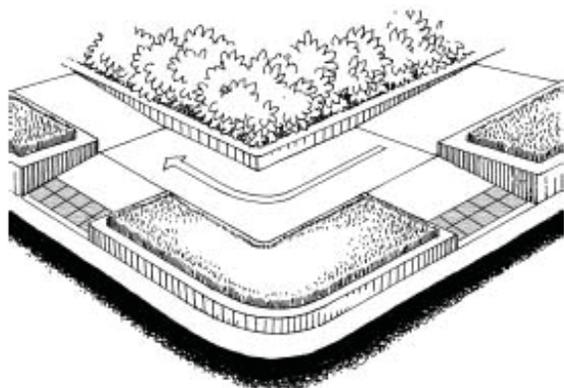
The parallel construction provides for a flat entry into the street, and the side ramps, which are viewed by some as a drawback as you have to go up and down 2 of them, I contend, are not drawbacks. Turning those two ramps into gentle slopes, plus the other advantages, more than offsets the fact that there are two slopes to negotiate. Another advantage is that the

parallel construction can extend to any sidewalk width desired. It can thereby also function as a combination curb ramp, and it can double as a flat bypass accessible route for those wishing to simply go around the corner, especially if the sidewalk is too narrow to have both a separate entry and a separate bypass!



Parallel Ramp

Here are some sample curb ramps:



Combination Perpendicular Location and Parallel Ramps



Combination Corner Diagonal and Parallel Ramps

GOOD DESIGN: A level landing of at least 1.220 m (48 in) and a 610 mm (24 in) strip of detectable warnings should be installed at the bottom of

a perpendicular curb ramp. But, if the flat exit landing is in the street, it may not work. I saw a person with a walker not stop until they got to the flat street level. This has a flat bypass and correct beveled warning strip for the visually impaired.

When designed to promote access, diagonal curb ramps include a detectable warning, a clear space of at least 1.220 m (48 in) within the crosswalk, and a level maneuvering area at the street/gutter approach. However, there is again a problem if there is no level landing before entering the street. Very undesirable with a corner ramp design.

Parallel curb ramps work well on narrow sidewalks but require users continuing on the pathway to negotiate two ramp grades. But, this is not a problem if side ramp slopes are made to be minimal by using available length.

At intersections with narrow sidewalks and wide turning radii, two parallel curb ramps should be considered. The ramps double for a bypass.

Notice that the slope of the ramp going left is almost no slope at all, and going right, it is also minimal and blends perfectly up the hill without adding any grade at all to the slope that is already there. Also note that these diagonal corner ramps are best suited for very quiet residential neighborhoods. On the other hand, if you look at the diagonal corner ramps downtown, there is at least one tire mark running across the outside edge on every one of them.

The reference provided above in this section has just about all of the information you need to design curb ramps and cuts to meet each individual situation you might encounter. However, the reference describes many advantages and disadvantages of the various ramp constructs. These should be considered, but consider them carefully. They are often merely opinions and it is up to you in the end to figure out what you need and what you consider to be the real advantages and disadvantages accordingly for each individual situation.

A table, located at the end of this appendix, was developed by the Federal Highway Administration (FHWA) providing the best

practices for you to consider. The FHWA provides ADA guidance under the authority of the Department of Transportation to develop guidance. But don't forget, these are not enforceable standards, and you may have your own ideas and opinions too. However, these FHWA guidelines are based on ADA standards and do meet or exceed those standards, and you should assure that your ideas and opinions do also.

Each type of curb ramp has advantages and disadvantages. Some advantages and disadvantages are fundamental to the type of curb ramp. Others result from changes to the configuration of the components within each type or the curb ramp placement on the site. You are especially encouraged to provide grades and slopes that are better than depicted here wherever you can.

Test It! As stated previously, one of the most important things you can do with respect to constructing and designing ramps (as well as any other ADA aspects) is to enlist the aid of the users -- and listen to what they have to say. For example, if you are doing a compliance audit of a facility, element, or area, find an ADA Advocacy Group or individual(s), including at least one person in a wheelchair, and have them actually try using whatever it is you are doing the compliance audit on. Again, usability is the bottom line.

In addition, when I showed city personnel the type of curb ramp that I preferred, one city person stated they had never had anyone tell them of preferences before, so they used what they thought was best. Of course, one of the recommendations made is for the City to solicit input. And here is a form developed and used by the City of Seattle to solicit and collect input. This form could be modified and further developed as desired for use in Golden.

CITIZEN WHEELCHAIR RAMP REQUEST	
City of Seattle Wheelchair Ramp Program	
Please provide a written description or sketch of the location(s) where wheelchair ramps would make your travel more safe and convenient.	
LOCATION: NE NW SE SW All corner(s) of the <small>(please circle appropriate location)</small> intersection between _____ <small>(please list intersecting streets above)</small>	
PLEASE PROVIDE BELOW Comments, Suggestions or Other Information that may assist us in providing a better service to you!	Please mark intersection corners needing wheel- chair ramps with an "X".
REPORTED BY: Name _____ Day Phone _____ Address _____ Zip _____ Date _____	
Please return to: Wheelchair Ramp Program Rm 708 Municipal Building Seattle, WA 98104	
For more information, Contact Pam Hamlin at 684-5377	

Citizen Wheelchair Ramp Request Form

The information and suggestions contained in this report on Appendix D - ADA Recommendations for the City of Golden was researched, studied, and prepared by:

Gerald A. Ganiere
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All photos and drawings in this appendix were taken by Jerry Ganiere or reproduced from www.fhwa.dot.gov

Table of Best Practices for Curb Ramp Design

Best Practice	Rationale
Provide a level maneuvering area or landing at the top of the curb ramp.	Landings are critical to allow wheelchair users space to maneuver on or off of the ramp. Furthermore, people who are continuing along the sidewalk will not have to negotiate a surface with a changing grade or cross slope.
Clearly identify the boundary between the bottom of the curb ramp and the street with a detectable warning.	Without a detectable warning, people with vision impairments may not be able to identify the boundary between the sidewalk and the street.
Design ramp grades that are perpendicular to the curb.	Assistive devices for mobility are unstable if one side of the device is lower than the other or if the full base of support (e.g., all four wheels on a wheelchair) are not in contact with the surface. This commonly occurs when the bottom of a curb ramp is not perpendicular to the curb.
Place the curb ramp within the marked crosswalk area.	Pedestrians outside of the marked crosswalk are less likely to be seen by drivers because they are not in an expected location.
Avoid changes of grade that exceed 11 percent over a 610 mm (24 in) interval.	Severe or sudden grade changes may not provide sufficient clearance for the frame of the wheelchair causing the user to tip forward or backward.
Design the ramp that doesn't require turning or maneuvering on the ramp surface.	Maneuvering on a steep grade can be very hazardous for people with mobility impairments.
Provide a curb ramp grade that can be easily distinguished from surrounding terrain; otherwise, use detectable warnings.	Gradual slopes make it difficult for people with vision impairments to detect the presence of a curb ramp.
Design the ramp with a grade of 7.1 ± 1.2 percent. [Do not exceed 8.33 percent (1:12).]	Shallow grades are difficult for people with vision impairments to detect but steep grades are difficult for those using assistive devices for mobility.
Design the ramp and gutter with a cross slope of 2.0 percent.	Ramps should have minimal cross slope so users do not have to negotiate a steep grade and cross slope simultaneously.
Provide adequate drainage to prevent the accumulation of water or debris on or at the bottom of the ramp.	Water, ice, or debris accumulation will decrease the slip resistance of the curb ramp surface.
Transitions from ramps to gutter and streets should be flush and free of level changes.	Maneuvering over any vertical rise such as lips and defects can cause wheelchair users to propel forward when wheels hit this barrier.
Align the curb ramp with the crosswalk, so there is a straight path of travel from the top of the ramp to the center of the roadway to the curb ramp on the other side.	Where curb ramps can be ahead, people using wheelchairs often build up momentum in the crosswalk in order to get up the curb ramp grade (i.e., they "take a run at it"). This alignment may be useful for people with vision impairments.
Provide clearly defined and easily identified edges or transitions on both sides of the ramp to contrast with sidewalk.	Clearly defined edges assist users with vision impairments to identify the presence of the ramp when it is approached from the side.