

# ACTIVE TRANSPORTATION RECOMMENDATIONS

FOR

# WADBLÍ HOHPI

*presented by the*

South Dakota State University  
Landscape Architecture Program

*in cooperation with the*

South Dakota Department of Health

**29 APRIL 2022**

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## Introduction

The built environment affects public and personal health. In addition to physical metrics of health such as obesity rates, dietary habits, and steps walked in a day, there are less-tangible indicators of a community's health. These include perceived friendliness, sense of community, and livability. The built environment impacts all of these indicators.

In 2012, the South Dakota Department of Health initiated the Active Transportation Advisory Team (ATAT) to facilitate change in the built environment of South Dakota. In particular, an effort has been made to help communities encourage using alternative means of transportation (such as walking or cycling) for completing one's daily routine. An outgrowth of the ATAT is the Active Transportation Collaboration project. This project provides resources and expertise to South Dakota communities in developing strategies to improve active transportation.

Recommendations are developed over the course of a 16-week semester by students and faculty from the South Dakota State University Landscape Architecture program. In the case of the present study, representatives from SDSU traveled to Wanblee, South Dakota, in late March of 2022 to conduct interviews with key stakeholders within the community. They also conducted an analysis of transportation infrastructure, parks and recreation facilities, and neighborhood composition in the area.

Following this data-gathering process, students developed a series of recommendations touching all aspects of active transportation issues, including the further development of active transportation infrastructure, improvement of park and recreation facilities, developing food sovereignty, and embracing indigenous culture. By approaching active transportation in this holistic way, a balanced, comprehensive plan for improving public and personal health can be achieved.

These recommendations represent a global shift in how people think of their community. Some recommendations will entail a major investment. By shifting community priorities and identifying existing resources within the community, Wanblee can be an example for tribal communities throughout the region of how to cherish and renew that which is inherently most valuable: the people who make up this incredible community.



## Infrastructure Improvements

Highway 44 is the primary access road to Wanblee. Due to its prominence, it is a heavily-trafficked thoroughfare. The highway bisects the city, with most residences on the east side of the highway, and the schools on the west side. It is also the main route linking to the grocery store on the north side of town. Intense traffic on this road poses a barrier to pedestrians seeking access from their homes to the other destinations in the community. There are few crosswalks provided, and while the highway features integrated sidewalks, those sidewalks often abut the road, providing little separation between fast-moving cars and the pedestrians.

### RECOMMENDATION 1: INSTALL HIGHWAY WELCOME SIGNS

The community should install welcome signs as a gateway treatment into the community along Highway 44. These signs should be larger than the current highway signs and should be created by the community as an event to bring people together. This sign should be made of pressure-treated lumber and painted.



*Figure 1: Example of a Welcome Sign*

### RECOMMENDATION 2: INSTALL RAISED CROSSWALKS ACROSS HIGHWAY 44

The community should install raised crosswalks at key locations on Highway 44 as it moves through the community. These crosswalks will help pedestrians cross from the residential east side of the highway to services and amenities on the west side of the highway, including the park, school, and college center. The locations of these crossings should maximize their usefulness to the community in both crossing Highway 44 and slowing traffic down as it passes through the community. Raised crosswalks should be placed at Tiyoko Itopa and Tiyoko Tokahe, in addition to the other crosswalk locations already identified by the community, to ensure the best possible connections across Highway 44. The crosswalks should be accompanied by pedestrian warning signage with flashing lights.



*Figure 2: Raised Crosswalk*

### RECOMMENDATION 3: CREATE PEDESTRIAN BUFFERS BETWEEN HIGHWAY AND SIDEWALK

The community should buffer its existing sidewalks and buffer future sidewalks from Highway 44. A buffer is designed to increase the separation between vehicles and pedestrians on busy roads, creating a safer environment for pedestrians and motorists alike while improving the quality of sidewalks in the community. We recommend the installation of 3-foot planted grass buffers with shade trees to help separate the sidewalks from the vehicle travel lanes. These buffers will also create spaces to plant shade trees and grass that will help improve the quality of sidewalks and the community. These planted strips should be implementing in the existing shoulder along current sidewalks, and all future sidewalk phases should be designed to incorporate planted buffer strips.

### RECOMMENDATION 4: CONNECT RESIDENTIAL NEIGHBORHOODS TO HIGHWAY 44

The community already has a strong sidewalk plan in place, with new sidewalks intended for the remaining length of Highway 44. We strongly recommend that the community add to this plan to further connect the community to more services and amenities. The main priority is to implement the sidewalks along Highway 44 as already proposed. Once this is accomplished, sidewalks are necessary to connect the two neighborhoods on the east side of Highway 44 to those routes and to provide consistent, cohesive pedestrian infrastructure throughout Wanblee.

### RECOMMENDATION 5: IMPROVE ACCESS TRAIL TO EAGLE NEST BUTTE

The current trail to the top of Eagle Nest Butte is not well suited for walking even for able-bodied members of the community. Improving access to the butte for all members of the community is important for building local cultural identity and pride. Trail improvement should start with managing the drainage around the trail and ensuring that the trail surface will not be the primary route for water runoff. The creation of landings where the trail curves will give community members a place to take a break during the climb to the top of the butte.

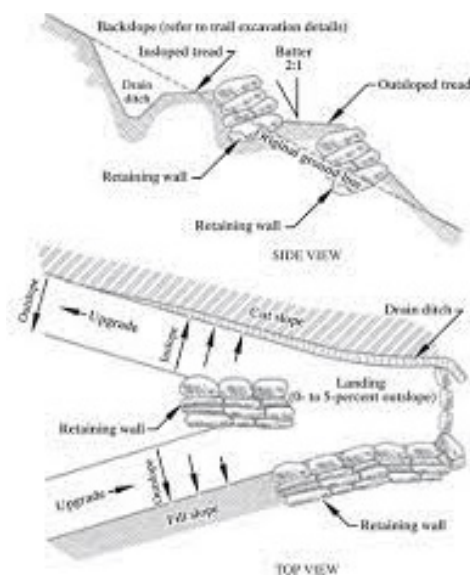


Figure 3: Trail reconstruction guidelines





Figure 4: Proposed Planted Buffers along Highway 44



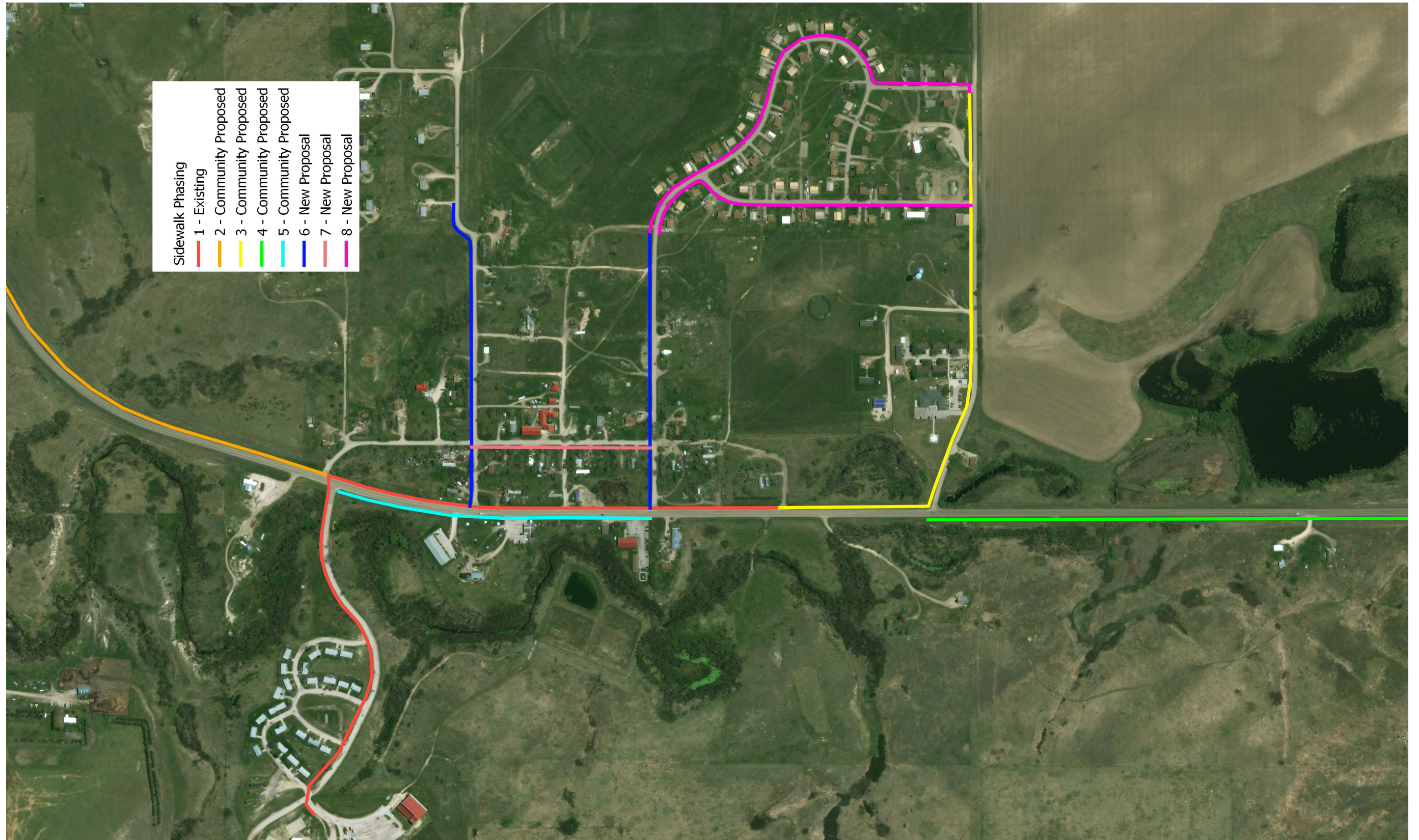
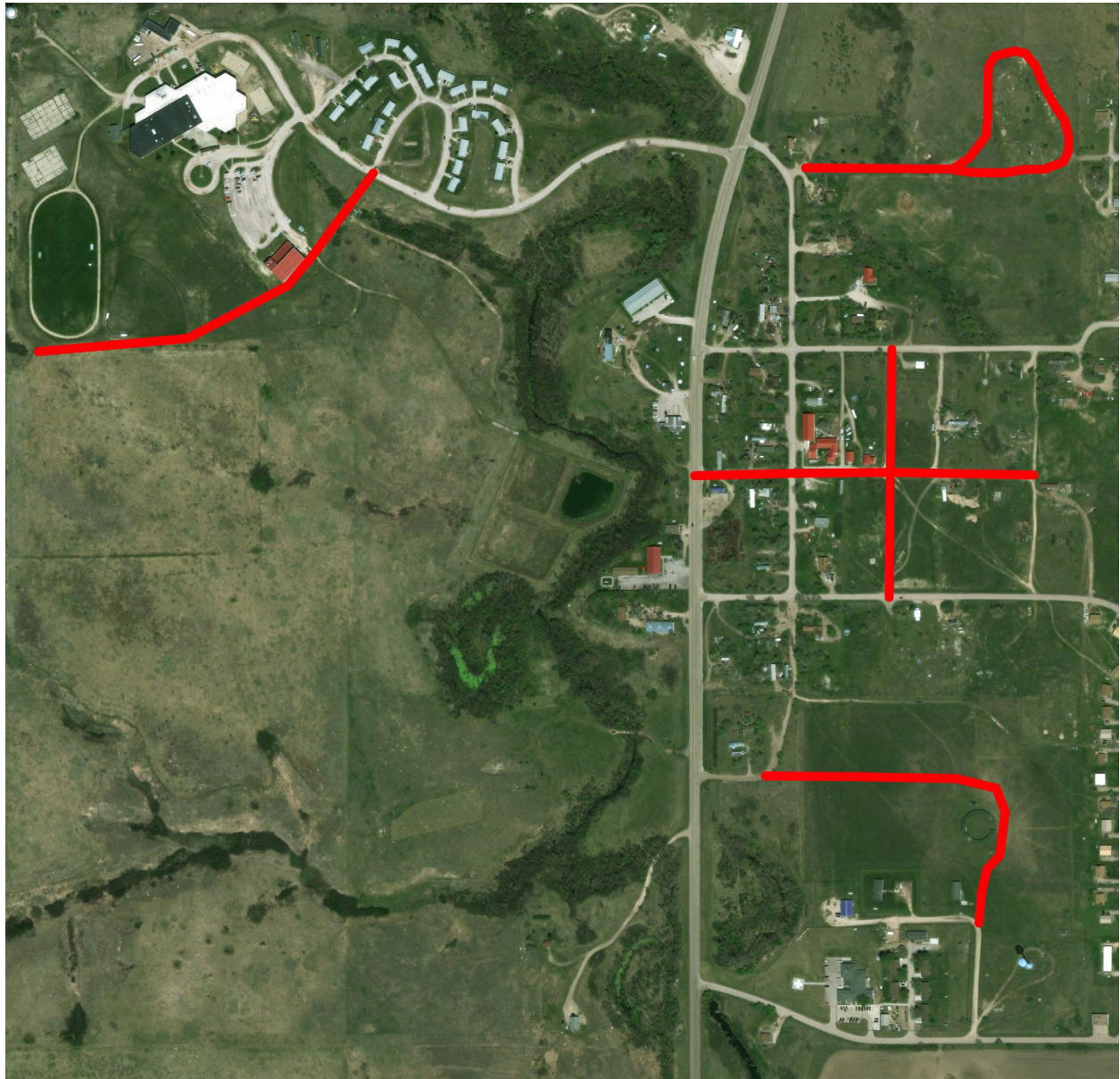


Figure 5: Sidewalk Implementation Phases



*RECOMMENDATION 6: REGRADE AND TOP-DRESS KEY ROADS*

The community should gravel Tiyyoko Inunpan and Pute Avenue to maintain their integrity through the wet winter and spring months when these roads become heavily rutted. In addition to graveling these streets, cemetery access roads throughout the community should be improved and, in some cases, created. These access roads will contribute to unifying the community and helping residents and visitors to properly honor their deceased ancestors.



*Figure 6: Priority roads for regrading and top-dressing*

### RECOMMENDATION 7: PLANT SHADE TREES

The community should plant shade trees improve the quality of the walking environment and provide more enclosure for the roads. Shade trees should be planted first along Highway 44 within grassed buffers (see Recommendation 3). There are several benefits to implementing shade trees along busy roads. They mitigate traffic noise, reduce airborne particulate matter, and improve air quality. They also reduce heat and glare on sidewalks and streets, and help slow vehicular traffic. Recommended shade tree species include sugar maple (*Acer saccharinum*), box elder maple (*Acer negundo*), and quaking aspen (*Populus tremuloides*). These species offer additional benefits in the form of medicine (box elder maple), a potential food source from syrup (sugar maple), and rapid growth rate (aspen).

### RECOMMENDATION 8: INSTALL DUAL-LANGUAGE STREET SIGNS

In meetings with community leaders and members, there was a strong desire to revive knowledge and use of the Lakota language in the community. To further this goal, dual-language street signage should be installed throughout the community. Existing signage should be updated, while new signs should be installed at key intersections throughout Wanblee. The highway welcome signs mentioned in Recommendation 1 should also feature text in both Lakota and English.

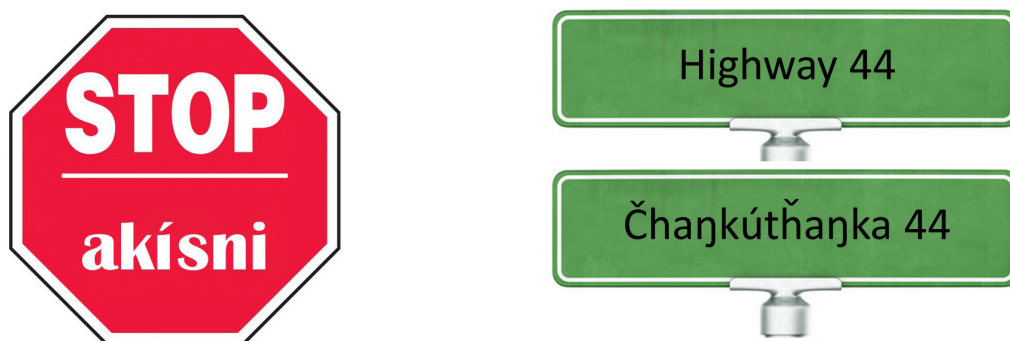


Figure 7: Examples of dual-language street signs

### RECOMMENDATION 9: INSTALL PEDESTRIAN-ORIENTED STREET LIGHTING

Wanblee should install more lighting on the streets to improve community safety. The streetlights should be no taller than 15 feet and focused on illuminating sidewalks. Priorities include Highway 44 and the sidewalk leading to Crazy Horse School. Culturally-appropriate banners should be incorporated on the light standards to celebrate community identity.



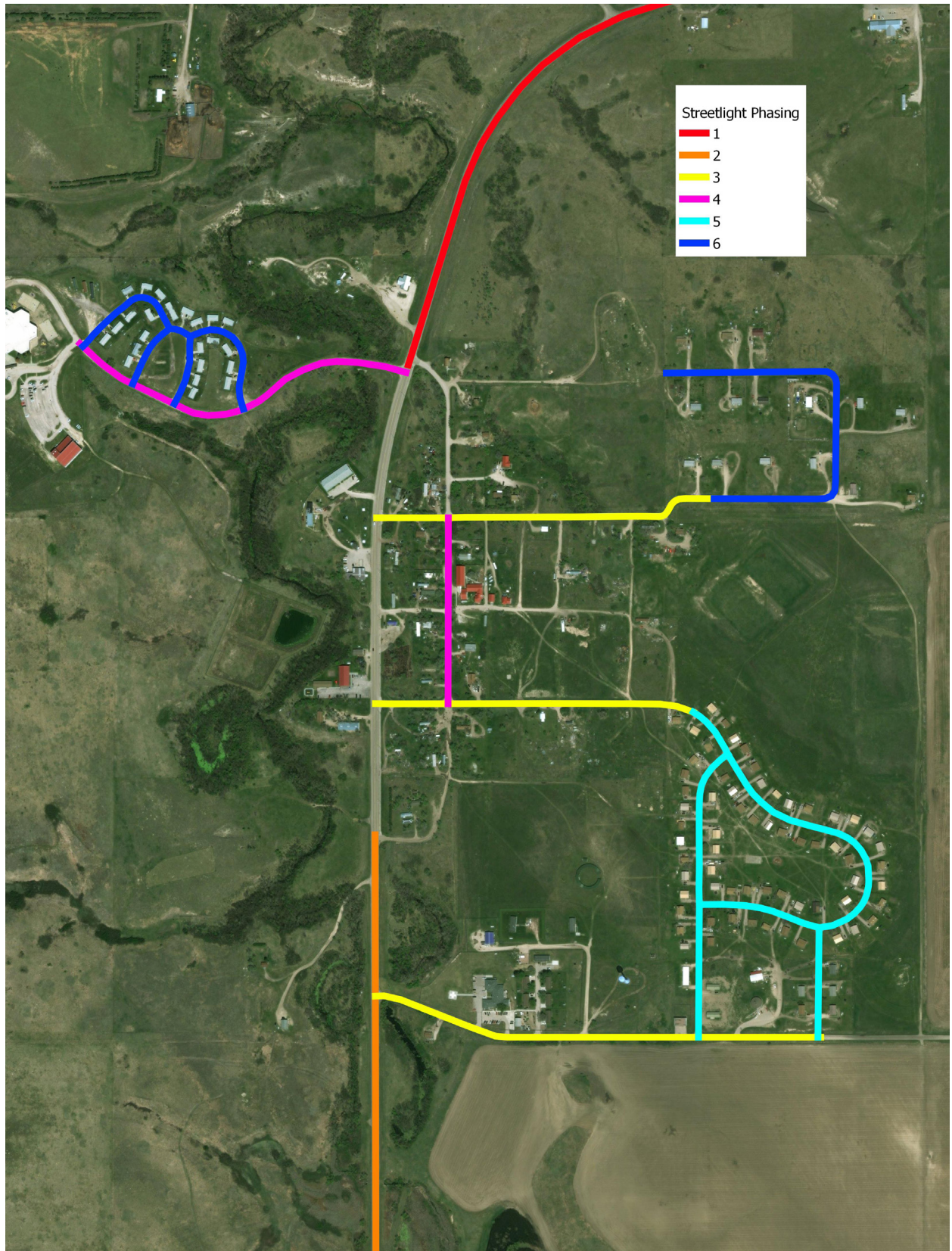


Figure 8: Streetlight priorities



## Parks and Recreation

Recreation opportunities in a community should fit the demographics of that community. In Wanblee, nearly half the population - 48.5% - is under the age of 18. Wanblee's youth need positive outlets for building creativity, friendships, skills, and confidence while expending energy and staying out of trouble. The recommendations in this section aim to build on the community-driven recreation opportunities already in place in Wanblee to further protect and benefit community youth and elders.

### *RECOMMENDATION 10: IMPROVE AND EXPAND THE EXISTING PARK*

The existing community park is a very successful location and an excellent example of grassroots community investment. This park should be expanded to include additional recreation amenities, including river access, basketball, skateboarding, a climbing wall, and bicycle safety training facilities.

#### *Basketball Court*

Basketball has been a part of tribal culture and identity since it was introduced to reservations in the early 1900s. Lakota players have excelled at the sport. Wanblee should provide outdoor facilities for youth to engage in basketball at the community park. One to two full basketball courts with two standards, asphalt or concrete paving, and painted lines would be best. However, if this were infeasible, beginning with a half-court setup with a single standard and a packed earth surface would be acceptable as a temporary solution.



*Figure 9: Regulation-sized basketball court*



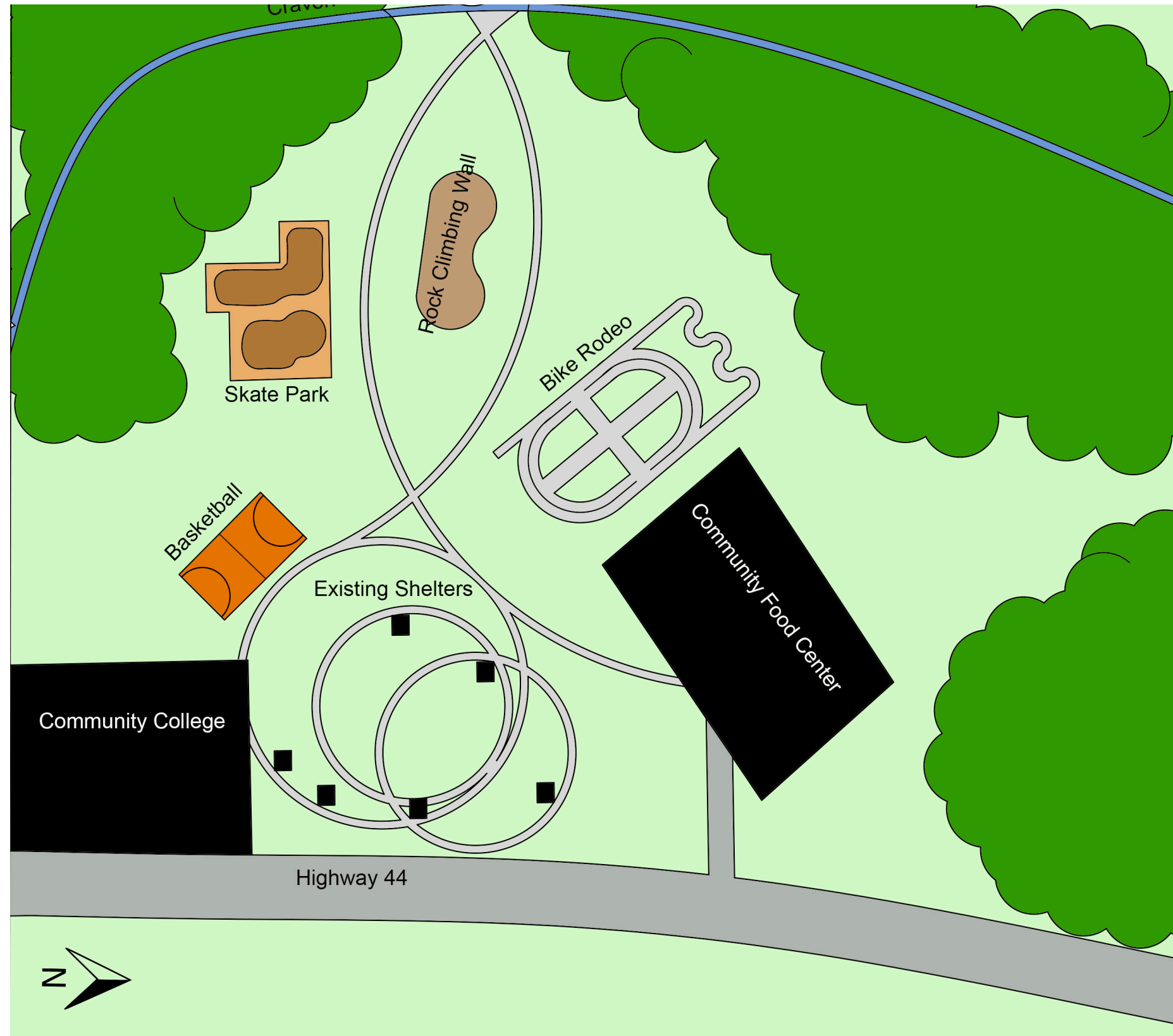


Figure 10: Proposed updates to the community park

### Skatepark

Skateboarding is a popular sport that challenges youth to develop their talents while improving their physical and social health. Skateparks provide a safe place for boarders to gather and skate, legitimizing their presence and activities in a community. The Wanblee community park is an ideal location for a skatepark. There are several organizations that help communities work with youth to develop skateparks that respond to each community's needs. These include Spohn Ranch and the Skatepark Project (formerly the Tony Hawk Foundation).



*Figure 11: Example of a skateboard park*

### Climbing Wall

Climbing walls are popular amenities in a community park. They are highly customizable, and can be designed and installed by community members. Considerations to include in the design are providing a safe fall-zone with shock-absorbent surfacing, color-coded grips to denote climbing routes of various difficulties, and adequate supervision when younger children are using the facility.



*Figure 12: A simple climbing wall*



### Bike Rodeo

Many children in Wanblee receive bikes after their kindergarten school year but have no place to ride them besides the streets or their driveways. To make biking, and learning to ride a bike safer, Wanblee should establish a bike rodeo. A bike rodeo works to teach children how to navigate sidewalks, bike trails and intersections, and how to interact with pedestrians and other cyclists in a safe environment free from real-world hazards. Bike rodeos are set up to include specific areas for children to ride bikes and may include small plastic or wood cutouts or models of cars to simulate a realistic urban cycling environment. There are also traffic signs such as stop signs, pedestrian crossing signs, one-way signs, and do-not-enter signs that children will learn to read and act upon.



Figure 13: Bike rodeo examples

### RECOMMENDATION 11: CREATE A NEW NEIGHBORHOOD PARK IN SOUTH WANBLEE

A new, smaller park should be created in the neighborhood on the southwest end of town. A park here will serve residents who currently are required to walk long distances along the highway to access recreation opportunities. Amenities should include two different playgrounds, one for younger children (5-8 years old) and one for older children (8-12 years old), a basketball court and lighting.





Figure 14: New southwest park location and layout



### 5-to-8-Year-Old Playground

Young children need a play environment that they are able to navigate. The proposed playground should be appropriately-sized, with platforms and play elements no higher than 42” above the ground. The playground should include age-appropriate play elements, including slides, climbing elements, and vertical play walls. These will capture young children’s attention and jumpstart their imagination.



*Figure 15: 5-to-8-year-old playground*

### 8-to-12-Year-Old Playground

Wanblee should include in this park a playground that will be used for older children who might not be old enough to play basketball yet but are too old to play on the early childhood playground. This playground should include similar obstacles as the early childhood playground such as slides and steps but should also include other things. The 8-12 children playground should include obstacles such as climbing walls, climbing structures, tunnels, monkey bars, ladders, and fire poles. With a wide variety of obstacles for the children to explore it will keep them busy, keep their imagination going, and bring their energy levels down.



*Figure 16: 8-to-12-year-old playground*

#### RECOMMENDATION 12: ADD FENCING AND LIGHTING TO PARKS

To promote safety and extended park use, existing and proposed park facilities should be fenced and adequately lighted. Fences provide parks with a sense of enclosure and delimit boundaries, while helping to prevent children and stray balls from entering the street. Adequate lighting helps to extend the useful hours of a park while deterring vandalism and similar activities. Light intensity should be focused at park entry points and other activity zones such as basketball courts, playgrounds, and skateparks. Pathways should feature lighting in a staggered pattern (standards placed 25-30' apart and on alternating sides of the walk) to help visitors navigate the park in the evening hours.

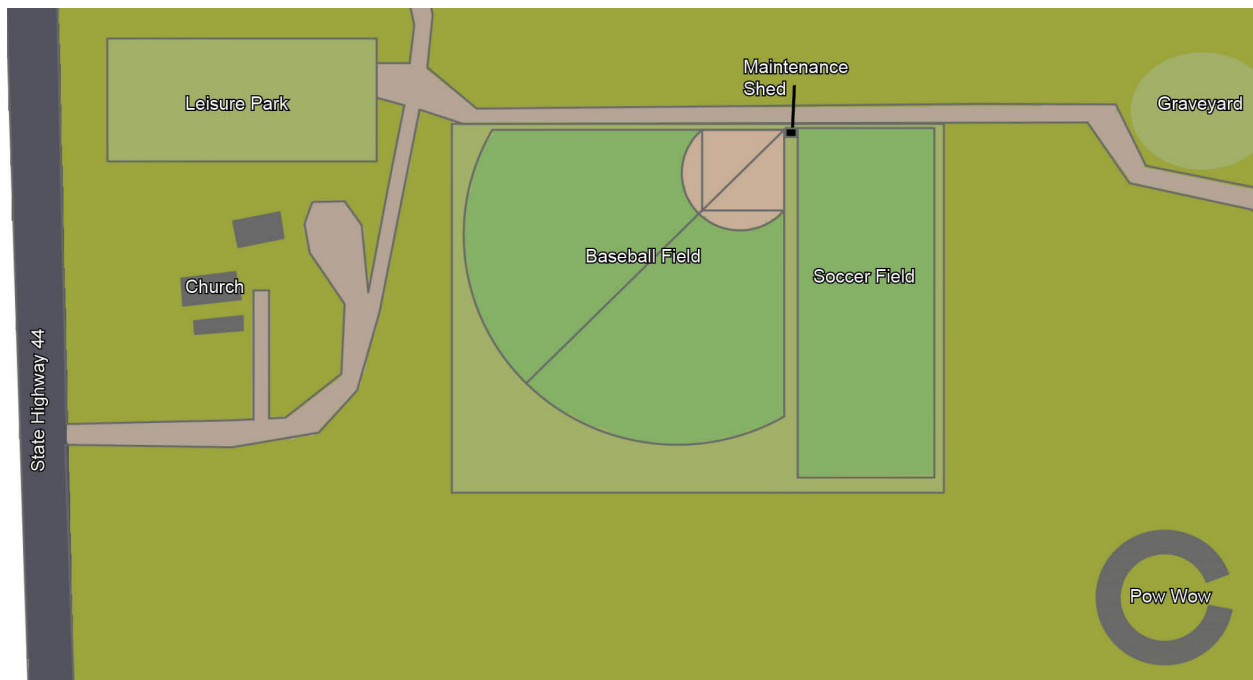
#### RECOMMENDATION 13: CREATE A MULTI-USE SPORTS PARK

Wanblee's population has lots of youth that are filled with energy and are looking for ways to spend it. A multiuse sports field close to the center of town will provide wholesome opportunities for recreation and community events for these youth and their families. The field should be large enough to accommodate a baseball field and a soccer field. It should be placed east of the southern church and northwest of the powwow. The park should include perimeter and backstop fencing, adequate lighting, and a maintenance storage shed.

The baseball field can host baseball, softball, and kickball tournaments for the community. It can also be used for movie nights by draping white tarps over the backstop fence and siting the projector at the pitcher's mound, and seating the audience in the outfield. The soccer field should be large enough to support archery events in addition to soccer, football, and other field sports. Archery can be accommodated by having targets and cones will be moved on and off of the field for whichever use is happening. This large open area can also be used for stargazing and other evening/nighttime activities.

#### RECOMMENDATION 14: ORGANIZE A COMMUNITY EVENTS CALENDAR

Prior to the pandemic, Wanblee saw excellent attendance for planned activities and events. As the impacts of the pandemic wane, group activities will increase once more. As events increase in scope and number, a shared community calendar of events will become necessary to coordinate and schedule park and recreation facilities. In addition to scheduling practices, tournaments, and other community activities, a maintenance schedule should be created. Weekly maintenance for park facilities should be supported by all members of the community, with each family assigned a facility or a rotating schedule for cleaning and other appropriate activities.



*Figure 17: Proposed multi-use sports park and leisure park*

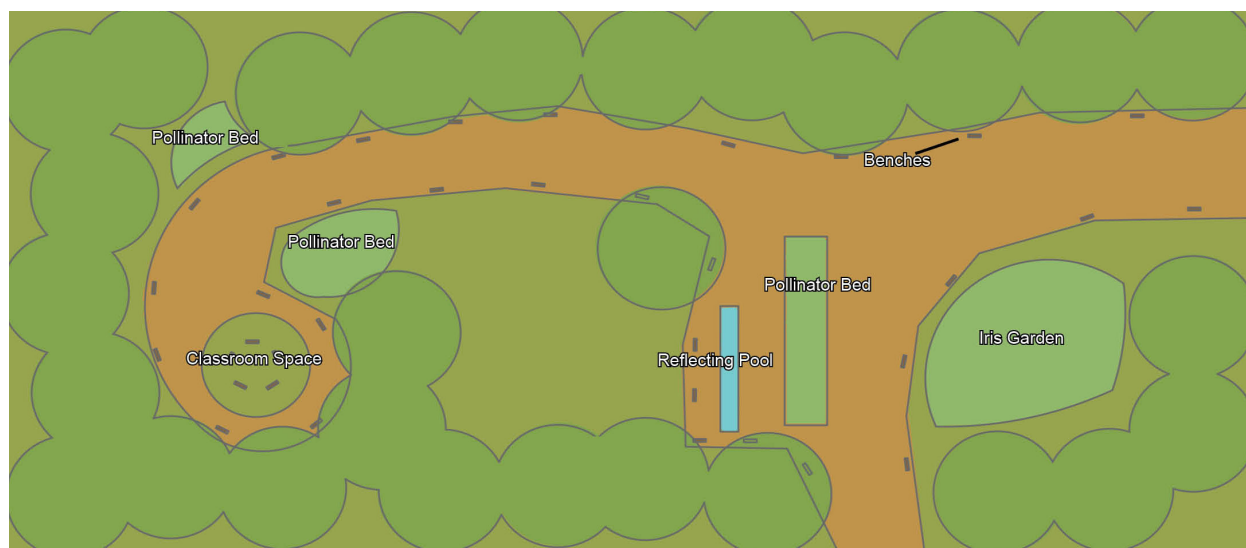


*Figure 18: Example of movie night at a baseball park*



### RECOMMENDATION 15: CREATE A LEISURE PARK

Wanblee has plenty of elderly community members for whom active recreation may be less desirable activities. Passive recreation or leisure parks provide places for socializing, reflection, bird- and people-watching, gardening, and other similar activities. A park of this type should be created immediately north of the southern church. This park should feature pathways, ample seating, and a shallow reflecting pool. Pollinator flowerbeds should be spread throughout this park to attract different species of insects. Songbirds and insects will provide color, sound, and movement. This park should also have a circular open area functioning as an outdoor classroom. Weekly community classes should be sponsored to talk about the different kinds of plants, insects, and birds that are there and what purpose each of them provides.



*Figure 19: Proposed leisure park*

### RECOMMENDATION 16: REHABILITATE THE SOUTH BASEBALL FIELD

A community group should be formed to restore the overgrown baseball field on the southeast part of Wanblee. This valuable asset is a complement to the existing and proposed recreation opportunities afforded in the community. Most of the necessary maintenance includes removal of weeds, mowing and edging overgrown grass, and repairing fencing, all easily done by volunteers within the community. Youth should be involved in this project to give them a sense of ownership and pride in these facilities.



## Food Sovereignty

Food sovereignty is an important asset to small communities because it allows community members to influence how food is produced, traded, and consumed. Food sovereignty can help communities implement a food system which can provide a source of revenue while ensuring access to healthy, affordable foods. People can grow food from the ground up when food sovereignty is available. In a community that prioritizes food sovereignty, people can be self sufficient and grow food themselves.

Affordable fresh food is difficult to obtain in Wanblee, SD. In Wanblee, the main mode of transportation is walking. Local stores have limited offerings of the fresh produce essential for a healthy diet. The following recommendations address food sovereignty issues within Wanblee.

### RECOMMENDATION 17: DEVELOP A VARIETY OF COMMUNITY GARDENS

Wanblee should include more community gardens with chicken coops. In addition to vegetable gardens, solutions include medicinal and pollinator gardens. Community gardens provide the opportunity for people to grow their own food and fiber. An important aspect of food sovereignty is education at the community level. This teaching opportunity supports growing practices, the different tribal and cultural uses of plants, and how pollinator plants help the community and insects. Bilingual signage should be provided so users can continue learning the Lakota language. An English description of the history and uses of every plant should also be included. Garden education programs can strengthen knowledge about Lakota culture and heritage.

#### gmá, čhansápa

Black Walnut

*Juglans nigra*



The deliciously rich nuts are used for food. The bark of the root is used to make black dye. The bark and leaves are made into a poultice that is excellent for treating skin ailments such as poison ivy, eczema and even herpes. A weak decoction of the bark is useful in treating diarrhea, even in children. The juice of the husk is applied externally to kill ringworm.

#### wazí čhán

Lodgepole Pine

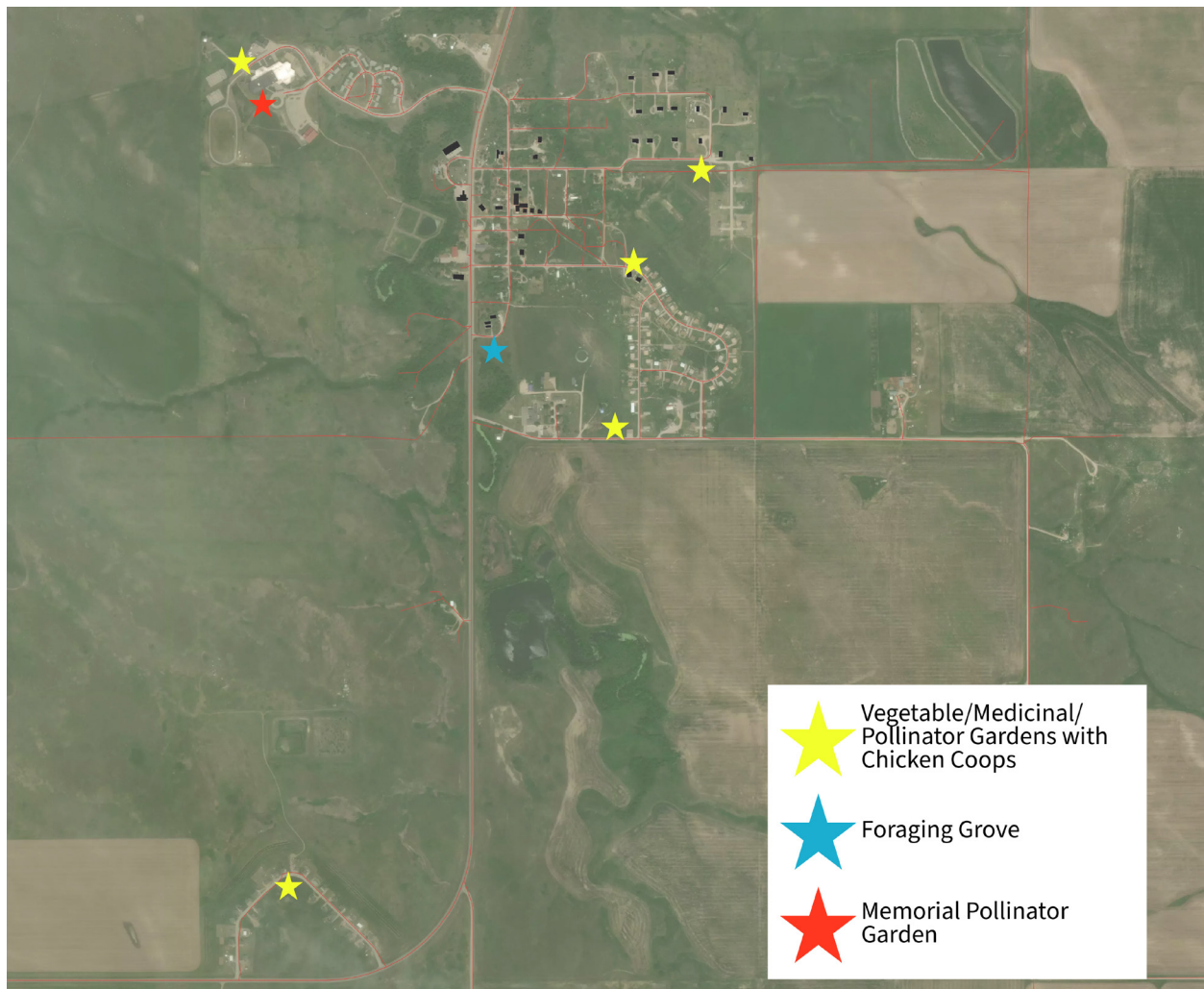
*Pinus contorta*



The cones of this pine tree are called "wazi pinkpa." A decoction of the roots is used to tan deerhides. The tall, thin trees are used for tipi poles. The sap or pitch from all species of pine is antibacterial and is wonderful for making salves.



Figure 20: Examples of dual-language plant education signage



*Figure 21: Proposed community garden locations and types*

### *Fruit and Vegetable Gardens*

Fruit and vegetable gardens should be planted in Wanblee to provide healthy food options for people in the community. Fruit and vegetable gardens should include food sources such as raspberries, strawberries, potatoes, onions, squash, melons and more. These gardens should include chicken coops so people can access fresh eggs and chickens. Appropriate locations for these gardens would be near the water tower, on the corner of Tiyoiko Itopa and Cluster Housing Drive, at the 3-way intersection on Sioux Avenue, and by The Day-Care Center along Highway 44. With these locations, people in every neighborhood will be able to walk to a garden in ten minutes or less.

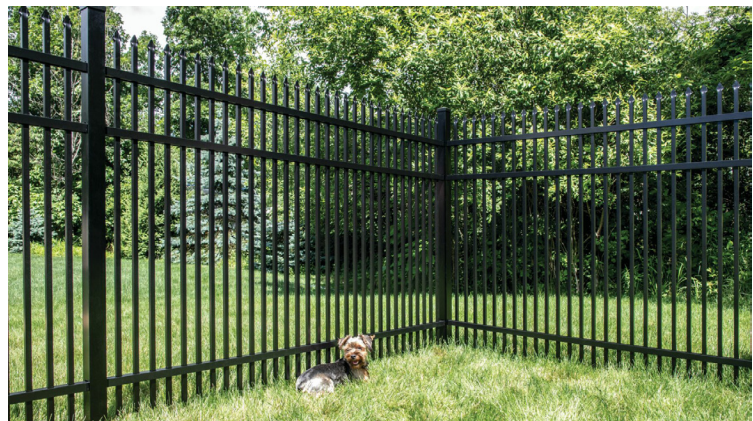
Gardens should be 30'x 50' with 6' high fencing to keep out unwanted animals. The southernmost garden should be 60'x100' and located adjacent to the proposed neighborhood park. Chicken coops





*Figure 22: Example of garden layout with row crops and storage shed*

should be 10'x10'x7' and include a roof to protect the birds. Each coop will accommodate up to 10 chickens. Community gardens should have an open walking lane in the middle for people and chickens to walk through.



*Figure 23: Fencing for gardens*





Figure 24: Example of layout with garden beds and chicken coops

### Medicinal Gardens

A medicinal garden consists of plants that can be used for health purposes. The medicinal plants should be included in each of the five community gardens discussed above. There will be a row or small section for culturally important herbs and other medicinal plants to grow within the garden space. There will also be a space for medicinal plants in the community school garden for the kids to learn about at school. People will be able to learn about what different benefits each plant can offer for people. They can help with sicknesses, aches and pains, and even boost the health of a person. This way the people of Wanblee will be able to make their own medicines to treat common everyday sicknesses. All the plants that will be present in these gardens will focus on the native culture and heritage of the Lakota people.

### Pollinator Gardens

Pollinator gardens are garden spaces that are planted predominately with plants that produce nectar, pollen, and habitat for insects and birds that live off them. These types of gardens should be located by some of the recreational parks, in or by community gardens, and into a memorial garden at the school. The pollinator areas conjoined with community vegetable gardens will help boost food production. People of all ages will be able to learn the importance of pollinators that live among us in the environment. These gardens can also represent the circle of life, by giving the natural world a gift, the natural world will give a gift back. By adding pollinator plants, they will attract butterflies and other insects in the pollinator gardens and the insects will give back in the form of bees making honey and other insects pollinating garden plants that are the backbone to humans having plentiful fruits and vegetables.

A pollinator memorial garden is proposed to be near the Crazy Horse School parking lot to remember the people who have perished due to COVID-19. The pollinator garden should be installed in the pattern of a star quilt with different plants in each point. The garden will also include selected fruit trees and a pathway going throughout it for community members and students to enjoy.



*Figure 25: Memorial pollinator garden pathway*



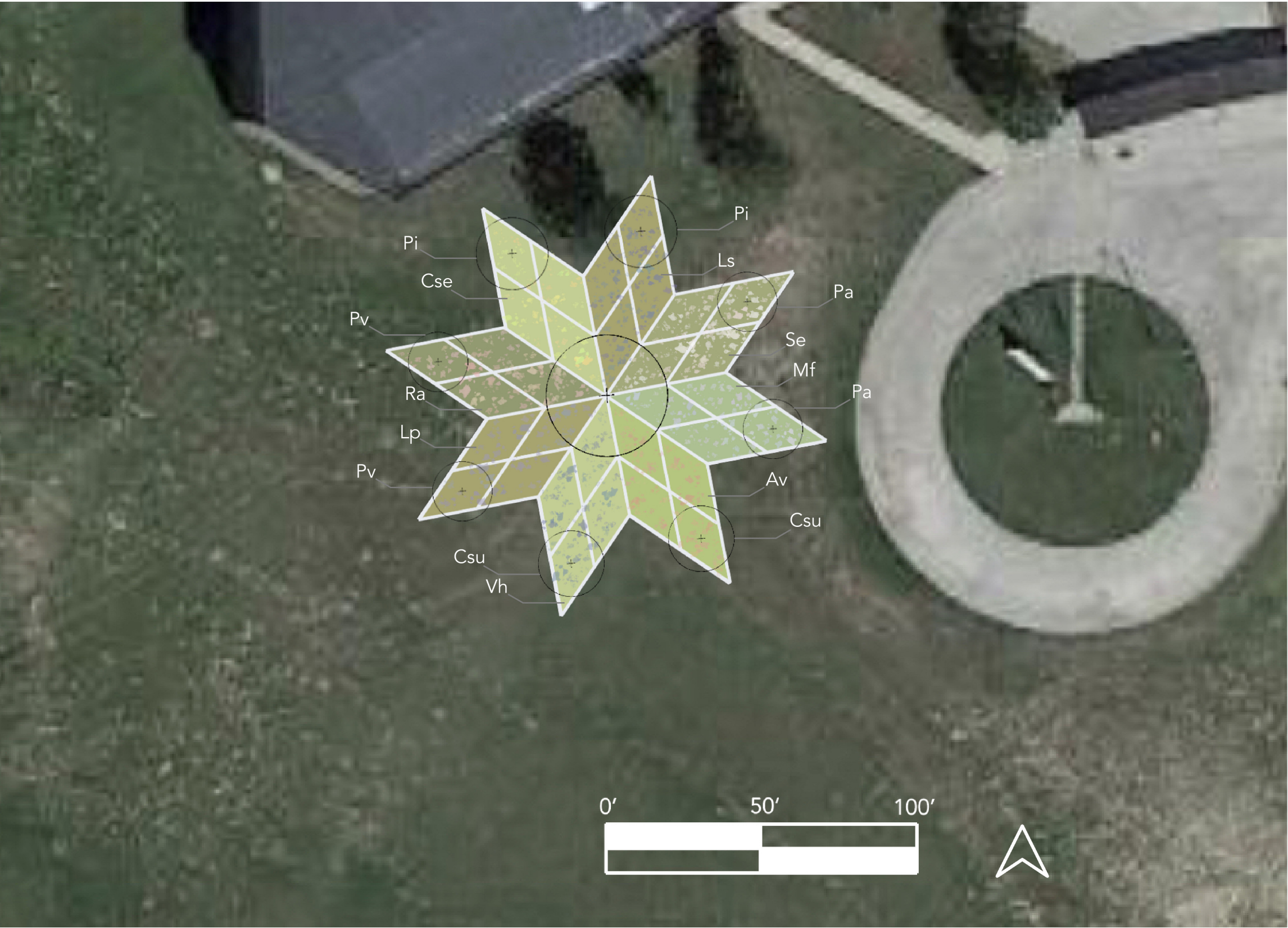


Figure 26: Crazy Horse School pollinator memorial garden

SYMBOL	BOTANICAL NAME	COMMON NAME	LAKOTA NAME
HERBACEOUS PERENNIALS			
Av	Asclepias verticillata	Whorled Milkweed	waŋpé thirpsila iyéčheča
Se	Symphoricarum ericoides	Heath Aster	čhaŋhóŋaŋ přéphela
Cse	Callyophus serrulatus	Yellow Evening Primrose	waŋča zi čik'ala
Lp	Liatris punctata	Blazing Star, Gayfeather	thátéte čhaŋnúŋga
Ls	Lobelia siphilitica	Blue Cardinal Flower, Great Blue Lobelia	zuzéča thawóte, úma/uŋmá wápe thoŋó hé
Mf	Monarda fistulosa	Wild Bergamot, Bee Balm	heháká thaphežúta, heháká thawóte, waŋpé waštemna
Ra	Rosa arkansana	Wild Rose, Prairie Rose	uŋžingitka hú
Vh	Verbena hastata	Blue Vervain, Blue Verbena	čhaŋhóŋaŋ přežúta, přéstola
TREES			
Csu	Crataegus succulenta	Hawthorn	maŋhó thaspán, thaspán hú
Pa	Prunus americana	Wild Plum	khiŋta
Pv	Prunus virginiana	Chokecherry	čhapphá; dried cherry patties: čhaŋphákaški
Pi	Pyrus ioensis	Crabapple	thaspán hú iyéčheča
Ta	Tilia americana	Basswood	hiŋta



### RECOMMENDATION 18: PLANT A FORAGING GROVE

Wanblee should plant a grove of trees for foraging food, medicine, ceremonial goods, and other useful supplies north of the clinic in town. The grove will have native tree and shrub species of cultural importance including Bur Oak, Lodgepole Pine, American Elm, Silver Maple, Basswood Linden, Black Walnut, Paper Birch, Balsam Poplar, Black Hills Spruce, Cottonwood, Boxelder, Chokecherry, Hawthorn, Juneberry, Hazelnut, Sandbar Willow, Sand cherry, Diamond Willow, Elderberry, and Skunkbrush Sumac. The grove will include signage that provides the common, Botanical, and Lakota names, as well as historical relevance and various uses or cautions. This area won't need much maintenance and will be allowed to naturalize throughout its establishment. Temporary fencing should be installed until trees are large enough to sustain animal and weather damage without permanent harm.

Putting in a foraging grove will be a great addition to the Wanblee community because people will be able to access bigger plants with more medicinal and ritual purposes. Having it by the clinic will make it easier for medicinal usage. People have many different plants to choose from with this grove.

### RECOMMENDATION 19: CREATE COMMUNITY FOOD PREP AREAS AND WORKSHOPS

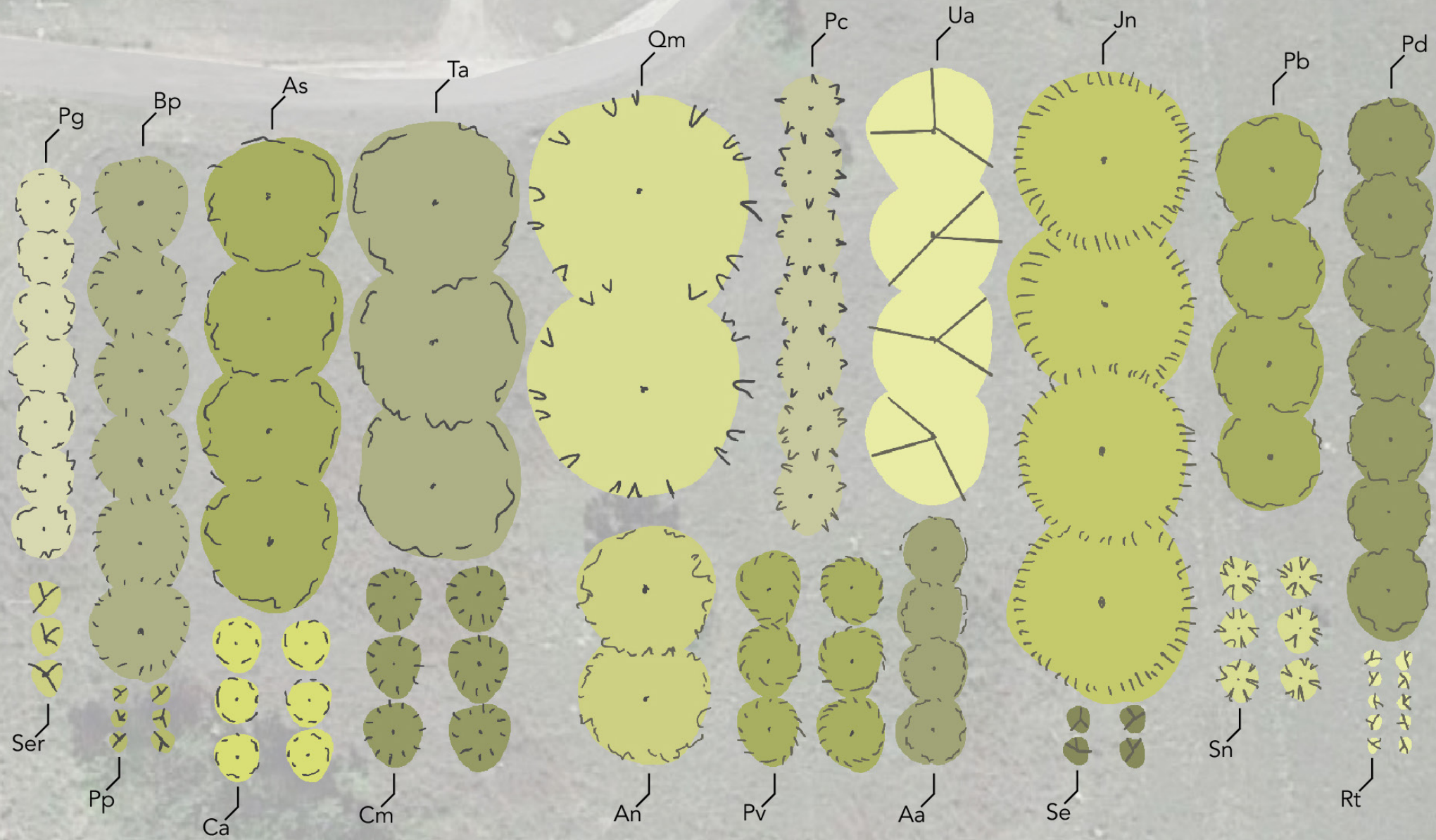
Wanblee should implement a food preparation station to support food preservation and host safety workshops within the community. The station should be adjacent to the Families Working Together or College Center facilities, and should have temporary weather covers to keep appliances and grills clean. Access to electricity and running water is an important consideration. It should include long steel tables, an open-grill fireplace, and a sink. Workshops should educate residents about proper food preparation, canning, curing/drying, and storage practices. Health and safety workshops should also teach residents about healthy eating and physical activity habits, and how to identify and prepare edible native plants in the landscape.



*Figure 27: Examples of food prep station equipment*

44

44



SYMBOL	BOTANICAL NAME	COMMON NAME	LAKOTA NAME
Rt	Rhus trilobata	Skunkbrush Sumac, Sourberry	čhánġ uŋkčémna
Sn	Sambucus nigra	Elderberry	čaphute hú
Ser	Salix eriocephala	Diamond Willow, Missouri River Willow	čł o! áŋ waŋžíča wap! áha
Pp	Prunus pumila	Sandcherry	aúŋyeyapi, t! al plyo"lŋ
Se	Salix exigua	Sandbar Willow, Coyote Willow	čł o! áŋ waŋžíča, wa! pé wazilya
Ca	Corylus americana	Hazelnut	úmahu
Aa	Amelanchier alnifolia	Juneberry, Saskatoon, Serviceberry	wípazutk! aŋ
Cm	Crataegus mollis	Hawthorn	mat! ó t! aspá ŋ, t! aspá ŋ hú
Pv	Prunus virginiana	Chokecherry	čhaŋpl á; dried cherry patties: čhaŋpl áka ški
An	Acer negundo	Boxelder	čhaŋšúška
Pd	Populus deltoides	Cottonwood	čhanyál 'u, šaká čhánġ, wa! čhínčawahcinca
Pg	Picea glauca	Black Hill's Spruce	wazíł čaka
Pb	Populus balsamifera	Balsam Poplar, Bamtree	šaka čhánġ
Bp	Betula papyrifera	Paper Birch	čhaŋhása ŋ
Jn	Juglans nigra	Black Walnut	gmá, čhaŋsápa
As	Acer saccharinum	Silver Maple, Soft Maple	t! ahálo
Um	Ulmus americana	American Elm	p'eik čeka, p'é čhaŋ
Ta	Tilia americana	Basswod, Linden	hínġta
Pc	Pinus contorta	Lodgepole Pine	wazí čhánġ
Qm	Quercus macrocarpa	Bur Oak	uskúye ča hú, útahu čhánġ

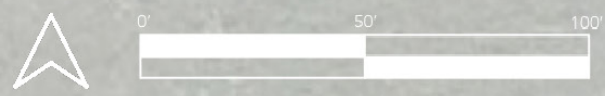


Figure 28: Foraging grove layout



## RECOMMENDATION 20: DEVELOP A FARMERS MARKET WITH SNAP/EBT ACCESS

Wanblee should think about organizing and having a farmers' market in the community that has EBT capabilities. This is a great way for people to come together and exchange foods and goods with one another. An ideal spot to hold a market would be the large lot between the community center and the post office. This could also bring in other people from other towns if the people of Wanblee want it to be bigger. Tents and foldable tables are all that is needed to hold these farmers' markets outside, so goods are protected from debris or weather and people can walk up to one another.

Having SNAP/EBT accessibility allows low-income families to receive and get fresh food if they don't have just enough money to provide themselves or their family with fresh foods. Allowing SNAP/EBT to be available and apart of farmers' markets is a strong step towards increasing a community's food security. Steps to set up SNAP/EBT accessible farmers markets have been provided by SDSU Extension (Barr, 2022).

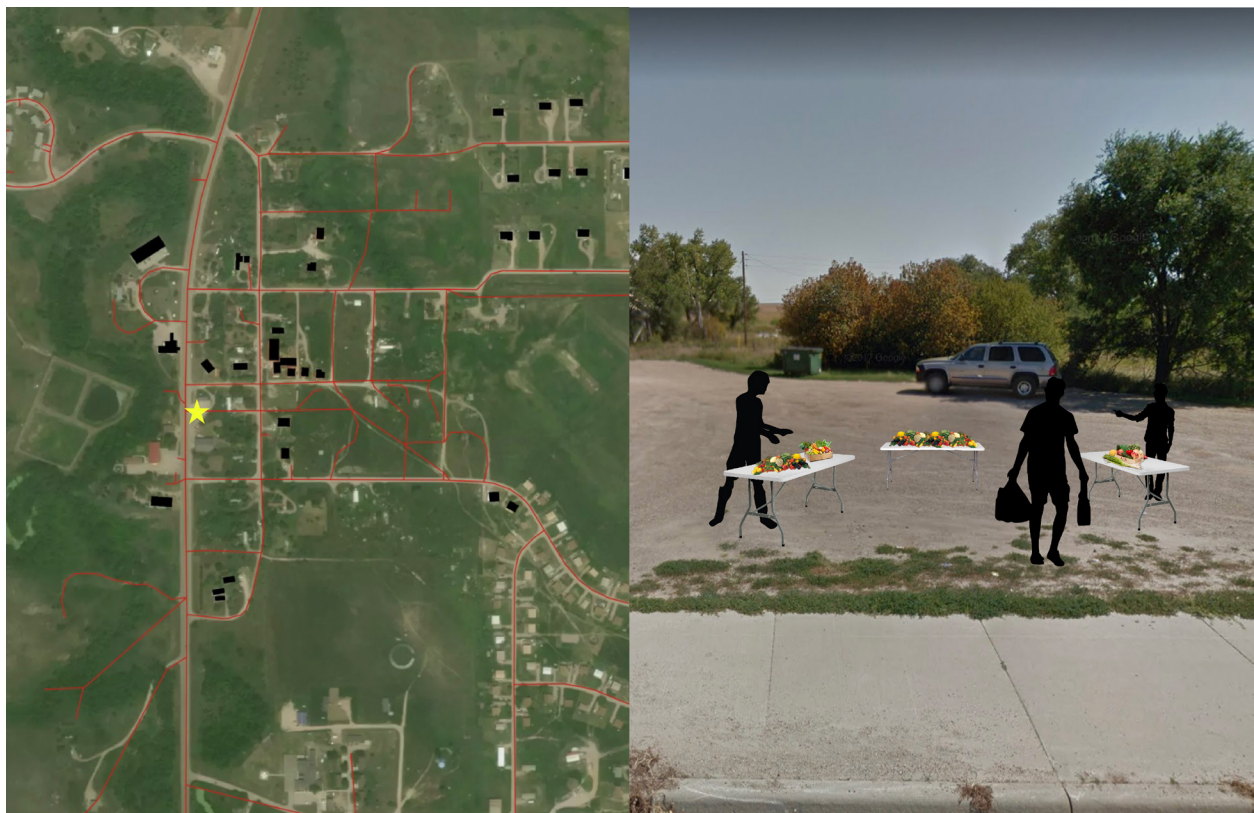


Figure 29: Farmers market location and setup

## RECOMMENDATION 21: CREATE A COMMUNITY HEIRLOOM SEED BANK

Seed banks are a place for seeds to be stored to preserve their genetic diversity for future plantings. Wanblee should have a seed bank within the community. It would be best to locate it in the community building so it can be climate controlled, and everyone will have easier access to the seeds. The seeds will be in their own jars with labeling that can be put on shelves when storing them. Seed banks allow people to plant their own seeds and pick what they want to grow in the community gardens or even in their own gardens. This will also preserve plant species that have been used by the tribe for hundreds of years in the community and rejuvenate the culture and heritage.

Having a seed bank provides many different benefits to communities. Having a seed bank available to people helps to protect seeds from natural and man-made disasters. When disasters happen, they can damage or even destroy local food supply storages and crops, creating potential shortages or nutrient problems for the community, but with access to a seed bank means that people are able to regrow and have available plants to them sooner rather than later. It also helps protect from climate change because it eliminates the total danger of crops being wiped out. Having many different seeds from different plants can preserve crops and plants from extinction because they can keep growing and reproducing in the right area.



Figure 30: Examples of food prep station equipment



## Cultural Sovereignty

Donna Ennis is the Community Center Manager and respected Tribal Elder in the Fond du Lac Reservation. In her article, “It’s Time to Take Back Our Cultural Sovereignty”, she says, “Cultural Sovereignty is ancient, and predates the arrival of non-Indians. It is a kind of sovereignty that we can only lose if we choose to give it up...Cultural Sovereignty is our inherent right to use our values, traditions, and spirituality to protect our future.” (Ennis 2015)

### RECOMMENDATION 22: RECOGNIZE DOGS AS COMMUNITY MEMBERS

It is important to recognize the status and importance of the dog in Lakota culture. Traditionally, dogs were recognized as members of the community with a mutual relationship of reciprocity and respect with their human counterparts. In modern Wanblee, that relationship between people and dogs has become strained. Community members have voiced concerns regarding their safety and the safety of their children because of local dogs’ aggressive tendencies.

For example, two members of the SDSU team performing the walkability analysis in Wanblee were stopped on the road by community members and told to turn around because there were aggressive dogs at the end of the road. Any member of the community, human or animal, who makes community members feel unsafe is not a respectable member of that community. These situations require mediation and intervention.

Since the dogs in Wanblee should be treated as members of the local community, the community should take a united approach to solve the issue at hand. Simple solutions like rehoming or euthanizing stray or aggressive dogs do not treat the root source of the problem; they merely mask the symptoms. The only way to begin to address the dog problem in Wanblee is by recognizing them as full members of the community and giving them the rights and responsibilities of community members. Additionally, they need to be properly cared for as community members.

Richard Meyers is the director and chair of graduate studies at Oglala Lakota College on the Pine Ridge Indian Reservation in South Dakota. He in his article, “What Rez Dogs Mean to the Lakota” he states, “It will take a community to solve this issue and to recognize that it is people, not dogs, who have become the real beasts who are ultimately responsible for things being out of balance” (Meyers 2020). Therefore, it falls to community members to correct the balance. “If dogs and people can be brought back into harmony across American Indian reservations, it will take a lot more than ‘rescuing’ or killing the dogs” (Meyers 2020).

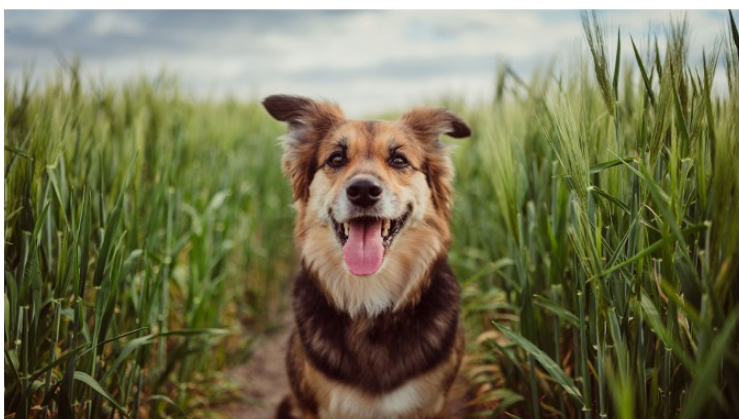
### *Spay or Neuter All Dogs*

Several organizations offer assistance with this. The most readily available solution for Wanblee is to contact the Oglala Pet Project, who also offer help in the rehoming process should that be necessary. Dogs that are spayed or neutered are more likely to be happy and healthy and are less prone to aggression.

Spayed and neutered dogs have less chance of spreading communicable diseases such as Brucellosis, which is a disease that is transmitted through sexual activity and can lead to reduced life expectancy in an animal and can cause a litany of other reproductive issues including cancer. In general spaying and neutering dogs leads to a longer expected lifespan and reduces the risk of health issues.

### *Vaccinate Every Dog*

Several organizations help with vaccinations, including Oglala Pet Project. Dogs that are vaccinated present less risk to the health of community members and themselves. Unvaccinated dogs can carry rabies. They may also carry other diseases and bacterial infections which may be contracted by humans and will negatively affect human health through contact with canine fecal matter or other bodily fluids. Dogs that have not been dewormed pose a threat to human health. Any animal with worms that enters a person's residence can pass it along to the humans in the same residence. Finally, unvaccinated dogs can contract a large variety of other diseases and bacterial infections, which reduce the animal's life expectancy and overall health and happiness.



*Figure 31: Vaccinated dogs are happier*

### *Provide Canine Access to Community Food Bank Resources*

One of the leading causes of canine hostility in Wanblee is food aggression. Many animals can become hostile to other animals and people due to a lack of food. Food aggression can cause good dogs to become violent and can be a danger to human health and safety. One way to combat food aggression is to provide access to a local food source. A food bank in Wanblee can be centrally located at a convenient location in the community. Community members can collaborate to provide food for the dogs in the community.



### *Raise Community Dogs by Community Families*

Dogs raised without proper structure and discipline will not appropriately integrate into the community. It is important to emphasize relationships centered around companionship rather than ownership. For example, orphaned children in a community are still raised and disciplined by community members as they grow up before becoming full members of society. As members of a community, dogs deserve the same care and respect as a child or any other person.



*Figure 32: Community members share responsibility for dogs*

Additionally, children within families should be given the responsibility of raising a dog, giving them something to do when they are bored. Dogs need not be detained in a single household. Families may rotate the puppies so long as the community settles on some disciplinary guidelines for the dogs. If community-based discipline and care of the dogs remain consistent, community members may share the responsibility to avoid the dogs becoming owned by any specific family.

Once dogs have been properly trained, they may enter the community free to roam as they wish. Once they have been made aware of the expectations of the community, they will be less prone to aggression toward the families they grew up with and the community. The community of Wanblee can hold meetings to keep one another informed and host workshops to teach community dog hosts how to properly cater to an animal residing with them. The details of this are ultimately up to the discretion of the community, but it is preferred that each household maintains consistent guidelines in compliance with community standards.

### *Rehome Aggressive Animals*

The Oglala Pet Project offers services to rehome animals. Animals that are difficult to reason with and are resistant to human interaction may need to be rehomed. An animal that acts aggressively toward people in a community constitutes a threat to human health and safety.

### Create a Community Dog Shelter

A community shelter can be built with dog doors to provide the local dogs with a place to come and go freely. This area can be built with a fence incorporated nearby to provide the dogs with a safe space to run. If necessary, the shelter can be built with dog doors that can be locked to detain dogs that are aggressive. A community dog shelter area can also serve as a location where dogs may access resources made available by Oglala Pet Project. We feel that this is a good location because it is centrally located but not immediately adjacent to any community residences or services.



*Figure 33: Dual-language signage*

If the citizens of Wanblee work as a community to recognize and treat dogs as members of the community, much of the perceived dangers posed by these dogs will be mitigated. It is important to emphasize the importance of consistency at the community level throughout this process. However, should the community agree to follow through with these recommendations, including dogs as members of the community is a very feasible solution to the issues at hand.



### RECOMMENDATION 23: REVITALIZE A LOCAL SENSE OF IDENTITY

The community of Wanblee has a rich Lakota heritage that deserves to be properly celebrated. To appropriately honor the heritage of the people of Wanblee, it is important for community members to revitalize their sense of Lakota pride. Reclaiming empowerment and pride in Lakota heritage is an important step in the transformation of the community. This could be addressed in many ways, including Native American art, outdoor classrooms or workshops, and remembering and embracing Lakota history.

#### Implement a Community Art Program

“Community art includes visual, media, and performing art activities to interested community members. Community-based centers offer programs for community members to create artwork through collaboration and interactions with others.” (Community Arts Programs 2020). Rapid City displays a great example with its implementation of “Art Alley”. Art Alley is an alley in Rapid City filled with graffiti. A landmark in the heart of downtown, it is a beautiful representation of the youth of Rapid City. Art Alley is a program that provides local youth with a legal and artistic outlet for any desire to express themselves. Art can be a healthy outlet for emotions, boredom, and frustrations.



Figure 34: Oglala artist dragonfly mural in Art Alley

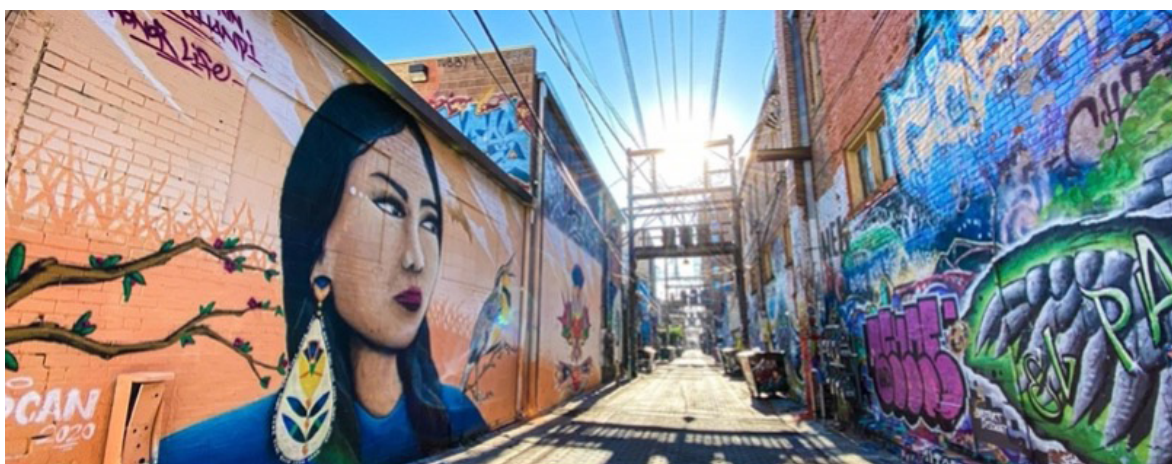


Figure 35: Art Alley mural



A similar program in Wanblee would be met with great success. The community should choose a specific set of buildings or homes, with the consent of the building owners, to allow people of all ages a space to express themselves with and through Lakota Art. Some buildings in Wanblee have been tagged with graffiti. Allowing local artists to paint over this graffiti with Native American Art would provide a canvas for community artists. These activities should be built into school art classes while synonymously serving as a learning tool. A respected town leader or elder could lead a workshop to teach children about their Native history during the art class. The artwork decorating the school could be constructed in a mural format to allow students to tell a story with their art, celebrating their history and culture.



*Figure 36: Lakota art mural by artist Derek Smith*



*Figure 37: Native American art on the Callwood Center*



*Figure 38: Lakota art covering existing graffiti in Wanblee*



### Embrace Lakota History

The community should create fun, engaging workshops during which elders can teach community members about the Lakota way of life and encourage them to embrace their history. People of all ages can learn about the history and cultural practices of the Lakota people. Community workshops are an excellent opportunity for families to spend time together out of the house. Elders can host an interactive storytime for adults and children and provide a craft for the family to create together during the story. These workshops can be held at the community center, the school, or weather pending, the outdoor classroom site.



*Figure 39: Proposed outdoor classroom by FWT*



*Figure 40: An outdoor classroom shelter example*



*Provide community access to educational resources*

Wanblee needs to improve communication between elders and citizens, as well as other resources to effectively educate its community members. Educational or art-oriented workshops can be held at the community center to engage families as well as other interested community members. News of events can be communicated through flyers found at the community center, on a local page such as Facebook, at community churches and the school, and by word of mouth. Locate an outdoor classroom space centrally in the community for ease of access and host community engagement activities three times a week. If the weather does not allow for workshops in the outdoor classroom, activities can be held at the community center or the school.



*Figure 41: Proposed outdoor classroom by Crazy Horse School*



*Figure 42: Pocket park system for Mission*



#### RECOMMENDATION 24: PROPERLY HONOR THE DECEASED

“Burial traditions vary from tribe to tribe, but one constant remains among them: caretaking of the dead is something all tribes consider sacred.” (Hemenway 2017)

Native American culture prioritizes properly caring for and honoring the deceased. Historically, it was believed that the soul could not find rest if the body was not properly buried and cared for. Caring for the deceased is a sacred responsibility and privilege among Native American peoples. Because of the importance of caring for the dead, the following recommendations have been made regarding the cemeteries in Wanblee, SD.

The following recommendations should be viewed as guiding principles; the community should adjust these recommendations as necessary to appropriately address specific cultural norms. A cemetery should serve functionally as a place for people to be laid to rest. A cemetery should also provide family members of the deceased a place of solitude and hope in remembrance of their loved ones. To this end, we are proposing feasible solutions to the issues brought to our attention as well as some recommendations for properly honoring the deceased.

##### Fencing

Each of the four cemeteries should be fenced. Fencing will provide enclosure and define the boundaries of each sacred place while keeping out undesirable animals. A hedge of *Cornus sericea* (Red osier Dogwood), which is red year-round, would be an elegant alternative to traditional fencing. In Native American culture, red is symbolic of spiritual life.



*Figure 43: Dogwood hedge as an alternative fencing material*

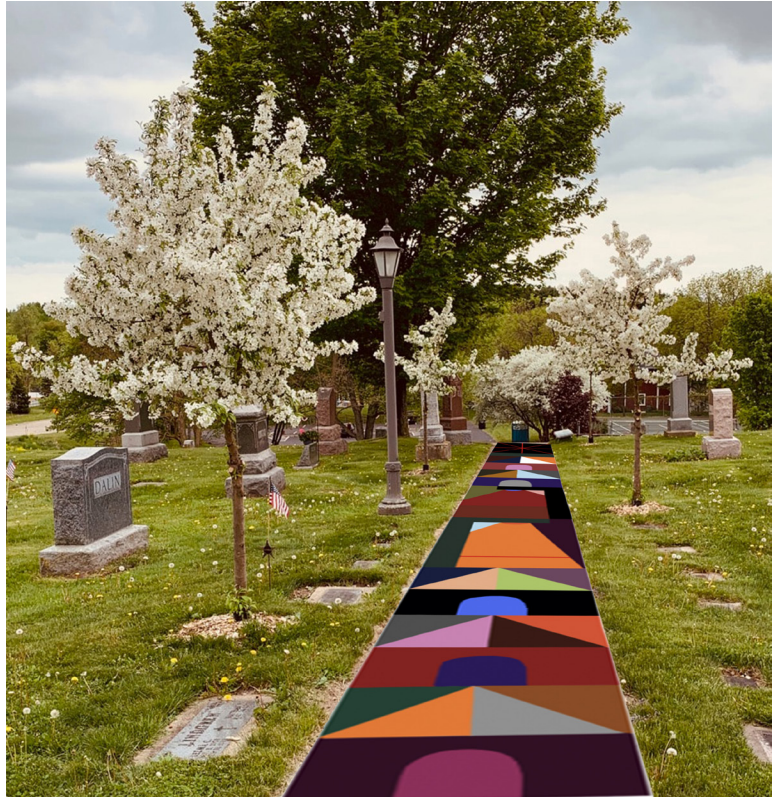
##### Plan for the Future

In each cemetery that is still active, a plan should be developed that will incorporate accessibility, proper signage, and appropriate elements that will provide for a positive visiting experience.



### Access

Wayfinding aids and adequate access should be provided to each cemetery. Adequate signage, which should be written in both English and Lakota, will direct visitors to each site. At the entrance to each cemetery, there should be a sign that lets visitors know they have arrived and an additional sign which indicates the burial locations of any important historical figures. For ease of circulation, there should be adequate parking space and indicated walking paths provided in each cemetery. Where appropriate, paver paths decorated with Lakota art can lead visitors throughout each cemetery.



*Figure 44: Paver pathway decorated with Lakota art*



*Figure 45: Updated cemetery entry*



### Appropriate Vegetation

Incorporate native shade trees into all cemeteries. Trees create a sense of peacefulness, quiet, and enclosure. Appropriate native species include Yellow Pine, White Spruce, Common Juniper, Red Cedar, Black Cottonwood, Quaking Aspen, and Hackberry trees (Williams 1895). Following the burial, per cultural norms, reseed the lawn areas of each cemetery. This will give each cemetery a more uplifting appearance and provide a better experience. Native flower beds would be an appropriate addition to any cemetery to adorn and bring life to the site.



Figure 46: Shade trees can positively impact cemeteries

### Peace and Comfort

Install benches and wind chimes in each cemetery. Wind or wood chimes are often a source of comfort and can be symbolic of remembrance. Incorporating birdfeeders that will attract songbirds in cemeteries would help in providing a comforting experience to visitors as well.

### Proper Gravesite Tidying Practices

The space surrounding each gravesite should be properly cleared of excess soil which can be moved to an accessible but common space. Each individual gravesite can be seeded with grass following the traditional burial process. Part of properly honoring the deceased includes giving them an attractive, clean, and well-kept place of burial.



Figure 47: Bench located adjacent to memorial stone

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