

Experience...

Vast

Silent Spaces

North Dakota Badlands & National Grasslands

SOUTHWESTERN NORTH DAKOTA

Directions From Medora to Marmarth:

From Medora, take East River Road into the National Grasslands

Turn Right onto FH3/Custer Trail going South.

1/2 mile-turn Right on 739 & go past Hellickson Ranch

2/3 mile-turn Right staying on FH3

3 1/2 miles-keep Straight on FH3 @ Y in road (Right Fork). If you chose to go left here, take Tracy Mt. Road up to Initial Rock (1 hr)

2 1/2 miles-Go past Vista Point

3 miles- Right @ Y in road keeping on FH3

1 mile-Burning Coal Vein Campground

1/2 mile-Right onto 773

1 mile-Right keeping on 773

1 mile-Going past Jacobson Ranch

2 miles-Take left onto FH4 by Wolfgram Ranch

2 miles-Road turns Right

1/2 mile-Road turns Left

1 1/2 miles-Going past Wolfgram Ranch

1 1/2 miles-Take Right

1 mile-Road turns Left

1 1/2 miles-Road turns Right

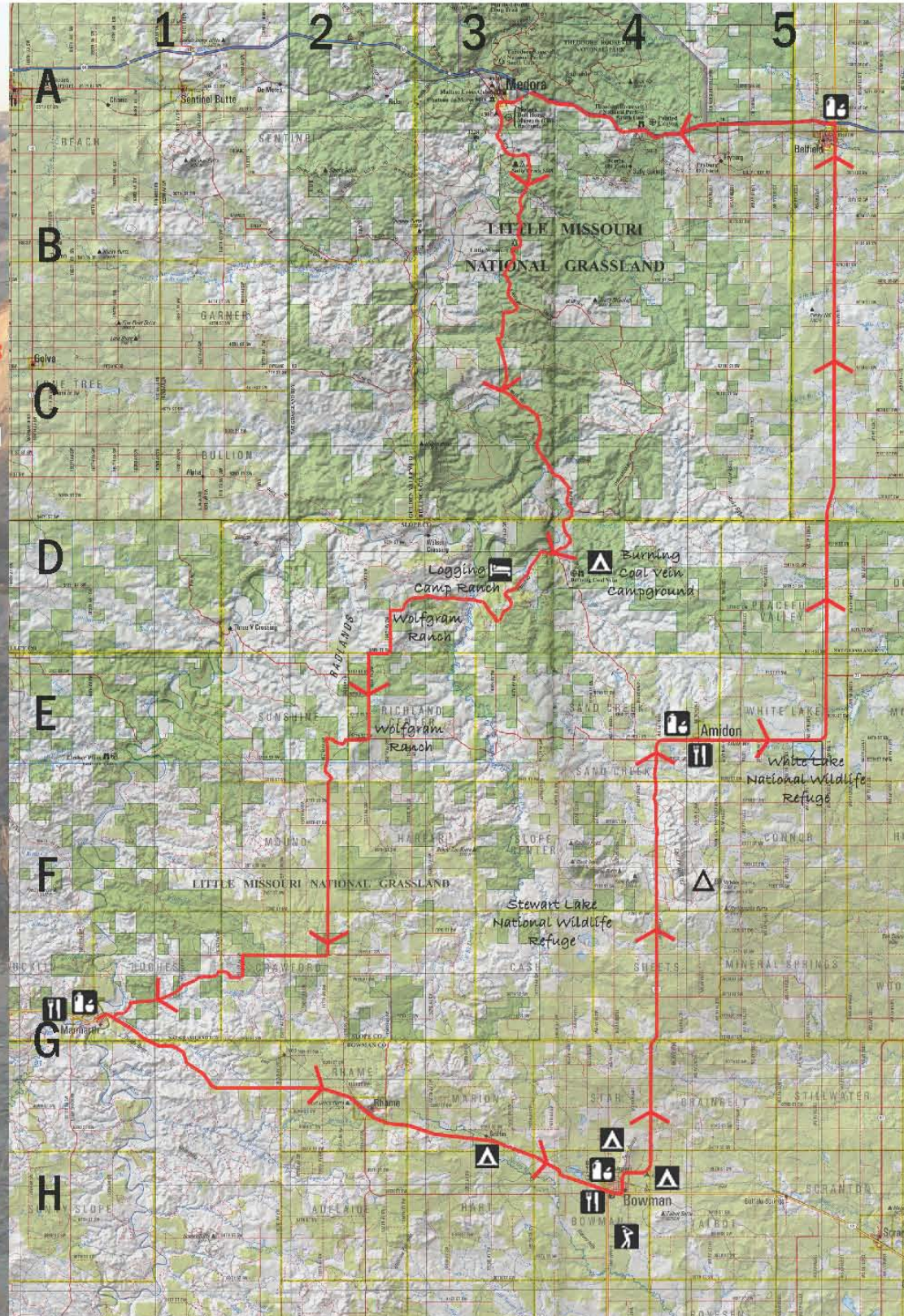
1 mile-Road turns Left

2 miles-Road turns Right

3 1/2 miles-Road turns Left

2 miles-To Marmarth on 784

This trip through the National Grasslands will take roughly 3 1/2 hours. You will find beautiful scenic sites to enjoy and the Burning Coal Vein Campground offers a wonderful place to stop, stretch, enjoy the scenery, and use the restrooms.



A5 - Trappers Kettle

D3 - Logging Camp Ranch

D4 - Burning Coal Vein

E4 - Firehouse Antiques

E4 - Georgia and the Owl (Dining)

F4 - White Butte

G1 - Dory's Antique Car Museum

G1 - Pastime Steak House

H3 - Butte View Campground

H4 - Twin Butte Campground

H4 - Pioneer Regional Museum and Gift Shop

H4 - Friends Hometown Cafe

H4 - Sweetwater Golf Course

H5 - Lions Campground

National Grasslands

The map on the opposite side shows your path through the national grasslands, but the route given does not show visitors all the park has. It takes roughly 3 1/2 hours to complete the drive to Marmarth, but one may spend a entire day there. If you would like to spend more time in the grasslands, one can also follow the Custer Trail to Initial Rock to see where soldiers carved their names while camping with Custer. Bathrooms are also located at this spot.



Initial Rock

The peaceful scenery, wildlife viewing, and camping opportunities makes the National Grasslands a relaxing place to spend a few hours or a few days. The Burning Coal Veins allow visitors to experience the local history and unique geology and rugged terrain of the badlands while at the same time allowing one to relax in the serene beauty of the landscape.



National Grasslands - Grazing wild pronghorns

Marmarth

www.marmarth.org

Places to Eat

-Pasttime Pub & Steakhouse

Main Street; 701-279-9843

Things to Do

-Dory's Car Museum

May-Sept; Thur-Sun 9-5

West of Marmarth on Hwy 12
701-279-5904

-Call ahead to make sure the museum is open

-Cell phones do not work in Marmarth, so call from your hotel before you leave - www.marmarth.org



Marmarth



Bowman

Places to Eat

-Big J's Restaurant

17 West Main; 701-523-3311

-Eats N Treats

408 Hwy 12 West; 701-523-3162

-Frontier Travel Center

405 Hwy 12 West; 701-523-4737

-Gateway Cafe

706 Hwy 12 West; 701-523-5757

-Has Beens Bar

27 No Main Street; 701-523-5000

-Hot Stuff Pizza to Go

13 1st Ave NW; 701-523-3268

-Hawks Landing

13 1st Ave NE; 701-523-5201

-Taco Johns

411 1st Ave SW; 701-523-5309

-Windy's Pizza

206 So Main; 701-523-5753

Things to Do

-Pioneer Trails Regional Museum

12 First Ave NE; 701-523-3600

-Golden Prairie Winery

118 Stiller Addition; 701-523-2949

-The Mustard Seed

1st Street SW; 701-523-5722

-Prairie Bleu Studio

15906 96th St. SW; 701-279-6670

-Twin Butte Antiques

14403 85th St. SW; 701-523-5569

Places to Stay

-Budget Host 4U Motel

704 Hwy 12 West; 1-800-BUD-HOST

-Downtown Motel

102 No Main St.; 701-523-5621

-El-Vu

409 Hwy 85 So; 701-523-5224

-North Winds Lodge

503 Hwy 85 So; 1-888-684-9463

-Super 8

408 3rd Ave SW; 701-523-5613

-Trail Motel

208 Hwy 12 West; 701-523-3291

-Butte View Campground

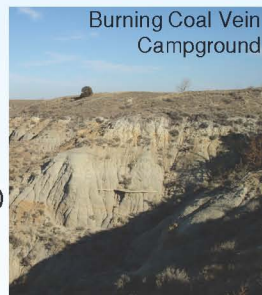
Hwy 12 East; 701-523-3896

-Lions Campground

Hwy 12 East; 701-523-5573

-Twin Butte Campground

14403 85th St SW; 701-523-5569



Burning Coal Vein Campground

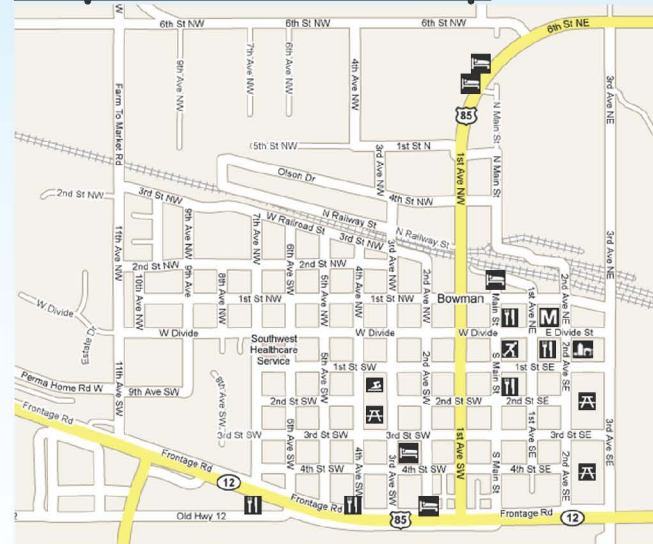


Pioneer Regional Trails Museum Gardens



Burning Coal Vein Campground

City of Bowman Map



Amidon

Places to Eat

-Georgia and the Owl

30 2nd St. East; 701-879-6289

Things to Do

-Firehouse Antiques

Hwy 85 & West St.; 701-290-4377

-White Butte Trading Company

30 Hwy 85; 701-879-5611

-As you leave Amidon, be sure to keep watch for the sign pointing to the highest point in North Dakota.

Getting back to Medora will take one hour; 45 minutes to Bellfield on Hwy 85 and 15 minutes going west on I-94. Bellfield also has plenty of places to eat and sleep including the Trapper Kettle which offers wonderful family style dining in a unique and relaxed atmosphere.



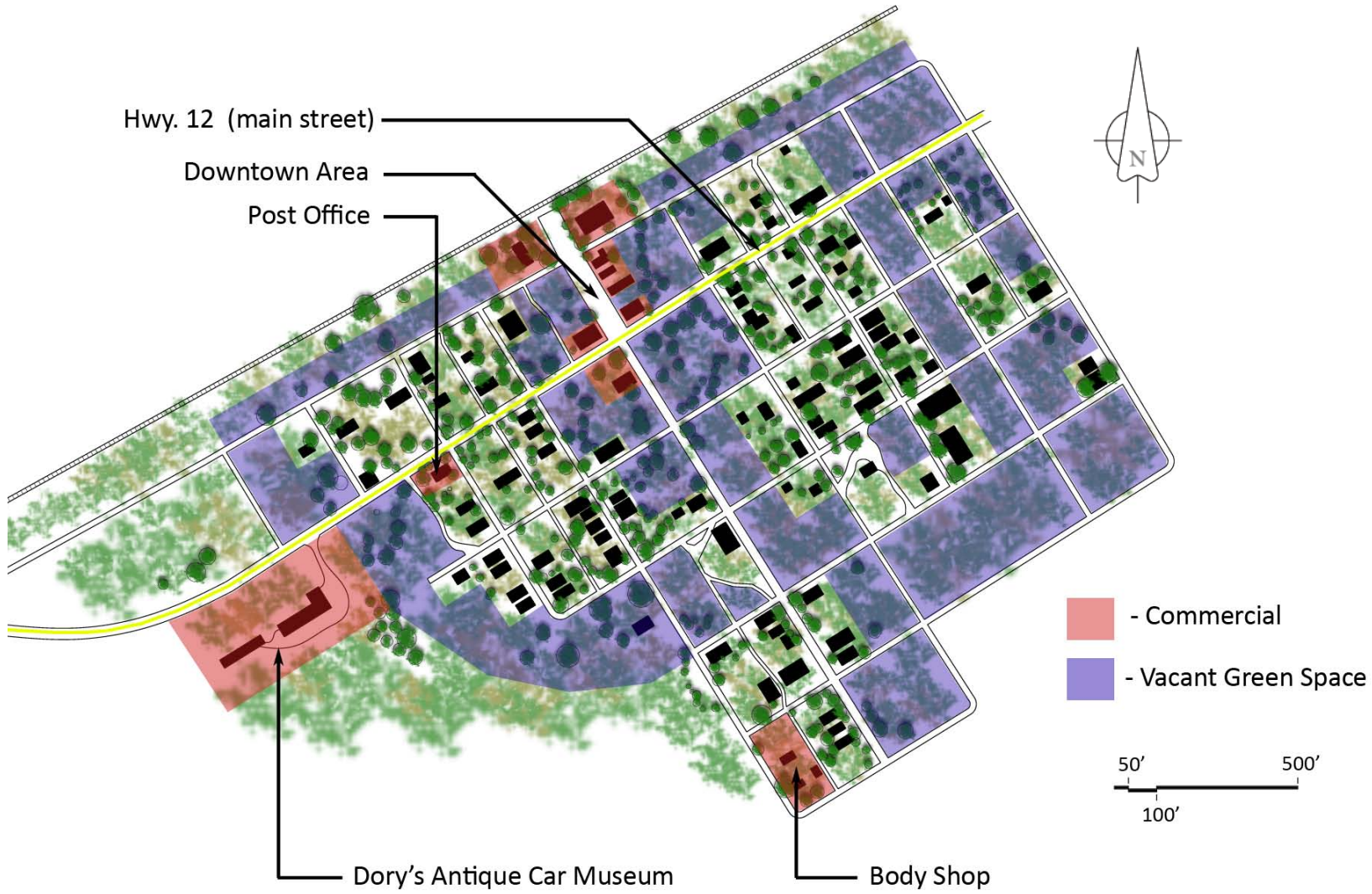
Pioneer Trails Regional Museum, Bowman ND

Design Narrative

Marmarth is one of many diminishing small towns in North Dakota. A lack of economic development leads to population decreases, abandon buildings, and an overall appearance of the town as being run down.

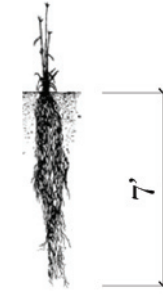
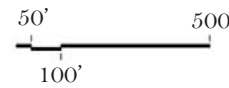
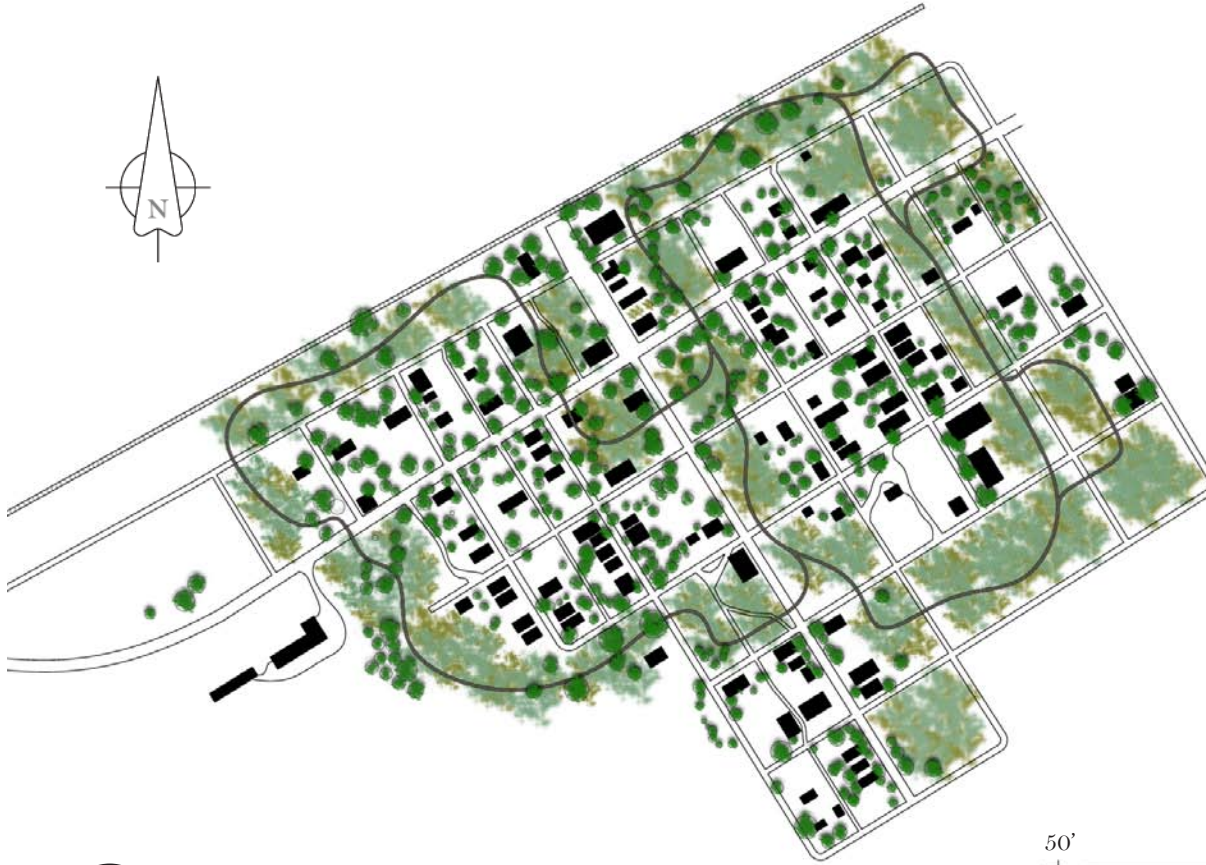
The loss of small towns is directly effected by the lack of economic development. Establishing a land banking system would utilize land that is currently abandon as a resources, by planting vegetation that could be harvested and produced into a commodity, the town could take an asset they already possess, such as land, and use it to generate an income.

With the added cash flow, money will be available for restoration projects, and new entrepreneurial adventures for the residents of the town.



1 Site Analysis

- Vacant green space is abundant in Marmarth, the opportunity for land banking is present
- The vacant areas create voids within the town. By restoring these areas and connecting them with a pathway system, the feelings of isolation within the town will be diminished.



Root depth of Big Blue Stem

2 *Initial base map*

Land Banking

Lots that are currently vacant will be used for agricultural practices. During the first phase (3-5 years), the land will be inhabited by natural prairie grasses. The grasses chosen are drought tolerant and appropriate for the site. The deep advantageous root systems these grasses exhibit will break up the soil. Once the plant dies its roots decay, depositing rich nutrients back into the earth.

Three reasons for planting the native grasses:

- 1) Break up of compacted soil; adding nutrients
- 2) Beautification; the areas isolated for initial cultivation are placed in the downtown area and along Hwy.12, the most visible areas of the town
- 3) Economic development; annually the grasses will be mowed and bailed. The product will then be sold to local ranchers as feed to livestock

Trail System

A pathway system will be created throughout the town of Marmarth. This system will connect the town through the use of vacant green spaces that currently separate and isolate the residents. The trail will also be a great resource for residents as a source of exercise to walk, run, or bike on. The path will serve a very practical purpose as well, for the vegetation on site. During times of harvest, trucks are able to drive on the 10' wide service road to make harvesting easier.



- Phase 1 (5 - 15 yrs.)
- Phase 2 (15 - 25 yrs.)
- Phase 3 (25 - 35 yrs.)

Phasing
 Phasing will begin in the areas notated in red. These areas were chosen due to their visibility. People coming into town from either direction will be greeted with the natural prairie grasses and Juneberry plants. Phasing will progress to the edges of the town in 10 year increments.

Juneberry plants have a slow growth rate. For a 18" - 24" plant to grow to a size that will produce a sizable return, a 10 year phasing process will be introduced.

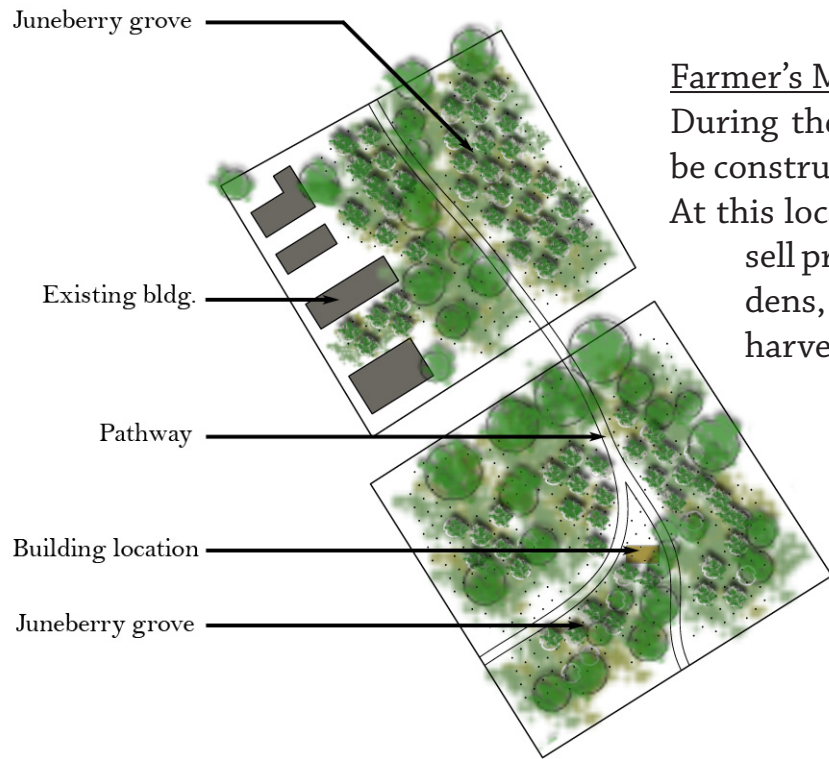
3 *Phased base map*

Juneberries

The phasing process will begin after the first five years. During this time period Juneberry, plants will be introduced to the areas notated in red. This plant is extremely drought tolerant, and will live in rocky soils. The plant's berries are also edible to humans.

I propose these be used by members of the town to make products from the berries, such as; jams, jelly's, syrups, pies. The products could then be sold to surrounding communities

This will create a second cash flow coming into the town, it will also give the town a sense of identity. People who come to Marmarth could relate the town to the products it produces, and also get to see first hand the plants that are used to produce these products.

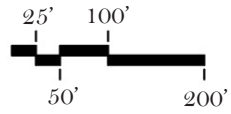


Farmer's Market

During the first phase a building will be constructed to serve as a sales post. At this location residents can buy and sell produce grown from local gardens, or items made from local harvesting of Juneberry shrubs.



Juneberry's growing in a vacant lot, next to a newly renovated building.



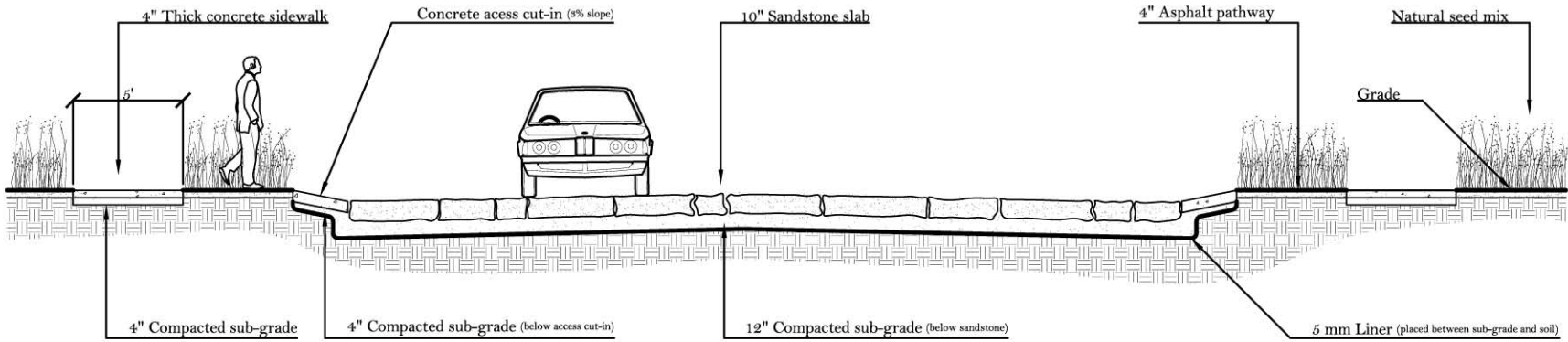
Economy

New construction is not necessary for new businesses to move into town. There are abandon buildings in the town that can be reused.

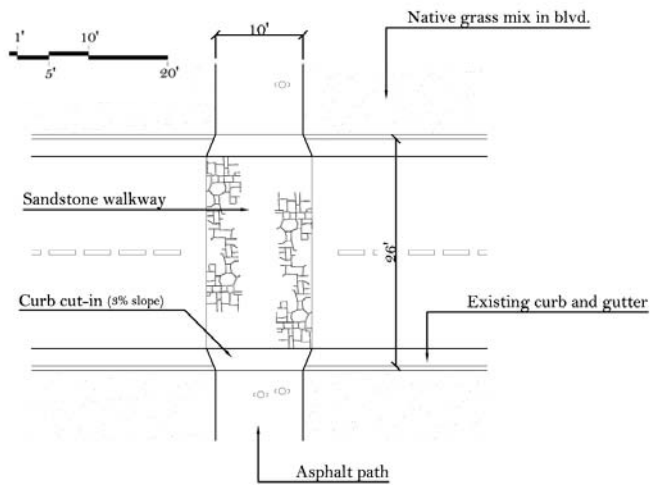
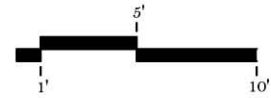
With renovations these buildings could provide plentiful area, along with creating a connections to Marmarth's history, by salvaging the architecture of its past.



A renovation of the old First National Bank building (completed in 1918)



5 *Street section of sandstone walkway*



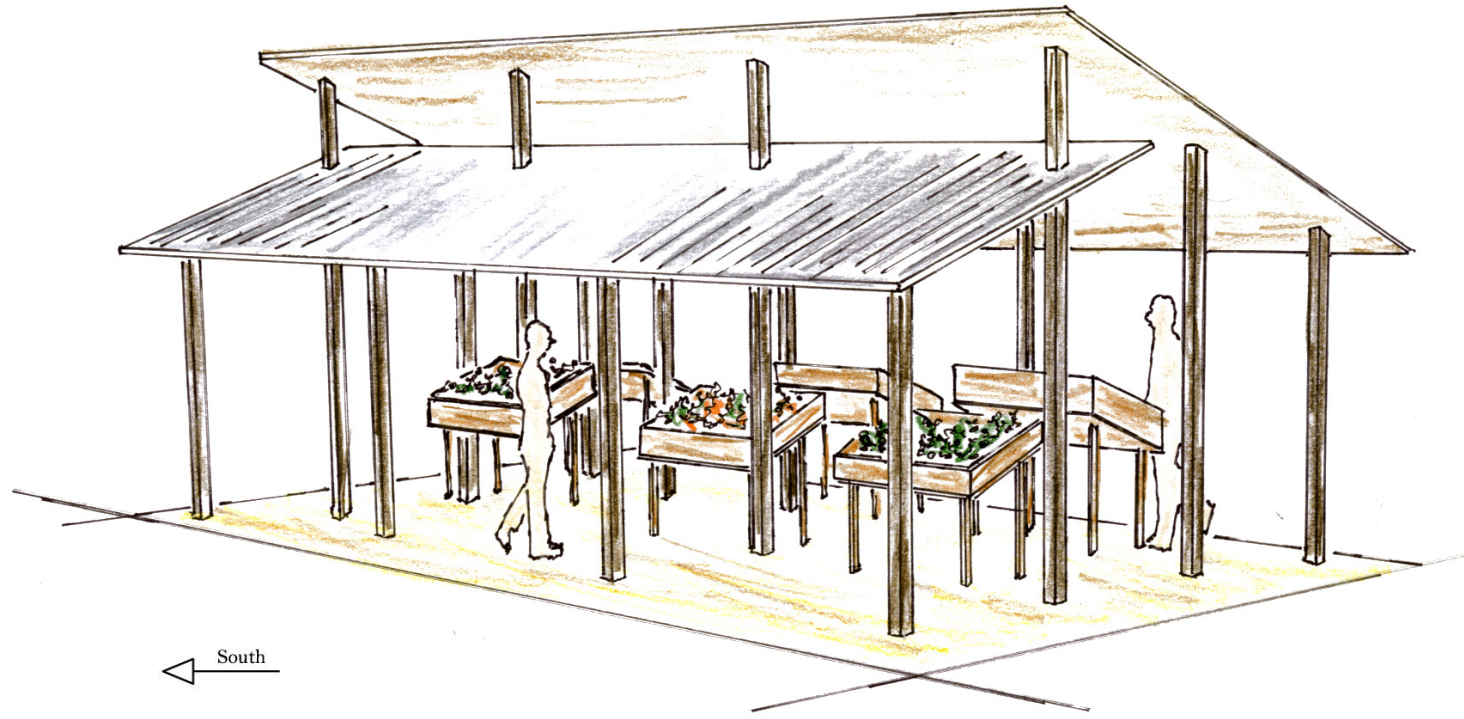
6 *Sandstone walkway plan blow-up*

Crosswalks

A system of crosswalks are placed throughout the town for safety. Sandstone, a local material, was used to make a connection between the town and its surrounding region.



A look down main street in Marmarth

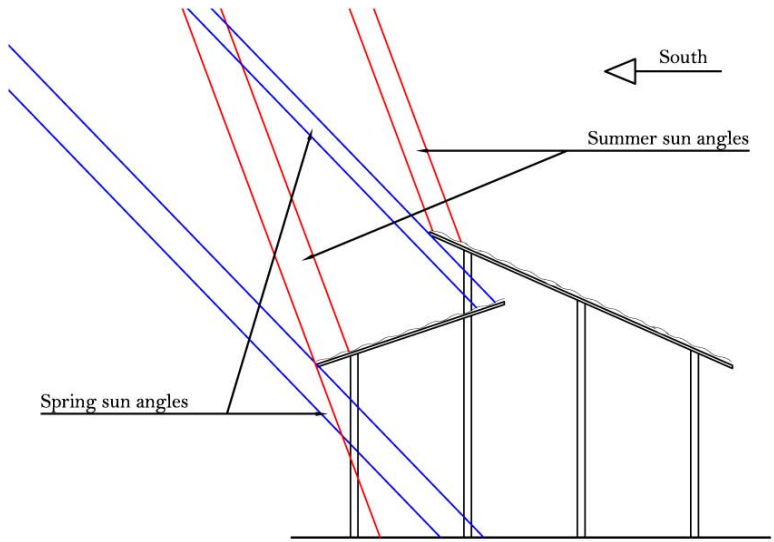


7
6 *Perspective of proposed building in downtown Marmarth*

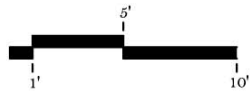
Market Place

During the first phase a building is placed in downtown Marmarth to serve as a centralized location to buy and sell produce. Initially only one building is scheduled for construction, although the opportunity to duplicate the design during future phases will be left at the discretion of the citizen's views on the need for additional space.

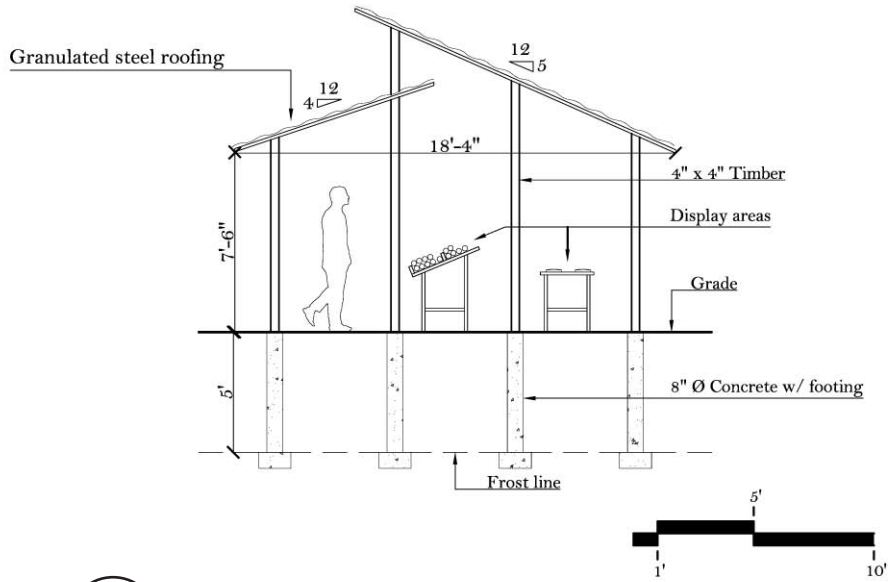
The form of the building is derived from its need to serve during the summer months. The overhead structure deflect direct sunlight during the spring and summer months, while a clear story will allow natural light to enter. No solid walls are present to encourage air flow throughout the area.



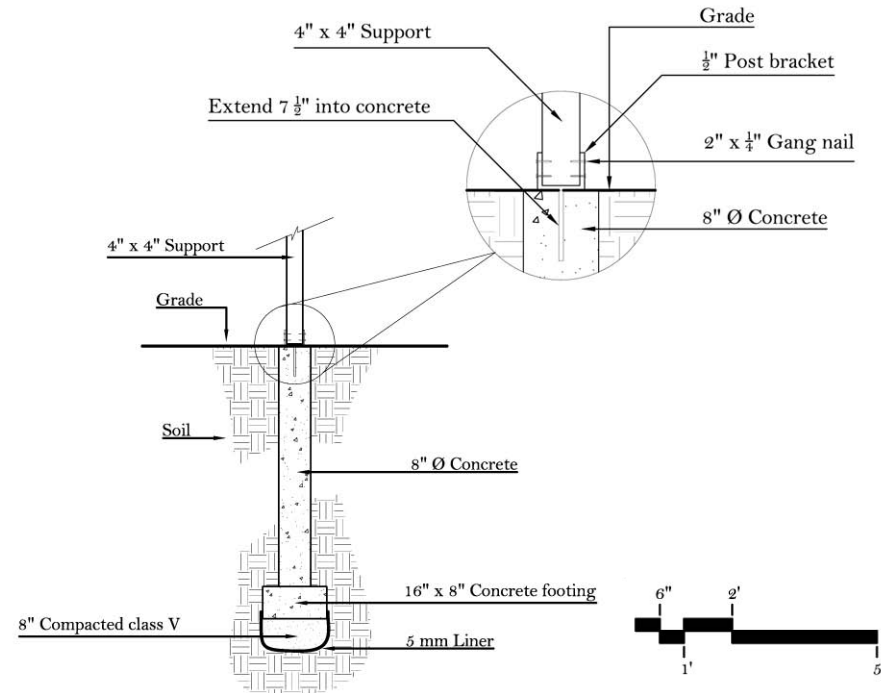
8
6 *Sun angle analysis*



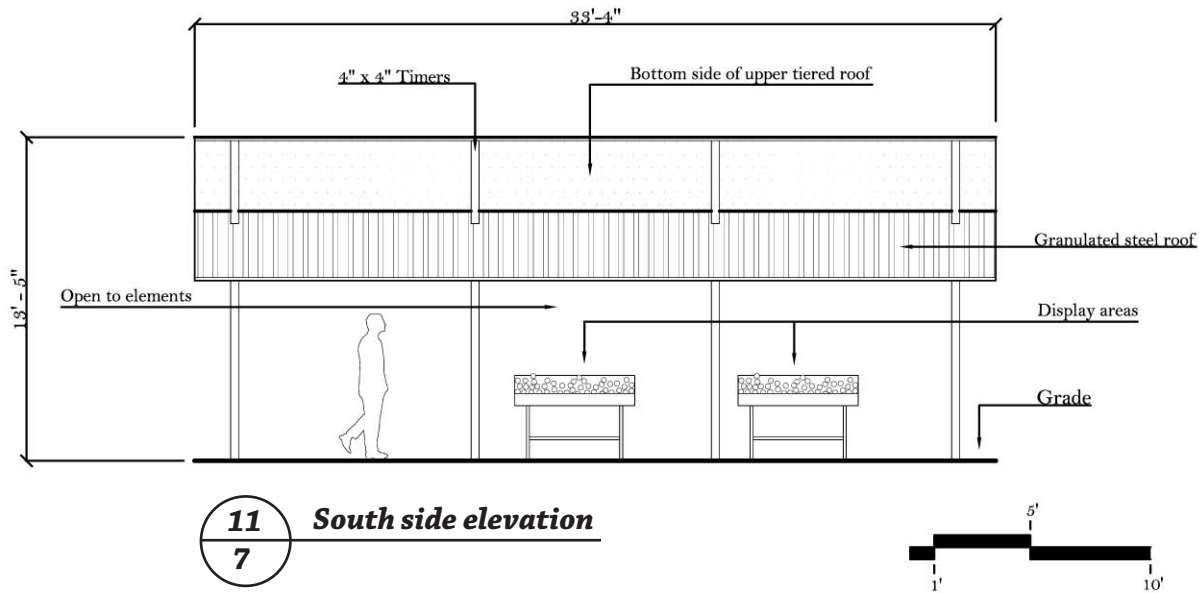
Notes:
 - June 21 marks the highest sun angles for a calendar year. The sun's angles is at 69.5° in Marmarth, ND at this time.
 - Spring sun angles are recorded on March 20, this angle is 46° on site.



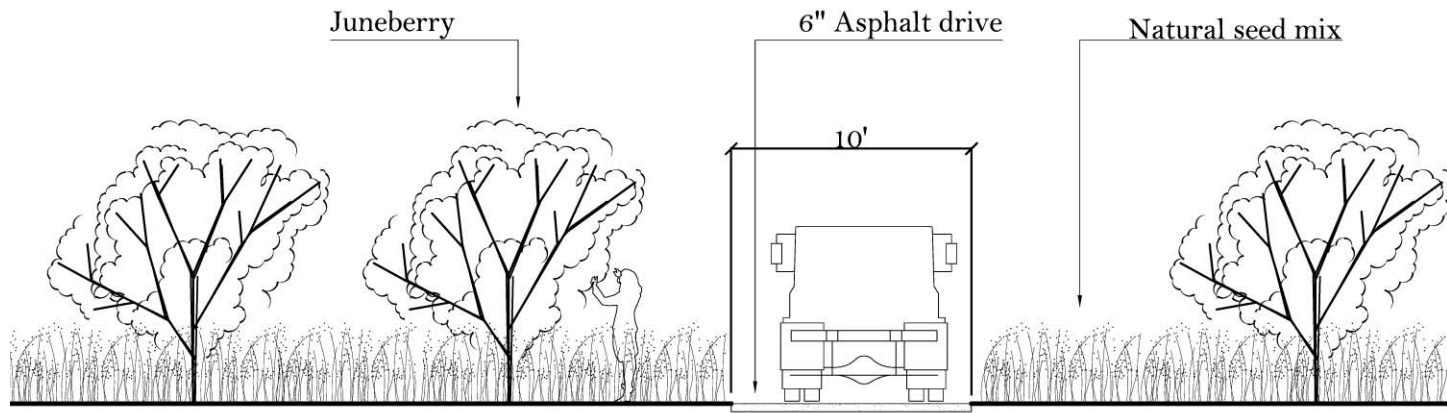
9
7 East side elevation



10
7 Foundation detail



11
7 South side elevation



12 *Pathway during harvest time*
8

Plant Life

The overall scale of the plants is moderate. At full growth the grasses would range from 2'-4' in height. The Juneberry would reach 10'-12' in height.

Species used in grass mix:

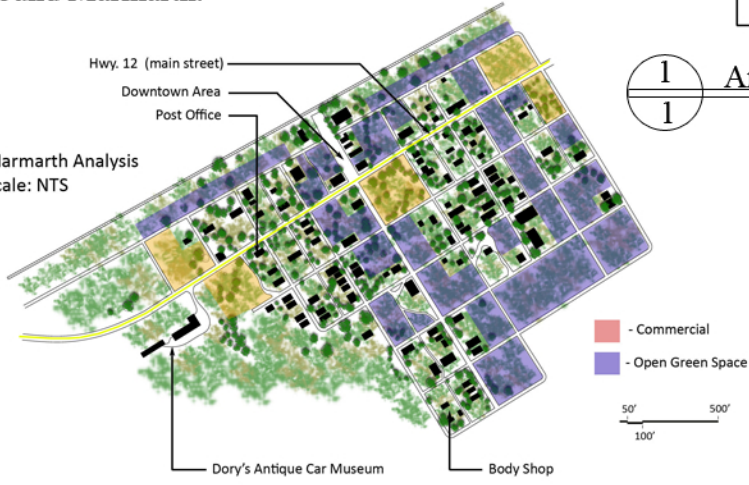
- Big Blue Stem*
- Blue Grama*
- Switch Grass*
- Buffalo Grass*

The first map shows all of the vacant lots currently in Marmarth as well as the businesses. Using this data, I decided to start with the vacant lots closest to the street. Also, the lots at the edge of town were chosen so they can start to present a more up kept appearance to the town's visitors as they enter Marmarth. The center lot was chosen because this is going to be the start of a path through all of the vacant lots around Marmarth.



1
1 Analysis of Marmarth

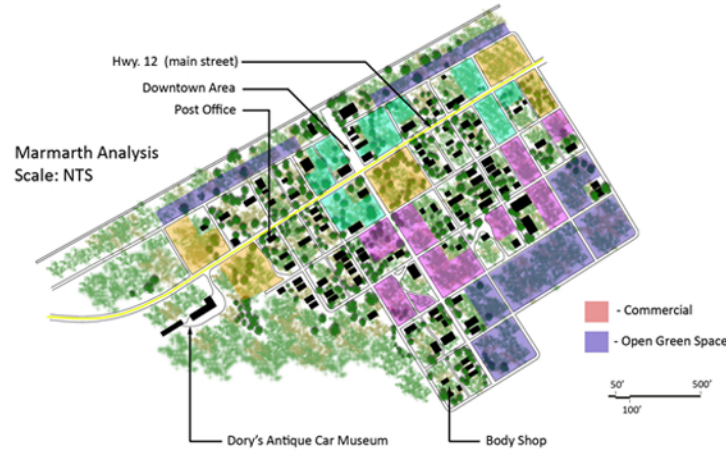
Phases 1 thru 4 show the progression of the vacant lots being turned into green space for Marmarth. Each phase will take 2-3 years to complete. At the end of phase 4, the entire town of Marmarth as well as the area along the railroad tracks will be beautified and turned into a place the city can both be proud of and can gain revenue from.



2
1 Phase 1: Yellow



3
1 Phase 2: Blue



4
1 Phase 3: Pink



5
1 Phase 4: Green



1 Sweet Clover
2



2 Alfalfa
2

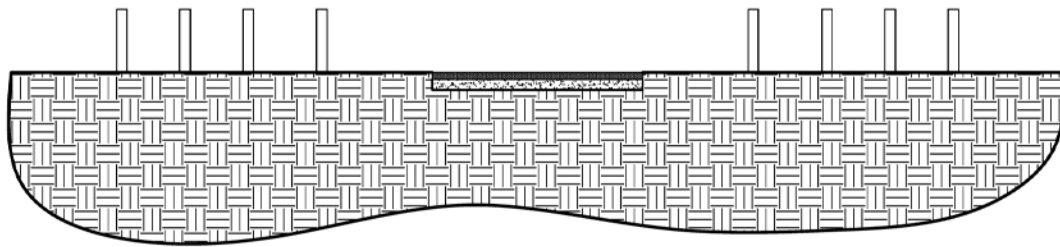


3 Juneberries (right) & Chokecherries (left)
2

Marmarth has a large number of vacant lots in it that would benefit from use. I propose to use these vacant lots to both beautify the lots and bring a revenue generating process to Marmarth. To do this, vacant lots would be used in 3 stages as illustrated in the plans.

The first stage would be to plant sweet clover in the lots to break up the soil and add organic matter to them. The second phase would be to plant alfalfa in the lots the second year to further the process. Both phase one and phase two would produce hay that could be sold to the area ranchers. Phase three would involve planting both juneberry and chokecherry shrubs in the lots.

Both juneberries and chokecherries can be used to make a variety of pies, jams, and other baked goods that could be sold both in town and to the local area as well as to visitors to Marmarth.

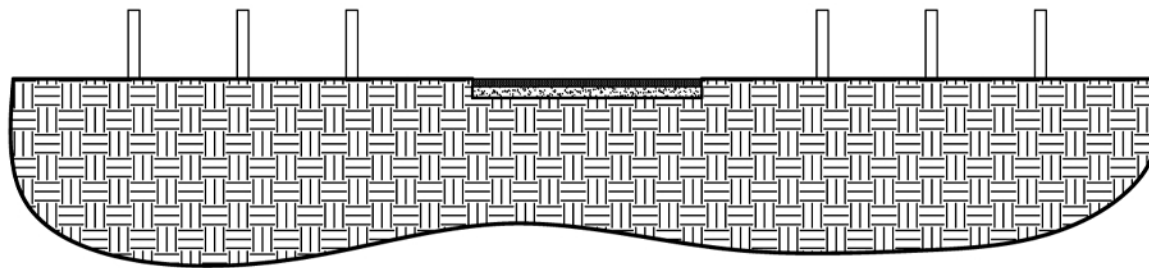


1
3 Seedling Spacing



When the juneberries and chokecherries are first planted, they will be spaced fairly close together at 2 1/2' apart. This will allow for the fact that some of the seedlings will not make it, but also allow for transplanting some of the seedlings into other lots. Each seedling will be planted by a 3' tall post to help designate where they are and also for possible support should the plant need it.

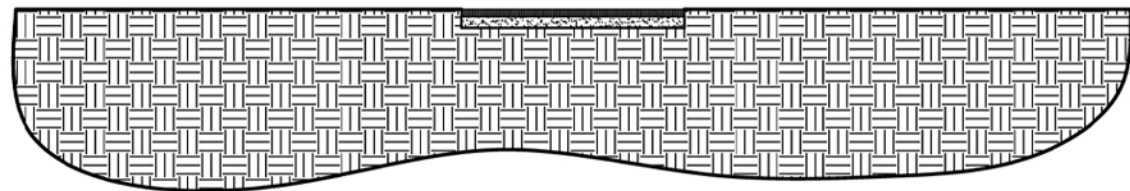
After the seedlings have been planted for a year, the following year they will be thinned out to a spacing of 5'. Any seedlings that are alive but need to be moved will be planted in one of the other vacant lots in Marmarth.



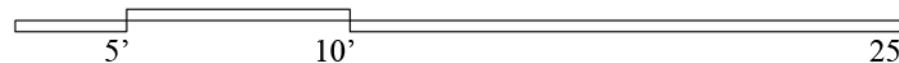
2
3 Mature Plant Spacing



A path will go through each lot, connecting up with one another if possible. Each path will be made with 4" of wood mulch on top of 6" of class 5. The paths will be 10' wide to accommodate both pedestrians, but also small vehicles which will be needed for pruning, planting, and harvesting the juneberries and chokecherries.



3
3 Path





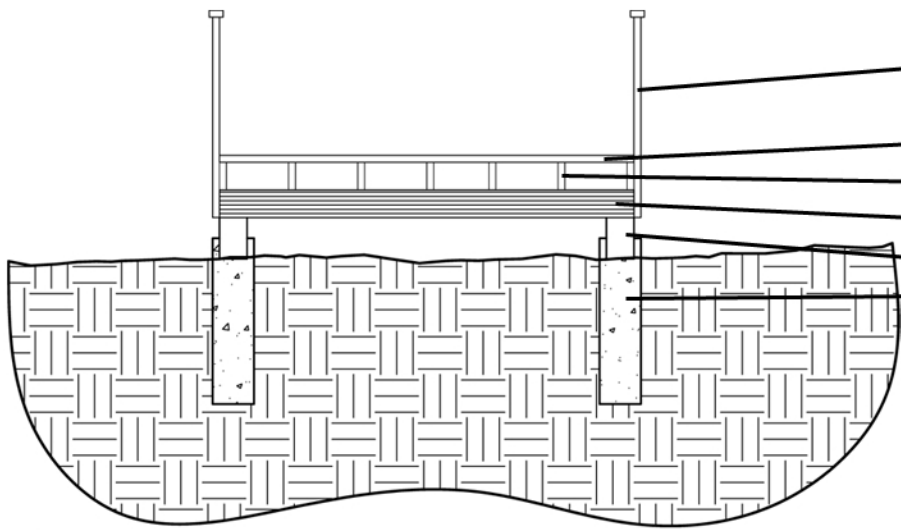
1 Dig Site Boardwalk



2 Dig Site Platform



3 Dig Site Path with Railing

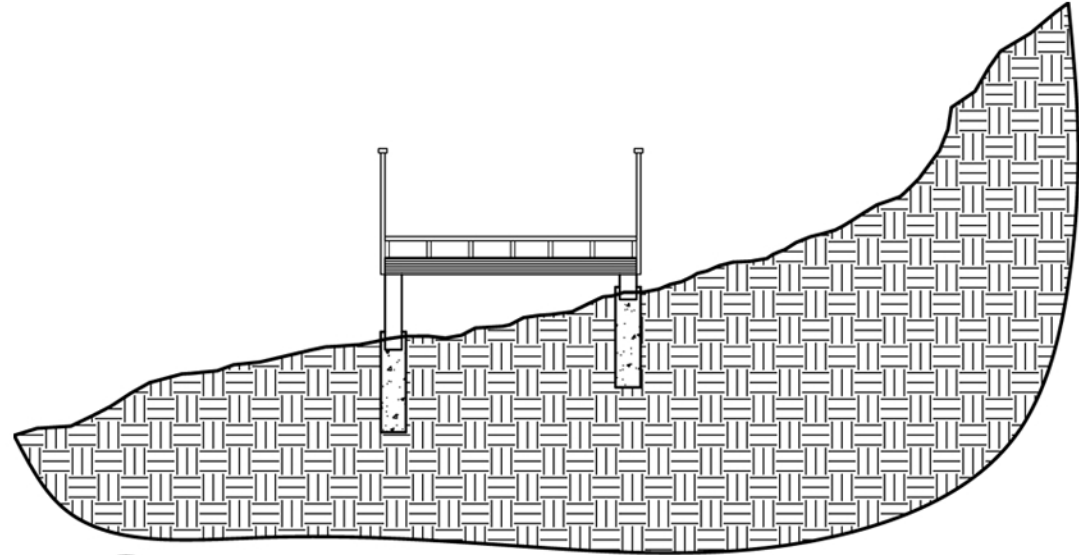


- 42" Tall Railing: Made of Treated 2x4 Posts Screwed into Joists with 2" Deck Screws; Treated 2x4 Cap Screwed into 2x4 Railing Posts with 2" Deck Screws
- 10' Wide Deck: Made with Treated 2x4's Screwed into Joists with 2" Deck Screws
- Joists: Treated 2x8's on End. Attached to Beams with Joist Hangers
- Beams: 8"x8" Treated Beams. Attached to Posts with Brackets
- Posts: Treated 8"x8" Posts Set into Concrete Footings
- Footings: 12" Square Concrete Footings Extending 4' Below Ground

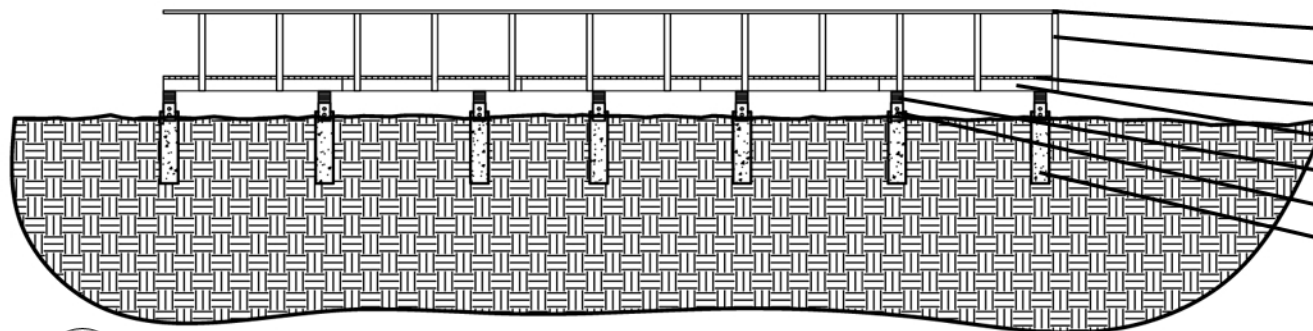
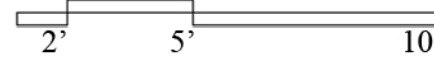
1
5 Boardwalk Section



Boardwalk Specifications Same as Above.
Footings will always be 4' into Ground.
Post Length will Vary Depending on
Slope of Ground.



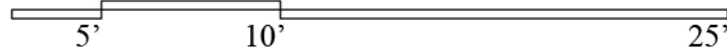
2
5 Boardwalk Into Hill Section

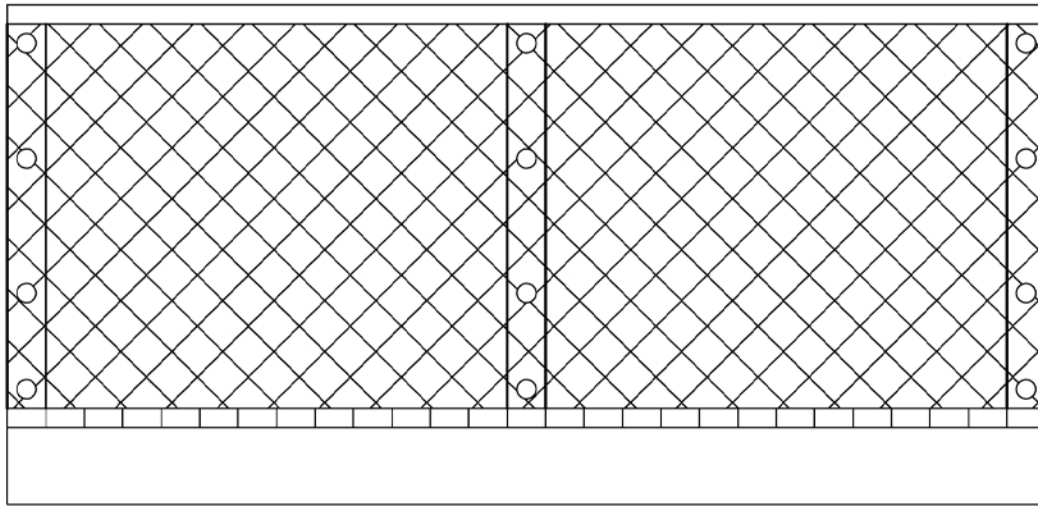


Same Specifications as Above.

- 2x4 Railing Cap
- 2x4 Railing Post
- 2x4 Decking
- 2x8 Joists
- 8x8 Beams
- 8x8 Posts
- 12" Footings

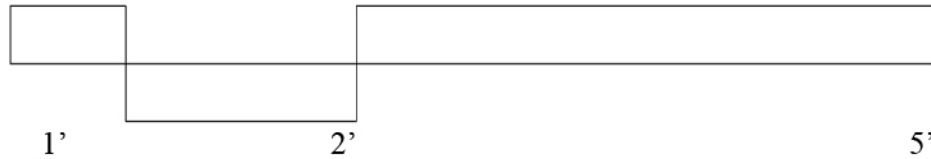
3
5 Boardwalk Lengthwise Section



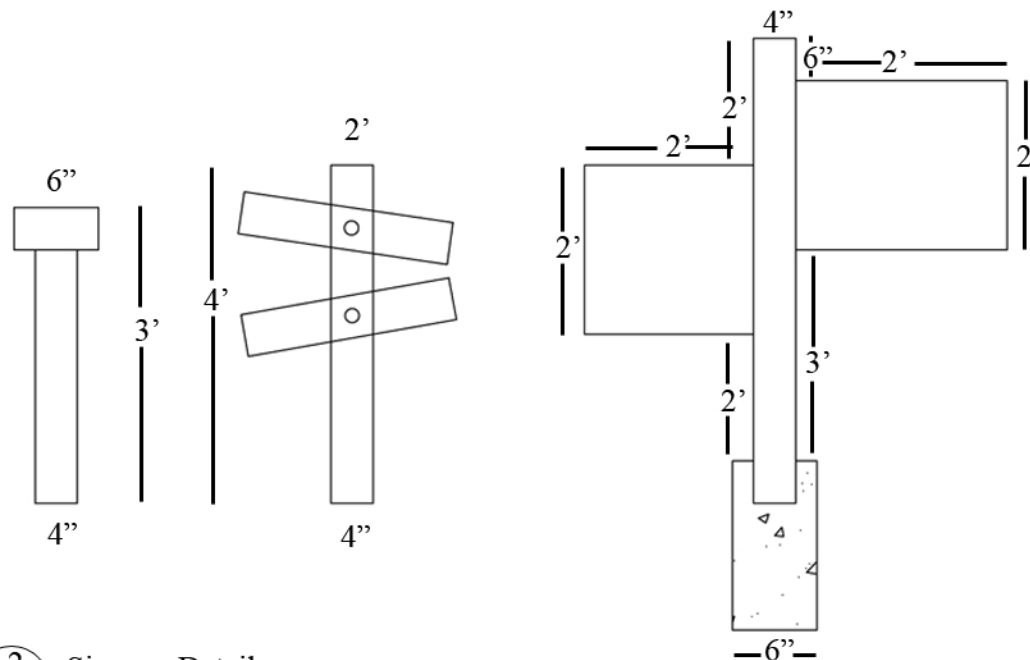


Between the railing posts on the boardwalk will be netting. This will prevent children from falling or walking between the posts, but at the same time allow them an unobstructed view of the dig sites. The netting will be bolted to the posts with 1" bolts every 14".

1
6 Boardwalk Netting Detail



Both Marmarth and the Dig Sites will require signage to let people know what is going on. There will be a combination of simple trail markers, larger directional signs, and even larger informational signs used along the paths and boardwalks.

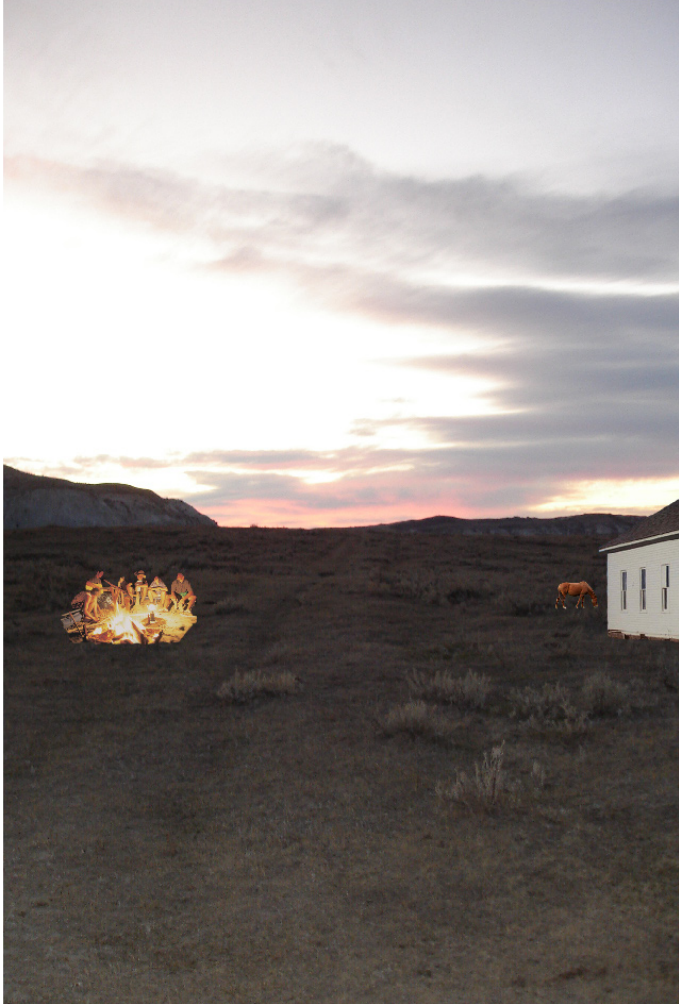


2
6 Signage Details

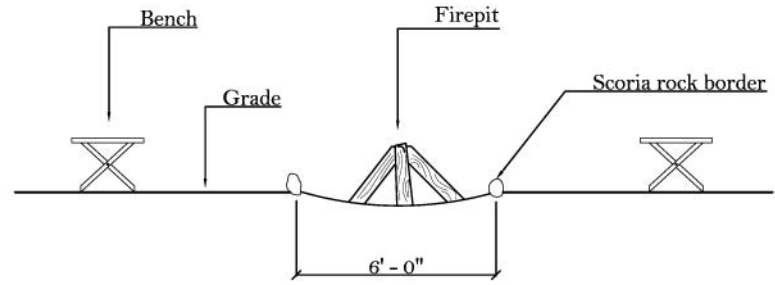


Tourism is an important aspect of economic development for any town. Tourist bring outside money into the town they visit. They will also spend more money if they are intrigued enough to spend the night, or stay for multiple days. To achieve this there needs to be attractions in the area that can not be found elsewhere; something special.

I propose restoring abandon buildings found in rural areas, to create a type of bed and breakfast retreat for people to come and stay. These buildings would resemble the original architecture they once had, they will have running water and electricity, to give visitors amenities they have come accustom to. These places could offer a wide array of activities for people to partake in: horse back riding, trail hiking, guided cook outs of local recipes, camp fires at night. The possibilities would only be limited by a persons' ability to imagine.



Enjoying a night in western North Dakota



14 *Firepit detail*
11

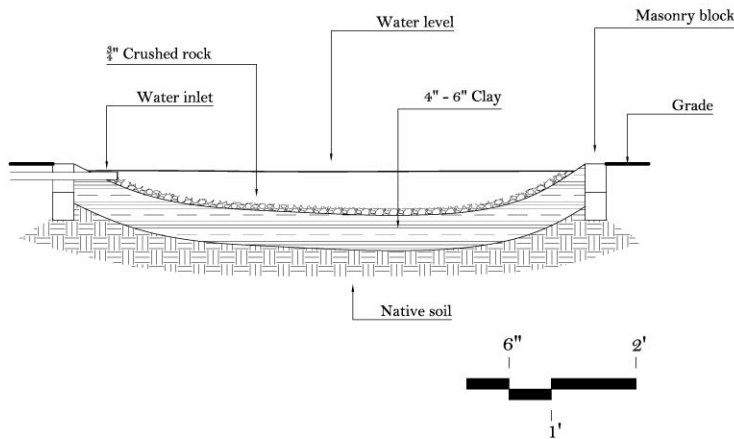
Firepit

Native materials are used for the construction of everything on site. Benches supplied around the camp fire have a simple design, using as little wood as needed. The wood was supplied by salvaged material from the renovated buildings.

Scoria rock, which is beautiful and abundant in this area, is used for a buffer around the fire pit.



Horses walking on a trail with a wind turbine spinning in the distance



13 ***Watering hole detail***
10

Water and Energy

To provide water to the residence and the animals, a typical windmill operation will be setup, pumping water from a local well that will supply water to the buildings and the watering holes.

Water is scarce in this area, limiting loss of water is important. That's why I have design special 'pond like' basins that will act as watering holes for the livestock and wild life. Clay will keep the water from leaching into the soil, along with masonry block surrounding the basin.

Electricity will be supplied on site by wind turbines. One wind turbine has the ability to supply 200 typical city homes. The installation of a this type of turbine will be more than efficient for the site.