

# SUPPLEMENT B: COMPLETE STREETS

## COMPLETE STREETS

A complete street is one that safely and effectively accommodates all users, including motorists, pedestrians, bicyclists, transit, freight carriers, emergency responders, and people of all ages and abilities. A complete street is comprised of many different elements; these elements may include, but are not limited to sidewalks, bike lanes, crosswalks, wide shoulders, medians, bus pullouts, special bus lanes, raised crosswalks, audible pedestrian signals, sidewalk bulb-outs, and trees or plantings. Specific elements will vary from project to project, but the objective is still to achieve a connected network that is safe and effective for all modes of travel.

Not every roadway demands every recommended component of a complete street. Some streets that could benefit from enhanced bicycle and pedestrian facilities might not require transit facilities if existing or planned bus service is not available. Urban and suburban corridors might benefit more from complete streets applications than rural roadways lacking commercial or residential development. The exception to this would be roadways that are frequently used by recreational bicyclists traveling longer distances; these roads should be provided with an unobstructed shoulder that is wide enough to provide a safe riding location for bicyclists.

## BENEFITS

The benefits of complete streets within communities are numerous and have been documented by planners, engineers, state legislatures, non-profit coalitions, state and county health departments, and others. The National Complete Streets Coalition ([www.completestreets.com](http://www.completestreets.com)) has published fact sheets on the many direct and indirect benefits complete streets provide. Some of the benefits that Greeley can expect to realize are described below.

### Healthy Communities

Today, many local governments and businesses are facing a crisis as they attempt to cope with the growing healthcare costs associated with chronic diseases, many of which are preventable. Obesity and sedentary lifestyles are major contributors to chronic disease for both adults and children. A recent Institute of Medicine report states that “obesity rates are generally higher for ethnic minorities, for those who are low-income or less educated, and for rural populations.” The report goes on to state that the estimated annual cost of obesity-related

illness is \$190.2 billion, or nearly 21 percent of annual medical spending in the United States. Childhood obesity alone is responsible for \$14.1 billion in direct medical costs.

Solving the obesity epidemic is a complex issue and will require multi-faceted solutions and coordinated change at multiple levels—from individuals, to families, to communities, to society as a whole. Cities like Greeley have a role to play in creating places where children and adults can live healthy, active lives. Studies have shown that people walk more in neighborhoods that are safe, walkable, and aesthetically pleasing. Improved pedestrian, bicycling, and transit infrastructure may promote physical activity by making walking and bicycling more appealing, easier, and safer.

*In 1969, approximately 50% of children walked or bicycled to school, with approximately 87% of children living within one mile of school walking or bicycling. Today, fewer than 15% of schoolchildren walk or bicycle to school. As a result, kids today are less active, less independent, and less healthy. As much as 20 to 30% of morning traffic can be generated by parents driving their children to schools, and traffic-related crashes are the top cause of death and major injury for children in the U.S. ages 1 to 17.*

Implementing complete streets provides children with dedicated, continuous, and safe facilities to travel between school and home and many other community destinations on their own power. Providing these facilities is in line with the national effort known as Safe Routes to Schools (SRTS), which is dedicated to improving safety and encouraging more children to choose to walk or bike to school.

The public health community recognizes that non-motorized or “active” travel helps citizens meet recommended levels of physical activity, thereby reducing the risk of chronic disease and associated health care costs. Communities that adopt complete streets policies do so as a way of providing facilities that will encourage and promote healthier, more active lifestyles for their residents.

*In May 2012, the Institute of Medicine committee released Accelerating Progress in Obesity Prevention and offered five recommendations along with strategies for implementation.*

*Recommendation 1: Communities, transportation officials, community planners, health professionals, and governments should make promotion of physical activity a priority by substantially increasing access to places and opportunities for such activity. Strategy 1-1: Enhance the physical and built environment.*

### Economic Development

A city that invests in creating complete streets is showing an investment in its people and overall quality of life. Increasingly, business decisions are made with the consideration of what kind of quality of life a community will provide to its employees and their families. Sidewalks, bike lanes, and transit service are important quality of life indicators, and show a community's commitment to multimodal transportation opportunities and healthy lifestyles.

Statewide and nationally, roadways with established identities and sense of purpose benefit adjacent land uses by providing convenience for patrons. Businesses along corridors that have undergone a reduction in lane widths, striping of bike lanes, and the installation and widening of sidewalks have noted increases in sales and patronage from nearby residents, who enjoy the reduced congestion and increased convenience found along complete streets. Streets serve as a first impression for first-time visitors to a city. Streets lined with overhead utilities, multiple curb cuts, gaps in the sidewalk network, and underutilized parking lots do not provide people with the impression of a hospitable environment or a city that is proud of its community.

### Changing Demographics

America's young people, including the 'Generation Y' and the maturing 'Millennials', are decreasing the amount they drive and increasing their use of transportation alternatives. National Household Transportation Survey Data has shown that America's 16-34 year olds are driving less and walking, bicycling and taking transit more. This is reinforced by FHWA's tracking of national vehicle miles travelled which shows a reduction in driving which is in part due to habits of younger citizens. Many members of the 'Baby Boomer' generation are also reevaluating their transportation and living preferences. For boomers, a desire to 'age in place' where driving is not required to ensure mobility has become a key factor in choosing where to live.

### Costs

The cost associated with complete streets is an issue that is raised early in the discussion process of whether to adopt a complete streets policy. The purchase of additional right-of-way is often the most expensive element of roadway improvements. The purchase of additional right-of-way is not very common and is typically done for larger roadway improvement projects. These projects are focused on roadway improvements for motor vehicles, but can also carry significant opportunity to be developed as complete streets for a small fraction of the overall project cost.

Retrofitting streets as projects arise to accommodate additional modes of travel is the most common and least expensive way of achieving complete streets. The vast majority of projects are accomplished within a city's existing streets, curbs, sidewalks, etc. Many bicycle related improvements can be provided with the small cost of painting a few new lines and putting up a few new traffic signs as part of a regular street maintenance program.

Landscaping is an important element of complete streets because of the numerous benefits to pedestrians, the environment, an area's sense of place, and the calming of vehicle speeds, yet is often reduced or omitted during the construction process as a way to keep project costs low. Elements of complete streets, such as landscaping, can be offset through the donations of materials and man hours by local civic organizations, area organizations, and professional societies.

*The estimated replacement cost of Portland's entire 300+ mile bikeway network—acknowledged by most as the best in North America—is approximately \$60 million (in 2008 dollars), which is roughly the cost of one mile of four-lane urban freeway. The monitory investment in bicycle specific infrastructure represents just less than one percent of the funding the metropolitan area spent on transportation between 1995 and 2010.*

### Air Quality

Reducing congestion along a roadway results in reduced vehicle idle times, thus reducing smog and ground level ozone, which are both large contributors of greenhouse gases. Complete streets-designed corridors improve traffic flow by helping to regulate vehicle speeds to appropriate levels for the corridor's function and reduce the number of cars on the road as some motorists become choice pedestrians, bicyclists, and transit riders.

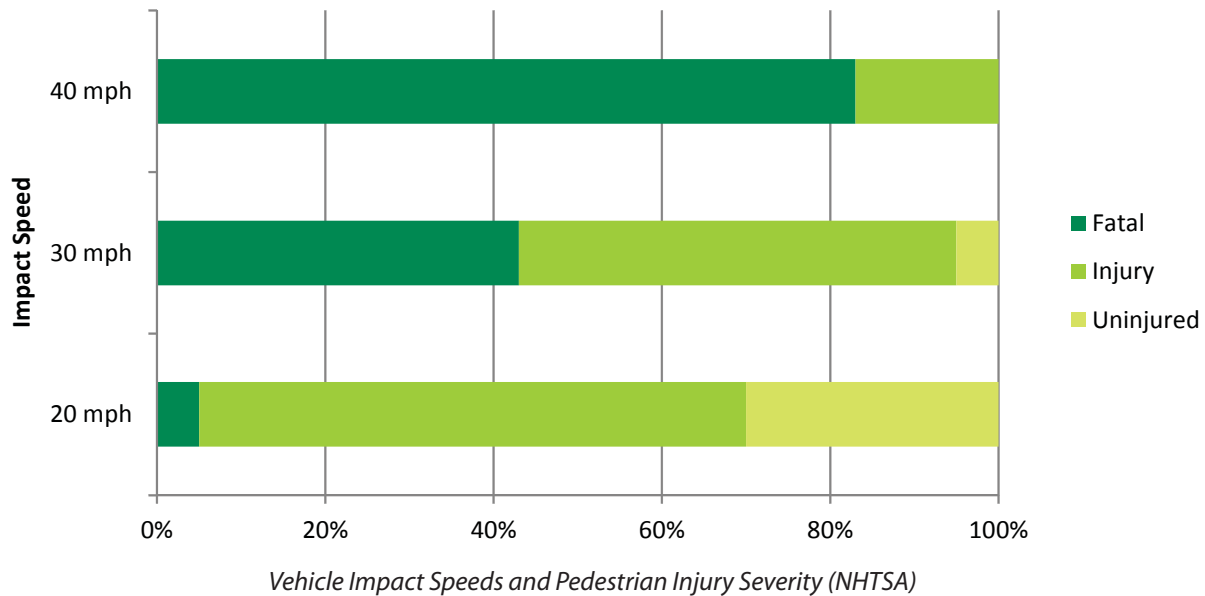
### Improved Safety

Streets without safe places to walk, cross, catch a bus, or bicycle put people at risk. The National Complete Streets Coalition published some sobering national statistics on bicycling and pedestrian safety:

*“Speed reduction has a dramatic impact on pedestrian fatalities. Eighty percent of pedestrians struck by a car going 40 mph will die; at 30 mph the likelihood of death is 40 percent. At 20 mph, the fatality rate drops to just 5 percent. Roadway design and engineering approaches commonly found in complete streets create long-lasting speed reduction. Such methods include enlarging sidewalks, installing medians, and adding bike lanes. All road users - motorists, pedestrians and bicyclists - benefit from slower speeds.”*

*“Complete streets encourage safer bicycling behavior. Sidewalk bicycle riding, especially against the flow of adjacent traffic, is more dangerous than riding in the road due to unexpected conflicts at driveways and intersections. A recent review of bicyclist safety studies found that the addition of well-designed bicycle-specific infrastructure tends to reduce injury and crash risk. On-road bicycle lanes reduced these rates by about 50%.”*

*“Pedestrian crashes are more than twice as likely to occur in places without sidewalks; streets with sidewalks on both sides have the fewest crashes. Of pedestrians killed in 2007 and 2008, more than 50% died on arterial roadways, typically designed to be wide and fast. Roads like these are built to move cars and too often do not meet the needs of pedestrian or bicyclist safety [SIC]. More than 40% of pedestrian fatalities occurred where no crosswalk was available.”*



## COMPLETE STREETS IN GREELEY

Cities all over the United States are developing and adopting complete streets policies. In 2012 and 2013 alone, more than 210 communities across the US adopted complete streets policies (“The Best Complete Streets Policies of 2013,” Smart Growth America, <http://www.smartgrowthamerica.org/complete-streets-2013-analysis>).

The state of Colorado has adopted policies that reflect complete streets principles:

- Revised Statutes 43-1-120 “The needs of bicyclists and pedestrians shall be included in the planning, design and operation of transportation facilities, as a matter of routine.” (2010)
- Colorado Department of Transportation Bicycle and Pedestrian Policy: “The needs of bicyclists and pedestrians shall be included in the planning, design, and operation of transportation facilities as a matter of routine.” (2009)

A complete street policy causes transportation agencies to design and operate the entire right of way to encompass users of all types and to promote safe access and travel for the users. It establishes a policy framework for ensuring all roadways within a jurisdiction are designed, built, maintained, and operated following complete streets principles.

As evidenced by content of previously-adopted planning documents, the Greeley community recognizes that taking a complete streets approach to public policy and planning improves quality of life. Greeley’s 2060 Comprehensive Plan, adopted in 2011, contains goals and direction that establish the basis of a complete streets approach, listed below.

*II.TR1.A.2. Design, construct, and maintain a transportation system which includes all modes of travel which:*

- *Meets the unique needs of each mode of travel*
- *Integrates all modes of travel into a comprehensive transportation system*
- *Ensures that the system provides efficient links between each mode of travel*
- *Provides networks for pedestrians and bicyclists which are equal in priority, design and construction to the system provided to motorists*
- *Anticipates future modes of travel by:*
  - *Researching trends and emerging forms of travel and related support facilities*
  - *Anticipating how emerging transportation systems might be accommodated such as with the reservation of rights-of-way*

*II.TR1.B.2. Ensure that all proposed development projects demonstrate the ability to incorporate pedestrian, public transportation, and bicycling travel into site planning and development*

*II.TR1.C. Design and operate a transportation system that optimizes choices and connections between all modes of travel*

*II.TR2.C.2. In development of all street systems and networks, balance the size and location of the roadway and its ability to sustain growth with the objective of ‘right-sizing’ roads to promote non-motorized forms of travel and to eliminate unnecessary roadway width construction, perpetual maintenance and impact upon the environment from storm run-off, snow removal management, and air quality impacts*

*II. TR8.A Adopt and implement target level-of-service standards for all components of the transportation system, such as pedestrian, bicycle, and vehicle movement*

Though not specifically described as a Complete Streets Policy, the current adopted plan documents are supportive of the same concepts. Based on recommendations provided by the U.S. National Complete Streets Coalition, language for a comprehensive Greeley Complete Streets Policy is provided below.

## RECOMMENDED GREELEY COMPLETE STREETS POLICY

Greeley will develop and manage its roadways with a complete streets framework. The complete streets approach is an on-going and comprehensive planning, design, construction, and operations process with a long-range perspective aimed at improving safety, usability and quality of life. The city will plan and program rights-of-way that fully integrate the needs of all users, which includes users of all ages, abilities, and modes including bicyclists, pedestrians, transit users, commercial vehicles and trucks, emergency service vehicles, and passenger vehicles.

To achieve a roadway network that is safe, comfortable, and attractive for all users, complete streets may be achieved through single projects, privately-funded development, or incrementally through a series of smaller improvements or maintenance activities.

The following components form the basis of a solid complete streets strategy and the basis for implementation of this plan:

### Vision

Greeley will be a community where all roadways will safely and effectively accommodate users of all ages, abilities and mode choices, including motorists, pedestrians, bicyclists, transit, commercial vehicles and trucks, and emergency responders. The Greeley Complete Streets Policy will ensure that all roadways within Greeley are designed, built, maintained, and operated following complete streets principles, because doing so will improve livability for the whole Greeley community.

### Project Planning

The City of Greeley shall:

1. Require review of proposed roadway modifications by all applicable city departments, including Planning, Greeley Evans Transit (GET), staff responsible for bicycle and pedestrian planning and design reviews (potential future bicycle and pedestrian coordinator), Traffic Engineering, Emergency Services, and Engineering.
2. Discuss current roadway projects on a quarterly basis to provide seamless transitions between existing and proposed facilities, and between all modes of travel creating an integrated, connected, network for all modes.
3. Coordinate trail development with the City Parks Department, Poudre River Trail Corridor, Inc., other non-profits, and developers to prioritize trail segments that provide connectivity to the regional system.
4. Allow only complete street solutions that will complement the context of the community and surrounding land uses.
5. Incorporate complete streets principles into all future planning documents, City Code, and City Planning and Design Documents and Standards.

### Project Design

The City of Greeley shall:

1. Consider roadway design that self-enforces appropriate design speeds and slows motor vehicles and/or limits access so as to provide greater safety for bicyclists, pedestrians, and motorists (e.g. medians, landscaping, lane narrowing or the reduction of lanes; reduction of access, etc.).
2. Adopt consistent design guidelines for bicyclists as recommended in this Bicycle Master Plan. Periodically update these design guidelines based on best practices.
3. Integrate each roadway or development project with existing and planned transit stops, routes, and facilities.
4. Evaluate existing and potential on-road bicycle use in all repaving and re-striping projects (i.e. striping of bicycle lanes, shared roadways, or paving of roadway shoulders) as well as new roadway construction and reconstruction projects.
5. Narrow pedestrian crossing distances at intersections or mid-block locations where high motor vehicle counts and high pedestrian crossing counts are expected. Narrowing can be accomplished with pedestrian refuge islands or curb extensions.
6. Use pedestrian-scale design adjacent to sidewalks, transit facilities, and other pedestrian facilities (e.g. pedestrian scale lighting, buffers between roadways and sidewalks or shared use paths, application of street furniture etc.).
7. Maintain the function of existing freight corridors, but evaluate design treatments to improve function of the corridor for bicyclists, pedestrians, transit users, and personal autos. Design proposed freight corridors so that bicyclists, pedestrians, transit users and personal autos are accommodated along the corridor or in an acceptable adjacent corridor.
8. Provide pedestrian accommodation in the form of sidewalks and/or shared-use paths adjacent to all arterial and collector streets.
9. Retrofit sidewalks and curbs with pedestrian ramps as expeditiously as possible so that pedestrians of all abilities are accommodated.
10. Recognize the role that street trees and other urban design elements play in creating a safe and attractive environment for active transportation, and include them in retrofit and urban design projects and roadway reconstruction or redesign projects. Many design elements, like pedestrian scale lighting, are context specific, but street trees can be used in almost any roadway context.

11. Develop a street design prioritization process to be used when the baseline elements of each roadway classification's respective cross section cannot fit within the available right of way. Not every road can adequately accommodate every user, and an effective decision-making tool is critical for situations where exceptions to this policy (see "Exceptions" below) are applicable.

### Project Construction

The City of Greeley shall:

1. Provide alternate routes for bicyclists and pedestrians during construction, reconstruction, and repair of streets. Develop standards to maintain pedestrian and bicyclist access during construction activities.

### Maintenance and Operations

The City of Greeley shall:

1. Time traffic signals to provide adequate/comfortable pedestrian and bicyclist crossing time.
2. In downtown and high use pedestrian areas, provide audible and countdown signal heads. Utilize exclusive pedestrian timing or leading pedestrian intervals where pedestrian crossing volumes are sufficiently high.
3. Provide bicycle detection at all actuated signals along bikeways and major roads typically used as bicycling routes.
4. Develop a coordinated maintenance schedule or program to address bikeway, sidewalk, and shared use path maintenance needs. Coordinate the maintenance strategy with adjacent jurisdictions.

### Finance

The City of Greeley shall:

1. Include active transportation as a sustainable line item in the City's operational and capital budget.
2. Prioritize projects that include active transportation elements.
3. Draw on all sources of transportation and related funding to implement complete streets in Greeley, as maximum financial flexibility is critical to implementation of complete streets principles.

### Jurisdiction

1. This Complete Streets Policy applies to all proposed new development or modification to existing infrastructure within the City of Greeley's public domain, and applies to all utility and other agencies the City permits including but not limited to water, gas, and electrical agencies.
2. This Complete Streets Policy applies to all City departments.
3. This Complete Streets Policy applies to all private developers whose plans are reviewed by the City.
4. The City shall develop and sign a memorandum of understanding (MOU) or other document formalizing the intention to cooperatively plan and prioritize active transportation investments with coordinating jurisdictions, including: Weld County, University of Northern Colorado, and Aims Community College, the Greeley-Evans School District 6, and encourage compliance with this policy.

### Exceptions

Not every street can be ideal for every type of user. However, it is still important to provide basic, safe, and direct access for users regardless of the design strategy used.

The City will make exceptions to the Complete Streets policy only where one or more of the following apply:

1. Bicyclists and pedestrians are prohibited by law from using the facility. In this case, alternative facilities and accommodations shall be provided within the same transportation corridor as determined by the City Engineer. A suitable or more desirable alternative shall be developed within a reasonable distance based on public and staff input. (General acceptable total distances between facilities: pedestrians ¼ mile, bicyclists ½ mile.)
2. The cost of accommodation would be excessively disproportionate to the need or probable use. (Note: Excessively disproportionate shall be defined as exceeding 20% of the cost of the larger project.)
3. There is public consensus that the accommodation is unwanted. Evidence of this should be well documented and defensible.

Where one or more of these conditions occurs, City Staff will review the project and exception and make a recommendation to Council for Council approval.

## Performance Measures

The City of Greeley shall:

1. Adopt performance metrics to track the implementation of this policy and report regularly (e.g., annually) via a website or other publically available format. Metrics include:
  - a. Miles of bikeways, shared use paths, and sidewalks in relation to miles of roadway
  - b. Reduced crashes involving bicyclists or pedestrians
  - c. Improvements to air quality
  - d. Reduced transportation system maintenance costs
  - e. Increased numbers of people walking and bicycling (counted annually at key locations)
  - f. Increased percent of traffic signals with countdown signalization and/or bicycle detection
  - g. Increased transit boardings, or number of transit passengers who travel with bicycles on transit.

## Implementation

The City of Greeley shall:

1. Implement this policy by evaluating and revising relevant City plans, construction standards, rules, regulations, and programs as appropriate to incorporate this policy by reference.
2. Review this policy every five years to determine performance and account for advancements in complete streets design.
3. Periodically train planners and engineers in the details and application of this policy to ensure the latest techniques in balancing the needs of roadway users are being applied.

