

D. REALIZING TRAIL CONNECTIONS

Tools for Realizing Trail Connections

Most of the San Luis Valley floor is dominated by private agricultural lands, interspersed with individual towns and communities. Public lands exist, but are geographically scattered and may not always be appropriate for trail-based recreation. Establishing community trail connections in this context can be challenging, but can be accomplished with planning, partnerships, creativity, and persistence. This section provides some guidelines for how to envision trail connections, the types of trail corridors that can be used, and the access and ownership models that are typically available to complete trail connections.

Making Connections

There is a demonstrated need and desire in the San Luis Valley for better trail connectivity between towns (i.e., Alamosa and Monte Vista), and from towns to recreation destinations (i.e., Del Norte to Forest Service trails). In either case, it all starts with a plan to understand and document the objectives of the proposed trail.

- **Desired Connection** – Understand the trail experience and connection that is desired, and the type of trail that will achieve that need. A longer-distance connection between towns or to other destinations typically requires a wide and smooth path that can accommodate a variety of user types and can allow trail users to safely and easily pass one another.
- **Access and Destinations** – Understanding the origination point and desired destinations of trail users (sometimes called “nodes”) is important to establishing relevant and meaningful connections. Access nodes can be an existing park, trailhead, commercial center, or school, while destinations may also include natural or historical features, public lands, or any other place that trail users seek access to.
- **Creating the Experience** – While community connection trails are important for transportation and efficiency, they need to also provide the user with a rewarding experience. This experience may be the opportunity to pass through natural areas or serene agricultural lands, opportunities

to view interesting features or grand vistas, or physical separation from the developed world. The selection of trail routes (and the final design of trails) should seek to provide users with these experiences and an ongoing sense of discovery along each user’s individual journey. However, trail alignments should also convey a sense of forward progress toward the destination; trail routes that are too circuitous are can be perceived as unpleasant or inefficient and result in shortcutting or underutilization of a trail.

- **Habitat Protection** – Access to undeveloped natural areas is an important part of quality trail experiences. Trail connections should be thoughtfully planned to provide physical and visual access to the natural world while minimizing impacts to vegetation and wildlife. *See [Balancing Recreation and Conservation](#) for more on this topic.*
- **Project Phasing** – It is unusual for long-distance trail connections to be established as a single project. Instead, these connections are typically completed as an iterative and systematic series of projects and phases. Recognizing this, plan for implementation phases that are logical and accomplish some sort of connection – don’t build a dead-end “trail to nowhere.” Complete each phase to the next park, neighborhood, road crossing, etc. to provide continuity to the system while you work on the next phase. Short-term connections are fine, as long as they are safe, practical, and are indeed short-term. (As we know, many “short-term” projects may never get completed.)

Trail Corridor Opportunities

Establishing a regional trail corridor is like completing a linear puzzle, where the creative and strategic use of different types of connections is necessary to create a continuous and high quality experience. Some of the following types of land and corridor types are often used to complete trail connections:

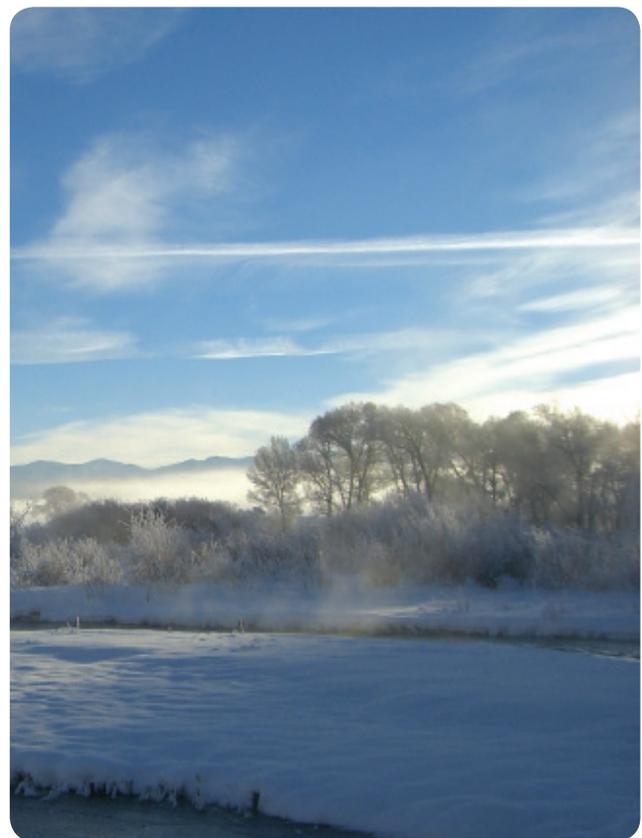
- **Public Lands** – where permitted by the managing agency, trail development is much easier on publicly-owned lands; no property acquisition is required and space is available to maneuver a trail to create high-quality experiences or avoid sensitive habitat. Public land

opportunities range from local parks to state and federal lands, each with its own set of priorities for management.

- **Utility Corridors** – Linear utility corridors such as transmission, water, or sewer lines may present opportunities to establish trails along those corridors. In many cases the corridor is owned by a single entity, and a maintenance or access road can be converted to a trail. In cases where utilities are located in an easement, trail access would still need to be negotiated with the underlying property owner.
- **Railroad Corridors** – Existing railroad lines in the San Luis Valley may provide opportunities for trail connections, since they are existing linear corridors that typically have a limited set of property owners and established infrastructure (bridges, crossings, etc.). Inactive rail lines have been successfully converted to recreation trails throughout the country – the “rails-to-trails” model. In addition, active rail lines with limited rail traffic/speeds are increasingly utilized for trail corridors (“rails-with-trails”) provided sufficient measures are in place to ensure safety. For more information, visit www.railstotrails.org.
- **Road Rights-of-Way** – In cases where the topography or land ownership patterns limit trail opportunities, county road rights-of-way can be used to establish critical connections. In some cases, the county (or other local government) owns a wider right-of-way than what is used for a road, while in other cases drainage ditches and embankments can be reconfigured to accommodate a trail. While roadways are not the ideal locations for trails, they can be designed (with elevational offsets, fencing, ditches, and landscaping) to maintain a pleasant experience for trail users.
- **Ditch Corridors** – The San Luis Valley has over 600 miles of irrigation ditches and canals that deliver water across the landscape. Most of these are owned and managed by private ditch companies and many have parallel access roads. In some cases the ditch corridor is wholly owned by the company, and in other cases a ditch easement crosses private land. Ditch corridors

can provide high quality connections for trails as they meander through natural and agricultural settings. Creating trail connections along ditches is generally more successful in cases where assurances are in place to ensure ongoing ditch management and maintenance and to minimize safety and liability concerns, or in cases where a local unit of government has an interest in or relationship with the ditch company or landowner.

- **Agricultural Access Roads** – In an agricultural landscape such as the San Luis Valley, numerous unimproved road corridors exist along the edges of fields to provide equipment and maintenance access. In some cases, these corridors can be utilized for trail connections if such access can be obtained from the landowner, with the necessary infrastructure (i.e., fencing) and assurances to minimize conflicts with agricultural management.



Culebra Creek (courtesy of Ben Doon)

ACCESS AND OWNERSHIP MODELS

Before a trail is built and connections are made, the managing entity must have the legal right to do so. The following models for corridor access and ownership are frequently used to establish trail corridors:

- **Public Ownership/Acquisition** – As mentioned previously, it is often easiest to design and route trails on land that is already publicly owned by local, state, or federal units of government. However, fee title land acquisition is costly and new acquisitions can be controversial. In cases where a property is being considered for fee title land acquisition, the demonstrated need for a trail connection can often strengthen the basis for funding and approving such an acquisition.
- **Trail Corridor Acquisition** – In many cases, local units of government will negotiate the purchase for a small, linear corridor of land in which to establish a trail connection. This model allows for the autonomy associated with fee title ownership of the trail corridor, while also allowing adjacent private land uses to continue.
- **Trail Easement Acquisition** – It is common for local governments to negotiate and secure an easement for a trail across public property. Similar to easements in place for public utilities, the government entity will purchase the right to construct and maintain a trail across private property, while the underlying title to the property remains private.
- **Access Agreement** – Local units of government can negotiate with landowners to obtain the right to construct and manage a public trail across private property. In some cases these agreements can be made with mutual assurances of rights and responsibilities (at no cost), while in other cases they take the form of a property transaction such as a long-term lease agreement.

COLORADO RECREATIONAL USE STATUTES

Colorado statutes provide some mechanisms of legal protection to landowners who allow public recreation on their land. Colorado Revised Statutes Sections 33-41-101 through 33-41-106 provides that if a landowner allows members of the general public to use the land or adjacent waters for recreational purposes without charge, the owner is not liable for injury suffered by a recreational user. Note that the liability protections do not extend to activities where the general public pays a fee. In addition, the statute does not limit liability to a landowner for “willful or malicious failure to guard or warn against a known dangerous condition, use, structure, or activity likely to cause harm” CRS § 33-41-104(1)(a), compelling landowners to post obvious warnings of known dangerous conditions.

Additional statutes have sought to protect agricultural landowners who permit recreational activities for (including fee-based activities), including the Agricultural Recreational Activities Limited Liability statute (CRS § 13-21-121), and the Equine Limited Liability (CRS § 13-21-119). More recently, the Colorado Legislature amended the Agricultural Recreation Activities statute to include activities related to agritourism.

While these protections have been effective in limiting landowners’ liability when they provide recreational access and activities, additional requirements may be necessary for recreational activity on non-agricultural land, as well as fee-based special events (which are typically covered by a waiver).

CASE STUDIES: Realizing Trail Connections

Ditch Trails

Agricultural ditches and canals are appealing options for recreational trails, since they are typically linear corridors that contour across the landscape, often passing through scenic, undeveloped settings. However, the implementation of public trails along these corridors can be challenging, often posing property, operational, or safety and liability concerns:

- **Property concerns** - In many cases, ditches and canals are owned and operated by private companies, over an easement that crosses different private landowners.
- **Operational concerns** - Ditch operators routinely travel along the ditches to open or close head-gates for water delivery and to perform routine inspections and maintenance. Ditch operators may also have actual or perceived concerns about water quality impacts from trail users or their dogs.
- **Safety concerns** - Larger ditches and canals can potentially pose safety hazards, due to water depth, steep banks, and in some cases hidden infrastructure such as diversions, siphons, or flumes.

- **Liability concerns** - Colorado statutes limit liability to landowners who allow a public trail across their property, but the existing statutes still may not satisfy private ditch companies that are concerned about liability associated with adjacent ditch facilities.

Despite these challenges, there are a growing number of communities throughout Colorado and the western US that have successfully implemented ditch trails. Some of these include the following:

Highline Canal Trail (Metro Denver) – This is one of the most frequently cited examples of an agricultural ditch trail in Colorado. The historic canal is owned and operated by Denver Water, but has limited use for water delivery due to its junior water right, excessive seepage, and fewer agricultural users. Management of the 66-mile trail system is shared by the seven state and local jurisdictions along the route.

Farmer’s Highline Canal Trail (Westminster) – This canal extends about 26 miles from Clear Creek through the northern suburbs of Denver. Originally constructed for agricultural irrigation, now most of the water is used for municipal purposes. The 10.3 mile trail along the ditch through Westminster is now one of the city’s signature trail connections.



Community Ditch Trail in Boulder, CO

Fairmount Canal Trail (Jefferson County)

– The Fairmount trail follows along the canal right of way for 3.2 miles between park destinations in Arvada and Golden. The canal is owned by Denver Water and is used primarily for municipal water supply. The trail is managed by Jefferson County Open Space, under an easement agreement. Some signage and fencing is in place along the trail to minimize safety and water quality concerns.

Community Ditch Trail (Boulder) – The Community Canal is owned by the Farmers Reservoir and Irrigation Company (FRICO), and crosses open space land owned by the City of Boulder. In this case, FRICO has an easement across city of Boulder land for maintenance access. A multi-use open space trail extends along the edge of the ditch for about 3.3 miles, and has been in place for over 20 years. There have been ongoing disputes between FRICO and Boulder over access authority and water quality concerns, and concerns related to a recently-constructed highway underpass.

Grand Valley Trails Master Plan (Mesa County) – For many years, trail enthusiasts and planners in Mesa County have been working to establish regional trail connections along some of the irrigation ditches and canals that extend across the Grand Valley. Of particular interest has been the Government Highline Canal, which traverses the valley north of Grand Junction and Fruita. Proposed ditch trails in this region have been controversial, posing concerns about property rights, privacy, maintenance access, safety, and liability. A draft master plan was completed in 2013. If successful, implementation of these plans could provide a model for establishing ditch trail connection in an agricultural community.

Models for Success

As noted above, trail connections along ditch corridors can be challenging, but the successful implementation of these trails can provide valuable connections and experiences. Based on these and other examples, some of the common themes of successful ditch trails include the following:

- **Public ownership or interest** – In most cases where a ditch trail has been successful, a public government entity has an existing legal interest in the ditch corridor. This may include an ownership interest in the ditch itself, or public fee ownership of some or all of the underlying prop-

erties. Public ownership of some of the property rights associated with ditches may also alleviate actual or perceived concerns about liability for trail users.

- **Site/facility selection** – Choose ditches or canals strategically for proposed trails. The size, type, and use of ditches can influence their feasibility for trails. Large, deep, or swift canals with many critical (or senior) water interests are less likely to be compatible with trails, while smaller ditches that are associated with fewer users or more junior water rights may be perceived to be safer and have fewer conflicts with trail use.
- **Multi-Stakeholder support** – As with trails, most ditch corridors cross land owned by multiple entities in multiple jurisdiction. Successful implementation of ditch trails typically requires the cooperation of multiple entities that can leverage their legal and community relationships, financial and logistical resources, and existing land interests to overcome the challenges that are unique to ditch trails.
- **Mitigation measures** – Some level of trail management or infrastructure commitments may be necessary to overcome the operational or safety concerns of ditch owners. Depending on the issues, mitigation measures may include signage, fencing of critical facilities or hazardous areas (e.g., headgates or siphons), short trail reroutes, dog on-leash and feces removal requirements (and enforcement), and legal easements or indemnification contracts. The costs of any required mitigation measures would likely be borne by the trail management entity and should be considered to be part of the trail infrastructure and management.

Rail Trails

The use of existing railroad corridors for recreation trails has been demonstrated to be a successful approach for trail implementation. Under the “rails-to-trails” model, inactive or abandoned railroad rights-of-way are converted for trail use. In “rails-with-trails” projects, trails are completed alongside active railroad lines within the existing right-of-way.

Examples of both types of rail trail are described below.

Rio Grande Trail (Roaring Fork Valley) –

The 42-mile long Rio Grande Trail extends from Glenwood Springs to Aspen primarily along the former Denver and Rio Grande Western Railroad alignment along the scenic Roaring Fork River. In 1997, most of the corridor was purchased in a cooperative effort by multiple local government entities, GOCO funding, and the Colorado Department of Transportation. The extent of the Rio Grande Trail, across multiple jurisdictions, is managed by the Roaring Fork Transportation Authority (which also manages the regional bus system). In addition to being an important transportation corridor, the Rio Grande Trail is a popular recreation amenity, providing a unique off-road cycling experience and connectivity between multiple recreation-dependent towns.

New Santa Fe Regional Trail (El Paso County) –

The Santa Fe Trail comprises the main, north-south regional trail spine through Colorado Springs. The northern extension (about 14 miles), the New Santa Fe Trail, is located on the abandoned Atchison, Topeka and Santa Fe railroad line, crossing through the U.S. Air Force Academy (AFA) to the Towns of Monument and Palmer Lake. The segment through the AFA is allowed through an easement agreement.

Mineral Belt Trail (Leadville) – Opened in 2000, the Mineral Belt Trail is a paved, 12.5-mile loop that traverses the historic mining districts outside of Leadville. About 6 miles of the loop is located within the historic Leadville Mining District. The loop trail alignment includes a combination of old roads, new trail, and abandoned rail road beds from the Denver and Rio Grande and Colorado Midland railroads. The trail was implemented over the course of seven years, as a result of partnerships between Colorado State Parks, Great Outdoors Colorado, the Colorado Department of Transportation, U.S. Environmental Protection Agency, Asarco Mine, Union Pacific Railroad, the town of Leadville, Lake County, and private landowners.

Midland Trail (Buena Vista) – Located primarily on Bureau of Land Management property, the Midland Trail follows an abandoned railroad grade for about 8.5 miles as it climbs east from Buena Vista. Most of the route is smooth, natural surface singletrack, but has some technical sections through ravines that were historically crossed by

railroad bridges. This historic grade has provide a spine around which other hiking and biking trails have been established in recent years to create a growing system of loop trails in the hills east of Buena Vista.

Rails-with-Trails

Successful examples of recreation trails within railroad rights-of-way include the following:

Animas River Trail (Durango) – The Animas River Trail extends to the south and to the north from downtown Durango. Most of the trail completed to date (about 1 mile) is located within the right-of-way for the Durango & Silverton Narrow Gauge Railroad (DSNGRR). The DSNGRR is a very popular tourist excursion train that runs between Durango and Silverton. Within the City of Durango, the railroad has a 100-foot right-of-way that was established in 1881. In 2009, DSNGRR granted the City of Durango a non-exclusive easement to extend the trail over its right-of-way adjacent to the railroad tracks. Plans are currently in place to extend the trail further north along an alignment that is largely within the DSNGRR right-of-way.

Santa Fe Rail Trail (Santa Fe) – This trail extends along the tracks of the historic Atchinson, Topeka and Santa Fe Railway from downtown Santa Fe to Lamy, a distance of about 18 miles. The ATSF line is used by the Santa Fe Southern Railway, a scenic excursion train. This trail is paved through the city, transitioning to a natural surface trail across the countryside. The City of Santa Fe and Santa Fe County are responsible for management of the trail within their respective jurisdictions.

Route 66 Trail (Flagstaff) – One of Flagstaff's first urban trails, the Route 66 Trail follows the corridor between the historic highway and the Burlington Northern-Santa Fe (BNSF) rail corridor for about 4.2 miles through downtown Flagstaff. Unlike many other rails-with-trails examples, the BNSF is a major heavy rail corridor with frequent train traffic. The trail is allowed through an easement.

Models for Success

The use of railroad corridors has long been a demonstrated model for regional trail connections. Based on the examples of rails-to-trails and rails-with-trails projects described above, some of the common themes for success include the following:

- **Abandoned lines** – Many rail trails in Colorado and the western U.S. are located along historic railroad lines that have been abandoned, and in

many cases, no longer have tracks or infrastructure. The use of these lines as a trail can have the added cultural and interpretive benefits.

- **Public ownership** – Many active or inactive railroad corridors are on rights-of-way or easements with underlying land ownership. Therefore, rail corridors that cross otherwise publicly-owned land are easier to implement than those with multiple ownership interests.
- **Excursion trains** – For rails-with-trails projects, it is often much more feasible to share portions of right-of-way with excursion trains, where train speeds are slower and there is a common interest in public visibility and recreation infrastructure.
- **Railbanking** - “Railbanking” is the practice of converting inactive (but potential) railroad corridors to trails for potential future use as a rail corridor. These types of projects are more complicated and have specific requirements, but can be an attractive option for both railroad owners and local governments in some situations.
- **Visit www.railstotrails.org** for more information, including implementation guidelines and a national list of rail-trails,

Hoosier Pass Recreational Pathway

Colorado State Highway 9 winds over 11,542-foot Hoosier Pass between the towns of Breckenridge and Alma, a distance of about 17 miles. Portions of this corridor are used by experienced cyclists for recreation, but it is generally not considered to be safe for non-motorized recreation due to high traffic speeds and narrow or absent road shoulders. For years, residents and communities on both sides of the pass have desired a separate recreational pathway through this corridor to enhance recreation opportunities and to provide a safer alternative for non-motorized traffic along Highway 9. In 2012, Summit County applied for and received a \$45,000 planning grant from the Colorado State Trails Program (GOCO and federal funds administered by Colorado Parks and Wildlife) to complete a conceptual trails plan for the Hoosier Pass corridor. The planning grant included matching funds from Summit County, Park County, the Town of Breckenridge, and the Town of Alma.

A consultant team was hired and the planning process was initiated in the fall of 2012, with a series of community and stakeholder meetings

taking place through the spring of 2013. The planning process included a detailed analysis of multiple pathway alignment options with associated opportunities and challenges, design guidelines, and implementation strategies. Key opportunities for trail implementation include:

- Public lands owned by the U.S. Forest Service and Colorado Parks and Wildlife
- Recreation-oriented communities with strong examples of existing pathways
- Potential use of historic and inactive ditches (from the mining era)
- Potential use of former road grades and historic routes

Major challenges include the following:

- Narrow right-of-way along Highway 9, with limited opportunities for a separated trail
- Extensive wetlands along the valley floor and many lower mountain slopes
- Limited opportunity or tolerance for public trail construction through residential subdivisions
- Challenges associated with steep slopes, grades, and rugged mountain terrain

Given these challenges and constraints, the feasibility study identified three potential alignments to be considered for further study and implementation. Implementation strategies include the following:

- Continue to work with state and federal agencies and other stakeholders to identify a single “preferred alignment” for each phase of the project
- Establish intergovernmental agreements designed to foster and leverage the support for pathway development
- Commit local government and agency funding for environmental compliance, land acquisition, and design and construction
- Work cooperatively to address issues effecting public access
- Support the formation of a non-profit, grass-roots organization to advance positive, locally-driven initiatives for the future Hoosier Pass Recreational Pathway