



TOWN OF MANCOS TRAILS MASTER PLAN



Trails Master Plan
Mancos, Colorado
Prepared by DHM Design Corporation
October 24, 2012

Town of Mancos

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photo courtesy of Jennifer Guy





Chapter One: Introduction

Purpose of this Document and Background
Study Area, Existing Conditions and Existing Attractions
Existing Trail User Groups
The Planning Process and Community Engagement
Needs Assessment

pages
5-12

Chapter Two: Guiding Principles and Components

Guiding Principles
Trail Types, Components and Cross Sections

13-18

Chapter Three: Trail Recommendations and Potential Alignments

Trail Priorities

19-34

Chapter Four: Implementation

Organizational Structure For Effective Implementation
Community Participation
Rights-of-Way and Permitting
Phasing and Next Steps
Funding and Budget Strategy
Operations and Maintenance Considerations

35-40

Appendix

A. Meeting Notes
B. Cost Estimates
C. Environmental Summary

41-56

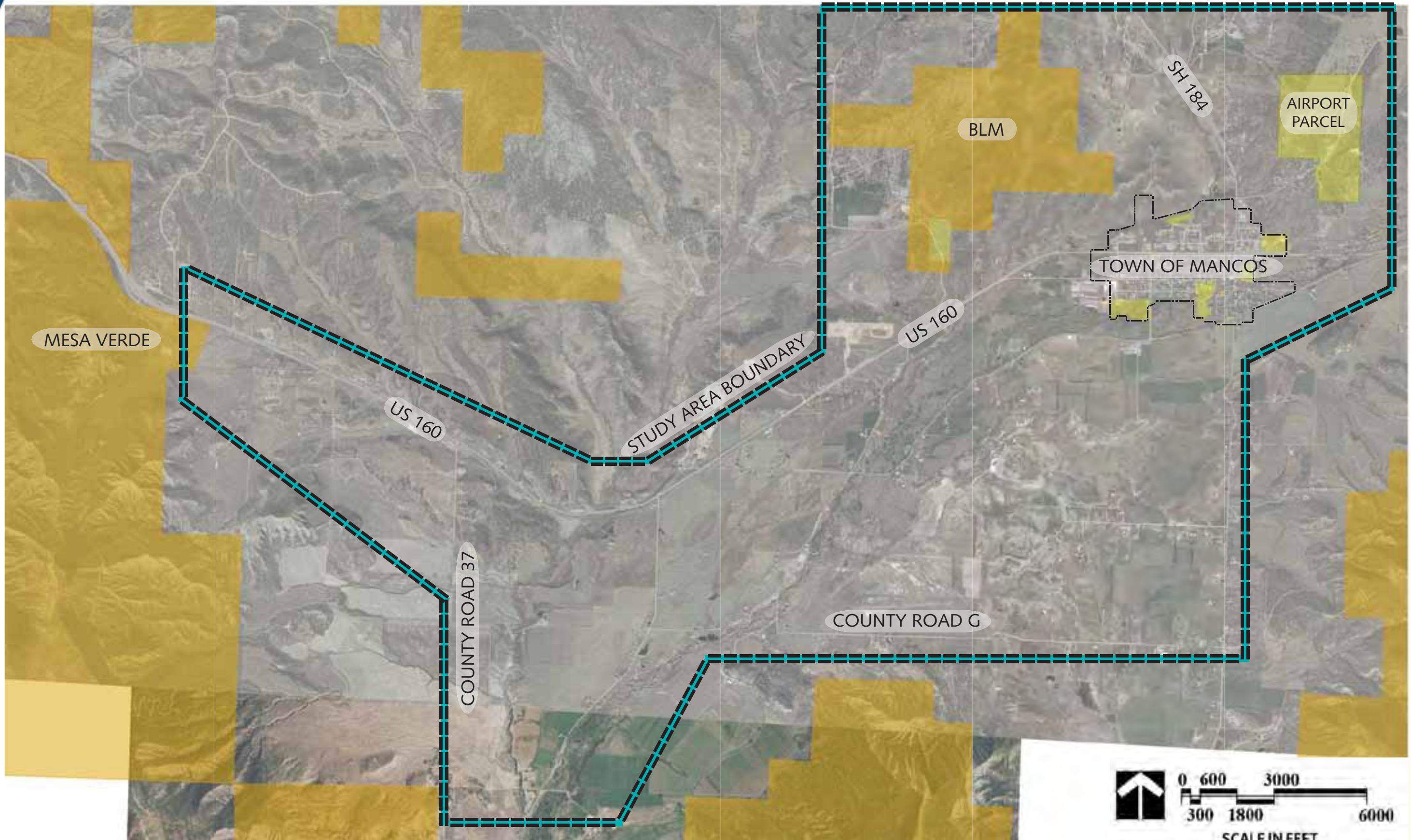




CHAPTER ONE

INTRODUCTION





Map 1. Overall study area and existing conditions



Purpose of this Document and Background

The Town of Mancos has identified the development of an integrated community system for non-motorized, hiking and biking trails as a high community priority. The Town hired DHM Design from Durango to complete the planning process.

This document puts forth a master plan for the Town of Mancos that includes specific feasible alignments for the trail system, trail cross section concepts, cost estimates and phasing priorities suitable for raising funds and to support future preparation of construction plans. It is intended to guide, step-by-step, the creation of a trail system throughout and around the Town and connecting to recreational amenities in the surrounding County and public lands. The plan includes a trail alignment connecting the Town’s commercial core and existing River Trail with anchoring town parks. It also strives to access scenic and more rural areas within the County including Mesa Verde National Park, the Colorado Trail and BLM land adjacent to Town.

With its ability to provide community access to vital locales, the Town of Mancos trails will be a very substantial investment and asset, serving residents of the Mancos area, visitors and tourists and the wider Montezuma County region. This project offers unique potential on a number of levels.

- This plan also proposes to promote—through increased public awareness and cooperative planning with adjacent landowners—the stewardship, clean-up and enhancement of the Mancos River corridor environment, especially the scenic character, as well as the flora, fauna and habitat values.
- It will enhance the River Trail to provide better connectivity.

Study Area, Existing Conditions, and Existing Attractions

The study area encompasses the Town of Mancos and surrounding areas including BLM land north of Highway 160, the Town owned Airport parcel, and a connection to the entrance of Mesa Verde National Park, the Colorado Trail and other public lands.

There are approximately 23 acres of parks and open space within the Town of Mancos. The existing conditions within the Town of Mancos are:

River Trail

The existing River Trail is a 4’-5’ wide crusher fines trail that follows along the north side of the river on school property. The existing section of trail is 600 linear feet.

County Roads

Because there are limited trails within the Town, County Roads are heavily used pedestrian routes. These are not “high” traffic areas and residents walk in the roadway. The most popular route is the scenic County Road J on the south edge of Town because there is a loop created between bridge crossings.

Boyle Park

The oldest Town park is Boyle Park, it was donated to the Town by the Boyle family in 1919. Since then, a number of improvements have been made to the park including a softball field, playground features, covered picnic shelters, landscaping and restrooms. Boyle Park sits on the eastern end of Town, adjacent to the downtown commercial core, and provides a venue for multiple community functions and events, including family reunions, private parties, the Mancos Balloon Festival, Mancos Days, and in 2010 was host to the annual Colorado Rural Philanthropy Days. *(Mancos Comprehensive Plan, 2011)*

Cottonwood Park

In 1998, the Town purchased 13 acres on the west end of Town and built its first open space park, Cottonwood Park. Cottonwood consists of a nature trail loop that runs along the perimeter of the park and adjacent to the Mancos River as it exits Town. Cottonwood Park is host to a number of community events, including the Mancos Renaissance Festival and outdoor music concerts. *(Mancos Comprehensive Plan, 2011)*



River Trail on the school property



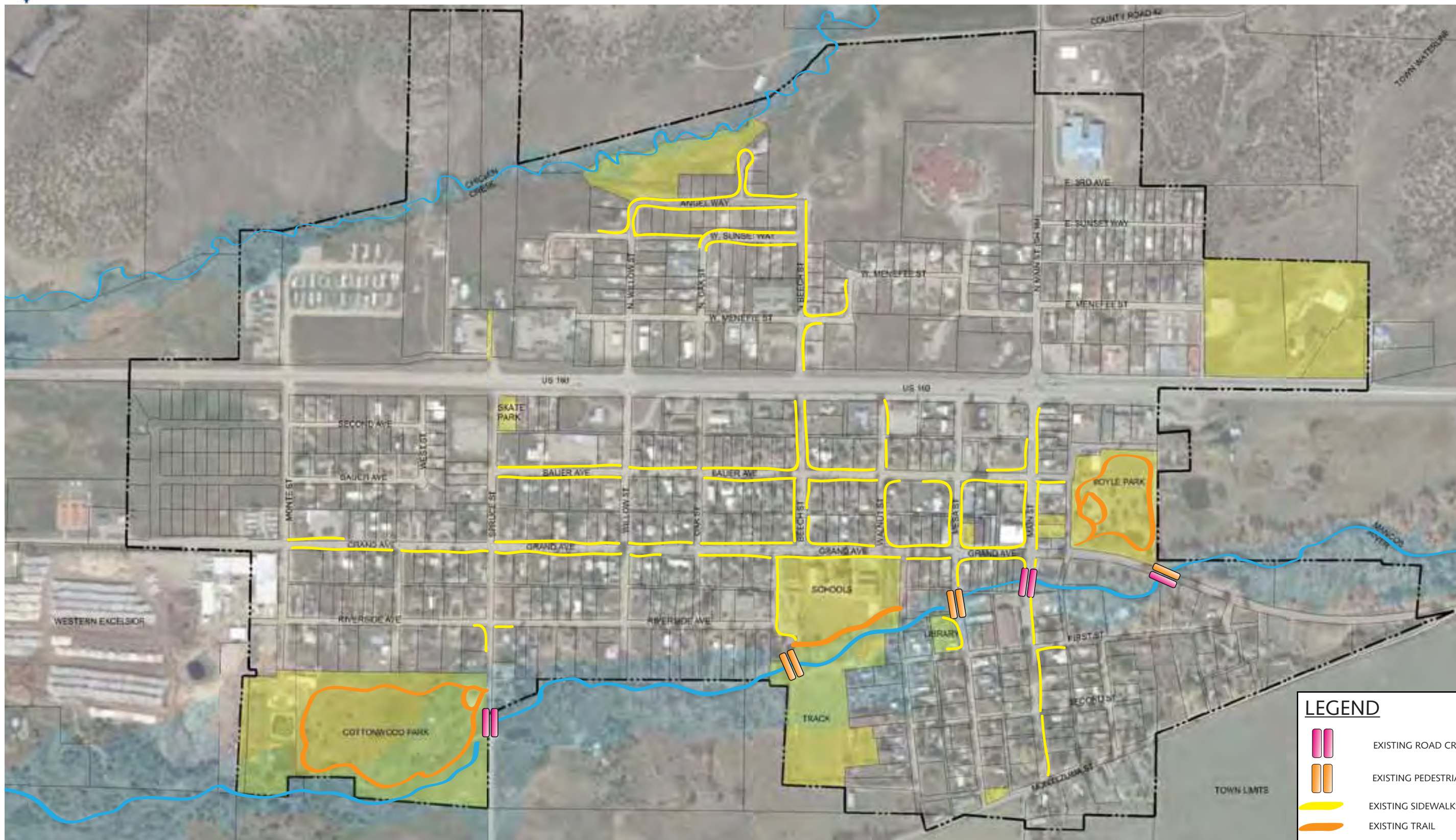
Boyle Park



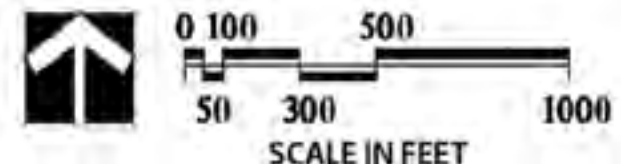
Cottonwood Park

- It will provide a safe, reliable, outdoor, non-motorized avenue for users to travel throughout the Town of Mancos as well as accessing adjacent recreation areas, schools, and other amenities.
- It will provide trail access to scenic areas rich in history and interpretive value.
- It will help promote businesses, such as coffee shops and restaurants along the commercial corridor, as well as enhance community development.
- It will provide access to the Schools, Boyle Park, Cottonwood Park, Library, the Community Center and other destinations.
- It will improve pedestrian and bicyclist safety.
- It can increase property values for adjoining properties, promote business development and enhancement, and assist Mancos in attracting visitors as an overnight destination.
- It will promote better community health through fitness and regular physical activity and improve air quality.
- It can potentially save on fuel costs—both to individuals and institutions.





Map 2. Existing conditions within the Town of Mancos.



LEGEND	
	EXISTING ROAD CROSSING RIVER
	EXISTING PEDESTRIAN CROSSING RIVER
	EXISTING SIDEWALKS
	EXISTING TRAIL
	EXISTING FLOODPLAIN
	PUBLIC PROPERTY

Skate Park

The Town owns and maintains a 7,500 square foot skate park on the southeast corner of Spruce and Railroad Avenues. The Skate Park was built in cooperation with community interest groups to meet the needs of local youths. The Skate Park has a number of ramps as well as a shaded seating area and landscaped gardens. (Mancos Comprehensive Plan, 2011)

Neighborhood Parks

The Town of Mancos owns and maintains several landscaped “pocket parks” or neighborhood parks, including Pioneer Park and the greenway along Sunset Avenue in the Creekside development. Neighborhood parks are typically small in size, usually occupying no more than one lot, and contain amenities that provide repose. Pioneer Park is a 5,227 square foot park on the northeast corner of Mesa Street and Grand Avenue, and is home to the Town’s old jail. Pioneer Park’s bench offers opportunity for solitude and rest on the edge of the historic downtown commercial core. (Mancos Comprehensive Plan, 2011)

School property

The Mancos School District owns a 12.2 acre parcel in the center of the Town of Mancos spanning both sides of the River. A pedestrian bridge exists to connect the schools to the track on the south side of the River. There also is a soft surface trail that runs on the northside of the river.

Future Parks and Amenities

In 2008, a 4 acre parcel in the Creekside Subdivision was dedicated to the Town. The Creekside parcel sits along the southern bank of Chicken Creek and contains wetlands and riparian habitat. The developer of the Creekside subdivision is required to build a pedestrian pathway before the second phase of the subdivision is approved. (Mancos Comprehensive Plan, 2011)

The Mancos Library was constructed in the summer of 2009 opened the doors to its new LEED certified building at 211 W. First Street. The library is located on the Mancos River and this fall a new pedestrian bridge is being constructed to connect to across the river to Mesa Street.

The existing attractions surrounding the Town of Mancos are:

Mesa Verde National Park

Mesa Verde is an UNESCO World Heritage Site and one of the most premiere archeological parks in the United States. The Park’s new visitor center is located at the entrance to the park only six miles to the west of Mancos. It is 52,000 acres with over 5,000 archeological sites. Mesa Verde has over 500,000 visitors annually.

Mancos State Park

In the spring, summer and fall, canoeists, kayakers and wakeless power boaters

enjoy the calm waters of Jackson Gulch Reservoir. In the winter depending on conditions there are great opportunities for cross-country skiing, snowshoeing, and ice fishing. Fishing enthusiasts have pulled numerous species of fish, including yellow perch and rainbow trout, out of the reservoir. Travelers from other parts of the state and country use Mancos State Park as their camping headquarters when they visit the numerous attractions in the area. (www.parks.state.co.us/parks/mancos/Pages/MancosStatePark)

Chicken Creek Nordic Ski Area

Chicken Creek Nordic Ski Area is located northwest of Mancos. There are 9 miles of maintained skate and classic cross country ski trails with an additional 9 miles of unmaintained trails. The highest elevation on the maintained trail system is 8,200 feet. Chicken Creek Nordic Ski Area links to the Colorado Trail, the San Juan National Forest and Mancos State Park, providing cross-country skiing, hiking, mountain biking, hunting and fishing opportunities. (www.mancoscolorado.com/ChickenCreek)

Colorado Trail/La Plata Mountains/West Mancos

Northeast of Town is an amazing network of trails through the La Plata Mountains. These trails start out along the Mancos River and climb up the nearby peaks, such as the base of Sharkstooth and Centennial Peak. There is an easy trail (Big Al’s) that leads to an overlook. This trail system eventually connects to the Colorado Trail at the top of La Plata Canyon.

Cherry Creek Road/Madden Peak

There are other public lands in the far eastern edge of Montezuma County that provide hiking and biking opportunities. Cherry Creek Road is an easy dirt trail for mountain bikers. Madden Peak is another access into the La Plata mountains and the San Juan National Forest.

Existing Trail User Groups

- Kids
- Walkers, Runners, and Hikers
- Dog walkers
- Bikers including tour/road, mountain, and town/cruisers
- Equestrian
- Cross country skiers
- Herders



Bench at the library facing the River



Mancos State Park (photo courtesy of: www.parks.state.co.us/parks/mancos)



Mesa Verde National Park



Pedestrian bridge on school property



Children at Highway 160 at Beech St.



Main St. Bridge



High School track



Children riding on Highway 160



Cottonwood Park



Sidewalks have been built in new development on north side of Highway 160



Children crossing Highway 160 at Beech St.



BLM parcel



The Planning Process and Community Engagement

The planning process included four major elements:

- 1. Site Inventory and Reconnaissance** - A thorough inspection and inventory of the resources, challenges, and opportunities of the corridors. Site investigation included a number of field visits where the planning team inspected the possible trail locations. The planning team identified opportunities and constraints and reviewed potentials with community leaders, key staff and the public.
- 2. Focus/Stakeholders Group meetings with CDOT, BLM, Kokopelli Bicycle Group and Montezuma County** - Reviewed plans, toured potential trail alignments and determined aspirations for the Trails Master Plan.
- 3. Draft Alignment Alternatives, Layout and Cross-Sections** - Working with Town staff and other stakeholders, the team laid out draft optimal trail alignments and prepared typical cross-sections.
- 4. Public and Stakeholder Participation Process** - There was a public participation process that consisted of three Advisory Group meetings and three Community meetings. Attendees consisted of individuals, property owners, user groups, National Park Service representative and business owners who were invited to candidly review and discuss the trail vision. After the public review, a final draft plan was prepared and reviewed with Town officials.
- 5. Final Master Plan Submittal** - The Planning team submitted this report summarizing the Town of Mancos Trail Master Plan with estimates of probable costs and phasing strategies. The Final Report was presented to the Mancos Board of Trustees in October 2012.

Needs Assessment

There are several ways to identify needs for trails in a community and specifically the need for Mancos' network of trails. These include: input through public participation processes such as community meetings and the website.

While the planning process did not include a scientific community survey, conclusions about trail needs can be reached by considering a number of sources. Foremost, people who attended the community public workshops demonstrated substantial support and the recently completed Comprehensive Plan ranks trail improvements as a high priority for the community.



Summary of Public Process:

Advisory Group Meeting 1: Wednesday, June 20th, 4 pm at Town Hall

Community Meeting 1: Wednesday, June 20th, 6 pm at Town Hall

Advisory Group Meeting 2: Thursday, July 26, 4 pm at Town Hall

Community Meeting 2: Tuesday, July 31, 6 pm at Town Hall

Advisory Group Meeting 3: Tuesday September 11, 4 pm at Town Hall

Community Meeting 3: Tuesday September 11, 6 pm at Town Hall

Board of Trustees Presentation: Wednesday October 24, 7 pm at Town Hall





CHAPTER TWO

GUIDING PRINCIPLES AND COMPONENTS



Guiding Principles

The following Guiding Principles were established and prioritized as part of the public process.

1. A priority of the trail improvements should be to focus on the river corridor.
2. One of the biggest obstacles in town for connectivity is Highway 160; improved pedestrian connections should be incorporated into the plan.
3. Provide trails that promote child-friendly transportation and safe access to schools.
4. Create a Community Trails Plan with public support that can be used to assist in obtaining grants/funding for implementing the trail projects.
5. Create a balance of trail improvements that should be feasible to accomplish in the near term with expansion in the future.
6. The project must be affordable to build and maintain.
7. Create a trail system that begins in the heart of downtown Mancos and returns to this central location. The trail system should provide an attraction for tourism, helping to make the Mancos Valley area a recreational destination and creating a positive impact on the economy.
8. The trail system should accommodate users of all abilities, from easy walking and commuting routes, to difficult recreational trails. For example, if there is a difficult mountain biking trail system developed there should also be an ADA accessible loop trail that takes off from the same trailhead.
9. The trail system should accommodate a full range of user groups (and be readily accessible per the Americans with Disabilities Act) including but not limited to runners, bikers, hikers, dog walkers, equestrians, cross-country skiers, wheelchairs and other non-motorized uses including a full range of abilities.
10. Promote trail connectivity to nearby neighborhoods, parks, public spaces, schools, public lands and to the regional attractions such as Mesa Verde and the Colorado Trail. The trail system should create a variety of short and long, interconnected loops.
11. Promote non-motorized community connectivity and fitness through physical activity.

12. The trail must be designed and maintained to respect private property.

13. All improvements should promote the preservation and enhancement of flora, fauna, habitat and cultural resources. Offer educational/interpretive opportunities (ecology, history, culture).

14. The trails and sidewalks that are used for commuting to school or work should be maintained to be accessible year-round.



Trail Types, Components and Cross Sections

This plan recommends several key elements or components which function as building blocks for the trail system. A list of components was generated considering field conditions, the wishes expressed at community meetings and other input. The descriptions, plans, and cross section drawings below specify, in general, the recommended elements. Note that these are for planning and budgeting purposes and not engineering drawings. Specific designs, specifications and detailing will occur during the design and construction phase*.

* For more details, standards and design references see: *Guide for the Development of Bicycle Facilities*, American Association of State Highway and Transportation Officials (AASHTO); *Trails for The 21st Century*, Rails to Trails Conservancy and Island Press; and *www.americantrails.org*. See also *Manual of Uniform Traffic Control Devices (MUTCD)* U.S. FHWA, *mutcd.fhwa.dot.gov* (for signage and other traffic regulation-related features for both automobile and bicycle facilities). Note too that, as of late 2009, new guidelines for accessibility per the Americans with Disabilities Act were in the process of update, see *www.access-board.gov*.

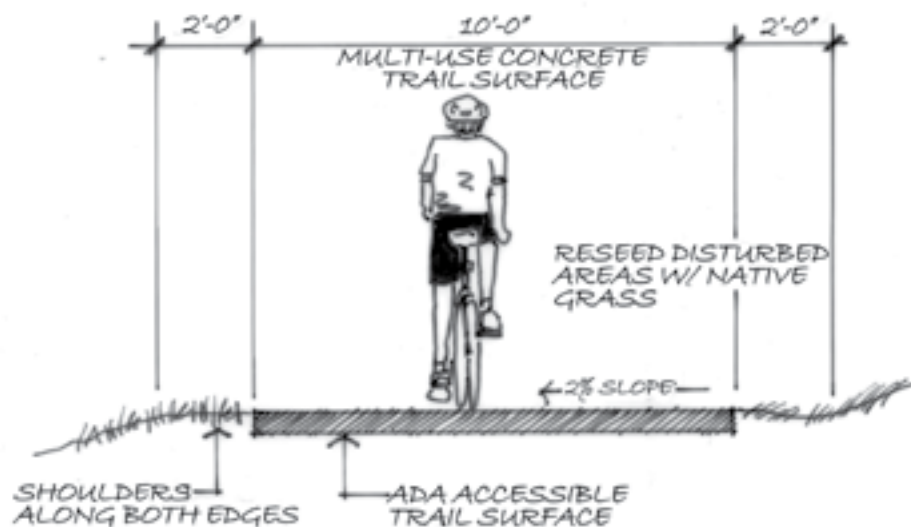


Telluride Bike Trail along Highway 145, photo from <http://4cornershikestell.blogspot.com/2008/06/telluride-bike-trail.html>

Paved Multi-Use (Shared-Use) Trail

There are two paved trail surface options— asphalt and concrete. Typically, for cost and other reasons, asphalt has been the surface of choice on many mountain community trails in Colorado. However, it should be noted that because of its durability and lower maintenance requirements, concrete has certain advantages for trail projects. Generally, concrete is recommended for areas subject to frequent inundation or erosion such as along a stream.

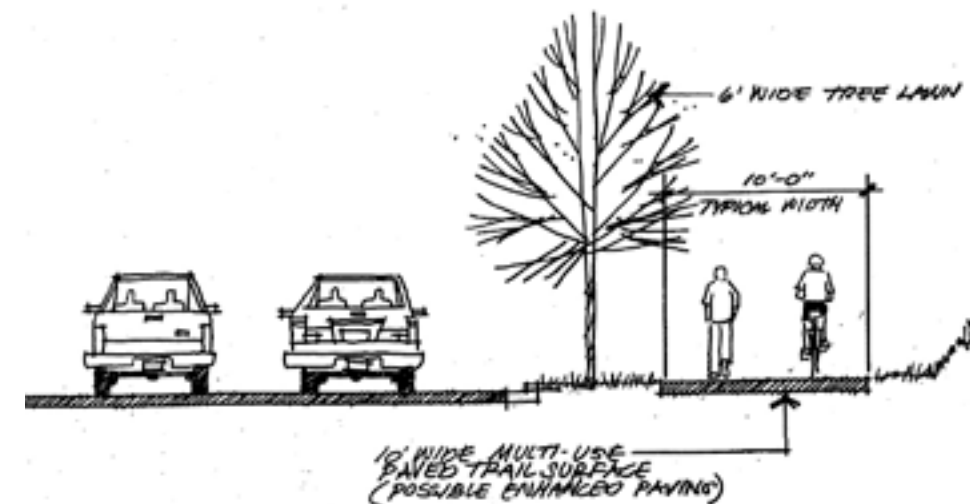
Paved trail surfaces accommodate pedestrians, bicycles, skates, and wheelchairs. Typically the paved surface is 10'-wide and designed to national engineering (AASHTO for Bicycles) and Americans with Disability Act accessibility standards. There is a graded trail edge on either side between 24" and 5'-wide with 5' preferred. This shoulder area should be mowed and kept free of debris though the width of the mowed area may undulate for improved aesthetics. Typically, grades do not exceed 5% with up to 10% for very short distances. For purposes of this plan, the shared-use path, when adjacent to a roadway includes a 5' to 10'-wide (minimum) landscaped buffer between the trail and the adjacent road. There should be a 30" minimum buffer between the trail edge and adjacent fences, walls or other obstructions.



Roadside (Shared-Use) Trail

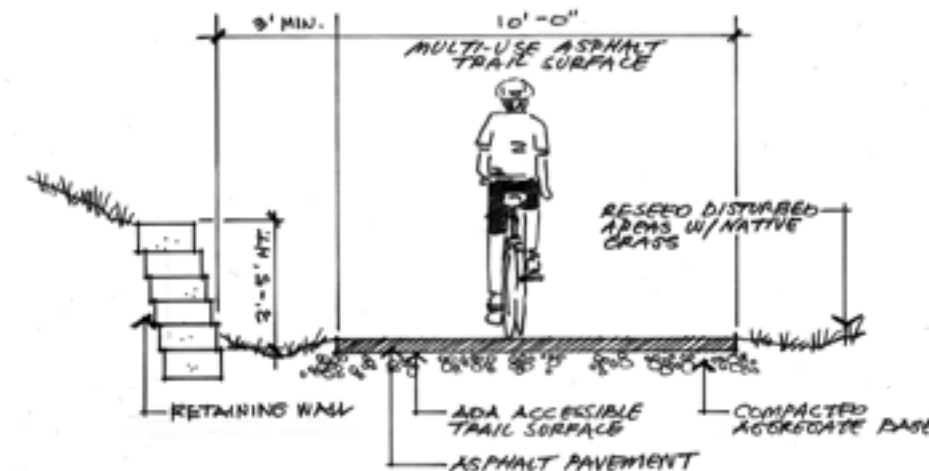
In a number of places, such as certain locations on Highway 160, the paved multi-use trail will run parallel and proximate to a roadway. Typically this consists of a 10'-wide "paved" surface with a vegetated or landscaped buffer (5' or more in width preferred) between the edge of the road and the trail. The trail allows for two-way bicycle and pedestrian traffic. If a 5'-wide buffer cannot be achieved than a minimum 42" high safety barrier or 6 " vertical

curb should be provided per AASHTO guidelines. The 5' buffer is a minimum per AASHTO, it is anticipated that CDOT would require a wider buffer along the highway because of high speeds.



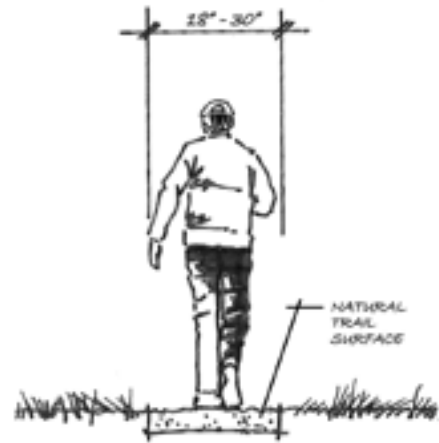
Paved Trail with Retaining Wall

This is a paved trail with an integral or proximate retaining wall. This wall may be 3' to 5' high. Where the trail surface is asphalt, the wall is a separate structure. In some instances, where the trail surface is concrete, the wall is typically built as an integrated unit where it is "keyed" into the trail surface and/or connected with reinforcing steel rods. The trail surface is typically 10'-wide and there may be a safety guardrail with a steep drop-off or where other hazards exist.



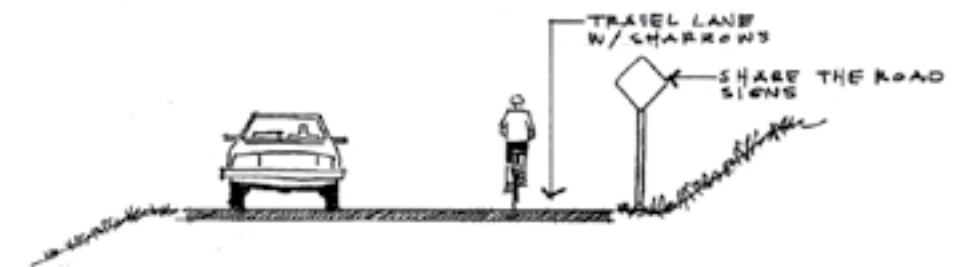
Natural Surface Trail

This is a graded dirt surface with appropriate erosion control and stabilization. Width may vary from 18" to 10', depending on permitted use, this trail accommodates hikers, mountain bikes, all-terrain wheelchairs, and equestrians. It does not meet national (AASHTO) standards for bicycles. Typically grades do not exceed 5% with 12.5% the maximum for short distances.



Soft Surface Trail at Cottonwood Park with wood chips

The Mancos Valley area enjoys the benefit of a network of rural back roads. Most of these have low traffic volumes and speeds, are well maintained and wide enough to accommodate bike (wider tire hybrid and mountain bikes) and pedestrian use. This road network might function better with the addition of "share-the-road" yellow diamond traffic safety signs (per the U.S. Manual of Uniform Traffic Control Devices) and distinct wayfinding "mile markers" that help guide users from point-to-point. On paved County roads, "share the road" symbols can be painted on the road as well. It would be helpful to place the mile markers with a 1/2-mile spacing in both directions and/or at least at any key decision points such as where the road forks and other intersections.

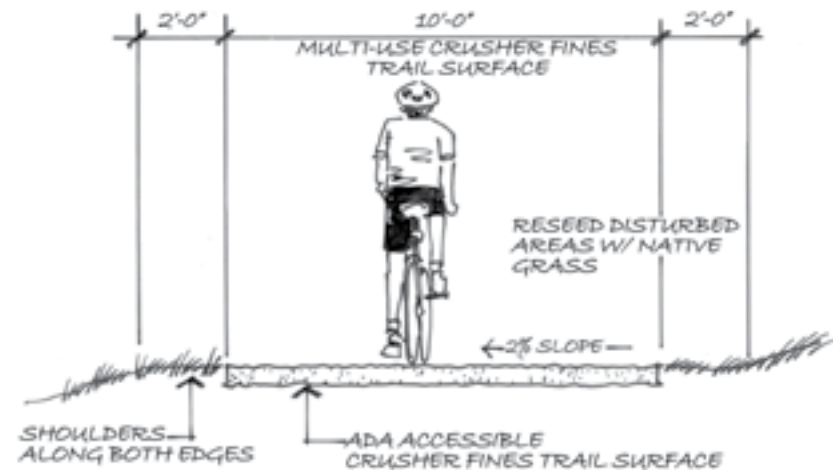


On-Street Shared-Use Routes

In addition to the "backroads" network, there are a number of low volume streets such as County Road J. Typically these are where bicyclists and pedestrians share a lower volume, lower speed (25 mph) street with automobiles. This may consist "share-the-road" yellow diamond caution signs with a bicycle symbol and placards that "spell out" "share the road". In some instances, there may be a designated bike lane defined by either a solid white paint strip or painted bicycle symbols applied to the pavement to designate bicycle use. Designs are per the US Manual of Uniform Traffic Control Devices (MUTCD) and the AASHTO Guide to the Development of Bicycle Facilities. Optimally, a shared lane is 14'-wide, not including the gutter pan if there is no parking lane and where there is not a designated bike lane.



Soft Surface Trail with crusher fines



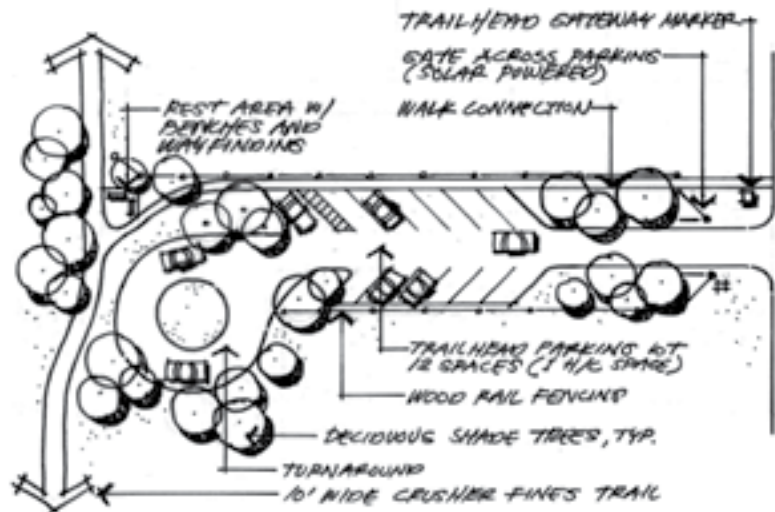
Trailheads and Entry Features

Trailheads should be strategically located where users might logically want to access the corridor by automobile and park to bike or hike. Typically these could accommodate 10 to 30 automobiles and could have a paved or gravel surface. Trailheads should also include an entry monument or sign that includes a trail system map, with "you are here" marker, and applicable user courtesy/regulations and other information. These locations could also include restrooms, shade structures and drinking water.

In some instances entry points might be more elaborately improved to enhance trail visibility to the public. These entry features might include special landscaping, trim elements, shade structures, and sculptural elements.

In other instances the trail entry point might not offer parking, serving rather as a "walk-up" or "bike-up" point of entry. These should include an accessible ramp from the street where applicable and neighborhood-appropriate signs or small pylons indicate the entry point. A small system map at these locations will also help with wayfinding.

Typically, trailheads, entry features, and other points where people can park or congregate, should not be placed in close proximity to residences. A gate that closes the area at night can be provided. A number of communities have used solar-activated automatic gates that close at sunset preventing access after dark.

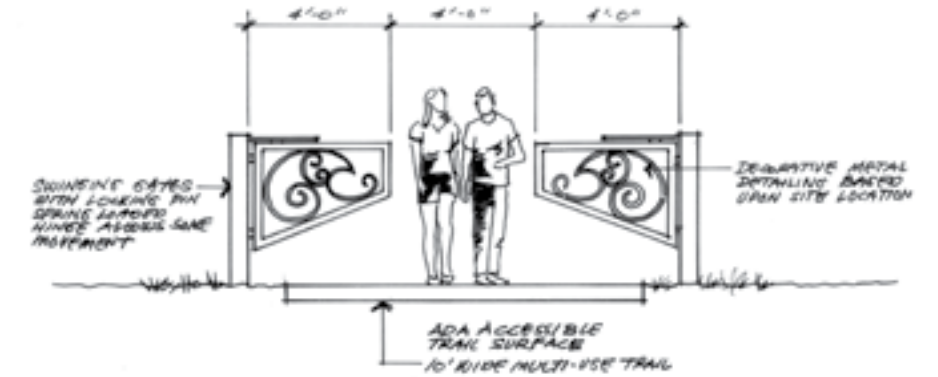
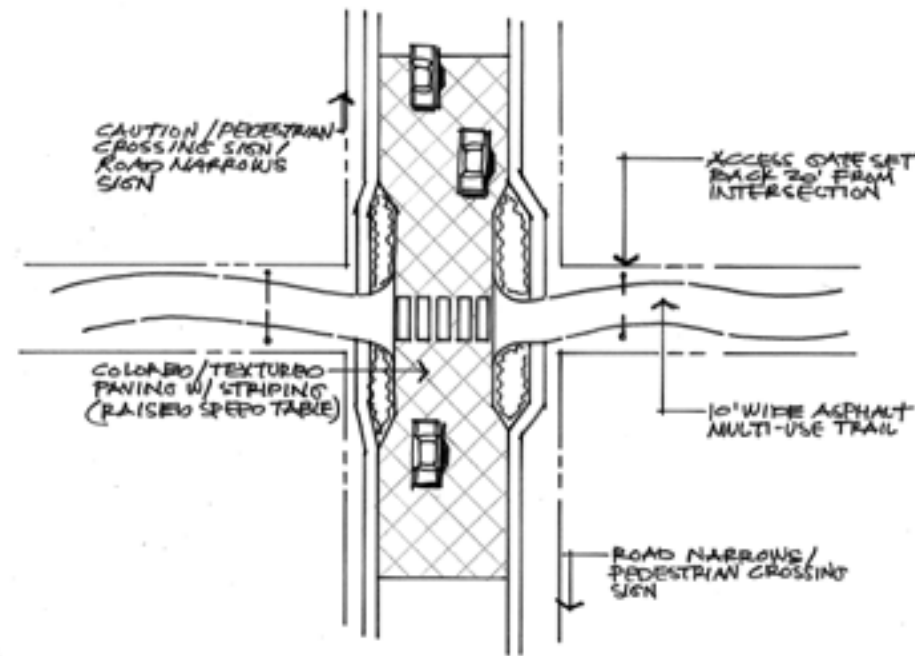


Sample of a trailhead layout

At Grade Street Crossings and "Traffic Calming" Street/Trail Intersection

There will be several instances where the trail system will cross streets - perhaps at intersections controlled by either a traffic light or by stop signs. In the instances of busier roads, like Highway 160, crossings are ideally traffic-light controlled, with a pedestrian activated signal for trail users. In previous discussions with CDOT, they have advised signage at trail crossings and warning signs prior to reaching the trail crossings. ADA accessible curb ramps should be provided and crosswalk striping at road crossings. Where traffic lights are not practical, and cross traffic does not stop, then intersections should be well signed to warn trail users to yield to traffic and use caution crossing.

There might also be trail crossings along lower volume streets. In these instances, a layout that promotes a safe interaction for both bike and pedestrian trail users should be provided. This consists of warning signs and striped crossing markings on the pavement per the Manual of Uniform Traffic Control Devices MUTCD, a neck down that narrows the traffic lane, special texturing of both the street and the trail approach and/or possibly a raised pavement "speed bump" or "speed table" to alert and slow motorists.



Access Gates

Access gates restrict automobile and most other motorized vehicles entry to trail corridors. The gate is designed with a lock and is hinged for easy entry by authorized personnel. Typically the gate is set back from the adjoining street with enough clearance to allow most vehicles to safely pull off the street to open the gate. The gate is substantial enough to discourage removal or damage. A gap is left in the gateway that allows a bicyclist, pedestrian, or wheelchair to pass through, but not a motor vehicle. Safety and regulatory signage, in compliance with the Manual of Uniform Traffic Control Devices (MUTCD), used on the street, alerts motorists just as similar signage on the trail alerts trail users to the gateway. Signage is placed an adequate distance ahead to allow response time and is designed per the MUTCD. In some instances, fencing should be used beyond the gate to further define the restricted access to the trail. Access gates could be built by local artisans to give interest as well as promote local businesses.



Signage; Safety, Courtesy, Interpretive and Wayfinding System

A number of informational, educational, interpretive and way-finding devices are recommended for the trail corridors. These include:

Safety Signs

These signs and/or pavement markings address or promote trail user and bicycle safety. For ease of understanding, these signs should follow standard formats for traffic control devices (See Manual of Uniform Traffic Control Devices). Signs address both bicycle and automobile traffic signage with respect to both trails and shared on-street routes.



Wayfinding/Directional Signs

Includes signs and markers, some with maps showing trail users how to reach their destinations, distance from a destination, and location signs such as mile markers, and street signs placed on bridges to identify cross streets. The wayfinding system should include overview signs and maps used at major entries (the system map should also be readily accessible on the Web). They address comprehensive issues such as system-wide trail maps, location of rest areas, degree of difficulty, accessibility and system trail rules and regulations. Due to the amount and importance of the information conveyed on system

signs, it is best to place them in locations where users are encouraged to safely stop and review the information represented. Markers may have a specific logo, or they may be as simple as blaze-using pieces of brightly colored tape attached to sign posts to indicate the corridor (used extensively in France and other places).



Rest Areas and Overlooks

The system should include strategically placed rest areas and overlooks. This might consist of a single bench or more improved sites with rest rooms and other amenities. Generally these should be available within a mile of any point on the trail.

Credit Signs

Provides information about those who contributed to the development of the trail and/or amenities along the trail.

Interpretive Signs and Displays

Addresses natural and/or cultural features. Important topics include ecological and geophysical interpretation and history.

Trail Lighting

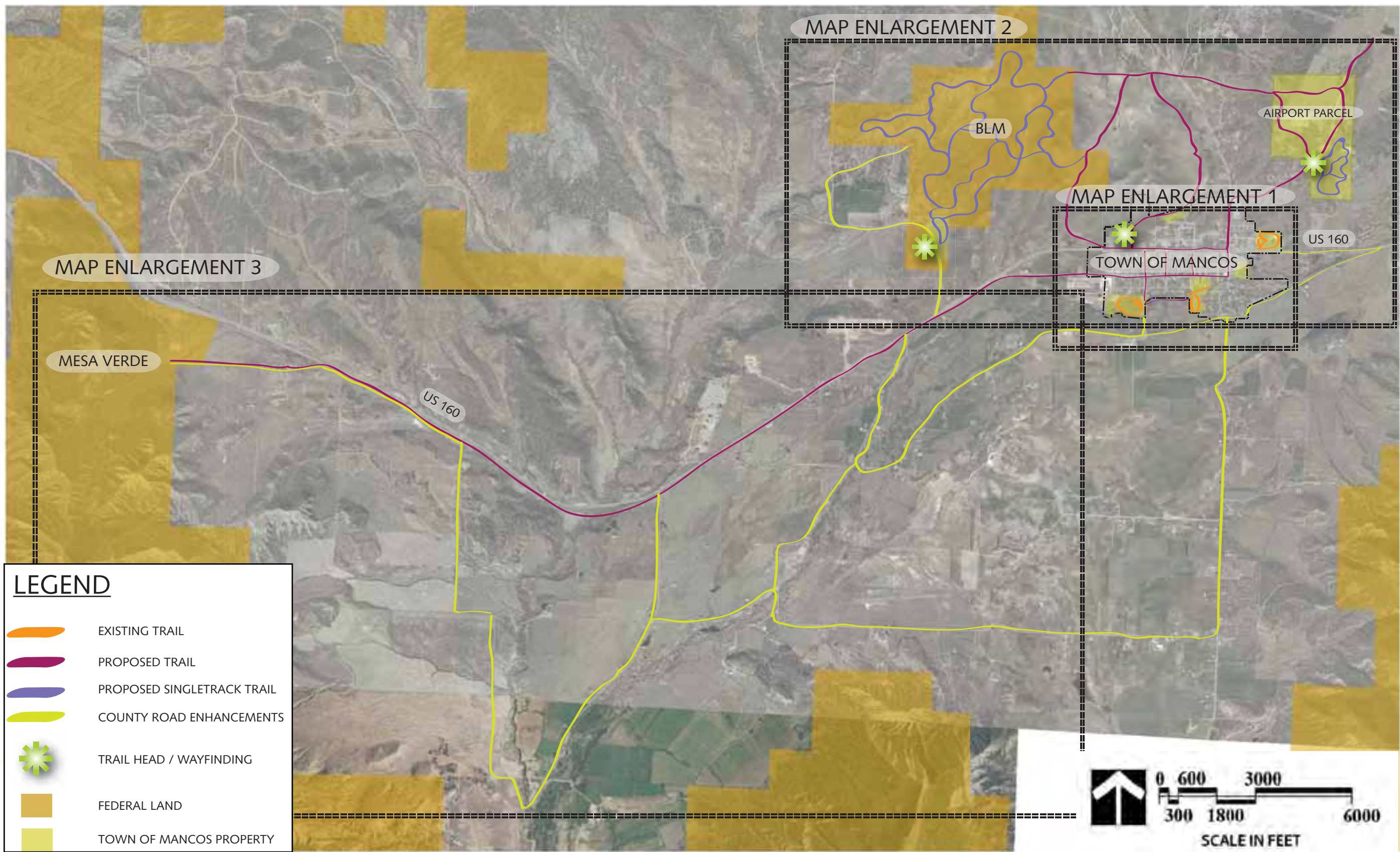
The community consensus was that at this point trail lighting was not desired. As trail use increases, lighting may need to be evaluated in the future for safety.



CHAPTER THREE

TRAIL RECOMMENDATIONS AND POTENTIAL ALIGNMENTS





Map 3.



photo courtesy of Jennifer Guy

The primary goal of the plan is to connect several key places within the Town such as the town's commercial core and existing River Trail with Boyle and Cottonwood parks and the school property. Another goal is to provide access to key open space areas surrounding the Town, therefore the study area is focused on trail connections within and adjacent to the Town. Trail connections are organized in order of priority and also could be considered the order of phasing. **Any and all routes shown on private land are subject to the property owners approval.**

Overall Recommendations include:

1. Improve signage and wayfinding throughout the Town, directing visitors to amenities such as the River Trail and Town Parks. The Town parking lot, at Grand and Mesa, would be a good location for trailhead signage and wayfinding.
2. All trail projects should be accompanied by river and habitat restoration where possible.

Proposed trail connections (in order of priority):

1. Connect Boyle Park to Cottonwood Park along the Mancos River.
2. Improved pedestrian Highway 160 crossing at Beech and Spruce Street and add a pedestrian signal at Willow Street and US160.
3. Downtown Sidewalk Improvements
 - Grand Ave from Main St to western town limit.
 - Bulb-outs at Beech St, Willow St, Spruce St, and Main St along Grand Ave.
 - Complete sidewalks along Willow St and Spruce St
4. Safety improvements along County Road J – improve pedestrian and bicycle experience.
5. BLM trail system and trail head at old landfill site.
6. Trail along north side of US160 and downtown trail head, trail connecting to BLM land on old railroad grade, and sidewalk along Highway 184 from traffic light to County Road 42.
7. Multi-use trail from downtown Mancos to Mesa Verde Visitor Center.
8. Trails at Airport property.
9. River trail connection (east) to Airport property.

Future Opportunities:

1. BMX course at old landfill.
2. Connection from BLM to Airport property along gas line easement.
3. Chicken Creek to old railroad grade loop.
4. Complete sidewalks in neighborhood north of US160.
5. Safety improvements on County Roads out of town limits.
Improve Cottonwood Park, add a trail loop in at new wetlands, add platform for wildlife viewing and possibly a off-leash area.
6. Trail connection to the Colorado Trail.
7. Trail connection to the eastern Montezuma County public lands.





Town of Mancos Enlargement Map
 Note: Any and all routes shown on private land are subject to the property owners approval.

LEGEND


-  TRAIL PRIORITY
-  FUTURE OPPORTUNITY
-  TRAIL HEAD
-  WAYFINDING
-  IMPROVED PEDESTRIAN CROSSING
-  EXISTING ROAD CROSSING RIVER
-  EXISTING PEDESTRIAN CROSSING RIVER
-  EXISTING SIDEWALKS
-  EXISTING TRAIL
-  PROPOSED TRAIL
-  COUNTY ROAD ENHANCEMENTS
-  EXISTING FLOODPLAIN
-  TOWN OF MANCOS PROPERTY


 Trail Priority 1 (T1):
Connect Boyle Park to Cottonwood Park along the Mancos River.

 Trail Priority 2 (T2):
Improved pedestrian Highway 160 crossing at Beech and Spruce Street and pedestrian signal at Willow Street and US160.

 Trail Priority 3 (T3):
Downtown Sidewalk Improvements

- Grand Ave from Main St to western town limit.
- Bulb-outs at Beech St, Willow St, Spruce St, and Main St along Grand Ave. Complete sidewalks along Willow St and Spruce St

 Trail Priority 4 (T4):
Safety improvements along County Road J – improve pedestrian and bicycle experience.

 Future Opportunity 6 (F6):
Improve Cottonwood Park, add a trail loop in at new wetlands, add platform for wildlife viewing and possibly a off-leash area.



Bridge abutments in Cottonwood Park could be used in future



Existing pedestrian bridge at Library, to be replaced Fall 2012



River condition in Cottonwood Park

Trail Priority 1 (T1) Connect Boyle Park to Cottonwood Park along the Mancos River.

The highest priority in the Town of Mancos is to create a continuous trail from Boyle Park to Cottonwood Park along the Mancos River. The 2010 Mancos Community Survey identified the Mancos River Trail as the top priority for recreation projects. (*Mancos Comprehensive Plan 2011*) Once the trail is built, it will follow the Mancos River connecting Boyle Park, the downtown historic district, Public Library, Elementary, Middle and High Schools, and Cottonwood Park. 600 linear feet of the river trail exists on the school property and the proposed trail will be of similar material and character. Due to the narrow river channel at the Main Street bridge, the trail would have to cross over the bridge. If the current drive lanes were striped to be 12' wide, there would be room for 5' wide sidewalks on both sides of the bridge.

The resulting trail will encourage healthy modes of transportation and recreation via safe non-motorized routes, thereby increasing the overall health and safety of the community. The River Trail will preserve public access to the Mancos River, reduce conflict between users and residents by locating routes and access points in use-compatible areas, increase opportunities for bird watching, enhance opportunities for fishing, and provide opportunities for outdoor education. (*Mancos Comprehensive Plan 2011*)



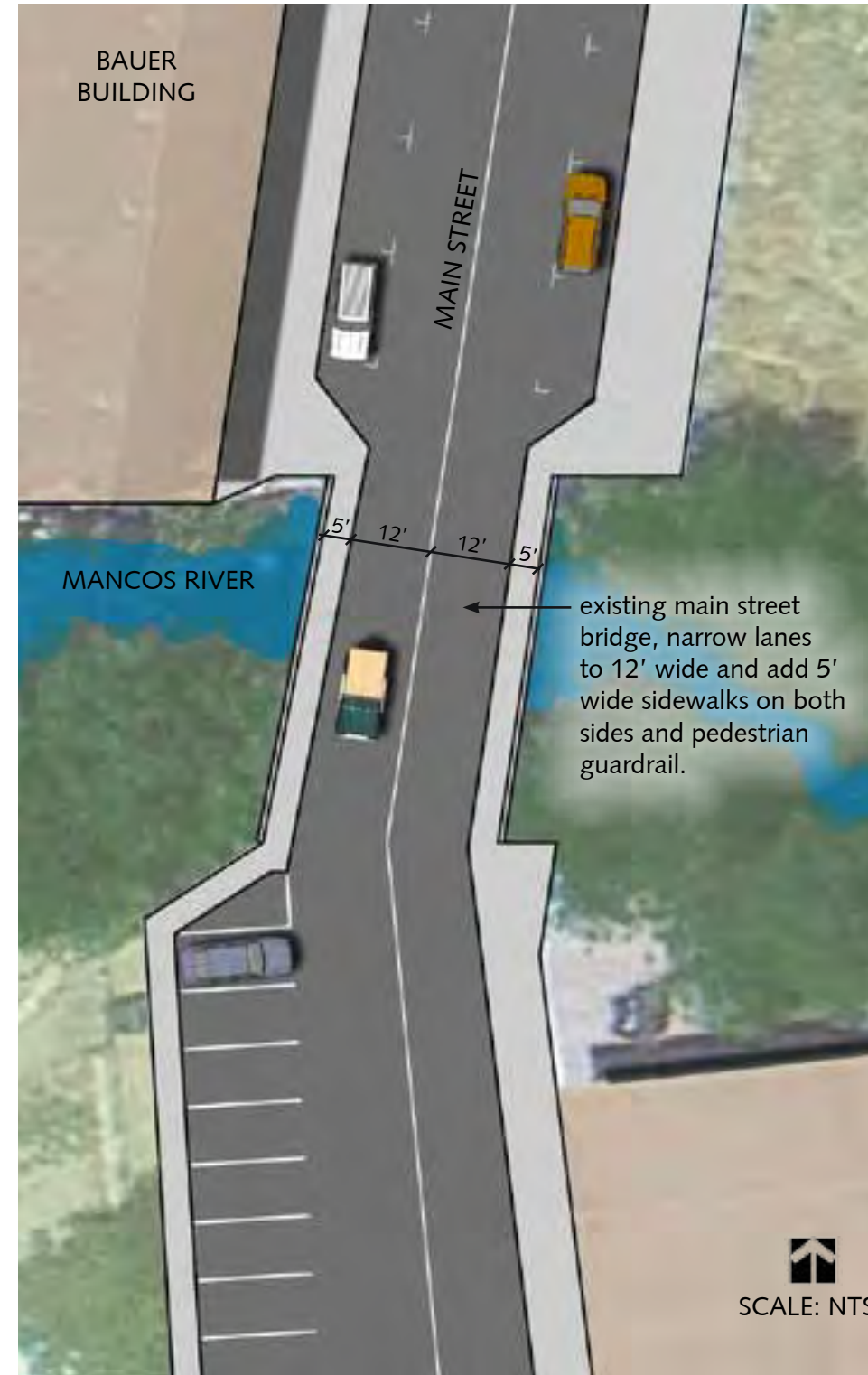
Existing trail on school property



Existing Main Street Bridge



Existing Main Street Bridge



Conceptual plan to make the existing Main Street bridge more pedestrian-friendly. In the future, you could incorporate pedestrian facilities to a new bridge.



Trail Priority 2 (T2)

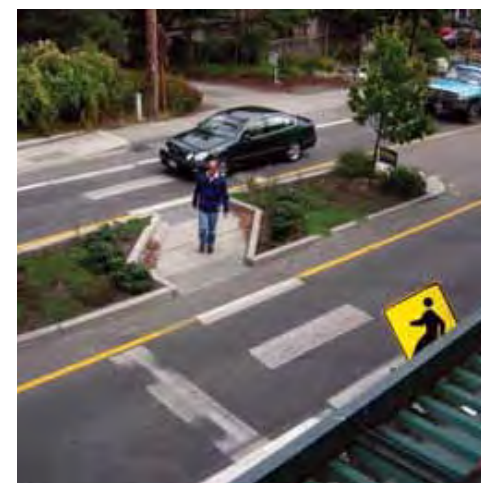
Improved pedestrian crossing at Beech Street (highest priority) and Spruce Street and pedestrian signal at Willow Street and US160.

An improved pedestrian crossing at Highway 160 and Beech and/or Spruce Street is recommended to connect the north and south sides of Mancos. The Beech Street crossing is the top priority because of its relationship to the school. The following plan and sketch below conceptually depicts a pedestrian crossing with center island refuge. The walk within the center island refuge should be angled so pedestrians can see the oncoming traffic. A center pedestrian refuge will also act as traffic calming along Highway 160.

Additionally, a pedestrian signal, such as a rectangular rapidly flashing beacon, is proposed at the Willow Street and US 160 intersection. CDOT will install a rapidly flashing beacon if the Town can provide adequate data that a certain number of people cross the intersection at a certain time. The image below shows the new pedestrian crossing in Durango which allows pedestrians to cross Highway 550/Camino del Rio at 7th St. The designs for these pedestrian improvements along the highway would need to be completed by CDOT.



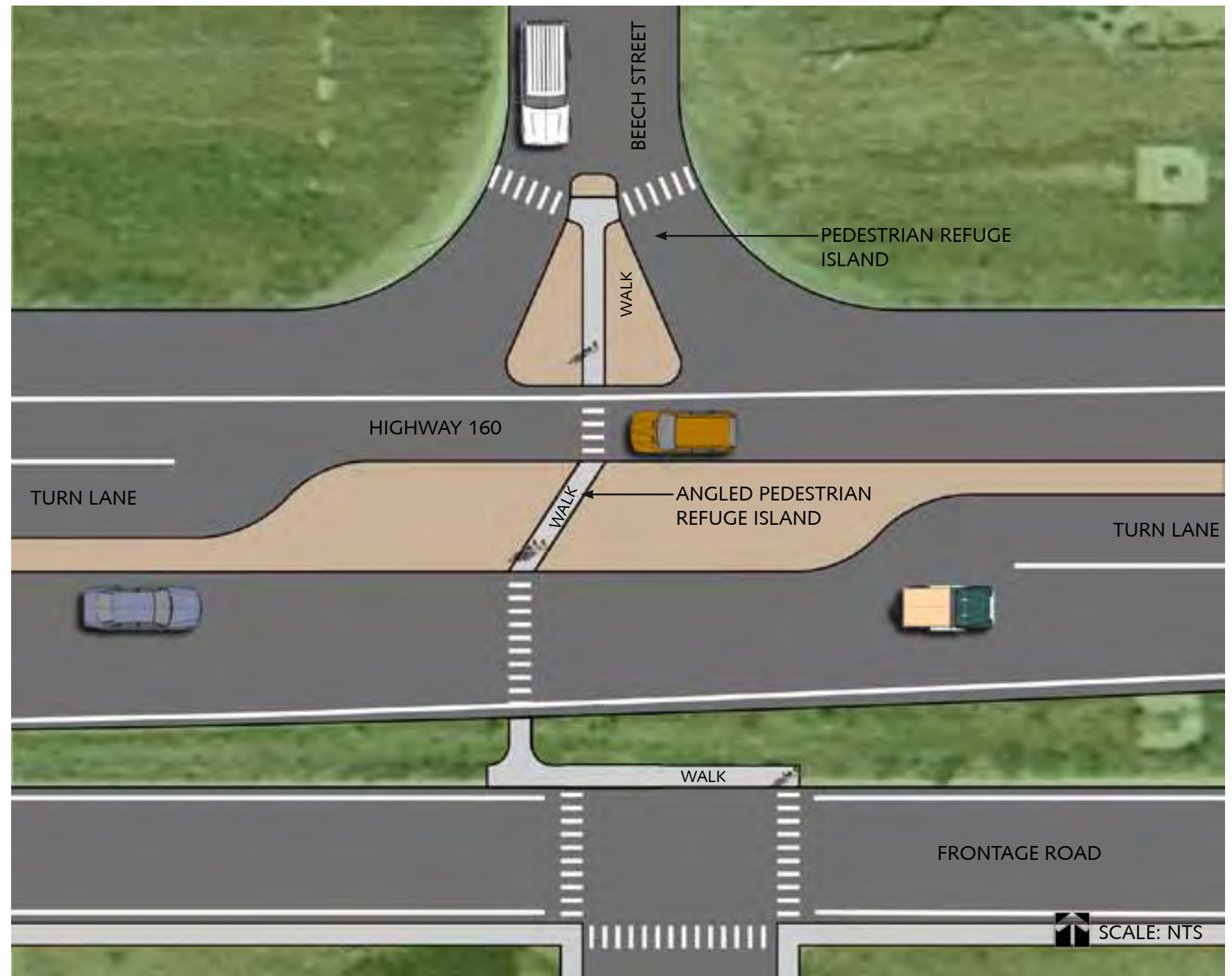
sketch of a pedestrian refuge



angled pedestrian refuge, photo from: http://safety.fhwa.dot.gov/ped_bike



existing pedestrian crossing at Highway 550/Camino del Rio in Durango



Conceptual plan of an improved pedestrian crossing on Highway 160 at Beech Street



Key Map



An area along Grand Ave where sidewalks need to be completed



Complete sidewalk along Spruce St to connect to Cottonwood Park



An example of a curb extension or bulb-out

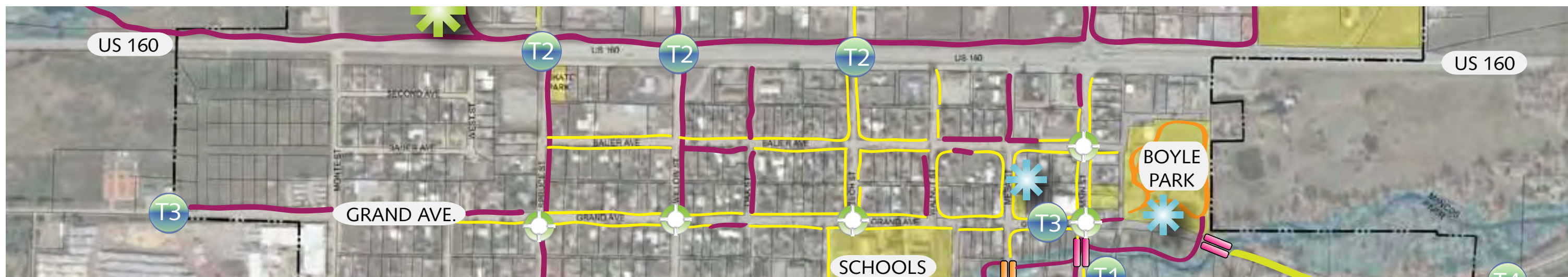
Trail Priority 3 (T3)

Downtown Sidewalk Improvements

- Grand Ave from Main St to town limits.
- Bulb-outs at Beech St, Willow St, Spruce St, and Main St along Grand Ave as well as at Main St and Bauer St
- Complete sidewalks along Willow St and Spruce St

Complete and/or improve sidewalks on Grand Avenue from Main Street to town limits. By connecting the sidewalks on Grand Avenue and Main Street, it will create a safe pedestrian route for residents to get to the downtown historic district as well as the to the schools. Wherever a sidewalk crosses a street a crosswalk should be striped and at signage added if needed.

At the intersections highlighted on the plan, bulb-outs should be built. Bulb-outs are curb extensions at the corner of the intersection lengthening the sidewalk. By creating bulb-outs, it reduces the crossing distance at the crosswalk for pedestrians. The narrower road also reduces speed of vehicles.



SCALE: NTS

Key Map

Trail Priority 4 (T4)

Safety improvements along County Road J – improve pedestrian and bicycle experience.

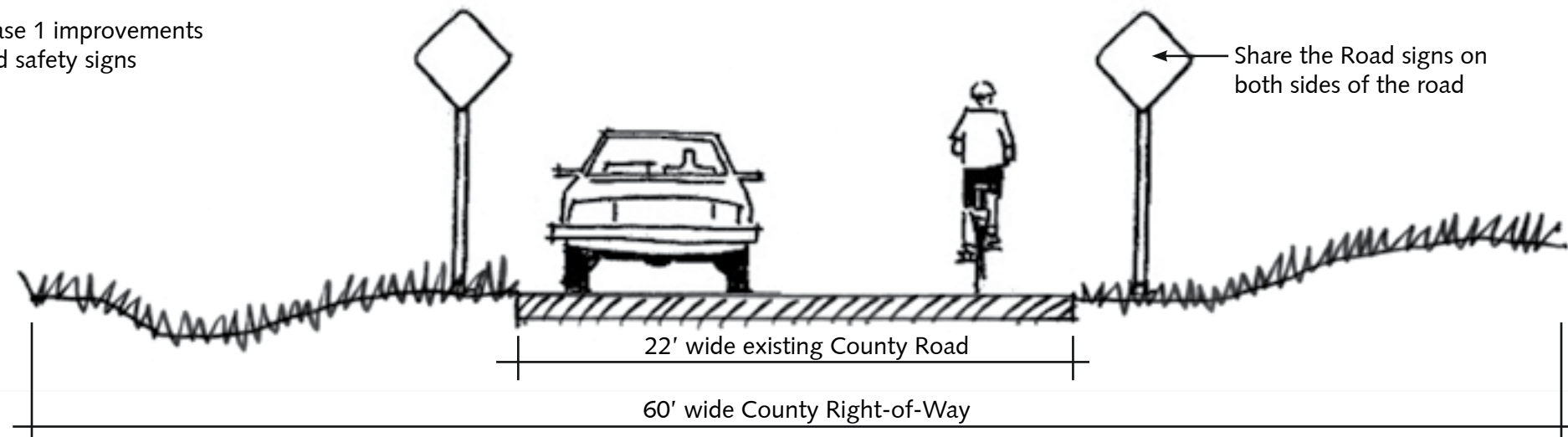
Safety enhancements should be made along County Road J to improve the pedestrian and bicycle experience. The first improvement should be to add 'share the road' yellow diamond traffic safety signs and painted symbols on the road as described in Section 2. Optimally, a shared lane is 14'-wide, not including the gutter pan if there is no parking lane and where there is not a designated bike lane.

A future phase could widen the existing county road to allow for a bike lane on at least one side. Due to existing ditches the widening of the road may be difficult in certain areas. This could be overcome by piping the ditch in some areas. A designated bike lane defined by either a solid white paint strip or painted bicycle symbols applied to the pavement to designate bicycle use. Designs are per the US Manual of Uniform Traffic Control Devices (MUTCD) and the AASHTO Guide to the Development of Bicycle Facilities.

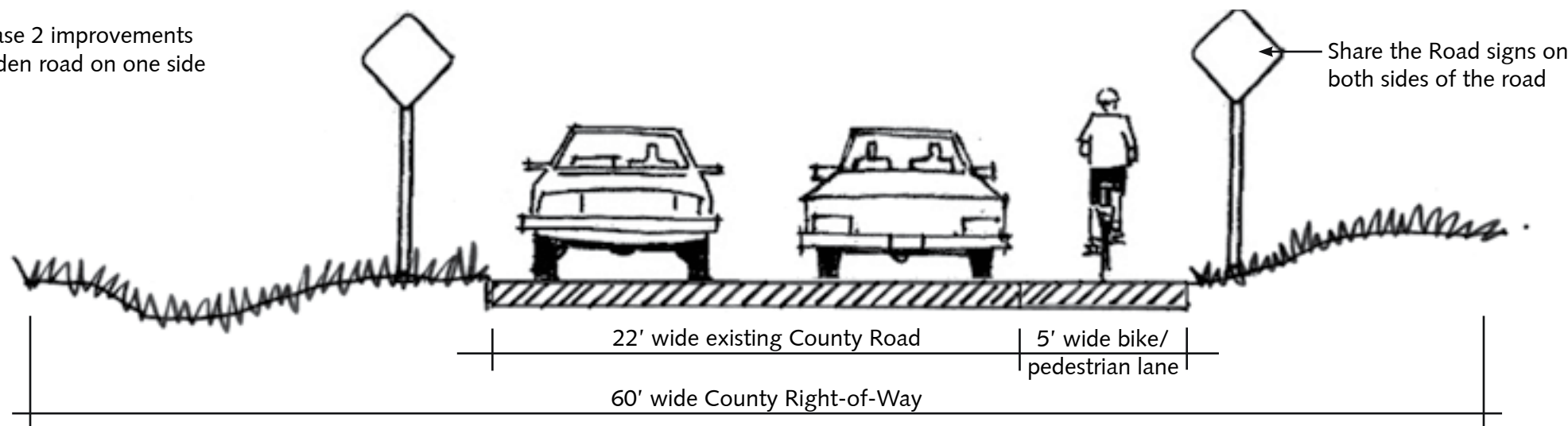


A 'share the road' symbol could be painted even if the road is not wide enough for a complete bike lane.

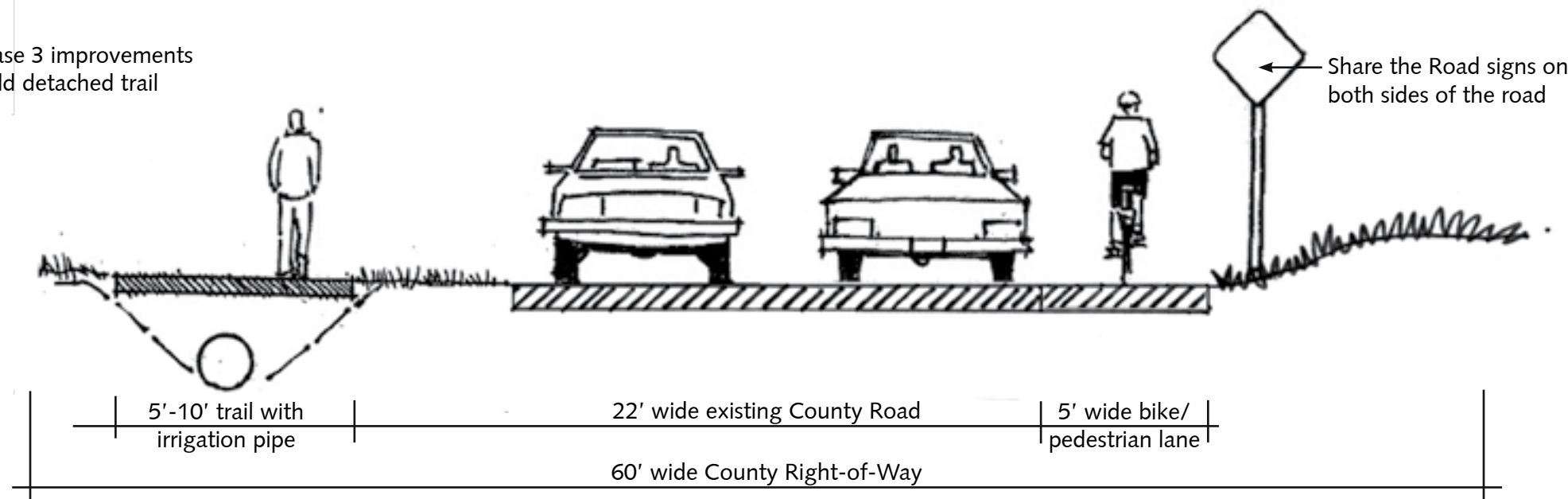
Phase 1 improvements
Add safety signs



Phase 2 improvements
Widen road on one side


















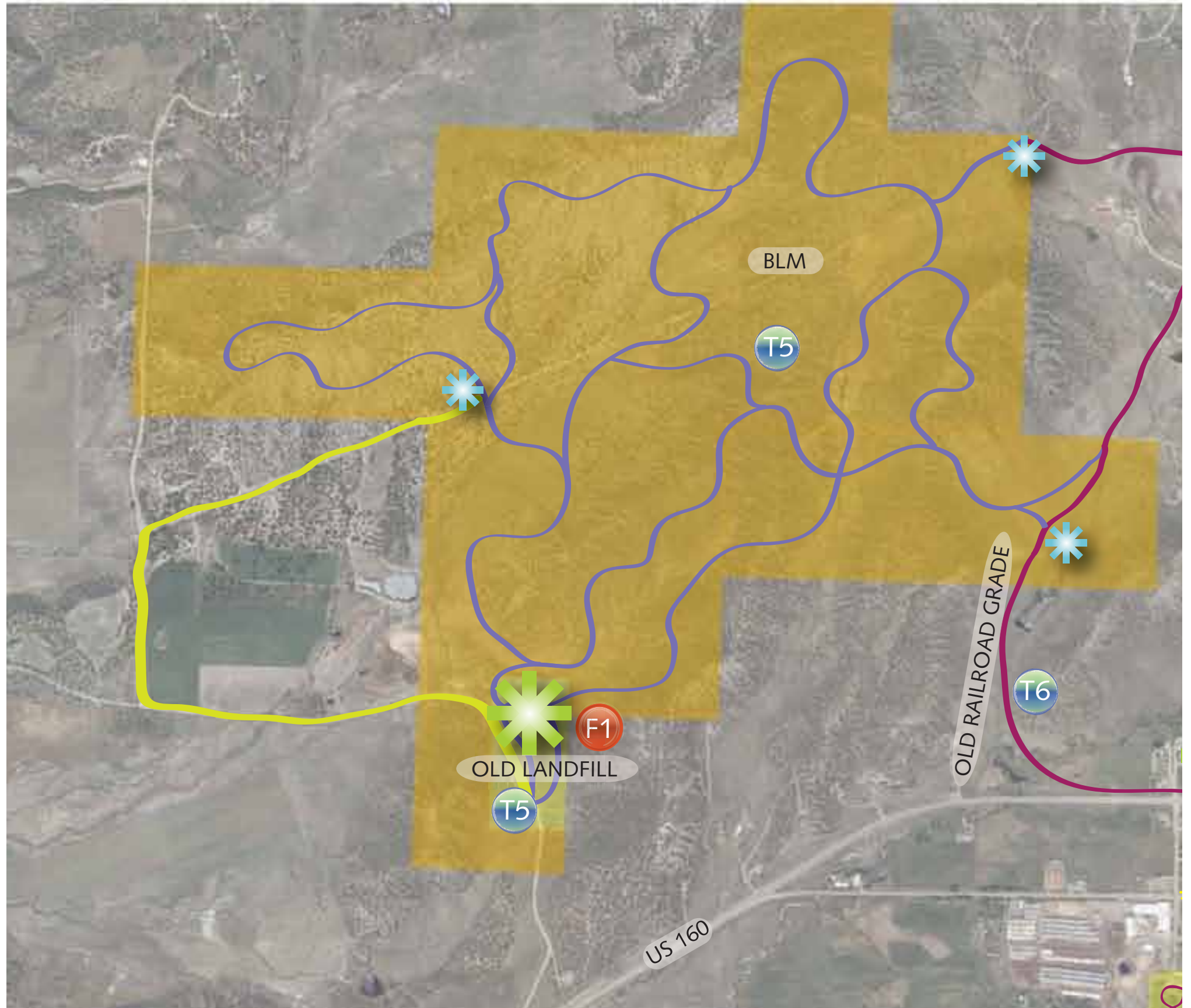
Phase 3 improvements
Build detached trail



MAP ENLARGEMENT 2

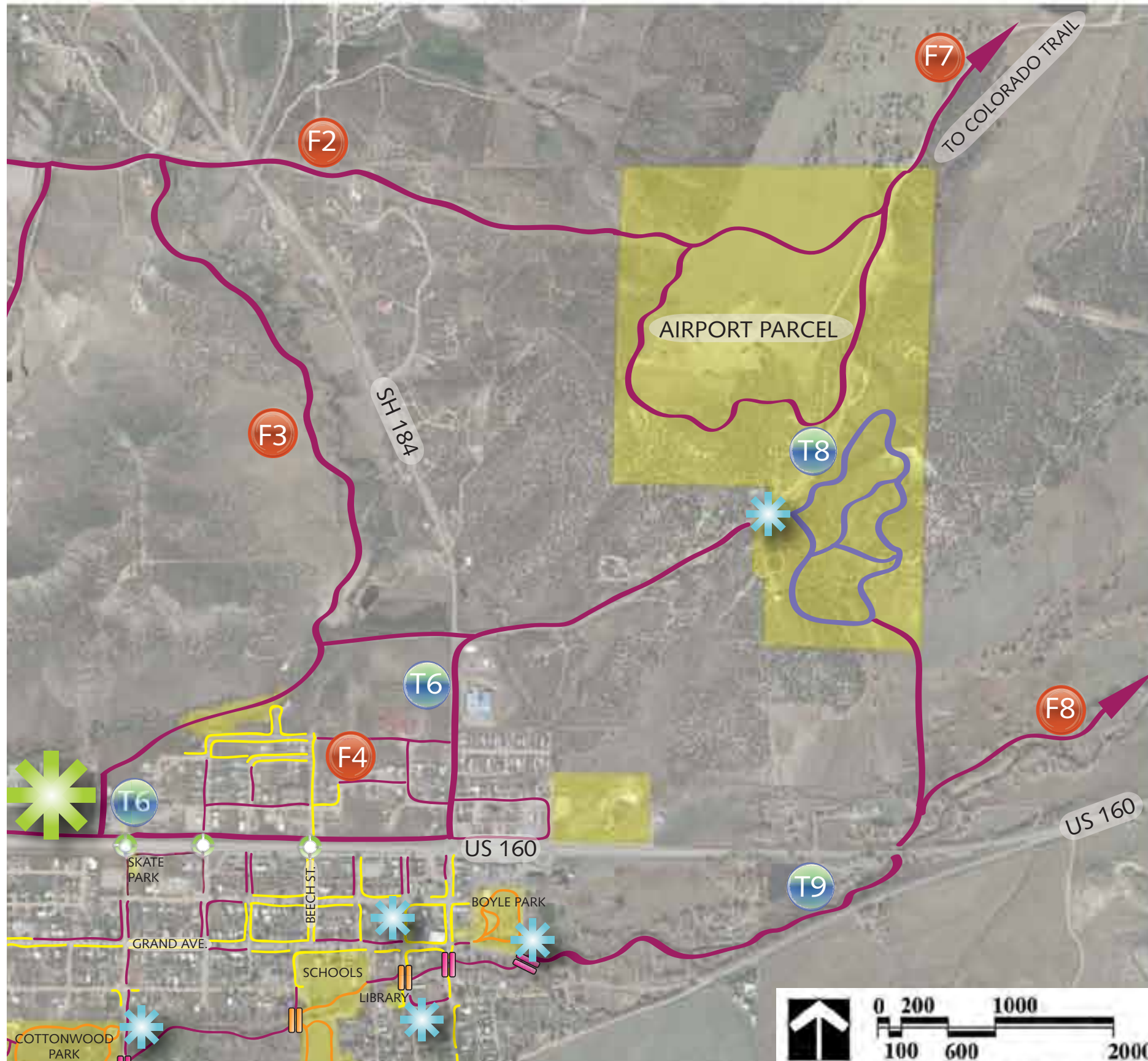
LEGEND

-  TRAIL PRIORITY
-  FUTURE OPPORTUNITY
-  TRAIL HEAD
-  WAYFINDING
-  IMPROVED PEDESTRIAN CROSSING
-  EXISTING ROAD CROSSING RIVER
-  EXISTING PEDESTRIAN CROSSING RIVER
-  EXISTING SIDEWALKS
-  EXISTING TRAIL
-  PROPOSED TRAIL
-  PROPOSED SINGLETRACK TRAIL
-  COUNTY ROAD ENHANCEMENTS
-  EXISTING FLOODPLAIN
-  TOWN OF MANCOS PROPERTY
-  FEDERAL LAND



Greater Mancos Enlargement Map

Note: Any and all routes shown on private land are subject to the property owners approval. All trails are drawn conceptually.



- T5** Trail Priority 5 (T5):
BLM trail system and trail head at old landfill site.
- T6** Trail Priority 6 (T6):
Trail along north side of US160 and downtown trail head, trail connecting to BLM land on old railroad grade, and sidewalk along Highway 184 from traffic light to County Road 42.
- T8** Trail Priority 8 (T8):
Trails at Airport property.
- T9** Trail Priority 9 (T9):
River trail connection (east) to Airport parcel.
- F1** Future Opportunity 1 (F1):
BMX course at old landfill.
- F2** Future Opportunity 2 (F2):
Connection from BLM to Airport property along gas line easement.
- F3** Future Opportunity 3 (F3):
Chicken Creek to old railroad grade loop.
- F4** Future Opportunity 4 (F4):
Complete sidewalks in neighborhood north of US160.
- F7** Future Opportunity 7 (F7):
Trail connection to the Colorado Trail.
- F8** Future Opportunity 8 (F8):
Trail connection to the eastern Montezuma County public lands





Old landfill, potential location for a trail head to access BLM land.



Phil's World trailhead



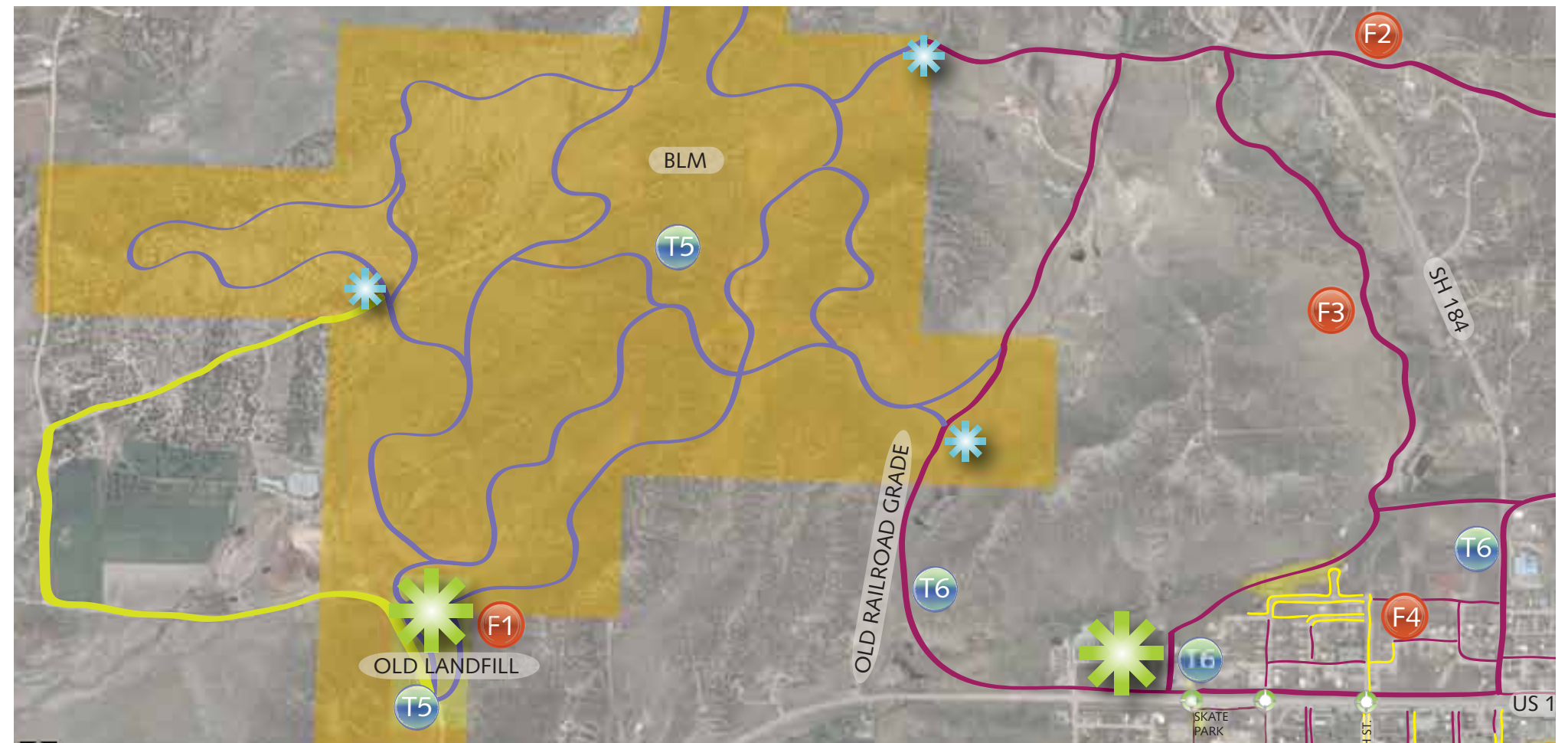
Mesa Verde aqueduct on BLM parcel

Trail Priority 5 (T5):
BLM trail system and trail head at old landfill site.

There is an amazing opportunity for recreational trails at the 800 acre BLM parcel northwest of downtown. The community has expressed interest in creating a trails network similar to Phil's World outside of Cortez. The BLM suggested that the Town formalize a request for trails because the BLM is currently working on land-use planning and travel plans. There is the potential for 8+ miles of single-track trails on the site. The old landfill that is off of County Road 41 is an ideal location for a trail head and parking lot that serves the area. A network of trails in this location could help take pressure off of Phil's World because it is closer to Durango. The trails could be accessed easily by Town residents via hiking or biking. A network of trails could also be design to accommodate equestrian trail users. It is about a mile from Town to the proposed trailhead and a 1/2 mile from Town to the SE corner of the site. Having a trail network this close to Mancos' commercial core could have a great benefit economically, attracting visitors to shops and restaurants.

Trail Priority 6 (T6):
Trail along north side of US160 and downtown trail head, trail connecting to BLM land on old railroad grade, and sidewalk along Highway 184 from traffic light to County Road 42.

If the BLM trails are built, the next logical step would be to create a trail from downtown to the site along to old railroad grade. Utilizing the old railroad grade would allow for interpretive/historic signage. A downtown trailhead should be established that is visible from Highway 160. The location would be determined based on availability of land that is off of a road that currently has access to the highway. An example of this is on the north side of the highway, on the east side of Monte St. This would provide a central trailhead for the whole Mancos Valley trail system that easily connects to downtown and the BLM parcel. Many people in the north neighborhood walk along the frontage road to get to the grocery store or to the traffic light to cross the highway. A pedestrian / bicycle / trail / sidewalk is needed to improve walkability and safety in this area of town. Another important improvement would be providing a sidewalk along Highway 184 from County Road 42 to the traffic light. This would provide a safe route for many residents to the north and east including the senior center.



SCALE: NTS

Key Map



Sidewalk needed along Highway 184 for north residents



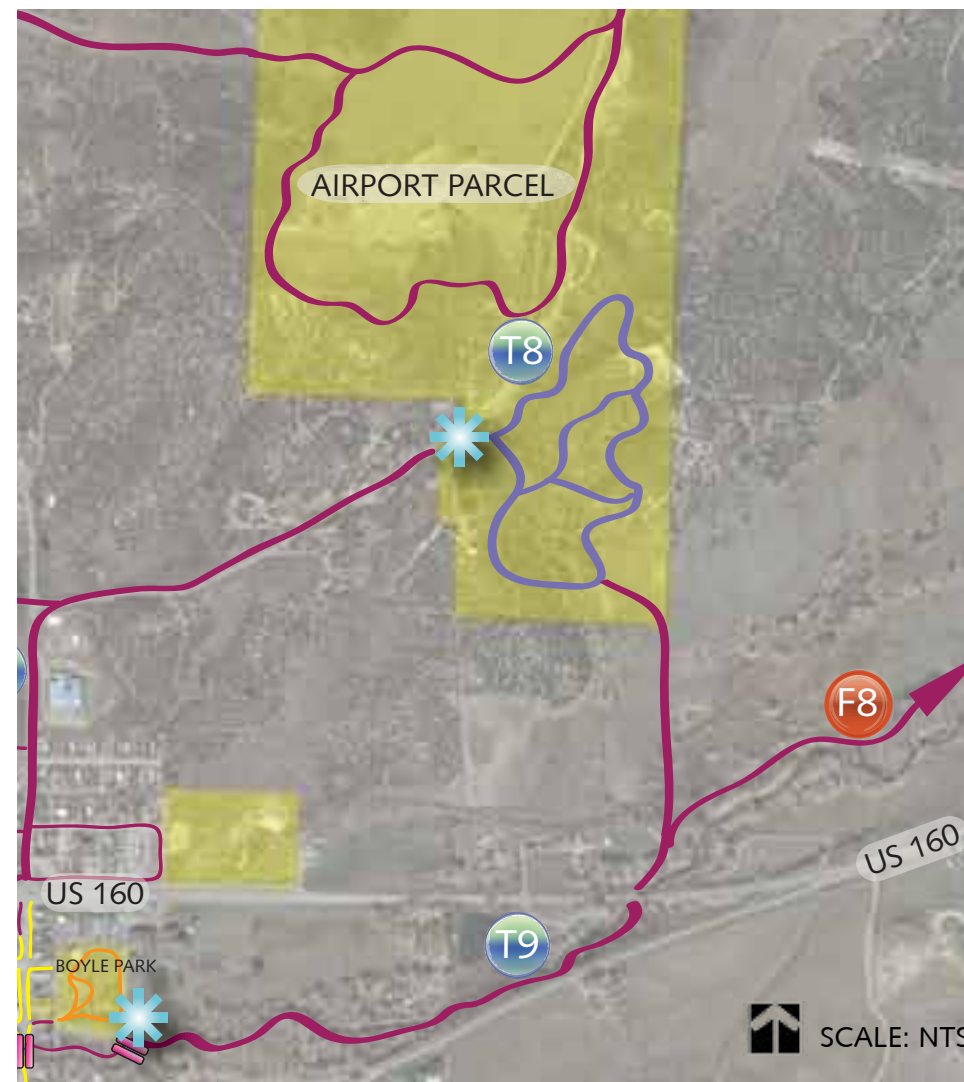
Pedestrian/bicycle facility is needed along the north side of Highway 160. The street is narrow and there is no safe place to ride or walk.



Utility corridor on north side of Highway 160, could be used for trail

**Trail Priority 8 (T8)/Trail Priority 9 (T9):
Trails at Airport property/River trail connection (east) to Airport parcel.**

The Town owns 200 acres of land known as the Airport Property because it was once home to a landing strip. Currently a portion of the property is being leased to Montezuma County for gravel extraction. This property could provide another opportunity for a variety of trails. There are steeper areas to the south that could become single track trails that may eventually be connected to downtown. The gravel pit area, whether it is kept as Town property or sold for future development should have trails incorporated into proposed plans. There is room for a trail head in this area that could serve as a starting point for heading into the Mancos State Park and West Mancos River public lands. If trails are developed on the BLM parcel and the Airport Property, these areas should be linked. A potential route would be along the gas line corridor. If these areas are connected with each other and back into downtown and the River Corridor, it would create a 5+ mile loop around the Town.



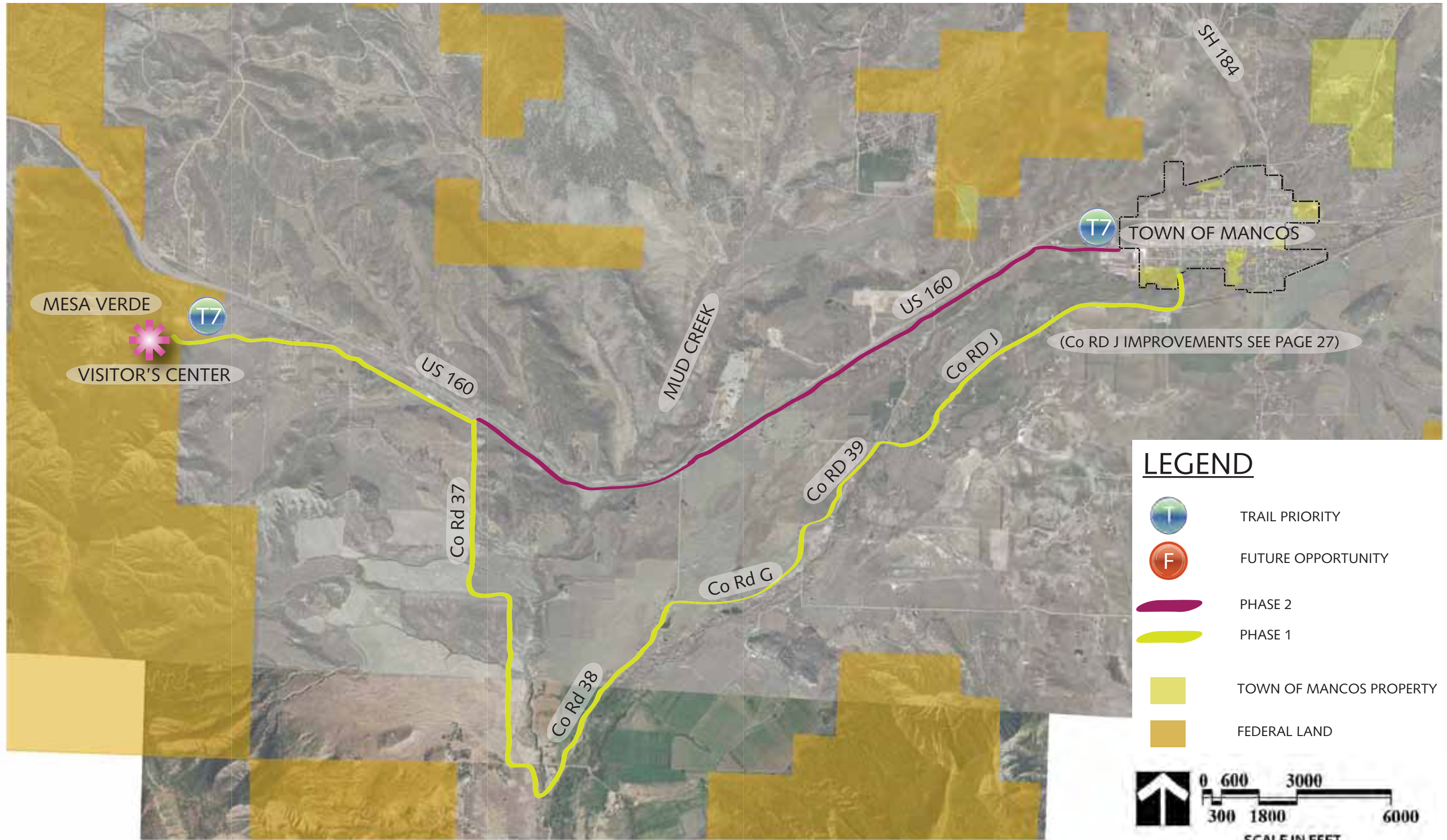
Key Map






Gravel operation on the Airport parcel.



Airport parcel looking to the south.



LEGEND

-  TRAIL PRIORITY
-  FUTURE OPPORTUNITY
-  PHASE 2
-  PHASE 1
-  TOWN OF MANCOS PROPERTY
-  FEDERAL LAND

0 600 1800 3000 6000
SCALE IN FEET

Mancos to Mesa Verde Enlargement Map
 Note: Any and all routes shown on private land are subject to the property owners approval.

T7

Trail Priority 7 (T7):
 Multi-use trail from downtown Mancos to Mesa Verde Visitor Center.
 Phase 1: Build trail in CDOT ROW to Mesa Verde where width allows and utilize County Roads to connect to the Town.
 Phase 2: Connect trail along CDOT ROW from Mesa Verde to the Town of Mancos.

The community has expressed interest in creating a trail connection from Mancos to Mesa Verde National Park. There are many positive opportunities that could come from making this connection. This could be an economic benefit to the area in the form of more visitors and overnight guests in Mancos. The logical terminus of the trail would be the new Mesa Verde Visitor's Center. People riding from Mancos to Mesa Verde could help reduce vehicular traffic in the Park. If the National Park Service were to develop a transit system that started at the new Visitor's Center, that could also help encourage the use of the trail. Having a visible multi-use trail starting in Mancos could establish the Town as a recreation and trails hub.

The initial plan would be to make the connection through public right-of-way (ROW). This direct route would be ideal for tourist visiting Mesa Verde for the day. Different routes along Highway 160 and Montezuma County roads have been explored. The CDOT ROW near downtown is fairly narrow until you hit Mud Creek, at which point it widens out to 200'+. In the short-term, County roads could be designated as a shared-use situation that would make the connection to the CDOT ROW. In the long-term, it would be ideal to have a 10' wide multi-use trail separated from roadways that would run the length of the route and in some spots may need to be outside the ROW. Interpretive signage should be incorporated whenever possible.

The distance from downtown to the Visitor's Center is approximately 6 miles. A trail of this magnitude would need to be phased in over many years. For example, the Animas River Trail in Durango now consists of 7 miles of multi-use trail that has been built over 30 years. There are numerous grants that can be applied for to complete design and construction and the fact that the trail connects to a National Park would be a big positive for raising money for this potential trail.



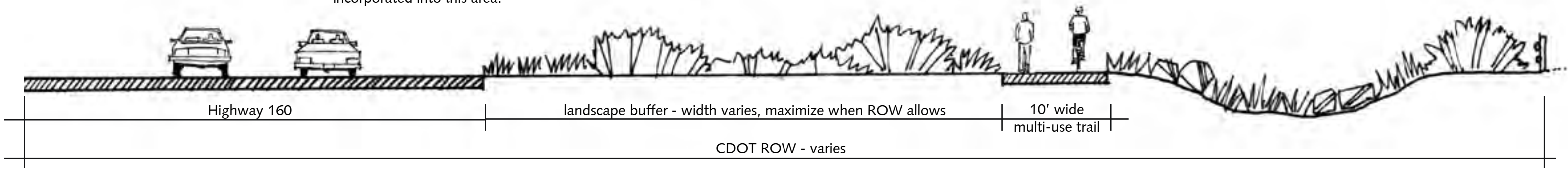
Trail in CDOT ROW near Montrose, CO

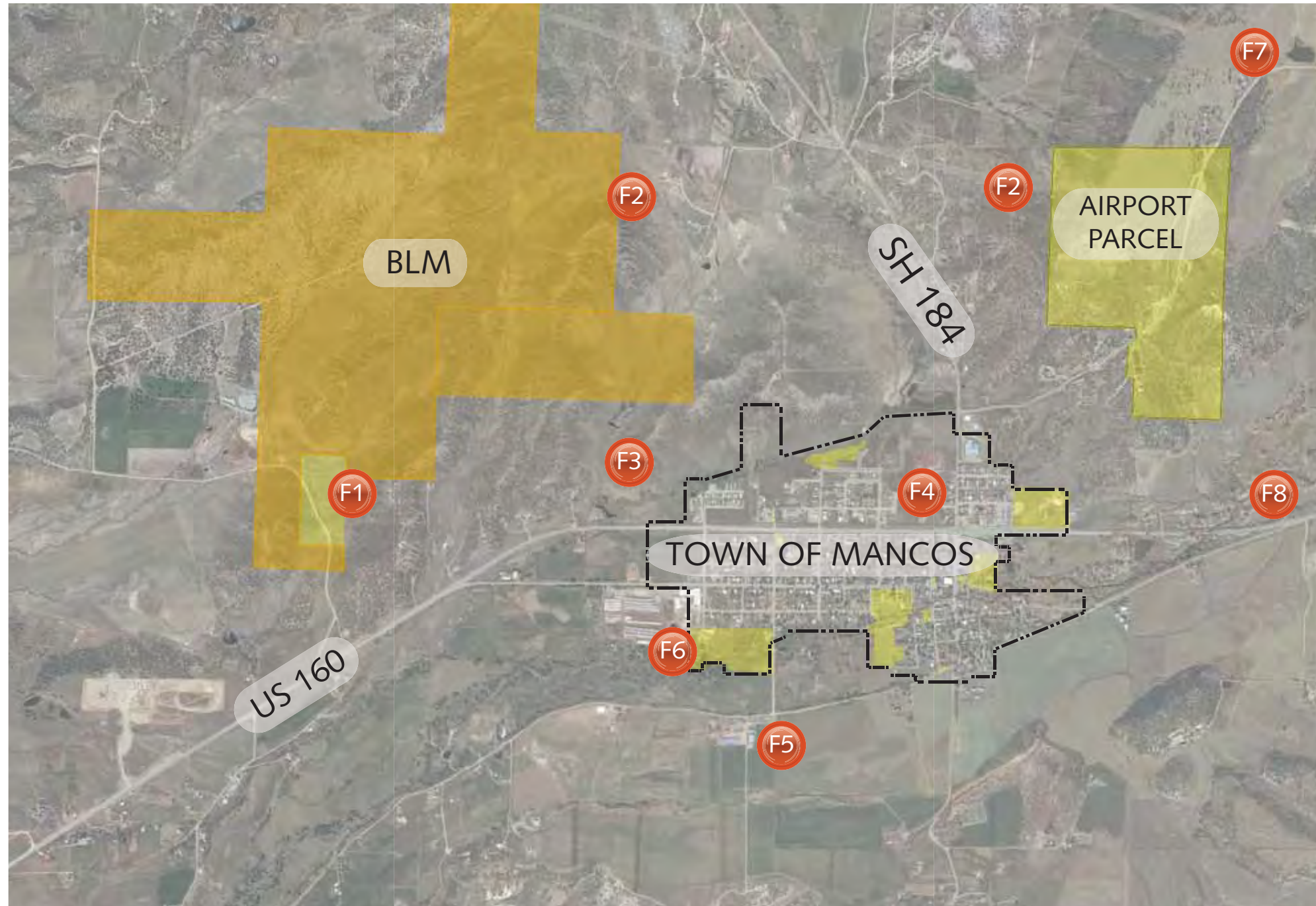


Trail in CDOT ROW - connecting Town of Ridgway to Ridgway State Park. The trail is separated from private property by fencing.



The CDOT ROW is wide to the south of Highway 160. A trail could be incorporated into this area.





Future Improvements Enlargement Map

SCALE: NTS

Future Opportunities

Future opportunities are meant to take place once all of the trail priorities (list on previous pages) have been completed.

- F1 BMX course at old landfill.
- F2 Connection from BLM to Airport property along gas line easement.
- F3 Connect Chicken Creek to old railroad grade loop.
- F4 Complete sidewalks in neighborhood north of US160.
- F5 Add safety improvements on County Roads out of town limits.
- F6 Improve Cottonwood Park, add a trail loop in at new wetlands, add platform for wildlife viewing and possibly a off-leash area.
- F7 Trail connection to the Colorado Trail.
- F8 Trail connection to the eastern Montezuma County public lands.



CHAPTER FOUR IMPLEMENTATION





photo courtesy of Jennifer Guy

Organizational Structure for Effective Implementation

The Mancos Valley Trails System will become an important asset to the Town as segments are completed. Numerous studies have shown that green infrastructure, especially trails, are vital, supporting both livability and economic development. The trails can also become the center point for a larger regional network of trails and scenic values shaping the character and quality of Mancos and Montezuma County area for generations to come.

Many leading communities in Colorado and around the nation have recognized this and have invested over the past several decades in these kinds of improvements. The elements laid out in this report also offer a vital step in expanding the existing trails that the Town has established along the river and in Boyle and Cottonwood Parks.

The success of the vision in this plan requires timely implementation of the components. Starting in 2013, and each year thereafter, a “ribbon should be cut” on logical, usable and inspiring trail segments and conservation agreements. This calls for putting in place an effective and enduring organizational structure providing leadership and strong community engagement. There will be a need to forge a cooperative effort among the parties to see all of the improvements through to completion. Skills in community advocacy, working with property owners, design, engineering, right-of-way acquisition, fund raising and overall coordination will be needed. Staff, consultants, political leaders and other champions for the project must be engaged in the process.

A key to this is having a designated entity and “point person” charged with managing the project and accomplishing completion of the project segments on time and within budget. There also needs to be a designated entity with authority to accept grants, appropriate funds, accept right-of-way conveyances, retain contractors, monitor construction and take on long-term operations and maintenance.

There are several models for accomplishing this, ranging from public agency management to private sector leadership to a public/private partnership. The Town of Mancos is fortunate to have a Planning Commission and a willingness of residents and business people to commit time and resources to completing the trail system. At this point, the community does not have an existing private entity such as a non-profit, but an upcoming task could be creating an entity or engaging an existing entity in the region to help champion the trail.

One option is a public/private partnership that could be put in place. This effort should be lead by a coalition of Town staff representatives working in coordination with the County and a citizens or “friends of the trail” group. Initially, the “friends” group could be informal, but there is value in the group evolving into an incorporated non-profit with tax-exempt status under

Section 501 (c)(3) of the U.S. Internal Revenue Code. This would allow the group to accept private donations, possibly hold conservation easements and provide other services to the effort. It is strongly recommended that the “friends” group focus strictly on completing the improvements outlined in this report—as opposed to having multiple activities and missions—until the work is largely completed.

There are a number of excellent models of this in Colorado and around the nation including: Kokopelli Bike Club in Cortez and Trails 2000 in Durango.

In this scenario, the Town and County key representatives form a “leadership council” consisting of key agency staff and elected officials to coordinate project management and development activities, each responsible for work in their respective jurisdictions. This group could be led by Project Coordinator(s) to chair the overall effort—one from the County and one from the Town. These officials lead the development process, providing staff services to pursue rights-of-way, raise funds, coordinate planning, design and construction, and otherwise oversee and lead key implementation activities. This, of course, is carried out in close cooperation with the other partnering entities—particularly the “friends” group.

In most cases, as appropriate, depending on funding sources and other considerations, the respective public agencies take on responsibility for contracting and supervising construction services and engineering. The respective jurisdictions, in cooperation with the partners and the “friends” group oversee operations and maintenance. The appropriate police, fire and rescue authorities will have responsibility for law enforcement and security along the trail and on associated properties.

At some point if the “friends” group decides to formalize its structure, this organization might decide to contract with a professional “Project Developer” who would take on leading the implementation effort. This partnering structure could evolve through an intergovernmental agreement—formal or informal—amongst the entities and in this instance the governmental entities would contribute all or part of the funding to hire development services. This model has worked quite successfully in the South Suburban example in Metro Denver and other places. Initially, however, the jurisdictions need to commit the staff and resources to manage the effort.

Regardless of the structure, it is essential that all activities be carefully coordinated through the designated lead entity and a key individual(s)—the Project Coordinator(s). This is especially important as the project involves negotiations with private property owners, applying and administering state and federal grants, public information and other activities that call for the group speaking with a singular voice.

Community Involvement

This trail plan included a key stakeholder participation process. Area residents, trail recreationalists, schools, businesses and others all have a stake in the outcome. These individuals and entities should be kept well abreast of progress on the trail in a timely manner and their input openly received and responded to. The Project Coordinators should keep a list of the contacts and regularly brief them. This might also include holding public update meetings at key junctures in the implementation process.

Rights-of-Way and Permitting

To expedite the process, and because right-of-way and permitting can be a lengthy process, right-of-way and permitting efforts should continue expeditiously. In addition to trail and conservation easements on willing private properties, right-of-way license agreements will likely be required from CDOT in certain areas. Permits including possible approvals under Sec 404 of the Clean Water Act might be required for any trail work that impacts wetlands.

Typically, easements provide the best acquisition instrument. Easements are a permanent land ownership instrument that does not include the entire property—just the right-of-way to a trail and any associated landscaping and/or conservation areas. The process will require surveying, legal descriptions, negotiation, appraisals and legal services. If outside funding is involved, such as federal transportation enhancement funds, more stringent steps may be required and must be carefully adhered to. While there are no known environmental hazards (i.e. contaminants) proper due diligence is always recommended that may include a site evaluation by a qualified environmental consultant.

Phasing and Next Steps

A conceptual cost estimate was prepared as part of this plan. Please see Appendix “B”. It is, however, a “planning level” estimate useful for initial budgeting, phasing and fund-raising. It is anticipated that design consultants will prepare more detailed cost estimates during the construction phase. Based on available funding and other considerations, it is suggested the project be divided into several phases and funds budgeted with the goal of completing a logically usable phase (which can stand on its own) each year.

Project Phasing

Phasing of projects is best guided by several criteria including:

- An immediate opportunity where a logical, usable connection can be made with current or readily available resources such as from the east side of the existing river trail to the new pedestrian bridge.
- Availability of rights-of-way and permitting.

- Availability of funding and/or grants to build and maintain improvements.
- Catalyst projects that demonstrate the value of the project, build public support and help promote further community support and fund-raising.
- Opportunity to include a trail with a current private or public development project such as a highway improvement, access road or new subdivision.
- Projects that can be completed using volunteers or in-kind labor and resources.
- Segments that offer an exceptional experience and/or are highly visible to the public.

Next Steps

There are several actions that can and should be taken immediately to initiate moving beyond this plan into concrete actions. These include:

1. Identify the key staff project coordinators to continue implementation activities.
2. Work to solidify a task force or a “friends group” to promote the trail project and build liaisons with key stakeholders such as business people, land owners, developers and public spirited citizens who might be willing to contribute to the effort.
3. Create a public information program including a Web site to keep community posted on the plans, accomplishments, volunteer activities, etc. Consider developing a trail logo and wayfinding marker.
4. Begin discussions with property owners for trail routes that are high priorities to negotiate of rights-of-way along the corridor.
5. Start work on GOCO application for completion of River Trail between the parks.
6. Coordinate with CDOT for improvements at Beech St and Highway 160.
7. Coordinate with the BLM to incorporate trail plans into their land use and travel plan.
8. Improve signage and wayfinding throughout the Town, directing visitors to amenities such as the River Trail and Town Parks.
9. All trail projects should be accompanied by river and habitat restoration where possible.
10. Review current development regulations and identify ways to improve

ordinances such as, open space and trail corridor dedications, set-back requirements along roads to leave room for trails, and incentives to promote trail and greenway benefits.

Funding Strategy

There are several potential funding sources likely to be available over the next several years. These include:

Local Appropriations

These funds come from Town and County revenues (property taxes, restaurant and lodging taxes) and other sources and appropriations. This local commitment is key to providing match money and helping leverage potential outside funding.

Create a Designated Fund

There are numerous examples of special taxes, typically a sales tax increment at the County level, dedicated to open space, trails, parks and other similar community investments. These projects have been phenomenally successful in Durango, along the Colorado Front Range, and other locations where a very small increment on sales can generate substantial funds that can be invested in infrastructure vital to the long-term health and economic well being of the community. This type of tax is especially beneficial in tourism-based places where a substantial portion of the revenue comes from outside the area such as a lodging tax. Because Mancos is a statutory Town, this strategy may be more difficult to accomplish.

Local Development

As new development comes on line a number of communities have been successful in funding trails and greenway improvements through the subdivision process. As an example, Commerce City, Colorado has been extremely successful working with developers to set aside open space corridors and build trails and parks in the developing area west of Denver International Airport. A key to this success was having a sound master plan in place. However, with the slowing of real estate development, less money is available for trail construction from these sources in the near term, though there may be opportunities for land and right-of-way designation on lands zoned for mixed use development. It should be noted that many developers want these improvements because they recognize them as essential benefits for the future marketability of their lands.

Conservation Set-Aside Tax Benefits

Under Colorado Law, landowners who agree to set aside developable lands for conservation purposes can reap substantial tax benefits directly, or cash benefits, by re-marketing the tax benefits to others in need of a state tax

deduction. The Southwest Land Alliance is an outstanding resource with a strong history of land conservation success in Archuleta County.

Individual, Philanthropic and Corporate Giving

There are several possible sources of private sector funding for trail projects. Programs and levels of sponsorship vary. These might include: gifts, grants, bequests, fund-raising events and other forms of giving. There are many ways to recognize these individuals or groups such as signage along the trail.

In-Kind and Volunteerism

There are opportunities to engage in-kind services from public agencies or private participants both in land donations and possibly use of equipment, labor or materials. This might also include youth programs, scout projects and volunteerism.



Kokopelli Bike Club working at Phil's World, photo courtesy of <http://kokopellibikeclub.blogspot.com/>

Grant Funding and Partnership Opportunities

Funding Agency: Great Outdoors Colorado (GOCO)

Grant Purpose: Grant Funding from GOCO applies a portion of the state lottery funds to preserve, protect, enhance and manage Colorado's park, wildlife, river, trails and open space heritage. The Legacy Grant in particular has the potential to provide capital improvement funding extending over several phases to help purchase, develop and manage improvements described in this plan. Trail funding from GOCO often comes through the State Trails program that also distributes funds from the U.S. Land and Water Conservation Fund and other sources.

For more information: www.goco.org

Funding Agency: Colorado State Parks

Grant Program: Land and Water Conservation Fund

Grant Purpose: Funding is available to create parks and open spaces; protect wilderness, wetlands, and refuges; preserve wildlife habitat; and enhance recreational opportunities.

For more information: <http://www.parks.state.co.us/Trails/LWCF/Pages/LWCFHome.aspx>

Funding Agency: Colorado State Parks

Grant Program: State Trails Program - Non-Motorized Trails Grant Application

Grant Purpose: The Colorado State Recreational Trails Grant Program funds projects for large recreational trail grants, small recreational trail grants, trail planning, and trail support grants.

For more information: <http://www.parks.state.co.us/Trails/Grants/Pages/Grants.aspx>

Funding Agency: Colorado Dept of Transportation (DOT)

Grant Program: Safe Routes to School Program - Bicycle and Ped K-8 Lesson Plans Mini Grant

Grant Purpose: The Colorado Department of Transportation's Safe Routes to School (SRTS) Program aims to incorporate bicycle and pedestrian lessons in core K-8 classes (math, science, history, language arts, etc.) with the goal of getting kids thinking about the benefits of walking and bicycling throughout their entire learning.

For more information: <http://www.coloradodot.info/programs/bikeped/safe-routes>

Funding Agency: Colorado Parks and Wildlife Div's (CPW)

Grant Program: Trails Program

Grant Purpose: Funding is available for trail-related projects on an annual basis.

For more information: <http://wildlife.state.co.us/SiteCollectionDocuments/DOW/Commission/2012/March/ITEM9OHVTrailsProgramGrants.pdf>

Funding Agency: Bikes Belong

Grant Program: Facility Grant Program

Grant Purpose: strives to put more people on bicycles more often by funding important and influential projects that leverage federal funding and build momentum for bicycling in communities across the U.S. Fundable projects include paved bike paths, lanes, and rail-trails as well as mountain bike trails, bike parks, BMX facilities, and large-scale bicycle advocacy initiatives.

For more information: <http://www.bikesbelong.org/grants/>

Funding Agency: Xcel Energy Foundation

Grant Program: Environment Focus Area Grant

Grant Purpose: In support of environmental education (teacher training workshops, nonprofit programs for K-12), environmental awareness (exhibits at museums and other public community-based facilities), environmental partnerships for habitat and park projects (efforts between nonprofit entities and Xcel Energy that preserve, restore, conserve and improve wildlife habitat, open lands, wet lands, parks, trail systems or recreational areas), and special projects/partnerships designed to meet the stated goal of producing environmental improvement through neighborhood cleanup and beautification efforts that provide volunteer opportunities for Xcel Energy employees and retirees.

For more information: http://www.xcelenergy.com/About_Us/Community/Foundation_Grants/Foundation_Environment_Focus_Area_Guidelines

Funding Agency: Department of Transportation

Grant Program: Paul S. Sarbanes Transit in Parks Program.

Grant Purpose: This program is administered through the BLM and provides substantial planning and construction assistance targeting projects that provide the opportunity for alternative transportation linking communities to public lands. Grant was suspended in 2012 but may come back in the future.

For more information: www.fta.dot.gov/funding/grants or www.westerntransportationinstitute.org

Funding Agency: Department of Transportation, Federal Transit Administration

Grant Program: MAP-21

Grant Purpose: MAP-21 creates a streamlined, performance-based, and multimodal program to address the many challenges facing the U.S. transportation system. These challenges include improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery. MAP-21 builds on and refines many of the highway, transit, bike, and pedestrian programs and policies established in 1991.

For more information: <http://www.fta.dot.gov/map21/>

Funding Agency: Environmental Protection Agency (EPA)

Grant Program: Wetland Program Development Grants - Region 08

Grant Purpose: To fund projects that focus on increasing the quantity and quality of wetlands in the U.S. by conserving and restoring wetland acreage and improving wetland condition. In pursuing these goals, EPA seeks to build the capacity of all levels of government to develop and refine effective, comprehensive programs for wetland protection and management.

For More Information: <http://www.epa.gov/region8/water/wetlands/grants.html>

Funding Agency: US Dept of Agriculture (USDA) - Natural Resources Conservation Service

Grant Program: Wetlands Reserve Enhancement Program

Grant Purpose: Targets and leverages resources to carry out high priority wetland protection, restoration, and enhancement activities and improve wildlife habitat. The NRCS goal is to achieve the greatest wetland functions and values, along with optimum wildlife habitat, on every acre enrolled in the program.

For More Information: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/wetlands>

Funding Agency: Natural Resources Conservation Service (NRCS)

Grant Purpose: NRCS is a federal agency administered through the U.S. Department of Agriculture. The NRCS assists landowners through conservation planning and assistance designed to benefit the soil, water, air, plants, and animals that result in productive lands and healthy ecosystems. Grants are available to assist with projects that offset impacts to the water quality and soils. Improvements that target selenium levels have particular potential to obtain grant funding.

For more information: National: www.nrcs.usda.gov, State: NRCs Colorado Environmental Quality Incentive Program (EQIP): www.co.nrcs.usda.gov

Funding Agency: U.S. Army Corps of Engineers

Grant Program: Federal Emergency Management Agency's Hazard Mitigation

Grant Purpose: Flood hazard reduction and bank stabilization.

For More Information: www.fema.gov/government/grant

Funding Agency: National Park Service

Grant Purpose: Connect trails to parks grant through the National Park Service

For more information: www.nps.gov

Funding Agency: American Trails

Grant Purpose: American Trails hosts a website with many different grant opportunities available across the United States.

For more information: <http://www.americantrails.org/resources/funding/index.html>

Contributions and in-kind services including Colorado Division of Wildlife programs such as: "Fishing is Fun"; "Watchable Wildlife"; and conservation land acquisition. The USFWS program has provided assistance in Western Colorado particularly targeting restoration of cottonwood and willow regeneration to support shrinking migrating bird habitat.

The following links target migrating birds and native fish programs:

Fish and Wildlife Service North American Wetlands Conservation Act Standard Grant Program, www.fws.gov/birdhabitat/grants/NAWCA

Fish and Wildlife Service North American Wetlands Conservation Act Small Grant Program, www.fws.gov/birdhabitat/grants/NAWCA

US Forest Service Bring Back the Natives Grant Program, www.fs.fed.us/biology/fish/

Trout Unlimited, www.tu.org

Colorado State Forest Service, csfs.colostate.edu

Operations and Maintenance Considerations

Key maintenance activities will include:

- Trail maintenance patrol and monitoring
- Snow removal as feasible and appropriate
- Trail sweeping
- Trail corridor weed and vegetation management
- Trail surface, fixture and furnishings routine repair
- Watering trees and landscape materials
- Application of fertilizer and pest management
- Litter and debris removal
- Remedial repair of improvements such as fixing washouts, erosion
- Public safety and rescue patrol, enforcement and emergency services

Annual operations and maintenance costs are estimated to run between \$2,500 and \$8,000 per mile depending on the level of improvement and maintenance. Maintenance of the on-road/backroads network would be next to nil assuming the road agencies continue to maintain the roads for vehicular use. Volunteers may be able to adopt sections of the trail and provide some support maintenance such as litter pick up and upkeep of wayfinding signs and other improvements not requiring heavy equipment or special skills. The partners may choose to each maintain their respective segments or may plan to cooperatively pool maintenance resources and management through working agreements.

Resources:

Mancos Comprehensive Plan 2011



APPENDIX



- A. Meeting Notes
- B. Cost Estimates
- C. Environmental Summary





Appendix A: Meeting Notes

The following are meeting notes from the Advisory Group, Community, and Focus Group Meetings.

Advisory Committee Meeting #1, Wednesday, June 20, 2012

Advisory Committee

Lee-Ann Hill, Kim Round, Craig Paschal, John Ninnemann, Brian Kimmel, Holly Rankin, Tom Yennerell, Tom Yoder, Jennifer Guy, Jim Justice, Chip Tuthill

General Notes and Discussion Items

The first set of meetings is intended to be an introduction of the master plan team and an information gathering session. The intent for this process is to summarize community input into a master plan report.

Would all trails need to be ADA accessible?

Yes, that would be the intent. There may be some areas that are limited by natural features.

Width and grades?

This will be explored as routes are developed.

Other municipalities use a combination of ADA guidelines and ASHTO standards.

Is cost an issue?

As we go further in the process we will do cost estimates and get public input on priorities, phasing, and funding opportunities.

Key Connections:

- 1st Parks, Boyle to Cottonwood
- 2nd to BLM parcel
- 3rd to Mesa Verde National Park (MVNP)

Funding

Are there tax benefits for donating land? Like Conservation Easements? Yes, we can add general info about this into the master plan report.

Can GOCO grants buy land?

Yes there is a grant that can be used to acquire land.

Next Meetings

- Planning Commission is July 18
- 2nd Advisory Committee: Thursday, July 26 at 5pm
- 2nd Public Meeting: Tuesday, July 31 at 6pm

Are there limitations to trails in CDOT Right-of-Ways?

- Tom thinks CDOT would be a positive partner
- DHM to contact CDOT about future trail in easement

Connections to MVNP

- New 160
- Old 160
- County Roads

On any new developments get trail easements

BLM parcel

- No official trails
- Horses and ATVs use it
- Trailhead could be at old landfill
- Kim Round will look into using aqueduct on BLM land
- The landfill is capped

There was a discussion about goals for the master plan and some questions were asked to the group for input. An example would be: Goal- to have a publicly supported plan that can be used to acquire future funding for the implementation of trails.

What do you want to change/improve?

- School trail is too short
- Can't access a lot of public land
- More loops/connections
- J Road loop
- 160B loop
- Any loop needs second 160 crossing (Willow or Spruce)
- Sidewalks/ Frontage road could be used for connections in gaps
- Focus on River corridor
- Clean up river (i.e. concrete, tire, etc.)
- Off-leash area for dog owners
- Sewage ponds on west Cottonwood Park could be an opportunity for wetlands
- Old bridge in Cottonwood out of place
- Bird viewing area
- Large utility easement (30' wide) and south of nursing home
- Potentially there will be a 4 way intersection that aligns with CR 42
- Trails in drainages or floodplain where it is not feasible to build a structure
- Trail along road; fenceline
- Look at self contained trails on BLM (short term); long term – connect BLM to town
- Connection 1st Avenue by track

- A lot of use on track in winter
- Library is an important connection point
- Signage needed
- Education – solar, river, walks ecology
- Biggest obstacle = Highway 160
- Could go under or over the highway
- There is a big culvert under Highway 160 for Chicken Creek
- To get crossing from CDOT there would need to be 11 people per hour crossing.
- Cross Highway 160 at Spruce

Community Committee Meeting #1, Wednesday, June 20, 2012

The Community Meeting started with a brief presentation of the proposed public process for the master plan. The input from the Advisory Group meeting was presented, discussed, and augmented. Finally the attendees were split into three groups to draw their input on maps. The groups were asked to document existing trail/walking routes and potential future trail routes in town. The groups were also asked to map out future regional connections. DHM will input this information onto plans that will be reviewed and discussed at the next Community Meeting in July.

Goals

What do you treasure about existing trails?

- Shady
- Close to river
- Exercise at track
- Walking through Cottonwood Park
- Nice place to sit and relax
- Quiet

Connections

- Start at downtown core and work outward
- Boyle to Cottonwood
- Cross 160 to make a loop
- Important for kids to get around
 - To school/friend's house
 - Across highway
- Issue: CDOT speed limit – 2nd crossing could be dangerous (need to meet w/CDOT)
- Suggested to go to CDOT with a request
- Create pocket park by Mancos Times
- Always connect to river; utilize new pedestrian bridge
- Cross river at Spruce

- Main Street bridge is narrow

Regional Connections

- Mesa Verde Visitor Center
- MVNP starting a transportation plan
 - Great opportunity
 - Bike racks on shuttles – at other parks
- Old railroad grade to Cherry Creek, easy mountain biking
- Connect to W. Mancos Colorado Trail
- BLM land by old landfill
 - A lot of tourists visiting MVNP bring their bikes, stay another day in Mancos to ride bikes on Phil's World-like trail
 - Attract all abilities
- Chicken Creek – Cross country skiing and biking
 - Mancos Mush

Trail Users

- Hike/bike (tour/road, mountain, town/cruisers)
- Equine
- Dog walkers
- Cross country ski
- Herders
- Specific rides for area, example: Grand Junction's Ride the Vineyards
- Maps to visitors
- Kids getting around safely
- BLM could be "shared" use

Concerns

- Funding?
 - GOCO grants can buy land
 - County has easement on Road J only
- Dog poop bags on Road J
- Maintenance
 - Liability
 - Cost per lf of trail
- Connect non-profits
 - Like Trails 2000
 - Backcountry Horsemen
 - Kokopelli
- Liability insurance would be similar to parks
- Would any surfaces affect insurances?
- ADA accessibility to MVNP
 - Use pedestrian bridges/culverts
- May not be a CR row on J Road, affect signs?
- Look at traffic calming on J Road

- Would grants cover trail maps?
- Trails should be accessibly 12 months/year
- Sidewalks are unusable in the winter because they are not maintained

Advisory Committee Meeting Notes, July, 26th, 2012

ADVISORY COMMITTEE

Lee-Ann Hill, Kim Round, (Craig Paschal), John Ninnemann, (Brian Kimmel), Holly Rankin, Tom Yennerell, Tom Yoder, Jennifer Guy, Jim Justice, (Chip Tuthill). (not in attendance)

General Notes and Discussion Items

Meeting began with review of "Guiding Principles"

- Discussed organizing in a hierarchy, prioritizing key principles.
- Identified similar principles that could be combined into a single stated principle.
- Distributed list to committee for further review and thoughts if more principles are needed.

General discussions included:

Pedestrian conflicts with Western Excelsior tractor trailers on Grand Avenue an issue. Manager is receptive to calls and comments from community, however left-hand turn on business route an issue. Another possible option is to contact CDOT regarding improving access at west intersection of Grand Ave & US160.

General condition and maintenance of existing sidewalks on Grande Ave an issue. Heaving is prevalent and snow-removal by community is inconsistent. Several possible strategies discussed:

- If new sidewalks are built, would require widening to 5' for ADA compliance, which could require trees to be removed.
- Could extend walks toward road centerline, reducing width of street travel lanes which also serves as a traffic calming device.
- Alternative materials discussed, possible crusher fines walk with added stabilizers are ADA compliant but could require increased maintenance and difficult snow removal.

It was concluded that sidewalks should be considered part of the overall trail system in town.

Trail Priorities DHM listed were reviewed and discussed:

Trail Priority #1- Connect Boyle Park to Cottonwood Park along river

- Consensus on priority, raised safety concerns along section of river. Fence may be needed, proximity to property owners may aide safety for users.

Trail Priority #2 - Improved pedestrian crossing at Beech & Spruce Street and pedestrian signal at Willow Street and US160

- Beech St is #1 priority, with proximity to schools and central location to community north of US160. Look into designing pedestrian refuge in center lane of US160, possible pedestrian activated crossing signal.
- Spruce St 2nd priority, same strategies as above for Beech St. Traffic light at Willow 3rd Priority.

Additional Trail Priorities and Future Opportunities reviewed and discussed. Consensus reached on current list ready for public meeting and input.

Other discussion topics included:

Safety improvements on county roads for bicyclers and pedestrians, different strategies reviewed.

Current GIS maps show property lines right up to county roads. DHM discussed with Doug Roth (county GIS manager), his opinion is, based on how long roads have existed, a 60' ROW is acceptable and need to work with owners on a case-by-case basis as needed.

Downtown Trailhead locations discussed, possible at city-owned lot by Chicken Creek, with connection to BLM land via utility easement under existing power lines.

BLM Land: Should initiate conversation with them to lay groundwork for trail system.

- BLM might have done archeology survey on site
- Trails may cross existing aqueduct however, may not follow line due to safety issues.
- Connection from town to BLM via old Railroad grade ideal, look at Chicken Creek crossing for existing bridge. Opportunity for historic connection and interpretive education.

Trail to Mesa Verde: good to start conversation with public and gain interest and momentum with groups that could assist with project later on.

Top of Mancos Hill trail on old railroad grade, has existing gas line corridor at property fence line and Target Tree campground connection. Great flora and fauna viewing opportunities exist.



Grant opportunities discussed, Safe Routes, Preserve America, and Great Outdoors Colorado all potential funding sources.

Overall Strategy: Town should make strategic connections with trail system that can have high impact on uses/safety/livability that will also serve as precedents for further funding acquisition efforts.

DHM Meeting with CDOT Notes, 7.31.2012

DHM met with Rick Routh from CDOT in Mancos; discussed pedestrian crossings along US160 at Beech & Willow Streets, as well as trail from Mancos to Mesa Verde.

For a pedestrian signal on US160, documenting 22 travelers crossing at respective street in any one-hour period will warrant a light. Options may include:

- Pedestrian activated crossing with Rectangular Rapid Flashing Beacon. Town would need to pay \$11k-\$14k, CDOT would install.
- School zone crossing with Flashing Beacon and '25mph/fines doubled' sign during morning and after school times.
- Pedestrian Refuge at Beech St feasible with long left-turn lane on US160 for SH184. Could shorten turning lane and use 10-15' as refuge for peds.

Trail to Mesa Verde Discussion:

DHM drove along US160 with Rick to look at options for trail alignment in CDOT ROW. The width of ROW leaving Mancos heading west is narrow, which may not allow room for the trail. Also, in the ROW, the presence of wetlands and steeper topography will further complicate the alignment. Another consideration is trail cannot run along (over) utility lines, it can cross (fiber optics example) but not follow. Also need to protect existing drainage ditches, avoid inadvertently creating a dam. West of the Mud Creek drainage area however, the ROW becomes wider and may provide room for the trail. On the south side, several drainage ditches will need to be crossed with bridges or Texas crossings etc. Discussed using existing County Roads to get from Mancos to the CDOT ROW west of Mud Creek. Rick recommended a study on Average Daily Traffic (ADT) on County Roads for funding assistance for safety improvements.

Rick cited the MAP 21 Bill passed by Congress for road funding. The program consolidated 90 programs to 30, with joint overlapping of the City, County and National Parks. He recommends presenting a rough draft of proposed

trail alignment, with historic/interpretive/educational components along the way, which will help it "float to the top of the heap" for grants and funding.

Community Workshop #2 Meeting Notes, 7.31.2012

DHM presented draft of proposed trail connections and priorities and the guiding principles for the plan, based on input from the initial community meeting and the two advisory committee meetings.

Trail Priority List (updated) and Future Opportunities identified:

Trail Priorities

1. Connect Boyle Park to Cottonwood Park along Mancos River.
2. Improved pedestrian crossing at Beech and Spruce Street and pedestrian signal at Willow Street and US160.
3. Complete or improve sidewalks on Grand Avenue from Main Street to town limits.
4. Safety improvements along County Road J – improve pedestrian and bicycle experience.
5. BLM trail system and trail head at old landfill site.
6. Trail along north side of US160 and downtown trail head.
7. Multi-use trail from downtown Mancos to Mesa Verde Visitor Center.
8. Trails at Airport property.
9. River trail connection (east) to Airport property.
10. Trail connection to the Colorado Trail.

Future Opportunities

1. BMX course at old landfill.
2. Connection from BLM to Airport property along gas line easement.
3. Chicken Creek to old railroad grade loop.
4. Complete sidewalks in neighborhood north of US160.
5. Safety improvements on County Roads out of town limits; complete the 'south loop'.
6. Additional trail loops in Cottonwood Park at new wetlands.

The town identified #1 priority (Connect Boyle Park to Cottonwood Park along Mancos River) for its overall connection of both parks to the schools and access to the river.

The next priorities focus on safety improvements, walkability improvements and pedestrian crossings at US160 for safety and increased connectivity within the town limits.

Additional priorities look to recreation amenities as well as tourist attractions and economic growth.

Public commented on trail priority #7 – improving safety on County Road J

should be moved to #3 or #4 in priorities. (reflected in updated list above).

Additionally, public would like to see a trail head and way-finding signs in downtown, a possible location could be in the existing parking lot by the old jail structure.

"Phil's World" idea for the BLM land north of town well received, citing it could become a great tourism opportunity for Mancos and could spark economic development in town.

Airport Parcel gravel operation discussed, stating the town gets 1500 CY from the County annually, which the town typically uses for streets. Could be a potential for use for construction of trails.

DHM told attendees to spread the word about the different avenues for community to provide input:

www.mancostrails.com / call DHM directly – 970.385.4219 / mail DHM - 1309 E 3rd Ave. Room 11, Durango, CO 81301 / email: wchristensen@dhdurango.com (Walker) / email: knelson@dhdurango.com (Katie)

Focus Group Meeting with BLM, August 13th, 2012

Jeff Christenson (BLM) Tom (BLM), Brent (Kokopelli), Danni (Kokopelli), Walker Christensen (DHM), Tom Yennerell (Town of Mancos)

General Notes and Discussion Items:

The purpose of the meeting was to discuss the 800+/- acre parcel of BLM land northwest of Mancos. During the public process for the Mancos Trails Master Plan that parcel has been targeted as potential for recreation trails.

- Currently that parcel is classified as "open".
- The BLM is going to be working on a land-use plan and a Travel Management Plan for this region, so this is a good time for the Town to make a request for potential use of that parcel.
- Kokopelli was encouraged to see the possibilities and said they could potentially be a partner and suggested that Trails 2000 might be a partner too.
- The trail could help take pressure off of Phil's World.
- A natural and cultural resources survey would need to be completed, if there has not already been one, before trails could be built.
- The BLM said this could be a good use for this type of parcel and said it was ok to include it in the master plan. Any trails would need to go through BLM approval process and even though it is in the master plan it does not guarantee that it could be built.
- Need to consider different user groups.
- At Phil's World directional use has been very successful in improving safety. Also, it is recommended to create as stacked loop system, or cloverleaf

system that provides a variety of distances and level of difficulties for trail users. Look into IMBA recommendations.

Focus Group Meeting with Montezuma County, August 14th, 2012

Dean Roundtree (Montezuma County), Walker Christensen (DHM), Tom Yennerell (Town of Mancos)

General Notes and Discussion Items

The purpose of the meeting was to discuss the progress and the Trails Master Plan, especially in regards to use of County Roads. A trail to Mesa Verde from Mancos has been suggested at public meetings. A portion of the trail could be in CDOT ROW and a portion of the trail may need to use County Roads as a bike route.

- The ROW for County Roads can be complicated. The County claims 60' ROW but maps show some property lines going to the center of the roads. County Commissioners may come up with a policy at some point to clarify.
- The County would prefer for the short term that any routes proposed along County roads be kept on the roadway. Signage and painting share the road symbols could be possible if they had outside funding.
- Any trail improvements along the roads in the long term would need outside funding as well.
- If a trail could be funded that included widening the road and adding bike lane striping it wouldn't change the County's maintenance significantly.
- If a detached trail was ever proposed in the long term, it would need to be maintained by someone other than the County.
- Traffic counts are available on the County's website. Road J is a major pedestrian route in Mancos. The County may be able to provide us with recent traffic counts.
- County recommended giving the Commissioners an update/introduction to the Mancos Trails Master Plan.

Advisory Committee Meeting Notes, September 11th, 2012

Kim Round, Craig Paschal, Holly Rankin, Tom Yennerell, Tom Yoder, Jennifer Guy, Jim Justice, Marianne Griffin, Reneata Collins, Katie Feeney, Walker Christensen

General Notes and Discussion Items

- Check through document for trail vs. trails.
- Add San Juan National Forest to the Cherry Creek Road/Madden Peak heading.
- Remove herders from trail users as this would not be a target group for the trails, i.e. the River Trail through Town.
- Make sure trail access gates are wide enough to accommodate wheel

chairs. Pg 15

- Add map enlargement box for trail to Mesa Verde on page 18.
- On the west side of Cottonwood Park, don't show trails but incorporate a wildlife viewing blind or a couple of platforms.
- Add a note to incorporate pedestrian facilities, such as an underpass, when the Main St. bridge is replaced in the future.
- Add a key map to each page that shows the trail priorities.
- The cross walk through the pedestrian refuge island should be angled so that pedestrians can see and be more aware of oncoming traffic. Pg 23
- Add a note that trails on the BLM parcel and Airport parcel are conceptual and would need to be designed/located in the field. Show and label old railroad grade. Show a trail connecting SH 184 with Chicken Creek. Pgs 26-27
- Add more text about historic railroad on trail priority #6. Pg 29
- The "ideal" route for the trail to Mesa Verde was discussed. There were two schools of thought. One was that the route along Highway 160 was the most direct and would benefit tourists who had limited time. The second was that the County Roads are much more scenic and it would be a better experience to be away from traffic. It was concluded that both routes had merit and could actually create a loop that provides flexibility of experience for users. The section between Mud Creek and the new Visitor's Center was determined to be the first phase because the CDOT ROW is wider there and County roads could be used as the interim bike route from Town to the trail. Future phases would be completing a multi-use trail from Mud Creek to Mancos. This area of the CDOT ROW is narrower, so the trail may need to be outside of the ROW on easements through private land. This makes this section more complex and more of a long-term goal to complete.
- Take out ARRA grant on page 36, this is expired. Leave Sarbanes grant in, it will expire this year but could be reinstated in the future.
- Trail maintenance costs were discussed. From other projects it is estimated to be between \$2,500 - \$8,000 a mile. The 8k is for multi-use trails that are plowed in the winter. Soft surface trails, such as the River Trail, would be on the lower end, closer to \$2,500. Almost all of the single track trails in Durango are maintained by volunteers of Trails 2000. The City does maintain the Animas River Trail. As new trails are proposed and built it is imperative that the Town or a volunteer group is committed to the maintenance.

Community Workshop #3 Meeting Notes, September 11th, 2012

Attending: Kim Round, Allen and Linda Farnsworth, Marianne Griffin, Rachael Simbeck, Tom Yoder, Chip Tuthill, Jeanne Archambeault, Jennifer Guy, Jim Justice, Holly Rankin, Walker Christensen, Katie Feeney, Tom Yennerell

DHM presented a summary of the draft Trails Master Plan document.

- There were comments about not allowing motorcycles at the BLM parcel. Some neighbors thought that the area was too fragile for motorized use. Right now the area is classified as "open" so the BLM has very few restrictions on it. If the BLM allowed trails to be developed there would be a public process and many environmental clearances that would need to be obtained.
- Different trail users should be considered on the BLM parcel. Mountain bikes and equestrian use should be separated. This could be accomplished by different user loops or by designated use times.

General Recommendations were discussed as the first steps toward implementation, they include the following:

1. Form a trails task force or "friends" group that will keep the momentum from the master plan.
2. Begin discussions with property owners for trail routes that are high priorities.
3. Start work on GOCO application for completion of River Trail between the parks.
4. Coordinate with CDOT for improvements at Beech St and Highway 160.
5. Coordinate with the BLM to incorporate trail plans into their land use and travel plan.
6. Improve signage and wayfinding throughout the Town, directing visitors to amenities such as the River Trail and Town Parks.
7. All trail projects should be accompanied by river and habitat restoration where possible.
8. Review current development regulations and identify ways to improve code.

The final draft of the report will be posted on the website soon. The final meeting will be in October with the Board of Trustees.

DHM told attendees to spread the word about the different avenues for community to provide input:

www.mancostrails.com / call DHM directly – 970.385.4219 / mail DHM - 1309 E 3rd Ave. Room 11, Durango, CO 81301 / email: wchristensen@dhm-durango.com (Walker) / email: knelson@dhmdurango.com (Katie)



Appendix B: Cost Estimates

Preliminary Cost Estimate

T1: Connect Boyle Park to Cottonwood Park along Mancos River

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$4,000.00	\$4,000.00	
Revegetation/ Seeding	40,000	SF	\$0.08	\$3,200.00	
Clearing and Grubbing	2	AC	\$2,000.00	\$4,000.00	
Grading Allowance	1	LS	\$30,000.00	\$30,000.00	
Surveying Allowance	1	LS	\$10,000.00	\$10,000.00	
Wetland Mapping/Mitigation/Boardwalks	1	LS	\$50,000.00	\$50,000.00	
Trails (Proposed)					
5' Wide Concrete Sidewalk	130	LF	\$25.00	\$3,250.00	walks on bridge
5' Wide Gravel or Crusher Fines Trail	3,855	LF	\$10.00	\$38,550.00	
Retaining Walls	100	LF	\$75.00	\$7,500.00	
Concrete Ramps	8	EA	\$1,500.00	\$12,000.00	
Street Crossings - crosswalk striping	3	EA	\$1,200.00	\$3,600.00	
Pedestrian Rail	130	LF	\$150.00	\$19,500.00	at Main Street Bridge
Fence along private property	1,660	LF	\$25.00	\$41,500.00	at west end
Site Furniture					
Trash Receptacle	5	EA	\$525.00	\$2,625.00	
6' Bench	10	EA	\$750.00	\$7,500.00	
Concrete Pad at Rest Area	500	SF	\$7.00	\$3,500.00	
Pet Station	5	EA	\$500.00	\$2,500.00	
Signage Allowance (Directional/Wayfinding)	1	LS	\$7,500.00	\$7,500.00	
Onstreet bike signage/ wayfinding	200	LF	\$4.00	\$800.00	
Trail gates/ Vehicle Restriction at Entry Points	10	EA	\$1,200.00	\$12,000.00	
				SUBTOTAL	\$263,525.00
				5% Mobilization/ general conditions	\$13,176.25
				20% contingency	\$52,705.00
				10% design/engineering/administration	\$26,352.50
				PROJECT TOTAL	\$355,758.75

Note: Preliminary estimates do not include cost for easements or land acquisition.

Preliminary Cost Estimate

T2a: Improved pedestrian crossing at Beech Street and US160.

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$10,000.00	\$10,000.00	
Revegetation/ Seeding	5,000	SF	\$0.08	\$400.00	
Clearing and Grubbing	0.2	AC	\$2,000.00	\$400.00	
Grading Allowance	1	LS	\$30,000.00	\$30,000.00	
Surveying Allowance	1	LS	\$10,000.00	\$10,000.00	
Trails (Proposed)					
5' Wide Concrete Sidewalk	145	LF	\$25.00	\$3,625.00	
Concrete Ramps	14	EA	\$1,500.00	\$21,000.00	
Concrete Curb	500	LF	\$25.00	\$12,500.00	
Median Paving at Pedestrian Refuge	4,500	SF	\$15.00	\$67,500.00	
Street Crossings - crosswalk striping	7	EA	\$1,200.00	\$8,400.00	
				SUBTOTAL	\$163,825.00
				5% Mobilization/ general conditions	\$8,191.25
				20% contingency	\$32,765.00
				10% design/engineering/administration	\$16,382.50
				PROJECT TOTAL	\$221,163.75

Note: Preliminary estimates do not include cost for easements or land acquisition.

Preliminary Cost Estimate

T2b: Improved pedestrian crossing at Spruce Street and US160.

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$10,000.00	\$10,000.00	
Revegetation/ Seeding	5,000	SF	\$0.08	\$400.00	
Clearing and Grubbing	0.2	AC	\$2,000.00	\$400.00	
Grading Allowance	1	LS	\$30,000.00	\$30,000.00	
Surveying Allowance	1	LS	\$10,000.00	\$10,000.00	
Trails (Proposed)					
5' Wide Concrete Sidewalk	145	LF	\$25.00	\$3,625.00	
Concrete Ramps	14	EA	\$1,500.00	\$21,000.00	
Concrete Curb	500	LF	\$25.00	\$12,500.00	
Median Paving at Pedestrian Refuge	4,500	SF	\$15.00	\$67,500.00	
Street Crossings - crosswalk striping	7	EA	\$1,200.00	\$8,400.00	
				SUBTOTAL	\$163,825.00
				5% Mobilization/ general conditions	\$8,191.25
				20% contingency	\$32,765.00
				10% design/engineering/administration	\$16,382.50
				PROJECT TOTAL	\$221,163.75

Note: Preliminary estimates do not include cost for easements or land acquisition.

Preliminary Cost Estimate

T2c: Add pedestrian signal at Willow Street and US160.

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$10,000.00	\$10,000.00	
Revegetation/ Seeding	5,000	SF	\$0.08	\$400.00	
Clearing and Grubbing	0.2	AC	\$2,000.00	\$400.00	
Grading Allowance	1	LS	\$30,000.00	\$30,000.00	
Surveying Allowance	1	LS	\$10,000.00	\$10,000.00	
Trails (Proposed)					
Concrete Ramps	4	EA	\$1,500.00	\$6,000.00	
Flashing Street Crossings - Highway	2	EA	\$7,000.00	\$14,000.00	
Street Crossings - crosswalk striping	4	EA	\$1,200.00	\$4,800.00	
SUBTOTAL				\$75,600.00	
				5% Mobilization/ general conditions	\$3,780.00
				20% contingency	\$15,120.00
				10% design/engineering/administration	\$7,560.00
PROJECT TOTAL				\$102,060.00	

Note: Preliminary estimates do not include cost for easements or land acquisition.

Preliminary Cost Estimate

T3: Complete or improve sidewalks on Grand Avenue from Main Street to town limits.

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$4,000.00	\$4,000.00	
Revegetation/ Seeding	10,000	SF	\$0.08	\$800.00	
Clearing and Grubbing	1	AC	\$2,000.00	\$2,000.00	
Grading Allowance	1	LS	\$30,000.00	\$30,000.00	
Surveying Allowance	1	LS	\$10,000.00	\$10,000.00	
Trails (Proposed)					
5' Wide Concrete Sidewalk (Grand Ave)	4,800	LF	\$25.00	\$120,000.00	
5' Wide Concrete Sidewalk (Spruce St)	1,050	LF	\$25.00	\$26,250.00	
5' Wide Concrete Sidewalk (Willow St)	1,050	LF	\$25.00	\$26,250.00	
Concrete Ramps	40	EA	\$1,500.00	\$60,000.00	
Concrete Curb at Bulb-outs	1,360	LF	\$25.00	\$34,000.00	85 LF PER BULBOUT
Concrete Paving at Bulb-outs	8,000	SF	\$15.00	\$120,000.00	500 SF PER BULBOUT
Street Crossings - crosswalk striping	20	EA	\$1,200.00	\$24,000.00	
SUBTOTAL				\$457,300.00	
				5% Mobilization/ general conditions	\$22,865.00
				20% contingency	\$91,460.00
				10% design/engineering/administration	\$45,730.00
PROJECT TOTAL				\$617,355.00	

Note: Preliminary estimates do not include cost for easements or land acquisition.

Preliminary Cost Estimate

T4: Safety improvements along County Road J – improve pedestrian and bicycle experience.

Phase 1: Add signage

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$4,000.00	\$4,000.00	
Site Furniture					
Pet Station	5	EA	\$500.00	\$2,500.00	
Signage Allowance (Directional/Wayfinding)	1	LS	\$5,000.00	\$5,000.00	
Onstreet bike signage/wayfinding/mile markers	1	LS	\$25,000.00	\$25,000.00	
SUBTOTAL				\$36,500.00	
				5% Mobilization/ general conditions	\$1,825.00
				20% contingency	\$7,300.00
				10% design/engineering/administration	\$3,650.00
PHASE 1 TOTAL				\$49,275.00	

Note: Preliminary estimates do not include cost for easements or land acquisition.

Preliminary Cost Estimate

T4: Safety improvements along County Road J – improve pedestrian and bicycle experience.

Phase 2: Widen County Road for bike lane

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$10,000.00	\$10,000.00	
Revegetation/ Seeding	50,000	SF	\$0.08	\$4,000.00	
Clearing and Grubbing	1	AC	\$2,000.00	\$2,000.00	
Grading Allowance	1	LS	\$50,000.00	\$50,000.00	
Surveying Allowance	1	LS	\$10,000.00	\$10,000.00	
Trails (Proposed)					
5' Wide Asphalt Trail	23,024	LF	\$20.00	\$460,480.00	widen County Road one 1 side
Retaining Walls	100	LF	\$75.00	\$7,500.00	
Drainage Structures	1	LS	\$30,000.00	\$30,000.00	
Site Furniture					
Trash Receptacle	5	EA	\$525.00	\$2,625.00	
6' Bench	2	EA	\$750.00	\$1,500.00	
Concrete Pad at Rest Area (overlook)	500	SF	\$4.00	\$2,000.00	
SUBTOTAL				\$580,105.00	
				5% Mobilization/ general conditions	\$29,005.25
				20% contingency	\$116,021.00
				10% design/engineering/administration	\$58,010.50
PHASE 2 TOTAL				\$783,141.75	

Note: Preliminary estimates do not include cost for easements or land acquisition.



Preliminary Cost Estimate

T4: Safety improvements along County Road J – improve pedestrian and bicycle experience.

Phase 3: Detached Trail

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$10,000.00	\$10,000.00	
Revegetation/ Seeding	100,000	SF	\$0.08	\$8,000.00	
Clearing and Grubbing	5	AC	\$2,000.00	\$10,000.00	
Grading Allowance	1	LS	\$100,000.00	\$100,000.00	
Surveying Allowance	1	LS	\$10,000.00	\$10,000.00	

Trails (Proposed)					
5' Wide Concrete Sidewalk	23,024	LF	\$25.00	\$575,600.00	detached concrete trail
Retaining Walls	500	LF	\$75.00	\$37,500.00	
Concrete Ramps	10	EA	\$1,500.00	\$15,000.00	
Street Crossings - crosswalk striping	8	EA	\$1,200.00	\$9,600.00	
Drainage Structure	1	LS	\$50,000.00	\$50,000.00	

Site Furniture				
Signage Allowance (Directional/Wayfinding)	1	LS	\$5,000.00	\$5,000.00
Trail gates/ Vehicle Restriction at Entry Points	4	EA	\$1,200.00	\$4,800.00

SUBTOTAL	\$835,500.00
5% Mobilization/ general conditions	\$41,775.00
20% contingency	\$167,100.00
10% design/engineering/administration	\$83,550.00
PHASE 2 TOTAL	\$1,127,925.00

Note: Preliminary estimates do not include cost for easements or land acquisition.

Preliminary Cost Estimate

T5: BLM trail system and trail head at old landfill site.

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$4,000.00	\$4,000.00	
Revegetation/ Seeding	314,400	SF	\$0.08	\$25,152.00	
Clearing and Grubbing	7	AC	\$2,000.00	\$14,000.00	
Grading Allowance	1	LS	\$30,000.00	\$30,000.00	
Surveying Allowance	1	LS	\$10,000.00	\$10,000.00	

Trails (Proposed)					
5' Wide Gravel or Crusher Fines Trail	5,280	LF	\$10.00	\$52,800.00	ADA accessible loop trail
3' Wide Single Track Trail	31,440	LF	\$1.00	\$31,440.00	assume installed by Kokopelli or Trails 2000
Drainage Structure	1	LS	\$10,000.00	\$10,000.00	
Parking Lot/Trailhead (10-30 cars)	15,000	SF	\$5.00	\$75,000.00	assume 30 cars spaces

Site Furniture				
Trash Receptacle	2	EA	\$525.00	\$1,050.00
6' Bench	6	EA	\$750.00	\$4,500.00
Concrete Pad at Rest Area	500	SF	\$4.00	\$2,000.00
Pet Station	2	EA	\$500.00	\$1,000.00
Signage Allowance (Directional/Wayfinding)	1	LS	\$7,500.00	\$7,500.00
Trail gates/ Vehicle Restriction at Entry Points	2	EA	\$1,200.00	\$2,400.00

SUBTOTAL	\$270,842.00
5% Mobilization/ general conditions	\$13,542.10
20% contingency	\$54,168.40
10% design/engineering/administration	\$27,084.20
PROJECT TOTAL	\$365,636.70

Note: Preliminary estimates do not include cost for easements or land acquisition.

Assume mostly volunteer work for laying out trails.

Preliminary Cost Estimate

T6: Trail along north side of US160 and downtown trail head, trail connecting to BLM land on old railroad grade, and sidewalk along Hwy 184 from traffic light to County Road 42.

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$4,000.00	\$4,000.00	
Revegetation/ Seeding	50,000	SF	\$0.08	\$4,000.00	
Clearing and Grubbing	2	AC	\$2,000.00	\$4,000.00	
Grading Allowance	1	LS	\$30,000.00	\$30,000.00	
Surveying Allowance	1	LS	\$10,000.00	\$10,000.00	

Trails (Proposed)					
5' Wide Concrete Sidewalk	6,320	LF	\$25.00	\$158,000.00	
5' Wide Gravel or Crusher Fines Trail	2,385	LF	\$10.00	\$23,850.00	railroad spur
Concrete Ramps	10	EA	\$1,500.00	\$15,000.00	
Street Crossings - crosswalk striping	6	EA	\$1,200.00	\$7,200.00	
Drainage Structure	1	LS	\$5,000.00	\$5,000.00	
Parking Lot/Trailhead	15,000	SF	\$5.00	\$75,000.00	assume 30 cars spaces

Site Furniture				
Trash Receptacle	2	EA	\$525.00	\$1,050.00
6' Bench	2	EA	\$750.00	\$1,500.00
Pet Station	2	EA	\$500.00	\$1,000.00
Signage Allowance (Directional/Wayfinding)	1	LS	\$7,500.00	\$7,500.00
Onstreet bike signage/ wayfinding	9,000	LF	\$4.00	\$36,000.00
Trail gates/ Vehicle Restriction at Entry Points	2	EA	\$1,200.00	\$2,400.00

SUBTOTAL	\$385,500.00
5% Mobilization/ general conditions	\$19,275.00
20% contingency	\$77,100.00
10% design/engineering/administration	\$38,550.00

PROJECT TOTAL	\$520,425.00
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Note: Preliminary estimates do not include cost for easements or land acquisition.



Preliminary Cost Estimate

T7: Multi-use trail from downtown Mancos to Mesa Verde Visitor Center.

Phase 1: Mud Creek to Mesa Verde National Park and signs and striping on County Road

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$20,000.00	\$20,000.00	
Revegetation/ Seeding	300,000	SF	\$0.08	\$24,000.00	
Clearing and Grubbing	10	AC	\$2,000.00	\$20,000.00	
Grading Allowance	1	LS	\$100,000.00	\$100,000.00	
Surveying Allowance	1	LS	\$20,000.00	\$20,000.00	

Trails (Proposed)

10' Wide Concrete Trail	10,000	LF	\$50.00	\$500,000.00	
5' Wide Asphalt Trail	31,000	LF	\$20.00	\$620,000.00	widen County Road one 1 side
Retaining Walls	100	LF	\$75.00	\$7,500.00	
Concrete Ramps	4	EA	\$1,500.00	\$6,000.00	
Prefab Pedestrian Bridge with abutments	1	LS	\$60,000.00	\$60,000.00	
Guardrail	5,000	LF	\$50.00	\$250,000.00	
Drainage Structure	1	LS	\$50,000.00	\$50,000.00	

Site Furniture

Trash Receptacle	10	EA	\$525.00	\$5,250.00	
6' Bench	5	EA	\$750.00	\$3,750.00	
Concrete Pad at Rest Area	1,000	SF	\$4.00	\$4,000.00	
Pet Station	10	EA	\$500.00	\$5,000.00	
Signage Allowance (Directional/Wayfinding)	1	LS	\$12,000.00	\$12,000.00	
Onstreet bike signage/ wayfinding	1	LS	\$75,000.00	\$75,000.00	along County Roads
Trail gates/ Vehicle Restriction at Entry Points	2	EA	\$1,200.00	\$2,400.00	

SUBTOTAL \$1,784,900.00

5% Mobilization/ general conditions \$89,245.00
 20% contingency \$356,980.00
 10% design/engineering/administration \$178,490.00

PROJECT TOTAL \$2,409,615.00

Note: Preliminary estimates do not include cost for easements or land acquisition.

Preliminary Cost Estimate

T7: Multi-use trail from downtown Mancos to Mesa Verde Visitor Center.

Phase 2: Multi-use trail from Mud Creek to Mancos

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$20,000.00	\$20,000.00	
Revegetation/ Seeding	240,000	SF	\$0.08	\$19,200.00	
Clearing and Grubbing	10	AC	\$2,000.00	\$20,000.00	
Grading Allowance	1	LS	\$50,000.00	\$50,000.00	
Surveying Allowance	1	LS	\$10,000.00	\$10,000.00	

Trails (Proposed)

10' Wide Concrete Trail	24,000	LF	\$50.00	\$1,200,000.00	
Retaining Walls	100	LF	\$75.00	\$7,500.00	
Concrete Ramps	4	EA	\$1,500.00	\$6,000.00	
Prefab Pedestrian Bridge with abutments	1	LS	\$60,000.00	\$60,000.00	
Guardrail	5,000	LF	\$50.00	\$250,000.00	
Drainage Structure	1	LS	\$50,000.00	\$50,000.00	

Site Furniture

Trash Receptacle	10	EA	\$525.00	\$5,250.00	
6' Bench	5	EA	\$750.00	\$3,750.00	
Pet Station	10	EA	\$500.00	\$5,000.00	
Signage Allowance (Directional/Wayfinding)	1	LS	\$12,000.00	\$12,000.00	
Onstreet bike signage/ wayfinding	1	LS	\$50,000.00	\$50,000.00	
Trail gates/ Vehicle Restriction at Entry Points	2	EA	\$1,200.00	\$2,400.00	

SUBTOTAL \$1,771,100.00

5% Mobilization/ general conditions \$88,555.00
 20% contingency \$354,220.00
 10% design/engineering/administration \$177,110.00

PROJECT TOTAL \$2,302,430.00

Note: Preliminary estimates do not include cost for easements or land acquisition.

Preliminary Cost Estimate

T8: Trails at Airport property.

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$4,000.00	\$4,000.00	
Revegetation/ Seeding	50,000	SF	\$0.08	\$4,000.00	
Clearing and Grubbing	5	AC	\$2,000.00	\$10,000.00	
Grading Allowance	1	LS	\$30,000.00	\$30,000.00	
Surveying Allowance	1	LS	\$10,000.00	\$10,000.00	

Trails (Proposed)

5' Wide Gravel or Crusher Fines Trail	7,000	LF	\$10.00	\$70,000.00	loop around gravel pit to be ADA accessible
3' Wide Single Track Trail	12,000	LF	\$1.00	\$12,000.00	assume installed by Kokopelli or Trails 2000
Parking Lot/Trailhead	10,000	SF	\$5.00	\$50,000.00	

Site Furniture

Trash Receptacle	2	EA	\$525.00	\$1,050.00	
6' Bench	2	EA	\$750.00	\$1,500.00	
Pet Station	2	EA	\$500.00	\$1,000.00	
Signage Allowance (Directional/Wayfinding)	1	LS	\$7,500.00	\$7,500.00	
Onstreet bike signage/ wayfinding	1	LS	\$20,000.00	\$20,000.00	
Trail gates/ Vehicle Restriction at Entry Points	4	EA	\$1,200.00	\$4,800.00	

SUBTOTAL \$225,850.00

5% Mobilization/ general conditions \$11,292.50
 20% contingency \$45,170.00
 10% design/engineering/administration \$22,585.00

PROJECT TOTAL \$304,897.50

Note: Preliminary estimates do not include cost for easements or land acquisition.



Preliminary Cost Estimate

T9: River trail connection (east) to Airport property.

Site Preparation	Qty.	Unit	Unit Cost	Total	Notes
Traffic Control	1	LS	\$4,000.00	\$4,000.00	
Grading Allowance	1	LS	\$30,000.00	\$30,000.00	
Surveying Allowance	1	LS	\$10,000.00	\$10,000.00	
Trails (Proposed)					
5' Wide Gravel or Crusher Fines Trail	5,603	LF	\$10.00	\$56,030.00	
Retaining Walls	200	LF	\$75.00	\$15,000.00	
Prefab Pedestrian Bridge with abutments	1	LS	\$150,000.00	\$150,000.00	
Site Furniture					
Signage Allowance (Directional/Wayfinding)	1	LS	\$7,500.00	\$7,500.00	
Trail gates/ Vehicle Restriction at Entry Points	2	EA	\$1,200.00	\$2,400.00	
			SUBTOTAL	\$274,930.00	
			5% Mobilization/ general conditions	\$13,746.50	
			20% contingency	\$54,986.00	
			10% design/engineering/administration	\$27,493.00	
			PROJECT TOTAL	\$371,155.50	

Note: Preliminary estimates do not include cost for easements or land acquisition.

Assume use of existing box culvert at highway underpass.



Appendix C: Environmental Summary

TOWN OF MANCOS COMMUNITY TRAILS PLANNING PROJECT PLANNING PROCESS OUTLINE

SME Environmental Inc. has prepared this outline on behalf of DHM Design for the Town of Mancos Community Trails Planning Project. The outline provides a basic description of the environmental review process required to permit any future trails. The review process is organized by agency nexus based on environmental laws, land ownership, and funding associations. In addition, a very cursory identification of potential limiting factors is included.

1 BASIC PROCESS - INDEPENDANTLY FUNDED ACTIONS ON PRIVATE/TOWN LANDS

- 1.1 Acquire ROW/Land Owner Agreement as needed.
- 1.2 Colorado Discharge Permit System (CDPS) compliance.
Would involve maintaining BMPs and a Storm Water Management Plan for interrelated/inter-dependant disturbances over 1 acre.
- 1.3 Comply with other environmental laws as appropriate (Clean Water Act, Endangered Species Act, National Historic Preservation Act, etc.)

2 ADDITIONAL PROCESSES - STATE AND FEDERAL AGENCY PROCESSES

- 2.1 Resource Nexus
 - 2.1.1 US Army Corps of Engineers Permit
Applies where Waters of the US (i.e., stream, pond, ditch, wetland) may be impacted. Would require tasks to comply with Endangered Species Act and National Historic Preservation Act.
- 2.2 Property Nexus
 - 2.2.1 CDOT Right of Way
CDOT 128 Form (NEPA Categorical Exclusion) - Stream-lined environmental review to investigate effects to resources including endangered species, migratory birds, Water of the US, CDPS, archaeology, hazardous materials, weeds, noise, and paleontology.
 - 2.2.2 BLM Lands
NEPA Compliance – Prepare comprehensive environmental analysis document (EA) to address effects to all potentially impacted resources on BLM lands. May require public mailings and meetings, review/comment periods, and an appeals period. Final decision on trail alternatives on BLM lands would be made by the BLM. Analysis would require definition of specific trail routes.
 - 2.2.3 Forest Service Lands
NEPA compliance similar to BLM.
- 2.3 Funding Nexus
 - 2.3.1 GOCO Funding
Demonstrate consideration of environmental effects in planning, show mitigation/alternatives where necessary to avoid impacts. Demonstrate compliance with applicable environmental laws.

- 2.3.2 FHWA Funding
CDOT 128 Form (NEPA Categorical Exclusion).

3 FACTORS AFFECTING ROUTE SELECTION

- 3.1 Resource Compliance Factors
 - 3.1.1 Archaeological sites – difficult or time consuming mitigation of effects.
 - 3.1.2 Endangered species – difficult or time consuming mitigation of effects, especially in the case of plants.
 - 3.1.3 Nesting birds – buffers should be in place around heron rookeries and raptor nests/roosts, other nests should be avoided when active.
- 3.2 Cost Prohibitive Factors
 - 3.2.1 Rough topography – increases excavation, reclamation, and overall trail length.
 - 3.2.2 Stream/highway crossings – increased costs associated with bridge or underpass construction.
 - 3.2.3 Resource mitigation – costs associated with reclamation of wetlands, excavating archaeological sites, etc.
- 3.3 User Function Factors
 - 3.3.1 Usability/User interest – direct routes may be better for multi use destination trails, whereas indirect routes may be best for single-track trails.
 - 3.3.2 Trail experience – scenery, traffic interaction, wildlife viewing opportunities, trail difficulty level.

4 IDENTIFIED LIMITING FACTORS

- 4.1 Potential Wetland Crossings – Alternative routes may differ by the degree to which wetlands would be crossed. Increased disturbance of wetlands would require increased costs associated with wetlands mitigation. Routes within BLM lands and areas north of Mancos generally avoid wetlands due to the lack of extensive irrigation and perennial drainages. However, wetlands associated with Chicken Creek and the Mancos River east of Mancos may be unavoidable (refer to attached Figure 2).

Within and south of Mancos, wetlands associated with the Mancos River and irrigation provide hydrology for a number of wetlands and waterways that would require Army Corps permitting and mitigation if crossed. Generally, alternatives with longer routes are most likely to cross the greatest volume of wetlands and waterways. For example, the Weber Rd/CR G route south and west of Town is likely to encounter more wetlands.

Routes that run perpendicular to drainages and swales may also be more likely to encounter wetlands as opposed to routes that follow drainages but are upslope of them. With this in mind, it appears that the US 160/CR 39 route west and south of Town may avoid more wetlands; it would also be shorter than the CR J route or Weber Rd./CR G route.

Extending a trail to include CR H and CR 38 is less direct a route and traverses an irrigated slope for the majority of CR H. The increased length of this route and the unfavorable topography would likely increase the wetlands encountered for this route.
- 4.2 Stream Crossings – North of Town, proposed routes cross Chicken Creek as many as six times. Alternatives may be developed to eliminate crossings, consolidate them, or utilize existing bridges.

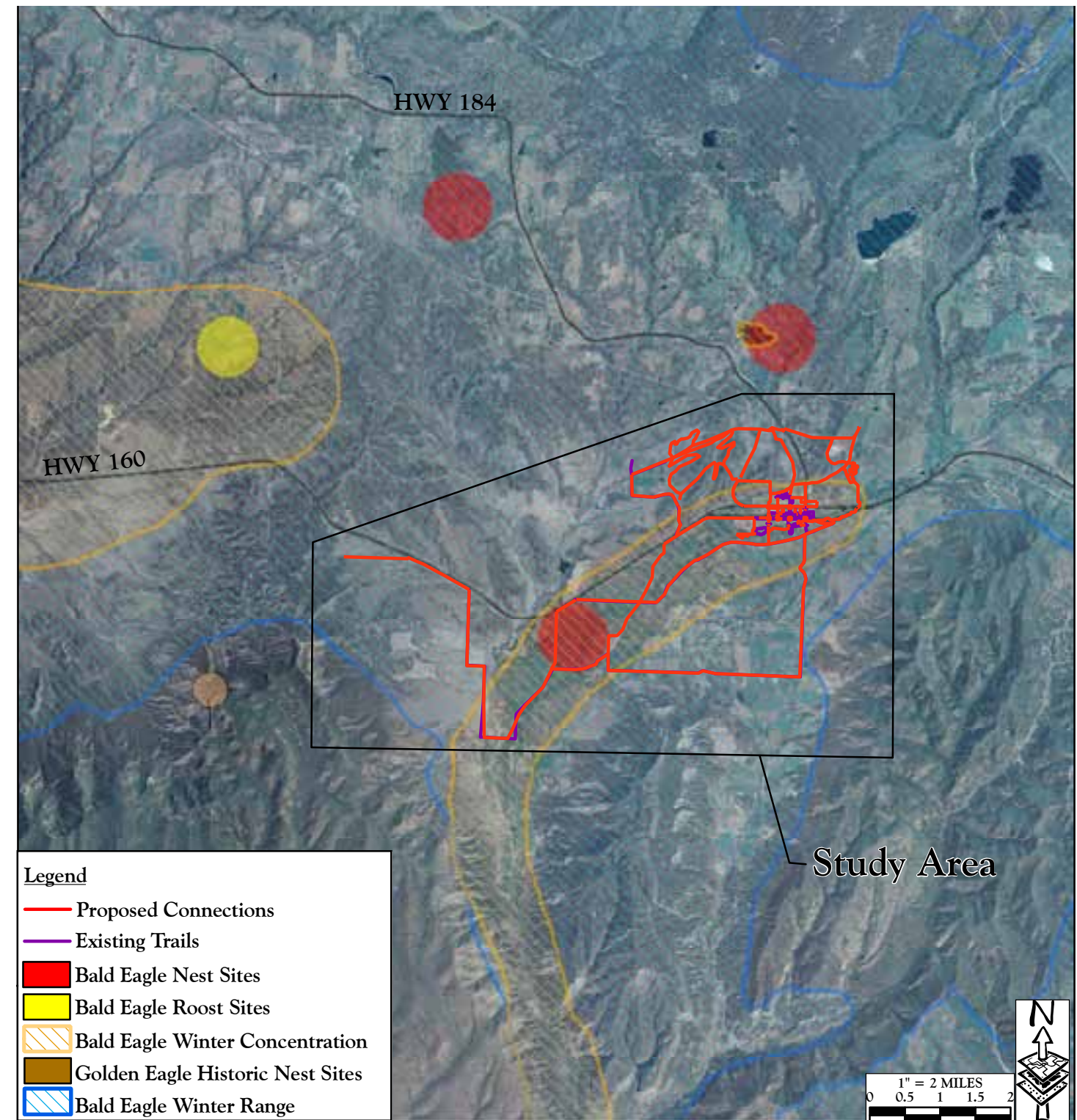
East of Town, the route connecting the airport parcel to Town via the Mancos River requires a bridge to cross the river and an underpass at US 160. It may or may not be cost effective to combine these features with the existing US 160 bridge.

South and West of Town, the Weber Rd./CR G route and the CR J route would both require crossing the Mancos River. If bridge construction or expansion is required for these crossings, the routes may have additional costs not associated with alternate routes. The US 160/CR 39 route would cross Chicken Creek at the US 160 (business) bridge which may have a wider surface than CR bridges. The Mud Creek crossing as drawn by DHM would not utilize the existing bridge to the south, but would require a new bridge within existing wetlands.

- 4.3 User Function – Identified features of interest, including a planned heron rookery observation point, may outweigh other limiting factors in route selection. In addition to being able to access a rookery overlook, the CR J route may also allow for greater user interest and experience. This route would follow closer to the Mancos River corridor than other routes. This may increase the likelihood of being able to observe wildlife utilizing the corridor. Increased trees along the route may provide for more shade improving user comfort and increasing opportunities for lingering, resting, and picnicking. Green riparian woodlands and meadows may also improve contrast and visual appeal to the immediate views observed by users.

Higher traffic volumes adjacent to routes following paved roads or other roads with heavy vehicle use may detract from the user experience by distracting users. Routes along US 160 may not be as appealing as other roads unless sufficient space and possibly barriers are provided to ensure the user's sense of safety.

- 4.4 Sensitive Resources – Known raptor nests in the project area are not likely to be an issue as proposed routes in their vicinity follow existing roads (Figure 1). Field investigations would be needed to identify habitat for endangered species. Potential habitat for endangered plants is unlikely. Potential habitat for the endangered southwestern willow flycatcher likely exists along stream channels and larger ditches. Removal of habitat would require a full season of protocol surveys to ensure the habitat is not essential to the bird prior to removal. Cultural resources are likely to occur throughout the project area given the proximity to Mesa Verde. Cultural resource surveys would be needed to identify sites and potential issues at the project level.

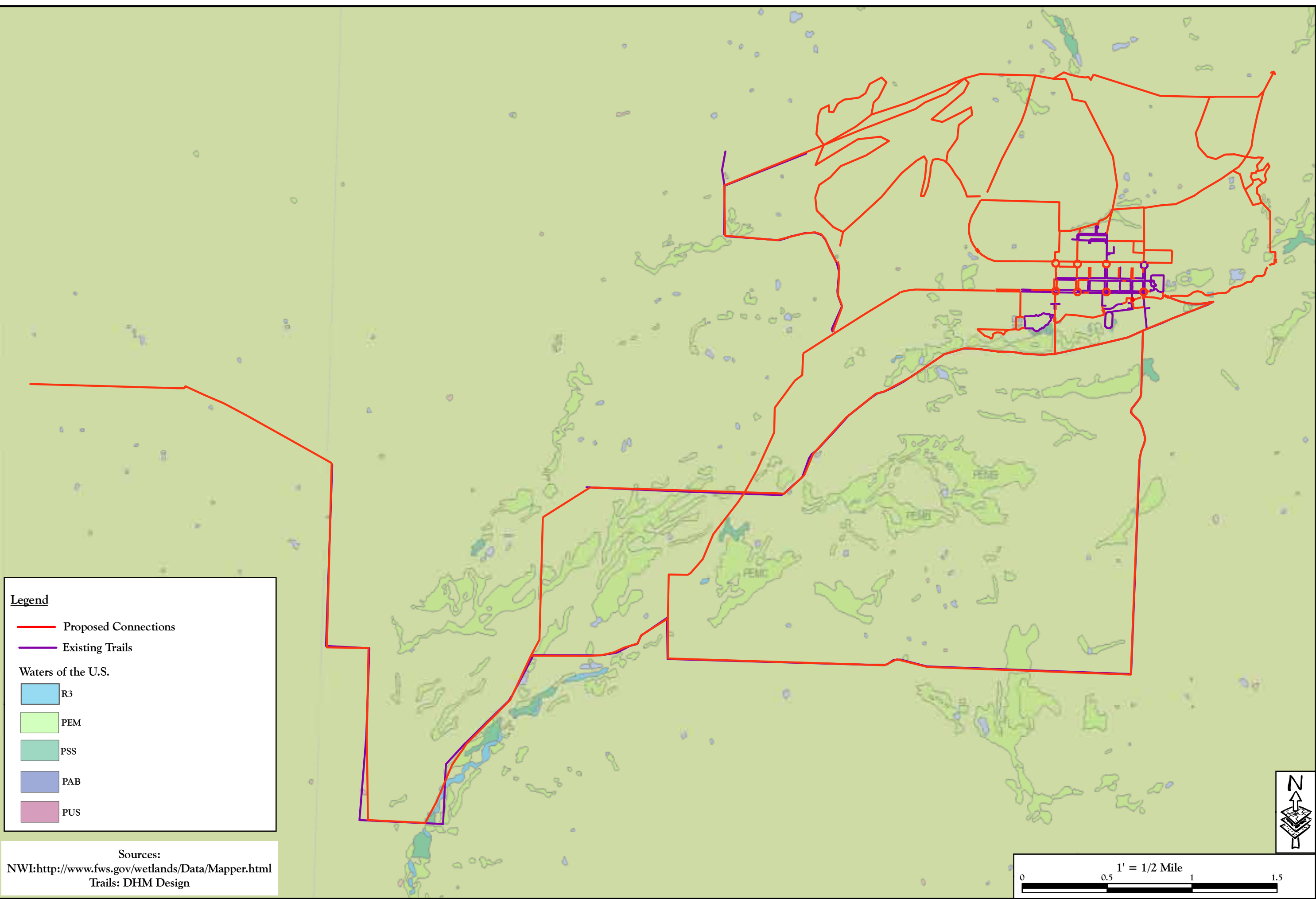


 679 E. 2nd Ave., Unit E2 Durango, Colorado 81301 www.sme-env.com (970) 259-9595	BALD & GOLDEN EAGLE HABITAT MAP	FIGURE 1
	TOWN OF MANCOS TRAILS MASTER PLAN	<i>Source: Aerial Photo taken in 2009 by National Agricultural Imagery Program (USDA); Bald Eagle Habitat Provided by CNDIS</i>

PRELIMINARY NOT
 FOR CONSTRUCTION OR
 RECORDING

TOWN OF MANCOS
TRAILS MASTER PLAN
NWI MAP

Date: 09/07/12
 Pro. #: 120033
 Name: Figure 2
 Scale: 1" = 1/2 Mile
 Notes:



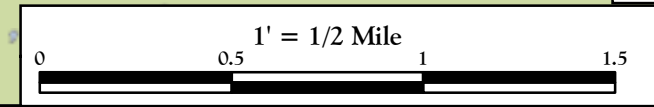
Legend

- Proposed Connections
- Existing Trails

Waters of the U.S.

- R3
- PEM
- PSS
- PAB
- PUS

Sources:
 NWI: <http://www.fws.gov/wetlands/Data/Mapper.html>
 Trails: DHM Design





Ms. Kerianne Zidmal
SMF Environmental Consultants
555 Rivergate Lane #91-101
Durango, CO 81301

September 12, 2012

RE: Class I Data for Mancos Community Trails Planning Project

Dear Kerianne:

As you requested, I have conducted a Class I cultural resources records search for the area surrounding the Town of Mancos' Community Trails planning Project. All data were obtained from the Colorado Office of Archaeology and Historic Preservation COMPASS database. I covered an area of about 14,000 acres (around 21.5 sections), as shown on the attached map (Figure 1). I drew the boundaries to encompass all of the proposed trails or trail options shown on the project maps you provided. Within the boundaries shown on Figure 1, there are about 500 acres of Bureau of Land Management lands, a small percentage of municipal lands, and mostly fee lands.

Previous Cultural Resources Surveys

Based on the COMPASS search, I found that there have been relatively few surveys conducted within the project area, mostly due to the high percentage of privately owned lands and, therefore, fewer federally funded projects. It appears that between 1000 and 1400 acres have previously been subject to cultural resource surveys in the project area, or less than 10 percent of the total area. Four categories of surveys are identified.

Large Block Surveys: The BLM contracted with La Plata Archaeological Consultants to conduct an intensive survey of the large BLM block of land in the north-central portion of the project area. During this 2002 survey, a total of 750 acres was surveyed.

Linear Surveys: Two large linear survey projects pass through the project area. These include the work conducted by Mesa Verde National Park in the 1990s and early 2000s as part of their improvements to the Mesa Verde domestic water aqueduct. The second project involved numerous surveys conducted along the natural gas pipeline corridor that crosses through the extreme northeastern corner of the project area.

Irrigation Improvement Projects: The USDA, Natural Resources Conservation Service has conducted numerous surveys along existing irrigation ditches over the past decade, as all improvements to historic irrigation systems require compliance with Federal historic preservation legislation.

Small Surveys: A few other surveys have been conducted in the project area for highway improvement projects and at least one gravel pit.

Known Archaeological or Historic Sites

There may be as many as 69 known archaeological or historic sites within the survey area. This would be about 3.2 per square mile, which is a low number for this region. The low number mostly reflects that less than 10 percent of the area has been systematically examined. The known sites fall within five categories, as summarized below.

Historic Structures in or near Mancos: There are about 15 historic structures which mostly include standing buildings in and near Mancos. These range from homes, to warehouses, to government buildings, to schools. Many of these are considered eligible for Nomination to the National Register of Historic Places.

Historic Irrigation Ditches: Due to the quantity of work conducted by the USDA recently in the Mancos Valley, a total of 10 irrigation ditches have been recorded. All are linear sites that extend for up several miles. The earlier "Pioneer" ditches are all considered eligible for Nomination to the National Register of Historic Places.

Highways and Bridges: One segment of Old US Highway 160 and one bridge within Mancos have been recorded as historic sites. Both sites have been determined to not be eligible for Nomination to the National Register of Historic Places.

Archaeological Sites: A total of 39 prehistoric or historic archaeological sites have been recorded in the project area, though the number may be inflated due to inclusion of some isolated finds in the database. Of these sites, most are recorded in the northwest quadrant of the project area where the BLM block survey conducted in 2002 and the various studies for the Mesa Verde Aqueduct provided extensive coverage of a large area. Prehistoric sites include artifact scatters up through sizable Anasazi pueblos. Historic archaeological sites include some homesteads but mostly smaller features and scatters.

Implications

It is difficult to predict what kinds of conflicts with cultural resources will arise once the project is fully planned. There are no large clusters of cultural resources identified at this time that should be avoided by the project, based on the relatively low density of known sites. Even in the area most intensively studied, the BLM block northwest of Mancos, there were only 18 sites recorded within a 750-acre area, yielding a density of less than 14 sites per square mile. Below, I'll discuss three types of trail development and how those types may conflict with cultural resources.

Trails Along Roads or Highways: Presumably, such trails will be confined to well-developed right-of-ways and the potential to impact eligible cultural resources will be minimal. However, there is a high likelihood that such trails will intersect historic ditches or other linear features (such as railroad grade segments), but no impacts would be likely.

Trails Following Railroad Grades: At least one trail is tentatively planned to follow the Rio Grande Southern railroad grade. It is unlikely that a non-motorized trail would be considered an adverse impact to this National Register property, but some restrictions or certain guidelines may need to be followed, depending on results of consultation with the Colorado State Historic Preservation Officer.

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Cross-country Trails: A series of cross-country trails is tentatively planned in the north half of the project area. This area also corresponds with BLM land ownership and the highest known site densities. Any trails in these areas will need to be purposefully laid out to avoid impacting cultural resources. Since a lot of the BLM block northwest of Mancos has been previously surveyed, this should be a straightforward task.

If you have any questions concerning this Class I analysis, please let me know.

Sincerely,

Steven Fuller
Principal Investigator

attachment (Figure 1)

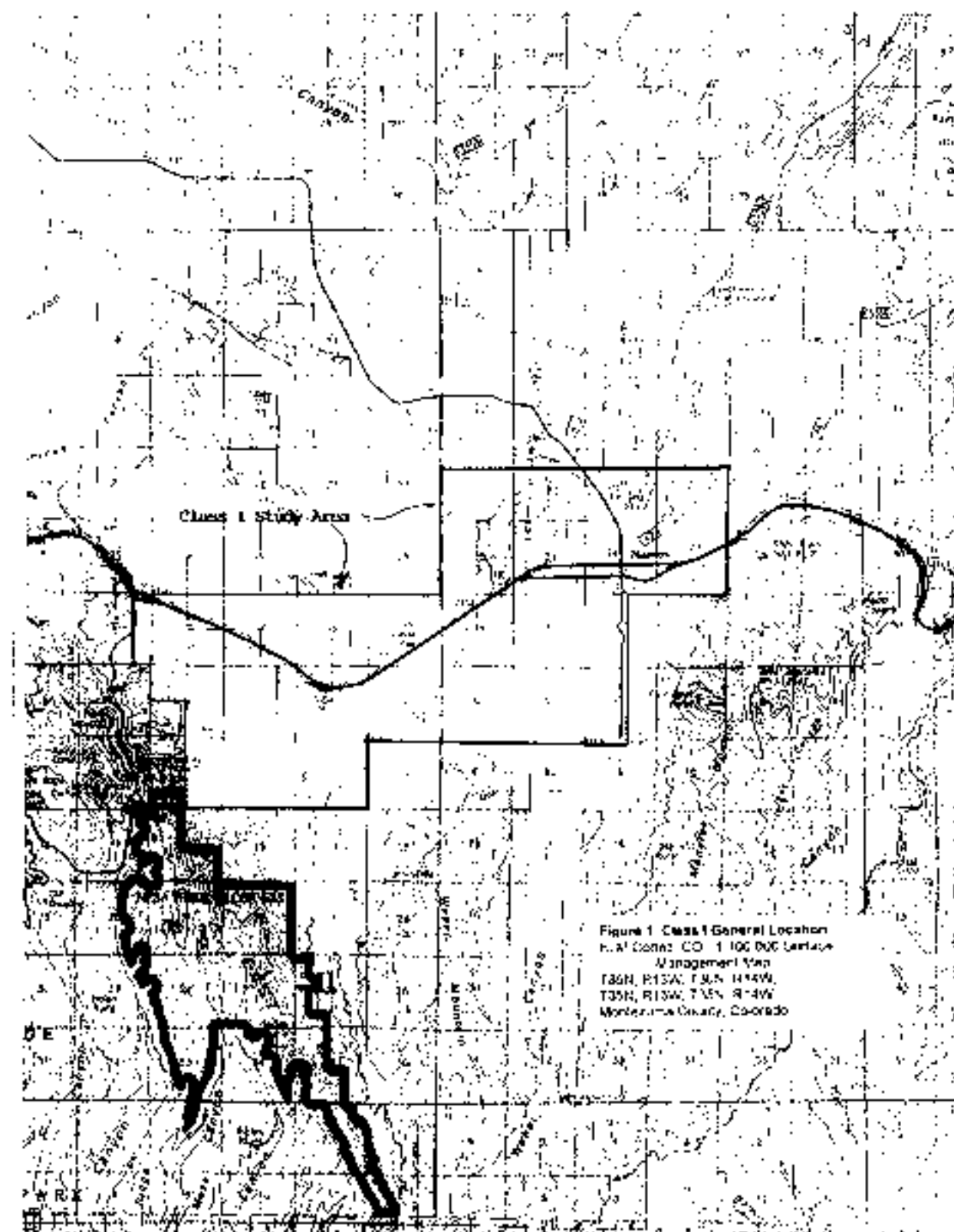




photo courtesy of Jennifer Guy