



# Red Hill Special Recreation Management Area Alternative Transportation Feasibility Study



Final Report  
September 30, 2013

For:  
The Town of Carbondale

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## Project Background

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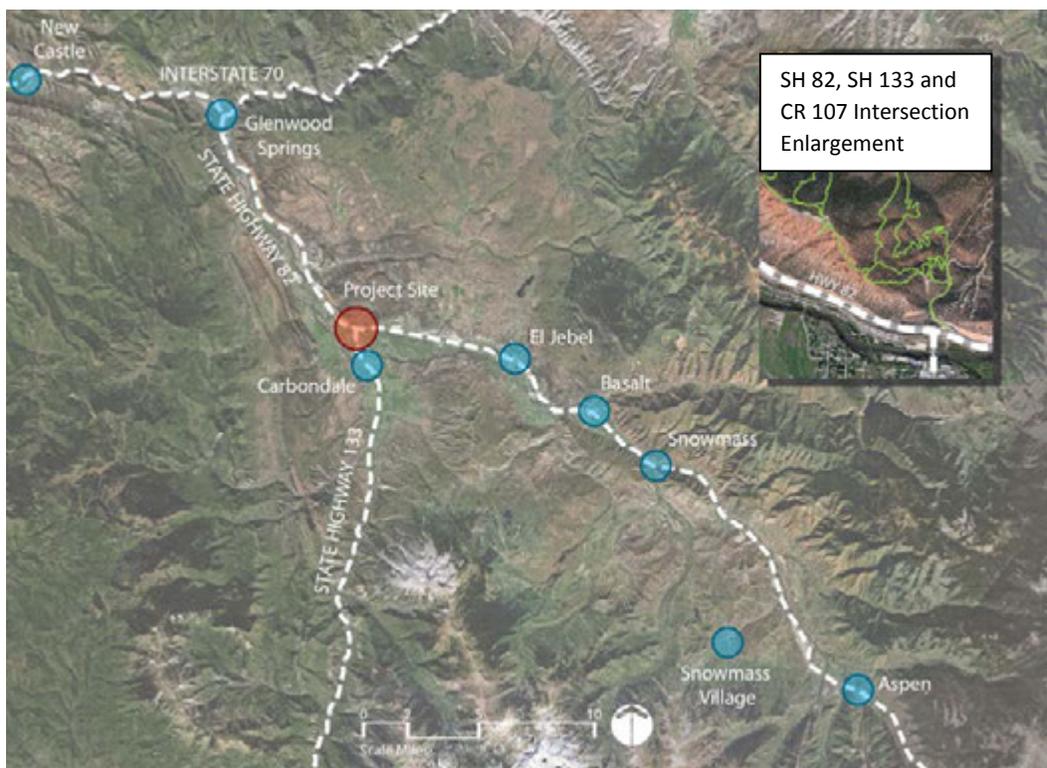
## History

The Red Hill Special Recreation Management Area (SRMA) is a popular recreational trail system for mountain bikers and hikers located approximately 1.3 miles from downtown Carbondale, at the intersection of State Highway 82 (SH 82) and State Highway 133 (SH 133). SH 82 is a four-lane, regional arterial, forming the major east/west route through the Roaring Fork Valley between Aspen and Glenwood Springs. Both SH 82 and SH 133 have been identified by the Colorado Department of Transportation (CDOT), Garfield and Pitkin Counties, and the Town of Carbondale as presenting safety hazards for bicycle and pedestrian traffic.

This intersection is widely seen as the gateway to Carbondale, and recreation is a primary activity in the area surrounding this busy intersection. To the north lies the entry to the Bureau of Land Management (BLM) Red Hill SRMA, whose trailhead is approximately ¼ mile up County Road 107 (CR 107) from the intersection of SH 82 and SH 133. To the south is the Town of Carbondale's Gateway River Park and a non-motorized trail system that provides direct access to other town parks, nearby neighborhoods, the multi-use Rio Grande and Crystal Valley trails, Roaring Fork Transit Authority (RFTA) bus stops, and RFTA's Bus Rapid Transit (BRT) park & ride facility. Colorado Parks and Wildlife also has easements at both the southeast and southwest corners of the intersection to provide access to the Roaring Fork River for anglers, kayaks and rafters.

In addition, CDOT has an existing carpool parking lot to the northeast of the intersection. This lot is utilized by both commuters and recreation users accessing the Red Hill trailhead, and is often very congested. RFTA also has a Park & Ride lot located on SH 133 approximately one-third of a mile south of the intersection which has the potential to alleviate some of this CDOT lot congestion.

In collaboration with the BLM, the Town of Carbondale received a grant from the Paul S. Sarbanes Transit in Parks (TRIP) Program to conduct an Alternative Transportation Feasibility Study that will examine several multi-modal transportation options to determine the most feasible method to address transportation needs on the site.





### **Purpose**

This study will examine the opportunity for multi-modal transportation alternatives to allow visitors better access to the Red Hill SRMA, reduce impact to the natural environment, and alleviate congestion. This study will address the parking, safety, congestion, and access needs of the site which will provide a safer and more satisfying visitor recreational experience, reduce the number of vehicles using CR 107, reduce environmental impacts, and enhance shared use for commuter carpoolers and recreational users.

Specifically, this work will evaluate the safety, along with the economic and environmental feasibility of a non-motorized transportation crossing of SH 82 at or near the intersection of SH 133, a safe non-motorized transportation connection between the CDOT parking lot to the Red Hill trailhead along CR 107, and to create safe connections between the Red Hill trail system and other pedestrian, bicycle and transit facilities.

### **Need**

Safe and convenient multi-modal site access has long been acknowledged as a critical need at the Red Hill SRMA. Pedestrians and bicyclists traveling to the site face major accessibility and safety barriers at the busy SH 82/SH 133 intersection. In addition, CR 107 is a winding, unpaved road that provides the only bike and pedestrian access to the SRMA trailhead. CR 107 is also the vehicular access for residents who live in the Red Hill area. This road does not have any designated bike and pedestrian facilities and the sharp turns with limited visibility present safety hazards to Red Hill visitors and vehicles who share the road. An enhanced non-motorized connection is needed to address the following issues:

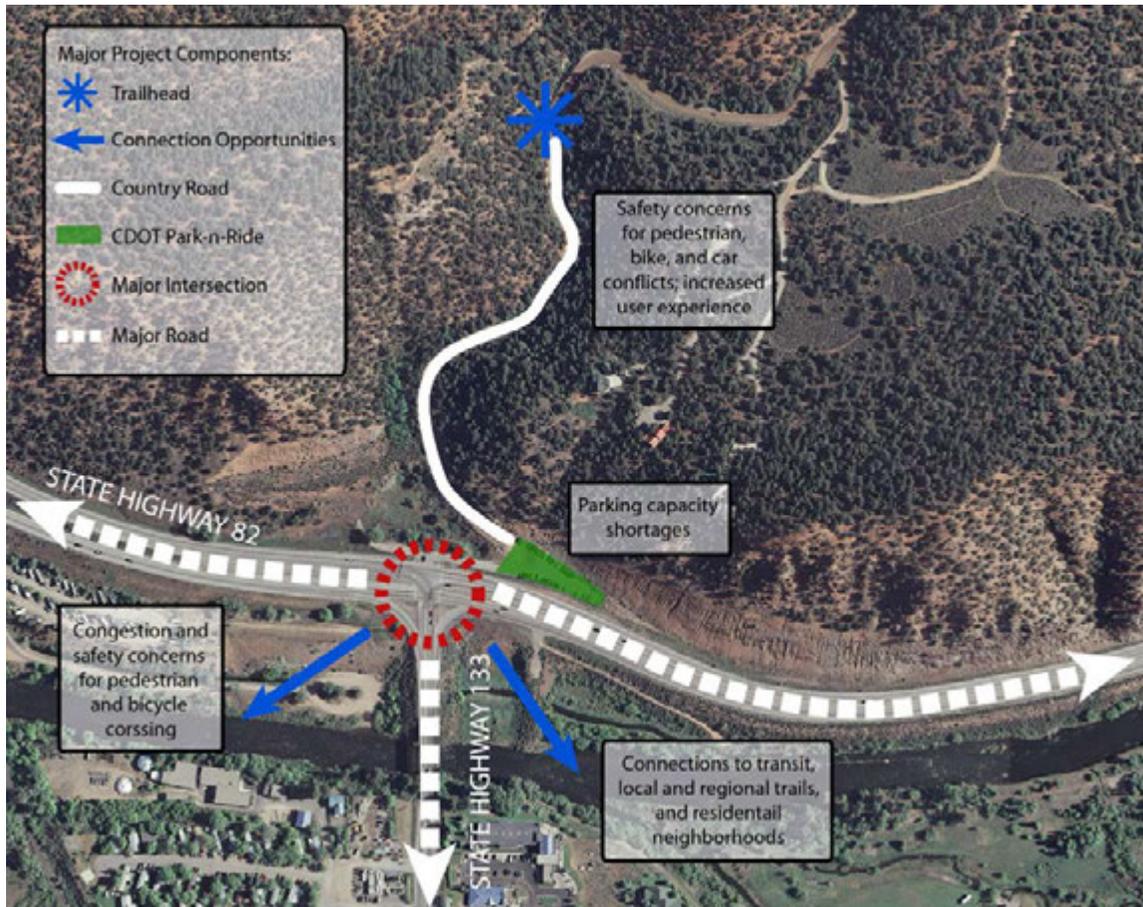


- Crossing safety at the SH 82/SH 133 intersection for pedestrians and bicyclists
- Safety for pedestrians and bicyclists along CR 107 to the trailhead
- Parking capacity shortages at the CDOT parking lot
- Lack of RFTA transit connection to access public lands
- Lack of alternative transportation connections between local and regional trails and residential neighborhoods

## Three Primary Components:

This project requires three connections to be successful:

1. Crossing SH 82
2. Connection from existing CDOT parking lot along CR 107 to the Red Hill trailhead
3. Connection to the regional transportation network (pedestrian, bicycle, transit)



## Goals

- Explore opportunities for non-motorized travel and transit access
- Provide a safer and more satisfying visitor experience
- Reduce the number of vehicles accessing the Red Hill SRMA trailhead
- Enhance shared use for commuter carpoolers and recreational users

## Objectives

- Determine the feasibility and costs associated with various options for crossing SH 82
- Evaluate the SH 82 crossing options and their connections to the existing trail network
- Determine the feasibility of creating a pedestrian and bicycle connection between the CDOT parking lot and the Red Hill SRMA trailhead
- Encourage the use of the RFTA transit system to access the Red Hill SRMA and reduce dependence on access by motorized vehicles

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## Community and Stakeholder Outreach

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## **Outreach Plan**

The Red Hill project team led a local public involvement effort to educate participants and encourage feedback to inform the development of alternatives for improving access to the BLM Red Hill SRMA. Meeting and outreach materials were designed to generate input from participants and to build consensus and acceptance of practical, constructible solutions.

### **Stakeholder identification**

A list of stakeholders was developed based on input from the client and includes affected and potentially affected public and private property owners, utilities, agencies, elected officials, and municipalities directly adjacent to and/or affected by the project.

### **Stakeholder Advisory Group**

The Stakeholder Advisory Group served as a working group providing information and feedback to the project team. It consists of planning and engineering staff from the BLM, Town of Carbondale, Garfield County, and the CDOT; Trustees from the Town of Carbondale; the Red Hill Council; Board of County Commissioners; and a representative from the Red Hill neighborhood. The group met regularly to discuss issues, review draft documents, and provide input for the project.

Responsibilities of the Stakeholder Advisory Group included:

- Providing feedback and political/technical/financial “reality checks” to the project team
- Regular reporting on project activities to their supervisors, elected official boards, trustees, and councils, as appropriate
- Reviewing draft deliverables provided by the project team
- Providing guidance to the project team on identifying and approaching targeted focus groups to resolve specific issues (See “Targeted Focus Groups” discussion below)
- A total of three stakeholder meetings were held on the following dates:
  - September 27, 2012
  - January 10, 2013
  - March 21, 2013

### **Public Open Houses**

Two public meetings were held at the Carbondale Town Hall, using an informal, open house format, where the project team actively solicited feedback from attendees. The focus of these meetings was:

1. Project Introduction (January 2013). Purpose of and need for the project, existing conditions, and opportunities and constraints for improved access.
2. Recommended Options (April 2013). Presentation of the options developed by the project team.

### **Town of Carbondale Board of Trustees, Garfield County Board of County Commissioners**

Project updates were provided to both the Garfield County Board of County Commissioners (BOCC) and the Town of Carbondale Board of Trustees. During a joint meeting on May 14, 2013, a project update was provided that focused on results from the second public open house that presented the alternatives for public comment. Preliminary costs were also shared at the meeting, with an emphasis that the alternatives were still under refinement.

A presentation was given on June 11, 2013 to the Garfield County BOCC. During this meeting, the refined alternatives and cost estimates were provided to the BOCC. Garfield County expressed a desire to make CR 107 a priority out of concern for safety issues that could arise from pedestrian, bike, and car conflicts. The discussion focused on providing a cost-effective alternative that would advance the project while working within the confines of the existing CR 107 right-of-way.

## **Notifying Stakeholders and the Public**

The project team invited stakeholders and the public to attend and participate in public meetings and targeted focus group meetings using the following tools:

- Letter and/or e-mail invitations to stakeholders, with follow-up calls or e-mails to critical stakeholders one week prior to the meeting.
- Paid display advertisements in the Sopris Sun and Glenwood Springs Post Independent inviting the public and outlining the content of the open houses.
- Posting of fliers at the pedestrian gate adjacent to the Park & Ride lot and at the Red Hill SRMA trailhead, inviting users to attend public meetings.
- Media releases and electronic calendar submissions to:
  - Aspen Times
  - Aspen Daily News
  - Glenwood Springs Post Independent
  - Sopris Sun
  - KAJX
  - KDNK



## Existing Conditions Assessment

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# Survey and Land Ownership

## Base Mapping

Sopris Engineering (SE) compiled the base mapping file from prior surveying projects SE performed in the area, including a 2007 lidar aerial topographic/orthometric photographic flight, the Carbondale Gateway Park survey and SH 133 corridor survey work, coupled with research and data acquired specifically for this study.

The base mapping was positioned on the Town of Carbondale coordinate system using the existing monuments located at 8<sup>th</sup> and Main and 2<sup>nd</sup> and Main Street intersections (bearing base of N 89°57'00"W) as horizontal control, and vertically on the National Geodetic Survey NAVD88 vertical datum. Area property and Right-of-way deeds and plats were researched and acquired at the Garfield County Courthouse, BLM and CDOT offices and from SE archival files. These properties were input based on their deeds and plats, relative to each other and with respect to the street control monuments. Positions for the private parcels, SH 82 and SH 133, and CR 107 right-of-way (ROW) - at and north of the SH 133 bridge - were further refined with field locations of aliquot, ROW and private property corner monuments. Land Title Guarantee Company prepared title work for the properties along CR 107 to assess any recorded easements that could be utilized relative to the study's goals, particularly for access enhancements.

The contouring is from a 2007 Sopris Engineering contracted aerial lidar flight that included contouring, planimetrics and orthometric digital photograph deliverables. The horizontal and vertical datum and bearing base of the aerial mapping was developed consistent with the Red Hill study discussed above. This topography and existing conditions line work was supplemented with field data in study areas where development and new construction had occurred in the intervening years (SH 133 bridge expansion and SH 82/SH 133 intersection construction and asphalt overlay).

## Land Ownership: Project Area South of SH 82

Directly south of the SH 82 ROW and to the east and west of the SH 133 ROW are two properties owned by the Town of Carbondale. On the west side, the Town's property reaches the Roaring Fork River and on the east side there is a private parcel between the Town's property and the river. The existing SH 133 ROW, as it approaches the intersection with SH 82, is approximately 200 feet wide. The existing lanes north of the Roaring Fork River Bridge are constructed on a fill platform to blend from the existing grades south of the river to the existing SH 82 elevations. The existing ground descends approximately 20 feet east and west from the SH 133 roadway to the river bottom lands. This elevation drop is accomplished with retaining walls and manmade slopes, making trail development within the SH 133 ROW problematic. Trail routes to the east of the SH 133 ROW, north of the bridge/river would cross private land, necessitating easement acquisition or confirmation of unabandoned SH 133 ROW along the old bridge alignment.

## Land Ownership: Project Area within SH 82 ROW

The existing SH 82 ROW, directly east and west of the SH 133 intersection is expansive in its width: On the intersection's east side, the distance from pavement edge to the south ROW line is 135 feet +/- and on the north 180 feet +/- . On the west side, from pavement edge to the south ROW line is 125 feet +/- and on the north 100 feet +/- . Given the distances between the pavement edges and the limits of the ROW, most any type of underpass or overpass improvements would be constructed within the SH 82 ROW. The existing ground on the ROW's south side slopes down from the pavement to the river, dropping 30 feet +/- vertically. Between the pavement and ROW limits on both the north and south sides are visible evidence of shallow bury utilities lying parallel the highway lanes. Traffic signalization utilities are also present at the intersection, both above and below ground. No underground utilities were marked for this study, but calls to utility providers and past project experience tells us that no deep utilities are present to greatly impact a proposed trail underpass. A box culvert (five feet wide by eight feet tall) exists east of the highway intersection, indicating if utilities are present, they are above or below that profile.

### **Land Ownership: Project Area North of SH 82**

CR 107 ROW was dedicated to the County Commissioners in a document dated May 21, 1929 and recorded as reception no. 134671 of the Garfield County records. The ROW is 40 feet wide, generally follows the existing road bed and leaves little room for trail development within the ROW that is not attached or part of the driving surface. Between the CDOT parking lot fronting SH 82 and the Red Hill SRMA trailhead, CR 107 traverses two private parcels and BLM land. The record property descriptions east and west of the dedicated ROW south of the BLM land generally conform to the described CR 107 ROW. Reviewed title work for these two properties contained no exceptions or easements for any public access rights adjacent to CR 107 or anywhere else on the respective parcels. The road follows a natural narrow drainage channel canyon with steep slopes/sheer cliff faces ascending abruptly from the westerly road edge and from the bottom of the drainage channel on the east. The actual drainage channel follows the easterly edge of the County Road. From the parking lot to the trailhead, the road ascends vertically 110 feet+/- along a 1,450-foot alignment. The steepest segments of the existing road approach a 12 percent grade. No visible evidence of any buried utility was found, which was confirmed by direct contact with utility service providers.

The existing gravel CDOT parking lot at the base of Red Hill is located within SH 82 ROW. Any potential lot expansion would be restricted by an existing highway drainage swale on the south, the Red Hill cliff face on the north, CR 107 ROW on the west and the converging cliff face and SH 82 west bound lanes on the east.

## Existing Environmental Conditions

### North Side Vegetation

The north side of SH 82 is differentiated between two main habitat/vegetation community types; non-native disturbed areas closer to the highway, and more native pinyon woodlands further up the canyon. Near SH 82 the vegetation is dominated by non-native vegetation types, likely initiated by past disturbances (such as excavation, temporary dirt storage, dumping, parking, livestock yarding, etc.). Tree species are dominated by Siberian elm (*Ulmus pumila*), with some infrequent pinyon pine (*Pinus edulis*) occurring on slopes and more well-drained areas. The understory is dominated by the noxious weeds cheatgrass (*Anisantha tectorum*) and kochia (*Kochia scoparia*), with the non-native grass smooth brome (*Bromus inermis*) occurring in the more shady areas, generally closer to the highway. Shrub species are dominated by basin sagebrush (*Artemisia tridentata* sbsp. *tridentata*), rubber rabbitbrush (*Chrysothamnus nauseosus*), and three-leaf sumac (*Rhus trilobata*).

Higher up the gulch and adjacent to CR 107, there is a moderately sized stand of Siberian elm which has become established in the draw where sediments are deposited and runoff has increased the available soil moisture. The understory in this area is fairly sparse, but cheatgrass and sagebrush are common. In this stand of elm there are a number of old camps, fire pits, user trails, and trash. Evidence of human activities are very common.

Where the gulch narrows, the non-native plant species become sparse, and native plant species dominate the gulch. The flashy flows and lack of soil development has limited the ability for plants to become established in the gulch, but the uplands immediately outside of the wash are dominated by pinyon pine, with infrequent juniper (*Sabina osteosperma*). The understory in these uplands is very sparse, with infrequent cactus (*Opuntia polyacantha*), Indian ricegrass (*Oryzopsis hymenoides*), and other forbs occurring. The sparseness of these uplands is likely due to the very erosive, steep, and poor quality soils; this should be taken into account when planning for any reclamation activities in these uplands, as reclamation or revegetation will be very difficult, and disturbed uplands will be highly erosive.



Photo of non-native vegetation north of SH 82



Photo of more native vegetation profiles further up the gulch adjacent to CR 107

## South Side Vegetation

South of SH 82 on the up-gradient side of the SH 133 bridge, the historic highway alignment, Glenwood Ditch, and SH 82 construction has resulted in a highly impacted area dominated by non-native and early seral species. Uplands are dominated by basin sagebrush and rubber rabbitbrush, with cheatgrass crested wheatgrass (*Agropyron cristatum*) and kochia occurring in the understory. Virgin's bower (*Clematis ligusticifolia*) occurs climbing the rock piles, three-leaf sumac, and fences. Nearer the Glenwood Ditch and more towards the Roaring Fork River, the elevated soil moistures have allowed coyote willow (*Salix exigua*), wild rose (*Rosa* spp.), and the noxious weed common tansy (*Tanacetum vulgare*) to become established.

Underneath the SH 133 Bridge, there are no wetlands, and barely any vegetation due to the shading from the bridge and lack of precipitation.

On the down-gradient side of the SH 133 bridge, the vegetation similarly shows evidence of historic disturbances and is dominated by Siberian elm, boxelder (*Acer negundo*), and some pinyon pine, with three-leaf sumac, cheatgrass, kochia and basin sagebrush dominating the understory.

## North Side Wetlands and Non-Wetland Waters of the U.S.

On the north side of SH 82, the unnamed gulch adjacent to CR 107 supports Ordinary High Water Marks and has a direct surface-nexus to the Roaring Fork River, which means that this gulch would be considered a non-wetland Water of the U.S., and is therefore under the regulatory authority of the U.S. Army Corps of Engineers (USACE). The USACE regulates section 404 of the Clean Water Act, which means that any activities within the gulch (and impacting the area where waters intermittently flow) would need to be permitted through the USACE in order to protect the function and value of these Waters of the U.S. The gulch does not support any "wetlands", and activities in the gulch would not impact any jurisdictional wetlands. Any culverting or modification of the gulch would need to consider protecting the flows and water quality flowing to the Roaring Fork River, and activities should consider improving the current conditions within the lower reaches of the gulch. Because of the past excavation and fill activities which have occurred at the base of the gulch, water quality has likely been compromised, and the USACE would likely want to see the current conditions improved with regards to reducing sedimentation, erosion, and surface water



Mostly disturbed vegetation and wetland areas south of SH 82.



Photo of vegetation on the downstream side of the SH 133 bridge.

degradation as surface flows cross the old disturbed areas. Additionally, activities which occur along the roadside would also likely be encouraged by the USACE to reduce sedimentation and road runoff into the gulch.

Projects or trail development which occur near the creek have the opportunity to improve the condition of water quality and runoff occurring into the gulch. Even though this gulch is only ephemeral, existing and ongoing impacts to water quality (such as sediment deposition, magnesium chloride runoff from CR 107, and roadway petrochemical runoff) could be reduced through more contemporary planning and construction measures.

### **South Side Wetlands and Waters of the U.S.**

The Glenwood Ditch and Roaring Fork River support jurisdictional wetlands, which would be under the regulatory authority of the USACE. Any activities which may impact these wetlands (albeit the wetland quality is marginalized due to non-native plants and noxious weeds) would need to be permitted through the USACE. Of note, there are no wetlands underneath the SH 133 Bridge.

### **Considerations for any Preferred Option**

The majority of the project area has seen many years and many different impacts to the vegetation and habitat community types. The dominance of the area by non-native vegetation and noxious weeds has diminished the effectiveness of the area. Additionally, the proximity of the busy SH 133/SH 82 intersection further reduces the effectiveness of this area for anything but incidental and temporary wildlife use.



There are no wetlands underneath the SH 133 bridge.

Any new activity will present opportunities to re-establish native vegetation. Additionally, any new activities for this area would also present opportunities to implement more contemporary construction and stormwater mitigation techniques which could help improve water quality in the Roaring Fork River. This includes activities which could occur along CR 107, where un-mitigated road runoff currently impacts the gulch. Activities which occur in previously disturbed areas could help improve current conditions. Activities which occur in undisturbed, steep slope native habitats should be carefully considered, as successful revegetation and stabilization of native soils will be very difficult at best.

Any activity which could impact the gulch along CR 107 or along wetlands adjacent to the Roaring Fork River or the Glenwood Ditch would require permitting through the USACE.



## Existing Pedestrian & Bicycle Facilities

This review describes the existing bicycle conditions observed, captured and discussed during field reconnaissance, documented in previous studies and gathered from meetings held with Town of Carbondale staff and key stakeholders for this study. Based on these findings, the most common types of pedestrian and bicycle facility gaps and infrastructure issues within the project site have been identified.

### Intersections

Intersections are a critical component of the pedestrian and bicycle network and also act as barriers for less experienced users if accommodation is not maintained through them. Currently, Village Drive is the only intersection with a crosswalk (pavement markings) and pedestrian signal crossing SH 133. Additionally, Cowen Drive and Delores Way intersect SH 133, however, the pavement markings at these intersections are not adequately maintained and they lack crosswalk markings and signage across SH 133. In addition, the existing RFTA BRT park & ride is located on the west side of SH 133 while many local businesses and residential neighborhoods are located on the east side of SH 133. Therefore intersections will play a key role in safely connecting bicycles and pedestrians to the station.

The intersection at SH 133 / SH 82 and the bridge crossing over the Roaring Fork River have both been recently reconstructed by CDOT. The improvements at the intersection include a 10-foot wide crosswalk (pavement markings) and pedestrian signal on the east side of SH 133 and a pedestrian refuge island on the southeast corner of SH 82 that provides a protected space between the right turn lane and SH 82.



### **Multi-Use Paths/ Trails**

Multi-use paths (also referred to as “trails” and “shared-use paths”) are often viewed as recreational facilities, but they can also be important corridors for utilitarian (work, shopping, or other) trips. Multi-use paths provide a desirable facility particularly for less confident cyclists who prefer not to ride on roadways with vehicular traffic.

The Rio Grande Trail, the Crystal Trail, neighborhood multi-use paths (following drainages east of SH 133 through residential areas) and the river/recreation access trail (between SH 133 & Cowen Drive) are multi-use paths in the study Area. The Rio Grande Trail provides adequate north south connectivity from downtown, past the RFTA BRT Station and over the Roaring Fork River towards the northeast edge of the Town of Carbondale.

The Crystal Trail branches off the Rio Grande Trail (south of Village Road) and heads north along the east side of SH 133. This path is nearly complete on the north end except for a one block lineal gap south of the SH 133 bridge.

The neighborhood multi-use paths, which cut through residential developments (east of SH 133), provide good connectivity to existing sidewalks adjacent to streets (local, collector or arterial). This network of trails provides an additional recreational corridor for the community. However, the trails lack pavement markings and/or signage at roadway crossings.

A soft surface trail exists between Cowen Drive and SH 133 and is currently used as a river access and recreation trail/park zone.

It should be noted that additional multi-use paths are scheduled to be completed within the Gateway Park, with connections extending to existing trails.

## **On-Street Bikeways**

On-street bicycle facilities throughout the study area have not been sufficiently considered in previous planning and design efforts. The study area contains few to no on-street bicycle facilities. Based upon field reconnaissance and preliminary street width measurements, bicycle facilities (bike lanes and shared lanes) could be incorporated along most of the local and collector streets by strategically removing parking on one side of the street, by road diets, or by lane reductions. CR 107 is another missing link for bicycle and pedestrian facilities within the study area. No facilities exist on this roadway that provide a safe alternative that separate vehicles from bicycles and pedestrians. Signs instructing/warning bicyclists and pedestrians to use the east side of CR 107 when accessing the BLM trailhead is the only safety measure posted along the corridor.

## **Underpasses/Overpasses**

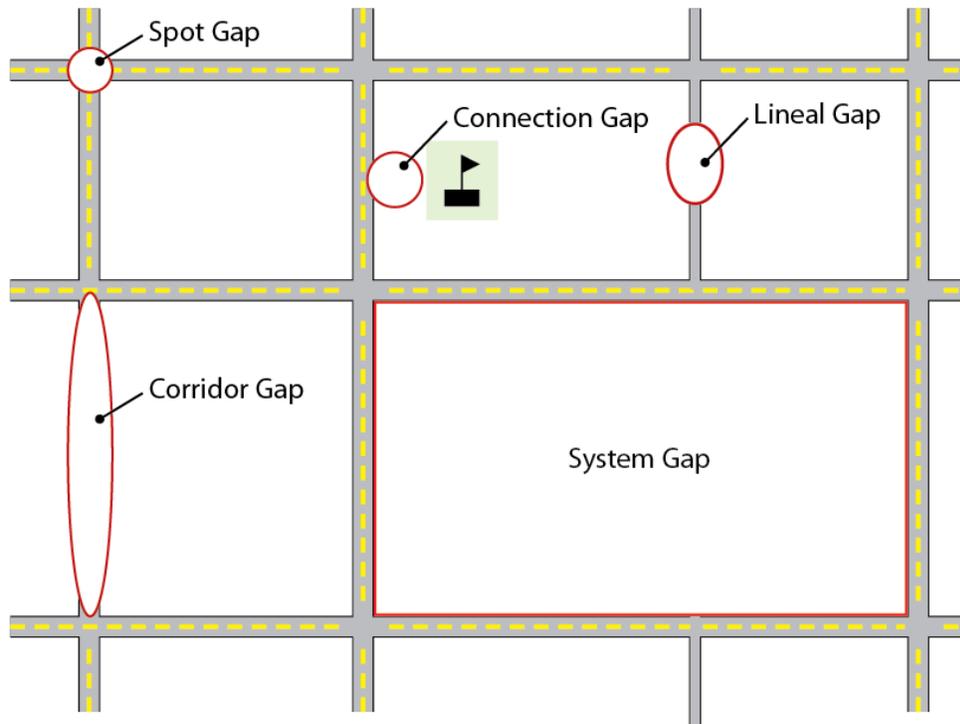
Currently, the Rio Grande Trail and the SH 133 bridge provides the only grade separated crossings over the Roaring Fork River. However, lineal trail gaps on both sides of SH 133 prevent a safe and comfortable river crossing. An existing bridge alignment and abutments exist to the east of the SH 133 bridge. This old alignment could be used as a future overpass structure.

## **Neighborhood, Business and Transit Connections**

As a whole, there is a good network of shared-use facilities within the study area. The Rio Grande Trail provides a connection from downtown to the RFTA BRT station, located on the west side of SH 133. Many local businesses and residential neighborhoods are located on the east side of SH 133. Currently, only one signalized intersection with crosswalk markings exists at the Village Road intersection, enabling safe pedestrian and bicycle crossing. In addition, gaps within the network and lack of high visibility crosswalks or adequately maintained crosswalks are a significant impediment to the vitality of future development and safety of pedestrians and bicyclists.

## **Gap Analysis**

Gaps in the pedestrian and bicycle network exist as significant constraints in the study area, while simultaneously presenting opportunities for network enhancement. Network gaps exist in various forms, ranging from short “missing links” on a specific street or multi-use path corridor, to larger geographic areas with few or no bicycle facilities at all (See Pedestrian & Bicycle Facilities Existing Conditions Tables on pages 17 - 19). Determining specifically what constitutes a “gap”, requires that parameters be set for the bikeway network and determine which activity centers require direct links. Gaps can be organized based on length and other characteristics.



## Network Gap Classifications

**Spot gaps:** Spot gaps refer to point-specific locations lacking dedicated pedestrian and bicycle facilities or other treatments to accommodate safe and comfortable alternative transportation travel. Spot gaps primarily include intersections and other conflict areas posing challenges for pedestrians or bicyclists. Examples include lack of intersection crossing treatments for pedestrians and bicyclists on a route or path as they approach a major street.

Examples of other Spot Gaps in the Red Hill Alternative Transportation Study Area include:

- SH 133 & SH 82
- SH 133 & Cowen Drive
- SH 133 & Village Road (lack of maintenance)
- SH 133 & Delores Way
- Delores Way road crossing to Carbondale Community School
- Latigo Loop roadway crossings along neighborhood multi-use path (4)

**Connection gaps:** Connection gaps are missing segments (1/4 mile long or less) on a clearly defined and otherwise well-connected trail or path. Examples include a discontinuous multi-use path and a missing section of a multi-use path or sidewalk to connect key destinations.

Examples of Connection Gaps in the Red Hill Alternative Transportation Study Area include:

- Along Delores Way between Carbondale Community School and SH 133
- Between the Rio Grande Trail and the Gateway Park (user created trails are visible due to the missing link)
- Between Gateway Park and the intersection of SH 133 & SH 82
- Along Delores Way between Whitaker Ave and Rocky Mountain High School

**Lineal gaps:** Similar to connection gaps, lineal gaps are ½ to one mile long missing link segments on a clearly defined and otherwise well-connected corridor.

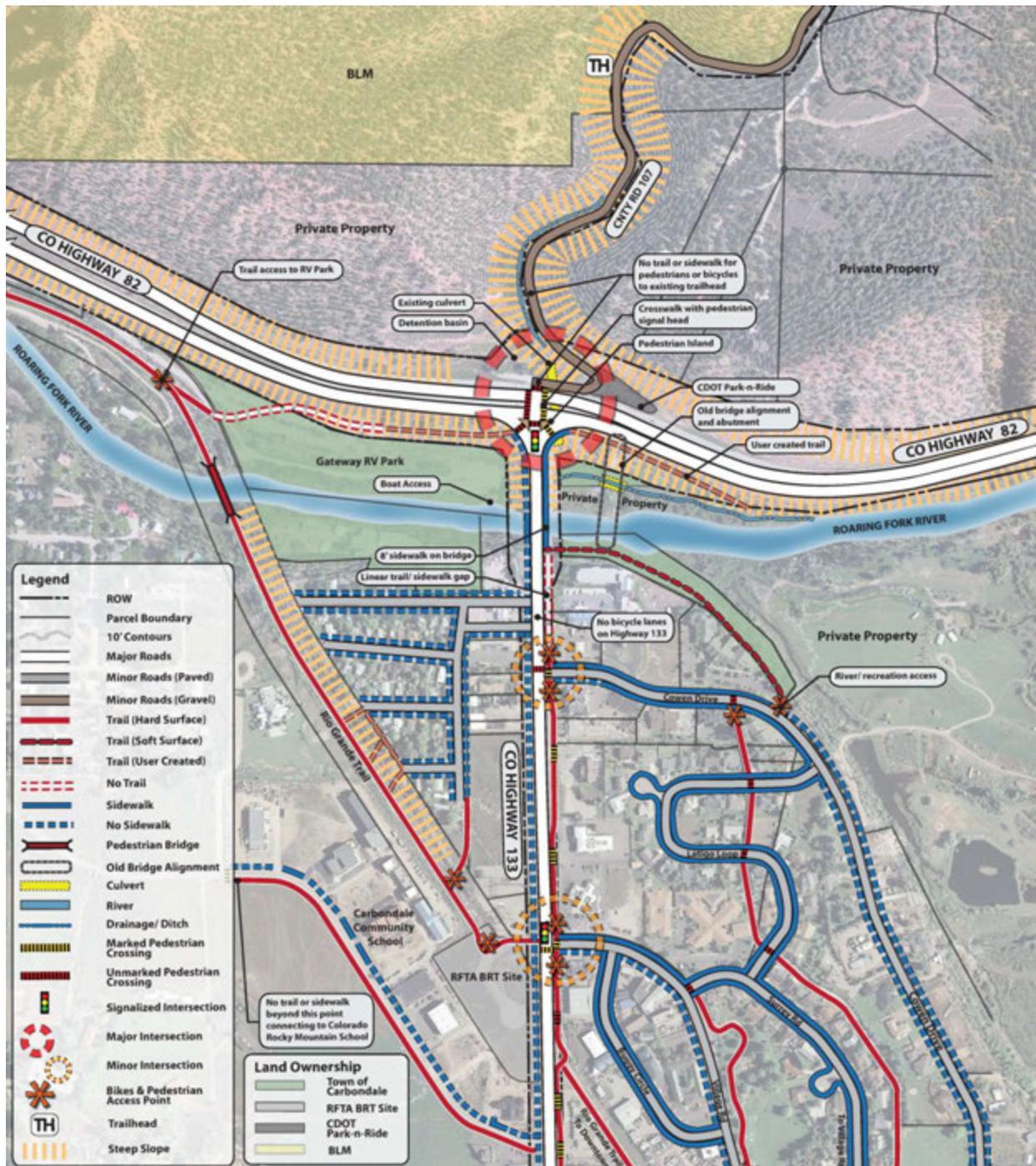
Examples of other lineal gaps in the Red Hill Alternative Transportation Study Area include:

- East of SH 133, along the south side of Cowen Drive
- Along CR 107 between the CDOT parking lot and the Red Hill SMRA trailhead
- On both sides of Cowen Drive south of Latigo Loop
- Along the west side of SH 133 between SH 82 and the southern boundary of the study area
- Along the Crystal Trail between Cowen Drive and the 8-foot sidewalk on the east side of the SH 133 bridge crossing the Roaring Fork River

**Corridor gaps:** On clearly defined and otherwise well-traveled corridors, these gaps are missing links approximately one mile or longer. The gaps can sometimes encompass an entire street corridor where sidewalk or multi-use paths do not exist but are desired.

**System gaps:** System gaps exist in areas where a minimum of two intersecting bikeways or sidewalks would be required to achieve the target network density. In general, the Town of Carbondale has few on-street bicycle facilities and no on-street bicycle facilities in the study area. This lack of on-street facilities for more experienced and confident bicyclist can be identified as a system gap.

# Existing Pedestrian & Bicycle Facilities Diagram



### Red Hill Pedestrian & Bicycle Facilities Existing Conditions – SH 133

General Corridor	SH 82	Cowen Drive	CR 107
Multi-use path (hard surface trail) on east side road within ROW. All but one driveway crossing has high visibility pavement markings	High visibility crossing exists on east side of intersection	A marked pedestrian crossing exists across Cowen Drive	No bicycle or pedestrian facilities exist from the intersection of SH 133 & SH 82 to CR 107
A one block linear trail gap exists south of bridge (across Roaring Fork River)	Existing pedestrian refuge islands and pedestrian signal head	No pedestrian crossing exists across SH 133	No dedicated bicycle and pedestrian facilities exist on CR 107 between the CDOT parking lot and the Red Hill SRMA trailhead
No sidewalk on west side of road	Bike and pedestrian facilities are combined		Signs are posted at the CDOT parking lot that instruct bikes and pedestrians to use the east side of the roadway when accessing the Red Hill SRMA trailhead
No bike facilities on highway			

### Red Hill Pedestrian & Bicycle Facilities Existing Conditions - Cowen Drive

General Corridor	SH 133	Latigo Loop
A sidewalk connection exists on the north side of Cowen between SH 133 & the existing multi-use path that follows a neighborhood drainage	A marked pedestrian crossing exists across Cowen Drive	No bicycle or pedestrian crossing facilities at intersection
No pedestrian or bicycle facilities exist to the south of Latigo Loop	No pedestrian crossing exists across SH 133	
A one block linear sidewalk gap exists on south side		

### Red Hill Pedestrian & Bicycle Facilities Existing Conditions – SH 82

General Corridor	SH 133	CR 107
No bike facilities on highway	High visibility crossing exists on east side of intersection	No bicycle or pedestrian facilities exist from the intersection of SH 133 & SH 82 to CR 107
	Existing pedestrian refuge islands and pedestrian signal head	No dedicated bicycle and pedestrian facilities exist on CR 107 between the CDOT parking lot and the Red Hill SRMA trailhead
	Bike and pedestrian facilities are combined	Signs are posted at the park-n-ride that instruct bikes and pedestrians to use the east side of the roadway when accessing the Red Hill SRMA trailhead

### Red Hill Pedestrian & Bicycle Facilities Existing Conditions - Latigo Road

General Corridor	Cowen Drive	Surrey Road
A sidewalk connection exists on each side of the street	No bicycle or pedestrian crossing facilities at intersection	No bicycle or pedestrian crossing facilities at intersection
No bicycle or pedestrian crossing facilities at multiple intersections with existing multi-use path that follows a neighborhood drainage		

### Red Hill Pedestrian & Bicycle Facilities Existing Conditions - Village Road

General Corridor	SH 133	Surrey Road
A sidewalk connection exists on the north side of Village Road between SH 133 & the existing multi-use path that follows a neighborhood drainage	High visibility intersection crossing exists on Village Road and SH 133	No bicycle or pedestrian crossing facilities at intersection
No pedestrian or bicycle facilities exist on the south side of Village Road		

### Red Hill Pedestrian & Bicycle Facilities Existing Conditions - Surrey Road

General Corridor	Latigo Loop	Village Road
A sidewalk connection exists on each side of the street	No bicycle or pedestrian crossing facilities at intersection	No bicycle or pedestrian crossing facilities at intersection

### Red Hill Pedestrian & Bicycle Facilities Existing Conditions - Delores Way

General Corridor	SH 133
Multi-use path (hard surface trail) on south and east side of road. A high visibility crosswalk/pavement markings exists at Delores Way just east of Whitaker Avenue	No bicycle or pedestrian crossing facilities at intersection

### Red Hill Pedestrian & Bicycle Facilities Existing Conditions - CR107

SH 133	SH 82
No bicycle or pedestrian facilities exist from the intersection of SH 133 and SH 82 to CR 107	No bicycle or pedestrian facilities exist from the intersection of SH 133 and SH 82 to CR 107
No dedicated bicycle and pedestrian facilities exist on CR 107 between the CDOT parking lot and the Red Hill SRMA trailhead	No dedicated bicycle and pedestrian facilities exist on CR 107 between the CDOT parking lot and the Red Hill SRMA trailhead
Signs are posted at the CDOT parking lot that instruct bikes and pedestrians to use the east side of the roadway when accessing the Red Hill SRMA trailhead	Signs are posted at the CDOT parking lot that instruct bikes and pedestrians to use the east side of the roadway when accessing the Red Hill SRMA trailhead

## Existing Automobile Infrastructure

### SH 82

SH 82 is a four-lane roadway that is the primary access to all communities in the Roaring Fork Valley. Near SH 133, CDOT's functional classification of SH 82 is principal arterial and its access designation is Expressway. These indicate that SH 82 is a facility intended to carry relatively high volumes of traffic medium to long distances, at relatively high speeds. Direct access to SH 82 is restricted to retain high levels capacity. The posted speed along SH 82 near its intersection with SH 133 is 55 MPH. According to CDOT, the average annual daily traffic along SH 82 near SH 133 was 21,000 vehicles in 2011. The capacity at this location is approximately 36,000 vehicles daily.



### SH 133

SH 133 provides access directly to the Town of Carbondale from SH 82. Near SH 82, CDOT's functional classification of SH 133 is minor arterial and its access designation is R-B, Rural Highway. These indicate that it is a facility with moderate travel speeds and low traffic volumes that is intended to provide for local rural travel needs. The posted speed along SH 133 near its intersection with SH 82 is 35 MPH. According to CDOT, the average annual daily traffic along SH 133 near SH 82 was 16,000 vehicles in 2012.

The recent SH 133 bridge widening includes an eight and a half foot wide sidewalk on the east side, and a five foot wide sidewalk on the west side. This improved the condition on the original two lane bridge, which had a single substandard four foot wide walk on the west side. The current bridge meets all minimum ADA access requirements, and meets preferred pedestrian standards. In addition, the new raised median on the bridge provides additional safety, separating opposing traffic.



### **CR 107**

CR 107 provides access to the Red Hill SMRA trailhead and low density, single family residents north of SH 82. This facility is an unimproved road that carries approximately 200 vehicles per day according to Garfield County. This is considered the capacity of the road given the mountainous, winding terrain and limited sight distances.

CR 107 provides access to a small unimproved carpool parking lot near the intersection with SH 82. The lot accommodates between 40 and 45 vehicles, depending on the vehicle types and their orientation within the lot. The lot is relatively narrow, and has substandard channelizing for vehicle movement. Carpoolers and Red Hill SRMA visitors park in this lot.

### **SH 82/SH 133/CR 107 Intersection**

Recent improvements to the intersection of SH 82/SH 133/CR 107 provide safer and more efficient traffic movement. The SH 133 bridge over the Roaring Fork River was widened to carry four lanes of traffic, which allows for double-left turns, more queuing capacity and a free right turn lane.

The intersection of SH 82/SH 133 and CR 107 is signalized with a raised median on the SH 82 and SH 133 legs. There are two westbound left turn lanes from SH 82 as well as two westbound through lanes. Eastbound SH 82 has a single left turn lane and two eastbound through lanes and a channelized right turn lane into a southbound acceleration lane. Northbound SH 133 has an exclusive left turn lane, a shared left/through lane and a channelized northbound to eastbound right turn lane leading into an eastbound acceleration lane on SH 82. Access to CR 107 from its intersection with SH 82 requires a sharp eastbound turn. There is minimal lane designation or queuing area on the CR 107 leg of the intersection. The intersection currently operates at a Level of Service C.

A pedestrian actuated signal is provided on the east leg of the intersection. However, no other pedestrian signals are provided including the northbound to eastbound channelized right turn lane.

Maintenance and operation of the SH 82/SH 133/CR 107 intersection is currently the responsibility of the CDOT.

### **Assessment of Existing Transportation Conditions**

The list below represents some of the main transportation concerns identified:

- SH 82 is difficult to cross because it is a wide, high-speed, high volume expressway. The intersection crossing distance is approximately 170 feet with a portion of that distance uncontrolled by signing or signalization.
- There is no pedestrian signal to cross the free-right turn from northbound SH 133 to eastbound SH 82.
- Speeds along SH 82 are 55 to 65 MPH contributing to the uncomfortable pedestrian and bicycling environment and a level of higher perceived hazard.
- There is no designated bike crossing of SH 82 at its intersection with SH 133 to provide access to Red Hill SRMA trailhead, a popular mountain biking destination.
- The east sidewalk along SH 133 is too narrow to effectively accommodate two-way multi-use activity. A minimum 10 foot wide sidewalk is recommended for multi-use paths.
- CR 107 is an unimproved, mountainous, winding, narrow, dirt road limiting visibility between motorized and non motorized users and creating an unsafe and unpleasant visitor experience.
- Red Hill SRMA trailhead users illegally park along CR 107 when the CDOT parking lot is full further reducing the available area for safely walking or biking along CR 107.

### **Existing Concrete Box Culvert Evaluation and Summary**

On the east side of the intersection of SH 133 and SH 82, an existing concrete box culvert crosses beneath SH 82, entirely within CDOT right-of-way. The existing culvert is five feet wide and seven feet high, and was constructed to serve as a cattle crossing when SH 82 was built. The culvert alignment is nearly perpendicular to SH 82, providing the shortest crossing of the highway.



The south end of the box was buried and the north end fenced off during CDOT's recent SH 82/SH 133 intersection improvement work. Until that time, the culvert was occasionally being used by people seeking a safe crossing of the highway. The existing culvert still drains a 300 +/- acre basin north of SH 82. The original culvert length did not extend far enough south to accommodate the intersection improvements, so it was extended with a 40 foot long segment of 36 inch diameter corrugated metal pipe to reach the new embankment along the Roaring Fork River. The south end of the pipe was then buried with rip rap, which allows drainage to pass through, but no longer allows pedestrian access through the facility.



One of several options under consideration for establishing a permanent crossing of SH 82 is to re-use the existing culvert, and improve it as needed to provide a safe passage. To accomplish this, a minimum 40 foot extension of the five foot by seven foot box section would be required on the south end, to replace the pipe noted above. Other improvements would include repair of any existing structural damage through the length of the box, painting of the interior, and the addition of lighting through the 200 +/- foot long culvert. While the structural integrity of the existing culvert is believed to be good, there would need to be significant improvements to turn it into a safe facility.

From a pedestrian user's perspective, the existing culvert size is substandard. Typically, the minimum sizes for pedestrian underpasses start at 10 feet by 10 feet, with wider sections often used where multi-use activity (both pedestrian and bike traffic) is planned. The existing width may meet ADA standards if handrails are not required (for five percent and greater longitudinal slopes), but it would not accommodate two-way pedestrian or bicycle traffic.

A more critical concern is that converting the existing box culvert to an underpass would put pedestrians at risk during rain events, unless the existing drainage is bypassed into a separate new system. New pedestrian underpasses subject to drainage impacts are typically served by separate drainage systems, or are set to elevations not impacted by two year or five year drainage events, as determined by the local drainage jurisdiction. Combining pedestrians with drainage would likely not be acceptable by CDOT at this location, thus the installation of a parallel drainage system crossing beneath SH 82 would be required.

Other multi-use underpass/overpass alternatives will be considered at this location, in combination with maintaining the existing box culvert as a drainage structure.

# Existing Automobile Infrastructure Diagram



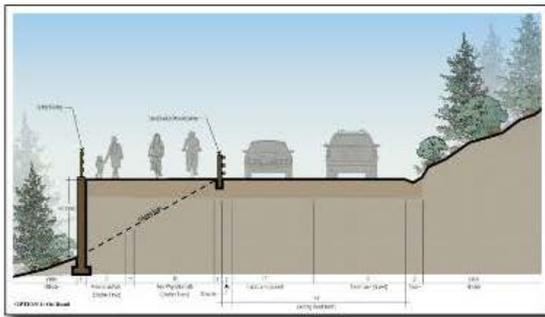
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## Development of Options

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# Preliminary Options Summary



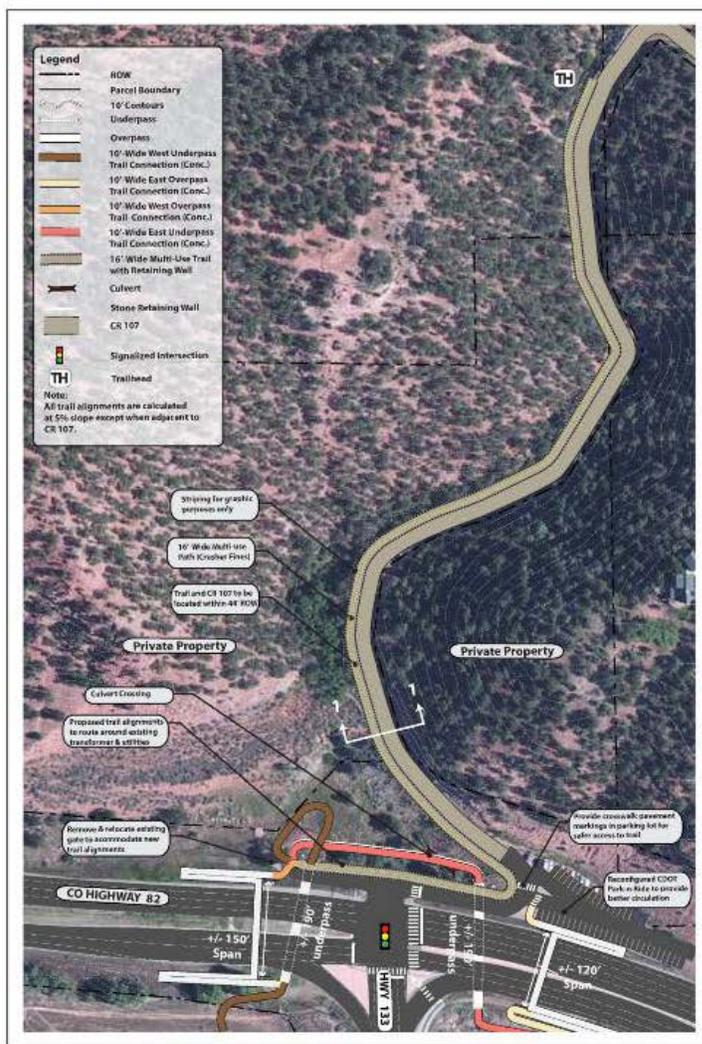
Section- Option 1:  
Multi-Use Path

Scale: 1/8" = 1'-0"

## CR 107 Improvements Option 1 – Multi-Use Path

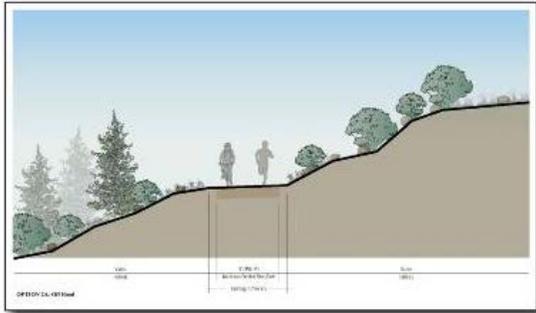
This option provides a shared crusher fines path for bicycles and pedestrians attached to the west side of CR 107.

The bicycle and pedestrian space is separated from the vehicular traffic by a vehicle barrier. The total width of improvements for this option is approximately 44 feet. Starting on the east side, this cross section includes; a swale, two 12 foot vehicle lanes, a one foot vehicle barrier, a ten foot bike path, a five foot pedestrian path, one foot for possible marking or barrier between bicycle and pedestrian paths, and a one foot wide retaining wall.

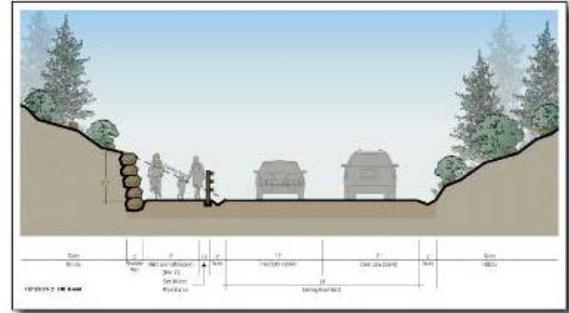


Plan View - Option 1:  
Multi-use Path

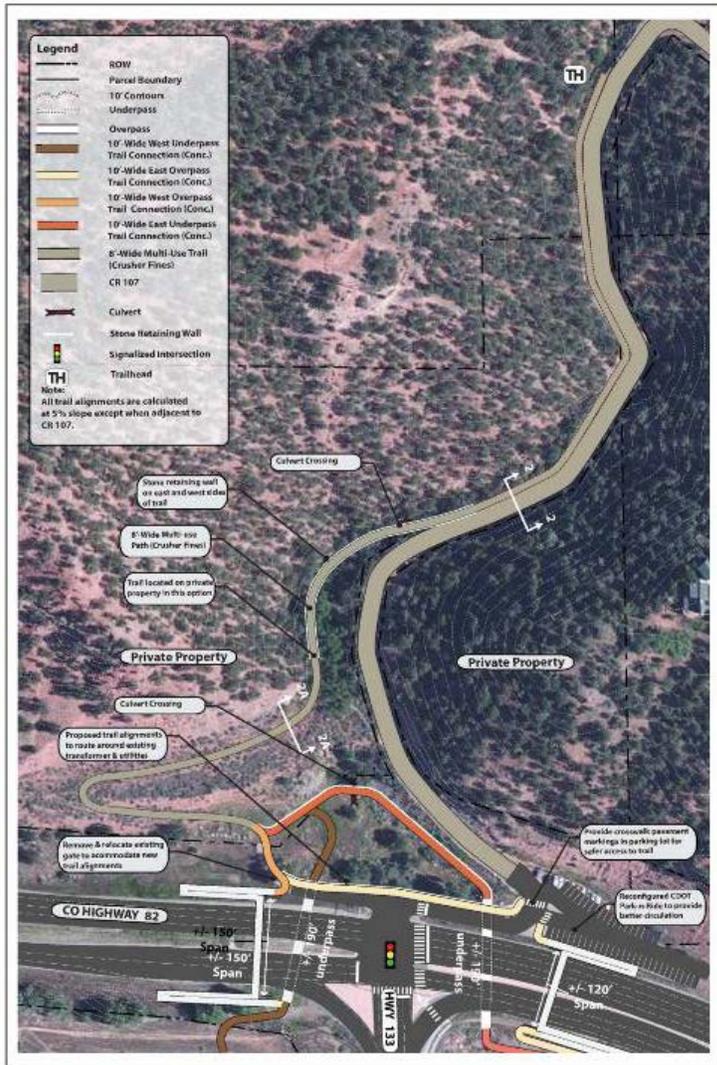
0 100 200  
FEET



Section - Option 2:  
Separated Path Scale: 1/8" = 1'-0"



Section - Option 2A:  
Separated Path Scale: 1/8" = 1'-0"

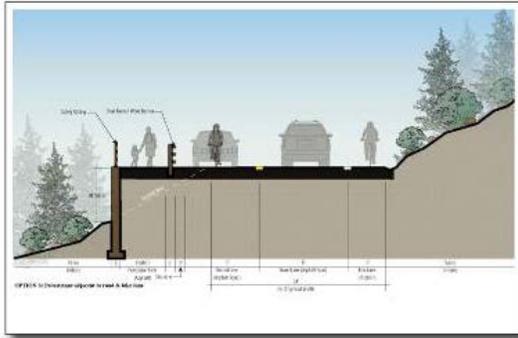


Plan View - Option 2:  
Separated Path

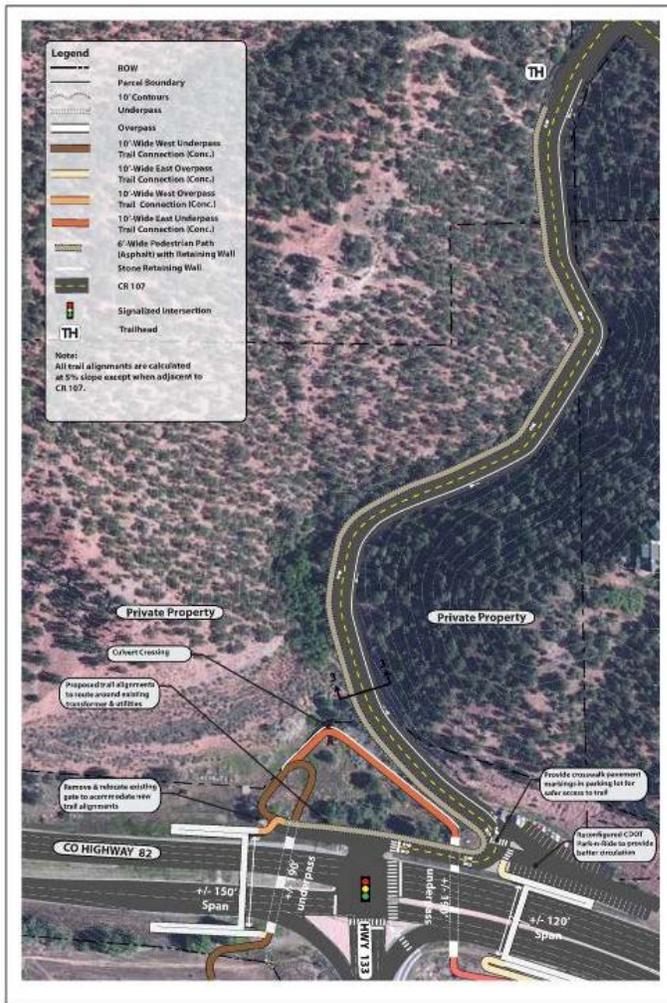
## CR 107 Improvements

### Option 2 – Separated Path

This option provides a separated trail along an old existing road bed, and then joins CR 107 on the west side when required by steep slopes. The separated trail is an eight foot path to be shared by bicycles and pedestrians. Because this option uses an existing ten foot bench, no retaining walls are expected until the path reconnects with CR 107. The cross section where the path and CR 107 are connected is a total of 38 feet. Starting on the east side, this includes; two 12 foot vehicle lanes with two foot swales on both sides, an eight foot multi-use gravel path and a two foot wide boulder wall. There is a vehicle barrier between the multi-use path and swale.



Section- Option 3:  
Ped. Path & Bike Lane      Scale: 1/8" = 1'-0"



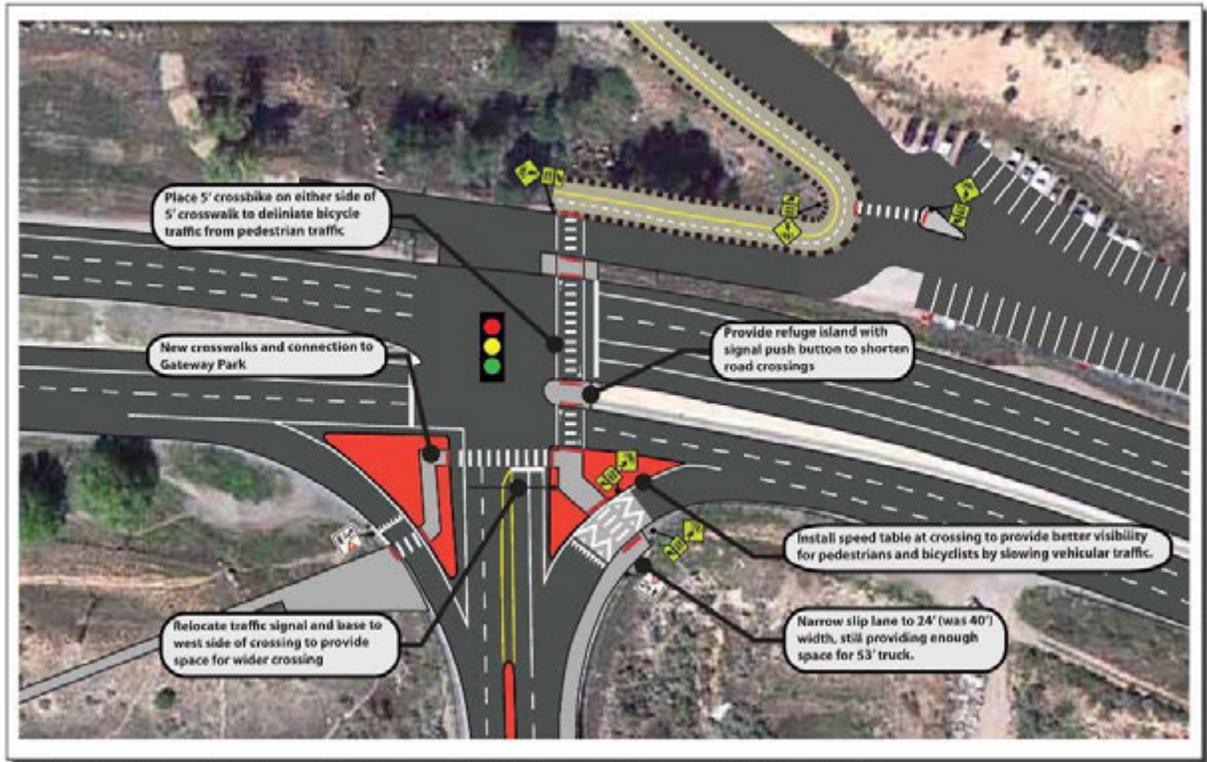
Plan View - Option 3:  
Ped. Path & Bike Lane

## CR 107 Improvements Option 3 – Pedestrian Path and Bike Lane

This option provides a dedicated pedestrian walkway attached to the west side of CR 107 separated from automobile traffic by a vehicle barrier. Bicycles will share the downhill lane with cars, and will have a dedicated five foot striped bike lane for traveling uphill. This striped bike lane is on east side of CR 107. This option requires paving the road with asphalt so that the bike and vehicle lanes can be striped and sharrows can be added to the downhill lane. The pedestrian path is also paved with asphalt. The total width of improvements for this option is approximately 37 feet. Starting on the east side, this includes; a five foot bike lane, two 11 foot vehicle lanes, a two foot shoulder, a one foot vehicle barrier, a six foot pedestrian path, and a one foot wide retaining wall.

## SH 82 At-Grade Improvements

### Option 1 – Speed Table at Slip Lane with Enhanced Crosswalk/Crossbike



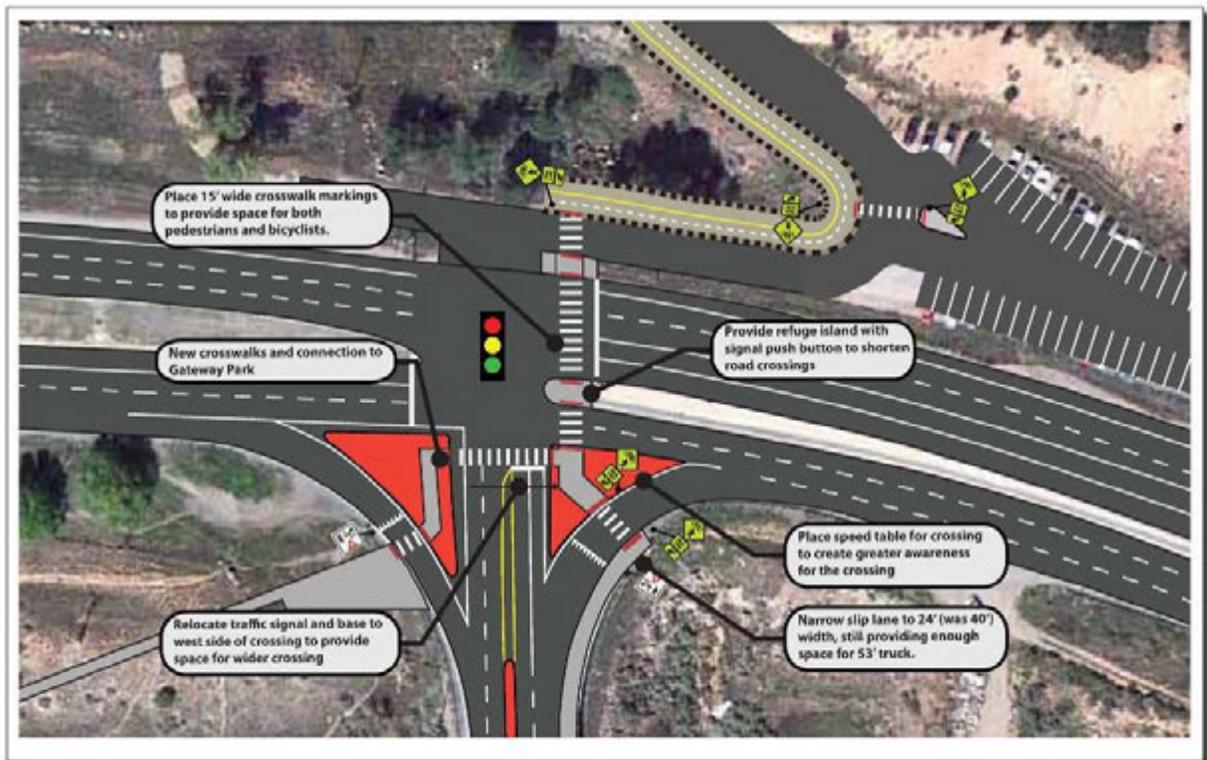
Option 1 - Speed Table at Slip Lane with Enhanced Crosswalk/ Crossbike



Option 1 provides a multi-modal crossing for SH 82 with a central five foot pedestrian crosswalk flanked by five foot bicycle crossings (crossbike) on either side. A speed table to slow traffic in the eastbound slip lane from SH 133 will reduce vehicular speeds at the slip lane crosswalk/ crossbike. The slip lane width will be reduced to 24 feet, from the existing 40 feet. The existing traffic signal pole will be moved to allow space for a wider crosswalk. The island in SH 82 will be expanded to 12 feet and a signal push button will be added to provide an effective refuge and shorten the continuous road crossing. New crosswalks will be added across SH 133 and in the slip lane from SH 82 eastbound to SH 133 southbound. ADA compliant ramps will be incorporated as required.

## SH 82 At-Grade Improvements

### Option 2 – Enhanced Crosswalk with Pedestrian Refuge Island



Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island

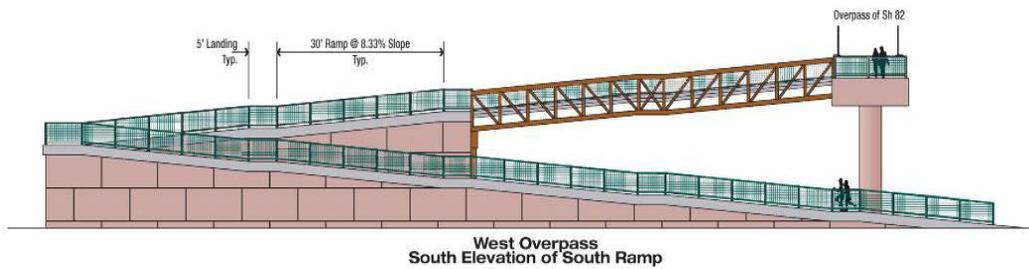


Option 2 provides shared crosswalks for bicyclists and pedestrians with reduced crossing distances. A 12 foot wide island with signal button in SH 82 will provide refuge on the 15 foot wide striped crosswalk. The slip lane from SH 133 to SH 82 will be reduced in width from 40 feet to 24 feet to reduce the crossing distance and vehicular speeds. To allow for a wider crossing, the existing signal pole will be moved. New crosswalks will be added across SH 133 and in the slip lane from SH 82 eastbound to SH 133 southbound. ADA compliant ramps will be incorporated as required.

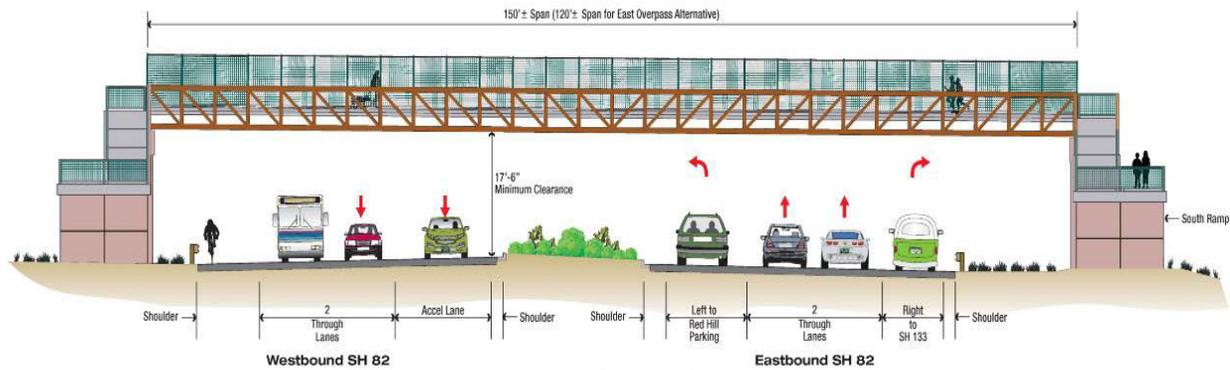
# SH 82 Grade Separated Crossing

## Option 1 – Overpass at SH 82

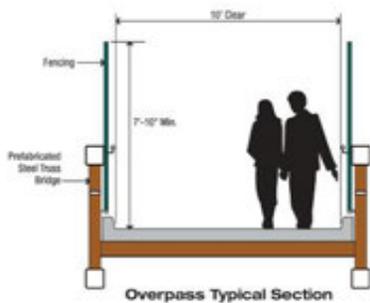
Option 1 provides a pedestrian overpass on either the east or west side of the SH 82 and SH 133 intersection. The required structure must have a clear span between 120 feet to 150 feet, and a minimum height clearance of 17 feet six inches. Ramps will be required on both the north and south sides of SH 82. Ramps on both sides will require approximately 220 feet of ramping at the maximum slope allowed by ADA requirements. The ramps and bridge will provide a minimum 10 foot wide clear pathway. Bicyclists may be asked to dismount before crossing the bridge, and the ramp has a 180 degree turn that could cause conflicts in a shared bike/pedestrian environment.



West Overpass  
South Elevation of South Ramp



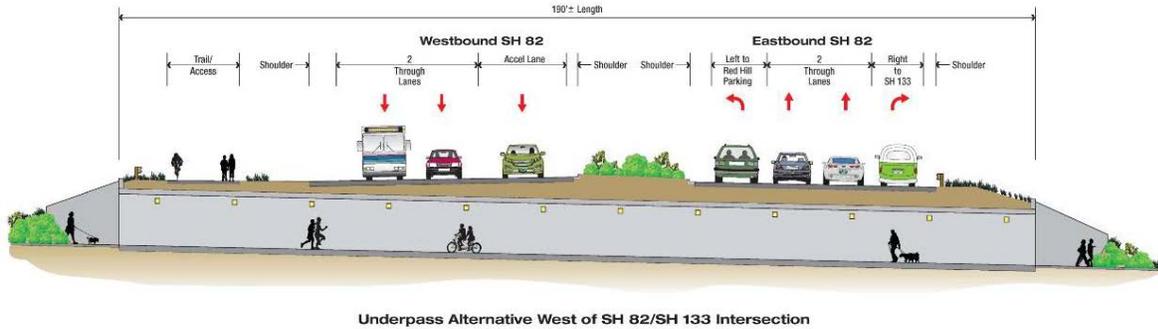
Overpass Alternative West of SH 82/SH 133 Intersection



Overpass Typical Section

## SH 82 Grade Separated Crossing Option 2 - Underpass at SH 82

An underpass at SH 82 consists of a large box culvert that provides a minimum 12 foot wide by 10 foot tall clear space under SH 82. The underpass could be located on either the east or west sides of the SH 82 and SH 133 intersection. The culvert will be a minimum of 190 feet long. The culvert will have an inline slope of



approximately 2.75 percent with the north opening sloping down to the south opening. The 12 foot width will allow bicyclists to ride through the tunnel without dismounting even with the shared pedestrian use. Sloped pathways will be required on both ends of each location to connect with existing and proposed facilities. The underpass will require 24 hour lighting for user safety.



# River Crossing Options

## Option 1 – Widen Existing Sidewalk



Option 1 - Widen Existing Sidewalk



Widening the existing sidewalk on the SH 133 bridge over the Roaring Fork River consists of reducing the vehicular lane and median widths to provide a 12 foot wide sidewalk. This option has direct connections to the at-grade and overpass options for crossing SH 82. A sloped switchback is required to access the east underpass option for crossing SH 82. One access to Gateway Park is the proposed crosswalk for the intersection of SH 82 and SH 133. Another access to Gateway Park is a proposed trail under the SH 133 bridge over the Roaring Fork River. Both methods of access to Gateway Park could connect with a west underpass, but neither route could be considered convenient.

# River Crossing Options

## Option 2 – New Separate Bridge on East Side



Option 2 - New Separate Bridge on East Side



This option consists of a new bridge on the existing abutments found just east of the SH 133 bridge. Connections to existing pedestrian and bicycle routes on the south side of the river will be improved. This option has a direct connection to the east underpass option for crossing SH 82. Connecting to the overpass option for crossing SH 82 requires a tight 180 degree turn to enter the ramp. At-grade crossing of SH 82 is direct but slightly less so than the crossing options on or attached to SH 133. This option provides the most direct connection to Gateway Park on a trail under the SH 133 bridge over the Roaring Fork River.

# River Crossing Options

## Option 3 – Attach New Structure to Bridge



This option consists of a 12 foot bicycle and pedestrian bridge directly adjacent and parallel to the existing SH 133 structure. The new bridge could be located so that it has a lower deck height than the vehicular bridge. This option provides direct connections to the at-grade and overpass options for crossing SH 82. A sloped switchback is required to access the underpass option for crossing SH 82. One access to Gateway Park is the proposed crosswalk for the intersection of SH 82 and SH 133. Another access to Gateway Park is a proposed trail under the SH 133 bridge over the Roaring Fork River. Both methods of access to Gateway Park could connect with a west underpass, but neither route could be considered convenient.





## Evaluation of Options

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# Option Evaluation Process

## Evaluation Summary

The following is a summary of the recommended options for establishing a connection from the south side of the Roaring Fork River to the Red Hill SRMA trailhead that best achieves the Purpose and Need, and the Goals and Objectives established by the planning team and stakeholder group.

Evaluating the options began with the 20 comment sheets received at the March 21, 2013 Open House. Feedback received on the comment sheets was recorded and tallied to determine which options had the strongest support. Both 1<sup>st</sup> and 2<sup>nd</sup> choices were requested, which resulted in a better understanding of the community's support. In all cases, preference was given to the option that received the most first place votes.

The results of the Open House input was then compared to a series of evaluation matrices based on the criteria defined in the Sarbanes Grant Proposal, the Request for Proposal, and further refined with input from the Town of Carbondale and project planning team. Each project component was evaluated separately. Due to the need for each component to connect together, they were also evaluated based on their relationships to each other.

The following pages contain the comment sheet matrix, and the four evaluation matrices.

# Open House #2 Comment Sheet Matrix

## Red Hill Alternative Transportation Study - Open House #2 Input Matrix

Option Name	1st Choice	2nd Choice	Total
<b>County Road 107 Improvements</b>			
Option 1 - Multi-Use Path	2	6	8
Option 2 - Separated Path	11	4	15
Option 3 - Pedestrian Path and Bike Lane	5	6	11
<b>Highway 82 At-Grade Improvements</b>			
Option 1 - Speed Table with Enhanced Crosswalk/Crossbike	8	4	12
Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island	6	6	12
<b>Highway 82 Over and Under Pass</b>			
Option 1 - West Overpass	3	3	6
Option 2 - East Overpass	3	2	5
Option 3 - West Underpass	5	8	13
Option 4 - East Underpass	7	5	12
<b>River Crossing</b>			
Option 1 - Widen Existing Sidewalk	2	1	3
Option 2 - Attach New Structure to Bridge	3	11	14
Option 3 - New Separate Bridge on East Side	13	1	14

Comments	Quan.
Need costs to prioritize/phase/evaluate improvements	2
Widen westbound SH 82 right turn lane at CO 107	5
Red Hill Trails are already overused and this will make it worse	2
Add parking on the west side of CO 107 entrance	3
Need to coordinate with Gateway Park	1
Add signs on CO 107 to educate people regarding shared use	1
Add vehicle access from 82 under 133 to Gateway Park	1
People will not use separated path	2
Don't spend \$ on the at-grade crossing of HWY 82	1
Add a skylight to underpass	1
Add "slip lane" when approaching from east to access parking	2
Add "slip lane" from new west side parking back on HWY 82	1

19 total responses at meeting, 1 response over the phone

# Evaluation Matrix for CRI07 Pathway Options

Criteria	Option 1	Option 2	Option 3
User Experience	protected, shared, on road	shared, separated from road	ped only, bike only, mix down
Connectivity to SH 82 Crossing Options	similar	similar	similar
Maintenance	may only need ex equip	ped/bike path req diff equip	ped path req diff equip, paved
Cost	retaining walls, barriers	possible property acquisition	must pave CR 107 to trailhead
Technical Feasibility	feasible	feasible	feasible
Safety and Security	possible ped/bike conflicts	possible ped/bike conflicts	possible bike/car conflicts
User Perception			
Legal Feasibility	in CR 107 ROW	requires property or easement	in CR 107 ROW
Utilities	no known issues	no known issues	no known issues
Adjacent Grades	similar issues	similar issues	similar issues
Traffic	separate bikes and cars	separate bikes and cars	integrated bikes and cars
Air Quality	no known issues	no known issues	no known issues
Environmental Justice	no known issues	no known issues	no known issues
Floodplain	no known issues	no known issues	no known issues
Hazardous Materials	no known issues	no known issues	no known issues
Noise and Vibration	no known issues	no known issues	no known issues
Prime and Unique Farmlands	no known issues	no known issues	no known issues
Historic Resources	no known issues	no known issues	no known issues
Parks and Recreation	no known issues	no known issues	no known issues
Wetlands	no known issues	no known issues	no known issues
Biological Resources	no known issues	no known issues	no known issues
Water Quality	no known issues	no known issues	no known issues
Construction Impacts on CR 107	major work on west side	major work on 1/2 of west side	paving all the way to trailhead
Cumulative and Indirect Impacts	no known issues	no known issues	no known issues
Property Acquisition or Easements	not required	required	not required

Winner!

## Legend

Good	
Better	
Best	

# Evaluation Matrix for SH82 At-Grade Crossing Options

Criteria	Option 1	Option 2
User Experience	speed table, bike ped separ.	better than existing
Connectivity to CR 107	similar	similar
Connectivity to River Crossing Options	similar	similar
Connectivity to Gateway & Rio Grade Trail	similar	similar
Maintenance	similar	similar
Cost	more improvements	less improvements
Technical Feasibility	feasible	feasible
Safety and Security	speed table, bike ped separ.	safer than existing
User Perception	more improvements	less improvements
Legal Feasibility	no known issues	no known issues
Utilities	no known issues	no known issues
Adjacent Grades	no known issues	no known issues
CDOT Easements	no known issues	no known issues
Traffic	traffic calming at speed table	reduced speed at slip lane
Air Quality	no known issues	no known issues
Environmental Justice	no known issues	no known issues
Floodplain	no known issues	no known issues
Hazardous Materials	no known issues	no known issues
Noise and Vibration	no known issues	no known issues
Prime and Unique Farmlands	no known issues	no known issues
Historic Resources	no known issues	no known issues
Parks and Recreation	crossing to Gateway	crossing to Gateway
Wetlands	no known issues	no known issues
Biological Resources	no known issues	no known issues
Water Quality	no known issues	no known issues
Construction Impacts on SH 82	speed table	similar
Cumulative and Indirect Impacts	no known issues	no known issues
Property Acquisition	no known issues	no known issues

**Winner!**

## Legend

Good	
Better	
Best	

# Evaluation Matrix for SH82 Grade Separated Crossing

Criteria	West Overpass	East Overpass	West Underpass	East Underpass
User Experience	views, noisy, long ramps	views, noisy, long ramps	no ramps, lighting, homeless	no ramps, lighting, homeless
Connectivity to River Crossing Options	poor connectivity to all	good connect to SH 133	poor connectivity to all	good connect to new bridge
Connectivity to CR 107 Options	roughly equal connectivity	roughly equal connectivity	roughly equal connectivity	roughly equal connectivity
Connectivity to Parks & Trails	best connectivity	poor connectivity	best connectivity	better than east overpass
Maintenance	snow, painting	snow, painting	snow at entries, debris	snow at entries, debris
Cost	more than underpass	more than underpass	less than overpass	less than overpass
Technical Feasibility	feasible	tight landing on north side	feasible	feasible
Safety and Security	good visual access	good visual access	underground, homeless	underground, homeless
User Perception	significant valley presence	significant valley presence	nearly invisible	nearly invisible
Legal Feasibility	no known issues	no known issues	no known issues	no known issues
Utilities	no known issues	no known issues	no known issues	no known issues
Adjacent Grades	no known issues	no known issues	no known issues	no known issues
CDOT Approval	all work is in CDOT ROW			
Traffic	no known impact	no known impact	no known impact	no known impact
Air Quality	no known impact	no known impact	no known impact	no known impact
Environmental Justice	no known issues	no known issues	no known issues	no known issues
Floodplain	no known impact	no known impact	no known impact	no known impact
Hazardous Materials	no known issues	no known issues	no known issues	no known issues
Noise and Vibration	no known issues	no known issues	no known issues	no known issues
Prime and Unique Farmlands	no prime or unique farmlands	no prime or unique farmlands	no prime or unique farmlands	no prime or unique farmlands
Historic Resources	no historic resources	no historic resources	no historic resources	no historic resources
Parks and Recreation	connects to Gateway	long connection to Gateway	connects to Gateway	long connection to Gateway
Wetlands	no known issues	no known issues	no known issues	no known issues
Biological Resources	no known issues	no known issues	no known issues	no known issues
Water Quality	no known impact	no known impact	no known impact	no known impact
Construction Impacts on SH 82	less impact than underpass	less impact than underpass	significant impact	significant impact
Cumulative and Indirect Impacts	no known impact	no known impact	no known impact	no known impact
Property Acquisition	not required	not required	not required	not required

Winner!

## Legend

Good	
Better	
Best	

# Evaluation Matrix for Roaring Fork River Crossing

Criteria	Option 1	Option 2	Option 3
User Experience	adjacent to traffic	separate bridge	separated by railing, elev
Connectivity to Downtown Carbondale	multiple approach options	multiple approach options	multiple approach options
Connectivity to RFTA Stop	must cross SH 133 at Village	must cross SH 133 at Village	must cross SH 133 at Village
Connectivity to Gateway & Rio Grade Trail	large loop under SH 133	more direct connection	large loop under SH 133
Maintenance	snow, debris	snow, debris	snow, debris
Cost			
Technical Feasibility	feasible	pending abutment assess	pending structural assess
Safety and Security	adjacent to traffic	separated from traffic	protected from traffic
User Perception	less comfortable	ideal experience	comfortable
Legal Feasibility	no known issues	private property easement req	no known issues
Utilities	no known issues	no known issues	no known issues
Adjacent Grades	no known issues	no known issues	no known issues
CDOT Approval	reducing lane width on 133	easement for trails	attaching to CDOT structure
Traffic	no known impact	no known impact	no known impact
Air Quality	no known impact	no known impact	no known impact
Environmental Justice	no known issues	no known issues	no known issues
Floodplain	trail in floodplain	ex. abutment and trail	trail in floodplain
Hazardous Materials	no known issues	no known issues	no known issues
Noise and Vibration	no known issues	no known issues	no known issues
Prime and Unique Farmlands	no prime or unique farmlands	no prime or unique farmlands	no prime or unique farmlands
Historic Resources	no historic resources	no historic resources	no historic resources
Parks and Recreation	connects to Gateway	shorter connection to Gateway	connects to Gateway
Wetlands	no known issues	no known issues	no known issues
Biological Resources	no known issues	no known issues	no known issues
Water Quality	no known impact	no known impact	no known impact
Construction Impacts on SH 133	disruption on bridge	no disruption	possible disruption
Cumulative and Indirect Impacts	no known impact	no known impact	no known impact
Property Acquisition	not required	may be required	not required

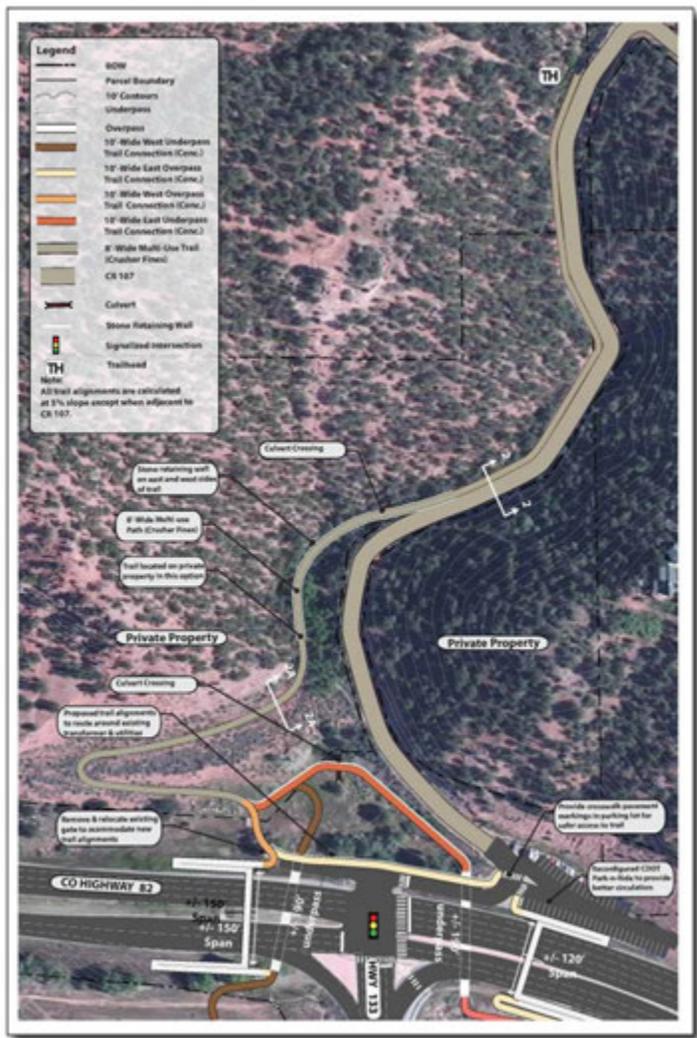
Winner!

## Legend

Good	
Better	
Best	

# Summary of Recommended Option

## CR 107 Pathway Options



### Recommended – Option 2

The comment sheets support Option 2, which has a separated path initially, and a protected path attached to CR 107 when required by steep slopes. Options 1 and 3 were not strongly supported in the comment sheets, but Option 3 was slightly preferred over Option 1. The evaluation criteria matrix shows a slight preference for Option 1 due to the uncertainty of land or easement acquisition in Option 2 and the cost of paving CR 107 to the trailhead in Option 3. This leaves us with a preliminary recommendation for Option 2, if cost effective access can be secured from the property owner. If not, then Option 1 appears to be the most cost effective solution that achieves the project goals.

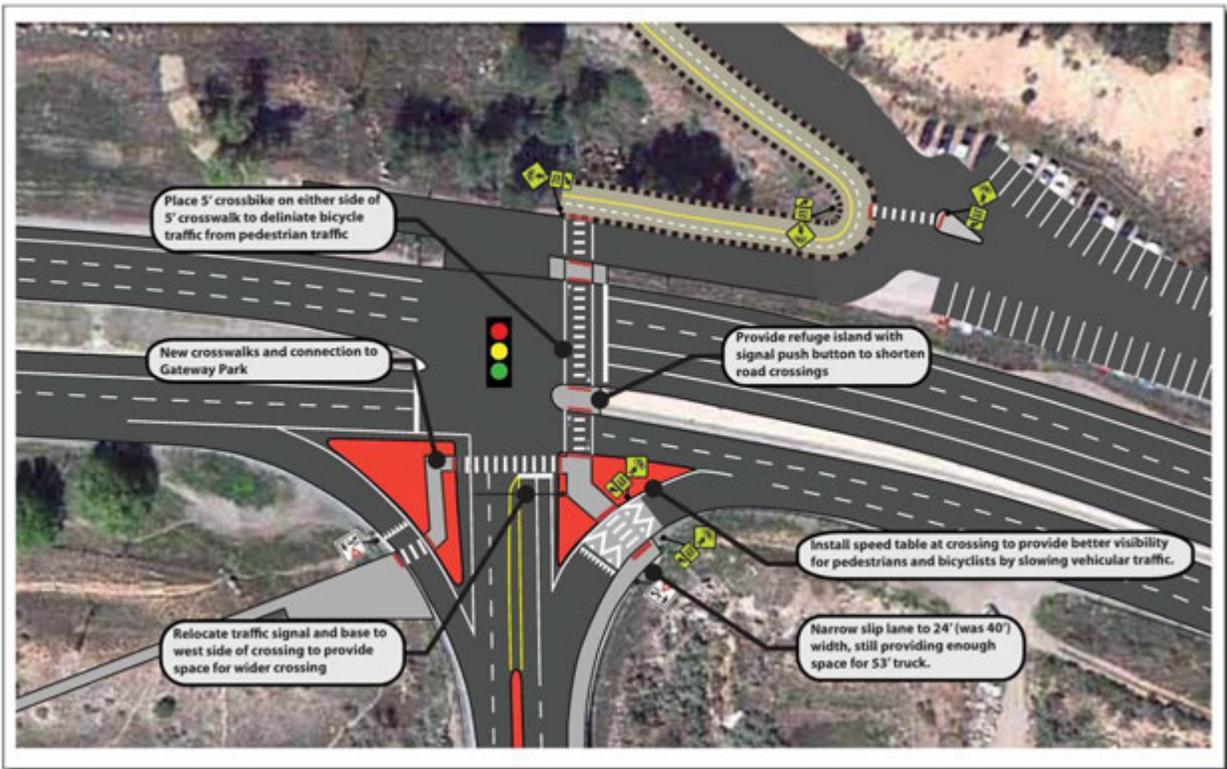
The primary benefits of the recommended option are:

- Off road pathway provides the best user experience and reduced construction costs for the lower section

The concerns regarding the recommended option are:

- Potential cost of easement or property acquisition may out-weigh cost savings

## SH 82 At-Grade Improvements



### Recommended - Option 1

Both options received strong support on the comment sheets with Option 1 garnering a few more votes. The evaluation criteria matrix also points to Option 1. This option will place a speed table/raised pedestrian crossing in the eastbound slip lane from SH 133 to SH 82, and use an enhanced crosswalk/crossbike on SH 82.

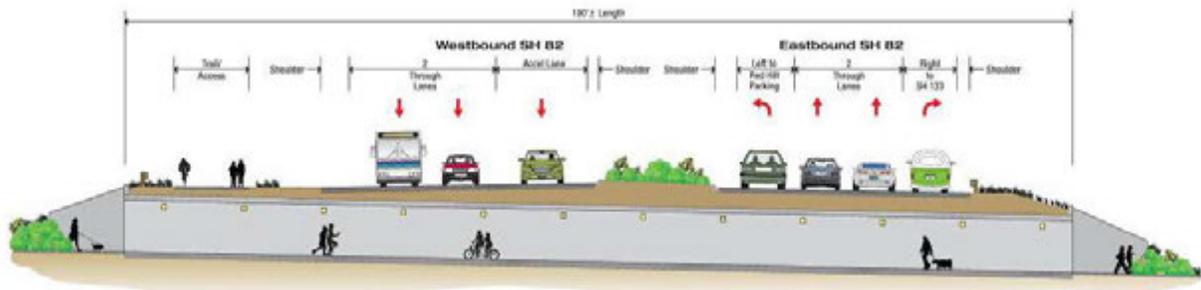
The primary benefits of the recommended option are:

- Stronger safety features for pedestrians and bicyclists resulting in a better user experience
- Speed table serves as a traffic calming device

The concerns regarding the recommended option are:

- Slightly increased cost and traffic impact versus Option 2
- Maintenance issues relating to the speed table

## SH 82 Grade Separated Crossing



### Recommended - East Underpass

The comment sheets show a preference for the underpass options with a slight lead for Option 4, the east underpass. Due to poor connectivity to the river crossing options, the west underpass scored poorly in the evaluation criteria matrix. This leaves the east underpass as the clear recommended option.

The primary benefits of the recommended option are:

- Direct connection to the preferred river crossing option
- Better connectivity to the preferred CR 107 option
- Best user experience for bicyclists, no additional ramping
- Less visual impact, less expensive, and less maintenance

The concerns regarding the recommended option are:

- Construction impacts on SH 82
- Misuse of tunnel by local homeless population
- Visual access for law enforcement

## Roaring Fork River Crossing



### Recommended - Option 3

The comment sheets show an overwhelming preference for Option 3, which will place a new bridge on the existing abutment east of the SH 133 bridge over the Roaring Fork River. The evaluation criteria matrix also supports this option.

The primary benefits of the recommended option are:

- Better user experience with a separate bridge for pedestrian and bicycle use
- More direct connections to Gateway Park, the Rio Grande Trail, and the preferred east underpass at SH 82
- Minimal disruption of SH 133 traffic during construction
- Provides a safer river crossing alternative for all users than currently available

The concerns regarding the recommended option are:

- The north abutment and part of the trail is on private property, requiring property acquisition or an easement (needs to be verified – is there an existing easement for the old bridge?)
- A structural assessment of the existing abutments is needed



## Final Recommendations and Cost Estimates

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## Final Recommendations

For the purpose of generating final design recommendations and cost estimates, the recommended option was studied in more detail with additional input from the Town of Carbondale, Garfield County and Red Hill Council. Issues considered and discussed in more detail were:

- Concern regarding the recommended option for CR 107 (Option 2) and the cost of securing easements or purchasing land
- CR 107 Option 1 was suggested as a more cost effective solution that does not require easements or land acquisition
- An additional route up CR 107 that utilizes the adjacent drainage was proposed

Based on input, the planning team further studied the CR 107 Option 1, and produced a preliminary cost estimate. The preliminary cost was higher than the stakeholder group felt was achievable. This was largely due to the steep terrain and sometimes narrow existing bench for CR 107. Significant walls were required to allow enough width for the protected 16 foot ped / bike path. A revised version of Option 1 with a 10' wide ped / bike path was considered and the cost estimate revised. The stakeholders still felt the cost was too high.

The proposal to utilize the drainage adjacent to CR 107 as the ped / bike path was also considered. This proposal would eliminate the need to widen the lower section of the roadway, and therefore reduce the quantity and cost of retaining walls. However, the impact on the drainage would not be acceptable based on USACE regulations regarding Waters of the U.S. In addition, the suggested route is not within the CR 107 ROW and would therefore also require land or easement acquisition. These factors combine to support Option 2 as the preferred off-road solution if it is possible to acquire land or easements for access.

In response to the cost estimate for Option 1, a solution utilizing an economical vehicle barrier on the existing road was suggested. This proposal called for concrete vehicle barriers, or “Jersey Barriers,” to be placed along CR 107 with a minimum of 6 feet protected space for the ped / bike path. Because the goal of this proposal was to minimize the cost of creating safe access to the Red Hill SRMA, no other improvements were suggested. The response to this proposal became the Interim Solution which is shown in the final design drawings and cost estimate for CR 107.

The existing roadway for CR 107 is only around 20 – 24 feet at many points between SH 82 and the Red Hill SRMA trailhead. This makes it difficult to add a 6 foot path and vehicle barrier without widening the road because of the additional automotive safety concerns regarding the resulting narrow roadway. However, the idea of reducing the width of the ped / bike path to 6 feet and minimizing the walls helped lower the cost significantly. Jersey Barriers were also considered, but the cost of properly installing them was similar to the cost of solutions more appropriate to a very visible roadway and the scenic environment.

Concerns regarding the Interim Solution relate to the width of the ped / bike path and automobile lanes. A 6 foot clear ped / bike path may be narrow enough to encourage bicyclists to use the roadway for both uphill and downhill travel on busy days. It is possible that bicyclists traveling downhill from the Red Hill SRMA will default to roadway use due to the need for slow travel within the 6 foot ped / bike path. There is the potential to reduce the width of the automobile lanes and gain some much needed space for the ped / bike path, but additional studies would need to be conducted to determine the safety of doing this.

These above concerns express the reason for using the term Interim Solution. The community supported and planning team endorsed solution for CR 107 is still Option 2. Due to the difficulty of acquiring the land or an easement, the planning team feels that Option 1 also achieves the goals set for this project and the cost is achievable when implemented with a 10' ped / bike path. If it is possible to fund the design and construction for Option 1, that is preferable to implementing the Interim Solution.

# Preliminary Cost Estimates – Possible Interim Solution CR 107 Modified Option I – 6’ Multi-Use Path

Red Hill Alternative Transportation Study, CR107 Improvements - Interim Solution					
CR 107 Interim Solution Description					30-Sept-13
The Interim Solution is composed of a shared 6' bike / pedestrian lane separated from the 24' wide roadway by a vehicle guard rail. The length of the bike / pedestrian lane from the parking lot to the trailhead is 1446 feet. Retaining walls reach heights up to 12' and require pedestrian guardrails. This option does not require the acquisition of easements or property.					
Item Description	Unit	Qty	Unit Cost	Item Total	Subtotal
<b>Erosion Control &amp; Sediment Protection</b>					
Silt fence	LF	1,684	\$5	\$8,420	
Straw mulching	AC	1	\$2,500	\$2,500	
EC blankets and matting	SY	2,467	\$5	\$12,335	
Native seeding	SF	9,868	\$0.20	\$1,974	
<i>Subtotal</i>					\$25,229
<b>Excavation &amp; Grading</b>					
Clearing and grubbing	SF	13,844	\$0.20	\$2,769	
Cut	CY	0	\$10	\$0	
Fill	CY	1,980	\$10	\$19,800	
Fine grading	SF	17,820	\$1	\$17,820	
<i>Subtotal</i>					\$40,389
<b>Roadway and Trail</b>					
Regulatory and warning sign	EA	8	\$300	\$2,400	
Directional sign	EA	2	\$300	\$600	
Guard rail - reinforced wood	LF	1,722	\$80	\$137,760	
Pedestrian guardrail	LF	948	\$75	\$71,100	
Retaining wall	FF	4,934	\$85	\$419,390	
<i>Subtotal</i>					\$490,490
<b>Estimated Direct Cost</b>					\$556,108
Contingency	20%				\$111,221
Construction / Overhead / Mobilization	15%				\$83,416
<b>Estimated 2012 Construction Costs</b>					<b>\$750,745</b>



Guardrail – reinforced wood (as priced)

# Preliminary Cost Estimates – Preferred Option CR 107 Option 2 – Separated Path

Red Hill Alternative Transportation Study, CR107 Improvements Preferred Option – Separated Path					
<b>Option 2 Description</b>					30-Sept-13
Option 2 is composed of a shared 8' bike / pedestrian trail that follows a separate alignment on private property for 1,888 feet. The final 415 feet is attached to the road and protected by a vehicle guardrail. The road is 24' wide. Retaining walls reach heights up to 10' on the road and trail. Both will require pedestrian guardrails for some sections. This option requires property or easement acquisition that is not included in this cost estimate.					
Item Description	Unit	Qty	Unit Cost	Item Total	Subtotal
<b>Erosion Control &amp; Sediment Protection</b>					
Silt fence	LF	1,804	\$5	\$9,020	
Straw mulching	AC	2	\$2,500	\$5,000	
EC blankets and matting	SY	4,730	\$5	\$23,650	
Native seeding	SF	35,103	\$0.20	\$7,021	
<i>Subtotal</i>					\$44,691
<b>Excavation &amp; Grading</b>					
Clearing and grubbing	SF	21,368	\$0.20	\$4,274	
Cut	CY	4,424	\$10	\$44,240	
Fill	CY	2,611	\$10	\$26,110	
Fine grading	SF	33,230	\$1	\$33,230	
<i>Subtotal</i>					\$107,854
<b>Roadway and Trail</b>					
Regulatory and warning sign	EA	8	\$300	\$2,400	
Directional sign	EA	2	\$300	\$600	
Guard rail - reinforced wood	LF	392	\$80	\$31,360	
Pedestrian guardrail	LF	415	\$75	\$31,125	
Retaining wall	FF	7,830	\$85	\$665,550	
<i>Subtotal</i>					\$696,675
<b>Estimated Direct Cost</b>					\$849,220
Property or Easement Acquisition	SF	15,104			unknown
Contingency	20%				\$169,844
Construction / Overhead / Mobilization	15%				\$127,383
<b>Estimated 2012 Construction Costs</b>					<b>\$1,146,447</b>



Guardrail – reinforced wood (as priced)

# Preliminary Cost Estimates – Included for Comparison

## CR 107 Option 1 – 10' Multi-Use Path

Red Hill Alternative Transportation Study, CR107 Improvements Option 1					
Option 1 Description					30-Sept-13
Option 1 is composed of a shared 10' bike / pedestrian lane separated from the 24' wide roadway by a vehicle guard rail. The length of the bike / pedestrian lane from the parking lot to the trailhead is 1446 feet. Retaining walls reach heights up to 16' and require pedestrian guardrails. This option does not require the acquisition of easements or property.					
Item Description	Unit	Qty	Unit Cost	Item Total	Subtotal
<b>Erosion Control &amp; Sediment Protection</b>					
Silt fence	LF	1,684	\$5.00	\$8,420	
Straw Mulching	AC	1	\$2,500.00	\$1,250	
EC blankets and matting	SY	3,257	\$5.00	\$16,285	
Native Seeding	SF	13,560	\$0.20	\$2,712	
<i>Subtotal</i>					\$28,667.00
<b>Excavation &amp; Grading</b>					
Clearing and grubbing	SF	14,058	\$0.20	\$2,812	
Cut	CY	0	\$10.00	\$0	
Fill	CY	5,136	\$10.00	\$51,360	
Fine Grading	SF	21,487	\$1.00	\$21,487	
<i>Subtotal</i>					\$75,659.00
<b>Roadway and Trail</b>					
Regulatory and warning sign	EA	8	\$300.00	\$2,400	
Directional sign	EA	2	\$300.00	\$600	
Guard Rail - Reinforced Wood	LF	1,722	\$80.00	\$137,760	
Pedestrian Guardrail	LF	1,129	\$75.00	\$84,675	
Retaining Wall	FF	9,613	\$85.00	\$817,105	
<i>Subtotal</i>					\$901,780.00
<b>Estimated Direct Cost</b>					<b>\$1,006,106.00</b>
Contingency	20%				\$201,221.20
Construction / Overhead / Mobilization	15%				\$150,915.90
<b>Estimated 2012 Construction Costs</b>					<b>\$1,358,243.10</b>



Guardrail – reinforced wood (as priced)

# Preliminary Cost Estimates – SH 82 At-Grade Crossing

Red Hill Alternative Transportation Study - SH82 Intersection Improvements					
<b>Description</b>					30-Sept-13
This cost estimate includes all the at-grade improvements to the pedestrian/bike crossing of SH 82. This solution does not require the acquisition of easements or property.					
<b>Item Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Unit Cost</b>	<b>Item Total</b>	<b>Subtotal</b>
<b>Street/Intersection Improvements</b>					
Concrete curb and gutter	LF	445	\$37	\$16,465	
Colored stamped concrete	SF	1,400	\$8.50	\$11,900	
4" aggregate fill	SY	200	\$6.20	\$1,240	
Relocation of Signal	EA	1	\$15,000	\$15,000	
HC ramp (sidewalk)	EA	2	\$1,250	\$2,500	
HC ramp (trail)	EA	2	\$2,500	\$5,000	
Tactile warning strip (24"x24" tiles)	EA	10	\$180	\$1,800	
Regulatory and warning signs	EA	8	\$300	\$2,400	
Directional sign	EA		\$300	\$0	
Thermoplastic striping	LF	425	\$16	\$6,800	
Guard rail - (W Style)	LF	150	\$45	\$6,750	
4" painted centerline striping	LF	15,600	\$2.50	\$39,000	
	<i>Subtotal</i>				\$108,855
Contingency	20%				\$21,771
Construction / Overhead / Mobilization	15%				\$16,328
<b>Estimated 2012 Construction Costs</b>					<b>\$146,954</b>

## Preliminary Cost Estimates – SH 82 Underpass

Red Hill Alternative Transportation Study – SH 82 East Underpass					
<b>Description</b>					30-Sept-13
This cost estimate is for a 200' long pedestrian underpass at SH82. The underpass will have a 16' wide by 10' high travel path. This solution does not require the acquisition of easements or property.					
<b>Item Description</b>					
	<b>Unit</b>	<b>Qty</b>	<b>Unit Cost</b>	<b>Item Total</b>	<b>Subtotal</b>
<b>Street/Intersection Improvements</b>					
Structure excavation	CY	4,100	\$ 15	\$61,500	
Structure backfill (class 1)	CY	490	\$ 25	\$12,250	
Structure backfill (class 2)	CY	2,000	\$ 15	\$30,000	
Shoring	LS	1	\$ 15,000	\$15,000	
Pedestrian railing (steel)	LF	40	\$ 125	\$5,000	
Concrete class d (box culvert)	CY	355	\$ 510	\$181,050	
Structural concrete coating	SY	600	\$ 10	\$6,000	
Reinforcing steel	LB	74,000	\$ 0.90	\$66,600	
Wiring	LS	1	\$ 8,000	\$8,000	
2 inch electrical conduit	LF	380	\$ 25	\$9,500	
Luminaire	EA	14	\$ 800	\$11,200	
Construction traffic control	LS	1	\$ 150,000	\$150,000	
		<i>Subtotal</i>			\$556,100
Contingency	20%				\$111,220
Construction / Overhead / Mobilization	15%				\$83,415
<b>Estimated 2013 Construction Costs</b>					<b>\$750,735</b>

# Preliminary Cost Estimates – Roaring Fork River Bridge

Red Hill Alternative Transportation Study - Pedestrian Bridge Over Roaring Fork River					
<b>Description</b>					30-Sept-13
This cost estimate is for a 143' long pedestrian bridge with a 12' wide travel path. It is assumed that the existing abutments will be reused for this bridge. This option requires property or easement acquisition that is not included in this cost estimate.					
Item Description	Unit	Qty	Unit Cost	Item Total	Subtotal
<b>Street/Intersection Improvements</b>					
Structure excavation	CY	50	\$ 15	\$750	
Structure backfill (class 1)	CY	35	\$ 25	\$875	
Structure backfill (class 2)	CY	15	\$ 15	\$225	
Steel Pile (HP 12x53)	LF	100	\$ 90	\$9,000	
Pedestrian railing (steel)	LF	32	\$ 120	\$3,840	
Concrete class d (bridge)	CY	50	\$ 450	\$22,500	
Structural concrete stain	SY	20	\$ 10	\$200	
Reinforcing steel	LB	10,000	\$ 0.90	\$9,000	
2 inch electrical conduit	LF	160	\$ 25	\$4,000	
Bridge girder and deck unit (144'-6")	EA	1	\$ 190,000	\$190,000	
<i>Subtotal</i>					\$240,390
Property or Easement Acquisition	SF	1733			unknown
Contingency	20%				\$48,078
Construction / Overhead / Mobilization	15%				\$36,058
<b>Estimated 2013 Construction Costs</b>					<b>\$324,526</b>

# Preliminary Cost Estimates – Trail Connections

Red Hill Alternative Transportation Study - Trail Connections					
Description					30-Sept-13
These improvements include the trails to connect SH 133 and Cowan Drive to the proposed pedestrian bridge over the Roaring Fork River, and the trail connecting the pedestrian bridge to Gateway Park, the proposed underpass of SH 82, and the at-grade crossing of SH 82. Some of these trail segments require property or easement acquisition that is not included in this cost estimate. See notes at bottom of this page.					
Item Description	Unit	Qty	Unit Cost	Item Total	Subtotal
<b>Erosion Control &amp; Sediment Protection</b>					
Silt fence	LF	1,000	\$5	\$5,000	
Straw Mulching	AC	1	\$2,500	\$1,250	
EC blankets and matting	SY	3,780	\$5	\$18,900	
Native Seeding	SF	34,000	\$0.20	\$6,800	
	<i>Subtotal</i>				\$31,950
<b>Demolition</b>					
Sawcut	LF	200	\$5	\$1,000	
Demo of existing path, sidewalk and curb/gutter	SY	3,100	\$17	\$52,700	
Hauling and disposal	CY	1	\$10,000	\$10,000	
	<i>Subtotal</i>				\$63,700
<b>Excavation &amp; Grading</b>					
Clearing and grubbing	SF	25,000	\$0.20	\$5,000	
Trail grading cut	CY	745	\$10	\$7,450	
Trail grading fill	CY	915	\$10	\$9,150	
Fine Grading	SF	25,000	\$1	\$25,000	
	<i>Subtotal</i>				\$46,600
<b>Greenway Trail</b>					
Concrete, 6" thick	SF	17,200	\$5.50	\$94,600	
Aggregate Base Course - Class 6 Crushed Aggregate (4" depth)	SY	1,730	\$6.20	\$10,726	
Pedestrian Guardrails	LF	1,000	\$75	\$75,000	
Retaining Walls	SF	11,500	\$85	\$977,500	
	<i>Subtotal</i>				\$1,157,826
<b>Estimated Direct Cost</b>					<b>\$1,300,076</b>
Contingency	20%				\$260,015
Construction / Overhead / Mobilization	15%				\$195,011
<b>Estimated 2012 Construction Costs</b>					<b>\$1,755,102</b>
Percentage of Estimated Construction Costs for the following trail segments:					
• SH 133 to the south side of the Roaring Fork River Bridge (approx. 3120 SF of property or easement req.)					<b>15%</b>
• Cowan Drive to the south side of the Roaring Fork River Bridge (approx. 9860 SF of property or easement req.)					<b>28%</b>
• The Roaring Fork River Bridge to the SH 82 Underpass (approx. 960 SF of property or easement req.)					<b>14%</b>
• The SH 82 Underpass to Gateway Park					<b>33%</b>
• The Roaring Fork River Bridge to the At Grade Crossing of SH 82 (as a spur off the River Bridge to Underpass trail)					<b>10%</b>



## Implementation Plan

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## Phased Implementation

Implementation of the Recommended Option is not likely to occur all at once due primarily to budget constraints, but also because of the coordination anticipated among several affected stakeholders to achieve its completion. Thus, a phased implementation approach is recommended to complete individual segments of the infrastructure construction. The system of pedestrian and bicycle trail linkage improvements from the south side of the Roaring Fork River to the Red Hill SRMA trailhead can be divided into three segments:

1. CR 107 from the CDOT parking lot to the Red Hill SRMA trailhead
2. The SH 82 underpass and at-grade improvements
3. The Roaring Fork River crossing and trail linkages

This phasing is also in line with feedback collected during Open House and stakeholder meetings that identified CR 107 as having the highest priority from a safety standpoint.

Each segment has a distinct set of design and construction requirements, which are summarized below. It is anticipated that each segment can be designed and constructed as a stand-alone project, with relatively clear dividing lines between each segment. This will help minimize the amount of “throw-away” construction from previous work, as the next segment is designed and constructed.

A simultaneous design of all three segments probably does not need to be considered unless appropriate funding opportunities arise that could enable the phases to be constructed within a relatively short period.

### Environmental Inventory and Mitigation

Since it appears there will be extended periods between each segment’s construction, we recommend that environmental resources be inventoried and impacts identified for each segment individually. Ideally, the Recommended Option could be designed all at once, and all of the associated environmental resources can be inventoried and impacts identified up front. Then, even if segment construction began to stretch over quite a few years, only minor updates to the environmental documentation would be required. However, due to the extent of the full build-out and the anticipated lack of funding, the full design and environmental clearance efforts are considered impractical at this time.

## CR 107 Improvements



The trail installation along CR 107 from the SH 82/SH 133 intersection to the Red Hill SRMA trailhead has been identified as the highest priority among the Recommended Option segments, addressing the most immediate needs. The improvements will separate pedestrian and bicycle traffic from vehicles on the roadway, providing a much safer condition than currently exists. It is anticipated that Garfield County would procure the design and construction work completed on this segment.

### **Additional Data Needs for Final Design**

ROW verification through field survey and review of ownership mapping along the CR 107 alignment will be a key early action item. Establishing temporary and permanent construction easements will be critical from constructability and cost standpoints, particularly if right-of-way takes or easements are required.

Retaining wall construction is anticipated along the roadway, which will require a geotechnical investigation and development of wall type and foundation recommendations along the proposed wall alignment. Geotechnical borings at approximately 100 feet on-center along the proposed retaining wall alignment will be required.

### **Design and Construction Recommendations**

It is recommended that a retaining wall selection report, in general compliance with CDOT requirements for major wall structures be submitted, to ensure the most effective wall is chosen. Costs, constructability, aesthetics, and maintenance criteria for several wall types should be evaluated for review and approval by the County and other stakeholders.

Investigation of drainage characteristics along the west side of CR 107 will be required to verify trail and wall construction assumptions. Permanent erosion control measures will be required to assure water quality requirements are met, and to ensure the stability of the new infrastructure.

The trail design is not anticipated to accommodate ADA requirements, due to the steep existing conditions to the trailhead. The design will instead focus on safe pedestrian and bicycle facilities for trail use.

## SH 82 Crossing



Following completion of the CR 107 improvements, construction of the segment including the proposed concrete box culvert underpass and the at-grade pedestrian crossing improvements at SH 82 is recommended. The extent of work included in this segment could include the trail extending under the SH 133 bridge to the Gateway Park improvements west of the bridge, if they have been completed. A majority of the construction for this segment will be within CDOT ROW, and will be subject to its design criteria and approval. As such, this segment has the potential to be procured by CDOT, but it more likely to be executed by Garfield County or the Town of Carbondale as a CDOT Local Agency project.

### **Additional Data Needs for Final Design**

A utility investigation along SH82 will need to be conducted to document potential conflict with the proposed underpass construction. Investigation of utility relocation or re-alignment would follow, as needed.

A full topographic survey along SH 82, both within and outside of CDOT's ROW will be required to verify ownership boundaries, and have adequate data available to address appropriate design issues. Among the key design elements requiring survey will of course be the at-grade and underpass construction, but also the temporary and permanent erosion control, drainage and water quality, and traffic control.

### **Design and Construction Recommendations**

It is recommended that the standard CDOT Scope of Work be used in developing the work plan for this segment to assure that all appropriate design issues and proper clearances are attained. Since the new

improvements are within CDOT ROW, it is assumed CDOT will be responsible for its maintenance, thus the necessity to adhere to its requirements.

The box culvert underpass construction may require as many as three phases to complete its full length while maintaining an appropriate number of operating traffic lanes. Shoring will be required between phases to minimize excavation limits, and maintain open lanes through the relatively narrow work zone.

A well-executed traffic control plan will be required to complete the underpass and at-grade crossing construction. To accommodate the anticipated lane shifts through the intersection of SH 82 and SH 133, a significant amount of raised median removal and reconstruction can be anticipated. Due to the proximity to SH 133, accommodating traffic lane shifts will likely require the temporary closure of dedicated turn lanes and acceleration lanes at the intersection. At least one traffic signal is being reset with the proposed crossing improvements, which will require use of temporary signals. The installation of a temporary span-wire signal arrangement can be considered to accommodate the anticipated series of lane shifts. All traffic control plans developed for the project will need to be developed or reviewed by an individual that has completed the Advanced Workzone Management and Design Training provided by the National Highway Institute.

Access from the CDOT parking lot to the at-grade and underpass crossings will be ADA compliant. The access from the south end of the underpass up to the SH 133 bridge will also be ADA compliant.

## **Roaring Fork River Crossing**



The final segment of the Recommended Option will extend from SH 82 to points south of the Roaring Fork River. This segment will include the construction of a multi-purpose bridge over the river, and trail connections to various connection points. Installation of these facilities would complete the improved continuous link between the north end of the Carbondale town center and the Red Hill SRMA trailhead.

### **Additional Data Needs for Final Design**

An inventory of wetlands in and around the river channel will be required to document potential project impacts, to pursue appropriate permits (e.g. 404 Permit), and verify potential wetland mitigation requirements.

It is likely that the proposed trail construction adjacent to and under the north abutment of the SH 133 bridge will add fill to the Roaring Fork River floodplain, and will thus require execution of a LOMR/CLOMR effort. This will include floodplain modeling of the pre-construction and anticipated post-construction conditions within the floodplain to verify minimal rise to the 100-year water levels mapped by FEMA. In addition to the topographic survey in proximity of the trail a bridge, a survey of the river for a minimum 1000 feet upstream and downstream of the proposed project will be required to develop and/or verify the flood plain model.

An extensive geotechnical engineering effort will be required for the retaining wall and pedestrian bridge design. Borings at approximately 100 feet on-center along the proposed retaining wall alignment, and one at each bridge abutment will be required. Additional borings may be considered for the trail pavement design, if the pavement will require design for special maintenance equipment or other vehicle loads. A scour analysis at the pedestrian bridge will be required, using the subsurface soil data found at the site.

### **Design and Construction Recommendations**

A prefabricated steel truss bridge has been proposed to span the Roaring Fork River in the same location a vehicular bridge once spanned the river. Portions of the abutment for the original bridge remain, and may be considered for re-use if found to be structurally sound. However, the effort to verify its integrity for the 50 to 75 year life span of the new bridge will be substantial, and potentially expensive. As-built drawings of the construction are not believed to be available, thus extensive inspection, underground investigation, and testing of the existing materials will be needed. Modifications to the existing abutment are also anticipated to fit the proposed bridge types under consideration. Considering the effort and expense required to verify the adequacy of the existing bridge abutments, it is recommended that new abutments be the first alternative for the bridge substructure.

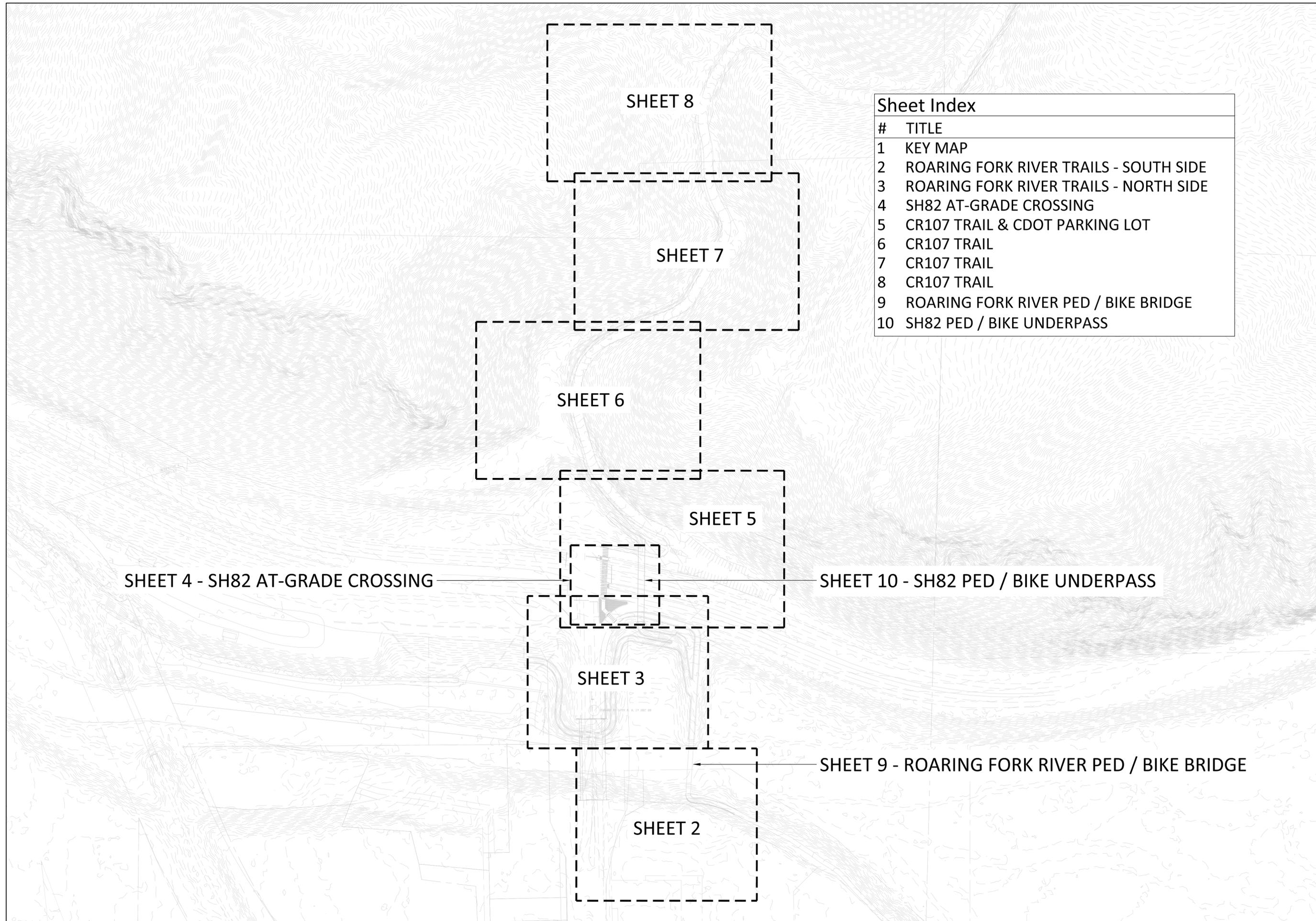
The trails will be designed to current multi-purpose trail standards, and will be constructed in compliance with ADA requirements.

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## Appendix A: Preliminary Design and Engineering Drawings

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Sheet Index	
#	TITLE
1	KEY MAP
2	ROARING FORK RIVER TRAILS - SOUTH SIDE
3	ROARING FORK RIVER TRAILS - NORTH SIDE
4	SH82 AT-GRADE CROSSING
5	CR107 TRAIL & CDOT PARKING LOT
6	CR107 TRAIL
7	CR107 TRAIL
8	CR107 TRAIL
9	ROARING FORK RIVER PED / BIKE BRIDGE
10	SH82 PED / BIKE UNDERPASS

SHEET 4 - SH82 AT-GRADE CROSSING

SHEET 10 - SH82 PED / BIKE UNDERPASS

SHEET 9 - ROARING FORK RIVER PED / BIKE BRIDGE

Red Hill Trailhead  
Alternative Transportation Feasibility Study  
Preliminary Design and Engineering Documents  
Key Map

MATCHLINE - SEE SHEET 2

LEGEND:



PROPERTY LINE



RETAINING WALL



CONCRETE TRAIL



CURB



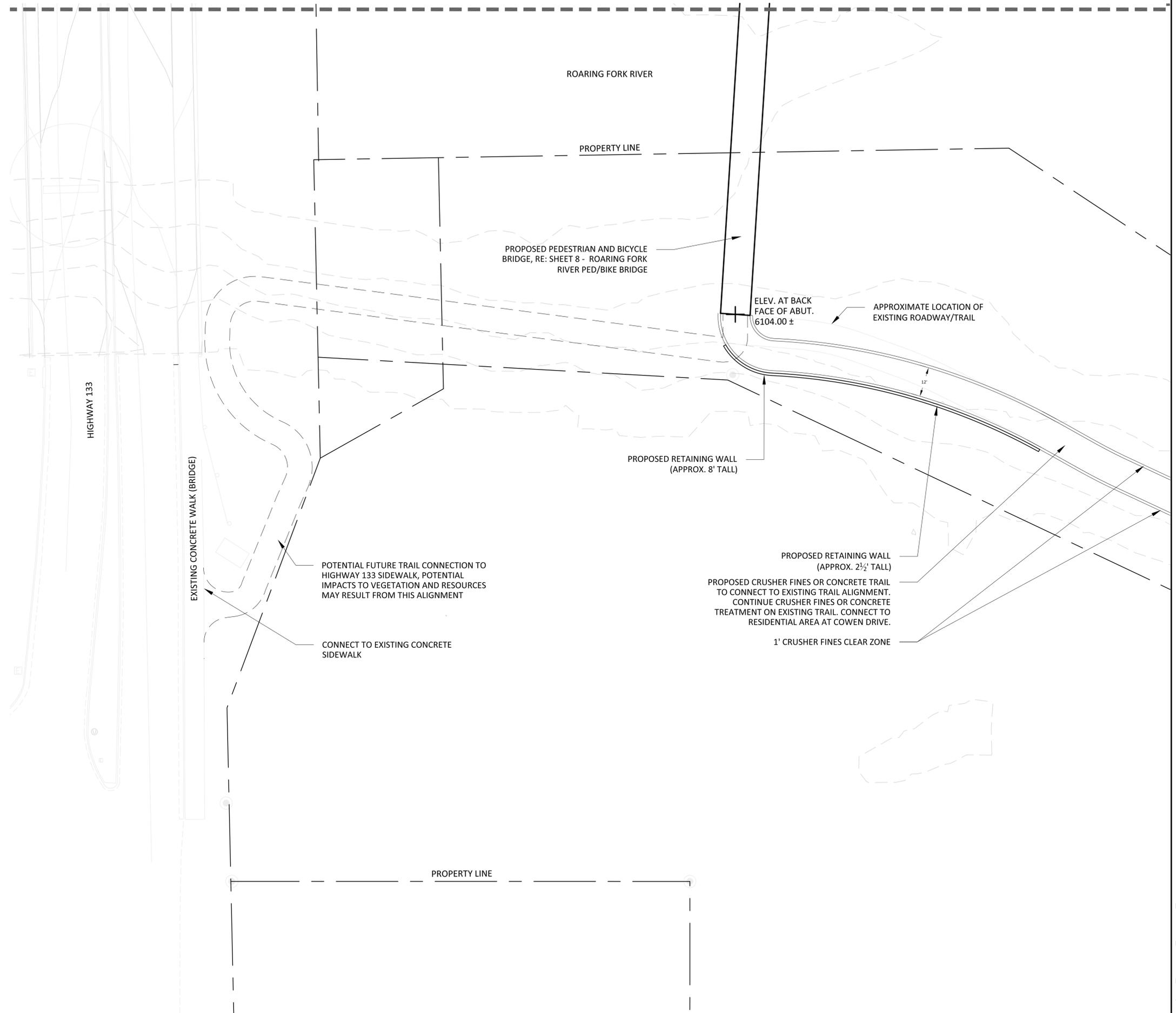
CROSSWALK



DECORATIVE CONCRETE



DETECTABLE WARNING STRIP



SCALE: 1:20



**Red Hill Trailhead**  
 Alternative Transportation Feasibility Study  
 Preliminary Design and Engineering Documents  
 ROARING FORK RIVER TRAILS - SOUTH SIDE

July 31, 2013  
 Date

15874.100  
 Project No.

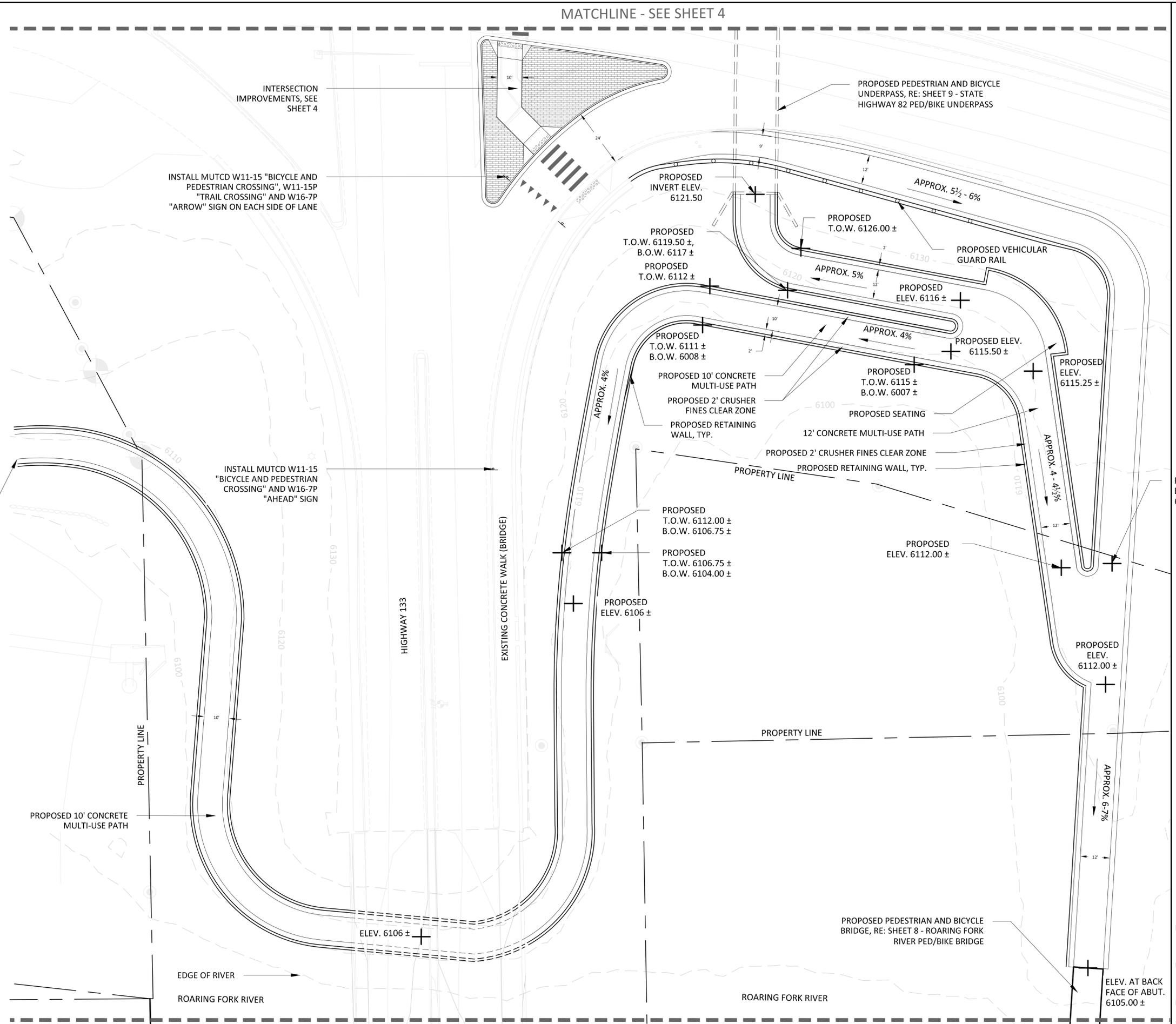
2  
 Drawing No.

Sheet 2 of 10  
 © 2013 Otak, Inc.

LEGEND:

-  PROPERTY LINE
-  RETAINING WALL
-  CONCRETE TRAIL
-  CURB
-  CROSSWALK
-  DECORATIVE CONCRETE
-  DETECTABLE WARNING STRIP

10' CONCRETE MULTI-USE PATH TO CONNECT TO GATEWAY RV PARK



NOTE:  
ALL GRADES APPROXIMATELY 4 - 6 1/2%

MATCHLINE - SEE SHEET 4

MATCHLINE - SEE SHEET 3



SCALE: 1:20



PROPOSED ELEV. 6113.00 ±

**Red Hill Trailhead**  
Alternative Transportation Feasibility Study  
Preliminary Design and Engineering Documents  
ROARING FORK RIVER TRAILS - NORTH SIDE

July 31, 2013  
Date

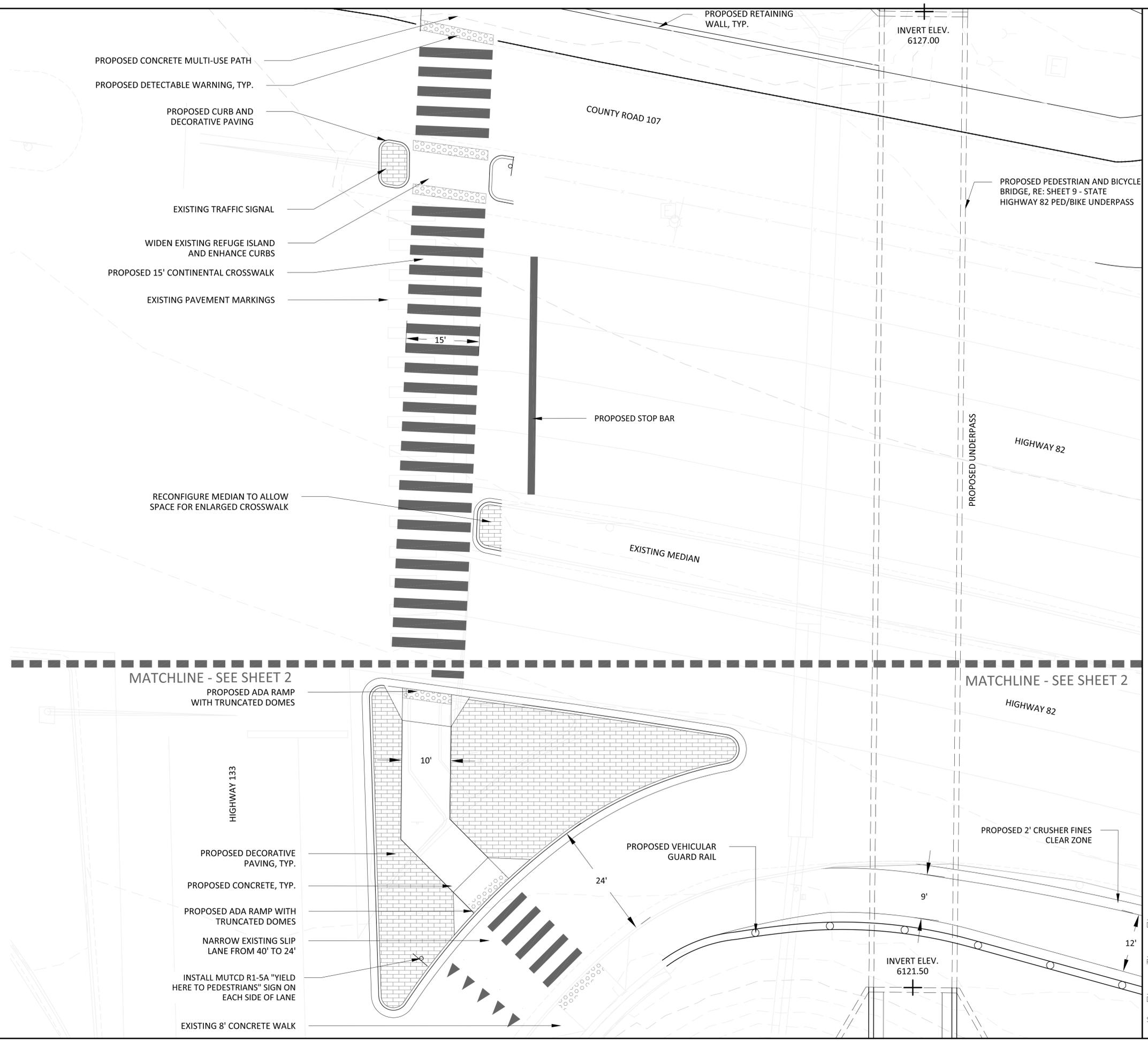
15874.100  
Project No.

3  
Drawing No.

Sheet 3 of 10  
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LEGEND:

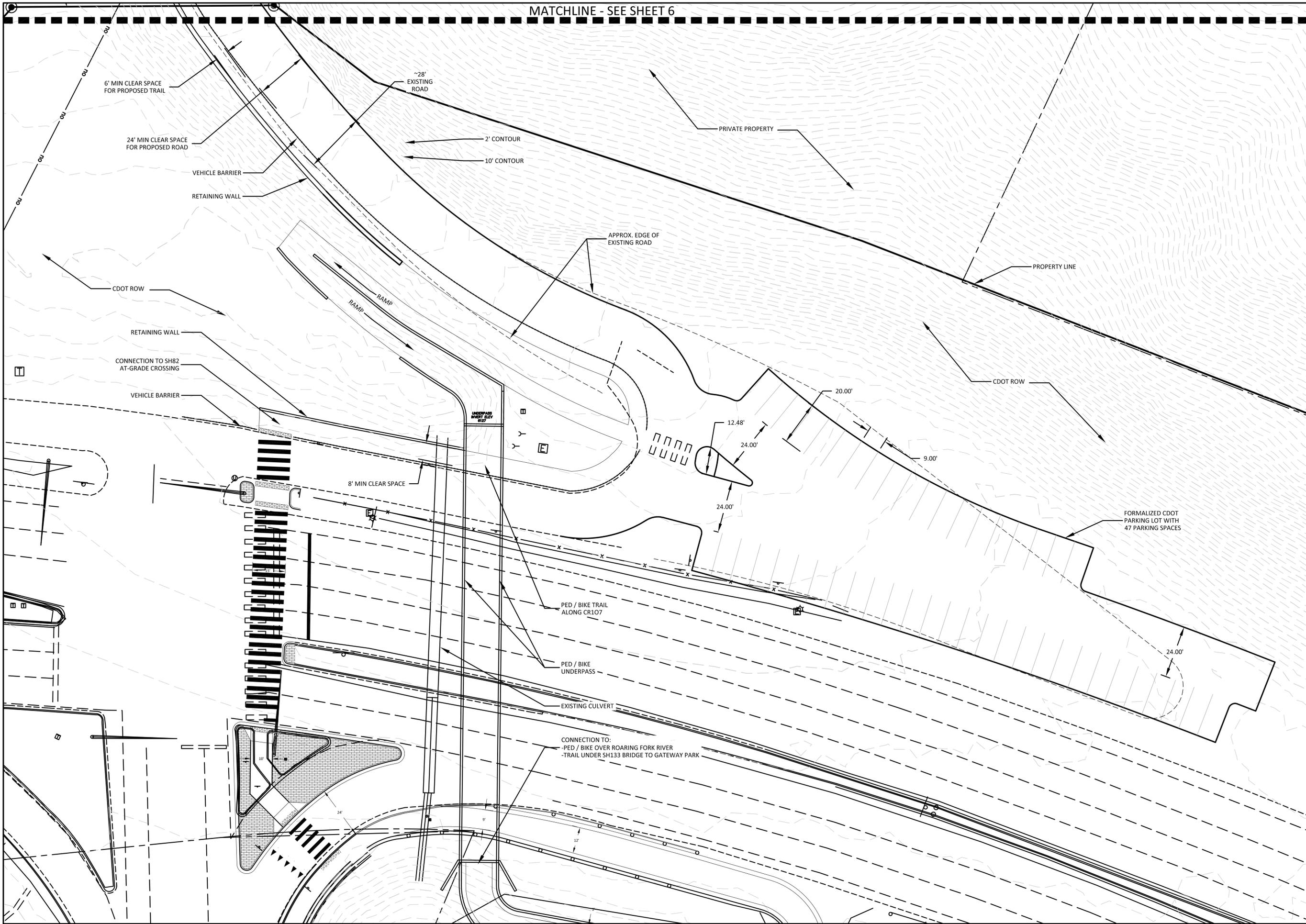
-  PROPERTY LINE
-  RETAINING WALL
-  CONCRETE TRAIL
-  CURB
-  CROSSWALK
-  DECORATIVE CONCRETE
-  DETECTABLE WARNING STRIP



SCALE: 1:10  
 NORTH

**Red Hill Trailhead**  
 Alternative Transportation Feasibility Study  
 Preliminary Design and Engineering Documents  
 SH82 AT-GRADE CROSSING

Date	July 31, 2013
Project No.	15874.100
Drawing No.	4
Sheet	4 of 10
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**Red Hill Trailhead**  
Alternative Transportation Feasibility Study  
Preliminary Design and Engineering Documents  
CR107 Trail & CDOT Parking Lot

Date July 31, 2013  
Project No. 15874.100  
Drawing No. 5  
Sheet 5 of 10  
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MATCHLINE - SEE SHEET 7

SLOPE FROM 1:1 TO 1.5:1

CR107 ROW

RETAINING WALL

VEHICLE BARRIER

6' MIN CLEAR SPACE  
FOR PROPOSED TRAIL

24' MIN CLEAR SPACE  
FOR PROPOSED ROAD

PRIVATE PROPERTY

2' CONTOUR

10' CONTOUR

CR107 ROW

SH82 ROW

APPROX. EDGE OF  
EXISTING ROAD

CR107 ROW

~22'  
EXISTING  
ROAD

PRIVATE PROPERTY

MATCHLINE - SEE SHEET 5



**Red Hill Trailhead**  
Alternative Transportation Feasibility Study  
Preliminary Design and Engineering Documents  
CR107 Trail

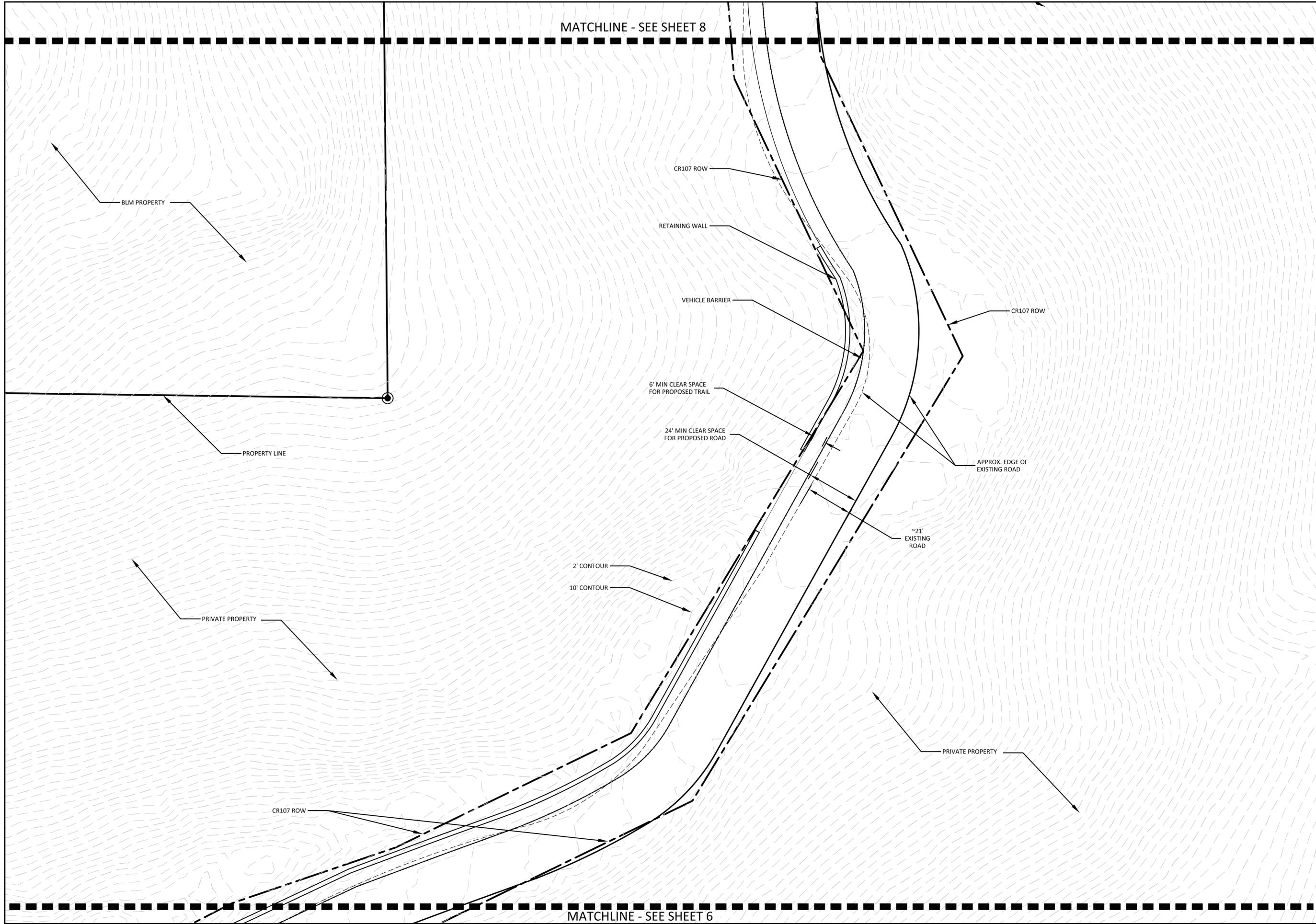
July 31, 2013  
Date

15874.100  
Project No.

6  
Drawing No.

Sheet 6 of 10  
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MATCHLINE - SEE SHEET 8



MATCHLINE - SEE SHEET 6



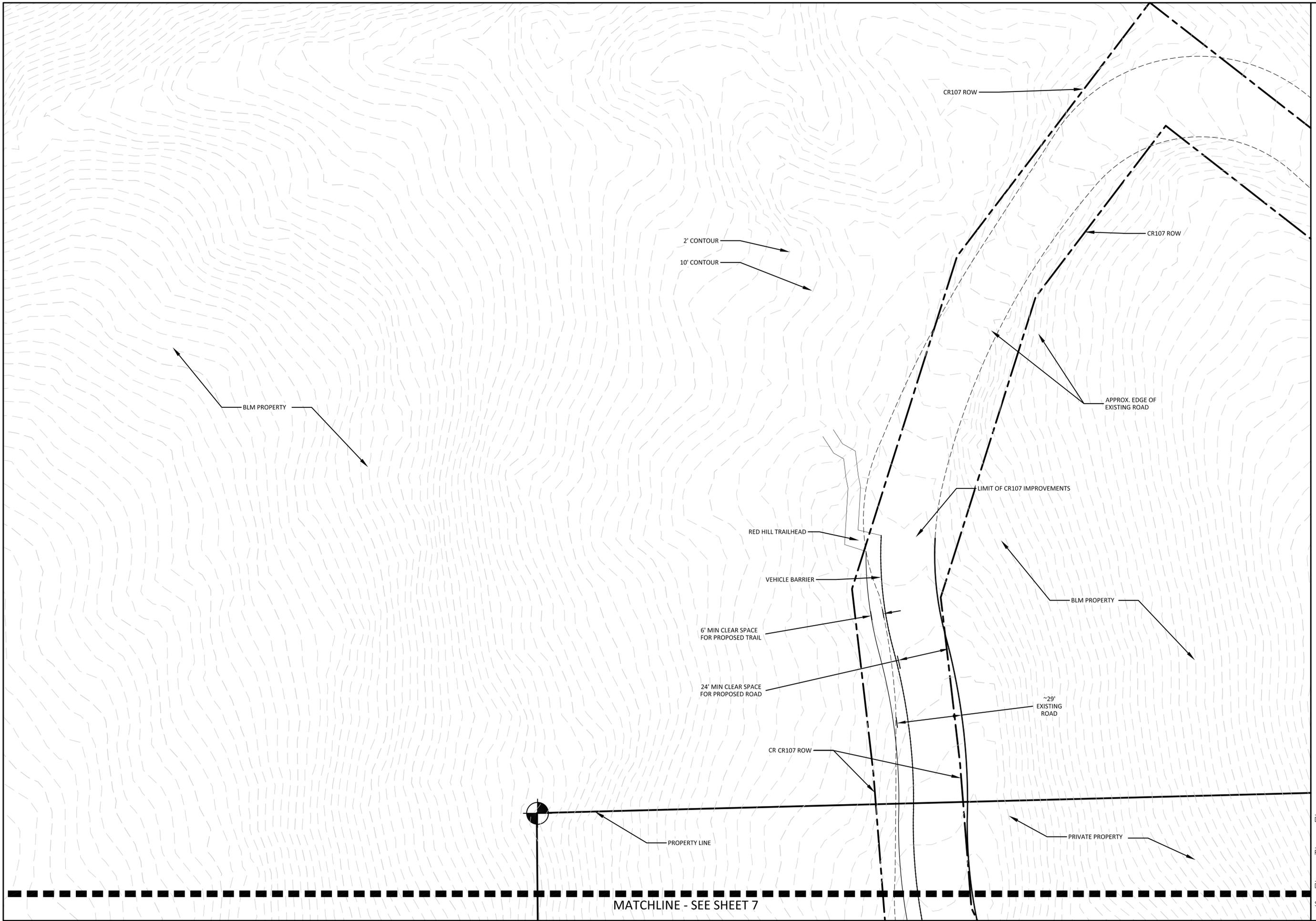
**Red Hill Trailhead**  
Alternative Transportation Feasibility Study  
Preliminary Design and Engineering Documents  
CR107 Trail

July 31, 2013  
Date

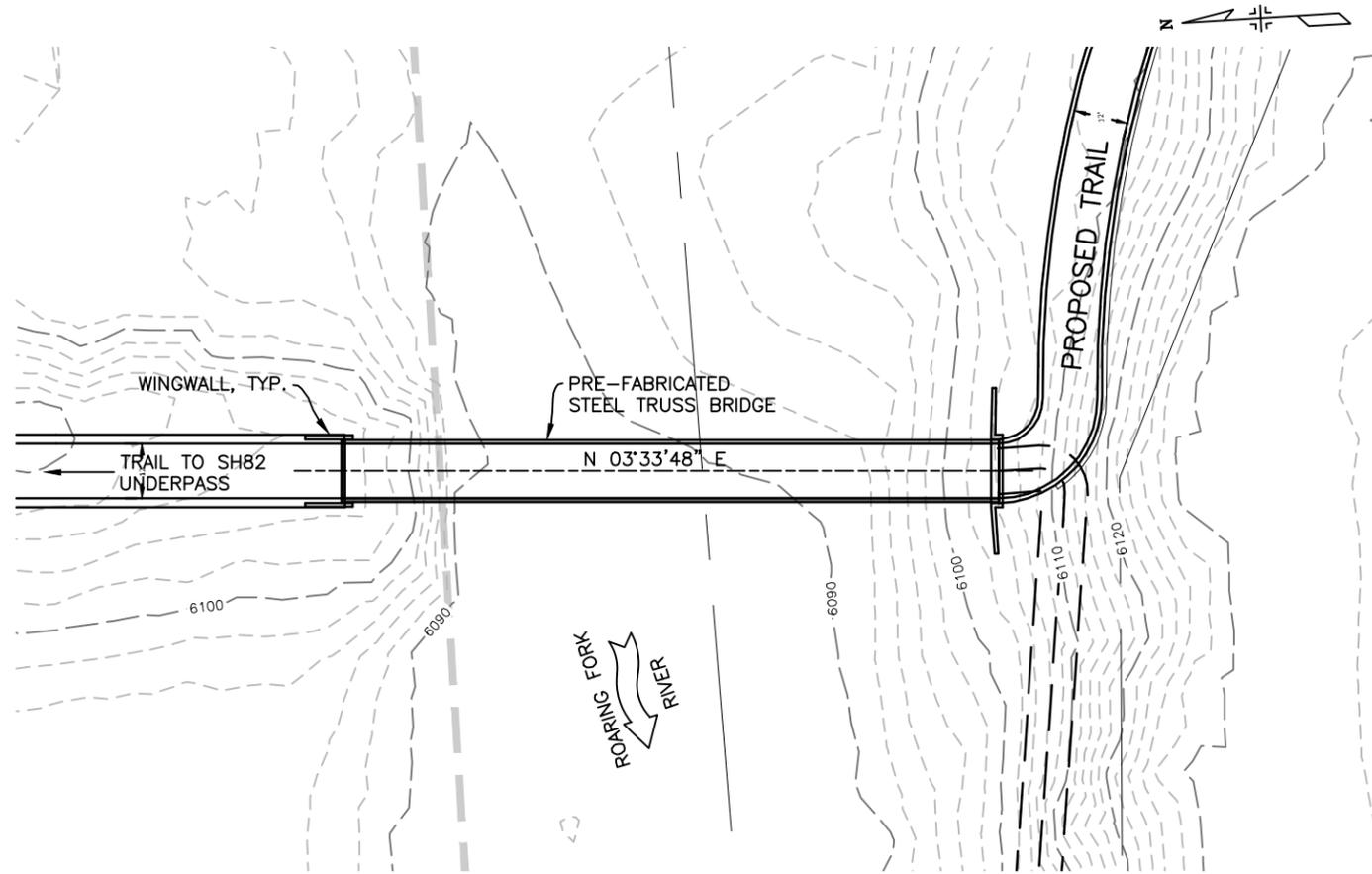
15874.100  
Project No.

7  
Drawing No.

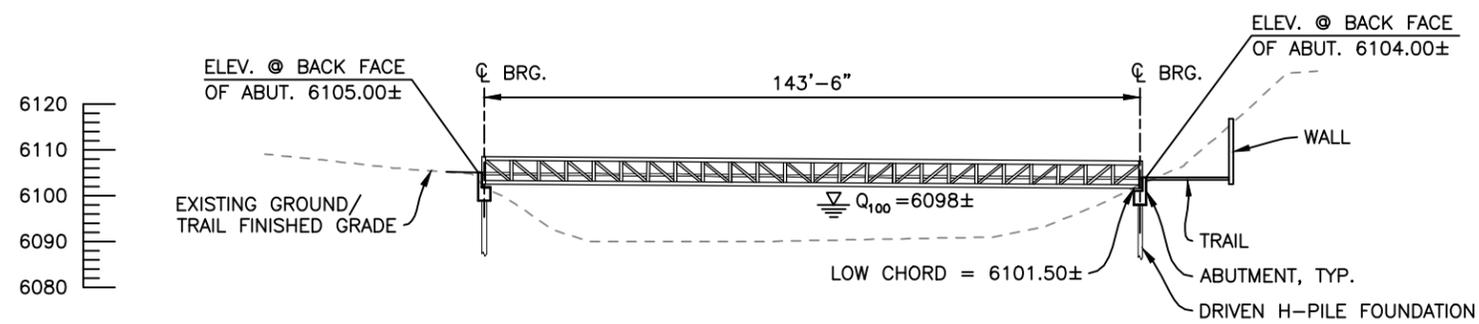
Sheet 7 of 10  
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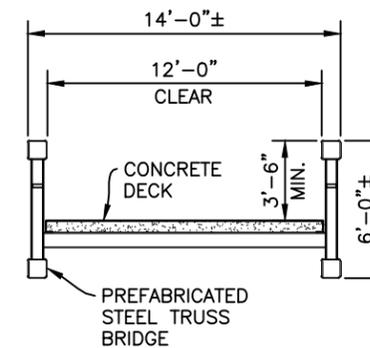
**Red Hill Trailhead**  
 Alternative Transportation Feasibility Study  
 Preliminary Design and Engineering Documents  
 CR107 Trail



PEDESTRIAN BRIDGE PLAN

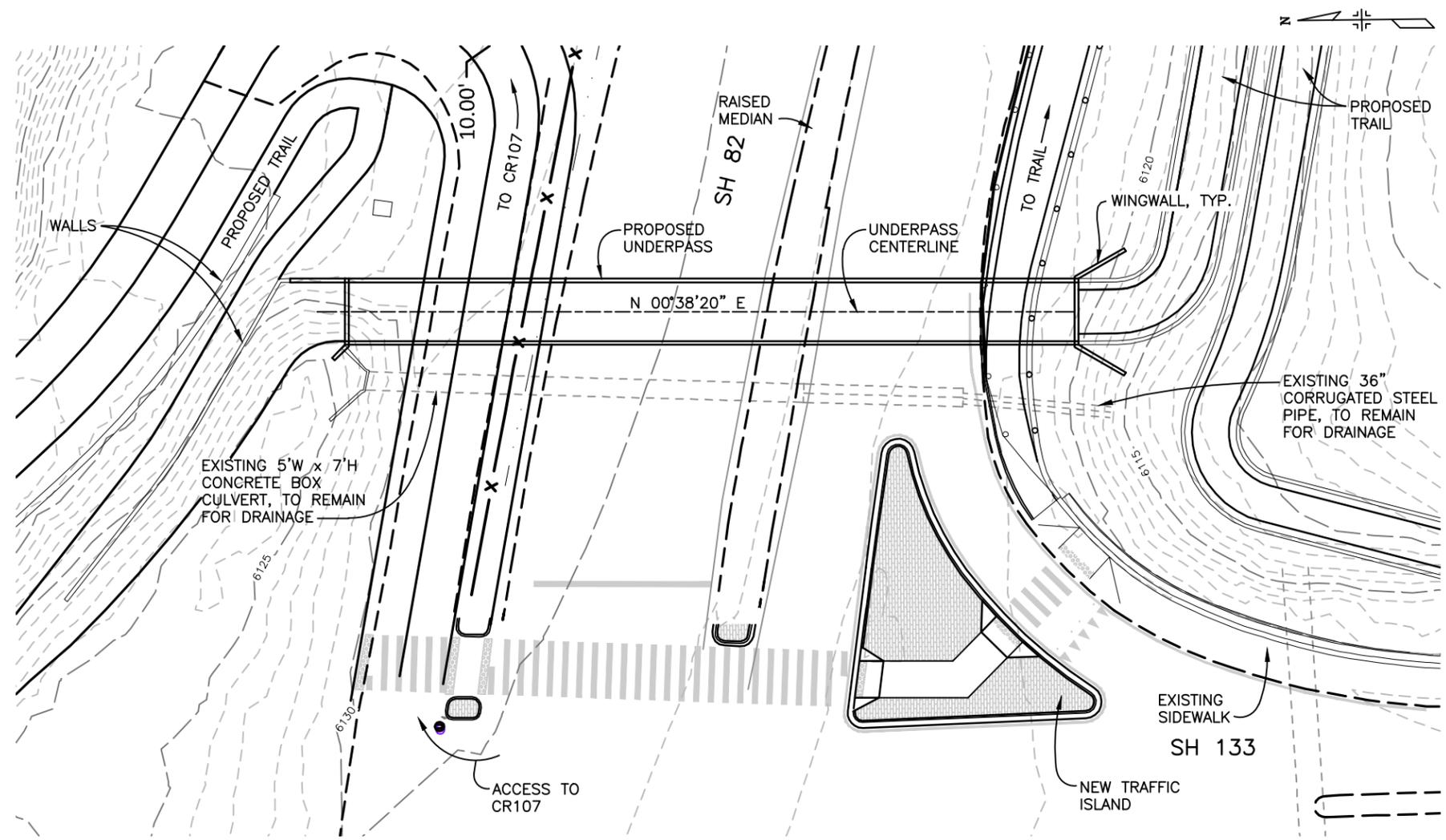


PEDESTRIAN BRIDGE ELEVATION  
(FACING EAST)

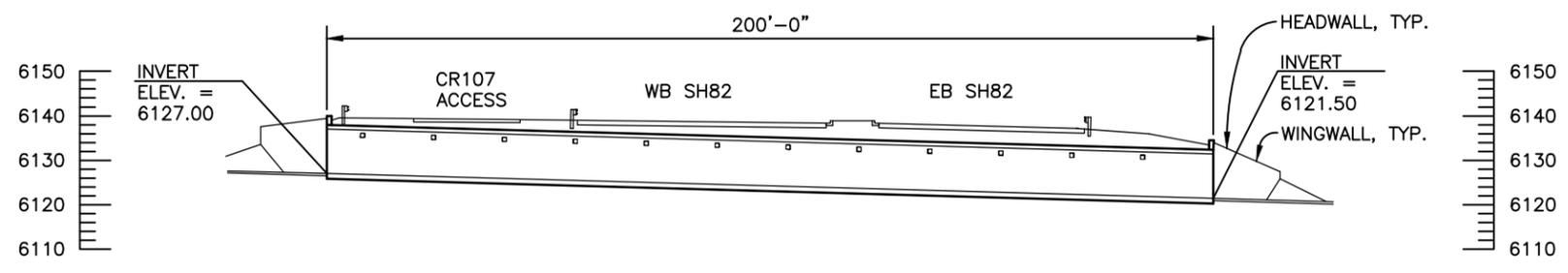


PEDESTRIAN BRIDGE  
TYPICAL SECTION

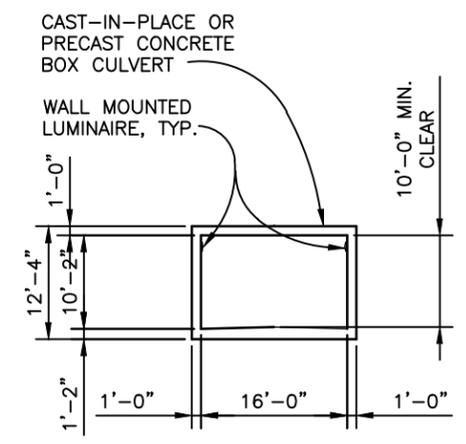
Plotter: Jul 26, 2013 - 5:42pm blim \\s112275-01\CADD\Drawings\Bridge\_Gen\Layout.dwg Layout Name: Layout



UNDERPASS PLAN



UNDERPASS ELEVATION



UNDERPASS SECTION

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## Appendix B: Red Hill Access Study

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# *Red Hill Project*

## Final Report



Prepared For:

**The Red Hill Committee:** Chair - Alex Schwaller, Vice Chair - Eric Gross, Steve Avery, Rick Broadhurst, Ian Hause, David Johnson, Chris Lawrence, Adam Olson, Michael Pines, Steve Wolfe

Prepared By:

Davis Farrar  
**Western Slope Consulting**  
0165 Basalt Mountain Drive  
Carbondale, Colorado  
970-963-1670

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## Acknowledgements:

The Red Hill Project and ultimate completion of the final report was a labor of love undertaken by devoted members of the Red Hill Committee. Their generous contribution of time and energy over a period of eight months resulted in the production of this document. Without the commitment of these folks, the public lands known as the Red Hill Area would continue to experience unmanaged increasing use and possible damage to a sensitive and valuable resource. This project is a testimony to the positive results that can be achieved when local residents work together for a common cause to protect the natural environment.

The committee members, working with the general public, completed a survey and conducted public hearings for purposes of identifying important Red Hill Area values. These values were examined very carefully and were fundamental to development of the final recommendations. The recommended management scenarios are included as recommendations to the BLM and local community to preserve the area values. The Committee has recommended in favor of and is committed to the formation of a Red Hill Management Committee. This Committee will be responsible for overseeing implementation of this plan to protect the resource known as the Red Hill Area.

This undertaking would not have been possible without the generous contributions of support, dollars and time from the following organizations and individuals:

The Red Hill Committee:

*Alex Schwaller*

*Eric Gross*

*Steve Avery*

*Rick Broadhurst*

*Ian Hause*

*David Johnson*

*Chris Lawrence*

*Adam Olson*

*Michael Pines*

*Steve Wolfe*

Town of Carbondale, Colorado

Aspen Glen PUD

Bureau of Land Management

Colorado Rocky Mountain School

Jim Gaw

Katherine Ross

Margaret Kiss

Aisha Murry

Nuria Moya

Xander Munroe

Ben Loveless

John Roland

Will Marsh

Tanya Spicker

Mari Rosen

Missi Blue

John Tumminaro

Katy McNulty

Kristin Games

Natalie Angell

Jake Butler

Rebekah Paulson

Rob Hykys

Joey Fetzko

Ron Leach

Rick Adams - DOW

Victoria Giannola - Garfield County

David Hamilton - Roaring Fork Volunteers

Tom Dalessandri - Garfield County Sheriff

Dennis Davidson - Soil Conservation Service

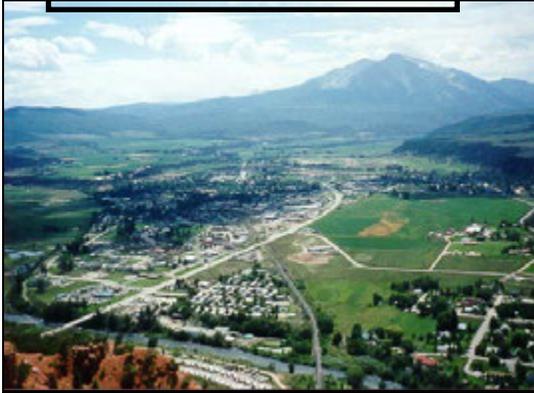
Francisco Mendoza - BLM

Davis Farrar - Western Slope Consulting

## **Introduction**

Immediately north of the Town of Carbondale, Colorado is an area of BLM public land locally known as "The Red Hill Area". These lands provide a rich diversity of vegetation, soils, wildlife, geology and terrain. Mushroom Rock, located on the south end of Red Hill is over 800 feet above

Carbondale From Mushroom Rock



the valley floor. From that vantage point there is a commanding view of Carbondale and the junction of the Roaring Fork and Crystal Rivers. Use of the area by Native Americans before occupation of the Roaring Fork Valley by Europeans is evidenced by discoveries of arrow heads and other artifacts by local residents. Early Anglo settlers of the Roaring Fork Valley documented their use of Red Hill with tree carvings dating back to 1896. Carbondale resident Mary Ferguson, a longtime valley native, tells stories about childhood hikes to the top of Red Hill for family picnics and outings.

Use of the Red Hill Area by area residents has increased significantly over the last ten years as a result of the rapid growth in the Roaring Fork Valley. It is anticipated that the demand for use of conveniently located public lands in the Carbondale area will increase in direct proportion to the construction of residential units in the valley floor.

The Town of Carbondale has formally recognized the Red Hill Area as a community resource for many years. In 1989, the Carbondale Board of Trustees entered into a Cooperative Management Agreement with BLM for joint management of these lands. Although this specific agreement has expired, interest remains in Red Hill by the Carbondale Board of Trustees, the Carbondale Parks and Recreation Commission and local residents.

In February, 1997, Davis Farrar, the former Carbondale town manager and a local area resident, submitted a proposal to the Carbondale Parks and Recreation Commission, BLM, Aspen Glen, River Valley Ranch and Garfield County to study these public lands. The purpose of this study is to evaluate existing use patterns and develop management recommendations on current and future use. After a period of six months of public debate about the merits of such a project, the Carbondale Board of Trustees agreed to contribute \$2,000 dollars toward the total project budget of \$6,000. The developers of the Aspen Glen PUD followed suit of a contribution of \$2,000. BLM agreed to contribute in-kind services valued at \$1,200. Garfield County and the developers of River Valley Ranch PUD declined to participate in the project.

This report is the culmination of input from the general public, adjoining private landowners and months of work by the Red Hill Steering Committee. Additionally, assistance was provided by Colorado Rocky Mountain School students in Jim Gaw's biology class, BLM staff and Aspen Glen staff. The Town Carbondale provided meeting space at Town Hall for public meetings and committee meetings. This project would not have been possible without the generous donation of time, dollars, staff assistance and energy from all of the involved parties.

## **Project Purpose and Scope.**

The purpose of this project was to evaluate existing use patterns, frequency of use, use conflicts, issues, resource impacts and needs from adjoining private landowners and the general public in the Red Hill Area. The overall project scope expanded considerably during the project from that identified in the original proposal. This work was accomplished without increasing the project budget and through contributions of additional time from the participants.

The project timeline was increased by approximately six months. The survey was expanded from the trailhead survey to a much broader community survey. Notification to and involvement of adjoining private landowners was expanded as a result of enlargement of the project boundaries. The general discussion and scope of debate of the issues by Red Hill Committee members extended over a longer period time than was originally anticipated.

Special attention was paid to engagement of adjoining private landowners. A meeting was held with these landowners early in the process to obtain their input. They were notified by direct mailings. Additionally, three of these landowners served on the Red Hill Steering Committee. A list of the private landowners and persons that attended various meetings is included in **Exhibit A**.

The Red Hill Steering Committee established the following mission statement immediately following their appointment. This mission statement was utilized to provide overall guidance during the project. A second mission statement was formed in the latter phase of the project to provide guidance on development of the scenarios. This subject is covered later in the report.

### **Red Hill Project Mission Statement**

*To make a general analysis of the BLM lands known as the Red Hill Area by using existing available data and soliciting public input from the local area. The steering committee, in conjunction with the project manager, is to develop a set of use ethics and a list of recommendations about future use and management of the Red Hill Area. These recommendations are to be made after a careful and objective consideration of the interests of the public, minimizing use conflicts, protection of the natural environment and meeting prescriptions for use of public lands.*

The total project budget was reduced from an original amount of \$6,605 to \$5,225 based upon actual dollars granted to the effort. The new budget was based upon \$4,025 allocated towards labor and \$1,200 for materials supplies and miscellaneous hard costs.

The expanded project scope resulted in increased consideration of public concerns, better survey results and more committee input. This allowed for a more comprehensive analysis and a better end result.

<b>Revised Red Hill Project Budget 8/27/97</b>		<b>Hours</b>	<b>Rate</b>	<b>Costs</b>
Identification and selection of project steering committee members		8	\$35	\$280
Refinement of project scope and definition of objectives.		8	\$35	\$280
Initial scoping meetings with adjoining private land owners		9	\$35	\$315
Kick-off meeting		4	\$35	\$140
Data collection		26	\$35	\$910
Analysis of data		20	\$35	\$700
Development of recommendations		10	\$35	\$350
Draft final report		20	\$35	\$700
Presentation of the final draft report		4	\$35	\$140
Revision of draft report and delivery of final report		6	\$35	\$210
		<b>Sub Total:</b>	<b>114</b>	<b>\$4025</b>
Materials & Supplies				\$200
Advertising				\$200
Volunteer Recognition				\$150
Mapping				\$500
Miscellaneous				\$150
		<b>Sub Total:</b>		<b>\$1200</b>
		<b>Project Total:</b>		<b>\$5,225</b>

**In-kind Services**

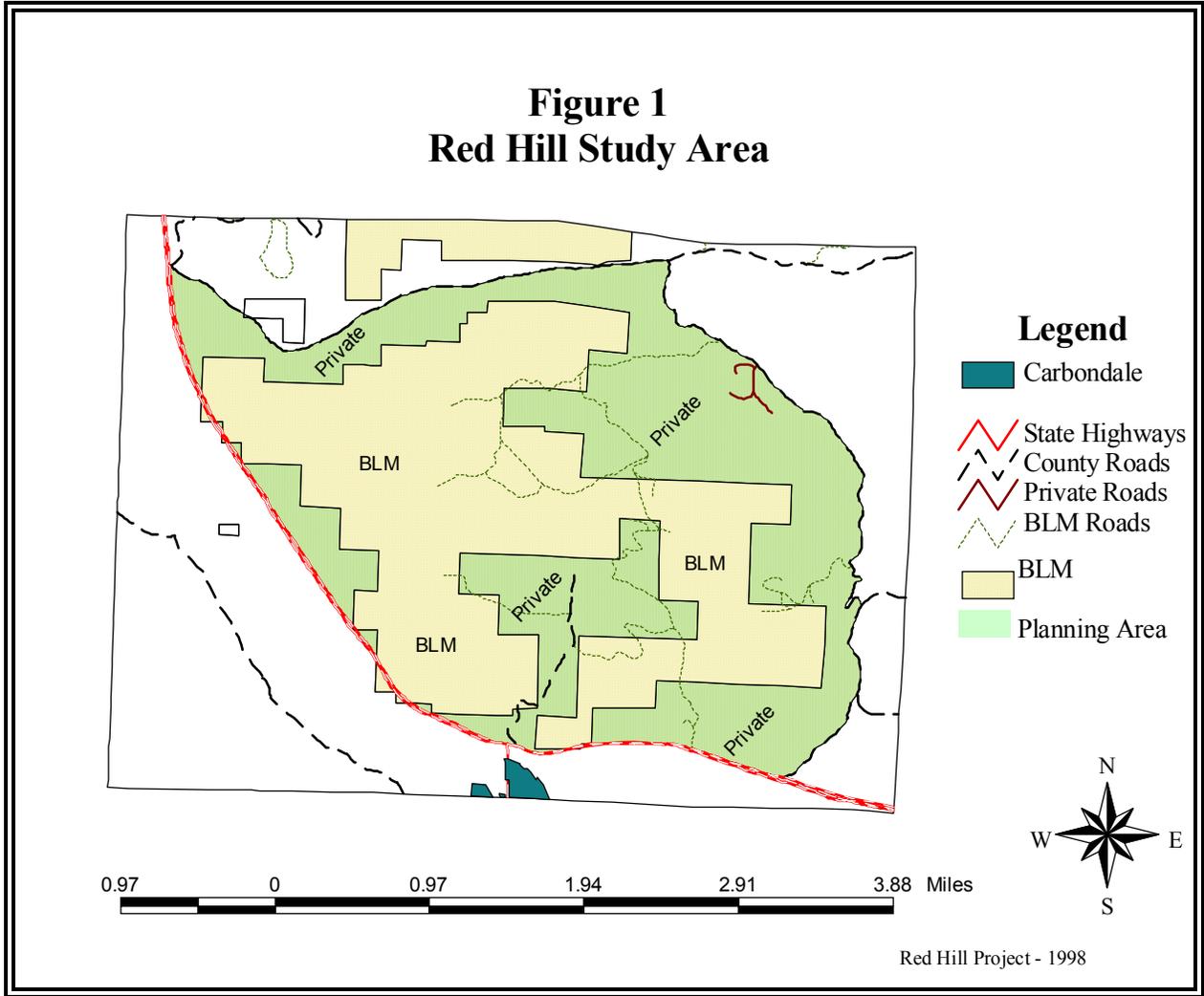
**Town of Carbondale:** Town Hall Meeting Space

**BLM:** Mailings, Copies, Staff support, GIS, Public Notices

**Study Area.**

**Figure 1** is a map of the study area. It is bounded on the West by Highway 82, on the North by Cattle Creek Road, on the East by County Road 112 and on the South by State Highway 82. The focus of the analysis was upon the BLM lands within this boundary.

**Figure 1**  
**Red Hill Study Area**



**Figure 1**

**Project Methodology.**

To provide overall project guidance and decision-making, a Red Hill Steering Committee was formed before any work was initiated. Public solicitation of committee members was made by direct mailing to adjoining land owners, notices the local newspapers, notice on local radio stations and on the Carbondale cable TV system. A set of selection criteria was developed for choosing committee members. The following is a list of the criteria:

- 1) At least one member must be an adjoining private property owner.
- 2) Members should represent a diversity of interests from the local community.
- 3) Individuals that have a particular expertise that may benefit the overall project.
- 4) Persons that can objectively listen to a variety of public input and can render fair and

- impartial decisions or recommended actions.
- 5) Individuals that are familiar with the lands proposed for study.
  - 6) Residents within the Roaring Fork Valley.
  - 8) People were willing to make a commitment for a defined period of time to their role as a steering committee member.
  - 9) Individuals with previous public process experience.

A onetime Steering Committee Selection Board was formed to make the appointments to the Red Hill Steering Committee. The selection board consisted of representatives from the Town of Carbondale, BLM and the project manager. Eleven applications were received from interested persons. The applicants represented both private landowners and the broader interests of the Roaring Fork Valley. All eleven applicants were appointed by the Steering Committee Selection Board. Early in the process, two members resigned from the committee and one was replaced leaving a committee of ten members.

The members of the Red Hill steering committee

Chair - Alex Schwaller - Resident of Red Hill interested in balancing human use with wildlife needs.

Vice Chair - Eric Gross - Carbondale area resident interested in promotion of recreational applications, education, preservation and public access to public lands.

Steve Avery - Carbondale area resident, guide and avid outdoorsperson with a main interest in the lack of trail facilities in and adjacent to Carbondale.

Rick Broadhurst - Resident landowner of the Red Hill Area.

Ian Hause - Life long valley resident and user of the Red Hill Area interested in educating current/future users, recreational opportunities and impacts to adjoining land owners, vegetation and wildlife. Aspen Glen representative.

David Johnson - Glenwood Springs resident and interested citizen. Member of the Northwest Colorado Resource Advisory Council.

Chris Lawrence - Carbondale resident and long-term Red Hill user interested in balancing recreational uses on these public lands with protection of the natural environment.

Adam Olson - Carbondale resident and avid recreationalist with an interest in educating Red Hill users and balancing use of the area with impacts on the natural environment.

Michael Pines - Resident of Red Hill with an interest in guiding future use of the area and in preservation of the area.

Steve Wolfe - Mountain bike shop owner and environmentalist with a strong interest in preserving the area.

Regular meetings were scheduled each week on Thursdays from September 1997, through May 1998. The meetings were open to the public and held at the Carbondale Town Hall. Except for a few short breaks in the schedule, the committee met each week. The meetings allowed the members an opportunity to receive input, discuss public comments, guide project direction, make decisions on actions to take, develop objectives and establish final recommendations.

On October 27, 1997, a meeting was held with private landowners that adjoined the Red Hill Area. Invitations were directly mailed to each of landowners using addresses of record in the Garfield County Clerk Recorders Office. The purpose of this meeting was to educate the owners about the project and obtain input for project direction. A second meeting was held on October 29, 1997, to which all members of the public were invited. Notice for this meeting was provided in the local newspapers, local radio stations and on cable television. Again, the purpose of this meeting was to educate attendees about the project and obtain their input. The input obtained at both of these meetings is documented in the minutes included in **Exhibit B**. Attendance records were kept at each meeting. A human resource list was compiled from these attended sheets and used for public mailings.

A survey was developed to obtain information about use of Red Hill. The survey included questions about demographics, attractions to the area, needs, issues, recreational experiences and frequency of participation in activities. A total of 86 questions were on the survey. The instrument was mailed to approximately 70 adjoining landowners and made available to the general public at the bike stores in Carbondale, at the Mushroom Rock trailhead and by delivery from committee members and volunteers.

Data was collected from October 10, 1997, through December 16, 1997. 116 responses were received. The data collected was input on a spreadsheet database. The results were tabulated and graphed. A copy of the survey instrument is included in **Exhibit C**. A copy of the full survey results is included in **Exhibit D**.

On November 13, 1997, representatives from identified federal, state and local government agencies with potential impacts or concerns about use of the Red Hill Area were invited to a meeting with the Steering Committee. Organizations represented at this meeting included BLM, Carbondale and Rural Fire Protection District, Garfield County, United States Department of Agriculture Soil Conservation Service, Division of Wildlife and the Town of Carbondale. Additionally, the Garfield County Sheriff's Department forwarded a letter to the committee with their input. Each agency was given an opportunity to present information and identify concerns to the committee. A record of the input given is included in the minutes of November 13, 1997, **Exhibit B**.

Davis Farrar, owner of Western Slope Consulting, served as they project manager and planner. Francisco Mendoza from BLM assisted with meeting facilitation and project management. Both individuals served as staff to the committee and took care of project logistics. BLM worked with Western Slope Consulting to compile survey results, develop GIS maps, generate reports and otherwise provide information for the committee.

Aerial photography obtained from the Soil Conservation Service were utilized to study features in the Red Hill Area and to map existing trails. The most recent photogrammetry available was 1987.  
Date Printed - 6/14/2006

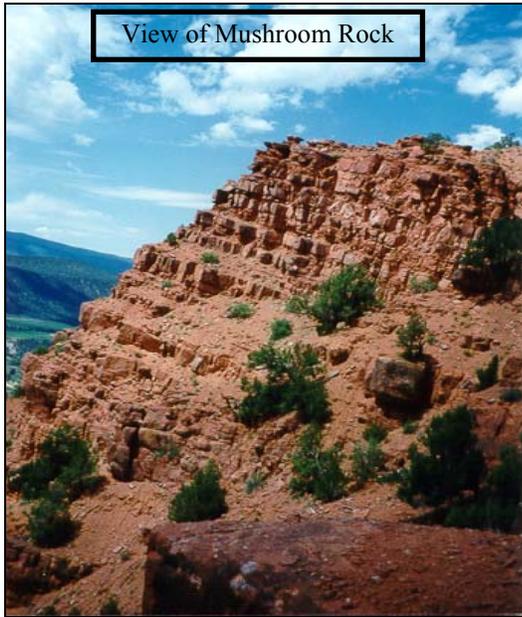
Although the information was several years old, it was valid and useful for the intended purpose. More current aerial photography was provided by Steve Wolfe taken during a fly over of the property in December 1997. This aerial photography was useful primarily for informational purposes because of the scale at which it was taken.

Field investigations were made at various times by individual committee members to evaluate such things as trail location, alternative access sites, presence of wildlife, identification of human impacts and general site investigation. Students from Colorado Rocky Mountain School under the direction of biology teacher Dr. Jim Gaw made additional field investigations in conjunction with research reports about Red Hill characteristics. Presentations were made to the students by the project manager in advance of their research. They were informed about the purpose of the Red Hill Project. Possible research project topics were noted. These researchers investigated bird species, reptiles, soils, large mammals and vegetation types and compiled this information into topic reports. These studies are included later in this document.

All of the information developed by the steering committee in conjunction with the Red Hill Project was compiled into this report. A draft of this document was presented to the committee for review in modification prior to submission to the general public for input. In June 1998, the draft document was presented at a public meeting to solicit feedback for report modifications. The draft report was made available in advance of the final May public presentation at Carbondale Town Hall, the Gordon Cooper Library, the Carbondale Chamber of Commerce and in the BLM office in Glenwood Springs. Additionally, an executive summary was mailed directly to each person on the project resource list. Input was solicited from the public in the form of written remarks, verbal comments and presentations at the public meeting. The Steering Committee carefully thought about the comments on the draft report and made modifications to the final document.

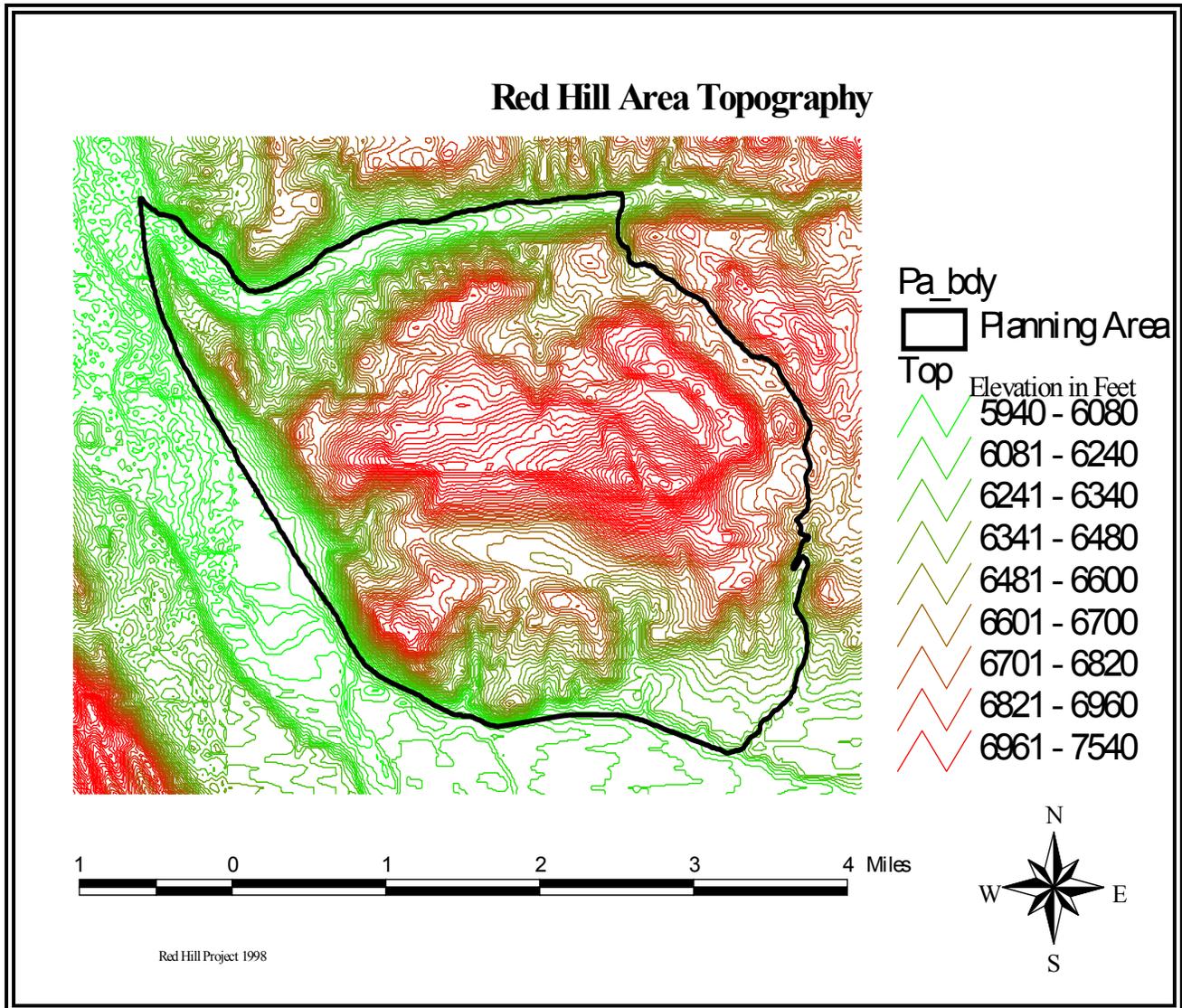
The final report was presented at a second public meeting in June 1998. In addition to mailed invitations to people on the project resource list and public notices, representatives from each of the funding agencies were invited to attend. A copy of the complete final document was provided to each of the funding agencies. Also, a copy of the report was placed on file in the Gordon Cooper Library in Carbondale. A special presentation of the project recommendations was made to the area director of the BLM for purposes of presenting the final project recommendations and consideration of possible modifications to the Glenwood Springs Area Resource Management Plan.

## **Physical Setting.**



The study area is located between 39 degrees 25 minutes and 39 degrees 27 minutes north latitude, 107 degrees 15 minutes and 107 degrees 10 minutes west longitude in Township 7 South, Range 88 west of the sixth P.M. in Garfield County, Colorado. The site is in southeastern Garfield County immediately north of the Town of Carbondale, Colorado in the Roaring Fork Valley. The Town of Carbondale and the surrounding areas are experiencing rapid residential development. Additional new development is being proposed for many of the remaining undeveloped ranch properties in the valley floor. This growth will bring new people to the area. The increasing population will likely result in increased use of the Red Hill Area.

Topographic elevations range from a high of 7,201 feet above sea level to 6,160 feet above sea level. Total vertical relief in the study area is 1,041 feet.



**Figure 2**

**Geology.**

Geologically the area is composed of Eagle Valley Evaporite in association with unconsolidated surficial deposits of colluvial materials. Much of the site is composed of Maroon Formation overlain by deposits of Pleistocene basalt lava flows. In the colluvial areas, gravity is the prime moving force for the materials. These sections are characterized by unconsolidated, poorly sorted, rock debris that may be angular and range in size from large blocks to clay sized particles.

Maroon Formation - Mushroom Rock



The reddish sandstone features of the Red Hill Area represents the Maroon Formation. This sandstone formation is inter-laced with areas of siltstone, claystone, conglomerates and limestone. The material is generally calcareous and moderately resistant corrosion.

Basalt lava flows are characterized by a dark gray, olivine basalt. This material is very hard and commonly fractured. Weathered services are often a brown to gray color. This material was deposited in a series of up to 10 separate volcanic flows. These flows are susceptible to mass wasting where they overlay clay or evaporate materials.

Areas of Eagle Valley Evaporite are found in the northwestern quadrant of the study area. This material is predominantly gypsum and dark gray shale with mixtures of silt and salt. It is characterized by yellow gray weathered services and strong susceptibility to erosion and solution. Thickness of this material varies but is reported to be more than 3,000 feet in the Cattle Creek area. The minerals in this formation can contribute to pollution of surface and groundwater. The susceptibility of this formation to erosion and solution can result in unstable slopes.

## **Climate.**

Red Hill is located in the Roaring Fork Valley at a base elevation of approximately 6,180 feet above sea level. The climate is characterized by a low relative humidity, light winds, light precipitation and large diurnal and seasonal temperature variations. The average monthly temperature varies from 11.1 degrees F. in January to 88.30 degrees F. in July based upon records obtained from long-term weather recording stations in Glenwood Springs.

The diurnal temperature range (night to day) is significant and often varies by as much as 40 degrees from high to low. Daytime high temperatures during the warmest summer months often reach into the low 90 degree range while nighttime low temperatures can easily fall into the low 40s. Winter time temperatures in the valley floor are often well below freezing with low temperatures dropping below zero. The valley floor is subject to lower temperatures that result from air drainage from high mountain peaks that line the valley walls.

The large diurnal variation in temperature results in freeze/thaw cycles that fracture rocks on the exposed faces of the Maroon Formation. This effect is particularly pronounced during the spring time when daytime temperatures can rise into the 50s and 60s while nighttime temperatures often fall well below freezing. **Figure 3** shows temperature and precipitation data recorded at Glenwood Springs, Colorado.

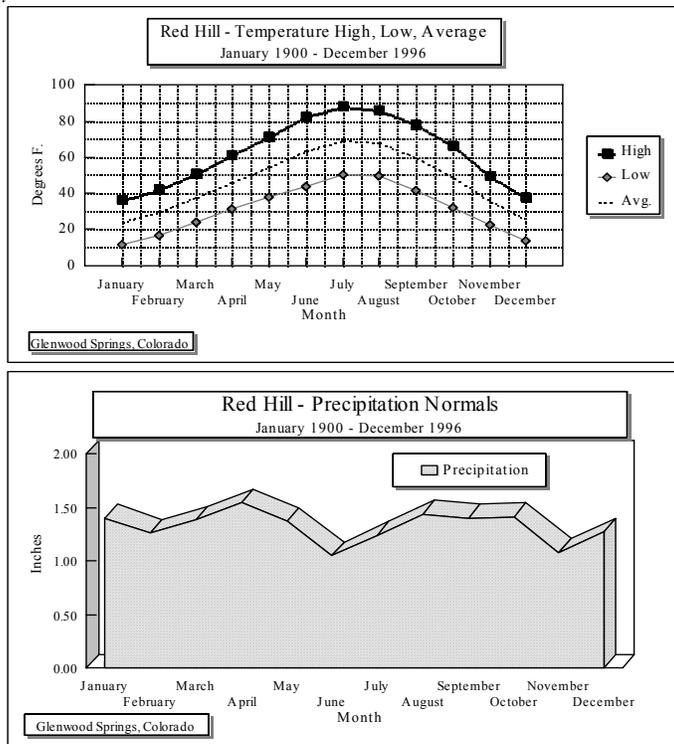
Annual precipitation is relatively low. Average annual precipitation in the valley floor is approximately 12 to 14 inches a year. However, precipitation increases significantly with elevation. The upper elevations in the Red Hill Area of 7,553 are not high enough to result and significant differences in precipitation from that of the valley bottoms. Winter time precipitation results primarily from cyclonic storm activity from the West. The storms tend to be larger in size and may

last one or more days. Most winter time precipitation falls as snow with March and April being the wettest months of the year.

Summertime precipitation arrives primarily as afternoon thunder showers. Usually the storms are short-lived but may be very intense and accompanied by lightning. In the summer of 1997, a particularly intense thunder shower stalled over the Red Hill Area and dropped significant amounts of precipitation. The result was flooding of Highway 82 adjacent to Aspen Glen PUD and debris flows off the steep westerly slopes of Red Hill. Lightning associated with thunderstorms often strikes in higher areas of Red Hill and can be a major cause of wildfire. **Figure 3** shows precipitation amounts recorded in Glenwood Springs.

Normals and Extremes (January 1900 - December 1996) for Glenwood Springs, Colorado

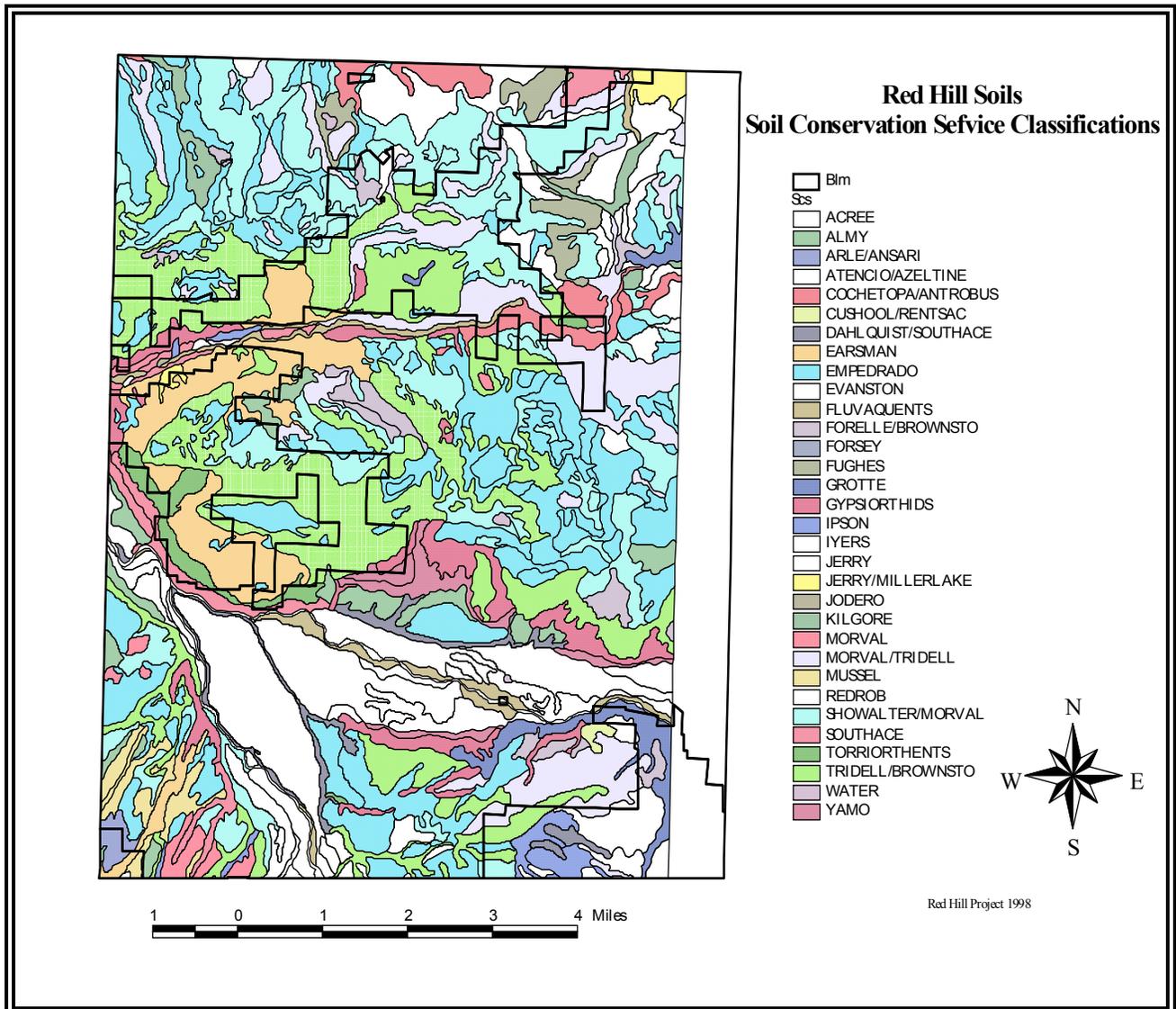
Month	Temperature Normals (degrees F)			Precipitation Normals	
	High	Low	Avg.	Inches	
January	36.70	11.10	23.90	1.40	
February	42.60	16.40	29.50	1.26	
March	51.10	24.20	37.70	1.38	
April	61.50	31.10	46.30	1.54	
May	71.90	38.10	55.00	1.37	
June	82.40	43.90	63.20	1.05	
July	88.30	50.40	69.40	1.24	
August	86.10	49.40	67.70	1.44	
September	78.20	41.50	59.90	1.40	
October	66.50	31.80	49.10	1.41	
November	49.70	22.10	35.90	1.08	
December	38.10	13.30	25.70	1.27	
<b>ANNUAL</b>	<b>62.80</b>	<b>31.10</b>	<b>46.90</b>	<b>15.83</b>	



**Figure 3**

**Soils and Associated Vegetation Types.**

Soil types in the Red Hill area vary among nine major types. In general, that portion of Red Hill lying to the South of the East-West ridge that bisects the property has a more uniform distribution of soil types. The north side, however, includes a much greater diversity of soils and corresponding vegetation. The discussion of soils types in the Red Hill Area is intentionally generalized but is intended to provide an overview of existing conditions. This discussion will be segregated into the south half of Red Hill and the north half. Each soil type will be followed by brief description of soil characteristics and associated vegetation types.



**Figure 4**

The predominant soil types in the South half of Red Hill are Earsman-Rock outcrop complex, Empedrado Loam, Torriorthents-Rock Ourcrop Complex and Tridell-Brownsto Stony Sandy Loams.

*Earsman-Rock outcrop complex:* It is a very stoney sandy loam with areas of rock outcrop. Typically, rock outcrop occurs in the steeper areas were this soil is found. It is a shallow excessively drained soil derived from colluvium from the underlying sandstone. A thin surface layer of decomposed needles, twigs and leaves is commonly found in the understory. The surface is often reddish brown. Permeability is moderate to rapid and water capacity is very low. Rapid runoff is typical of this soil type. The potential for erosion ranges from slight to severe steeper slopes.

Vegetation types found on this soil include Pinyon pine, Utah juniper, bluebunch wheatgrass, bottlebrush squirreltail, Indian ricegrass and western wheatgrass.

*Empedrado Loam*: This soil is a deep well drained type located on fans and upland hills. It is formed in alluvium and eolian materials. Surface layers are typically brown loam materials overlying a clay loam of up to 35 inches in depth. Soil permeability is moderate with a high available water capacity. Runoff potential is medium and water erosion hazards are slight.

Typical plant communities are mainly western wheatgrass, needleandthread, prairie junegrass, big sage brush and Douglas rabbitbrush. Other plant species that may be found on the soil type include Letterman needle grass, common snowberry, Utah serviceberry and antelope bitterbrush.

*Torriorthents-Rock Outcrop Complex*: This soil type is found primarily on south facing steep ridges and hillsides. The soil is found on the slopes facing Highway 82 along Red Hill. The soils are shallow or moderate in depth and are very well drained. They formed in the materials and colluvium from sedimentary rocks. The surface is typically covered with stones and colors range from reddish brown to brown. Soils range from sandy loams to clay loams and include gravel, cobbles and stones. Water permeability is moderate and water capacity is low. Run off is rapid and water erosion hazards are severe.

Vegetation is typically sparse on the soils type. It is limited to sparse stands of grasses, forbes, Pinyon and Utah juniper.

*Tridell-Brownstone Stoney Sandy Loams*: This is the dominant soil type in the southern half of the Red Hill Area. The soils are deep and very well drained. They are formed in alluvium and colluvium derived dominantly from sandstone and basalt. The upper surface layer is often a gray/brown stoney sandy loam. Areas that are adjacent to steep hillsides are occasionally affected by runoff that may be accompanied by rock and debris. Typically, there is a thin surface layer of partially decomposed needles, twigs and leaves.

Primary vegetation types include Pinyon pine and Utah juniper with an understory of bluebunch wheatgrass, Indian ricegrass, big sagebrush muttongrass. Other plants found in this association are bottlebrush, squirreltail, antelope bitterbrush and mountain mahogany.

The North half of Red Hill is characterized by a much wider diversity of soils type.

The major soil classifications on the north side include Gypsum land, Earsman-Rock outcrop complex, Grotte gravelly loam, Fluvaquents, Jerry-Millerlake loams, Showalter-Morval complex, Torriorthents-Rock Outcrop Complex and Tridell-Brownstone Stoney Sandy Loams.

*Gypsum land*: the soil consists primarily of exposed parent material with a very high gypsum content it occurs on moderately steep to very steep slopes. It is derived primarily from gypsiferous shale and sandstone. Areas where this soil type occurs is important as critical winter range for mule deer and habitat for cottontail, greentailed towhee, birds of prey and some elk in late winter.

The associated vegetation types include forbes, grasses, woody shrubs, Pinyon pine and Utah juniper.

*Earsman-Rock outcrop complex:* This soil was described in the previous section.

*Grotte gravelly loam:* This is a deep well drained soil that occurs on mountainsides. It is formed in alluvium and colluvium derived primarily from sandstone. The surface is typically a gray/brown loam; overlying a clay loam. Water permeability is moderately slow and available water capacity is moderate. Runoff is rapid and water erosion hazard is moderate or severe on steeper slopes. Slope failure and slumping is common in the steeper slope areas.

Commonly associated vegetation types are Indian ricegrass, bluebunch wheatgrass, bottlebrush squirreltail, mountainmahogany, Wyoming big sagebrush and Utah serviceberry. Other associated plant types are Douglas rabbitbrush, needleandthread, prairie junegrass, Pinyon pine and Utah juniper.

*Fluvaquents:* The soils are typically deep, poorly drained soils occurring on level planes and alluvial valley floors. The soils are stratified and very widely in texture and depth. Underlying layers are generally sandy loam or loam stratified with sand, gravel and cobbles. The soils are occasionally flooded in late spring and early summer. The soils are typically found in river bottoms or adjacent to waterways.

Native vegetation consists of cottonwood, willow, water tolerant grasses, sedges and rushes.

*Jerry-Millerlake loams:* The soil is deep and well drained. It is derived primarily from sandstone and shale. Surface layer is commonly dark gray/brown. Water permeability in the soil is moderate as is water holding capacity. Runoff is rapid and erosion potential is moderate.

The associated vegetation is primarily mountain brome, elk sedge, mountain snowberry, Gamble oak and Saskatoon serviceberry. Additionally, wheatgrass, needlegrass and western wheatgrass are found in association with this soil.

*Showalter-Morval complex:* This soil is found on alluvial fans, high terraces and valley sides. The soil is deep and well drained. It is formed in alluvium derived primarily from basalt. The surface layer is commonly a brown stoney loam overlying a cobbly clay loam. Water permeability is slow and water capacity is moderate. Both runoff and erosion hazards are moderate.

The associated vegetation types include needleandthread, western wheatgrass, bluebunch wheatgrass, prairie junegrass and big sagebrush.

*Torriorthents-Rock Ourcrop Complex:* This soil was described in the previous section.

*Tridell-Brownsto Stoney Sandy Loams:* This soil was described in the previous section.

The following reports were completed and submitted by students from the Colorado Rocky Mountain School in conjunction with this project and as a part of their Advanced Biology Curriculum.

## Cryptogamic Soil, The Forbidden Soil

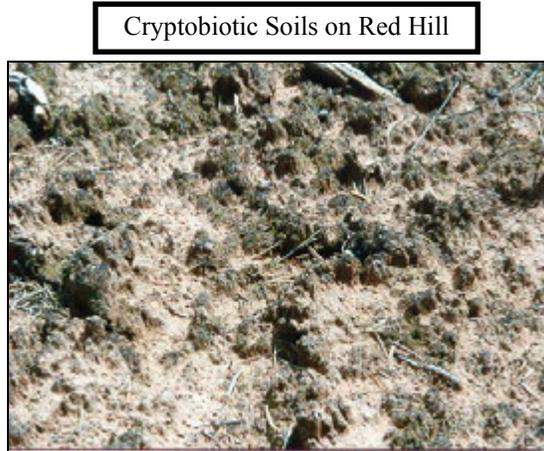
By - Xander Munroe, Ben Loveless, John Roland

Imagine a desert wasteland, with no visible life whatsoever. The air is as dry as a bone, and the weekly forecast does not look much better. But on the ground, looking like nothing more than black crusty dirt lies the life that can transform the desert into a vegetated area. These crusts, called cryptogamic soil, are pioneer species. They are the very first types of life to enter an area and make it easier for other plants to survive

### *HOW DOES IT GET THERE?*

Cryptogamic soils or cryptobiotic soils are made up of bacteria, (especially cyanobacteria), lichens, mosses, and fungi. Cryptogam finds its origins from the Greek "kryptos," meaning hidden, and "gamia", meaning marriage, because the plants lack flowers and sex cells.

Cyanobacteria are often found in desert type crusts. Small spores and bacteria are blown to different areas by the wind. The cyanobacteria secrete a sponge like sheath that attracts and bonds to the soil particles. When water is added, the bacteria move through the soil leaving a sticky trail that soil particles also stick to. Cryptogamic soil is hydrophilic, which means that it attracts and absorbs water. This allows the bacteria to remain active longer, as well as other crypto-species. In freezing temperatures the soil cracks and uplifts. These cracks trap soil and seeds and can help start a whole new ecosystem.



### *ITS ROLE*

Cryptogamic soils can be found in the cold deserts of the Colorado plateau (parts of Utah, Arizona, Colorado, and New Mexico) and are as much as 70% of the ground cover in these areas. Cryptogamic soils are pioneer species. Pioneer species are ones that are the first to start an ecosystem. The cyanobacteria that are present in most desert soils start the whole process. As soil collects on cryptogams, and by having something to stick to, the area becomes much less susceptible to erosion from both wind and water. By allowing the soil to stay in one place it allows larger vascular plants to take hold and start vegetation growing, starting the ecosystem. Unlike vascular plants however, cryptogamic soil is not threatened by drought. This allows it to offer stability for long periods of time and under adverse conditions, a very important feature for a pioneer species. Plants growing on cryptogamic soil show higher concentrations or accumulations of various nutrients such as nitrogen, compared to plants growing in other areas. Thus, Cryptogamic soils might also be part of the reason we live on earth now. It has been hypothesized that cryptogamic soil made earth hospitable enough for terrestrial organisms to live. In cold pinyon-juniper forests like that on Red hill, cryptogamic soil may in addition play a large part in fixing or capturing nitrogen contribution.

### *CRYPTOGAMIC SOIL AND IT'S ROLE ON RED HILL*

Cryptogamic soil does exist on Red Hill, however due to weather conditions we have been unable to investigate the extent. We did take a soil sample of some suspected Cryptogamic soil, and added

water. After roughly a week, we observed growth of mosses among this sample. However these results are rather inconclusive.

#### CONCLUSION

We do not know the extent of cryptogamic soil on Red Hill, and are not sure about what should be done to protect this sensitive soil under management of Red Hill. Where cryptogamic soil exists, there should be warning signs and designated trails, because it can take an undisturbed area of cryptogamic soil many years to recover. There is the possibility of damage to cryptogamic soils in the most used sections of the area.

### Sagebrush and Grasses

By: Natalie Angell, Jake Butler and Rebekah Paulson

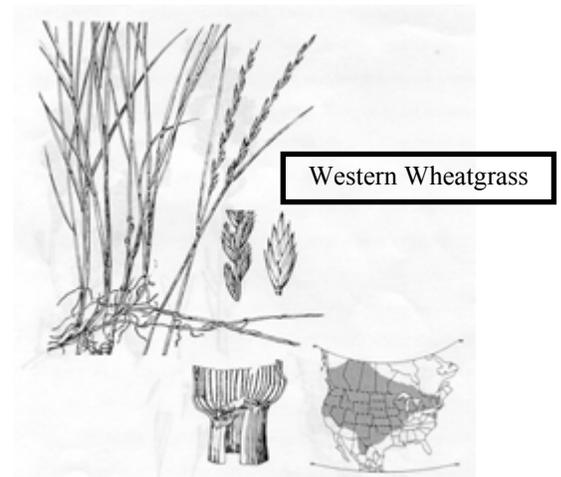
The most prominent type of shrub on Red Hill is big sagebrush (*Artemisia tridentata*). The big sagebrush is the most abundant form of *Artemisia* in the West. It adds many benefits to the range community. These benefits include general, wildlife, and hydrological related contributions. Sagebrush physically protects smaller plants and hold soils together. The roots help establish both deep and shallow soil profile. Sagebrush is the main source of food for mule deer and elk during the winter because it keeps its nutritional value which most other shrubs lose. Sagebrush retains 12.4% per gram of crude protein and 20% per gram of phosphorous, both of which are higher than most other plants. It is also the primary nesting spot for birds such as the Brewer's Sparrow. Big sagebrush provides protective cover for fawns, calves, nesting birds, and grouse broods.



Sagebrush contributes hydrologically to the community for two main reasons: the first is that a bush collects a snowpack (more so than grasslands) which has potential to improve the water table. Ground water's main replentisher is snow melt. The second contribution is comes from big sagebrush's tap roots. These roots move moisture in the soil closer to the surface where it becomes usable to other plants.

Western wheatgrass (*Agropyron smithii*), a perennial plant, is the only type of grass that grows on the steep sides of hills. It is a sod forming grass that has complex roots, which hold the soil together and help prevent erosion. This plant is found all over the Red Hill area. The grass is a direct indication of over-grazing in an area. It is one of the least palatable types of grass for animals to eat.

It has .5% digestible protein. When an area is made up of 50% or more western Wheatgrass, the area is considered to be



over-grazed.

The other types of grass that grow on Red Hill are Indian ricegrass, prairie Junegrass, bottlebrush squirreltail, and Bluebunch wheatgrass. Other types of bushes are: mountain mahogany, antelope bitterbrush, serviceberry, and rabbitbrush.

Indian ricegrass (*Oryzopsis hymenoides*) is a perennial, native plant. It is good for livestock and wildlife, especially valuable for winter grazing. The seeds are very high in protein. The plant is a bunch grass and is unable to grow on the steep cliffs of Red Hill, although the plant can be found in meadow areas on top of Red Hill. Prairie junegrass (*Koeleria pyramidata*) is another native, perennial, bunch grass. It is excellent for all classes of livestock, although its forage production is low. - It is a good source of food for wildlife in spring and fall. It does best in prairies, and sandy soil. Bottlebrush squirreltail (*Agropyron spicatum*) is a sod forming, perennial, native plant that has an excellent forage value for livestock and wildlife. It grows well on dry slopes and plains, much like bottlebrush squirrelgrass, although bottlebrush is unpalatable during fall and winter, and not generally preferred by livestock and wildlife for its forage value.

Mountain mahogany (*Cercocarpus montanus*) is a perennial, native plant as well as Serviceberry (*Amelanchier alnifolia*), rabbitbrush (*Chrysothamnus viscidiflorus*), and Antelope bitterbrush (*Purshia tridentata*). All of these plants, except for rabbitbrush, have excellent forage value, living in dry, rocky bluffs, and mountainsides. Rabbitbrush has little or no value to livestock and fair for deer on winter range. Dense stands of rabbitbrush are indicative of poor range management. Mountain mahogany is extremely valuable winter browse for deer, and it is also very important to livestock.

Resource partitioning is very important in Pinon Juniper forests. It is a first come, first serve basis. All of the animals are in constant competition for the best, most palatable plants. The plants diminish in accordance with the wildlife and livestock palatability. Smaller mammals are at an advantage because they are able to forage small plants that hide under sagebrush and other brush; plants hidden from the large jaws of deer and livestock. Availability of plants as well as migration patterns in wildlife, has a huge effect on the density of stands in a given area.

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## Pinyon-Juniper Forest

By: - Aisha Murry, Margaret Kiss, and Nuria Moya



**Juniper Characteristics:** The Juniper tree is mainly found in countries with cold climates. There are seven different types of Juniper trees in the USA: the Common Juniper, the One-Seed Juniper, the Rocky Mountain Juniper, the Sierra Juniper, and the Alligator Juniper. Because of the diversity of juniper species, it has perhaps the widest natural range among all trees. Due to its wide natural range, the common juniper tree can vary between three and sixty feet tall. Juniper male and female cones are born on different trees, thus making reproduction slightly more difficult. The trees have berry-like fruits that are either red or blue and are distinctively fragrant. Their leaves can either be needle like and prickly, or scale like and lie tightly against the twig. The Juniper tree has many uses, such as fence posts, furniture, pencils, perfumes, and medicines.

**Pinyon Characteristics:** The Pinyon tree is found in semiarid regions with colder climates. There are four types of Pinyon trees: *Pinus Parryana*, *Pinus Cembroides*, *Pinus Monophylla*, and *Pinus Edulis*. The number of needles in a cluster can distinguish these different types of Pinyon trees. These trees are characterized by their especially large seeds. Pinyon trees can grow anywhere between fifteen to fifty feet. They survive adverse conditions because of their small size, slow growth and ability to grow with little water. Pinyon trees have many uses, such as fuel, fence posts, railroad ties, telephone poles, mine supports, charcoal, and general construction.



**Characteristics of Pinyon-Juniper Forests:** Pinyon-Juniper forests are often surrounded by grasslands or sagebrush. Both Pinyon and Juniper trees regenerate by seeds, which are disseminated by birds and mammals. These trees are both slow growing and can reach an age of up to 400 years, but they rarely reach a height of 30 feet and a diameter greater than 20 inches. The quickest and most frequent way that Pinyon and Juniper trees are killed is by fire.

**Pinyon-Juniper Ecosystem:** Often, Pinyon Pine and Rocky Mountain Juniper coexist in the same ecosystems. They are located in the elevations below the Ponderosa and Douglas Fir forest. The Pinyon Pine forest range is at 5500 and 7000 feet and up to 8500 feet. Pinyons are more frost tolerant than Junipers, therefore it exists at higher and more moist elevations. The Pinyon Pine tree lives in shallow rocky soil. Its growing season is about 120 days, where the amount of rain each year ranges between 8 and 12 inches, and sometimes as much as 28 inches or more. Juniper species occur at elevations between 5000 and 8000 feet and also grows in shallow rocky soil. The Rocky Mountain Juniper series usually occurs above sagebrush and along lower edges of Ponderosa Pine forests. Other species associated with the Juniper series are blue bunch wheat grass, slimstem muhly, true mountain mahogany, and antelope bitter brush. This series is located in a region with a

very severe climate, ranging from hot summers, low precipitation, high evaporation, low humidity, high winds, and frost-free season of 120 days.

**Insects and Diseases Associated with Pinyon-Juniper Ecosystems:** Insect outbreaks in Pinyon-Juniper ecosystems often occur when droughts are in progress. During long drought periods, outbreaks or infestations of the bark beetle along with the twig beetle tend to cause widespread tree mortality. Widespread defoliation and damage to viewsheds and landscapes are caused by the needle miner and the needle scale. Other pests associated with the Pinyon tree are the tiger moth, the saw fly, spindle gall midge, the bark moth, and pitch nodule moth.

Pests associated with the Juniper tree are the western cedar borer, and the twig pruner. The wood borer in particular, will attack or seriously injure healthy trees, the larger ones being in favor. Unlike insect infestation, if a tree is infected with a disease pathogen it may take years before the symptoms appear and even longer before the tree may die. Fatality among trees is usually highest among young trees or seedlings. The two main diseases that occur among Pinyon-Juniper ecosystems are mistletoes and root rots. Mistletoes are parasitic plants that kill their hosts by stealing water and nutrients. Root rot is caused by a fungus, and is spread by spores and rhizomorphs, which cause the trees butt to rot from the center.

**Fires Among Pinyon-Junipers:** Although Pinyon and Juniper trees tend to burn rapidly, fires help their entire ecosystem greatly. Pinyon Juniper forests tend to accumulate a great amount of fuel build-up. Fires naturally help to clean and reduce this fuel and at the same time reduce thick abundant vegetation. This allows new growth to occur that is beneficial to the whole ecosystem. Fire suppression tends to allow fuel build-up to increase and dense stands to occur.

Overcrowding of Pinyon-juniper forests leads to insect infestation and widespread disease. Widespread, uncontrolled fires can lead to the destruction of not only homes, but the mass consumption of many valuable Pinyon and Juniper trees. In order to let the forests prosper, controlled fires must be promoted, and fire suppression should not occur. To accomplish this objective, BLM must reduce fuel build-up and break up continuous areas that are at risk from wildfires. Garfield County should also improve rural building codes and rural wildfire planning standards.

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## **Management of pinyon-juniper forests with specific reference to the Red Hill Area**

By: - Gina Cuseo Noah Scher

There are several important things to consider when deciding how to treat a pinyon-juniper forest.

The most important point is the public's opinion on use of the land. The possible uses of the Red Hill Area include: grazing, hunting, recreation, pinyon-nut harvesting, and timber and mineral extraction. A major part of management is creating guidelines and/or restrictions for grazing, fire wood cutting, pinyon-nut harvesting, timber and mineral extraction, and the use of motor vehicles. Hands on management methods include: brush-hogging swaths of already existing meadow to create the new growth of plants that is vital for deer and elk to forage upon, trail upkeep, and creating grazing for livestock by planting grasses after removing the trees.

When a pinyon-juniper forest is used for grazing, the trees are removed by chemicals, mechanical means, or by burning. Mechanical means of removal include either an 83 ton tree crusher that leaves the wood in fireplace sized pieces, or two bulldozers with an anchor chain from a large boat hung between them. After tree removal, grazing grasses are planted. Neither of the two mechanical methods would work on the south face of Red Hill because of the steep, rugged terrain. However, much of the approximately 3000 acres has more level terrain, and could easily be harvested for firewood and turned into pasture.

A problem with turning this land into pasture is that as a south facing, low elevation area that is not developed, it provides a critical foraging area for deer and elk migrating from Basalt Mountain for the winter months. (In the past decade, a large area of sage and grass on the north side of Red Hill was treated with the brush hog method to provide tender shoots for the deer and elk to eat.) Moving cattle into the area could create some competition for food. A drop in the population of deer and elk would not be welcome news to hunters.

Firewood is most often harvested from pinyon-juniper forests as a bi-product of turning the forest into pasture. If the pinyons and junipers are not already being cut down for another purpose, such as clearing the forest for grazing, the wood cutters usually select a better burning hard wood. The impact of wood or mineral extraction is most commonly erosion, coupled with a displeasing appearance for recreationists.

Pinyon-nut harvesting has two detriments. First, the birds that feed off the nuts may not have enough to eat. Second, the harvesters will most likely not stick to the trails, and might cause erosion. Both of these can be easily corrected by giving permits, or by some other method of managing the number of harvesters and the amount harvested.

By far, the most popular use of the Red Hill Area is recreation. Hikers, bikers, hunters, nature lovers, and other users frequent this area. The irony is that while they go to the Red Hill Area for the beauty, many of them cause erosion through trail cutting and vehicle use, or leave trash behind. Trails need to be kept clean and be well marked to avoid unnecessary impact, and to keep up the general wealth and beauty of the area by controlling erosion and litter. Maybe something similar to the "Adopt a Highway" litter control program could be instituted.

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## **Wildlife - Large Mammals and Winter Forging**

By: - John Tumminaro

The winter forging of large mammals on Red Hill is a complex problem. As the weather gets colder during the winter months many animals seek out land for which to live for the winter. Mammals such as deer and elk require large fields or meadows for winter forging. Because of development of the area in and surrounding Red Hill, many deer and elk cannot find winter forage and have a high starvation rate (17% of both deer and elk die from winter starving). Deer are not the only mammals depending on this land.

Mountain Lions and other large carnivores also go to such low altitude open spaces for winter to hunt for smaller mammals. Winter survival for these creatures is uncertain. Mountain Lions must make a kill (deer or other similar sized mammal) once every two weeks in order to survive the winter. The lack of proper forging lands has caused the sick and young deer especially (the ones the Mountain Lions feed on) to die. If Mountain Lions lose their source of food they quickly die or move.

The same is true for other deer preying carnivores such as wolves and in some cases Bears. Even the carnivores that feed on smaller mammals such as Lynx, Bobcats, Ringtails and Raccoons can find smaller game scarce, with small mammals searching for lower elevation habitats, usually near water sources, who find their habitats violated by humans. These carnivores stick mostly to rocky terrain, so their habitats are not as much disturbed, but starvation is not uncommon.

If the Mountain Lions on Red Hill start to die off or leave, the deer and elk population will not be kept at bay. The herd will survive the winter and begin to reproduce extremely rapidly. This has already been shown with deer and elk populations in Colorado. The deer will begin to start expanding and moving toward agricultural land eating up hay and knocking over fences. This presents a huge financial difficulty for the taxpayers that end up paying the damages (which can amount to millions of dollars).

Another problem is that winter forage is lost to real estate development. The Mountain Lions will begin to come off Red Hill in search of food and a proper winter habitat. Many people live near these areas and are in a certain amount of risk. When Mountain Lions are hungry enough it is not unknown for them to attack people, sometimes with fatal results. Possible solutions to the difficulties of winter forage and food supply may be to limit certain human activities on Red Hill such as grazing, mining, motorized traffic, and possibly establishing seasonal restrictions for other use of the Red Hill Area. The BLM is not the only agency that can solve this problem. There are hundreds of acres of real estate surrounding Red Hill that is ideal winter forage for large mammals. If landowners could be convinced to protect their property from additional development, the mammals on Red Hill would not be as impacted by winter starvation.

## **Reptiles and Amphibians of the Red Hill Area**

By: - Mari Rosen and Missi Blue

The Red Hill area is in the Sonoran Zone and has a climate and environment accommodating to a  
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small number of reptile and amphibian species. Among these possible species are; the milk snake, the bullsnake, the sagebrush lizard, the tiger salamander, the smooth green snake, and the western terrestrial garter snake. Although we have no actual evidence that any of these has been cited in the Red Hill area (excluding the milk snake), we have selected a few species that are likely possibilities.

The milk snake has black, yellow and red bands around its body. It is easily confused with the poisonous coral snake because of its coloring, but the milk snake is not harmful to humans. It has smooth scales on its back and has a single anal scale. It has two rows of scales on the underside of its tail. Their maximum length is 36 inches. The milk snake is possibly the most widely distributed of any living snake species, so it is no wonder that it has been sighted on the Red Hills. It has the ability to survive in a variety of habitats such as grasslands, pinon-juniper woodland and arid river valleys. As a constrictor, the milk snake eats small mammals, birds, lizards, snakes, and bird and reptile eggs.

The Bullsnake is a husky snake that ranges from three to five feet in length. They are beige to light brown with dark brown or black blotches. They have a yellow belly with black spots. They vary in temperament, some are rather docile while others react very defensively toward anyone who attempts to handle them. Sometimes they hiss or make themselves into an S shaped curve to threaten or intimidate their unwanted company. Despite their menacing attitude, they are non-venomous and they will not strike unless bothered. Bullsnakes are oviparous, meaning that they lay eggs instead of giving birth to live young. Mating happens in March and April when they come out of hibernation. During June and July, they lay five to 19 leathery eggs in loose soil. The babies hatch in early autumn after their incubation of about 50 to 80 days. Bull snakes are often killed while crossing roads because they move so slowly. This and habitat destruction are two elements that plague the long-lived bullsnake (one is known to have lived in captivity for 22 years). Bullsnakes live in the western, southern and southeastern US. They are very common throughout Texas not including the extreme east and western Trans-Pecos. Bullsnakes prefer sandy soils in fields, brushlands and grasslands and have been seen in the Carbondale area.

The smooth green snake lives in sandy areas where there are wet prairie meadows, grassy marshes, or moist grassy fields along forest edges. It measures 15 to 20 inches in length when mature. It is a small streamlined snake with bright green coloring. Its underside is white. Hatchlings are bluish-gray of dark olive green. It mates in the spring and late summer, then lays 3 to 11 eggs in late July or early August. Usually the young are hatched 4 to 6.5 inches long. The smooth green snake is active during the day and is largely terrestrial. Its color provides very good camouflage in grasses and low shrubs. The smooth green snake feeds on insects and spiders.

The Sagebrush lizard has small spiny scales on its back, and usually has a light strip along each side of its back. The maximum length is 149 millimeters. The physical difference between females and males is that males have a mottled blue throat and bright blue patches on each side of the belly. It is found throughout western Colorado in elevations below 7500 feet. It survives well in many various habitats including pinon-juniper woodlands, sagebrush, and semi-desert shrublands. Studies have shown that each year in Garfield county two clutches of eggs are laid. The Sagebrush lizard's favorite food is ants but, it also eats termites, leaf bugs, beetles, spiders, butterflies, and other insects.

The tiger salamander is the most widespread salamander in North America because it is capable of tolerating the dry conditions of many regions in the interior of North America. This salamander is smeared with yellow and black to form irregular blotches or vertical stripes. The head of the tiger salamander is round and relatively short, some have a pronounced snout too. Their eyes are small and widely spaced. Males have longer tails than females. Adults may be as long as 200mm long, most are between 140 and 180mm. This seems long, but their tail makes up half this length. The tiger salamanders are usually found near ponds and lakes. They survive periods of drought by residing below ground. Though, what they do not survive is the development of lake margins for roads, agriculture, and housing. This is the main factor that has put the tiger salamander on the endangered list. In early spring they migrate to nearby permanent or semi-permanent lakes and ponds to breed. Eggs are laid shortly after mating. Sometimes they only have one and sometimes more. They attach them to stones, twigs, and plants. They hatch in two to three weeks and grow rapidly and transform in three to four months. They can live for up to 20 years. They eat earthworms, insects, and molluscs and sometimes frogs and baby mice. They will eat small fish, aquatic insects and worms or other larval tiger salamanders.

The milk snake, the bullsnake, the smooth green snake, the tiger salamander, and the sagebrush lizard seemed most likely to inhabit the arid region of Red Hill. We focused primarily on these three species because of the lack of sightings of reptiles on Red Hill in early winter.

## **Birds Of the Mighty Red Bluffs**

By - Katy McNulty and Kristin Games

### *Introduction*

The birds of "Red Hill" play a key role in the ecosystem. Some species are so specific in their requirements that they cannot live anywhere else. The Red Hill bluffs also provide a home to a host of other local birds, including some of the valley's beautiful birds of prey. The Bald Eagle, Golden Eagle, and several different hawk species can be found in the 3,000 acre area. There are also many smaller birds. The ground has little cover and there are few herbaceous plants, so the birds rely on the trees as their main food supply. The two main species of trees found in a pinon forest are the Pinon tree with its' pinon nuts, and the Juniper, which bears little blue berries.

This study was conducted in the late fall. The cold weather and the fact that the only time that we could go out was in the early morning made it difficult to see birds. The information that we obtained involved looking in several Western bird books. We also called the BLM office in Glenwood Springs, Colorado.

**PINON JAY** - *Gymnorhinus cyanocephalus*

The Pinon Jay is one of the most important birds in the Pinon- Juniper forest. It plays a key role in the regeneration of the Pinon tree. Over time these two species have come to rely on each other so much that neither one can survive without the other. The Pinon tree uses all of its extra energy to create a surplus of seeds, so that the birds have no way of eating them all. So the birds bury the excess seeds in the ground, thus planting the seeds. This is an example of a mutual relationship. These



birds are nomadic, constantly moving through Pinon forests to find their food. In this way they regenerate large sections of forests.

**DESCRIPTION**

The Pinon Jay resembles a crow in so many ways that it has also come to be called the "blue crow". It has a beak and a call like a crow and also often flies in flocks. Its whole body is a slate blue color.

**RANGE**

This bird ranges from Oregon to Montana, and as far south as Baja California.

**BUSH-TIT** - *Psaltriparus minimus*

These birds travel in flocks speaking in high pitched tones while searching for food in the trees. In the Rocky Mountains the main species of this bird is the Lead colored Bush-tit. These birds protect the leaves of the Pinyon-juniper forest because they eat many varieties of insects. If it were not for these birds there would be no leaves left on the trees.



**DESCRIPTION**

These birds are identified by their "stubby bill, and rather long tail." (Petersen pl30) These birds are about the size of a human thumb. The Lead-colored Bush-tit is told apart from others by its brown cheeks. Female birds have light colored eyes and males are said to have dark colored eyes.

**RANGE**

These birds range from Western Washington to Utah and from the Rocky Mountains down through Central Texas and Mexico.

**PLAIN TITMOUSE** - *Baeolophus inornatus*

These birds thrive in the Pinyon- juniper and oak forests. They have no distinctive markings, which is why they are called the Plain Titmouse. This species of birds eats mostly caterpillars and moths. They are also



musical birds and sound much like the Chickadee.

#### DESCRIPTION

These birds are," the only small gray-backed birds with conspicuous crests." This species of Titmouse is the only one found in most of the West. (Petersen p 1 29)

#### RANGE

These birds are found from Southern Oregon to Southern California, New Mexico, and Western Texas.

#### **BALD EAGLE** - *Haliaeetus leucocephalus*

After the California condor the Bald Eagle is the largest bird in North America. These birds can be found along the Roaring Fork River and higher up into the Red Bluffs. Their main staple is fish but they will also eat carrion, and hunt small mammals. They were thought to be a threat to the numbers of fish, and around the turn of the century, were almost hunted to extinction. They have made an incredible comeback after being put on the threatened list. Now, once again, they can be seen along the rivers.

#### DESCRIPTION

The Bald Eagle can easily be identified by the white head and tail. It has a bright yellow beak, and very sharp talons. The rest of its body is dark brown. Its wing span is seven feet.

#### RANGE

They can be throughout the United States near water (the ocean, rivers, and lakes)

#### **SWAINSON'S HAWK** - *Buteo swainsoni*

These crow sized hawks are also residents of this area. They do not prey on small mammals usually, because of their size. They feed on insects, such as crickets and grasshoppers. They are migratory birds, and can be seen flying in huge flocks in the spring and fall.

#### DESCRIPTION

They have a brownish back and head, white forehead and under parts and a black beak. They have a call like a sea gull.

#### RANGE

These hawks can be found from Alaska to California in the summer time, and migrate to Argentina in the winter.

**RED TAILED HAWK - *Buteo borealis***

The red Tailed hawk is one of the most common raptors in this valley. They rely on the Red Bluff area for winter feeding. They eat a variety of small creatures, sometimes the slightly larger ones such as rabbits. They can be seen soaring and waiting for small unsuspecting mammals.



**DESCRIPTION**

Darkest birds are a very dark brown, usually a rusty color. Their tails are a lighter red- brown that gives them their name. They have a loud harsh scream.

**RANGE**

These birds are widely spread, and can be found from Canada to Central America. They can be found in forests and open areas as well as the desert.

**GOLDEN EAGLE - *Aquila chysaetos canadensis*,**

The Golden Eagle has a wing span of six and one half to seven and one half feet. They also use the Red Bluffs in the winter. In the summer they are farther north. They require the Bluffs as a space not covered by snow in the winter They rely on the area more than the Bald Eagle, because they do not fish. These large birds can feed on larger animals, such as rabbits, gophers, and even cats.

**DESCRIPTION**

Mature Golden's are dark brown with golden feathers on their neck. They do not have the yellow beak of the Bald, instead their beak is black.

**RANGE**

The Golden eagle is also widespread North to Canada, and south to Mexico.

They can be found in several habitats and do not rely on rivers and fish.

**GREAT HORNED OWL - *Bubo virginianus***

This nocturnal bird takes over the hunting at night, when many small animals come out. They are powerful and can take prey as large as a porcupine. They have adapted large eyes that allow them excellent night vision.



**DESCRIPTION**

These birds are very well adapted to their night life. Their feathers are very soft and almost fur like. This allows the air to pass through their wing feathers without making a sound. They also have very good hearing. The color of an adult is a mottled gray-brown. They have large ear tufts and big yellow eyes.

**RANGE**

The Great Horned Owls range throughout North and South America.

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## **Red Hill Project Survey:**

The project included a survey that was targeted toward both users and adjoining private landowners. Originally, the survey was to be taken at the trailhead of users to obtain information about use patterns, issues and needs. The steering committee decided to expand data collection to include the adjoining private landowners. Approximately 200 surveys were printed. A copy of the survey is included in **Exhibit C**. It was designed to gather information about demographics, use of Red Hill, ranked attractions, ranked in needs, ranked issues, ranked recreational activities in the number of days associated with particular uses.

Approximately 68 surveys were directly mailed to the adjoining private landowners utilizing addresses obtained from the Garfield County Assessor's Office. Surveys were placed at two bicycle stores in Carbondale and posted on the marquis at the Red Hill trailhead. Additionally, members of the public and members of the steering committee distributed surveys. The total of 116 surveys were returned. Each survey included a total of 80 questions. The staff at Aspen Glenn PUD input the survey results on a spreadsheet database. The data was analyzed by Western Slope Consulting. The results were tabulated and pictorially represented with graphs and charts. A copy of the complete survey results is included as **Exhibit D**.

As with many surveys, some of the results are very clear. Other responses show a split in the response and the remainder do not indicate any particular emphasis. It is particularly important to use the survey data and results contained in **Exhibit D** in conjunction with a review of the survey results narrative. Such a side by side comparison will allow the reader verification of the information that is presented here. Additionally, comments from the survey respondents are included. The following analysis will focus on the major highlights obtained from the survey. The survey results were used in conjunction with the public input to substantiate the project recommendations.

## **Red Hill User Profile**

The Red Hill survey was a useful tool for developing a profile of the typical user. The profile was developed by analyzing information from the survey categories containing the highest percentages of responses. Although there are variations in the responses, there are some clear indicators.

The typical user accesses Red Hill during the Spring, Summer and Fall (27%, 28%, 28%). There is significant winter use, however, it is less than other times of the year (17%). Most people access the area two to five times per month (33%). A slightly lower frequency of use occurs among persons in the six or more times per month category and in the onetime per month category (27%,

27%).

The majority of users travel less than five miles to get to Red Hill (71%). Most frequently, they drive (47%), but pedestrian and bicycle traffic are the other two primary methods of access (23%, 29%). This indicates that proximity to the Red Hill Area is a primary draw for users. This conclusion is supported by the very high percentage of users that reside in Carbondale (54%).

It is important to note that over half of the respondents said that their use of the area is increasing (51%). A slightly smaller percentage of users said their use was the same (46%). Very few people said their use was decreasing (4%).

Most people have used the Red Hill Area for more than seven years (33%). It is significant that the next category of use was "first-time users" (23%). The third highest category was the three to four-year use group at 21%. Most people use Red Hill with one or two partners (57%). 27% use the area alone.

There are two important results identified in the Red Hill user profile. First, survey results indicate a trend towards increasing use of the area. A significant number of the respondents indicated that they were first-time users and the majority of respondents were from the Carbondale area. This may be a result of a greater awareness of Red Hill as a recreation site as well as its proximity to the user's place of residence. Additionally, increasing use may be a direct result of the continuing and rapid growth around Carbondale.

### **Attractions.**

People are drawn to Red Hill because of the close proximity of the site to where they live (73%). They go there to escape the pressures of everyday life. A great majority of users are not interested in motorized use and motorized activities and ranked these activities as "least important" (81%, 77%). A majority of people said they want to get away from motorized vehicles (79%). Users are most interested in physical activities out in the woods away from other people.

Viewing wildlife and the valley from Red Hill are important attractions. Generally, people want to be alone or with one or two partners. These attractions correlate with the previous user profile responses about number of people that accompany them.

### **Needs.**

People identified the need for more public access as "least important" (57%). Twenty-five percent of the respondents felt more access is a "most important" need. In response to the question about a need for expanded trails systems, the majority said that it was "least important" (46%). It should be noted that there was a split in the answers to this question with the next highest category of "most important" with 33% of the respondents.

There is a need to better identify the public land boundaries. This was rated as most important by 41%. 25% of respondents ranked this need in the next highest category. 49% of the responses identified that fewer access points was a "least important". However, 22% felt a reduction of access

points was "most important".

Users do not want an easier less steep access to the area (62%). The next highest ranked category for this question at 18%, identified that the need for a less steep access was "most important". This result correlates with the previous response that the area provides an opportunity for physical activity. The steeper trails offer a good opportunity for a physical workout.

It is interesting that most people said better trail maintenance and more information about Red Hill was "least important" (40%, 44%). The other categories depict mixed feelings for and against these needs.

On the issue of restricted public access and/or use, the majority (44%) said that restricting public access was "least important". Almost equal numbers of people said it was "most important" (26%) or in the category just above "least important" (23%).

Generally, people are not interested in restricting trails to specific uses such as foot, bike or horse only (40%). There were mixed feelings on this question as is reflected in the ranking of importance of this need in the other responses to this question.

A very strong desire for restricting motor use is indicated by the 82% response to the need as "most important". The next highest category response to the question was identified as "least important" (10%). These results correlate closely with the prior responses on use activities supporting no motorized use and the attractions identifying a desire to be away from motorized vehicles.

It is interesting that there were mixed responses about better management of the area. In the two largest response categories, equal numbers (32%) felt better management was "most important" and "least important". There was a similar and almost equal split among the two middle response categories.

Most people said there is not a need for additional parking. This is reflected in the "least important" category (54%) and the next category above "least important" (16%).

## **Issues.**

Use conflicts on the trails are not identified as a problem. Use conflict was ranked "least important" by 53% of the respondents. Trash along the roads or trails and trail erosion was identified by a majority of respondents as "most important" with results of 68% and 43% respectively. This is an interesting response because it does not correlate well with the lower ranking of need for better management of the area. Survey respondents may not have associated the issue of trash and similar issues with management concerns.

People said that private property conflicts were a "most important" issue (52%). This correlates with the need for better identification of boundaries of the public lands.

Mixed results were obtained on the issues of damage to trails when soils are muddy and too many people using the area. The former question elicited support in the "most important" and the next

category of importance (32% & 30% respectively). A more mixed response was obtained about too many people using the area. The majority response was identified in the "least important" (25%) and the category just above "least important" (20%).

Lack of identification of the public boundaries is a "most important" concern (35%). There were mixed and almost equal responses in the other categories. This response does not show a strong correlation to the "most important" previous "need" category under better identification of public land boundaries.

Most people identified that damage to vegetation by users and adverse impacts to wildlife were "most important" issues. The responses to this question were 45% and 45% respectively. The other categories of response to these questions showed similar percentages of response indicating a mixed opinion.

Trespass on private lands is a most important issue for 42% of the respondents. However, 52% of the people rated not enough direction/information's signs or maps as a "least important" need. There was a strong "least important" (59% & 62% respectively) response to the two issues of poor access to Red Hill and not enough BLM enforcement.

Similar results were obtained on the questions about too many people finding out about the area and poor trail maintenance. These questions were rated by the majority of people as "least important" at 41% & 50%. Use of campfires was rated as a "most important" issue by 51%. 27% of the respondents said that the fire issue was "least important". Lack of care for the area showed mixed results. Almost equal results fall into "most important" (30%) and "least important" (32%). This correlates with the mixed response to the need for better management of the area and the "least important" rating of the need for better trail maintenance.

### **Benefits/Experiences.**

Most people use the Red Hill Area to be part of the natural environment (76%). Very few people see taking risks as a benefit with 56% ranking the topic as "least important". Both experiencing new challenges and using primitive outdoor skills were least important to 43% and 55% of the respondents.

Again, using motorized vehicles and equipment was rated as "least important" by 94%. This continues to correlate with the previous responses supporting non-motorized use of the area.

Generally, users desire to be in the Red Hill Area to get away from other people and the demands of everyday life. Inter-acting with other people was rated as "least important" by 48%. Getting away from other people was ranked "most important" by 41%, and getting away from the demands of everyday life was rated as "most important" by 53% of the people as a benefit. This correlates well with the "attractions" identified previously.

A primary benefit of using Red Hill is to keep physically in shape (71%). Mixed to results were obtained for testing skills and abilities with the majority of people rating the benefit as "least important" (32%). However, 28% said the benefit was "most important". Improving skills showed mixed results that were similar to testing skills and abilities. 31% said the benefit was "least

important" and 26% said it was "most important". A majority of people responded that releasing tension and anxiety and enjoying the scenery were "most important" benefits (52% & 75% respectively). Collecting artifacts and getting meat for the table were rated as "least important" benefits by 89% and 92% respectively.

### **Red Hill -- User Activity Days.**

Most users walk in the Red Hill area (39%). Viewing wildlife reflected the next highest number of user days and ranked 29%. Walking dogs ranked 22%. Running accounted for 14% of user days. Mountain biking and photographing the area comprised with following closely at 9% of user days. The other uses ranked low as a percentage of total. 5,737 user days were identified in the survey.

It is likely that some user days are combined. For example, many of the days identified as walking may also have included walking a dog, viewing wildlife and photographing the area. These activities are not easily accommodated while running or mountain biking, although runners and bikers may account for some of the days.

The surveys also included a number of written comments. These are included in the survey **Exhibit D** attached to this report. The comments have not been assembled into categories. However, respondents generally expressed concern about use of the area. Some people would like the area to be left alone and others expressed concern about impacts resulting from use. Clearly, people care greatly for the Red Hill Area in a variety of ways.

The survey was conducted in the fall of 1997 and the total response was much higher than originally expected. This questionnaire represents a good first attempt to quantify user demographics, attractions to the area, needs, issues and benefits of the public lands on Red Hill. The survey responses were important to the committee. This information was used to develop the final project recommendations. In the future, it would be useful to perform a similar survey to identify continuing trends or changes overtime. This information is useful for management of the area and identification of needs and future planning.

### **Red Hill Steering Committee - Actions, Purpose and Function.**

The ten member Red Hill Steering Committee met weekly during the term of the project. Their function was to provide guidance and input to the process in conjunction with the project manager and the BLM representative. The committee was also responsible for reviewing invoices submitted by the project manager and approving them for payment.

Each meeting included an agenda, minutes and memos from the project manager. Meeting minutes were reviewed and approved by the members. The minutes that are included in this report provide a documented history of the decisions and discussions that took place. Input from each of the public meetings was recorded in this documentation.

Most of the committee decisions were made on consensus basis. In the latter stages of the project, some decisions had to be made by vote. Voting became a necessity on the issues where there were strong differences of opinion. However, the group continued to use consensus decision-making

whenever possible.

Other examples of committee actions include development of the survey and consolidation of public input from the meetings. The Red Hill user survey was crafted by the project manager and BLM. The committee's role was to evaluate the survey instrument to ensure proper questions were asked and to ensure adequate distribution to the public.

Input obtained from the private landowner meeting and the kickoff meeting was evaluated by the committee and synthesized into nine major classifications. These groupings included management, preservation, motorized use, safety and parking, access, hunting, fire, wildlife and trails. Each major classification included a number of sub headings. The committee was responsible to ensure that the public input was accurately represented in the results. The nine classifications and sub headings from the public meeting are listed below.

**Nine Categories of Input Obtained From Red Hill Public Input Meetings**

<p><i>MANAGEMENT</i></p> <p><i>PRESERVATION</i></p> <p><i>MOTORIZED USE</i></p> <p><i>107 SAFETY AND PARKING</i></p> <p><i>ACCESS</i></p> <p><i>HUNTING</i></p> <p><i>FIRE</i></p> <p><i>WILDLIFE</i></p> <p><i>TRAILS</i></p>
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**Management**

- 1 trespass - visitors wandering onto adjacent private property
- 2 litter prevention and clean up
- 3 possibility of future mining activity
- 4 signage for property lines, trails, parking etc.
- 5 trail maintenance
- 6 user ethics and rules
- 7 information and maps
- 8 erosion control
- 9 confine use to trails
- 10 appropriate and feasible level of BLM presence
- 11 intergovernmental cooperation and actions
- 12 long-term management and planning

**Preservation**

- 1 soils - identification of types and impact of uses to soils
- 2 wildlife - identification of species, migratory patterns and impacts of present and potential uses
- 3 vegetation - identification of types, locations and impacts from use
- 4 artifacts - locations, origins and need for preservation.

- 5 aesthetics - assessing the environment and the need for limited passive uses
- 6 identification of the scope of planning for preservation
- 7 possibility of any future land trade involving Red Hill land
- 8 preservation of multi-use recreational opportunities
- 9 existing state of the entire area
- 10 water sources - identification and protection
- 11 finding the limits of acceptable change

**Motorized Use**

- 1 possible ban/restriction on specific motorized use
- 2 need for or need to restrict access to area for vehicles
- 3 trail impact/erosion
- 4 definition
- 5 conflicts with other uses
- 6 snowmobiles
- 7 safety
- 8 fire
- 9 noise
- 10 impact on wildlife

11 existing designation (BLM)

### **Safety and Parking**

- 1 junction of 82 = traffic and pedestrian crossing concerns
- 2 present parking spots - issues for through traffic and lack of parking
- 3 need to establish and /or enforce speed limit
- 4 emergency vehicle access
- 5 U. turn concern on narrow road
- 6 bikers/hikers/dogs on County 107 Road

### **Access**

- 1 amount
- 2 location
- 3 ease of public access
- 4 trailheads
- 5 conflict areas (user)
- 6 trespass
- 7 legal and illegal access
- 8 private
- 9 commercial access
- 10 possibly of unanticipated new access points resulting from subdivision of adjoining parcels or change of policy by private landowners with access.
- 11 historical patterns of use and access

### **Hunting**

- 1 trespass by hunters
- 2 unsafe practices such as shooting in the general direction of homes
- 3 gain management
- 4 access for hunters
- 5 area information
- 6 safety of trail users

### **Fire**

- 1 smoking
- 2 woodsies
- 3 need for bans and restrictions
- 4 sparks from motorized use
- 5 fire ethics
- 6 property exposure
- 7 access for firefighters
- 8 fuel hazard of the area
- 9 camping fires
- 10 types of potential fires to prevent - natural or man caused

### **Wildlife**

- 1 impact of dogs on wildlife
- 2 need to identify and preserve area wildlife
- 3 hunting impacts on area wildlife
- 4 identify sensitive areas
- 5 population dynamics
- 6 mountain lions
- 7 Division of Wildlife = level of input and participation in the project
- 8 identification of sensitive species
- 9 identification of wildlife corridors
- 10 sensitive areas (seclusion areas)

### **Trails**

- 1 expansion vs. non-expansion
- 2 access
- 3 maintenance
- 4 identification and signs
- 5 erosion control
- 6 seasonal conflicts
- 7 multi-use/conflicts
- 8 code of ethics
- 9 litter

Similar responsibilities included meeting with representatives from local government agencies to receive their input about Red Hill and use impacts. Again, input from these organizations had to be synthesized and developed into a series of project objectives.

Each of the nine major issues was defined by the group and specific mitigation actions were proposed for each individual issue. After considerable discussion and debate, a set of project objectives was developed. A second project mission statement was established to guide development of the Red Hill Plan. The second mission statement and the defined objectives are as follows:

## **Second Mission Statement**

*The mission is to have a plan that protects the environment and minimizes conflicts while continuing to provide for recreation use of public lands in the Red Hill area.*

### **Objectives**

- 1) Provide area and trail maintenance to prevent damage to the land and facilities and keep the area clean.
- 2) Provide safe and accessible trailhead areas and parking. Provide safe off-road parking and access to trailhead. Identify or designate safe non-motorized public access points.
- 3) Designate a trail system to help users access public lands and minimize trespass conflicts.
- 4) Inventory and evaluate existing trails and roads in-place. Designate trail systems as non-motorized and build or maintain accordingly.
- 5) Keep all trails non-motorized multi-use (no segregation of use).
- 6) Develop a trail system to encourage maximum use in specific areas and not in other areas.
- 7) Encourage lengthy bike rides in other areas.
- 8) Plan locate and maintain any new trails away from sensitive areas.
- 9) Identify and evaluate potential access points to the Red Hill Area.
- 10) Identify opportunities and obstacles to access across Highway 82 and identify a linkage.
- 11) Eliminate motorized use and restrict fires.
- 12) Identify any new trail construction needs.
- 13) Provide local and/or onsite visitor information to promote awareness of concerns, use effect, boundaries, use restrictions and develop a sensitivity for use of the area.
- 14) Consider seasonal closures to protect wildlife, soils, vegetation and sensitive values.
- 15) Establish ongoing management organization using local volunteers to deal with implementation, future issues, funding and ongoing care of the area.
- 16) Identify potential trail links to a valley wide system.
- 17) Organize regular and periodic monitoring and maintenance of the Red Hill Area in coordination with the BLM.
- 18) Support intergovernmental cooperation with BLM, Garfield County, Town of Carbondale and other planning efforts that deal with Red Hill.
- 19) Minimize damage and trash in the Red Hill area.
- 20) Hiking, biking and horse riding are recreation uses that need to be accommodated in the Red Hill Area.

These objectives were used as guiding principles for the final development of recommended use scenarios. These objectives will also be used to guide future decision making on Red Hill. Individual committee members proposed several alternate use scenarios for evaluation by the group. The details of these proposals are included in the minutes. The following scenarios were agreed upon by the committee as recommended actions and alternative actions for recreation/use management in the Red Hill Area.

### **Governmental Jurisdiction and Management Classifications.**

Management responsibility for the public lands in the Red Hill Area is vested with the of the Bureau of Land Management. Management actions are identified in the Glenwood Springs Area Resource Management Plan (RMP).

The 1984 RMP includes management decisions that define how the resource will be managed. Projects will be implemented according to the level of support that is needed. The document states that the "plan provides a broad framework for multiple use management on public land. This plan makes land-use allocations, sets broad production goals, and protects important resource values." There are provisions for plan amendments and revisions if changes are necessary. It also allows for administrative actions to "serve the public and to provide optimal use of the resources." These administrative actions can be handled at the resource area, district or state offices. The Glenwood Springs resource area Resource Management Plan was adopted in 1984. Copies are available at the BLM district office in Glenwood Springs.

Under the existing BLM management prescription, the Red Hill Area is designated for certain specific actions. The following provides a general summary overview of those actions. For more specific and detailed information, interested persons should consult the 1984 RMP for the Glenwood Springs resource area.

*Watershed Management:* Presently, there is no special designation. There is a potential for a debris flow hazard or erosion hazard area designation.

*Minerals Management:* Red Hill is open to mineral location and leasing. It is open to gas leasing under standard requirements. There is a restriction excluding surface occupancy on the steep slopes facing the Roaring Fork River.

*Terrestrial Habitat Management:* The study area is located in game management unit No. 444. In 1987, sagebrush treatment (by mechanical mowing) was completed to improve understory production of grasses/forbes to rejuvenate the older sagebrush. Presently, there are no management plans or special habitat designations.

*Livestock Grazing:* There are three grazing allotments in the Red Hill area. Two of the three allotments are not currently permitted. The third allotment allows for 40 head of cattle from June 1 to June 30 and three head of horses from June 1 through September 30. This allotment has taken a "non-use" status since 1990 and had little use prior to that date. The allotment lacks water. Portions of the public/private boundary are fenced and fences exist within the public lands.

*Forest Management:* Pinyon/juniper woodlands have been identified as suitable for management. This includes potential firewood cutting. The existing limited access is a deterrent to these actions.

*Recreation Management:* The Red Hill Area is identified for disbursed recreation management and normally receives minimal monitoring and maintenance. Approximately two miles of trail are included in the facility management system. For fiscal year 1998, approximately five percent of the recreation staff time will be allocated to work with the Red Hill Steering Committee to review public use issues and needs, to evaluate the existing trail system and to prepare an area management plan and environmental assessment. Additionally, a volunteer project may be scheduled for trail maintenance and stabilization.

*Visual Resource Management:* The steep slopes are presently protected from modification that will detract from their appearance under an existing class two prescription. This prescription identifies that landscape modification should blend in and have a low visual contrast and not attract attention. The lands identified under the VRM Class 4 designation allows for modification that may contrast strongly with the existing landscape. There are a number of scenic overlooks along the upper rims in the area.

*Off Highway Vehicle Management:* All lands within the Red Hill area are currently designated as open to off highway vehicle use year-round.

*Transportation Management:* There are no official BLM roads in the area. Several roads traverse the area or enter public lands from private property but lack public access. Public access is available from County Rd. 107 at the "old power line access road". A public access easement acquisition was proposed in the 1984 Resource Management Plan through the Suty property or possibly other properties. Currently, approximately two miles of trail are identified in a management system. These trails exist in the vicinity of the Mushroom Rock area. Some trail maintenance was completed in the summer of 1997.

*Utilities/Communication Facilities:* All of the lands in the Red Hill area are suitable for consideration for a variety of right-of-way's for utility company facilities such as power lines, gas lines and similar installations. There are several right-of-way's that exist for power line access and private driveways.

*Land Tenure:* These public lands are identified under in retention classification by BLM. They are not identified for disposal.

*Fire Management:* The area is identified as a fire suppression zone. Fire restrictions may be implemented during periods of extreme fire hazard. Existing fire management prescriptions are being reviewed by the BLM Fire Management Organization. The lands are identified as a potential fuel hazard reduction area.

The Red Hill Area is zoned by Garfield County as Agricultural/Residential/Rural Density. This zoning allows for one residential dwelling unit per two acres and

agricultural uses. However, because of these lands are under federal jurisdiction the county zoning designation is preempted. Garfield County does identify public lands within their comprehensive plan. They have no jurisdiction over uses on those lands except for activities that may impact county roads accessing the public land.

### **Scenario Development.**

A number of different "use scenarios" were considered by the committee. These included a plan to restrict use to the existing Mushroom Rock area, development of a trail adjacent to the drainage above Aspen Glen that would access the frontage road near Highway 82, development of a "grand loop" on the north side and construction of additional loops to access the Mushroom Rock area. These basic scenarios and scenario alternatives were debated at length. Ultimately, the committee decided to adopt and recommend the following actions and alternatives.

The Red Hill Committee developed these three scenarios after carefully considering all of the public input from the meetings and the surveys. Alternate actions were considered during the scenario development process. The final process of developing recommendations came after a long and arduous effort by the committee. All points of interest were carefully considered. The diversity of interest by committee members allowed for a very comprehensive debate on each topic. The meeting minutes reflect clearly the breadth of discussion undertaken by the committee members.

### **Common to All Scenarios:**

The following actions are recommended under all scenarios except the "no action scenario".

Educate visitors about conflicts between dogs and wildlife, and required leashes.

Provide trails/area information only as part of the trail map that includes other trail riding opportunities near Carbondale.

Close all public lands in the planning area to use of motorized vehicles, except for routes used under rights of way for private land access and administrative, enforcement and emergency purposes.

Enforce restrictions on use of fire during high fire danger periods. Restrict fires to designated areas and prohibit fires during periods of high fire danger.

Recommend that Garfield County prohibit any parking on County Road 107 except at the bottom of the hill.

Set up a private non-profit Red Hill Management Committee to assist the BLM with management of the area, with the initial makeup of the committee to be the Red Hill Planning Committee.

BLM will send notice to the Red Hill Committee about proposals submitted on public lands in the Red Hill Area that would impact the property.

### **Scenario One.**

No action scenario -- provide basic custodial management for all public lands in the Red Hill area, consistent with the current resource management plan. Provide minimal annual maintenance on the existing trails. Continue current management and use designations.

### **Scenario Two.**

Maintain existing trails currently in the BLM trail system. This includes the "Blue Ribbon", "Roller Coaster" and "Rim Trail" to Mushroom Rock as shown on the attached map.

Improve the trailhead parking situation along County Rd. 107. Options for providing a parking area include two sites:

- ◆ Colorado Department of Transportation Highway 82 right-of-way near the road 107 and Highway 82 intersection.
- ◆ Private land at the base of Rd. 107.

As part of the new parking area development, provide a trail from the new parking area to the existing point of access separated from 107 Rd.. A route exists along the drainage across private property, and would require easement acquisition.

Provide visitor information at the existing "Three Poles" bulletin board including trails map, use ethics and use restrictions. Relocate the bulletin board to the new parking area when it is developed.

### **Scenario Three.**

Provide special management for intensive use in the Mushroom Rock area to maintain and enhance the existing trail system, and provide limited expansion within this area. The boundaries for the intensive management area are shown on the attached map.

Improve the trailhead parking situation along County Rd. 107. Options for providing a public parking area are described under scenario 1 above.

Maintain existing trails in the Mushroom Rock area and correct any problems identified by inspection (i.e.: drainage, erosion, unnecessary spurs or braids).

Construct new trails to disperse use as described below and shown on the attached map. New trail construction would be subject to environmental assessment (EA) and any mitigating measures identified through the EA process. All new trails would be kept away from private land as far as practicable.

- ◆ Provide a new trail from the Mushroom Rock area extending the existing spur along the rim to a new access point along the Highway 82 frontage road. Locate the alignment entirely on BLM land, avoiding the riparian area in the gulch bottom. Design the new trail with grades similar in steepness to the existing trails off County Rd. 107 (i.e.: Heller Trail). Provide minimal trailhead facilities at the new access point.
- ◆ Provide a new trail from the existing point of access off County Rd. 107 up to the drainage basin to a connection with the existing "Heller Trail" near the "sage field".
- ◆ Provide a new trail from the top of the Mushroom Rock overlooked to the "Heller Trail" near the "sage field" to provide an alternate loop avoiding the "rock slide" segment of the "high water trail" along the rim.

Continue basic custodial management on the public lands outside the Mushroom Rock area consistent with a dispersed recreation management area.

Commence in 1998, an intensive study on public lands in the dispersed recreation management area on the north side to:

- ◆ Inventory existing trails, recreational use and recreational use impacts.
- ◆ Inventory sensitive areas, including springs/surface water sources, neo-tropical birds nests, and elk calving areas. The following are also considered sensitive resource values under BLM policy and would also be surveyed for: special plant populations, raptor nests, and cultural resources.

The Red Hill Management Committee will evaluate the findings of the intensive study and determine appropriate recreation management actions.

### **Recommended Actions:**

The Red Hill committee recommends that the BLM amend their Resource Management Plan to incorporate scenario No. 2 and scenario No. 3 including the items that are common to each scenario identified above.

Additionally, it is recommended that a private non-profit Red Hill Management Committee be formed to address implementation of the plan, management of the area and deal with concerns that arise. The legal format of this committee is to be determined after the committee is assembled. This will allow the members to determine what structure is most appropriate. It is recommended that this committee be created at the conclusion of the Red Hill Project.

**Exhibit - A**  
**Landowners Adjoining Red Hill Area**

<b>First</b>	<b>Last</b>	<b>Address</b>	<b>City</b>	<b>St.</b>	<b>Zip</b>
Aspen	Glen	POB 21307	Hilton Head	SC	29925
Robert	Burry	9175 Highway 82	Carbondale	CO	81623
Carl	Midland	POB 3492	Glenwood Springs	CO	81602
Jill	Libby	POB 2076	Carbondale	CO	81623
Ray	Fender	POB 66	Carbondale	CO	81623
Ric	Quisenberry	POB 626	Carbondale	CO	81623
Timothy	Smith	POB 1012	Carbondale	CO	81623
Steven	Dawson	673 W 23rd ST	San Pedro	CA	97031
Darwin	Raymond	POB 3413	Glenwood Springs	CO	81602
David	Robinson	912 County Road 113	Carbondale	CO	81623
Stephen	Kinney	1000 County Road 113	Carbondale	CO	81623
Donald	Huntsman	1172 County Road 113	Carbondale	CO	81623
Scott	Lipke	701 Grand Avenue	Glenwood Springs	CO	81601
Bobby	Burkett	1170 County Road 113	Carbondale	CO	81623
Peggy	Beck	2744 County Road 113	Carbondale	CO	81623
Peter	Ureche	2930 County Road 113	Carbondale	CO	81623
Peter	Fitzsimmons	County Road 113	Carbondale	CO	81623
Richard	Spencer	2882 County Road 113	Carbondale	CO	81623
Jan	Blais	2910 County Road 113	Carbondale	CO	81623
Robert	Velasquez	2906 County Road 113	Carbondale	CO	81623
Albert	Carsten	2954 County Road 113	Carbondale	CO	81623
Monte	Bridle	3044 County Road 113	Carbondale	CO	81623
Steven	Atchison	115 Panorama Drive	Carbondale	CO	81623
Edward	Killam	7540 Baseline Road	Boulder	CO	80303
Craig	Overbeck	3268 County Road 113	Carbondale	CO	81623
John	Sutey	2343 County Road 112	Carbondale	CO	81623
Charles	Talley	2220 Durant Road	Valrico	FL	33594
Charles	Martin	1645 County Road 335	New Castle	CO	81647
Troy	Cobb	6629 Hawarden DR	Riverside	CA	92506
William	Harper	2203 N Lois	Tempe	FL	33607
Patrick	Gremillion	POB 639	Carbondale	CO	81623
Robert	Kennedy	POB 639	Carbondale	CO	81623
Eleanor	Spence	POB 111	Carbondale	CO	81623
H.	Johnson Trust	471 County Road 112	Carbondale	CO	81623
Edelhard	Schumacher	475 County Road 112	Carbondale	CO	81623
John	Powers	13114 Highway 82	Carbondale	CO	81623
Wilma	Martin	13112 Highway 82	Carbondale	CO	81623
Gary	Marshall	12748 Highway 82	Carbondale	CO	81623
Arthur	Evans	286 Cross Creek RD	McGregor	TX	76657
Clyde	Marshall	12748 Highway 82	Carbondale	CO	81623
Robert	Carter	67 N 3rd ST	Carbondale	CO	81623
R&N	Enterprises	POB 626	Carbondale	CO	81623
Paul	Froning/Linda Singer	POB 545	Carbondale	CO	81523
Stephen and Helen	Low	POB 797	Carbondale	CO	81623
Ken	Riley	POB 584	Carbondale	CO	81623
Alison	Osius and Michael Benge	POB 1972	Carbondale	CO	81623
Robert	Carter	67 North 3rd	Carbondale	CO	81623
Robert	Froning Trust	10319 E 121st ST	Bixby	OK	74008

**Exhibit - A**  
**Landowners Adjoining Red Hill Area**

Rick	Broadhurst	POB 185	Carbondale	CO	81623
Duane	Stewart	20 Sunset Drive STE 8	Basalt	CO	81621
Phillip	Lacert	13155 Noel Road Floor 22	Dallas	TX	75240
Marion	Downs	735 Grape Street	Denver	CO	80220
John	Pike	31587 Aguacate Road	San Juan	CA	92675
			Capistrano		
Alex	Schwaller	POB 323	Carbondale	CO	81623
Richard	Viet	POB 1134	Carbondale	CO	81623
Joann	Stephenson	POB 1301	Carbondale	CO	81623
Mark	Baker	1625 Defiance RD	Carbondale	CO	81623
Kent	Pfleider	2317 Interstate Avenue	Grand Junction	CO	81505
Glenwood	Land	525 E Cooper	Aspen	CO	81612
	Company				
Ronald	Austin	600 E Hopkins Avenue STE 205	Aspen	CO	81611

## Exhibit - B Meeting Minutes



### Red Hill Project

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A Cooperative Venture Between BLM, The Town of Carbondale, Aspen Glen and Western Slope Consulting

#### Red Hill Steering Committee Meeting Minutes

October 9, 1997

Carbondale Town Hall 7:00 PM

Members Present: Alex Schwaller, Dave Johnson, Michael Pines, Ian Hause, Adam Olson, Chase Harrison, Eric Gross, Steve Avery, Chris Lawrence.

Members absent: Mitch Heuer, & Rick Broadhurst

Other persons present: Ted Tiernan, Francisco Mendosa, Davis Farrar

The Steering Committee was called to order at 7:00 PM by Project Manager Davis Farrar. The members introduced themselves. Discussion ensued about selection of a Committee Chair and Vice-Chair. Alex Schwaller was nominated to be Chair after she expressed interest in serving. The committee unanimously elected her as chair. Eric Gross said he was interested in serving as Vice-chair. He was nominated and elected vice-chair unanimously.

Alex took over the meeting as chair. The group discussed the proposed scope of services and whether they needed to be amended. Davis said that the revised budget submitted the committee reflected a reduction of hours and dollars from the original budget by approximately \$300. He said that the original project scope could remain intact with the \$4,000 that had been obtained to project labor. It is important to maintain a working Board and volunteer participation in the project to complete the work. Francisco said that it is important to define the area of study and define the boundaries. The area is large and the existing well-used trails cover a smaller area. The general area subject to study is covered in the 1984 BLM Resource Management Plan. He said that the existing plan would not likely be subject to wholesale revision in the near future as the Forest Service Plan is presently. A question was asked if the actual public lands' boundaries were known. Francisco said that the boundaries in some areas were marked but in others were unmarked. All the lands proposed for investigation were public lands. BLM has made marking public lands' boundaries a priority.

After discussion, it was decided that the area of public lands to be studied are generally bounded on the South and West by HWY 82, on the North by Cattle Creek, on the East by County Roads 112 and 103.

Steve Avery suggested that it was important to identify what kind of volunteer support was available to the project; e.g., CRMS, RFHS, etc. Davis said that he is working with both schools and encouraged any volunteer or group interested to participate including the committee members.

Chase H. asked who will deal with the project outcomes. Francisco said recommendations would have to be made to all stakeholders BLM, County, users, etc. People need to be kept informed. We need to identify all of these folks.

Alex asked about grazing permits up there. Francisco said that there are active permits but

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he wasn't sure if they were in use Sutys have some of them.

Eric Gross asked how people will provide information back to the committee. Francisco said that we need to notify all of the adjoining landowners about the project. They should all be sent personal letters inviting them to participate in the project and give input.

Regular meeting dates was discussed. The committee felt that establishing a date every Thursday at Town Hall with an alternative meeting place was important. The committee agreed that Thursday worked at 7:00 PM.

Discussion ensued about the trailhead survey. Comments ranged from expanding the survey over several seasons to focusing on people at the trailhead during the next two weeks before the weather gets bad. The decision was to get started now and see what we get as responses. It was agreed that the survey should include a place for people to put their name and address. Michael P. felt that inclusion of names was key. Francisco said that names will also allow the respondents to be included on future mailings so they are informed about what is going on. The committee felt that hunters should be involved in the survey as much as possible. Steve felt that this weekend and next weekend were critical to get information.. Francisco said that he may be able to get staff help to input and compile the results. Eric said that one of the results of this project could be an identified need for additional survey work. It is important that this process doesn't stop future efforts.

The survey should focus on local folks. A survey should be included with the mailing to the private landowners. We should approach CRMS, RFHS, the Fire Dist. CMS and CES. Steering Committee members should be involved surveying up on Red Hill and at other locations. Surveys will be placed at the two bike shops and the Post Office if they allow it. Adam will take care of Ajax Bike and the Post Office. Steve Avery will take care of Lifecycles, Eric, Chris, Davis, Alex and Steve will do Red Hill. David will do CRMS. Ian will cover Aspen Glen. Ajax Bike will be the pick up and drop off point for surveys.

The private landowner meeting will be on Monday, October 27<sup>th</sup> 7:00 PM at Town Hall if available and the Kick-Off meeting will be on the 30<sup>th</sup> 7:00 PM at Town Hall, again, if available.

Next week's meeting agenda is to include information that has surfaced to date, development of a project mission statement, overview of BLM public land's management and uses, the Committee should be provided Carbondale Parks & Rec. minutes from the previous meetings, DOW letter, copies of other letters, previously identified issues.

Francisco briefly reviewed how BLM might handle recommendations about the Red Hill Area that the Committee makes at the end of this project.

The meeting adjourned at 10:10 PM



## Red Hill Project

A Cooperative Venture Between BLM, The Town of Carbondale, Aspen Glen and Western Slope Consulting

### Red Hill Meeting Minutes

*Thursday, October 16, 1997*

*7:00 PM - Carbondale Elementary School*

Members Present: Alex Schwaller, Dave Johnson, Adam Olson, Chris Lawrence, Eric Gross, Steve Avery, Ian Hause, Rick Broadhurst, Michael Pines

Others Present: Davis Farrar Project manager, Francisco Mendoza BLM, Steve Wolf

Absent: Mitch Heuer

Alex called the meeting to order at 7:00 PM. A motion was made to approve the minutes of the meeting October 9<sup>th</sup> 1997. The minutes were approved unanimously. A motion was made to approve the billing in the amount of \$822.50 submitted by Davis Farrar. The motion was approved unanimously.

Members asked about how long the surveys should be continued. The board felt that the process should continue a little longer as long as input was being received. Ian & Michael volunteered to input the results. Ian volunteered the services of Aspen Glen to input the results.

Francisco Mendoza provided an overview of the BLM management prescriptions and a general historical perspective of the Red Hill Area. He gave the board a copy of a handout that outlined the various management responsibilities for these public lands. He said that Jack Snobble had approached him at BLM years ago and requested that the area receive a special designation, but that never happened. The management prescriptions for the area allow: oil and gas exploration, mineral extraction, removal of saleable materials, grazing, firewood cutting. Presently there is little interest in these uses. Mineral, oil & gas potential is low to moderate. The prescription prohibits "surface occupancy" on the slopes facing the highways. There are some mining claims in the area. There is no special designation for wildlife. Water is a limiting factor. There are some raptors. The SCS air photo shows land treatments completed in the summer of 1987. The sage fields were brush hogged to create better browse for wildlife. There are three grazing allotments on the lands and these are permitted for cows and horses. There has been no use for a number of years. Grazing permits remain valid for years with no use. Suty's have 55 animal unit months (AUM) on the lands. The road shown through Suty's was identified as an access in the BLM Resource Management Plan. BLM approved pursuing the access but Suty's were not interested. This committee could pursue the access question with Suty's. Also, if access is a desire of the committee, they could approach the Low's. However, the Low's are not happy with allowing people through their property. They have been abused. Recreation management is minimal. BLM checks in on the used areas once per month. This has been a low priority for BLM. They respond to complaints. The area is open to motor vehicles but the road is blocked. The Red Hill Area is designated as "retention lands" and are not identified for disposal. Fire - BLM will allow preventive

fire maintenance to eliminate fuel accumulations. This could be accomplished through: heavy equipment, chemicals, by hand, or other methods.

Steve Wolf asked about preventing future oil & gas leases. Francisco said it is very difficult to close areas to leasing.. The gas & mineral potential in this area is low to moderate.

Alex went around the table and asked each board member to express their own vision or desires for the Red Hill Area.

Alex - Concern to make sure trails are maintainable, controllable and maintained. She wants to see management for trash, erosion etc..

Aspen Glen - Wants to see what is there to be accessible and useable. They have a concern about encroachment onto their property. They also have a concern about abuse, over use and motor vehicles.

Steve - Wants to leave the area the way it is; a place for people to explore.

Chris - Wants to see more maintenance on the existing trails. Would not mind seeing that area left the way it is. She has a concern about the increase of use and has seen a huge increase in use over the last two years.

Steve - He visualizes a trails system with a main loop of ten to fifteen miles. The trail planned and designed with concern for the environment. He has a concern about use by horses. They do the bulk of damage and horse people do the least amount of maintenance. He would like to get horse people involved in the project.

Adam - He noted that with increased use the trail doesn't seem to be getting any bigger. If the trail was expanded the wear would be spread over a larger area. We need to develop a use ethic for the area. There needs to be education about the area and using the lands i.e.: cryptobiotic crusts. An expanded trails system should be one that can be maintained.

Alex - Everyone wants to be careful. Possibly we could look at a specific area and identify lands that are too sensitive.

Dave - It is important to note that the "cat is out of the bag" (Red Hill awareness). We need to look 10 to 20 years ahead and plan for that.

Eric - He represents the "people who are coming". These folks are looking at the lands around town for use. The whole area will get impacted as people move here. He doesn't know where the trails area and he ends up going down the wrong trails because he is not informed. The area will be used and abused unless it is managed. We all want the same ends. It is the means of getting there that is important.

Rick - He is concerned about the access point and safety on the road. The use will increase. GarCo. Needs to provide input on the parking and access. Other access points need to be considered. Aspen Glen has discussed a land swap with BLM. To make a trails system work, another access is needed. The turn at the bottom of the hill is too sharp. GarCo. & CDOT need to cooperate in this process. Rick likes the idea of an access at Aspen Glen at the water tank.

Dave - The group has to get a handle on the Red Hill Area before it gets out of hand.

Steve - Doesn't want more trails. He wants to see people find the trails that are there. They have to be "found".

The forthcoming public meetings:

The Kick-Off meeting and the private land owner meetings should be an opportunity for the board to listen to the public input.

The revised mission statement was reviewed and the committee was happy with the new version.

Francisco - Wants to be able to tell his managers that what comes out of this process is what the community wants.

Davis suggested that it is important that Carbondale have a representative involved in the process so they develop some ownership. It would be frustrating to go through all the effort and have the Town at the end not agree with the results. He will contact Kelli Jaycox and the Mayor to see if the town would like to have a representative involved as we move along.

Davis mentioned that Chase Harrison had resigned due to the time requirements of this project. Steve Wolf was present and expressed an interest in serving on the Board. He was asked why he did not originally submit an application for the Board. He said that he had been out of town and was not able to do so. The Committee unanimously voted to appoint Steve to the Steering Committee.

The next meeting will be the private land owner meeting on October 27<sup>th</sup> followed by the Kick-Off Meeting on October 29<sup>th</sup>.

The meeting adjourned at 9:47 PM.



## Red Hill Project

A Cooperative Venture Between BLM, The Town of Carbondale, Aspen Glen and Western Slope Consulting

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### **Red Hill meeting minutes Thursday Nov. 6 1997 7 p.m. Carbondale Town Hall**

Members present: Alex Schwaller, Dave Johnson, Adam Olson, Chris Lawrence, Eric Gross, Steve Avery, Ian Hause, Michael Pines and Steve Wolf.

Others present: Davis Farrar Project Manager, Francisco Mendoza BLM.

Absent: Mitch Heuer, Rick Broadhurst

Alex called the meeting to order at 7 p.m. Davis presented a series of slides taken by Jim Breasted of the red Hill area. Board members were given an index map showing where each photograph was taken.

Steve Avery made a motion to accept the minutes as presented. Dave Johnson seconded the motion. The motion was approved unanimously. Francisco noted that in the minutes October 16<sup>th</sup> he did not check the records for mining claims.

Discussion took place about what to do with the input received from the two public meetings and the survey. Davis suggested that one way to sort the data would be to identify items that were most important or that were "hot items". It was suggested that the board start identifying the most obvious issues on which they could develop consensus. The issue of motor vehicles was suggested as one that would be easy start with.

Michael said that what he was hearing about motor vehicles also included mechanized vehicles, i.e.: bicycles. Chris and Adam said that they did not get the message from the public that motorized vehicles included bicycles. Dave said non-motorized designation would require a change in prescription of these lands by BLM. Steve A. said he heard concerns about motorized vehicles not mechanized devices.

Ian asked if the management plan could be so specific as to differentiate between different types of uses. Francisco responded that BLM has made changes that were that specific. He said it was possible to segregate uses by designation.

Steve asked how decisions would be made by the committee. Davis suggested that the process should work by consensus. He said that later it may be necessary to vote but the board would have to determine the process to use. Francisco said it would be important to define the issues and sort through them. Dave said it's inevitable that a vote would eventually take place. Eric suggested that straw polls may be good way to determine consensus with a particular issue. Eric did not want a specific accounting of the vote numbers but instead said the members should come to a general agreement on issues.

Davis suggested the following procedure:

- 1 identify the problem
- 2 identify mitigation measures.
- 3 rank the issues by high medium and low priority.

The topic of fire was used an example.

Steve said that the term fire has many aspects. Subjects associated with fire can range from smoking to the BLM fire management strategies.

Alex asked if the board recommended a fire ban for Red Hill, couldn't BLM supersede that action? Francisco said the subject is complicated. He hypothesized if there was a fire, what would the result be? What is the fire hazard? The type of hazard is in issue and it depends on the conditions. Fire suppression is another issue. It was suggested that the board could identify fire as an issue to the BLM and let BLM come up with mitigation strategies.

Discussion took place about how to sort the issues. Francisco suggested that for BLM, health and safety are primary issues. The board went through a process of identifying “hot issues”. Under each “hot issue” the board described points for consideration.

**Update on the surveys:**

Davis asked the board how long they want to continue to survey process. He said he had received approximately 75 surveys and that other board members had additional surveys. The board said that they would like to continue taking surveys and inputting them as they filtered in. Davis and Francisco will work with the Ian at Aspen Glenn on the survey input process. Francisco said it would be important to number the surveys so that they can be tracked.

**Committee comments:**

Steve Wolf brought up the idea of a land swap at the bottom of Red Hill, on the bench. He suggested that the flat land on the bench could be used as a parking area. Trails could be extended from this area up to Red Hill. Francisco said that he supports the idea. He felt that the land there should be preserved. He believed it would be important to have a low traffic generator use on this bench instead of the potential commercial use. Davis said that in the past, the town of Carbondale had specific concerns about the entrance to the community. At one time the town had talked about annexing across Highway 82 so that they could control the land uses at that intersection. Dave suggested that the town of Carbondale government be kept involved in informed about this project.

Ian was asked about Aspen Glen's feelings on Red Hill. Ian responded that Aspen Glenn is interested in foot traffic only on red Hill. He was asked about the issue of horses. Ian said he would like to put the horse issue to bed. The equestrian center will be primarily a stable area. A horse trail on red Hill is not a point of focus of the project. He was also asked about hunting. Aspen Glenn has not sold themselves as hunting community. This is a wait-and-see issue. A Michael asked about wildlife from Aspen Glenn's standpoint. Ian said they view wildlife as an amenity.

Items for the next meeting: the board would like to have representatives from other governmental jurisdictions at the next meeting on Nov. 13. Davis should invite the following entities:

Division of Wildlife

Fire District

Soil Conservation Service

Garfield County

Town of Carbondale

County Sheriff

BLM

For the next meeting, members should be considering what to do with the issues. Francisco suggested that the committee define the topics, determine mitigation methods, develop alternative methods, and possibly recommend a preferred course of action.

Francisco had been asked about the acreage in the red Hill area. The public lands identified in the Rd Hill area are 3,092.27 acres. The private lands within the study area are 2,976 acres. The total acreage is 6,068.9 acres.

The meeting adjourned at 10:10 p.m..



## Red Hill Project

A Cooperative Venture Between BLM, The Town of Carbondale, Aspen Glen and Western Slope Consulting

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### **Red Hill Steering Committee Meeting Minutes Nov. 13 1997 Carbondale Town Hall**

Members present: Dave Johnson, Alex Schwaller, Steve Avery, Michael Pines, Steve Wolfe, Chris Lawrence. Rick Broadhurst arrived late.

Others present: Victoria Giannola GarCo., Dennis Davidson SCS, Francisco Mendoza BLM, Ron Leach Fire Dist., Joli Springer, Pat Gremillion, Jim Pitts, Rick Adams DOW and Davis Farrar -- Project Manager

Alex called the meeting to order at 7 p.m.. She made a motion to approve the minutes as presented. Michael second the motion. The vote was unanimous.

Various local government representatives were invited to the meeting and were in attendance. The agencies represented were: BLM, Carbondale Fire District, Garfield County, Soil Conservation Service, Division of Wildlife, and Town Carbondale.

Ron Leach from the Carbondale Fire District said he was there to answer questions and provide information. Wildfire issue -- the area has been mapped by the Colorado State Forest Service as high wildfire area. A year ago there was a fire from a lightning strike. The area seems to be lightning prone. There is a potential for serious fire. The district responds to approximately 2 to 3 lightning fires a year. Residents on Red Hill are very conscious of the problem and cleared vegetation away from their homes. The fire last year was handled quickly and was put out.

There are concerns about County Road 107 as an access. It is steep, narrow, and a dead end Road. If there were more houses up there, the Fire District would lobby Garfield County to improve Road. Kids and bonfires -- the department responded 4-6 times last year. Where fires are built is a clear area but the kids leave the fires burning. This is more of a pain than a danger. Ron believes this issue is more a law-enforcement issue.

The district responds to ambulance calls to the private residents a few times a year. As this area is used more, there will likely be more calls. That is a function of population. Davis asked if mitigation measures can be devised for the fire hazard. Ron said not really. The residents have taken the proper steps. He suggested more public education and possibly restricting the area to nonsmoking.

Ron said with more people in the area it increases the potential for wildfire and emergency medical responses.

Michael said the question is whether to open the Red Hill area to more use or not and what does that mean?

Steve Wolfe asked in what ways hikers or bikers start fires? Ron said that was a tough question but was a function of human element.

Davis asked about the best ways to address these issues. Ron suggested cracking down on the kids' bonfires and outlaw fireworks. Steve asked if there were fires from motors. Ron said that yes it can happen.

A question was asked about remote fires. Ron said the district was equipped to deal with them. Initial attack is important for fire suppression. Michael asked about response time to the area. Ron said it took 20 minutes to get to the fire at Pines' house. Michael asked about the human element and additional trails and if it was a fire concern for Ron. Ron responded that it was.

Discussion took place about access to the more inaccessible areas. Ron said that a fire in a remote area would be difficult to get to. In a difficult situation where life or property was not in danger, he said he would consider not sending his crews in.

Steve asked if the district can access private property in the event of a fire. Ron said the district was allowed to under state law.

Joli asked if the general public obeys fire bans. Ron said yes but the government agencies do not have their response together. Because of this, the public doesn't know how to respond to the mixed messages of where, when and how. Joli said residents voiced concern about fires. How would residents be notified? Ron said there isn't a policy or procedure for doing that. It was suggested that the local phone tree could be provided to the district for use in the event of a fire emergency.

Ron said Western Colorado doesn't burn like other areas because of altitude and elevation. The difficulty in this area is people moving here and building homes in the woods. This affects the urban/forest interface.

Steve said the area seems to have a lot of lightning strikes. They don't seem to go anywhere as far as fire is concerned. Ron agreed and said that rain often accompanies lightning so a tree may smolder and then go out.

Dave Johnson asked about the issue of controlled fires. He asked what criteria goes into rating areas for dealing with fire exposure. Francisco said if the hazard was high to property and safety the issue could be addressed. Dennis from the SCS said fuel reduction can be achieved by harvesting the wood. Francisco noted other methods including: fire breaks and elimination of the fuel sources. Victoria asked if any the homes had internal sprinkler systems Ron said no. Victoria suggested one solution would be a burn safe room in a shelter.

Dave Johnson inquired about developing some type of fire pre-plan for the area. Ron said he thought that would be a good idea. He added that 107 Road must be improved if there's any additional development at the top of the Road.

Dennis Davidson representing the Department of Natural Resources -- Soil Conservation Service made a presentation. The S.C.S deals with five resource areas: soil, water, animals, plants and the air. A soil study has been completed for the Red Hill area and is available to the committee. It covers vegetation by common name and includes aerial photos. The department also has standards and specifications for dealing with the various resources.

Dave Johnson asked if the document includes age classification of the trees. Dennis said it did not but the area trees were very old. The area has not burned in longtime and it could burn like storm King Mountain. Some trees could be 500 years old. Rick Adams from D. O. W. said C. M. C. did increment boring. They found some of the trees were in excess of 400 years old.

Dennis noted that we had not addressed the issue of debris flow. We should consider erosion control. Another issue is the Park Ditch. Equipment needs to get an along the ditch to maintain it. The committee should be careful about boxing themselves in by precluding that. Alex mentioned that the ditch is maintained with equipment. Francisco said there are exceptions for certain motorized uses.

Chris asked about statistics on erosion from mechanized use on trails. Dennis said they did not have specific information however, erosion could be calculated. They have information on methods for Reducing erosion. Chris asked about calculating erosion impacts from cows vs. horses. Rick Adams said that information was available.

Dennis asked whether the committee had considered handicapped accessibility. Francisco noted that handicapped access does not mean wheeled access necessarily.

A question was asked about installation of a pond. Dennis said the SCS has cost sharing provisions and incentive programs available for conservation projects. Another resource available is the Resource Conservation and Development program through Willa Holgate.

Rick Adams from the Division of Wildlife spoke next. The area is covered with a combination of pinion juniper and sage. There are to 218 bird species on the West slope. Half of those are ground nestors. There are also cavity nestors that use old pinion and juniper trees. D. O. W. also has interest in migrating tropical birds. Evidence shows these birds are losing ground. Closure of areas to public use during certain times of the year is an issue. Pinion and juniper trees provide good cover for big game and furnishes little food for the game. Big game uses the area from mid-October to Spring when the grasses turn green (April/May). Stress during the winter is very hard on the large animals. Males drop out of the population first, then the young, next the females.

D. O W. considers the Red Hill area a winter concentration area for big game. There is no official "critical designation" for Red Hill. Rick noted the elk population was out competing the deer for food. The DOW has lost control of the elk and deer population in the general area from Red Hill East to Panorama Ranches Subdivision. There are approximately 1,100 elk and they do not have numbers for deer.

Alex inquired about elk calving. Rick said the area is a "sanctuary" situation. Some members of the herd do not leave the area. Calving takes place into the first of June. Control of disturbance should extend into the third week of June. With the big game herds out of control, serious damage is going to result to both public and private lands. Access to the area for hunting would be a benefit for controlling the herds. D. O W. will assist in efforts to facilitate hunting. Alex commented that hunting is high on people's list as a concern because of the hunting season.

Dave Johnson said it's not until people see the devastation that herds out of control can do, that the role of hunting is put into perspective.

Francisco asked if D. O. W. has a program for allowing hunting on private lands that are otherwise not accessible. Rick said D. O W. policy is to be fair to everybody. They do not create special situations. They do have private land only licenses. That's as far as they have gone.

Davis asked as far as use of the area, what issues would D. O W. like to see addressed. Rick said "absolute dog control." All dogs should be on a leash.

Chris mentioned she is concerned about area landowner's dogs off a leash. Rick agreed that is also a concern. He said it will require a great deal of education. Owners are more protective of pets than even their kids. A critical dog restriction period would extend from the onset of winter to 2 -- 3 weeks after green up. Steve Wolfe asked for suggestions on dog controls. Rick said signs and information can help.

Discussion took place regarding mountain lions. With more people moving into their habitat there are more sightings. Where deer winter, there are mountain lions.

Rick suggested a closure from Nov. 12 to April 15. That time frame could be extended to June 15 for elk calving.

Rick stressed that users of the area stay on trails to minimize impacts to wildlife. Typically, animals will get used to traffic on trails and they will move 30 to 50 feet away. It is when trail users wander at through an area off trails that there's the greatest disturbance to wildlife. It is also very important to keep dogs on the trails on a leash.

Dave inquired about sensitive species. Rick mentioned that area has raptor nesting and golden eagles in proximity to Mushroom Rock. There is also a site near Aspen Glen in the gypsum rock. Neo-tropical birds are a concern. There have been no sightings of Peregrine Falcons. The cliff areas are important for raptors. There are also red tail hawks, great horned owls and turkeys.

Francisco asked about habitat improvements. Rick said they worked on the sage brush. However, opening of the timber would not be worth it.

Victoria with Garfield County said she concurred with the other agencies about road and fire concerns. She said the county is limited about what they can do with the road. Garfield County supports dogs on a leash.

Francisco asked about the County's trail Planning. Victoria said the county has an Open Space and Trails Plan but it has not focused much on trails. She said the county trail's group is interested in getting the trails issue re-activated.

Steve Wolfe expressed concern about 107 Road because it is steep, the access off 82, the sharp turn on the road, and washboarding. He believed that paving of the road would help.

Alex asked for input from the citizens present. Pat Gremillion expressed concern that if Basalt Mountain and Red Tables are closed to motor vehicles or bikes in the Forest Service Plan revision, there will be much more pressure on the Red Hill area.

The committee decided item 7 on the agenda should be discussed when a whole evening can be dedicated to the issues.

Steve Wolfe expressed concern about not receiving agendas and minutes. It was decided that Alex would get copies of her faxed agenda and drop them at Steve's shop.

Francisco said he should have some G. I. S. plots showing basic information for the next meeting. Steve inquired about the inspection on horse trails that B. L. M. made.

Francisco said that this summer 3,000 trips have been taken. There were spots on the trail that were half piped and needed water bars. The number of trips is considered a lot of use but the area was relatively free of negative impacts. During the summer, a gully washer eroded a portion of the trail. The committee is welcome to go to inspect the trail. Members should contact B. L. M. before going there.

Alex said she contacted Mitch Heuer. He said he would not be able to be part of this process.

The next meeting will be Thursday Nov. 20, at 7 p.m. at Carbondale Town Hall.

The meeting adjourned at 10:12 p.m.



## Red Hill Project

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### **Red Hill Steering Committee Meeting Minutes November 20, 1997 Carbondale Town Hall**

The meeting was called the order by Alex Schwaller at 7:08 p.m.

Members present: Chris Lawrence, Ian Hause, Alex Schwaller, Rick Broadhurst, Michael Pines, Steve Avery, Steve Wolfe

Others Present: Jim Pitts, Francisco Mendoza -- BLM, Davis Farrar -- project manager

Minutes of the previous Meeting: Francisco asked that the minutes reflect that steering committee members should contact Mitch Heuer as well as the BLM before accessing the Red Hill Area from Fun Land. A correction should be made to the spelling of Pat Grimillian's name. Alex made motion to approve the minutes. It was second it by Chris.

The vote was unanimous to approve.

Francisco made a comment that when the public appears at a meeting, the committee should make an effort to listen to these folks because that is a primary function of the committee.

On the issue of the age of trees -- the BLM Forester completed a study of juniper trees from timber sales in the area. They devised a method of aging trees based on the trunk diameter. These results are available to the committee.

Alex proposed swapping agenda items No. 4 and No. 5. The committee agreed to the swap.

Steve Wolfe suggested that committee discuss where they want to go with this project.

Steve Avery said he sees two extremes. First, if the direction is to close the Red Hill area there is no need to discuss the specifics of area impacts. If the committee is to consider keeping the area open to use, then all issues are important.

Steve Avery commented that, in a general sense, the committee should find some middle ground between the users of the area and others who would like to see use curtailed. He is in favor of use of the area in an environmentally sound way. He agrees with the mitigation issues suggested by DOW. He believes use will continue up there (Red Hill). Five individuals have approached him to let him know they are looking to the committee for plan for additional use of the Red Hill area. Trails are a big issue. There are already several areas of trails and roads that exist. He would like to see links to the existing roads, etc.. He wants to see a planned trail instead of individuals developing their own trails in the wrong places.

Michael agrees that there will be use on Red Hill. He would rather see people use trails instead of spreading out. But somehow, he feels we need to have some controls. We should see what we can do with what we have, first, and manage that. He suggested allowing BLM to come up with restrictions they see are appropriate for the area. The feedback he has received relates to losing what we have up in the Red Hill Area.

Steve Avery noted that he does not think we will see an abundance of use. He believes the committee needs to look beyond the mushroom rock area. He would like to see a plan for expanded use implemented over a year or two.

Francisco commented that BLM does not take that long to develop a plan for an area. A

plan could be developed to connect the existing trails. Any plan that evolves should be reasonable. The committee needs to recognize the demand for use of the area.

Rick agrees with the points that Michael made. He would like to see the area expanded with controls based on the success of the management of an area. He suggests a segmented process to see how each part works.

Steve Wolfe is not in agreement. He believes we should look for alternates because when you open area up people will go off the trail and make their own. If we open an area people look for new areas and new high's. He recognizes that red Hill is open to the public, but there is a natural barrier in the drainage above Aspen Glen. He feels that mushroom rock is already "gone". That area is close to town. Use should take place there in the area that is already lost. What you do with the mountain bikers? He suggested the loop down in the gully by Aspen Glen and back along the road. What about people who want more? He suggested they do to Holgate Mesa or they can ride for miles.

Michael asked about closing the red Hill area to all but foot traffic.

Steve Wolfe disagreed. He said once the area is open it's hard to stop use. Closure works for people that obey rules. However, he feels if we make more access people will make more trails. You cannot keep people out but you can make it difficult for them. A smaller loop would be more acceptable to him.

Michael mentioned the over use of the mushroom rock area. He proposed that we need to address those issue's first; control and manage what is up there and define the use. The existing areas need to be managed before the north side is opened up.

Steve Wolfe noted that he is pleased to see how the area past three poles has recovered now that access has been closed off to motor vehicles. When it was open to vehicles, the area was trashed.

Steve Avery agreed. Closure of the area to vehicles has been a positive thing.

Alex stated that her first, concern before anything else happens, is that the use of the area is changed to exclude motor vehicles.

Steve Wolfe asked how fast BLM could act on a motor vehicle closure for the area.

Francisco stated that the quickest method would be an "emergency action". He described examples of emergency scenarios may include: major development of adjoining areas that are causing severely increased use.

Chris inquired about whether the wildlife herd issues would be a factor for eliminating motorized use.

Rick noted that the public input has all been in favor of non-motorized classification.

Francisco said that to amend the plan they would make public notice of a limited or non-motorized use classification. That would start the process. He estimated that would take approximately three months to complete a plan amendment process.

Alex stated that she liked Steve Wolfe's idea of a loop. She would like to see a foot use only designation from an identified point. Her most important issues are a non-motorized designation and restrictions on the use of fire.

Ian said that he originally supported foot traffic only but would like to re-tract that statement. He would support the concept of the defined loop that would have a management system that could deal with the problems. He feels a non-motorized designation is important. He does not necessarily support horse traffic. He does not see Red Hill as a horse traffic destination. The uses he feels should be addressed are motorized use and horse use.

Chris commented that she likes the area. She does not see how we can keep bikers out of the areas they have not yet accessed. She wants to see better management of the area that is presently used. She does not see how we can effectively limit areas to foot traffic only. "We are dreaming". She is also in favor of a non-motorized use designation but feels we may also be dreaming on that issue. She supports having fires contained to the three poles area. It might be far fetched to say no fires at all. She does not want the committee to get "too far out" and have BLM say they are being ridiculous.

Alex stated that if we do not control where people are now, then we will not be able to control the use of fires, etc.

A straw pole was taken on the question of a non-motorized use designation before any trails' expansion. There was consensus on that issue.

Ian noted, that on non-motorized designation and no fires, there was agreement on by the committee and the general public.

Jim Pitts agrees with Steve Wolfe. He has climbed all of the 14'rs and has seen lots of people go to the easier access areas. When you introduce trails you bring people into the area. He believes that if trails are introduced, people will go off the trails. He felt that if we opened it up the locals may respect the area but non-locals will not. He likes the idea of experimenting with an area to see if it works.

Francisco said it works both ways. In his experience, sometimes the locals are the worst offenders. Non-locals often try to find out about the use ethic of an area first and often try to comply with that.

He noted that he does not see a non-motorized designation as a big issue. When you identify an area for closure you also identify the areas that are open to motor vehicles. The discussion took place about the issue of excluding fires. There was consensus on the designation of no smoking and no open fires.

Francisco – During a high fire danger, open fires are restricted. It would be possible to identify a restriction on fires in the Red Hill area.

Discussion took place about limiting fires to designated areas, except during periods of high fire danger. There was consensus on the issue.

The committee focused next on the "hot items" list.

Item: **PRESERVATION**

Term Definition -- keep what is there despite increased human use and prevent additional degradation. Keep in public ownership.

Mitigation Actions:

- Public Education
- Erosion Control
- Control of Use
- public involvement To Maintain Public Ownership
- Commercial Use Limitations
- Inventory What Is There
- Preserve watershed values/water Rights

Item: **MOTORIZED USE**

Term Definition -- current and potential damage to the area. Can have a detrimental impact to wildlife. Conflicts with non-motorized uses. Noise impacts. Caused by vehicles themselves.

Mitigation Actions:

- Ban all motorized use except for specified situations

Item: **FIRE**

Term Definition -- irresponsible use of fire. Fear of a devastating fire. Proliferation of fires. Smoking. Campfires. Fireworks.

Mitigation Actions:

- Campfires in designated areas only in prohibited during high hazard periods
- Prohibit all fireworks
- Field dress all cigarette butts
- Educate commercial users
- Total fire ban
- Ban smoking
- General fire education

Item: **MANAGEMENT**

Term Definition -- does not exist for the Red Hill area and results in: litter, trail erosion, trespass. No funds. No personnel. No priority.

Mitigation Actions:

- Create management system and structure
- Secure financing
- Raise priority for BLM and community and users
- Develop volunteer program
- Mark boundaries
- Education for users and the general public

Davis provided an update on the survey input process. He said the data input should be completed in about a week. He also noted that CRMS students are working on reports about Red Hill biology and may be doing some G. I. S. mapping.

Francisco said BLM has a historian who can document the area. **Committee members should bring a list of contacts of people who know the history of Red Hill to the next meeting.**

The next meeting date is December 4th 1997 at 7 p.m. at Carbondale Town Hall.

Steve Wolfe mentioned a letter in the paper from Pat Grimillian. He contacted the Sierra Club about the representations made in the letter. The Sierra Club said that they are not suggesting the closure of Basalt Mountain or Red Tables. The goal of the Sierra Club is to concentrate use in one area so others remain pristine. They would like to provide other places for people to go.

The meeting adjourned at 10 p.m.



## Red Hill Project

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### **Red Hill Steering Committee Meeting Minutes December 4, 1997 7:00 PM Carbondale Town Hall**

Red Hill Steering Committee

Meeting Minutes December 4, 1997

Carbondale Hall

The meeting was called to order by Alex Schwaller at 7 p.m.

Members present: Ian Hause, Alex Schwaller, Rick Broadhurst, Michael Pines's, Steve Avery, Eric Gross, Dave Johnson, Adam Olson.

Absent: Chris Lawrence, Steve Wolfe

Others Present: Jim Breasted, Francisco Mendoza -- BLM, Davis Farrar -- Project Manager

Minutes of the Previous Meeting -- discussion took place about the minutes of the previous meeting. On page 1 in the ninth paragraph, "Steve" the in the first sentence refers to Steve Avery. The second sentence in the last paragraph on page 1 should read "he would like to see a plan for expanded use implemented over a year or two." Instead of "evolve over a year or two." On page two the fourth paragraph should read "Michael asked about closing the Red Hill area to all but foot traffic." At the bottom of the page, the word "heard" should be spelled "herd".

Ian made a motion to approve the minutes as corrected. Rick seconded the motion and it passed unanimously.

Francisco mentioned that the State BLM director visited the office in Glenwood recently. He briefed her about the Red Hill project. She was supportive of the effort. One concern she expressed was the F. A. C. A. (Federal Advisory Committee Act). This has become an issue in which people have appealed actions of BLM for not complying with the specific provisions of this law. The steering committee must remain as an open committee, open to the public and they will be okay. It is important for the committee to identify alternate actions for BLM to pursue. All documentation produced during this process would be forwarded to the BLM's legal counsel in the event of lawsuit. Technically this board is not a BLM appointed committee therefore FACA does not apply.

Discussion took place about how to proceed. Michael said that he would like to define a direction for the process. Francisco reviewed the hierarchy of: mission, goals and objectives. Dave Johnson said that he does not have a problem making some statements about things such as non-motorized use or prohibition of fires because we do not have the survey detail at this time and input has been in that direction. He can see continuing with the list that was started at the last meeting and finishing the process.

Alex asked for input from the committee members there were not present at the previous meeting. She noted that each board member was given an opportunity to express their feelings about where they would like to see the process go.

Dave Johnson said he would like to see the existing system delineated. He does not want to see trails expanded at this time until a management system is in place. He would like to see motorized vehicles banned from the area. He would like to see a management system developed for Red Hill. Considering public input, he felt preservation was very strong concept. We must move to a healthy landscape. On access, he said it should be limited to what is there until there are too many people up there. Hunting -- he was not sure. Safety and parking should be addressed. Fires should be banned from the area. Wildlife -- he is not quite sure what to do with this issue.

Eric Gross agrees with a ban on fires and elimination of motorized vehicles. The less fire up there the better. He is beginning to see the area as to separate sections. Mushroom Rock area on the South and the North Side. Mushroom rock needs special attention. The trails should be marked and some special organization should be developed to care for it.

The North Side needs better access for hunting. Once that access is there, Pandora's box is open. He would like to look at all of the issues' one at a time. On the issue of additional access (possibly controlled) -- any of the private landowners could open up an access at any time. We need to have a management system in place first. It may be impossible to "keep the area the same." He would like the committee to visit the issue of what they think the pressure will be on the resource in the next few years. If there is going to be increased use, we need a management plan for the area.

Adam Olson -- he agrees with the designation of non-motorized use. He does not see much use there now so it is not a big deal to him. Fires -- he has a problem with an outright ban on fire. Fires can be used wisely and should be restricted to designated areas. Access is a big issue for him. If mushroom rock is to be preserved, then we need an expanded area with another "out". We can reduce pressure by providing another way out. This would be a good way to reduce the pressure on existing trails and minimize impacts such as erosion. He sees the north side as a "future use" not now. We should not jump into the system without a management plan. Right now people can go wherever they want. Cyclists need a trail because they generally are not going off trail. If they go off trail, they are carrying their bikes.

Francisco commented that the effort we are going through here is a compressed process. It is not the same process that BLM uses. The committee should identify goals and objectives with alternatives to achieve the goals. It will be important to allow a broader public to respond to those identified items at a meeting. The public should also be able to respond in writing.

Michael noted that over Thanksgiving there was an incident on the (107) road due to ice. A car slipped sideways and became stuck. The Sheriff deputy that came a to the scene also became stuck. The incident took place just above the trail head.

The meeting moved into discussion about continuing the process started at the last meeting. This was the process of defining the "hot items" and identifying mitigation actions for each item.

Jim Breasted said it would be helpful to hear from the committee members about the intersection of 107 Rd. and Highway 82. He also mentioned that the bridge in Satank would provide a good pedestrian access to the Red Hill area. The committee should talk to the county about use of the bridge for access. Recently, Garfield County closed bridge to all use.

Item: **WILDLIFE**

Term Definition -- impacts on big game, birds and predators. Impacts on viewing wildlife. Herd management (hunting). Impacts of herd over population on land. Impacts of dogs and cats on wildlife.

Mitigation Actions:

- Seasonal closures of all or a portion of the area.
- Leash law requirements.
- Avoid sensitive areas.
- Education of the public.
- Facilitate hunting through access or other.
- Developed a trail ethic.

Item: **ACCESS**

Term Definition -- General safety. Limited public access (steep). Use conflicts. Forces concentration of users -- results in increased trail damage. Trespass concerns. Increased demand for access. Access closure (concerns). Potential legal issues (prescriptive rights). Surrounding private lands limit access.

Mitigation Actions:

(these need to be developed and inserted here)

Item: **SAFETY**

Term Definition -- Highway 82 crossing (non-motorized and motorized crossing). Parking on County Road 107. Traffic on 107. Individual safety (use of helmets, single file non-motorized use on 107 Road).

Mitigation Actions:

- Alternative parking areas.
- Modification of intersection of 107 Road and Highway 82 (CDOT).
- Connection to the proposed trail from Highway 133.
- Access and use of the existing tunnel under Highway 82.
- Eliminate or restrict parking on County Road 107 near the trail head.
- Improved parking at the base of 107 Road.
- Move to pedestrian and bicycle traffic off County Road 107.

- Public education RE: Highway crossing, use of helmets and other safety gear, use of leash is for dogs, additional signage.
- Placement of sand barrels on 107 Road for use when roads are slippery.

Item: **HUNTING**

Term Definition -- Concern regarding careless and irresponsible hunting. Trespass. Safety. Use ethic/conflict. Game management tool.

- Better signage.
- Education.
- Map/information.
- Access (outfitting).

Discussion took place about the town of Carbondale's request for their trails grant application. The time line is very short as the letter is due tomorrow. Davis included a draft letter packet for the board to consider.

The committee felt there were a number of issues about Red Hill that have yet to be resolved. They have just begun to process of focusing on the points were brought up by the public. The committee, as a group, has not defined their goals enough to address a connection from the Town trail to Red Hill. The topic is a real dilemma for the committee because they support the concept of a trail along Highway 133. It is the connection to Red Hill the presents the biggest problem right now. They felt much of this concern would be addressed during the process however, there were not at that stage yet. There are numerous issues about this connection that need to be considered. There is the basic issue of increased use on these BLM lands. There are other questions about access to the north side of highway 82. These include: use of the tunnel under the road, legal access to the tunnel, safety on County Road 107, parking and others. The committee would support a link from the South end of River Valley Ranch North to Cowan Drive.

The committee felt it was important to review the specific language in the grant application to make sure that there were not references to a connection to Red Hill. If such a reference was included in the application, the committee could not support the proposal or would support the proposal if that language could be changed or eliminated.

Dave Johnson made a motion "to support the town of Carbondale state trails grant application for a trail from the South end of River Valley Ranch to Cowan Drive on Highway 133. If the application is for a connection to Red Hill across Highway 82 the committee was not prepared to support the application at this time." The motion was seconded by Michael and passed unanimously. The board asked that a separate memo be provided to the Town identifying the issues and concerns of the committee about the request and the timing of the request. The board would like to see a copy of the letter of support proposed to be included with the town's application.

A motion was made to adjourn the meeting. The motion passed unanimously. The meeting adjourned at 10:35 p.m.



## Red Hill Project

A Cooperative Venture Between BLM, The Town of Carbondale, Aspen Glen and Western Slope Consulting

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### **Red Hill Steering Committee Meeting Minutes December 11, 1997 7:00 PM Carbondale Town Hall**

The Red Hill Steering Committee meeting was called to order by Alex Schwaller at 7:10 p.m.

Members present: Alex Schwaller, Adam Olson, Michael Pines, Dave Johnson, Rick Broadhurst, Chris Lawrence, Steve Wolfe, Steve Avery. Eric Gross arrived later due to interviews for the Carbondale Planning Commission.

Others present: Francisco Mendoza -- BLM, Davis Farrar -- project manager.

Minutes of the previous meeting -- discussion took place about what should be in the minutes of the previous meeting. Michael felt there were items discussed that were not reflected in the minutes. Steve Avery commented that the minutes included lots of material. Davis responded noting that members need to recognize minutes are just that; they are not a transcription of the meeting.

Discussion was initiated about where to go from this point with the project. Davis outlined the process as he saw it. This included completion of "hot items" definitions, identification of the mitigation actions, verification of these actions against both the public input and the survey data.

Steve Wolfe and Rick Broadhurst felt there was presently enough data to begin developing a finite proposal for the area. They did not want to see a final project that consisted of a broad series of recommendations without a specific focus. Francisco said it would be appropriate to develop a plan with options that support the plan.

Dave Johnson agreed that we need to plan with preferred options and alternates to submit to the public for feedback. Francisco emphasized that we need a plan that is both practical and reasonable. The plan must include alternative actions that were considered. An example of such a plan would be public use -- keep it where it is and manage it. Another issue that should be addressed is the increasing public demand. This could be addressed by identifying ways to deal with the demand.

The discussion moved back to approval of the minutes. A correction was noted on page 4 (I do not have the specific change because I gave my minutes with the correction, to Adam Olson). Alex made a motion to except to minutes as corrected. Dave seconded the motion. The vote to accept the minutes was unanimous with the abstentions from Steve Wolfe and Chris Lawrence (they were absent at the previous meeting).

The committee discussed the situation surrounding the support letter for the Carbondale's grant application. Alex and Davis presented the details of the events of that day. The committee reviewed the draft letters that were not signed or authorized for use. Michael asked if the unsigned letters had been delivered to the Town. Davis said the whole packet is faxed to the Town (including the letters) when the other packets were faxed. It was explained at the letters were not signed and were for informational purposes to the

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Town only. The committee noted that Alex and Davis took the proper actions under the circumstances. The decision was to leave everything "as it is".

The committee continued the process of defining the "hot items" and identifying mitigation actions.

Item: **TRAILS.**

Term Definition -- rapid expansion of trails (uncontrolled). Places folks use -- main arteries of movement. Trails degrading environment through improper placement/use (impacts -- soils erosion, wildlife, vegetation). Visual impact of trails. Identification of existing trails (mapping). The difficulty of hiking/biking trails. Lack of trails information/management. Dealing with increasing demands for trails. Trail use conflicts. Keeping people on trails/people do not stay on trails. Poor trailhead facilities. Lack of trail maintenance.

Mitigation Actions:

- Map existing trails.
- Map potential trail links.
- Improve trailhead facilities.
- Establish trail's group.
- Develop trail's brochure, Marquis.
- Improve signage.
- Remove unnecessary trails.
- Designate trails for specific uses.
- Establish trails planning process (trail expansion by design).

Item: **ACCESS.**

Term Definition -- emergency access. Loss of previously used access points. Other potential access points in addition to existing accesses. Wide-open BLM classification for access. Future access considerations.

Mitigation Actions:

- Leave "as it is".
- Close completely.
- Limited access -- ways to limit uses when people are in there (Red Hill area).
- Investigate/develop other access points (purchase/negotiate).
- Investigate reopening "closed" access points.
- Pursue "in and out" loop points to return users to Highway 82 corridor.
- Mark the BLM boundaries.
- Develop general information about the area (maps, brochures, or other information).

The committee it discussed items for the next meeting on December 18. Davis and Francisco will bring survey results to that meeting for the board to review. This

information will be used and correlated to the identified "hot items", public input, agency input and other points considered by the committee. The committee decided they would skip meetings on Thursday, December 25th and Thursday, January 1st because of Holidays. The next Red Hill Steering Committee meeting after the Holidays, will be 7 p.m. Jan. 8 1998 at Carbondale Town Hall.

Michael Pines made a motion to adjourn the meeting. Adam seconded the motion. The vote was unanimous. The meeting ended at 9:15 p.m.



## Red Hill Project

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### **Red Hill Steering Committee Meeting Minutes December 18, 1997 7:00 PM Carbondale Town Hall**

The Red Hill steering committee meeting was called order by Alex Schwaller at 7:00 p.m.

Members present: Alex Schwaller, Michael Pines, Chris Lawrence, Steve Avery, Ian Hause, Eric Gross, David Johnson, Adam Olson, Steve Wolfe and Rick Broadhurst arrived late.

Others present: Francisco Mendoza -- BLM, Davis Farrar -- project manager.

Davis presented information submitted by Tim Beck an adjoining property owner. The materials included a letter, copies of maps and an infrared satellite photograph. Davis also showed the committee a panoramic series of pictures he had taken in August of the north side.

Minutes of the previous meeting -- Alex made a motion to except the minutes as presented. Steve Wolfe seconded the motion. The vote in favor was unanimous.

It was suggested that the meeting end at approximately 8:30 p.m. The members of the board agreed with that adjourned the time. Davis handed out the survey results packet. The board went through the information, page by page, and discussed briefly the results.

After reviewing the survey information, the board discussed the memorandum written by Davis Farrar included in the packet. The memo outlined potential "Universal Items" and possible scenarios for recommended action.

Francisco said it is easy to develop scenarios. However, what should be done is to define the scope of what the committee ultimately would like to recommend. Then objectives should be developed to support that scope. The survey results can be used to support the various scenarios. The committee should define objectives of what they want to accomplish and develop a scenario or scenarios, that will support the objectives/goals.

Eric proposed that the committee identify alternatives. The committee could do their own survey as a group and identify members' responses. The process seems a little bit like a moving target. If you change one variable, then others change in response.

Steve Wolfe agrees that the issues change with each scenario.

Michael commented that leaving the area as it is would require management. Without management, the area will continue to change.

Alex suggested that each member could put together a list of the nine hot issues and the group could rank them as individuals and collectively. Davis suggested taking two weeks off and each member would go through the nine items. The committee would meet again and discuss how they should pull together a plan of action.

Alex asked the committee members about the scenarios in the memo Davis drafted. She asked if any of the scenarios were of interest to committee members. Dave Johnson said he felt more work needs to be done. He said it is in the realm of possibility to set aside a larger block of time to work through the remaining items (goals, objectives, scenarios). Chris suggested the committee work on goals and objectives. Davis proposed that the members take on as homework, three or more objectives. These should be the most important objectives to each member. If members had more than three objectives, they could be included as well. The committee will review these objectives at their meeting on January 8, 1998.

There was discussion about how to define objectives. Some examples are as follows:

Keep the area as it is environmentally.

Develop a plan of how to use the area in an environmentally safe and sensitive way.

Francisco suggested another objective -- how do you provide a safe connection to other trails in the area?

It is important that the committee define what an objective is and how it works.

Steve Wolfe proposed another objective example -- provide a Red Hill experience for increasing numbers of people. Francisco suggested two others: How do you disperse the use to avoid crowding or feelings of crowding. Providing for non-motorized use or closing the area to motorized use.

Agenda for the next meeting --

- 1) Each member will present their own mission statement for the area.
- 2) Each member is to develop and present their set of objectives. These will be compared and consolidated as appropriate.
- 3) Refine and consolidate project objectives.

Eric suggested that if there is not agreement on particular objectives that they be set aside so they would not stop the process. Committee members agreed with this approach.

Ian said Aspen Glen had surveyed the property boundary adjacent to the BLM. He reviewed his findings with the committee. There appears to be some access near the water tank on public land. There are some areas that are quite steep.

A motion was made to adjourn meeting. The vote was unanimous. The meeting adjourned at 8:43 p.m.



## Red Hill Project

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### **Red Hill Steering Committee Meeting Minutes January 8, 1998 7:00 PM Carbondale Town Hall**

The Red Hill steering committee meeting was called to order by Alex Schwaller at 7:00 p.m..

Members present: Eric Gross, Steve Wolfe, Steve Avery, Adam Olson, David Johnson, Alex Schwaller, Michael Pines, Chris Lawrence.

Members to absent: Rick Broadhurst, Ian Hause

Others present: Francisco Mendoza -- BLM, Davis Farrar -- project manager.

Steve Wolfe made a motion to accept the minutes as presented. Chris Lawrence seconded the motion. The minutes were approved by unanimous vote of the committee.

Discussion began about the second project mission statement and identification of project objectives.

The committee decided that the following mission statement would be adopted for this phase of the project.

**THE MISSION IS TO HAVE A PLAN THAT PROTECTS THE ENVIRONMENT  
AND MINIMIZES CONFLICTS WHILE CONTINUING TO PROVIDE FOR  
RECREATION USE OF PUBLIC LANDS IN THE RED HILL AREA.**

#### **OBJECTIVES**

*(\* Starred Items are objectives that all committee members in attendance agreed on.)*

- 1) Minimize damage and trash in the Red Hill area.
- 2) **starred item** -- provide area and trail maintenance to prevent damage to the land and facilities and keep the area clean.
- 3) **Starred item** -- provide safe and accessible trailhead areas and parking. Provide safe off road parking and access to trailhead. To identify or designate safe non-motorized public access points. (Objectives No. 4 and 5 were combined with objective 3).
- 6) **Starred item** -- designate trail system to help users access public lands and minimize trespass conflicts.
- 7) Inventory and evaluate existing trails and roads in place. Connect existing trails to allow sustained hike or ride. Designate bulk of trails systems non-motorized and build or maintain accordingly.
- 8) Provide one loop to accommodate increasing use without increasing impacts. (This item was eliminated by the committee.)
- 9) Keep all trails non-motorized multi-use (no segregation of use).

- 10) **Starred item** -- develop trail system to encourage maximum use in specific areas and not in other areas.
- 11) Encourage lengthy bike rides in other areas.
- 12) Discourage a connection from the Mushroom Rock area and not connect to the north side.
- 13) Plan locate and maintain any new trails away from sensitive areas.
- 14) Create a loop down to Aspen Glen underpass.
- 15) Identify and evaluate potential access points to Red Hill area.
- 16) Purchase property at the bottom of County Road 107.
- 17) Identify opportunities and obstacles to access across Highway 82 and identify a linkage.
- 18) Eliminate motorized use and restrict fires.
- 19) Identify any new trail construction needs.
- 20) Provide local and/or on-site visitor information to promote awareness of concerns, use ethic, boundaries, use restrictions and develop sensitivity for use of the area.
- 21) **Starred item** -- seasonal closures to protect wildlife, soils, vegetation and sensitive values.
- 22) Establish ongoing management organization using local volunteers to deal with implementation, future issues, funding and ongoing care of the area.
- 23) Identify potential trail links to a valley wide system.
- 24) **Starred item** -- organize regular and periodic monitoring and maintenance of the Red Hill area in coordination with the BLM.
- 25) Support intergovernmental cooperation with BLM, Garfield County, Carbondale and other planning efforts that deal with Red Hill.

The committee discussed items for the next agenda. They also discussed a date for the next meeting. There were conflicts identified with the January 15th meeting date. The committee decided that the next meeting would be at 5:00 p.m. on January 22nd 1998 at Carbondale Town Hall.

The committee decided to finish their objectives analysis and deal with implementation and goals. It was decided that the committee should start on developing recommendations and management actions for the Red Hill project. The committee also discussed how to get agreement on identified objectives for which there was not committee consensus. The members should consider way to resolve situations in which there is not a consensus. The next meeting is to be a potluck. The committee asked if the minutes and agenda could be made available as soon as possible so they could study them prior to the next meeting. Davis said he would work on these items over the weekend and get them out on Monday.

**Next meeting date: Thursday, January 22, 1998 at 5:00 p.m. -- CARBONDALE TOWN HALL. The meeting will be a POTLUCK. Please bring a dish and eating utensils. If you have a question about what to bring, please call Alex.**

The meeting adjourned at 10:35 p.m.



## Red Hill Project

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### **Red Hill Steering Committee Meeting Minutes January 22, 1998 5:00 PM Carbondale Town Hall**

The Red Hill steering committee meeting was called to order by Alex Schwaller at 5 p.m. Members Present: Eric Gross, Ian Hause, Steve Wolfe, Alex Schwaller, Steve Avery, Michael Pines, David Johnson - Adam Olson arrived late.

Absent: Rick Broadhurst, Chris Lawrence

Others Present: David Hamilton -- Roaring Fork Outdoor Volunteers, Francisco Mendoza -- BLM, Davis Farrar -- project manager.

Minutes of the previous meeting: Alex made a motion to accept the minutes as presented. Michael Pines seconded the motion. The minutes were approved unanimously.

David Hamilton introduced himself and the Roaring Fork Outdoor Volunteers Program. It is a private nonprofit organization that was formed in 1995. Their primary focus is construction projects on public lands. Typically, they work on 5 to 7 projects each season and construct facilities, adopt trails, and assist with trails planning. RFOV work with a number of groups in the Roaring Fork Valley and would like to expand the number of groups they work with to 24. They can assist other groups on their specific projects, and have tools available for trail maintenance and construction. They are now looking for projects for 1998. David Hamilton has worked with Francisco and the BLM.

David is at the meeting tonight to introduce the organization and identify how they can help with the Red Hill Project after the decisions on the plan have been made. They can help with design and implementation of trails. Their founding principles are to bring regional groups together to do projects. The services that they can offer include: volunteer management expertise, tools, publicity, trails design and trail planning.

When they are planning trails they can analyze an area and develop a minimum impact plan. Sustainable trails is an important area of their focus. It is important to spend time on the land to design a trail that is sustainable and minimizes long-term maintenance and impact.

Francisco noted that this summer they are looking at the trails project off the Spring Gulch Road toward Holgate Mesa. The trail is limited to non-motorized travel and will be extended a couple of miles.

David said that the beginning of February is the time when they finalize projects for 1998. It is possible that they will also identify projects to work on during National Trails Day in June.

In the planning process is important to identify who the users of trails are, what type of uses they participate in and the pattern of the use (increasing or decreasing).

Ian asked if there was any type of notice that is provided to the public that identifies who has completed the work or the type of work that is in progress.

David said they have a mailing list of approximately 2,500 individuals they can send

notice to. They try to get recognition for the work that they have done. In some instances, a sign is posted along the trail.

Davis noted that local involvement in the Red Hill Area will be important. Will the Roaring Fork Volunteers solicit participants from Carbondale to be involved with Red Hill work?

David responded that they would work to involve local volunteers in addition to the regional groups. Roaring Fork volunteers can assist the Red Hill Committee with information and can help get the word out about the projects.

Alex asked if they go back to inspect the work they have done to see how everything worked out.

David said that they do go back to evaluate the work they completed. This feedback is important to them to avoid repeating mistakes and identify procedures that worked. Typically it is water or trail users that cause erosion. It is helpful to observe how various techniques worked. A key point is designing and constructing sustainable trails systems.

Davis inquired about making an application for 1998 for Red Hill.

David responded that if we had a project for 1998 we wanted the Roaring Fork Volunteers to take on, time is getting short. If we had a project that we wanted assistance from the Roaring Fork Volunteers with that might work better because there is not a specific time constraint. He noted that there are usually a number of procedural measures that need to be in place before a shovel goes into the ground. In the case of BLM, it might be necessary to complete a NEPA or cultural assessment.

Eric asked if they had seen trails that needed to be re-routed?

David said that they frequently deal with re-routing trails and making repairs to those sections.

Francisco suggested a hypothetical example using Steve Wolfe's scenario. If the committee were to adopt Steve's proposal, David could design and layout the trail. During that time, BLM could complete their analysis so that work could be started in 1999 for example.

David noted that it takes about one year to design and prepare for construction of the new trail. Typically it takes less time for trail re-routes or trail maintenance.

Francisco said it is possible for BLM to accomplish their work in a shorter period of time.

The committee thanked David for attending the meeting and said they would get back in touch with him after they had completed the plan for Red Hill.

The next agenda item was a discussion about how to resolve items for which a consensus could not be achieved.

Davis outlined various voting options for making a decision. He suggested that a simple majority vote may not offer enough support for an issue. He proposed that a two-thirds or 3/4 majority might be a better way. It is important that BLM have a clear direction to take on recommendations in the Red Hill Area Plan.

Francisco said if there are diametrically opposed concepts they need to be evaluated and discussed. The pros and cons of each issue should be identified. The results will be subject to public review and comment. BLM can use this input to make a final decision.

It is important, where there is divergence on the board, to analyze each issue and identify the points associated with it. This would allow both the public and BLM to evaluate each option so a decision can be made.

Eric suggested that in situations where there were just a few points on which there was disagreement, he would like to revisit the topic to allow for further discussion. In this way, it is possible differences could be resolved.

Michael acknowledged similar concerns for the process. He would like to see a single plan developed for the Red Hill area but does not know if that is possible.

Eric said that having no plan is a plan.

Alex said that it is not necessary for the committee to have 100 percent agreement on every issue.

Davis said it is important to have a mechanism for resolving differences of opinion.

Eric suggested that the committee use a straw poll system to determine the level of agreement on a particular issue and to identify points of difference. The differences could be discussed in an attempt to resolve them. If this process does not work to establish general agreement, then a system of voting could be applied.

The committee decided that a two-thirds majority vote would be necessary to approve or deny an item. A minimum of seven committee members must be present in order to have a vote. The following number of members and affirmative votes must be achieved in order for the committee to pass on a motion: 7/5, 8/6, 9/6, 10/7. (The numerator indicates the number of committee members that must be present and that the denominator identifies the number of affirmative votes for an issue to pass).

Ian asked whether proxy votes would be allowed.

Davis said that the problem with proxy votes is that a committee member is not present to participate in the discussion that leads up to a final vote.

Alex said that eliminating proxies would provide an incentive for committee members to be present at the meetings.

The committee decided that proxy votes would not be allowed.

Ian noted that he felt ill and would be leaving the meeting early. If Ian left, it would leave six members of the committee in attendance. Alex said that the committee would not vote on any items because Ian was leaving the meeting. (This was prior to Adam Olson's arrival).

Steve Wolfe presented a scenario he drafted before the meeting. Steve asked if he could discuss his proposal.

Ian asked about access up to draw from Aspen Glen. He noted that he does not see how Aspen Glen could close their boundary to the BLM lands as was suggested in Steve's proposal. He noted that he did not anticipate much winter use and would be happy to consider discouraging use but not a closure.

There was discussion about whether it was a good idea to discuss Steve's proposal because other members did not have an opportunity to develop and present scenarios of their own.

Steve commented that he finds it easier to make decisions if there is a plan to work from.

He also noted that he had received comments from committee members at the last meeting who were upset because they felt the process was going in the wrong direction. Eric asked if those members could be identified and if they would give their comments directly to the committee.

Alex expressed her frustration. She said that when the committee was talking in the generalities everything is okay. However, when the committee gets to specifics things begin to get tough.

Michael noted that he is ready to disagree because he would like to work on something specific.

Discussion took place about not reviewing Steve's proposal and getting back to the agenda topic of reviewing project objectives.

Eric said that the committee agreed a plan should be established after a set of objectives was established. The plan should evolve from those objectives. He said that we should get back to that discussion.

David Johnson noted that he wanted to get back to a discussion of objectives. He felt it was important to decide what we agreed on and what we did not agree on. This was necessary before we moved onto identifying a specific plan.

Francisco noted that Steve had addressed many of the objectives in his proposal but not all of them. We need to narrow the list of objectives before we move on to developing scenarios. It is important to take an objective and try to develop agreement. The committee then should develop the detail for that objective about how it will be implemented.

Davis proposed that we finish the objectives process.

Alex noted that there were typos in the minutes she felt needed to be corrected and would like to briefly revisit the minutes for these corrections. The specific problems in the minutes were identified by the committee for correction. A motion was made and seconded to adopt the minutes again as they have been corrected. The motion carried unanimously.

The committee moved on to continue review of the non-starred objectives.

Alex suggested that objective number one was included in objective No. 2 so it should be deleted. The committee agreed. Objective No. 7 should be split into sub objectives A, B, C, D.

A - should be "inventory and evaluate trails and roads that are in place". A question was asked whether trails included animal trails or human use trails only. The committee decided they would focus on trails used by people. A lengthy discussion ensued about whether an inventory was a good thing to do or not.

Dave Johnson felt that an inventory needed to be completed to deal with the pressures of use and identify sensitive areas where trails should not exist. Alex asked how this would be accomplished. The debate continued about whether an inventory should be completed.

Francisco noted that he has done inventories to determine if a route was needed, should be closed, or has problems. An inventory tells you what you have and allows you to determine what to do with it. He said he has a map of the existing trails and would bring

it to the next meeting for review. The map is not complete but it includes a number of trails. An inventory will help the committee decide what to do with what exists.

Eric said that he is willing to let this issue go for now but would like to make a comment. He said an inventory as an objective should not be linked to other objectives. This was creating a problem for the process and prevents the committee from moving forward. He noted that members of the committee said they would support an inventory under certain conditions. He would like to get at those underlying conditions so the committee could move forward.

Francisco said he was hoping that the group would evaluate what is up there, i.e.: trails and determine what to do with them.

Steve Wolfe said he is afraid folks will get hold of the inventory and use it to find trails. For example, they might use it to find the trail going down to the spring above Aspen Glen.

Michael suggested that an inventory be used only in specific areas.

Francisco said that was possible to do.

Eric stated that he felt it would be wrong to limit our own internal look at the area. The committee agreed to study the whole Red Hill Area. He felt not developing needed information was inappropriate.

David Johnson noted that of the 25 identified objectives, many of them have to do with trails. He said trails are the issue. If we do not know what is up there we do not know what we are doing. He said that he liked Francisco's point about completing an inventory.

Steve Avery said there are trails up there. If we do not inventory the trails they do not go away. Some of the trails are used by adjacent private landowners. If we say that only those owners can use the trails on the public land, it is discriminatory. He also said that if the committee were to eliminate those trails that would also be inappropriate.

Steve Wolfe said that we do not have enough votes to decide the inventory issue tonight.

Steve Avery asked what process would allow the committee to make this topic an objective?

Adam said we need to look at the north side because we should have a concern about commercial use of the area.

Francisco noted that Mitch Heuer contacted him about expanding trail rides in the north Red Hill Area. He would like to start earlier in the season. Francisco identified concerns with starting early in the season such as mud and discouraged him.

The comment was made that there are trails on the north side and the group decided to study all of Red Hill Area.

Eric said an inventory is critical to address each item that we took on as an objective.

Steve Wolfe suggested taking a walking inventory that is not written or documented because of his concern that people would have access to the information. He feels that the inventory should not be available to the general public because they may use it for trail access purposes.

Eric stated that he had a philosophical difference with the decision to make a plan to not

have a plan.

Michael said that he felt the committee heard input from the public both ways. That is to leave the area as it is and to allow for additional trails etc.

At the end of the debate, the committee chose the following language: "Identify and evaluate important trails used by the public."

Michael feels that we should not qualify the inventory by restricting what it addresses.

The committee discussed the concept of three basic scenarios for Red Hill:

- 1) No expansion of trails or use beyond the existing used area of Red Hill.
- 2) Allow for limited trails expansion in the Red Hill Area in general conformance with the scenario that Steve Wolfe presented to the committee.
- 3) Allow use of the northern sections of the Red Hill area by creating another public access point and not connect a trail to the existing Mushroom Rock region.

Items for the next agenda: The committee will discuss the three basic scenarios and attach the appropriate identified objectives to each scenario. The committee members should come to the next meeting prepared to make decisions and recommendations.

The next meeting date is Thursday, Jan. 29, 1997 -- Carbondale Town Hall at 7 p.m.

The meeting adjourned at 10 p.m.



## Red Hill Project

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### **Red Hill Steering Committee Meeting Minutes January 29, 1998 7:00 PM Carbondale Town Hall**

The meeting was called to order at 7:00 p.m. by Alex Schwaller.

Members present: Alex Schwaller, Steve Wolfe, Steve Avery, David Johnson, Michael Pines, Rick Broadhurst, Ian Hause, Adam Olson, Chris Lawrence arrived late.

Absent: Eric Gross -- he had a conflicting Planning Commission meeting and stopped in at the end of the Red Hill meeting.

Minutes of the previous meeting.

Alex and Michael expressed concern with the flavor of the minutes. They felt that the minutes did not accurately reflect some of the discussions that took place at the previous meeting. They acknowledged that taking the minutes and participating in the meeting was a difficult task. Discussion took place about other ways to record the minutes. Davis said that whoever takes notes for the minutes should be the same person that types them. Michael said that the minutes will provide the historic record of discussions. It was important that this record provide an accurate depiction of the committees' deliberations. Steve Avery suggested that Alex and Michael draft an addition to the minutes to provide information that was not covered in the draft minutes. They will present the re-drafted section to the committee at the next meeting for consideration of inclusion in the minutes. No action was taken on the draft minutes.

Francisco presented the committee with a map showing the roads and trails that he had mapped for the Red Hill Area. He described the information to the committee. The members reviewed and discussed the map.

Alex asked the committee how they would like to proceed. Davis suggested that the group review each of the three scenarios identified at the previous meeting and attach objectives to each one.

The committee decided they needed to determine which scenarios they desired to pursue. Alex asked for a straw poll on each of the three scenarios. Scenario 1 -- no expansion of trails beyond the existing used area near Mushroom Rock. No interest was expressed in this scenario. Scenario 2 -- limited expansion of trails in the existing used area of Mushroom Rock. This was the scenario that Steve Wolfe proposed. Broad interest was expressed about pursuing this scenario. Scenario 3 -- expansion of trails into the north area of Red Hill with an alternate access point. There would be no connection to the mushroom rock area. Some interest was expressed in this scenario.

Steve Wolfe noted that he attended a Roaring Fork Railroad Holding Authority community meeting the night before. He encouraged committee members to attend the next meeting to voice support for trails on the rail corridor. Discussions at the meeting were largely focused on rail systems and there was little or no discussion about trails. Davis said he had contacted a member of the Holding Authority to express the same

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concern about the rail over shadowing trails. Members were encouraged to contact Alice Hubbard at 704.9282.

Discussion took place about scenario 3 and whether it should be included or not. Two committee members expressed interest in that scenario and interest was expressed by Eric Gross in writing.. Concern was expressed about scenario three by other committee members. They felt the north side should remain as it is. If people are interested in using the north side they would not be prevented from doing so. However, use of that area would be discouraged to preserve its characteristics.

Davis offered a comment that it was possible all three scenarios could be considered in a phased process. Scenario 1 could be a first phase. Management systems would be developed and implemented. An evaluation would be made about the success of those systems before any other expansion would take place. Scenario 2 could be implemented in a second phase and scenario 3 would be a future development phase.

Committee members continued to express reservations about any formal use of the north side. Steve Wolfe suggested that longer rides should be taken in other areas such as The Crown and Holgate Mesa. BLM will be constructing a trail to Holgate Mesa in the summer of 1998. The Crown is open for longer bike rides. Steve outlined the boundaries of his scenario on a topographic map of Red Hill.

Adam expressed concern that he does not see how scenario 2 will handle the exponential growth in use that is anticipated.

Ian said that he sees the area in scenario 2 useful for meeting the needs of short time frame uses of Red Hill in the one to two hour range.

Michael continued the discussion of scenario 2. He felt it was important to confine use to the boundaries outlined for the scenario and develop a use ethic. People should avoid using all but the developed trails. If trails were constructed out of the developed area, it would be the management committee's responsibility to obliterate them. The use ethic should include not accessing the north side to protect the sensitive features there.

Adam expressed concern that turning our backs on use of the north side is not good.

Ian said he feels the committee is not turning their backs on use of the north side.

Steve Wolfe said he feels opening up the north side to use is like opening up Pandora's Box.

Alex said that she believed the committee had made a recommendation not to expand use into the north area.

Francisco said that if the north area is not to be used the committee should identify reasons for not allowing access.

Chris asked if it is not a sensitive area why would it be closed?

Michael noted that DOW said it is sensitive because of big game and other wildlife issues.

Chris noted that DOW explained that seasonal closures of the north side would be a way to mitigate adverse impacts on big game.

Michael said that by using the existing area outlined in scenario 2 the committee could see how we could protect and manage the area.

Francisco asked the committee to work through an exercise to identify values for the Red Hill Area that could not be obtained in other places. Discussions took place about The Crown and Holgate Mesa identifying values that were similar and different from those at Red Hill. The committee completed this exercise and Francisco listed the input.

Ian said that he envisions a final report that identifies scenario 2 for short rides.

Alex suggested that the committee needed to have good reasons not to use the north side. These reasons included wildlife, soils, impacts in an area that receives little use.

Adam noted that similarly the committee needed to identify reasons that bikes or commercial uses should not exist on the north side. He asked how the committee could say hikers and bikers should not use the north side if commercial use is okay (use by Funland trail rides).

Ian commented that he believes we should be encouraging use of the existing area around Mushroom Rock.

Members made comments that the existing used area is a sacrifice zone and other areas should not be used to protect their values.

Steve Avery said that we cannot ignore the north side. User groups have expressed interests in using it. He expects that area will be used. He referenced the map and noted that he believes eventually a spur will be constructed that connects the Mushroom Rock area with the north area.

Steve Wolfe said that if that connection is constructed, the management committee would have responsibility to obliterate the trails to keep people from using it.

Alex and Michael expressed concerns about elk calving in the north area. Francisco stated that no elk calving has been identified there by BLM or other agencies. He went on to say that the issue is the level of use on the north side. The point is whether to increase that use or not. He stated that comparatively, the issues of fire, wildlife, soils, etc. are very similar on Holgate Mesa, The Crown and Red Hill. He suggested that the issue could be maintaining the north side for dispersed recreational use with a lower management presence and managing the area for less intensive use.

Steve Wolfe commented that BLM is constructing a trail to Holgate Mesa. They must have looked into potential impacts.

Francisco said they have studied the impacts, completed a cultural survey, etc. and no concerns were found. BLM decided that access to that area should be non-motorized. BLM did not go through an extensive process because use of the area was not a big concern.

Michael asked what the issue at hand was. He felt the public suggested that the north area should be left alone.

Adam commented that there is an issue about use of the north side. BLM has allowed a commercial activity indicating that use of that area is okay.

Francisco said that BLM studied the area for the requested permit time period. There were no identified problems.

Ian inquired about the present status of the commercial use. (This question related Funland's request for extending their use season.)

Francisco said that he told Funland they could not expand their use.

Alex suggested that if one of our management strategies was to offer use in other areas, why wouldn't people be willing to use those areas and leave Red Hill alone?

Adam said that he gets sick of riding the other areas and using the Crown was not as good an option.

Rick asked we thought young kids will be riding up the steep access to Mushroom Rock? (He felt that the steep access would minimize bicycle access by young people.)

Chris asked if it would be wrong to use the north side from Labor Day to Memorial Day with seasonal closures suggested by DOW to protect wildlife?

The question was asked whether there was a consensus or not about using the north side. Again, there was little support for that scenario. The committee decided there was not support for continuing discussion of scenario 3.

Steve Avery suggested that the committee continue discussion about scenario 2 and later develop language to address scenario 3. There was agreement about doing so.

The committee proposed limiting meeting time to a maximum of two hours. The meeting times were proposed to be from 6:30 p.m. to 8:30 p.m. The committee voted unanimously in favor of this proposal.

Discussion took place about using proxy votes to decide issues. The proposal was to allow another person to have a proxy from a committee member to vote on issues as the recipient the saw fit. Proxies should be used only when committee members could not attend the meeting. Proxies should not be used as an excuse for not coming to the meeting. The committee agreed on this premise. The committee voted unanimously to accept the use of proxies as stated above. Proxy votes are to be identified in the record of the meeting.

Actions for the next meeting -- scenario 2 is to be developed as a proposal at the next meeting. Committee members should work on objectives and definitions for scenario 2 in advance of the meeting.

Discussion took place about the future schedule of meetings and the public meetings for presentation of the draft and final reports. Davis outlined the sections of the document that he anticipated developing. A number of the sections could be drafted in advance of final recommendations from the committee. The committee agreed that these sections of the document should be developed. A proposed schedule was identified as follows:

4/2/98 -- first public meeting on draft document.

4/16/98 -- final presentation of the Red Hill report.

Future meeting dates -- 2/5/98, 2/12/98, (break), 2/26/98, 3/5/98 -- revised draft

document.

No meetings would be scheduled on the following dates -- 3/12/98, 3/19/98, and 3/26/98. The end of March is Spring Break. It would not be a good idea to schedule any public meetings during that time because community members likely would be out-of-town.

4/9/98 -- revisions to the draft documents would be made based on public input.

The meeting adjourned at 10:00 p.m.

### **Additions to the minutes of the Red Hill Committee Meeting January 22,, 1998**

Page 4 describes the center of discussion. Arguments against the inventory are

- 1) Alex's concern is that there is no way to determine the original usage of a particular "trail" or path as it would be indicated on aerial photos. Alex asked , "What is a trail?" There is great room for debate over what the "trail" was used for or made by. Was it human usage, cattle, wildlife, or a waterway from heavy runoff?
- 2) Alex was concerned over the cataloging of "trails" before any mapping of sensitive areas has occurred.
- 3) Eric said that each objective should be studied without making assumptions as to what it would be used for. Alex thought that was not a safe approach.
- 4) The group all acknowledged that records are public and that no "secret" studies should be made.

Submitted by Alex Schwaller and Michael Pines



## Red Hill Project

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### **Red Hill Steering Committee Meeting Minutes February 5, 1998 6:30 PM Carbondale Town Hall**

Alex Schwaller called the Red Hill Committee meeting to order to 6:30 p.m.

Members Present: Ian Hause, Adam Olson, Steve Avery, Steve Wolfe, David Johnson, Alex Schwaller, Michael Pines, Chris Lawrence -- Eric Gross and Rick Broadhurst arrived late.

Also Present: Davis Farrar -- Project Manager, Francisco Mendoza -- BLM.

Adam and Alex handed out documents that they prepared. Adam's document provided comments about scenario 2 and proposed options for expanding use in the existing Mushroom Rock area. Alex's hand out included information from the survey about use of Red Hill and a list of pro/con statements about use in the Red Hill Area. The committee members spent several minutes reviewing this information.

Minutes of the previous meeting: The committee members reviewed the addendum to the minutes of January 22, 1998, prepared by Michael and Alex. Michael made a motion to accept the minutes with the addendum. Ian seconded the motion and the vote in favor was unanimous. The minutes from of the January 29th meeting were presented. Michael asked that the minutes reflect his presence at the meeting. He proposed the following amendments to the minutes: Page two -- the second sentence of the second paragraph should a be changed from "three committee members expressed interest in that scenario." to "two committee members expressed interest and that scenario with additional interest expressed by Eric in writing." On page 2 in the seventh paragraph, the sentence "people should avoid using the north side. If trails were constructed into that area it would be the management committee's responsibility to obliterate them." Should be changed to read, "people should avoid using all but the developed trails. If trails were constructed out of the developed area it would be the management committees responsibility to obliterate them."

Alex made a motion to accept the January 29 minutes as amended. Steve Wolfe seconded the motion and the vote in favor was unanimous.

Committee continued their discussion about developing scenario 2. Davis asked if the committee members understood how this scenario was defined. Alex asked for straw poll vote and all the committee members indicated they understood how it was defined.

Francisco asked if he could make it comments regarding the scenarios. The committee agreed. He said one thing that he anticipated the committee doing was to help BLM with development of the management options for use of the public lands. These options should address all issues and concerns that have been identified in the process. The group has already spent considerable time doing this and now is moving into developing the scenarios. He would like to see the committee address management options that make sense while keeping in mind that they are developing management options. After the last meeting, he thought about the process. The committee is working on developing a specific scenario (scenario 2). They still need to address the other management options that include additional use even though there is disagreement about doing so. These management alternatives still need to be addressed and balanced against the identified concerns and conflicts for the area.

This array of actions will be used by BLM to implement a future use plan.

Alex asked if we should touch on all three scenarios?

Francisco responded that the committee should do that.

Alex asked if they should develop a pro/con list with a final statement that the committee supports one or another of the suggested scenarios?

Francisco said that was one way to approach the issue but there does not have to be 100 percent agreement by the committee.

Michael said we should address all options as much as possible.

Ian asked about a scenario that is supported by the survey and input. Would it carry more weight with BLM?

Francisco said the input would be used to support of BLM decision and would be important in the decision-making process. He noted that there would be additional input later in this process when the draft document is presented to the public. Positive input would be an indication of public support of one or more scenarios.

Ian asked a hypothetical question, if scenario 2 was supported and public input was in that direction, could that be the option selected by BLM?

Francisco said that it was a possibility.

Ian also asked if by supporting the limited trail system as part of a scenario 2, would he also be supporting a larger trail system without that intent?

Francisco stated that if everyone feels a limited trail system is what should happen, then that could be what is finally implemented.

Ian asked if there could be unintended final actions from BLM.

Francisco commented that there may be some aspects of the proposal the area manager finds are not necessary or needed. He has the prerogative to do something else.

Discussions moved on to Adam's memorandum. Adam presented the points in his handout. He would like to move pressure away from County Road 107. Use should be moved west towards Aspen Glen where development activity is taking place. It is important to stay out of the drainage with the water source. That area is sensitive from both a wildlife and vegetation standpoint. The tunnel under Highway 82 provides access. He proposed an alternative trail to the south of the water tank and on a contour up above the drainage. He noted that this access would need to be walked to be understood.

Ian noted that a steep trail could be erosion problem but it appears the access would all be on public land.

The committee began discussing the specifics of trail design and construction. Alex suggested that the specifics of trail design, etc. should wait until the Roaring Fork Outdoor Volunteers could help with these subjects.

Steve Wolfe said that he is in agreement if people stay out of the gully in the alignment is "doable". The trail would be steep and we should keep it steep.

The committee moved on to defining the elements of scenario 2. Francisco listed the various elements on the flip chart pages. The following items were identified:

Investigate a connection from Mushroom Rock West along the south side of the drainage containing the spring down to the frontage road if it is feasible.

Maintain the existing trails and correct problems. The trail that heads north easterly through the sage field was specifically identified as an area of concern.

Investigate a new trail connecting to the trail in the sage field that heads north easterly. The new trail should go down the gully on the east side of Red Hill and to terminate in the general area of the existing trailhead.

Investigate a new connection from the south side of Mushroom Rock, above the slick rock, to the sage field.

The following three items should be packaged together in some form. Eliminate parking along County Road 107 near the trailhead. Provide formalized parking at the base of 107 Rd. in the highway right-of-way with permission of CDOT. Build a new trail from the lower parking area to the trailhead. This access should be off-road and subject to acquisition of an easement.

Pursue acquisition of land at the base of 107 Rd.

Davis said he would contact Ralph Trapani at CDOT about a more formalized plan for parking at the base of 107 Road.

Steve Wolfe asked if there was support for acquiring the land at the base of Red Hill by BLM.

Francisco indicated that it would be a low priority. He noted that the feasibility for an outright purchase of land is difficult.

The committee called for a straw poll on three options proposed by Steve Wolfe these were: acquisition -- there was strong support by the committee, purchase of an easement -- there was strong support for this option, or working with the Department of Transportation on a parking area at the bottom of 107 Rd. there was not a specific straw poll on this item because the committee began discussing all the various versions of these three options.

Eric asked for specific time on the next agenda to address the committee regarding some issues and would like to discuss the standing of scenario 3.

Alex and Michael mentioned the article in the Aspen Daily News about Red Hill. They requested that in the future when Davis was contacted by the press, he should also ask that the reporter contact Alex or Eric as Chair and Vice Chair for additional input. The committee agreed with this approach. The members also asked if we could get a bigger room for the next meeting.

The next meeting will be held on February 12, 1998, at Carbondale Town Hall at 6:30 p.m.

**PLEASE NOTE THE NEW TIME FOR THE MEETINGS.**

The meeting adjourned at 8:45 p.m.



## Red Hill Project

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### **Red Hill Steering Committee Meeting Minutes February 12, 1998 6:30 PM Carbondale Town Hall**

Alex Schwaller called the Red Hill Committee meeting to order at 6:30 p.m. February 12, 1998.

Members present: Alex Schwaller, Chris Lawrence, Michael Pines ends, David Johnson, Ian Hause, Steve Wolfe, Adam Olson, Steve Avery, Eric Gross. Absent -- Rick Broadhurst (Rick gave his proxy vote to Michael Pines)

Also present: Francisco Mendoza -- BLM, Davis Farrar -- project manager.

Davis handed out a memorandum and a map. The memorandum outlined issues that needed to be considered by the committee and it offered some information on trail mileage identified on the map. Specifically, the memo included information to be addressed about the Red Hill management structure, access across Highway 82 to Highway 133, alternative access points to the Red Hill area, discussions with CDOT about parking at the bottom of County Road 107 and information on length of trails in the Red Hill area. The members took a few minutes to review the information.

Minutes of the previous meeting: Ian requested a change to the minutes on page 2. The sentence "Ian noted that a steep trail could be an erosion problem but it appears the access would all be on public land" should be changed to read "Ian noted that a steep trail could be an erosion problem and aesthetic problem but it appears the access with all be on public land." Eric made a motion to accept the minutes as amended. Ian second motion and it passed unanimously.

Eric previously requested time on the agenda to address the board. He felt this was a good place to evaluate what has been done in the process so far. There were four specific areas of concern.

- 1) Originally, the board agreed that the scope of the project would be the whole Red Hill Area. However, during the objectives discussion the committee decided to focus on the Mushroom Rock portion and stopped short of addressing the whole area.
- 2) The survey was undertaken to gather information from the public at-large. It was not intended to be a "user survey", "private owner survey", or some other document. After the survey was completed, Eric perceived that there were comments questioning the validity of the survey. He heard the survey referred to as "a user survey" and other terms that made him question whether other committee members supported the results.
- 3) The committee began a discussion about what to do with the objectives they had identified. This process was never finished. He observed that the committee attempted to put the objectives aside when the process became difficult.
- 4) Proxy voting came up in a previous meeting. The committee voted against allowing proxies on the basis that members needed to participate in discussions and understand the specifics of an issue for which a vote was taken. Eric missed a meeting and read in the minutes that proxy voting was discussed again and this time the committee voted in favor of

allowing them. He noted that he would have objected to allowing proxy votes if he was able to attend that meeting. The process of proxy voting needs to be better defined. He has a concern that members who grant blanket proxy votes do not know the specifics of an issue to be voted on, nor can they participate in the discussions.

Eric mentioned the issue of scenario 3. He commented that to take no action on scenario 3 is equivalent to taking no steps to preserve the area. Preservation was a key issue of the public and of the committee. He suggested that Francisco should address this from a professional standpoint as a representative of BLM. Eric commented that the minutes included a comment about obliterating trails from the area. He suggested that elimination of trails in scenario 3 would have to include all users, e.g., Funland, private owners, users and others. He felt that if the committee moved to recommend obliterating trails it should be done with a plan. Also, he noted planning does not necessarily mean trails.

Previous minutes identified committee comments about using Holgate Mesa and the Crown. It was suggested that use should be steered away from Red Hill and into those areas. The minutes also stated that the issues (wildlife, fire, soils, etc.) are similar in those two places. He questioned why the committee would suggest use of those areas if they were also sensitive. If the major difference between Holgate Mesa, the Crown and Red Hill is the adjoining private landowners, then we need to put that issue on the table.

Steve Wolfe commented that the minutes cover much of the discussion in the meetings but they do not cover everything. It is difficult to know all of the details of the discussions from the minutes only.

Eric said if we continue on with the existing process, what may be perceived as "no action" will result and others looking into what can be done in the area (scenario 3). That would undermine what the committee has accomplished to date.

Discussion took place from some committee members who felt Eric's input was critical or negative about the process.

Francisco said he felt Eric's comments were positive.

Alex said she felt many of the items Eric presented have been discussed by the committee and his comments were a chastisement of the group. She felt he is missing much of what happens in the meetings by just reviewing the minutes.

Adam said he does not see that at all. He sees Eric's comments as making an observation and not a criticism.

Eric suggested that the committee, to maintain credibility, needs to ponder an issue; make a decision and move on. He feels the committee may be becoming dysfunctional.

Steve Wolfe asked what Eric's points were as they relate to scenario 3.

Eric asked what research had been done from which the committee developed the conclusion not to address the north side?

Alex commented that she felt the committee was not flip flopping but there is a reluctance to deal with the north side.

Chris suggested that the flip side of the issue is to look at the whole area and as a result, make a decision not to address the north side. She said there was a sense that some members did not want to look at the north side and that is what caused this to happen.

David said that all of the points that Eric mentioned had previously crossed his mind. He stated that he was one of the few that voted against using proxy votes when the issue was brought up a second time.

Francisco asked if the committee wanted to deal with Eric's comments. He noted that at the previous meeting he had expressed his concerns about the process. Regarding the questionnaire, he was not concerned because he felt the information was valuable and it was a valid survey.

David suggested that the committee was using the survey information to support individual positions rather than focus on entire survey results.

Francisco commented that the objectives process was never completed. He felt it was okay to proceed but at some point the committee needs to come back to the issue of objectives. They need to be defined and resolved so the committee can determine specifically what they are doing.

Michael commented that Eric's last point in his presentation was the issue of proxy voting. Additionally, he noted that the committee is looking at the 3,000 acres or the 300 acres at Mushroom Rock. At the public meetings he felt the input was not to look at the north side. He does not want to see an area closed. If it comes down to closing an area or not he would not want to have to do that.

Adam expressed concern over commercial use and what it means on the north side. They (Funland) have requested expanded use for trail rides. Their future plans are an issue for the committee as they relate to the north side.

Steve Avery asked why it is wrong for the public to use the area (the north side). Discussion took place about how the Red Hill Planning process was initiated. Davis covered a brief history of the process leading up to development and submittal of the proposal.

Discussion took place about the issue of identifying the Mushroom Rock Area as a "sacrifice zone". It was questioned whether it was appropriate to establish this type of designation in this area because of sensitive soils, slopes, steep terrain, etc..

Steve Wolfe asked for a straw poll from the committee about the issue of a sacrifice zone. Additional discussion took place. Steve noted that there is disagreement about use on the north side.

David said he believes that there are good reasons to look at scenario 3 but for now he suggested the committee finish with scenario 2.

Steve Avery said that based upon his walk in the north area, he saw evidence of heavy and recent use particularly in the Northwest quadrant. He saw evidence of use by motor vehicles, horses, foot traffic and bicycles.

Alex said the trails there are used by five horses. She knows the people. If area has damage, then that is an indication of the impact five horses can have. She suggested moving on to completing scenario 2.

Steve Wolfe asked if people are willing to go with a sacrifice zone?

Steve Avery commented that he would rather look at "heavy" and "light" use zones and not refer to them as "sacrifice zones".

Adam said that he feels as if Steve Wolfe is dragging scenario three into the discussion about

a sacrifice zone.

(No straw poll was taken about establishing a sacrifice zone)

Discussion moved on to further development of scenario 2.

1) Connect the point of access to planned town trails and a valley wide trail. Use the tunnels under Highway 82 located at County Road 107 and near the water tank at Aspen Glen.

Widen the bridge on Highway 133 in the future when it is replaced to allow for pedestrian access. Add a bolt on sidewalk to the existing bridge to allow for non-motorized access.

(This would be similar to the pedestrian access that used to exist on the Glenwood Springs Grand Avenue Bridge.) The committee needs information about ownership of land leading to the tunnel accesses under Highway 82. The tunnel under Highway 133 can connect to a North/South Route. Use the Satank bridge as a route to town. An alternative to the Satank bridge is the old railroad bridge that crosses the Roaring Fork River.

2) There are concerns with the route in the gulch above Aspen Glen water tank. It is close to this drainage and may invite/attract people to the riparian area. The route brings people close to private residences. It is steep. It also is an area that provides seclusion for deer along the route.

3) Walking time from Highway 82 to the point of access on County Road 107 is six minutes up and five minutes back. The loop time to go to Mushroom Rock and back is 45 minutes up and 25 minutes back. Total round-trip time is one hour and 30 minutes.

4) Dogs in the mushroom rock area should be required to be on a leash. A map was drawn showing the trails identified for scenario 2. The map also identified parking areas associated with trail heads.

5) Area information: information developed for Red Hill should identify Red Hill as part of a larger trail system for areas around town. An area map should be posted at the trail access point at County Road 107 and at the trailhead near the Aspen Glen water tank if it is developed.

Francisco suggested that the committee needs to define "the trail system" in Red Hill.

Items for the next agenda: Management for the area, scenarios 3 and scenario 1, development of the elements to be included in a trail brochures/map with information. Francisco asked about developing a publication for the Red Hill Area only. Ian suggested a hand out should cover a larger area.

The committee agreed that the next meeting would be a longer meeting from 6:30 p.m. to 9:30 p.m. on Thursday February 19, 1998.

The meeting adjourned at 8:45 p.m.



## Red Hill Project

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### **Red Hill Steering Committee Meeting Minutes February 26, 1998 6:30 PM Carbondale Town Hall**

Alex Schwaller called the Red Hill steering committee meeting to order at 6:45 p.m. February 26, 1998.

Members present: Alex Schwaller, Michael Pines, David Johnson, Steve Wolfe, Steve Avery.

Absent: Chris Lawrence, Eric Gross, Rick Broadhurst, Ian Hause, Adam Olson.

Proxies provided: Eric Gross gave one proxy vote to David Johnson. Rick Broadhurst and Ian Hause gave one proxy each to Michael Pines.

Minutes of the previous meeting: Steve Wolfe requested a change in the minutes to note that scenario one had one vote instead of zero votes. Alex Schwaller requested a change on page 1 regarding parking. The minutes should reflect that the red dirt at the base of red Hill cannot be compacted and roadbase or pit-run gravel would need to be applied on the frontage Road adjacent to Aspen Glen. Alex also wants to clear up what Rick Adams from DOW said at a previous meeting. She read a passage from the minutes dated November 13, 1998, in which Rick Adams noted there was Elk calving in the Red Hill Area. Alex made a motion to approve the minutes as amended. Michael Pines seconded the motion and the minutes were approved upon a unanimous vote of the committee.

The committee moved on to discuss management of the Red Hill Area. David Johnson expressed concern about voting on any scenarios without all the members here to participate in the discussion.

Alex suggested that management would consist of two parts. The first part would be who is to handle the study proposed for the north side. The second part is who will be the operative force overseeing use of Red Hill. She suggested that this committee should meet in June to "do the study." People on the committee that cannot participate should pick their own replacement.

Steve Avery inquired about what the structure would be for month to month management.

Alex proposed a management committee of five people starting this summer. She feels the "study" needs to be completed as soon as possible.

Francisco commented that the committee talked about developing a table of soils type and erosion characteristics. This is a project that somebody could take on. A table needs to be developed that can be incorporated into a GIS system so soils could be mapped by attribute. Alex volunteered to work on this project.

Steve Wolfe suggested having the management organization expanded to include Holgate Mesa and the Crown.

Davis presented Eric's comments on management structure. He suggested a committee of

5 to 7 seats including representation from BLM, the Town of Carbondale, landowners, recreationalists and open space/trail experts. The committee would meet four to eight times annually. They would be responsible for six basic functions. These include education, fund-raising, planning, maintenance, monitoring, coordination with other government entities.

Steve Avery feels the committee should start out with a focus on Red Hill.

Alex proposed that we should suggest disbursed recreational use.

Steve Wolfe suggested that we could form another management group to deal with other areas such as the Crown and Holgate Mesa.

Discussion ensued about organizational structure, legal status and funding.

Francisco said, for example, if the group was going to construct a trail it would be necessary to hire an archeologist. BLM has one on staff but her time is fully occupied. Some work could be done by volunteers.

Davis suggested forming a 7 to 9 member committee as a working board. A larger board would minimize the potential for burnout by board members. He suggested a private nonprofit status. This would necessitate articles of incorporation and bylaws that would outline the function of the group.

Steve Wolfe asked if the committee could request that people pay fees for membership, etc.

The response was "yes."

David Johnson said that the committee needs to decide the makeup of the management group. He likes the idea of a nine member group. He suggested three users, three owners and three government types. The existing Red Hill Committee should be encouraged to participate.

Steve Wolfe made a motion that the management committee should be a 501 C 3 private nonprofit organization. Steve Avery seconded the motion. Yes votes -- 4, No votes -- 4. The motion failed on a tie vote.

Michael asked for an explanation about the benefits of the private nonprofit organization.

Alex expressed reservations about forming a larger organization. She felt this would draw more attention to the Red Hill Area.

Steve Wolfe explained that a private nonprofit allows money to be given with a tax benefit to the donor. It also offers some legal protection for board members.

Francisco said there already is an organization in place to do many of these things -- BLM. The whole plan could be implemented by BLM without a formal organization.

Steve Wolfe asked if people could sue BLM? Francisco replied "yes".

Discussion took place about the merits of BLM managing vs. a Red Hill management committee. It was suggested that a local governing committee would build ownership for the Red Hill Area. The local committee may also ensure that the Red Hill Plan is implemented.

Steve Wolfe commented that we need to start raising money for the project to purchase the property at the bottom of Red Hill.

Michael said that he does not know if buying the property at the base of Red Hill is an objective. He commented that a private nonprofit corporation may come out of this effort in the future but he was not sure the committee should make that decision now.

Steve Wolfe asked why he was against a private nonprofit corporation?

Michael replied that putting a corporation into effect was not something he expected to be deciding at the meeting.

Francisco noted that having a local management group is one way to ensure things will happen, funding is raised and tasks are completed.

David commented that the existing resource list could be used to identify interested folks.

Steve Wolfe made a motion to recommend forming the nine member board with a balance between users, landowners, BLM, the town with the skills of a lawyer/fund-raising and trails represented.

Alex seconded the motion. Yes votes -- 8. No votes -- 0.

The legal status of this management group is to be left up to the committee in the future.

Discussion of scenarios --

Alex inquired whether the committee wanted to vote on the scenarios? She explained that scenario four includes all of the scenarios identified in the previous minutes (scenario 3) plus a loop trail. There has been no vote on scenario 4.

Steve Wolfe is not happy with the trail by the water tank in scenario 3. He spoke with a landowner that said there are deer in that area and the trail ends up too close to the gully. The gully is a very sensitive area is far as he is concerned.

Alex agrees because that route has not yet been walked or investigated by the committee.

Francisco said the group agreed that they were going to investigate the route. He would like to see the scenarios defined and identified.

Steve Wolf made a motion to take scenario 2 number 4 (A) out of scenario 2 input it into scenario 3 to give it the study it needs. Alex seconded the motion.

Michael said he agreed with the concept.

Steve Avery commented that one thing the committee discussed was not making Mushroom Rock an out and back ride. He asked the committee what an alternative would be?

Francisco noted that one of the identified benefits was having a second access point to Red Hill.

Michael said that issue needs to be studied.

Steve Avery commented that he agreed with Steve Wolfe. He would agree with his motion to put paragraph A of 4 in scenario 2 into scenario 3 if the committee with seriously study another access point.

Francisco suggested that one way to get the study process going with BLM is to propose a second access point.

Steve Wolfe withdrew his previous motion. The second was also withdrawn. He made a new motion that before scenario 2 #4 (A) is implemented that a comprehensive study similar to that proposed for scenario 3 is completed.

This motion was also withdrawn.

Francisco noted that any new trail must have a cultural survey, ecological analysis for threatened and endangered plants and wildlife biologist analysis for raptors.

Michael asked if that is the type of analysis we would be completing with the study?

Francisco said "yes" these are the three critical values. There are others the committee might consider as well. In scenario 2 BLM would complete the three critical analyses only for the corridor affected by the trail.

Steve Avery proposed that the committee deal with studying the north side and identify how it would affect scenario 3.

David agreed. The committee needs to identify what they want to study.

Steve Wolf would feel more comfortable if this group would make the final decision on the study.

David said that he does not see how that can happen because of timing.

Francisco suggested that the study could be completed by this summer and the decision could be made by this group. He identified the similar situation in Eagle County.

Steve Avery said he wanted to see a vote tonight.

Steve Wolfe asked if the committee would consider having this group make the final decision after the study is finished? This could take place in mid June upon completion of the study when everything is pulled together. The group could identify if trails are feasible and necessary.

Steve Avery commented that he liked all of the suggestions however, he wants the study started now. Elk calving would be taking place this spring. Raptors could be identified and other work could be started.

Michael agreed with the comment.

The group discussed modifications to scenario 3. Francisco was to specifically identify these changes and include them in the minutes.

Steve Avery made motion to adopt scenario 3 as amended and specifically identified in Francisco's written version.

David Johnson seconded the motion. Yes votes -- 8. No votes -- 0.

David Johnson commented that this action needs to be implemented. The group agreed.

Francisco will prepare a written documentation of the amended motion.

Items for the next agenda.

Review of the minutes, review of Francisco's amended scenario three, final wrap up on these items, final decision on the list of objectives based upon the final recommendations on the scenarios, identify who wants to continue to serve on a management group.

The meeting adjourned at 8:47 p.m.



## Red Hill Project

A Cooperative Venture Between BLM, The Town of Carbondale, Aspen Glen and Western Slope Consulting

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### **Red Hill Steering Committee Meeting Minutes March 5, 1998 6:30 P.m. Carbondale Town Hall**

Alex Schwaller called the meeting to order at 6:00 p.m. March 5, 1998.

Members present: Alex Schwaller, Michael Pines, Steve Avery, Chris Lawrence, Ian Hause, David Johnson. Also present: Francisco Mendoza -- BLM, Davis Farrar -- Project Manager.

Absent: Steve Wolfe, Eric Gross, Rick Broadhurst, Adam Olson.

Minutes of the previous meeting: Alex made a motion to accept the minutes with the noted changes. David Johnson seconded the motion. The motion passed with 6 yes votes, 0 no votes and 1 abstention.

Michael asked about the extent of an environmental assessment.

Francisco explained that an EA is basically a review of the affected environment in an area where a trail is proposed. The process involves identification of impacts and mitigation measures. Researchers look for cultural resources and other concerns such as soils and wildlife 50 feet on either side of a proposed trail.

Davis inquired about whether reciprocal access provisions are required when there is a request for a private access across BLM land.

Francisco said that in some cases that can be required but it is not always the case.

Ian asked if Garfield County would have a role in the access process. Francisco said the county could have a role and if public access was required it would have to be negotiated.

Michael asked if an issue such as public access was subject to public disclosure. Francisco said that it is possible and if a formal committee exists they could be notified of access requests. Access to public lands is sometimes part of a subdivision marketing plan. When there is a request for a use permit on public lands BLM holds an internal session to discuss the proposal. Usually, notice is sent out to the public and most often, the adjoining landowners.

The consensus of the committee was to ask BLM to include notice to the Red Hill Committee about use proposals in the Red Hill Area.

Dave Johnson asked, in regard to a designation of non-motorized use, what the committee would need to do to backup that change in the resource management plan.

Francisco said that the committee would need to have reasons for making the request and

public notice would be given. After notice was made, input would be taken before a final decision is made. He went on to review the different levels of use within the Resource Management Plan. Elimination of motorized vehicle is the only action the committee has suggested that would require a change to the RMP. A project plan is more specific than an area plan. Area plans are more broad-based. A project plan will include surveys of trail alignments and identified widths of trails and other points. The committee is working an area plan or an activity plan.

Dave noted that the dog leash restriction comes out of an activity plan and would result from an order by BLM. The work the committee has done regarding documentation of the need for dogs on leash provides an adequate reason from which BLM would make a decision. The recommendations would be implemented through the annual work plan process. He asked if the immediacy of our study needs is something that can be implemented this summer.

Francisco responded that there are some operations funds for projects. BLM could adjust some budget allocations to this project. This project is not in the current work plan. It was his opinion that a study of the Red Hill area would have to be based upon a volunteer project with BLM assistance. The study is something the committee would do except for the items the committee was not qualified to perform. One example of work committee could complete is to make a contact with the Audubon society to investigate birds in the area. BLM could also be contacted and asked if they could do some of the work.

If we had a specific proposal for a project then we could have BLM do the work if their staff is available. Otherwise, we would have to deal with a subcontractor. The committee would be obligated to come up with the dollars to fund that work. Contractors can cost \$500/day or \$500/mile for linear projects. General area surveys cost approximately \$25/acre. In areas of known concerns, the cost can go up to \$40/acre. The cost for evaluation of threatened and endangered species is similar.

David asked how this project could get ranked and how the committee can improve their budget position with BLM.

Francisco said there is a public interest in doing something up there (Red Hill). The committee should plan a visit with Michael Mottice and give him a presentation about the project. That would be helpful for developing his understanding of the efforts and the need for funding. Another item that helps is public support and financial contributions. The issue of closure to motorized vehicles would have to be played by ear. This will require public notice and federal register costs.

The committee moved on to discuss the objectives. A lengthy discussion took place about objective No. 7 "connect trails to allow a sustained hike or ride." Debate centered around whether this objective should be included or not.

Eric said that he wants to see it included. He said the committee needs to deal with what kind of recreational activities we want to see in the area.

Michael said that he feels the committee cannot set objectives without first studying the area.

Francisco said the committee can still have their objectives without completing the study.

Eric noted that the objective is an acknowledgement that people in the area desire using Red Hill for a particular purpose. We have overlooked the objective of providing an excellent biking experience if it can be accommodated. Biking is a significant experience in the area. Eric asked for straw poll to see if it makes sense to recognize mountain biking as a use. The committee should recognize biking as an important recreation experience in the Red Hill Area.

Chris seconded the motion for a straw poll. A straw poll was not taken. Instead, a formal motion to the committee was made.

Eric made a motion -- Is mountain biking something you want to accommodate in the Red Hill area? Chris Lawrence seconded the motion. Yes votes -- 5. No votes -- 3.

The objective agreed to by the committee is as follows -- Hiking, biking, and horse riding are recreational uses that need to be accommodated in the Red Hill area.

Committee members were asked about who wished to continue as a member of a newly formed Red Hill Management Committee. Members that noted they were interested in continuing to serve were: Alex Schwaller, Michael Pines, Eric Gross, Chris Lawrence, Ian Hause, David Johnson and Davis Farrar.

It was suggested that the members who were not present the contacted to find out if they may be interested in serving. (Adam Olson, Rick Broadhurst and Steve Wolfe).

The meeting adjourned at 8:45 p.m.



## Red Hill Project

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A Cooperative Venture Between BLM, The Town of Carbondale, Aspen Glen and Western Slope Consulting

### **Red Hill Steering Committee Meeting Minutes April 30, 1998 6:30 p.m. Carbondale Town Hall**

Alex Schwaller called the Red Hill Steering Committee meeting to order at 6:30 p.m. April 30, 1998.

Members present: Steve Wolfe, David Johnson, Adam Olson, Alex Schwaller, Chris Lawrence.

Also present: Davis Farrar -- Project Manager, Francisco Mendoza -- BLM.

Absent: Rick Broadhurst, Steve Avery, Michael Pines, Ian Hause.

Proxies: Steve Wolfe had a proxy from Rick Broadhurst, Alex Schwaller had a proxy from Michael Pines.

Davis handed each member at copy of the Draft Red Hill Report. He asked the members to take it home and carefully review the document for content and typographical errors.

Steve Wolfe brought up the issue of forming a private nonprofit Red Hill Committee. He noted that he spoke with Michael Pines and Michael had changed his opinion about waiting to determine the legal status of the committee. Michael was in favor of forming a private nonprofit organization. The consensus of the committee was to move ahead with that type of legal status. However, it was suggested that the members not present be contacted for their opinions.

Francisco discussed proceeding ahead with a non-motorized designation and a change to the Resource Management Plan.

Discussion took place about dogs not being leashed. There was debate about the practicality of requiring leashed dogs. The committee recognized that most dogs on Red Hill are not on a leash. The consensus of the committee was that dogs had been identified as a concern for wildlife by the Division of Wildlife. The proper thing to do was to require that dogs be leashed. It was recognized that enforcement was a difficult problem. It was also recognized that responsible pet owners would keep their dogs on a leash. If there was a requirement and a percentage of the population complied with that requirement, it would be a better situation than what exists presently.

The committee decided that the next meeting would be May 7th at 6:30 p.m. at Town Hall. At that meeting, the committee would discuss and decide upon the future dates for a draft presentation and a final presentation of the plan to the public.

Francisco said that Saturday June 13 was National Trails Day. It was suggested that a Red Hill cleanup workday would be an appropriate activity to schedule for that day. The

committee agreed. Steve Wolfe will work to organize the event. Other members are welcome to help him accomplish that task.

Davis asked the committee members to think about a "recognition day" for committee members. BLM has offered to provide some food for the event other items could be provided on a potluck basis.

Dave Johnson mentioned the RAC report for recreation uses and impacts from a meeting held in Rangely. He asked the committee to recommend his re-appointment to RAC. The committee was unanimous in their support for his re-appointment.

Davis noted that, at the request of the Town of Carbondale, he mailed them a final billing for the project in the amount of \$1, 045.00 (the remaining balance). He said that the billing included a note requesting that payment be withheld until it was approved by the committee. The town needed the invoice for purposes of their audit.

Steve Wolfe made a motion to approve a final payment on the project for the remaining balance to Western Slope Consulting. The motion was seconded by Alex Schwaller. The vote in favor of the motion was unanimous.

Items for the next agenda.

1. Go through the draft report.
2. Consider the recommended scenarios and discuss whether the committee has a specific recommended preference or priority preference.
3. Make a decision on the private nonprofit committee status proposal.
4. Make decisions on the public meeting dates and locations.
5. Set a date for the Red Hill Committee party.

Francisco noted that there was a story in the Glenwood Independent about trail construction in Barber Gulch. Concerns had been expressed by Bob Perry and other adjoining landowners about the project. A meeting will be scheduled to discuss the project in the near future.

The meeting adjourned at 7:50 p.m.



## Red Hill Project

A Cooperative Venture Between BLM, The Town of Carbondale, Aspen Glen and Western Slope Consulting

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Red Hill Steering Committee  
Meeting Minutes May 7, 1998  
6:30 p.m. Carbondale Town Hall

The meeting was called to order by Alex Schwaller at 6:30 p.m.

Members present: Alex Schwaller, Rick Broadhurst, David Johnson, Michael Pines, Steve Wolfe, Steve Avery, Adam Olson, Eric Gross.

Also present: Francisco Mendoza -- BLM, Davis Farrar -- project manager.

Absent: Chris Lawrence, Ian Hause.

The meeting minutes of March 5 were approved as amended. Alex made a motion to approve that was seconded by Eric. The vote was unanimous. Alex made a motion to approve the meeting minutes of April 30 with the notation that Eric was absent. David Johnson seconded the motion. The vote to approve the minutes was unanimous.

Discussion took place about the final draft document. The members decided that an executive summary should be included. The executive summary should have signature blocks for each of the board members. The document should include a table of contents. A cover letter signed by each board member should be included in the front of the document.

Each board member present was asked to provide a short statement about who they were and why they were interested in the project. These statements would be included with each members name in the report.

The meeting adjourned at 7:45 p.m.



## Red Hill Project

A Cooperative Venture Between BLM, The Town of Carbondale, Aspen Glen and Western Slope Consulting

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Red Hill Steering Committee  
Meeting Minutes May 14, 1998  
6:30 p.m. Carbondale Town Hall

The meeting was called to order by Alex Schwaller at 6:30 p.m.

Members present: Alex Schwaller, Steve Avery, Rick Broadhurst, Ian Hause, David Johnson, Michael Pines.

Also present: Francisco Mendoza -- BLM, Davis Farrar -- project manager.

Absent: Eric Gross, Chris Lawrence, Steve Wolfe, Adam Olson.

Alex presented her synopsis of the project recommendations. Francisco presented his project executive summary. He asked committee members to notify him if they had any problems or changes with his executive summary.

Francisco said that the Barber Gulch project has been canceled because of concerns raised and because the study that was used as a basis for the project was out of date (it was eight years old). The Red Hill project model is proposed to be used as a process for studying issues in the Barber Gulch area according to BLM area manager Michael Mottice. It was suggested that the Red Hill Committee or a similar group could manage the Barber Gulch area as well. The BLM lands around Carbondale need to be studied on a similar basis as has been used in the Red Hill Area. Michael Mottice would like to enlist Carbondale area residents to participate on a committee for this purpose. This project is a high priority for BLM.

Issues that were raised in the Barber Gulch area are similar to issues that were identified on Red Hill. These include: ownership, access roads, trespassing, wildlife habitat -- dogs, existing grazing permits (Rangers are opposed to mountain bikers because of respect issues associated with livestock and horses). The north Thompson Creek ranchers include: Susan Rogers, Bob Perry, the Sewell's, Cerise and Neislaniks.

The area is a transitional range between public lands, private lands and seasonal use. The 1984 BLM report had recommended access to the area via trails.

Steve Avery asked what it took to stop the Barber Gulch project. Francisco said that it was the issues raised by landowners and a subsequent meeting with the cattleman's association.

Davis inquired about the scope of services needed for the Barber Gulch evaluation project. Francisco said that Michael is big on community-based planning processes. He's looking at a community-based effort in conjunction with BLM.

Rick Broadhurst mentioned that he heard a new trail had been flagged north out of the Mushroom Rock area. Discussion took place about that trail and how to deal with it. Francisco said that he would send his staff up there to look at the trail. Alex said she would be happy to meet with the BLM staff. It was decided that BLM would produce a sign and posted on the marquee at the trailhead and at the intersection of the trails in the

sage field. Alex said she would work with BLM to post the signs.

The following dates were established for future meetings: June 4th at 7:00 p.m. the committee would present the draft Red Hill report at Carbondale Town Hall, on June 10th at 7:00 p.m. the committee would present the final document. Changes in the plan would be made by attaching an addendum to the final report. The Red Hill Committee celebration party was scheduled for June 7th at 5:00 p.m. at Rick Broadhurst's house on Red Hill.

The meeting adjourned at 8:30 p.m..

# Exhibit - C

## Survey Instrument

This questionnaire is voluntary. Your responses will help the project Steering Committee and BLM identify recreational uses and activities on these public lands. The information will also be used to identify problems you encounter and develop solutions to those problems.

**What Time of Year do you use the Red Hill Area (circle all that apply)?**

- a) Spring      b) Summer      c) Fall      d) Winter

**How often do you use Red Hill?**

- a) First Time      b) 1 time / month      c) 2 to 5 times a month      d) 6 or more times / month

**How far do you travel to use Red Hill?**

- a) 0 to 5 miles      b) 6 to 11 miles      c) 11 to 20 miles      d) over 20 miles

**How do you get to Red Hill?**

- a) Drive      b) Bike      c) Foot      d) Horse      e) Other: \_\_\_\_\_

**What activity do you participate in when using the area?**

- a) Walking or hiking      b) biking      c) hunting      d) motorcycle or ATV use      e) horse      f) camping      g) other \_\_\_\_\_

**How Many years have you been using Red Hill?**

- a) first year      b) 1 to 2 years      c) 3 to 4 years      d) 5 to 7 years      e) more than 7 years

**Where do you live?**

- a) Carbondale      b) Glenwood Springs      c) Basalt      d) Old Snowmass      e) Snowmass Village      f) Aspen      g) Other \_\_\_\_\_

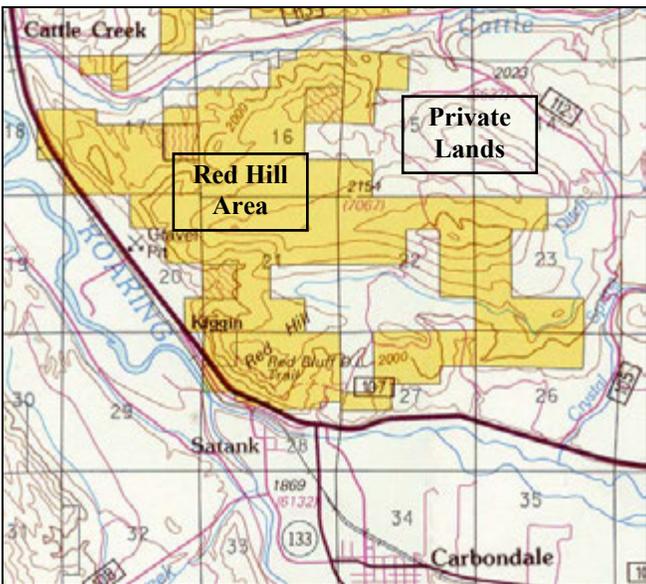
**Is your use of the area-**

- a) decreasing      b) increasing      c) the same

**When you use the area how many people usually accompany you?**

- a) none      b) 1 to 2      c) 3 to 4      d) more than 4

Please identify on the map below how you usually access the area?



### Optional But Important

If you would like to be included on our mailing list to receive information about the Red Hill Project through periodic mailings, please include your name and address below.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ St.: \_\_\_\_\_ Zip: \_\_\_\_\_

Please Include any comments or suggestions about the Red Hill Area: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Where **4 is most important** and **1 is least important**, rate each of the following **ATTRACTIONS** you feel are important to you about the area. (you may rank more than one value the same).

Close proximity to where you live	
Good opportunity for non-motorized activities	
Good opportunity for motorized use	
Provides escape from the pressures of life	
Opportunity for physical activity	
Getting away from other people	
Opportunity to be in the woods	
Viewing wildlife	
Viewing the valley from the top of the hill	
Getting away from motorized vehicles	
Opportunity to be alone	
Opportunity to be with friends	
Other:	

Where **4 is most important** and **1 is least important**, rate each of the following **NEEDS** you feel are important to you about the area. (you may rank more than one value the same).

Need more public access points to the area	
Expanded trails system	
Better identification of public lands boundaries	
Need fewer public access points	
Easier (less steep) access to the area	
Better trail maintenance	
More information available about Red Hill Area	
Restricted public access and or use	
Designation of specific trails for specific uses e.g. foot use only, bike only, horse only	
Restriction of motorized use	
Better management of the area	
More parking	

Where **4 is most important** and **1 is least important**, rate each of the following **ISSUES** you feel **should be addressed** about the area. (you may rank more than one value the same).

Use conflicts on the trails e.g. foot vs/ bike, horse vs/ foot	
Trash along roads or trails	
Trail erosion	
Private property conflicts	
Damage to trails when soils are muddy	
Too many people using the area	
Lack of identification of the public boundaries	
Damage to vegetation by users	
Adverse impacts to wildlife	
Trespass on private lands	
Not enough directional or informational signs or maps	
Poor access to Red Hill	
Not enough BLM enforcement presence	
Too many people finding out about the area	
Poor trail maintenance	
Use of camp fires	
Lack of care for the area	

Where **4 is most important** and **1 is least important**, rate each of the following **RECREATIONAL EXPERIENCES OR ACTIVITIES** you feel are important to you about the area. (you may rank more than one value the same).

Being part of the natural environment	
Taking risks	
Experiencing new challenges	
Using primitive outdoor skills	
Using motorized vehicles & equipment	
Interacting with other people	
Getting away from other people	
Getting away from the demands of everyday life	
To keep physically in shape	
Testing skills and abilities	
Improving skills	
Releasing tension and anxiety	
Collecting artifacts	
Enjoying the scenery	
Getting meat for the table	

**Identify the number of days** in the past year that you spent participating in the following activities in the Red Hill Area. Leave the box blank if you did not participate in the activity.

Walking	
Running	
Photographing the area	
Viewing wildlife	
Motorcycle riding	
ATV riding	
Mountain biking	
Camping	
Picnicking	
Horseback riding	
Snowmobiling	
Cross country skiing	
Camping	
Hunting	
Partying	
Walking your dog	
Rock climbing	
Backpacking	

Additional Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Thank You For Your Time And Input**

**Where to Return Surveys:**

**Drop-off Location:** Ajax Bike & Sport - 419 Main St. Carbondale

**Mail-in address:** Western Slope Consulting 0165 Basalt Mt. Dr. Carbondale, CO. 81623

**Please Turn Over and Complete The Other Side**

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Appendix C:  
Paul S. Sarbanes  
Transit in Parks Grant Application

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**U.S. Department of Transportation  
Federal Transit Administration**

**Paul S. Sarbanes Transit in Parks Program (Transit in the Parks Program)  
Project Proposal for Fiscal Year 2010 Funds – Planning Project**

BASIC PROJECT INFORMATION			
Project Name (Please provide a 1-2 sentence description of the project): <b>Red Hill Special Recreation Management Area Alternative Transportation Feasibility Study</b> Examine the opportunity for multi-modal transportation alternatives to allow visitors to better access the site, reduce the impact to the natural environment, and alleviate congestion. The study will focus on several alternatives for mode-shift, including transit and non-motorized transportation.			
Proposed Funding Recipient: <b>Town of Carbondale</b>			
Public land unit(s) involved: <b>Red Hill Special Recreation Management Area, the Bureau of Land Management</b>		<u>Location of Project</u> City: <b>Carbondale</b> County: <b>Garfield</b> State: <b>Colorado</b> Congressional District: <b>John Salazar (3)</b>	
Federal Land Management Agency managing the above unit(s): <input checked="" type="checkbox"/> Bureau of Land Management <input type="checkbox"/> Bureau of Reclamation <input type="checkbox"/> Fish and Wildlife Service <input type="checkbox"/> Forest Service <input type="checkbox"/> National Park Service <input type="checkbox"/> Other (e.g. Federal Trust) Describe:		Type of Planning Project: (Implementation projects, please use the alternate form) <input checked="" type="checkbox"/> <b>Planning</b>	
<input type="checkbox"/> Proposal is to plan for a possible new alternative transportation system where none currently exists. <input checked="" type="checkbox"/> Proposal is to plan for a possible expansion or enhancement of an existing alternative transportation system.			
Transit in Parks Program Funding Requested during FY 2010 \$160,000		<b>Total</b> Cost of Planning Project at Completion (All sources) \$160,000	
Were you awarded Transit in Parks Program funds for this project in the past? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If answer "Yes," please provide amount awarded:			
Do you plan to request additional Transit in Parks Program funds in future years? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>(Note: If you wish to compete for future Transit in Parks Program fiscal year funds you must reapply).</b>			
If answer "Yes," please specify Transit in Parks Program proposed funding levels for out years below: <b>Amount and year will be based on findings of the Alternative Transportation Feasibility Study.</b>			
FY 2011	FY 2012 \$	FY 2013 \$	
<b>FY 2010</b> Funding Amounts from sources other than Transit in Parks Program funds? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> <b>No</b> If answer "Yes," please specify funding levels per source below:			
State \$	Local \$	Federal (other than Transit in Parks Program) \$	Private sources \$

**CONTACT PERSON**

Name: Jeff Jackel

Phone: 970-704-4114

Position: Recreation Director, Town of Carbondale

E-mail: [jjackel@carbondaleco.net](mailto:jjackel@carbondaleco.net)

Address: Carbondale Town Offices; 511 Colorado Avenue; Carbondale, CO 81623

**OTHER PROJECT SPONSORS (in addition to funding recipient)**

Bureau of Land Management

**REQUIREMENTS**

- If a State, Tribal, or local government entity is proposing the project, the applicant has contacted the manager of the Federal land unit(s) and has the consent of the Federal land management agency or agencies affected.
- The project is consistent with the metropolitan and statewide planning process.
- The project is consistent with agency plans.
- The planning project will analyze all reasonable alternatives, including a non-construction option.

**BASIC PROJECT DATA-**Number of Visitors (Annual): **55,000**Daily Number of Visitors (Peak season):  
**Approximately 300**Average Number of Vehicles per Day at Peak Visitation: **Approximately 200**Current Road Level of Service at Peak Visitation: **Not calculated, but road is generally under capacity**

(Please consult guidance where available on determining this variable. You may use observational accounts or pictures to provide an assessment of this datum for FY 2009 proposals).

What time of the year does your land unit experience Peak Visitation?

 Spring       Summer       Fall       Winter

Mornings, evenings, and weekends from April - September

Current Carrying Capacity of Existing Roads:

**The capacities around the Highway 82/133 Intersection have not been officially calculated by CDOT. One CDOT official gave a rough estimate of a capacity of 8,000 vehicles per hour on Highway 82 and 4,500 vehicles per hour at the intersection.****Average Daily Traffic Counts on at the Highway 82/133 intersection range from about 13,000 to 20,100 (with lower counts in the winter and higher counts in the summer). RFTA predicts that the Average Daily Traffic will reach 36,000 by 2035.**

What percent of that capacity is the site operating at during peak periods?

**Given the rough estimate of carrying capacity, it is likely that the intersection is usually**

functioning below capacity but that peak periods may reach or exceed road capacity. These peak periods include afternoon rush hour, which coincides with Red Hill SRMA's heavy use period for post-work recreation.

Current parking shortages during peak visitation:

**Estimate that an additional 20-30 spaces are needed during peak visitation (at current visitation levels, not accounting for future growth)**

Current Number of Persons who use the alternative transportation system (if one already exists) at peak visitation:

**Trail counts for the Rio Grande Trail (non-motorized): 70,000 annually**

**RFTA ridership to Carbondale Park & Ride lot: 95 parking spaces occupied in Park & Ride lot (though some are used by carpoolers) and about 90,000 bus riders on the Hwy. 82 route per month in 2009.**

Estimated Annual Number of Persons who will use the alternative transportation system at project completion: **Depends on alternative selected**

Average number of auto collisions with wildlife in the area:

**Collisions not documented but some anecdotal concerns with wildlife crossings one mile east and west of the intersection.**

## Executive Summary

Please provide an executive summary of your proposal that is no more than one page in length.

A safe, accessible off-highway connection to the Red Hill Special Recreation Management Area (SRMA) has been a long-term goal of the Red Hill Council (RHC), the Bureau of Land Management (BLM), and the Town of Carbondale. The Red Hill SRMA is a popular recreational trail system for mountain bikers and hikers, and it is located approximately 1.3 miles from downtown Carbondale, at the intersection of U.S. Highway 82 and Highway 133. Highway 82 runs the length of the Roaring Fork River Valley, spanning from Glenwood Springs to Aspen, and serving as the principal arterial route for the region. The intersection with Highway 133 is the gateway to Carbondale, and the community has a long history of interest and support of planning for activities in that area.

Red Hill SRMA is located within one-half mile of many local residences and business. Due to the close proximity between the Town of Carbondale and the SRMA, bicycle and pedestrian site access is highly needed. The Town of Carbondale has fairly extensive sidewalks and several bike trails, including the Crystal Valley Bike Trail along Highway 133 from Prince Creek Road to the Highway 82/133 intersection. This two mile trail connects to Red Hill and also to the Rio Grande Trail System a paved non-motorized trail that extends the entire length of the Highway 82 corridor (see Figure 1) from Glenwood Springs to Aspen. However, pedestrians and bicyclists traveling to the site face a major accessibility and safety barrier at the busy Highway 82/133 intersection. The intersection provides for a multitude of vehicle turning movements and for high-speed through traffic. For non-motorized users, the intersection includes a striped pedestrian crossing with a highway crossing light.

With the creation of the Red Hill SRMA in 1996, the BLM and the Red Hill Council arranged with the Colorado Department of Transportation (CDOT) to utilize an existing parking lot on CDOT property for private vehicle access to Red Hill, but the lot is often congested due to use by commuters for carpool and ride-sharing. The Roaring Fork Transportation Authority (RFTA) opened a "Park & Ride" lot in 2007, located in the southwest quadrant of the Highway 82/133 intersection one-third of a mile from Red Hill, which has the potential to alleviate some of the CDOT lot congestion. RFTA provides regional commuter bus transit services along the Highway 82 corridor and along the I-70 corridor between Rifle and Glenwood Springs. RFTA is the second-largest transit system in Colorado (behind RTD in Denver) with ridership of approximately 4.3 million in 2009.

Recreation use on Red Hill has been increasing for 10 years, with peak recreation use occurring in the spring, summer and fall and some continued visitation through the winter months. Trail counter records at the entrance show approximately 55,000 user days annually. Most of the user population arrives by automobile because of the perceived and/or real concerns with crossing the Highway 82/133 intersection. Public input received during the 2009 BLM Resource Management Plan (RMP) Revision scoping indicated a very strong interest in recreation on public lands around Carbondale, a community noted for its strong history and culture of outdoor recreation, bicycling, running, and hiking. The RMP specifically identifies the Red Hill SRMA as a key recreation resource for Carbondale and the Roaring Fork Valley.

Given the availability of public transit access through RFTA, the proximity and availability of access on the Rio Grande and Crystal Valley Trails, and the proximity of an active population in Carbondale, potential access improvements to Red Hill could significantly reduce vehicle trips to the Red Hill parking lot. The proposed Alternative Transportation Feasibility Study will examine several multi-modal transportation alternatives to determine the most feasible method to address transportation needs on the site.

Alternatives will be evaluated by a set of criteria designed to address project goals: explore opportunities for non-motorized and transit access, provide a safer and more satisfying visitor experience, reduce the number of vehicles needed to access Red Hill, and enhance shared use for commuter carpoolers and recreational users. A decrease in vehicle trips to Red Hill would lessen vehicle congestion at the Highway 82/133 intersection and in the Red Hill parking lot. Fewer vehicle trips results in reduced vehicle emissions, energy consumption, and an overall improvement to the outdoor recreation experience.

As the "Gateway" to the Carbondale area, the Highway 82/133 intersection has been the focus of local investment and beautification projects, including a proposed "Carbondale Gateway River Park." The 2004 Carbondale Gateway Park Feasibility Study identified a pedestrian connection via a 5 ft by 7 ft box culvert under Highway 82 to the Red Hill parking lot. The culvert was built at the time of Highway 82 construction

for drainage and livestock movement but closed by CDOT during a highway construction project. While the re-opening of this underpass has been considered previously, the proposed Feasibility Study would provide a more comprehensive examination of several alternatives to address Red Hill's need for greater visitor mobility and safety through alternative transportation.

**Figure 1: Red Hill Access Components**



## Project Description

### What activities would be funded by the requested Transit in Parks Program financial assistance?

The Red Hill SRMA Alternative Transportation Feasibility Study will determine the feasibility of an alternative transportation connection between the Town of Carbondale Trail System and the BLM Red Hill Recreation Area, which will provide a convenient, safe, and accessible route across Highway 82 for hikers, pedestrians, and mountain bikers. A non-motorized connection is needed to address:

1. Parking at capacity
2. Safety concerns at intersection and highway, especially for pedestrians and bicyclists
3. Congestion at intersection, roadway and parking area
4. Connection to transit for accessing public lands
5. Trail connections to local and regional trails and residential neighborhoods

The Study is a collaboration between the Town of Carbondale and the BLM, with partner stakeholder assistance from the RHC, CDOT, and RFTA. The proposed Feasibility Study will address the parking, safety, congestion, and access needs of the site. Additional goals include:

1. Explore opportunities to bring people to Red Hill from Carbondale, and from around the region by non-motorized and transit modes
2. Provide a safer and more satisfying visitor recreational experience
3. Reduce the number of vehicles needed to access Red Hill to relieve congestion and reduce environmental impacts
4. Enhance shared use for commuter carpoolers, and recreational users

The Feasibility Study will evaluate six alternatives, including one no-action alternative, to assess impacts of future visitation growth with no additional transportation action. The study will evaluate a pedestrian underpass and overpass; minor improvements to the Highway 82/133 intersection, such as signalization or raised pedestrian crosswalk; transit alternatives, which may include a shuttle system operating seasonally or a feeder system in conjunction with RFTA service; and accommodation of future improvements, such as more capital-intensive intersection improvements that include a roundabout or grade separation. The latter option incorporates projects proposed by CDOT, though these are to be evaluated only briefly in the Feasibility Study as CDOT has determined that these improvements are unlikely to be feasible in the near future. Finally, each alternative will include the provision of an off-road connection between the CDOT parking lot and the Red Hill trailhead (along County Road 107) to accommodate the continuation of safe, non-motorized access.

Each of the six transportation alternatives will be evaluated by a set of criteria established to address Feasibility Study goals. These criteria include the following:

1. Congestion reduction (reduction of vehicles used to access site)
2. Increased visitor mobility, accessibility, and safety (including barriers to use)
3. Visual resource and environmental impacts (wildlife impacts, fuel use, and emissions)
4. Management feasibility
5. Cost
6. Compatibility with local, regional, and state plans and regulations

In addition to the evaluation of alternatives, the Feasibility Study will include a public feedback element and illustrative preliminary steps for implementation plans. The Study team will present the evaluation of alternatives, including strengths and weaknesses of each alternative and elements common to each, to stakeholder partners through a public forum. Stakeholders and members of the general public shall help the study team and project sponsors assess the merits of each alternative.

The Study team, incorporating public feedback, may select one or more alternatives for illustrative purposes to create preliminary implementation steps. These steps will provide a more detailed picture of how alternatives may move into implementation. Potential implementation steps to be considered include:

- Estimated cost of alternative, including both capital costs, operations and maintenance costs, and cost effectiveness measures.
- Management and operations plan with agency roles and a project timeline.

- Environmental compliance strategy or process
- Annexation, acquisition, and easements (consistency with local and regional planning)
- Design and locational guidelines and criteria

## **Alternative Transportation in the Parks and Public Lands Planning Evaluation Criteria**

(There are separate evaluation factors for implementation projects. Use the implementation project proposal template for implementation projects.)

Criteria	Points	Weight
1. Demonstration of Need		50%
a. Visitor mobility & experience	(1-5)	
b. Environmental condition as result of existing transportation system	(1-5)	
2. Methodology for Assessing: Visitor Mobility & Experience Benefits of Project		15%
a. Reduced traffic congestion	(1-5)	
b. Enhanced visitor mobility, accessibility, and safety	(1-5)	
c. Improved visitor education, recreation, and health benefits	(1-5)	
3. Methodology for Assessing: Environmental Benefits of Project		15%
a. Protection of sensitive natural, cultural, and historical resources	(1-5)	
b. Reduced pollution	(1-5)	
4. Methodology for Assessing: Operational Efficiency and Financial Sustainability of Alternatives		20%
a. Effectiveness in meeting management goals	(1-5)	
b. Financial plan and cost effectiveness	(1-5)	
c. Cost effectiveness	(1-5)	
d. Partnerships and funding from other sources	(1-5)	

## Planning Justification

Your responses to these questions must total no more than eight pages.

### 1. Demonstration of Need

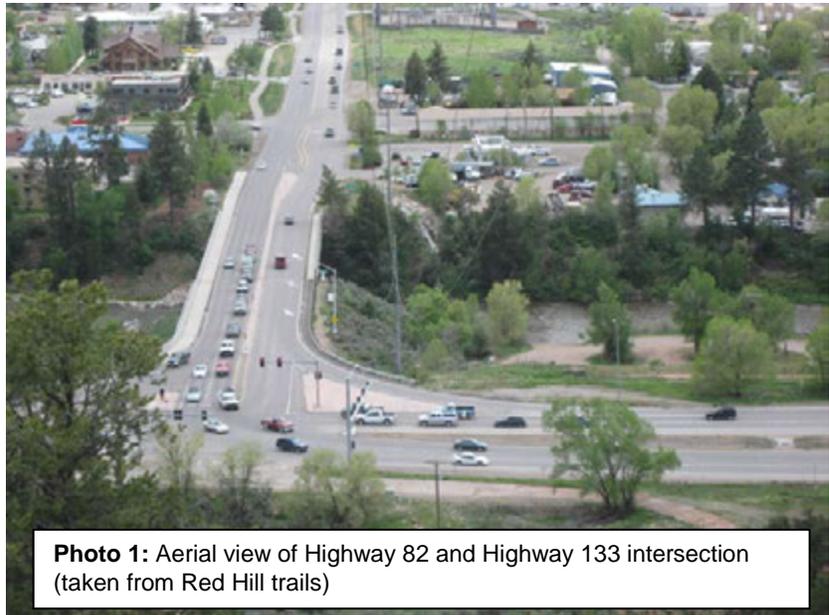
- a. **Visitor mobility and experience:** Describe the site's current and/or anticipated transportation problem or opportunity for improvement. You should include information on issues such as traffic congestion, traffic delays, parking shortages, difficulty in accessing destinations, safety issues, lack of access for persons with disabilities, lack of access for individuals with lower incomes or without cars, and visitor frustration. Please cite reports, plans, studies, and other documentation to support your description.

Safe and convenient multi-modal site access has long been acknowledged as a critical need at Red Hill. The 1998 Red Hill Project Final Report lists several objectives including the provision of safe and accessible trailhead areas and parking. In particular, the Report lists objectives to "identify opportunities and obstacles to access across Highway 82 and identify linkage" and to "identify potential trail links to a valley-wide system." These management objectives echo the growing need for transportation improvements to improve safe non-motorized visitor access to Red Hill, as demonstrated by observed infrastructure and travel patterns around the Red Hill area.

#### Current Conditions

U.S. Highway 82 is a four-lane, major regional arterial, forming the only east/west route through the Roaring Fork Valley between Aspen and Glenwood Springs. Based on 2008 CDOT traffic data, approximately 20,100 vehicles drive on U.S. Highway 82 each day. Speed limits on Highway 82 are typically 65 miles per hour (mph) but reduce to 55 mph at the intersection; the speed limit on Highway 133 at the intersection is 35 mph. U.S. Highway 133 also receives heavy traffic as its the main highway entrance into Carbondale and also because of its state-designated status as the "West Elk Scenic Byway". Both Highway 82 and Highway 133 have been identified by CDOT, Garfield and Pitkin Counties, and the Town of Carbondale as presenting safety hazards for bicycle and pedestrian traffic, due in part to the narrow traffic lanes along Highway 133, poor visibility around curves, and no highway shoulders for bicyclists. These agencies have collaborated with RFTA and the state lottery-funded Great Outdoors Colorado (GOCO) to finance and construct the paved Rio Grande Bike Trail, which runs 45 miles along U.S. Highway 82 between Aspen and Glenwood Springs, and the north/south Crystal Valley Bike Trail, which runs along U.S. Highway 133. These two trails merge and intersect in Carbondale at the RFTA commuter Park & Ride lot. These trails are popular transportation and recreational amenities in the Valley; the Rio Grande Trail near the intersection with the Crystal Valley Trail received 77,000 riders in 2008.<sup>1</sup> (See Figure 1 for Red Hill Access Components and Photo 1 for an aerial view of the Highway 82/133 intersection).

The paved non-motorized trails are just two of the many trail amenities



**Photo 1:** Aerial view of Highway 82 and Highway 133 intersection (taken from Red Hill trails)

<sup>1</sup> Peak trail use months were May through September, with an average of 11,200 monthly riders and over 200 daily riders. Ridership dropped to about 72,000 annual users in 2009.

in the Carbondale area. The region also hosts an extensive network of paved and unpaved recreational trails, connected by sidewalks, bike lanes, and other non-motorized transportation infrastructure. A large proportion of Carbondale residents are avid cyclists, runners, hikers, and outdoor enthusiasts that regularly use and support the many area trails. Red Hill Council members approximate that over half of all Red Hill visitors would choose to cycle, walk, or run to the Red Hill trailhead if non-motorized access were safer and more convenient. If such non-motorized access to the Red Hill trails were to be achieved, the linkage between the Red Hill trails and other key trails in the Roaring Fork Valley would fulfill the Red Hill Mission Statement objective to link Red Hill SRMA to a “valley-wide system.”

While no bicyclist or pedestrian fatalities have occurred at the Highway 82/133 intersection, the current infrastructure poses both safety and mobility barriers to non-motorized users. During peak spring, summer, and fall weekends, the volume and types of motorized traffic create particularly unsafe conditions for non-motorized users. Anecdotally, Carbondale residents and Red Hill Council members perceive that the intersection is unsafe for pedestrian access and that safety concerns form the biggest barrier for visitors who would otherwise choose non-motorized modes of access.

As the CDOT parking lot designated for Red Hill users is frequently filled by ridesharing commuters, parking spaces are often not available for recreational users and illegal parking sometimes occurs along County Road 107, which is used to access the trailhead. The parking lot holds approximately 45 vehicles. There is no designated parking for handicapped users or larger vehicles (buses or vans), though the lot could accommodate them assuming space was available. The peak congestion times at this lot are morning and afternoon commuting periods, around noon on weekdays, and all day during weekends in the spring, summer and fall. It is estimated that over 300 vehicles demand parking at this lot during peak weekends (See Photos 2 and 3 of the CDOT parking lot).



**Photo 2:** Access to CDOT parking lot from intersection.



**Photo 3:** CDOT parking lot (approximately 4 p.m. on a Monday in May).

While most demand for alternative access to the SRMA will likely come from Carbondale area residents and employees who walk or bicycle from in-town destinations, RFTA also provides regional transit connections to Red Hill that may be enhanced by alternative access improvements. Currently, the RFTA Carbondale Park & Ride lot contains approximately 95 spaces, which are almost always filled to capacity during the day, and the transit agency is planning service increases through their new Bus Rapid Transit System, which will stop at the Park & Ride facility. Visitors can currently take the bus to this facility to access the Red Hill area, though no data is available on the number of riders who take advantage of this service. Anecdotally, Red Hill Council volunteers and BLM staff believe that perceived safety barriers and lack of direct pedestrian connections between the Park & Ride facility and the trailhead deter visitors from using transit to access the site.

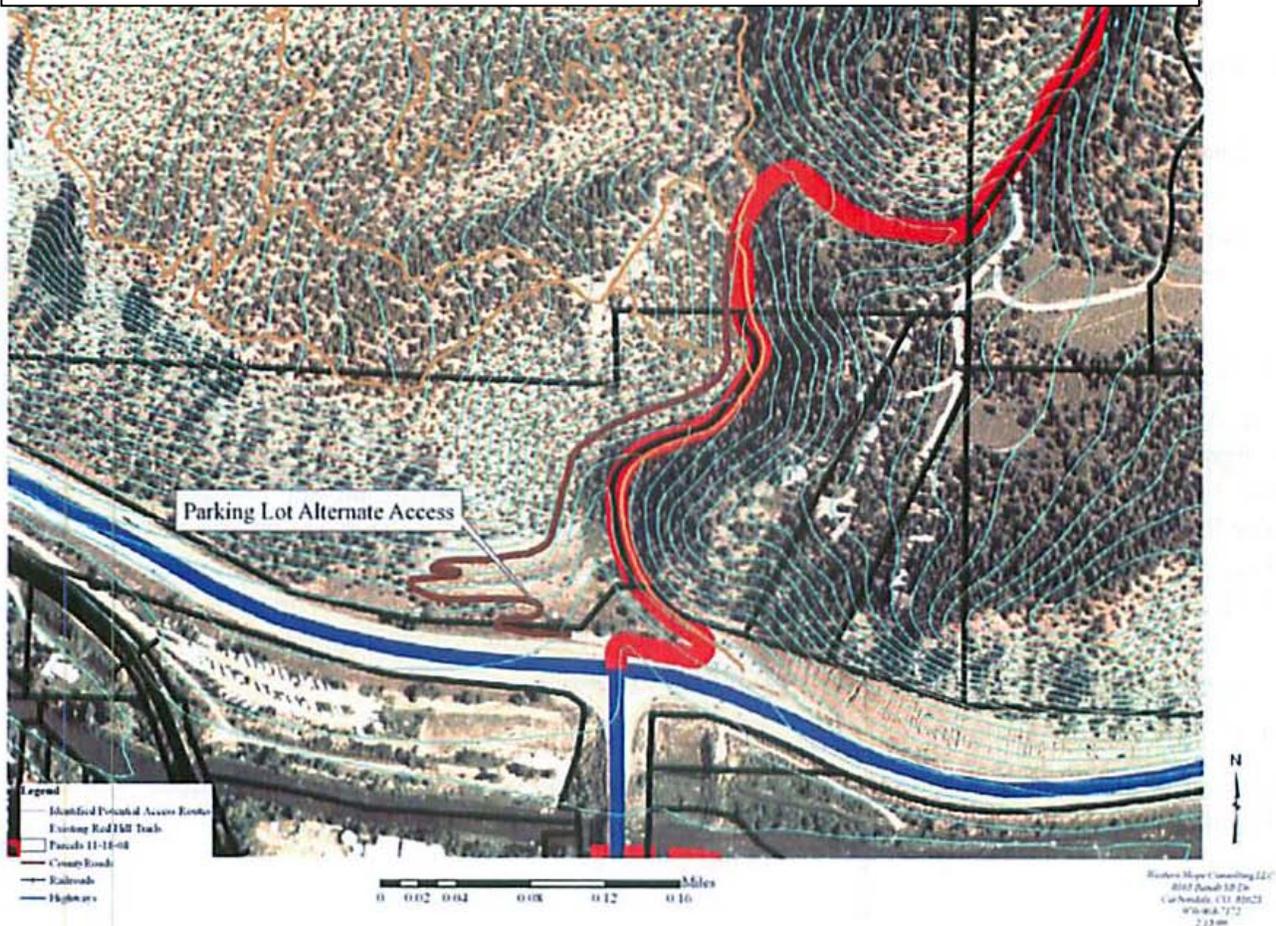
A final barrier to non-motorized site access, and a major issue for local residents, is the one-quarter mile of County Road 107 between the CDOT-owned parking lot and the Red Hill trailhead. County Road 107 is a winding dirt road that offers access to the trailhead and several private homes in the Red Hill area. The road has no designated facilities or shoulder for pedestrians or cyclists. The sharp turns and limited visibility on the road present safety hazards to Red Hill visitors and vehicles who share the road (See Photo 4 of the County Road access). The Red Hill Access Study of May 2009 considered alternate

trailhead access via an existing roadbed from the 1970s that begins just west of the existing CDOT parking lot; this option may be explored further as a means of removing pedestrian traffic from C.R. 107 (see Figure 2 of the proposed alternate trailhead access). The planning study will examine mechanisms to address this final barrier as part of an overall streamlined system to improve non-motorized access.

**Photo 4:** C.R. 107 (between CDOT lot and trailhead)



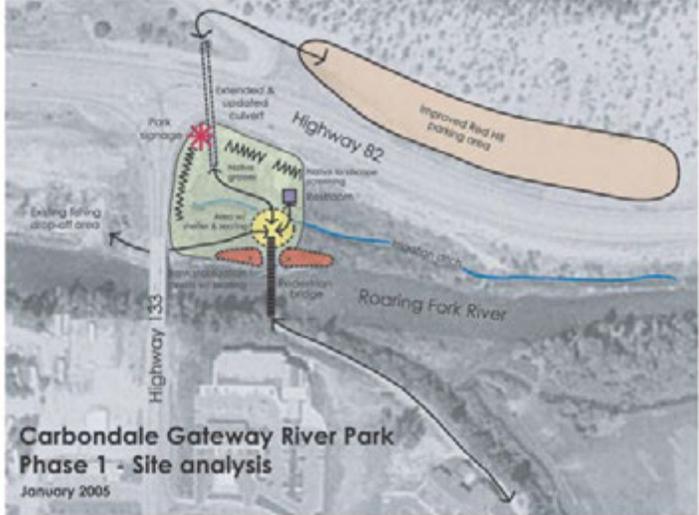
**Figure 2:** Alternate access to Red Hill trailhead. Graphic courtesy of Western Slope Consulting LLC.



**Future Conditions**

While the current conditions present a significant need for improved visitor mobility, accessibility, and safety, several future conditions may further aggravate existing conditions. First, visitation to Red Hill SRMA is expected to grow. The Red Hill Council, who keeps trail user counts of the hikers and mountain bikers using the area, recorded that approximately 55,000 hikers and cyclists annually visit the Red Hill trails, with most use concentrated between April and October. Average use during spring and fall months is approximately 300 visitors per day. This is an increase from an average of 50-60 visitors per day during peak season in 2002, according to trail counters run by the Red Hill Council. Growth projections are

**Figure 3**  
Graphic courtesy of the Town of Carbondale



based on a steady increase in trail users over the past eight years as well as increased use and congestion in the CDOT-owned parking lot. CDOT estimates that the average daily traffic count will increase to 36,381 in 2035 (up from 20,100 in 2008), a further sign of growth in this area of the Valley. Second, the Town of Carbondale has proposed the creation of "Gateway River Park," a linear river corridor park located directly south and across Highway 82 from the CDOT parking lot (See Figure 3 of proposed Gateway River Park). This new park amenity would provide a key link in the non-motorized infrastructure and outdoor recreation spaces between Red Hill and the Town of Carbondale.

In 2003 the Town of Carbondale conducted a feasibility study associated with development of the Carbondale Gateway River Park, and considered access between the proposed park and the Red Hill SRMA. The study examined the feasibility of using an existing 5 ft. wide x 7 ft. high concrete livestock culvert that was placed under Highway 82 during original road construction (see Photo 5). The box culvert was used, albeit infrequently, for pedestrian/bicycle access to Red Hill until reconstruction of the right turn lane by CDOT in 2002 closed the south culvert opening, which was replaced by a 30-inch culvert pipe. In



**Photo 5:** Existing (closed) livestock underpass.

2003, CDOT made a preliminary decision that this existing culvert was not a safe or acceptable means for pedestrians to cross Highway 82 and directed the Town to consider an engineered plan and design for the culvert that would allow CDOT to make a final determination about its safety as a pedestrian crossing. Since that time, the culvert on the south side of the highway was filled in by CDOT when constructing a second directional east-hand turn lane from Highway 133 onto Highway 82.

No comprehensive transportation study has ever been completed for this intersection to consider alternatives for safe pedestrian access, and the proposed planning study would fulfill this unmet need while considering a range of options to

ensure that the selected alternative best meets the needs and constraints of this unique situation.

- b. Environmental condition as a result of the existing transportation system:** Describe the site's current or anticipated problem or opportunity for improvement of the environment in this area. You should include information on current or anticipated problems such as air pollution, noise pollution, run-off, water quality, harm to vegetation and wildlife, and other impacts or stressors on natural, scenic, cultural and/or historic resources caused by the existing transportation system. Please cite documentation in agency plans, studies, reports and other documentation that will help to support your description.

The current and anticipated access patterns to the Red Hill SRMA threaten the site's natural and aesthetic resources, particularly in the case of access via personal motorized vehicles. The Red Hill Mission Statement objectives emphasize the protection of natural resources by planning and maintaining trails for non-motorized use, eliminating motorized use, locating new trails away from sensitive areas, considering seasonal closures for resource protection (specifically soils, wildlife, vegetation, and sensitive values), and minimizing trash and damage. The site's management interest in resource protection is well-aligned with strategies to explore new, lower-impact transportation alternatives to access Red Hill.

An Environmental Assessment, completed in 2004, found that Red Hill is characterized by old-growth pinyon-juniper woodlands and a mature sagebrush shrub land, with an understory of native grasses and forbs. The area includes five soil types with slopes ranging from 2% to 50%; the soil types include Earsman-Rock complex, Empedrado Loam, Showalter-Morval complex, and Tridell-Brown sandy loam. A range of big and small game and nongame mammals and birds inhabit the area, including the pinyon jay, black-throated gray warbler, black-chinned hummingbird, gray flycatcher, juniper titmouse, sage sparrow, Brewer's sparrow, golden eagles, red-tailed hawks, and great-horned owl. While no federal or state listed species or habitat is found in Red Hill, the area and its immediate surroundings contain an active bald eagle nest and roost sites and habitat for cutthroat trout and Harrington's penstemon. Vegetation and soils, which affect species habitat, have been directly impacted by construction activities or undesignated recreational use and indirectly impacted by air pollution or runoff associated with surrounding traffic and development.

The 1998 *Red Hill Project Final Report* includes the management objective of enabling visitors to enjoy the area's natural resources, specifically including wildlife, scenery, and aesthetics, and gain greater environmental awareness. The BLM values the environmental resources on site, which may be impaired as visitation (and resulting traffic) to the site increases.

Carbondale's significant residential and commercial growth in the past 10 years has created undesirable impacts associated with severe automobile congestion and pollution. The natural and scenic resources of the Red Hill SRMA is heavily impacted by congestion at the Highway 82/133 intersection. According to the 2003 [West Glenwood Springs to Aspen Corridor Investment Study](#), undertaken in cooperation with FTA, the Federal Highway Administration, and CDOT, "Highway 82 is the state's most congested rural highway, with a summer average daily traffic (ADT) volume of over 28,000 vehicles in some locations. Highway congestion within the Project Corridor threatens the economic vitality, environmental health, and character of the larger region."

Air quality is negatively affected by automobiles and bus emissions, and noise from automobiles, trucks, and buses negatively affects humans and wildlife in the Valley. Automobiles and their related parking areas also impact water quality and runoff, and these impacts can be particularly harmful given the proximity of the site to the Roaring Fork River (see Figure 1). High traffic volume on Highway 82 has raised concern for wildlife safety, as wildlife cross the roadway approximately one mile west and one mile east of the Highway 133 intersection (steep slopes near the intersection deter most wildlife crossing activity in that area).

As the existing transportation conditions are inhospitable to pedestrian and bicycle access to Red Hill, the majority of users drive personal vehicles and park at the CDOT-owned parking lot. The principal environmental conditions resulting from vehicular site access are air and noise pollution associated with vehicle use and vegetation, soil, and watershed impacts associated with the vehicle footprint of the parking area. Red Hill Council members have observed that, during peak periods when the CDOT lot is at

capacity, recreational users or carpoolers park in undesignated areas or along County Road 107, increasing the developed footprint of these areas and impacting surrounding vegetation and soils.

The proposed transportation study has a goal of reducing the number of vehicles used to access Red Hill SRMA, which will reduce the negative environmental impacts associated with vehicle use. The study proposes several transportation alternatives that aim to decrease vehicle mode share and increase transit and non-motorized mode share of visitor access. For example, visitors can currently use RFTA transit to access Red Hill from the nearby Park & Ride lot, and mechanisms to streamline the pedestrian connection between transit and Red Hill will further bring reductions in air pollution, noise pollution, and fuel use. Increased utilization of bus transit will help to maintain, if not improve, air quality, conserve energy, reduce automobile congestion, and reduce demand for limited on-site parking at this BLM Recreation Area.

### **Scope of Work and Methodology**

*The planning project's scope of work and methodology should include tasks that will assess the areas below in a thorough and professional manner. The planning project should have a scope of work and methodology at this proposal phase, although it may be refined later.*

### **2. Methodology for Assessing - Visitor Mobility & Experience Benefits of Project**

Please address how the planning project's scope and methodology will assess the visitor mobility & experience benefits of a potential alternative transportation system improvement in the following areas:

- a. **Reduced traffic congestion:** This criterion includes: reduced average number of daily motorized vehicle trips during peak visitation, time lost to traffic delays, visitor frustration, and the area's current capacity of the existing transportation system.

The Feasibility Study goal to reduce the number of vehicles needed to bring visitors to Red Hill demonstrates the intention to relieve traffic congestion in the CDOT parking lot and at the Highway 82/133 intersection adjacent to the site. The current situation of Red Hill allows visitors to access the site via transit or non-motorized modes, but the barriers for non-motorized users (including transit riders who would then walk or bike to the trailhead) are significant. Non-motorized users must work through an indirect system of sidewalks and crossings to access the site, and encounter perceived safety threats due to the high-traffic and high-speed intersection.

The general methodology of the Alternative Transportation Feasibility Study is to examine each of the six transportation alternatives using six categories of criteria, which were crafted to align with project goals. The alternatives can then be compared equally based on the same criteria. The first of these criteria categories is congestion reduction, referring to parking lot and road congestion caused by vehicles accessing the site.

The specific criteria for congestion reduction will measure the ability of an alternative to reduce the number of vehicles used to bring visitors to Red Hill. Specifically, for each alternative, the Study will estimate the number of cars replaced from the parking lot and the intersection during peak periods and the vehicle miles traveled (VMT) reduced by visitors using transit or non-motorized modes for site access. The Study will also evaluate alternatives by ability to increase visitor mobility, accessibility, and safety. This criteria will include the ease of use and potential visitor barriers to each alternative, demonstrating how potential alternatives would address congestion-related impacts to visitor experience.

- b. **Enhanced visitor mobility, accessibility, and safety:** This criterion includes enhanced intermodal interconnectivity, improved public access to resources, improved access for those with disabilities and low incomes, traffic safety, pedestrian/cycling safety, and safety in the case of catastrophic events (i.e., forest fires or security threats).

User counts, visitor surveys, and observed visitation patterns indicate the popularity and increasing demand for non-motorized recreation at Red Hill, but impediments in visitor mobility, accessibility, and

safety are the key threats to the continued enjoyment of the SRMA. The focus for any alternative should be to streamline safe, non-motorized access to Red Hill, which will improve safety and mobility for all visitors. Safe and streamlined access will also increase the use of the site by groups that are currently underserved or not using the site due to current constraints. The transportation alternatives include several that would enhance intermodal access to the site, including connections between the RFTA bus system, a potential Carbondale feeder system, and the existing and extensive bicycle and pedestrian infrastructure in Carbondale. Multi-modal alternatives and intermodal connections are further emphasized through the composition of the stakeholder team that developed the Feasibility Study proposal; the team includes representatives from various modal groups (including CDOT, RFTA, and RHC).

The Feasibility Study criteria to evaluate the impacts to pedestrian safety and accessibility will incorporate estimates of the number of users served by transit, non-motorized, and personal vehicular modes under each transportation alternative scenario. For each alternative, the Feasibility Study will estimate the number of pedestrians and cyclists served, including the ability to capture new visitors to site based on new, safe access routes and the ability to serve targeted user groups. Using these figures, the Study team will estimate the ability of each alternative to induce mode shift.

As safety is a major concern for Red Hill users, the Study criteria will also estimate the ability of each alternative to enhance pedestrian and cyclist safety, either by reducing speeds or congestion at the intersection or avoiding at-grade crossing. The removal or reduction of safety threats will be a key consideration in measuring how many pedestrians or cyclists will elect to utilize a non-motorized transportation alternative. For example, several public and private schools and youth groups located within walking distance from Red Hill have expressed interest in traveling to the site for educational or recreational trips but do not do so due to perceived safety and accessibility barriers. One school administrator noted that her school would walk to the site instead of taking buses if a safe, off-road walking path were available. The Feasibility Study would also examine the number of transit riders served and anticipated reduced impacts in traffic violations at the Highway 82/133 intersection.

- c. Improved visitor education, recreation, and health benefits:** Describe how the project's scope and methodology will assess improved visitor education, recreation and health benefits?

Red Hill SRMA is currently a popular recreational amenity, frequently used by many Carbondale residents and increasingly serving as a destination for other Roaring Fork Valley residents and visitors. The BLM Glenwood Springs Field Office Report of 2008 noted that the Red Hill area received disproportionately high visitation relative to other recreation sites in the field office. In focus groups related to Red Hill use, visitors expressed that they highly valued the site for opportunities to frequently access outdoor physical activity and engage in activities that involve challenge or sport. Visitors also reported mental well being and improved physical fitness as personal benefits of site use. Most current users are individuals using the site for hiking, jogging, mountain biking, and sightseeing, and due to the trails' close proximity to Carbondale, many people use the site regularly for physical fitness purposes. Red Hill serves as an outdoor classroom for several area schools. Bus trips to Red Hill in vehicles from Colorado Rocky Mountain School, Carbondale Community School and other area schools would be reduced or eliminated (to be replaced by walking or bicycling) if an off-highway connection were available to Red Hill.

Visitors recreating at Red Hill already enjoy health benefits from active outdoor exercise, but their recreation and health benefits would be further improved by streamlined, safe access to the trailheads. If non-motorized transportation alternatives, such as those considered in the Feasibility Study, were realized, visitors could gain additional exercise benefits from walking, running, or bicycling to the site. The Feasibility Study will consider increases in site access by non-motorized modes, and reduction in access by personal vehicles, (as measured in criteria outlined previously) to be proxy measures for the health and recreation benefits that accompany additional mode shift.

### **3. Methodology for Assessing - Environmental Benefits of Project**

Please address how the planning project's scope and methodology will assess the environmental benefits of a potential alternative transportation system improvement in the following areas:

- a. Protection of sensitive natural, cultural, and historical resources:** This criterion includes energy conservation, energy efficiency, ecosystem sustainability, preservation of archeological and/or historical resources, watershed and watershed preservation, reduction in auto-wildlife collision rates, improved habitat connectivity, ensuring that visitation does not exceed an area's ability to handle increased levels of visitation or the "carrying capacity" of the land unit, and other protection benefits where applicable.

Red Hill is located in the heart of the Roaring Fork Valley, situated in close proximity to the Roaring Fork River with sweeping views of the Valley and surrounding mountain vistas, including the unique and imposing Mount Sopris. The trails run through the rock and sandy loam soils on Red Hill's steep terrain and are flanked by sagebrush and pinyon-juniper woodlands, which are home to many birds and mammals (listed in the Environmental Conditions section of this application). The scenery, topography, and natural resources are highly valued by visitors and by the Red Hill Council, who helps manage the site. For these reasons, stewards and visitors alike have an interest in protecting the natural and aesthetic resources as a means to maintain the integrity of Red Hill.

The impacts to the scenery and natural resources are primarily a result of vehicular congestion. Vehicles, both in designated and undesignated areas, interrupt the area's natural scenery and may affect sensitive vegetation or soils near the site. Vehicles traveling to and from Red Hill also have incremental negative impacts upon the Roaring Fork watershed.

Most significantly, increased vehicle use (as anticipated through increased visitation) would increase the developed footprint of the site by expanding the parking area, either through formal expansion or the "creep" of undesignated parking. The transportation alternatives to be considered in the Feasibility Study may be able to reduce vehicle trips to Red Hill, which would prevent the need for new parking as visitation increases. Some transportation alternatives may even result in an overall reduction in parking need, potentially allowing part of the CDOT parking lot to be re-vegetated for increased environmental benefits.

The Study will evaluate each alternative for potential visual resource and environmental impacts. The BLM has designated the SRMA as a Visual Resource Management Class II area, with the objective of retaining the existing characteristic landscape. Any change to the basic landscape element (form, line, color, or texture) due to management activities must be low and not evident. Given the sensitivity to visual resources, the Feasibility Study will specifically include an estimate of the amount of parking or developed footprint for each alternative (including new developed areas needed or potential to reduce existing footprint), impacts to the watershed, and impacts to aesthetic resources or views. Some of this evaluation will be a qualitative estimate based on the alternative's abilities to reduce motor vehicle site access.

Alternatives will be evaluated based on their impact to wildlife crossings, and impacts will be judged to facilitate, inhibit, or have no impact upon wildlife crossings around the Red Hill area. Red Hill Council members also note potential impacts by improper site use by non-motorized users, generally caused by failure to follow management guidelines. Potential natural resource impacts by non-motorized users will be considered for each alternative.

- b. Reduced pollution:** This criterion includes air pollution, water pollution, noise pollution, and visual pollution.

The vehicles that carry users to the Red Hill parking lot are sources of carbon dioxide (CO<sub>2</sub>) emissions, noise pollution, and potential water pollution from incremental roadway runoff. The overall Feasibility Study goal to reduce vehicle use and increase non-motorized access to Red Hill would indirectly achieve reductions in pollution associated with motor vehicle site access. Several of the transportation alternatives (pedestrian underpass, pedestrian overpass, and intersection improvements) are designed to replace pollution-producing vehicle trips with non-motorized trips, which are free of air and noise pollution. The

transit alternative included in the Study may also consider alternative-fueled vehicles that would reduce noise and CO<sub>2</sub> emissions; even conventionally-fueled transit vehicles may result in an overall reduction in air pollution as one bus or shuttle replaces several personal vehicles.

The Feasibility Study criteria to consider the number of vehicles reduced by each of the alternatives would serve as a proxy measure for pollution reduction. Proxy measures will include reduction in car trips and parking on site and measurement of VMT reduced. Using these proxy measure estimates, the Study team could also estimate total fuel use and total CO<sub>2</sub> emissions for each alternative. This would illustrate the ability of each alternative to reduce pollution. Motor vehicle impacts from transit vehicles, as included in the transit alternative, will also be included in this criteria.

In addition to air and noise pollution from motor vehicles, several alternatives proposed in the Feasibility Study may induce visual pollution, as defined by noticeable changes to the visual landscape that interrupt the current viewshed. Specifically, these include a pedestrian underpass and major physical changes to the intersection (such as a grade separation), though other alternatives may also include visual pollution. These effects shall be qualitatively evaluated and included in the Study.

#### **4. Methodology for Assessing - Operational Efficiency and Financial Sustainability**

Please address how the planning project's scope and methodology will assess the operational efficiency and the financial sustainability of a potential alternative transportation system improvement in the following areas:

- a. Operational efficiency:** This criterion includes considerations of how a potential alternative system may/may not meet identified management goals and objectives for this site, including consideration of multiple alternatives.

The management objectives of Red Hill, as captured in the *Red Hill Project Final Report*, include creating a site where visitors can enjoy frequent access to outdoor physical activity, enjoy the area's natural resources (including wildlife, scenery, and aesthetics), improve their physical fitness and health, gain greater environmental awareness and stewardship, and have greater aesthetic appreciation. The criteria proposed in the Study are closely aligned with the management objectives, with the intention that alternatives will be evaluated to measure their ability to achieve the primary goals of the site. On a foundational level, any transportation alternative that increases non-motorized access to the site (either a direct pedestrian or bicycle link or a secondary link from a transit system) will contribute to the management objectives by streamlining visitor access to the site and decreasing negative environmental impacts in the process.

A critical aspect of the Feasibility Study is to ensure that each alternative is clearly evaluated to indicate its ability to achieve the Study goals and to enhance the management objectives of the site. The Study criteria were developed to reflect both the Study goals (outline in the Project Description section) and align with management objectives. Additionally, the Study will evaluate multiple alternatives, covering non-motorized, transit, intermodal, and no-action modes, which will ensure that a full range of options are evaluated to find the most appropriate and effective transportation solution for the site.

As established previously, the congestion and safety issues with the Highway 82/133 intersection and the CDOT parking lot lead to negative resource impacts and reduced mobility, accessibility, and safety for visitors. Alternative transportation systems, such as the alternatives considered in the Feasibility Study, will be evaluated based on their ability to alleviate congestion and parking issues and thereby meet site management goals.

The analysis will specifically consider the operational feasibility of each alternative to meet the Site's management objectives and the Study goals by examining several implementation and usability factors. These factors include cost, ease of visitor use, and management feasibility. The latter criteria will assess the management capacities and resources needed to implement and operate each alternative, as compared to the current and potential resources available.

- b. Financial feasibility:** This criterion includes the development of a financial plan that will incorporate a potential alternative transportation system, including the evaluation of multiple alternatives.

Red Hill SRMA offers many benefits to the Roaring Fork Valley, and consequently many local and regional agencies are supporting the Alternative Transportation Feasibility Study as a means to maintain the site as a public amenity into the future. However, each stakeholder groups realizes the constraints posed by limited funding and recognizes a secondary Study goal to identify a transportation alternative that is financially feasible for Red Hill. Each alternative will include basic financial attributes to be incorporated into overall rankings and comparisons. Financial attributes will include planning costs, implementation and capital costs, and management and operations costs. The Feasibility Study will also consider potential short-term and long-term funding sources that may be applied to some or all of the alternatives. Finally, the Study will note whether total costs of an alternative appear to exceed potential revenue sources.

- c. Cost effectiveness:** This criterion includes the development of an analysis of cost effectiveness considerations that includes multiple alternatives.

While financial feasibility is a critical component and cost is a key criteria in the evaluation of the Transportation Alternatives, the cost factors must be measured against their ability to meet site management objectives and Study goals to ensure that the alternative addresses Red Hill's problems and needs. For example, a low operating cost per visitor that does not actually result in increased non-motorized site access does not meet project goals.

For each alternative, the Study team will assess the total cost (using financial attributes described above) against other evaluation criteria (congestion relief, visitor mobility, safety benefits, resource impacts, feasibility, etc.) to produce cost effectiveness measures. The evaluation criteria are directly related to Study goals; therefore this assessment will demonstrate the ability of each alternative to meet Study goals and the cost required to implement and operate each alternative. As the Study aims to increase safe and streamlined non-motorized access to Red Hill, one measure of cost effectiveness may be the cost per visitor mode shift (as measured by the total number of visitors estimated to shift to non-motorized or transit access from motor vehicle access divided by the total capital and operations cost). Cost effectiveness will be a key factor used to illustrate the relative benefits and costs of each alternative to the public and stakeholder groups.

- d. Partnerships and funding from other sources:** This criterion includes planning projects that would be carried out or funded in partnership with other entities in addition to the sponsor and will receive points depending on the level of partnership. Documentation (e.g., partnership agreements, letters of partnership support, letters of confirmation of financial contribution, letters of in-kind contributions, etc.) that supports and verifies involvement of partners and level of partnership *must* accompany this proposal.

The Red Hill SRMA is unique in having a strong partnership and stakeholder network, given the relatively small size and scope of the site and the Feasibility Study. A Stakeholder Team composed of governmental, quasi-governmental, non-profit, and public agencies and organizations has been working collaboratively to define the transportation need for Red Hill, gather supporting evidence, and identify Study components. Organizations represented in the Stakeholder Team include the Bureau of Land Management, Town of Carbondale, the Red Hill Council, CDOT, and RFTA.

Letters of support from the following organizations are included in this application:

- Bureau of Land Management
- Colorado Department of Transportation
- Roaring Fork Transit Authority
- Garfield County
- Mayor of Carbondale
- Carbondale Chamber of Commerce
- Garfield County Sheriff
- Colorado Rocky Mountain School

- Carbondale Community School
- Colorado Division of Wildlife

- Roaring Fork Mountain Bike Association
- Red Hill Council



## Appendix D: Community and Stakeholder Outreach Materials

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**Red Hill**  
Alternative Transportation Study

**PUBLIC OPEN HOUSE**  
for Roaring Fork Valley Citizens  
Thursday, Jan. 10, 4-7 pm  
Carbondale Town Hall, 511 Colorado Ave.

Come talk to Town of Carbondale staff and their consultant, Otak, about creating better hiking and biking access to the popular BLM Red Hill Recreation Area Trail System. Come learn about existing conditions and new potential opportunities and constraints to access the trail system. We need your thoughts, suggestions and ideas to help formulate possible improvements to access Red Hill.

*Please...your feedback is needed!*

Call Otak at 970-963-1971 if unable to attend but you would like more information.

Sponsored by the Town of Carbondale




**Red Hill**  
Alternative Transportation Study

**PUBLIC OPEN HOUSE**  
for Roaring Fork Valley Citizens  
Thursday, Jan. 10, 4-7 pm  
Carbondale Town Hall  
511 Colorado Ave.

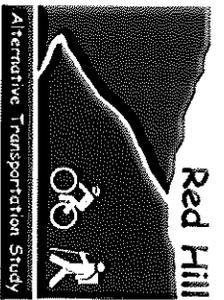
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*Please...  
Your feedback is needed!*

Call Otak at 970-963-1971 if unable to attend, but you would like more information.

Sponsored by the Town of Carbondale

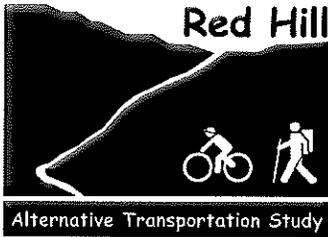




**Public Open House**  
 Thursday, January 10, 2013 • Carbondale Town Hall

Welcome! Please sign in.

Name (please print)	Mailing Address	City	State	Zip	email
Laurie Guevara-Stone	1319 West Ridge Ct.	Carbondale	CO	81623	guevarastone@gmail.com
Tom Stevens	2155 Maroon Mesa Rd	Carbondale	CO	81623	stevens.stevensgroupinc.com
Jim Pokrandt	1010 Colade	Quils	CO	81601	jpokrandt@stevens.com
Byrn Peterson	1144 Kings Row	Carbondale	CO	81623	frontside3@aol.com
ADDEN WALKER	Po Box 41	"	"	81623	haddaddy@msn.com
TODD FIGARE	PO BOX 352	"	"	"	TODD.FIGARE@KUSKATNET.COM
JANELLA FLETCHER	PO BOX 1872	"	"	81623	FLETCHERPL@AMWAY.COM
Ayoja E. Dominguez	700 BX 0826	Colade	"	"	—
SARA TIE	1053 CRAA CT	"	"	"	henn_sara@gmail.com
JASON TIE	1053 CRAA CT	"	"	"	br_humber@gmail.com
HEATHER HEURY	435 N 8th ST	"	"	"	hheury20@gmail.com



**Public Open House**  
Thursday, March 21, 2013 • Carbondale Town Hall

**What do you think?**  
Thank you. We appreciate your feedback!

**County Road 107 Improvements**

- | 1st choice               | 2nd choice               |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - Multi-Use Path              |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - Separated Path              |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 3 - Pedestrian Path & Bike Lane |

*NO PREFERENCE*

**Highway 82 At-Grade Improvements**

- | 1st choice                          | 2nd choice               |  |
|-------------------------------------|--------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 1 - <sup><i>NO!</i></sup> Speed Table with Enhanced Crosswalk/Crossbike |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island                    |

**Highway 82 Over and Under Pass**

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - West Underpass |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Underpass |

**River Crossing**

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Widen Existing Sidewalk          |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - Attach New Structure to Bridge   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - New Seperate Bridge on East Side |

Comments:

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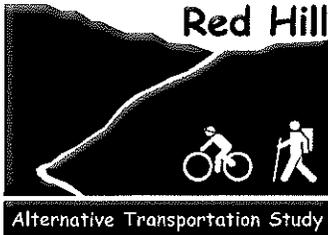


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Name: MARK KUTNER



**Public Open House**  
Thursday, March 21, 2013 • Carbondale Town Hall

**What do you think?**

Thank you. We appreciate your feedback!

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**County Road 107 Improvements**

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Multi-Use Path              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Separated Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - Pedestrian Path & Bike Lane |

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**Highway 82 At-Grade Improvements**

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

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**Highway 82 Over and Under Pass**

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - West Underpass |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - East Underpass |

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**River Crossing**

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - New Seperate Bridge on East Side |

Comments:

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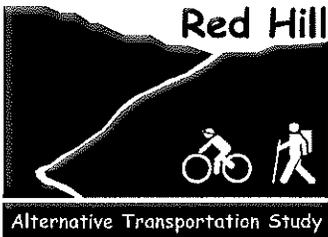
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Name:

Jo Jones



**Public Open House**  
 Thursday, March 21, 2013 • Carbondale Town Hall

## What do you think?

Thank you. We appreciate your feedback!

### County Road 107 Improvements

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - Multi-Use Path              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 3 - Pedestrian Path & Bike Lane |

### Highway 82 At-Grade Improvements

- | 1st choice                          | 2nd choice               |   |
|-------------------------------------|--------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

### Highway 82 Over and Under Pass

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - West Underpass |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Underpass |

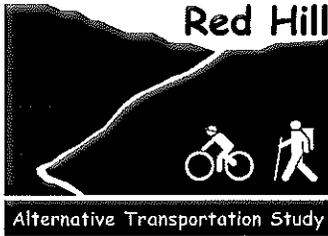
### River Crossing

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 3 - New Separate Bridge on East Side |

Comments:

*Would be beneficial to understand the costs of these alternatives and be able to prioritize and phase them. Immediate needs are to provide a safer way to cross 82 - structure is expensive! Other priority is to provide a designated ped/bike route from 82 to the trail head.*

Name: \_\_\_\_\_



## Public Open House

Thursday, March 21, 2013 • Carbondale Town Hall

### What do you think?

Thank you. We appreciate your feedback!

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#### County Road 107 Improvements

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - Multi-Use Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 3 - Pedestrian Path & Bike Lane |

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#### Highway 82 At-Grade Improvements

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

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#### Highway 82 Over and Under Pass

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - West Underpass |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - East Underpass |

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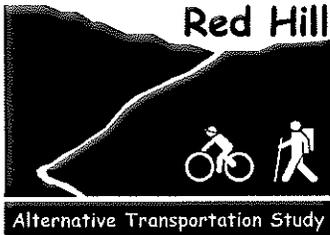
#### River Crossing

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - New Separate Bridge on East Side |

Comments: I like the underpass options to keep ped/bikes away from vehicles and it retains the natural views. I think it would be really cool if you could add a vehicle underpass (under St 133) that you could access via N. St 133 and the slip/acceleration lane on St 82 headed E. Connect the river to the trail system... GATEWAY PARK! Adding signs to educate people and drivers on CR 107 is a cheap way to improve conflicts between ped and vehicles. THANKS.

Name:

BRETT MEREDITH



# Public Open House

Thursday, March 21, 2013 • Carbondale Town Hall

## What do you think?

Thank you. We appreciate your feedback!

### County Road 107 Improvements

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - Multi-Use Path   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Separated Path <i>I DON'T THINK PEOPLE WILL USE IT</i> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - Pedestrian Path & Bike Lane                            |

### Highway 82 At-Grade Improvements

- | 1st choice                          | 2nd choice               |   |
|-------------------------------------|--------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

### Highway 82 Over and Under Pass

- | 1st choice               | 2nd choice               |                           |
|--------------------------|--------------------------|---------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - West Overpass  |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - East Overpass  |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 3 - West Underpass |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - East Underpass |

### River Crossing

- | 1st choice               | 2nd choice               |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 3 - New Separate Bridge on East Side |

Comments:

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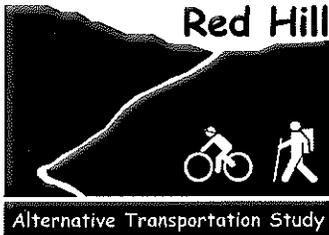
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Name:

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# Public Open House

Thursday, March 21, 2013 • Carbondale Town Hall

## What do you think?

Thank you. We appreciate your feedback!

### County Road 107 Improvements

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Multi-Use Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - Pedestrian Path & Bike Lane |

### Highway 82 At-Grade Improvements

- | 1st choice                          | 2nd choice               |   |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

### Highway 82 Over and Under Pass

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - East Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 3 - West Underpass |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Underpass |

### River Crossing

- | 1st choice                          | 2nd choice               |   |
|-------------------------------------|--------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Option 3 - New Seperate Bridge on East Side |

Comments:

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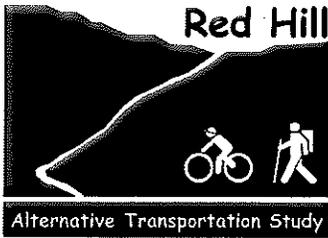
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Name:

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**Public Open House**  
Thursday, March 21, 2013 • Carbondale Town Hall

## What do you think?

Thank you. We appreciate your feedback!

### County Road 107 Improvements

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - Multi-Use Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - Pedestrian Path & Bike Lane |

### Highway 82 At-Grade Improvements

- | 1st choice               | 2nd choice               |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

SAVE THE \$  
FOR BIGGER AND  
BETTER.

### Highway 82 Over and Under Pass

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - West Overpass  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - West Underpass |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - East Underpass |

### River Crossing

- | 1st choice                          | 2nd choice               |   |
|-------------------------------------|--------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 1 - Widen Existing Sidewalk          |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 3 - New Separate Bridge on East Side |

Comments:

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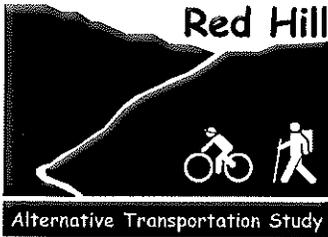


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Name: TODD FUGATE



# Public Open House

Thursday, March 21, 2013 • Carbondale Town Hall

## What do you think?

Thank you. We appreciate your feedback!

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### County Road 107 Improvements

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - Multi-Use Path              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 3 - Pedestrian Path & Bike Lane |

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### Highway 82 At-Grade Improvements

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

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### Highway 82 Over and Under Pass

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - West Underpass |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - East Underpass |

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### River Crossing

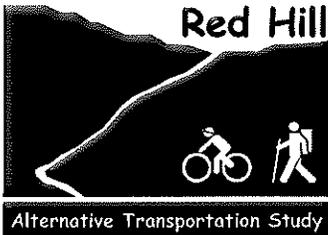
- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - New Separate Bridge on East Side |

Comments:

try to keep travel as direct as possible  
or 65ers will not use it

thanks!

Name: \_\_\_\_\_



# Public Open House

Thursday, March 21, 2013 • Carbondale Town Hall

## What do you think?

Thank you. We appreciate your feedback!

### County Road 107 Improvements

- | 1st choice                          | 2nd choice               |  |
|-------------------------------------|--------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 1 - Multi-Use Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 3 - Pedestrian Path & Bike Lane |

### Highway 82 At-Grade Improvements

- | 1st choice               | 2nd choice               |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
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### Highway 82 Over and Under Pass

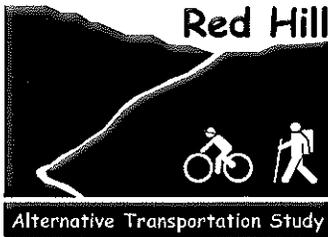
- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - West Underpass |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - East Underpass |

### River Crossing

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 3 - New Separate Bridge on East Side |

Comments: Is a Sky light an option for the underpass?

Name: \_\_\_\_\_



**Red Hill**

**Public Open House**

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**What do you think?**

Thank you. We appreciate your feedback!

Shaine  
Ebrahimi

**County Road 107 Improvements**

- | 1st choice               | 2nd choice               |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - Multi-Use Path              |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - Separated Path              |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 3 - Pedestrian Path & Bike Lane |

**Highway 82 At-Grade Improvements**

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

**Highway 82 Over and Under Pass**

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - West Underpass |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - East Underpass |
- #1 ↓

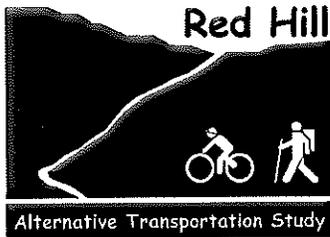
**River Crossing**

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - New Seperate Bridge on East Side |

Comments: Please try to add more parking. Perhaps west of existing parking. Please widen right turn when coming from down valley. Please widen road where people enter and leave CR 107 slip lane into existing parking then slip lane out of new parking (west)

Name: \_\_\_\_\_

\_\_\_\_\_



## Public Open House

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### What do you think?

Thank you. We appreciate your feedback!

#### County Road 107 Improvements

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - Multi-Use Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 3 - Pedestrian Path & Bike Lane |

#### Highway 82 At-Grade Improvements

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

#### Highway 82 Over and Under Pass

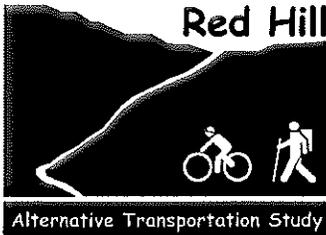
- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - West Overpass  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 3 - West Underpass |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Underpass |

#### River Crossing

- | 1st choice                              | 2nd choice                              |   |
|---|---|---|
| <input type="checkbox"/>                | <input type="checkbox"/> 3rd            | Option 1 - Widen Existing Sidewalk          |
| <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/> 2nd | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> 1st | <input type="checkbox"/>                | Option 3 - New Separate Bridge on East Side |

Comments: Adding additional parking and expanding the turn radius (road width) when turning right onto CO Rd 107 from up-valley would be ideal

Name: Mary Sundblom



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**What do you think?**  
 Thank you. We appreciate your feedback!

**County Road 107 Improvements**

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Multi-Use Path              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Separated Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - Pedestrian Path & Bike Lane |

**Highway 82 At-Grade Improvements**

- | 1st choice               | 2nd choice               |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |
- > neither*

**Highway 82 Over and Under Pass**

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - West Underpass |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - East Underpass |

**River Crossing**

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - New Seperate Bridge on East Side |

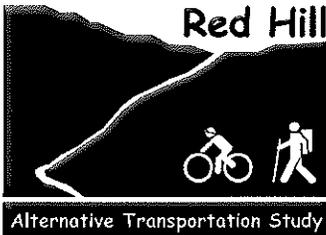
**Comments:**

- Extended parking lot on west side that connects with underpass on one side + a trail that links into the road towards the trail head

- Better turn access into existing parking lot going downvalley into Ch 107

- Red Hill trails are already overused + abused - If access is improved, trail use will increase. Need better management of trails - even separate bike/peds. perhaps more than one trail head

Name: P.J. Wallace



# Public Open House

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## What do you think?

Thank you. We appreciate your feedback!

### County Road 107 Improvements

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Multi-Use Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - Pedestrian Path & Bike Lane |

### Highway 82 At-Grade Improvements

*(this should be short-term solution)  
need to grade separate peds + bikes!*

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

### Highway 82 Over and Under Pass

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - West Underpass |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - East Underpass |
- 1<sup>st</sup> Choice w/ Option 2 on Cty Rd 107*

### River Crossing

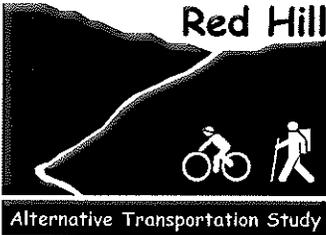
- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - New Seperate Bridge on East Side |

Comments:

*Option 2 - Cty Rd 107 would be enhanced by ① Overpass / ~~Underpass~~  
 Before major improvements do following:  
 \* Need for more trails & other access points other than  
 Cty Rd 107 because of over use! \* Need additional parking on  
 NW side of intersection. \* Possible exit to existing parking  
 lot from upvalley for safety access avoiding 180° turn @ intersection,*

Name:

*Michael Hutton*



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## What do you think?

Thank you. We appreciate your feedback!

### County Road 107 Improvements

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Multi-Use Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - Pedestrian Path & Bike Lane |

### Highway 82 At-Grade Improvements

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

### Highway 82 Over and Under Pass

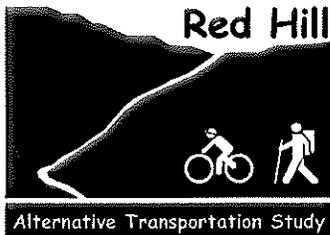
- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - West Underpass |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - East Underpass |

### River Crossing

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - New Separate Bridge on East Side |

Comments: I think any of these improvements would be much better than what is there now.  
 Thanks for working on all of those options!

Name: Helen Carlisen



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**What do you think?**

Thank you. We appreciate your feedback!

**County Road 107 Improvements**

- | 1st choice                          | 2nd choice               |  |
|-------------------------------------|--------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 1 - Multi-Use Path              |
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 2 - Separated Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Option 3 - Pedestrian Path & Bike Lane |

**Highway 82 At-Grade Improvements**

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

**Highway 82 Over and Under Pass**

- | 1st choice               | 2nd choice               |                           |
|--------------------------|--------------------------|---------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - West Overpass  |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - East Overpass  |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 3 - West Underpass |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - East Underpass |
- NO.*
- NEEDS TO BE COORDINATED W/ GATEWAY PARK REDEVELOPMENT.*

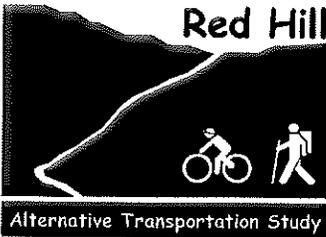
**River Crossing**

- | 1st choice                          | 2nd choice               |   |
|-------------------------------------|--------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Option 3 - New Seperate Bridge on East Side |

**Comments:**

- WOULD BE HELPFUL TO UNDERSTAND ORDER OF MAGNITUDE COSTS FOR EACH OPTION.
- IS THERE A PHASING SCENARIO THAT CORRESPONDS WITH DEVELOPMENT OF GATEWAY PARK? OR ARE BOTH PROJECTS BEING IMPLEMENTED SIMULTANEOUSLY?
- PREFERENCE WOULD BE A TWO-PHASED APPROACH: PHASE 1: AT GRADE CROSSING IMPROVEMENTS PHASE 2: (IN COMBINATION W/ REDEVELOPMENT OF PARK) RIVER CROSSING AND UNDERPASS TO ACCESS PARK AND RIVE and TRAILHEAD.

Name: PAUL SQUADRI TO.



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### What do you think?

Thank you. We appreciate your feedback!

#### County Road 107 Improvements

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Multi-Use Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - Pedestrian Path & Bike Lane |

#### Highway 82 At-Grade Improvements

- | 1st choice               | 2nd choice               |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

#### Highway 82 Over and Under Pass

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - West Underpass |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - East Underpass |

#### River Crossing

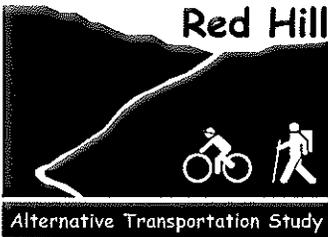
- | 1st choice                          | 2nd choice               |   |
|-------------------------------------|--------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 1 - Widen Existing Sidewalk          |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 3 - New Separate Bridge on East Side |

Comments:

① We need an easier turn from Hwy 82 westbound onto CR 107.

② We definitely need to separate vehicle traffic from pedestrians + bikes + dogs etc. I live up CR 107 and it's an issue every day.

Name: RIC QUISENBERAY 379-2073 ric@sopris.net



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**What do you think?**

Thank you. We appreciate your feedback!

**County Road 107 Improvements**

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Multi-Use Path              |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - Pedestrian Path & Bike Lane |

**Highway 82 At-Grade Improvements**

- | 1st choice               | 2nd choice               |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

**Highway 82 Over and Under Pass**

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - West Underpass |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - East Underpass |

**River Crossing**

- | 1st choice               | 2nd choice               |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 3 - New Separate Bridge on East Side |

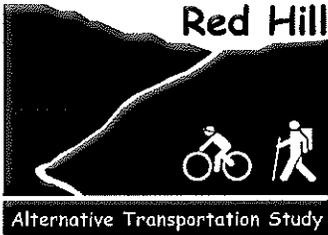
Comments:

① CDOT needs a large turn into "Radius" County Rd 107 - Cars can't turn off the Hwy 82. w/p backing up or moving forward.

② I live on County Rd 107 and there is going to be a serious accident - I have experienced near death experiences with pedestrians & bikers. There will be a major lawsuit if there is not an immediate solution.

Name:

Nancy Owsenberry 970 618-8797  
 Basalt Realty, Inc



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## What do you think?

Thank you. We appreciate your feedback!

### County Road 107 Improvements

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - Multi-Use Path              |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - Separated Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - Pedestrian Path & Bike Lane |

### Highway 82 At-Grade Improvements

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

### Highway 82 Over and Under Pass

- | 1st choice               | 2nd choice               |                           |
|--------------------------|--------------------------|---------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - West Overpass  |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - East Overpass  |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 3 - West Underpass |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - East Underpass |

*Not For Either*

### River Crossing

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - New Seperate Bridge on East Side |

Comments:

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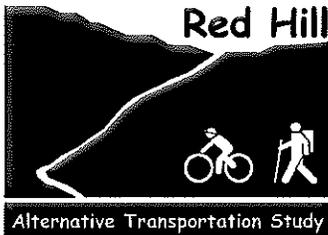
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Name:

*HOLZIS KERLER*



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### What do you think?

Thank you. We appreciate your feedback!

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#### County Road 107 Improvements

- | 1st choice                          | 2nd choice                          |  |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - Multi-Use Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 3 - Pedestrian Path & Bike Lane |

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#### Highway 82 At-Grade Improvements

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

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#### Highway 82 Over and Under Pass

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 2 - East Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 3 - West Underpass |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Underpass |

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#### River Crossing

- | 1st choice                          | 2nd choice                          |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 3 - New Seperate Bridge on East Side |

Comments:

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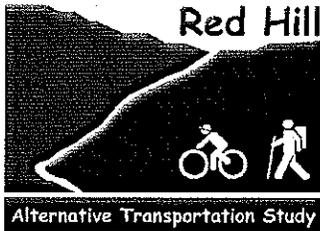
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---

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Name:

---



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**What do you think?**  
Thank you. We appreciate your feedback!

**County Road 107 Improvements**

- | 1st choice                          | 2nd choice               |  |
|-------------------------------------|--------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 1 - Multi-Use Path              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Option 2 - Separated Path              |
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 3 - Pedestrian Path & Bike Lane |

**Highway 82 At-Grade Improvements**

- | 1st choice               | 2nd choice               |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Option 1 - Speed Table with Enhanced Crosswalk/Crossbike    |
| <input type="checkbox"/> | <input type="checkbox"/> | Option 2 - Enhanced Crosswalk with Pedestrian Refuge Island |

**Highway 82 Over and Under Pass**

- | 1st choice                          | 2nd choice                          |                           |
|-------------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 1 - West Overpass  |
| <input type="checkbox"/>            | <input type="checkbox"/>            | Option 2 - East Overpass  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Option 3 - West Underpass |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Option 2 - East Underpass |

**River Crossing**

- | 1st choice                          | 2nd choice               |   |
|-------------------------------------|--------------------------|---|
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 1 - Widen Existing Sidewalk          |
| <input type="checkbox"/>            | <input type="checkbox"/> | Option 2 - Attach New Structure to Bridge   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Option 3 - New Separate Bridge on East Side |

Comments:

*Concerned that people will not  
the separated trail as much as  
the more direct on-road route.*

Name:

*Tamara via phone call*



## Appendix E: Acknowledgements

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# Acknowledgements

The Town of Carbondale, Stakeholder Group and Planning Team would like to thank everyone that contributed time and ideas to this process. Every project has a unique history and issues that cannot be understood without the input of managing entities and everyday users. Thank you.

## **Town of Carbondale:**

Jeff Jackel  
Recreation Director

## **Garfield County:**

Tamra Allen  
Planning Manager

## **Stakeholder Group:**

Town of Carbondale Board of Trustees – Elizabeth Murphy, John Hoffmann  
Garfield County Board of County Commissioners – Tom Jankovsky  
Roaring Fork Transit Authority (RFTA) - David Johnson, Jason White  
Colorado Department of Transportation (CDOT) – Joe Elsen  
Bureau of Land Management (BLM) - Greg Wolfgang, Jack Placchi, John McCarty  
Red Hill Council - Davis Farrar  
Red Hill Neighborhood – Sharon Boucher

## **Planning Team:**

Otak  
Kate Schwarzler  
Cliff Lind  
Linda Schuemaker

Alta Planning + Design  
Josh Mehlem  
Brett Hussong

Felsburg Holt & Ullevig  
Holly Buck  
Bill Marcato

Sopris Engineering  
Mark Beckler

RMES, Inc.  
Eric Pettersen

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[www.otak.com](http://www.otak.com)

1821 Blake Street, Suite 3B  
Denver, Colorado 80202

