

**1. Start at Pearl Street Mall & 13<sup>th</sup> Street:**

13<sup>th</sup> Street Contra flow bicycle lane

Running parallel to and one block east of Broadway, 13<sup>th</sup> Street serves as an integral bike corridor for north-south travel through and to the downtown business and retail area. With a daily volume of 800 bicyclists and 1,800 motor vehicles, bicyclists comprise more than 30% of the traffic in the corridor. The one-way contra-flow cycletrack from Canyon to Spruce was finished in the fall 1993. Installation of the bicycle facility required removal of approximately 35 metered diagonal parking spaces between Walnut and Spruce Streets. The street throughout downtown is 45' in width curb to curb. This space accommodates an 8' contra-flow bike lane, a 5.5' divider from traffic, an 18' one-way lane of traffic, and 13.5' of diagonal parking. Between Walnut and Canyon, the original contra flow bike lane was upgraded as part of the One Boulder Plaza development project in early 2003.

**2. Walk three blocks south on 13<sup>th</sup> Street to Arapahoe**

13<sup>th</sup> Street enhanced pedestrian crossing at Arapahoe

The decision to travel as a pedestrian is in part subject to the pedestrian's ability and perceived ability to safely and efficiently cross roadways along the travel route. In the late 1990's the city began demonstrating new enhanced pedestrian crossing treatments. The first was a new, multi-colored sign which stated "State Law - YIELD for pedestrians in crosswalk." Over an eight-year duration, the city conducted before/after studies to evaluate driver compliance at locations around Boulder where these signs were installed. The evaluations showed that the sign treatment is effective at getting vehicles to comply with state law and yield to pedestrians in crosswalks. It accomplishes this with a relatively minor impact to vehicle delay. In 2006, the city adopted the Pedestrian Crossing Treatment Installation Guidelines, which recommended that mid-block crossings of 2 and 3 lane roadways install a marked crosswalk with "State Law - Yield to Pedestrian" signs mounted on the side of the roadway with standard (W11-2) advance pedestrian warning signs. The raised median offers the pedestrian refuge between directional traffic, shortens the pedestrian crossing distance and increases pedestrian visibility to motorists.

**3. Cross Arapahoe, walk south stopping just south of intersection: Boulder Creek Path at 13<sup>th</sup> Street**

In 1984, the city of Boulder developed the Boulder Creek Corridor Plan, which detailed wetland/riparian habitat and

flood improvements in addition to establishing a continuous path along the creek. Completed in three years, the Boulder Creek Plan was primarily funded through proceeds from the Colorado lottery. An outgrowth of the Plan was the Greenways program, which is comprised of a series of corridors along riparian areas including Boulder Creek and its tributaries. Boulder Creek path runs through the heart of town and is shared by non-motorized uses including bicyclists, runners, walkers, and in-line skaters. An in-pavement signal loop detector tracks the volume of bicycle travel through the intersection of the Boulder Creek path at 13<sup>th</sup> Street. During warm weather season, over 1,800 cyclists travel along the Boulder Creek path through this intersection each day.

**4. Go right (NW) on the Boulder Creek Path, walk along path to "T" intersection, go left (west) cross under Broadway: Boulder Creek Path at Broadway underpass**

The Greenways program seeks to coordinate and integrate six management objectives including riparian, floodplain and wetland protection and restoration; water quality enhancement; storm drainage; multi-use path transportation trails for pedestrian and bicyclist travel; recreation opportunities; and protection of cultural resources. In 2003, the city completed an improvement project to widen this existing ped/bike underpass of Broadway. The project doubled the path width; included flood control improvements to contain 100 year flood storm waters; wetland restoration and artistic elements. The project was funded by urban drainage monies used to leverage federal transportation enhancement dollars.

**5. Continue west on the Boulder Creek path, then go right (north) to Canyon:**

11<sup>th</sup> St enhanced pedestrian crossing at Canyon

This mid-block crossing treatment provides pedestrians with a push-button that activates flashing lights to warn motorists of their intent to cross. The median refuge island separates their crossing of directional traffic flows. Studies of these devices coupled with the State Law signing have shown substantial increases in compliance. However, the vehicle stopped in the first travel lane may create a blind spot between the pedestrian in the crosswalk and the driver approaching in the second lane. At some locations, this has increased the potential for conflict and pedestrian-related crashes. To increase sight distance, the typical treatment recommended also includes an advance stop bar and "Yield Here to Peds" regulatory signing. We continue to monitor and test refinements to further study the safety effects of the rectangular rapid flash beacon (RRFB) crossing devices.

**6. Cross Canyon, continue north to Walnut. Go right (east): "Sharrow" on Walnut between 11<sup>th</sup> & Broadway**

A shared lane arrow or "sharrow" pavement marking is installed on every block of the Downtown Loop on-street bicycle routes and along other arterial streets designated as a bike route in Boulder. The pavement marking consists of a bicycle symbol with two dart arrows above it. It is placed approximately three feet into the travel lane from the parking lane, adjacent right turn lane or curb. The symbol is designed to encourage all roadway users to share the road by showing the recommended position for bicyclists in the lane. The sharrow sends a reminder that Boulder's streets are used by many modes, including bicycles. This symbol shows bicyclists where to ride and shows motorists where to expect bicyclists. It is another tool the city added to its toolbox to provide safe and convenient travel choices for residents and visitors.

**7. Continue east on Walnut, cross Broadway: Raised right turn by-pass at SE corner of Walnut & Broadway**

The city of Boulder has adopted this treatment to encourage motorists to yield to pedestrians at these crossings. Bicyclists riding along a multi-use path that enter a crosswalk at no greater than 8 mph are afforded the rights and responsibilities of pedestrians. Studies have shown the raised treatment to substantially increase compliance of drivers. This treatment improves the sight visibility between drivers and pedestrians / bicyclists by creating a crossing at a 30 ~ 45 degree angle, allowing users in the conflict zone to more readily make eye contact with drivers.

**8. Go north on Broadway to Pearl Street Mall:**

Count-down pedestrian signal at Pearl & Broadway

The Broadway & Pearl intersection has the highest volume of crossing pedestrians in the city of Boulder. During the noon peak hour, an average of 1500 pedestrians cross Broadway at Pearl on weekdays. In the busiest summer months, as many as 2000 pedestrians cross Broadway between noon and 1:00 p.m. In 1998, Broadway & Pearl became the first intersection in Boulder with countdown pedestrian signal heads. A study conducted at Broadway & Pearl after installing the countdown displays found that pedestrians readily understood and appreciated the remaining crossing time information provided by the countdown signals, and used the information to make better decisions about when to enter the crosswalk. At present, countdown heads are provided at over 30 signalized intersections in Boulder.

# Downtown Boulder

## Self Guided Walking Tour of Bike/Pedestrian Treatments

Biking and walking are the way to GO in Boulder. Residents bike twenty times and walk three times more than the national average

Thank you for visiting Boulder to learn more about our walking & biking system. The robust bicycle and pedestrian improvements built throughout the Boulder community are helping more community members to integrate walking and biking into their daily lives.

We've assembled this self-guided tour to highlight some of the innovative treatments that make Boulder what it is today, a great place to use transportation options like walking, biking and riding the bus to get around town.

The walking tour is a short  $\frac{3}{4}$  mile loop that will start and end on the Pearl Street Mall, Boulder's main street retail shopping district and outdoor gathering place for residents, employees and visitors. Estimated walking time for this tour is about 20 – 30 minutes.

For more information on biking and walking improvements in Boulder visit [www.goboulder.net](http://www.goboulder.net) or contact:

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