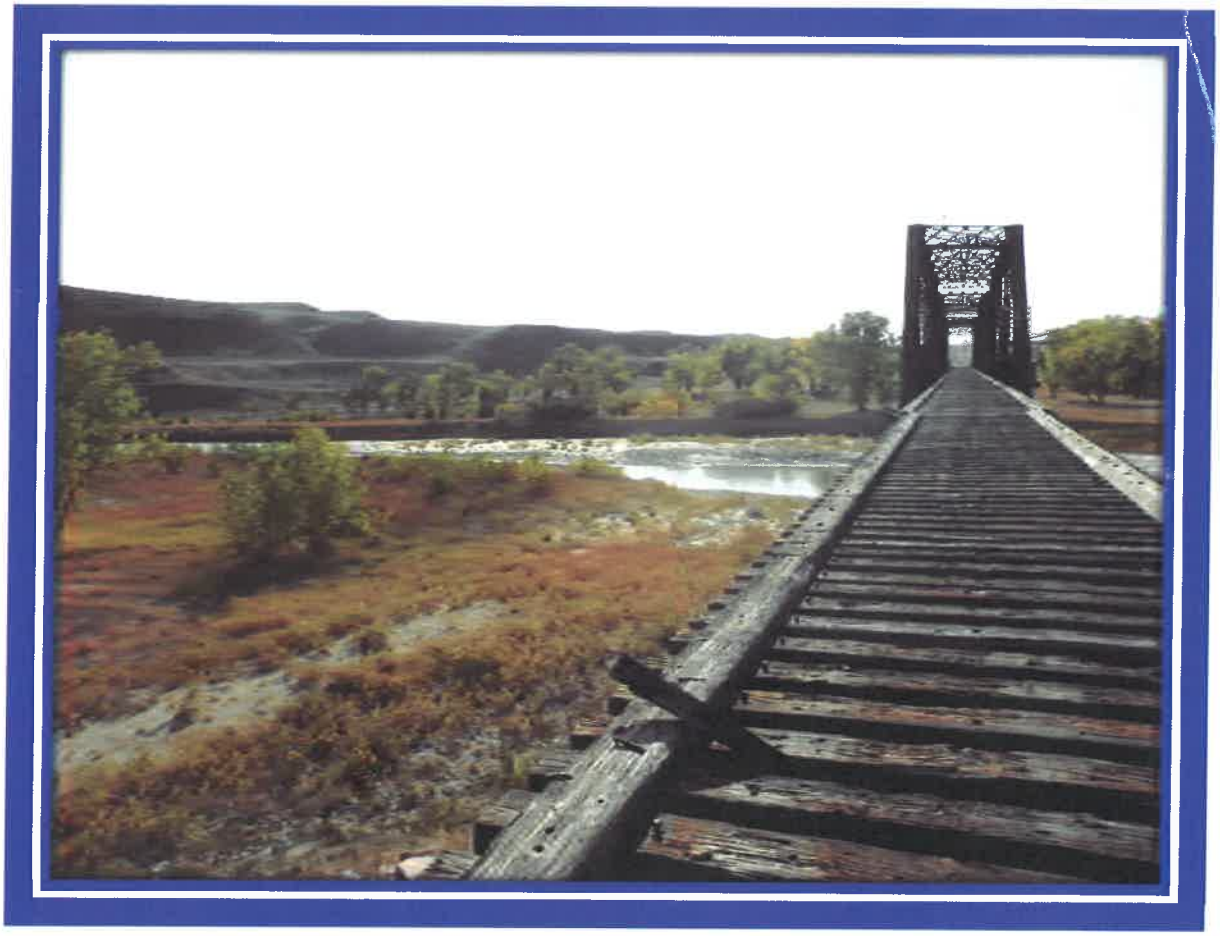
MAKO SICA TRAIL FEASIBILITY STUDY



Future Focus Consulting

Wyss Associates, Inc.

WEST RIVER TRAIL COALITION

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Executive Summary

Project Scope

This study began in the summer of 2012 and investigates the feasibility of creating a multi-use (walking, bicycling, and equestrian) trail along the old Chicago, Milwaukee and St Paul railroad line that runs between Rapid City and Kadoka, South Dakota.

This study investigates if the South Dakota owned, railbanked, railroad corridor is in good enough shape to be turned into a trail, how many people would use it, who should manage it and what it would cost to build and maintain the trail.

The study's findings are presented here in this document consisting of narrative, pictorial and appendix consisting of detailed maps, spreadsheets and conceptual drawings.

Project Partners

This study would not have been possible without the help and vision of the project's many partners. Including the:

- West River Trails Coalition,
- Black Hills Area Community Foundation,
- State of South Dakota Railroad Authority,
- National Forest Service,
- Badlands National Park,
- South Dakota State Parks,

The objectives of this study were to evaluate the feasibility of creating this trail and make recommendations to guide the development of the trail.

A map of the trail corridor was prepared along with inventoried rights-of-way, land ownership, and trail amenities. Opportunities for linking communities, Western Dakota Technical Institute, and tourist sites were identified.

During the physical assessment of the trail current neighboring landowners were identified contacted and their comments were recorded and are attached in the appendix.

During the past year monthly meetings were held with the West River Trails Coalition as well as public meetings where members of the communities could give input.

A phased implementation plan for the trail network is included in the report. The phased implementation plan is supported by opinions of probable construction and maintenance costs.

General Description and Conditions

Stretching one hundred miles long, the old railroad corridor of the Milwaukee, Chicago, and St. Paul railroad from Rapid City to Kadoka, South Dakota has been inactive for the past thirty years. Interest in the old railroad corridor has come and gone throughout the years until in 2007 an idea to create a rail to trail project along the old railroad bed began to take shape. The proposed Mako Sica trail (MST) is intended for the shared use of 4 core activities: hiking/walking, biking, horseback riding, and in the winter, cross-country skiing. The rail corridor is geographically diverse as it travels from the Black Hills through the Badlands of Pennington and Jackson Counties. Traveling from west to east along the corridor a diverse flora and fauna transitions from creek and wetland riparian system to arid desert like conditions of the Badlands.

The study took place July through November of 2012 and the entire corridor was either hiked or bicycled. During the corridor study bridges, culverts and fences we recorded and the condition of the railroad bed surface was examined. The primary conclusion from the corridor inventory is that for the most part the rail corridor bed is in excellent condition for conversion to a recreational trail. That is the bed is in place and can be used now without much modification. Except some eroded spots in the rail bed, and the bridges not being decked it can be traveled safely on foot today.

The primary conclusion from the corridor inventory and examination is that for the most part the railroad corridor bed is in excellent condition for conversion to a recreational trail.

The field survey revealed the following regarding the existing condition of the rail bed:

- From Anderson Rd east of Rapid City to Hwy 73 just west of Kadoka all rails and ties have been removed.
- Some rails remain along the sides of the rail bed between Caputa and Anderson Rd.
- Rails and ties are still in place from Cambell Street to Anderson Rd in Rapid City and along the short section from Kadoka to Hwy 73. *(As of October 2013 rails and ties were being removed from this section.)*
- Railroad spikes and miscellaneous metal fragments remain scattered along the rail bed.
- The railroad bed is packed, and worn in spots and grass and sage covered in others. For the most part the rail bed can be ridden or hiked without much manipulation on more than 75% of it.
- The rail bed appears to be stable with only a few locations where minor erosion has occurred and half a dozen culverts locations where major erosion has occurred and new culverts will have to be put in place.
- There are 83 bridges along the corridor with two bridges (bridge #4 & #24 being completely gone. One by washout and the other by removal by Pennington

County. Another bridge (#23) is about to succumb to erosion. This bridge will be costly to fix if it should be washed away an deemed unsafe.
- All the other bridges still in tack all look structurally sound but will need a structural engineer to make that determination.
- There is 8075 lineal foot of bridge decking.
- There are 123 culverts.
- There are 69 fences that span the trail corridor.

There are 83 bridges along the railroad corridor and all but two are intact and upon visual inspection have no major repairs needed. There is one bridge that will be in need of erosion control help very soon due to erosion of the creek bank where Rapid Creek has changed it course. Of the two that are missing, one was taken out by Pennington County to reconstruct a drainage area through the area. According to the State Railroad Authority, Pennington County has promised $87,000 to rebuild the crossing across the channel whenever the State would request that done. The other bridge that is missing is located west of Creston about 2.5 miles. This bridge was taken out when flooding of Rapid Creek changed its course and created an oxbow. This bridge cannot be reconstructed without several major hurdles being overcome including money and permits. However the good thing about this bridge is the location. The location sits along National Forest Service Property and a bypass can possibly be secured from the Forest Service along the south side of the corridor. This property is home to the Railroad Buttes ATV area and should have gone through a NEPA study already. If that is in fact the case using the existing #512 atv trail as a bypass should not be a problem however it will be up to the Forest Service to give that permission upon request.

There are approximately 123 culvert placements along the rail bed. Several of these placements include at least double side-by-side culverts. Ten of these culverts are in need of repair with six being total replacements projects. All six of the total replacements will be major construction projects. Three of the washout areas are in the small section of the trail runs through the Badlands National Park. Another one is just outside of the park and the other two are located between Interior and Kadoka.

There are approximately 69 fences that span the railroad corridor. Not all of the fences have legal authority from the State of South Dakota Railroad Authority to block the corridor. Some of the fences act as livestock containments but other are just for property boundary placement. Future Focus believes it would be in the best interest of whoever oversees the construction of the trail to work with the property owners along the corridor and create passage gates for those fences that have permission from the State to block the corridor.

Two public meetings were held in October, 2012 to judge the public's interest in the trail. Participation in the public meetings indicated strong interest in developing a recreational trail along the corridor however there was also very passionate debate with some landowners about not allowing the trail.

The results of the public participation and the corridor study were used in preparing a final recommendation for operations, construction phasing, and maintenance of the proposed trail.
Finding an organization to manage the trail will be one of the hardest parts of getting the trail built. The best entity to manage the trail due to their knowledge, man power and equipment would be the State of South Dakota Game, Fish and Parks. The corridor, like the Mickelson Trail would have to become a State Park first. However having the State take on the management and maintenance of the trail is probably not an idea that is going to succeed. Especially since the state has put the focus on the spur trail from Mt. Rushmore to Hill City.

[**This report recommends that a non-profit organization such as the West River Trails Organization take on the management of the trail and begin with a small section lease from Jolly Lane to Caputa.**] Taking on this small section would accomplish three things: 1. This section of trail would open recreational activity up on a 12-mile section of which would start to get people involved. 2. Would allow the organization to grow as funding and members grew. 3. Would give the organization a chance to prove it could manage the trail.

This report recommends that the managing enity work with the Kadoka group so a small section of the trail can be put in place from the Kadoka Depot to Hwy 73 a length of about a mile.

The report highly recommends that the section of trail along Cambell Street and then east to Jolly Lane be built and oversaw by the City of Rapid City. This section is going to be one of the highest costs of construction per mile due to the three major road crossing and the section through Discount Lumber. The managing organization should continue to gather support for the City to take on this section not only in construction but in the management and maintenance as well. This section of trail would extend the Leonard Swanson Pathway out to the eastern edge of the City limits and opens recreational and commuting hiking and biking up to almost 8,000 more residents and workers within the City of Rapid City.

Future Focus recommends four major trails heads at Caputa, Scenic, Interior and Kadoka: These trail heads will include parking for all users including equestrian users, water and restrooms. Smaller trailheads that would be available for parking only with no restrooms only water and a small shelter and kiosk would be placed at Jolly Lane, Creston, Conata Basin and Weta.

This report is not advocating putting in a major trailhead in Rapid City as the Leonard Swanson trail (LST) has several trailheads already. Trailheads are located at near the Pennington County Fair Grounds and the Rapid City Swim Center, People starting/ending from these locations can connect to the LST and then connect with the MST.

This report also recommends that the trail be constructed in phases.

Construction Phase Priority

Phase I	-	Cambell St to Jolly Ln	2.5m	Construction	-	$1,075,832
		" " " "		Maintenance	-	$3-5,000.00 yr
Phase II	-	Kadoka to Hwy 73	1m	Construction	-	$166,125
		" " "		Maintenance	-	$1,000.00 yr.
Phase III	-	Jolly Lane to Caputa	12m	Construction	-	$2,177,742
		" "" "		Maintenance	-	$8-10,000 yr.
Phase IV	-	Weta to Hwy 73	12 m	Construction	-	$2,280,270
		" " "		Maintenance	-	$5-$10,000 yr
Phase V	-	Interior to Weta	12m	Construction	-	$3,047,187
		" " "		Maintenance	-	$5-10,000 yr
Phase VI	-	Caputa to Creston	27m	Construction	-	$ 3,703,528
		" " "		Maintenance	-	$ 25-30,000 yr
Phase VII	-	Conata Basin to Interior	10m	Construction	-	$ 2,248,413
		" ' " "		Maintenance	-	$ 10-15,000 yr
Phase IX	-	Scenic to Conata Basin	23m	Construction	-	$4,173,296
		" " "		Maintenance	-	$20-25,000 yr

Total Trail Cost Construction w/Trailheads	$ 21,510,328
Total Cost of Annual Maintenance	$ 87,000 to $111,000

The economic figures for the MST construction and operation, although not as large as if compared to manufacturing, health services and large sectors of the local economy, the impacts are concentrated in the small communities along the corridor which are dependent on this type of activity, and this activity then spreads to other businesses in population centers and commercial hubs such as Rapid City.

There are many ways that trails affect the local and regional economies, including tourism, events, redevelopment, community improvement, property values, health care savings, jobs and general consumer spending.

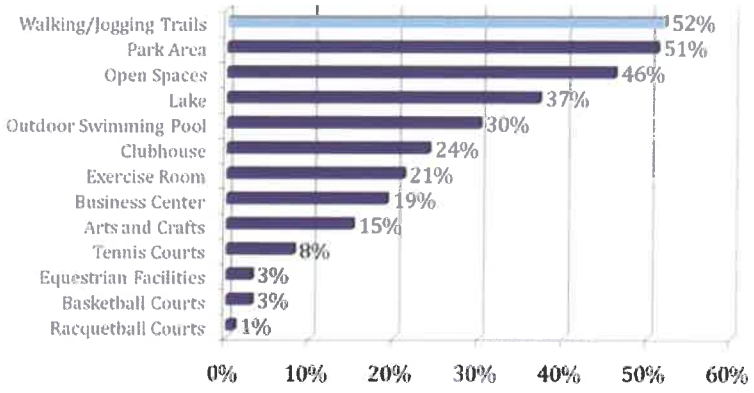
Trail users economics vary greatly mostly due to these types of users being spend-thrifty when on vacation. Users also don't spend a lot of money when they are on the trail. Rail to trail users generally spend their nights in lodging places including bed and breakfasts, hotel and motel where mountain bikers are more of the outdoor recreationalist and tend to camp or stay in campgrounds. According to a report from Rails-to-Trails Conservancy, users of these types of trails tend to have and income above $50,000 a year with a mean age of 49 years old.

According to the calculation of Future Focus Consulting, LLC when the MST is completed Rapid City and the region could see upwards to $5-10,000,000 of impact generated yearly by trails users. Over the course of the next 20-25 years the region could see upwards of $100-$150,000,000 dollars of direct impact into the region due to the MST.

Benefits of the Mako Sica Trail

The South Dakota 2008 State Comprehensive Outdoor Recreation Plan (SCORP) has walking and bicycling in the top 20 outdoor recreational activities with walking being #1 and bicycling being #17 that people like to do in South Dakota. The 2012 Rapid City Bike/Pedestrian Plan calls for a trail from Cambell Street to Anderson Road as one of the priority projects for Rapid City.

According to multiple studies conducted by the National Association of Realtors and the National Association of Homebuilders, trails have been ranked as either the first or second most important community amenity when potential buyers consider their purchase. This preference is particularly notable for homebuyers 55 years and older, as indicated below:



The Rapid City and Badlands area are rich with a cultural and historical past. In this study we investigate the opportunities and challenges that link these attractions with a non-motorized recreational trail. Should the Mako Sica trail be built it will enhance the quality of life for the thousands of residents in close proximity of the trail not only by providing for alternative non-motorized trail for commuting and recreation, but also by stimulating economic revitalization of the small historic towns along the corridor.

When the Mickelson Trail was constructed new businesses such as bed and breakfasts, bicycle shops, restaurants located along the trail. The proposed MST will also create an opportunity for new business to start up and existing business to be enhanced. Potential trail businesses that might be generated by the trails use would include, eateries, bed and breakfasts, bicycle rental, recreation and event activities, sightseeing excursions, bicycle related shops and equestrian support centers.

The trail will develop links and connectedness throughout Pennington and Jackson Counties by allowing safe walking, biking and equestrian opportunities to connect the small communities that now can only be connected by motorized travel. It will provide

the rural residents and business owner's enhanced recreational opportunities that aren't available to them now. It will be that spark that will attract business and workers in the expanding industries to want to relocate here making the communities and counties more competitive in the future economy.

Just like the Mickelson Trail the MST will encourage economic development in places like Rapid Valley, Caputa, Interior and Kadoka. Completing the trail through these small town centers will encourage economic development. Small businesses such as Plantsmyth, Jolly Lane, Caputa Store and the Cowboy Corner in Interior will provide amenities to the trail users in the form restaurants, shops, and site seeing. Thus the trail users will bring a new source of income to help grow current businesses and create opportunity for the development of new ones.

Railroad History

According to the South Dakota State Historic Preservation Office the late 1800s Dakota Territory as well as other plains areas were shaped and grew out of the railroad transportation network that rapidly occurred west of the Mississippi during this time. The railroads were the most vital components of large numbers of people coming to the Dakota Territories.

The railroad companies often times influenced the settlement process by actively recruiting settlers often times with reduced freight costs to move their possessions and other times by purchasing entire land tracks and selling it to settlers at a mark up and a promise at prosperity. The results were lineal townships that sprung up overnight followed the rail building all across the territory.[1] All of the towns along the MST except for Rapid City were railroad towns. They lived and died because of the railroad.

By 1870 the population of Dakota Territory below the 46th parallel (the current North Dakota-South Dakota boarder) was 11,776 *(Dakota 1870 territorial census index)* and showed signs of increasing rapidly. During the 1870s the reservation land in the central and southeast corners of the sate blocked significant railroad access. Most lines that were being built at this time also included a Federal land grant.[2] Apparently a federal land grant was the only reason for construction into the state at this time. In fact several of the railroads that were built with federal land grants during this time weren't even used for another 8-10 years.

By the mid 1870's during the high peak of the Black Hills gold rush people were coming to the Territory in droves. The railroads needed to find a direct connection to Rapid City from Yankton, the jumping off point of rail and river travel. However there was a significant roadblock in the way, the Indian reservations! At this time the only way to get to the Black Hills was by overland travel by walking, horse or wagon.

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[1] American History From Revolution to Reconstruction
[2] Federal Land-Grant Act of 1862

In 1873 a recession hit the U.S. and stock in the railroad plummeted and railroad expansion into the Black Hills came to a stand still.

When the recession finally ended in the 1880s the North Western railroad company reached the Black Hills in 1886 bypassing the reservation lands by going through Nebraska and connecting to Buffalo Gap and then into Rapid City. Another railroad line (CB&Q Burlington) entered the Black Hills, which used branch lines to connect to Edgemont and then right through the middle of the Black Hills to Deadwood. This line today is the home of the Mickelson Trail.

In 1870s the Southern Dakota Territories population stood at just under 12,000 people. By the beginning of the 1880s just over 98,000 people lived in the southern territory and five years later over 260,000 people.

In the 1890's South Dakota had a significant drought and then a in 1893 a recession hit the country. Again this recession all but stopped any railroad construction westward.

By the end of the 1890s the economy was on the upswing and had the rail companies again looking for a direct route to the Black Hills from Yankton.

In 1887 lobbied by the railroad companies Congress set the stage for opening up the "West River" region of the territory by partitioning the Great Sioux Reservation through what became know as the Dawes Act.[3] This change began with assigning plots of lands to family allotments on the reservation and those lands not assigned to individual tribal members were sold to any and all takers. This allowed the C,SP,&M to chart a line from Chamberlain to Rapid City. In 1906 the railroad made its way west where a new railroad city was chartered called Kadoka.[4] From Kadoka just eight short months later after laying track through the badland country and what used to be reservation land the railroad entered Rapid City in March of 1907.

In the early 1900 railroad engines were powered by steam. Water stops along the rail corridor was very important for the train to continue it journey. Many of the small towns along the MST were built by the railroads themselves for these vital water stops. Up to nine thousands gallons of water from the water tanks placed along the way were pumped into the tender located behind the engine, which powered the train. The water was heated by coal in the boiler to create steam, which ran the engine.

There were seven water stops along the line between Kadoka and Rapid City. At all of these stops along this line the railroad would have a "man or men" that would keep water in the reservoirs or tanks to be ready for the next train to arrive. These stops grew up to become small towns of several hundred people.

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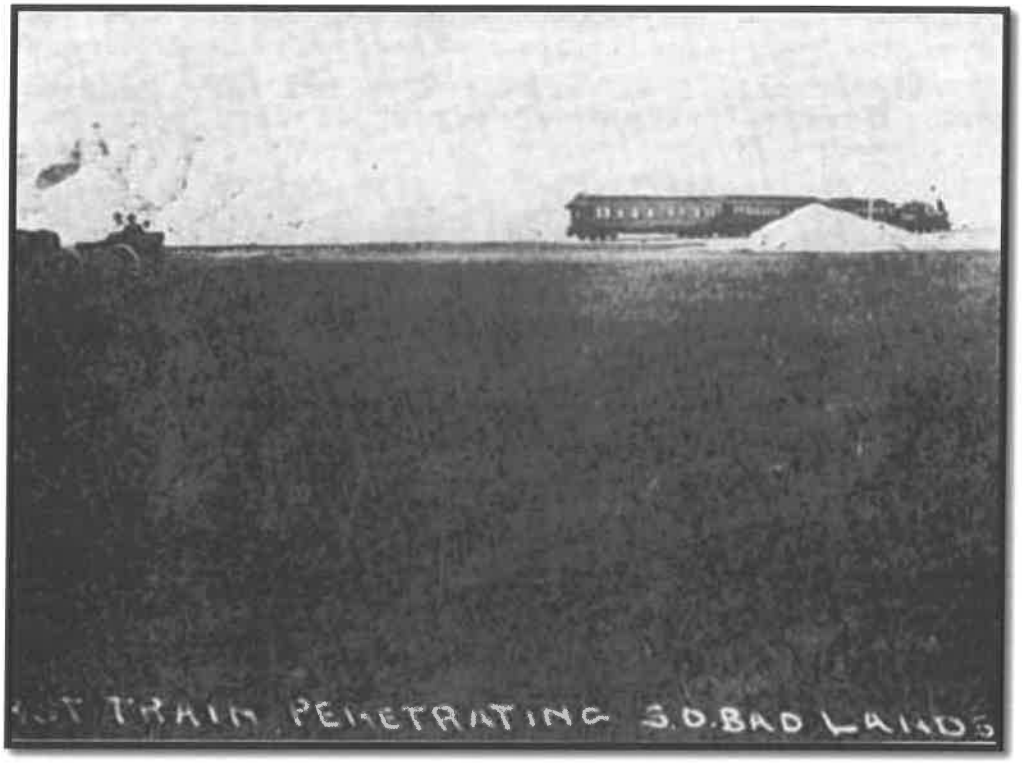
[3] Federal Legislation 49th United States Congress
[4] South Dakota Rail System History

In the early 1950 the steam engines were replaced by the diesel engines that became the workhorse of the railroads. Now a train could run for hundreds of miles without stopping and there was no need for the railroads to keep personal at each stop. So when the company men moved away from these towns with them went the other residents as well.



FIRST TRAIN PENETRATING SOUTH DAKOTA BADLANDS, 1907
(Badlands Natural Historical Association Picture)

Some communities have survived, (Scenic, Interior, Caputa, and Kadoka) but sustained themselves on tourism and ranching. Others like Conata Basin, Weta, Creston, Imlay have now all but gone by the wayside and have only ghost like structures remaining.

Water Stop Communities [5]

Caputa

Caputa, South Dakota once a booming small town along the railroad line and State Highway 44 started its decline in the 1960s when the interstate highway system went in to the North. Once a thriving cattle town where ranchers gathered to bring their cattle to market and load them on the train to the slaughtering houses Caputa today is home to around 80 residents. The Caputa Store is the main gathering place now and still is the place where area ranchers and travelers stop on their way home or to the Badlands.

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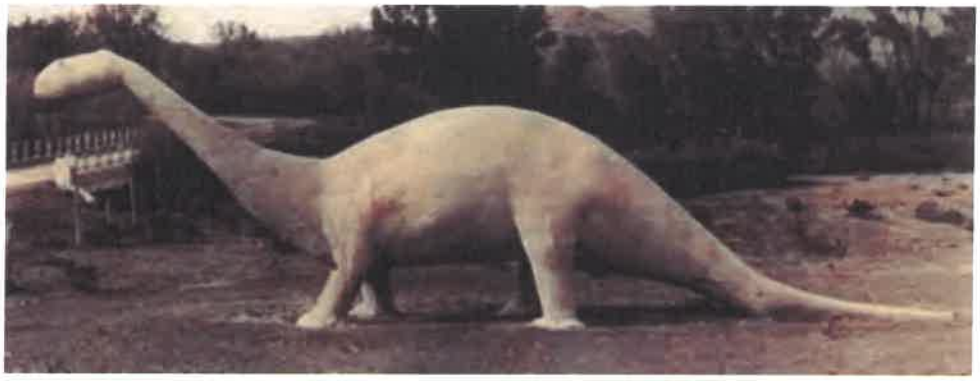
[5] Ghost Towns of South Dakota

Caputa would be a welcome stop for hikers and bikers along the MST should the trail be built.

Creston

Creston was once a thriving town along the Milwaukee Railroad tracks that ran between Kadoka and Rapid City. The town owned its existence to the railroad. The Dust Bowl and the abandonment of the railroad in 1980 contributed to its demise.

Currently no residents reside in Creston, which is situated on the banks of Rapid Creek. The only remains of the town are some building foundations, some abandoned farm equipment, an abandoned railroad grade, and a dirt road named after the town (Creston Rd).



The **Creston Dinosaur** may have been the earliest roadside dinosaur ever built. It was made with scrap metal, wood and concrete in 1933. It was designed to stop traffic for the Creston General Store, which no longer exists. The dinosaur stands 20 feet high and is 60 feet long. Over the years, it fell into serious disrepair with exposed framework and graffiti. In 1998, students from the South Dakota School of Mines and Technology restored it. They saved what they could but had to build a new neck, back and feet.

Scenic

After the Indian wars of 1899 settlers started to return to the area around the Cheyenne and White Rivers. A man by the name of Ab Jefferson who with his wife and three daughters lived on a homestead (filed in 1900), just off the northwest side of sheep Mt. Table saw with the coming of the railroad the possibilities of a better way of life for himself and his family. So he built the first building, which was a tarpaper shack, located on the south side of the railroad track in 1907, this was to become the town site of Scenic.

Scenic was so named in 1906 by the railroad's track laying crew because of the many beautiful views that it commanded from this one spot. In the early "20's", at the height of the Milwaukee Road's service Scenic had a population of nearly 250 people. [6]

Imlay

Imlay was a small town established when the Milwaukee Road extended its line west from Kadoka to Rapid City in 1907. As with most small towns in this area in 1930s the Dust Bowl drove homesteaders away, the population declined sharply in Imlay as did in many other nearby towns. Only a couple buildings exist in Imlay. One of the existing buildings is a Milwaukee Road depot from Interior, SD. It can be seen from Hwy 44 on the north side.

Conata

Currently no one resides where the town of Conata used to be. Conata was a boomtown during the construction period of the Milwaukee Railroad from Kadoka to Rapid City in 1907. Again the Dust Bowl of the 1930's drove many residents and homesteaders out of the area contributing to a decline in the population. Then abandonment of steam engine and the use of the new diesel engines in the 1950s allowed the trains to chug on past this tiny ranching hamlet there was no reason to stay when communities like Rapid City and Kadoka had jobs and supplies. Finally the shutdown of the railroad on March 31, 1980 was the final blow that created the deserted plain.

Interior

The small town of Interior grew from several different and unlikely sources. In the early 1900s from hearing that a railroad was going in from Chamberlain to Rapid City homesteaders started pouring into the region when the U.S. Government broke up the reservations. By 1907 hundreds of homesteads were being ranched and the town of Interior was situated perfectly for these ranches for supplies. When the railroad came to town Interior grew to a bustling community. By 1909 as more settlers and visitor came through Interior they were noticing the Badlands Wall, which started the tourist trade to Interior. People started traveling from Rapid City and parts east to visit and stay in the Badlands. Some came by train and some by horse and buggy along route 40 the Washington Highway but almost all came through Interior.

Interior started its decline the much the same way as the rest of the small town did, diesel engines, dust bowl and interstate highway system but with the building of the newer highways and automobiles came more tourists. The town of Interior survives today with approximately 94 residents, a convenience store with a gas station, a small grocery store, a tavern, motel and campground.

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[6] South Dakota State Historic Preservation Office

Weta

There are no residents currently residing in Weta but ranches dot the landscape around this area. It sits on a tableland surrounded by geological landforms commonly known as the Badlands.

A couple of abandoned houses; a grove of trees; and an the abandoned railroad grade Weta grew from a siding on the Milwaukee Road in 1907, when the line was being extended westward to Rapid City. Because of the Dust Bowl of the 1930's inhabitants fled the area. In the 1950's with no trains stopping in the town Weta finally became a ghost town. Today no buildings stand except for a ranch house near where the community used to be.

Kadoka

The City of Kadoka was originally named Willard but was eventually renamed Kadoka, which originated from "Hodoka", meaning "Hole in the Wall". Kadoka is a fitting name for this small community because it sits at the mouth of a gap leading into the Badlands.

When the railroad arrived in 1906 from Chamberlain, SD, Kadoka was just starting to transition into a town. Property bought by the railroad became the basis for the first town lots sold in Kadoka. The Train Depot was built in the spring of 1907 and the town was incorporated on May 4, 1908 a year after the railroad had reached Rapid City.

In 1915 county lines were changed and Kadoka became part of Jackson County. An election was held to determine the county seat and Kadoka came out on top with 410 of the 610 votes cast. On July 28th, 1916 the County Court House was dedicated in Kadoka.

Today around 650 people live in Kadoka one of the only small towns to survive after the railroad went bankrupt in 1980. Survival has been hard but due to being a gateway for Badlands National Park and the County seat Kadoka continues to maintain life on the prairie.

The End of an Era

In the years that followed the building of the railroad, the small towns along this railroad line had a many ups and downs. Droughts, economic downturns such as the great depression, as well as political problems were the causes that threw many businesses and ranchers into bankruptcy. In the 1950s and 60s the interstate highway system now being used by automobile, trucks and buses could get goods and people from one place to another cheaper and in some cases just as fast. People didn't have to travel along Highway 44 anymore so businesses died along with the traffic.

Then in 1977 the Milwaukee Road went bankrupt and with it 30 percent of the rail line in South Dakota was closed overnight. With this closure the State of South Dakota in 1981 bought over 800 miles of track for $24,000,000. The State had just entered the railroad business. That same year (1981) the Milwaukee closed its only remaining track through South Dakota it's main line, which was the equivalent of an interstate system through South Dakota. The Governor called a special legislative session and the State issued $30,000,000 in bonds and bought this line as well. With this purchase the State of South Dakota now owned more than 1200 miles of railroad track.[7]

By 1980, 60 percent of the rail line in South Dakota had been abandoned and if not for the State would have gravely crippled the State economy. Most lines came to life as community railroads again hauling agricultural supplies to and from communities within the State. The main line was sold to Burlington Northern Railroad for $30,000,000 and the line still operates today.

The Milwaukee Road line running from Kadoka to Rapid City never reopened and the State taking steps to preserve the corridor into the future rail banked the line from Kadoka to Caputa in 1987.

Many ideas have come and gone for use of this corridor. In the late 1990s and early 2000s Kevin Costner wanted to open a passenger railroad from the Rapid City Airport to Deadwood to bring people to his new casino and landmarks. That idea was abandoned in the mid 2000s.

In 2004 with word that the passenger rail might not happen a group of citizens started investigating a possible rails to trail project. Contacting the State in 2007 they found out is was possible, however the Cheyenne River Bridge was about to collapse into the Cheyenne River and something had to be done about it. In 2008 with no backing and by himself Jerry Cole traveled to Pierre, SD where he explained to the Railroad Authority Board that by tearing down the bridge they would be stopping all chances to create a rails to trail project in the future. The Railroad Board voted by a vote of 6-1 to spend the money to save the bridge and in doing they saved the dream of creating this wonderful rails to trail project.

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[7] South Dakota Rail System History

Railbanking

All across the United States the public continues to seek more and more outdoor recreation opportunities and no outdoor recreational activity has grown bigger than hiking and biking on multi-use recreational trails. Rails to trails started appearing in the early 1980s after the U.S Congress passed an amendment to Section 8(d) of the National Trails System Act. The statute allows the owner of a railroad to remove all of the ties and rails and other equipment with the exception of bridges, tunnels and culverts, from a corridor, and to turn the corridor over to any qualified private organization or public agency that has agreed to maintain it for the future use.

In 1990 in a landmark decision for trails, the U.S. Supreme Court unanimously ruled, in the case of Preseault v. United States, in Burlington, VT, that preserving a corridor for future rail use through railbanking is a legitimate exercise of governmental power. This decision protects a railroad's legal right to transfer all forms of its ownership, including easements to a trail group.

Should the rail corridors owner ever want to reestablish a railroad along the railbanked corridor they have the right to do so. According to Rails-To-Trails Association no known railbanked section of any railroad corridor has ever been returned to rail use. If the rail use should be continued after a trail is in place the trail managing agency or organization is entitled to fair market compensation from the railroad that wants to re-establish rail service. [8]

Trail Funding

Before the 1990's, federal highway funds could be used only for highway projects or specific bicycle transportation facilities. However, in 1991, Congress made a major shift in surface transportation policy with the Intermodal Surface Transportation Efficiency Act or ISTEA as it was known. For the first time, pedestrian and bicycle facilities were framed as part of the nation's transportation infrastructure, and trail projects became eligible for almost all federal-aid highway funds. The Federal Highway Administration (FHWA) of the Department of Transportation (DOT) emerged as the largest single source of funding for multiuse paths and trails in the United States. Since 1992, transportation enhancement (TE) activities have contributed $5.6 billion in federal funds to support more than 14,000 projects for paths, trails, and bicycle facilities across the U.S. The Recreational Trails Program (RTP) has funded more than 10,000 projects, awarding $800 million in matching federal grants to states for recreational trails.

In 1991 for the first time, pedestrian and bicycle facilities were framed as part of the nation's transportation infrastructure, and trail project became eligible for almost all federal-aid highway funds.

[8] National Trails Systems Act of 1983

In 2012 Congress passed a new 27-month federal transportation bill. (MAP-21) This bill consolidated all the bicycle facility funding except for RTP. Now rather than dedicated enhancement funding, recreational trail funding will have to compete with highway and surface transportation funding in the future. This could mean a real downturn in funding for trails in the future. The RTP funding source was funded at the same level as states received in 2009 but now allows a state to opt out of RTP funding all together each year.

Although the Federal dollars for trails have shrunk during the last two years there is still hope with local and national organizations like the American Trails Association, Rails-to-Trail Conservancy, Walk and Bike to School, Adventure Cycling Association, International Mountain Biking Association, American Hiking Association, etc. to lobby on behalf of trails at the National level. Trails and trail users are continuing to grow and the need for new trails is at an all time high. As that growth continues we may well see the federal government step up to the plate and add new sources of funding for trails and trail related infrastructure to the overall budgets of departments such as Department of Transportation, Centers for Disease Control and Prevention and others.

Donations

With the Federal and State dollars harder to come by donations to the trail will become even more important. According to the National Council of Nonprofits with the passing of the baby boomer generation comes the largest transfer of wealth in human history.

The unprecedented opportunity for nonprofits, given this intergenerational transfer of wealth, is to encourage donors to consider planned gifts, not only because they enable donors to leave lasting legacies with revered organizations, but they can minimize tax burdens and optimize the benefits for both their designated heirs and the nonprofit organization.

Developing a comprehensive fundraising program is a complex undertaking. Planning should be started early and professionally. If the organization doesn't have a fundraising program set up they should do so immediately. Hoping gifts come in doesn't make it so. Develop a plan, implement the plan and reap the rewards.

Maintenance and Operations

Developing a trail can be likened to building almost anything. You need first answer the questions, "What needs to be done? How does one get it done? Who will do it? Who will pay for it? And so on.

Ownership

Generally who owns or manages the trail will have the greatest interest in keeping the trail safe and attractive. Around the country there are as many different owners as there are trails. According to the Rails-to-Trails Conservancy the Municipal governments are the largest managers of rail to trails that run within a City's limits they manage about 26% of the rails to trails. State governments are next in line especially when the trail passes through several jurisdictions or Counties they manage close to 25% of rail to trails. This ownership would be like that of the Mickelson Trail in South Dakota. Most of these trails are shared management when the trail passes through a community. That is the owner manages all the trail outside a community but the community has the management power inside the City limits.

The next largest manager of rail to trail projects, are those of Counties. They manage approximately about 20% of all rails to trails. Where trails pass through two or more counties generally the counties will oversee trail work within their counties. Next would be the not for profit agencies which account for about 12% of all rail-to-trail management authorities. These not for profit agencies generally have a lease for the trail system from either the railroads companies themselves or whom ever owns the rail bed. In the case of the MST the State of South Dakota owns the line and a not-for-profit organization can lease the corridor. What most of these management arrangements have in common is that almost all of them have a not-for-profit organization helping them along the way not only to raise funds but to have boots on the ground when work needs to be done.

This report will look as each entity and the pros and cons of each. It will be left up to the trail backers to sell or create the entity they believe will do the best at operating and maintaining the trail.

First we must look at what maintenance task there would be on the Mako Sica Trail in order to understand who might be best suited to maintain the trail. An effective maintenance program is critical for trail safety. The maintenance program should provide for regular safety inspections. Proper management is an important part of the safety program. This includes all maintenance to maintain no matter if it is a bridge repair or trail washout.

From talking to trail managers of the Cowboy Trail in Nebraska, the Medicine Bow Trail in Wyoming and the Mickelson Trail in South Dakota this report includes important maintenance tasks that management agencies must consider are indicated in the

following:

Mowing - (3-4 times annually) 4-foot min. wide each side of trail where applicable. Flail type mower best - less debris on trail.
Pruning - (Annually) Prune woody vegetation 4-feet back from sides of trail – 14-feet vertical clearance – remove invasive species. Vegetation Management Program may reduce this task long term.
Removal of Trees/Limbs - (Annually) Evaluation/ removal of unhealthy or dead trees and limbs. Fallen trees may remain as access control and to minimize disturbance.
Signage - (periodically as required) Maintain directional and informational signs and Permanent signs.
Access Control - (periodically as required) Replace damaged access control devices. Estimated frequency: 10% annually due to vandalism.
Trail Surface on local roads - (periodically as required) Resurface based on municipal schedule.
Trail Surface on gravel road - (periodically as required) Repair surface damage from vehicles, erosion, etc.
Trail Surface, (periodically as required) Replace damaged areas.
Drainage Structures - (Minimum - Annually) Clean inlets, keep swales clear of debris. Complete rehabilitation during construction would dramatically reduce necessity for this type of maintenance after storms.
Litter Pick Up - (Weekly or as required) Trailside-litter pickup. Access area litter pickup. Encourage continued user "carry-in, carry-out" policy.
Trash Collection - (Weekly) Removal of trash from receptacles at access areas. Problems with non-user trash. Some agencies do not have trash containers at access points for this reason.
Bridges Inspection - (Every 2 years) Maintenance of bridge to ensure structural integrity.
Law Enforcement - Trail managers should take necessary steps to provide both a safe trail for the users and to protect themselves from liability claims. Where possible, hazardous conditions and attractive nuisances should be identified and removed during the original construction of the trail. Those that cannot be removed should be fenced off and/or have warning signs posted.

If trail segments are opened in phases, as is recommended in this study, clear mention should be made at all trail entrances and in any printed/electronic material (especially trail signage, maps, guidebooks and pamphlets) that portions of the trail are still not yet fully developed nor open to the public and that users must exercise the necessary care when using the Trail.

Several individuals at public meetings expressed concern that conflicts might arise between trail usage and hunting. A program to encourage awareness by both hunters and trail users of the need for responsible usage is critical.

With the ever-increasing use of cell phones by the general public, including trail users, aspects of security have changed in recent years. Users are very well prepared to report and locate questionable activity on or within trail corridors. User surveillance tends to

deter potential criminal activity. Proper phone numbers should be posted along the trail for users to report a problem.

The Need For Management:

Even if a wealthy philanthropist were to appear and bequeath millions to get the trail built and maintained, the question remains of who would take charge of the detailed planning, design, right-of-way lease, construction and management of the trail?

It is possible that since the Mako Sica Trail runs through many jurisdictions maybe the solution is a mixture of management of the different segments of the trail. Maybe a combination of City, County, State and Federal Government along with a private "Friends Group" is the answer. This could create the entire trail system to have different strategy, or a mix of strategies throughout it length.

Management Alternatives: Five possible alternatives to management and development of the Mako Sica Trail.

1) **State and Federal Resources:** The State would be the most logical of all the entities to oversee and manage the trail. Rails to trails are often developed by state and federal agencies. They generally have the resources already on board. From engineers, park maintenance to the equipment needed to deal with maintenance issues. Take the Mickelson Trail for instance, which is a State of South Dakota Game, Fish and Parks run trail. The State along with a small "Friends Group" operates, maintains and enforces the trail system. The Cowboy Trail in Nebraska is also operated by the Nebraska State Parks. These two trails systems work very well with this type of management however both organizations have stated that money is very tight and without further resources from their respective State Legislators they could not and would not advocate for another or an expanded trail for their oversight. If West River Trails Coalition would want the State Legislature to create a State Park and provide funding, lobbing to sell this idea would have to be done at the highest levels of State Government.
2) **The National Forest Service** operates the Medicine Bow Trail in Wyoming. Mainly this trail was put under the Forest Service management because the trail already ran through the National Forest property. The trail is being looked at for expansion but the new expanded portion of the trail will not be on Forest Service land so another manager will have to be found. The same would be true on the Mako Sica trail as the trail only runs through a small section of the Forest Service and the Badlands National Park.
3) **County and Local Municipality Resources:** Pennington and Jackson Counties have no trail management experience or parks departments so both of these entities would be hard pressed to come forward and even want to be involved in operating and maintaining a trail system. Rapid City would be the right fit to oversee the trail within their jurisdiction that is from Cambell Street to Anderson Road. If marketed right this section of trail could be one of the first phases to be built. Except for Kadoka all the other communities along trail have no resources

to manage any of the trail even through their small communities. Kadoka could manage a small section of the trail within their City limits and if a willing partner could maintain a much longer piece outside their limits.

4) **Private Non-Profit:** Many trails have been developed, managed and maintained by Non-Profit organizations as part of their conservation and/or health initiatives. This can be done successfully either along, or in partnership with other groups, agencies, and governments. The biggest hurdle with "Friends Groups" working in partnership with the other organizations is to convince the City, Counties and State that the groups will be there when needed. Some government groups have gotten burned when they relied on these groups to help maintain trails but have faded away when the leadership went away. A successful group "The Olympic Peninsula Trails Coalition" has been in existence since the late 80s and could be a model for the West River Trails Coalition or other group seeking support from governmental organizations.
5) **Tribal Government:** Even though the Mako Sica trail doesn't run through any of the tribal governments land I would not rule out partnering with them to oversee and manage the trail system. The Tribal Governments have access to grants and money other Federal organizations don't and they are clearly trying to increase their marketability of their small reservations communities. Also they will start managing their first National Park that is only about 10 miles away from the Mako Sica trail when it runs through Scenic, SD.

Liability

One of the first things that have to be discussed besides not only who will manage the trail but also how much risk is there to the managing organization. Once this is sorted out the management of the trail could become all the more clearer.

This part of the report highlights general legal issues associated with building and managing a trail. The intent is to provide possible managing organizations with a little background on liability issues to prepare them to pose appropriate questions to a legal authority should they want to pursue the management of the trail. It is not intended as legal advice.

One of the most common threads found in all the public meetings that were held was landowner liability. There were two concerns about liability issues. One was the liability associated with managing the trail and the other was with the private land adjacent to the trail. Most of these concerns were about landowner's liability should a trail user stray onto their land and become injured or start a fire, etc.

Fortunately, South Dakota has a recreational use statute that protects private landowners who want to open their land to the public for recreation free of charge. This statute will protect not only a not-for-profit organization but a public organization and private landowner as well. This doesn't mean that whomever operates and manages the trail won't have to carry liability insurance they will, what it means is that the law can protect the operator of the trail and surrounding landowners as well. State trespassing laws

should also protect private landowners adjacent to the trail. Adjacent landowners are not at risk as long as they abstain from "willful and wanton misconduct" against trespassers such as recklessly or intentionally creating a hazard. Landowners adjoining the trail may reduce their liability by making it clear that trail users are not invited onto the adjoining land. This can be aided by working with the trail designer and managing organization to develop signs, vegetative screening, and/or fencing.

Concerns about liability are always going to be on the forefront of everyone's mind, but in reality it is hard to find any public or private landowner who has suffered from a lawsuit for trail development and operations when trail standards were met. Liability concerns can minimize liability exposure provided the trail is design and managed in a responsible manner and the trail managers do not charge for trail access. In addition to reducing trail hazards, documentation of trail maintenance activities is essential in combating possible liability claims. Through written records of good maintenance practices, the managing organization will be able to protect themselves from liability claims. In terms of property ownership and liability, it should be noted that South Dakota's recreational use laws largely protect landowners from liability related to recreational use of their properties as long as no fee is charged and the landowners uses due diligence to maintain the property and/or warn recreational users of any safety hazards.

Should the managing organization charge a fee to help with the costs of trail maintenance the organization now exposes them to a different level of liability and should build and maintain the trail to a higher standard. Managing organizations should also consult legal council to see what types of tort law become more realistic when people are paying for the privilege of hiking or biking on a trail.

There are four legal precepts, either along or in combination, that define and in many cases limit liability for injury resulting from trail use. The first is "duty of care" which goes to the managing authority to be a responsible landowner who invites anyone onto his or her land. Second is the Recreational Use Statute which provides protection to landowners and who allow public **free** access to land for recreational purposes. Third, is a risk management program for the trail. Inspection and documentation of trail corridor, bridges and adjoining right of ways. Fourth for all private and public parties, liability insurance provides the final line of defense.

Maintenance Costs

Maintenance costs will vary greatly depending on the type of trail, amount of volunteer labor use, available services and geographic location of the trail. These costs, however, must be considered during the trail planning process to ensure that trail owners can pay for the ongoing maintenance of the trails they develop.

According to the Rails-to-Trails Conservancy typically trail maintenance on a crushed stone trail with bridges generally range from $700 to $2,000/per mile/per year for similar trails. This cost varies due to the type of organization managing the trail, how many

volunteers, etc. Future Focus Consulting recommends that the managing agency use a figure of $1,000 per mile to estimate maintenance costs during the first year after development. This figure can be evaluated at the end of the first year. This cost can be used for fundraising purposes as well as to solicit volunteer help for maintenance.

The following are the typical annual maintenance costs for the Mako Sica trail (these figures are based on several trail budgets in use today – the costs will vary for individual trails):

Salaries & Wages	Administration	$45,000
PT Temp Emp SAL & Wages	Administration	$14,000
	Administration	
		$0
		$0
Events	Special Events	$500
Memberships & Subscriptions	Administration	$500
Conferences	Administration	$500
Meals & Entertainment	Food	$0
		$0
Insurance	Administration	$3,500
Fleet Services	Fleet Services	$10,000
Equipment Rentals	Equipment Rental	$2,000
Garbage & Septic Services	Garbage & Septic Service	$3,500
Other Contractual Services	Fleet Services	$500
Trail Surface Supplies	M & O	$5,000
Building & Grounds Supplies	M & O	$1,000
Maintenance & janitorial	M & O	$0
Lumber Supplies	M & O	$500
Hardware Supplies	M & O	$500
Painting Supplies	M & O	$0
Electrical Supplies	M & O	$0
Agri Chem & Fertilizers	M & O	$800
Vehicle Maintenance	Fleet Services	$300
Culvert Maintenance	M & O	$500
Signs	M & O	$500
Fuel & Oil		$8,000
		$0
		$0

$97,100

Many trail operators have been able to supplement their maintenance program by creating partnership agreements with local businesses, clubs and organizations. Formal cooperative agreements can be made with these partners that clearly define the roles and responsibilities of each party. Developing an effective maintenance management system is an on-going process.

Mako Sica Economic Impact Report

Stretching approximately 100 miles across western South Dakota in two counties the Mako Sica Trail (MST) could be the third 100-mile trail in South Dakota should it be built. The other two would be the Mickelson and Centennial Trails. The MST uses the abandoned Chicago, Milwaukee, St. Paul railroad line. It is intended for the shared use of 4 core activities, running/walking/hiking, biking, horseback riding and cross-county skiing. The Trail will be geographically diverse as it runs through several ecological zones between Kadoka and Rapid City, SD.

Among many reasons stated for building the trail include the preservation of the environment, promoting physical exercise and a venue for safe, family activity, and the generation of economic benefits that increased visitation from visitors can bring to the communities located near the trail.

This section of the feasibility will outline the economic benefits that will be generated for the region as a result of the one-time construction costs, and the annual non-local (i.e. visitor) user expenditures, trail maintenance costs and expenditures for durable goods (i.e. equipment) associated with activity use (i.e. hiking/walking, biking horseback riding, and cross-country skiing) on the Trail.

An economic impact analysis is the study, of how dollars spent on trail construction, maintenance or by users of the Trail, circulates and re-circulates with the economy, thereby, multiplying the effects of the original expenditures on overall economic activity. This process is referred to as the economic multiplier effect. The economic multiplier effect operates at several different levels including: initial (direct) effects, indirect effects, and induced effects. The sum of these three effects-direct, indirect and induced – represents the economic impact of the Trail.

- **Initial (direct) effects are** the initial expenditures of the trail users and trail operators on goods and services, wages, materials and other trail-related expenditures are generally referred to as the direct costs of operation
- **Indirect effects** are the subsequent purchase by suppliers of materials and services to sustain the direct expenditures.
- **Induced effects** emerge when workers in the sectors stimulated by initial and indirect expenditures spend their additional incomes on consumer goods and services.

The study scope measured the economic benefits that are likely to be realized by communities along the trail.

- Impact of trail construction;
- Impact of trail maintenance;
- Impact of trail user non-durable expenditures;

- Employment impacts; and
- Regional and local tax impact.

For the purpose of this part of the study Future Focus Consulting used the following models to complete the economic impact analysis.

1. Conducted a search for existing trail economic impact studies and trail user studies.
2. Reviewed and analyzed available studies as well as information from recreation and tourism related data.
3. Conducted an online and in person survey with residents and visitors of other trails to determine their activity patterns, associated expenditures as well as use patterns of individuals.
4. Conducted phone and in person interviews with rail-trail associations and managers to get information on trail usage, expenditure patterns and trail maintenance costs.
5. Developed activity usage estimates based on survey results, benchmarking of other trails, along with published data from sources such as the State of South Dakota, International Mountain Biking Association, Rail to Trail Conservancy, American Trail Association and others.
6. Developed daily expenditure figures for each activity based on the input, previous studies and review of visitor expenditure data.
7. Incorporated the daily expenditure and activity usage estimates into demand side inputs for the economic impact model.
8. Developed construction cost estimates and estimated annual trail maintenance costs.
9. Undertook economic impact modeling using the latest figures from both Counties and Communities along the trail.
10. Used national and regional trends within the outdoor recreation, bicycling and rail to trail industries.

This section of the report reviews several indicators of the possible economic success of the MST and the region it will serve.

Health and Fitness

While not included in the calculations of benefits the health and fitness of trails have a well-documented history of promoting these benefits. According to U.S. Department of Health and Human Services people who use trail experience less:

- Cardiovascular Diseases
- Colon Cancer
- Non-Insulin-Dependent Diabetes
- Osteoarthritis
- Osteoporosis
- Falls among the elderly
- Obesity

- Depression and Anxiety
- Lower Back Pain

A recent national study[9] found a cost-benefit ratio of $1-$2.94 for expenditures on trails. That means that every one-dollar spent on providing trails results in nearly three dollars in direct medical benefits.

Medical Costs

While not included in this study, reductions in medical costs would have a significant impact on health care costs. Considering that the majority of health care costs are paid in South Dakota by the State through Medicaid any lessening of this burden would be beneficial. Because inactivity increases those diseases listed above reducing inactivity by hiking or biking on a trail could save the State hundreds of thousands in reduced care and diseases.

According to the Centers for Disease Control and Prevention South Dakota have one of the highest obesity rates of any state and one of the highest per capita diabetes rates in the Nation. One reason identified for this situation is the lack of available safe outdoor recreation areas outside of larger population centers. The lack of safe walking and biking trails and other forms of activity-based recreation close to residential areas is a major cause. Having trails in a region where sidewalks are scarce and roads have little or no shoulders for pedestrians or bikers could be a partial solution to this problem.

Benefits to Land Owners

The MST could provide many economic benefits for landowners along the corridor. Among these are:

- Reduction in tax burden as more development takes place and great tax base is created to support the trail.
- Enhanced property values as the area develops demand for property increases.
- Professional trail management will provide an alternative to the current illegal use of "informal" trails on the landowner's property without their permission.
- Increased enforcement of federal, state and local laws and regulations will mitigate existing abuses and reduce landowner's potential liability.
- Improved maintenance of the area, as the trail is developed and kept ready for use, will result as the system assumes these expenses.
- Improved access to the landowner's property as roads and trail heads are developed.
- Community goodwill toward the landowners is also a major benefit particularly to ranchers who operate along the corridor.

Education

[9] Health Promotion Practice; April 2005 Vol.6, No.2, 174-179

Among the often overlooked or at least underemphasized benefits of a trail is their contribution to education. Trails serve as outdoor classrooms. Students can learn the State's history, its ecology and its social-economic structure from study along the trails. For students in biology and environmental science trails can be more than classrooms, they can be living laboratories.

Potential Demand

Currently the MST is ideally located close to a population centers. Three major urban areas lay within a days drive to this area. Denver, Minneapolis, and Kansas City all are within a 500-mile trip by automobile. Even the Black Hills with population of over 194,000 people[10] will provide a large percentage of visitors to this new trail

Economic impact was calculated based on a range of possible annual visitors taking into account other trails in the regions and their annual usage. FFC believes that the MST will serve between 15,000-20,000 local visitors each year and between 12,000-17,000 out of region visitors.

Results of the economic impact analysis indicate that the communities along the trail are shown to derive significant and real economic impacts from a completed trail. The outcome of the economic impact study indicates that all users, recurrent non-durable good and durable good expenditures, as well as trail maintenance expenditures on an annual basis will likely result in the following impacts:

- ✓ Over 40 new jobs will be created in two counties
- ✓ Based on surveys local visitors to the trail will have an direct impact of $256,000
- ✓ Visitors from out of the region will have over 3 million dollars of direct impact
- ✓ A total of about $4.5 million will be generated annually in value added income in the State and Region. Of that, a total of $3.95 million will be generated by non-local user expenditures representing "new money into the economy.
- ✓ Total recurrent tax collections will add to about $350,000 annually for all levels of government, of which nearly $120,000 per year will remain in local governments.

Over a period of years during construction of the trail the dollars spent on construction will generate an additional $20,000,000 in new income to the businesses as well as over $1,200,000 to the State and Local tax base.

One of the major challenges facing the Mako Sica Trail at present is a lack of funds to complete or even start construction of the Trail. It is interesting to note that cost of constructing and operating the Trail could be recovered in just 10-14 years worth of total tax revenue to all three levels of government alone.

[10] Black Hills Knowledge Network

This study also indicates the importance of marketing, promotion and attraction efforts in order to achieve significant economic impacts. Additionally, communities will need to work together to encourage the development of the infrastructure, businesses and services required by trail users. There are significant opportunities to be realized and many ongoing economic benefits can occur as a result of well-established, well-marketed and well-supported Mako Sica Trail.

Community Benefits

The Black Hills Badlands and Lakes and the Rapid City Visitor and Convention Bureau have for years been marketing the Black Hills and Badland region is part of the fast-globalized trend of nature-based tourism. The economic importance of the tourism industries in this region is leading to more thoughtful policy and institutional development in nature-based tourism. Ecotourism as it is called, has for years generated wide reaching U.S. and even foreign tourists. Just one trail system won't make that big of impact on the region but when you put the MST in with a broad based trail plan which includes the Mickelson, the new Mickelson Spur trail, Centennial Trail, Hanson Larsen, and the other 300-400 miles of trails within the Black Hills and Badlands it will make the region a destination for all trail users. The MST presents Rapid City, Kadoka and the region with the opportunity to make the most of its competitive advantage, with its spectacular and diverse natural features, unique flora and fauna and diverse cultural heritage.

According to Rails-to-Trail Conservancy, they estimated that existing rails-to-trails get used more than 150,000,000 times a year and that a percentage of these users travel from state to state just to hike and bike on rail to trail corridors. Based on our research and other similar trails, FFC is confident that more than 15,000 out of area visitors and more than 20,000 locals would hike or bike on the MST each year. Not all visitors to the trail would be traveling the entire 100 miles. Most would be using trail within community sections such as Rapid City, Kadoka and Interior. FFC can also be confident that when the trail is built there will be economic development with new start up businesses such as tour companies or new bicycle shops that would be renting or guiding visitors along the MST. Some visitors coming to South Dakota might not be coming to hike or bike the trail but will stay longer in the region when they are confronted with the opportunity to hike or bike along some of trail. If the trail can slow down a tourist from leaving region more dollars will be left behind in hotel/motels, restaurants and gas stations. According to the South Dakota Tourism Department they estimated that more than five million visitors come to this region of South Dakota. If the MST was built and just one half of one percent of these visitors could be slowed down because of the trail and they spent another $25.00 more dollars they would end up leaving behind more than $600,000 in new money to the economy each year.

Budgeting Impact

In developing the budget figures for the MST trail managers around the country were asked to give input in budgeting for future maintenance. Depending on the type of trail surface and bridge decking that is used in construction can affect a budget by two to three thousand dollars for every mile of trail. An asphalt or concrete trail surface would be more costly up front but the maintenance cost would go down for the first nine to fifteen years. Crushed limestone surface is less costly to build but replacement costs start within the first year or two due to rain and wind events. For the purposes of this document maintenance numbers were used that would be associated with a crushed limestone surfaced trail and treated lumber for bridge decking rather than recycled plastic.

Another factor is determining the cost of maintenance of a trail is who will manage the trail. According to Rail-to-Trails Conservancy rails that are operated by government organizations, states counties and municipalities tend to cost more than those run by non-profit trail organizations due to the potential to use volunteers. Government managed trails average about $2,000 per mile where trails managed by non-profit groups cost around $1000 per mile. Most of the savings are in the volunteers that are doing the maintenance rather than paid staff. For the purpose of this report the lower dollar figure of $1,000 a mile was used.

A draft budget was developed for the MST at a cost of $97,100 per year. These dollar figures were also used in developing the economic impact report.

Soils, Plants and Animals

The intent of this section is to give the reader a sense of the soil conditions and flora and fauna that is adjacent to the MST alignment. A formal study was not completed but observations by the Consultant and Charon Geigle a retired Forest Service employee noted plant and animal life as the physical assessment was being completed. In the research phase Counties Conservation organizations, Forest Service, Badland National Park as well as reference books and reports on native species in the area were used.

RAPID CREEK and SPRING DRAW

The Rapid creek soils consist of very deep, well or somewhat excessively drained soils that formed in mixed alluvium derived from sedimentary and igneous sources. Rapid creek soils are on flood plains and terraces.

Along the Rapid Creek and Spring Draw drainage areas where the MST runs through is a mixture of agricultural crops, (grass, alfalfa, corn, etc.) and riparian vegetation including a mixture of grasses, trees, and shrubs.

Common tree species included plains cottonwood, box elder, green/red ash, elm and Russian olive. Shrubs mainly consisted of willows, wild rose, and chokecherry as wells a wild plum. Grasses that were observed were orchard grass, Kentucky bluegrass, and smooth brome. Riparian areas were fairly uniform in appearance along Rapid Creek and started to transition into more of the Badlands formations when entering into Spring Draw. There was a mixture of both riparian and prairie landscapes in Spring Draw area. Cottonwoods were the predominant tree in this section although there were pockets of red/green ash and wild plum and chokecherry in the understory. Rabbit brush was starting to be noticed in this area and was quite predominate in some areas.

In areas that were not grazed by domestic livestock meadow grassland vegetation was found in abundance. Grasses such as green needle grass, wheatgrasses and Kentucky bluegrass dominated these areas. In the areas that were grazed it was hard to tell what types of grasses were there as most areas seemed overgrazed in this dry year. What we did notice was that most of the grazed areas had a large abundance of invading species such as Russian thistle, kochia and burdock.

There were quite a few small wetland features along the section of trail from Rapid City to Creston. These areas were observed either directly adjacent to Rapid Creek or along the many drainages that entered Rapid Creek. Even in this dry year the wetlands typically had shallow standing water and contained cattails, bulrushes, and sedges. The wetland areas were not large the largest one was along the Box Elder creek drainage and several acres in size.

Box Elder Creek Wetlands (Just East of Caputa)

According to the South Dakota Natural Heritage site there are no listed (threatened or endangered) plants along this area of the trail.

Wildlife was in abundance along this part of the corridor (as well as along the entire length from Rapid City to Kadoka). Birds such as red wing black bird, dickie birds, thrushes, owls, grouse, turkeys and raptures including red tail hawk, falcons, and others, which we could not identify were found. Duck species such as mallards, wood ducks and geese were observed along the creek sections.

Whitetail and mule deer were seen almost every day we were on the trail corridor as were antelope, coyote, fox, skunk, beaver, and muskrat. Beaver were plentiful in the Rapid Creek and Spring Draw areas and their instinct for cutting trees were noticed all along the creek.

SCENIC EAST - THE BADLANDS

Underlying the White River Badlands is the Pierre Shale, with clay-rich soil formed from the mud of a shallow inland sea that covered the mid section of the North American continent 80 million years ago.

Around 65 million years ago, the land was forced up, and the sea slowly drained away. A jungle developed on the exposed seabed, transforming the mud and shale into a bright yellow soil. During the Oligocene, the climate, at first warm and humid, became cool and dry.

As the lands to the west rose even higher, sediment-loaded floods washed over this level

region, depositing layer after layer of mud, volcanic ash and sand. Under pressure of successive layers, these sediments became soft rock. Beginning half a million years ago, erosion began to expose these formations.

The Badlands are a type of arid terrain that has been extensively eroded by wind and water. Unusual topographic features characterize this region. Canyons, ravines, gullies, other such geological forms are common in the region. The Badland area usually has a spectacular color display that alternates from dark black/blue coal strata to bright clays to red scoria. These features are a product of the erosion of sedimentary beds.

According to the Soil Conservation Society, badlands contain very little vegetation, some plants, particularly over 60 types of prairie grasses, and dozens of flowering plants are found in the region. Sod tables, remnants of the prairie that have resisted erosion, provide platforms for vegetation.

The Badland area is a unique wildlife habitat. At first glance people would think nothing lives here. But on further inspection you find that this desert area is alive with many living creatures big and small.

The wildlife includes more than two hundred species of birds such as owls, doves, swallows, hawks, shorebirds, and waterfowl.[11] During observations many hawks and falcons along with thrush and smaller songbirds were seen. The most commonly seen mammals that were viewed during the physical assessment were mule deer and pronghorn antelope. A few white-tailed deer, mule deer and coyotes, were seen and well bighorn sheep droppings were found although no sheep were spotted. Other mammals spotted during the assessment included prairie dogs, bats, rabbits, and one skunk.

Reptiles and amphibians seen, included frogs, toads, in some of the drainages holding water and one bull snake just outside of the BNP boundary east of Scenic. No rattlesnakes were encountered along the trail.

[11] Badlands National Park

Badland Buttes

Endangered Species - The black-footed ferret, the most endangered land mammal in North America, was reintroduced to the Sage Creek Wilderness area of the park. Thought to be extinct in the 1970s, a small colony was found on a ranch in Wyoming. From just 18 ferrets, a captive breeding program was developed and Badlands National Park was selected as an area for reintroduction. Wild-born kits are now producing young of their own.

(Picture Black Footed Ferret BLNP)

Mako Sica Spring Wildflowers

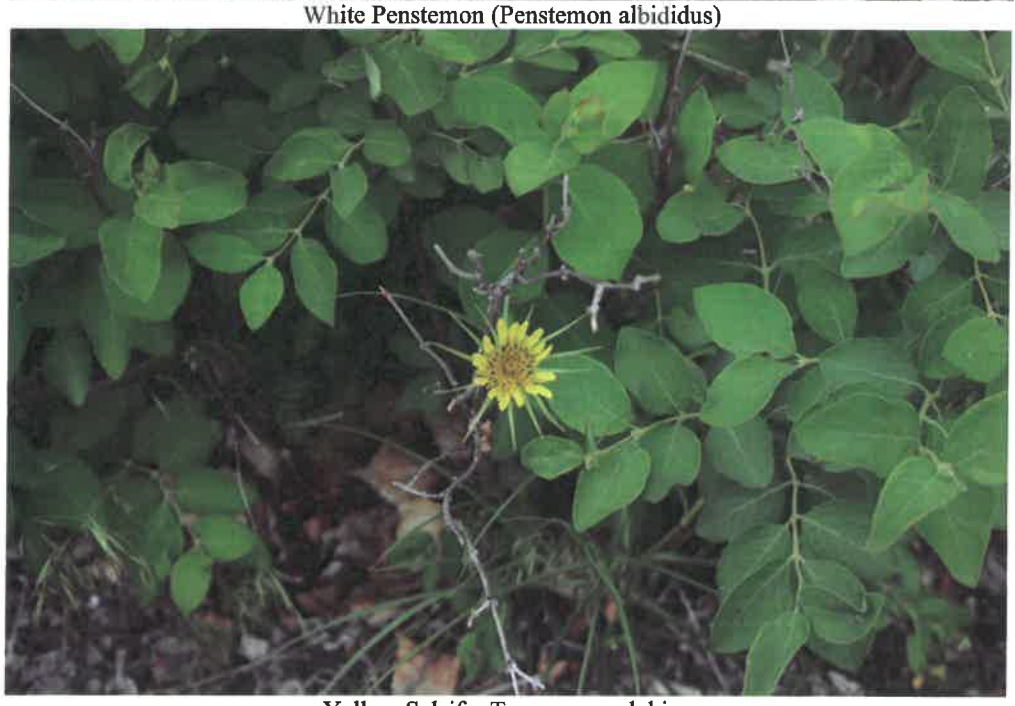
Scarlet Globemallow (Sphaeralcea coccinea)

Tufted Evening Primrose, (Oenothera caespitosa)

Plains Yellow Primrose (Calylophus serrulatus)

Common Star Lily (Leucocrinum montanum)

White Penstemon (Penstemon albididus)



Yellow Salsify, Tragopogon dubius

Trail Phases

Almost all rail-to-trail projects are done in phases. The Mickelson, Medicine Bow, and the Cowboy Trail were all done in phases. Of these three trails only the Mickelson has all the phases completed as of this report.

This study recommends that the trail be built out in phases unless funding for the entire trail can be found within the next year or two. With the cost of trail building continuing to rise and some sections of the trail needing more work done on it than others the following phases are offered in order of priority. The estimated cost for the trail sections are in 2013 dollars and according to the Federal Reserve those costs will go up between 1.2 to 2.0 percent each year due to inflation.

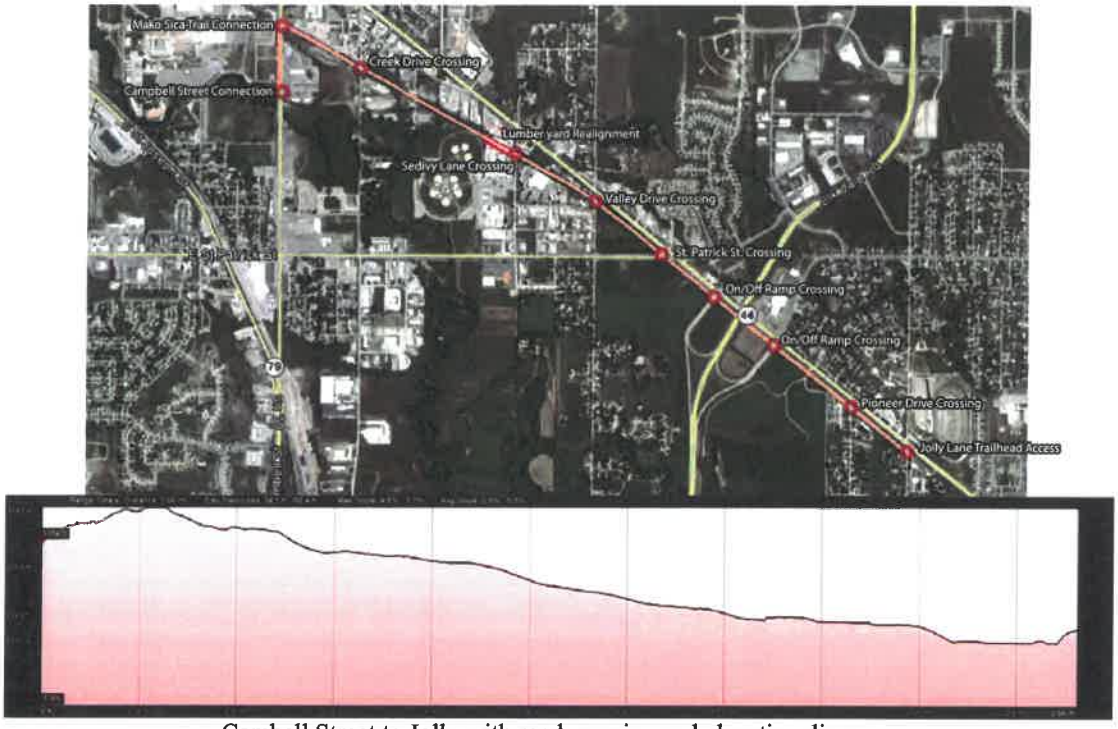
Building the trail in phases does several things. It allows an organization to manage smaller sections to start the project. Allows the organization to get a larger base membership due to the excitement of each building phase. Allows dollars to be found in smaller quantities to complete each stage.

In developing the priority phases this report looked at use, costs, and possible volunteer support for construction. In all the phases the costs were similar per mile except for the areas where the corridor is breached by erosion. The possible user numbers increased around each of the communities with the highest number of users being in the Rapid City area. It was also surmised that more volunteers could be found around the communities to help construct the trail.

The probable costs to construct each phase was develop using the following criteria:

- The probable cost for each phase includes estimated work to be produce a completed crushed stone trail riding surface.
- An estimated amount of drainage and grading solutions are built into each phase.
- Trail wash outs estimated costs are based upon repair of the trail bed and drainage improvements directly adjacent to the trail. Additional drainage structures may be needed upon further investigation. These costs are not built into the opinion of probable costs and should be worked out during design of the trail.
- Bridge surfacing and railing costs are based upon wood surfacing and rail. Any structural analysis or repair of the bridge structures is not built into the opinion of probable costs.
- Trailhead costs are based on a preliminary design of a trailhead with gravel parking, pit toilets, and well water station. Each trailhead must be carefully designed and developed to ensure proper environmental requirements for the pit toilets and wells.
- Probable costs do not include and design fees, environmental studies, permit requirements, and or governmental coordination.

Priority I
Section: Cambell Street to Jolly Lane Estimated Cost: $1,075,832.00

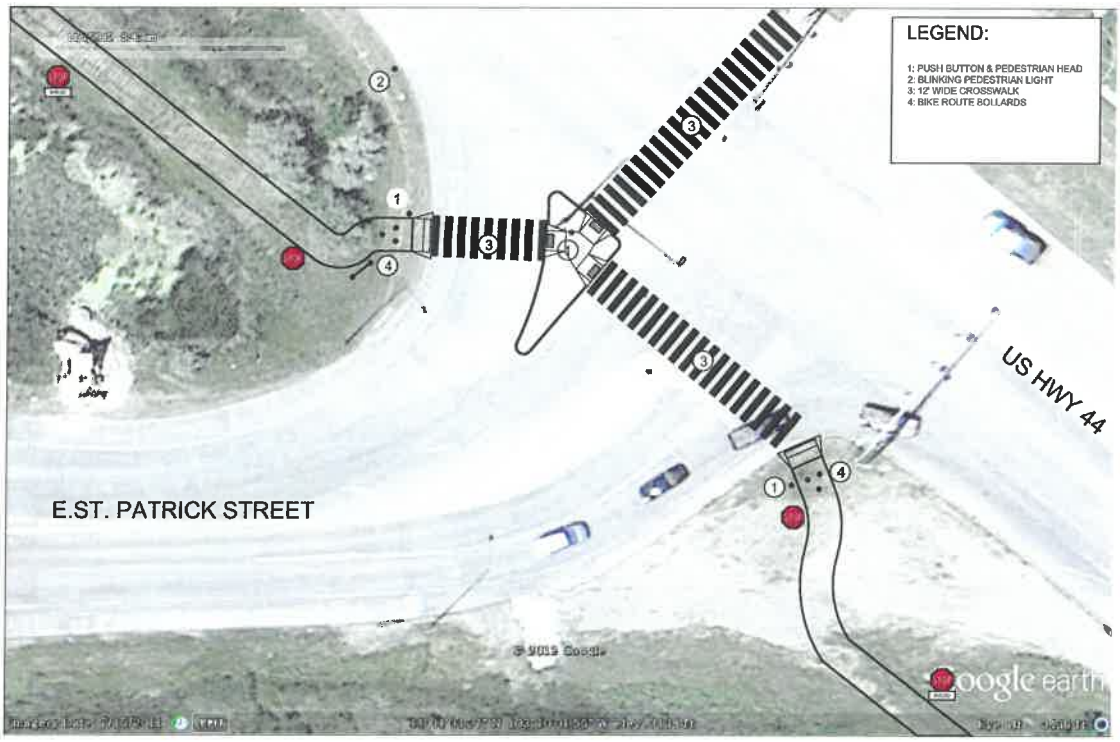


Cambell Street to Jolly with road crossing and elevation diagram.

This phase is one of the most important links to the trail due to the fact that it is the connection to the Leonard Swanson Pathway that runs through Rapid City. This section would open the door for communters to travel from the inner city to Dakota Tech or for valley residents in Blue Sky or Elks Country Estaste to travel into town on a safe and seperate pathway. It would also allow visitors to the KOA campground to get on the trail and travel into Rapid City by bike or foot. This portion of the Mako Sica Trail has the possiblity of having 15,000 trips per year from communters, students, recreation walkers, and bikers. That is an average of 41 people hiking and biking along this section each day. Once the section from Jolley Lane to Captua gets developed more than 35,000 trips each year will be taken along this section of trail.

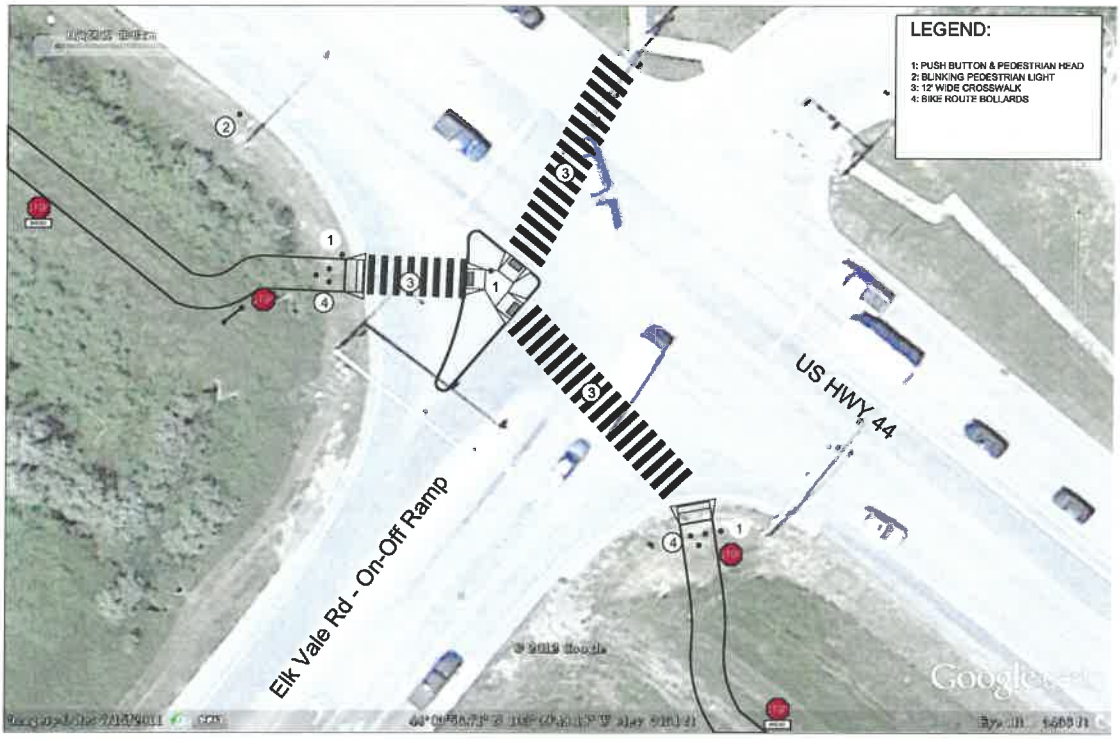
There is one bridge at Jolly Lane trailhead and there are three major crosswalks, a fence that would need constructed for the lumber yard and about 1250' of sidewalk along Cambell Street that would have to be consturcted. The cross walks are located on St. Patrick's Street and two on Elk Vale on and off ramps.

Cambell Street pathway from the start of the Mako Sica looking south toward Rapid Creek and the Leonard Swanson Pathway connection. Liberty Motors is on the left. A 10' sidewalk would need to be constructed along this section.

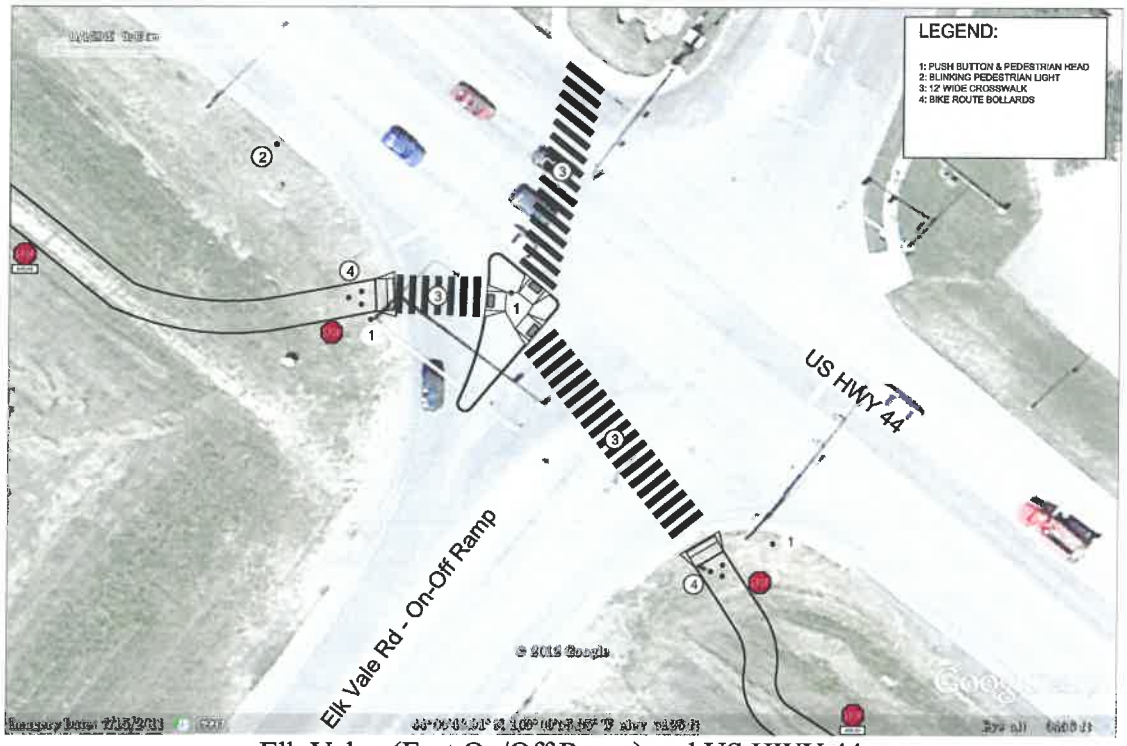


East Saint Patrick Street and US HWY 44

These conceptual plans show what the cross walks would look like should the trail be built. Cross walks and ped lighting already exist on the west side of E. St. Patrick Street.



Elk Vale Road –(On/off Ramp) and US HWY 44

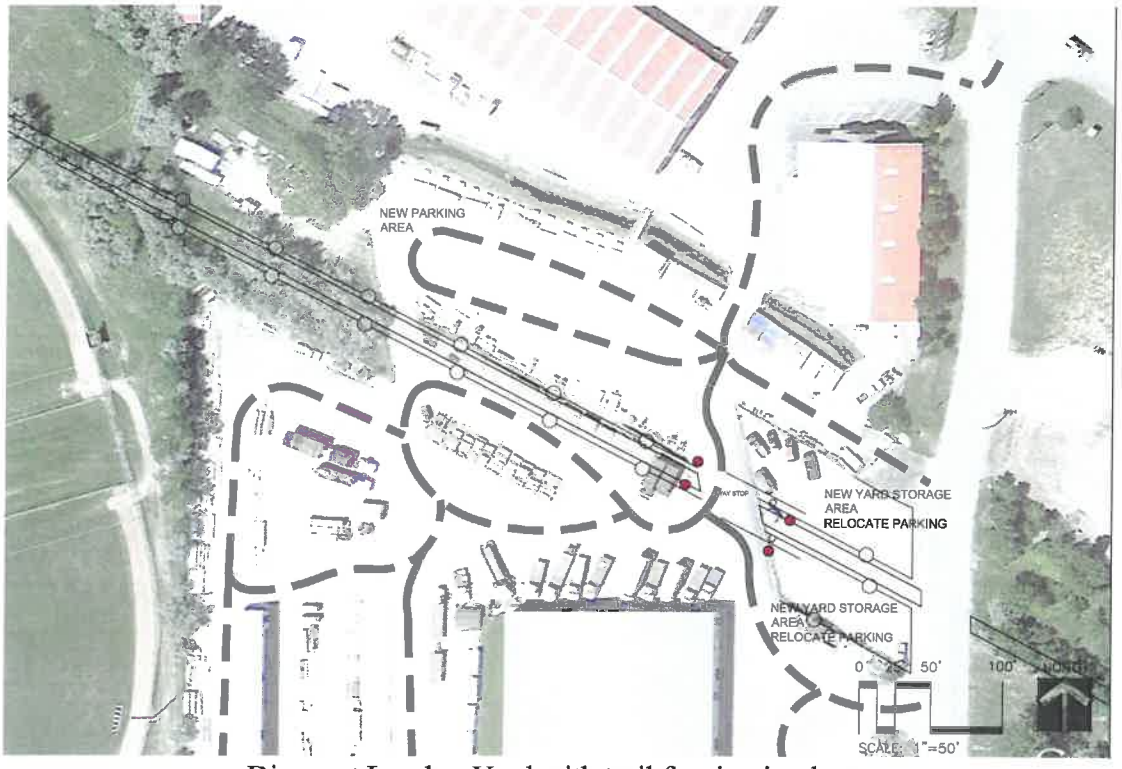


Elk Vale –(East On/Off Ramp) and US HWY 44

All three of these crosswalks would have to go through DOT permitting process, however there are already signals and curb cuts at some of these intersections. There are also curb cuts at locations where there are no crosswalks but are adjacent to the trail.


Curb Cut Adjacent to Trail

Also along this this section is the area of the trail that runs through Discount Lumber. Discount Lumber has a permit from the State Railroad Authority that allows them to use the right-of-way for employee parking and for storage. The owners of Discount Lumber understand that if a trail or a railroad is put along the corridor that their permit could be revoked. At this time they are very willing to work with whoever will construct the trail in to be able to keep traffic flow to both sides of the corridor. They also have use of the area for back and forth movement from store to warehouse. If a trail were to be built through this section a fence would have to be constructed along the rail corridor to protect the lumberyard's property when it is closed. Below is a diagram outlining the property and a fence with gates that would need to be constructed.

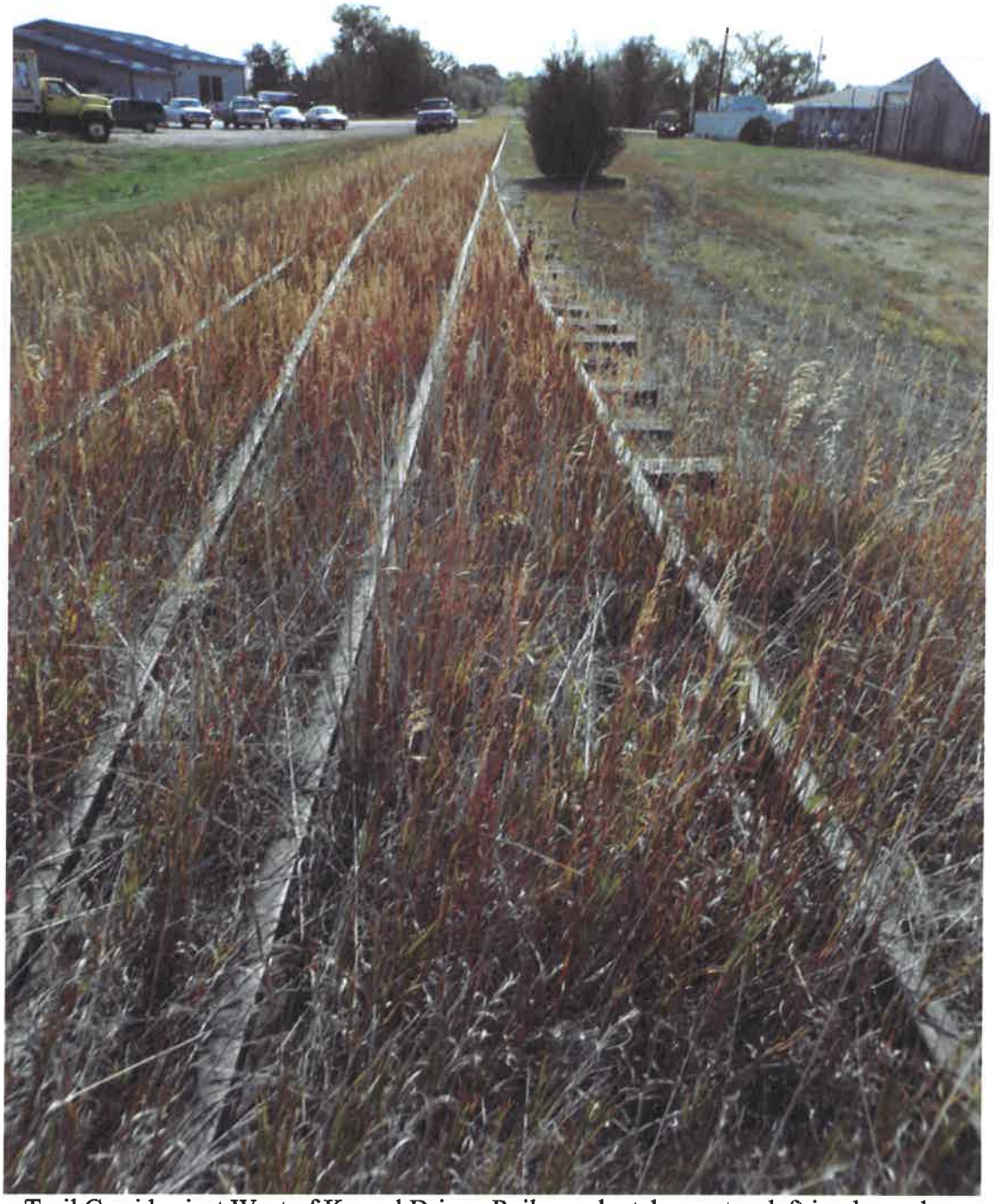


Discount Lumber Yard with trail fencing in place.

Railroad corridor just west of St. Patrick's Street. Notice rails and ties still in place.

Discount Lumber Yard Storage area.

Discount Lumber Employee Parking



Trail Corridor just West of Kennel Drive. Rails can be taken out or left in place when constructing the trail.

Priority II

Section: Highway 73 to Kadoka Cost Estimate: $166,125.00

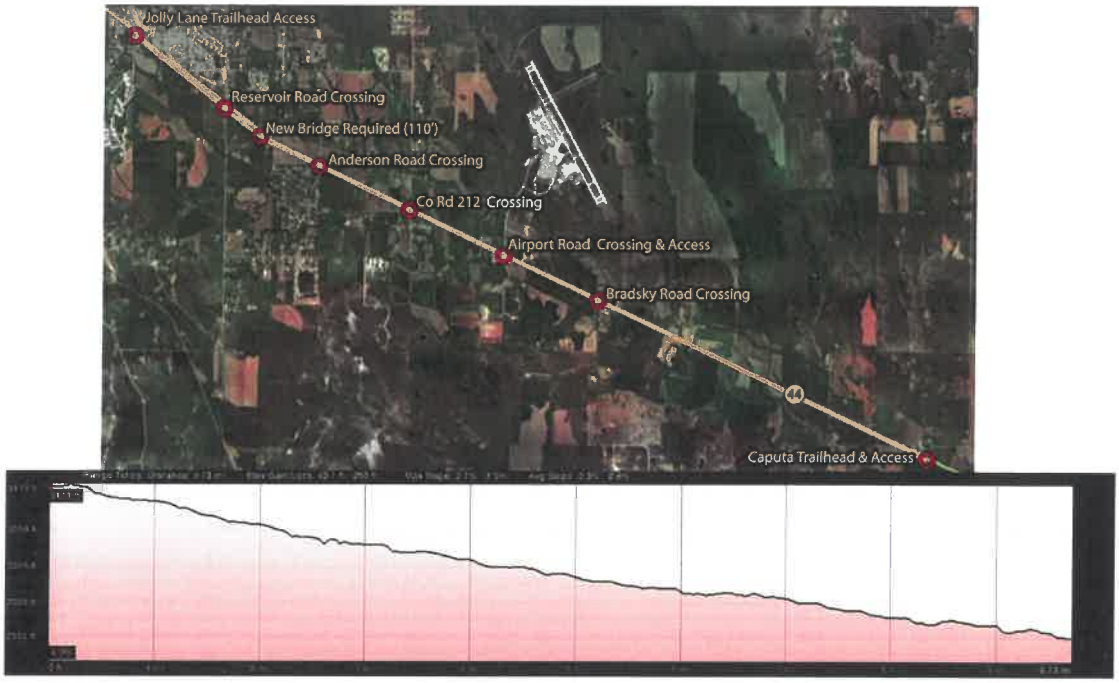
The second phase for construction in the priority is a short section (less than a mile) and the least costly phase to build from Kadoka to Hwy 73. The Pearl Hotel Non Profit group is in discussions with the City of Kadoka to build and manage this section. The maintenance on this section would be relatively small less than $600 a year.

Another reason this is such a high priority is the Railroad Museum which was built in 1906 and was once a depot for Kadoka is located at the beginning of this section. This building on the National Historic Register would be an anchor for the trail. The museum is open to the public and along with the rebuilding of the Pearl Hotel would be an incredible resource for the trail.

Kadoka Depot Now a Museum

Priority III

Section: Jolly Lane to Caputa Cost Estimate: $2,112,742.00



The trail corridor from Jolly Lane to Caputa is a little over 9.73 miles long. It would have a trailhead at each end of this section a small one at Jolly Lane for car parking no restrooms or water and a major trailhead in Caputa with water, pit toilet and parking for auto and equestrian.

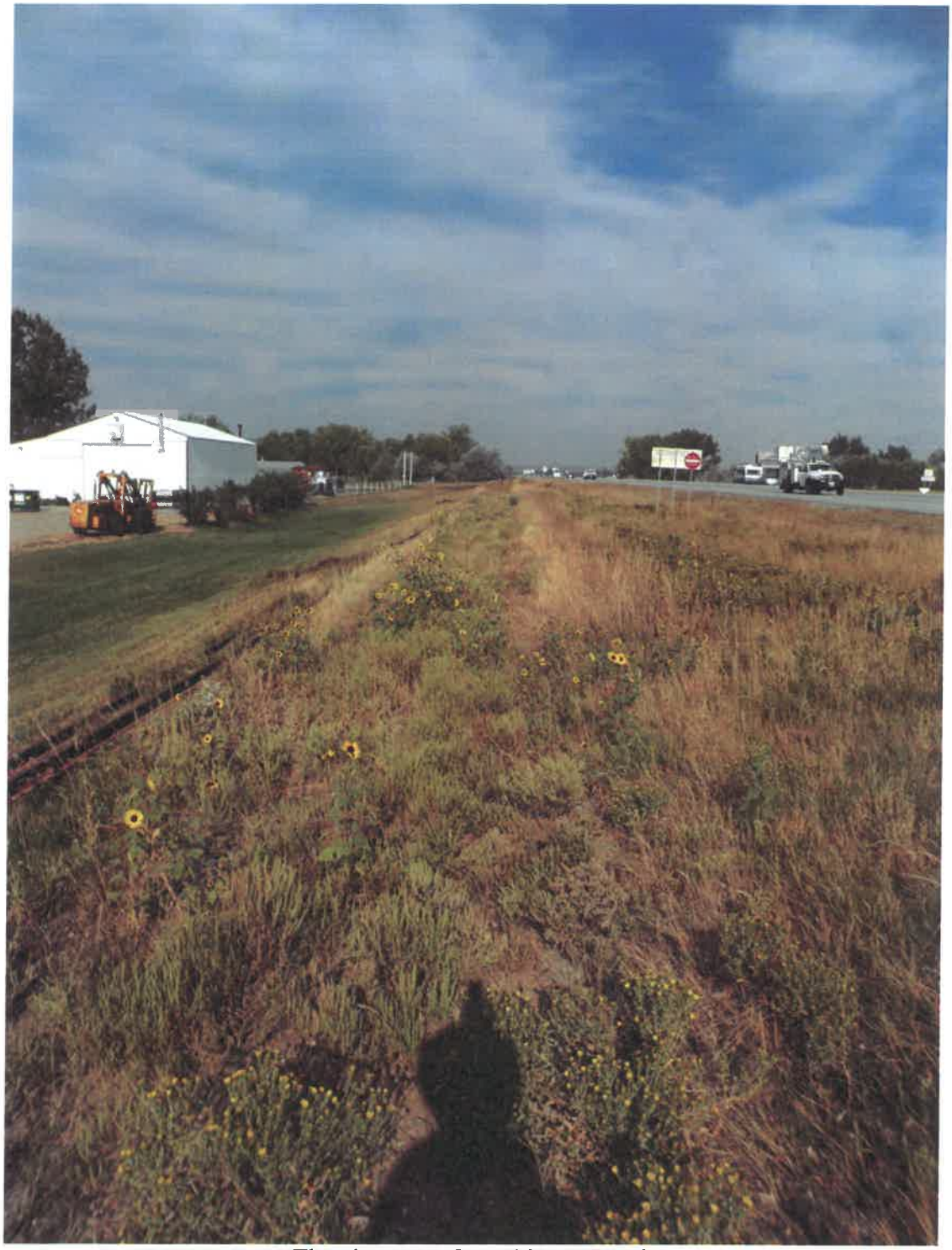
There is only one major hurdle along this section and that is part of the corridor was removed by Pennington County when the drainage was redone through this area. According to Bruce Lindholm, from the South Dakota Railroad Authority, the Country has agreed to pay the Railroad Authority $87,000 to replace the breech in the channel when and if a trail or railroad becomes a reality. An estimated bridge cost is approximately $110,000 to span this channel. A better alternative would be to put in large concrete culverts and back fill to create the connection.

There are ten other bridges along this section that need to be decked and have railings installed. One of the bridges has been burned on the outside but still looks to be structurally sound. The largest bridge is 72 feet long. Altogether 298 feet of decking would have to be installed.

This bridge has been scorched by fire

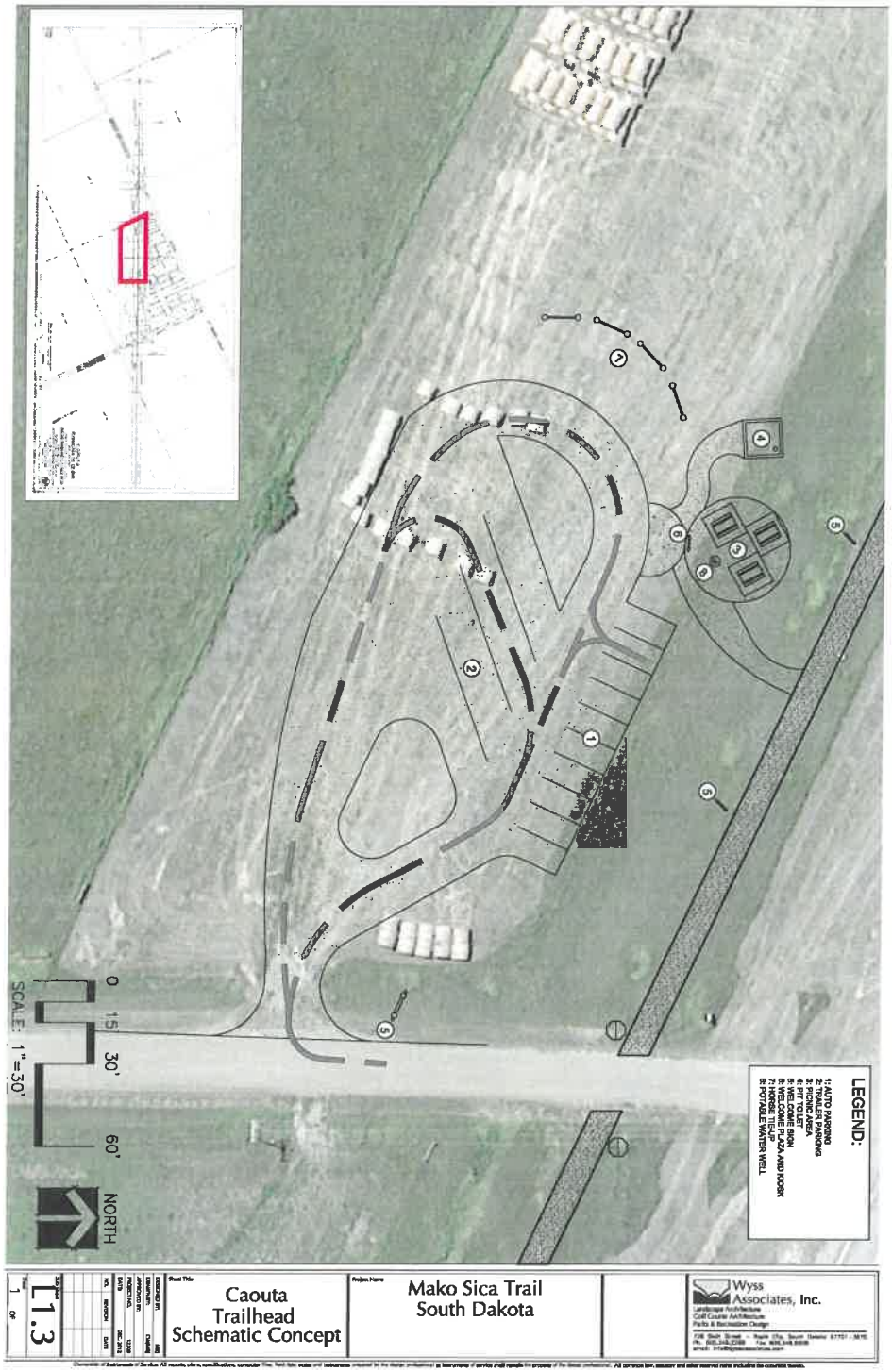
Rail corridor breech due to drainage construction.
Pennington County has promised $87,000 to help rebuild.

Railroad Corridor along Hwy 44 looking east



The view west from Airport Road.

The first major trailhead is located at Caputa. This trailhead will have pit toilets, water, and equestrian parking. Captua Store is located just across Hwy 44 to the north.

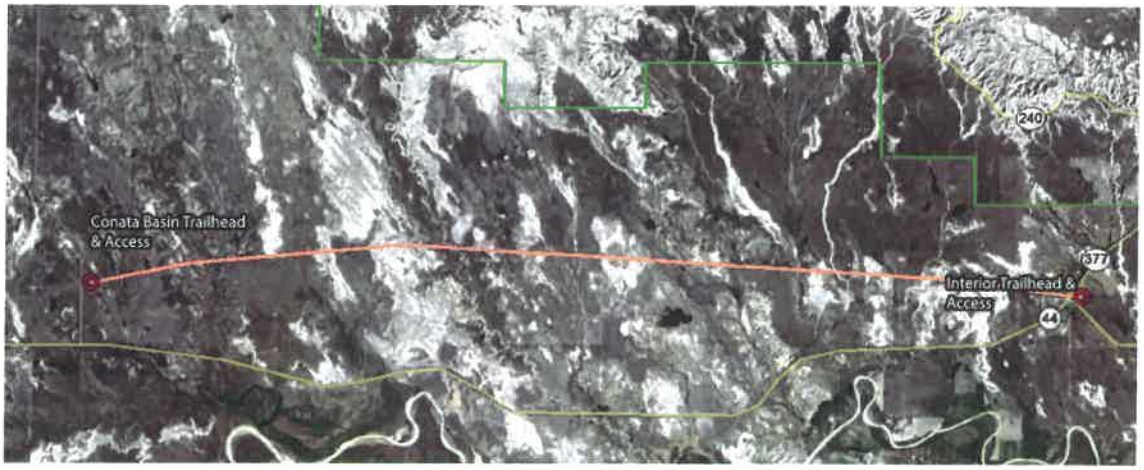


Caputa trailhead concept

Caputa Store

Priority IV

Conata Basin to Interior Cost: $2,248,413.00



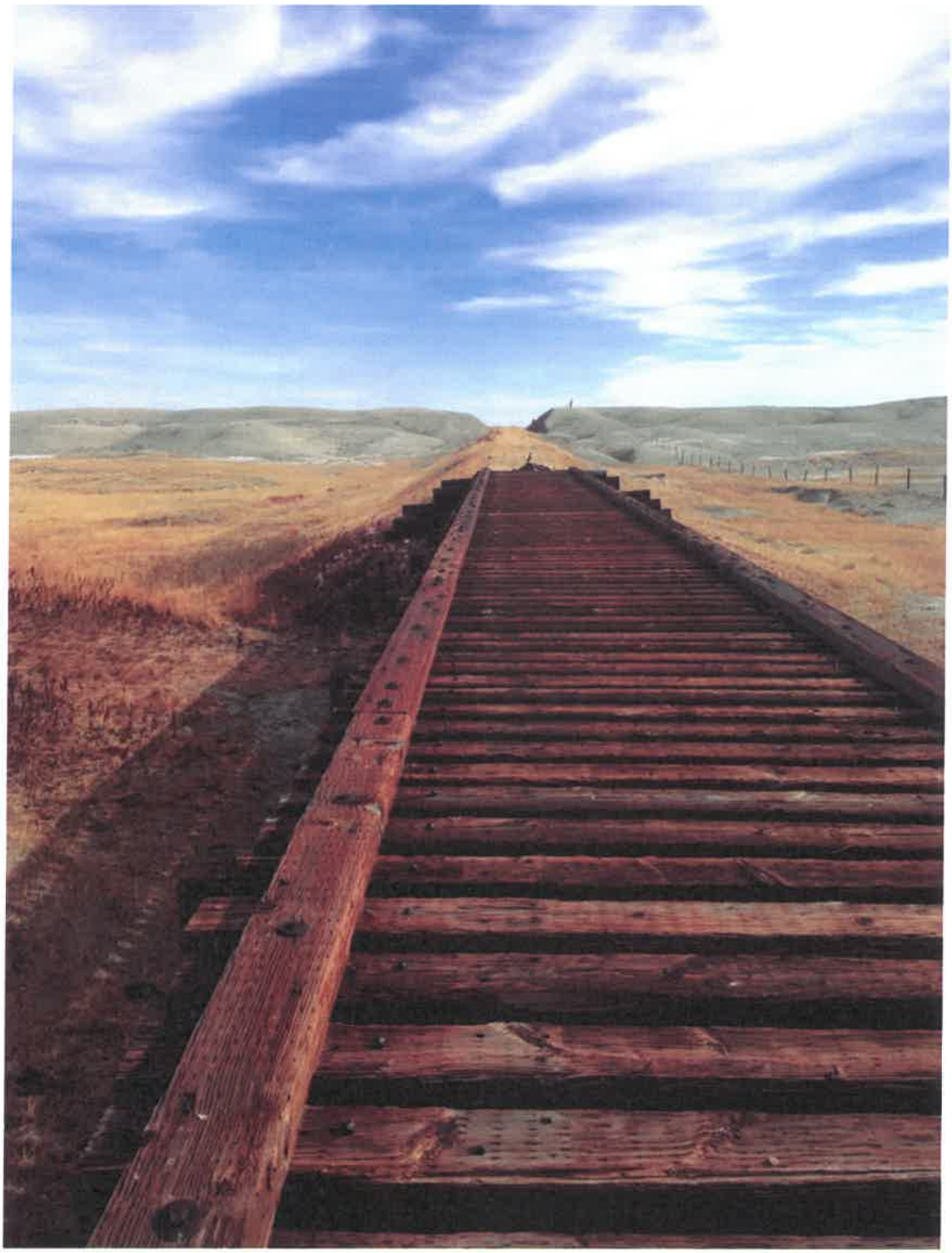
This section get the priority IV because it connects with the small town of Interior and it is also considered the gateway of the Badlands where several million visitors pass through each year.

This section is pretty straightforward. Beginning at Conata Basin one travels east to Interior over roughly 10.5 miles and eleven bridges. The trail bed itself in this section is in really good shape as atvs and pickup trucks have been driving the corridor for years. This section of the corridor is in the best condition of any section of the MST. It can be traveled safely on bike and foot at this time except for the bridges. The trail corridor is in such good shape putting down a surface material is not necessary at this time.

The view sheds of the National Grasslands and Badlands National Park are incredible any time of year along this section. Agate beds lay on each side of the corridor along with an abundant amount of wildlife.

Conata Basin Train Station - In the background is the remnants of the lake they used to draw water from to fill the steam engines.

The trail corridor to Interior is suitable to be hiked or biked now if the bridges were decked.

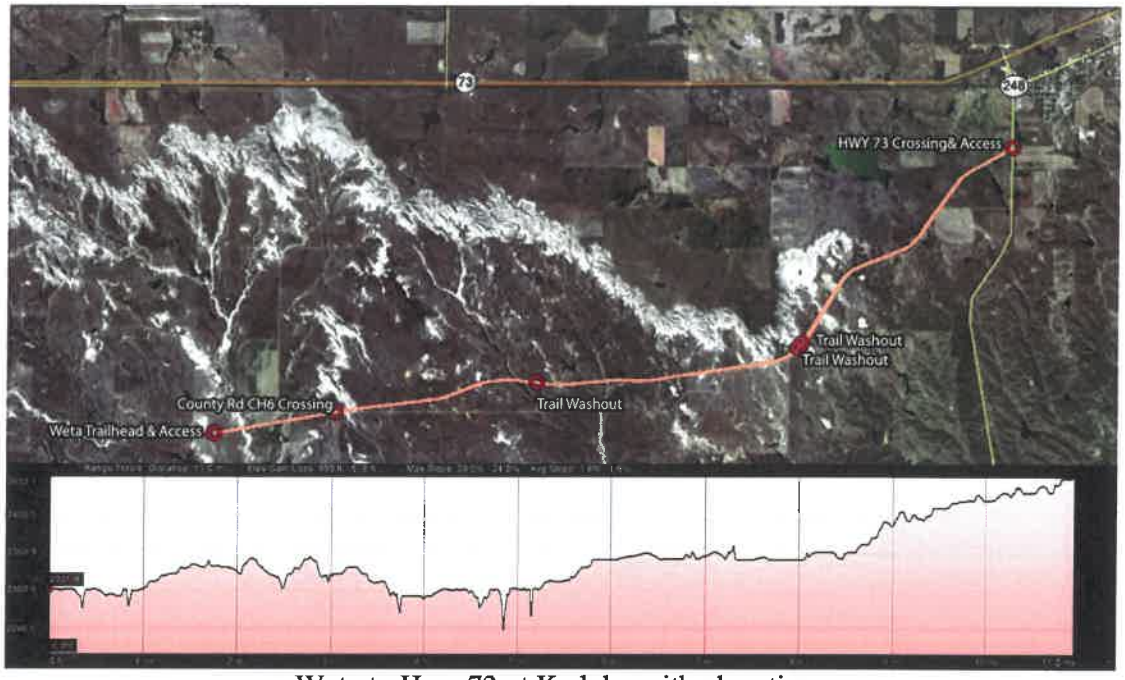


One of the elven bridges in this section with badlands views

Agate fields along the corridor from Conata Basin to Interior.

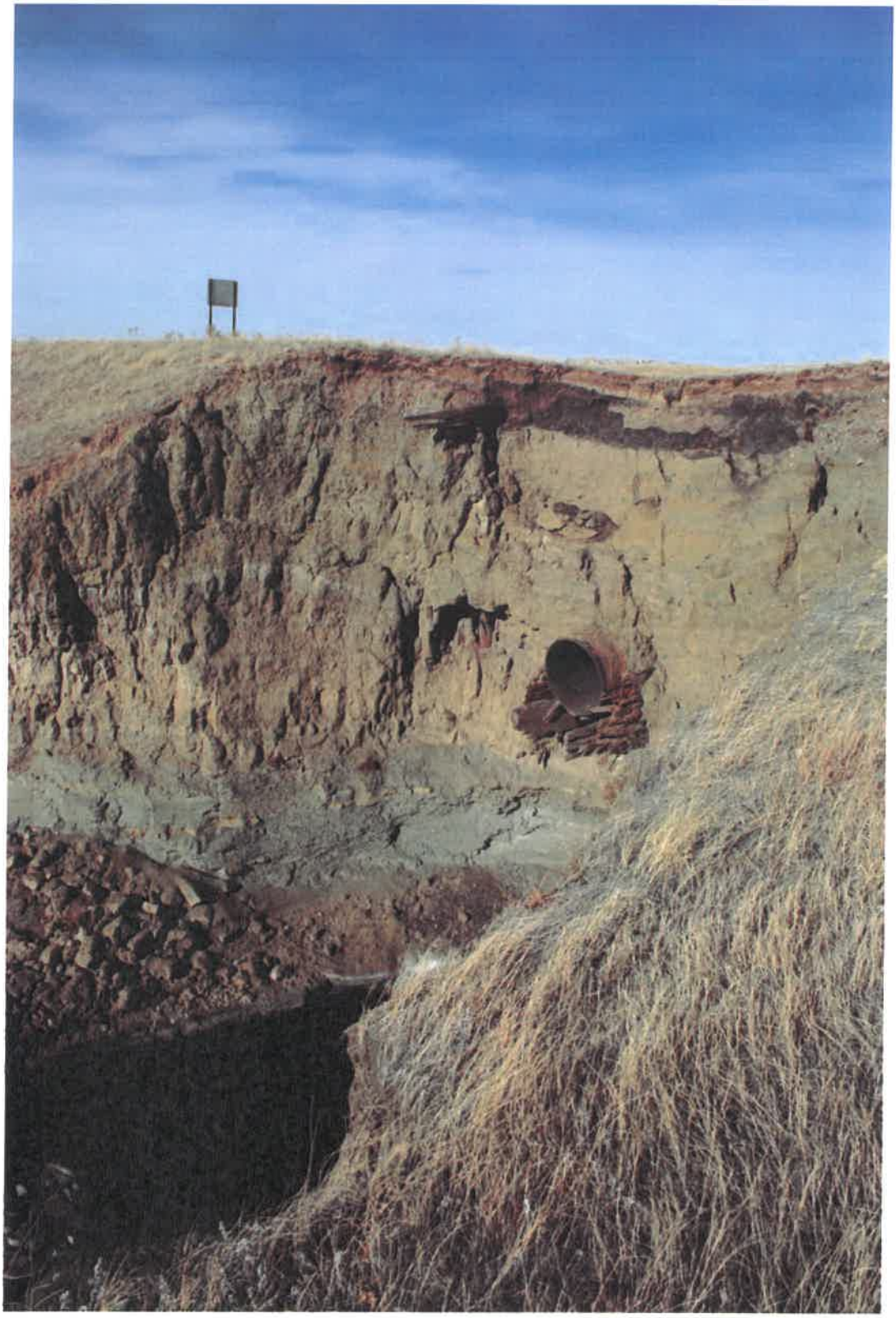
Entering the small community of Interior through the badlands environment

Priority V Weta to Hwy 73 Cost: $2,280,270.00



Weta to Hwy 73 at Kadoka with elevations

This section is eleven miles long and would connect to the short section from HWY 73 to the town of Kadoka. When this section is completed it would give anyone starting at Kadoka about a 12-mile section of out and back trail. This section has seven bridges and three washout areas two of which are quite sizable. Engineering would need to be done to decide how to renovate the washouts.

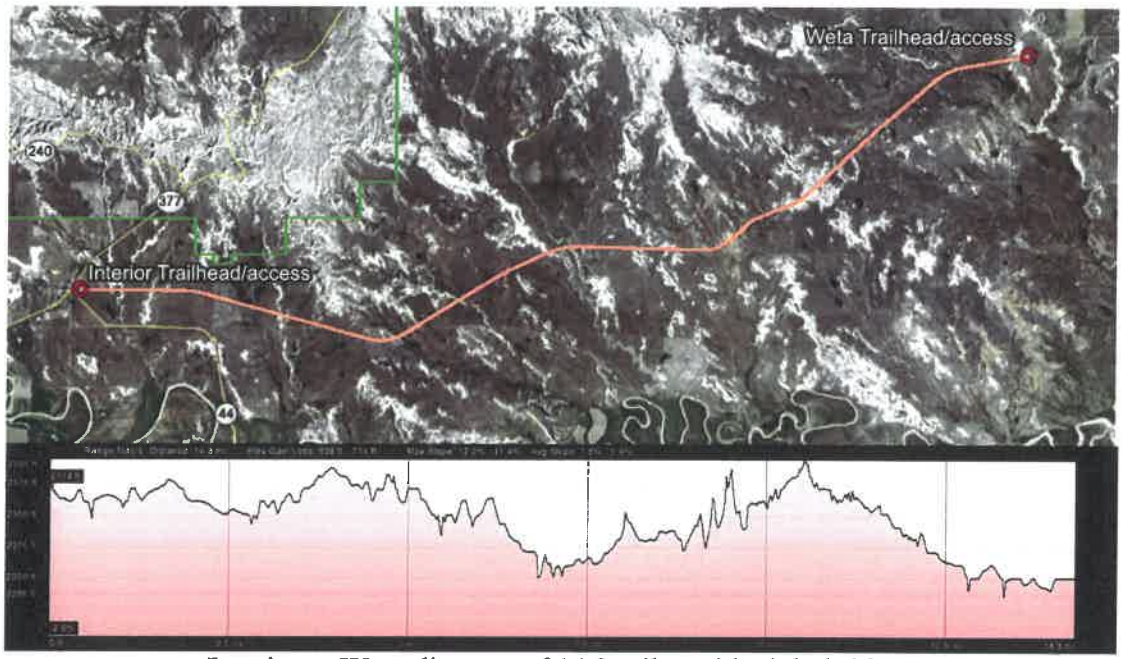


Large washout area east of Weta

A route around the washout to the right in this picture (north side) can be maintained on railroad property if money cannot be found to fix the breech. The top of the washout is located behind the bicycle in this picture

Trail corridor heading towards Kadoka.

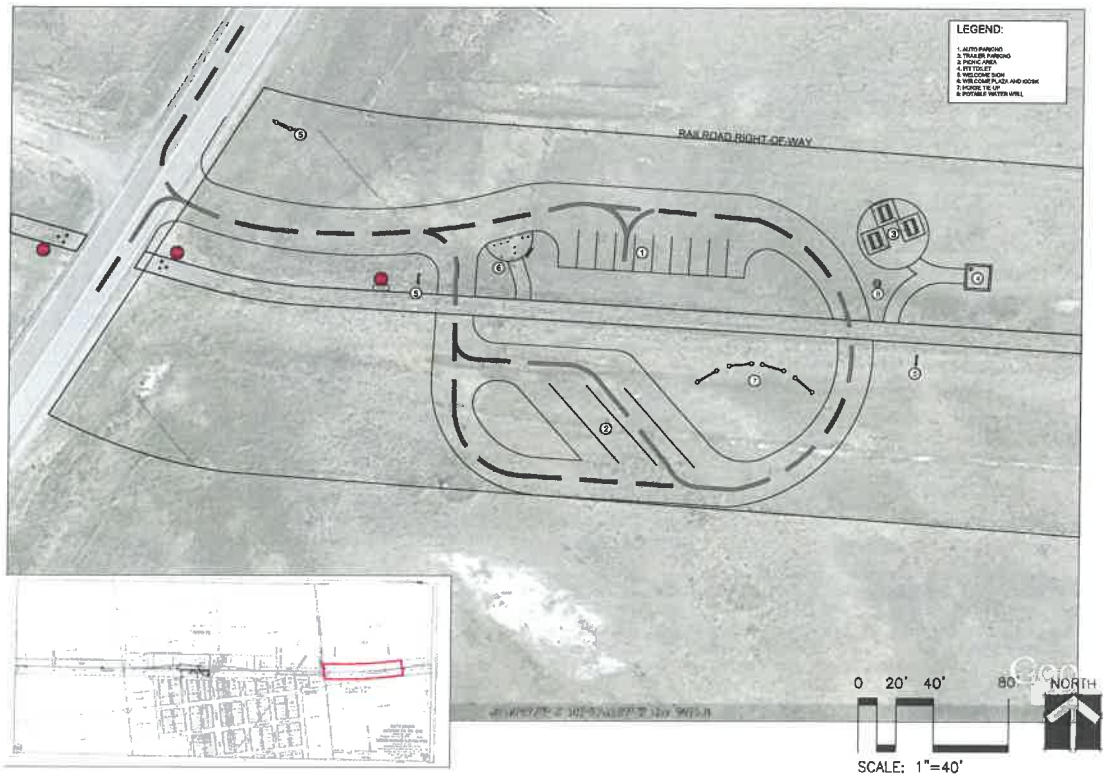
Priority VI Interior to Weta Cost: $3,047,187.00



Interior to Weta distance of 14.3 miles with eight bridges

This is one of the longest sections of the trail between trailheads and one of the most beautiful. This trail would be the final link for the trail from Kadoka to Conata Basin. Almost 36 miles of trail would be completed through the badland landscape. This section of trail travels away from roads and extends itself into the National Grasslands and private ranching country. Beautiful vistas of the Badlands can been seen from this secion,

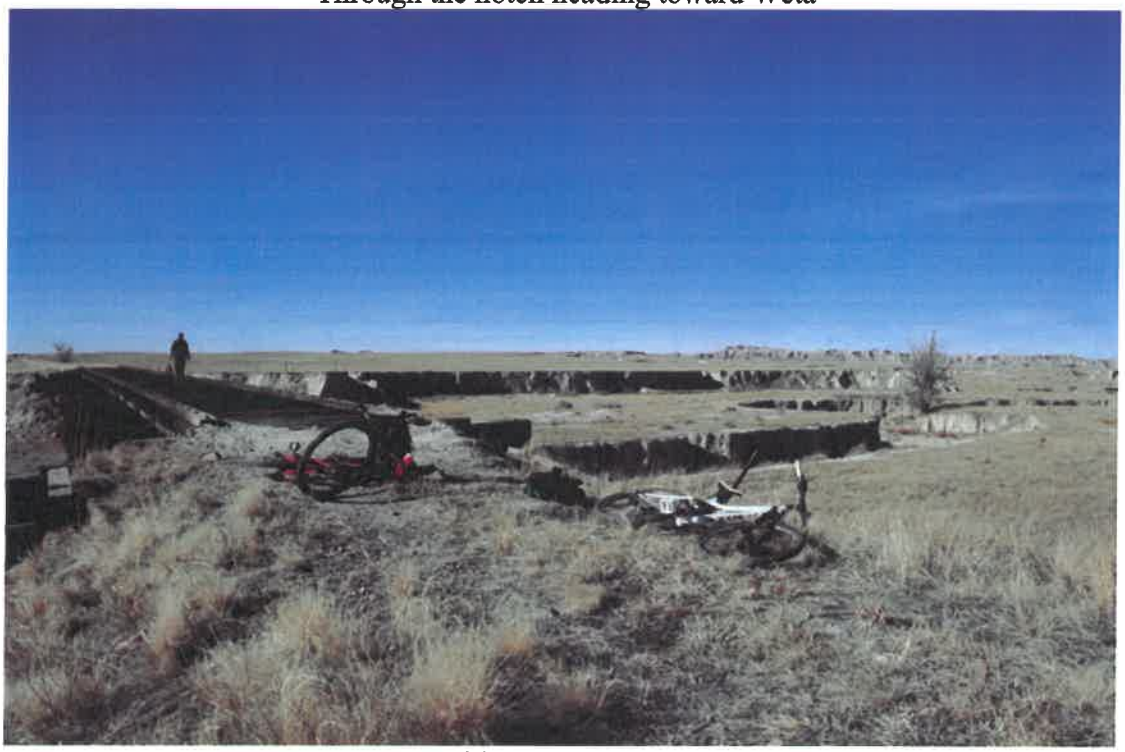
A major trailhead would have to be constructed along the Badlands Hwy just south of the entrance to the Park and across from the Cowboy Store in Interior. The siding area is actually in the center of town but by putting the trailhead in a more visible spot along Highway 44 and the Badlands entrance it would attract more attention. A smaller and more primitive trailhead would be located at Weta. The Weta trailhead would include gravel parking, kiosk and water.



Interior Trail Head Concept

Trail east of Interior is in great shape and the views are spectacular.

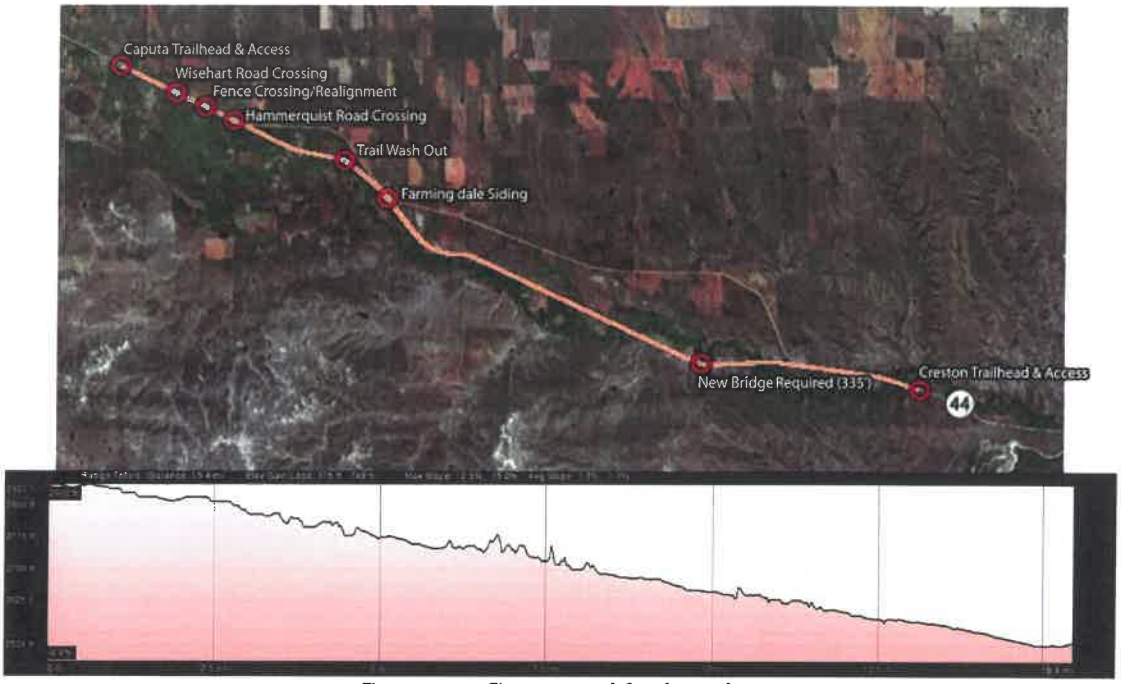
Through the notch heading toward Weta



Bridge west of Weta

Views of the Badlands

Priority VII Caputa to Creston Cost: $3,768,528.00



Caputa to Creston with elevation

This section of trail would connect Caputa with railway siding at Creston. This stretch of trail is 15.4 miles long with 13 bridges. There would be 14 bridges but one of them has been washed away due to the ever-changing Rapid Creek. Building a new bridge here would cost around $140,000 if permits could be secured. A route around this section is possible due to an off road trail on the south side of the rail corridor. At this time the area on both sides of the corridor where the bridge is out is Forest Service Property and is part of the Railroad Buttes off road area. Railroad Buttes Trail #512 runs along this section and could be used (with permission from the FS) to make a continuous connection. It is suggested that the managing organization of the trail start negotiations with the Forest Service to secure permission.

Bridge #23 is in danger of being washed out by Rapid Creek. In the fall of 2012 quite a bit of the southeast abutment of this bridge was being undermined by the creek.

The rest of the trail in this section is very good except one other small culvert that has been breeched and would need to be replaced.

Bridge #24 washed out and completely gone.

Railroad Buttes Trail 512 which could be used to bypass the washed out bridge.

Mako Sica Trail corridor east of Caputa along the Rapid Creek drainage.

Winter along the Mako Sica trail corridor.

Possible bypass around washed out bridge. Trail 512 parallels the rail corridor.

Bridge #23 being undercut by Rapid Creek.

Rail corridor in Rapid Creek drainage with fall foliage.

Rapid Creek from one of the many bridges along this section.

Notes From the Trail
by Charon Geigle

Caputa to Creston

September 21, 2012

We hiked yet again through boardwalks of trees in full fall colors. Green ash, cottonwood, chokecherry, wild plum and wild grape stood tall on each side of the trail. The significant features of this section include long bridges of more the 200 feet and the invitation of vastness on the horizons.

As we neared the end of the days trek on the trail changes in vegetation were becoming more obvious. Large patches of rubber rabbit brush were adjacent to the water loving trees near the creek. This lovely bush is rightful competition in its display of fall colors.

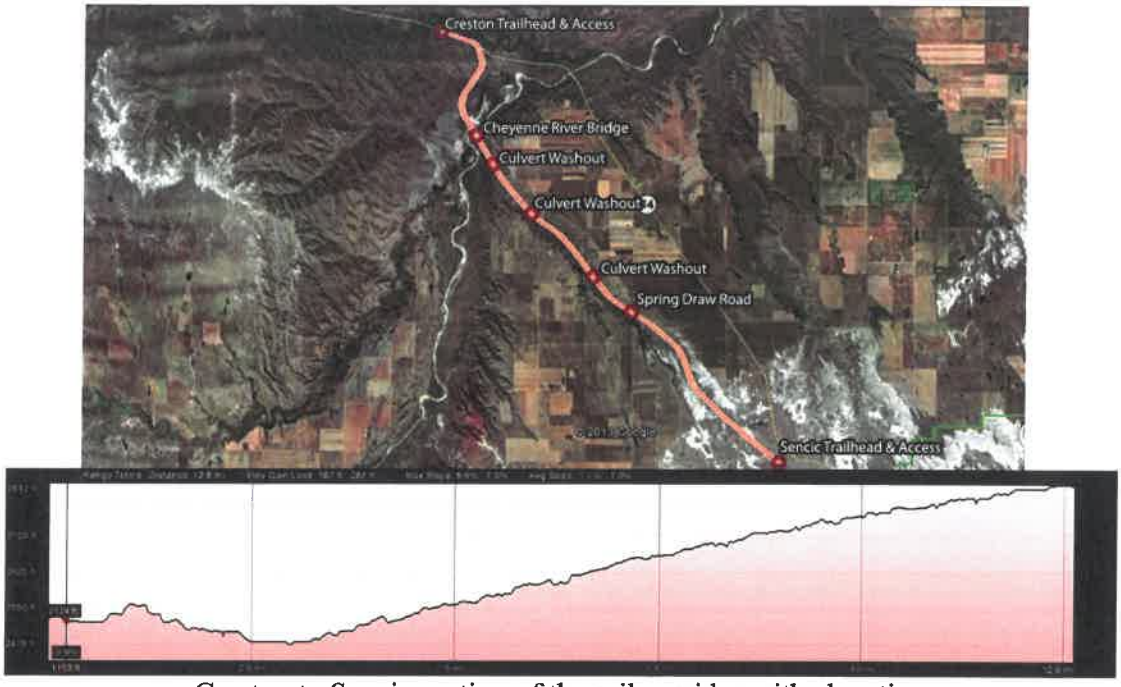
Turkey, white-tailed deer, sharp-tailed grouse and a covey of partridge paid homage to their human passersby.

Rocks carried by the trains to surface the rail bed unveiled many stories if one new how to interpret them. Scoria, chalcedony, river rock and limestone line the bed of the railway.

Turkeys, brown thrashers, northern flickers and red-tailed hawk guided our eyes beyond the bed of the trail. Showing us there was more to see along the way. A large fish waved its body in the pooling water, resting or waiting for an opportunity to eat.

This section of trail demonstrated the powerful water flow of Rapid Creek. The creek banks eroded all support of one bridge and threaten another. Horseback riders and bikers alike would take delight at the sight flowing water.

Priority IIX Creston to Scenic $2,637,843.00



Creston to Scenic section of the rail corridor with elevation

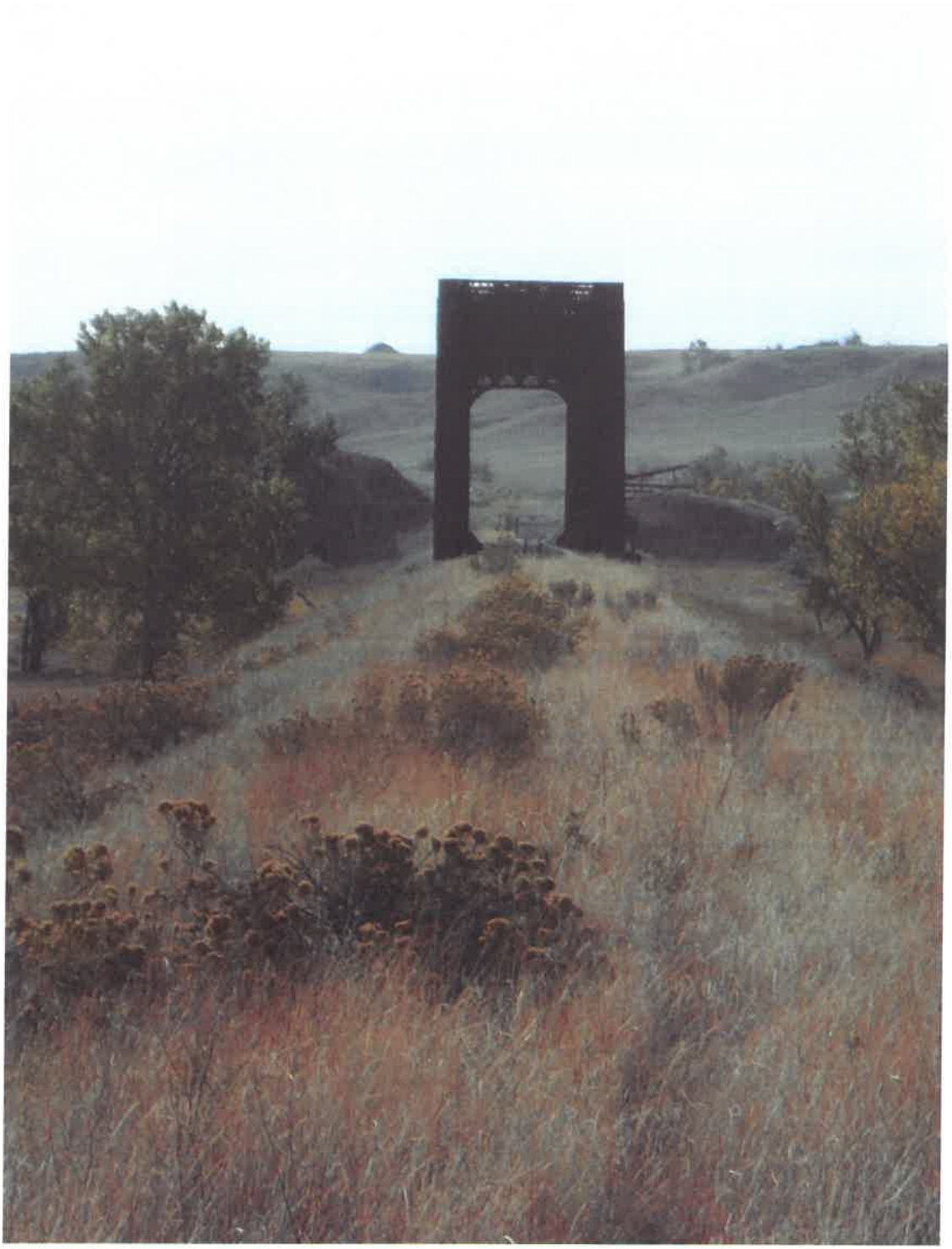
This section of trail is 12.6 miles long and could be one of the more controversial sections along the trail. Ranchers along this section of trail have stated they do not want the trail running through their ranch land and will do whatever it takes to keep it from happening.

There are 11 bridges through this section of trail with the largest being the Cheyenne River Bridge at over 740 feet in length. This bridge is the longest bridge on the trail as well as an icon left over from the abandoned railroad. In 2007 the Cheyenne River Bridge was in danger of collapsing into the Cheyenne River due to eroding abutments. The South Dakota Railroad Authority needed to make a decision to either tear the bridge down or renovate the bridge to preserve it. In 2008 the SD Railroad Authority voted to budget the money to renovate the bridge. Work was completed in 2009 and today the bridge is a standing legacy to a vision of the future.

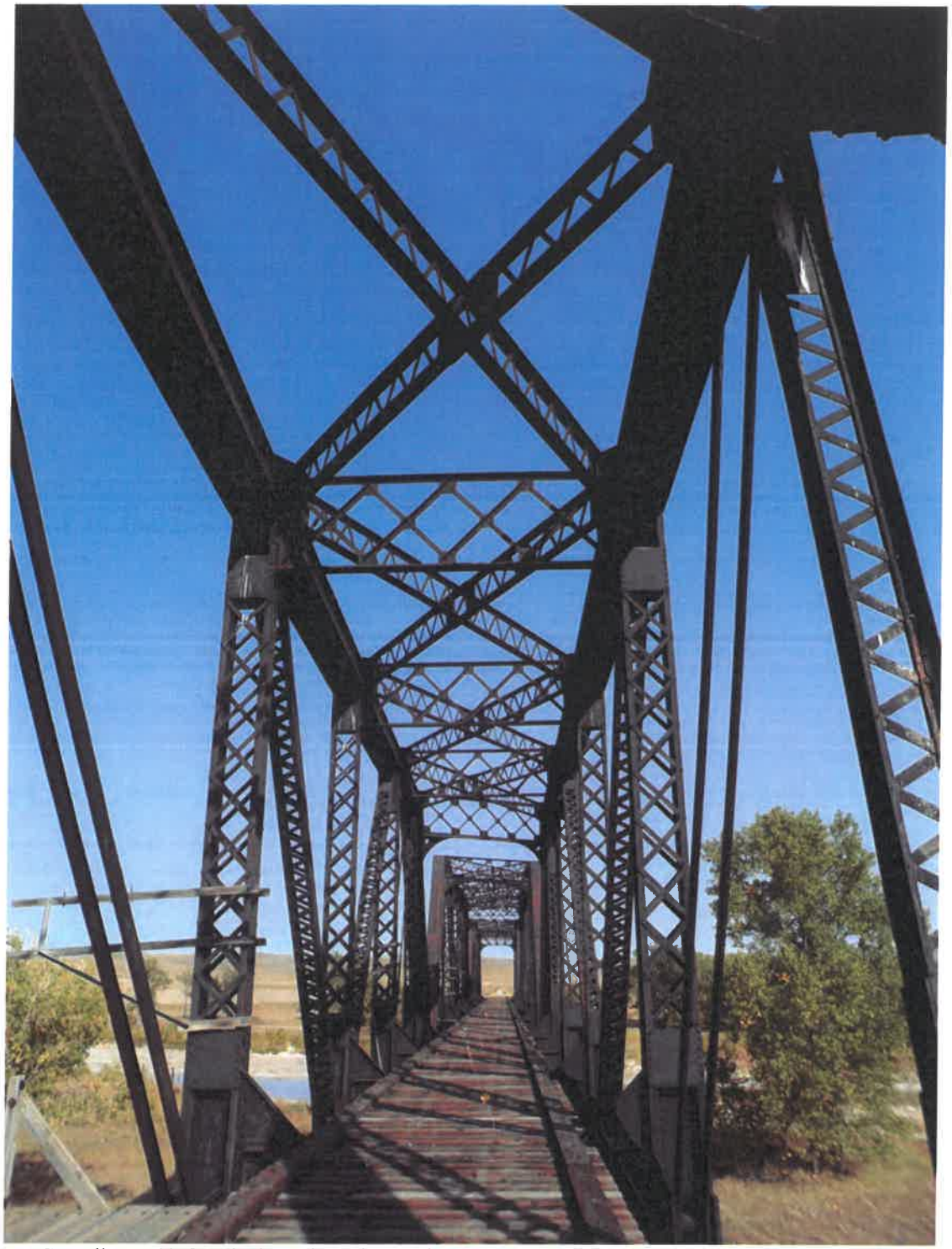
This section from Creston to Scenic has some of the most beautiful fall colors anywhere along the trail. There is a culvert that has been removed just east of the Cheyenne River Bridge. The culverts are piled along side of the rail corridor and could be used to put this section back in.

This section of trail also is situated adjacent to the Pete Lien gravel company. Large trucks are crossing the rail corridor at all times. When the trail is built signage will need to be placed here to provide caution for users.

Cheyenne River Bridge before renovation



Cheyenne River Bridge standing as the gateway to the Badlands.



Standing 740 feet in length and crossing the Cheyenne River this bridge is an icon.

Cheyenne River

Notes From the Trail

(Charon Geigle)

This section of the trail I have named "the valley". Spring Draw is this just right valley of not to wide and not too narrow, it is just perfect to give the balance of intimacy with the landscape yet not closed in. The experience of "comfortable vastness" would describe this valley.

The first memorable moment on this section was looking back toward the Cheyenne River Bridge. The framework was lined up perfectly with the rail bed that it appeared to be a window or looking glass to another world from the prairie. And "the creek" is truly is another world of trail experience to the west.

It is at this moment I think of the different trail experiences: the creek, the valley, the basin and the wall. The four segments of this 98-mile trail offer experiences vastly different than the Mickelson Trail. It is also at this moment that I know this trail rivals and perhaps surpasses the beauty of the Mickelson Trail.

The rail bed is in excellent condition. There are very few cross fences or bridges. The valley is the shortest segment. The elevation rise from the Cheyenne River is about 400 feet over 9 miles. We can readily visualize horseback riders, hikers and bicyclists sharing the trail.

We met with a local landowner. Their concerns were good ones: what about cow chasers, litter, emergency access, trail access, congested parking, cross fencing, gates, OHV use, potable water, etc. These concerns are valid, if a trail was going through the alley behind my house, I would have the same concerns. (Other than the cow chasers.) It was a good visit and we plan to have more.

Spring Draw is host to an active beaver colony. As the name of the draw implies, it is spring fed, and even in this very dry year the beaver were very busy. Mule and white tailed deer, antelope, coyotes and turkeys all made appearances for us.

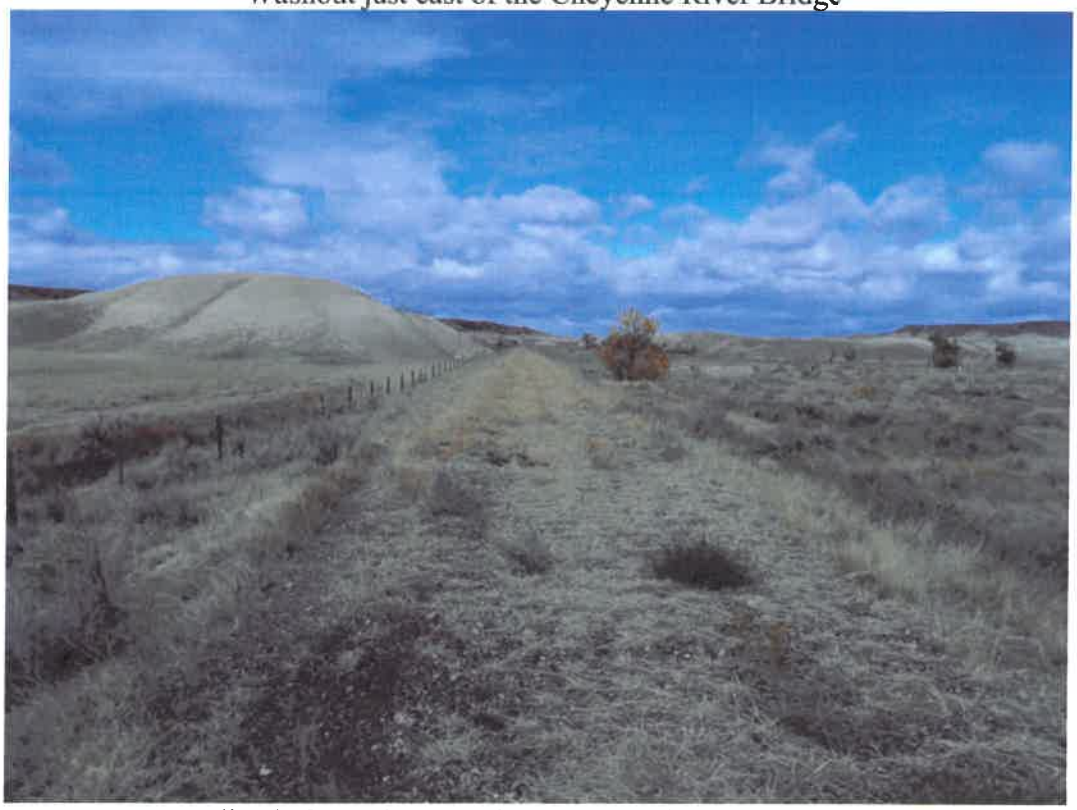
As we neared Scenic the soil type started to change significantly to the clayey soil. Badland formations are on the horizon: Sheep Mt. Table, Heck Table and Quinn Table. The trail will be in the White River watershed just beyond Scenic, which will take us into "the basin" or Badlands as they are referred to.

The Beauty of Spring Draw

Beaver Dam in Spring Draw

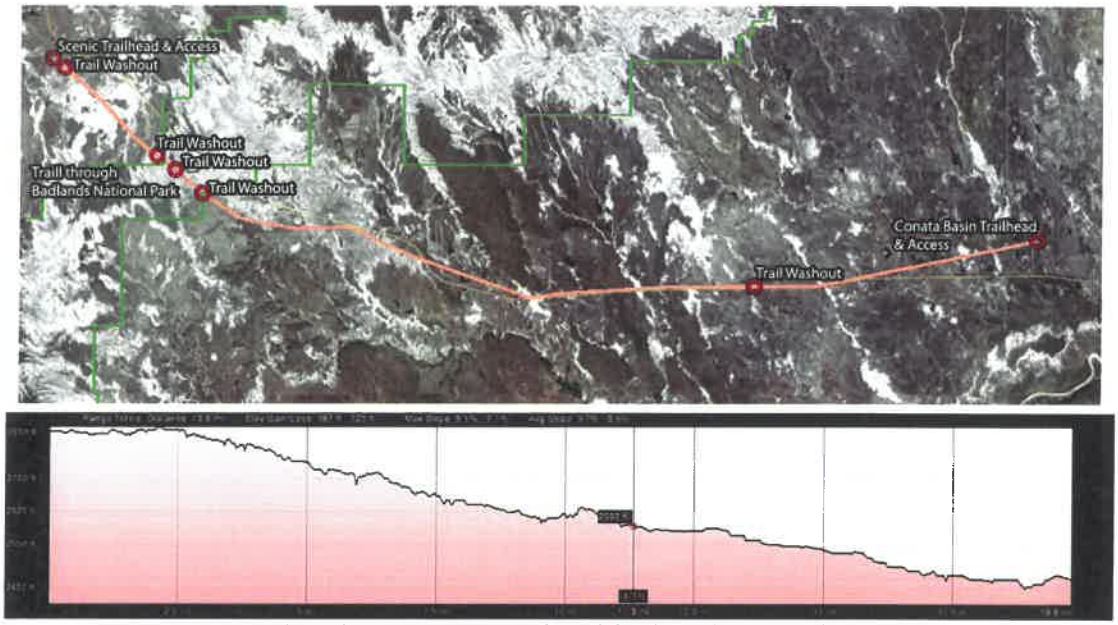
As the trail rises in the distance to Scenic the landscape begins to change.

Washout just east of the Cheyenne River Bridge



Badlands formations starting to appear just west of Scenic

Phase IX Scenic to Conata Basin Cost: $4,173,296.00



Scenic to Conata Basin with elevation profile

This section would be the last phase in the trail system and at 19.8 miles the longest section. Imlay sits in between Scenic and Conata Basin and would have a minor trailhead as well. This section would also be one of the more costly sections at over four million dollars not only due to its length but also due to the three major washouts all within the boundaries of Badlands National Park.

This section has thirteen bridges along the corridor all of which are in good shape. The trail bed except for the washouts is in very good shape.

After traveling through the National Park a rider or hiker would come to the Hwy 44 crossing and enter the ghost town of Imlay before entering the National Grass Lands and onto Conata Basin. You get your first up close vistas of the Badlands on this section traveling east and quite a sight they are.

Inside Badlands National Park Washout #1

Inside Badlands National Park Washout #2

Inside Badlands National Park Washout #3 Park Boundary is just beyond the fence

Looking down washout #3

East of Scenic entering Badlands National Park

West of Imlay

East of Imlay traveling through the notch

Some of the vistas that await you when you exit the notch east of Imlay

Sunset from Conata Basin

Design Considerations

Trail Characteristics and Amenities

Crushed Stone Surface

The following are several different types of trail surfaces that have been used on rail to trails. Unpaved trails like the Mickelson (South Dakota) or the Cowboy Nebraska trails use fine crushed stone, or crushed stone mixed with limestone fines, which are the most sustainable and least costly trail surface for this type of trail. Crushed stone surface trails are an option when the trail surface is nearly flat as is the case of the MST. This report recommends that this type of surface be the primary surface on the MST.

Crushed stone surface with a layer of limestone fines over the top

Asphalt Surface

Asphalt surface trails are used in a variety of trails and an excellent choice if you have the money to build them. The asphalt is set on a base of crushed stone. In the case of railroad beds like the MST it is possible that enough crushed stone is already in place so that the asphalt can be laid over the top of the stone. This type of trail is favored by skinny (road bikes) tire bike riders and allows other users such as skate boards and inline

skates so it is possible to have a larger set of users using the trail. This reports recommends when the trail is built that asphalt be considered inside the city limits of the different communities so that more users will have access to these sections of the trail. Asphalt is not recommended outside these community zones due to the expense except for the possibility from Jolly Lane to Caputa if money was found in the future.

Concrete Surface

Rapid City uses this type of surface predominately inside the city limits for the Leonard Swanson trail. This type of surface is much more expensive but the maintenance cost are lower due to how well concrete last without a lot of maintenance. The section of trail along Cambell Street should be concrete due to it will also become a city sidewalk and if possible at some point in the future the section running all the way to Jolly Lane should be paved with concrete so a continuous paved trail from the West side of Rapid City to the East side of Rapid City is in place. Due to it's upfront costs we suggest it would be more important to open this section up with as a gravel trail first and if possible pour concrete at a later date.

Specialized Trail Surfaces

Unusual conditions often times call for special surfaces such as a raised board walk or other suitable surface through a wetland or other geographic anomaly. The MST has several areas that were wet during trail assessment. It was a dry year in 2012 and yet there were areas that were wet and had standing water. During wet or average moisture years these areas could be hard for hikers or bikers to get through without getting wet.

In these areas it is suggested that a raised boardwalk would be suitable for allowing access while protecting the resource of these wet areas. Boardwalk railings probably wouldn't be needed, as the boardwalks would be close to the ground. Equestrians could be instructed to ride along side of the boardwalks where possible in order for the rider not to dismount to cross the boardwalk.

Bridge Decking and Railing

Most of the bridges along the MST trail corridor were built to withstand a 100-ton locomotive so they should be far more solid than needed for bicycle and pedestrian use. The MST has 83 bridges. Every bridge along the trail corridor however has had the rails removed, which leave an open expanse between each rail tie. The State, in order to keep people from driving across two of the bridges had the ties removed, which leaves only two parallel wood beams running lengthwise along the expanse. These two bridges will need to have cross beams put in before they are decked. All the bridges are different lengths, different heights and some even have a curve or tilt to them.

There are many different types of decks just like trail surfaces however the bridge decking should be durable and non-slip. Treated wood decking is the most popular because it is also the cheapest and the easiest for a non-skilled volunteer to work with. When decking the bridges the boards are laid perpendicular or at a angle to the path of

travel to prevent bike tires from catching on an edge and causing a bicyclist to be thrown off balance.

Railings

Typical bridge railings are 48 inches high however if equestrians are going to be allowed to use the bridges the bridge railing should be extended to at least 54 inches high. Signs should be posted on all the bridges to warn horse riders to dismount and walk across a bridge.

Trailheads

In order to attract and give comfort to the people using the trail, trailheads should be developed at critical junctions along the trail. The main trailheads at Caputa, Scenic, and Interior include rest rooms, interpretation (i.e. ecology, geology or history) of the surrounding area. There is already an established site for a trailhead in Kadoka at the Railroad Museum so no concept was developed for this site. This report recommends smaller trailheads be located at Jolly Lane, Creston, Imlay, Conata Basin, and Weta, with gravel parking areas and water. Putting pit toilets at these locations would be up to the managing organization as these smaller sites are in secluded areas where vandalism could be a problem. These sites should have kiosks with maps of the trail as well as directing travelers to campgrounds, towns, etc. It is recommended that when the trailheads are built that they are design with the look of 1900s architecture and the feel of a train station.

Trail and Trail Amenities

Along the trail as certain points it is strongly suggested that certain amenities be placed such as shelters, kiosks, underground water storage, interpretive signs, way finding signs, gates, etc.

All of these types of amenities make the trail experience that much more enjoyable and safer for the user.

Sheltered Kiosk

Sheltered Kiosk along the Mickelson Trail

It is strongly suggested that during construction of the different sections of the trail that a sheltered kiosks be place along the trail at different intervals. Shelters like this are a must to protect the traveler as well as give comfort at different areas along the trail. Placement should be considered every three to five miles and at all the major and minor trailheads.

Water Storage

Water storage along the MST will be very important since most of the trailhead areas are without wells or water lines. Water storage tanks should be placed at all traiheads. It is recommended that potable water be available to a visitor on foot, bike or horse every 10 to 15 miles.

Underground Water Storage Tank with Hand Pump

One problem with having potable water on the trail is the higher maintenance costs. Someone will have to test the water in these tanks on a regular basis as well as fill them up in the spring and during the summer and drain and clean them before winter sets in.

Interpretative Signs

The goal of interpretation is to improve and enrich the visitor experience by helping site visitors understand the significance of the place they are visiting, and connecting those meanings to visitors' own personal lives.

Use of interpretive signs is to interpret natural, cultural, and historic features and stories for trail visitors. They can also be used for education purposes such as to show case of how working ranches and our national grasslands can coexist and each can benefit from the other.

Interpretation is a communication process designed to revel to the reader relationships of our cultural and natural heritage. Interpretation tells the story of another time or a natural relationship and brings meaning to the reader.

Interpretation should:

- Catch the attention or arouse the curiosity of the audience.
- Relate the message to the everyday life of the audience.
- Reveal the essence of the subject through a unique viewpoint.
- Address the whole by showing logical significance of an object to a higher-level concept or story line.
- Strive for message unity by use of a sufficient but varied repetition of cues to create an accentuated to a particular mood, theme, aura, or atmosphere.

Interpretation can also communicate specific messages to visitors to a trail. These messages can be used to change behavior, educate, or evoke an emotion in the reader. These types of signs are most commonly used for wayside exhibits at points of interest, such as a beaver pond, and old watering station for a train, or significant viewing areas to educate the user on what they are looking at.

Interpretation signs along the Medicine Bow Trail in Wyoming

Interpretation signs along the Medicine Bow Trail in Wyoming

Many people call Freeman Tilden the father of interpretation. In his book *Interpreting Our Heritage*, published in 1957 Tilden developed his six principles of interpretive communication. It is recommended that interpretive signage developed for the MST is based on Tilden's interpretive principles. These six principles state that interpretation must:

1) Somehow relate to what is being displayed or describe to something within the personality or experience of the visitor will be sterile.

2) Information, as such, is not interpretation. Interpretation is revelation based on the information. But they are entirely different things. However, all interpretation includes information.

3) Interpretation is an art, which combines many arts, whether the materials presented are scientific, historical, or architectural. Any art is to some degree teachable.

4) The chief aim of interpretation is not instruction, but provocation.

5) Interpretation should aim to present a whole rather than a part, and must address itself to the whole person rather than any phase.

6) Interpretation addressed to children (say, up to the age of twelve) should not be a dilution of the presentation to adults, but should follow a fundamentally different approach. To be at its best it will require a separate program.

MUTCD and Way Finding Signs

MUTCD signs are signs that control a user for safety. The Manual on Uniform Traffic Control Devices, or MUTCD defines these standards to be used on bikeways that connect or cross roadways, highways, or any other traffic control device that will make travel safer. Signs include stop signs; yield signs, HWY crossing, speed limit signs, etc.

Examples of MUTCD signs for trails

HWY Crossing Signage

Way finding Signs

There are a lot of things in life that get little attention; until they don't work the way they're supposed to. Way finding is a case in point. During a trip to an unfamiliar place is the time someone thinks about way finding. When it's confusing or nonexistent it becomes frustrating for the visitor. Like so many things that seems simple but isn't, way finding is an unobtrusive guide to where people can travel. When it works, it's transparent. When it doesn't, it's the center of frustration.

Way finding is more than creating attractive signs. Effective way finding is a well-researched, well-engineered plan that anticipates directional needs, mileage, guides visitors to key destinations, aligns your trail with towns and places, and strengthens your brand.

Examples of way finding signs include mile markers, community locations, first aid or hospitals, food, motels etc.

Trail Mile Marker

Mile Marker on the Medicine Bow Trail

Examples Of Way Finding Signage

Way Finding Sign on the Maah Daah Hey Trail

Education Signage

Educational signage is there to educate the user most of the time about trail etiquette. On a rails to trail such as the MST it will be inviting user groups from hikers, joggers, bicyclists, and horseback riders in addition to other groups including families school and environmental education groups, etc. This broad spectrum of trail users has the potential for conflict because of their varying trail needs and styles of recreation. Education of the various trail users will help in reducing trail conflicts.

A lack of communication between different trail users is the root of many clashes and collisions on the trail. Users must realize that communication is a two-way interaction and make an effort to warn others of their needs and intentions. Bicycle speeds could likely be the source of a majority of user conflicts. If trail users are educated in a basic and universal system of communication, such as what ringing a bike bell means, chances for conflict and crashes are minimized. Signs, speed limits, and good user etiquette along the trail can minimize conflicts between user groups.

Educational Sign.

Fences, Gates and Bollards


Gates for service & emergency vehicles as well as pedestrian, bike and equestrian

During the assessment of the railroad corridor sixty-nine fences were found that blocked access to the corridor. Some of these have ranch gates or vehicle access gates on them but most do not. Most are a straight barbed wire fence across the trail to keep cattle and vehicles in or out.

During construction it is paramount that the trail managers work with landowners and the State Railroad Authority to make a workable plan for all concerned. Other trails such as the Mickelson, Medicine Bow, and the Cowboy Trail have been through the same planning and most have worked out a plan where there is a pedestrian, bike, and equestrian gate and a vehicle gate that can be used by the rancher, security or a trail maintenance vehicle.

Pedestrian Gate

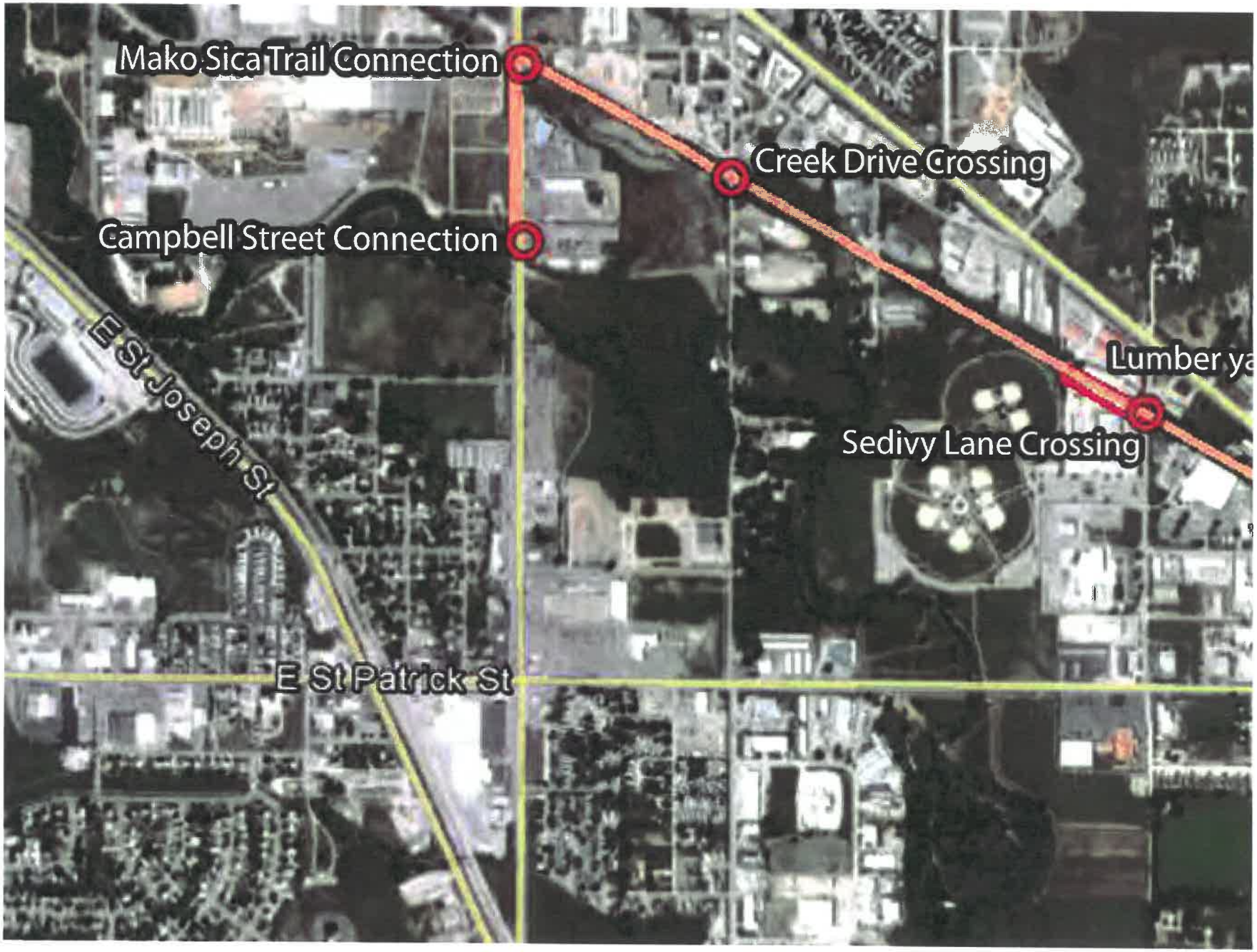
Horse and pedestrian gate on the Maah Daah Hey Trail

Bollards

Bollards on a pave pathway

Path entry control objectives: meet user needs, keep out or discourage access by unauthorized motor vehicles, while allowing access by emergency services.

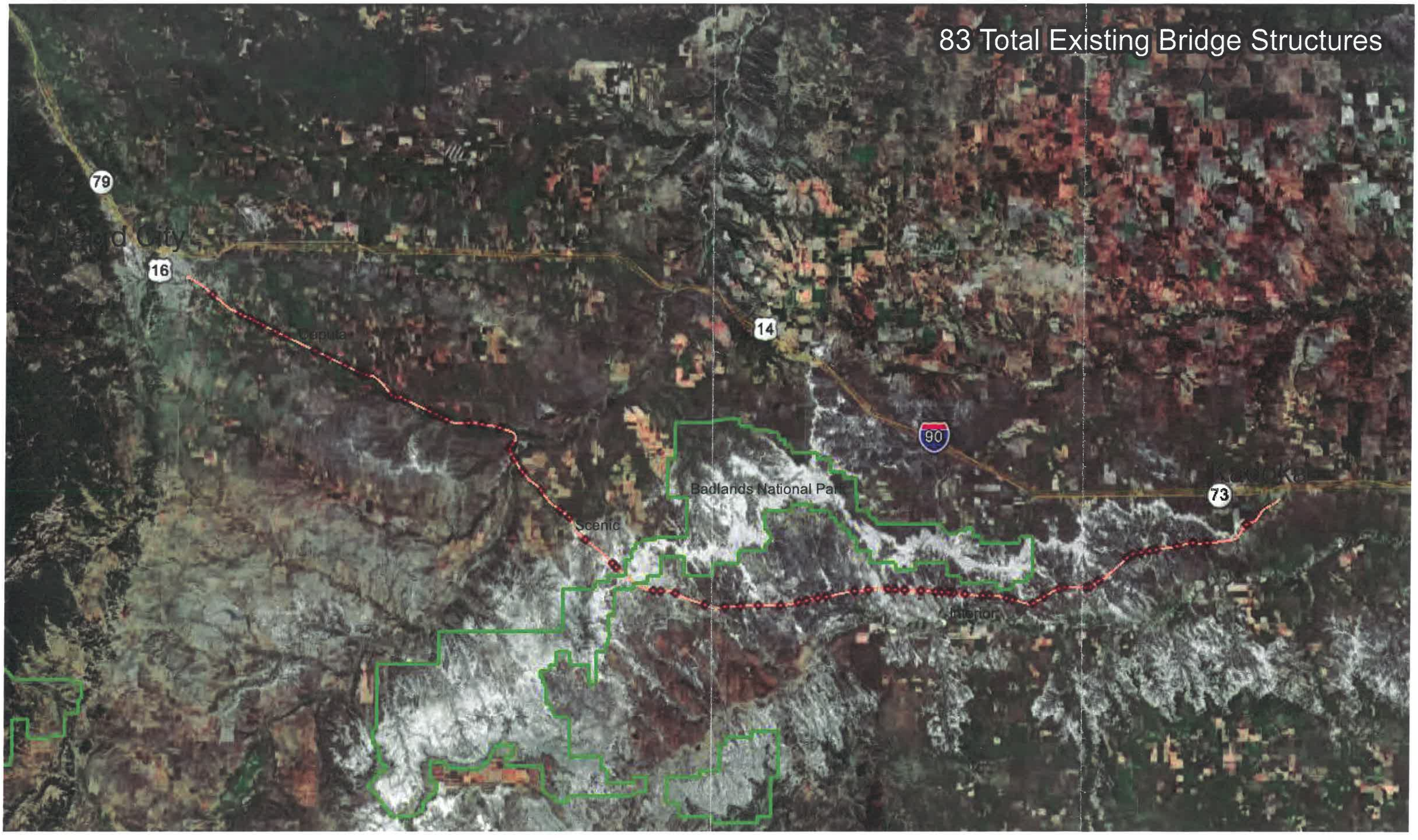
Security is that which prevents threats and protects and returns safety's to the user and landowner. Bollards are sentinels of security at trailheads. Medical, law enforcement, or fire personnel must enter the trail and mitigate threats to safety. The quicker and easier they can do this, the sooner safety is returned to the trail. The metrics of "quicker" and "easier" define bollard design and function. These are a must of trail security!


Mako Sica Trail Connection
Creek Drive Crossing
Campbell Street Connection
E St Joseph St
Lumber ya
Sedivy Lane Crossing
E St Patrick St


Jolly Lane Trailhead Access
Reservoir Road Crossing
New Bridge Required (110')
Anderson Road Crossing
Co Rd 212 Crossing
Airport

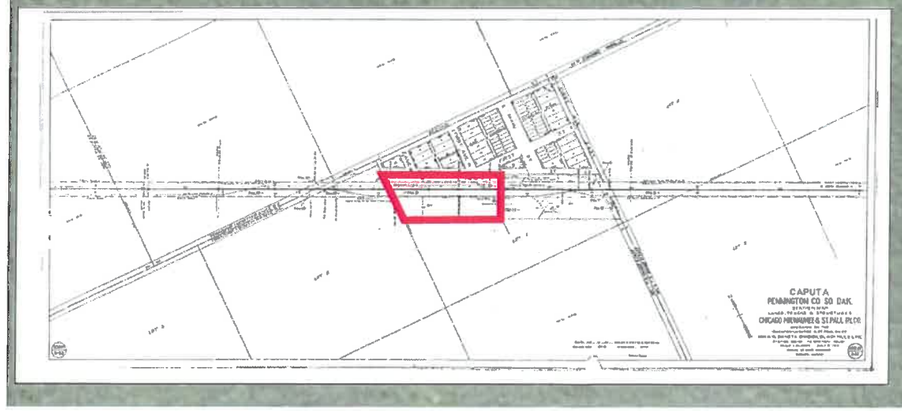

Caputa Trailhead & Access
Wisehart Road Crossing
Fence Crossing/Realignment
Hammerquist Road Crossing
Trail Wash Out
Farming dale Siding


79
Rapid City
Jolly Lane Trailhead
16
9.75
Caputa Trailhead
90
15.5
Creston Access


83 Total Existing Bridge Structures
79
16
14
90
73
Scenic
Badlands National Park
Interior

LEGEND:

1: AUTO PARKING
2: TRAILER PARKING
3: PICNIC AREA
4: PIT TOILET
5: WELCOME SIGN
6: WELCOME PLAZA AND KIOSK
7: HORSE TIE-UP
8: POTABLE WATER WELL



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NORTH

Wyss Associates, Inc.
Landscape Architecture
Golf Course Architecture
Parks & Recreation Design
728 Sixth Street – Rapid City, South Dakota 57701 – 3670
Ph. 605.348.2268 Fax 605.348.8506
email: info@wyssassociates.com

Project Name: Mako Sica Trail
South Dakota

Sheet Title: Caouta Trailhead Schematic Concept

DESIGNED BY:	MRJ
DRAWN BY:	CW/MRJ
APPROVED BY:	
PROJECT NO.	12303
DATE:	DEC. 2012

NO.	REVISION	DATE

Sub Sheet: L1.3

Sheet 1 OF

Wyss Associates, Inc.
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Project Name: Mako Sica Trail
South Dakota

Sheet Title: Senic Trailhead Schematic Concept

DESIGNED BY:	MRJ
DRAWN BY:	CW/MRJ
APPROVED BY:	
PROJECT NO.	12303
DATE:	DEC. 2012

NO.	REVISION	DATE

Sub Sheet: L1.4

Sheet 1 OF

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Project Name: Mako Sica Trail
South Dakota

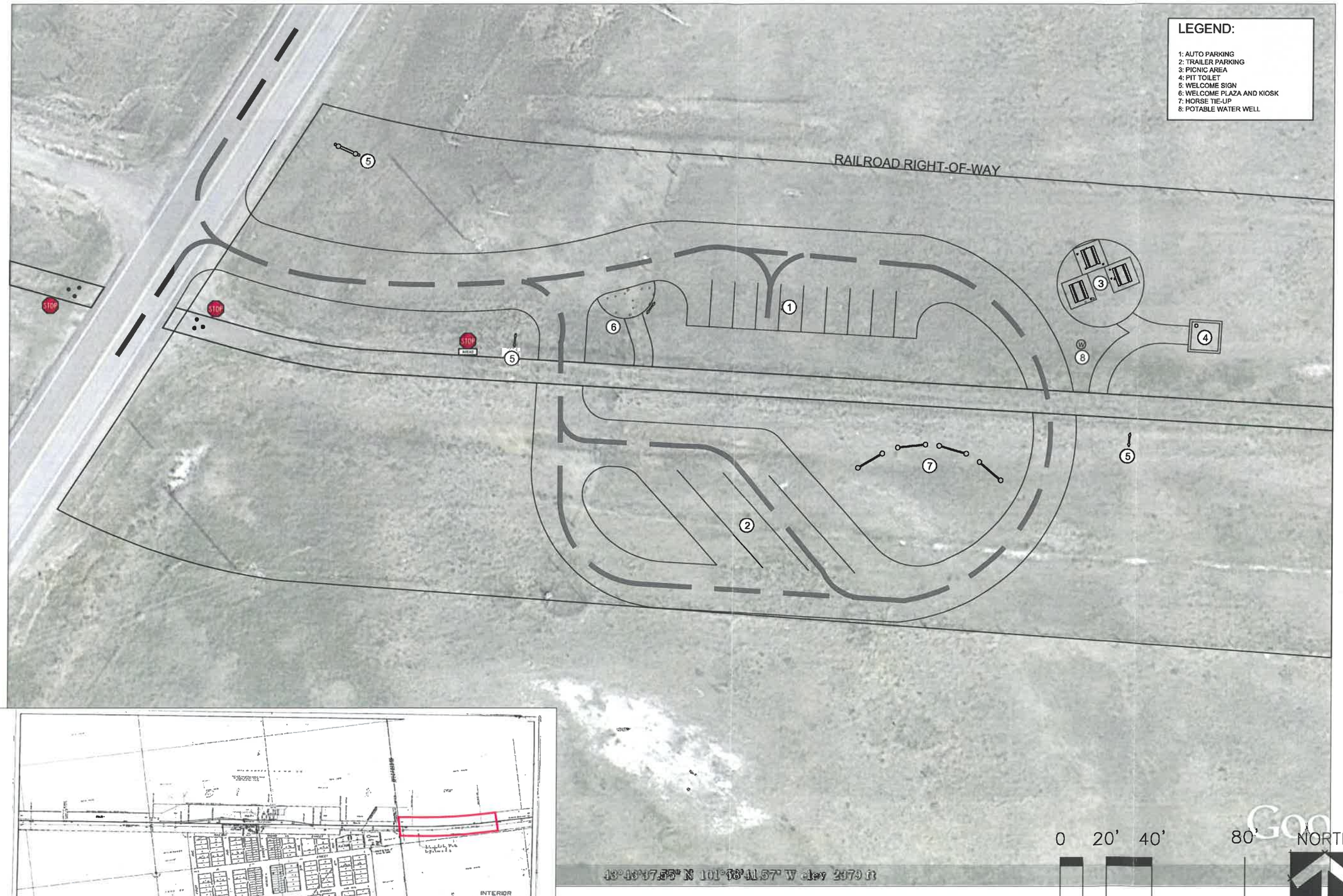
Sheet Title: Senic Trailhead Schematic Concept

DESIGNED BY:	MRJ
DRAWN BY:	CW/MRJ
APPROVED BY:	
PROJECT NO.	12303
DATE:	DEC. 2012

NO.	REVISION	DATE

Sub Sheet: L1.4

Sheet 1 OF



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NORTH

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Project Name: Mako Sica Trail
South Dakota

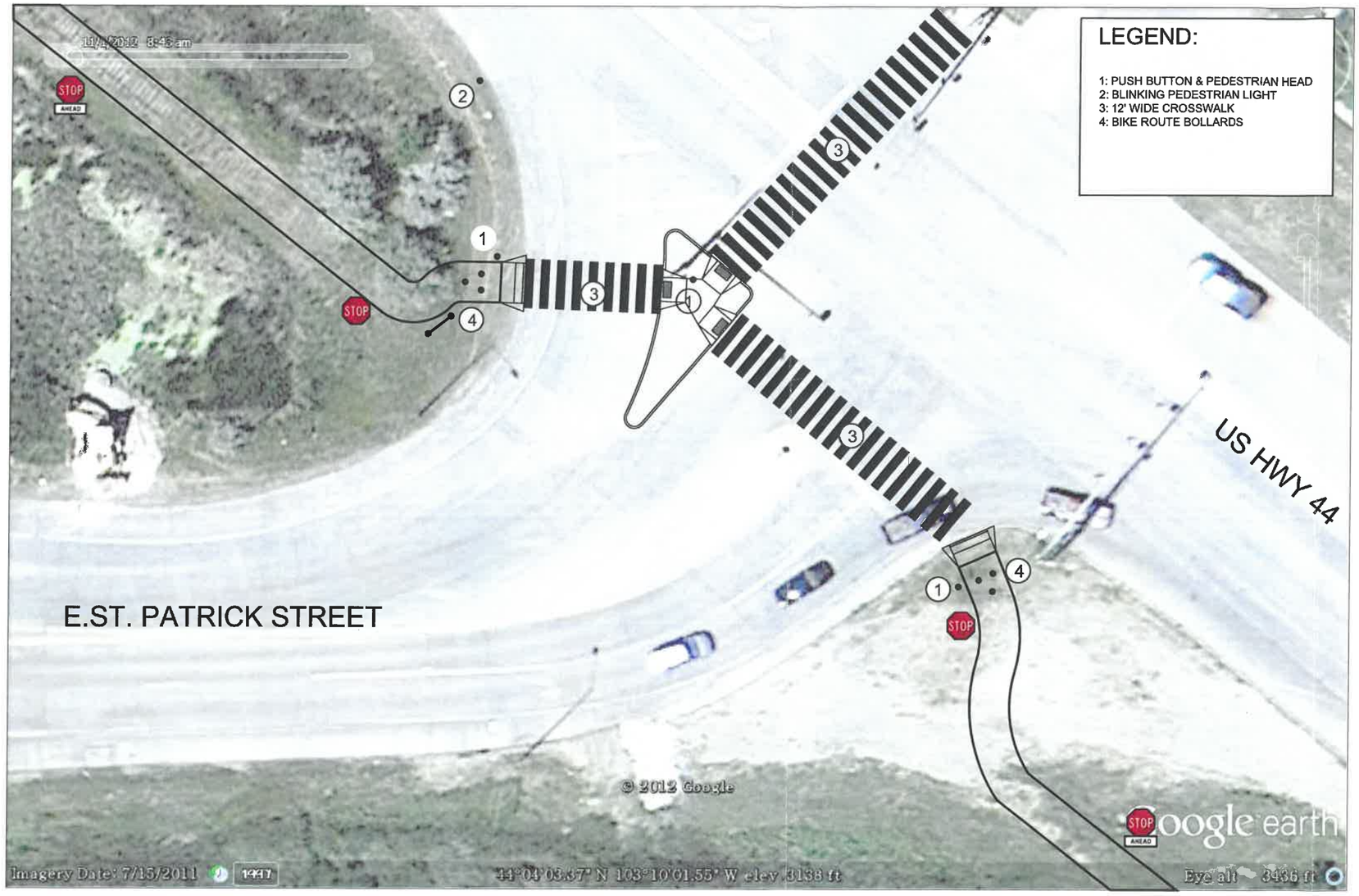
Sheet Title: INTERIOR Trailhead Schematic Concept

DESIGNED BY:	MRJ
DRAWN BY:	CW/MRJ
APPROVED BY:	
PROJECT NO.	12303
DATE:	DEC. 2012

NO.	REVISION	DATE

Sub Sheet: L1.5

Sheet 1 OF



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SCALE: 1"=30'

NORTH

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Project Name: Mako Sica Trail South Dakota

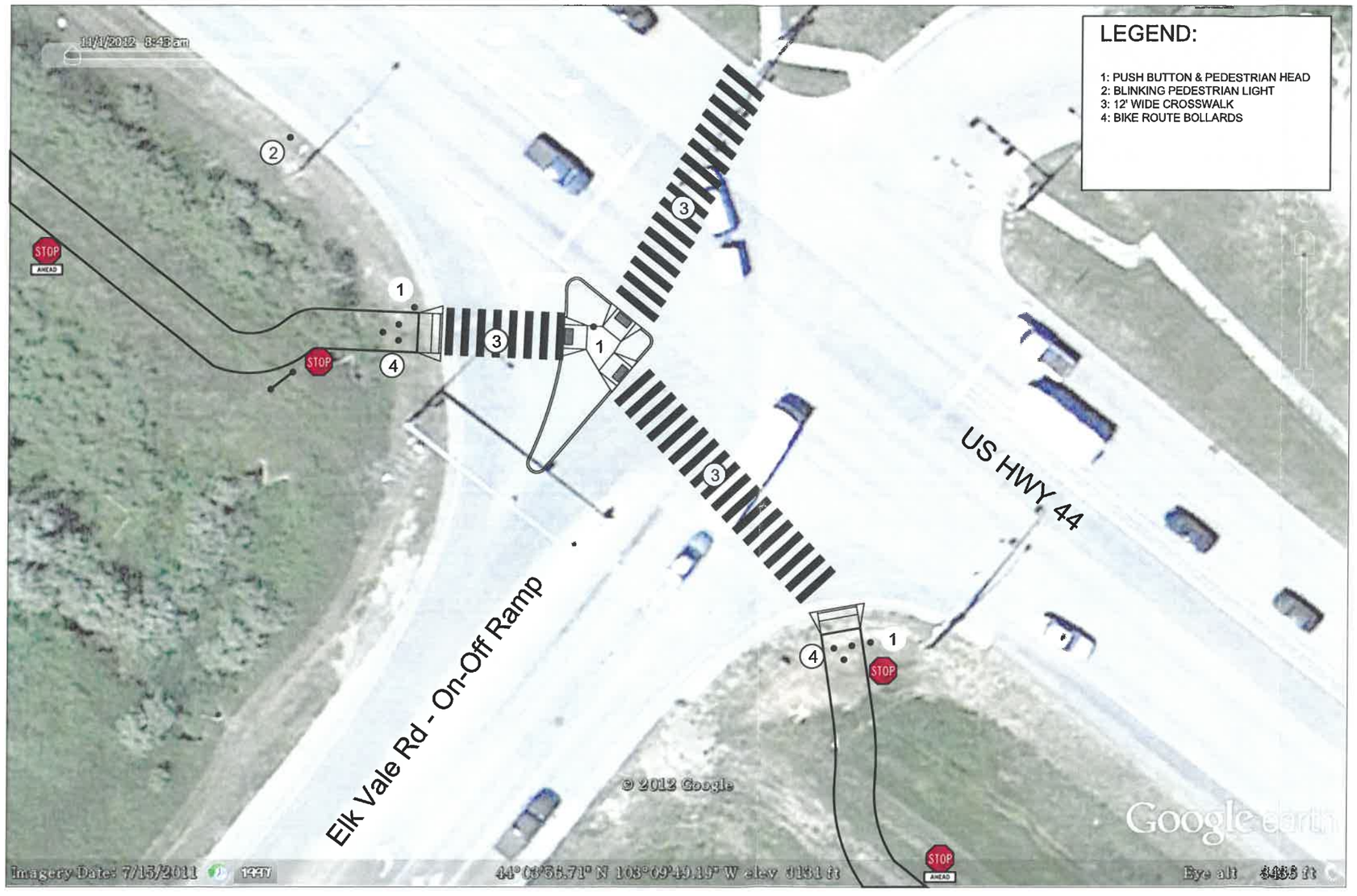
Sheet Title: E. St. Patrick Street Trail Crossing Schematic Concept

DESIGNED BY:	MRJ
DRAWN BY:	CW/MRJ
APPROVED BY:	
PROJECT NO.	12303
DATE:	DEC. 2012

NO.	REVISION	DATE

Sub Sheet: L1.0

Sheet 1 OF



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SCALE: 1"=30'

NORTH

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Project Name: Mako Sica Trail South Dakota

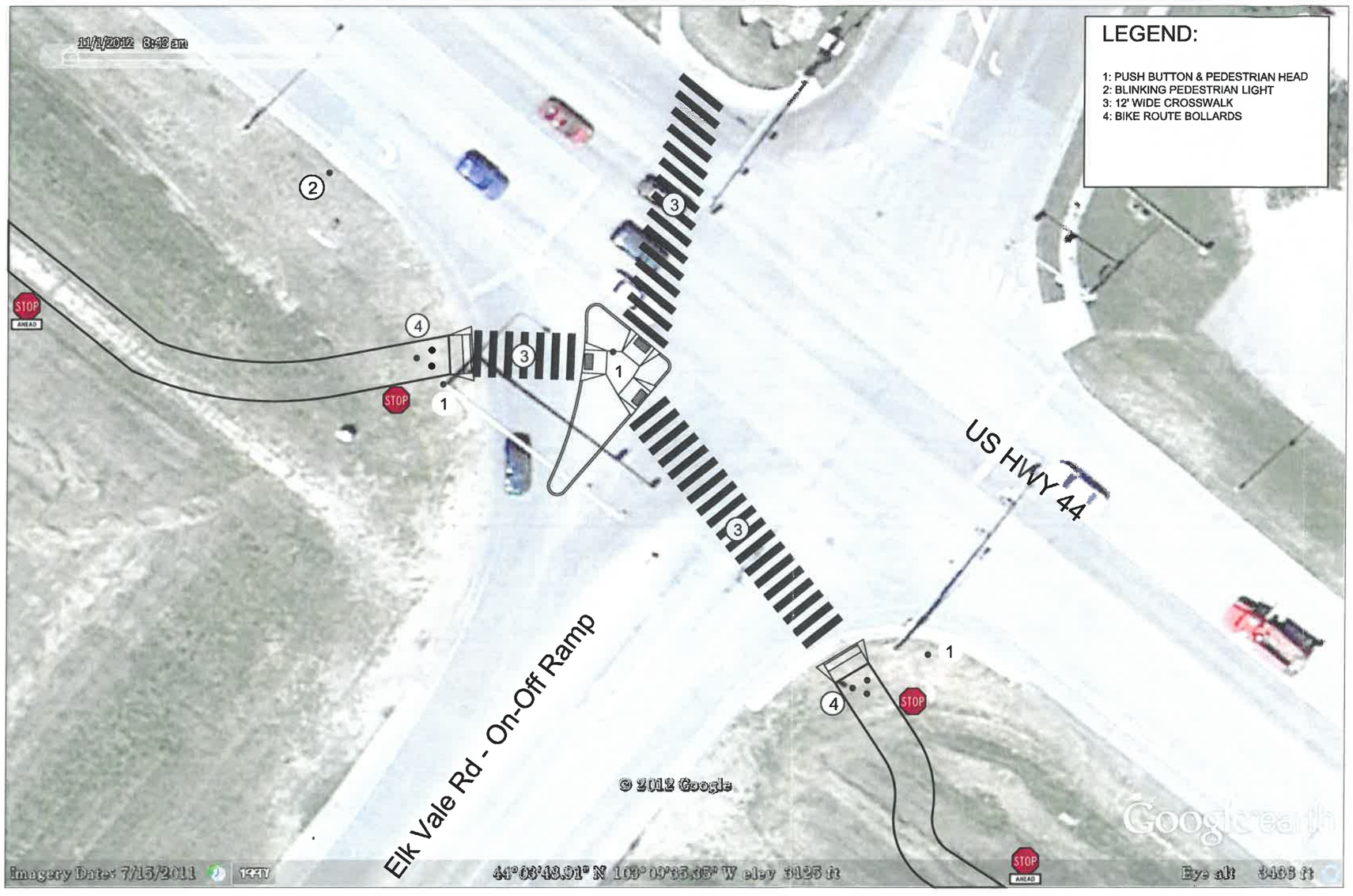
Sheet Title: Elk Vale Rd Ramp West Trail Crossing Schematic Concept

DESIGNED BY:	MRJ
DRAWN BY:	CW/MRJ
APPROVED BY:	
PROJECT NO.	12303
DATE:	DEC. 2012

NO.	REVISION	DATE

Sub Sheet: L1.1

Sheet 1 OF



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SCALE: 1"=30'

NORTH

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Parks & Recreation Design
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Project Name
Mako Sica Trail
South Dakota

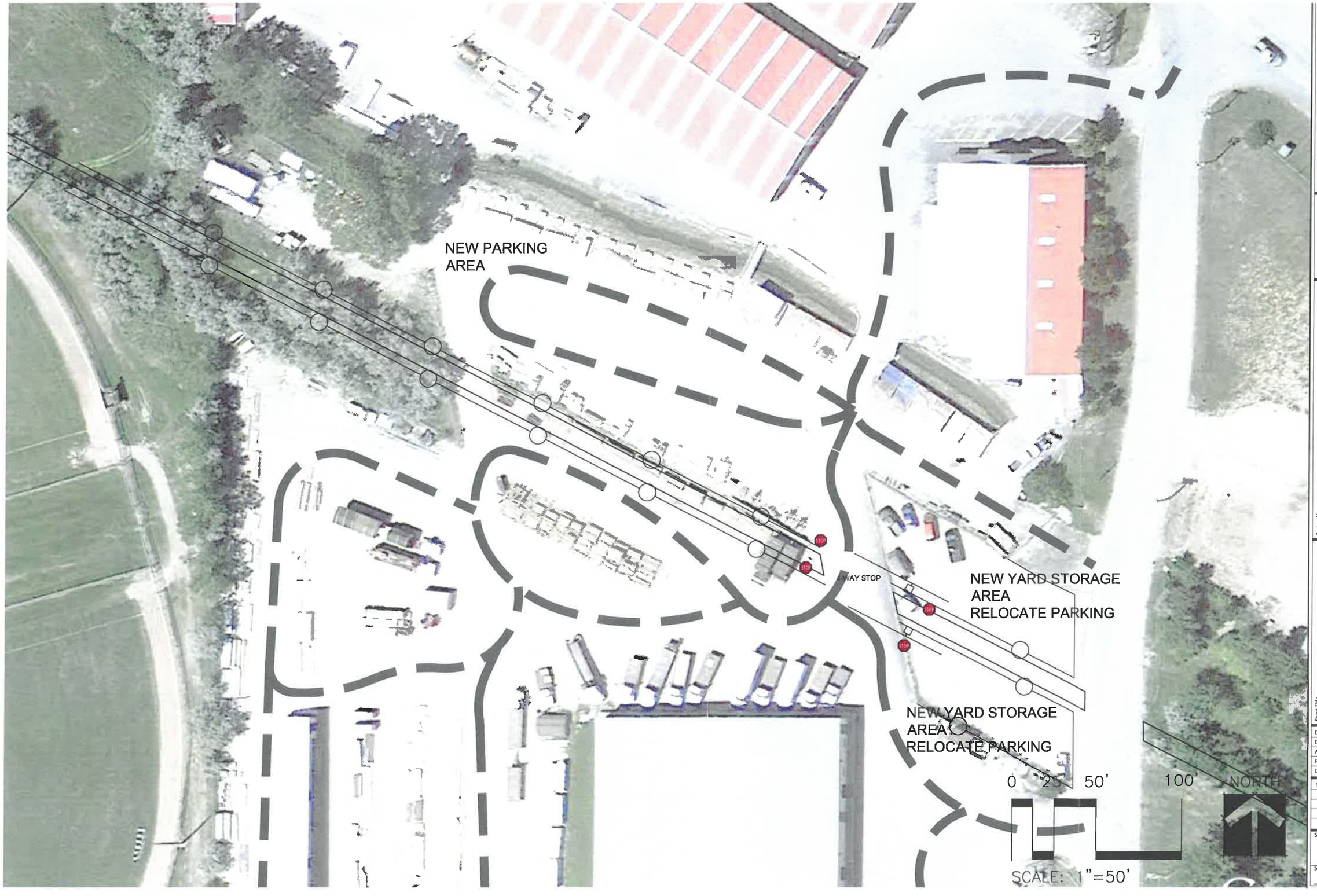
Sheet Title
Elk Vale Rd Ramp
East Trail Crossing
Schematic Concept

DESIGNED BY:	MRJ
DRAWN BY:	CW/MRJ
APPROVED BY:	
PROJECT NO.	12303
DATE:	DEC. 2012

NO.	REVISION	DATE

Sub Sheet
L1.2

Sheet 1 OF



Wyss
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Project Name
Mako Sica Trail
South Dakota

Sheet Title
Lumber Yard
Trail Crossing
Schematic Concept

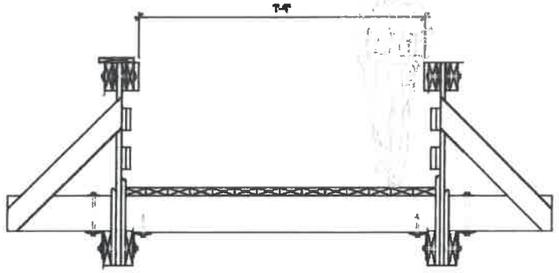
DESIGNED BY:	MRJ
DRAWN BY:	CW/MRJ
APPROVED BY:	
PROJECT NO.	12303
DATE:	DEC. 2012

NO.	REVISION	DATE

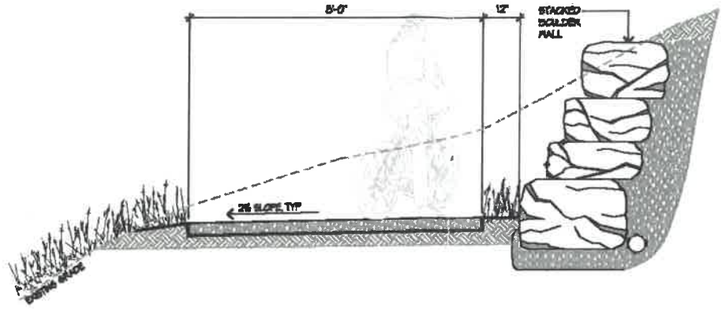
Sub Sheet
L1.6

Sheet 1 OF

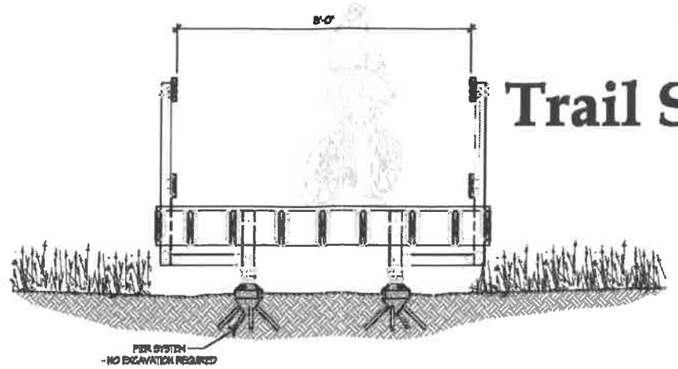
Typcial Trail Sections



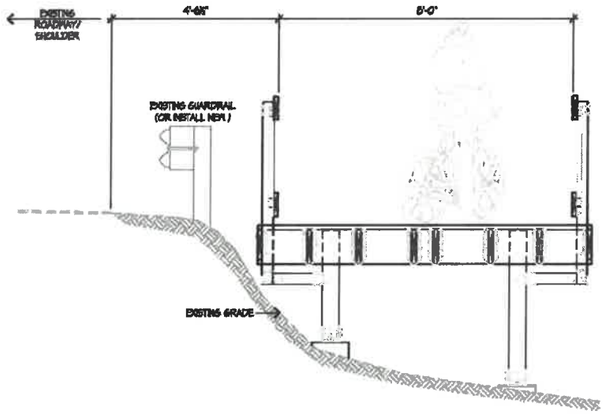
SECTION: TYPICAL BRIDGE CROSS SECTION



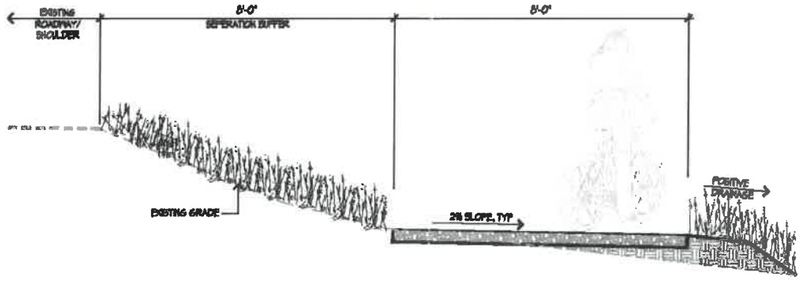
SECTION: TYPICAL TRAIL AT STEEP CROSS SLOPE



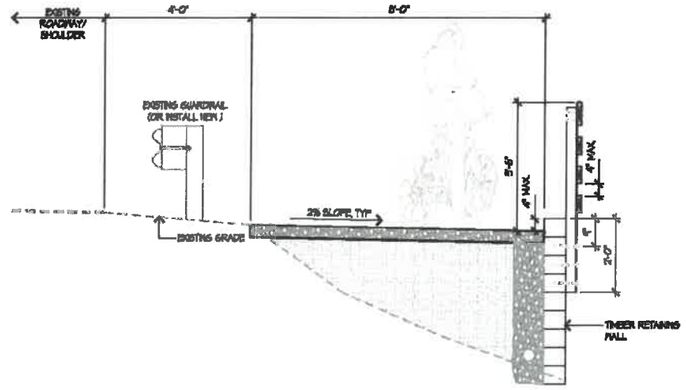
SECTION: ELEVATED BOARDWALK AT WET HABITAT



SECTION: ELEVATED BOARDWALK AT STEEP CROSS SLOPE



SECTION: TYPICAL TRAIL ALONG EXISTING ROADWAY WITH 8' BUFFER



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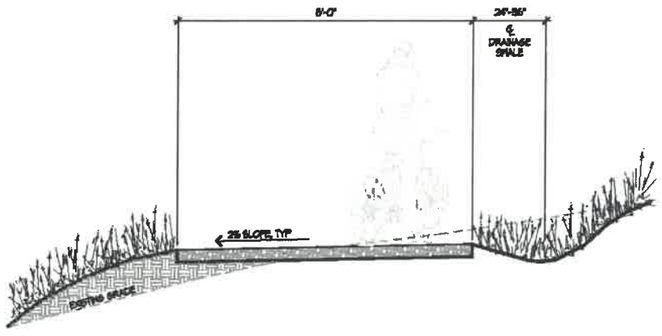

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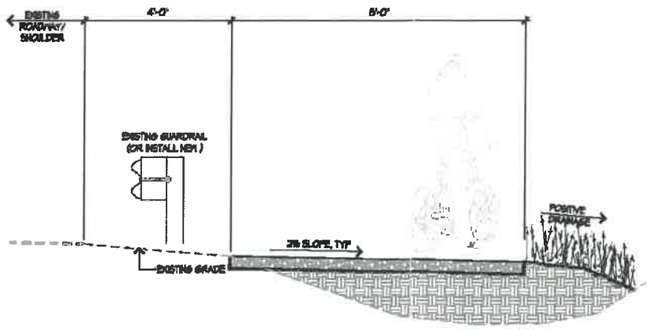

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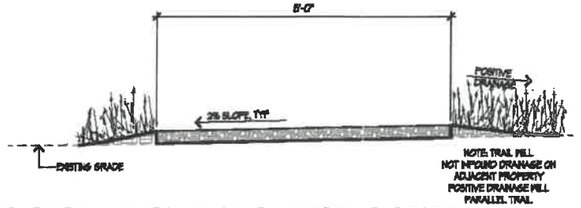

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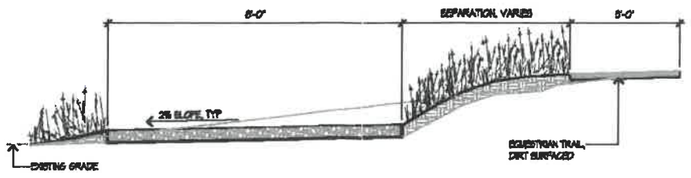
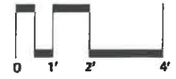


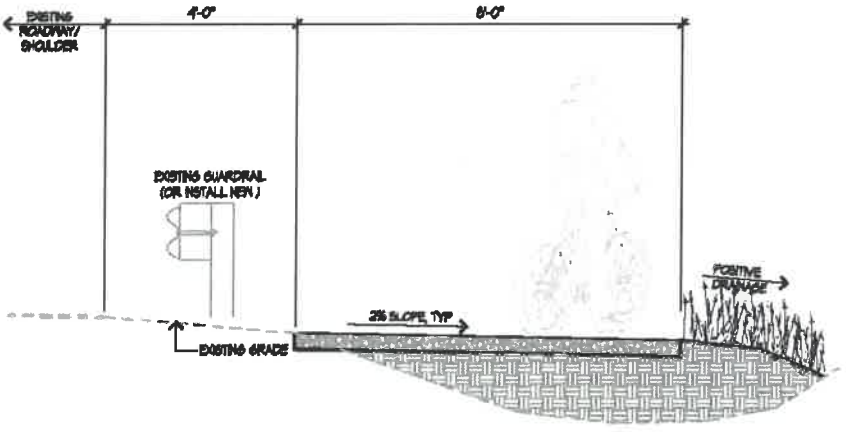
SECTION: TYPICAL TRAIL WITH EQUESTRIAN TRAIL



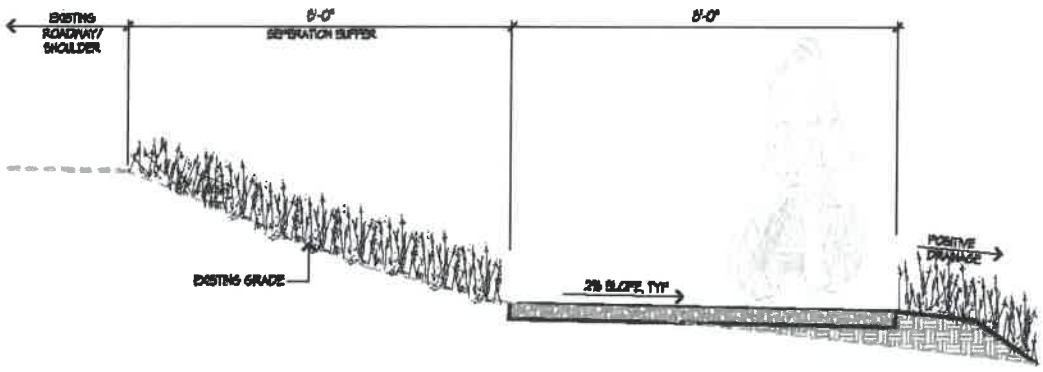
Prepared by:

January, 2009

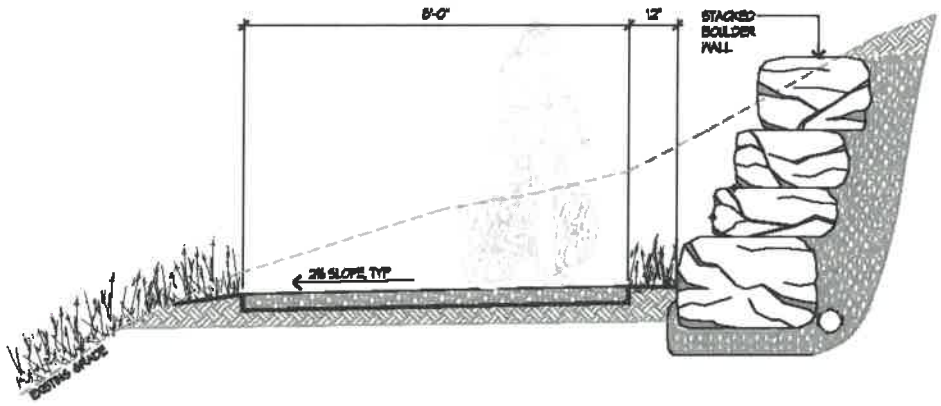
Mako Sica Trail
SOUTH DAKOTA



SECTION: TYPICAL TRAIL ALONG EXISTING ROADWAY OR TRAIL



SECTION: TYPICAL TRAIL ALONG EXISTING ROADWAY WITH 8' BUFFER



SECTION: TYPICAL TRAIL AT STEEP CROSS SLOPE

PUBLIC MEETING
MAKO SICA TRAIL

TRAIL MEETING

A PUBLIC MEETING WILL BE HELD TO TAKE COMMENTS ON THE MAKO SICA (BADLANDS) RAIL TO TRAIL. THIS TRAIL IF BUILT WOULD RUN FROM RAPID CITY TO KADOKA, SD APPROXIMATELY 100 MILES. IF YOU CAN NOT MAKE THE PUBLIC MEETING YOU CAN STILL COMMENT BY E-MAILING YOUR COMMENTS TO FUTUREFOCUSCONSULTING@MIDCO.NET

What: Public Meeting

When: Wednesday, October 17, 2012

Where: Caputa Store,
HWY 44, Caputa, SD

Time: 6:30 pm - 8:30 pm

Other: Trail social starts at 6:30 p.m. with public meeting at 7:00 p.m.

Paula Huizenga, Grants Program Engineer, 605.773.6253

Transportation Enhancement Funds Application

Transportation Enhancement (TE) activities are federally funded, community based projects that enhance the transportation system through preservation of visual and cultural resources and that improve the quality of life for South Dakota citizens. TE projects must have a link to the transportation system and be one of the 12 eligible activities as listed below:

1. Provision of facilities for pedestrians and bicycles.
2. Provision of safety and educational activities for pedestrians and bicyclists.
3. Acquisition of scenic easements and scenic or historic sites.
4. Scenic or historic highway programs (including the provision of tourist and welcome center facilities).
5. Landscaping and other scenic beautification.
6. Historic preservation.
7. Rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals).
8. Preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian or bicycle trails).
9. Control and removal of outdoor advertising.
10. Archaeological planning and research.
11. Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity.
12. Establishment of transportation museums.

Applications are due February 1st of each year. Successful applicant's TE projects are then programmed in the Statewide Transportation Improvement Program (STIP).

The Transportation Enhancement Program guide outlines the requirements of this program. More information can also be found at **www.enhancements.org**.

Enhancement Grant Guide

Questions and comments during the 6/16/2011 Public Meetings

To submit written comments, email Paula Huizenga at paula.huizenga@state.sd.us.

Questions:

Q. What would the trail surface be made of? A. An aggregate such as limestone chips or fines.

Q. What would have to be done with the bridges? A. The bridges would have to be decked (a surface to ride or walk on) and railing installed.

Q. How much will this cost and who will pay for it? A. The initial construction can be paid for with Transportation Enhancement Program Funds. These are federal funds available at a 81.95% federal share. A large portion of the 18.05% local share would be provided by Railroad Administration funds. Project costs are estimated to be $5 million to $6.5 million.

Q. Why don't you use these funds to fix the roads? A. The program requirements for Transportation Enhancement will not allow these funds to be used for road and bridge construction.

Q. Even if you are using federal funds for the majority, you are still wasting local tax dollars for the match. Where does that money come from? A. Railroad Administration funds come from the leasing of stated owned railroad property. The Railroad Administration fund does not receive property tax revenues or general fund dollars.

Q. How do you know the federal government will still have the program and how do you know they won't pull the money for the project. A. We don't – congress could decide to eliminate the Transportation Enhancement Program. If that happens there would not be a funding source for the project. However, if we receive Federal Funding Authorization for the project, the money to complete the project will be available. Federal Funding Authorization would be provided only when the project design has been completed and the project is ready to bid.

Q. Is this meeting just a formality? Haven't you already decided to construct the project? A. No. A decision has not been made to move ahead with the project or not.

Q. Who decides if the project moves ahead? A. The Administration and/or the Legislature will ultimately decide if the project should be built.Q. Will there be a fence? Does there have to be a fence? Who will pay for the fence? A. Many locations are already fenced. Some are not, and the landowner wishes to keep it that way. The fencing issue would have to be determined on a parcel by parcel basis – some adjunct landowners want a fence, some do not. While no decisions have been made, it would seem the project costs would include fence construction in areas where the adjacent landowners wants a fence.

Q. If there is no fence, there will be problems with cattle on the trail and possible

liability issues if someone gets hurt. Are landowners liable? A. We are not in a position to offer legal advice. The Mickelson Trail has areas where the trail goes through open range and cattle are sometimes on the trail.

Q. Can someone ride horses on the trail? A. Yes

Q. Can people ride ATV's or motorcycles on the trail? A. No. Transportation Enhancement program rules do not allow motorized travel on trails.

Q. If someone gets hurt on the trail, does the county have to pay for them to be rescued? A. DOT does not have an answer for that question.

Q. In order to make this a little more palatable to adjacent landowners, could the trail be moved off the railroad ROW to Highway 44 ROW in locations where they are close? A. It is possible. If the trail is moved off the railroad ROW there would be increased project costs because of grading and base requirements.

Q. How wide is the railroad ROW? A. In most places it is 100 ft wide, some places are wider – up to 400 feet.

Q. How much will it cost to maintain the trail? A. The Mickelson Trail costs $50,000 to $80,000 per year.

Q. How is this study you are doing now being paid for? A. It is being paid for out of existing budgets. In DOT's case it is being paid out of the RR Administration Fund.

Q. Where did the state get the railroad? A. The state bought the assets of the Milwaukee Road in the early 1980's from the bankruptcy court.

Q. What will really be the economic impact of the trail? Should an economic impact study be done? Will it include the increased costs to adjacent land owners? A. The decision to do a study and what that study would include if it were to be done has not been made.

Q. There are a number of washouts on the rail bed. How will you fix them? Won't that add to the project costs? A. We are aware of the washouts. Some can be fixed and at least one cannot and a path would have to be routed around that area. We are aware that washout repair will increase project costs.

Comments:

1: Rails to Trails projects have a historic benefit to cost ratio of 10:1.
2. The distance is close enough to 100 miles to be a big draw for organized events.
3. The cost of this project will be twice your estimate.
4. People need to remember that this is public right of way – not public property.
5. The project will ruin our way of life.
6. If the money is not spent on this project, it will just be spent somewhere else.
7. The economy of Kadoka could really get a boost from the project.
8. Bicyclists will use the trail and in higher numbers than what you think.
9. Landowners will end up being the people that provide aid to injured cyclists or those that need help.
10. We pay taxes on our property; the people that want to use the trail do not.
11. Trail users pay taxes too.

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Time: 1:30
Place: KadokaCityAuditorium 820 Chestnut Street
Kadoka, SD 57543
The South Dakota Department of Transportation (SDDOT) will hold an open house style public meeting to discuss and receive public input on the above project. The open house will be informal, with one on one discussion with SDDOT staff.
A presentation will take place shortly after 2:00 p.m. SDDOT staff will be available with displays to discuss the proposed project and answer your questions. During this time, you will also have the opportunity to present written comments.
Information will be available on the acquisition of right-of-way, and the
Bike Path along the Railroad Right-of-Way From Rapid City to Kadoka
effects of the project's location and design.
Notice is further given to all individuals with disabilities that this meeting is being held in a physically accessible place. Please notify the SDDOT ADA Coordinator at least 48 hours prior to the open house meeting if you have special needs for which this department will need to make arrangements. The telephone number for making special arrangements is 605-773-3540 or 1-800-877-1113 (Telecommunication Device for the Deaf).
All persons interested in this project are invited to attend this meeting to share your views and concerns any time between 1:30 p.m. and 3:00 p.m.
For further information regarding this project, contact Paula Huizenga, Grant Program Engineer at (605) 773-6253.
Information presented at the Public Meeting/Open House will be posted on the SDDOT web site after the meeting at http://www.sddot.com/fpa/lga/enhance.asp.

Date: Time: Place:
June 16, 2011
6:00 pm
South Dakota Department of Transportation Rapid City Regional Office 2300 Eglin Street Rapid City, SD 57709
effects of the project's location and design.
Notice is further given to all individuals with disabilities that this meeting is being held in a physically accessible place. Please notify the SDDOT ADA Coordinator at least 48 hours prior to the open house meeting if you have special needs for which this department will need to make arrangements. The telephone number for making special arrangements is 605-773-3540 or 1-800-877-1113 (Telecommunication Device for the Deaf).
All persons interested in this project are invited to attend this meeting to share your views and concerns any time between 6:00 p.m. and 7:30 p.m.
For further information regarding this project, contact Paula Huizenga, Grant Program Engineer at (605) 773-6253.
Information presented at the Public Meeting/Open House will be posted on the SDDOT web site after the meeting at http://www.sddot.com/fpa/lga/enhance.asp.
SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION NOTICE OF PUBLIC INFORMATION MEETING/ OPEN HOUSE
The South Dakota Department of Transportation (SDDOT) will hold an open house style public meeting to discuss and receive public input on the above project. The open house will be informal, with one on one discussion with SDDOT staff.
A presentation will take place shortly after 6:30 p.m. SDDOT staff will be available with displays to discuss the proposed project and answer your questions. During this time, you will also have the opportunity to present written comments.
Information will be available on the acquisition of right-of-way, and the
Bike Path along the Railroad Right-of-Way From Rapid City to Kadoka
Notice published twice at the total approximate cost of_____.

Chuck and Jan Carlbom

South of Interior
Run cattle along trail and has to cross trail
Please don't fence in
Can't see anyone riding from Rapid to Kadoka
State shouldn't spend any money on trail.

Rapid to Caputa would be fine.

Against spending tax money on trail.