



Upper Kingsbury Toll Road

Pony Express National Historic Trail Conceptual Plan





"Van Sickle, who helped finance the road, eventually acquired it and sold it to Douglas County in 1889 for \$1000."

Kingsbury Grade Road Marker

Upper Kingsbury Toll Road

Pony Express National Historic Trail Conceptual Plan

Douglas County, NV

Produced by:
National Park Service

National Trails Intermountain Region &
Rivers, Trails, and Conservation Assistance Program

In partnership with:
Douglas County, Nevada



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Introduction

This plan outlines a conceptual design for a 2.5 mile segment of the Pony Express National Historic Trail along the route of the Kingsbury Toll Road in Douglas County, Nevada. Development of a retracement trail along this corridor would provide visitors a vicarious experience of the trail’s historic route through a pristine and evocative landscape. Beyond its historic significance, the trail represents a key link in strengthening recreational opportunities between Carson Valley and Lake Tahoe Basin.

What is a National Historic Trail?

As the Pony Express National Historic Trail website notes: “Much like a national park, a national historic trail is created by an act of Congress. National historic trails are congressionally designated official routes that reflect the research, review, and recommendation of many trail experts.

National historic trails commemorate historic trade, migration, and other routes important to American culture.” (<https://www.nps.gov/poex/faqs.htm> Accessed 11:45am MDT March 20, 2018)

While national historic trails typically cannot be traveled continuously from end to end today—due to changes in land use and ownership since their original period of use—there are still many historic trail places that can be visited or trail segments that can be followed in a vehicle or on foot, bicycle, or horseback. The trail proposed in this document would become one of those segments.

Regional Context

The Pony Express was a 1,900-mile overland mail system that operated between Saint Joseph, Missouri and San Francisco, California from April 1860 to November 1861. During the first six weeks of operation, the Pony Express route travelled through Douglas County from Carson City to

Genoa, and then continued south to Woodfords Station trekking over Luther Pass and on to Sacramento. For the remaining months of operation, the Pony Express route followed an improved trail from Genoa up and over the Kingsbury McDonald Toll Road to Friday’s Station near the Nevada-California border in Stateline before continuing on to Sacramento. This route generally runs parallel to modern Kingsbury Grade (State Route 207).

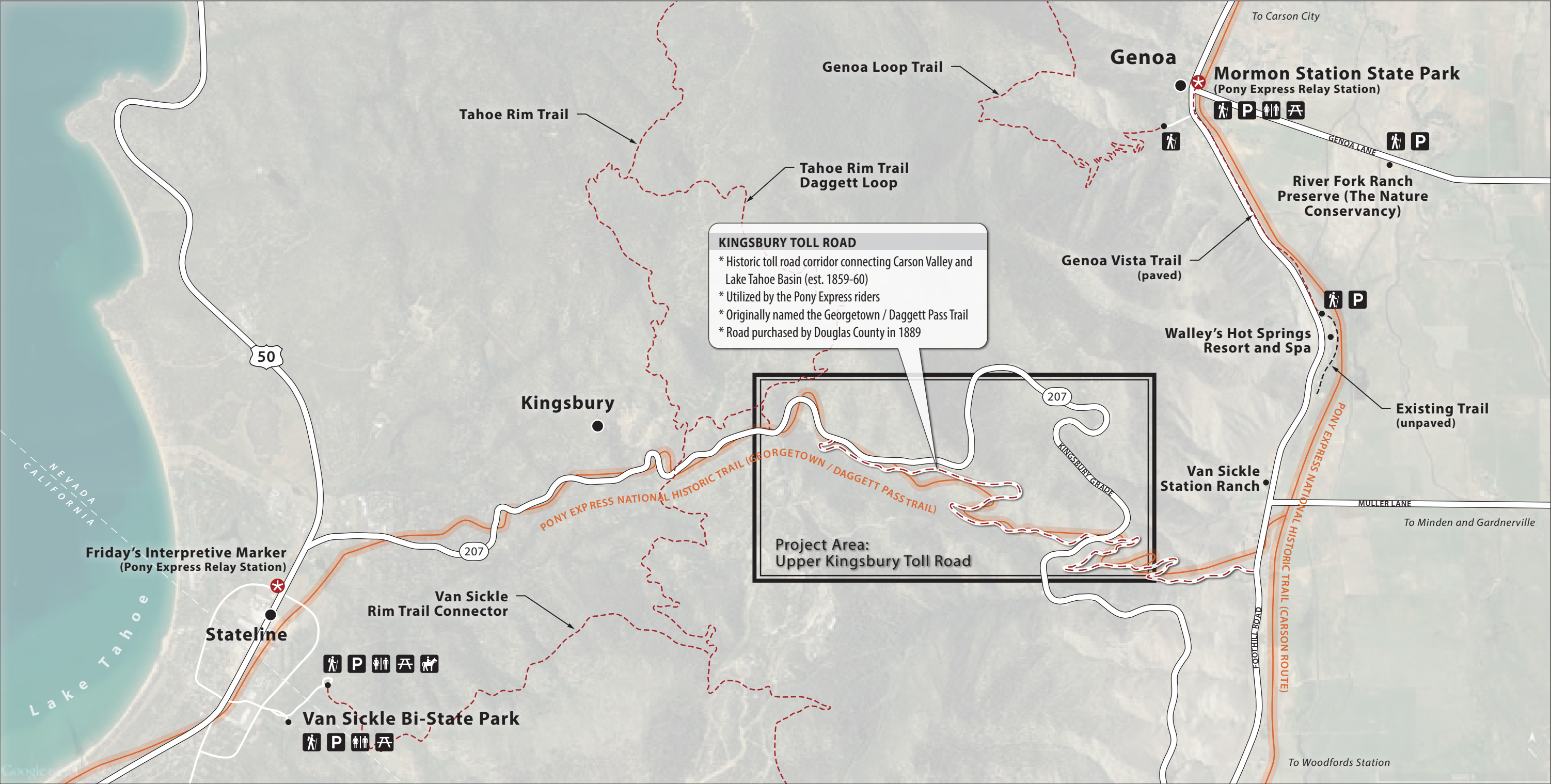
Numerous Pony Express stations were positioned along the entire route from Missouri to California, but none were located between the valley floor and Daggett Summit. Pony Express riders through this section of the route were supported by Mormon Station in Genoa and then Friday’s Station in Stateline, approximately 11 miles apart. Traversing this section of the trail was challenging, with riders and their horses climbing from an elevation of approximately 4700’ at the valley floor to over 7400’ near Daggett Summit in a little over 3 miles.

Pony Express National Historic Trail





Existing Conditions Regional Context Map



	Pony Express National Historic Trail		Trailhead		Seating / Picnic Area
	Kingsbury Grade Toll Road		Parking		Equestrian Facilities
	Existing Trail		Restroom Facilities		Pony Express Relay Station

0 0.5 1.0 2.0 mi

NOTE: Map illustrations and trail alignments are conceptual for illustrative/planning purposes only

North



The area is characterized by steep, pine-studded mountain slopes and canyons with spectacular vistas of the Carson Valley and distant Pine Nut Mountains and other quintessential Basin and Range features. Traversing this landscape, the Pony Express corridor intersects with several notable natural, historic, and recreational resources. Near Daggett Summit, the Pony Express corridor crosses the Tahoe Rim Trail which, in turn, circles the entire Lake Tahoe Basin. Above the west shore of Lake Tahoe, the Tahoe Rim Trail links up with the Pacific Crest Trail which runs the length of the west coast from Mexico to Canada. Closer by, the Tahoe Rim Trail connects to the Van Sickle trail and Van Sickle Bi-State Park, providing access to Stateline resorts and attractions.

Along Carson Valley, the Pony Express route passes through a mix of urban, open space, and agricultural land uses. The towns of Genoa, Gardnerville, and Minden are all within 5 miles of the trail corridor, with the Pony Express passing right through the historic town of Genoa—site of Nevada’s first settlement commemorated by Mormon Station State Park—and continuing farther north to Carson City, Nevada’s state capital.

Project Purpose and Background

In 1889, Douglas County purchased the historic Kingsbury McDonald Toll Road used by the Pony Express riders. The old toll road was in use well into the 20th century, and was paved with asphalt in the 1960’s before being abandoned in favor of a new alignment for then Nevada State Route 19 (later renamed SR 207) shortly thereafter. Due to the years of grading, addition of asphalt paving, and other modifications over the years, there is very limited possibility of any archaeological artifacts or other Pony Express era remnants remaining within the Douglas County right of way. The route is listed in the County Trails Plan as an historic trail but has never been developed or improved for recreational use.

Douglas County has been working for a number of years to enhance the quality of life for its residents and visitors and increase opportunities for tourism and economic growth and development. In particular, the county has worked with local partners, stakeholders, and regional recreational enthusiasts to expand the network of high-quality, multiuse trails

“To create a system of open space areas and linkages throughout the county that protects the natural and visual character of the county, provides contiguous wildlife corridors, and provides for appropriate active and passive recreational uses.”

– Douglas County Master Plan (2011), Parks and Recreation Element, Goal 2

throughout the county. Several new trails were developed in recent years including the Genoa Vista Trail and Stateline-to-Stateline bikeway with demonstrable economic benefits to the county. In addition, the county is working to identify possible routes and shared uses for development of a recreational trail alignment of the Pony Express National Historic Trail.

In 2015, staff from the National Park Service (NPS) – National Trails Intermountain Region (NTIR) office (Santa Fe, NM) toured portions of the Pony Express National Historic Trail in Douglas County, meeting with partners from Nevada State Parks, Oregon-California Trails Association, and Legacy Land and Water (a private consulting firm). Impressed by the quality and character of setting, and the potential for highlighting such a pristine segment of national trail with significant historic value, the representatives from NPS encouraged Douglas County to pursue a project to commemorate and promote preservation, interpretation, and appreciation of the Pony Express Trail. NPS staff specifically recommended looking at opportunities along the Kingsbury Grade portion of the trail.

In keeping with these recommendations, Douglas County identified the upper portion of the Kingsbury McDonald Toll Road for potential multiuse recreation and interpretive trail development. This roughly 2.5 mile corridor running east of Daggett Summit to State Route 207 has the advantage of being owned by the county and crossing few adjacent land parcels. To assist in moving forward with planning of this segment of the trail, the county submitted an application for technical assistance from the NPS’s Rivers, Trails, and Conservation Assistance (RTCA) program.

In October 2016, RTCA awarded Douglas County a technical assistance grant to work in collaboration with land owners, community partners and stakeholders, and NPS staff from NTIR in the development of a conceptual plan for the Upper Kingsbury Toll Road segment of the Pony Express National Historic Trail.

This plan explores the development of a retracement trail that creates a vicarious experience for visitors to understand and appreciate the trail’s history and significance. It provides a conceptual vision for the trail, illustrating trail access, routing, and signage concepts; addressing safe

crossings of the Kingsbury Grade; and accommodating recreational use by hikers, equestrians, bicyclists, and other outdoor enthusiasts.

Overall, it is a concept for trail development that seeks to strengthen the connection between the Valley and Lake Tahoe Basin and encourage economic development associated with increased recreational activity.



Commemorative Pony Express monument in Stateline, NV



National Trails System Act and National Historic Trails

National historic trails are part of the National Trails System, designated by the United States Congress by amendments to the National Trails System Act (NTSA) (16USC1241, 1968.) The NTSA’s stated purpose is: “. . .to provide for the ever-increasing outdoor recreation needs of an expanding population and in order to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation, trails should be established (i) primarily, near the urban areas of the Nation, and (ii) secondarily, within scenic areas and along historic travel routes of the Nation which are often more remotely located” [16USC1241 Sec2(a)].

According to the act: “National historic trails. . .will be extended trails which follow as closely as possible and practicable the original trails or routes of travel of national historic significance. . . .National historic trails shall have as their purpose the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment” [16USC1241 Sec3(a)(3)].

In addition, the act recognizes the key role volunteers and non-federal partners play in trail work, and identifies as an additional purpose of the act to “assist volunteer citizen involvement in the planning, development, maintenance, and management, where appropriate, of trails” [16USC1241 Sec2(c)].

The NTSA also outlines the criteria which a route must meet for eligibility as a national historic trail. As broadly defined:

- “It must be a trail or route established by historic use and must be historically significant as a result of that use.”



Friday’s Station historic marker

- “It must be of national significance with respect to any of several broad facets of American history, such as trade and commerce, exploration, migration and settlement, or military campaigns. To qualify as nationally significant, historic use of the trail must have had a far reaching effect on broad patterns of American culture.”
- “It must have significant potential for public recreational use or historical interest based on historic interpretation and appreciation.”



Auto tour route sign post for the Pony Express and California trails

Please see 16USC1241 Sec5(b)11a–c for the full descriptions of these criteria.

Nine of the nineteen national historic trails (NHTs) that are currently part of the National Trails System are administered or co-administered by NTIR-NPS, in partnership with many federal, state, local, and non-governmental entities. Among these is the trail being considered in this project, the Pony Express National Historic Trail.

Historic Significance

The historic trail was in use from April of 1860 to November of 1861, between Saint Joseph, Missouri and San Francisco, California. It was designated an NHT in 1992. The trail’s Comprehensive Management Plan (1999) states: “The trail is significant because:

- the Pony Express proved the viability of a central United States overland communication system and was a forerunner of a transcontinental telegraph and railroad
- the Pony Express required organizational skills to join the populous East and the West
- the horse-and-rider relay system used by the Pony Express became the nation’s most direct and fastest means of east-west communications before completion of the telegraph system
- the Pony Express played a vital role in aligning California with the Union by providing a link between the eastern states and California just before the Civil War; it allowed westerners to develop and maintain a sense of contact with the East at a critical time in United States history
- the Pony Express made important contributions to journalism, commerce, and personal domestic and international communication by providing news and original documents in a timely manner
- the lone riders and isolated stations became a lasting image of the West.”



Planning Vision and Goals

Through input and engagement with project stakeholders and partners, and based on findings from site visits, the project team identified the following planning vision and goals to guide site design and project development.

Vision

The upper Kingsbury Toll Road is recognized as an iconic component of the Pony Express National Historic Trail, providing residents and visitors an inspiring and meaningful trail experience of national significance.

Goals

- 1. CREATE A VICARIOUS EXPERIENCE FOR VISITORS TO UNDERSTAND, ENJOY, AND APPRECIATE THE TRAIL’S HISTORY AND SIGNIFICANCE

Strategies:

- a. Provide an opportunity to retrace the historic route and experience its resources firsthand
- b. Connect visitors to the experience that Pony Express riders endured along the trail
- c. Incorporate distinct features and character-defining elements that set apart a national historic trail

- 2. INCREASE RECREATIONAL OPPORTUNITIES FOR RESIDENTS AND VISITORS, BUILDING UPON THE NETWORK OF EXISTING TRAILS AND REGIONAL DESTINATIONS AND STRENGTHENING THE CONNECTION BETWEEN CARSON VALLEY AND LAKE TAHOE BASIN

Strategies:

- a. Develop a 2.5 mile multiuse recreational trail along the Upper Kingsbury Toll Road that accommodates hikers, equestrians, bicyclists, and other outdoor enthusiasts
- b. Establish safe and improved access to and from the identified trail corridor
- c. Identify opportunities to develop and/or improve links to other regional trails and destinations
- d. Develop comprehensive orientation, wayfinding signage, and trail amenities to support a variety of recreational uses

- 3. DEVELOP AND ESTABLISH THE TRAIL AS A READILY IDENTIFIABLE COMMUNITY ASSET

Strategies:

- a. Encourage economic development activity related to outdoor recreation and heritage tourism
- b. Provide for safe recreational activities that promote healthy lifestyles and community livability
- c. Publicize and brand the Pony Express trail as a regional destination

- 4. PRESERVE AND PROTECT THE UPPER KINGSBURY TOLL ROAD’S HISTORIC AND CULTURAL RESOURCES ASSOCIATED WITH THE PONY EXPRES NATIONAL HISTORIC TRAIL

Strategies:

- a. Identify and preserve authentic trail resources, sites, and segments, where applicable
- b. Address erosion, drainage, and stormwater management issues along the trail corridor

- 5. INTERPRET THE HISTORY AND SIGNIFICANCE OF THE PONY EXPRESS TRAIL TO ENCOURAGE UNDERSTANDING AND APPRECIATION FOR ITS RELEVANCE TO THE REGION AND COUNTRY

Strategies:

- a. Provide clear and engaging interpretive messaging and materials about the trail and its resources
- b. Provide support for educational programs, special events, and activities on the trail

- 6. FOSTER COOPERATIVE PARTNERSHIPS AND FUNDING STRATEGIES FOR DEVELOPING AND MAINTAINING THE COUNTY’S PONY EXPRESS NATIONAL HISTORIC TRAIL FACILITIES

Strategies:

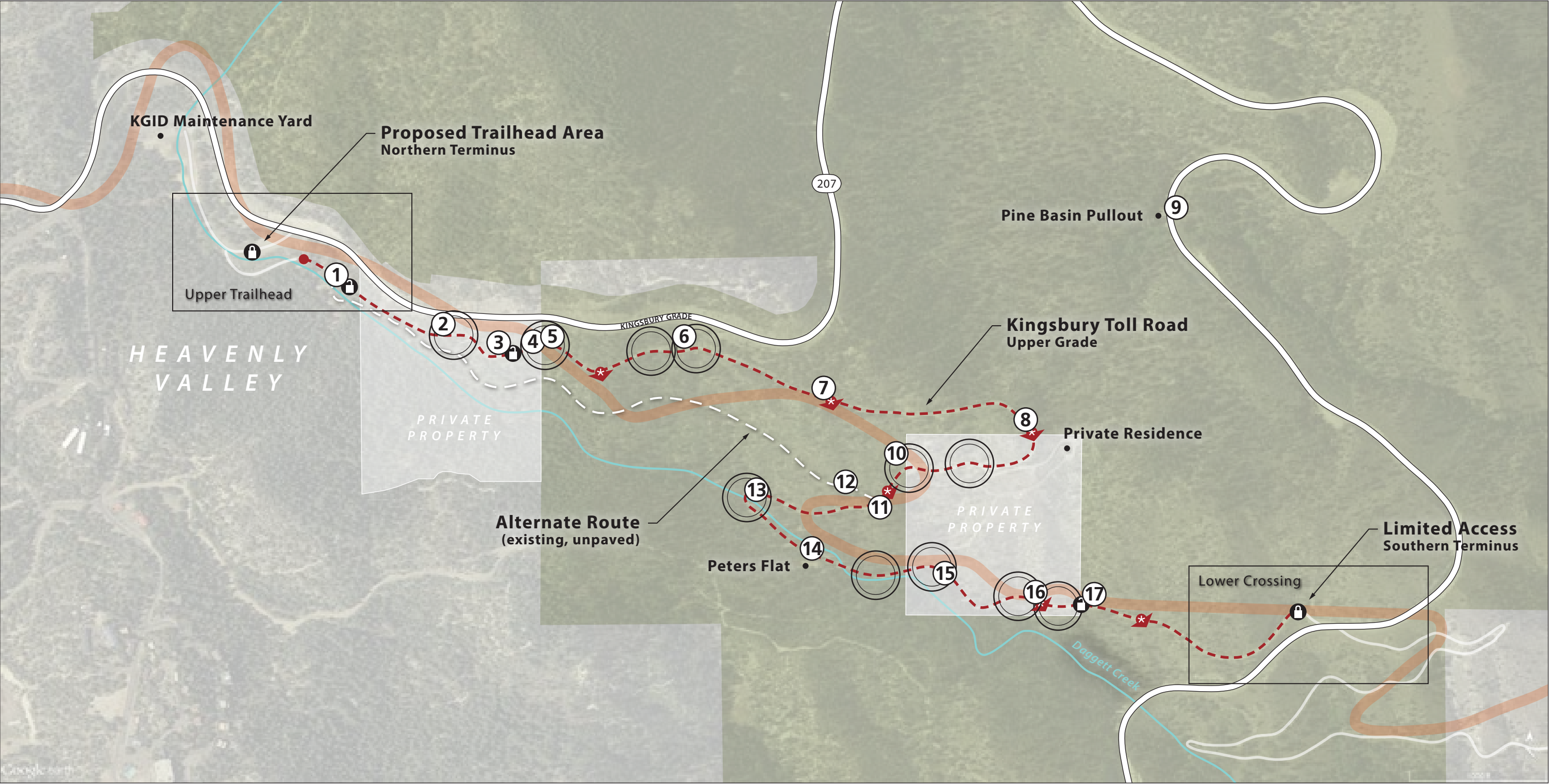
- a. Engage a broad coalition of community partners, stakeholders, and land owners/managers in trail planning and development
- b. Build consensus among partners on trail access, routing, development, and funding strategies

Site Analysis and Project Planning





Upper Kingsbury Toll Road Existing Conditions Inventory Map



- | | | | | | |
|--|--------------------------------------|--|---------------------------|--|-------------------|
| | Pony Express National Historic Trail | | Roadway Erosion / Washout | | US Forest Service |
| | Kingsbury Toll Road Corridor | | Gate (locked / unlocked) | | |
| | Alternate Route | | Notable Vista Point | | |

NOTE: Map illustrations and trail alignments are conceptual for illustrative/planning purposes only



Photo Inventory and Analysis | Upper Kingsbury Toll Road Alignment

Summary Assessment: Road corridor closely follows the historic alignment of the Pony Express National Historic Trail through pristine landscapes with stunning vistas

The Upper Kingsbury Toll Road corridor closely follows the historic route of the Pony Express National Historic Trail, representing an unprecedented opportunity to provide an incredible and unique opportunity for trail users to experience vicariously the settings and conditions of the historic corridor. The trail is characterized by stunning vistas through a pristine mountain landscape where interpretive media could bring to life the story of the Pony Express and its riders. However, significant issues with drainage and erosion need to be addressed across the existing road corridor if a range of users is to be accommodated and the potential of the Pony Express NHT in this location is to be fully realized.



1 Gate where the Kingsbury Grade Toll Road provides public access through an existing private parcel.



2 Recently graded road surface after winter storm erosion across the trail.



3 Typical roadway conditions are characterized by a flat asphalt surface with varying degrees of hillside erosion.



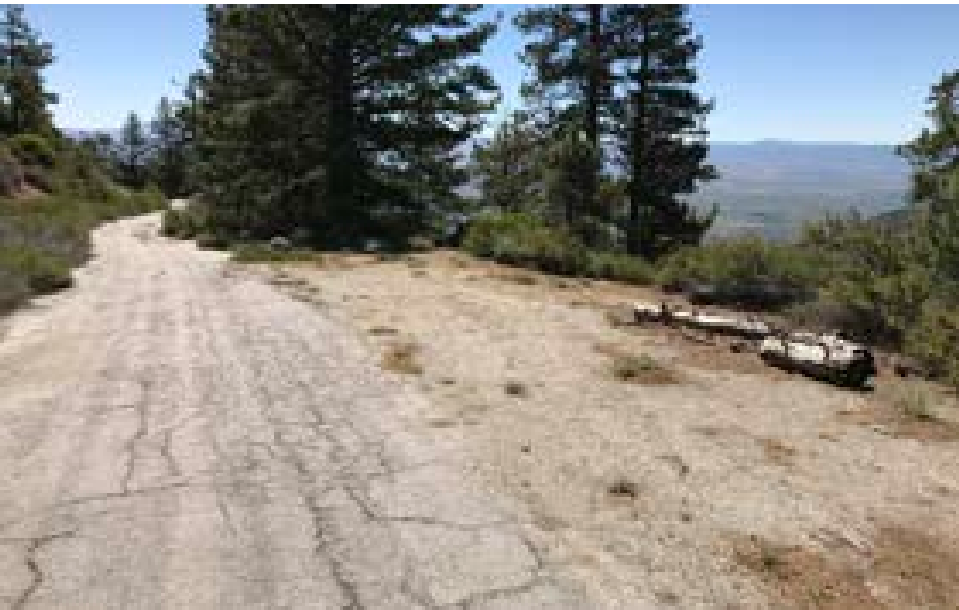
4 Area where the roadway corridor has been reinforced with an engineered retaining wall.



5 Newly surfaced asphalt treatment where winter storm erosion washed away the roadway corridor.



6 Typical impacts from erosion where drainage off of the hillside degrades the asphalt surface over time.



7 Stunning vista where interpretive media and trailside amenities could be developed.



8 Overlooking the valley to the east where trailside amenities could be developed.



9 Pullout area at Pine Basin where a trail connector to the Kingsbury Grade could be established.



10 Significant erosion of the roadway corridor from winter storm runoff.



11 Entry to an alternative trail corridor running parallel to the upper portion of the Kingsbury Grade corridor.



12 Looking west along the distinctly visible alternate cutoff route to the Kingsbury Grade corridor.



13 Runoff from the adjacent hillsides moves across the Kingsbury Grade corridor, eroding the road surface.



14 Looking east along Kingsbury Grade Toll Road where Peters Flat intersects with the trail to the right.



15 Severe trail tread erosion where multiple culverts have been placed to facilitate drainage.



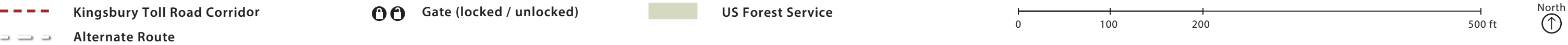
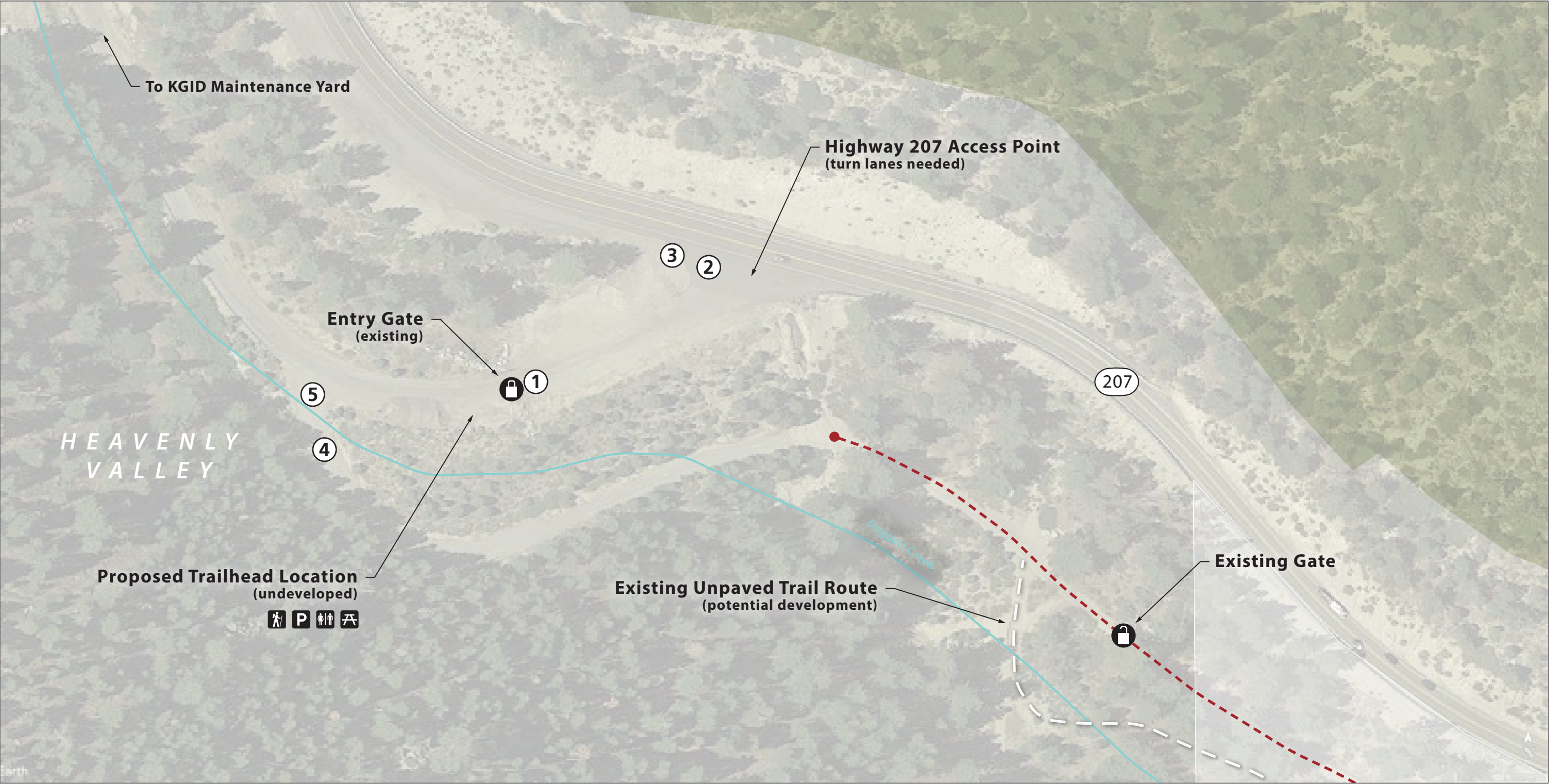
16 Vista point along the lower portion of the Kingsbury Grade corridor.



17 Degraded asphalt roadway from insufficient drainage and maintenance.



Upper Trailhead Existing Conditions Inventory Map



NOTE: Map illustrations and trail alignments are conceptual for illustrative/planning purposes only



Photo Inventory and Analysis | Upper Trailhead

Summary Assessment: Access point with room for development of a fully-featured trailhead and improvements to SR 207 to allow for turning lanes in and out of the trail access point

The upper trailhead access point represents an area where full trailhead features and amenities could be developed, supporting trail users along the Pony Express National Historic Trail as well as those traveling along the nearby Tahoe Rim Trail. The area has a large road right-of-way presenting opportunities for improving the SR 207 roadway corridor to accommodate turning lanes in and out of the trailhead access point. Consideration will need to be given to securing the entry to KGID’s maintenance yard to the north of this location if trail access is to be provided here.



1 Entry gate at the upper trailhead access point looking in towards area where trailhead facilities could be developed.



2 Looking north along SR 207 where existing right-of-way can be improved to accommodate a turning lane.



3 Looking west across the SR 207 access point towards the gated trail entry.



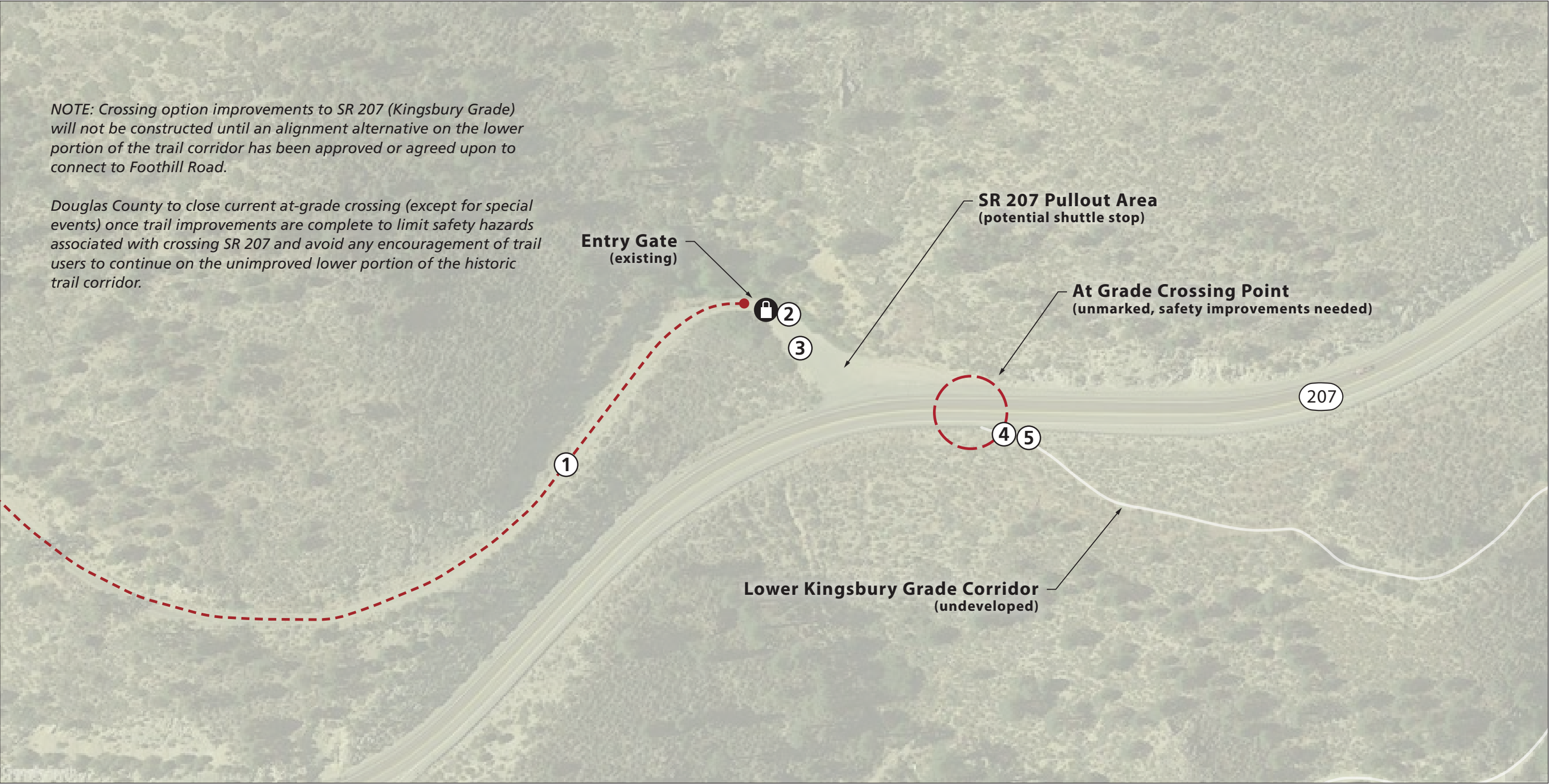
4 View of the entry to the Upper Kingsbury Grade trail corridor.



5 View looking north along the road leading to the KGID maintenance yard from the trail access point.



Lower Crossing Existing Conditions Inventory Map



Kingsbury Toll Road Corridor

Gate (locked / unlocked)

US Forest Service

0

100

200

500 ft

North

NOTE: Map illustrations and trail alignments are conceptual for illustrative/planning purposes only



Photo Inventory and Analysis | Lower Crossing

Summary Assessment: Limited room for establishing a full trailhead access point and challenges associated with crossing SR 207

The lower SR 207 crossing point presents several unique design challenges for trail development. The pullout area off of the roadway does not provide adequate space to develop a fully-functioning trailhead access point for the Upper Kingsbury Grade segment of the Pony Express National Historic Trail. At the same time, the current trail crosses the highway at grade presenting significant safety concerns for future trail users. Likely, this area should be considered a secondary trail access point with improvements focused on providing safe crossing of the roadway corridor for hikers, bicyclists, and equestrians. Consideration should be given to the development of a roadway underpass and/or overpass, perhaps re-routing the trail to an area better suited for such design solutions. The pullout area could potentially support the establishment of a transit shuttle stop, providing user access to existing Park-n-Ride facilities at the base of the mountain.



1 View overlooking SR 207 where the trail corridor continues at grade across the roadway at a blind curve.



2 Entry gate at the lower crossing point with runoff from the adjacent hillside eroding the existing trail tread.



3 Looking east from the SR 207 pullout where space limits development of full trailhead facilities.



4 View looking across the dangerous SR 207 at grade crossing to the Upper Kingsbury Grade entry gate.



5 View looking east towards the valley where the Lower Kingsbury Grade corridor continues down to Foothill Rd.



Stakeholder Outreach

Summary of Partner Engagement

Working with representatives from the National Park Service, Douglas County reached out to a broad coalition of community partners, stakeholders, land owners, agencies, and land managers to build awareness of the project and gather input on overall opportunities, challenges, interests, and potential issues. Many of the partners and stakeholders participated in a series of hour-long, in-person outreach meetings beginning in the spring of 2017. The preliminary round of meetings coincided with the annual meeting of the Carson Valley Trails Association, providing the team an opportunity to present on the project at that gathering.

Additional conference call meetings were held with partners unable to attend the in-person meetings, as well as continued dialogue was maintained with private landowners residing along the lower segment of the Kingsbury Toll Road (building on previous outreach conducted by the county and Legacy Land and Water).

In all, more than 20 outreach meetings were held with dozens of project stakeholders, community partners, and agency representatives, including:

- Back Country Horsemen / Nevada All State Trail Riders
- Carson Valley Chamber of Commerce
- Carson Valley Trails Association
- Carson Valley Visitors Authority
- Heavenly Mountain Resort
- Kingsbury General Improvement District
- Lake Tahoe South Shore Chamber of Commerce
- Lake Tahoe Visitors Authority
- National Pony Express Association, Nevada Chapter
- Nevada State Historic Preservation Office
- Nevada State Parks
- Nevada Department of Transportation
- Private Landowners
- Tahoe Metropolitan Transportation Organization
- Tahoe Regional Planning Agency
- Tahoe Revitalization Economic Vitality Champion
- Tahoe Rim Trail Association
- Tahoe Transportation District
- Tremendous Trails and Outdoor Experiences Champions
- US Forest Service, Carson Ranger District
- US Forest Service, Lake Tahoe Basin Management Unit



Sharing project updates at the annual Carson Valley Trails Association meeting

These efforts were considered a critical first step in the planning process and one that would help the county begin to establish agreement on trail access, routing, and future development. It was also key in the identification of project planning goals and design strategies which have informed the concepts illustrated in this plan document.

Opportunities and Challenges

Based on input and observations provided by project partners and stakeholders, the project team developed the following summary of over-arching project opportunities and challenges to be considered in project planning and development.

Summary of Opportunities

- Trail improvements can help preserve, protect, and stabilize the Kingsbury Grade road corridor and any associated historic and cultural resources
- Developing the trail segment can support opportunities for connections to other surrounding trails and recreational destinations
- The Upper Kingsbury Grade segment of the Pony Express National Historic Trail can serve as a key link to help strengthen the “Valley to Lake Tahoe Basin” connection
- Development of the trail segment can increase safety by providing an alternative for bicyclists traveling along Route 207
- Trail development can strengthen partnership opportunities and collaboration between Douglas County and several key partners and local stakeholders
- The designation of the Kingsbury Grade corridor as a Shared-Use Path in NDOT’s Douglas County Bicycle Plan (2014) facilitates project planning, development, and funding
- Project development potentially can be supported through a broad range of funding sources, including federal transportation funds and historic preservation resources
- A well-designed, multi-use trail corridor can support and enhance a variety of recreational activities year round, as well as interpretive programming and events (e.g. including the Pony Express Re-Ride event)
- The County’s ownership of a 20’ wide corridor along Kingsbury Grade offers potential for accommodating multiple uses, as well as emergency and utility vehicle access, while addressing stormwater management issues
- Existing utility infrastructure (water and power) and an expanded right-of-way at the trail’s upper access point provides an opportunity for trailhead development that can support a range of trail users and enhance facilities available to adjacent land owners (e.g. restrooms, parking, trash, etc.)
- Development of the trail segment can promote tourism, support local businesses, and enhance economic development opportunities
- Existing bus service along Route 207 can support visitor access to/from designated trail entry point(s) along the Kingsbury Grade corridor with nearby Park-n-Ride facilities
- The trail corridor’s pristine setting and close proximity to the historic route alignment of the Pony Express Trail offers visitors a unique opportunity to deepen their understanding of, and connection to, the significance of the region’s history to the nation’s westward expansion



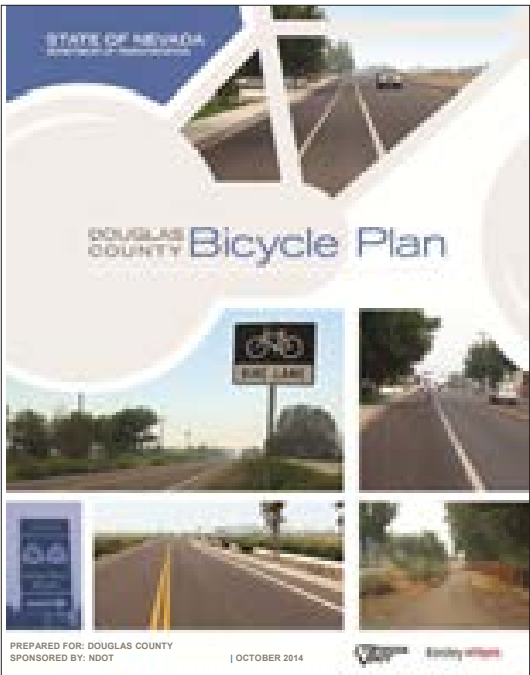
Key Opportunities



Capitalize on existing infrastructure and an expanded right-of-way to develop a formal trailhead access point with a range of support features and amenities



Connect visitors to the story of the Pony Express in a pristine natural setting



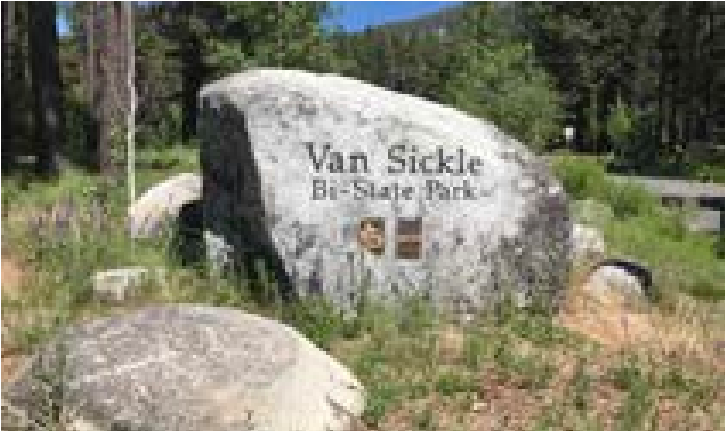
Leverage existing designation as a shared-use path for funding and development



Stabilize the road corridor and protect resources



Leverage existing transit services to expand access to the project site



Link to other regional destinations and strengthen the Valley to Lake Tahoe Basin connection



Promote and increase recreational opportunities, tourism, and economic development



Re-purpose existing roadway corridor owned by the county to support multiple recreational uses



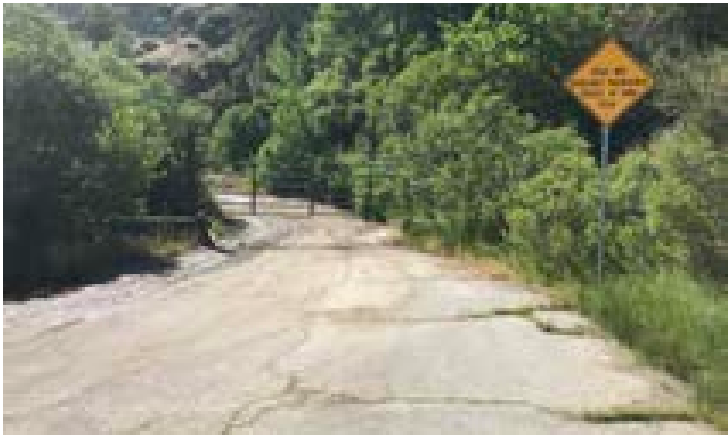
Summary of Challenges

- The location of the trail segment is prone to fire and serves as a staging area for local search and rescue activities, requiring a trail design that maintains access for emergency and utility vehicles
- Poor drainage, erosion, and frequent washouts from rain require a trail design that integrates advanced stormwater management best practices
- The trail corridor will need to accommodate a wide range of potential uses and user groups likely requiring multiple trail surfaces for different purposes
- Trail features/amenities and signage will need to accommodate multiple user groups (e.g. hiking, biking, equestrian)
- The narrow right-of-way and blind turns at the trail’s lower crossing with Route 207 limits the feasibility for developing a formal trail access point at that location and likely requires development of an under/over-pass to accommodate safe crossings for multiple user groups, including equestrians
- Traffic and roadway conditions on Route 207 at the trail’s upper trailhead access point likely requires establishment of a deceleration / turn lane for vehicle entry
- Trail access point locations will necessitate partnership planning and agreements (e.g. w/ NDOT) to allow for safe, appropriate user access and trailhead facility development
- Trailhead facilities adjacent to other agency or private lands will need to be properly signed and secured to avoid impacts to existing operations or compromising security of private property
- Potential conflicts between multiple users of the trail corridor will need to be mitigated as best as possible through appropriate signage and effective trail design and management
- Varying use restrictions in adjacent recreational lands and other nearby trail networks can create conditions for user conflicts without proper signage and education
- Without additional trail links or loop trail development, the Upper Kingsbury Grade segment of the Pony Express National Historic Trail sits as a stand-alone, isolated trail segment with limited access points
- The steep and persistent elevation change from one end of the trail to the other can limit its use, function, and desirability
- Potential connections to existing and proposed regional trail networks are not well-defined or clearly feasible
- Gated access to the trail at both ends will likely be required to restrict non-administrative vehicular use
- The historic road corridor has not been fully assessed for historic and cultural integrity

Key Challenges



Persistent erosion and drainage issues pose significant design challenges



Limited feasibility to develop a trailhead entry point at the lower 207 junction restricts access



Securing private property while providing public access requires carefully designed gate controls and clear signage



Blind turns and a narrow right-of-way at the lower SR 207 junction requires costly design interventions to cross



Adjacent property ownership and use restrictions require clear and consistent signage and wayfinding to avoid trespass and user conflicts

Trail Context and Design Concepts





General Trail Design Treatment

Within the 20 foot wide right of way owned by Douglas County, this trail conceptual design proposes both to accommodate various user types and retain all runoff generated by the trail itself. It also attempts to address varying slope and soil conditions, and potential runoff situations, related to the surrounding area and the trail’s location in the larger landscape. The standard cross section includes:

- a 5-6 foot wide soft surface trail for equestrians and, as applicable, pedestrians
- an 11-12 foot wide asphalt lane serving road bikes, strollers, wheelchairs, rollerbladers and other non-motorized wheeled transportation, as well as limited vehicular traffic
- a 1.5-3 foot wide French drain between the two trail types, with or without perforated pipe for storage, which both catches runoff from the trail surface and serves as a buffer between different user groups

As a variation to the standard trail treatment, a 1’ diameter perforated pipe can be included in the French drain feature to accomodate additional runoff capacity at locations that experience concentrated drainage from surrounding hillsides. This also would allow for a slightly wider soft surface trail, and/or retaining walls or other features needed in specialized cases (see additional cross sections on the following pages.)

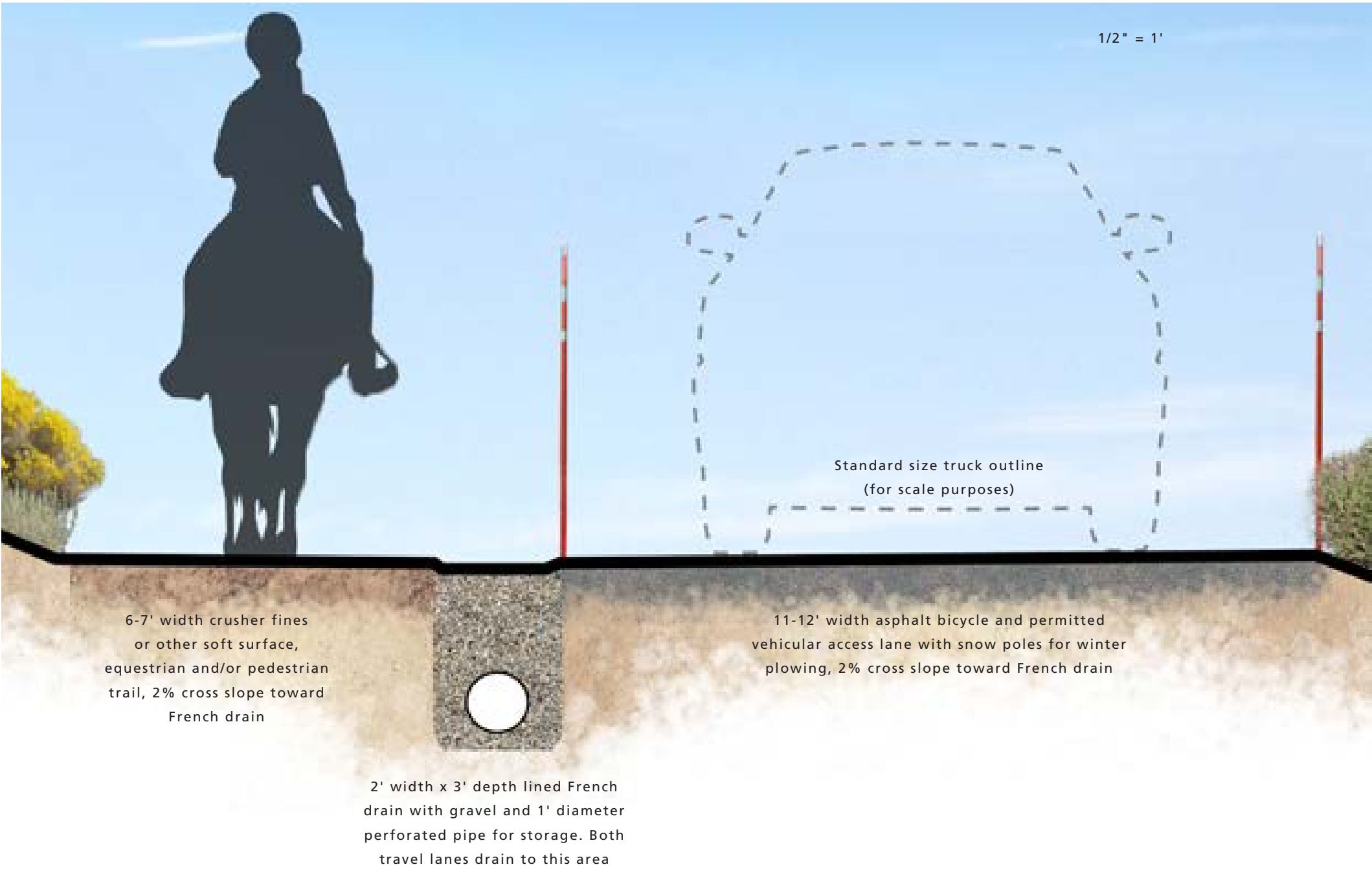
Standard Cross Section



Typical trail courtesy and cautionary signage placed along the trail corridor improves trail user safety and helps mitigate user conflicts



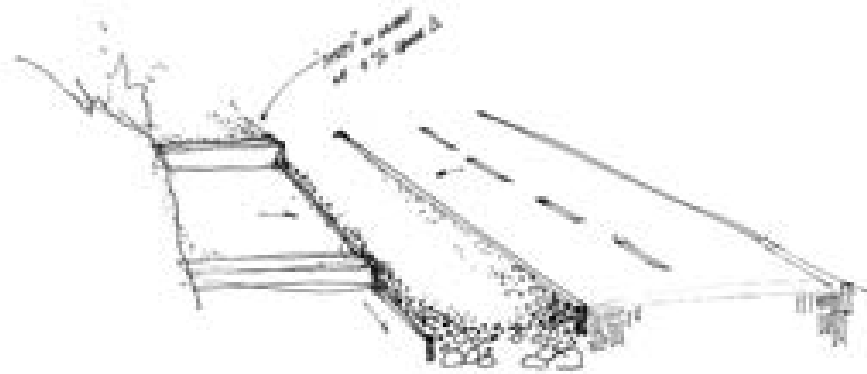
Standard Cross Section, Perforated Pipe Alternative



Conceptual Trail Treatments



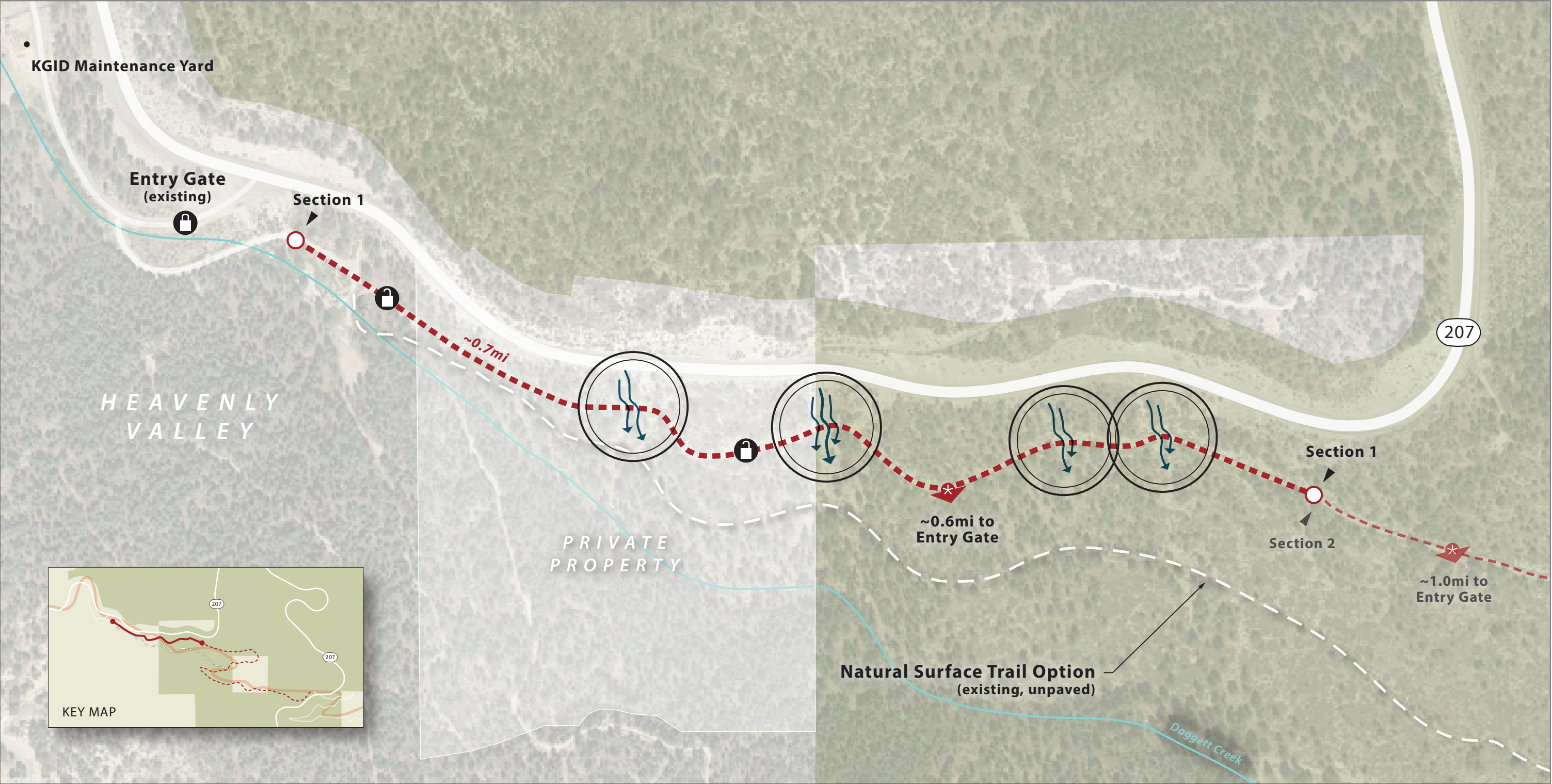
Typical trail perspective rendering depicting the different surface treatments and drainage culvert



Concept sketch for trail steps to avoid excessive erosion where slopes along the trail length are steep



Section 1 Context Map



- Kingsbury Toll Road Corridor
- - - Alternate Route
- ⊙ Roadway Erosion / Washout
- 🔒 Gate (locked / unlocked)
- ★ Notable Vista Point
- 🟢 US Forest Service

0 100 200 500 1000 ft

NOTE: Map illustrations and trail alignments are conceptual for illustrative/planning purposes only



Trail Section 1

Steep slopes on either side, persistent runoff and noise impacts from the roadway above

Section 1 begins just beyond the entry gate to KGID’s maintenance yard and the project’s proposed trailhead development site. The trail bed consists of paved asphalt, though in several locations the road surface has been severely degraded or washed out entirely by runoff coming down from the SR 207 roadway corridor above. The section is characterized by steep slopes on both sides of the trail and a constrained right-of-way impacted by noise and runoff from the adjacent highway. A notable vista point is located approximately 0.6 miles from the site’s entry gate. Near the beginning of this section, an existing, unpaved trail branches off south of the Kingsbury Toll Road, providing an opportunity to consider developing a separate, natural surface alternative route.

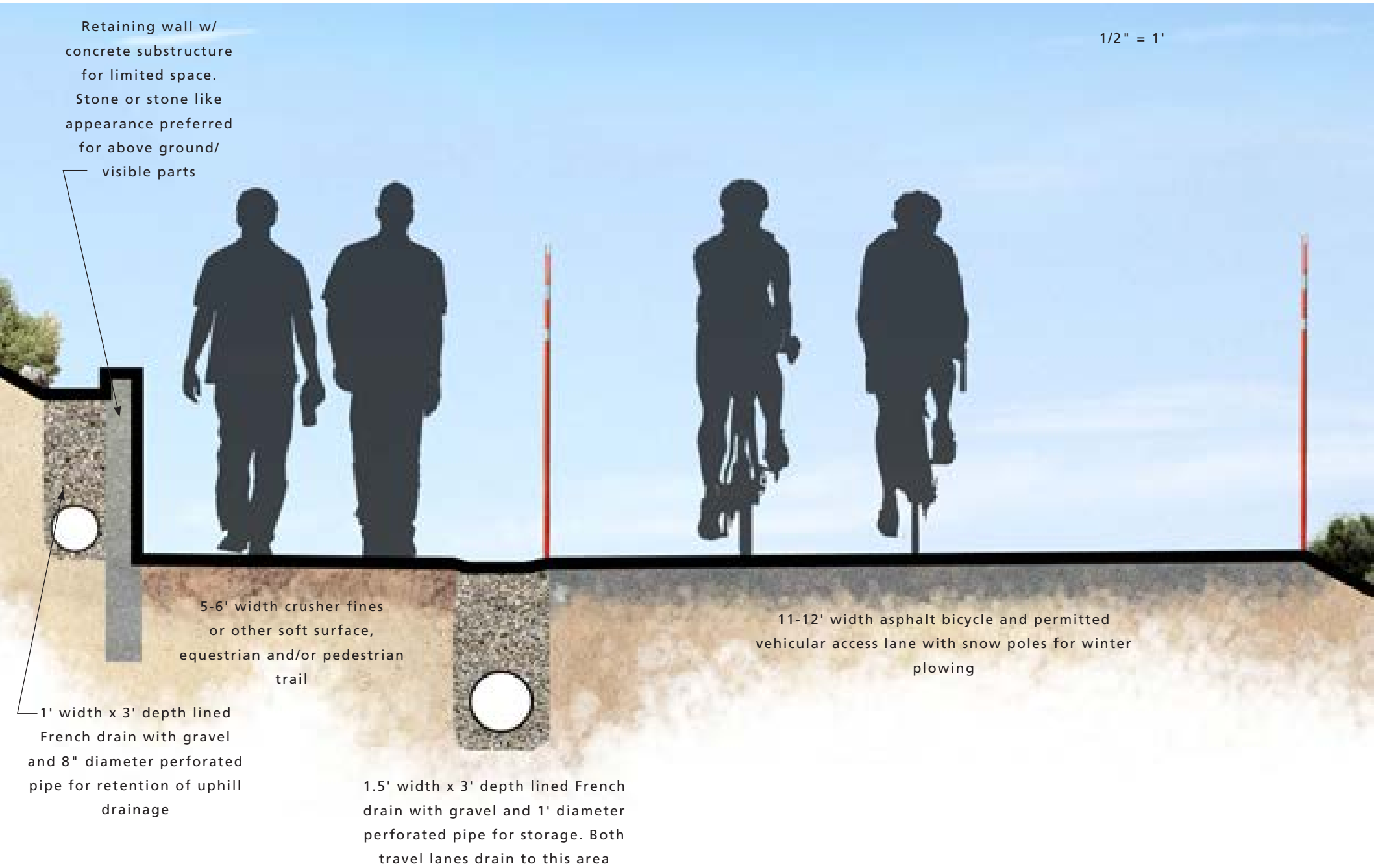
Design Concept

Retaining wall either up or down slope + pipe underneath

Trail design in Section 1 may include retaining walls either up or downhill from the trail, and in extreme cases may require piping runoff from uphill under the trail to avoid negative impacts to the trail from water down flowing from adjacent parcels. (See Sections 2 and 4 for additional cross section examples.)

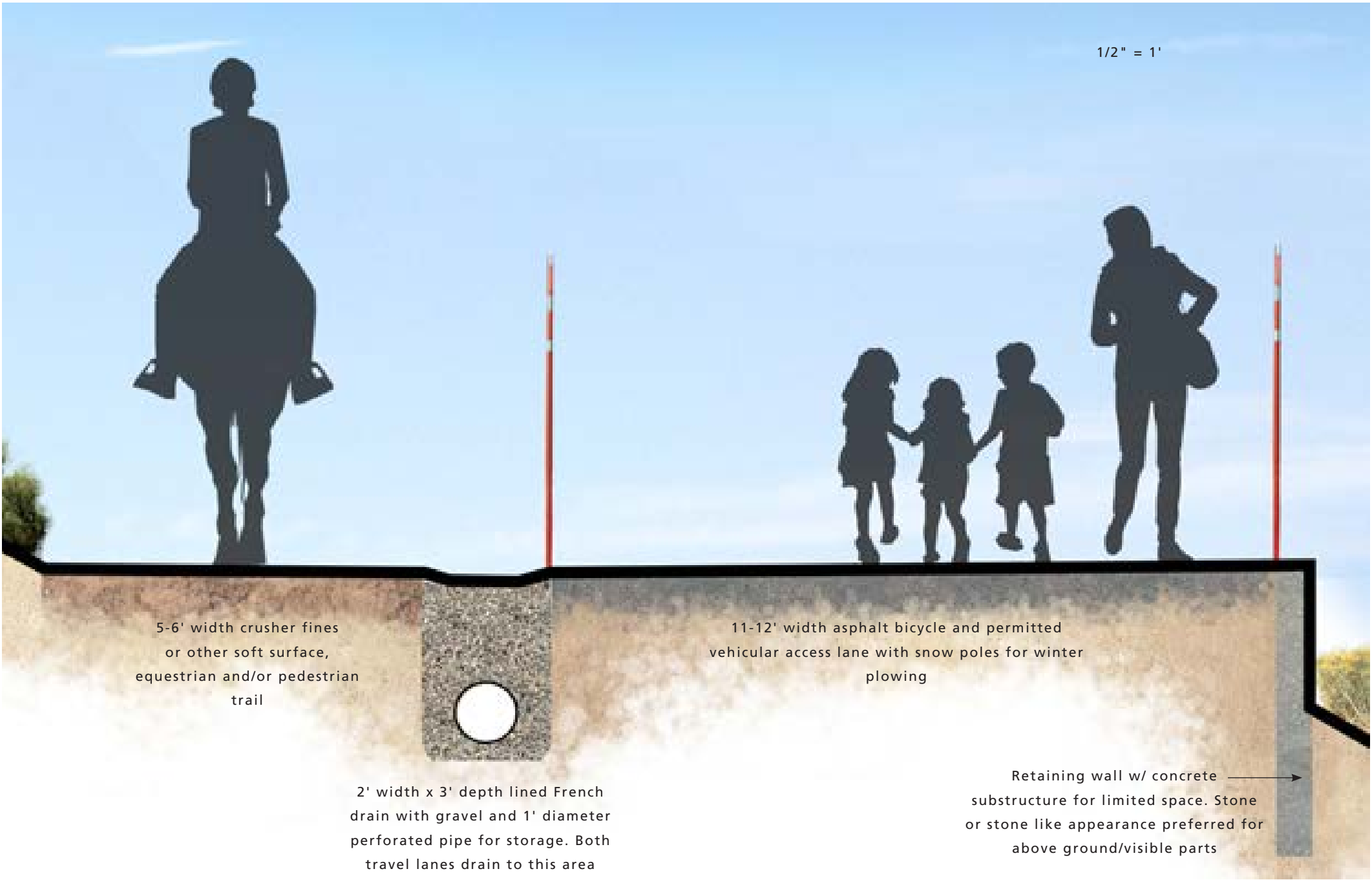
The vista point highlighted in this section may be an appropriate location for an off-trail resting place (dependent on interest and participation of the adjacent land managing agency, the US Forest Service, Humboldt-Toiyabe National Forest.) In future interpretive planning efforts, a wayside exhibit or other interpretive media could be considered for this location, if an appropriate Pony Express NHT-related or other interpretive topic applies.

Upper Retaining Wall Section



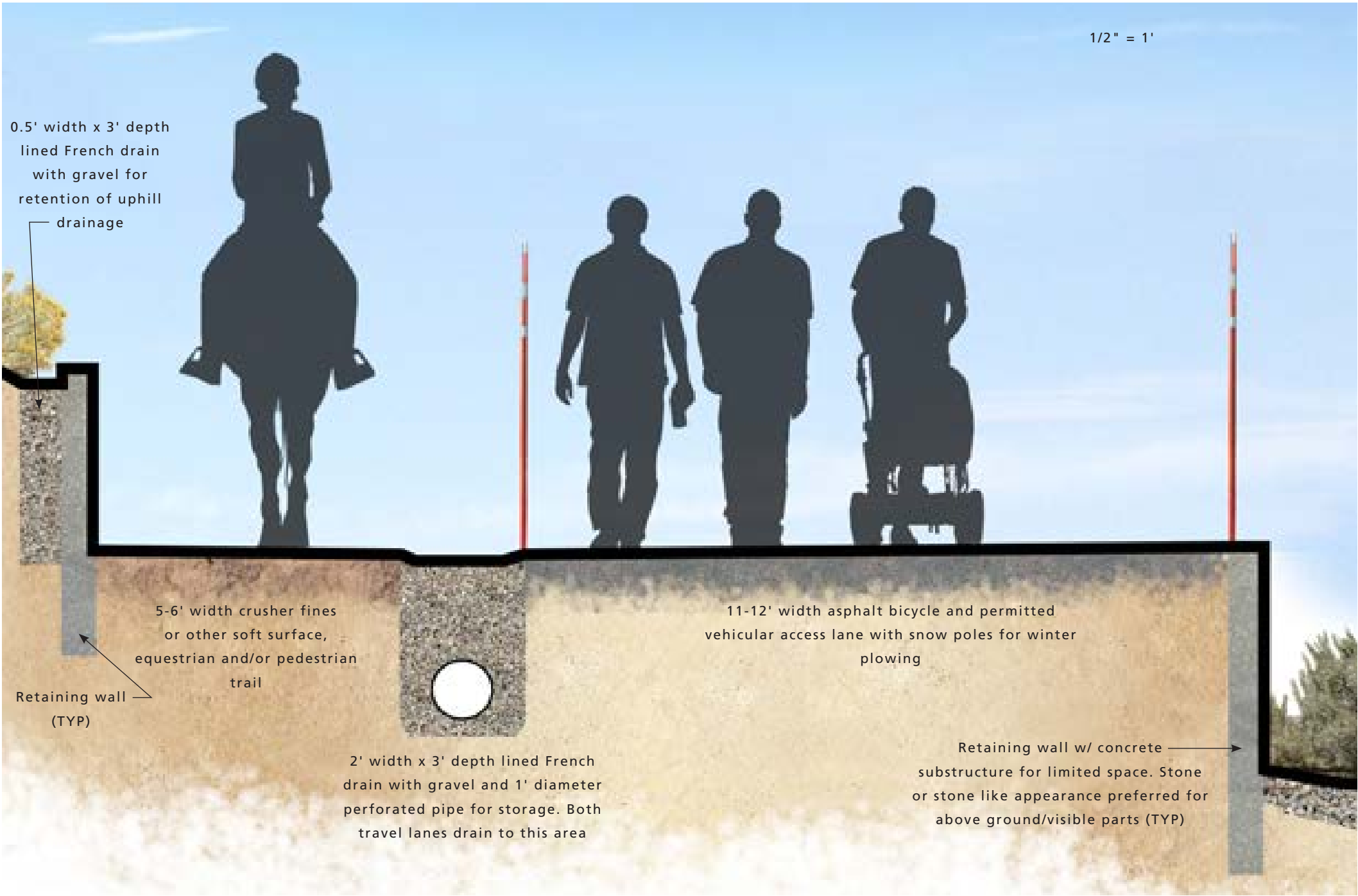


Lower Retaining Wall Section



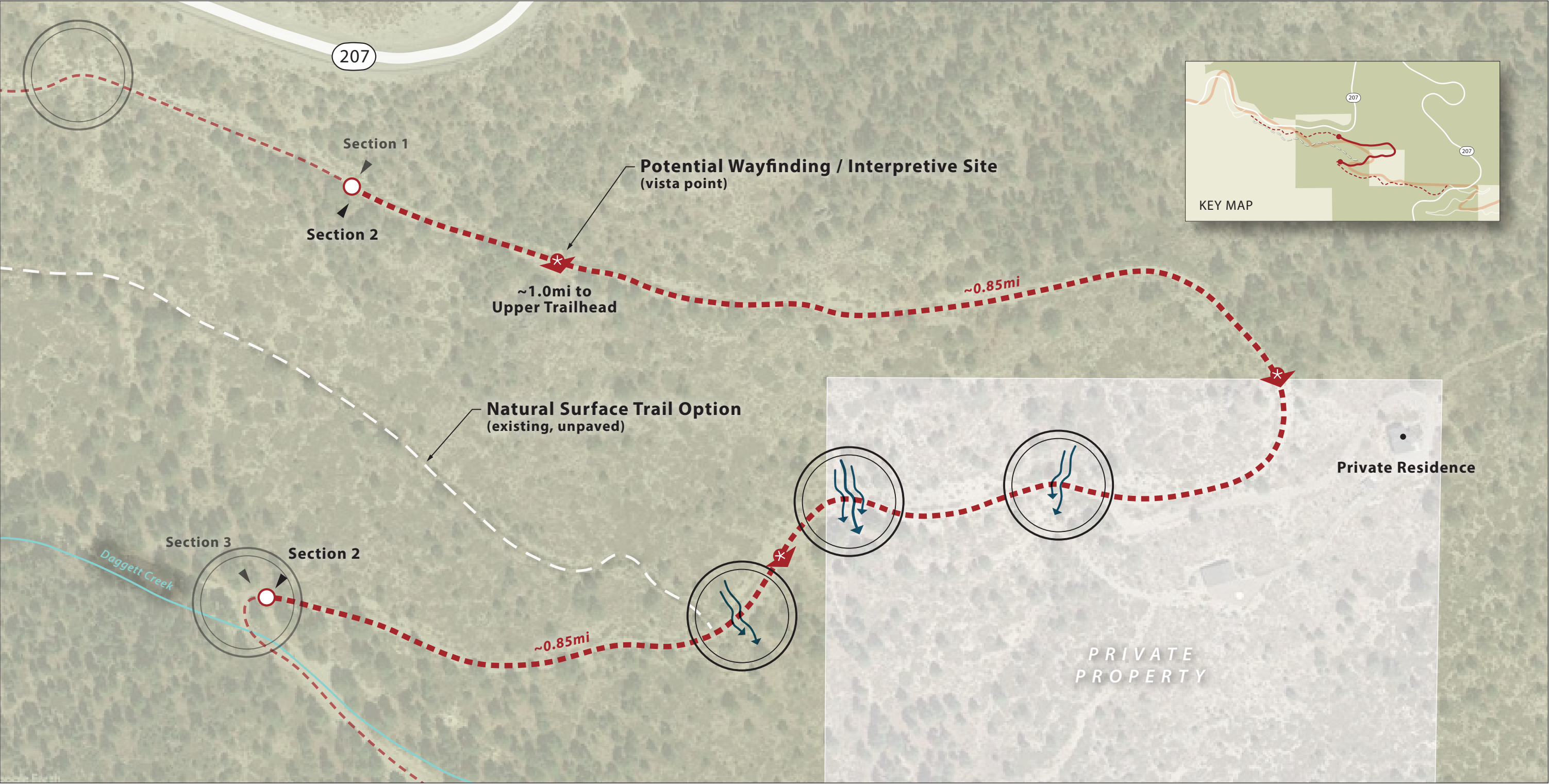


Upper and Lower Retaining Wall Section

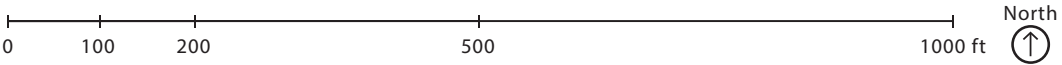




Section 2 Context Map



- Kingsbury Toll Road Corridor
- Alternate Route
- Roadway Erosion / Washout
- ★ Notable Vista Point
- US Forest Service



NOTE: Map illustrations and trail alignments are conceptual for illustrative/planning purposes only



Trail Section 2

Open vistas, quiet setting, with a steady and steep incline

Section 2 moves beyond the reach of many of the impacts from SR 207, offering visitors some of the most stunning views of the Valley below, and presenting several notable opportunities to establish vista / stopping points along the way. This is an important consideration as Section 2 averages a 9% slope, overall the steepest segment along the upper portion of the Kingsbury Toll Road. This section is also notable for crossing near an existing private residence. Again, runoff from the hillside has impacted the road bed in two prominent locations. The unpaved trail which branched out in Section 1 connects back in to the Kingbury Grade a short ways from the bottom of Section 2. Developing this route would provide visitors a loop trail option at the upper portions of the Kingbury Grade.

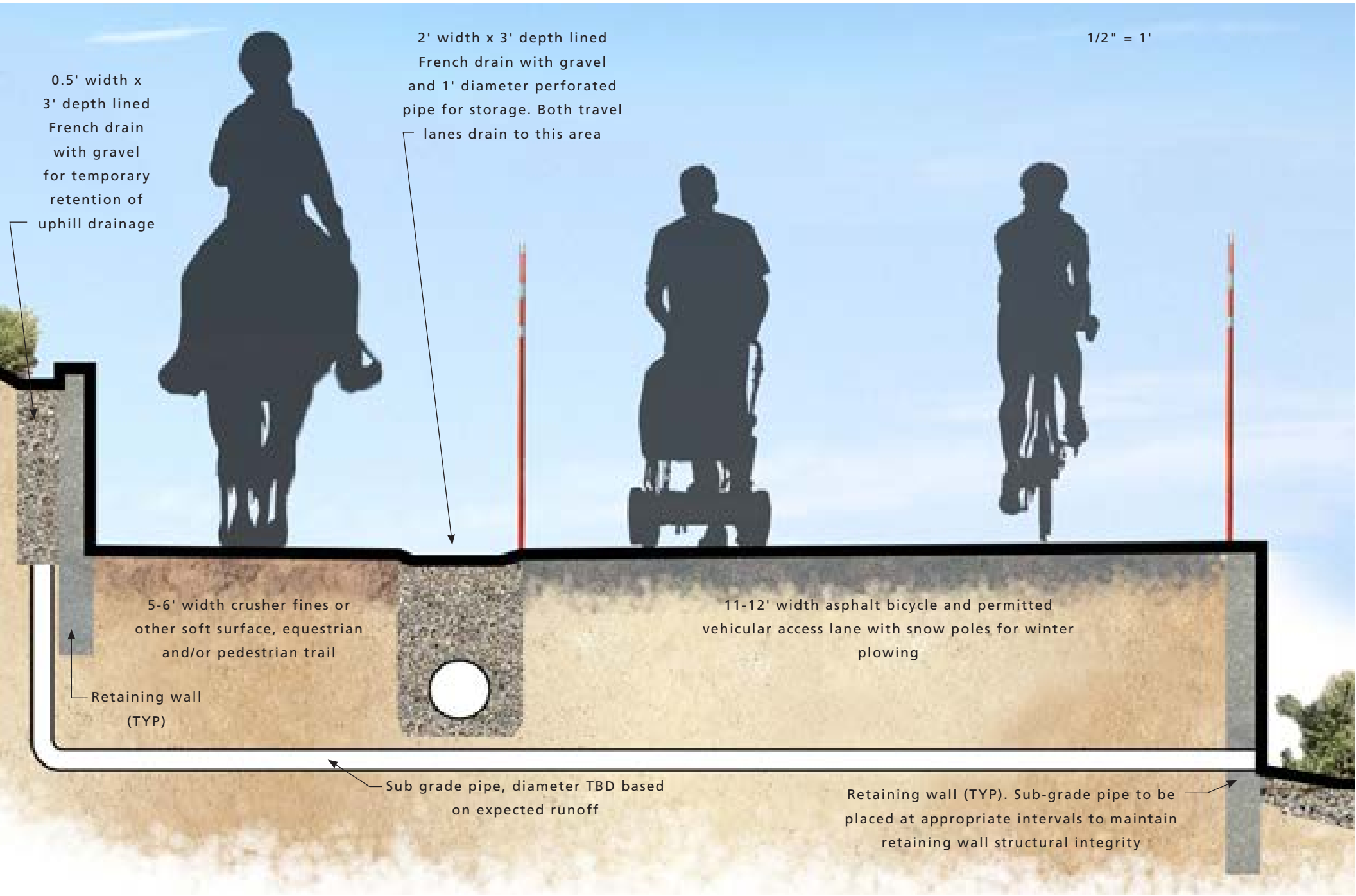
Design Concept

Other retaining wall options

As in Section 1, trail design in Section 2 may include retaining walls either up or downhill from the trail, and in extreme cases may require piping runoff from uphill under the trail to avoid negative impacts to the trail from water down flowing from adjacent parcels. Its location farther away distance from SR 207 suggests that runoff and debris slides may be less severe than in Section 1. (See Sections 1 and 4 for additional cross section examples.)

The vista point highlighted in this section may be an appropriate location for development of a resting place next to the trail (dependent on interest and participation of the agency that manages the adjacent parcels, US Forest Service Humboldt-Toiyabe National Forest.) It is approximately one mile downhill from the trailhead, and also may be a good location for distance and wayfinding information, to encourage visitors to consider whether to return top of the hill, or continue downhill, potentially accessing the loop trail option (if that option has been developed for public use.) In future interpretive planning efforts, a wayside exhibit or other interpretive media could be considered for this location, if an appropriate Pony Express NHT related or other interpretive topic applies.

Upper and Lower Retaining Wall Section, with Sub-Pipe Alternative



Kingsbury Toll Road Corridor

The map displays the Kingsbury Toll Road Corridor, which runs from the top left towards the bottom right. The corridor is divided into three main sections:

- Section 2:** Located in the upper left, near Daggett Creek.
- Section 3:** Located in the middle left, near Peters Flat.
- Section 4:** Located in the lower right, near Private Property.

Key features and landmarks include:

- Daggett Creek:** A blue line running along the top left.
- Peters Flat:** A point labeled "~0.75mi to Lower Crossing".
- Private Property:** A large area labeled "PRIVATE PROPERTY" in the center-right.
- Private Residence:** A point labeled "Private Residence" in the top right.
- Natural Surface Trail Option (existing, unpaved):** A dashed white line running diagonally across the top.
- Potential Wayfinding / Interpretive Site (undeveloped):** A red star symbol located between Section 3 and Section 4.
- Roadway Erosion / Washout:** Indicated by double circles at various points along the corridor.
- Notable Vista Point:** Indicated by a red star symbol with a crosshair.

A **KEY MAP** is provided in the bottom left corner, showing the overall route and its connection to Highway 207. The map includes a scale bar (0 to 1000 ft) and a north arrow in the bottom right corner.

Legend:

- Kingsbury Toll Road Corridor:** Red dashed line.
- Alternate Route:** White dashed line.
- Roadway Erosion / Washout:** Double circle symbol.
- Notable Vista Point:** Red star symbol with a crosshair.
- US Forest Service:** Green shaded area.



Trail Section 3

Running across and parallel to Daggett Creek

Section 3 begins where Daggett Creek crosses the road bed, paralleling the creek for nearly 0.25 miles. As expected, this section is heavily impacted by the creek flow with runoff washing across the roadway in several locations. Unlike other sections of the trail, runoff here is largely parallel with the roadway corridor—aside from a couple notable locations towards the bottom of this section when the runoff again rushes down the hillside and across the roadway. Much of this section is wooded, offering a shaded relief from the more exposed sections of trail above. This section also passes by Peters Flat, an undeveloped clearing that could have some potential as an interpretive and/or wayfinding location for visitors.

Design Concept

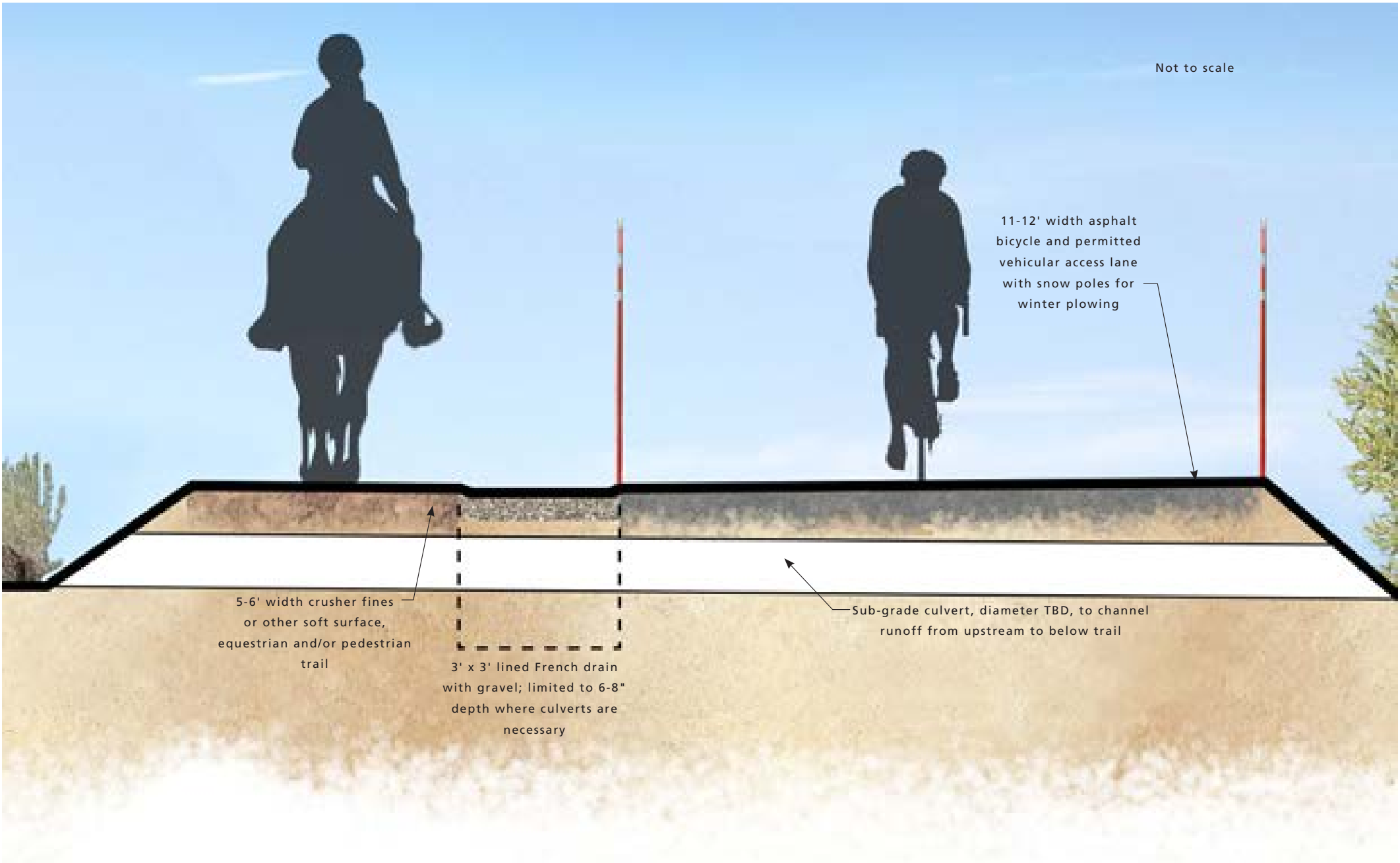
Culvert, intermittent French drain

In this section, new or replacement culverts will be needed to transport runoff under the trail and avoid impacts like those that are currently occurring during storms or spring snow melt. A spring or seep near the lower end of the segment will also require a culvert to allow water to reach Daggett Creek. To leave room for these culverts under the trail, the trail surface may need to be built up from the existing grade in some areas, and the French drain will need to be interrupted or made significantly shallower where culverts pass beneath.

The Peters Flat area is level, shaded, and protected, and offers an opportunity for another rest spot with USFS interest and collaboration. It could also be considered for installation of interpretive media if an applicable interpretive topic is identified as part of future interpretive planning.

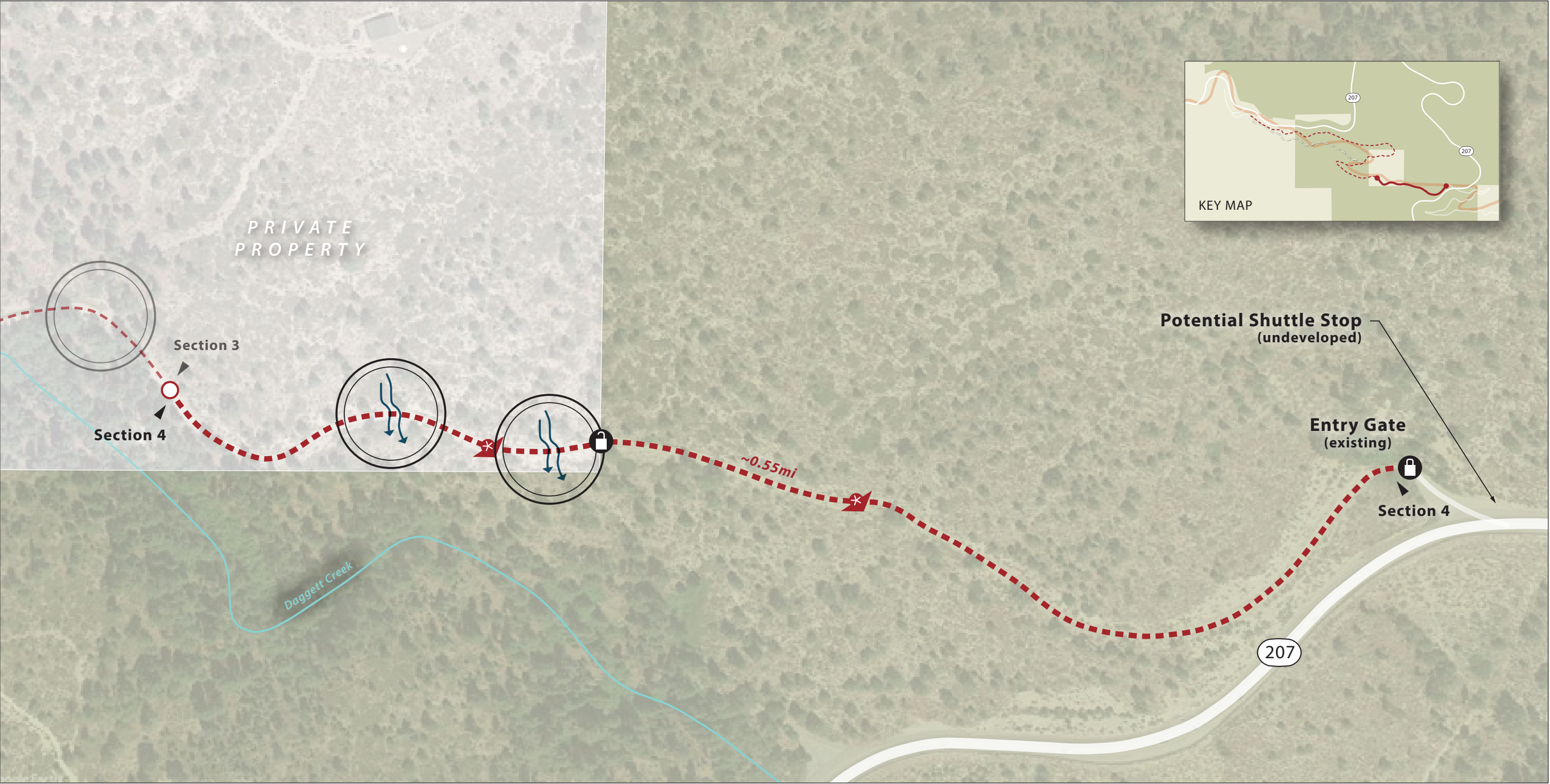
NOTE: Trail improvements and use of trail not to impede Daggett Creek.

Sub-Grade Culvert





Section 4 Context Map



■ ■ ■ ■ Kingsbury Toll Road Corridor
 Roadway Erosion / Washout
 Gate (locked / unlocked)
 Notable Vista Point
 US Forest Service

0 100 200 500 1000 ft
North ↑

NOTE: Map illustrations and trail alignments are conceptual for illustrative/planning purposes only



Trail Section 4

Steady, steep inclines with some potential to establish a transit shuttle stop at the trail entry point

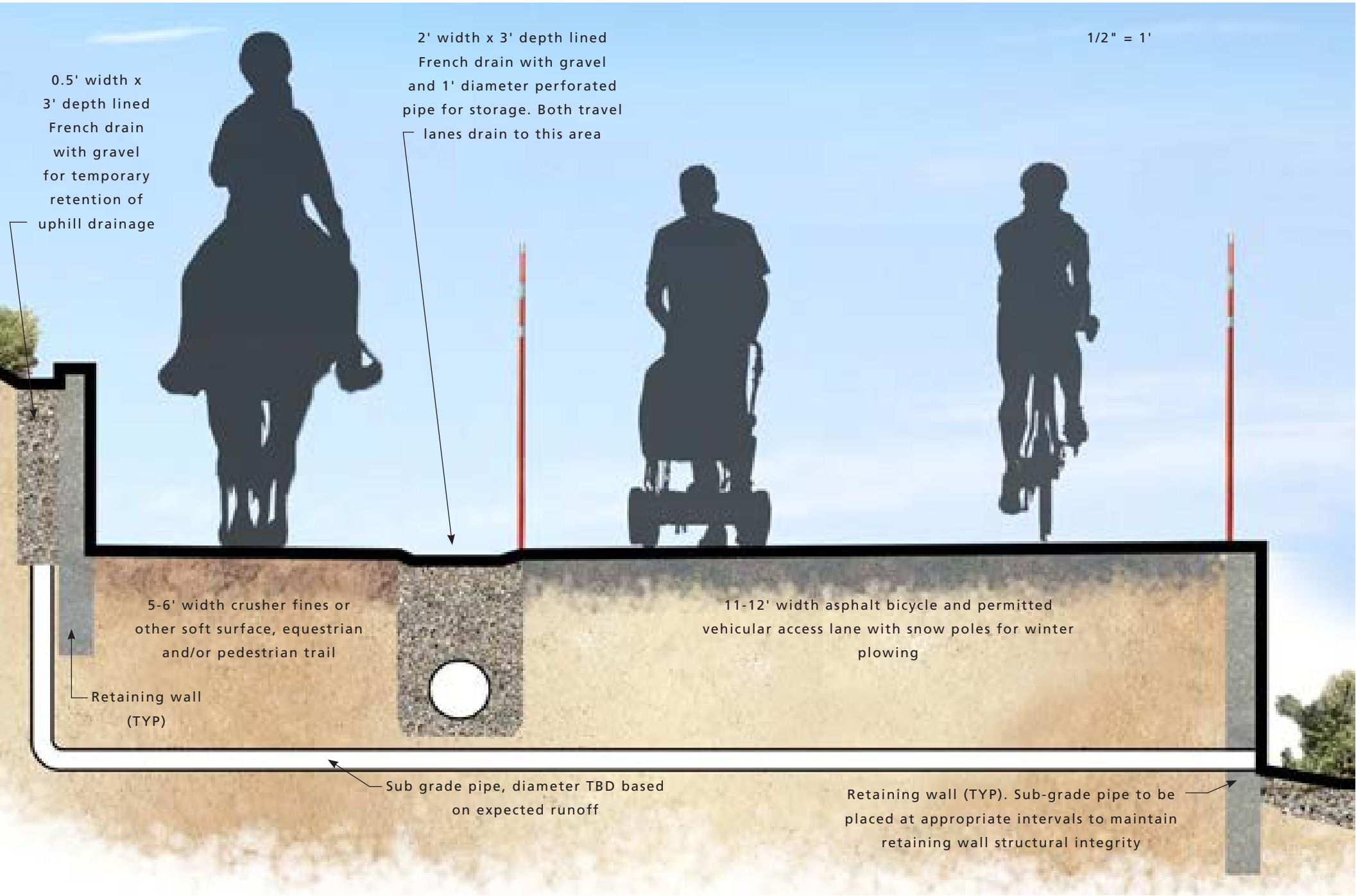
Section 4 is very similar to Section 2. It is an area characterized by notable vistas and a couple locations of persistent road bed erosion from hillside runoff. It, too, should be noted for its steep slope, particularly the bottom half towards the existing entry gate. While the access point to Section 4 offers little opportunity to develop a formal trailhead entry point, there may be potential for establishing a shuttle stop for the existing transit service that runs along SR 207. This would provide an option for visitors to take a bus from the Park ‘n Ride facilities at Foothill up to the top of Kingsbury Grade (Section 1 trailhead), hike or bike the length of the developed trail corridor, and then be picked up at the bottom of this section and taken back. Alternatives for crossing SR 207 from this section are presented in the next chapter of this plan document.

Design Concept

Steep cross slopes in areas of section 4 will require retaining walls, although runoff from above is less severe than in other sections. Opportunities for interpretive media connected to the highlighted viewpoints may be considered as part of an overall interpretive plan for the trail, particularly if unique interpretive stories are identified for this area. Gating at the bottom of this segment near SR 207 will need to be designed to ensure vehicular access for residents, emergency vehicles, and USFS staff but prevent general vehicular access to the trail. (See Sections 1 and 2 for additional cross section examples.)

NOTE: Douglas County to close current at-grade crossing (except for special events) once trail improvements are complete to limit safety hazards associated with crossing SR 207 and avoid any encouragement of trail users to continue on the unimproved lower portion of the historic trail corridor.

Upper and Lower Retaining Wall Section, with Sub-Pipe Alternative



Access Point Development





Upper Trailhead Site Plan

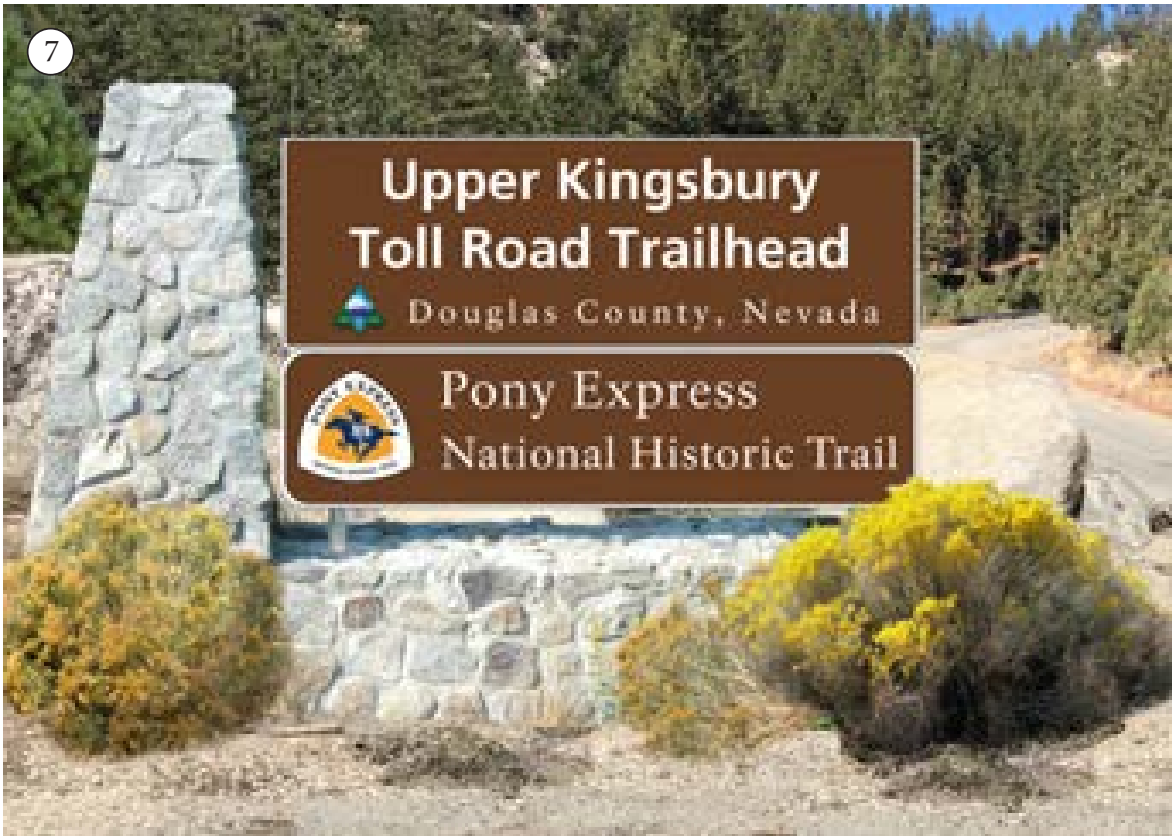




Upper Trailhead Access Site

Full-featured Trailhead Entry Site

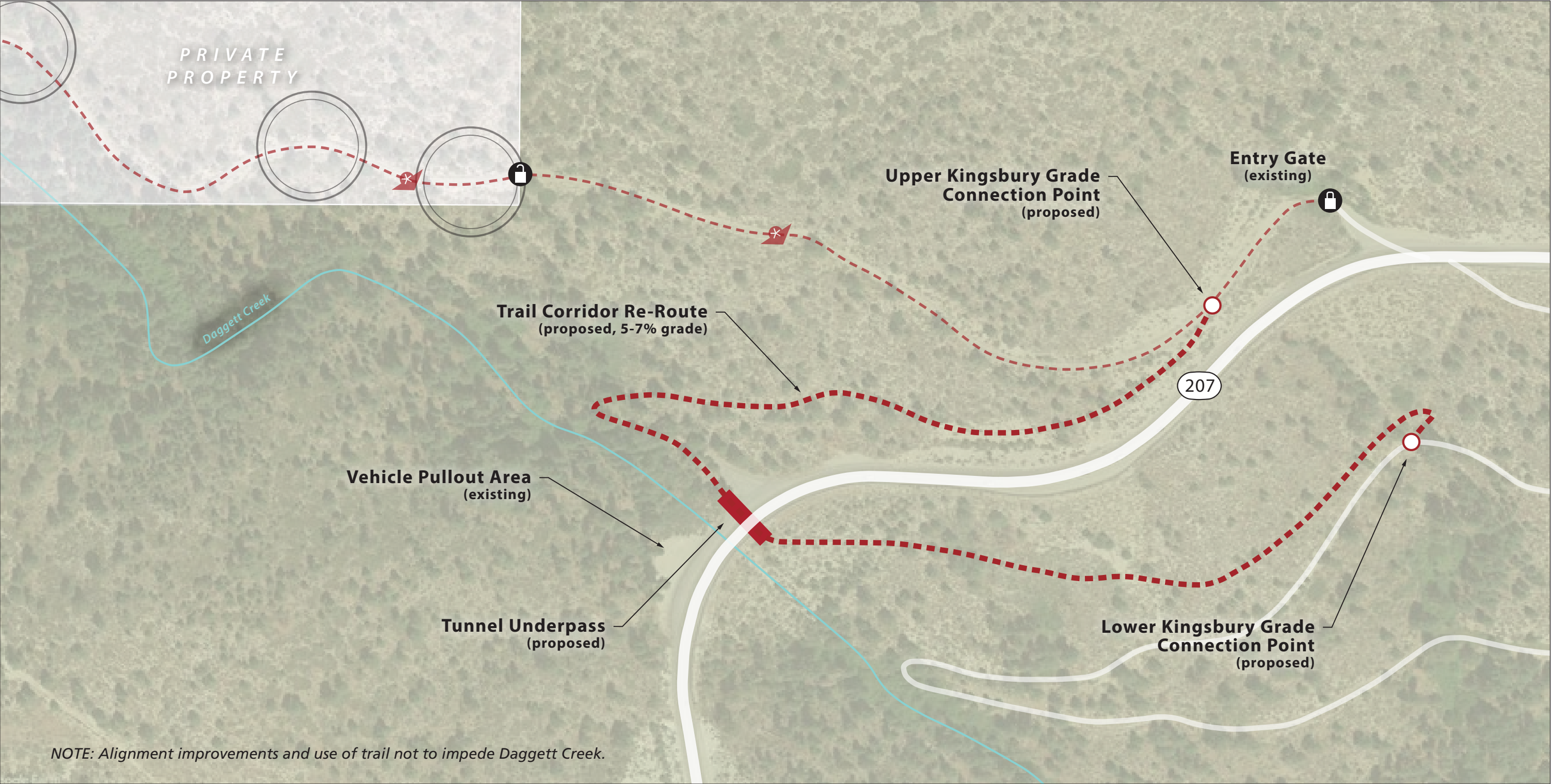
- 1. Pony Express National Historic Trail: Upper Kingsbury Toll Road Segment. See pages 20-21 for general design treatment.
- 2. Gated access to trail. Gate designs for multiple user types are addressed on page 48. Allows vehicular access for residents, County maintenance, USFS, and emergency vehicles. Also may include logo in colored pavement band at beginning of trail segment, and Historic Route trail end distances pedestrian sign.
- 3. Orientation panel with trail map, safety and use messages, and basic information about Pony Express NHT and connecting recreational trails (example from Bent’s New Fort, Lamar, CO, Santa Fe National Historic Trail).
- 4. Parking for up to 15 standard cars/trucks. New swale along southern berm to catch runoff from road and parking area.
- 5. Public restroom
- 6. Gate, unlocked during trail use hours
- 7. Pony Express NHT entrance sign
- 8. Parking for horse trailers and oversized vehicles
- 9. Graded gravel area for large vehicle turn around
- 10. Existing swale for diverting runoff from slope
- 11. Proposed right turn slow-down lane for visitors and KGID trucks. Left turn lane to access the site from SR 207 westbound is not shown in this plan, but would improve the safety of access if feasible within NV DOT right of way.
- 12. KGID maintenance yard access with locking gate and private property signage.



Upper trailhead perspective rendering from parking area (4) looking towards orientation panel (3) and trail entry



Option A Lower Crossing Map



Upper Kingsbury Grade Corridor

Proposed Corridor Re-Route

Roadway Erosion / Washout

Gate (locked / unlocked)

Notable Vista Point

US Forest Service

01002005001000 ft

North

NOTE: Map illustrations and trail alignments are conceptual for illustrative/planning purposes only

SR 207 Lower Crossing | Option A

Tunnel Underpass at Daggett Creek

Option A re-routes the lower section of the trail corridor about 0.25 miles south towards Daggett Creek, proposing a tunnel underpass of SR 207 near an existing vehicle pullout area and creek drainage culvert. The route takes advantage of existing topography and grade changes near Daggett Creek to get enough clearance to pass under the roadway corridor while staying within a modest 5-7% slope. Beyond the proposed tunnel, the route would reconnect with the existing lower portion of Kingsbury Grade.

While this would be an expensive option, there is precedent for establishing a tunnel underpass for trail use on the Stateline to Stateline Bikeway. In addition, the larger vehicle pullout area in this location provides greater opportunity for establishing a more functional trailhead access point, including a potential transit stop and a pull out area for equestrian trailers supporting the annual Pony Express Re-Ride.

PROS

- Improved trail user safety when crossing SR 207
- Existing topography and grade changes minimize tunneling requirements
- Size of existing vehicle pullout area better suited for trailhead development
- Potential to develop a transit stop
- Wide right-of-way / improved visibility at proposed trail access area
- Route connects back in to the Kingsbury Toll Road / Pony Express NHT corridor

CONS

- Cost of tunneling under SR 207
- Potential impacts to creek and other natural resources
- Re-routing trail off existing Kingsbury Toll Road corridor / need for easements and new construction
- Feasibility / engineering study needed to confirm opportunity
- May not be optimal for equestrian use

NOTE: Crossing option improvements to SR 207 (Kingsbury Grade) will not be constructed until an alignment alternative on the lower portion of the trail corridor has been approved or agreed upon to connect to Foothill Road.



Tunnel underpass being constructed for the Stateline to Stateline Bikeway trail



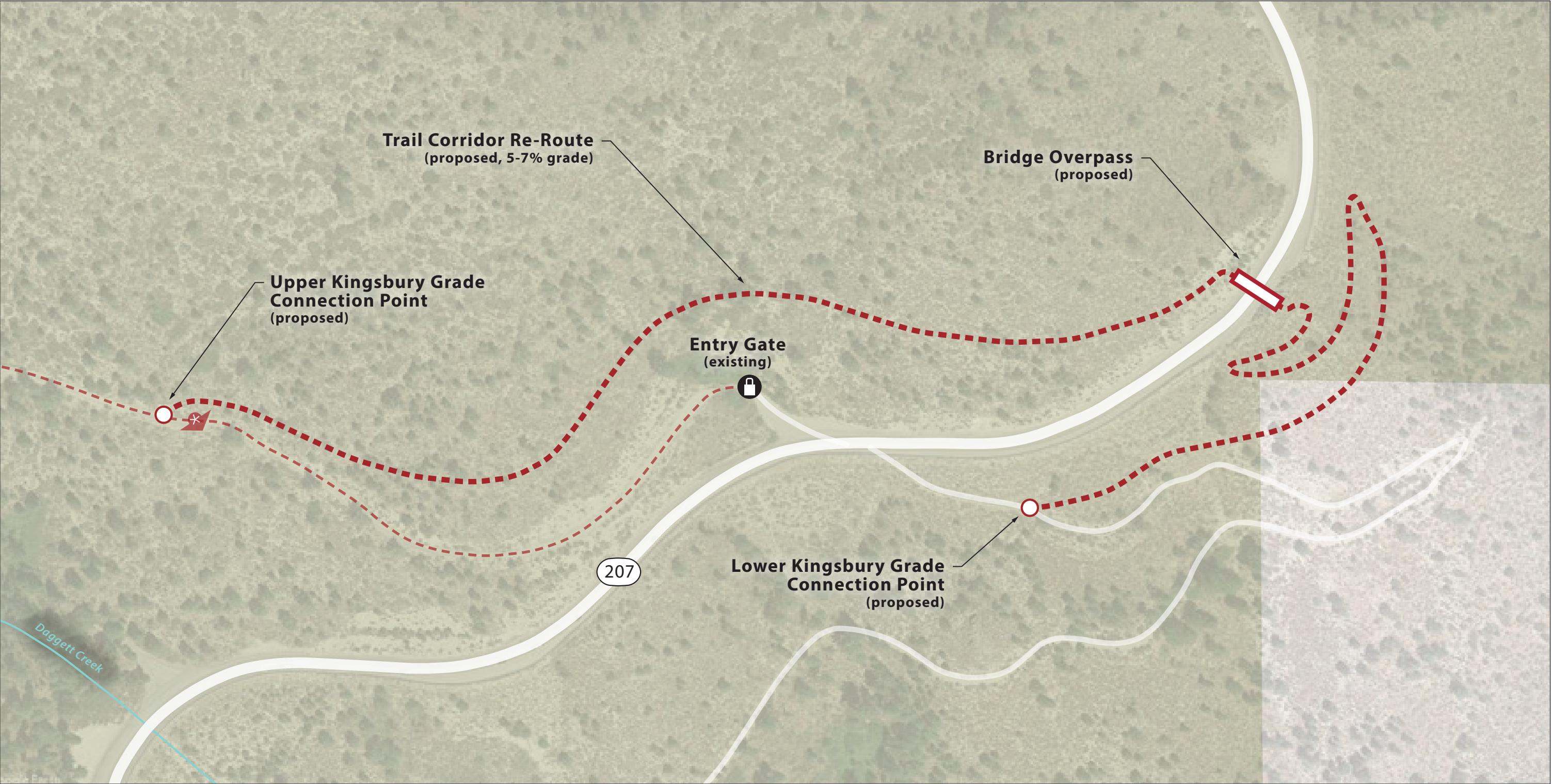
Existing topography drops under SR 207 roadway corridor near the existing Daggett Creek culvert



Large, existing vehicle pullout area with good visibility to and from roadway



Option B Lower Crossing Map



- Upper Kingsbury Grade Corridor
- Proposed Corridor Re-Route
- Roadway Erosion / Washout
- 🔒 Gate (locked / unlocked)
- ★ Notable Vista Point
- US Forest Service

0 100 200 500 1000 ft North ↑

NOTE: Map illustrations and trail alignments are conceptual for illustrative/planning purposes only

SR 207 Lower Crossing | Option B

Bridge Overpass

Option B proposes the development of a trail bridge overpass north of the existing entry gate location. This option would require an extensive re-routing of the trail corridor to maintain a modest 5-7% slope; however, routing the trail further north takes advantage of an existing road cut in the hillside that provides an elevated area from which to span the bridge structure. From the bridge, the route could reconnect with the existing lower portion of Kingsbury Grade.

Bridging over SR 207 would be an expensive option but, perhaps, more feasible in a location such as the one indicated here where the hillside topography is elevated on either side of the roadway corridor. Similar road cuts can be found at various locations along SR 207, but this one is the closest to the current trail alignment, located about 1000’ north.

PROS

- Improved trail user safety when crossing SR 207
- Existing topography and road cut minimizes bridging requirements
- Route connects back to the Kingsbury Toll Road / Pony Express NHT

CONS

- Cost of bridging over SR 207
- Re-routing trail off existing Kingsbury Toll Road corridor / need for easements and new construction
- Feasibility / engineering study needed to confirm opportunity

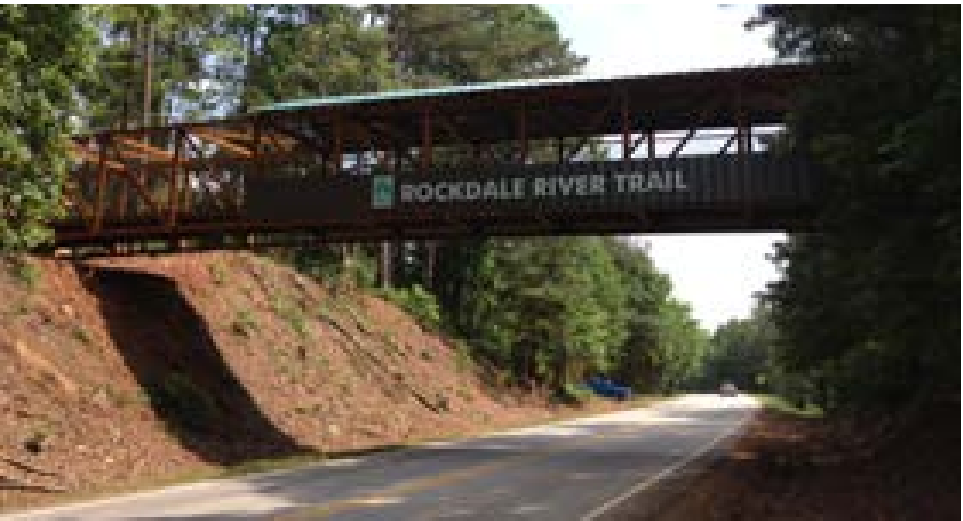
NOTE: Crossing option improvements to SR 207 (Kingsbury Grade) will not be constructed until an alignment alternative on the lower portion of the trail corridor has been approved or agreed upon to connect to Foothill Road.



Location where SR 207 has been cut into the hillside, leaving elevated slopes on both sides of the roadway corridor

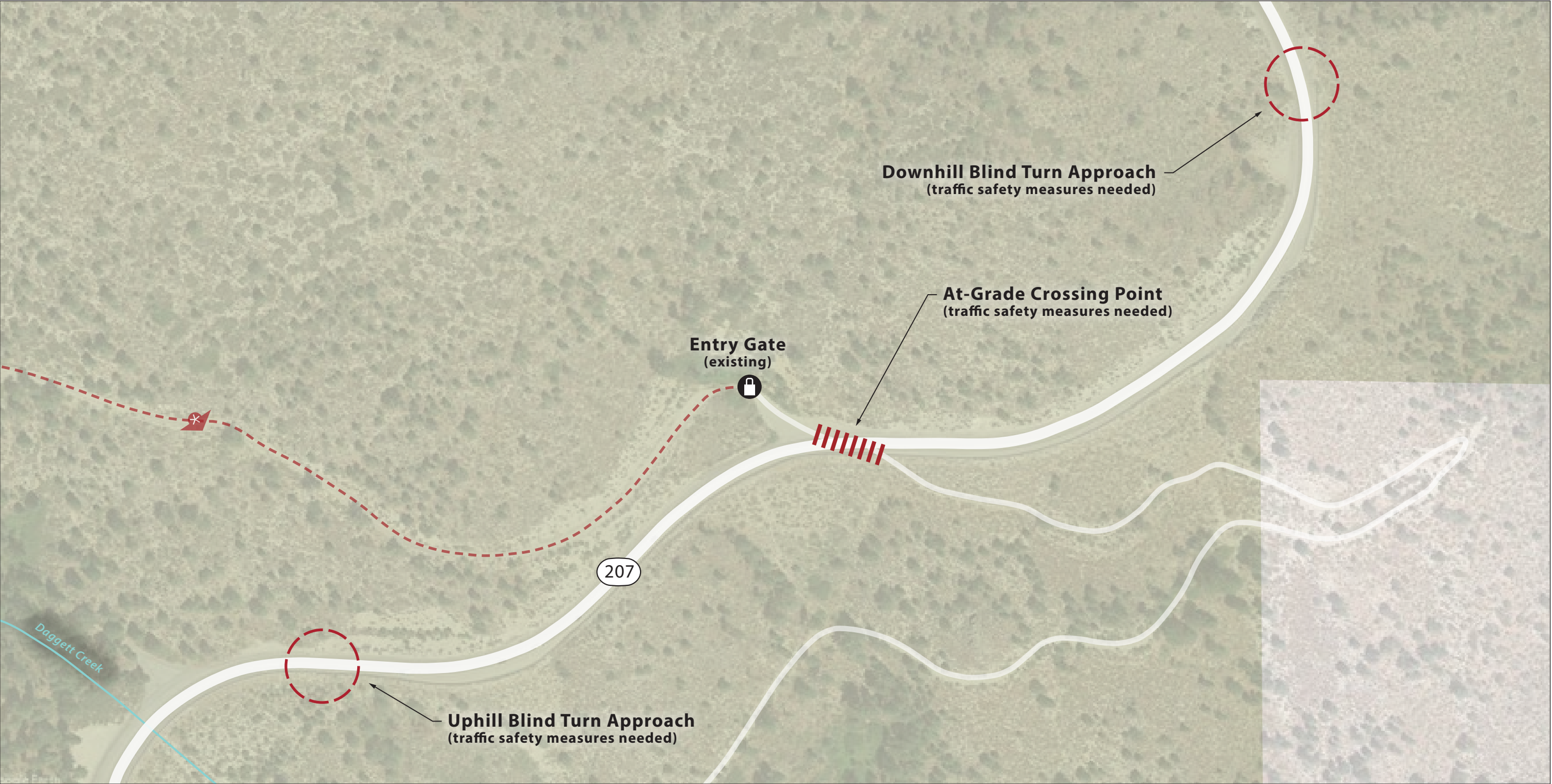


Area where trail could be re-routed from the Kingsbury Toll Road



Rockdale River Trail highway bridge example (pre-fab construction)
(source: pioneerbridges.com)

Option C Lower Crossing Map



Upper Kingsbury Grade Corridor

At-Grade Crossing Point

Roadway Erosion / Washout

Gate (locked / unlocked)

Notable Vista Point

US Forest Service

0

100

200

500

1000 ft

North

↑

NOTE: Map illustrations and trail alignments are conceptual for illustrative/planning purposes only

SR 207 Lower Crossing | Option C

Improved At-Grade Crossing

Option C represents an enhancement of existing conditions, where traffic control measures are implemented to improve conditions for an at-grade crossing of SR 207. No re-route of the trail corridor would be required, with minimal infrastructure investments made at—and leading up to—the existing crossing point. Crosswalk-markings, flashing beacons, and overhead pedestrian-activated crossing lights could all be implemented to increase user safety.

Even with such improvements, the location remains challenging given traffic speeds and blind turns leading up to this point from both directions. In addition, due to slope and constraints with topography and right of way, a bridge and/or tunnel option does not appear feasible at this location, especially given that other identified locations present better opportunities for such options. At a minimum, at-grade crossing improvements could be a short-term solution while other crossing options are developed.

PROS

- Enhanced safety features for crossing SR 207
- Minimal investment in resources to upgrade current conditions
- Potential to develop a transit stop
- No re-routing of trail needed / route stays on historic Pony Express alignment
- Minimal impacts to existing resources

CONS

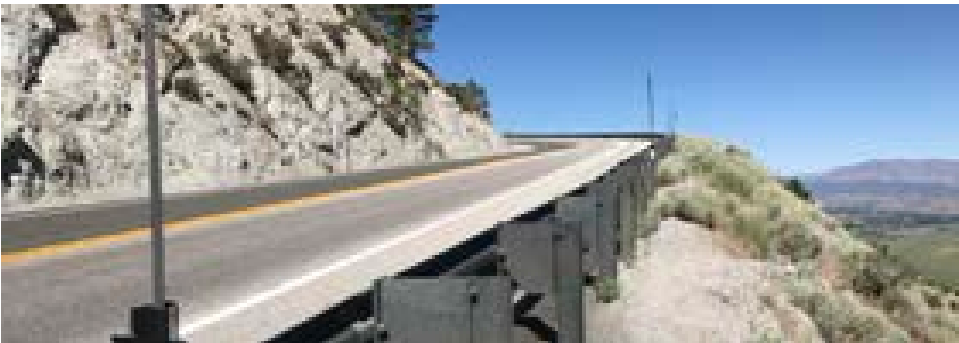
- At-grade crossing likely remains hazardous for pedestrians
- Physical and geographic constraints limits other crossing options (e.g. bridge or tunnel)
- Limited right-of-way along SR 207 prohibits development of a formal trail access point
- Traffic engineering study needed to confirm opportunity

NOTE: Crossing option improvements to SR 207 (Kingsbury Grade) will not be constructed until an alignment alternative on the lower portion of the trail corridor has been approved or agreed upon to connect to Foothill Road.

Douglas County to close current at-grade crossing (except for special events) once trail improvements are complete to limit safety hazards associated with crossing SR 207 and avoid any encouragement of trail users to continue on the unimproved lower portion of the historic trail corridor.



Existing at-grade crossing could be enhanced with minimal improvements such as crosswalk-markings



Blind turns with minimal signage approaching the existing crossing point impacts user safety

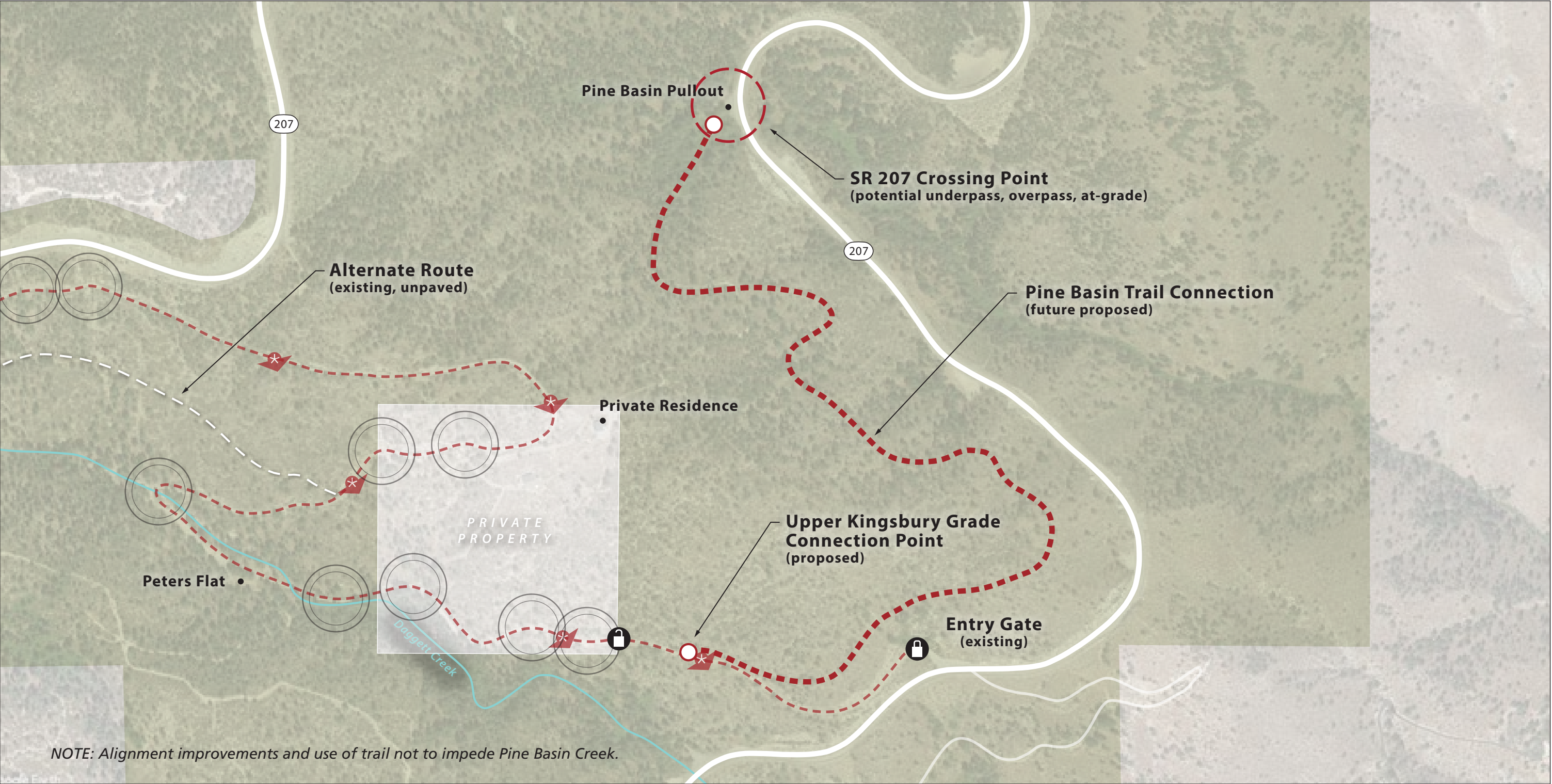


A variety of additional traffic control measures can be implemented to improve safety





Option D Lower Crossing Map



Upper Kingsbury Grade Corridor

Proposed Corridor Re-Route

Alternate Route

Roadway Erosion / Washout

Gate (locked / unlocked)

Notable Vista Point

US Forest Service

00.1250.250.5 mi

North

NOTE: Map illustrations and trail alignments are conceptual for illustrative/planning purposes only

SR 207 Lower Crossing | Option D

Pine Basin Re-route

Option D re-routes a significant portion of the trail north to the Pine Basin area. The specific alignment follows an approximate 1.1 mile Pine Basin Trail Connection proposed by the Carson Valley Trails Association. Routing the trail up to Pine Basin could provide an opportunity to develop a formal trailhead access point and possibly additional recreational facilities given the area’s flat terrain. An existing vehicle pullout offers further potential for establishing a transit stop in the near term.

Routing the trail to Pine Basin does not eliminate the need to negotiate crossing of SR 207. An existing culvert located a short distance to the north of the vehicle pullout area may offer an opportunity to consider a tunnel option; likewise, a road cut in the hillside south could facilitate bridge development. An at-grade crossing in this location would still be impacted by a significant blind turn coming from the north. It is not clear how the trail would reconnect with the Pony Express National Historic Trail corridor after crossing SR 207 at Pine Basin. And, in fact, this entire route is a significant detour from the national trail alignment. Still, this connection has value to the overall effort and does not need to be considered a mutually exclusive option.

PROS

- Increases connections to additional recreational destinations
- Incorporates an existing proposed regional trail alignment
- Potential to develop a transit stop
- Potential to develop a trailhead access point and other recreational amenities at Pine Basin

CONS

- Significant diversion from the Pony Express NHT alignment
- No clear connection back in to the Kingsbury Toll Road / Pony Express NHT corridor
- Requires consideration of bridging or tunnel options for safe crossing of SR 207
- Re-routing trail off existing Kingsbury Toll Road corridor / need for easements and new construction

NOTE: Crossing option improvements to SR 207 (Kingsbury Grade) will not be constructed until an alignment alternative on the lower portion of the trail corridor has been approved or agreed upon to connect to Foothill Road.



Connector trail leading from the Pine Basin pullout area



Culverts passing under SR 207 near Pine Basin



A blind turn on SR 207 to the north of Pine Basin impacts safety of at-grade crossing options



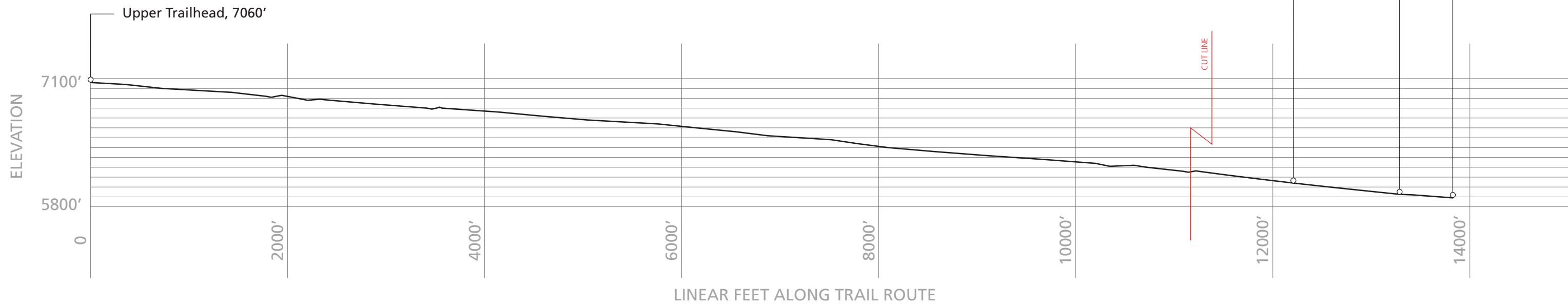
Trail Grade and Elevation Analysis

The average grade over the length of the existing trail alignment, from the proposed upper trailhead to the intersection with SR 207, is approximately 8.5%. Under current conditions, this includes some segments that exceed 10%, and may approach 15-20% for short stretches, as well as sections with a much more moderate grade.

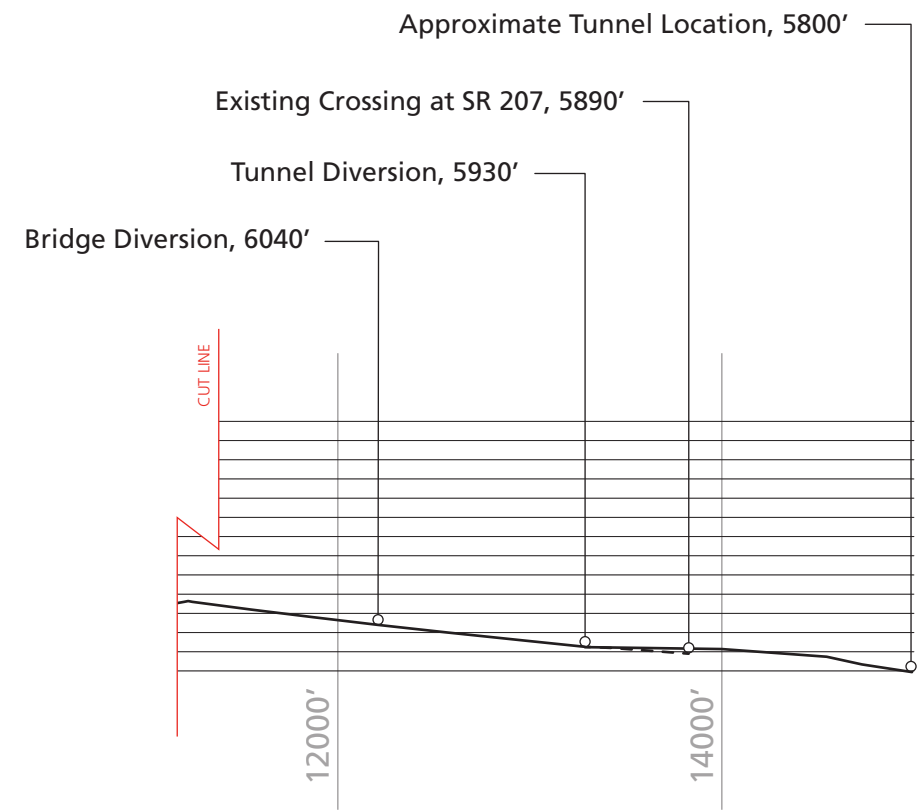
If selected, either Option A (Tunnel Underpass) or Option B (Bridge Overpass) would add a segment of trail off of the main alignment to access the proposed locations for tunnel or bridge. As represented in this document, either choice would result in an overall extension of the trail length, and a slight reduction in the average grade of the trail (to 8.4% for Option A, and 7.1% for Option B.)

Even under the best design circumstances, this constructed trail will exceed Americans with Disabilities Act (ADA) maximum grades for much of its length. However, the historic nature of this trail—and the National Trails System Act mandate to follow the historic route as closely as is practicable when constructing a segment of a national historic trail—precludes making major modifications to the trail route to reach ADA grades. Douglas County ownership of a 20 foot wide right-of-way also limits opportunities to reduce grades through trail realignment. Development of the upper trailhead, paving the trail surface, and providing frequent areas for rest along the length of the trail will help address accessibility and make the trail more user-friendly overall.

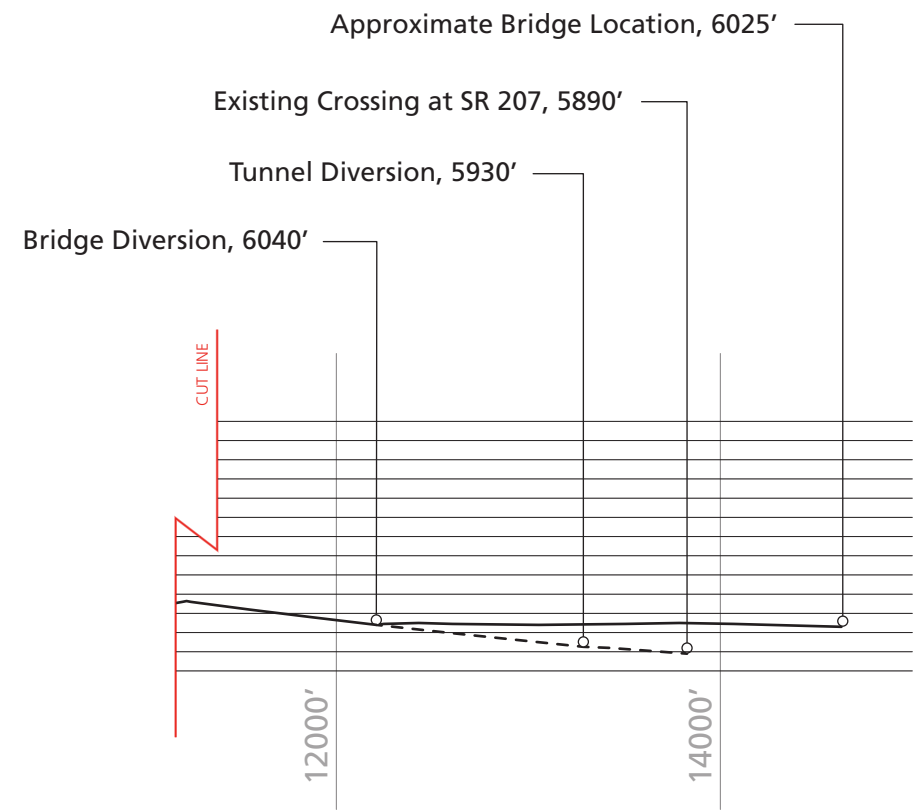
Existing Trail Alignment (retained in Option C)



Option A: Tunnel Underpass



Option B: Bridge Overpass



NHT Awareness and Experience



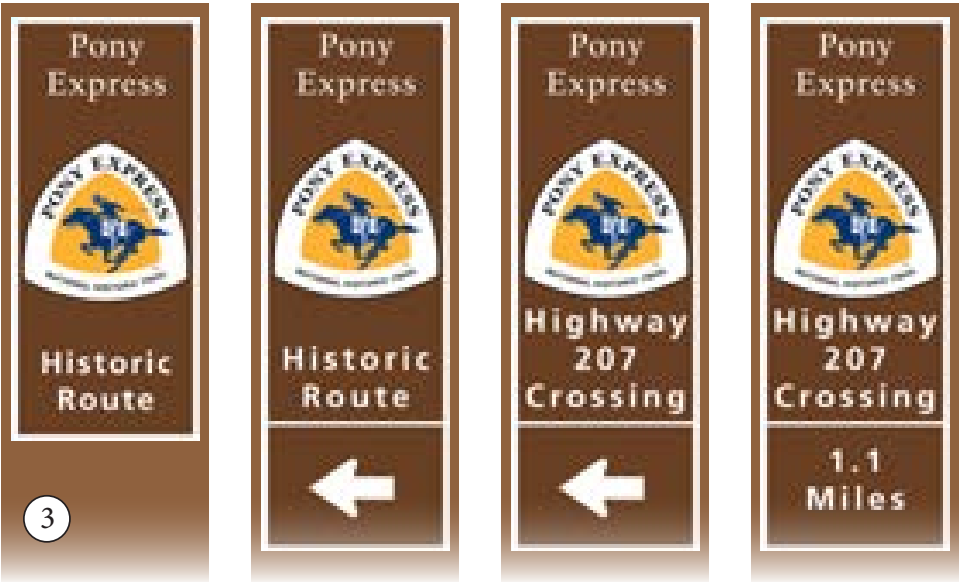
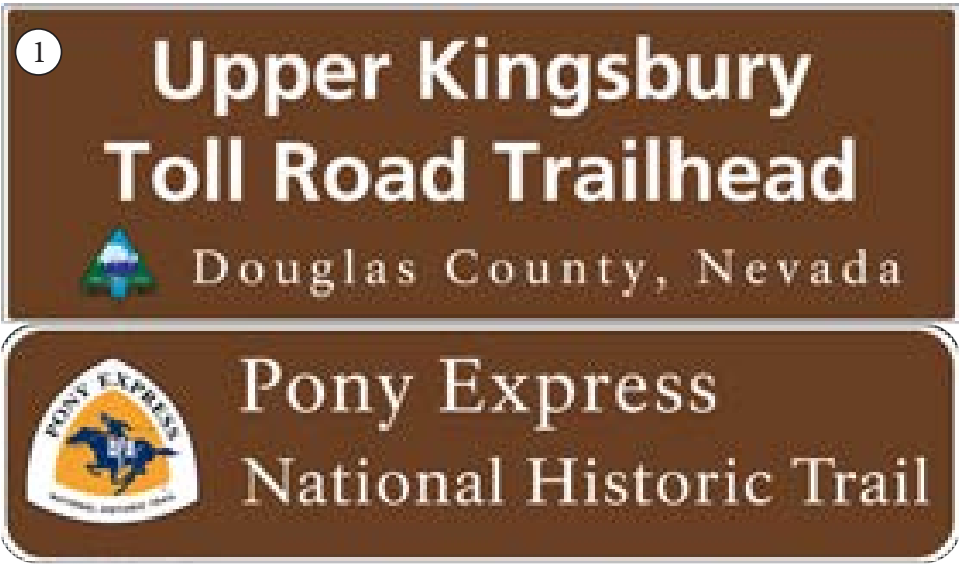


Signage and Wayfinding Concepts

One of the main ways a segment of modern recreational trail can be recognized as a national historic trail is through use of the NHT logo. For this project, a couple of standard NHT logo sign types may be appropriate. These include:

- 1 A site entrance sign at the upper trailhead, identifying the trailhead and trail itself as affiliated with the Pony Express National Historic Trail
- 2 Also near the trailhead, at the beginning of the trail, a historic route sign identifying the distances from Upper Kingsbury to the two ends of the trail (St. Joseph, MO, and Sacramento, CA)
- 3 Along the trail, particularly at junctions, use of carsonite posts with Pony Express NHT stickers indicating that one is on the historic route of the trail; direction where needed; and distances to potential destinations, such as the crossing of Hwy 207
- 4 If desired, the logo may be used on the ground surface as one begins the descent from the trailhead. This application is typically used in more urban settings, but could be a good match for the asphalt/mixed materials used on this trail, and to signal when trail users cross onto the national historic trail

Information on and assistance with all uses of all signage options are available from National Trails Intermountain Region, National Park Service. The Pony Express NHT and other national trail logos are federally protected marks & logo projects must be approved by NTIR.





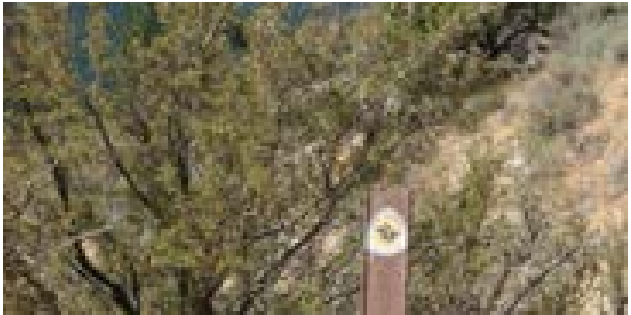
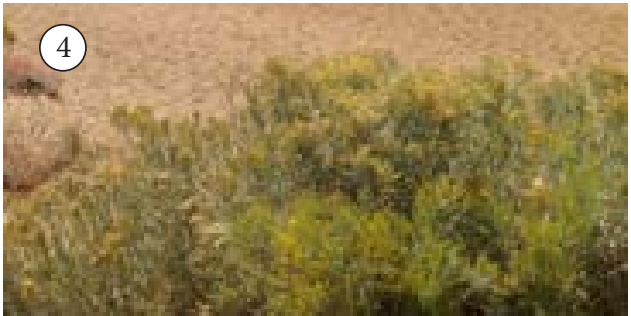
Materials

By necessity, the original Kingsbury Toll Road used during the Pony Express period would have been constructed using the materials on hand. With that in mind, for the purposes of the national historic trail experience, local/native materials are preferred for construction to the extent practical under current conditions.

- ① Local stone for retaining walls, gravels in French drains, and similar
- ② Crusher fines/decomposed granite for soft surface trail to match native soils in color
- ③ Wood preferred for any fencing and/or gates
- ④ Any new planting using native plants appropriate for elevation/slope, particularly species already present along Kingsbury Grade corridor
- ⑤ Asphalt proposed for the 11-12’ vehicular/bicycle lane is an exception to local materials, by necessity, to meet maintenance and snow removal needs. Asphalt treatment options are available for soil-like appearance if applicable, but are likely to be short lived under climate conditions. Asphalt will also lighten in color over time to become more similar to the appearance of adjacent soils.



Treatment on asphalt pathway for soil-like appearance, San Antonio Missions NHP





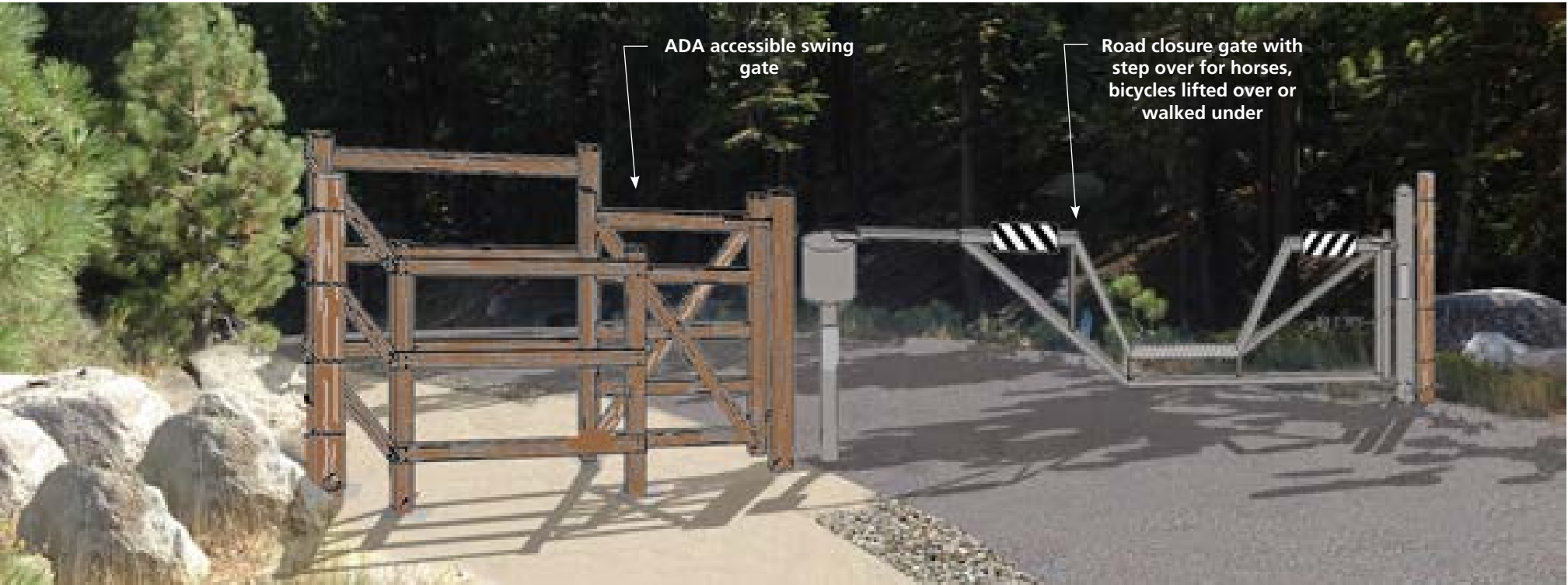
Trail Amenities

This project will need some standard amenities such as benches at trail-heads and rest-stops or fencing at potentially hazardous points along the trail. Although traditional materials in keeping with the historic setting are generally preferred for the Pony Express NHT (wood, metal, stone, etc.), longevity and maintenance needs will also be a factor in the choice of these items as part of a later phase of trail design.

Gates

Gates that serve the needs of all expected user types—pedestrians, equestrians, bicyclists, and limited vehicles—while not allowing unauthorized vehicular access to the trail are a key need for the project. Many potential designs meeting these needs exist; conceptual representations of two possible options are shown at right

Details on these ADA accessible and equestrian compatible gate designs are available from the US Forest Service: <https://www.fs.fed.us/recreation/programs/accessibility/pubs/htmlpubs/htm06232340/drawings/index.htm#fig06>





Orientation and Interpretation Overview

Just as many aspects of the historic trail landscape have vanished over the past 150 years, the people, animals, vehicles, and other man-made elements of the historic trail experience are also no longer visible to the modern trail user. The following section outlines orientation and interpretive media that can be implemented along the trail corridor to help put today’s trail travelers in touch with those of the past.

Orientation

Orientation sets the stage for visitor experiences, letting them know where they can go and what they can do while meeting basic needs. Users particularly need orientation when accessing a trail from multiple locations, or if the trail is of any substantial distance.

Interpretation

When coupled with trail marking, orientation and site design, interpretation offers structured experiences ranging from information to in-depth awareness and complex stories told from a variety of perspectives using the most effective media available. When offered meaningful experiences, visitors may opt to extend their visit and explore more than one place or story.



Traditional trailhead kiosk at River Fork Ranch Preserve providing users key orientation to the site and trails

Finding Their Way

Marking and Orientation

Signs make visitors aware of the trail and where it can be accessed. They confirm that users are at a place of significance to the nation.

Orientation areas offer visitors a space to learn what the trail offers in experiences or stories and how to take advantage of those resources. Orientation also promotes a sense of arrival and value. For many visitors, it reinforces that the trail is significant and available for public use.

Relevant Stories and Experiences

Interpretation and Education

As with all facets of trail development planning, interpretive planning identifies which types of interpretive media are best suited to a particular place or story. The process includes the formal development of guiding interpretive themes, and combines the elements outlined here with appropriate media to best create a vibrant NHT experience for the anticipated audience.

Central Stories for the Pony Express

Central stories offer a brief glimpse of the major topics available for interpretation of the Pony Express National Historic Trail and provide a starting point for theme development. These stories are reflected in the trail-wide themes (see page 51).

- » Communication
- » Mythology
- » Time
- » Logistical Challenges
- » Cross-cultural Conflict
- » Transportation
- » Coordination & Involvement of Many



Marking and interpreting the trail



Interpretive Guidance

What is Interpretation?

Interpretation is an activity that facilitates an intellectual and emotional connection between the interests of the visitor and the meanings of the resource. Interpretive planners and designers use a process that identifies tangible resources, intangible meanings in that resource, and universal concepts. Together this creates a meaningful, possibly life-changing, experience that opens the door to stewardship values when visitors find relevance in the stories told at trail sites.

Interpretive media is used to convey stories and significance to the public. These can be ideas, feelings, relationships, values, or beliefs. Visitors are choosing to spend their leisure time at a trail site. It is essential to understand your audience and its needs as well as your site’s significance when planning. The goal is to craft an experience that is relevant to the visitor and connected to the power of place.

Successful Interpretive Media

Media products connect the interests of the visitor with the importance of the site through print, video, and interactive materials. Text, graphics, design, and other elements work together to create opportunities for the audience to make connections.

There are many considerations taken into account when planning interpretive media. Refer to this overview when planning interpretive media.

Plan for Success

Choose the Right Place

- Welcoming
- Safe
- Accessible
- Iconic

Choose the Right Type

- What kind of media can best express your message? There could be more than one.
- Does a certain media type best engage current and/or future audiences?
- Do you have the resources you need to begin developing interpretive media?

Considerations

- What is the interpretive need?
- What are the desired outcomes?
- Does media creation support organizational goals?
- How and where will you share stories?
- Are there any expectations amongst partner or public groups?

Preparations

- What concepts do you want to share?
- Are there multiple perspectives on the site’s story?
- Do you have knowledge of the resource(s)?
- Do you have knowledge of the audience(s)?
- What are the meanings the site may hold?
- Have you written a theme? It connects your resource and meanings.



Interpretive media can range from traditional trailside kiosk signage to modern digital platforms...the key is to select the right media for the right situation.



Interpretive Goals and Themes

Trail Experience Goals and Themes

Project goals relevant to interpretation include:

- Through the development of the national historic trail, facilitate a positive visitor experience of the historic route and instill a public desire for the protection of historic resources as well as a better understanding and enjoyment of the trail.
- Publicize, brand, and make accessible the Pony Express National Historic Trail through signs and interpretation as well as increased public use and enjoyment.

Pony Express NHT Interpretive Goals

- Provide a variety of interpretive media, experiences, and facilities for people planning to visit or use the trails.
- Develop interpretive and visitor experience threads that connect trail resources and sites.
- Provide information, interpretation, and education material from a broad perspective of trail experiences and impacts.
- Appeal to broader and more diverse audiences.
- Incorporate modern technology in delivering information, interpretation, and education messages.
- Incorporate multiple perspectives in trail interpretation.
- Promote design continuity, or branding, with our partners for the various on-site interpretive media so that visitors can recognize that all sites from one end of the trail to the other are part of a national historic trail.

Thematic Planning

Whether the trail retracement experience offers recreation or history, thematic planning connects the awareness or use of the trail with relevant and engaging messages.

Interpretation connects marking and awareness tools with powerful messages made by connecting stories to the human experience. Trail-wide themes provide continuity of story and experience along national historic trails.

Themes are used to guide the planning process. Those who create compelling themes need knowledge of the place, story, and audience.



Typical existing roadside interpretive format found along the trail within Carson Valley could be updated in coordination with improvements to the trail.

Pony Express NHT Trail-wide Themes

- » The Pony Express offered the fastest transcontinental mail service of its day, providing a vital, all-season communication link between the east and west during a critical period in American history.
- » The organization and implementation of this complex system required the contributions of hundreds of people — among them district superintendents, clerks, station keepers, stock tenders, and riders — a stark contrast to the popular image of the solitary express rider.
- » The route of the Pony Express had to reconcile requirements for favorable topography and water sources with the need to minimize distance.
- » With the completion of the transcontinental telegraph, the Pony Express discontinued operations after only 19 months in service. Yet the trail proved the feasibility of a central overland transportation route and played a vital role in aligning California with the Union just before the Civil War.
- » The Pony Express stations and riders became targets of Indian frustrations due to violent contacts on the California Trail.
- » Pony Express riders became celebrities in their own time, due to their feats of endurance, skill and bravery, contributing to the popular culture and mythology of the American West.



Interpretive Media Types

Know Your Interpretive Media

Interpretive media selection is as much art as science. There is rarely only one way to achieve a goal. Involving an interpretive media specialist is highly recommended. Each situation has its own particular mix of factors to consider. Some of the most important elements in a media decision are: message, audience, and resources.

Digital media endures longer than other forms and can reach broad audiences by addressing diverse learning styles and engagement preferences.

The National Park Service recommends a theme-driven approach that includes orientation and logistical planning for visitors. Safety must be a priority. Interpretive media has to balance safety and enjoyment with difficult historical topics and modern landscapes.

- Understanding the differing needs of current and future audiences plus the complexity of retracement experiences suggests a need to use both traditional and digital interpretive media.
- The trail experiences can be accessible at any time - plan for visitors’ after hours access with orientation exhibits and portable options such as digital media.

Learn more about interpretive media at:
<https://www.nps.gov/hfc/products/>

Traditional Media Examples

Orientation Exhibits

These exhibits help visitors know where to start and what to expect.

Wayside Exhibits

This type of exhibit captions the landscape. It is used at the location of the resource to which it refers.

Publications

Examples include: brochures, self-guiding walking/driving tours, rack cards, trail or partner newsletters, and more.

Audiovisual

Film, podcasts, audio driving tours, and pedestrian tours are illustrative of this type of media.

Museum exhibits

Indoor media displays that use historical content, including in depth local stories and trail wide contextual information.

Personal services

Greeters, docents, tours, and programs are typical examples.

Digital Media Examples

Web Media

The foundation for digital media is the web. It is the place to start the conversation with the public about planning a visit, exploring a topic, or learning about history. In depth content that is not appropriate to other types of interpretive media may be offered on a website or mini website.

Mobile Applications (Apps) and Mobile Websites

Locating yourself on a map, making your own tour, finding ranger programs, or discovering what’s around you by just looking through your smartphone is possible with this media. Apps for smartphones, tablets, and e-readers are an important part of the digital visitor experience. Apps can stand alone (native) or be web-based (mobile website or web application). Both offer expanded content and meet the needs of a variety of user preferences.

Virtual Experiences

Use technology to your advantage by offering virtual or augmented experiences for private land or inaccessible sites. Visit with the landowners to find a way to enhance the visitor experience without intruding on private or sensitive property.

Social Media

Visitors and the public are discovering and connecting to parks through their friends and family on social media. Social media is a tool to encourage interpretive connections to a place or experience. It allows for immediate feedback and sharing of the experience, which is particularly important to younger audiences.

Education Technology

Every new application of education technology is designed to intensify formal and informal educational experiences, and to expand the audience for park educational programs. Digital media resources can support and expand education programs both on site and through distance or virtual learning.

Range of Interpretive Media Types

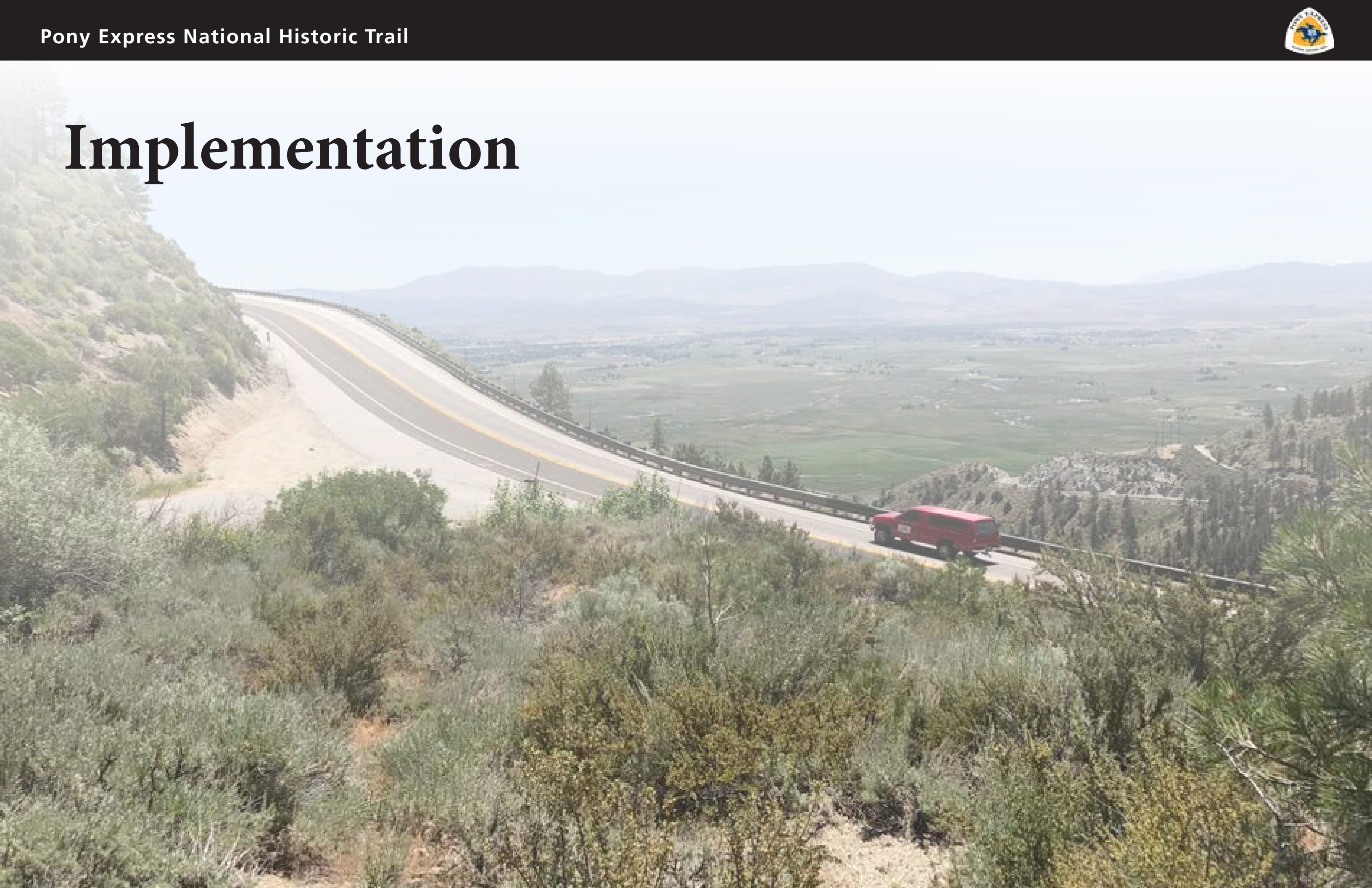
Site design, marking, orientation, and interpretation tools work together to create a welcoming space for recreational or leisure-time use, which can include hiking, biking, learning, and playing.

This chart includes multiple types of interpretive media. While wayside exhibits are often expected, other media types may more successfully meet audience preferences or accessibility needs, promote resource protection, and share depth of story.

General Types →	Outdoor signs	Outdoor signs	Audiovisual	Audiovisual	Audiovisual	Interactive	Interactive	Mobile	Mobile	Publications
Specific Types →	<i>Interpretive exhibits</i>	<i>Wayfinding signs</i>	<i>Personal device</i>	<i>Integrated at site</i>	<i>Video</i>	<i>Physical</i>	<i>Digital</i>	<i>Website</i>	<i>App</i>	<i>Paper</i>
Considerations ↓										
Cost	• •	•	• •	• • •	• • •	• •	• • •	• •	• •	•
Staffing	•	•	•	• •	• • •	•	•	•	•	•
Design time	• • •	• •	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •
Maintenance	•	•	•	• •	• •	• •	• •	• •	• •	•
Lifespan	• •	• •	•	•	• •	• •	• •	• •	• •	•
Learning styles	•	•	• •	• •	• • •	• •	• •	• •	• •	• •
Landscape effect	• • •	• • •	•	•	•	•	•	•	•	•
Ease of group participation	• •	• •	•	•	• •	•	• •	• • •	• • •	•
Continuity	• •	• •	• • •	• •	•	• •	• • •	• •	• • •	• •
Meets accessibility needs	• •	• • •	• • •	• • •	• • •	• •	• • •	• • •	• • •	•

• Lowest • • • Highest

Implementation





Concept Plan Adoption

The vision put forth in this planning document will take time and resources (potentially significant) to realize fully. The process for plan adoption and eventual implementation can be generally summarized as follows:

- ✓ **Stakeholder Plan Review**
Re-engage the coalition of community partners, stakeholders, land owners, agencies, and land managers that provided input on the trail planning process to review and comment on the draft concept plan.
- ✓ **Concept Plan Modification**
Modify and update draft concept plan to reflect additional input from community partners and stakeholders.
- ✓ **Parks and Recreation Commission Plan Review**
Present the updated draft concept plan to the Douglas County Parks and Recreation Commission for additional public review and comment. *[Draft plan unanimously approved by Commission on September 25, 2018 with two minor notations]*
- ✓ **Finalize Concept Plan**
Finalize draft concept plan to reflect additional input from Parks and Recreation Commission hearing.
- ✓ **Douglas County Board of Commissioners Adoption**
Present finalized concept plan to the Douglas County Board of Commissioners for adoption. *[Plan adopted on November 20, 2018]*

➔ **Funding and Development**
Work with other land agency and management partners to identify and apply for grant funds to implement plan concepts. Funding for this project should come from outside resources with reasonable in-kind matching requirements that will not burden the County with additional debt service or require an obligation of funds that impact current fiscal priorities.

Implementation
Work collaboratively with the broad coalition of community partners, stakeholders, land owners, agencies, and land managers to implement project concepts and establish a 2.5 mile retracement trail of the Pony Express NHT in Douglas County.

Cost Estimates

The figures detailed here provide a rough estimate of the cost to construct the primary elements of the trail design as presented in this conceptual plan. While figures from similar projects, such as the Stateline-to-Stateline Bikeway Project, as well as national research data on standard costs for trail improvements* were consulted in developing these figures, many unknowns and unforeseen variables will impact final cost of implementation. As best as possible, these factors are described below. It is recommended that a local consultant be hired to provide professional cost estimation for this project early in the Funding and Development phase.

Trail Development Costs: \$8 million - \$10 million / mile

- Potential Cost Reduction Factors:**
- Existing 20’ trail right of way formerly used as a state highway may mean less overall grading and route definition will be needed, compared to creating a new trail right of way in steep slope conditions
- Potential Cost Increase Factors:**
- Difficulty of access due to slope/location
 - Pre-existing erosion issues in some parts of the proposed trail segment
 - Complexity of proposed trail cross section (e.g. multiple surfacing types, French drain, retaining walls)
 - Need for permitting/compliance/monitoring related to possible construction impacts on adjacent public lands (building a 20’ width trail within a 20’ right of way implies at least limited or temporary impacts on adjacent areas during construction.)

Trailhead Development Costs: \$500,000 - \$1,200,000

- Breakdown of Costs and Considerations:**
- Grading/surfacing: \$400,000
This figure is likely on the high side, as the proposed area is already roughly graded, and will just require refinement and/or adjustments for drainage and increased use.
 - Restroom: up to \$600,000
Costs will be impacted by county’s decision (and ability) to tie into existing utilities (water, electricity) at the site. A pit toilet without utilities could cost as little as \$20,000-\$25,000.

- Interpretive exhibits, signage: \$15,000-\$20,000
Includes professional design services and installation.
- Other amenities (gates, kiosk/shelter, fencing, etc.): \$15,000

SR207 Lower Crossing Costs: Variable by Option

- Option A, Tunnel:**
- Tunnel excavation and construction: \$10,000,000+
Costs would likely be on the high side of average because of difficulty of access/terrain.
 - Realignment of trail route: \$1,500,000 minimum
Likely additional costs/additional trail construction will be required to return to existing grade on downhill side of tunnel, although less than required for a bridge (grades in area may exceed 100%).

- Option B, Bridge:**
- Bridge structure: \$600,000+
Costs would likely be on the high side because of difficulty of access/terrain and need for additional width to accommodate multiple users.
 - Realignment of trail route: \$2,000,000 minimum
Likely additional costs/additional trail construction will be required to return to existing grade on downhill side of bridge (grades in area may exceed 100%)

- Option C, At-Grade Crossing:**
- Signalized crossing: \$100,000
Complex trail construction may be required on downhill side of highway as grade in this location exceeds 100%, adding to costs.

- Option D, Pine Flat:**
- Realignment of trail route: \$2,000,000 - \$5,000,000
Costs will be greatly influenced by whether a 20’ width and cross sections for multiple user types are maintained throughout, as well as by actual grades and existing conditions (not surveyed on this project).
 - SR207 Crossing: TBD
Choice of crossing type (tunnel, bridge, or at-grade) will dictate overall cost of crossing at this location. Grades are more level in this area than other options proposed, so either bridge or tunnel option may be less costly to construct than at locations near the Pony Express NHT.

* Costs for Pedestrian and Bicyclist Infrastructure Improvements: A Resource for Researchers, Engineers, Planners, and the General Public (UNC Highway Safety Research Center for the Federal Highway Administration, October 2013)

Appendices





Appendix A: Historic Preservation

NEPA and Section 106 Compliance

The original historic Pony Express trail alignment was widened and paved as a public motor vehicle roadway in the mid-20th century. This work may have largely or entirely obliterated the original trail trace and any other cultural features that might have existed along the alignment; however, professional archeological assessment of the road and the old trail corridor would be needed to ascertain whether that is the case. Today the road consists of sections of cracked, crumbling, and patched pavement interrupted by sections of graded earth where the pavement has washed out. Development of the alignment for recreational use as proposed in this document would replace the old asphalt with gravel or other “soft” surfacing suitable for pedestrian and equestrian use, and with an asphalt trail for cyclists, largely within the existing 20-foot county right of way. Depending on which project alignment is selected, however, the recreational trail may deviate from the historic alignment in some places, and the project area might need to extend beyond the county right of way depending on equipment and supplies staging needs.

While NPS and project partners do not expect these alignment choices to adversely affect any historic properties or trail sites, the protection of any cultural resources that might exist in the project area is a central concern for all involved with the NHTs.

Under certain circumstances, development activities at a trails site requires environmental review under the National Environmental Policy Act (NEPA) and/or Section 106 of the National Historic Preservation Act. These reviews are triggered only if the project is federally funded, federally licensed or permitted, on federal land, or has some other significant federal involvement. The reviews can be a simple paperwork exercise, or they can require tribal consultation, archeological survey and testing, survey for sensitive and endangered species and habitat, resource monitoring during construction activities, and more, depending on the nature of

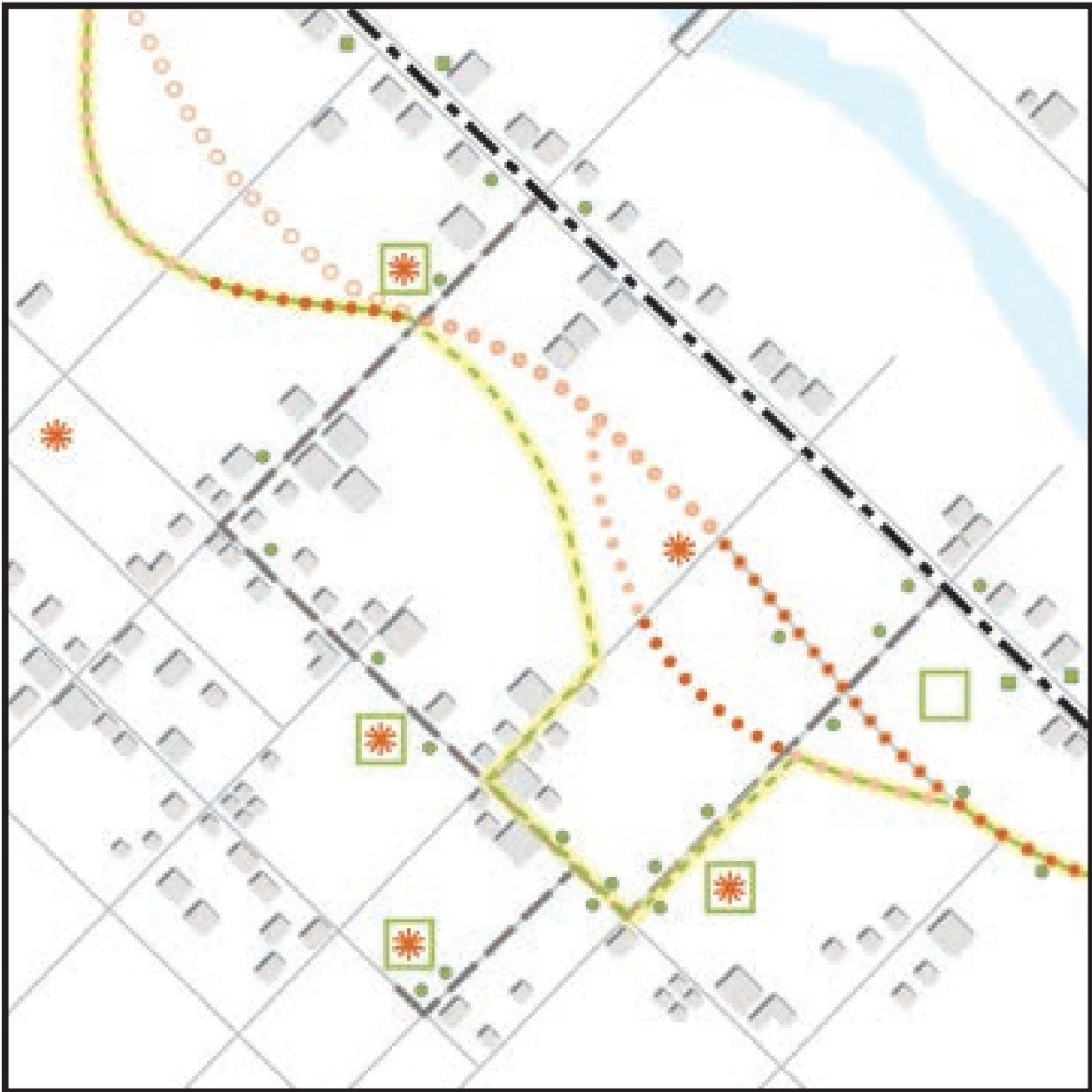
the proposed development and the natural and cultural resources that exist within the project area. Typically, NEPA and Section 106 reviews are handled by the federal agency whose land or funding is involved in the project. Non-federal partners such as a counties or non-profit organizations would not be expected to perform that work themselves, but they do need to consult with the affected federal agencies early in the planning stages to ensure that any need for environmental review is addressed. Partners also should be aware that environmental review could increase project costs and lengthen project timelines. These factors must be taken into consideration in scheduling and in developing the project construction budget.

Even if the project is not a federal undertaking, the NPS encourages partners to ensure that the selected project area has been professionally surveyed for archeological and historical remains, that any identified properties are protected during construction, and that the concerns of American Indian tribes for cultural and natural resources are appropriately solicited and addressed.

Individual states, too, often have their own cultural and environmental compliance requirements, outside of NEPA and Section 106. Project proponents should consult early with the state’s history division, historical society, or equivalent offices in order to ensure compliance with state law.



Appendix B: Elements of a national historic trail



Congressionally designated route
In most locations, this is the same as the historic route of the NHT. However, as research into the trail since the time of NHT designation has occasionally uncovered new information more accurately identifying the historic route, in some places the Congressionally designated route currently differs somewhat from the known historic trail alignment.

Historic route
This represents the most current knowledge and documentation about the historic route of the NHT on the ground, varying from precise to uncertain over the length of the trail. Research on and documentation of the trail is ongoing, so knowledge of the historic route will likely continue to become more accurate over time.

Surviving route segments
These are locations where physical signs (ruts/swales, river crossings, or archeological remains) of the trail are present. It also includes segments of historic trail now developed into modern roads. These roads may vary in character from very similar to the historic condition to paved modern roads which have been significantly widened or altered.

Constructed trail
While constructed trail follows the original historic route as far as is feasible, in some locations deviations are required due to current conditions or landownership. Interpretive and trailhead facilities may be part of development of a constructed trail.

Signing
The system of road and pedestrian signing which guides visitors to accessible trail sites, segments, and constructed trail. It includes auto tour route and local tour route signing as well as directional signing to sites, signing of the original historic route where it follows or crosses roads, signs for public identification of NHT sites, and pedestrian signing of constructed NHT trail.

Historic trail site
These are sites that date from the period of significance of the trail, and which maintain some level of historic integrity to the present day. Although they may be well documented, some of these sites will remain undeveloped and inaccessible to the public indefinitely, due to private ownership, sensitivity or other considerations.

Developed historic trail site
These are historic trail sites which have been developed with visitor facilities such as parking, directional or site identification signing, interpretation including interpretive facilities, and/or opportunities to retrace the trail, and which allow the public to recognize them as part of the NHT. Historic preservation and/or documentation may have also occurred on site.

Trail-related interpretive facility
These are museums or visitor centers that provide significant interpretation and visitor information about the NHT, but which lack historic trail resources on site.

Auto tour route
As identified in the Comprehensive Management Plan of some national historic trails, the auto tour route follows the approximate direction of the trail along all-weather roads, providing access to trail sites and segments which are open to the public. Not all national historic trails have a planned or marked auto tour route.

Local tour route
A signed route—often closer to the historic route and resources than the auto tour route— which guides visitors to a group of NHT sites and segments in a relatively small geographic area, in a situation where it would otherwise be too complex to provide directional signing to each of the sites individually. Interpretive and trailhead facilities may be part of development of a local tour route.

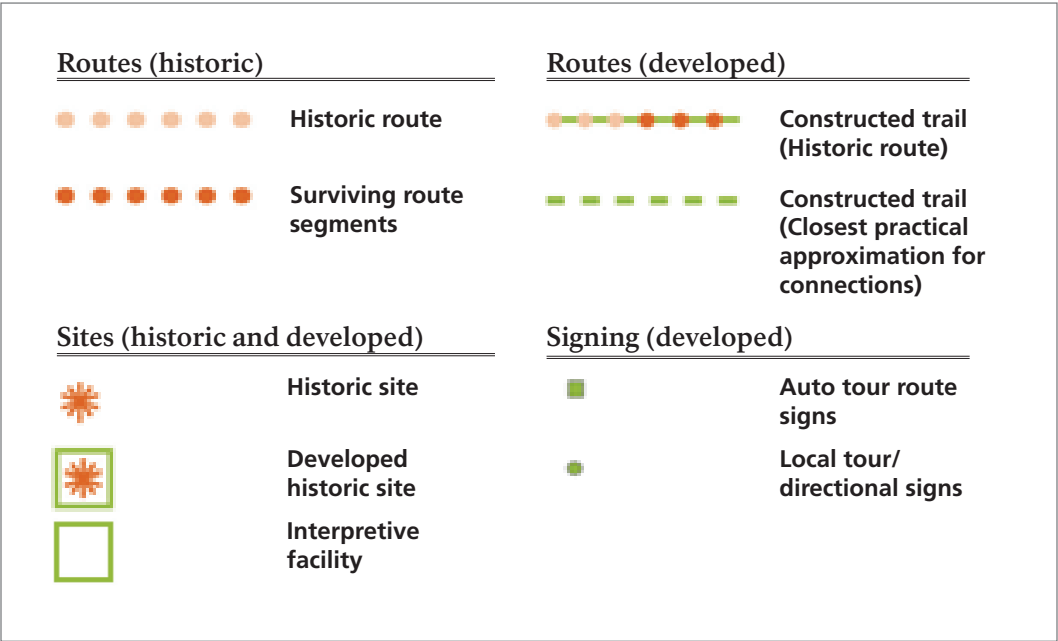


Appendix B: Developing a national historic trail

Historic condition



During the trail period, the entire historic route would have been visible or at least well known (by landmarks or other wayfinding methods), and sites would have been present and in operation. These two elements are the historic foundation of the NHT, though not all of these locations may be fully identified or understood at the present time. Trail sites of segments may not have been present or operational through the entire period of significance of the trail to be considered NHT-related historic resources.



Condition at national historic trail designation



At the time of NHT designation, the trail-related resources included:

- surviving historic sites (some accessible to the public, others not)
- remnant segments where the trail was still physically present as swales or road
- some small segments of constructed trail
- some signing or other markers placed by various groups and organizations
- no NHT visibility or trail-wide consistency of trail identification

Developing a national historic trail



Ongoing efforts to develop each NHT include:

- constructing modern trails approximating the historic route
- adding signing of all types to identify and locate NHT sites, segments and visitor recreational opportunities
- developing visitor facilities to encourage public access, use and interpretation
- conducting preservation work on historic sites and segments
- researching/documenting newly recognized sites and segments
- increasing consistency of NHT identification trail-wide