

CITY OF BRANDON // BIKE & PEDESTRIAN PLAN



Students walking and biking from school on a late summer day in Brandon, South Dakota.

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INTRODUCTION

Walking and biking are a fun and healthy way to get around, recreate, exercise, and spend time with family and friends, all while building a stronger sense of community. The City of Brandon has identified the need for a Bicycle and Pedestrian Plan and partnered with the planning and design experts at Ulteig Engineers, Inc. (Ulteig) to develop a groundbreaking, visionary bike and pedestrian system plan to guide the city into the future. The City of Brandon Bike and Pedestrian Plan will ultimately provide a Healthy Community Design that provides opportunities for increased activity, public health, clean air, trails, increased ADA accessibility, economic development, and multimodal opportunities.



BIKE & PEDESTRIAN MASTER PLANNING

The development of the master planning document that will guide the City of Brandon for the next 20 years requires thoughtful planning and iteration between planners, City staff, and the study advisory team and stakeholders. In partnership with the Sioux Falls Metropolitan Planning Organization (MPO), South Dakota Department of Transportation (SDDOT), Federal Highway Administration (FHWA) and Ulteig, the City of Brandon has invested in creating this document—the City's first Bike and Pedestrian Master Plan—to integrate active transportation seamlessly into city life both as a practical mode and as a catalyst for economic and community development. The Plan will propose a bicycle and pedestrian transportation network that links the City's neighborhoods in a safe and pleasant manner that is comfortable for a range of users. It will recognize that the network must be practical and affordable to the community and deliver economic and health benefits far greater than its costs. The City of Brandon's transportation system will offer choices to walk or bike comfortably using a healthy, sustainable, affordable, and socially satisfying means of mobility.

PLAN GOALS

The City of Brandon's Bike and Pedestrian Master Plan will guide the city to achieve the following goals:

- **CONNECTIVITY** — Brandon's bicycle and pedestrian network should be easy to access, convey people to destinations quickly and safely regardless of age and experience.
- **TRAILS** — Create a network of hard and loose surface trails throughout the city to increase public health, active transportation, and economic development.
- **SAFETY** — Identify the safest designs possible to enhance Brandon's walkability and bikeability, including ADA compliance, lighting, signage, striping, and physical separation from traffic.
- **SAFE ROUTES TO SCHOOL** — Build safe, well signed, accessible walking and biking routes to and from schools to enhance the quality of life and reduce school-based traffic congestion.
- **ACCESSIBILITY** — Incorporate ADA compliance and universal design principles into planned projects to meet the needs of all users with and without disabilities
- **EQUITY** — Spread bike/pedestrian infrastructure investment and access throughout the City of Brandon—everyone should have access to facilities, businesses, housing, and the larger transportation network!



PLAN METRICS

The City of Brandon Bike and Pedestrian Master Plan recommends the following measurement strategies to periodically review the effectiveness of the Plan over the next few decades:

- **COUNTS** — The City of Brandon does not currently collect bicycle or pedestrian count data, but it is recommended to invest in technology to collect such data for the future. Having bicycle and pedestrian counts would inform future infrastructure decision making, its usage over time and locations for improvement. These types of counts can provide measurements of walking and biking in Brandon, to ensure that more people are walking and biking each year and utilizing recommended bike and pedestrian infrastructure improvements.
- **MILEAGE** — Keep a tally of the number of feet or miles of sidewalk, trail, and on-street markings that the city installs. This should correlate with increasing bike/pedestrian counts. An expansion of bike and pedestrian infrastructure within the City of Brandon is the primary measure of effectiveness for this Plan. Byproducts of an expansion of the bike and pedestrian infrastructure may include improved economic development, public health, accessibility, quality of life, mode shift, congestion, and air quality.
- **DATA COLLECTION** — Maintain data records of bike/pedestrian counts, crashes, and information about active transportation usage in the City of Brandon. Even as more people are walking and biking, fewer crashes and injuries may result from the bike/pedestrian network if it is designed properly.



TERMINOLOGY

Sidewalk: separated from road by curb, recommended minimum standard width is 5 feet.

Shared Use Path (SUP): promotes users of various modes in two directions such as walking and biking, can be within public right of way or completely separate, and typically recommended to be at least 10 feet wide.

Sidepath: term often used interchangeably with shared use path, but pertains to locations where paths are parallel to, but are physically separated from streets.

Trail: designated path, but with various types paved or unpaved surfacing material. Width can vary from single track (3 feet wide) to the width of a shared use path.

BIKE & PEDESTRIAN ISSUES IDENTIFICATION

INFRASTRUCTURE

- Central Brandon is generally well connected for bicycle and pedestrians between the Big Sioux River and Split Rock Creek, but the surrounding areas of town would benefit from additional bicycle and pedestrian infrastructure. This issue was identified regularly through public feedback. Additional bike and pedestrian infrastructure would promote easier and safer access to schools, business, and recreation in the heart of Brandon.
- Railroad tracks throughout the city are currently not in use but will begin being utilized again by trains. With expected increases in usage of trains, crossing safety should be a focus area at the current five railroad crossings within the city
- Sidewalks and shared use paths have inconsistent widths throughout Brandon.
- Street markings or bike lanes in streets for road cyclists are not utilized by the city at this time. The city could benefit from increased bicycle connectivity via on-street markings or interim solutions instead of more costly construction of new bicycle infrastructure.
- Arterial and major collector streets have gaps in sidewalk connectivity.
- Public feedback noted gaps in sidewalk connectivity at locations where lots have not been developed. There are also long corridors and neighborhoods without sidewalk on either side of the street.



SAFETY

- Due to gaps in bicycle and pedestrian infrastructure, bicyclists and walkers in Brandon must occasionally bike and walk within the roadway corridor with automobiles. These roadways were often constructed with little or no consideration of how bicycles or pedestrians would use them.
- Public comments indicated a desire for more safety at busy intersections due to traffic and distracted driving.
- Opportunities are available to improve driver awareness of bicyclists and pedestrians on city streets.

FUNDING

- Limited funding to meet all desirable improvements
- Funding for improvements and maintenance of bike and pedestrian infrastructure comes from various sources and implemented with various project types
- The city pursues grants to supplement funding sources for bike and pedestrian infrastructure but cannot assume funding from these sources

POLICY

- Existing city standards have a minimum sidewalk width of 4 ft. This meets ADA standards but ADA standards state that sidewalks less than 5 ft wide must include passing spaces every 200 ft.

EXISTING & BASELINE CONDITIONS FOR WALKING & BIKING IN BRANDON

This chapter examines existing conditions in Brandon and includes those relevant to walking and bicycling. Existing factors such as land use, trails, curb ramps, traffic volumes, crashes, sidewalks, connectivity, and deficiency areas. The chapter includes a series of maps that illustrate the physical conditions of the bicycle and pedestrian network and some of the external forces that affect bicyclists and pedestrians.

The existing conditions in Brandon serve as the baseline for planning an active transportation network and development of recommendations as a result of this planning process. The City of Brandon is a community whose character is defined by its destinations, transportation network, and people. The baseline analysis is divided into two topic areas:



DEMAND

Factors that suggest a need for facilities and can be analyzed together to suggest the structure of the network. These factors include both points of origin such as population density and destinations such as parks, schools, and places of employment. Areas of analysis include:

- Current land use
- Future land use
- Population density
- Employment density
- Parks
- Schools

INFRASTRUCTURE

These factors use data on existing infrastructure and suitability to accommodate bike/ped infrastructure as is, or to determine if an infrastructure upgrade or new project is required. Areas of analysis include:

- Functional street classification
- Trails
- Traffic volumes
- Crashes
- Crash severity
- Sidewalk condition and curb ramps
- Severe crashes
- Crashes involving bicyclists or pedestrians

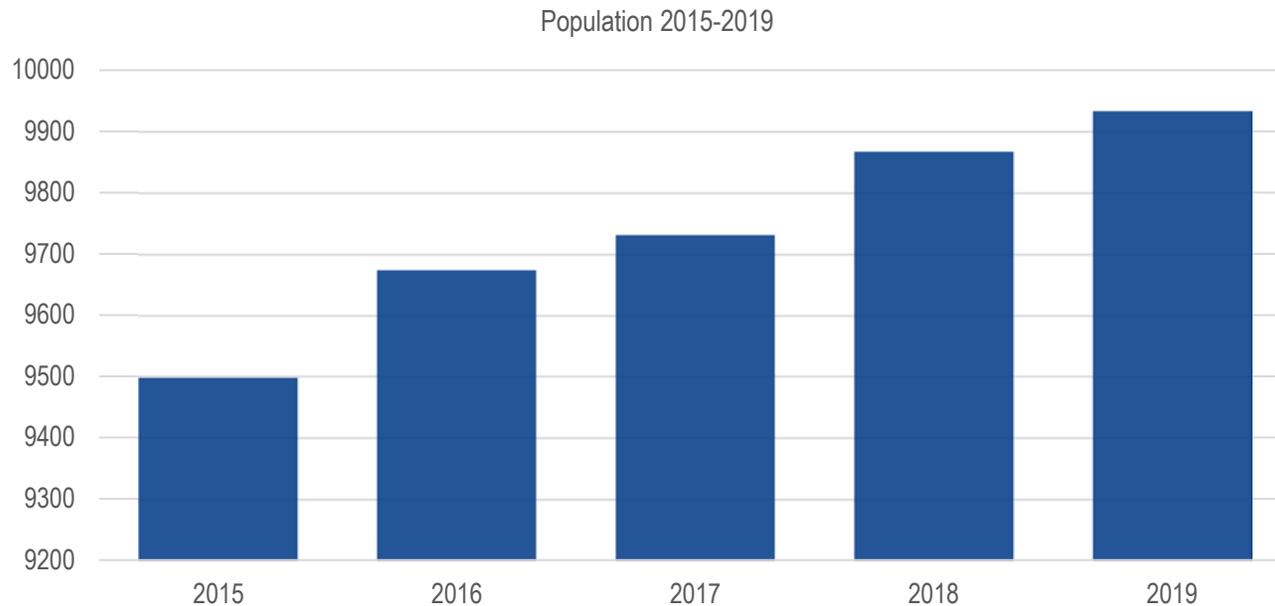
CHALLENGES

The City of Brandon's largest bike and pedestrian network deficiency is the core area of town, which was originally built with no sidewalk or ADA accommodations. Other areas were built with narrow sidewalks and are not ADA compliant.

The City of Brandon is currently building out their core area plan in phases, this buildout includes a retrofit of sidewalk into older neighborhoods previously devoid of sidewalks.

CITY OF BRANDON DEMOGRAPHICS & MODE CHOICE

The City of Brandon is located within Southeastern South Dakota. The city is bordered to the north by Interstate 90 and is bisected by the Big Sioux River near the western side of the city, and Split Rock Creek near the eastern side of the city. The City of Brandon lies approximately 8.4 miles from Sioux Falls. It covers approximately 5.42 square miles, with an estimated population of 11,048 in 2020 according to the decennial census. The chart below displays population trends for the City of Brandon.

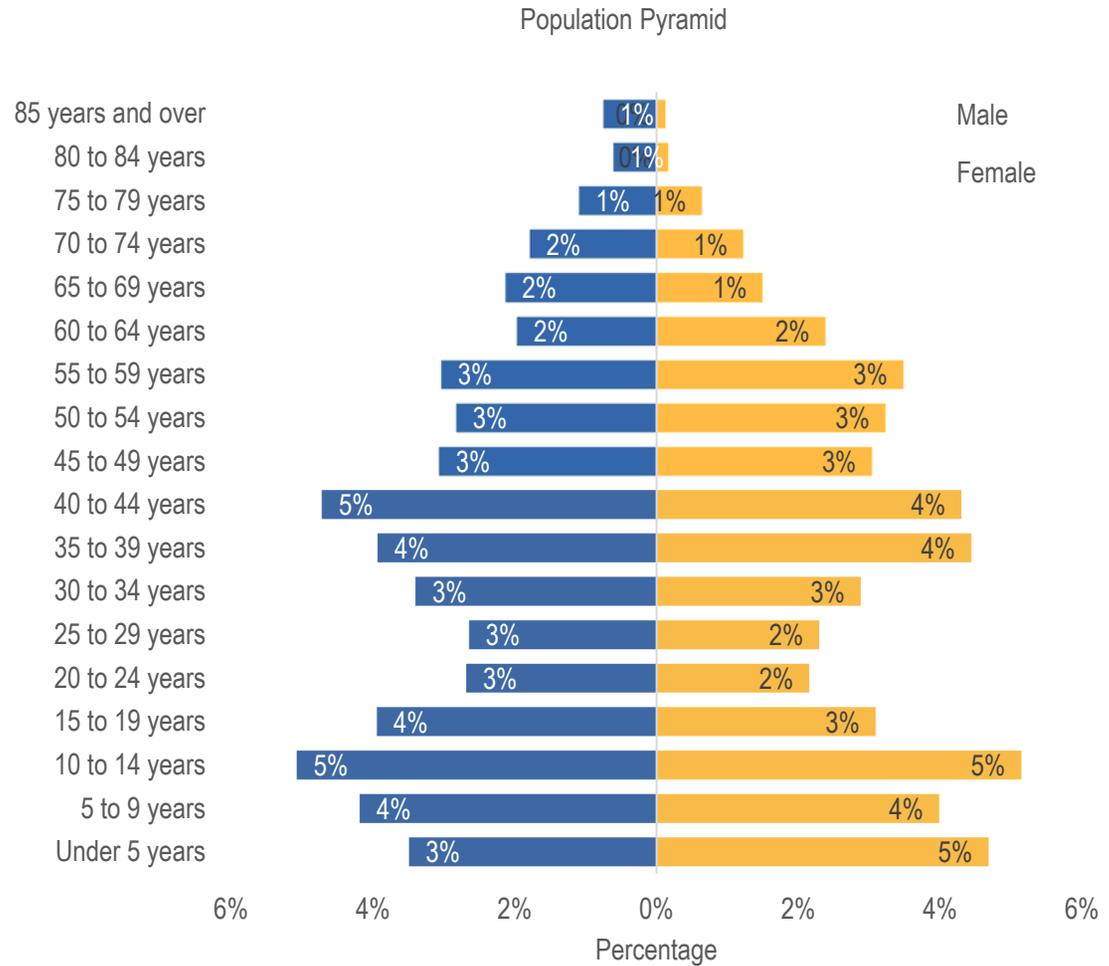


DEMOGRAPHIC SUMMARY

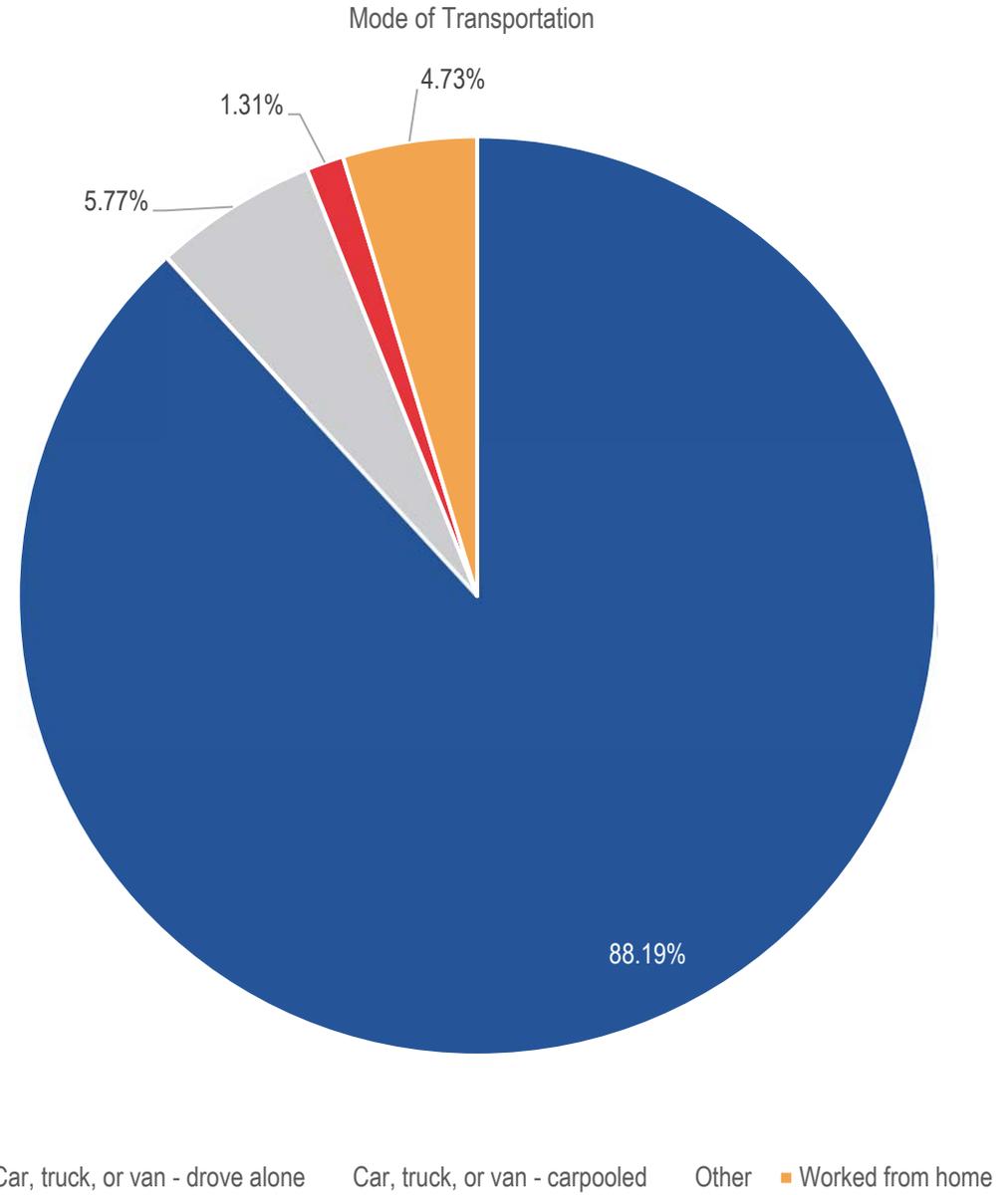
With a population of 11,048 and 3,614 households, Brandon is a vibrant and growing community. The American Community Survey (ACS) is a survey that provides social, economic, demographic and housing data of the U.S. population every year. This section utilizes the 5-year estimates from the ACS to increase the statistical reliability of the data. Its primary land use is single-family residential; a 2019 ACS survey 5-year estimates showed that 73.7% of respondents are residing in owner-occupied houses and 82% (LEHD 2018) are outside Brandon. Commercial and industrial uses are primarily concentrated along major road corridors, with industrial in the north half of Brandon. The southern and eastern halves of Brandon are also prevalent with institutional, recreational, and conservation districts.

The 2019 ACS 5-year estimates indicate that the Brandon's largest age group is 10-14 years followed by 40-44, and 35-39 years, respectively. According to the ACS 5-year estimates, approximately 0.5% of all workers bike and 2.6% walk to work. Younger residents, 16-24 years old, report biking to work at greater percentages in the U.S. For individuals under the age of 16, walking and biking are usually the only means of transportation. Nearly 39% of the population in the City of Brandon is 25 years old or younger, and they are more likely to walk or use bicycles for their commuting needs due to their young age or the availability of transportation mode.

The City's median household income is roughly \$87,250 with only 2.6% of City of Brandon residents reporting incomes below the national poverty level. The City of Brandon reported to have a work force population of 5,546 people.



According to the ACS 2019 survey 5-year estimates, approximately 0.3% of commuters rode bike and 0.8% walked to work. An increase of bike ridership is expected as a result of the implementation of this Plan, but the magnitude of increase is challenging to estimate due to the lack of regular bike counting program. The Plan will include specific ridership measures and the development of public survey to accurately represent existing and future levels of biking and walking.



EXISTING DATA & PLANS

EXISTING PLANS & PUBLIC FEEDBACK

The *Brandon Comprehensive Plan 2035*, completed in 2015, stated that a system of greenways will be developed to connect community park facilities and other open spaces, potentially with a continuous trail corridor, and featured the following goals for parks and open spaces:

1. Create a connected system of parks, trails, and open spaces that respond to the needs of current and future residents.
2. Maximize the use and efficiency of funds for the continued maintenance, development, and expansion of existing and future parkland.

The connected system of parks, trails, and open spaces has yet to be fully realized as of 2021, and there is no formal plan at this time.

The *Aspen Park Master Plan*, completed in 2015, gathered valuable public comments from Brandon residents on their thoughts for the City's park system.

Brandon Valley School District and Residents were two groups that were engaged in the plan. Both groups had thoughts that included the need for improvements for bikes and pedestrians.



How satisfied are you with the Park's trails?



Satisfied
12%



Unsatisfied
28%



Not Applicable
59%

Most respondents said 'not applicable' when asked about their satisfaction with Aspen Park trails, but when asked for improvements, multiple responses included bike and pedestrian access.

“WHAT CHANGES, IMPROVEMENTS, OR ADDITION COULD BETTER YOUR EXPERIENCE AT THE PARK?”

- Bike trails that connect to Sioux Falls and Big Sioux Recreation Area
- Create more inclusive access to benefit all users
- Better drainage
- Create shaded areas
- Add multiple entrances and exits into park

The *Final Project Report Community Assessment Survey*, completed in 2010, found from a survey of 865 Brandon residents that 44% of respondents agreed or strongly agreed that the City should invest in building more sidewalks while 25% disagreed or strongly disagreed. It also found bike and pedestrian paths to be the highest priority for recreation program funding. “A third of respondents supported expanding alternative transportation that connects to Sioux Falls.” Table 12 from that report is shown below.

Table 12: Sidewalks in Brandon

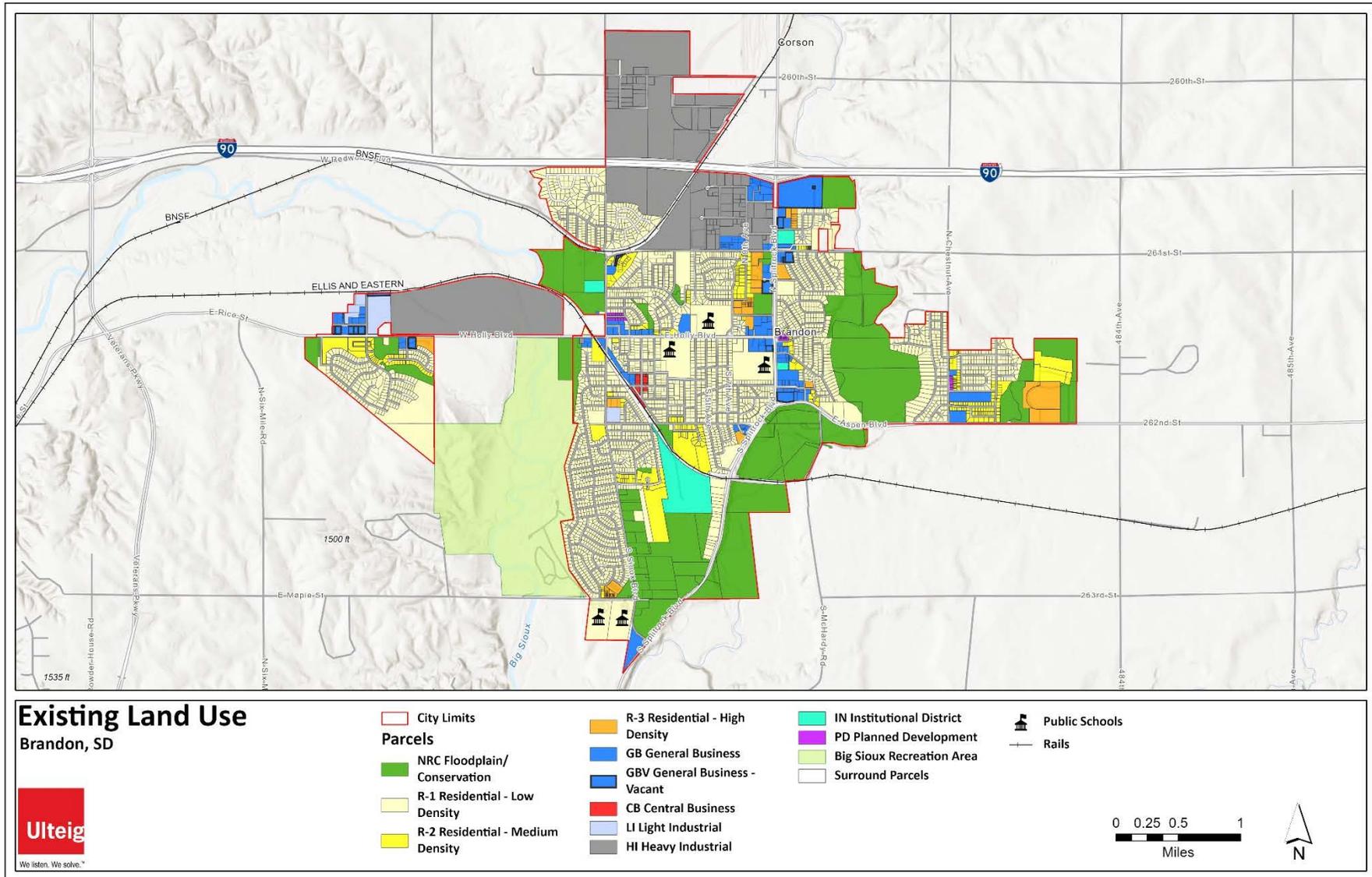
Question Seventeen (i-k)	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Don't Know/ Unsure
The sidewalks in Brandon are safe.	9%	64%	12%	7%	3%	5%
The City should invest in widening sidewalks in Brandon.	4%	16%	28%	32%	12%	8%
The City should invest in building more sidewalks in Brandon.	14%	30%	22%	18%	7%	9%

Other previous studies that are being reviewed as part of the Brandon Bike & Pedestrian Plan include the following studies:

- Maple Street/Park Street Corridor Study, 2019
- 2035 Brandon Comprehensive Plan 2035, 2014
- Minnehaha County Plan Envision 2035, 2015
- Sioux Falls Bike Plan, 2015
- Sioux Falls MPO Multi-Use Trail Study, 2011
- Sioux Falls MPO Bicycle Plan, 2009

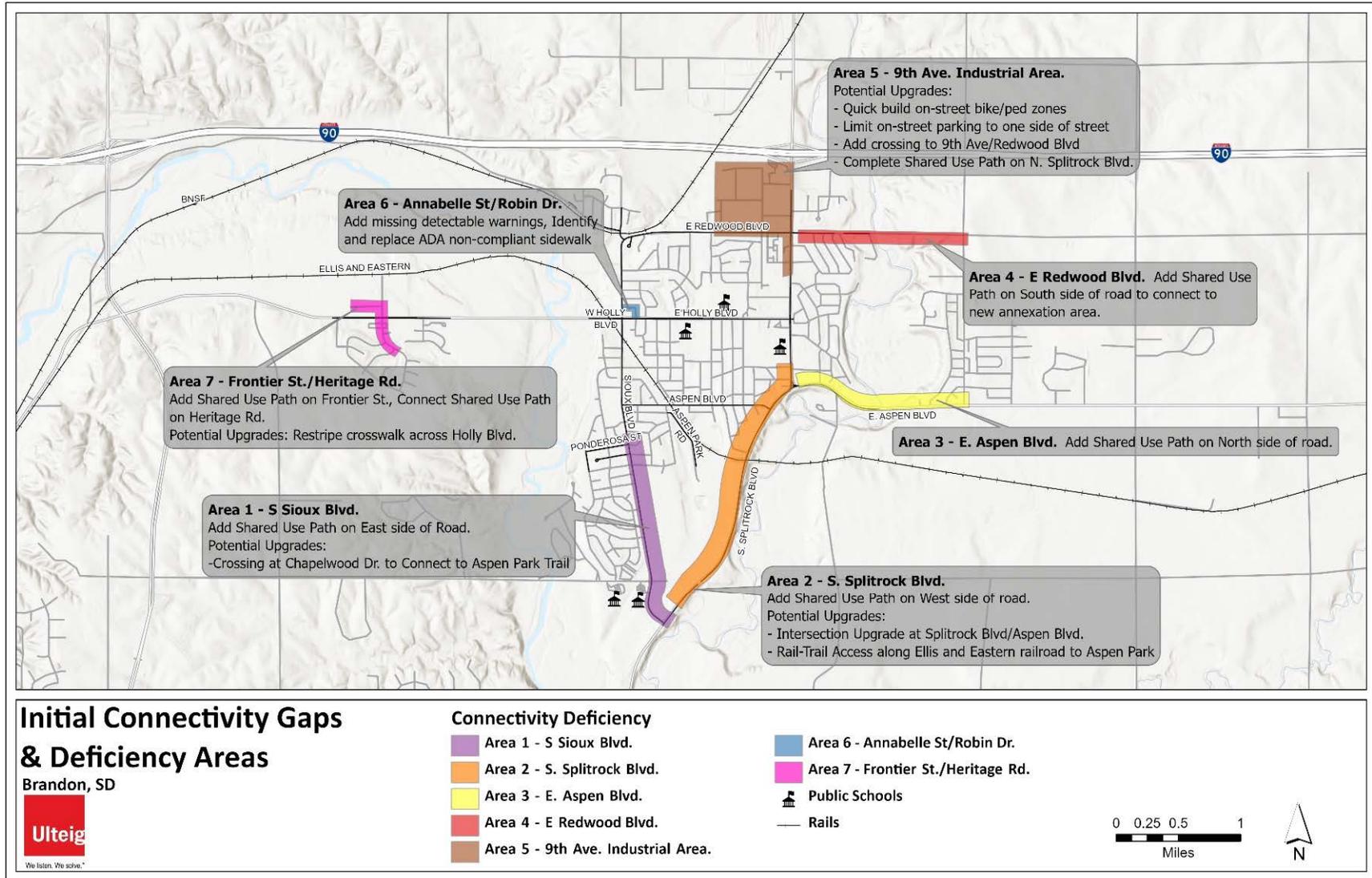


Figure 1.1 // Existing Land Use



CONNECTIVITY ANALYSIS & DEFICIENCY AREAS

Figure 1.2 // Initial Connectivity Gaps & Deficiency Areas



For each of the Deficiency Areas noted on the map, a focused aerial map is included on the next pages.

Figure 1.3 // Area 1 - S Sioux Boulevard.

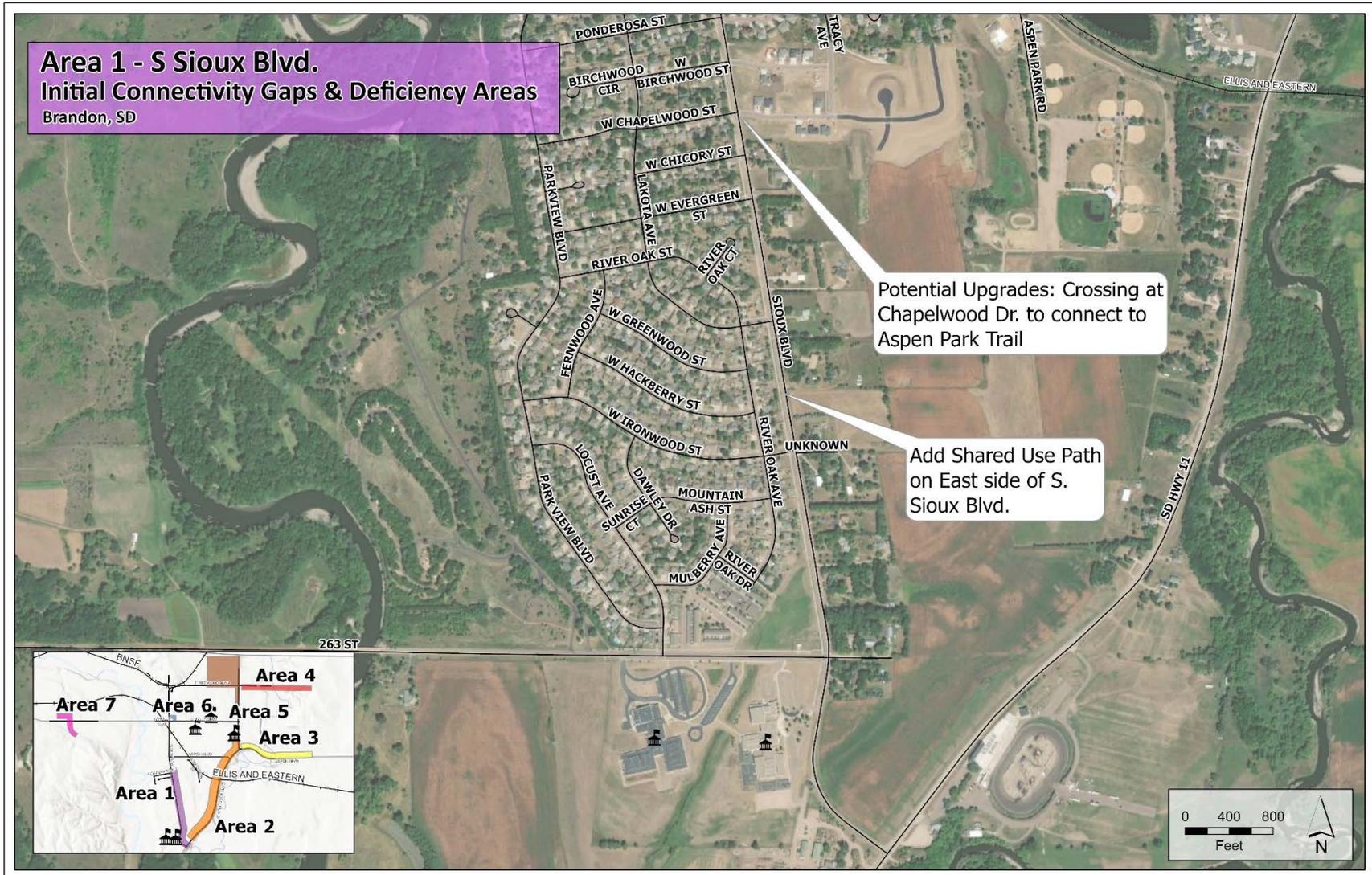


Figure 1.4 // Area 2 – S Splitrock Boulevard.

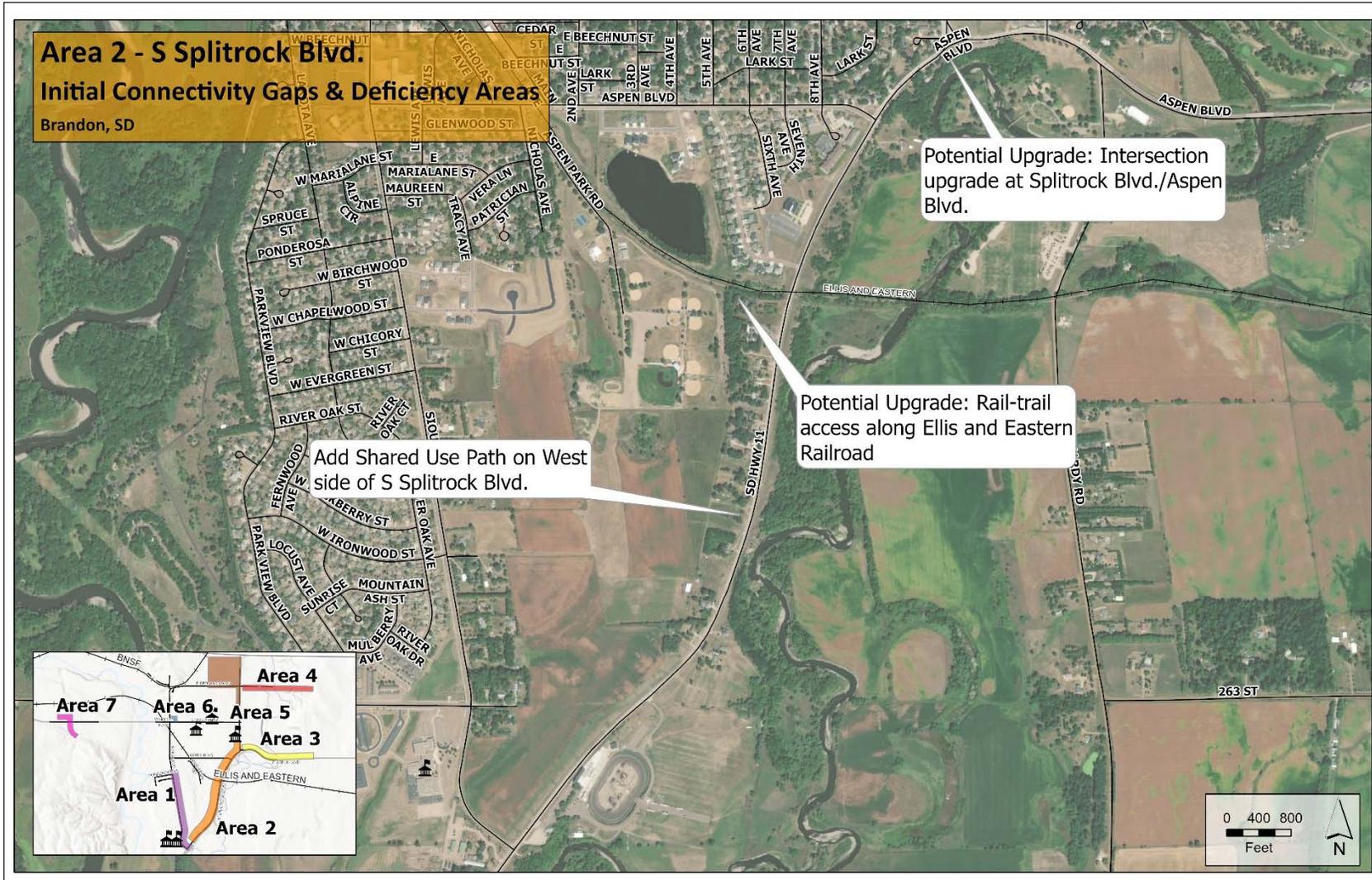


Figure 1.5 // Area 3 – E Aspen Boulevard.

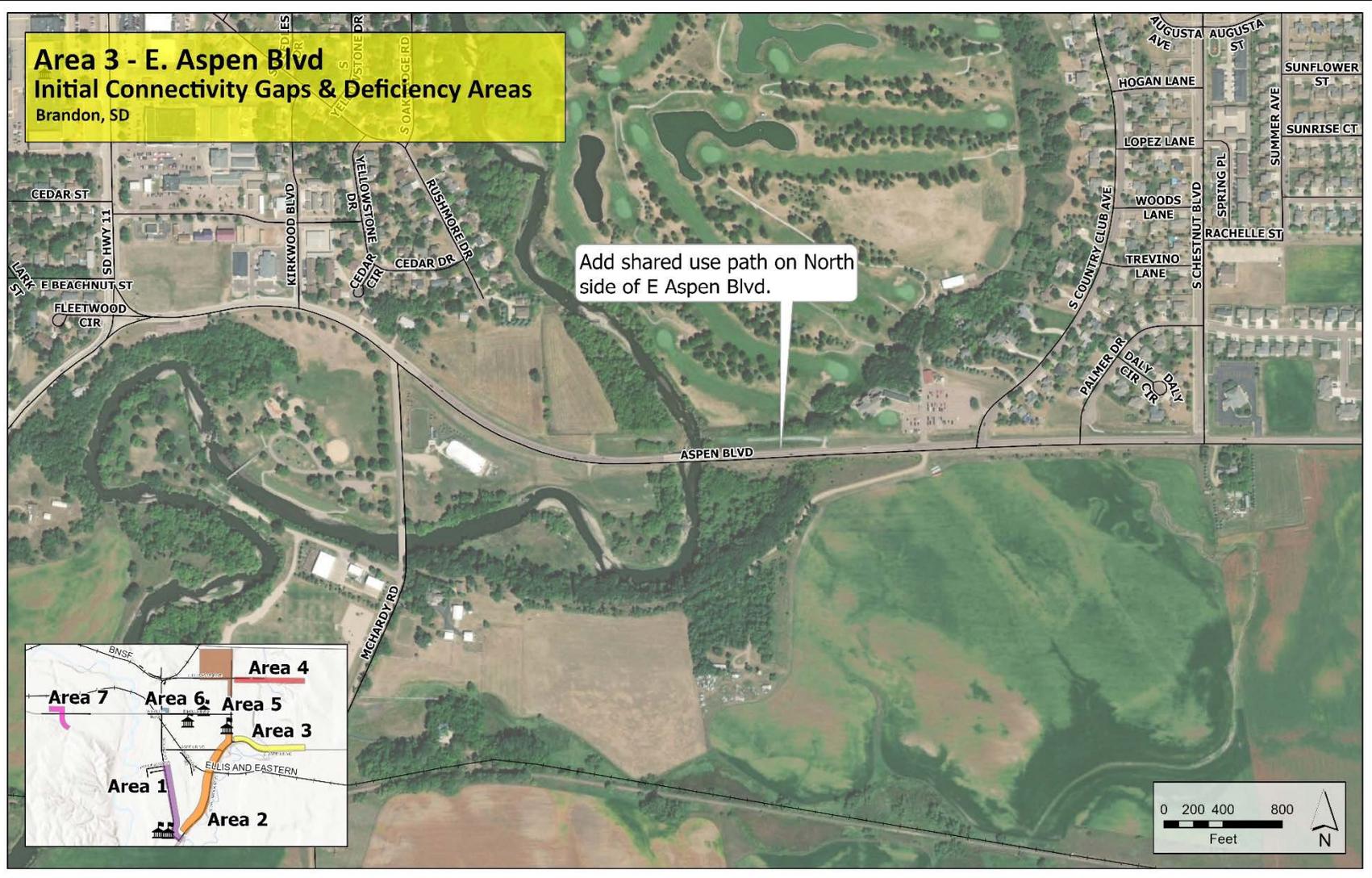


Figure 1.6 // Area 4 – E Redwood Boulevard.



Figure 1.7 // Area 5 – 9th Avenue Industrial Area

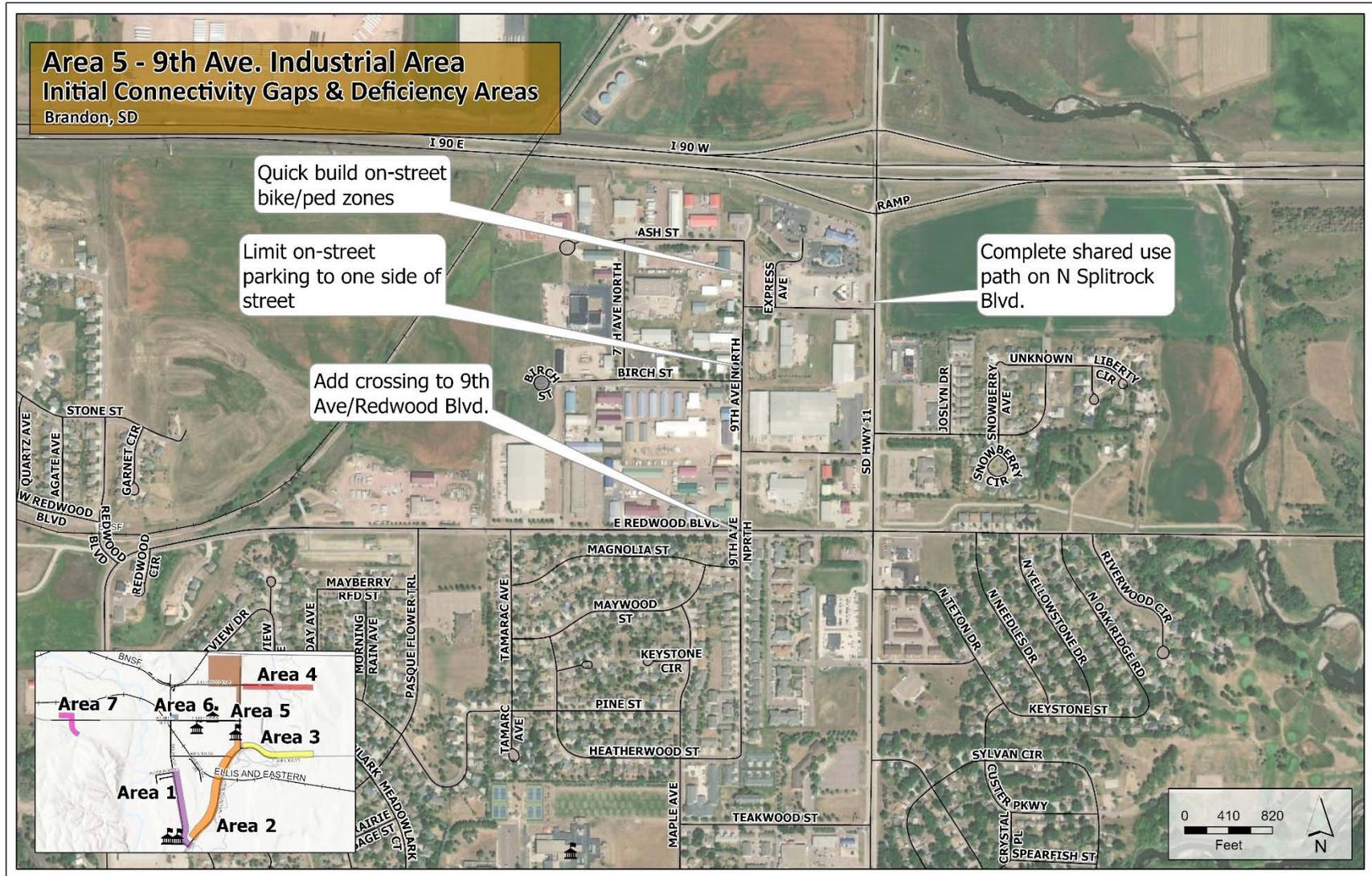


Figure 1.8 // Area 6 – Annabelle Street/Robin Drive

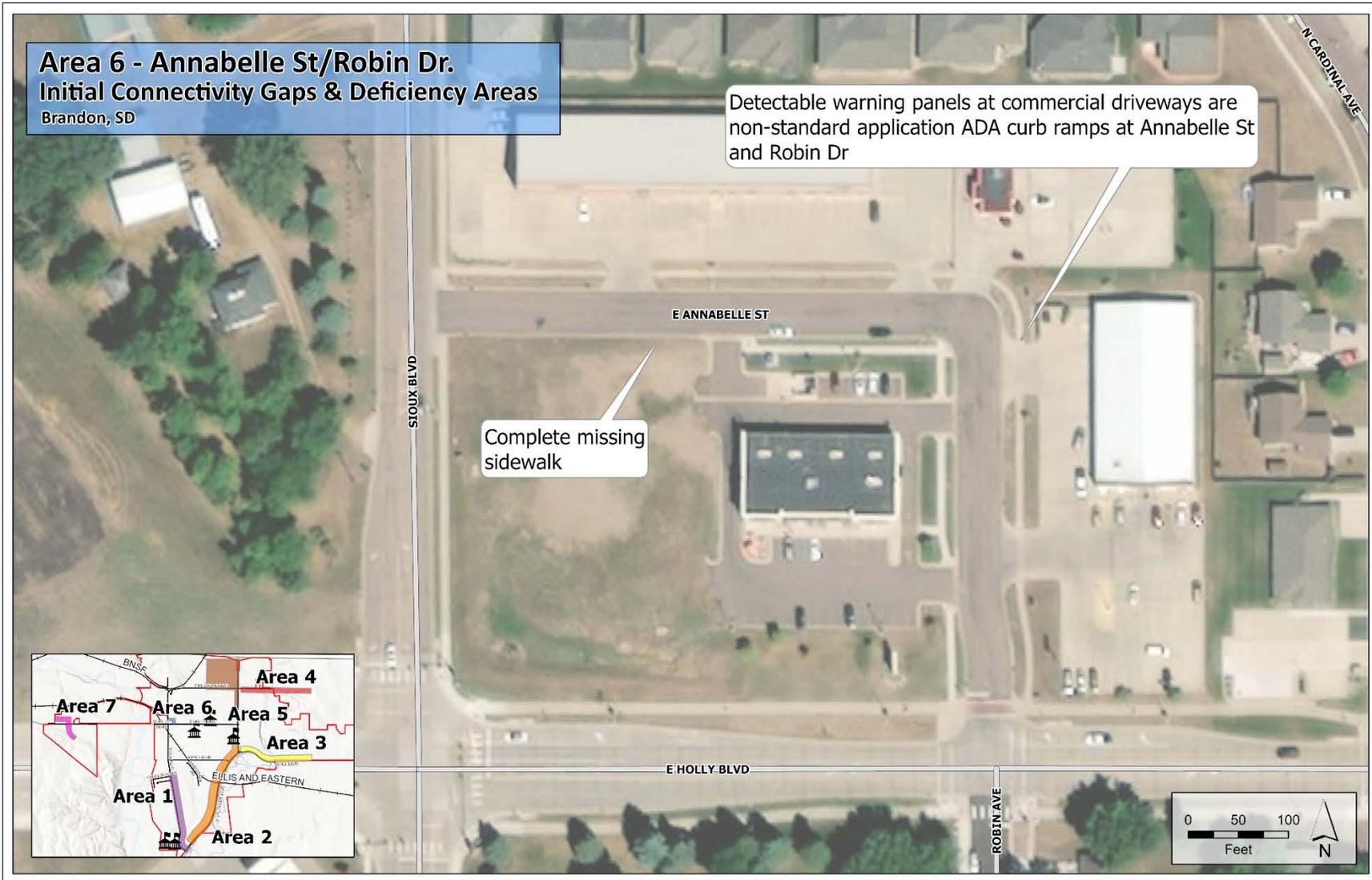


Figure 1.9 // Area 7 – Frontier Street / Heritage Road

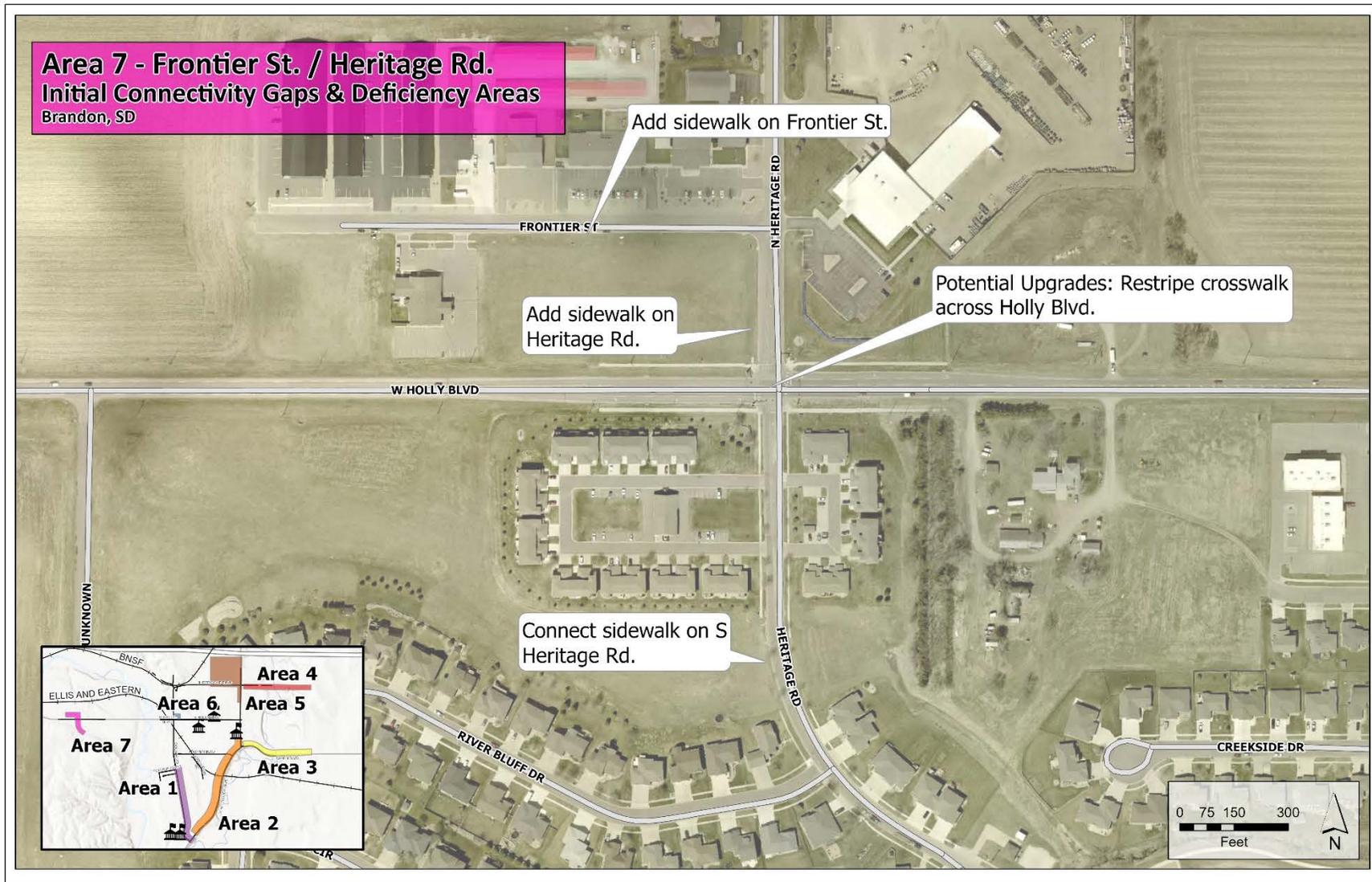
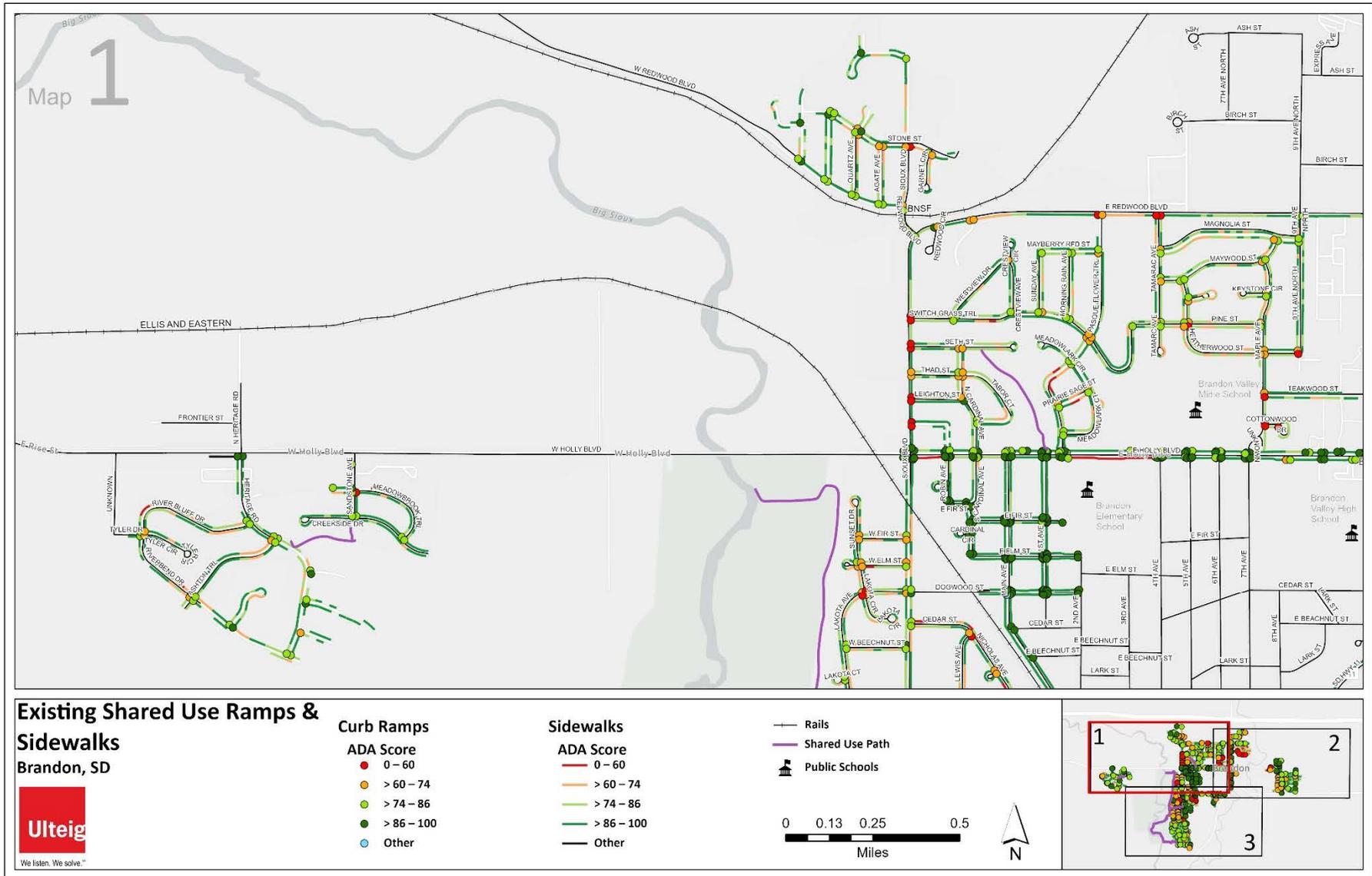
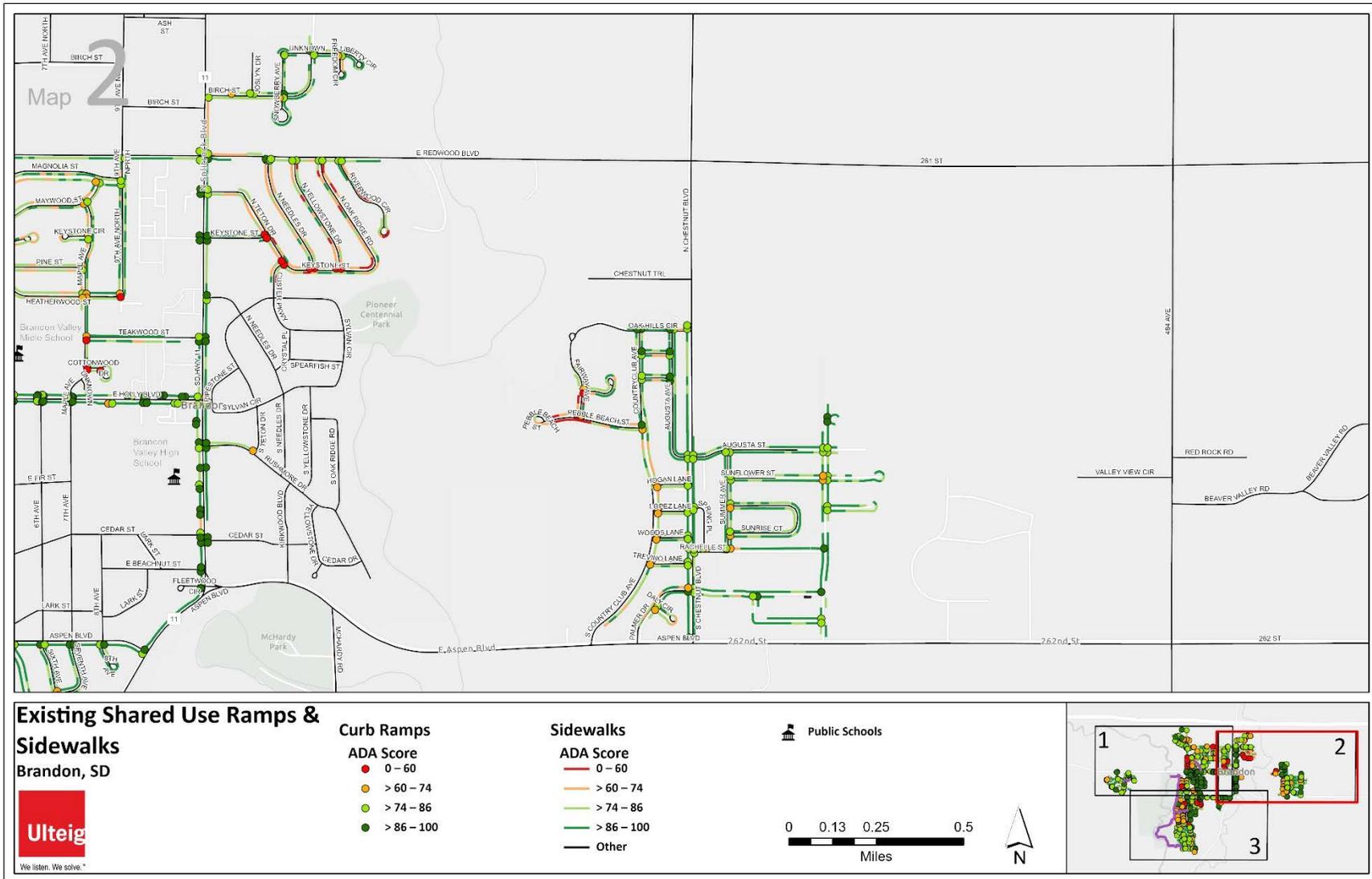


Figure 1.10 // Existing Shared Use Trails, Curb Ramps, and Sidewalks (Map 1 of 3)



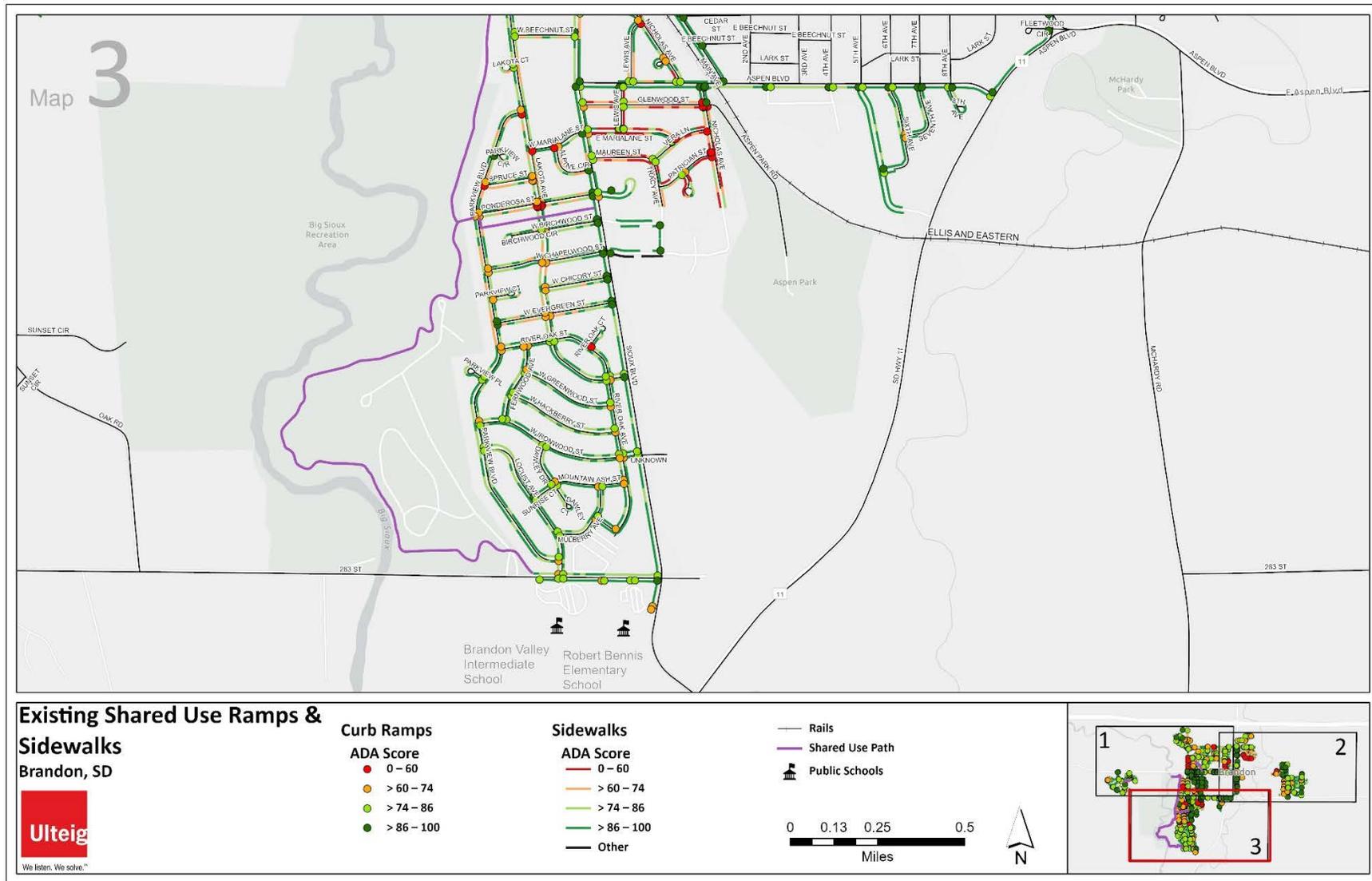
Map 1 shows a series of deficient curb ramps along Sioux Boulevard, north of E Holly Boulevard, as well as a sidewalk deficiency along E Holly Boulevard from Sioux Boulevard to Robin Avenue. Another sidewalk deficiency is shown on E Holly Boulevard from Pasque Flower Trail to 4th Avenue.

Figure 1.11 // Existing Shared Use Trails, Curb Ramps, and Sidewalks (Map 2 of 3)



Map 2 shows a series of deficient curb ramps along N Teton Drive and on Keystone Street. The map also shows that Pebble Beach Street has sidewalk of substandard width.

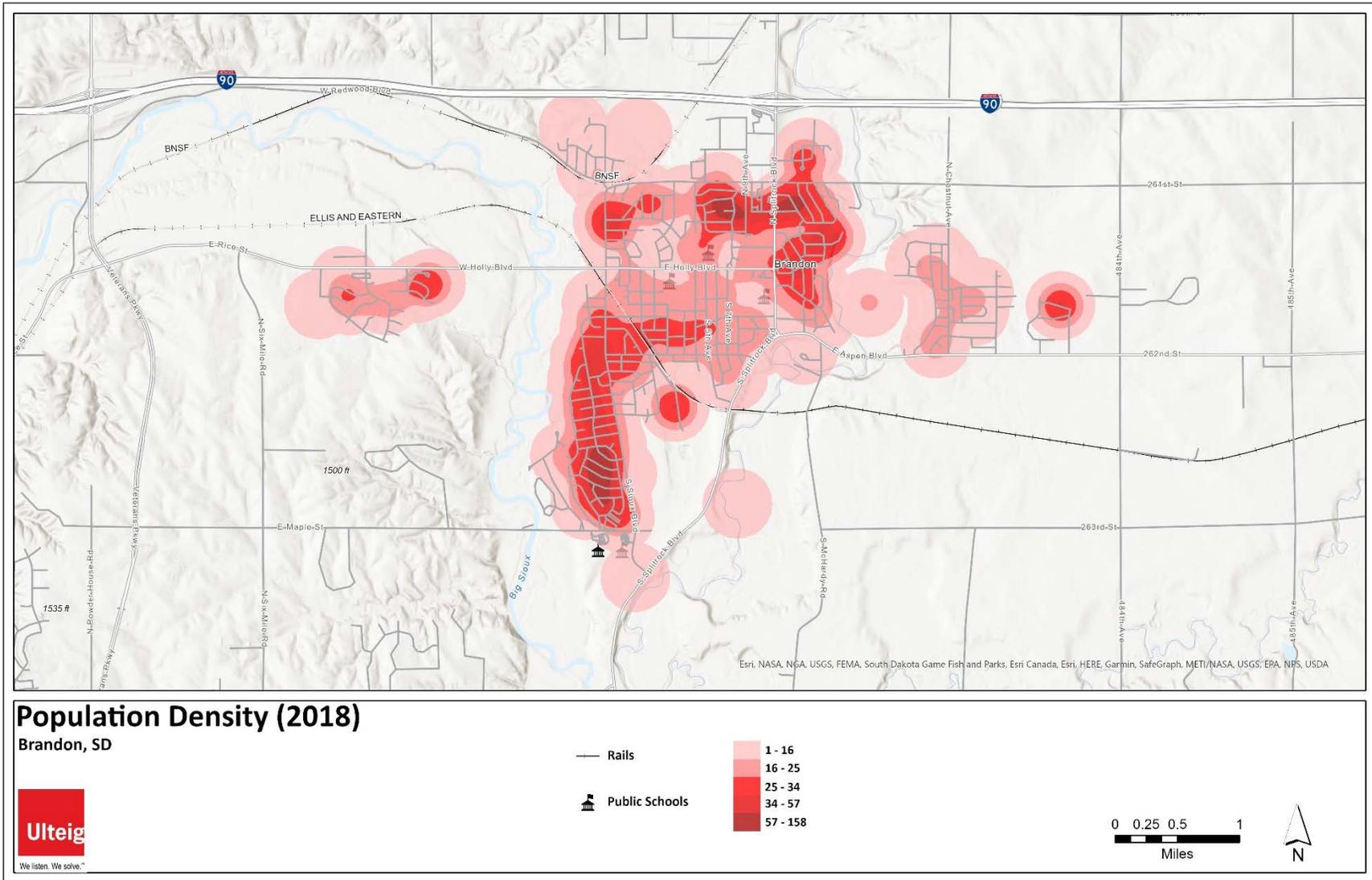
Figure 1.12 // Existing Shared Use Trails, Curb Ramps, and Sidewalks (Map 3 of 3)



Map 3 shows a series of deficient curb ramps along Nicholas Avenue and a few more in the area of Lakota Avenue and Ponderosa Street. The map also shows that entire neighborhood around E Marialane Street has sidewalk of substandard width.

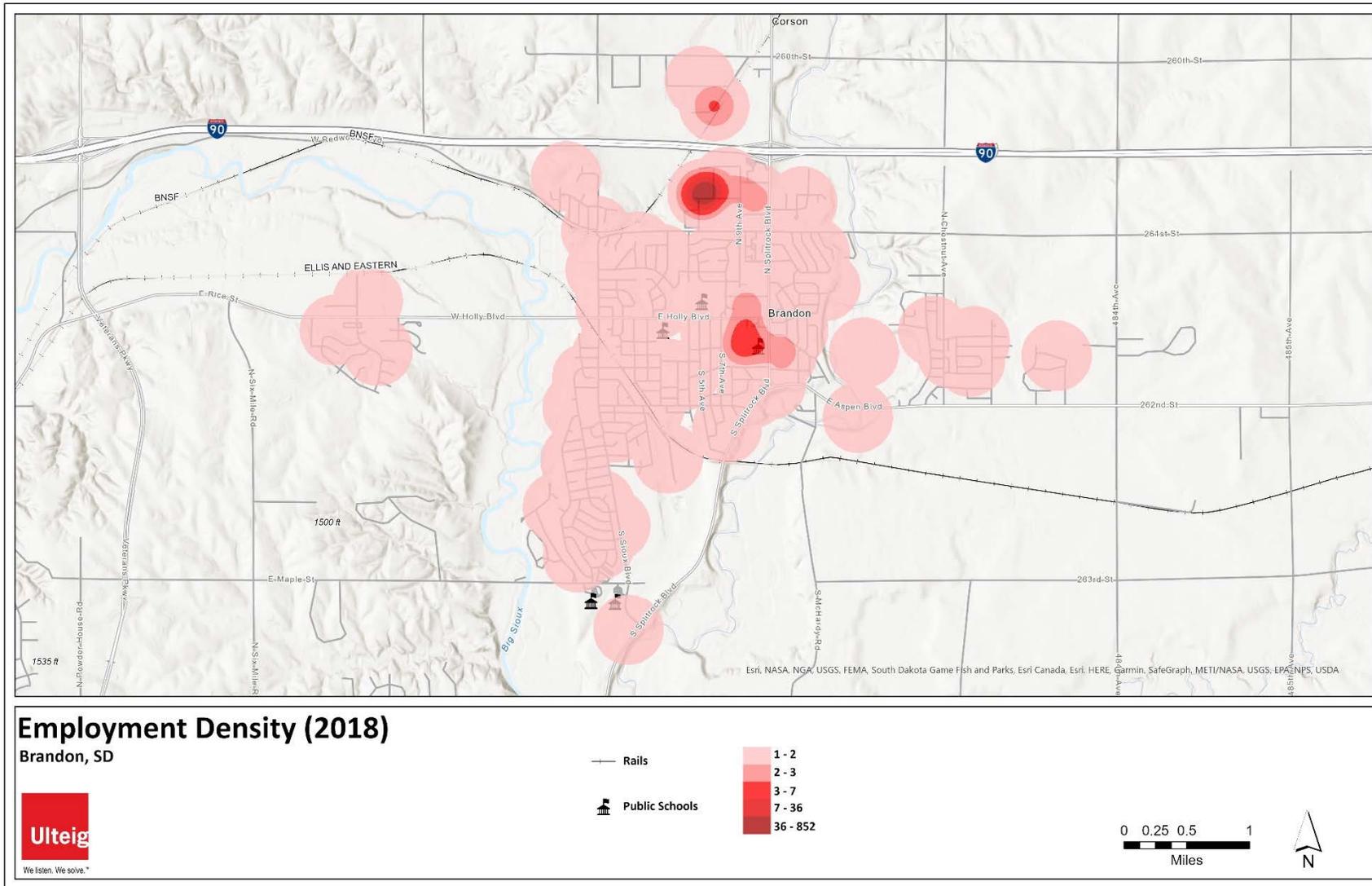
DEMOGRAPHIC ANALYSIS

Figure 1.13 // Population Density



Population density is one of the most common indicators of bike and pedestrian demand. Based on the population and employment density, the planning team will divide the study area into various Bike-Ped Analysis Zones. These zones will be used to analyze various socio-economic and built-environment factors to understand existing and future bike/ped demand. When the number of people living in an area increases, they are more likely to make short walking and biking trips.

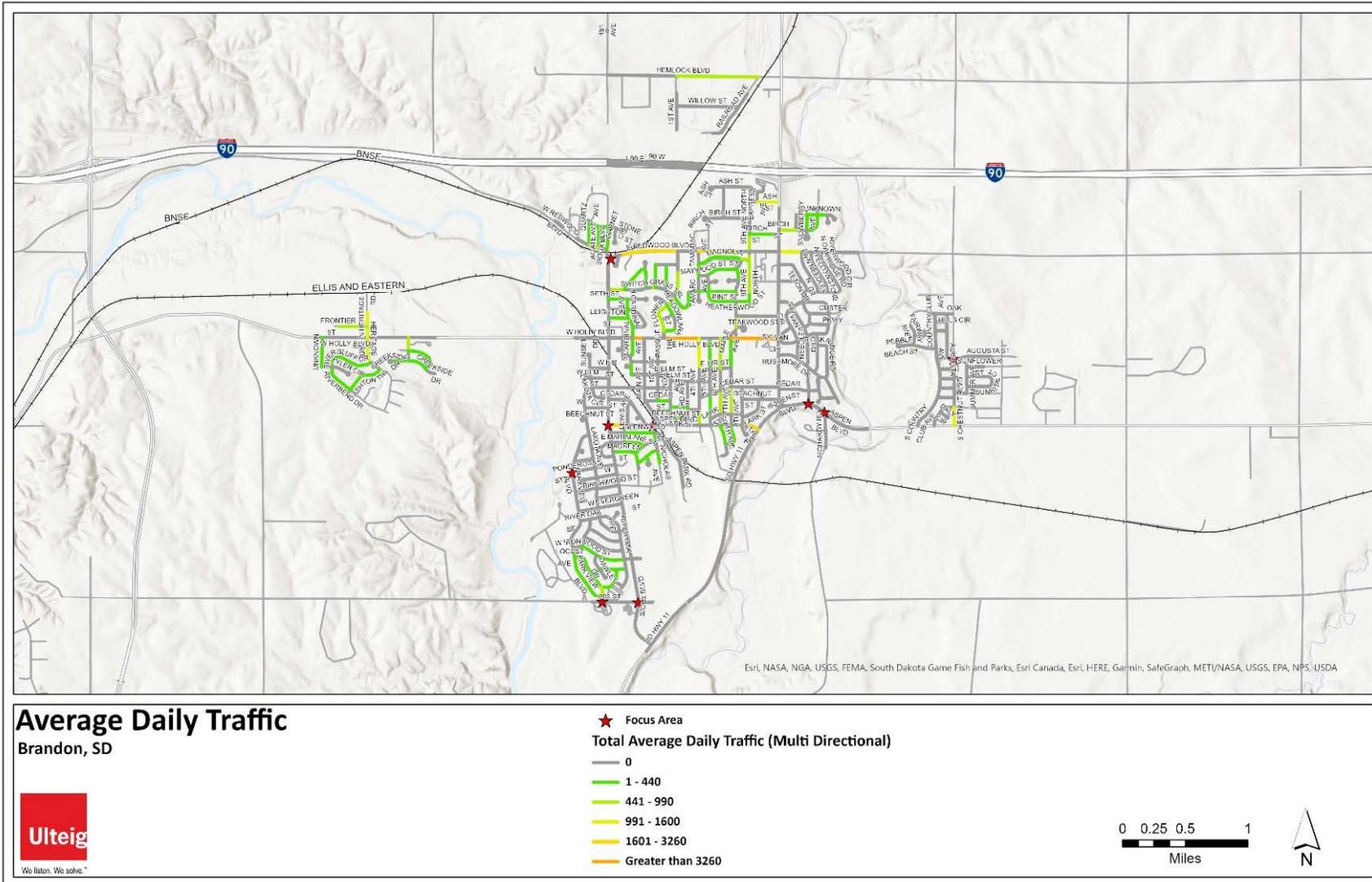
Figure 1.14 // Employment Density



Employment density is also correlated to active transportation demand by identifying concentrated job centers. The map uses census data to illustrate jobs per square mile in the city. The greatest concentrations are in the N 9th Avenue Industrial Park and the Brandon Valley High School/Brandon Library/Sunshine Grocery area. This pattern combines industrial, institutional, and retail employment. It underscores the value of providing a strong bicycle and pedestrian connection throughout the core of the City and into industrial employment centers

TRAFFIC ANALYSIS MAPS & CRASH HISTORY

Figure 1.15 // Average Daily Traffic



The type of bicycle facility applied to a given street should consider the volume of vehicle traffic present. Typically, higher traffic volumes warrant a greater degree of accommodation and separation from traffic. However, the City of Brandon generally has low traffic volumes.

VEHICLES PER DAY & BIKE/PED INFRASTRUCTURE

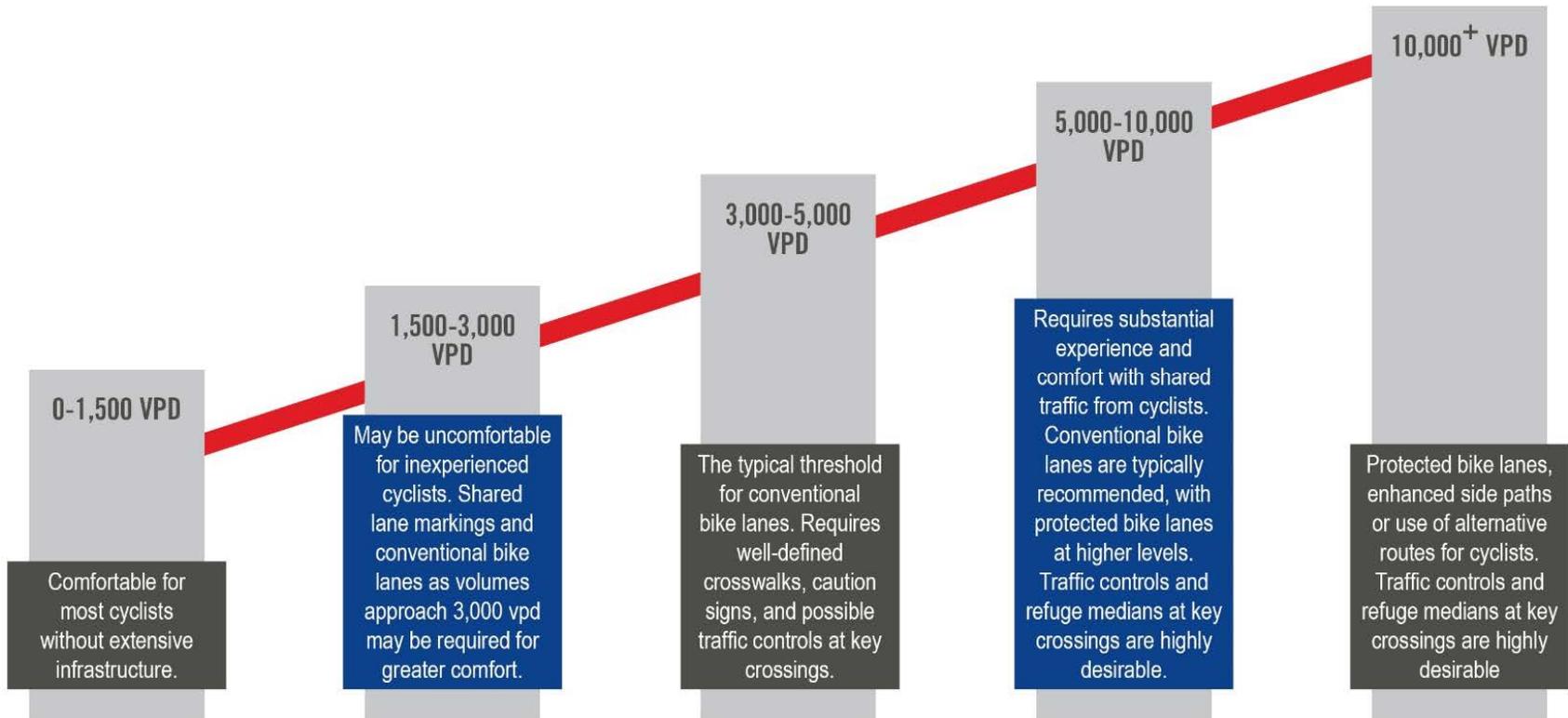
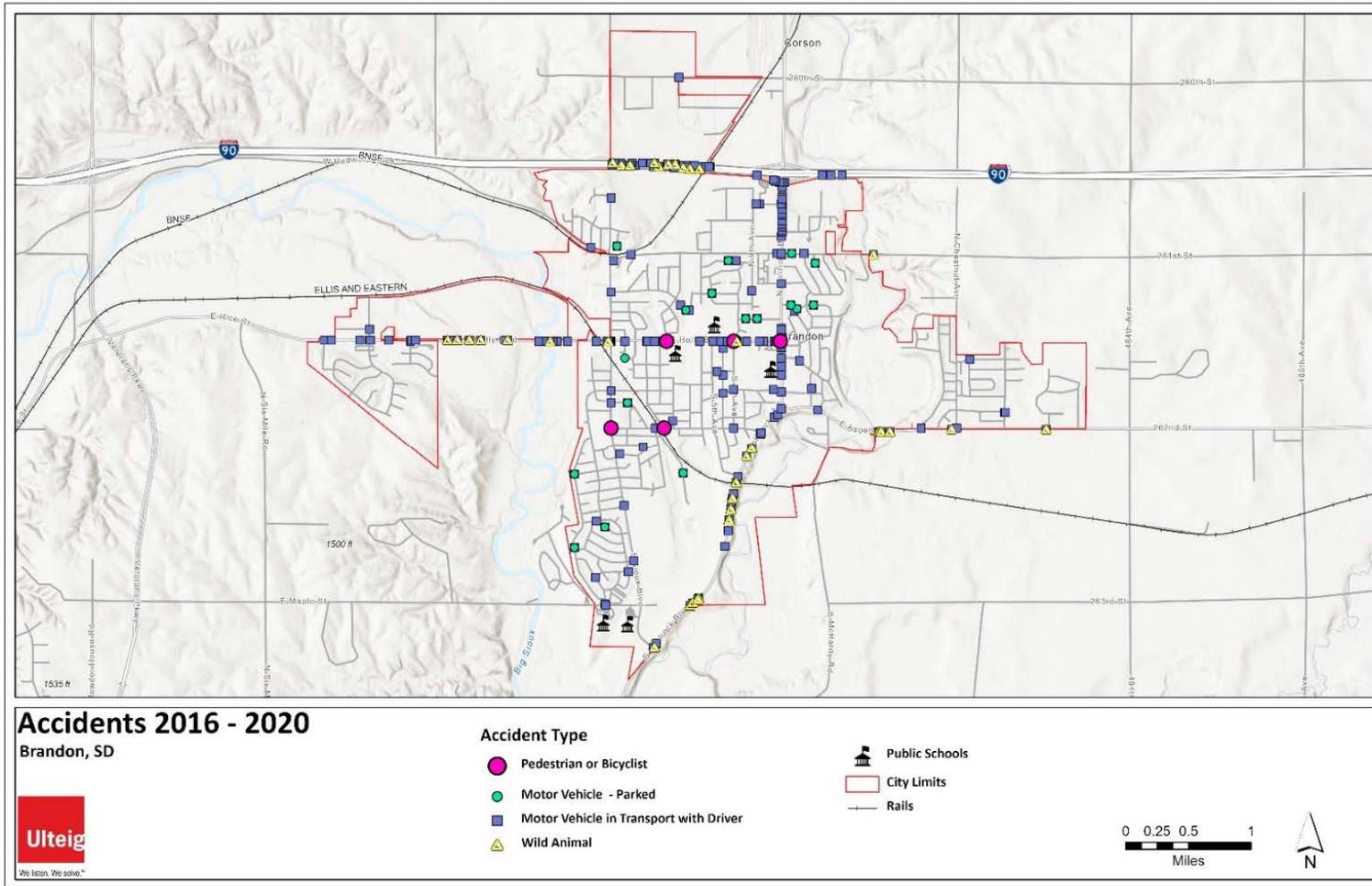


Figure 1.16 // Crash History



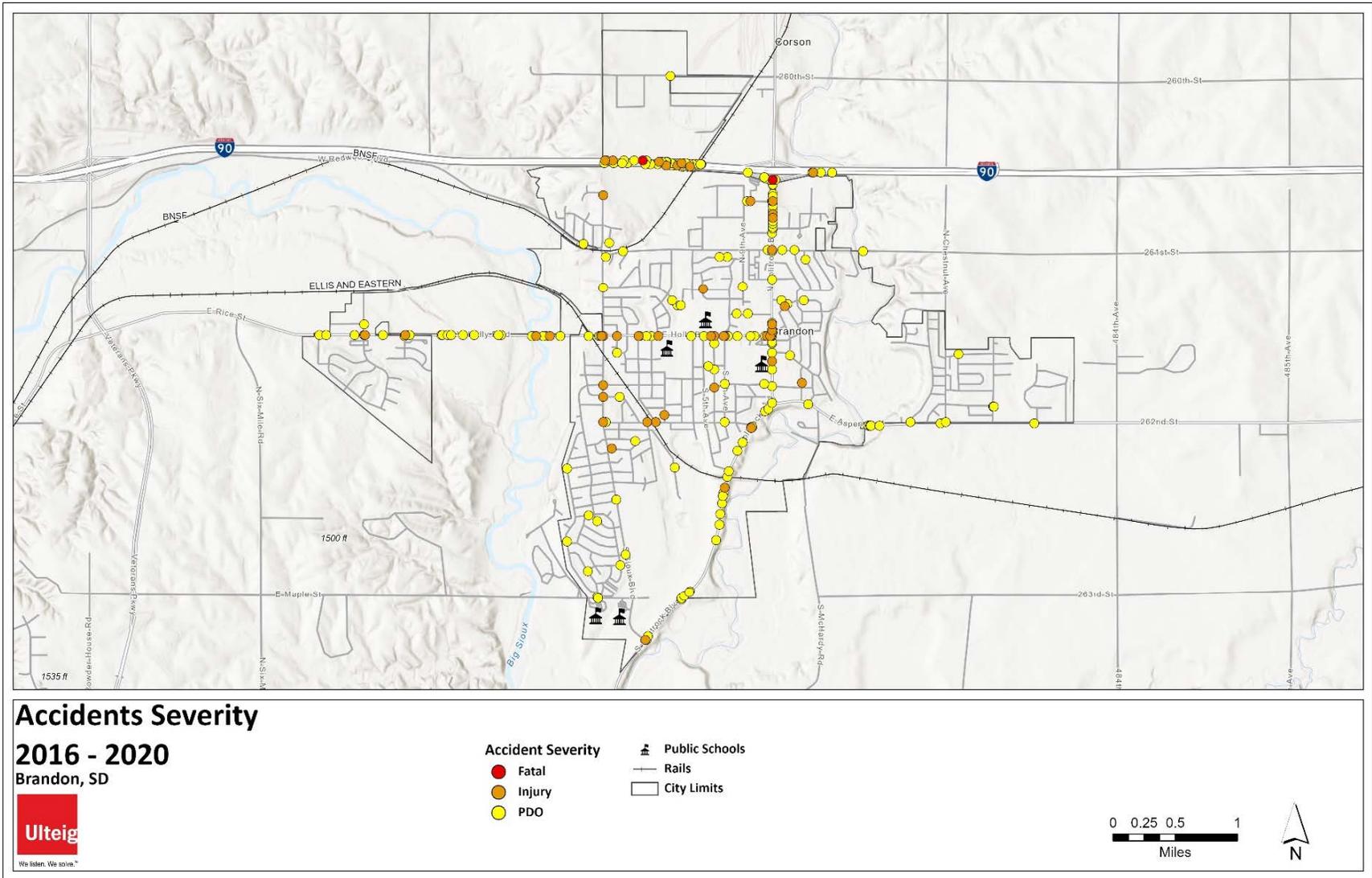
Incidence of pedestrian and bicycle crashes pinpoint specific problems that system planning must address. The map on this page locates crash history between 2016 and 2020 detailing vehicle crashes in the following categories:

- Automobile crashes
- Crashes involving a bicyclist or pedestrian
- Other crashes, such as animal hits, single vehicle incidents
- Automobile crashes involving parked cars
- High incident areas indicate problem areas and barriers regardless of the type of incident.

Analysis of the map indicates that:

- Traffic signals make a difference. Most crashes recorded occurred at intersections without signals.
- There is a concentration of all crash types on Splitrock Boulevard and Holly Boulevard. This concentration is especially true for pedestrian/bicycle crashes, and the majority of these incidents occurred near intersections.

Figure 1.17 // Crash Severity



FUTURE & PLANNED LAND USES

Figure 1.18 // Future & Planned Land Uses

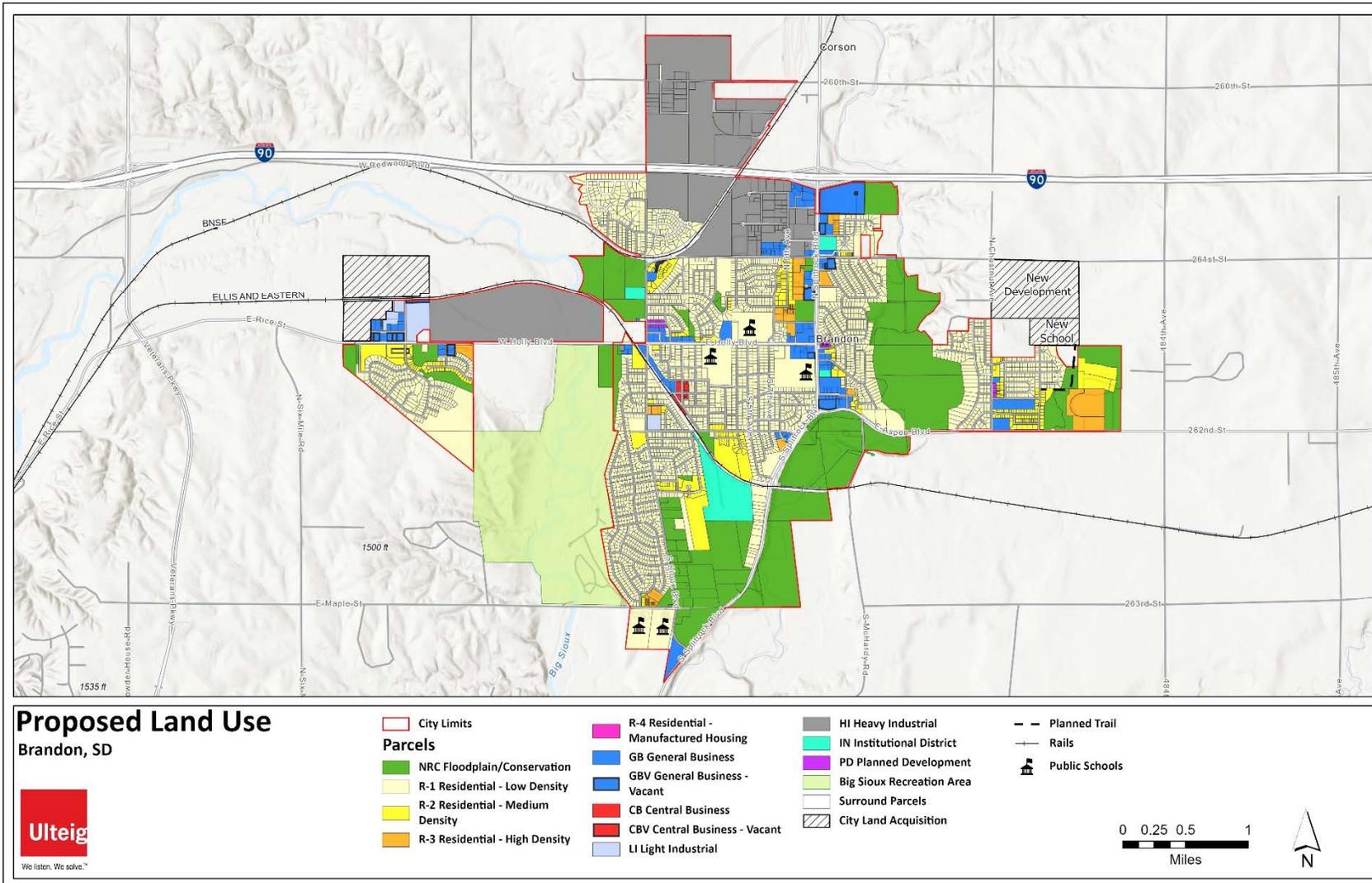
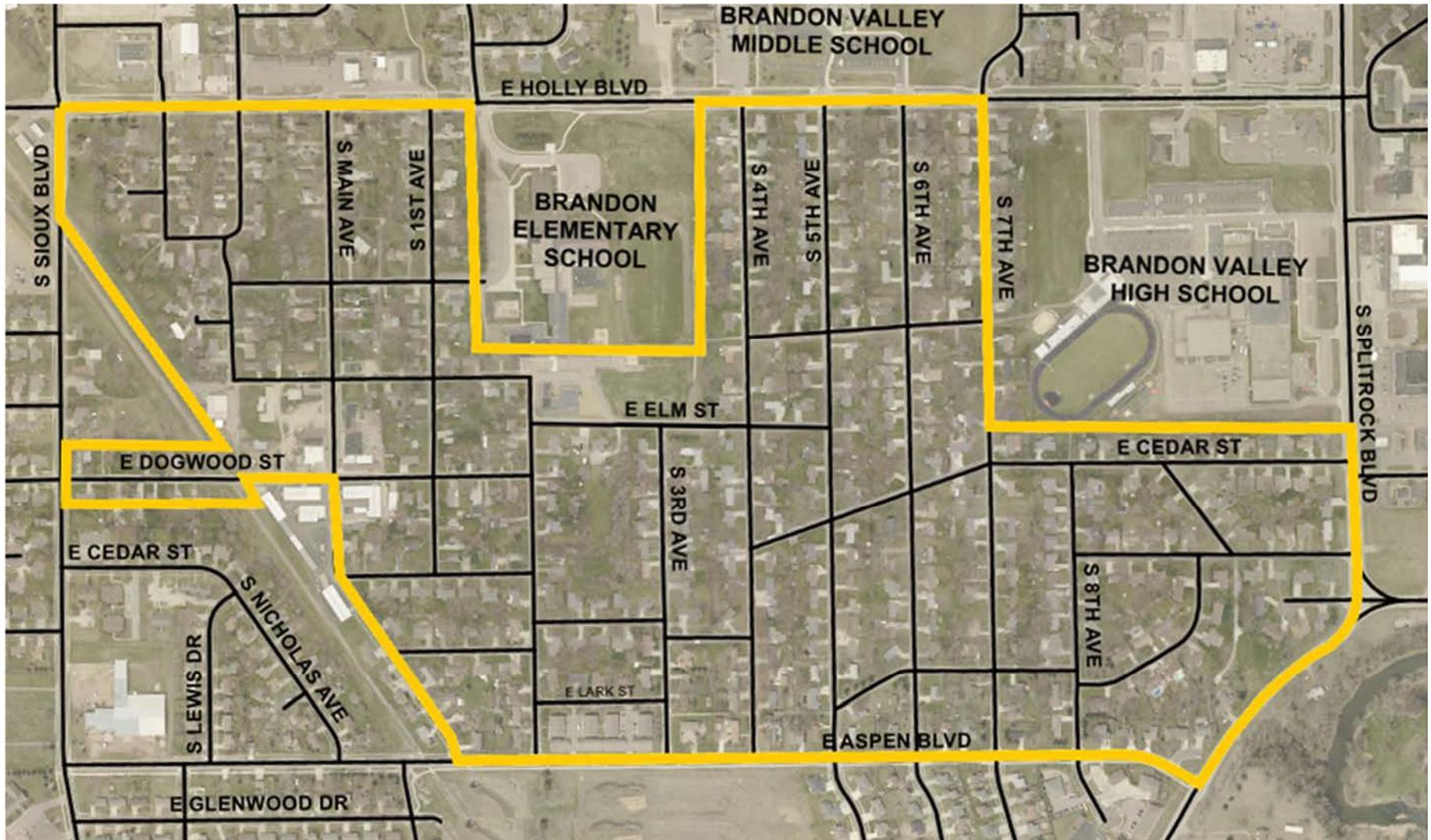
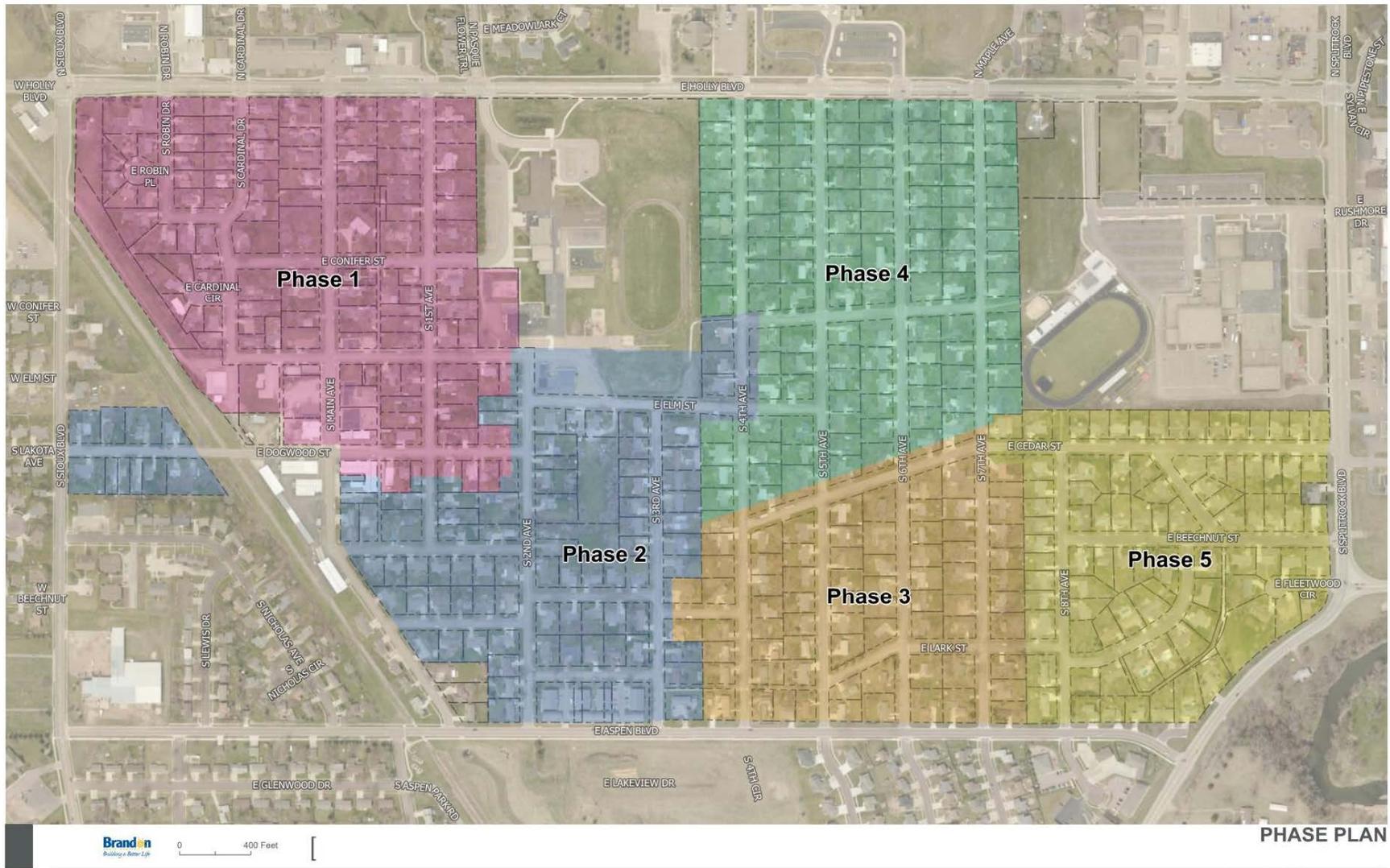


Figure 1.19 // Core Area Overview of Brandon



THE CORE AREA ▪ Brandon has an extensive sidewalk system throughout most of the town; however other areas, such as the core area, was built without sidewalk or adequate provision for pedestrians and ADA accessibility. The City of Brandon has identified the core area project improvements necessary due to age and condition of the existing surfacing and utilities in the area. Street reconstruction including sidewalks, public and private utilities, drainage improvements, street light replacement, and restoration of disturbed grass areas. Construction began in 2020 for this area.

Figure 1.20 // Core Area Phased Reconstruction Plan



THE CORE AREA ■ Brandon is currently reconstructing the core area in five phases that includes sidewalks and ADA-accessible curb ramps.

Figure 1.21 // Bike & Pedestrian Count Locations

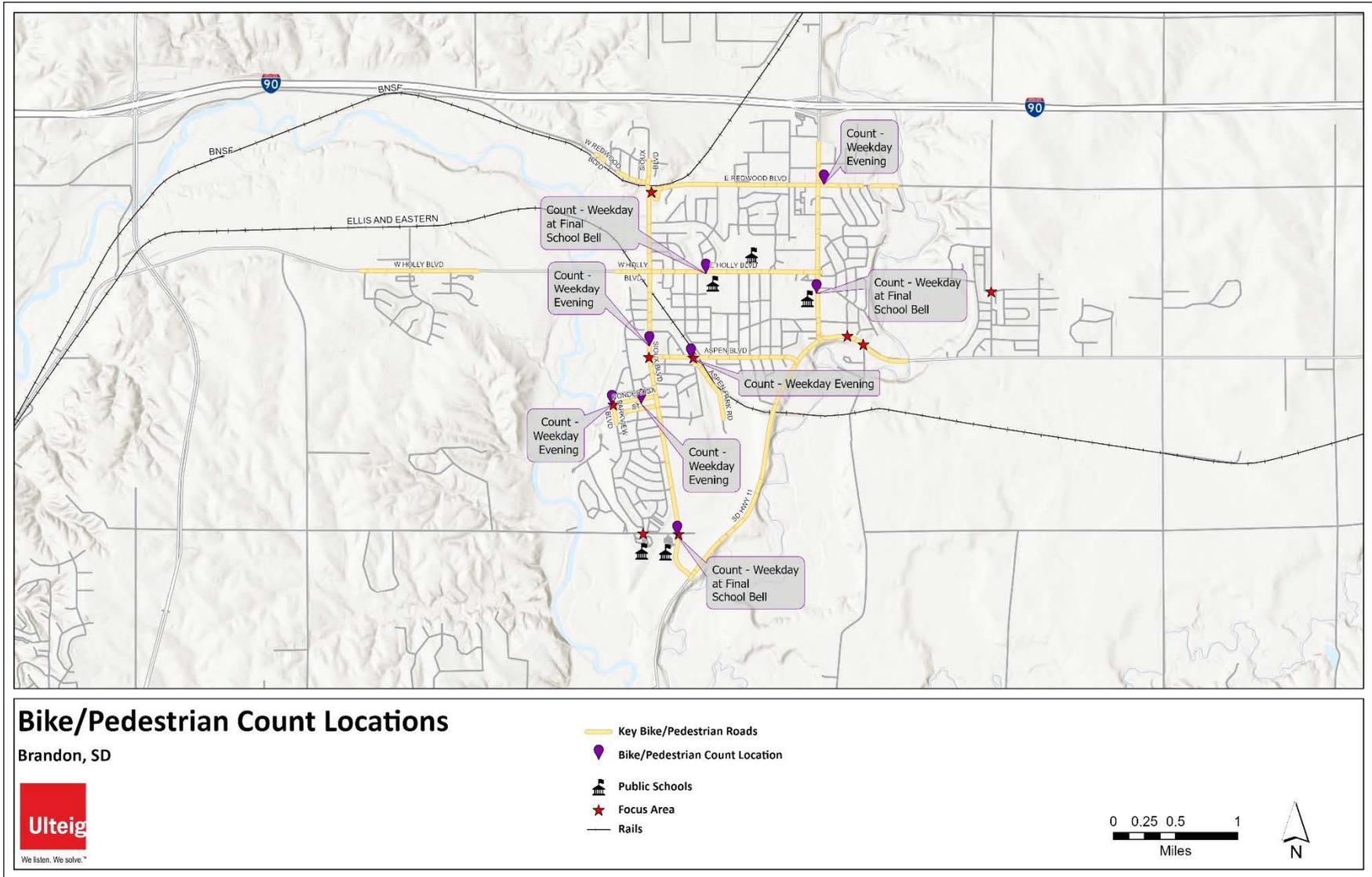
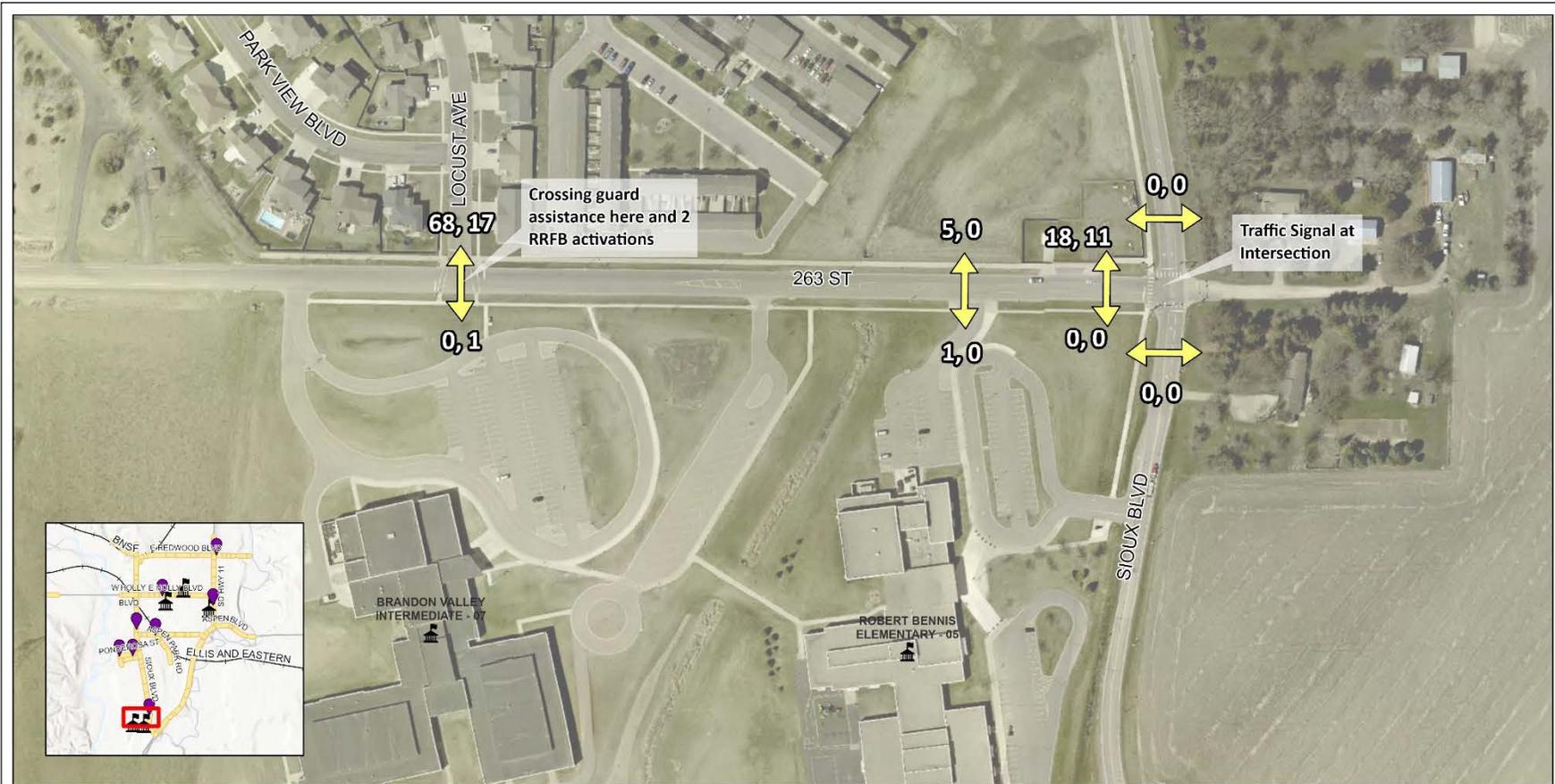


Figure 1.22 // Bike & Pedestrian Count – Location 1



Bike/Pedestrian Count
Robert Bennis Elementary

↕
#of Pedestrians, #of bicyclists

When: September 28th 2021 3:00 - 4:00pm (end of school)
Weather: Clear & Warm
Comments: 15mph school speed limit beacons on at dismissal, all bicyclists were children, zero on-street cyclists

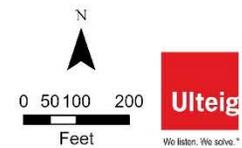


Figure 1.23 // Bike & Pedestrian Count – Location 2



Bike/Pedestrian Count
S Parkview Blvd & Shared Use Path

↕
 # of Pedestrians, # of bicyclists

When: September 28th 2021 4:15 - 5:15pm
 Weather: Clear & Warm
 Comments: 1 on-street cyclist (SB Parkview Blvd), Appeared that cross country athletes were going EB/WB from the park path to/from Ponderose Dr. from 4 - 4:30pm approximately 7 are provided in these numbers but before 4:15 there were about 30 that made the same crossing EB and WB

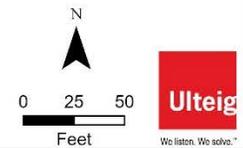
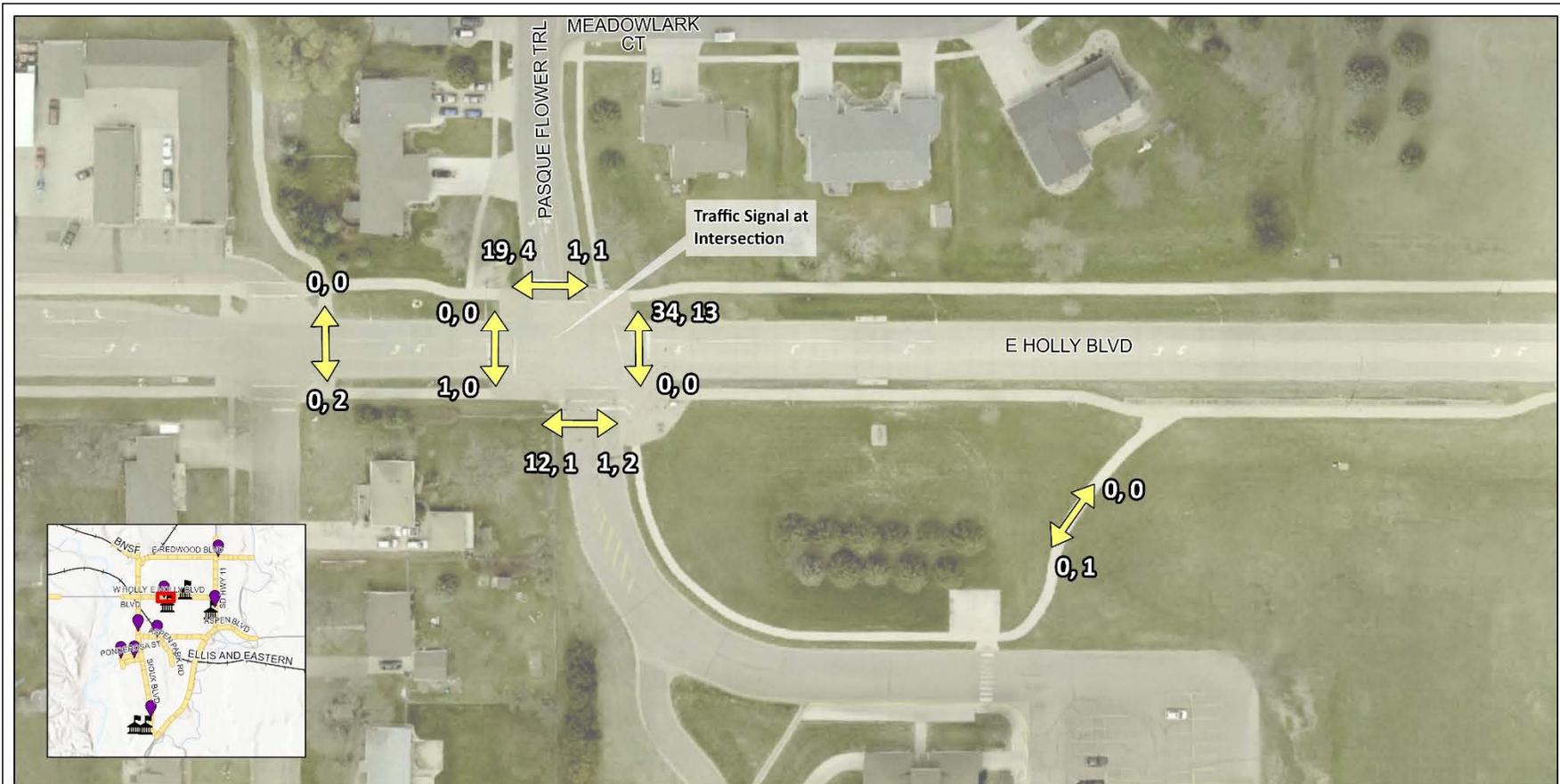


Figure 1.24 // Bike & Pedestrian Count – Location 3



Bike/Pedestrian Count
Brandon Elementary School

↕
of Pedestrians, # of bicyclists

When: October 4th 2021 3 - 4 pm (end of school)
Weather: Clear & Warm
Comments: 15mph school speed limit beacons on at dismissal, most pedestrian traffic 3 - 3:15pm, zero on-street cyclists, Most bicyclists were children,

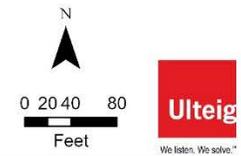


Figure 1.25 // Bike & Pedestrian Count – Location 4



Bike/Pedestrian Count
S Sioux Blvd. & E Aspen Blvd.


 # of Pedestrians, # of bicyclists

When: October 4th 2021 5 - 6 pm
 Weather: Clear & Warm
 Comments: One on-street cyclist (WB Aspen to NB Sioux Blvd.)

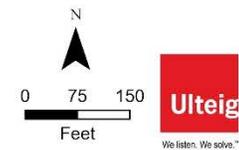
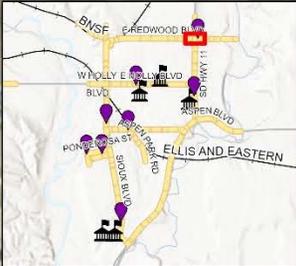
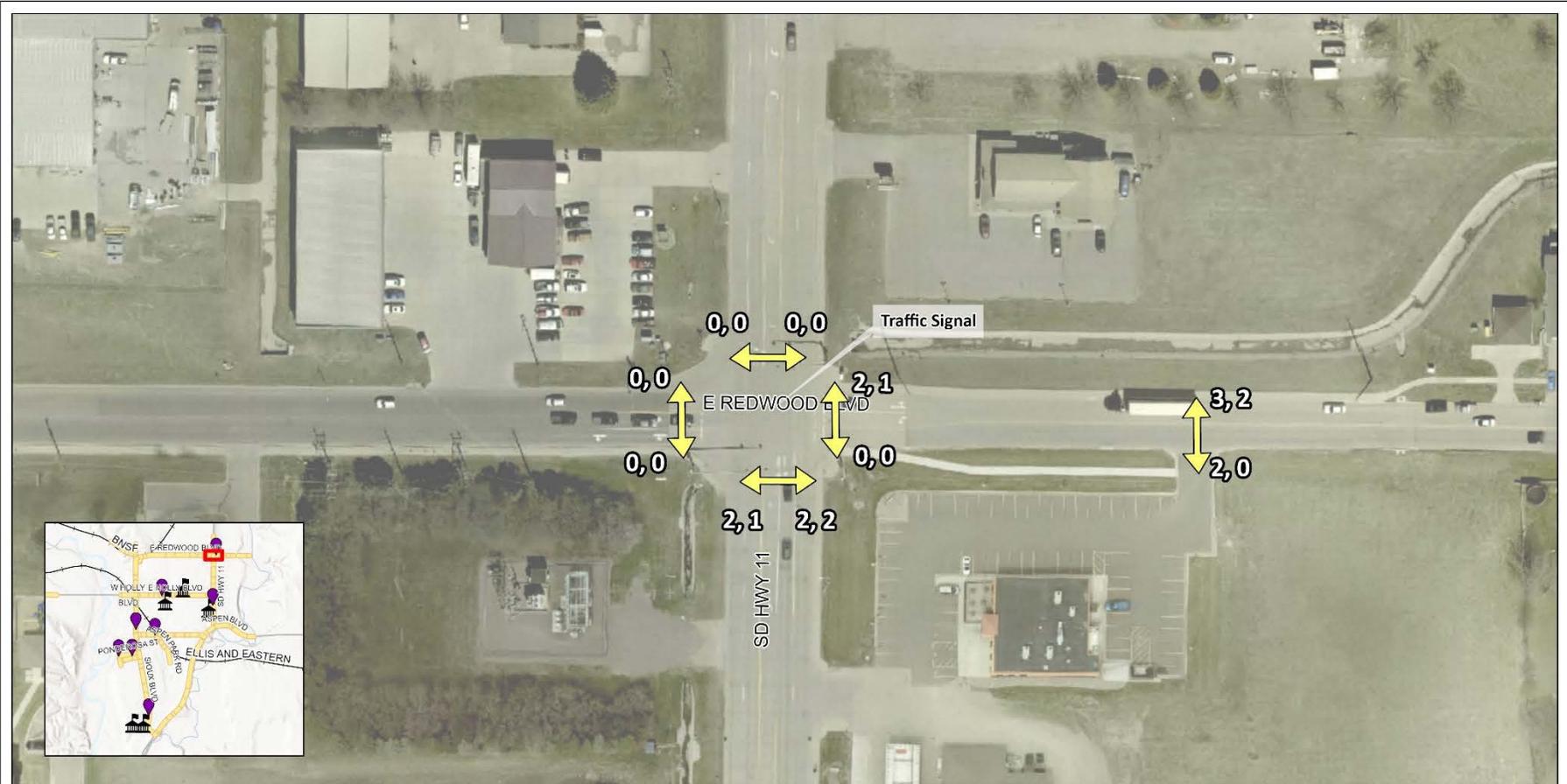


Figure 1.26 // Bike & Pedestrian Count – Location 5



Bike/Pedestrian Count
N Splitrock Blvd & E Redwood Blvd.

↕
of Pedestrians, # of bicyclists

When: October 5th 2021 4:15 - 5:15 pm
 Weather: Clear & Warm
 Comments: One on-street cyclists

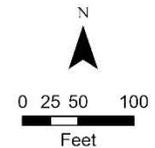
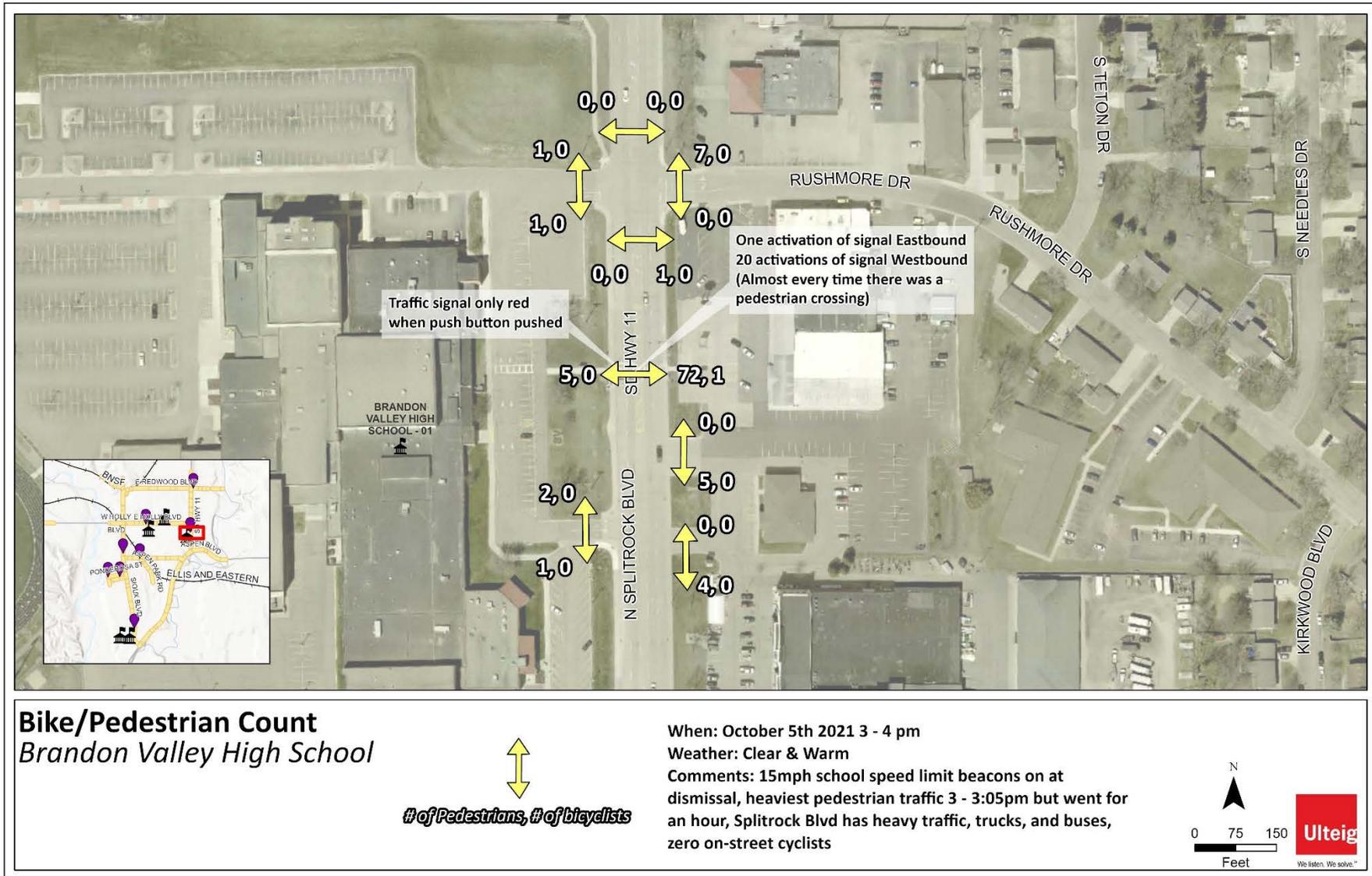


Figure 1.27 // Bike & Pedestrian Count – Location 6



STAKEHOLDER & PUBLIC ENGAGEMENTS

PUBLIC ENGAGEMENT TOOLS

- Website
- Newspaper ads
- Social Media Blasts
- Posters
- Flyers
- Keloland TV Interview
- Open House Meeting
- Number of Public Comments received: 213
- Number of Survey Participants: 188



**PUBLIC
ENGAGEMENT
PROCESS:
2 MONTHS**

Ulteig worked closely with our primary stakeholders throughout the City of Brandon's bike and pedestrian planning process.

**CITY OF BRANDON'S
BIKE &
PEDESTRIAN
PLANNING
EFFORT
PRIMARY
STAKEHOLDERS**

■ BRANDON VALLEY SCHOOL DISTRICT



■ BRANDON VALLEY CHAMBER



■ BRANDON TOWNSHIP

■ CITY OF BRANDON PARK ADVISORY COMMITTEE

■ CITY OF BRANDON PARKS DEPARTMENT

■ CITY OF BRANDON



■ CITY OF BRANDON GOLF COURSE



■ CITY OF BRANDON POLICE DEPARTMENT



■ CITY OF SIOUX FALLS



■ ELLIS & EASTERN RAILROAD

■ FALLS AREA BICYCLISTS (FAB)



■ FEDERAL HIGHWAY ADMINISTRATION



■ GREAT BEAR SKI VALLEY



■ MINNEHAHA COUNTY, SOUTH DAKOTA



■ SIOUX FALLS METROPOLITAN PLANNING ORGANIZATION



■ SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION



■ SPLIT ROCK CREEK TOWNSHIP

PUBLIC AWARENESS ACTIVITIES

Public awareness activities for the City of Brandon's bike and pedestrian planning process is composed of the following five components:

- 1. WEBSITE AND INTERACTIVE MAPPING TOOL** ▪ The Brandon Bike and Pedestrian Plan includes a project website and interactive mapping tool allowing users to view plan documents and presentations, make comments and suggestions, and drop pins on an online map corresponding to input on the Plan.
- 2. PUBLIC MEETING AND OPEN HOUSE** ▪ Ulteig gave a presentation to the Brandon Parks Board and held an open house after the meeting to gather feedback and answer questions about the plan, including large maps and handouts.
- 3. SOCIAL MEDIA** ▪ The City of Brandon hosted a series of social media posts directing residents and the public to the plan website, public meetings, and plan documents for review.
- 4. ONLINE SURVEY** ▪ The project team developed a survey to gather feedback about the plan, the survey was designed to gather demographic information and statistically significant information about how people use Brandon's bike and pedestrian network, and what new features and connections they would like to see in the future.
- 5. NEWSPAPER ADVERTISEMENTS** ▪ The team used advertisements in the Brandon Valley Journal to inform the public about public meetings and the link to the plan website.

PLAN FEEDBACK SUMMARY

The City of Brandon's bike and pedestrian planning process used a robust system for gathering feedback online. We also gathered feedback in-person, from the Study Advisory Team, and from stakeholders. Online feedback gathered has been split into the following sections:

- 1. WEBSITE COMMENT FORM FEEDBACK** ▪ A project website has been set up for the Bike and Pedestrian Plan, the webpage is located at www.cityofbrandon.org/bikepedplan and includes a draft of the Existing Conditions portion of the plan, public meeting notices, an interactive map, questionnaire, and comment form.
- 2. INTERACTIVE MAP FEEDBACK** ▪ An interactive map has been developed to allow people to pinpoint specific areas in the City of Brandon to provide feedback and ideas.
- 3. ONLINE SURVEY FEEDBACK** ▪ Also included on the project website is an Online Survey allowing people to provide detailed feedback on their thoughts on walking and biking in Brandon.

Bike & Pedestrian Plan

Welcome to the Brandon Bike and Pedestrian Plan project. Here, you can access plan documents, survey questionnaire, interactive map, online comment form, schedule of events, and more.

[Existing Conditions Review](#)
Review the existing conditions of the Brandon Bike and Pedestrian Plan, including maps of the area.

[Survey Questionnaire](#)
Help inform your Bike and Pedestrian Plan. Your participation in the online survey is a great way to contribute to the identification of issues and needs for walking and biking in Brandon. Thanks for your feedback! (Survey deadline Friday, December 3rd, 2021)

[Interactive Map](#)
Use this map to leave comment about specific locations in Brandon. Write your comment in the empty comment field, mark the location with a pin on the map, and then click to submit! (Map comments deadline Friday, December 3rd, 2021)

[Leave us a Comment or Ask a Question!](#)
If you have a direct question, concern, or additional comment about the project, please fill out the comment form below. You can also sign up for updates and announcements by submitting your email address here.



FEEDBACK RECEIVED AT PUBLIC MEETINGS

PUBLIC COMMENTS

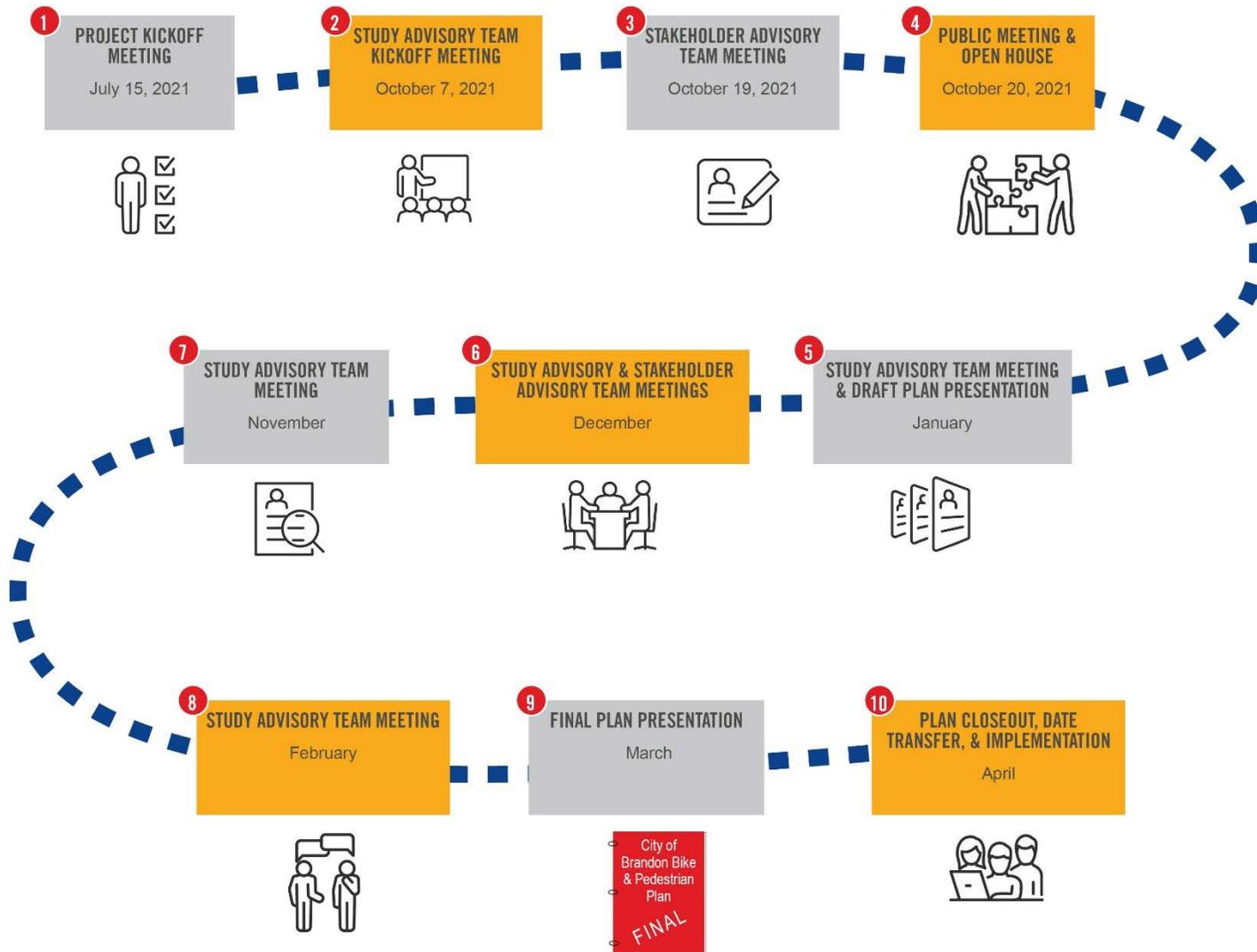
Public comments were collected from October 12, 2021 to December 3, 2021 by survey, interactive online map, and a community meeting on October 20th 2021. Comments from each medium were compiled to show that respondents were looking to add connections from outlying neighborhoods to central Brandon as well as adding trails separate from traffic and improving safety on existing paths. Many respondents said they would bike or walk to central Brandon when possible but that facilities either did not exist or were not safe to travel on. Concern was particularly indicated on W Holly Boulevard where the shoulder is not safe to travel on due to traffic. Residents in the Bluff and Eagle Creek neighborhoods suggested a safer shoulder on W Holly Boulevard and/or a trail through Big Sioux Recreation area to central Brandon. Additionally, comments showed people would like improved safety and connectivity within central Brandon. Connections between the city's parks was mentioned for the benefit of school age kids commuting to sports, library, and school. Respondents didn't feel safe on current paths due to high traffic speeds, distracted driving, or incomplete sidewalk. Similarly, respondents suggested more trails off roads for safety as well as enjoyment. Specific comments requested connections between Aspen Boulevard and Holly Boulevard on 5th, 6th or 7th Street and improved sidewalk discontinuity and obstructions on the east side of Sioux Boulevard between Maureen and Chapelwood Drive. Respondents also shared a desire to connect Brandon to the greater area, specifically Sioux Falls.

MAIN TOPICS MENTIONED

- Connect to Sioux Falls
- Connect to West Brandon
- Connect to East Brandon
- Connect to Downtown
- Connect to Parks
- Pull trails away from traffic
- Lower traffic speeds
- Increase lighting, signage visibility



Figure 2.1 // Public Planning Process



SURVEY RESPONSE SUMMARY

Figure 2.2 // How often do you bike/walk in Brandon?

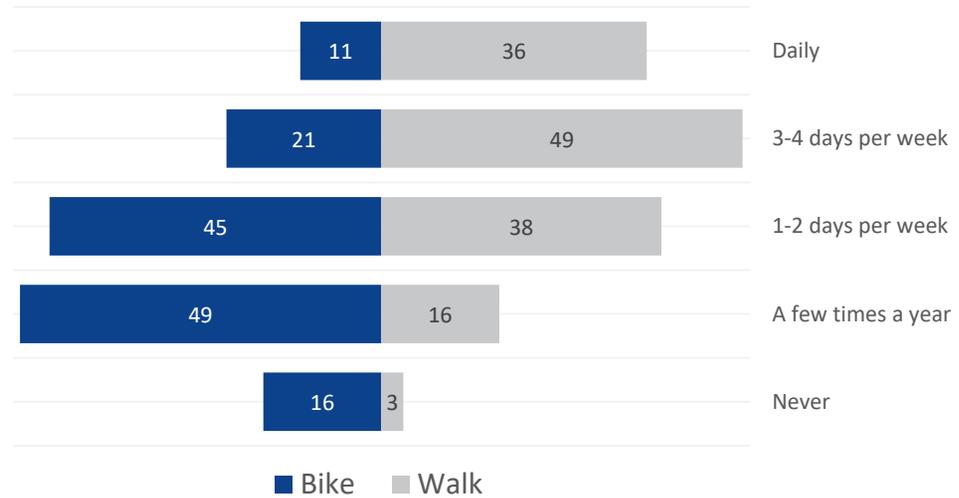


Figure 2.3 // Which of the following describes why you bike/walk in Brandon? Select all that apply.

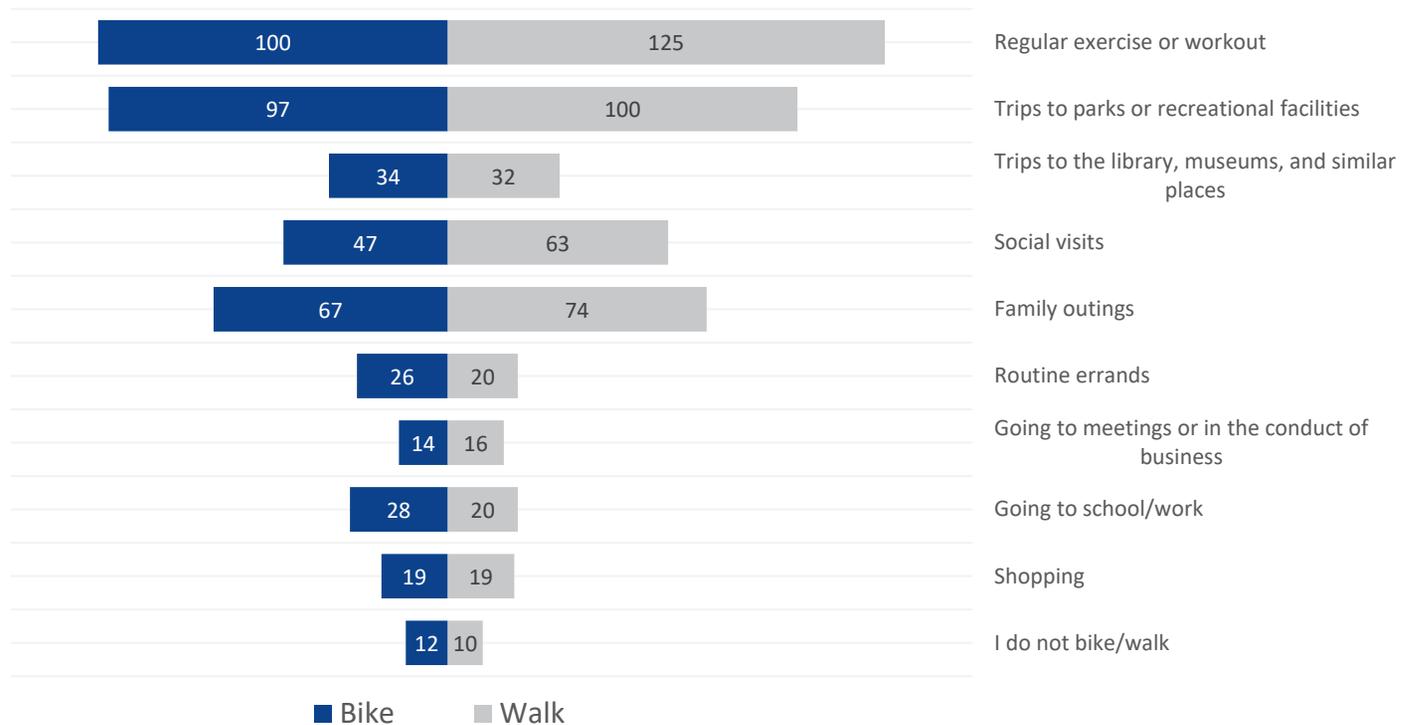


Figure 2.4 // Which of the following best describes you as a bicyclist?

COMMITTED AND FEARLESS

I am a committed bicyclist who rides in mixed traffic on every street. I don't believe that any significant further action on bicycle facilities is necessary.

COMMITTED URBAN CYCLIST

I am a committed bicyclist who rides in mixed traffic on most streets, but believes that new facilities like bike lanes, bike routes, and trails are needed to improve Vermillion's biking environment for me and encourage other people to ride more often.

INTERESTED BUT CONCERNED

I am interested in bicycling and use low-traffic streets but am concerned about the safety of riding in mixed automobile traffic. More trails and bike lanes and routes would increase the number of trips that I make by bicycle.

RECREATIONAL TRAIL USERS

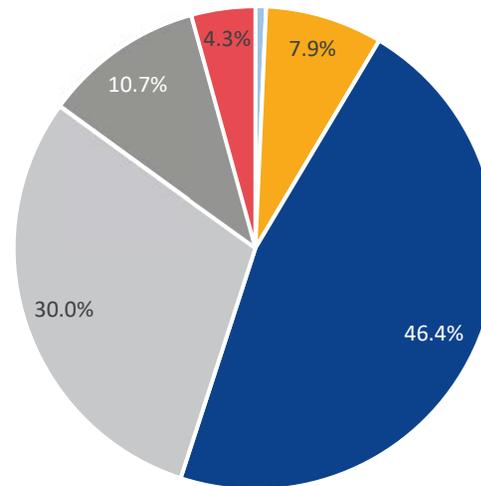
I am a recreational or occasional bicyclist and ride primarily on trails. I would like to see more trails, but am unlikely to ride on city streets even with bike lanes

INTERESTED NON-RIDERS

I do not ride a bicycle now but might be interested if Vermillion developed facilities that met my needs better or made me feel safer.

NON-RIDER, UNLIKELY TO RIDE:

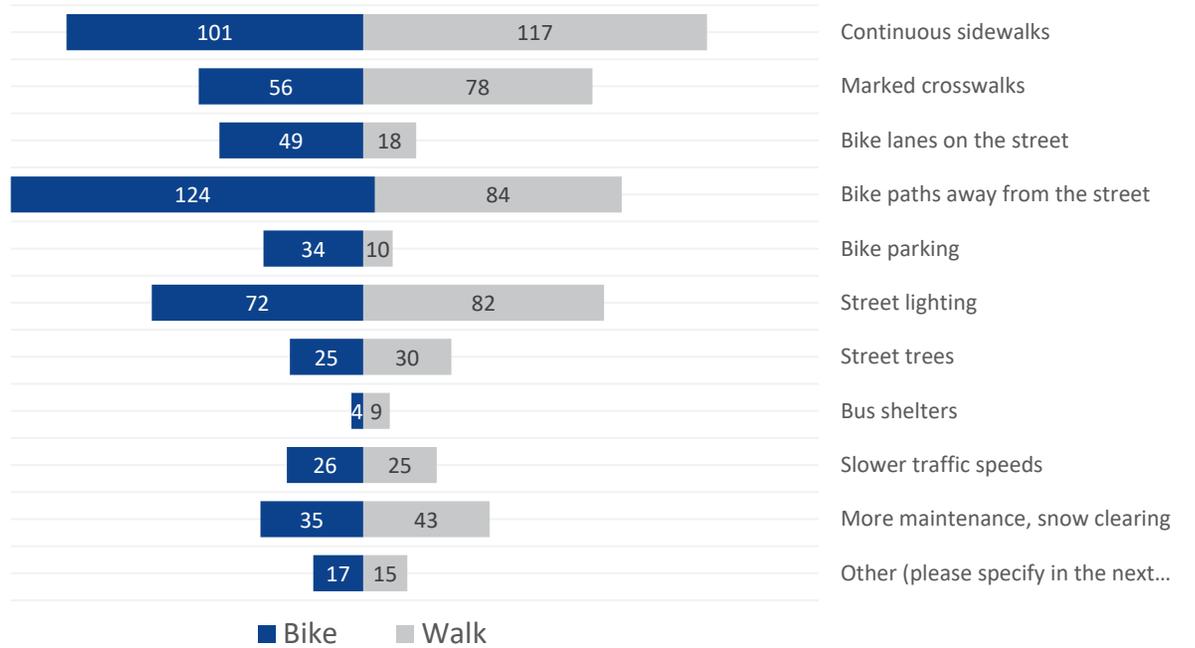
I do not ride a bicycle and am unlikely ever to do so.



- Committed and Fearless
- Committed Urban Cyclist
- Interested but Concerned
- Recreational Trail Users
- Interested Non-Riders
- Non-Rider, Unlikely to Ride

Figure 2.5 // What would make biking/walking better in Brandon? Select all that apply.

See Appendix C for a more detailed survey analysis.



OVERALL PUBLIC ENGAGEMENT & FEEDBACK SUMMARY

Public comments were collected in person on October 20th and online through a voluntary survey, interactive map, and general comment form. From one survey question, respondents mostly said they walked three to four times a week while biking was mostly responded with a few times a year.

From the comments collected through each of these avenues, most comments had to do with lack of sidewalk connecting to the central area of Brandon from areas east and west on the periphery. From the survey, when asked what discouraged a respondent from walking or biking, “Lack of bicycle lanes, trails, or sidewalk” was marked most by respondents. One comment “(The) Largest opportunity is getting to town from outlying neighborhood(s)” was the general sentiment of many comments. More specifically, many comments asked for connectivity to the eastern and western parts of Brandon.

The Bluffs neighborhood to the west seems to have been told years ago that a bike and pedestrian path to the central area of the city would be installed. Most comments about connectivity spoke to connecting the Bluffs and its surrounding neighborhoods into the core area. Comments were split on how to connect to the core area, some suggested through the Big Sioux Recreation Area while others said a safe designated path along Holly Boulevard. Connections to East Brandon and a trail east of McHardy Park were also requested.

A regional connection to Sioux Falls was also commented frequently, especially at the October 20th meeting. Some routes suggested included along the Sioux River, connecting to Veterans Parkway, Six Mile Road, or Holly Boulevard.



What would make walking/cycling better?



The public responded well with 213 comments collected representing a statistically significant number of people responding to the survey. The specific and general comments have helped to understand where improvements and additions to bike and pedestrian sidewalk are desired as well how residents would like to see the city of Brandon connected.

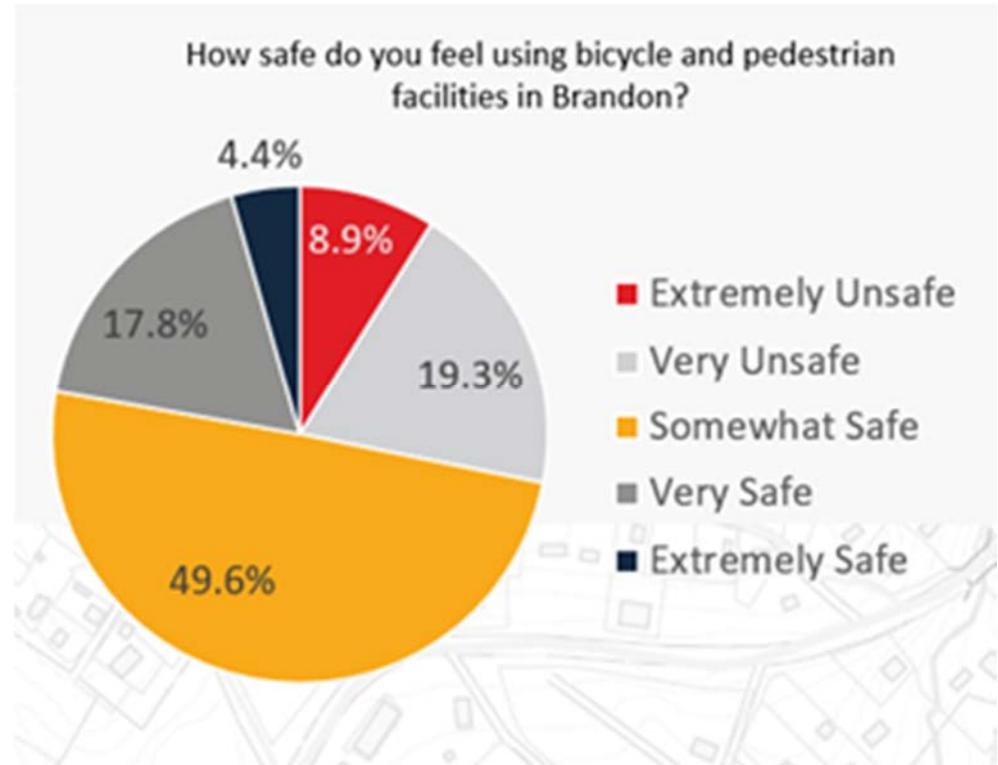
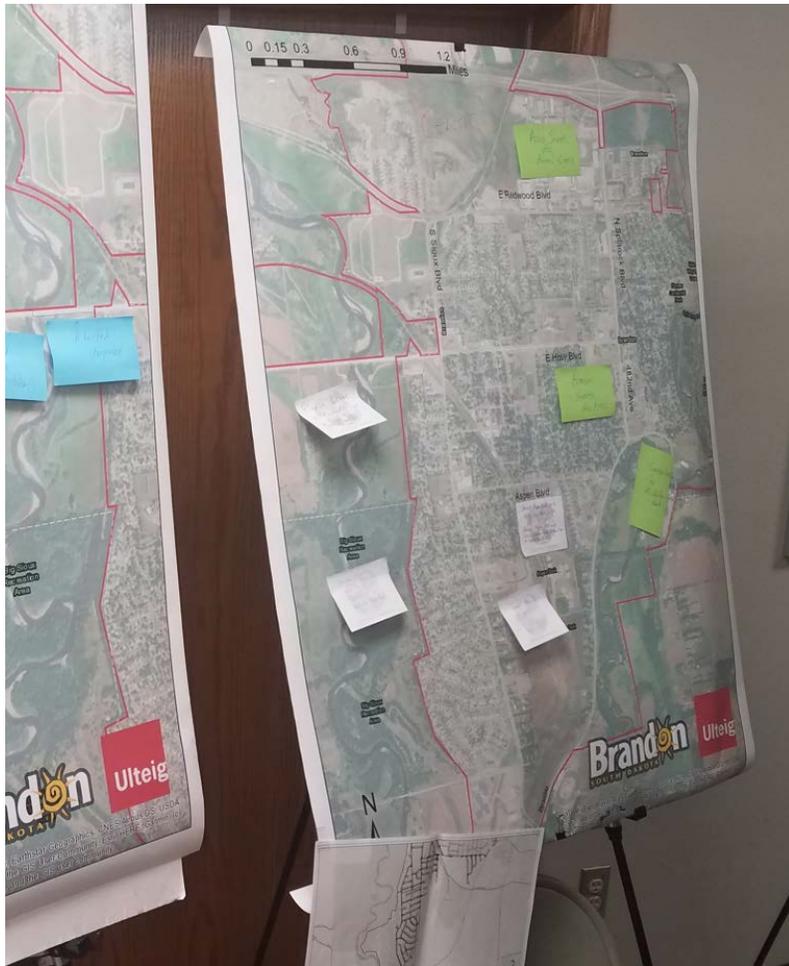


Figure 2.7 // How safe do you feel using bicycle and pedestrian facilities in Brandon?

SAFETY, ACCESSIBILTiy ASSESSMENT, & MAPPING

Walking and biking are affordable and environmentally friendly ways to reach destinations, an important focus area of this plan is Safety including an evaluation of safe bicycle and pedestrian access to destinations in and around Brandon. Barriers to pedestrians remain the most dangerous obstacles in narrow, inconsistent, weathered or deteriorated sidewalks and shared use paths. Brandon hosts numerous narrow-width sidewalks that do allow pedestrian access but are not wide enough to allow two wheelchairs to pass each other for instance, other safety issues are found with substandard curb ramps shown in the Existing Conditions maps.

A key factor in the Midwest region related to maintenance is to ensure that snow removal is done well to alleviate icy patches and the formation of ice dams. In some cases, problems can be found with older infrastructure designed and built prior to the Rehabilitation Act of 1973 or the Americans with Disabilities Act (ADA) of 1990. Some of the barriers impeding safe walking and bike access included lack of safe, marked crossings and intersections; poor sightlines; and inadequate lighting.

There is a total of six Pedestrian or Bike crashes within city limits, three pedestrian and three bicycle crashes occurred in the last five years. Four of these pedestrian and bike crashes occurred at intersections, one crash occurred at a T-intersection, and one occurred at a location that was defined as other. All of the crashes observed within the last five years are injury crashes.

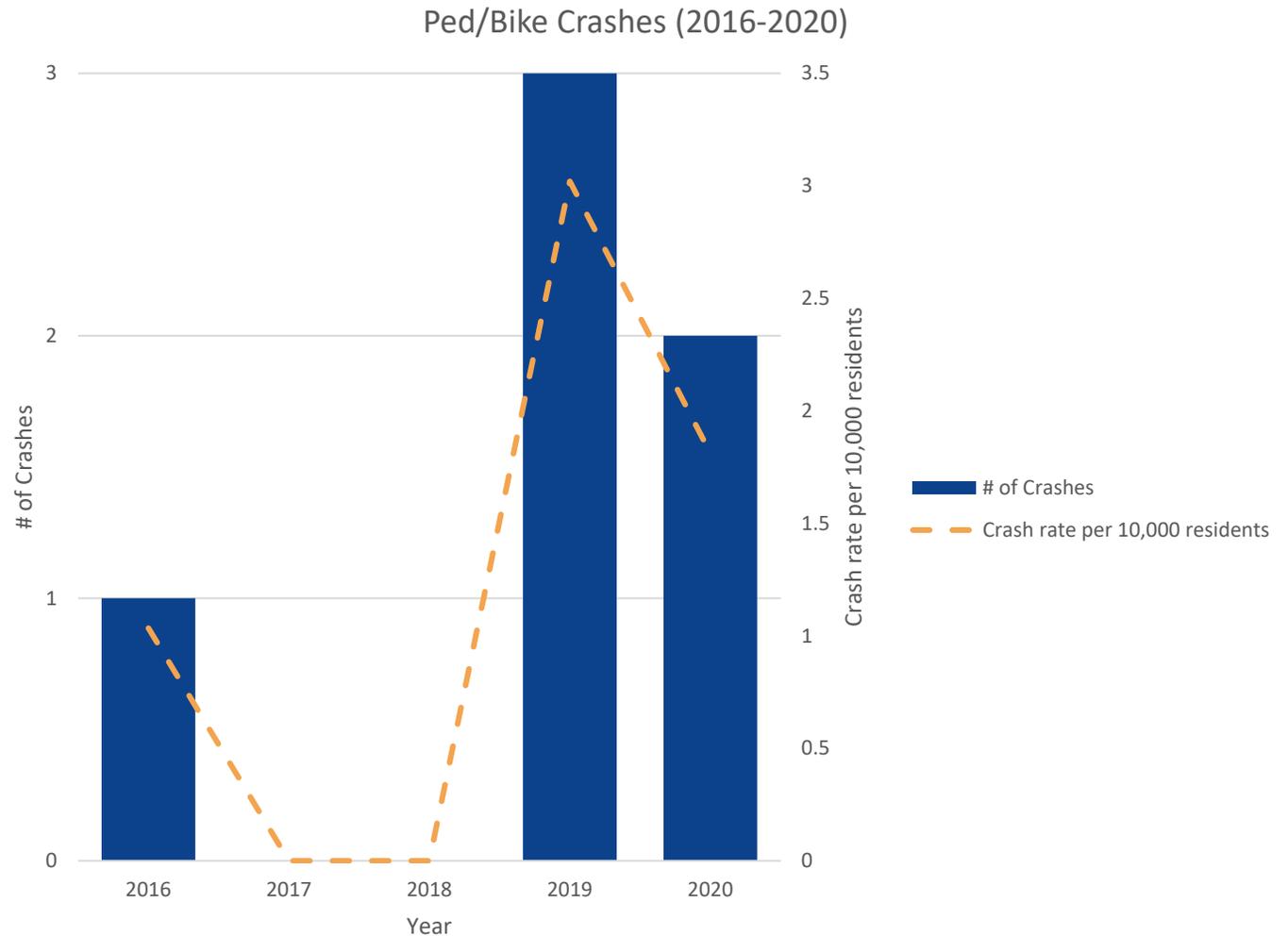


Figure 3.1 // Ped/Bike Crashes in Brandon 2016-2020

PEDESTRIAN/BIKE CRASH SUMMARY

- 4 intersection related, 2 T-intersection crashes
 - Aspen Boulevard
 - Sioux Boulevard
 - Holly Boulevard (2)
 - 7th Avenue
 - W Park Street
- All of the above are injury crashes & 1 hit and run
- 5 marked crosswalks, 1 unmarked crosswalk, all intersection crashes
- 1 pedestrian at fault: improper crossing
- Motor vehicle movements
 - Straight forward x5
 - Right Turn x1
- 2 signalized, 2 stop controlled, 1 no control

An area to be addressed within the Safety Assessment related to pedestrian safety points to areas of the city that are inadequate to meet the needs of people with disabilities.

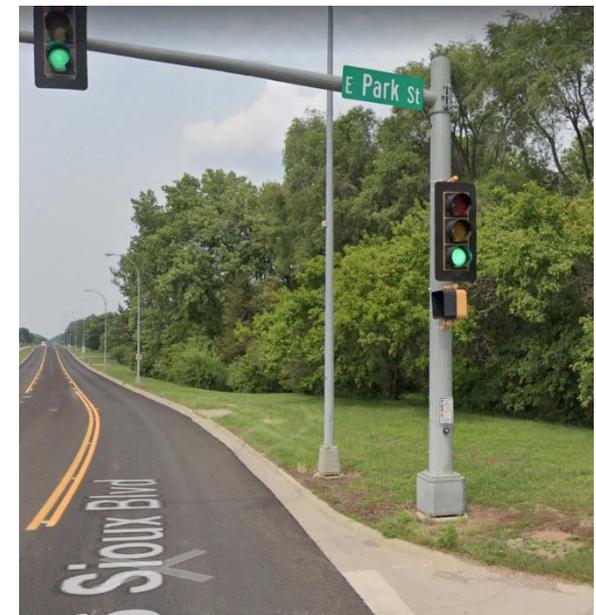
Challenges identified include:

- Inadequate or missing curb ramps at intersections
- Long crossing distances combined with short crossing times at intersections
- Narrow or missing sidewalks
- Poles, street furniture, or other obstructions impeding the path of travel
- Bridges without adequate space for bikes and pedestrians (N Splitrock Boulevard over I-90)
- Excessive grades and slopes, and
- Inappropriate placement of pedestrian signal actuation buttons

During the planning process jurisdictional staff, the public, city council, and school board were included as stakeholders in the Safety and Accessibility Assessment in order to adequately consider the needs of people on foot or bicycle, resulting in a project that is safe and that accommodates all users. One way to ensure that transportation projects properly account for walking and bicycling facilities is to integrate them fully into the transportation planning and design processes for every project. The FHWA Bicycle and Pedestrian Program website contains many resources available regarding planning and project development.



Above: An example of a pedestrian activated push-button that is too close to the curb ramp. **Below:** An example of a pedestrian activated push-button that does not have an adjacent sidewalk.



OBSTACLES TO ACTIVE TRANSPORTATION

Some physical obstacles exist within Brandon that inhibit walking, biking, and other forms of active transportation. A few of these obstacles as discussed below block bikes and peds and may require specialized infrastructure to create new pathways and access.

- **BIG SIOUX RIVER** — The Big Sioux River is an obstacle to cross but also an opportunity for regional greenway connections especially to the south, and potentially to the west. The Big Sioux River is fairly wide at between ~125 and 200 feet across not including alluvial deposits and shifting flow channels, the Big Sioux River presents a large north-south obstacle to walking and biking in Brandon.
- **SPLIT ROCK CREEK** — Split Rock Creek is narrower than the Big Sioux River at ~70 to 100 feet across and runs north-south on the east side of Brandon. The barrier that this creek presents is further bolstered by adjacent golf courses, and existing private property along both sides of the creek in Brandon.
- **BRANDON GOLF COURSE** — The Brandon Golf Course is the largest of its kind in the City of Brandon and is located on the east side of Split Rock Creek creating a double barrier to walking and biking for east/west transportation within the City of Brandon. The remedy to this barrier is to construct a shared use path along E Aspen Boulevard that includes a pedestrian bridge over Split Rock Creek connecting East Brandon with the core area of the city.
- **INTERSTATE 90** — The Interstate north of Brandon forms a large linear barrier to walking and biking movements, the N Splitrock Boulevard bridge over I-90 has very small shoulders, however they are not generally conducive to pedestrians or bicycles and traffic on the bridge would be dangerously close to someone walking or biking across this particular span. On either end of the bridge guardrail and crash protection narrows shoulder space even further. In the future SDDOT and the City of Brandon should work closely together on a more accessible design once this bridge is due for replacement.
- **THE BURLINGTON NORTHERN AND SANTA FE RAILROAD** — The BNSF cuts through the northwest side of the city, a multimodal connection under the railroad exists at N Sioux Boulevard and Redwood Boulevard. An opportunity for an additional undercrossing of the railroad exists 860 feet northwest of the E Redwood Boulevard and Pasque Flower Trail intersection, as development of the Stone Street area north of the BNSF continues the City of Brandon should consider working with the BNSF to allow bike and ped access under this existing railroad bridge.
- **THE ELLIS AND EASTERN RAILROAD** — The Ellis and Eastern Railroad through the City of Brandon presents both a barrier to walking and biking and a significant opportunity for a “Rail with Trail” network. This potential Rail with Trail could eventually connect from Sioux Falls and the Great Bear Ski Valley into and through the City of Brandon and east to Valley Springs and beyond with the correct coordination, design, and interagency agreements. The Rail with Trail is imagined to be a loose surface singletrack or slightly wider gravel trail that resides within the active railroad right-of-way of the Ellis and Eastern Railroad with the correct permissions and spacing from active rail operations.
- **PRIVATE PROPERTY AND EXISTING FENCE LINES** — Existing private property and built fence lines are a typical barrier to walking and biking for transportation throughout the nation. The City of Brandon has a significant private property barrier on the west side of the city bordering the Big Sioux Recreation Area, however a crucial connection does exist at Ponderosa Street that will connect into Aspen Park. Other private property barriers include the Rushmore Drive area, S Oak Ridge Road, and Sylvan Circle on the west side of Split Rock Creek and Country Club Avenue on the east side of the Split Rock Creek area.

Gaps in the existing sidewalk system include but are not necessarily limited to the following:

- S Country Club Avenue, Fairway Drive, E Oakhill Circle,
- Rushmore Drive area (reconstruction plan in place)
- Sylvan Circle
- Riverwood Circle, missing sidewalk is in the backyards of a few residential lots.
- North side of E Redwood Boulevard from N Needles Drive and Split Rock Creek Bridge, build new sidewalk on the north side of E Redwood Boulevard and build crossing on east side of Oak Ridge Road
- E Dogwood Street in the core area

- S Heritage Road Bluffs Neighborhood – Recommend City of Brandon creates a policy that once 90% of lots are sold, developer must build out the internal sidewalk system.
- West side of N Maple Avenue
- North Side of Redwood Boulevard
- Big Sioux Boulevard – Gap on southeast side of corridor from Maureen Drive
- Holly Boulevard – Sioux Falls MPO calls for a trail or shared use path on the north side of Holly Boulevard.
- Rovang Industrial Park – does not have sidewalk, SDDOT is starting construction in 2024 of Splitrock Boulevard Bridge over I-90, once this bridge is reconstructed with pedestrian accessibility, ne sidewalk should be retrofitted into the industrial park.
- Brandon Industrial Park (9th Avenue) – No sidewalk exists, recommendation to install a quick-build project creating a protected walk/bike lane with new paint, flexible delineators, and parallel parking.

PEDESTRIAN SAFETY

When designing roads and crossings for pedestrian safety, there are numerous combinations of safety applications available, but first it is important to know that every pedestrian crossing falls under one of two categories: controlled crossings and uncontrolled crossings. Controlled crossings are where sidewalks or designated walkways intersect a roadway at a location with traffic control requiring motorists to stop (i.e., traffic signal or stop sign). Uncontrolled crossings occur where sidewalks or designated walkways intersect a roadway at a location where there is no traffic control and can occur at intersections (marked or unmarked) and at non-intersections (mid-block locations), requiring pedestrians to make a judgement as to when it is safe to cross.

CONTROLLED CROSSINGS

Listed below are some high-level recommendations for ways to improve conditions and safety at controlled crossings:

- Traffic control and operation improvements
- Geometric design improvements
- Shorten crossing distance
- Improve sight distance
- Improve driver awareness of intersections and signal control
- Improve compliance with traffic control devices
- Installation of centerline flexible delineators and quick-build projects
- Increased reflectivity of signs, paint, and flexible delineators
- Improve access management
- Improve safety through other infrastructure treatments
- Choose appropriate intersection traffic control
- Reduce operating speeds

Other potential countermeasures are linked below:

PEDESTRIAN SAFETY COUNTERMEASURES AT CONTROLLED CROSSINGS

- **Install traffic signal**
 - When properly timed, a traffic signal increases the traffic handling capacity of an intersection, and when installed under conditions that justify its use, a signal is a valuable device for improving the safety and efficiency of both pedestrian and vehicular traffic. Signals may reduce certain types of accidents, most notably, right-angle (broadside) collisions.
- **Extend pedestrian crossing time**
 - In general, shorter cycle lengths (ideally less than 90 seconds) and longer walk intervals provide better service to pedestrians and encourage better signal compliance. For optimal pedestrian service, fixed-time signal operation usually works best because it provides an automatic pedestrian phase.
- **Leading pedestrian interval**
 - Leading Pedestrian Intervals or LPIs provide 3 to 10 seconds of advance WALK signal only for pedestrians, where vehicles are traveling in the same direction or turning right or left across the crosswalk. During the advance WALK only, pedestrian signal phase, pedestrians get a “head start” crossing the intersection while parallel and conflicting turning movements are at a stop.
- **Raised intersection**
 - A raised pedestrian crossing is also essentially a speed table, with a flat portion the width of a crosswalk, usually 10-15 feet. Raised intersections and crosswalks encourage motorists to drive slower through the intersection and to yield.
- **Convert two-way stop to all-way stop**
 - Past studies documenting the safety effect of converting intersection traffic control to all-way stops have consistently shown impressive accident reductions.
- **Realign intersections to 90 degrees**
 - 90-degree intersections have a higher degree of safety than intersections operating at a skewed angle. Realignment of a skewed intersection to 90 degrees can see a reduction of crashes up to 50% depending on the skew angle.
- **Advance stop/yield markings**
 - Advance yield/stop line include the stop bar or “sharks teeth” yield markings placed 20 to 50 feet in advance of a marked crosswalk to indicate where vehicles are required to stop or yield in compliance with the accompanying “STOP Here for Pedestrians” or “YIELD Here to Pedestrians”.
- **Prohibit right-turn-on-red**



A raised intersection slows all vehicular movements through the intersection and improves pedestrian crossings in all directions.

- Prohibiting right turns on red is a simple, low-cost measure. Together with a leading pedestrian interval, the signal changes can benefit pedestrians with minimal impacts on traffic. They should be done in locations with substantial pedestrian volume and places where children cross.
- **Yield to pedestrians sign**
 - These signs serve to remind road users of laws regarding right-of-way, and they may be appropriate on 2-lane or 3-lane roads where speed limits are 30 mph or less. The sign can be placed in between travel lanes or in a median.
- **ADA ramps & audible push button upgrades**
 - New and upgraded ADA ramps remain on the top of the list throughout the planning process. Neenah steel ADA compliant plates should be advised for the city to use for these upgrades. The plastic yellow inserts tend to be less reliable after years of wear, which only create more problems for persons with disabilities.
- **Curb extensions**
 - This treatment, also referred to as bulb-outs, extends the sidewalk or curb line out into the parking lane, which reduces the effective street width. Curb extensions must not extend into travel lanes and should not extend across bicycle lanes.
- **Extended time pushbutton**
 - Pedestrian activated pushbuttons can be enabled to allow pedestrian to request additional crossing time by holding the button for at least two seconds.
- **Install pedestrian countdown timer**
 - Pedestrian countdown signals consist of a standard pedestrian signal head, with an added display showing a countdown of the remaining crossing time. Countdown signals are required by the MUTCD to be installed whenever pedestrian signal heads are warranted as part of intersection signalization or reconstruction.
- **Pedestrian Hybrid Beacon (PHB)**
 - PHBs have been shown to significantly reduce pedestrian crashes. A Federal Highway Administration (FHWA) study published in 2010¹ found that pedestrian hybrid beacons can reduce pedestrian crashes by 69 percent and total crashes by 29 percent.
- **Pedestrian refuge island**
 - Reduce the exposure time experienced by a pedestrian in the intersection. While safety islands may be used on both wide and narrow streets they are generally applied at locations where speeds and volumes make crossings prohibitive. Pedestrian safety islands should be 6' wide (based on the length of a bicycle or a person pushing a stroller), however a narrower raised median is still preferable to nothing. The cut-through in the Safety Island should be the width of the crosswalk. All medians at intersections should have a "nose" which extends past the crosswalk, protecting people in the median and slowing turning drivers.



Photo Credit: Mike Cynecki

Countermeasure	Range	Average
High visibility crosswalk marking	\$600-5,700 each	\$2,540 each
Lighting	Varies based on fixture type and utility service agreement	
Parking restriction	Varies based on the required signs and pavement markings	
Curb extension	\$2,000-20,000	\$13,000 each
Advance STOP/YIELD sign	N/A	\$300 each
Advance STOP/YIELD line	N/A	\$320 each
In-street STOP/YIELD sign	N/A	\$240 each

Figure 3.2 // Safety Countermeasure Cost

- Raised crosswalk
- Rectangular rapid flashing beacon (RRFB)
- Closing driveways and access control
- Lighting
 - If In-Roadway Warning Lights are used at a crosswalk, the following requirements shall apply:
 - Install In-Roadway Warning Lights along both sides of the crosswalk and span its entire length.
 - In-Roadway Warning Lights initiate operation based on pedestrian actuation and cease operation at a predetermined time after the pedestrian actuation or, with passive detection, after the pedestrian clears the crosswalk.
 - In-Roadway Warning Lights display a flashing yellow light when actuated. The flash rate should be at least 50, but no more than 60, flash periods per minute. If they are flashed in a manner that includes a continuous flash of varying intensity and time duration that is repeated to provide a flickering effect, the flickers or pulses should not repeat at a rate that is between 5 and 30 per second to avoid frequencies that might cause seizures.
 - Install In-Roadway Warning Lights in the area between the outside edge of the crosswalk line and 10 feet from the outside edge of the crosswalk.
 - In-Roadway Warning Lights face away from the crosswalk if unidirectional or shall face away from and across the crosswalk if bidirectional.
- Restrict on-street parking in advance of crossing
- Improved sight lines and visibility
- Textured and colored pavement treatments
- Hardened centerlines
- Additional signage
 - Regulatory signs are used to inform motorists or pedestrians of a legal requirement and should only be used when the legal requirement is not otherwise apparent. The use of NO TURN ON RED signs at an intersection should be evaluated on a case-by-case basis. Less restrictive alternatives should be considered in lieu of NO TURN ON RED. Also, supplementary signs, such as WHEN PEDESTRIANS ARE PRESENT or WHEN CHILDREN ARE PRESENT may be placed below the NO TURN ON RED sign.



UNCONTROLLED CROSSINGS

According to MUTCD Section 3B.18.08, “Crosswalk lines should not be used indiscriminately. An engineering study should be performed before a marked crosswalk is installed at a location away from a traffic control signal or an approach controlled by a STOP or YIELD sign.”

FHWA has produced a guide as part of the Safe Transportation for Every Pedestrian (STEP) program to help agencies select countermeasures to reduce pedestrian crashes by releasing the Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations (FHWA, July 2018 Update), which highlights nine countermeasure categories:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
 - High-visibility crosswalks (i.e. bar pairs, continental, ladder) are preferred over traditional parallel line crosswalks and should be provided at all established midblock pedestrian crossings.

- Raised crosswalk
- Advance yield here to (stop here for) pedestrian sign and yield (stop) line
- In-street pedestrian crossing sign and centerline flexible delineators
- Curb extension
- Pedestrian refuge island
- Rectangular rapid-flashing beacon (RRFB)
- Road diet
- Pedestrian hybrid beacon (PHB)

A major outcome of the FHWA guide is the creation of the two very useful tables. Table 1 from the guide is the Application of Pedestrian Crash Countermeasures by Roadway Feature. Table 2 from the guide is Safety Issues Addressed Per Countermeasure. By using the two tables, a well-conceived application of pedestrian crash countermeasures (or combination of) can be developed in short order for almost any roadway depending on number of lanes, presence of medians, traffic volume, and posted speed limits. It is recommended that the City of Brandon consult the FHWA guide as a starting point for any uncontrolled intersection crossing improvement. Additionally, officials should also consider the surrounding land development context, pedestrian travel patterns, countermeasure effectiveness, and costs when considering what countermeasure(s) are best suited for the crossing.

SAMPLE CRITERIA FOR RECTANGULAR RAPID FLASHING BEACONS (RRFB) IN THE CITY OF BRANDON

1. Use when posted speed limit is 40mph or less.
2. Low visibility, vertical or horizontal curves exist in the roadway
3. Proximity to civic land uses such as City Hall, schools, libraries, or government buildings.
4. High pedestrian crossing volumes
5. If RRFB crossings are not desired, consider in-street crossing signage and an upgrade of on-street crossing markings.

Pedestrian Crash Countermeasure for Uncontrolled Crossings	Safety Issue Addressed				
	Conflicts at crossing locations	Excessive vehicle speed	Inadequate conspicuity/visibility	Drivers not yielding to pedestrians in crosswalks	Insufficient separation from traffic
Crosswalk visibility enhancement					
High-visibility crosswalk markings*					
Parking restriction on crosswalk approach*					
Improved nighttime lighting*					
Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line*					
In-Street Pedestrian Crossing sign*					
Curb extension*					
Raised crosswalk					
Pedestrian refuge island					
Pedestrian Hybrid Beacon					
Road Diet					
Rectangular Rapid-Flashing Beacon					

*These countermeasures make up the STEP countermeasure "crosswalk visibility enhancements." Multiple countermeasures may be implemented at a location as part of crosswalk visibility enhancements.

Figure 3.3 // Safety Issues Addressed Per Countermeasure from Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations (FHWA, July 2018 Update, Table 2)

FHWA suggests that RRFBs shall not be used without the presence of pedestrian, school or trail crossing warning sign. RRFBs shall not be used for crosswalks across approaches controlled by YIELD signs, STOP signs, traffic control signals, or pedestrian hybrid beacons, except for the approach or egress from a roundabout. RRFBs are used to enhance the conspicuity of standard pedestrian and school crossing warning signs at uncontrolled marked crosswalks. The irregular flashing pattern of the RRFB appears when activated by pedestrians to bring attention to motorists to yield to pedestrians.

Rectangular Rapid-Flashing Beacon (RRFB)¹ ▪ **Cost: \$4,520 - \$52,310**

When RRFB is not necessary, but mitigation is required: In-street crossing signs can be implemented at existing crossings in low speed (20-30mph) and more urban settings at a cost between \$500-\$1,000.

In-Street Pedestrian Crossing Sign² ▪ **Cost: \$240**

AREAS IDENTIFIED FOR IMPROVED PEDESTRIAN SAFETY IN BRANDON

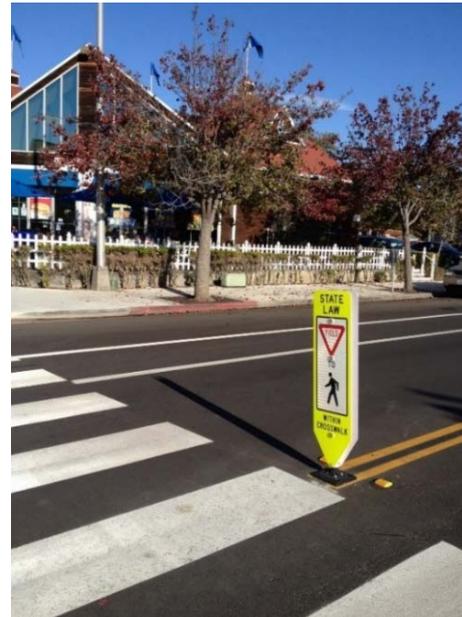
As a result of existing conditions analysis, discussions with city officials and stakeholders, as well as public feedback, 11 locations were identified for pedestrian safety improvements through design strategies. As funding becomes available, these would be opportunities for pedestrian safety improvements in Brandon.

- **UIOIX BOULEVARD** — Sioux Boulevard has continuous sidewalk on only one side with only a few crossings. Striped roadway crossings exist on the west side but no striped crossings exist on the east side of Sioux Boulevard. The City of Brandon should construct missing sidewalk or shared use path on Sioux Boulevard from E Maureen Drive to W Alpine Circle.

- **UIOIX BOULEVARD CROSSINGS** — New crossings on Sioux Boulevard include a new crossing at W Chapelwood Drive to connect to a new shared use path that will eventually connect between the Aspen Park pool, and the Big Sioux Rec Area.

Another possible new crossing of Sioux Boulevard could be at or near the Ponderosa Street/W Birchwood Drive shared use path, this crossing should likely be located at Ponderosa Street to give a northern crossing near the adjacent shared use path.

- **HOLLY BOULEVARD AND SURROUNDING AREAS** — Holly Boulevard could serve as a primary bike/ped route between Brandon and Sioux Falls. In order to accomplish this Holly Boulevard would need to be upgraded in places with wider paved shoulders that tie into existing shared-use paths near S Heritage Road. Initial recommended treatments are to use pavement markings on the shoulders similar to the markings that already exist on Rice Street (Holly Boulevard) in Sioux falls. The long-term goal for the Holly Boulevard corridor is an eventual shared use path connecting the City of Brandon to the existing shared use path on Veterans Parkway. Eventually, this SUP could connect to the Great Bear Ski and Recreation Area. An upcoming Holly Boulevard corridor study will include coordination across multiple jurisdictions and will make recommendations for the number of lanes and other traffic issues on Holly Boulevard.



¹ FHWA. Rectangular Rapid-Flashing Beacon (RRFB). http://www.pedbikesafe.org/pedsafe/countermeasures_detail.cfm?CM_NUM=54

² FHWA. In-Street Pedestrian Crossing Sign. http://www.pedbikesafe.org/pedsafe/countermeasures_detail.cfm?CM_NUM=69

- **WEST SIDE OF BRANDON** — The Holly/Heritage Industrial Park is in need of sidewalk, especially considering the daycare operating within this area. Sidewalk does exist on the western end of Frontier Street. Add sidewalk on north side of Frontier Street and west side of Heritage Road.

Other regional trail connections are identified near the W Holly Boulevard corridor, including a shared use path along an existing city-owned sewer easement near the Ellis and Eastern Railroad, as well as a potential Big Sioux River Trail corridor connecting to planned Sioux Falls Big Sioux River greenways. A southeastern loose surface trail connection from S Heritage Road in the Bluffs Neighborhood is recommended to connect to the Big Sioux Recreation Area.

- **REDWOOD BOULEVARD** — The City of Brandon should evaluate an upgraded crossing of Redwood Boulevard at N Sioux Boulevard. This crossing is on a curve in the road with some grade changes. A ped activated RRFB could work well here and give drivers an advance warning of pedestrians crossing ahead of a curve in the road.
- **E REDWOOD BOULEVARD** — The City of Brandon should evaluate construction of sidewalk on the north side of E Redwood Boulevard from N Needles Drive and Split Rock Creek Bridge, build new sidewalk on the north side of E Redwood Boulevard and build crossing on east side of N Oak Ridge Road.
- **EAST SIDE OF BRANDON** — Should the City of Brandon assume maintenance of E Redwood Avenue, a connection to a new 180-acre development area for the city that could include a new elementary school. Discussions are being had for new trails and an elementary school to be built along with the new subdivision. New shared use path on the south side of E Redwood Avenue should connect this area to central Brandon.
- **NORTH SIDE INDUSTRIAL AREA** — The Rovang Industrial Park does not have sidewalk, SDDOT is starting construction in 2024 of Splitrock Boulevard Bridge over I-90, once this bridge is reconstructed with pedestrian accessibility, new sidewalk should be retrofitted into the industrial park.
- **9TH AVENUE INDUSTRIAL PARK** — The Industrial Park north of E Redwood Boulevard currently has no sidewalk. A recommendation to construct a quick build project similar to what is pictured here. However, pull back the access points to allow trucks with long trailers. This quick build project will add buffer protected bike and ped access more quickly and more cost effectively than retrofitting sidewalks.
- **ANNABELLE STREET/ROBIN DRIVE & HOLLY BOULEVARD/5TH AVENUE** — The Annabelle Street/Robin Drive area has some deficiencies including multiple non-standard curb ramps and a few inconsistent grades exist, along with multiple crossings that do not include companion ramps on the opposite side of the street. Intersections of note in this area include Annabelle Street/Robin Drive, Holly Boulevard/Robin Drive for some concrete renovations that include removal of non-standard detectable warning panels. Holly Boulevard/5th Avenue is missing companion curb ramps across from Brandon Valley Middle School.
- **ASPEN BOULEVARD/MAIN AVENUE & ASPEN BOULEVARD/NICHOLAS AVENUE** — This is a tricky intersection for pedestrians to cross as it is adjacent to the Ellis & Eastern Railroad. Recommendation to create a pedestrian crossing zone with ped activated RRFBs on both intersections that flash when either button is activated, or In-street pedestrian crossing signs. The entire area should be signed as a pedestrian crossing zone.
- **BIG SIOUX RECREATIONAL TRAIL NETWORK** — A plan focus area and recommendation could include mapping out the Big Sioux Recreation Area Trails, and extension of those trails into the City of Brandon and extending a trail out to the Bluffs Subdivision, including recommendations for wayfinding signage.

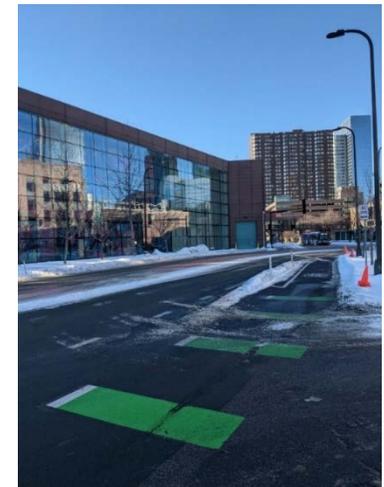
QUICK BUILD PROJECT DETAILS

Implement a quick build project on the south sides of Birch and Ash Streets between Splitrock Boulevard and 9th Avenue North. Install a quick build project on the west side of 9th Avenue, on the south side of Ash Street between 7th Avenue and 9th Avenue, install a quick build project on the north side of Birch Street between 7th and 9th Avenues. Finally, install a quick-build project on the east side of 7th Avenue.

Quick build projects to accommodate pedestrian and bicycle traffic on-street with minimal additional infrastructure can be implemented quickly and easily. Parking can be integrated into the quick build projects to buffer bicyclists and pedestrians from traffic. However, the 9th Avenue Industrial Park currently has ample parking. An additional crossing at Redwood Boulevard to the west side of 9th Avenue N would be added as well. Protected walking & biking lanes described in this quick build are cheaper to install and maintain compared to permanent infrastructure like a sidewalk. Additionally quick builds are easily adaptable if changes to other infrastructure are required.

WHAT IS A QUICK BUILD PROJECT?

Quick build projects are projects that quickly and affordably address an identified need. They are typically low in cost and can be implemented on existing infrastructure by adding forms of traffic control within roadway right-of-way such as striping, paint, signage, temporary curbing, and flexible traffic control posts (also known as flexible delineators, flex posts, or bollards). These types of projects often change the roadway environment to improve the experience for pedestrians and bicyclists. Another major benefit of quick build projects is that it provides an affordable demonstration to the community before investing in more costly permanent changes. There are multiple considerations to implement a successful strategy for quick build projects, and the Minnesota Department of Transportation provides a guide that will increase the likelihood of success.³



³ Minnesota Department of Transportation. *Demonstration Project Implementation Guide* (November 2019). <http://www.dot.state.mn.us/saferoutes/documents/mndot-demonstration-project-implementation-guide-final.pdf>

Figure 3.4 // 9th Avenue Industrial Park – Proposed Quick-Build Project Area

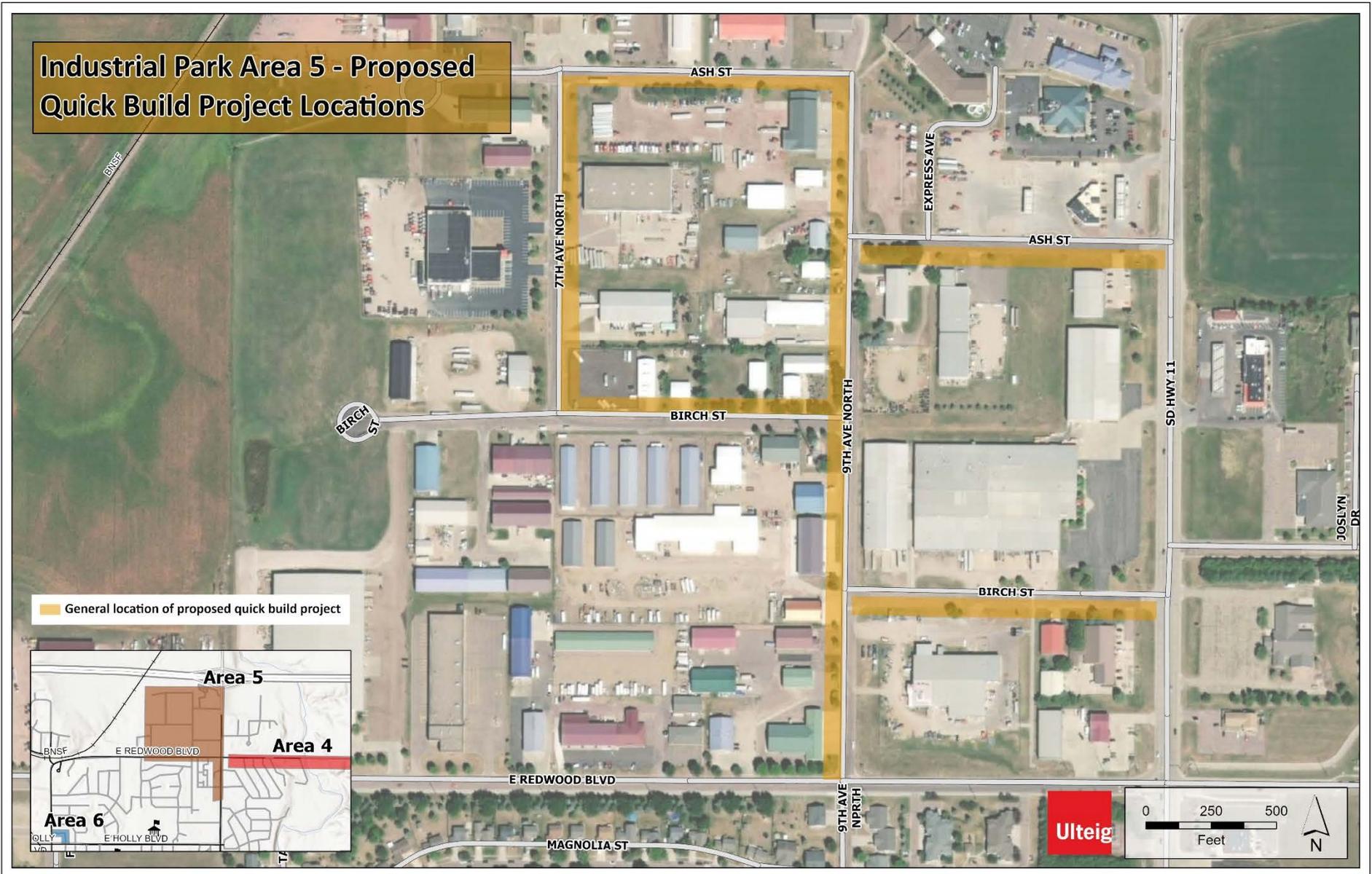


Figure 3.5 // An overview of the proposed 9th Avenue Industrial Park Quick Build project. Large truck turning radius symbol shown.

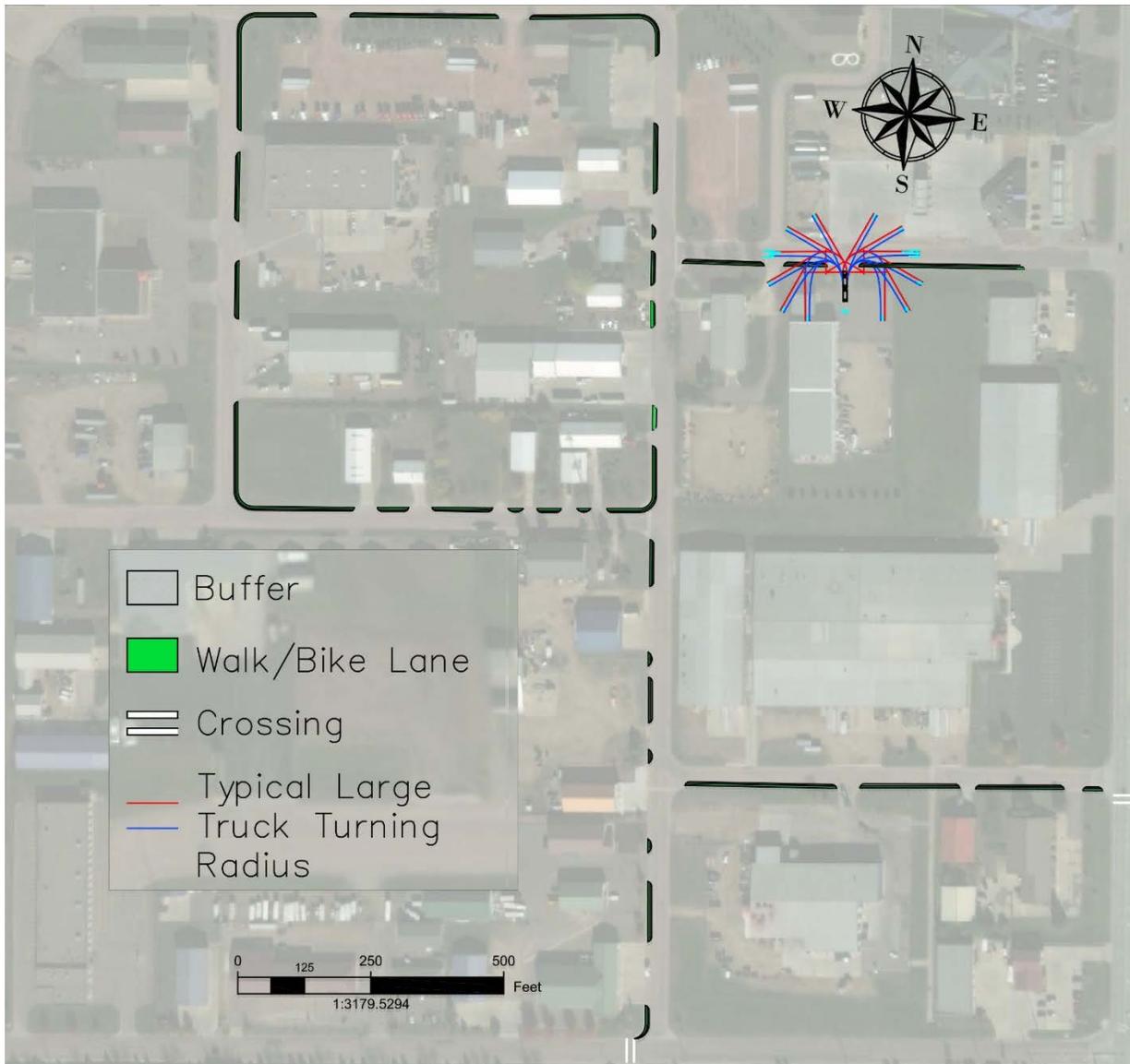


Figure 3.6 // Quick Build NW area. Large truck turning radius symbol shown.



Figure 3.7 // Quick Build East Area. Large truck turning radius symbol shown.

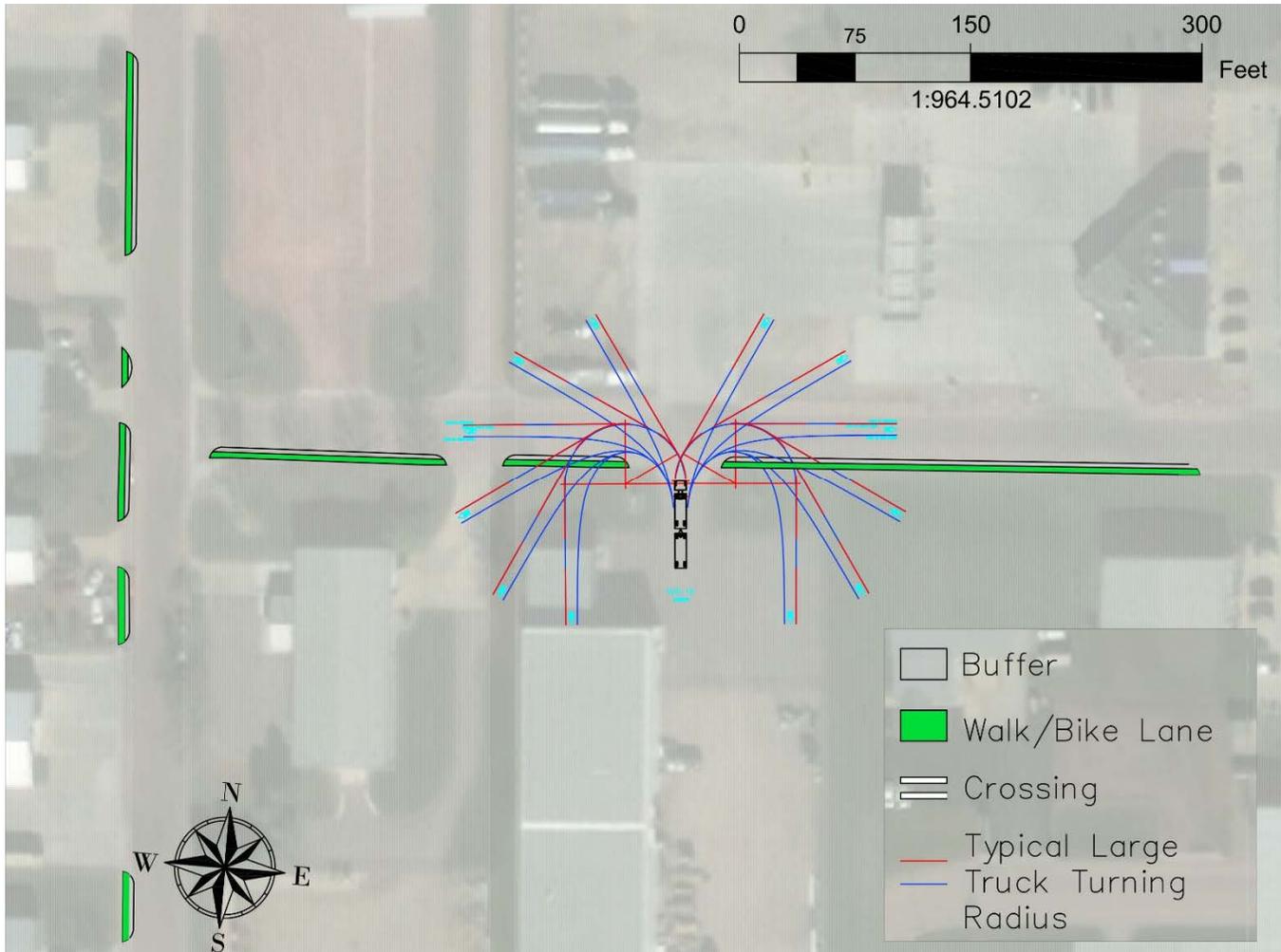


Figure 3.8 // Quick Build SE Area



POLICY GUIDANCE FOR THE CITY OF BRANDON

Plan policy guidance for the City of Brandon is recommended below:

- **SIDEWALK WIDTHS** — Plan recommendation is for a 5 ft minimum sidewalk width in the City of Brandon. Currently the town standard is 4' sidewalk. All new City of Brandon sidewalks should have a minimum width of 5 ft. The preferred minimum sidewalk width recommended for safe routes to school is five to six feet. The six-foot width allows for two people to walk comfortably side by side and provides sufficient space for pedestrians crossing in the opposite direction. Sidewalks with a width of ten feet or more should be built where there is no sidewalk buffer along an arterial street and along roads adjacent to school grounds where large numbers of walkers are expected. This width policy meets or exceeds ADA requirements. Policy crafted with guidance from National Safe Routes to School Partnership, and FHWA.
- **SIDEWALK AND TRAIL SURFACES** — Heavily used sidewalks should be made of concrete, less expensive walkways may be constructed of asphalt, crushed stone, loose surface, or other materials if they are properly maintained and accessible. In more rural areas, paths and trails made of a material other than concrete may be suitable and be a better fit with a rural environment, a regional context, or where the trail network meets another loose surface trail network. However, within Brandon City Limits trails should be hard surfaced.
- **SIDEWALK CONSTRUCTION** – The City may construct sidewalk if any owner fails to construct the sidewalk, as required by City code (10-1-5 & 10-1-7) and assess the costs to the owner.

LIGHTING STANDARDS

The City of Brandon Lighting Standards are found within the Brandon Zoning Ordinance (effective 10/20/2021), Chapter 15-14-10. It is important to review the lighting standards because lighting is often a recommended improvement for bike/ped infrastructure and different requirements may apply to bike/ped infrastructure depending on its location. The text from the ordinance is shown below as a reference:

Lighting of all types, excluding street lighting and traffic signals, shall be directed so as to reflect away from all residential districts, and shall be so situated so as not to reflect directly onto any public right-of-way, so as to create a traffic hazard. When property is adjacent to or within one hundred fifty (150) feet of residentially used or zoned property, the following lighting standards apply:

- The maximum light level shall be no greater than three (3) foot candles field measured at the property line (ground level).*
- The maximum height of light luminaries shall be twenty-five (25) feet above the ground.*
- Canopy luminaries and other on-site lighting with luminaries greater than two thousand (2,000) lumens shall include a 90-degree cut-off type, deflector, refractor, or forward throw light fixture.*
- The maximum number of canopy luminaries shall be determined by the following industry standard:*

Canopy length (in feet) x canopy width (in feet) x 3 – Maximum Number of Luminaries Lamp wattage.

All other light luminaries shall have a maximum height of thirty-eight (38) feet above the ground. Submittal of photometric plans shall be required with all site plan checks for building projects on property with lighted parking lots or lighted canopies.

The following structures or uses are exempt from these lighting standards: public recreation facilities, parks, pedestrian walkways, illuminated flags or statues, airport runways, telecommunication towers, broadcast towers, and historic period lighting.

RAILROAD CROSSINGS IN BRANDON

The City of Brandon has five soon-to-be-active railroad crossings. The point at which bicycle and pedestrian infrastructure cross active tracks is an area of great concern to railroads, trail planners, transportation agencies, and trail users. The following guidance on railroad crossing is from the FRA/FHWA promoting the safe movement of trail users across railroad tracks: Figure 4.10 on page 112 shows how these could be implemented at the existing crossing as Aspen Blvd. and Main Ave.

Advance Notice of the Crossing: The first element concerns stopping sight distance, a common consideration in highway intersection design. The stopping sight distance is the distance required for a trail user to see an approaching train and/or the grade-crossing warning devices, recognize them, determine what needs to be done, and then come to a safe stop 12 feet clear of the nearest rail if a stop is necessary. This point usually will be marked by a pavement marking in advance of the crossing. This sight distance is measured along the trail and is based on a trail user traveling at a given speed and coming to a safe stop.

Properly Located Traffic Control Devices: The second element involves locating the appropriate traffic control devices (e.g., crossbuck signs) at grade crossings. Traffic control devices should be seen from an adequate distance in order for the observer to take appropriate action. The MUTCD⁴ available from the Federal Highway Administration, contains guidance and standards for the proper use of signs, signals, and pavement markings on roadways and pathways.

Ability to See an Approaching Train: The third element concerns the trail user's ability to see an approaching train to decide whether it is safe to cross. Two kinds of sight distance considerations are involved for safe movement across the crossing: the sight distance available in advance of the crossing and the sight distance present at the crossing.

APPROACH GRADES

Generally, standards for federal outdoor developed areas call for grades of five percent or less, but grades over five percent are allowed for short distances in specific circumstances. Grades over five percent are not recommended for crossing approaches. In general, the trail approach should be at the same elevation as the track. Steep grades on either side of the track can cause bicyclists to lose control, may distract trail users from the conditions at the crossing, and may block sight lines.

CROSSING ANGLE

The crossing angle is a critical issue for bicyclists and people with disabilities, the ideal angle to cross railroad tracks is at 90 degrees (perpendicular crossing). Other crossings may need to be skewed due to existing built environmental conditions, skewed crossings are less ideal due to bicyclists potentially slipping on skewed rails at speed when the rails are wet, or getting wheels caught in the flangeway (the open area



Figure 3.9 // 45° Rail with Trail Crossing



Figure 3.10 // 90° Rail with Trail Crossing

⁴ Federal Highway Administration. *Manual on Uniform Traffic Control Devices (MUTCD)* (March 2022). <https://mutcd.fhwa.dot.gov/>

next to the rail). The preferable skew angle between the centerline of the tracks and the bikeway for a skewed crossing of a railroad is between 60 and 90 degrees.

SIGNAGE & PAVEMENT MARKINGS

The MUTCD requires that all “pathway grade crossings” without active warning devices have a crossbuck assembly in each direction. The MUTCD also states that “A YIELD sign shall be the default traffic control device for Crossbuck Assemblies on all highway approaches to passive grade crossings unless an engineering study performed by the regulatory agency or highway authority having jurisdiction over the roadway approach determines that a STOP sign is appropriate.” The MUTCD does not require pavement markings at trail-rail crossings, but states that “If pathway users include those who travel faster than pedestrians, such as bicyclists or skaters, the use of warning signs and pavement markings in advance of the pathway grade crossing should be considered.”

SAFE ROUTES TO SCHOOL

One of the goals for the Brandon Bike and Pedestrian Plan is to build safe, well signed, accessible walking and biking routes to and from schools to enhance the quality of life and reduce school-based traffic congestion. Safe Routes to School (SRTS) programs are meant to be comprehensive, including engagement, equity, engineering, encouragement, education, and evaluation. A comprehensive SRTS plan and program is outside the scope of this Bike & Ped Plan, however, some conceptual routes are provided as well as additional resources to help guide future SRTS planning.

- **ENGAGEMENT** – The SRTS initiative should begin by listening to the community, including students, families, teachers, school leaders, and organizations. From there, an effective and intentional strategy can be built upon. This Bike and Ped Plan in and of itself is a result of engagement with the community.
- **EQUITY** – The equity focus area ensures that underserved communities and schools are able to participate in SRTS programs, regardless of income, race, gender, immigration status, disability, or other demographic groups. For many in these categories, walking and biking is the main way of travel to and from basic needs such as education, food, and employment, in addition to recreation. Prioritize schools and communities with the highest need for safe walking and biking.
- **ENGINEERING** – By creating physical improvements to streets and neighborhoods, walking and biking can become safer, more comfortable, and more convenient. This broad concept describes the design, implementation, operation, and maintenance of transportation infrastructure. As part of this Bike and Ped Plan, numerous engineering solutions are covered in other sections of this document.
- **ENCOURAGEMENT** – This strategy’s goal is to increase the number of children who walk and bike to school safely by generating excitement and interest in these modes of travel. The benefits of walking and biking have been described previously in this plan, and can be driven by special events, campaigns, clubs, contests, and ongoing activities to name a few.
- **EDUCATION** – Students and others in the community should be taught about pedestrian, bicyclist, and traffic safety. Creating awareness of the benefits and goals of SRTS as well as sharing the key messages for all groups will be most effective. Some methods to achieve this focus



Figure 3.11 // 90° Rail with Trail Crossing



area include various community education and programs, assisted with city government, school districts, and private businesses. Education initiatives can be rolled out with back-to-school activities, school-specific education, crossing guard training, and more.

- **EVALUATION** – Once an SRTS plan has been implemented, it is important to identify the issues and understand the results, so that improvements can be made over time. An SRTS plan is always evolving. Are the goals of the strategies being met? Are the efforts producing the successes expected? Adjustments can be made once you identify problems and address them with solutions that have reasonable expectations for success.
- **FUNDING & GRANT OPPORTUNITIES** – Grants can be a great way to supplement or bolster funding for projects. However, grants require both funding and staff time to identify projects, grants, and fill out the grant application forms, each of which have different requirements and take different levels of administrative burden to complete. Grants are also typically a competitive process and are inherently risky as not all applications will win a grant award. Some grants require a specific % cash match from the applicant or in-kind contribution.

BEST PRACTICES FOR PURSUING GRANT FUNDING



The City of Brandon can potentially qualify for multiple types of grants related to transportation infrastructure projects including:

- State Grants: SDDOT, South Dakota Lottery
- Federal Grants: FHWA, HUD, USDOT, Natl. Park Service
- Other Grants: Local Flood Districts, Non-profit organizations

BRANDON SAFE ROUTES TO SCHOOL MAPPING & ANALYSIS

School route maps should be reviewed each year to see if there have been changes to the physical environment or traffic control that could affect the safety of the routes shown or changes to the routes themselves. It may be necessary to conduct an assessment of the physical environment to optimize the routes and suggest engineering treatments to enhance safety at some locations. Some locations may also benefit from adult school crossing guards.

SRTS PEDESTRIAN SAFETY TIPS

- School may consider incentive programs for walking to school

- Consider creating a “Walking School Bus” in neighborhoods without sidewalks. A walking school bus (WSB) is a safe and fun way for children to get physical activity as they travel to and from school with adult supervision. Each “bus” walks along a set route with one or more adults leading it, picking children up at designated stops along a predetermined route and walking them to school. The process is reversed in the afternoons on the way home from school.
- Children under the age of 10 should have supervision while walking and crossing streets. Young children lack full cognitive skills and depth perceptions to safely consider the speed and distance of oncoming vehicles.
- Cross streets only at corners or identified crosswalks
- Look left and right multiple times before crossing and make eye contact with the driver. Drivers are often distracted, and you want to be sure they see you and have come to a stop.
- Keep looking for oncoming vehicles as you cross the street
- You should not be distracted when crossing the road. Remind children and teens to remove ear buds and not use cell phone when crossing the street.
- Be a role model and use proper pedestrian behavior as an example.

SRTS BICYCLE SAFETY TIPS

- Wearing a helmet is the most effective way to prevent head injuries when in any type of crash
- Walk your bike when using crosswalks and follow other pedestrian safety tips. Riding your bike across the street does not give drivers much time to stop in case there is a conflict.
- A bicycle with one seat is designed for only one rider. It should not carry more people than it was designed for, such as on handlebars or pegs.
- When riding a bicycle, don’t carry anything on your hands and keep hanging backpack straps away from wheels and pedals. Keep hands on the handlebars at all times.

Figure 3.12 // Safe Routes to School Map 1 – Brandon Elementary, Brandon Valley Middle School, Brandon Valley High School

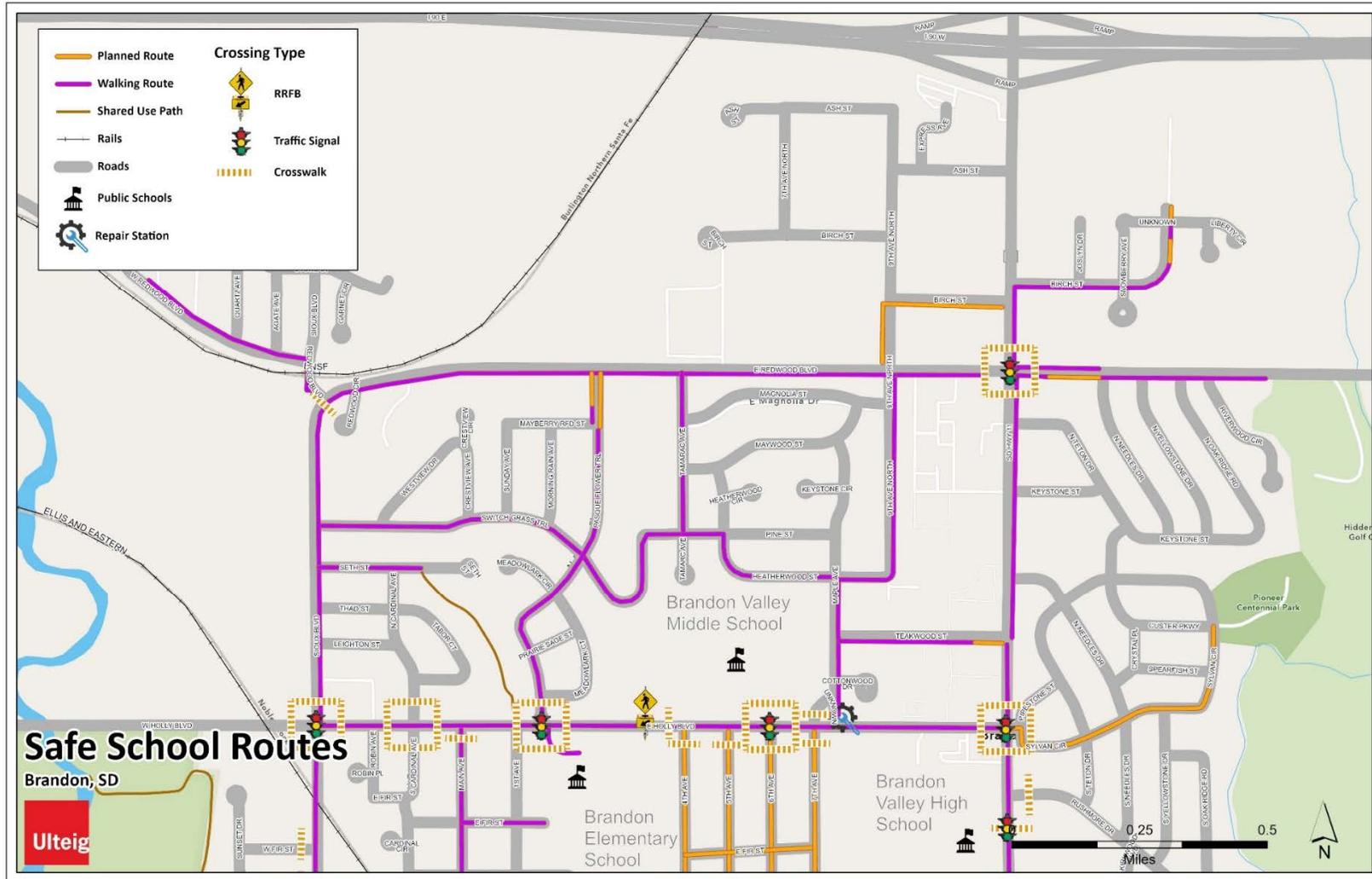
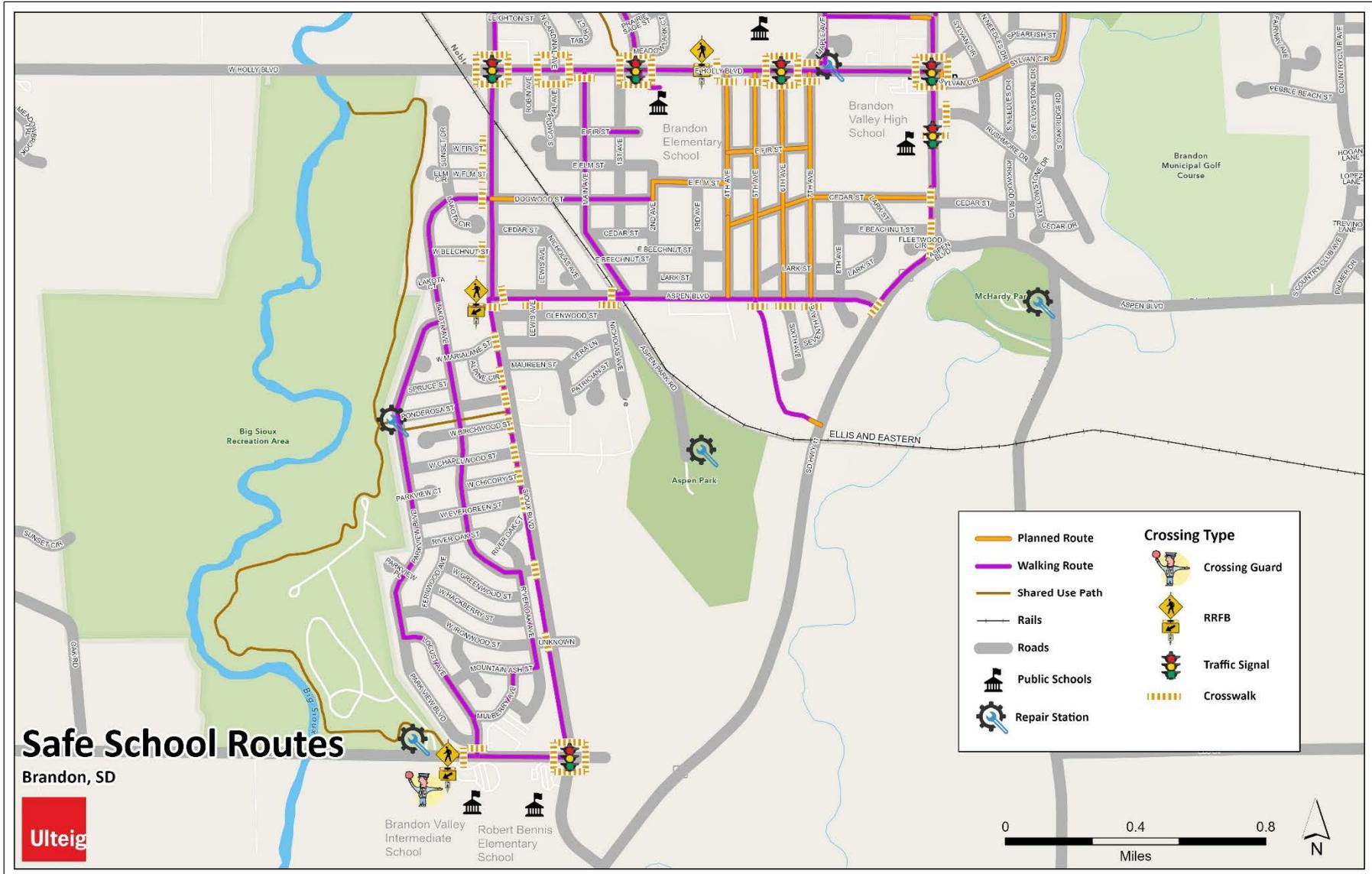


Figure 3.13 // Safe Routes to School Map 2 – Robert Bennis Elementary and Brandon Valley Intermediate School



BRANDON RAIL WITH TRAIL PILOT PROJECT

The Ellis and Eastern Railroad (E&E RR) is going to be beginning two train per-day service soon through the City of Brandon, the E&E RR was recently awarded a grant to revitalize and upgrade their vacant railroad tracks through the city. The E&E RR has been open minded and receptive to ideas. The E&E RR Corridor through Brandon is ripe for a technique called a Rail with Trail, which combines an active railway corridor with an agreed upon pedestrian access easement located ~50' from the railroad centerline. The Brandon Bike and Pedestrian Plan Team proposed a Rail with Trail concept to the E&E RR during the stakeholder engagement portion of our planning process and the E&E RR agreed to an initial pilot Rail with Trail project in the center of Brandon from Sioux Boulevard to Aspen Boulevard. This Rail with Trail can allow bike and pedestrian access to and from the core area of town connecting to Aspen Park and nearby schools.

Figure 3.14 // Brandon Rail with Trail Phasing Plan

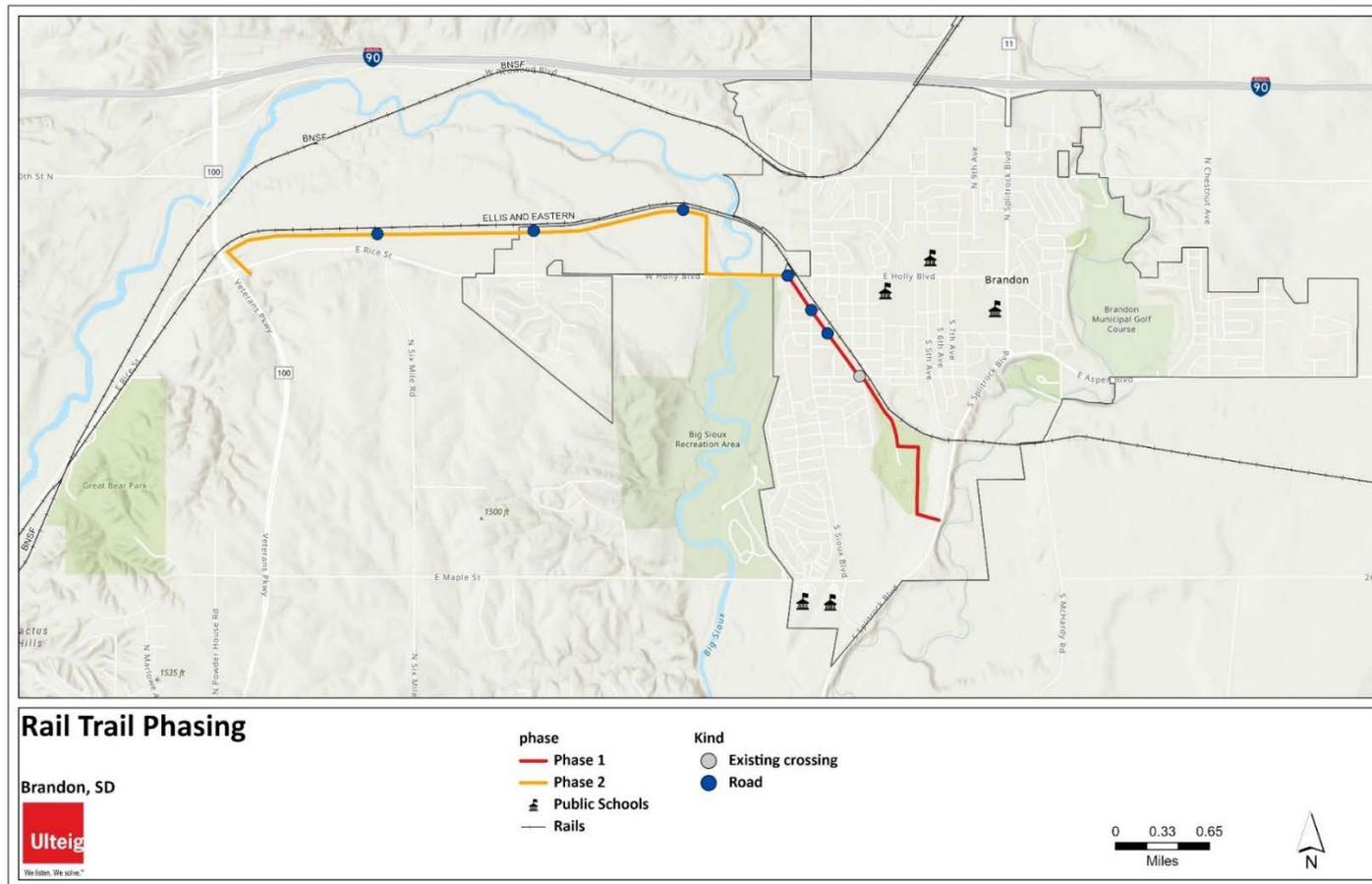


Figure 3.15 // Above rendering shows a 10ft loose surface single track trail Rail with Trail that includes 1' mowed shoulders on each side, trail is located 50' from the railroad centerline in this rendering but will vary along the railroad right of way.

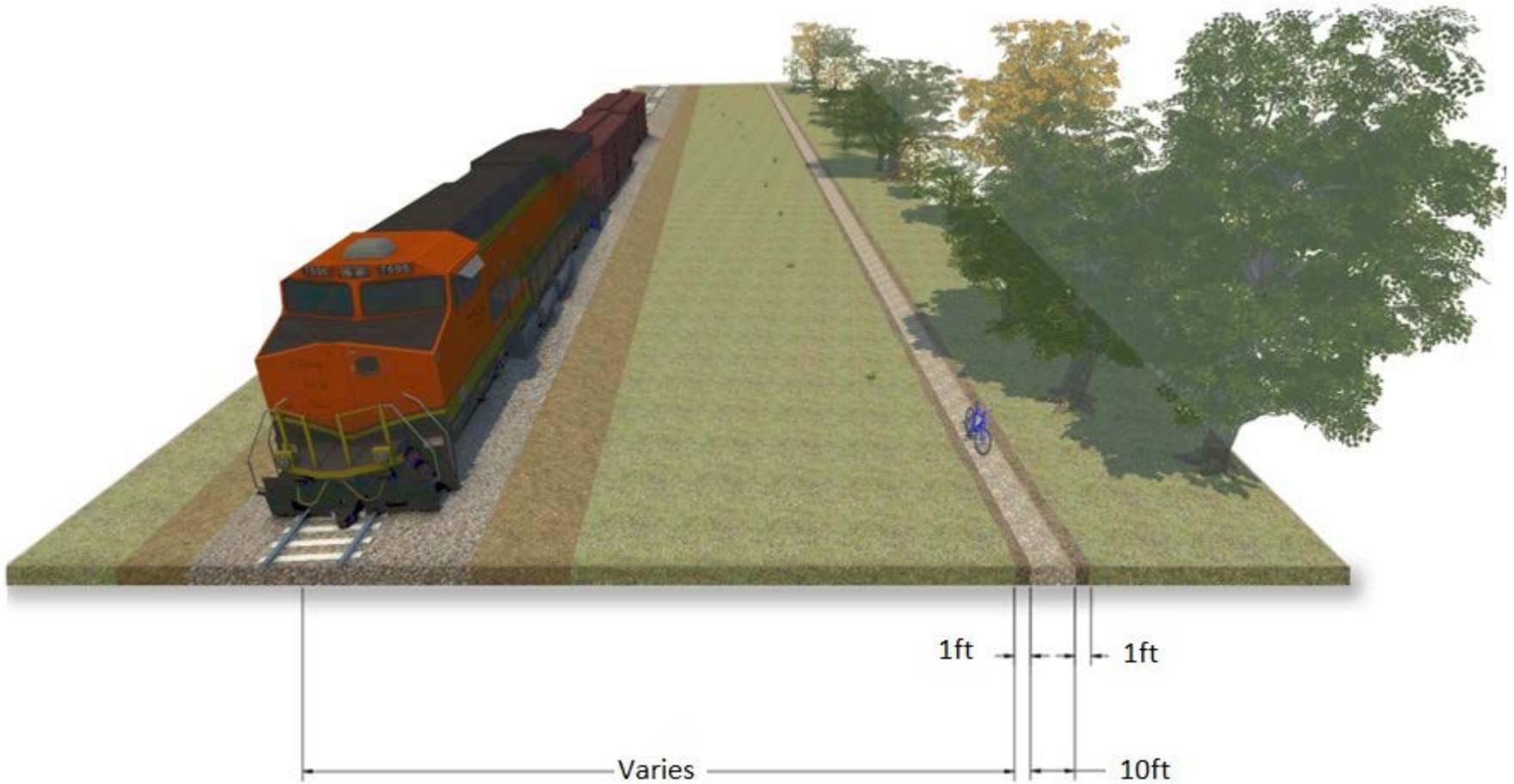
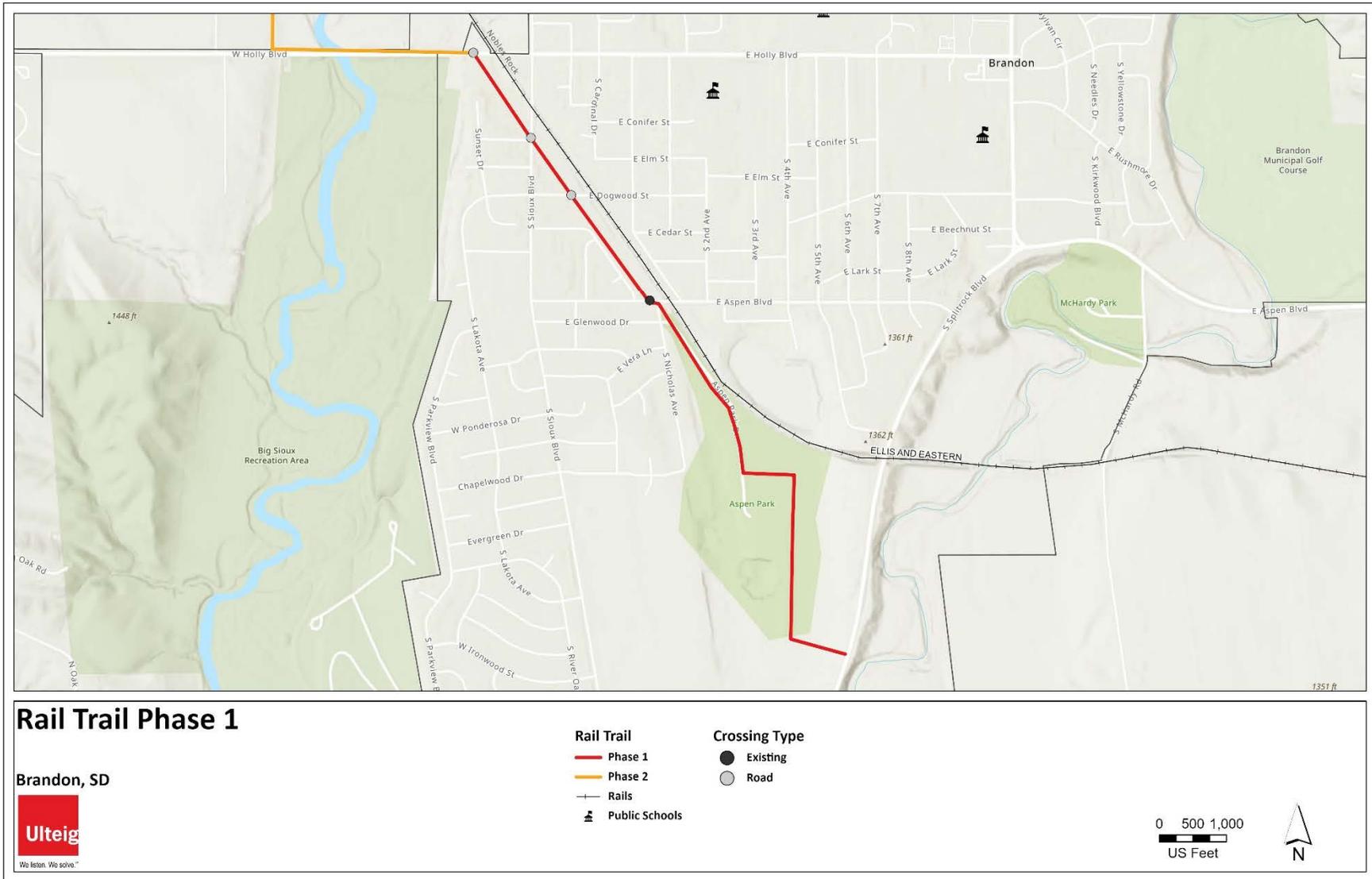
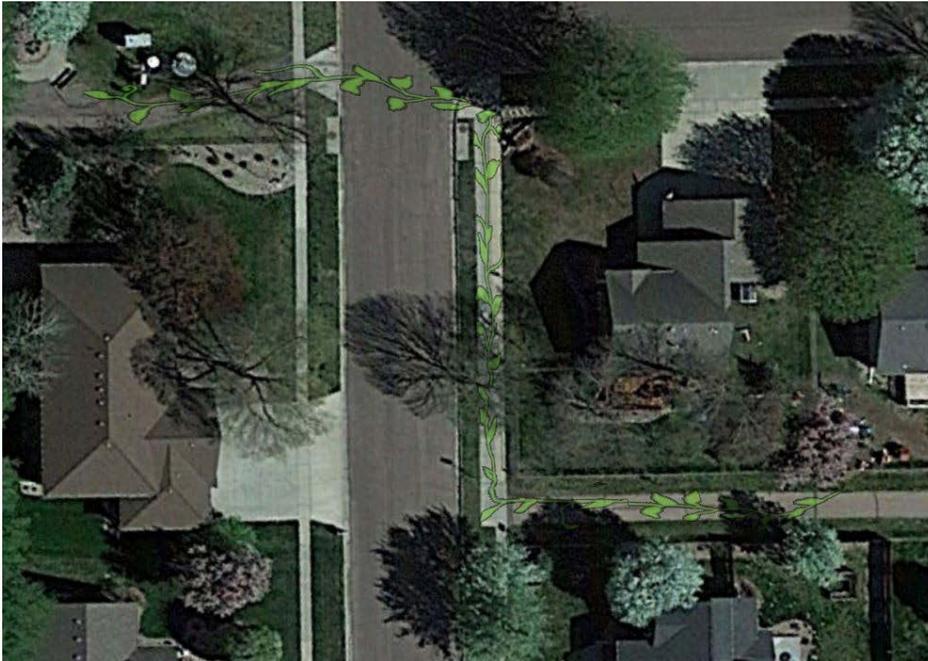


Figure 3.16 // Brandon Rail with Trail Phase 1 Plan



TRAIL UPGRADES BETWEEN PONDEROSA STREET & BIRCHWOOD CIRCLE

The trail between Ponderosa Street and Birchwood Circle, can be upgraded with lighting and markings to allow for removal of unsightly “Bike Route” signs, paint a marking on the sidewalk and street to show bicyclists and pedestrians the “jog” that occurs between trail segments. A vine with leaves theme is rendered above. Also consider low-level downcast lighting options for this segment, similar to landscape lighting.



BRANDON REGIONAL TRAILS MASTER PLAN

Recommendations for a regional trail system includes the following:

SHORT TERM REGIONAL TRAIL RECOMMENDATIONS

W Holly Boulevard Shared Use Path: This is a highly requested connection that would likely be built on the south side of W Holly Boulevard from Sioux Boulevard to S Heritage Road. This connection had over 80 requests during the public feedback portion of the planning process. A dedicated shared use path is recommended, however in the interim shoulder improvements to W Holly Boulevard should also be made. Ultimately this shared use path is envisioned to connect to Great Bear Park along the south side of W Holly Boulevard/E Rice Street.

Ellis and Eastern Railroad Regional Trail: This trail system has been initially agreed to by the Ellis and Eastern Railroad (E&E RR), trail would need to be built in phases.

- **Phase 1** is a segment of trail proposed to go on the west side of the E&E RR ROW from Holly Boulevard to Aspen Boulevard. The E&E RR agreed to 90 feet of standoff distance from the trail to the train, leaving 10 foot of space for a shared use path inside of the E&E RR's variable ROW. There is a challenge in implementing this as adjacent homeowners have encroached onto the E&E RR's ROW in this area, placing sheds, fences, trees, gardens, and other vegetation that would have to be cleared and rearranged before this trail connection can be implemented.
- **Phase 2** may be more easily implemented as the proposed trail would follow an existing City of Brandon owned sewer easement north on the east side of the Big Sioux River, then following the sewer easement west on the south side of the E&E RR ROW connecting to Veterans Parkway.

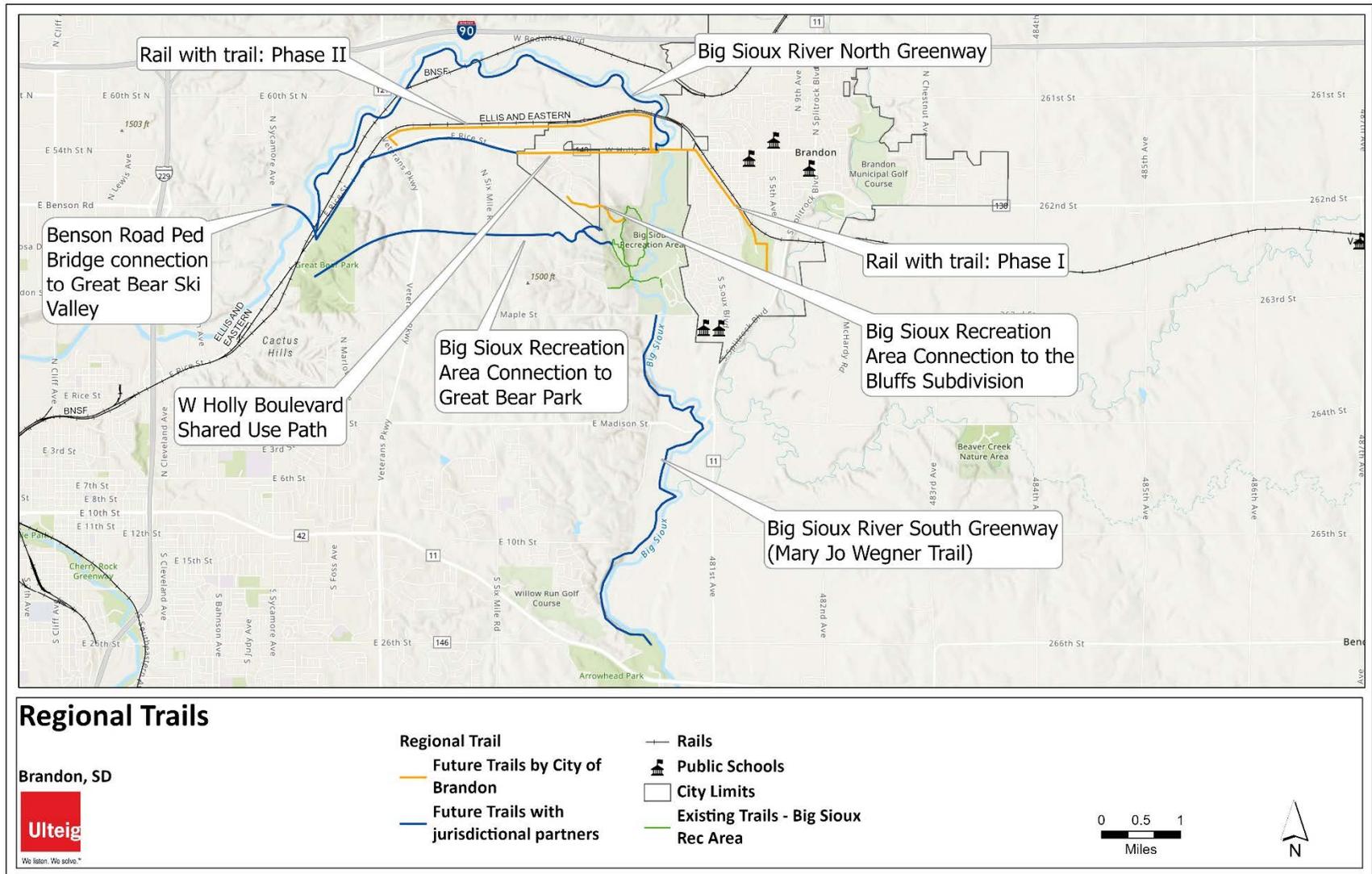
Big Sioux Recreation Area Connection to the Bluffs Subdivision: Envisioned as a natural surface singletrack trail. This trail formalizes a social trail connection by gaining access through an existing fence, possibly by constructing a gate that trail users close behind them, or a permanently open entrance through the fence onto a pedestrian access easement provided on the south side of the Bluffs Subdivision parcel. This trail is envisioned to be extended as a loose surface trail to the west to connect to Great Bear Park.

MID- AND LONGER-TERM REGIONAL TRAIL RECOMMENDATIONS

Big Sioux River North Greenway: A greenway trail of a yet to be defined surface type is proposed to follow the Big Sioux River. This greenway trail was discussed with Sioux Falls Parks stakeholders who posed the idea. This proposed trail could connect to a future Benson Road pedestrian bridge over the Big Sioux River completing a missing link to Northeastern Sioux Falls.

Big Sioux River South Greenway: The proposed South Greenway Trail would connect to the Big Sioux Recreation Area near W Park Street. Pedestrian accommodations would be required at the W Park Street Bridge over the Big Sioux River, for the trail to continue south along the west side of the Big Sioux River. An alternate option exists to follow the east side of the Big Sioux River south to cross trail users at the E Madison Street bridge which has wide existing paved shoulders. The Big Sioux River South Greenway then follows the Big Sioux River south on the west side to connect to the Mary Jo Wegner Arboretum and East Sioux Falls Historic Site.

Figure 3.17 // Brandon Regional Trail Plan



CONTEXT SENSITIVE SOLUTIONS & BEST PRACTICES

FHWA defines context sensitive solutions (CSS) as “a collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources, while improving or maintaining safety, mobility, and infrastructure conditions.” Trails and Bicycle/Pedestrian Infrastructure should fit the physical setting and preserve scenic, aesthetic, historic, and environmental resources, while providing safe mobility. Context sensitivity also means that infrastructure should meet the needs of users, respect design objectives for safety, efficiency, multimodal mobility, capacity, maintenance, and provide a sense of place. A CSS project is developed with the surrounding environment, conditions, and user base in-mind.

- Design guidance for CSS Projects should be more flexible, and projects should receive a high amount of input from stakeholders and the public.
- Document decision making when applying design flexibility on CSS projects
- Be innovative in CSS solutions, while meeting project needs
- Use performance metrics and measurements once CSS projects are built
- Commit to maintain the facilities

One example of a CSS is the application of the R1-6 (In-Street Pedestrian Crossing) Sign. This sign is a pedestrian crash countermeasure at uncontrolled pedestrian crosswalks in low-speed environments. It is designed to be placed within the centerline of the road, and its narrow shape makes it less likely to be hit by a vehicle. If it is hit, it is designed to fold over, then “bounce back.” Depending on the location, it may still prove to be a maintenance burden, particularly if it becomes an obstacle for snow removal. Some jurisdictions have found that by working with school districts, an agreement can be made where the school is responsible to set a portable version of this sign in the street during times when school starts or ends, and then remove them when not in use. A portable version of the In-Street Pedestrian Crossing Sign can also be set in the street during warmer months and removed during the winter to avoid run-ins with snowplows.

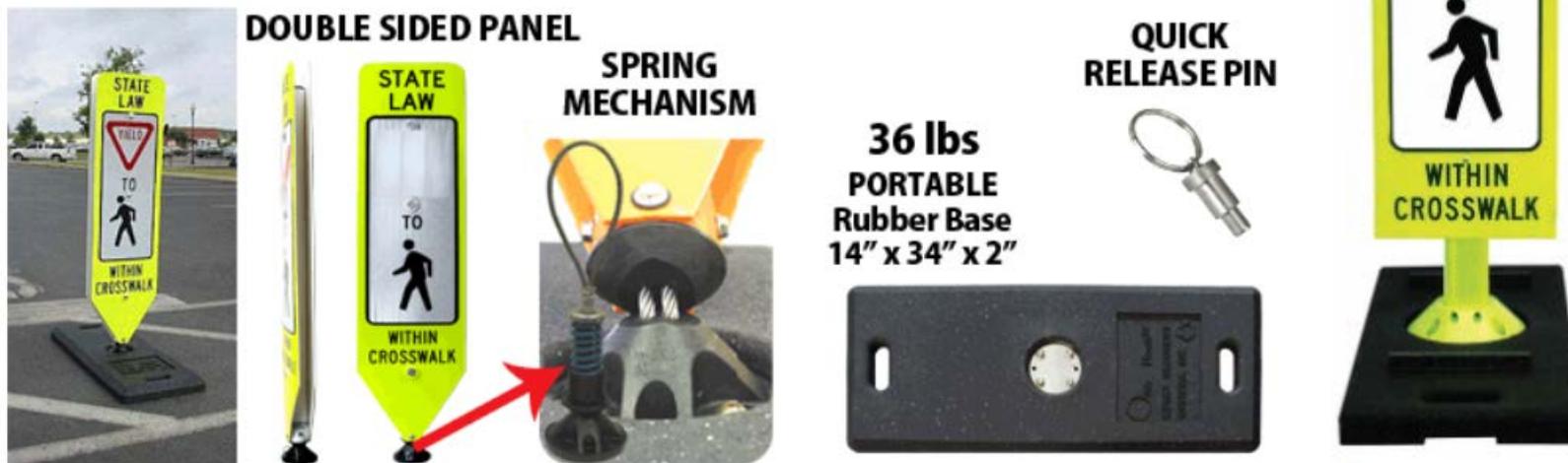
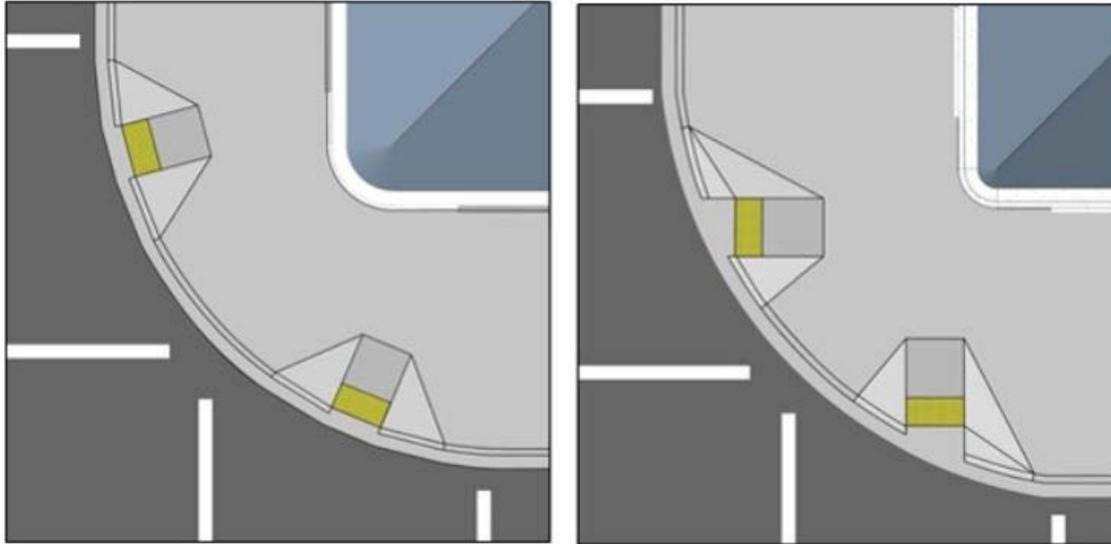


Figure 3.18 // Examples of portable R1-6 In-Street Pedestrian Crossing Signs from safetysign.com and granger.com

CURB RAMPS & CONTEXT SENSITIVITY

In addition to updating crossing paint, curb ramps can be updated to orient pedestrians into the crosswalk safely and easily. This can be done with a diagonal curb ramp but they are not accepted within city limits. The City of Brandon only uses direction curb ramps



The curb ramp opening can be aligned with the curb line (left) or more directionally oriented to the crosswalk (right).
Taken from the US Access Board.

Figure 3.19 // Examples different curb ramp layouts at an intersection

Table 3.20 // PROWAG and ADA standards summary; differences between the two guidelines. From Budget Plan 5.0 B: Use PROWAG and ADA Standards to ensure that proposed infrastructure complies for sidewalk, curb ramps, and traffic signals.

	Public Right of Way Accessibility Guidelines (PROWAG)	Americans with Disabilities Act (ADA)
What	 <p>Guidelines/Best Practices</p>	 <p>requirement/civil rights</p>
Where	 <p>Public right of way</p>	 <p>Public buildings and sites</p>
Examples	<p>Pedestrian Access Route (PAR) can be the same grade as the road it follows, without the requirement for ramps.</p> <p>Accessible On-Street Parking requirements exist</p>	<p>Accessible Routes require ramps where the gradient is between 5-8.33%, handrails, and edge protection when rise is greater than 6”</p> <p>Accessible On-Street parking is not addressed in 2010 ADA Standards</p>
Federal Highway Administration (FHWA) thoughts?	<p>“Guidelines are currently recommended best practices and can be considered the state of the practice that could be followed for areas not fully addressed by the present standards.”</p>	<p>The FHWA meets in regulatory responsibility by ensuring that recipients of Federal-aid and State and local entities that are responsible for roadways and pedestrian facilities...</p> <ol style="list-style-type: none"> 1. have a transition plan setting forth the steps necessary to make its existing facilities accessible to persons with disabilities, typically referred to as updates 2. that new construction or alteration of the public right-of-way be made accessible to persons with disabilities as per the ADA and Section 504, 3. investigating external complaints of discrimination, and 4. providing training on ADA and Section 504 compliance.

<https://rockymountainada.org/resources/general/2010-ada-standards-vs-prowag>

MAINTENANCE PLAN

Maintenance is a key consideration to keep bike and pedestrian facilities safe and comfortable for all users. Initial project funding often does not include required costs for maintenance, so the City should strategically plan budgets to include this expense. Maintenance costs for shared-use path maintenance are estimated to be around \$10,000 per mile annually which includes routine maintenance activities and preventative maintenance activities for the pavement surfacing. Underbrush and weed abatement should be performed once in the late spring and again in mid-summer. In addition, these same maintenance treatments should be performed on other bicycle and pedestrian facilities. The design of bike and pedestrian facilities should also accommodate the snow clearing and maintenance vehicles, whether it is small pickup-based plow trucks, utility vehicles, all-terrain vehicles (ATVs), or other equipment. The heavier the vehicle, the stronger the pavement surface should be designed.

COORDINATION BETWEEN CITY DEPARTMENTS & FUNDING

The City will need to coordinate and communicate maintenance needs for new or modified bicycle/pedestrian infrastructure to establish maintenance responsibilities. Consider the maintenance equipment during the design process of bike and pedestrian facilities. It is common for bicycle and pedestrian facility maintenance to be funded through municipal general funds or transportation funds from property and sales taxes. Maintenance programs can be managed separately by different City departments, but best practice is to manage street, sidewalk, and trail maintenance with one program so that there is equal priority for each facility.

GENERAL MAINTENANCE TIMEFRAME FOR BICYCLE & PEDESTRIAN FACILITIES

Table 3.21 // Maintenance Strategies

Facility Type	Maintenance Activity	Strategy	Frequency
Shared Use Path	Sign replacement/repair	Signs may be vandalized, damaged, or simply fade over time.	5-15 years
	Pavement markings	Decorative pavement markings may be present, typically waterborne latex paint due to its cost. Other types of pavement marking applications such as epoxy or cold-applied plastic (tape) may be considered at street crossings for more longevity, but at higher cost.	1-3 years (on-street) 5 years (off-street)
	Vegetation control	Trimming, mowing, pruning, seeding, weed control	1 month – 1 year, and after severe storms
	Vegetation maintenance	Watering	Weekly – monthly as needed
	Drainage maintenance	Inspect drainage performance and drainage grates and/or other structures for repair or replacement	1 year, and after severe storms
	Lighting replacement & maintenance	LED bulbs can last 15-20 years.	5-20 years
	Sweeping, Trash Collection	Clearing debris, litter, trash, and other materials. If trash receptacles are used to reduce impact of litter, then consider cost of regularly scheduled trash pick-up.	6 months – 1 year
	Snow and ice control	Evaluate path design to accommodate maintenance vehicles for snowplow & report problems, identify a priority network of bikeways for snow clearance.	As needed
	Street furniture maintenance	Inspect benches, traffic barriers, delineators, bollards, mailboxes, streetlamps, signs, lights, bus stops, and waste receptacles for repair or replacement	1 year

	Surface maintenance and preservation	Regular and preventative maintenance such as crack sealing, patching, seal coats, fog sealing, etc.	5-15 years
	Traffic control	Address safety concerns promptly. Inspect for broken bulbs & signal calibration of actuation and timing based on user feedback and bike counts.	1 year
	Public communication & reporting	Record user feedback and complaints	As needed
	ADA requirements	Assess baseline ADA compliance of existing facilities and ensure ADA compliance for new designs	As needed
	Coordination between agencies and utilities	Follow maintenance and repair standards in public right-of-way	As needed
Bike Trail	Vegetation control	Trimming, mowing, pruning	1 month – 1 year
	Vegetation maintenance	Watering	Weekly – monthly as needed
	Drainage maintenance	Inspect drainage performance and drainage grates and/or other structures for repair or replacement	1 year
	Surface maintenance and preservation	Regular and preventative maintenance such as crack sealing, patching, seal coats, fog sealing, etc.	5-15 years
Quick-Build	Snow and ice control	Evaluate path design to accommodate maintenance vehicles for snowplow & report problems, identify a priority network of bikeways for snow clearance. Design should provide additional space for snow removal.	As needed
	Drainage maintenance	Inspect drainage performance and drainage grates and/or other structures for repair or replacement	1 year, and after severe storms
	Pavement markings	Decorative pavement markings may be present, typically waterborne latex paint due to its cost. Other types of pavement marking applications such as epoxy or cold-applied plastic (tape) may be considered at street crossings for more longevity, but at higher cost. These may change based on quick-build projects transitioning from temporary to permanent.	1-3 years (on-street) 5 years (off-street)
	Sweeping, Trash Collection	Clearing debris, litter, trash, and other materials. If trash receptacles are used to reduce impact of litter, then consider cost of regularly scheduled trash pick-up. During the design, access for equipment needs to be addressed.	6 months – 1 year

MAINTENANCE ACTIVITIES

SIGN REPLACEMENT & REPAIR

Missing or damaged signs should be replaced or repaired as soon as possible. Missing or damaged signs can lower the bike/pedestrian experience for users, making the bike and pedestrian network more difficult to navigate or less enjoyable.

PAVEMENT MARKINGS

Inspect pavement markings on off-street surfacing frequently, replace faded or worn-out pavement markings every 1-3 years on-street or up to 5 years off-street. Ensure pavement marking retro reflectivity is visible at night. Visible pavement markings are important for on-street bike and pedestrian projects such as crosswalks, and an upcoming quick-build project in the 9th Avenue area that will rely heavily on pavement markings.

The common pavement marking applications in South Dakota for streets are waterborne latex paint, epoxy, and cold-applied plastic (tape). Their use on streets and highways generally varies with cost and durability. Paint generally lasts 1-2 years on streets but is the lowest cost. Epoxy generally lasts 3-5 years, and cold-applied plastic lasts 5-8 years. Often the primary considerations are location, marking type, durability, and expected surface life of the pavement itself. For example, the application of the pavement markings should not have a longer life expectancy than the next planned surface treatment that would cover up the pavement markings. Grooving the pavement surface before application is another option to consider and is recommended for the more expensive applications to protect the pavement marking investment from traffic wear and snowplow operations.

VEGETATION CONTROL

Mowing, brush control and trimming, sweeping, seeding, and weed mitigation should be performed on a regular basis to maintain sight distance and keep bike and pedestrian facilities obstruction-free. City staff should make inspections after severe storms and respond to reports of low-hanging branches and downed trees promptly. Underbrush and weed abatement should be performed once in the late spring and again in mid-summer.

VEGETATION MAINTENANCE

New planted landscapes and vegetation should be watered weekly to monthly as needed and as the plantings are getting established. Structural pruning helps keeps landscape plants from developing in odd shapes prone to break during snow events.

DRAINAGE MAINTENANCE

Routine maintenance of drainage infrastructure helps increase safety and prolong the service life of bike and pedestrian infrastructure. A well-drained shared-use path prevents injuries by keeping the walking and riding surface as dry as possible. Drainage maintenance and drain clearing is a long-term preventative maintenance strategy that can save money by preventing pooling, erosion, and freeze/thaw damage to hard surface infrastructure. City staff should make inspections after severe storms and respond to reports of damage to drainage systems promptly. Locate drainage grates outside of the main path of travel whenever possible. Drainage grate design in proximity to bike and pedestrian infrastructure should be compatible with bike tires and grating should be perpendicular to the path of travel.

SWEEPING & TRASH COLLECTION

Keeping a schedule of routine activities including removal of litter, vegetation, gravel build-up, and other debris from shared-use paths should be included as part of the Public Works calendar of maintenance activities. Frequent sweeping and debris removal increases safety for trail and sidewalk users and beautifies the community. If trash receptacles are used to reduce impact of litter, then consider cost of regularly scheduled trash pick-up.

SNOW & ICE CONTROL

Build a network of priority bike and pedestrian routes for snow and ice removal, typically these priority routes are along main thoroughfares, or share-use paths that access key areas in town. The design of bike and pedestrian facilities should accommodate the snow clearing vehicle, whether it is small pickup-based plow trucks, utility vehicles, all-terrain vehicles (ATVs), or other equipment. The heavier the vehicle, the stronger the pavement surface should be designed. Heavy maintenance vehicles can severely damage bike and pedestrian infrastructure, especially in the spring. Identification of snow storage areas in advance of plowing operations can provide snow removal crews with a plan for storing and removing snow that minimizes impacts to the bike and pedestrian network and also the traffic network. If using salt to melt ice build-up, excess salt should be swept away after ice has been removed to avoid excess damage of concrete surfaces. Implement snow and ice policies if property owners will have obligations for maintenance.

STREET FURNITURE MAINTENANCE

Street furniture includes benches, traffic barriers, delineators, bollards, mailboxes, streetlamps, signs, lights, bus stops, and waste receptacles. All of these items reside in the public realm and extra thought should go into placement and maintenance of any of these items. If a piece of street furniture falls into disrepair or is damaged or dislocated. Immediate removal, repair, or replacement should occur.

SURFACE MAINTENANCE & PRESERVATION

Surface maintenance techniques include the following treatments and methods: Crack sealing, hand patching, machine patching, seal coats, and fog sealing; each of these techniques will help prolong the service life of a bike/pedestrian facility. Routine inspection and condition inventory of the sidewalk and trail network helps to inform maintenance personnel of the highest priority areas to perform surface treatments. The city should have a program in place to address common surface maintenance activities such as repairing uneven slabs, settling, cracking, and surface deterioration.

ROADWAY & PAVED SHOULDER SURFACE TREATMENTS

Pavement surface treatment strategies are key to making pavement last longer, ride smoother, and save cost over time. The following strategies can help the City of Brandon increase pavement life and reduce costs.

- Using 1/4" crushed aggregate in lieu of the standard 3/8" or 1/2" chips helps with ride quality on the finished surface. Chips larger than 1/2" are not recommended.
- Coating the chipped surface with a fog seal improves rideability and better retains the chips on the road.
- "Chipless" seal coat seals the surface and reintroduces binders back into the asphalt while maintaining a smooth surface for cycling. This kind of application is used frequently and extends the time in which a new, more costly wearing surface is needed.
- Slurry seals and micro seals are more expensive, however they are excellent resurfacing alternatives for bicycle routes on paved shoulders.

TRAFFIC CONTROL

If bicycle crashes are recorded at traffic-controlled locations such as signalized intersections, unsignalized intersections, or any other crossing, assess if the traffic control itself is a contributing factor (consultation with a traffic engineer may be recommended). Regularly inspect for broken bulbs and signal calibration of actuation and timing based on user feedback and bike counts.

PUBLIC COMMUNICATION & REPORTING

Many of the maintenance issues and/or safety concerns will be brought to attention by public complaints. Record and collect user feedback to address in a timely but prioritized manner. Prepare a communication plan to notify the public when necessary. Safety concerns should be addressed promptly; the governing body responsible for maintenance may be required by law to install guards within a certain period of time to protect the public if the safety of public travel is endangered.

- Online Maintenance Request Form, modify the existing online pothole reporting form for residents to become active in reporting areas of sidewalk that are in-need of repair, in addition to reporting potholes.

ADA REQUIREMENTS

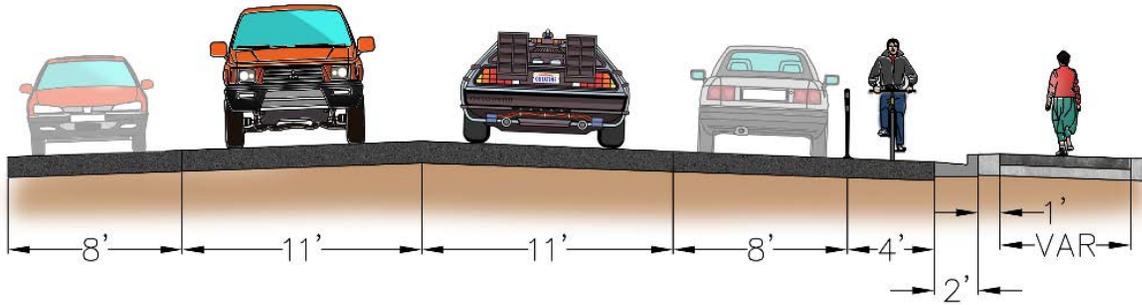
Assess baseline ADA compliance of existing facilities to determine current compliance status and make note of locations that are out of compliance. When improvements are due (or sooner) bring the facilities into ADA compliance. Ensure ADA compliance is strictly adhered to for new design and construction.

COORDINATION BETWEEN AGENCIES & UTILITIES

Consistent coordination is key to maintaining good relationships with other government agencies and utility providers. Oftentimes projects are delayed simply because project coordination and communication did not occur early enough when there are conflicting jurisdictions. Early communication is especially important for utility providers, as utility relocation is often impacted by many other factors and projects, giving utility providers a large head-start about project plans and timeframes can reduce delay during project implementation. Holding a quarterly standing call with agencies such as SDDOT, or utility providers to discuss current and upcoming projects is key to building relationships and keeping everyone's projects on-time with fewer surprises. After construction, utility work underground, above, or adjacent to bike and pedestrian facilities may interfere or damage the facilities. In these instances, utility companies should be required to promptly make necessary repairs to standard.

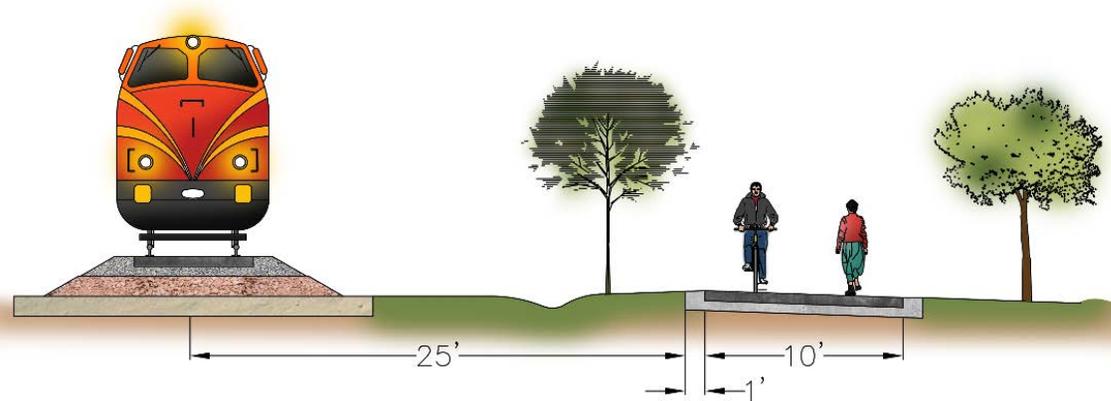
Figure 3.22 // Cross Sections

Buffered On-street Bike Lane with Sidewalk

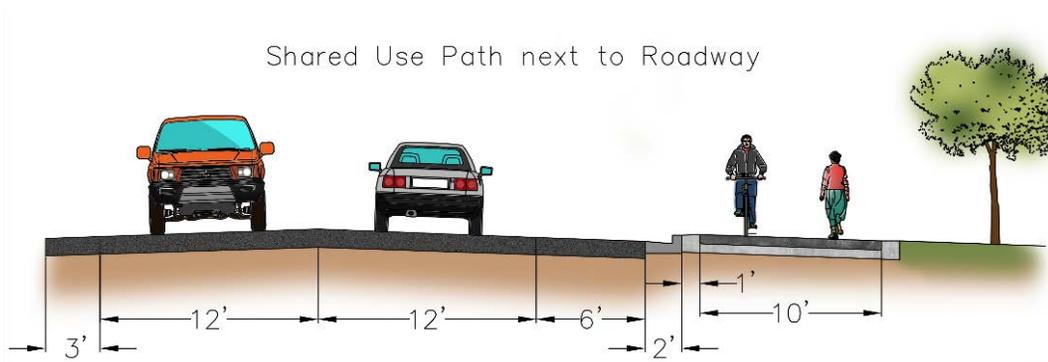


The buffered On-street Bike Lane with Sidewalk allows a wide range of multi-modal transportation within the roadway right-of-way, the buffered bike lane uses on-street parallel parking to effectively shield bicyclists and pedestrians from traffic.

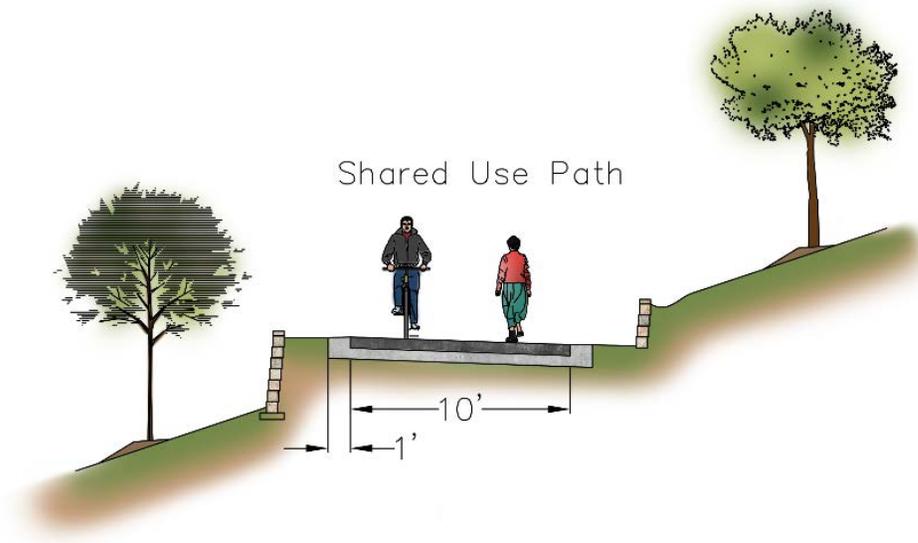
Rail with Trail Typical Section



A Rail with Trail is a relatively new technique that allows trails to be constructed with permission inside of active railway right-of-way, typically the edge of an active trail is sited 25 feet or more from the centerline of the active railroad tracks. This designation follows guidelines set forth by the Federal Railroad Administration.

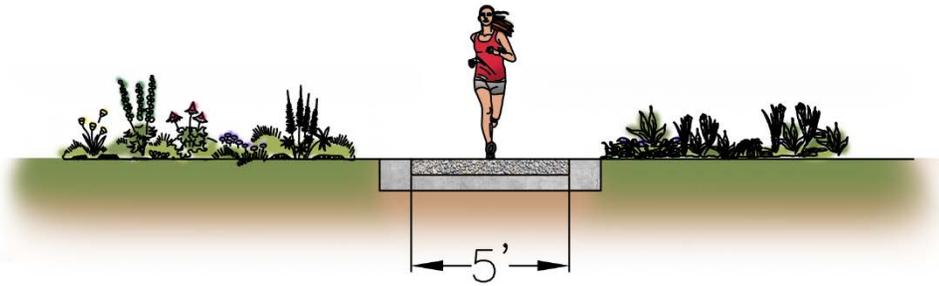


The City of Brandon currently uses this cross-section in many corridors within the city. The shared-use path is typically 10 feet wide or more. The key to siting a shared use path adjacent to a roadway facility is the curb and gutter grade separation, as well as any paved shoulder or on-street parking such as the 6' paved shoulder shown here.



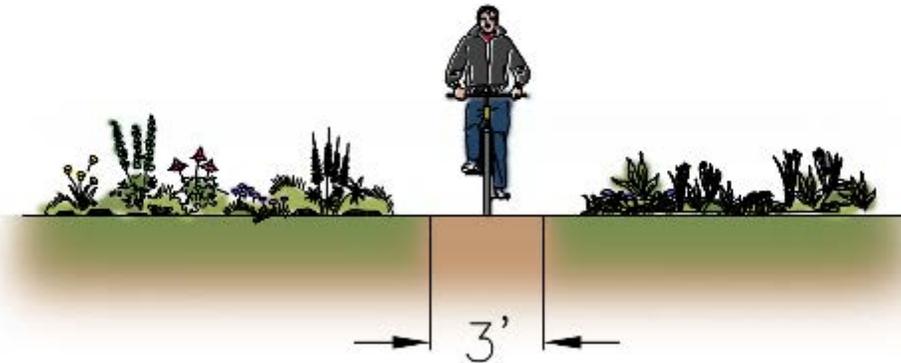
A typical shared-use path shown here follows an independent alignment and can wind its way through the landscape. Typically shared-use paths are at least 10' wide and constructed from concrete or asphalt with a road base sub-layer.

Recommended Detached Sidewalk Section



A recommended detached sidewalk is at least 5 ft wide and constructed from concrete or asphalt with a road base sub-layer.

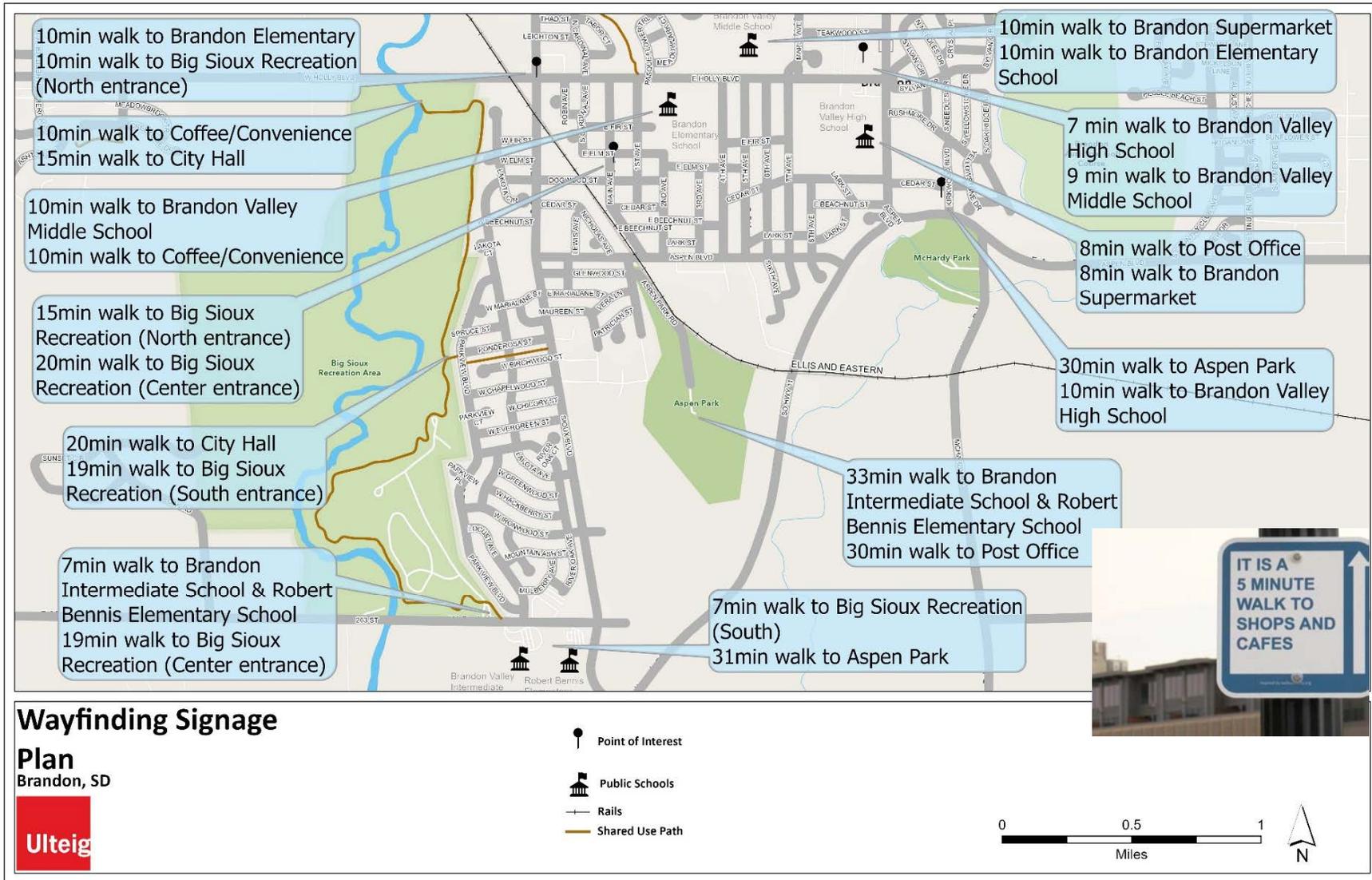
Singletrack Trail



A typical Singletrack Trail is at least 3' wide and is sometimes simply cleared and mowed. Singletrack can also use naturally occurring aggregate, gravel, crusher fines, or recycled asphalt as a travel surface. Typically, a mini-excavator or a trails crew will dig vegetation away from the travel surface of the trail. On Singletrack trails that travel up or down grades a best practice is to dig water bars that cut across the trail to drain water to the side of the trail limiting erosion of the trail surface.

WAYFINDING SIGNAGE & BIKE REPAIR STATION PLAN

Figure 3.23 // Brandon Wayfinding Signage Plan



Wayfinding signage within the City of Brandon should give walking directions to destinations using walking time in minutes. A reference in minutes reminds people how easy it is to walk to places in-town. Placing these signs within the view of motorists also helps to remind people who normally drive, how easy it is to walk rather than drive.

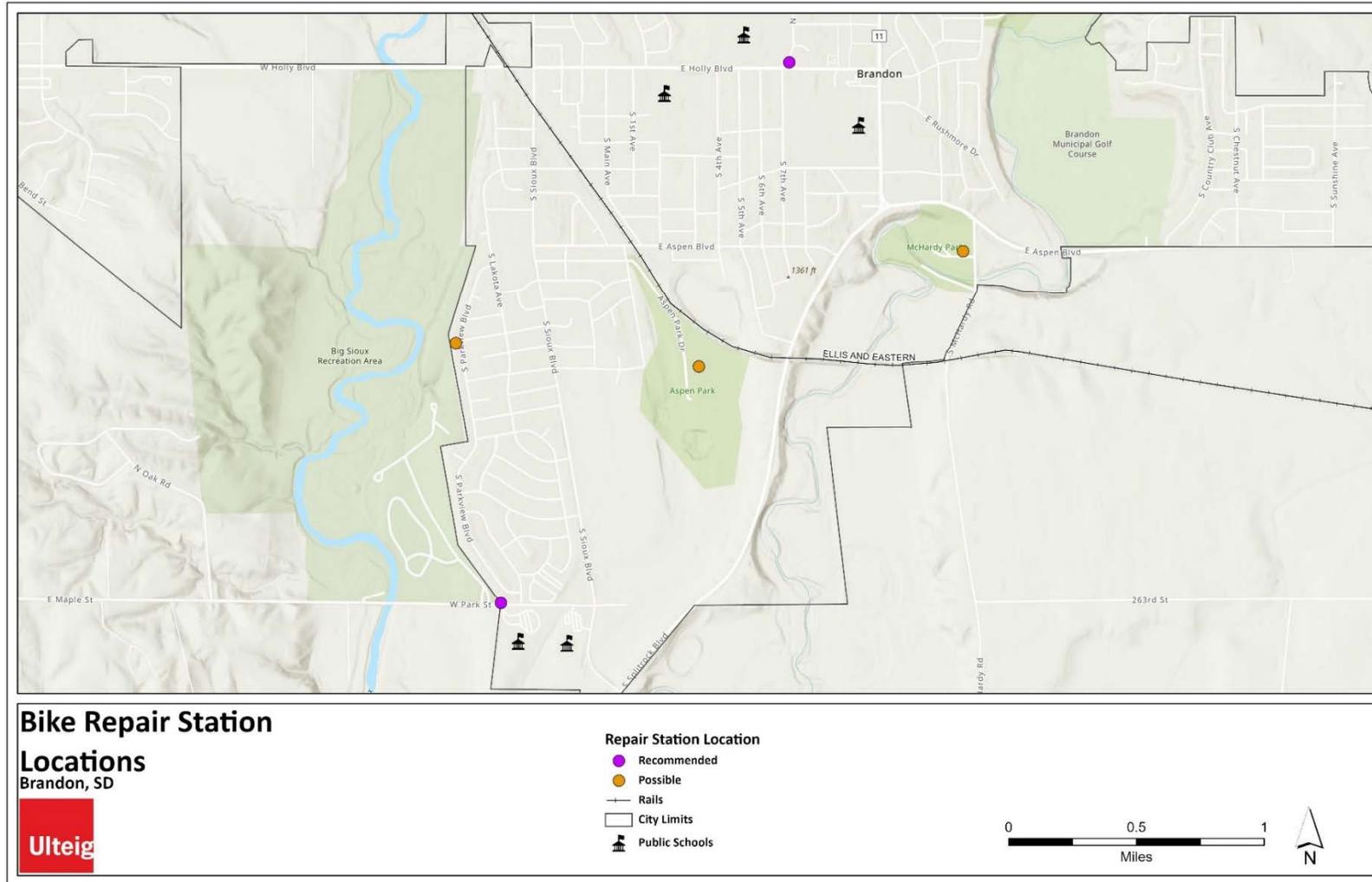


Figure 3.24 // Brandon Bike Repair Stations

PLAN RECOMMENDATION & COST ESTIMATES

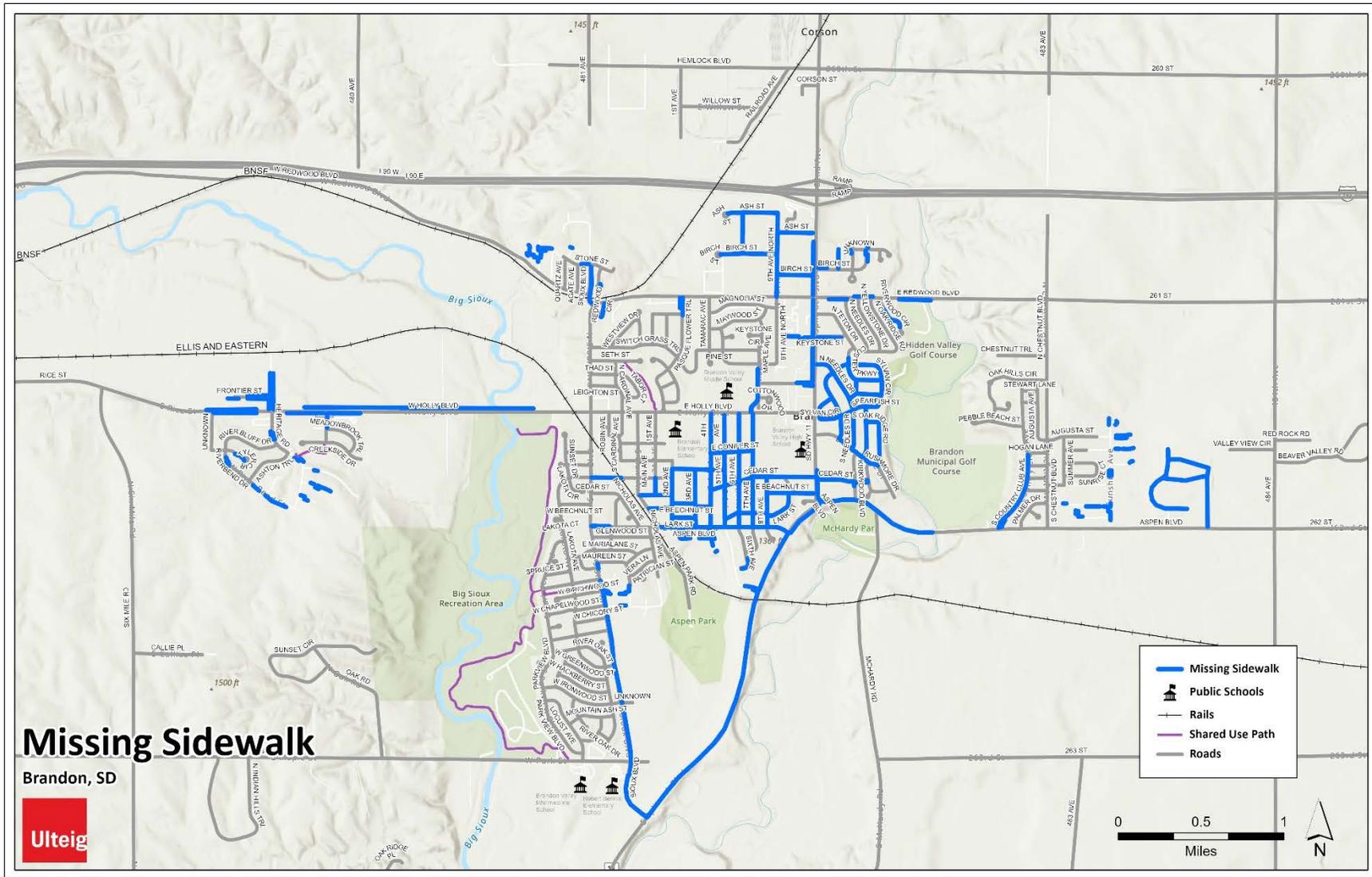
Through the process of creating the City of Brandon Bike and Pedestrian Plan, the project team has collected data, reported out to plan stakeholders and solicited their feedback, gathered public surveys and input, identified safety issues, and produced your plan recommendations listed below. The plan recommends improvements aimed at satisfying the following plan goals:

- **CONNECTIVITY** — Brandon's bicycle and pedestrian network should be easy to access, convey people to destinations quickly and safely regardless of age and experience.
- **TRAILS** — Create a network of hard and loose surface trails throughout the city to increase public health, active transportation, and economic development.
- **SAFETY** — Create the safest designs possible to enhance Brandon's walkability and bikeability, including ADA compliance, lighting, signage, striping, and physical separation from traffic.
- **SAFE ROUTES TO SCHOOL** — Build safe, well signed, accessible walking and biking routes to and from schools to enhance the quality of life and reduce school-based traffic congestion.
- **ACCESSIBILITY** — Incorporate ADA compliance and universal design principles into planned projects to meet the needs of all users with and without disabilities
- **EQUITY** — Spread bike/pedestrian infrastructure investment and access throughout the City of Brandon—everyone should have access to the bike/pedestrian network!

PLAN RECOMMENDATIONS

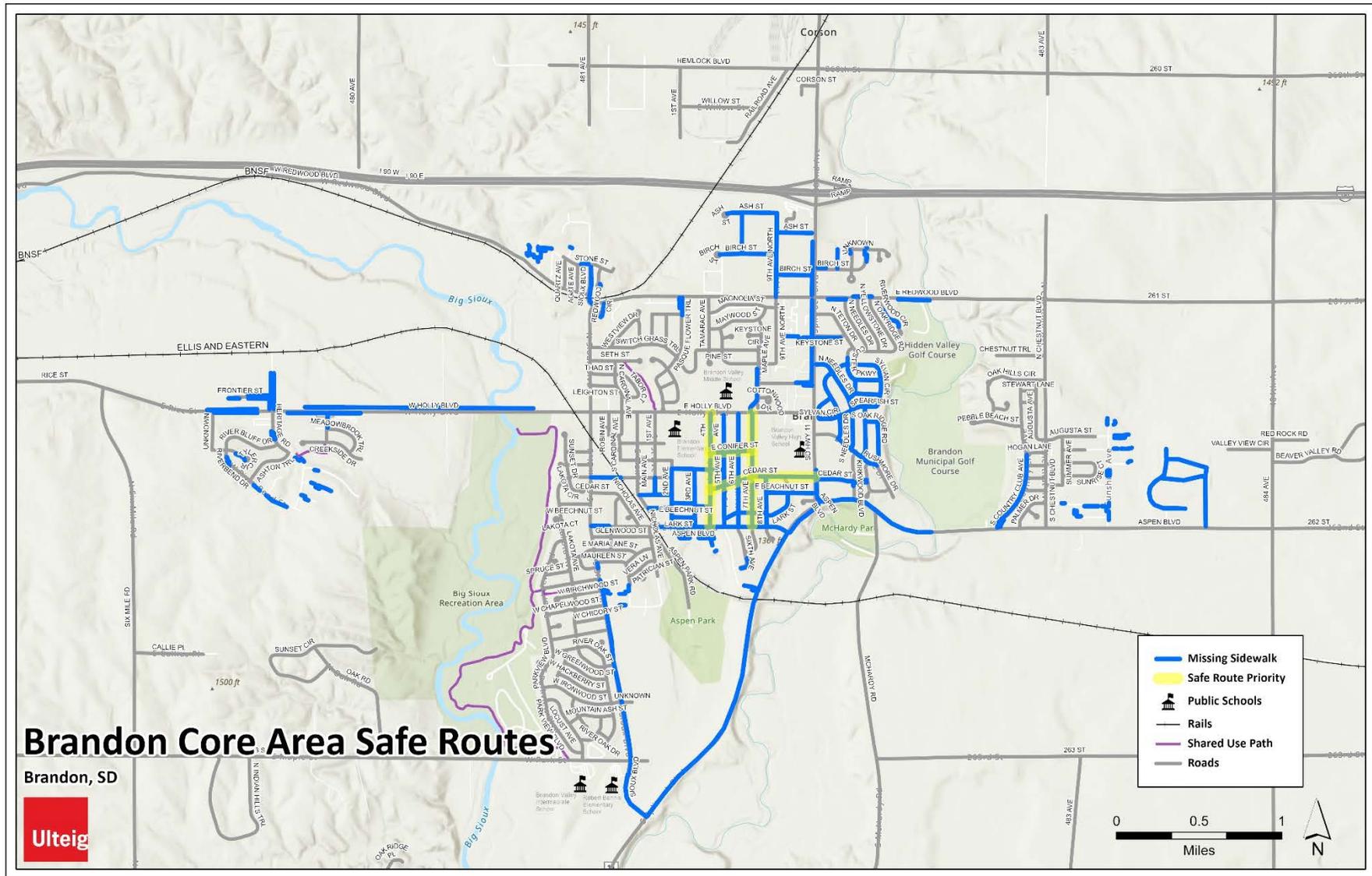
- **CLOSING GAPS IN SIDEWALKS** — Gaps in the sidewalk system exist in every city in the US, and gaps in the sidewalk network can be due to undeveloped parcels or lots, areas of cities that were developed during a lapse in sidewalk policy or oversight, or rural road designs that have urbanized over time. The City of Brandon has gaps in the sidewalk network that we have identified in the map below and in a sidewalk gaps database. Many missing sidewalks in Brandon are in developing neighborhoods which means they will be installed as parcels are completed by the developer and not a cost to the city. The plan recommendation is to construct identified priority sidewalk gaps initially, then close remaining sidewalk gaps in phases.

Figure 4.1 // Missing Sidewalk in the City of Brandon



Prioritizing Safe Routes to Schools in the Core Area of Brandon ■ As the Core Area of Brandon is built out as part of the city's Core Area plan, a priority should be placed on constructing 4th Avenue, 7th Avenue, Conifer Street, and Cedar Street sidewalk due to the connectivity they provide between Brandon Valley High School, Brandon Valley Middle School, Brandon Elementary School and the surrounding neighborhoods.

Figure 4.2 // Missing Sidewalk in the City of Brandon



- **SIoux BOULEVARD** — Sioux Boulevard has continuous sidewalk on only one side with only a few crossings. Striped roadway crossings exist on the west side, but no striped crossings exist on the east side of Sioux Boulevard. The City of Brandon should construct missing sidewalk or shared use path on Sioux Boulevard from E Maureen Drive to W Alpine Circle. The city should also build share-use path on the east side of Sioux Boulevard from E Ponderosa Circle to S Splitrock Boulevard for length of ~1.07 mi. Also connect sidewalk on the west side of Sioux Boulevard from the southeast entrance of Robert Bennis Elementary School to S Splitrock Boulevard approximately 1,125 feet.

- **SIoux BOULEVARD CROSSINGS** — New crossings on Sioux Boulevard include a new crossing at W Chapelwood Drive to connect to a new shared use path that will eventually connect between the Aspen Park pool, and the Big Sioux Rec Area.

The next phases of this project would be to build a shared-use path on the east side of Sioux Boulevard from E Ponderosa Circle to Splitrock Boulevard and connect sidewalk on the west side of Sioux Boulevard from southeast entrance of Robert Bennis Elementary School to Splitrock Boulevard.

- **HOLLY BOULEVARD & SURROUNDING AREAS** — Holly Boulevard could serve as a primary bike/ped route between Brandon and Sioux Falls. In order to accomplish this Holly Boulevard would need to be upgraded in places with wider paved shoulders that tie into existing shared-use paths near S Heritage Road. Initial recommended treatments are to use pavement markings on the shoulders similar to the markings that already exist on Rice Street (Holly Boulevard) in Sioux falls. The long-term goal for the Holly Boulevard corridor is an eventual shared use path connecting the City of Brandon to the shared use path on Veterans Parkway. Eventually, this SUP could connect to the Great Bear Ski and Recreation Area. An upcoming Holly Boulevard Corridor Study will include coordination across multiple jurisdictions and will make recommendations for the number of lanes and other traffic issues on Holly Boulevard.

- **WEST SIDE OF BRANDON** — The Holly/Heritage Industrial Park is in need of sidewalk, especially considering the daycare operating within this area. Sidewalk does exist on the western end of Frontier Street. Add sidewalk on north side of Frontier Street and west side of Heritage Road.

Other regional trail connections are identified near the W Holly Boulevard corridor, including a shared use path along an existing city-owned sewer easement near the Ellis and Eastern Railroad, as well as a potential Big Sioux River Trail corridor connecting to planned Sioux Falls Big Sioux River Greenways. A southeastern loose surface trail connection from S Heritage Road in the Bluffs Neighborhood is recommended to connect to the Big Sioux Recreation Area.

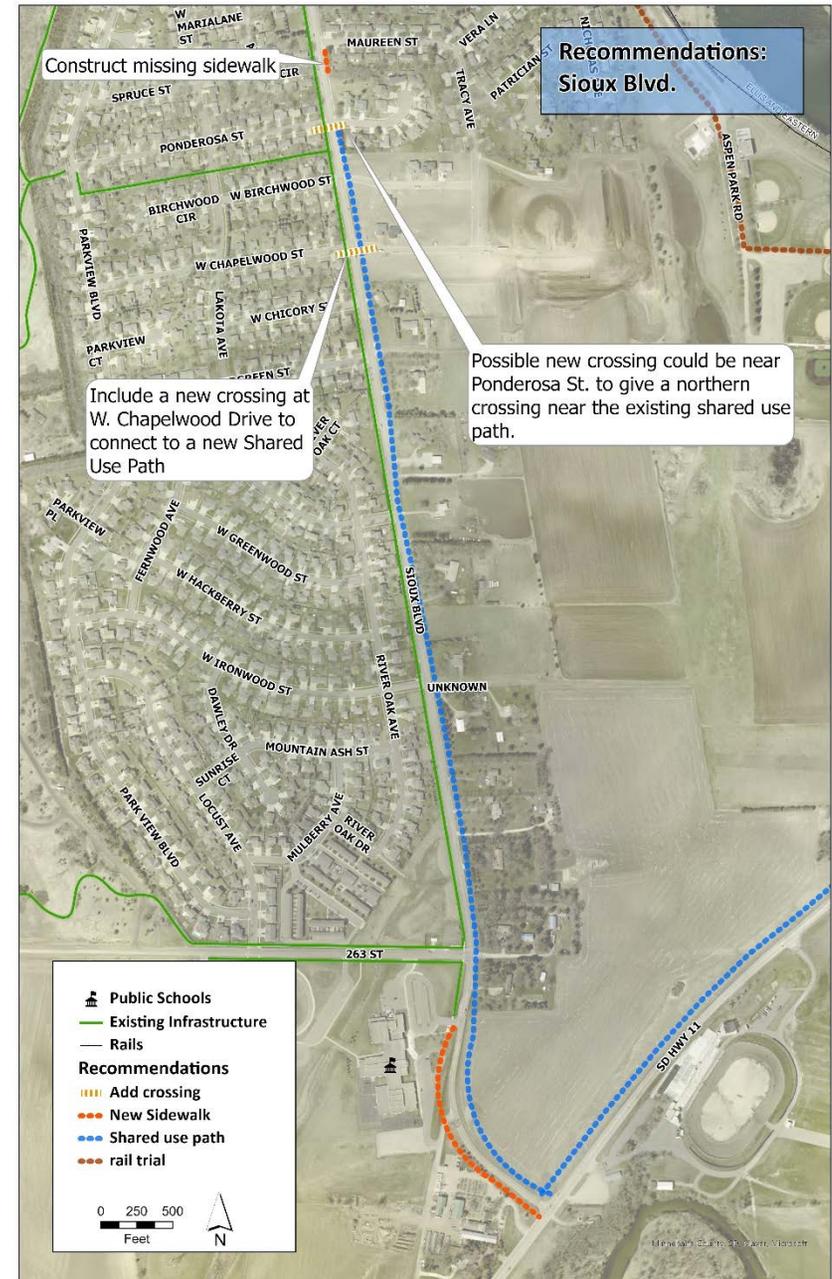
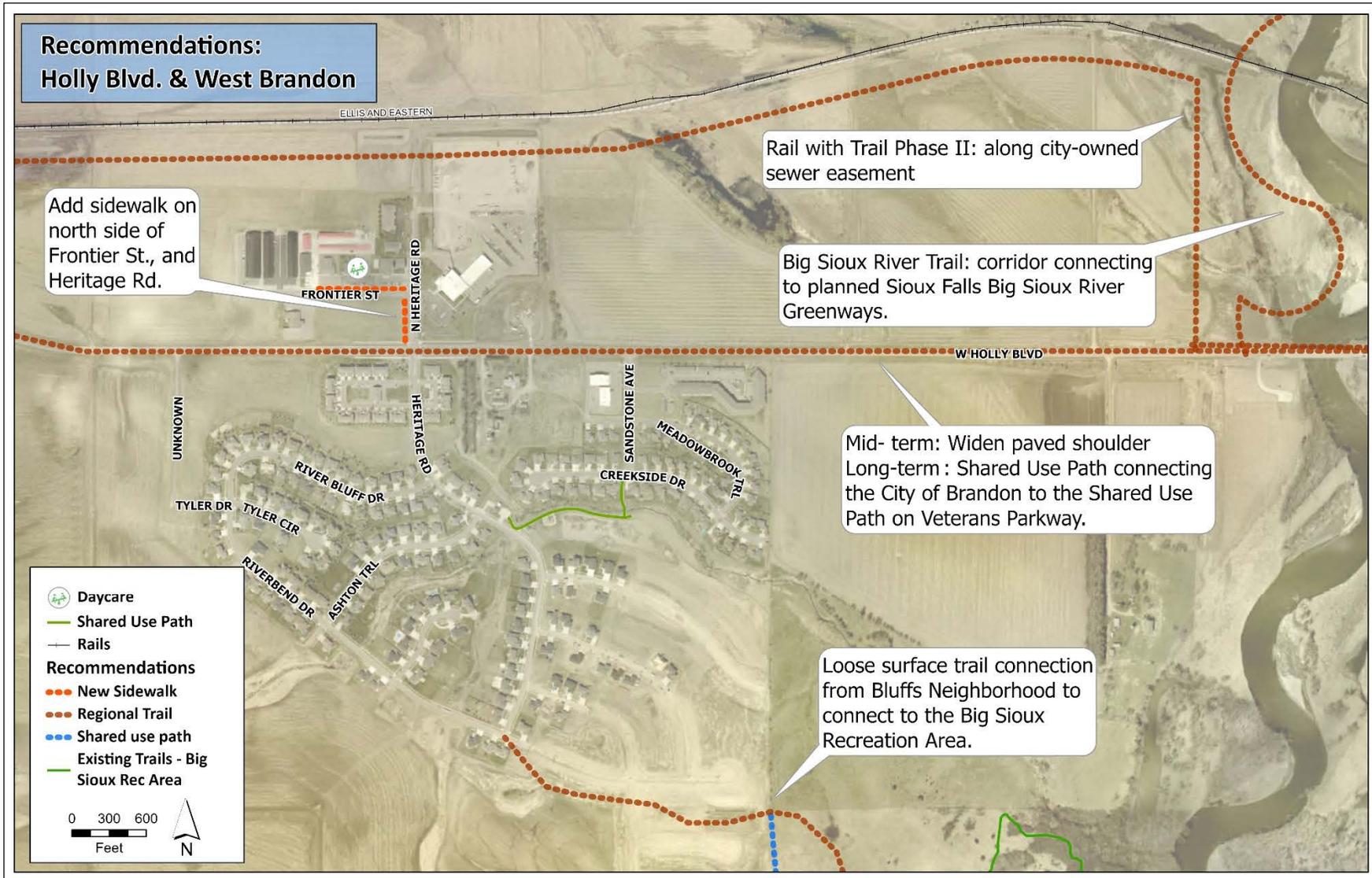
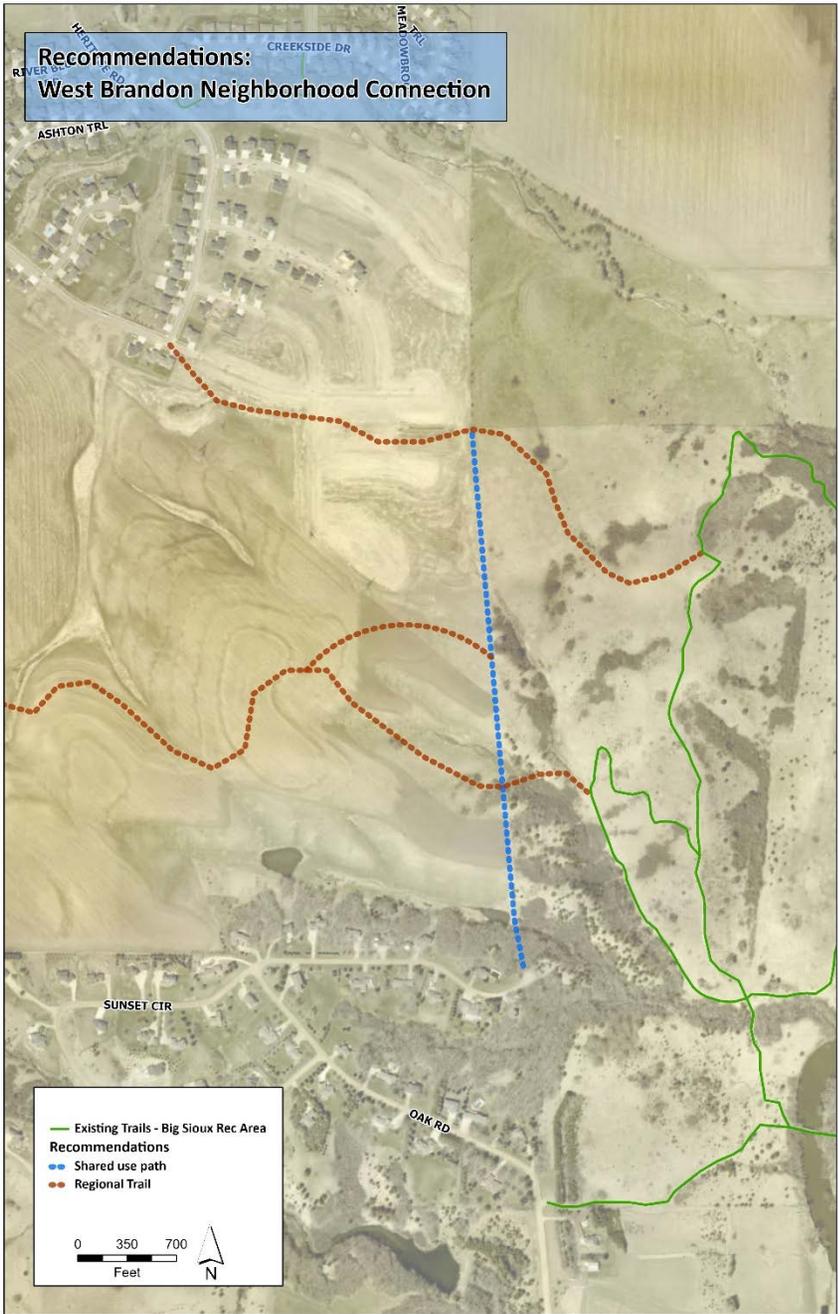


Figure 4.3 // Recommendations on Sioux Boulevard

Figure 4.4 // Recommendations on Holly Boulevard and in West Brandon





Redwood Boulevard ■ The City of Brandon should evaluate an upgraded crossing of Redwood Boulevard at N Sioux Boulevard. This crossing is on a curve in the road with some grade changes. A pedestrian activated RRFB could work well here and give drivers a more prominent warning of pedestrians crossing the road.



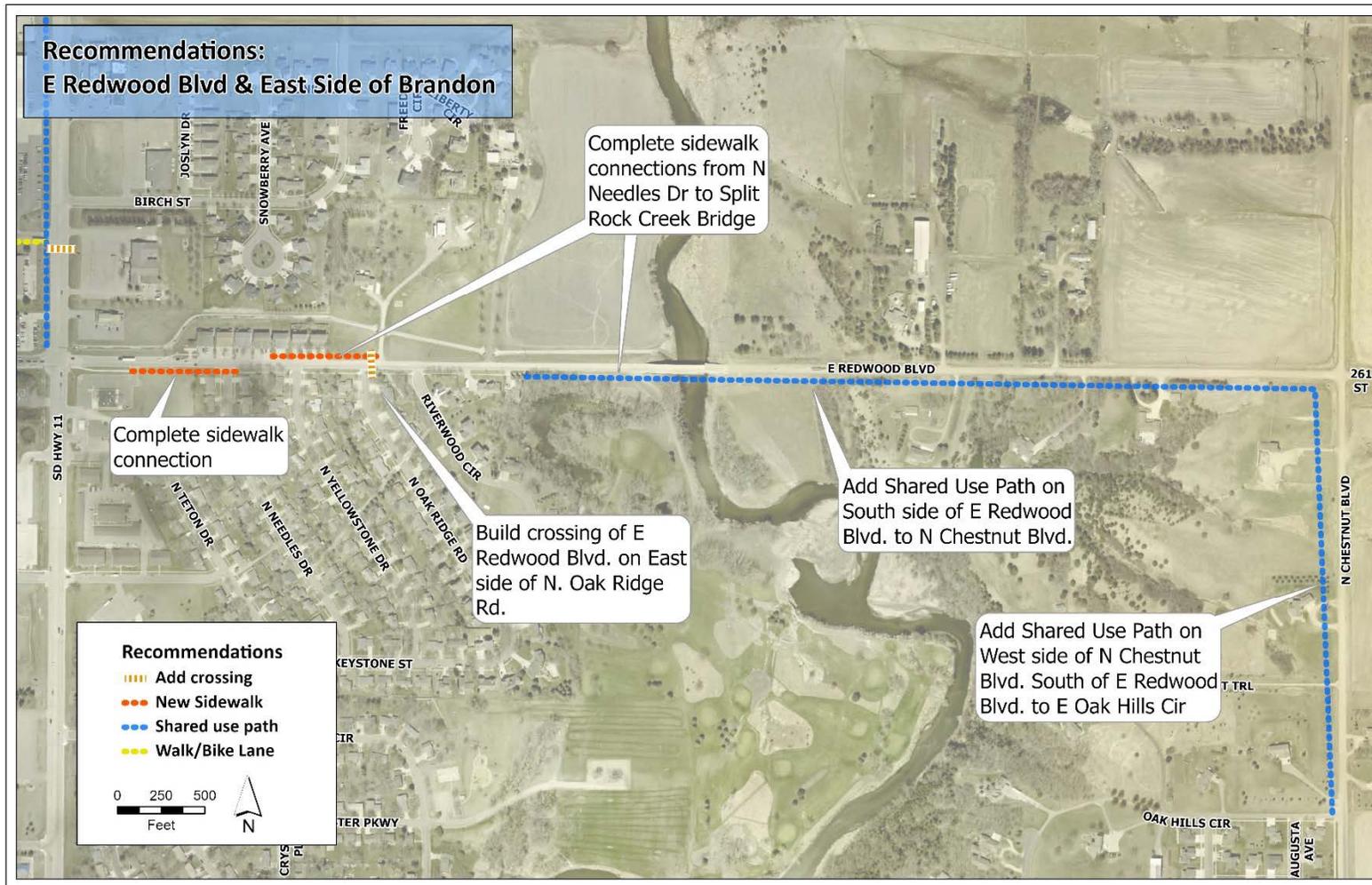
Figure 4.5 // Recommendations on Redwood Boulevard

- **E REDWOOD BOULEVARD** — The City of Brandon should complete a sidewalk connection and evaluate construction of sidewalk on the north side of E Redwood Boulevard from N Needles Drive to Split Rock Creek Bridge, build new sidewalk on the north side of E Redwood Boulevard and build crossing on east side of N Oak Ridge Road.
- **EAST SIDE OF BRANDON** — Should the City of Brandon assume maintenance of E Redwood Avenue, a connection to a new 180-acre development area for the city that could include a new elementary school. Discussions are being had for new trails and an elementary school to be built along with the new subdivision. A new shared use path on the south side of E Redwood Avenue should connect this area to central Brandon. Once a shared use path is built on the south side of E Redwood Boulevard, the City of Brandon should construct a shared use path connection on the west side of N Chestnut Boulevard to connect between the new shared use path on E Redwood Boulevard to the existing shared use path on E Oakhill Circle. A shared use path is also proposed connecting S Sunshine Avenue to future development.

**Recommendations:
East Brandon Future Development**



Figure 4.6 // Recommendations on E Redwood Boulevard and in East Brandon



- **HOLLY BOULEVARD CROSSWALK PAVEMENT MARKINGS** — Holly Boulevard from Sioux Boulevard to Splitrock Boulevard features many variations of crosswalk design, and the City of Brandon has desired more consistency in preparation for upcoming striping efforts:

The intersection of Holly Boulevard and Sioux Boulevard clearly shows a combination of old pavement markings and new pavement markings, in different locations. The old pavement markings were not properly removed.

- Uncontrolled intersections with 4-way approach through streets (such as Robin Drive, Cardinal Avenue, etc.) show marked parallel line crosswalks with pedestrian crossing signs, but 4-way intersections with commercial driveways on one of the approaches (such as Main Avenue, 1st Avenue, etc.) were often not marked with crosswalks at all.
- Two of the signalized intersections show marked continental / ladder crosswalks (Sioux Boulevard, Splitrock Boulevard) at all approaches, but two other signalized intersections show parallel line crosswalks (Pasque Flower Trail, 6th Avenue).
- Many of the minor cross-street and commercial driveway approaches to Holly Boulevard have red color contrast crosswalks, but this feature was not replaced during recent construction at some locations (Robin Drive, Cardinal Drive, Main Avenue, 1st Avenue).

The following recommendations are made to address these inconsistencies:

- The old pavement markings should be properly removed from the pavement surface at the intersection of Holly Boulevard and Sioux Boulevard as they can be disorienting to pedestrians and motorists. This can be done by grinding or obliterating the old markings.
- For locations where crosswalks are already marked with pavement markings along the Holly Boulevard corridor, traditional parallel line crosswalk markings that cross Holly Boulevard may be replaced with high-visibility crosswalk styles such as continental or ladder style pavement markings. The addition of these high-visibility crosswalk markings would be viewed as a safety improvement over current parallel line crosswalk markings.
- Minor cross-street and commercial driveway approaches to Holly Boulevard are recommended to be replaced with high-visibility crosswalk styles such as continental or ladder style pavement markings especially since Holly Boulevard is identified as a Safe Route to School in Brandon. Note: the use of high-visibility crosswalk markings may be used at any pedestrian crossing, but cost considerations motivate most agencies to be selective about where it is applied.

Figure 4.7 // Recommendations on Holly Boulevard, Annabelle Street/Robin Drive & Holly Blvd/5th Ave

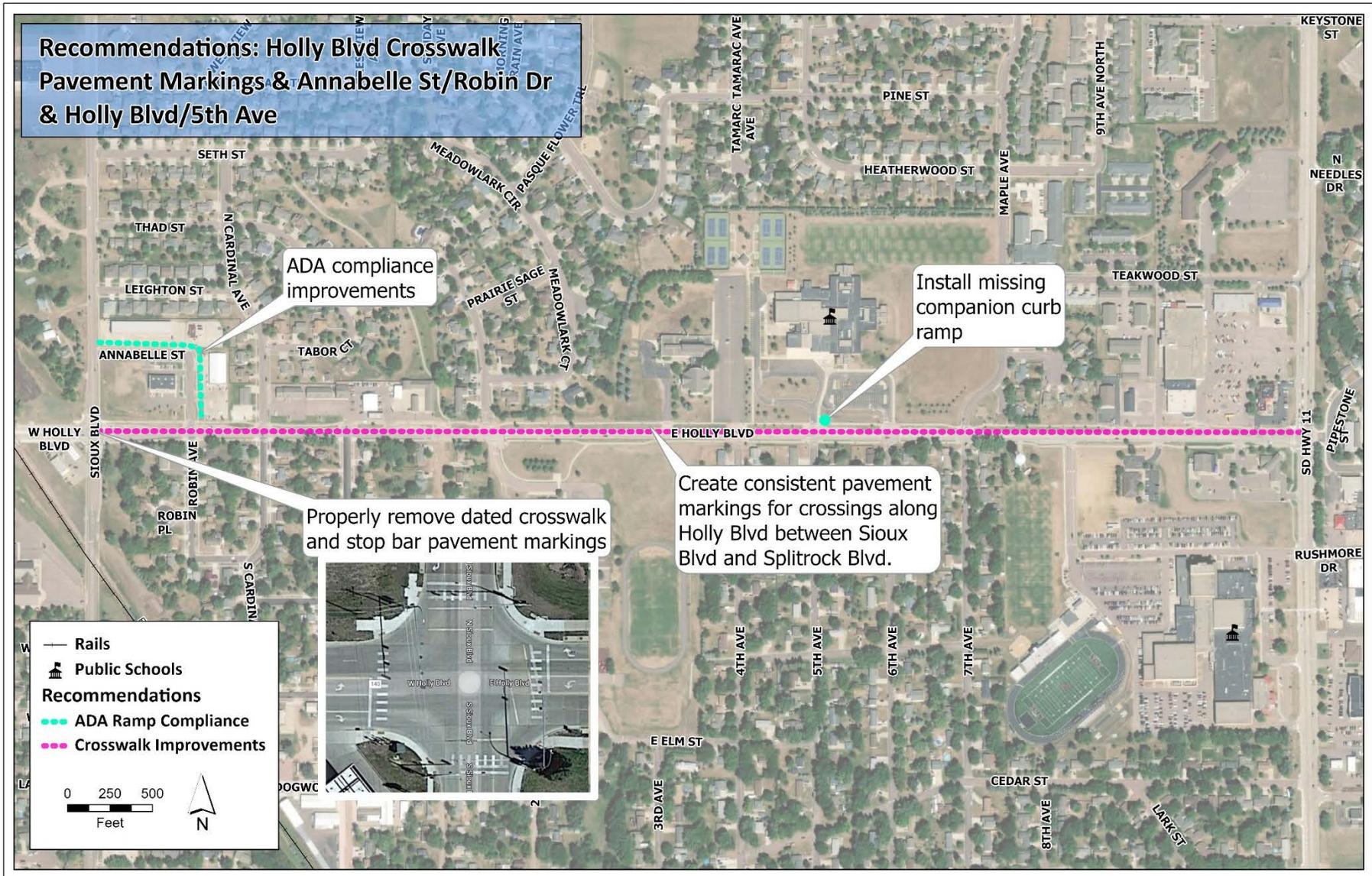
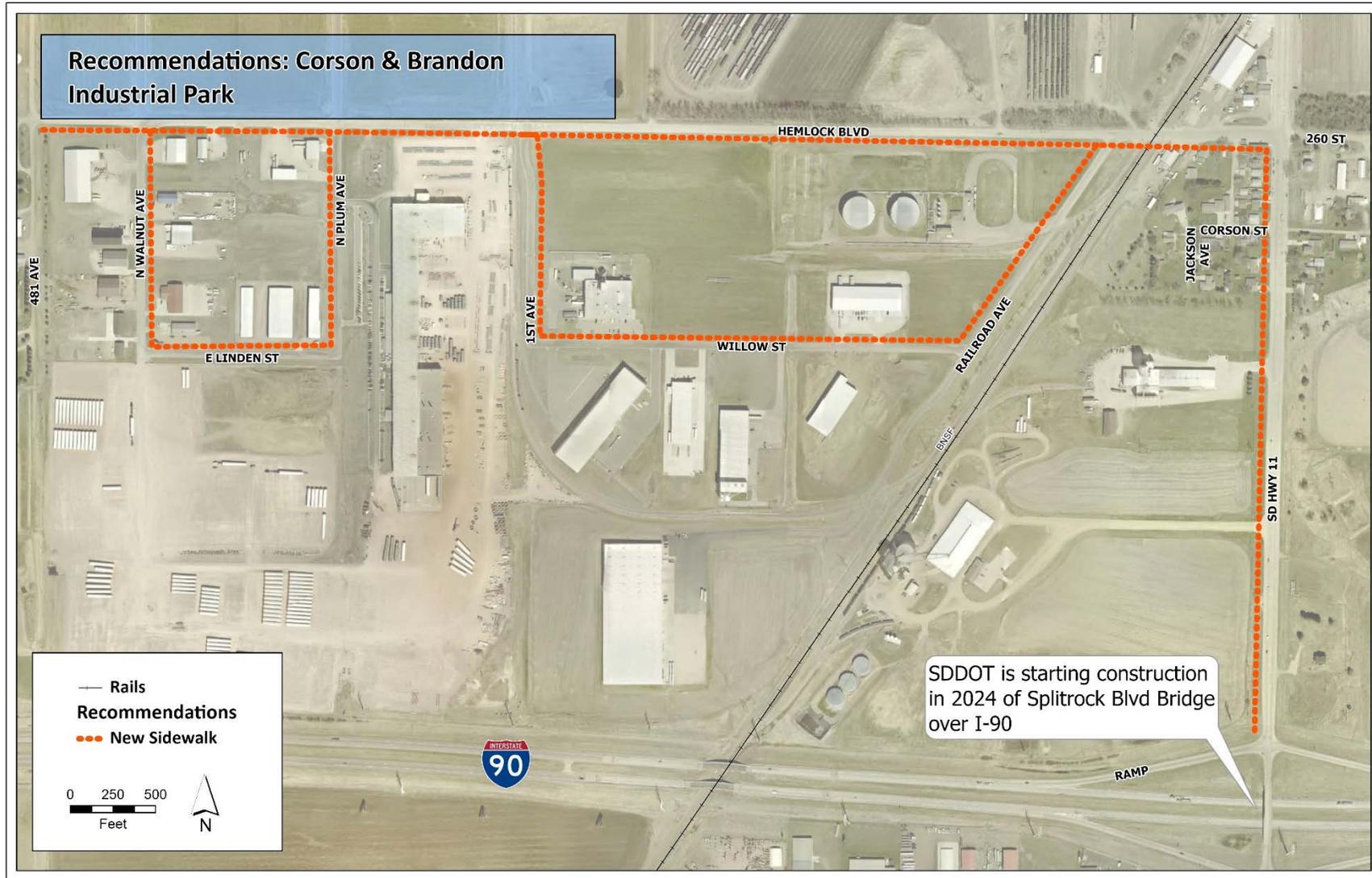


Figure 4.8 // Recommendations on Corson and Brandon Industrial Park



Corson and Brandon Industrial Park ■ Industrial Park does not have sidewalk, SDDOT is starting construction in 2024 of Splitrock Boulevard Bridge over I-90, once this bridge is reconstructed with pedestrian accessibility, new sidewalk should be retrofitted into the industrial park. Sidewalk on the west side of 482nd Avenue, sidewalk on south side of 260th Street, sidewalk on the north sides of Railroad Avenue to E Willow Street to N 1st Avenue from E willow back to 260th Street. Add in a final block of sidewalk on N Plum Avenue W side, to E Linden Street N side, to N Walnut Avenue E side.

- 9TH AVENUE INDUSTRIAL PARK** — The Industrial Park north of E Redwood Boulevard currently has no sidewalk. A recommendation to construct a quick build project similar to what is pictured here. However, pull back the access points to allow trucks with long trailers. This quick build project will add buffer protected bike and ped access more quickly and more cost effectively than retrofitting sidewalks. It is also recommended to complete a shared-use path along the west side of Splitrock Boulevard from E Redwood Boulevard going north to the areas near I-29 ramps.

QUICK BUILD PROJECT DETAILS

Implement a quick build project on the south sides of Birch and Ash Streets between Splitrock Boulevard and 9th Avenue North. Install a quick build project on the west side of 9th Avenue, on the south side of Ash Street between 7th Avenue and 9th Avenue, install a quick build project on the north side of Birch Street between 7th and 9th Avenues. Finally, install a quick-build project on the east side of 7th Avenue

Quick build projects to accommodate pedestrian and bicycle traffic on-street with minimal additional infrastructure can be implemented quickly and easily. Parking can be integrated into the quick build projects to buffer bicyclists and pedestrians from traffic, if desired. However, the 9th Avenue Industrial Park currently has ample parking. An additional crossing at Redwood Boulevard. To the west side of 9th Avenue N would be added as well.

- ANNABELLE STREET/ROBIN DRIVE & HOLLY BOULEVARD/5TH AVENUE** — The Annabelle Street/Robin Drive area has some inconsistencies with curb ramps, detectable warning panels, a few inconsistent grades, along with multiple crossings that do not include companion ramps on the opposite side of the street. Intersections of note in this area include Annabelle Street/Robin Drive, Holly Boulevard/Robin Drive for some simple concrete renovations. Holly Boulevard/5th Avenue is missing companion curb ramps across from Brandon Valley Middle School.
- ASPEN BOULEVARD/MAIN AVENUE & ASPEN BOULEVARD/NICHOLAS AVENUE** — This is a tricky intersection for pedestrians to cross as it is adjacent to the Ellis & Eastern Railroad. Recommendation to create a pedestrian crossing zone with ped activated RRFBs on both intersections that flash when either button is activated, or In-street pedestrian crossing signs. The entire area should be signed as a pedestrian crossing zone. Aspen Boulevard and Main Avenue – Crossing Zone Graphic
- BIG SIOUX RECREATIONAL TRAIL NETWORK** — A plan focus area and recommendation could include mapping out the Big Sioux Recreation Area Trails, and extension of those trails into the City of Brandon and extending a trail out to the Bluffs Subdivision, including recommendations for wayfinding signage. A Shared Use Path is considered along an existing City-owned sewer easement near the Ellis & Eastern Railroad, as well as a potential Big Sioux River Trail corridor connecting to planned Sioux Falls Big Sioux River Greenways. A southeastern loose surface trail connection from S Heritage Road in the Bluffs Neighborhood is

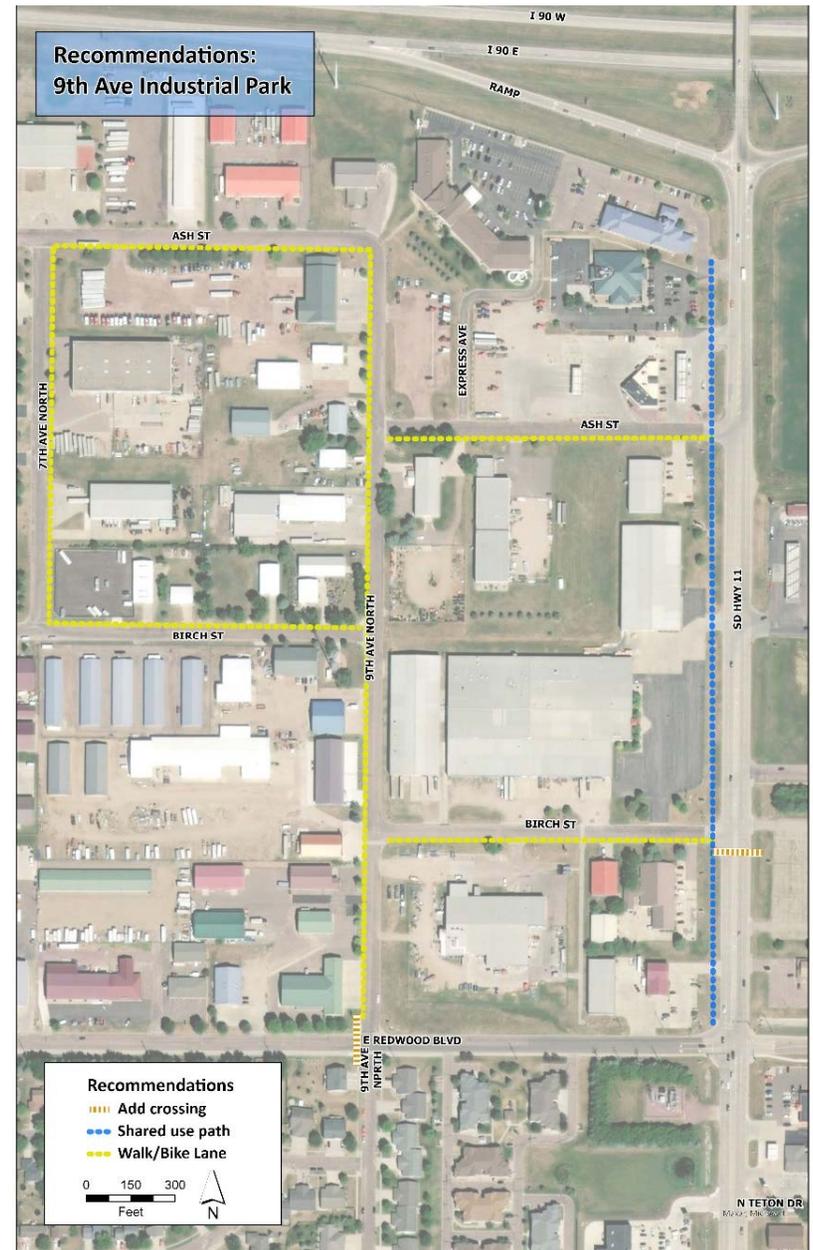


Figure 4.9 // Recommendations in 9th Avenue Industrial Park

recommended to connect to the Big Sioux Recreation Area. This recommendation is shown on the Holly Boulevard and West Brandon Recommendation Map.

- **BRANDON RAIL WITH TRAIL PHASE I** — The Ellis and Eastern Railroad (E&E RR) Corridor through Brandon is ripe for a technique called a Rail with Trail, which combines an active railway corridor with an agreed upon pedestrian access easement located ~50' from the railroad centerline. The Brandon Bike and Pedestrian Plan Team proposed a Rail with Trail concept to the E&E RR during the stakeholder engagement portion of our planning process and the E&E RR agreed to an initial pilot Rail with Trail project in the center of Brandon from Sioux Boulevard to Aspen Boulevard. This Rail with Trail can allow bike and pedestrian access to and from the core area of town connecting to Aspen Park and nearby schools. An additional Rail with Trail opportunity exists on the southeast side of Aspen Park connecting east to S Splitrock Boulevard or utilizing one of the City of Brandon's pedestrian access easements. An extension from this Rail with Trail would build a connection from Aspen Boulevard through Aspen Park and tie in with Splitrock Boulevard. Figure 3.16 on page 82 of the plan shows a close-up map of Phase I
- **BRANDON RAIL WITH TRAIL PHASE II** — Westside sewer main will include a SUP May be more easily implemented as the proposed trail would follow an existing City of Brandon owned sewer easement north on the east side of the Big Sioux River, then following the sewer easement west on the south side of the E&E RR ROW connecting to Veterans Parkway. Figure 3.14 on page 80 of the plan depicts how Phase II will connect to Phase I.
- **S SPLITROCK BOULEVARD TO BRANDON POST OFFICE** — Build sidewalk on Cedar Street and Kirkwood Boulevard to connect to the existing sidewalk around the Brandon Post Office.

Figure 4.10 // Aspen Boulevard/Main Avenue & Aspen Boulevard/Nicholas Avenue

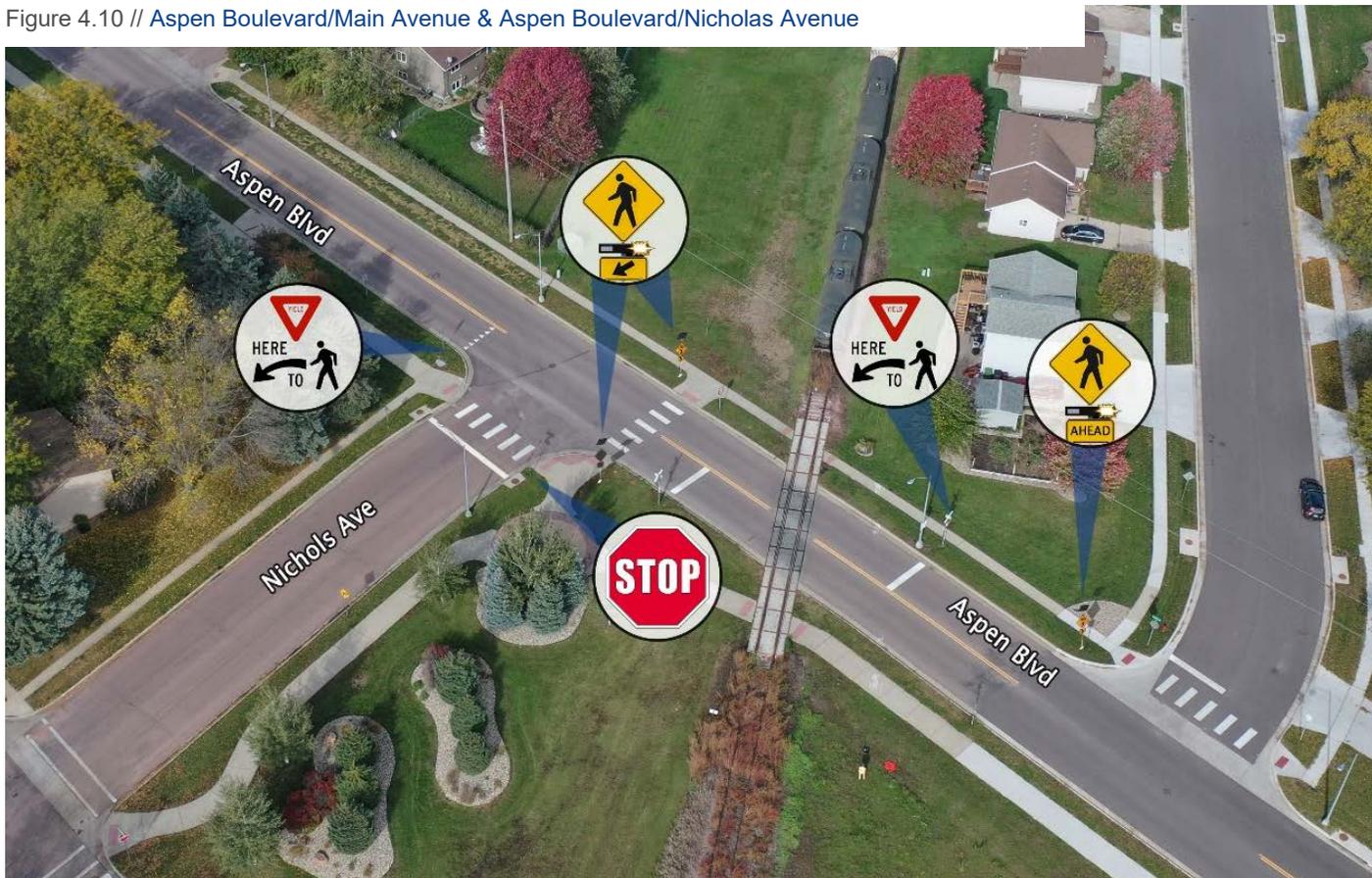


Figure 4.11 // S Splitrock Boulevard to Brandon Post Office

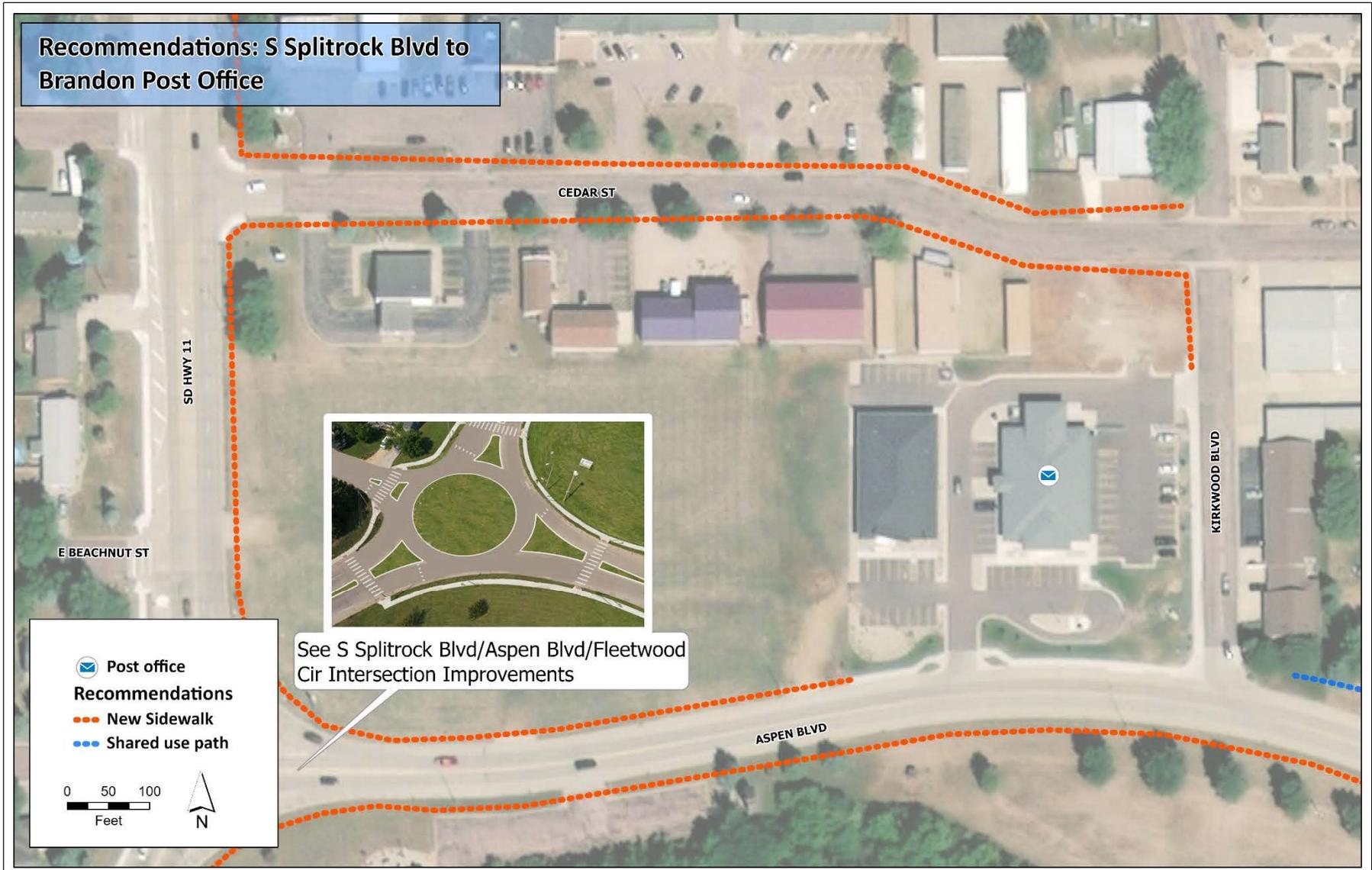


Figure 4.12 // S Splitrock Boulevard/Aspen Boulevard/Fleetwood Circle Intersection Improvements



S Splitrock Boulevard/Aspen Boulevard/Fleetwood Circle Intersection Improvements // Upgrade intersection to include bike/ped accessibility and crossing connectivity, rendering below shows a future roundabout design for the intersection.

- **S SPLITROCK BOULEVARD IMPROVEMENTS** — Build a shared use path on the west side of S Splitrock Boulevard from Aspen Boulevard to S Sioux Boulevard. This path will serve as a Safe Route to School and as a potential southern access to Aspen Park.
- **MCHARDY PARK, E ASPEN BOULEVARD IMPROVEMENTS** — Add sidewalk on north side of Aspen Boulevard from Kirkwood Boulevard to east side of McHardy Road. Build a connection south to McHardy Park with a connection across Aspen Boulevard, add SUP along east side of McHardy Road south to bridge. Add SUP on north side of E Aspen Boulevard including an optional pedestrian bridge across Split Rock Creek, an alternative trail route exists that crosses McHardy Road bridge to the south and follow the river south back to Aspen Boulevard.

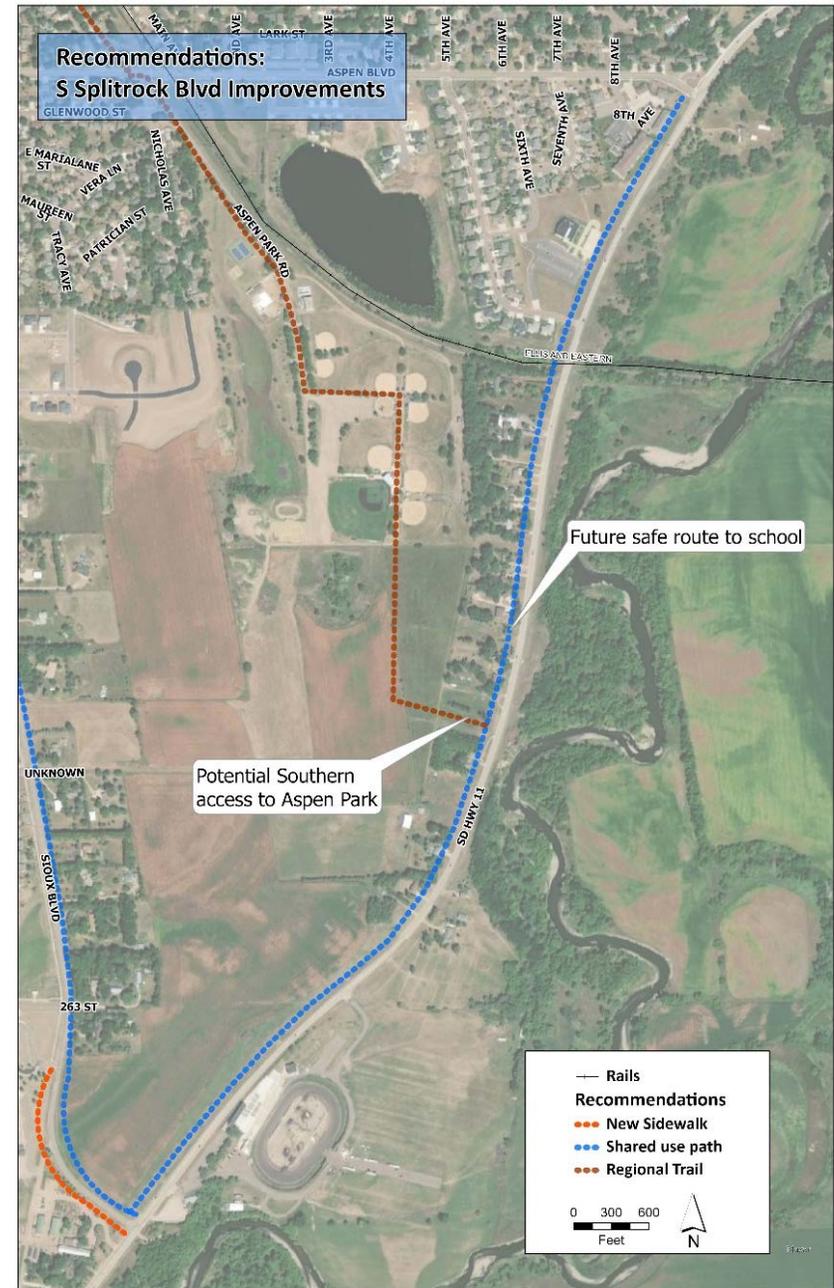
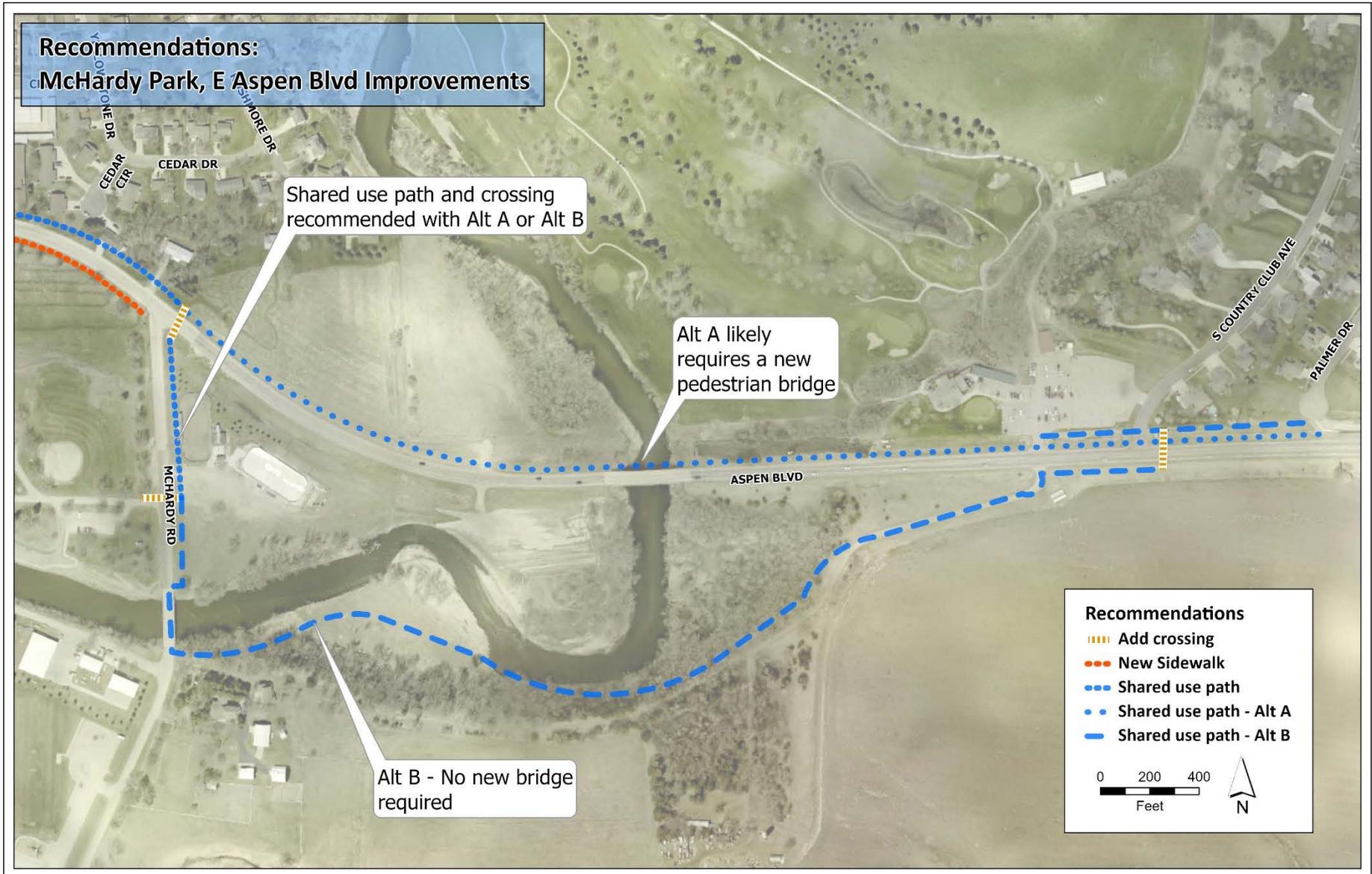


Figure 4.13 // S Splitrock Boulevard Improvements

Figure 4.14 // McHardy Park, E Aspen Boulevard Improvements



- **TRAIL UPGRADES BETWEEN PONDEROSA STREET AND BIRCHWOOD CIRCLE** — The trail between Ponderosa Street and Birchwood Circle, should be upgraded with lighting and markings to allow for removal of unsightly “Bike Route” signs, paint a marking on the sidewalk and street to show bicyclists and pedestrians the “jog” that occurs between trail segments. A vine with leaves theme is rendered above. Low-level downcast lighting options for this segment, similar to landscape lighting is also recommended.



Figure 4.15 // Big Sioux Recreation Path to Shared Use Path



Figure 4.16 // Facing East on Shared Use Path

GENERAL RECOMMENDATIONS

- Purchase counter to inform on pedestrian and bicycle usage in the City
- Update the City’s minimum Street Design Criteria from a 4ft to a 5ft sidewalk, making travel and passing on any sidewalk within the city more accessible for everyone including wheelchair users as well as eliminating the requirement of passing areas every 200ft

Project Table 1: - Sorted in Report Order (Page 1 of 2)

Project Name	Project Location	Project Type	Priority* (S, M, L)	Est Proj Cost (2022 \$)
Closing Gaps in Sidewalks	Citywide (Non-Specific), subtracting other proposed projects #2-#21. Estimated cost shown includes all sidewalk gaps identified, some of which are missing sidewalk in developing neighborhoods which would be completed and paid for by developers.	Sidewalk Connection	L	\$ 7,000,000
Prioritizing Safe Routes to Schools in the Core Area of Brandon	Core Area Neighborhood	Sidewalk Connection, Street Crossings	M	\$ 1,660,000
Sioux Blvd	Sioux Blvd - E Maureen Dr to W Alpine Cir	Phase 1: Sidewalk Connection or Shared-Use Path, Street Crossings	S	\$ 55,000
	Sioux Blvd - E Ponderosa Cir to Splitrock Blvd	Phase 2: Sidewalk Connection or Shared-Use Path, Street Crossings	M	\$ 775,000
	Sioux Blvd - Robert Bennis Elementary to Splitrock Blvd	Phase 3: Sidewalk Connection or Shared-Use Path, Street Crossings	M	\$ 210,000
Holly Blvd and Surrounding Areas	Holly Blvd - Veterans Pkwy to Big Sioux River Bridge	Phase 1: Widen Paved Shoulder	M	\$ 290,000
	Holly Blvd - N Heritage Rd to Big Sioux River Bridge	Phase 2: Shared-Use Path	L	\$ 630,000
	Holly Blvd - Veterans Pkwy to N Heritage Rd	Phase 3: Shared-Use Path Extension	L	\$ 1,080,000
West Side of Brandon	Frontier St - N Heritage Rd to 540 ft west	Sidewalk Connection	S	\$ 40,000
	N Heritage Rd - Frontier St to Holly Blvd	Sidewalk Connection	S	\$ 50,000
Redwood Blvd	Intersection of Redwood Blvd and N Sioux Blvd	Street Crossing	S	\$ 25,000
E Redwood Blvd	E Redwood Blvd - N Needles Dr to Split Rock Creek Bridge	Sidewalk Connection, Street Crossing	M	\$ 190,000
East Side of Brandon	E Redwood Blvd - Split Rock Creek Bridge to N Chestnut Blvd	Shared-Use Path	M	\$ 310,000
	N Chestnut Blvd - E Redwood Blvd to E Oakhill Cir	Shared-Use Path	M	\$ 270,000
	S Sunshine Ave to Future Development	Shared-Use Path	M	\$ 450,000
Holly Blvd Crosswalk Pavement Markings	Holly Blvd - Sioux Blvd to Splitrock Blvd	Pavement Markings	S	\$ 25,000
North Side of Industrial Area	482 Ave - I-29 WB onramp to 260 St/SD 11 (in Corson)	Phase 1: Sidewalk Connection	M	\$ 300,000
	260 St - 481 Ave to 482 Ave/SD 11 (in Corson)			\$ 640,000
	Railroad Ave - 260 St to E Willow St, then to N 1st Ave, then to 260 St	Phase 2: Sidewalk Connection	M	\$ 280,000
	N Plum Ave - 260 St to E Linden St, then to N Walnut Ave, then to 260 St			\$ 160,000

Project Table 1: - Sorted in Report Order (Page 2 of 2)

Project Name	Project Location	Project Type	Priority* (S, M, L)	Est Proj Cost (2022 \$)
9th Ave Industrial Park	Various Locations	Quick Build	S	\$ 115,000
	Splitrock Blvd - E Redwood Blvd to areas near I-29 ramps	Shared-Use Path, Street Crossing	M	\$ 360,000
Annabelle St/Robin Dr & Holly Blvd/5th Ave	Area of Annabelle St/Robin Dr	ADA Improvements	S	\$ 18,000
	Intersection of Holly Blvd/5th Ave	ADA Retrofit	S	\$ 11,000
Aspen Blvd/Main Ave & Aspen Blvd/Nicholas Ave	Intersection Area: Aspen Blvd/Main Ave & Aspen Blvd/Nicholas Ave	Street Crossing	S	\$ 40,000
Big Sioux Recreational Trail Network	Big Sioux Recreational Trail to S Heritage Rd	Phase 1: Unpaved Trail Connections	M	\$ 290,000
		Phase 2: Paved Trail Connections	L	\$ 690,000
Brandon Rail with Trail Phase I	Parallel to E&E Railroad - Holly Blvd to Aspen Blvd. Then extension from Aspen Blvd to Splitrock Blvd	Rail with Trail Phase I, Street Crossing	L	\$ 1,050,000
		Extension: Shared-Use Path	L	\$ 760,000
Brandon Rail with Trail Phase II	Holly Blvd (west of Big Sioux River Bridge) north to E&E Railroad, then parallel E&E Railroad to Veterans Pkwy	Rail with Trail Phase II	L	\$ 2,080,000
S Splitrock Blvd to Brandon Post Office	S Splitrock Blvd - Cedar St to north 130 ft; Cedar St - S Splitrock Blvd to Kirkwood Blvd to Post Office	Sidewalk Connection	S	\$ 190,000
S Splitrock Blvd/Aspen/Fleetwood Cir Intersection Improvements	S Splitrock Blvd - Cedar St to Aspen Blvd; Aspen Blvd - S Splitrock Blvd to east 500 ft; Intersection Crossing	Sidewalk Connection, Street Crossing	M	\$ 310,000
S Splitrock Blvd Improvements	S Splitrock Blvd - Aspen Blvd to S Sioux Blvd	Shared-Use Path, Street Crossing	L	\$ 980,000
McHardy Park , E Aspen Blvd Improvements	Phase 1: Aspen Blvd - Kirkwood Blvd to McHardy Dr	Sidewalk Connection, Street Crossing	M	\$ 110,000
	Phase 2: McHardy Rd - Aspen Blvd to Split Rock Creek Bridge	Shared-Use Path, Street Crossing	M	\$ 180,000
	Phase 3A: Alternative A - Aspen Blvd - McHardy Rd to Chestnut Blvd via Aspen Blvd	Shared-Use Path, Pedestrian Bridge Option	L	\$ 1,500,000
	Phase 3B: Alternative B - Aspen Blvd - McHardy Rd to Chestnut Blvd via Split Rock Creek (south side of creek)	Street Crossing, Shared-Use Path, Pedestrian Bridge	L	\$ 1,020,000
Trail Upgrades between Ponderosa St and Birchwood Cir	Parkview Blvd - Ponderosa St to south 130 ft	Lighting, Paint	S	\$ 140,000

* S: Short-Term 1-5 Years

* M: Mid-Term 6-10 Years

* L: Long-Term 11-20 Years or More

Project Table 2: - Sorted in Order of Short-, Mid-, & Long-Term Priority Order (Page 1 of 2)

Priority* (S, M, L)	Project Name	Project Location	Project Type	Est Proj Cost (2022 \$)
S	Sioux Blvd (Phase 1 of 3)	Sioux Blvd - E Maureen Dr to W Alpine Cir	Phase 1: Sidewalk Connection or Shared-Use Path, Street Crossings	\$ 55,000
	West Side of Brandon	Frontier St - N Heritage Rd to 540 ft west	Sidewalk Connection	\$ 40,000
		N Heritage Rd - Frontier St to Holly Blvd	Sidewalk Connection	\$ 50,000
	Redwood Blvd	Intersection of Redwood Blvd and N Sioux Blvd	Street Crossing	\$ 25,000
	Holly Blvd Crosswalk Pavement Markings	Holly Blvd - Sioux Blvd to Splitrock Blvd	Pavement Markings	\$ 25,000
	9th Ave Industrial Park (Phase 1 of 2)	Various Locations	Phase 1: Quick Build	\$ 115,000
	Annabelle St/Robin Dr & Holly Blvd/5th Ave	Area of Annabelle St/Robin Dr	ADA Improvements	\$ 18,000
		Intersection of Holly Blvd/5th Ave	ADA Retrofit	\$ 11,000
	Aspen Blvd/Main Ave & Aspen Blvd/Nicholas Ave	Intersection Area: Aspen Blvd/Main Ave & Aspen Blvd/Nicholas Ave	Street Crossing	\$ 40,000
	S Splitrock Blvd to Brandon Post Office	S Splitrock Blvd - Cedar St to north 130 ft; Cedar St - S Splitrock Blvd to Kirkwood Blvd to Post Office	Sidewalk Connection	\$ 190,000
Trail Upgrades between Ponderosa St and Birchwood Cir	Parkview Blvd - Ponderosa St to south 130 ft	Lighting, Paint	\$ 140,000	
M	Prioritizing Safe Routes to Schools in the Core Area of Brandon	Core Area Neighborhood	Sidewalk Connection, Street Crossings	\$ 1,660,000
	Sioux Blvd (Phase 2 of 3)	Sioux Blvd - E Ponderosa Cir to Splitrock Blvd	Phase 2: Sidewalk Connection or Shared-Use Path, Street Crossings	\$ 775,000
	Sioux Blvd (Phase 3 of 3)	Sioux Blvd - Robert Bennis Elementary to Splitrock Blvd	Phase 3: Sidewalk Connection or Shared-Use Path, Street Crossings	\$ 210,000
	Holly Blvd and Surrounding Areas (Phase 1 of 3)	Holly Blvd - Veterans Pkwy to Big Sioux River Bridge	Phase 1: Widen Paved Shoulder	\$ 290,000
	E Redwood Blvd	E Redwood Blvd - N Needles Dr to Split Rock Creek Bridge	Sidewalk Connection, Street Crossing	\$ 190,000
	East Side of Brandon	E Redwood Blvd - Split Rock Creek Bridge to N Chestnut Blvd	Shared-Use Path	\$ 310,000
		N Chestnut Blvd - E Redwood Blvd to E Oakhill Cir	Shared-Use Path	\$ 270,000
S Sunshine Ave to Future Development		Shared-Use Path	\$ 450,000	

Project Table 2: - Sorted in Order of Short-, Mid-, & Long-Term Priority Order (Page 2 of 2)

Priority* (S, M, L)	Project Name	Project Location	Project Type	Est Proj Cost (2022 \$)
M	North Side of Industrial Area (Phase 1 of 2)	482 Ave - I-29 WB onramp to 260 St/SD 11 (in Corson)	Phase 1: Sidewalk Connection	\$ 300,000
		260 St - 481 Ave to 482 Ave/SD 11 (in Corson)		\$ 640,000
	North Side of Industrial Area (Phase 2 of 2)	Railroad Ave - 260 St to E Willow St, then to N 1st Ave, then to 260 St	Phase 2: Sidewalk Connection	\$ 280,000
		N Plum Ave - 260 St to E Linden St, then to N Walnut Ave, then to 260 St		\$ 160,000
	9th Ave Industrial Park (Phase 2 of 2)	Splitrock Blvd - E Redwood Blvd to areas near I-29 ramps	Phase 2: Shared-Use Path, Street Crossing	\$ 360,000
	Big Sioux Recreational Trail Network (Phase 1 of 2)	Big Sioux Recreational Trail to S Heritage Rd	Phase 1: Unpaved Trail Connections	\$ 290,000
	S Splitrock Blvd/Aspen/Fleetwood Cir Intersection Improvements	S Splitrock Blvd - Cedar St to Aspen Blvd; Aspen Blvd - S Splitrock Blvd to east 500 ft. Intersection Crossing	Sidewalk Connection, Street Crossing	\$ 310,000
	McHardy Park, E Aspen Blvd Improvements (Phase 1 of 3)	Phase 1: Aspen Blvd - Kirkwood Blvd to McHardy Dr	Phase 1: Sidewalk Connection, Street Crossing	\$ 110,000
McHardy Park, E Aspen Blvd Improvements (Phase 2 of 3)	Phase 2: McHardy Rd - Aspen Blvd to Split Rock Creek Bridge	Phase 2: Shared-Use Path, Street Crossing	\$ 180,000	
L	Closing Gaps in Sidewalks	Citywide (Non-Specific), subtracting other proposed projects #2-#21. Estimated cost shown includes all sidewalk gaps identified, some of which are missing sidewalk in developing neighborhoods which would be completed and paid for by developers.	Sidewalk Connection	\$ 7,000,000
	Holly Blvd and Surrounding Areas (Phase 2 of 3)	Holly Blvd - N Heritage Rd to Big Sioux River Bridge	Phase 2: Shared-Use Path	\$ 630,000
	Holly Blvd and Surrounding Areas (Phase 3 of 3)	Holly Blvd - Veterans Pkwy to N Heritage Rd	Phase 3: Shared-Use Path Extension	\$ 1,080,000
	Big Sioux Recreational Trail Network (Phase 2 of 2)	Big Sioux Recreational Trail to S Heritage Rd	Phase 2: Paved Trail Connections	\$ 690,000
	Brandon Rail with Trail Phase I	Parallel to E&E Railroad - Holly Blvd to Aspen Blvd. Then extension from Aspen Blvd to Splitrock Blvd	Rail with Trail Phase I, Street Crossing	\$ 1,050,000
			Extension: Shared-Use Path	\$ 760,000
	Brandon Rail with Trail Phase II	Holly Blvd (west of Big Sioux River Bridge) north to E&E Railroad, then parallel E&E Railroad to Veterans Pkwy	Rail with Trail Phase II	\$ 2,080,000
	S Splitrock Blvd Improvements	S Splitrock Blvd - Aspen Blvd to S Sioux Blvd	Shared-Use Path, Street Crossing	\$ 980,000
	McHardy Park, E Aspen Blvd Improvements (Phase 3 of 3)	Phase 3A: Alternative A - Aspen Blvd - McHardy Rd to Chestnut Blvd via Aspen Blvd	Phase 3A: Alternative A - Shared-Use Path, Pedestrian Bridge Option	\$ 1,500,000
Phase 3B: Alternative B - Aspen Blvd - McHardy Rd to Chestnut Blvd via Split Rock Creek (south side of creek)		Phase 3B: Alternative B - Street Crossing, Shared-Use Path, Pedestrian Bridge	\$ 1,020,000	

* S: Short-Term 1-5 Years
 * M: Mid-Term 6-10 Years
 * L: Long-Term 11-20 Years or More

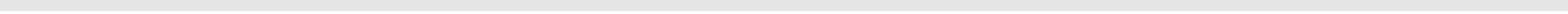
APPENDIX A – MISSING SIDEWALK

	A	B	C
1	OBJECTID	Length (ft)	Location Description
2	1	1341.18	2nd Ave between E Elm St and Aspen Blvd.
3	2	1334.36	3rd Ave between E Elm St and Aspen Blvd.
4	3	2997.58	Aspen Blvd between Main Ave and SD Hwy 11
5	4	431.25	South side of E Redwood Blvd. East of SD HWY 11 and West of N Needles Dr.
6	5	433.67	North side of E Redwood Blvd. between N Yellowstone Dr. and N Oak Ridge Rd.
7	6	131.59	North side of Riverbend Dr. North of Ashton Trl and South of Tyler Cir.
8	7	87.20	South side of Riverbend Dr. North of Ashton Trl and South of Tyler Cir.
9	8	190.83	South side of W River Bend St. West of W Thomas Cir and East of Ashton Trl
10	9	557.30	South side of W River Bend St. East of W Thomas Cir
11	10	98.20	North side of W Bennett Dr
12	11	88.96	North side of W Legacy Dr West segment. Intersecton with S Heritage Rd
13	12	326.63	North side of W Legacy Dr East Segment. Intersecton with S Heritage Rd
14	13	91.27	South side of W Legacy Dr. Intersecton with S Heritage Rd
15	14	97.60	North side of Heritage Rd. North of W Burton Dr and South of Ashton Trl.
16	15	125.09	South side of Heritage Rd. North of W Burton Dr and South of Ashton Trl.
17	16	89.05	South side of W Burton Dr. Intersection with S. Heritage Rd.
18	17	78.27	South side of Tyler Cir. West segment
19	18	110.82	South side of Tyler Cir. East segment
20	19	192.87	West side of Heritage Rd. North of River Bluff Dr and South of W Holly Blvd.
21	20	149.71	East side of Heritage Rd. North of River Bluff Dr and South of W Holly Blvd.
22	21	1155.72	North side of W Holly Blvd. From West city boundary to just West of N Heritage Rd.
23	22	727.23	South Side of Frontier St and East side of N Heritate Rd to W Holly Blvd
24	23	251.92	South side of Frountier St. West end of road
25	25	1039.64	North side of Frontier St and East side of N Heritate Rd
26	26	825.39	East side of N Heritage Rd. North of W Holly Blvd.
27	27	86.92	South side of W Bennett Dr
28	28	1095.43	South side of W Holly Blvd and East side of Sandstone Ave. North of Meadowbrook Trl
29	29	852.82	South side of W Holley Blvd. West of Sandstone Ave and East of Heritage Rd.
30	30	995.48	South side of W Holly Blvd. From Tyler Circle to just West of Heritage Rd.
31	32	5291.58	North Side of W Holly Blvd. East of N Heritage Rd and West of Sioux Blvd.
32	33	688.56	Dogwood St. between Railroad and S Sioux Blvd.
33	35	2590.42	4th ave between Holly and Aspen Blvd.
34	36	2554.22	5th ave between Holly Blvd and Aspen Blvd.
35	37	2559.26	6th Ave. between Holly Blvd. and Aspen Blvd.
36	38	2554.49	7th ave between Holly Blvd and Aspen Blvd.
37	39	2474.47	Cedar St. between 4th ave and SD Hwy 11
38	40	973.02	E Conifer St. between 4th st and 7th st.
39	41	311.50	North side of S 5th Ave. West of SD HWY 11
40	42	138.52	South side of S 5th Ave. West of SD HWY 11
41	43	342.50	Sixth Ave between Aspen Blvd and S 5th Ave
42	44	7516.67	SD HWY 11 from Aspen Blvd to Sioux Blvd.
43	45	1173.60	Sioux Blvd. West of SD HWY 11 and East of Robert Bennis Elementary
44	46	4555.82	East side of Sioux Blvd. from Robert Benes Elementary to South side of Ponderosa St.
45	47	113.86	East side of Sioux Blvd. between E Maureen Dr. and W Alpine Cir

	A	B	C
46	48	922.44	East side of SD HWY 11 from Aspen Blvd. and E Aspen Blvd.
47	50	1208.72	8th Ave South of Cedar st and North of Aspen Blvd
48	51	1080.92	E Beachnut St. East of 8th Ave and West of SD HWY 11
49	52	838.59	Lark St between E Beachnut St and 8th Ave.
50	53	1016.16	Lark St. West of 8th Ave and East of 5th Ave
51	54	354.43	E Beechnut St. between 3rd and 4th Ave
52	55	536.07	Lark St. between 2nd and 3rd Ave.
53	56	530.71	E Beechnut St. between 3rd and 2nd Ave
54	57	535.35	E Beechnut St. between Main and 2nd ave
55	58	746.12	Cedar St. between Main and 2nd st
56	59	393.11	1st ave between Cedar st and Dogwood St.
57	60	1182.66	E Elm St. between 2nd Ave and 5th ave.
58	62	204.91	South side of E Teakwood St. Just West of SD HWY 11
59	63	401.06	East side of Pasque Flower Trl. South of E Redwood Blvd.
60	64	233.42	West side of Pasque Flower Trl. South of E Redwood Blvd.
61	66	162.47	East side of E Birch St. South of E Liberty St.
62	67	74.32	East side of E Birch St. North of Liberty Cir
63	68	90.55	West side of Birch St. South of Liberty St.
64	69	731.65	South side of Redwood Blvd. West of Splitrock Creek and East of Riverwood Cir
65	70	3540.64	Aspen Blvd from Splitrock Creet to the East side of SD HWY 11 just north of Cedar St.
66	71	326.82	South side of E Palmer St. East of Sunbirst Dr and West of Sunshine Ave.
67	73	218.54	South side of E Palmer St and West side of Sunshine Ave.
68	74	224.66	North side of E Sunburst Dr and East side of Sunburst Dr.
69	75	84.25	West side of E Sunburst Dr. South of E Palmer St.
70	77	78.49	North side of E Palmer St. East of S Chestnut Blvd and West of E Sunburst Dr.
71	78	195.60	East side of Sunshine Ave from E Sunburst Dr to South of E Palmer St.
72	79	84.52	East side of Sunshine Ave at intersection of E Palmer St.
73	80	120.00	West side of S Sunshine Ave. South of E Sunflower Cir and North of Rachelle St.
74	81	123.05	East side of S Sunshine Ave. South of E Sunflower Cir and North of Rachelle St.
75	82	83.36	End of E Daybreak Cir
76	83	92.98	N side of E Sunflower Cir. just East of S Sunshine Ave.
77	84	252.07	N side of E Sunflower Cir. just East of S Sunshine Ave.
78	85	243.39	South side of E Augusta Cir East of S Sunshine Ave and
79	86	326.67	North side of E Augusta Cir East of S Sunshine Ave and
80	87	103.25	end of E Sunray Cir. East of N Sunshine Ave
81	88	146.00	West side of N Sunshine Ave. at intersection of E Sunray Cir
82	89	955.49	Cedar street from SD HWY 11 to West side of Kirkwood Blvd.
83	90	259.92	South side of Cedar St. West o Yellowstone Dr and East of Kirkwood Blvd.
84	91	106.17	North side of Cedar St. West o Yellowstone Dr and East of Kirkwood Blvd.
85	92	177.21	East side of S Country Club Ave. Just North of Aspen Blvd.
86	93	1891.04	West side of S Country Club Ave. Just North of Aspen Blvd.
87	94	80.93	South side of Chapelwood St. East of Sioux Blvd.
88	95	132.02	North side of Chapelwood St. East of Sioux Blvd.
89	96	163.08	South side of Birchwood Dr. East of Sioux Blvd
90	97	134.43	North side of Birchwood Dr. East of Sioux Blvd

	A	B	C
91	98	232.41	West side of Tracy Ave to North side of Birchwood St.
92	99	140.21	South side of Birchwood St. between Sioux Blvd and Tracey Ave.
93	100	448.17	South side of East Lakeview Dr. South of E Aspen Blvd.
94	101	447.26	South side of East Lakeview Dr and West side of 4th Ave.
95	102	368.39	North side of E Lakeview Dr and West side of 4th Ave to Aspen Blvd.
96	103	300.22	North side of E lakeview Dr to E Aspen Blvd
97	104	39.70	South end of 4th Ave. South of E Lakeview Dr. intersection
98	105	120.06	East side of 4th Ave at intersection with E Lakeview Dr.
99	106	413.81	North side of Aspen Blvd between Sioux Blvd and Levis Ave
100	107	1894.73	West side of SD HWY 11 North of Teackwood St and South of Redwood Blvd.
101	108	1247.18	West side of SD HWY 11 North of Redwood Blvd. and South of Ash st.
102	109	194.95	North side of Birch St. just East of SD Hwy 11
103	110	48.64	East side of Garinet Cir. South of Stone St.
104	111	925.73	East of Sioux Blvd. Sout of Stone St. and North of E Redwood Blvd.
105	112	260.49	North side of Stone St to West side of N Sioux Blvd
106	113	53.68	End of N Stone Cir. North of Stone St.
107	114	186.39	South side of W Emerald Cir to West side of N Emerald Dr.
108	115	265.84	South side of W Stone St to East side of N Emerald Dr.
109	116	67.22	South side of W Emerald Cir West of Emerald Dr.
110	117	308.56	North side of W Emerald Cir West of Emerald Dr.
111	118	84.28	West side of N Emerald Dr at intersection of W Stone St.
112	119	243.52	North side of W stone St. East of N Emerald Dr.
113	120	322.99	East side of Redwood Cir. South of E Redwood Blvd.
114	121	1162.91	Custer Pkwy. West of Pioneer Centennial Park and South of Keystone St
115	123	1442.79	N Needles Dr. North of Sylvan Cir and east of SD HWY 11
116	124	486.64	Pipestone st. North of Holly Blvd and West of Sylvan Cir.
117	125	776.99	E Spearfish Dr. East of Sylvan Cir and West of N Needles Dr.
118	127	362.03	North side of Teakwood St. West of SD Hwy 11 and East of Maple Ave.
119	128	670.58	South side of Keystone Pl West of SD HWY 11
120	129	556.81	South side of Keystone Pl East of SD HWY 11
121	131	590.15	West side of Riverwood Cir South of Redwood Blvd
122	132	1339.78	Birch St. Wst of 9th Ave North
123	133	838.42	Birch St. East of 9th ave N and West of SD HWY 11
124	134	1158.83	Ash St. everything West of 9th Ave. N
125	135	1917.48	9th Ave N. North of Redwood Blvd and South of Ash St.
126	136	940.75	7th Ave N. North of Birch St and South of Ash st.
127	137	443.15	Joslyn Dr. North of Birch St.
128	138	92.51	West side of Sonwberry Ave South of intersection with Liberty Cir
129	139	2311.00	E Augustana Pl North of Aspen Blvd
130	140	1031.44	S Nelson Ln East of S Nelson Ln and East of E Augustana Pl.
131	141	2181.96	S Nelson Ln
132	142	103.88	E holly Blvd. East of SD HWY 11 and West of N pipeston St.
133	143	1287.33	S Oak Ridge Rd. East of S Yellowstone Dr. and North of Rushmore Dr.
134	144	532.65	S Teton Dr. North of Rushmore Dr. and South of Sylvan Cir.
135	145	1101.12	Rushmore Dr. East of S Teton Dr and West of S Oak Ridge Rd.

	A	B	C
136	146	1195.22	S Yellowstone Dr. South of Sylvan Cir and North of Rushmore Dr.
137	148	4719.57	Sylvan Cir East of SD HWY 11
138	149	327.56	Crystal Pl. North of Spearfish St. and South of Custer Pkwy
139	150	880.80	S Needles Dr. North of Rushmore Dr and South of Sylvan Cir
140	151	790.61	Ash St. West of SD HWY 11 and east of 9th St. N



APPENDIX B - RESOURCES

AARP Livable Communities Challenge (<https://www.aarp.org/livable-communities/community-challenge/>)

America Walks – Community Change Grants (<https://americawalks.org/programs/community-change-grants/>)

FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations (https://safety.fhwa.dot.gov/ped_bike/step/docs/STEP_Guide_for_Improving_Ped_Safety_at_Unsig_Loc_3-2018_07_17-508compliant.pdf)

FHWA In-Street Pedestrian Crossing Sign (http://www.pedbikesafe.org/pedsafe/countermeasures_detail.cfm?CM_NUM=69)

FHWA Manual on Uniform Traffic Control Devices (MUTCD) (https://mutcd.fhwa.dot.gov/pdfs/2009r1r2/pdf_index.htm)

FHWA Non-Motorized User Safety Manual for Local Rural Road Owners (https://safety.fhwa.dot.gov/local_rural/training/fhwasa010413/nonmotorize.pdf)

FHWA Noteworthy Local Policies That Support Safe and Complete Pedestrian and Bicycle Networks (https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwasa17006-Final.pdf) FHWA Rectangular Rapid-Flashing Beacon (RRFB) (http://www.pedbikesafe.org/pedsafe/countermeasures_detail.cfm?CM_NUM=54)

FHWA PedBikeSafe Safety Guide and Countermeasure Selection System (<http://www.pedbikesafe.org/>)

FHWA/FRA Rails with Trails Best Practices and Lessons Learned (https://railroads.dot.gov/sites/fra.dot.gov/files/2020-04/RWT_Report_Final_031620_0.pdf)

Minnesota Local Road Research Board – Pedestrian Crossings: Uncontrolled Locations (http://www.mnltap.umn.edu/publications/handbooks/pedcrossingguide/documents/ped_guidebook.pdf)

MnDOT Pedestrian Snow Removal Best Practices and Lessons Learned (<https://www.dot.state.mn.us/research/TRS/2013/TRS1306.pdf>)

MnDOT Demonstration Project Implementation Guide (<http://www.dot.state.mn.us/saferoutes/documents/mndot-demonstration-project-implementation-guide-final.pdf>)

SDDOT Safe Transportation for Every Pedestrian Guide & Best Practices (<https://dot.sd.gov/media/documents/STEPGuide.pdf>)

SDDOT Transportation Alternatives Program (TA) Recreational Trails Programs (https://dot.sd.gov/programs-services/programs/transportation-alternatives#listItemLink_1420)

South Dakota Game Fish and Parks – Recreational Trails Program (RTP) (<https://gfp.sd.gov/userdocs/docs/rtp-application.pdf>)

US Environmental Protection Agency – Recreation Economy for Rural Communities (RERC) (<https://www.epa.gov/smartgrowth/recreation-economy-rural-communities>)

Wellmark Healthy Hometown Initiative (<https://goodandhealthysd.org/about/ocdphp/healthyhometown/>)

Wellmark Small MATCH Grant Program – Small (IA & SD) (<https://www.wellmark.com/foundation/grants/grant-information/matching-assets-to-community-health>)

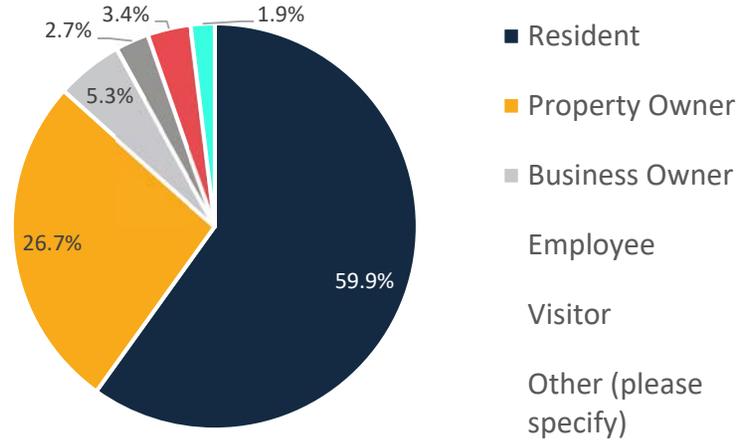


APPENDIX C – PUBLIC SURVEY SUMMARY

Date: October 3, 2021 to December 3, 2021

Survey Data: 188 Participants, 135 Completed, 0 Termination, 53 Partially Completed, 298 Views.

1. How would you best describe your relationship with the City of Brandon

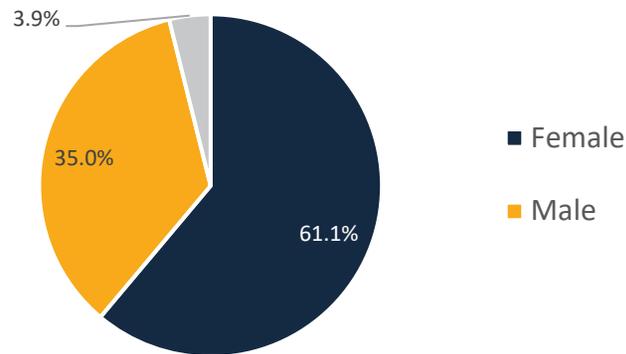


Other (please specify)

- Future Resident
- Neighboring resident

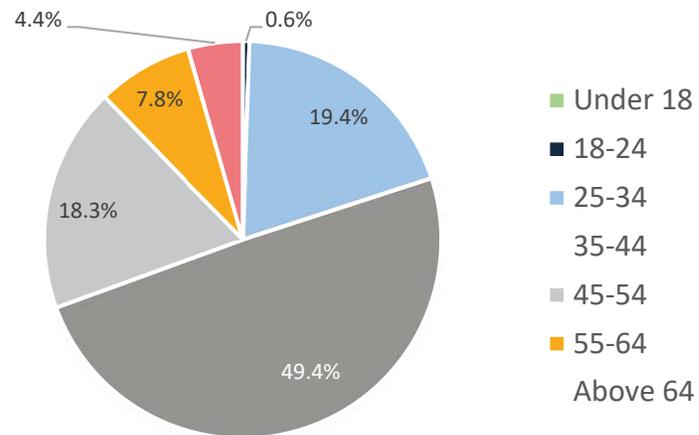
More than half of the respondents (59.9%) were City of Brandon residents while 26.7% were property owners.

2. What is your gender?



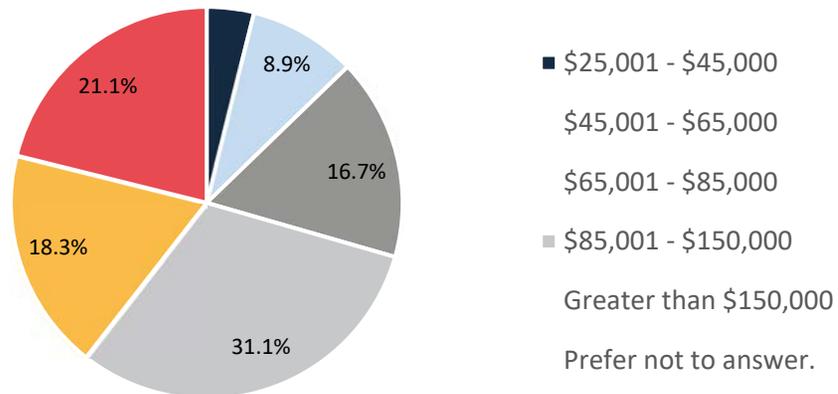
The majority of respondents (61.1%) were female.

3. What is your age?



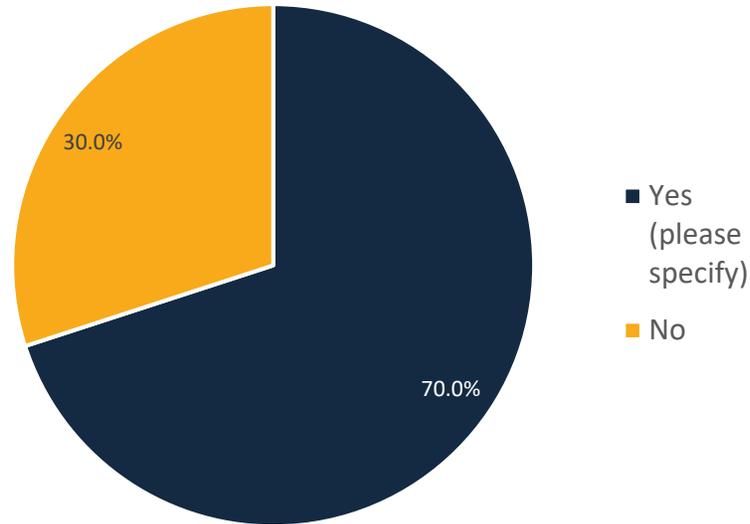
Most respondents (49.4%) were between 35-44 years old. There were no respondents under the age of 18 and only 0.6% of the respondents were in the 18–24 year old population.

4. What is your gross annual household income?

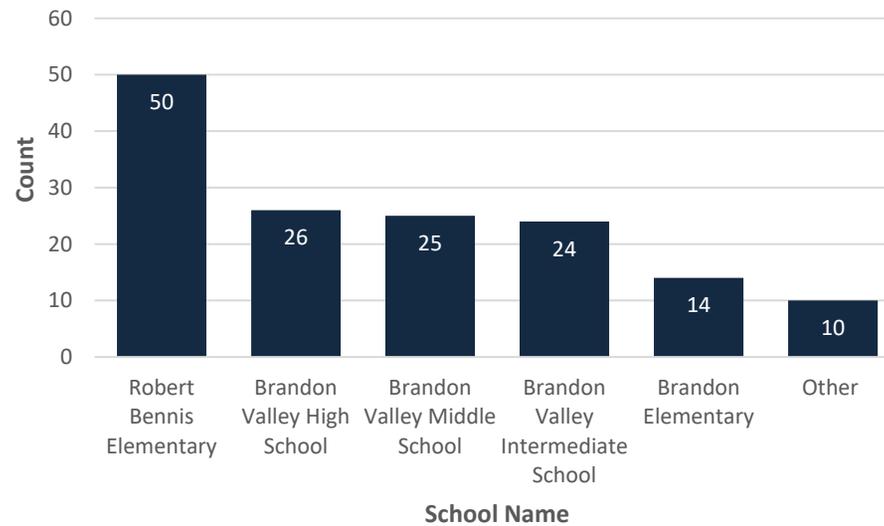


According to ACS 2019 results, median income in Brandon is \$87,250. Approximately half of the respondents indicated that their household income is over \$85,000 in the survey.

5. Is there a student(s) in the household? If so, what school(s) do they attend?



Yes (please specify)

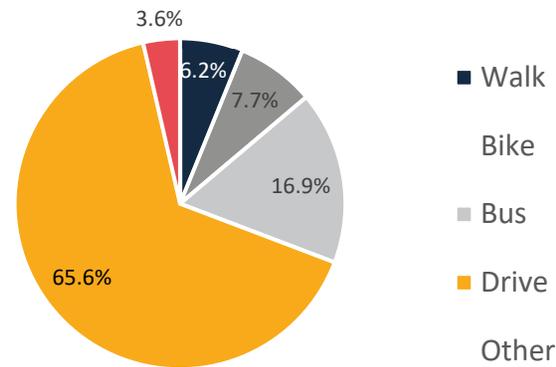


- Brandon Elementary
- BVHS
- BvHS and RBE
- Brandon Elementary
- home school
- Brandon elementary
- Robert Bennis and BVHS
- Robert Bennis, Brandon Valley Middle School
- SDSMT
- RBE, BVIS
- Robert bennis, intermediate, middle school
- BE & Middle School
- BVIS and BVHS
- BVIS and BVHS
- BE BVIS BVHS
- BE, MS, & HS
- Bvhs
- RBE
- Robert Bennis
- Brandon Valley Middle School, RBE
- Middle school and RBE
- Bvis, bvis
- RBE, Middle School
- Is and bvms
- Brandon Middle school
- RBE, BVIS, BVMS
- Rbe and middle school
- High school & intermediate
- RBE
- Robert bennis
- RBE BVIS
- BVMS and BVHS
- Robert Bennis and BVMS
- K

- robert bennis and intermediate school
- RBE
- Bvhs
- RBE
- Brandon Elementary
- Brandon Elementary, BVHS
- Robert Bennis Elementary
- Robert Bennie, Intermediate school
- Brandon Elementary
- Robert Bennis Elementary
- RBE
- Brandon elementary
- Brandon Intermediate
- BVHS
- Bvis
- RBE
- RBE, BVIS, a Sioux Falls preschool
- Bvis and bvms
- Robert Bennis Elementary, Brandon Intermediate, Blessed Redeemer preschool
- Bvms ans bvhs
- Bennis
- Robert Bennis, Brandon intermediate and Blessed Redeemer
- Rbe
- Brandon Vallwy High School
- Brandon valley high school
- Robert Bennis Elementary
- BVHS
- Robert Bennie
- Middle and high school
- robert bennis
- BVHS
- Noah's ark pre school

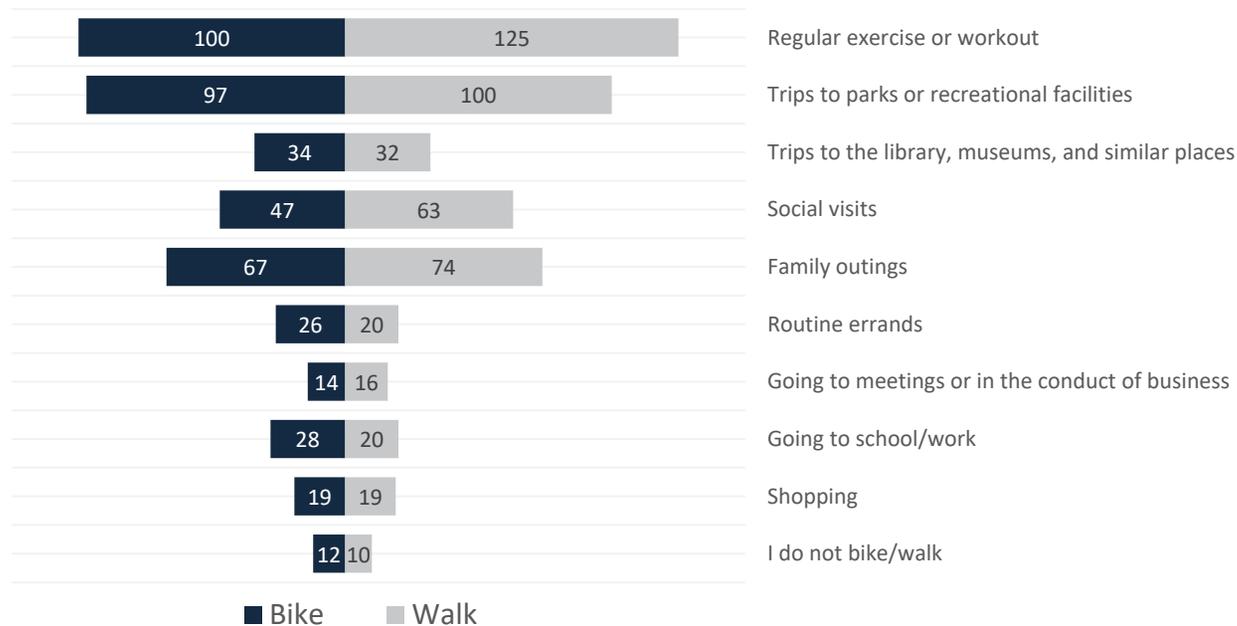
- BVHS BVMS RBE RBE
- Brandon Elementary
- Brandon valley intermediate school
- Brandon valley intermediate
- 7 and 12
- Brandon Valley Highschool & Robert Bennis Elementary
- Hills Beaver Creek Elementary
- RBE
- High school
- Brandon middle school and high school
- Robert Bennis
- BVMS
- Robert Bennis Elementary
- RBE, Brandon Middle School
- BVMS, RBE
- Robert Bennis and intermediate
- BVIS and RBE
- Robert Bennis
- Sioux Falls Public Schools
- Robert Bennis Elementary and BV Middle School
- B-E
- BVHS
- Brandon Elementary
- Robert Bennis, Brandon Intermediate
- BVMS, RBE
- RBE
- RBE and Middle School
- Robert Bennis
- Elementary
- BVHS
- RBE, BIS, BMS, BVHS
- Robert Bennis Elementary

6. How do you get to work/school?



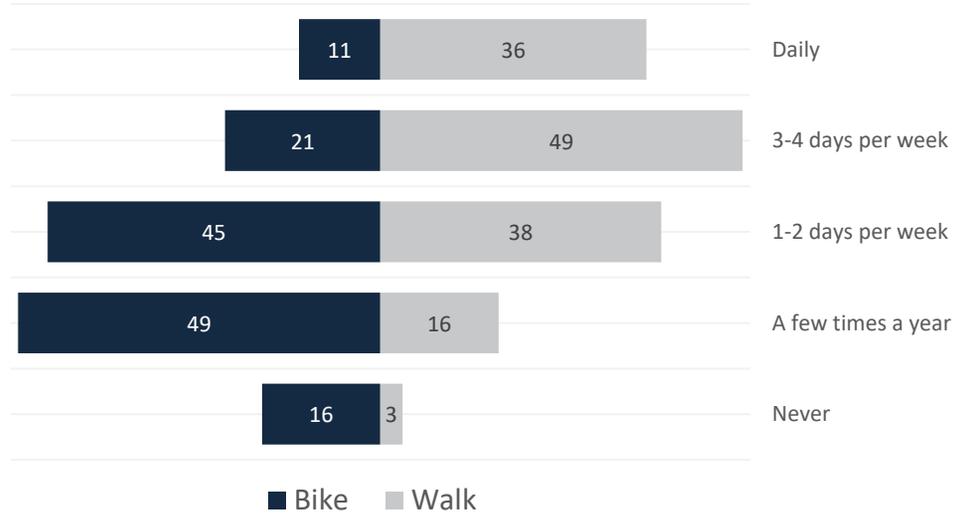
13.9% of the respondents bike or walk to school in Brandon while 65.6% drive.

7. Which of the following describes why you bike/walk (2 questions in one form)?



The results of this question show that Brandon residents make bike and walk trips for similar purposes and the number one reason is regular exercise or workout.

8. How often do you bike/walk (2 questions in one form)?



34.5% of survey respondents report that they bike a few times a year followed by 31.7% indicating that they cycle 1-2 days per week. 34.5% of survey respondents walk 3-4 days per week and 26.8% walk 1-2 days per week.

9. Which of the following best describes you as a bicyclist?

Committed and Fearless: I am a committed bicyclist who rides in mixed traffic on every street. I don't believe that any significant further action on bicycle facilities is necessary.

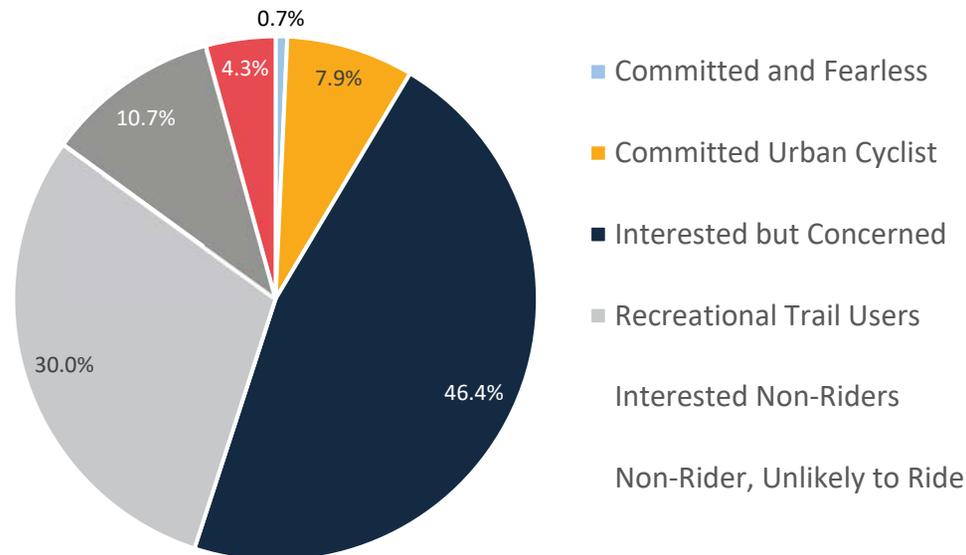
Committed Urban Cyclist: I am a committed bicyclist who rides in mixed traffic on most streets, but believes that new facilities like bike lanes, bike routes, and trails are needed to improve Vermillion's biking environment for me and encourage other people to ride more often.

Interested but Concerned: I am interested in bicycling and use low-traffic streets but am concerned about the safety of riding in mixed automobile traffic. More trails and bike lanes and routes would increase the number of trips that I make by bicycle.

Recreational Trail Users: I am a recreational or occasional bicyclist and ride primarily on trails. I would like to see more trails, but am unlikely to ride on city streets even with bike lanes

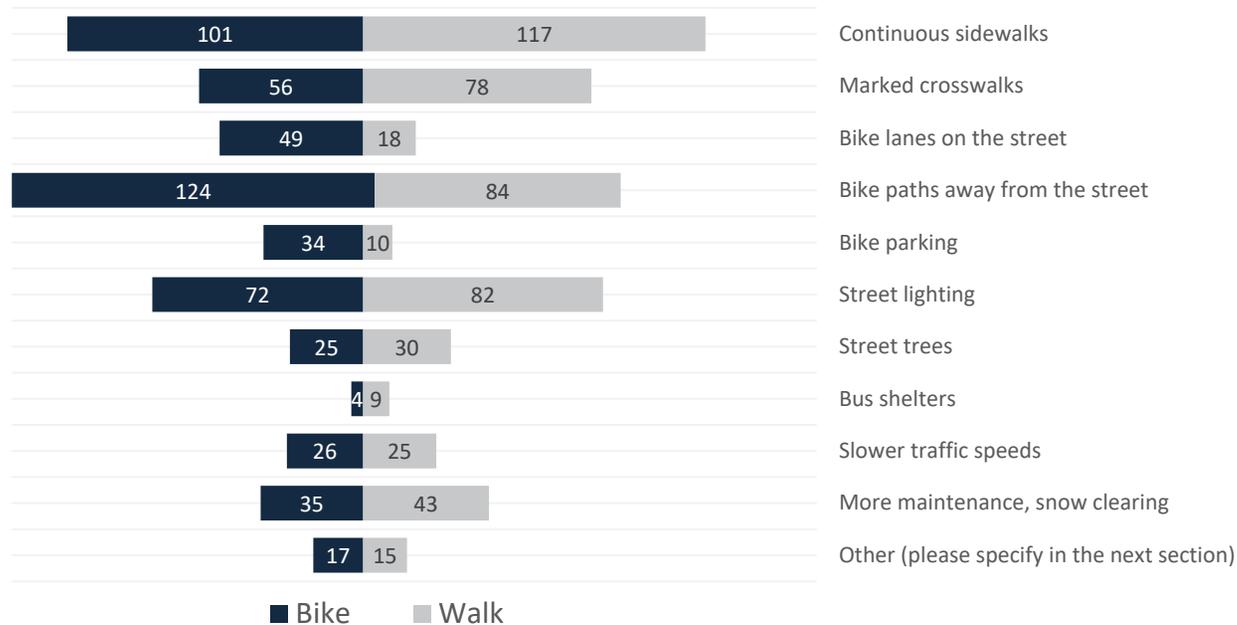
Interested Non-Riders: I do not ride a bicycle now but might be interested if Vermillion developed facilities that met my needs better or made me feel safer.

Non-Rider, Unlikely to Ride: I do not ride a bicycle and am unlikely ever to do so.



The survey results indicated that there are 4 major types of cyclists in the City of Brandon. The majority of respondents considered themselves "Interested but Concerned" riders followed by Recreational Trail Users. The answers to multiple questions in this survey have highlighted that the reason people do not ride bicycles is because they are afraid to be in the roadway on a bicycle. Non-riders are only 4.3% of the respondents.

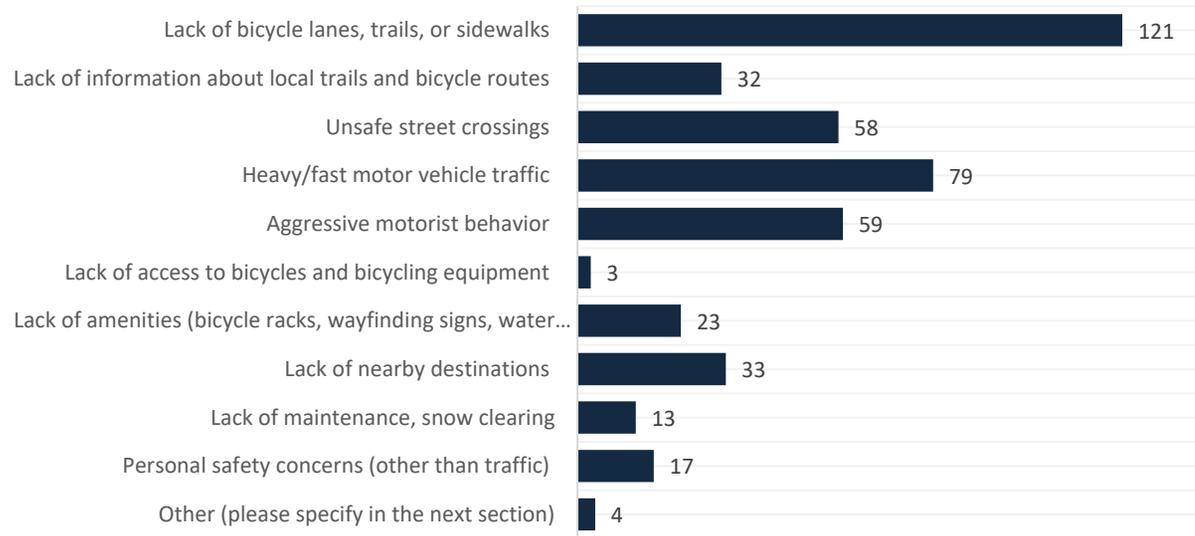
10. What would make walking/cycling better (2 questions in one form)?



11. What new bike and pedestrian connections would you like to see constructed in the future?

- We have no bike path or shoulder on road from The Bluffs into Brandon or the Sioux Rec bike trails.
- Bike trails needed
- We love our in the bluffs and it is very hilly to ride bike (but we do it anyway) and can only go so far bc rice street is definitely not safe to be riding/walking on.
- Not enough designated bike and walking paths..
- No continuous SAFE bike and walking paths from one side of town to the other.
- Well the west side of Brandon which I would consider cherry creek and bluffs are completely cut off for walking or biking. It's a growth area. It's insane to think that these neighborhoods and future growth are cut off.
- N/A
- No sidewalk into town from the Bluffs neighborhood
- No bike or walking paths. Brandon is way behind compared to communities in the area with bike and walking paths.
- No paths on east side of town or access to McHardy Park from the west side.
- Safety

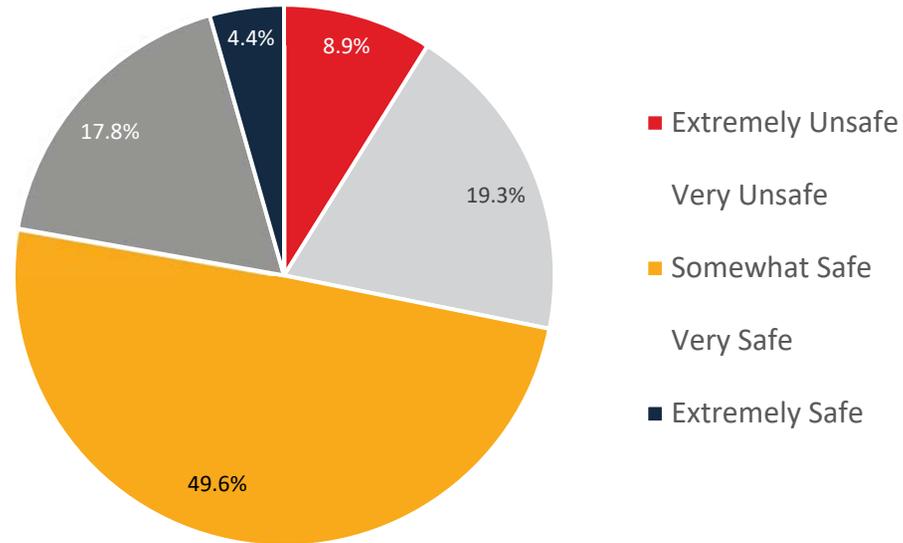
12. What do you think are the factors that most discourage bicycling or walking in Brandon? Please select up to five factors.



Other (please specify)

- Safety
- No paths on east side of town or access to McHardy Park from the west side.
- No bike or walking paths. Brandon is way behind compared to communities in the area with bike and walking paths.
- No sidewalk into town from the Bluffs neighborhood
- N/A
- Well the west side of Brandon which I would consider cherry creek and bluffs are completely cut off for walking or biking. It's a growth area. It's insane to think that these neighborhoods and future growth are cut off.
- No continuous SAFE bike and walking paths from one side of town to the other.
- No enough designated bike and walking paths..
- We love our in the bluffs and it is very hilly to ride bike (but we do it anyway) and can only go so far bc rice street is definitely not safe to be riding/walking on.
- Bike trails needed
- We have no bike path or shoulder on road from The Bluffs into Brandon or the Sioux Rec bike trails.

13. How safe do you feel using bicycle and pedestrian facilities in Brandon.



22.2% of the survey respondents feel very safe to extremely safe while using bicycle and pedestrian facilities in Brandon. The respondents that feel very unsafe to extremely unsafe while using these facilities are 13.3%.

14. Any other comments?

- Bike/walking trails away from busy roads.
- We need better bike and pedestrian access connecting all the parks- especially McHardy.
- I am excited and happy that Brandon is considering improving their biking and walking infrastructure. It is important to be bike/ped friendly, especially because we have a beautiful state park right near the city. It will help campers visit the local businesses via biking and walking! Yay Brandon!
- Connectivity all across town is key to success
- For teens out at the golf course . It's extremely unsafe to have them on Aspen Blvd . If they want to do to the pool, school, library, or parks ..we always have to drive
- Bike paths to walk and bike on from the west/ Bluffs to hook up to the Sioux Rec area
- I would love to see a couple of garbage cans placed along the sidewalk running down Sioux Blvd similar to what exists on Holly. People may be more likely to pick up after their dogs if they had better access to dispose of it.
- We have lived on the east side of town by the golf course, and now live on the west side in the bluffs development. Neither neighborhood had access for kids or adults to come into town safely without going on busy/fast highways. It would be great to see a bike path on each side of town especially since a lot of the growth is in these two areas.
- The lack of paths is not a reason folks aren't out more. If they want to ride/walk, there is more than enough area and paths to use.
- More bike paths, less bike lanes
- There is no where safe to bike from the Bluffs neighborhood besides to Eagle Creek and around the Bluffs
- I didn't know there are any facilities in Brandon. Where are they?
- Bike path and sidewalks along Holly to the Bluffs
- "My kids would love the opportunity to bike more but I will not allow them to bike into Brandon without a trail. It's very disappointing that the town does not connect the city to its residents."
- While riding on Bike Paths in Brandon my 7yo nephew almost got nailed by a vehicle last summer. The driver was too impatient to wait for the last bike to pass. Brandon definitely has to teach the community to be more respectful and to watch out for bikers. Getting the Sioux Falls bike groups opinions on what works and what doesn't work in Sioux Falls might actually help as well. Additionally I think a Single Track should be in Brandon's future Mtn biking is great for all and the track can be multi use for hikers/Walkers and getting a group like FAST involved so they can help maintain and possibly help raise funds for it.
- We currently have to ride down Rice Street (too fast of traffic) or put bikes in back of truck to Big Sioux crossing in order to ride.
- Unsafe for me because we live in the Bluffs and have to get into town.
- We really need some bike paths that are designated for bikes/walking. The traffic and roads are too busy for bicycles and pedestrians. Safety is a huge concern for people living in the Eagle Creek and Bluffs area- no nice way to travel into town other than drive. Should make a bike path connecting into Big Sioux Rec area
- Inability to get to them easily due to having to use holly
- I currently do not use bike/walkways because there are none between our home and the main part of the city
- I feel unsafe because of where we live in the bluffs. There is not a safe way to get to the main city
- Need a sidewalk or bike path on Holly! There used to be room to ride on the road but it was removed when the streets were expanded. Very unfortunate and gives impression that city doesn't care about cyclists
- I haven't used bike path in town as there is no connection from my neighborhood (Bluffs)
- It's time connect The Bluffs to Brandon through a bike path.
- Please put a bike path bluffs to Brandon for the kids in the bluffs
- I think in town is fine some room for improvement but largest opportunity is getting to town from outlying neighborhood.
- Sidewalk going into town from the bluffs neighborhood
- I would love to ride on the bike trails that go thru the Nature Area. However, since there isn't a safe way to get from the Bluffs to the entry point off of Rice St/Holly Blvd I don't. I will not ride my bike nor would I let my children ride their bikes on Rice St/Holly Blvd. it is too dangerous.

- There need to be safe options for bikes. There is literally no safe way to get into Brandon from the Bluffs!!!
- Sidewalk on the E Side of Sioux from Aspen to Chapelwood is broken/intermittent and requires children on the E side of Sioux Blvd to either traverse grass boulevards (where the sidewalk should be) or cross one of Brandon's major arterial streets without a controlled intersection. Access to the light at Aspen and Sioux Boulevard from the East side of Sioux is not achievable South of Maureen Drive, due to the broken sidewalk connection moving south from Maureen. Further, the tree overgrowth into the boulevard on the East Side of Sioux, South of Ponderosa, makes that stretch of space unpassable by pedestrians, especially children, unless they enter the roadway. Further, at the city's most recent council meeting, two new exemptions were granted from the Sidewalk requirement, including one along this stretch of Sioux Boulevard. This inconsistent application of city statute regarding sidewalks is creating a major issue for pedestrians in this area. Some of the landowners who have been exempted have taken measure to prevent children from even traversing the grass in the boulevard, through landscaping placed in the Boulevard. This has been addressed by the City's code enforcement but is indicative of the landowners desire not to have children traveling on the grass boulevards where a sidewalk is designed to be. Please address this lack of sidewalks on the E side of Sioux.
- The older neighborhoods that do not have sidewalks are fine due to they are quiet low traffic areas. No need to force them to add new sidewalks. Concentrate on the more heavily used traffic areas that need maybe a Yield sign added so the driver knows which lane has the right-of-way to reduce potential vehicle - bike/pedestrian accidents.
- We don't use them because we don't have access from the bluffs
- I like the wide sidewalk the is available in the core, but crossing the major intersections are sometimes difficult to cross during busy times, even with crosswalks for flashing signals. There are many vehicles that go too fast and I hesitate to start onto the street as I cannot be sure they will stop.
- I can't say I feel that bicycle and pedestrian facilities' are plentiful. But my experience riding there was stressful, but tolerable. (Not enjoyable)
- Finish the bike path from the Bluffs to Brandon so that all the citizens in the developments here can safely get into town. Finish what you started and which we pay ridiculous taxes not have finished for over 10 years!!
- We need a bike path into Sioux Falls
- I would in the past bike all over on the hwys, but development and traffic have caused to me to search out bike path areas to go biking.
- My 'extremely unsafe' rating is isolated to Rice road and The Bluffs subdivision. I think the rest of Brandon has decent sidewalks and lower speed traffic that makes the city itself pretty safe for cyclists and kids on bikes. The Bluffs deserves access to Brandon via a dedicated bike path. The developer and every realtor that has sold a house there has been pitching a 'future bike path' for 16 years now. It's time for the city and Van Buskirk to get together and figure it out, and quickly. There's no reason (other than the developer spending some of the huge sums of money they are making on the current housing market) there can't be a path connecting to a usable path in the Big Sioux Rec area by spring. It should have been done as soon as the land prep was done. Top priority should be for SAFE bike access to the schools. There are a ton of elementary and intermediate school kids in this subdivision who would like to bike to school, but can't safely do so. The only time my family has biked from our subdivision to town was when Rice was closed for construction. It was great to be able to hop on our bikes and ride to Milky Way. We wish we could safely do more of that.
- Access to Brandon from the Bluffs and Eagle Creek would be great!
- It is very unsafe biking into Brandon from the bluffs there is no shoulder to ride on anymore and people consistently drive 10-15 over the posted 45 mph speed limit
- There is a not a safe way to walk/bike into Brandon from our housing development (Eagle Creek). We are residents of Brandon but can not get into Brandon safely without driving. I see children riding their bikes on the shoulder of Holly Avenue and it is definitely NOT a safe road for them to be on.
- Would love bike and walking path other than street, west side on holly going into town from the development's on the out skirts of town.
- The existing facilities are fairly well executed. The biggest problem is there is no good means for traveling from east Brandon to any other part of town other than a car, this is especially true for children wanting to go to the library/school. It is effectively cut off from the rest of town.
- Connectivity between the parks would be a great thing to work on. would be awesome to see a bike/walking path that goes through all parts of town and is fully connected.
- Bike lane away from traffic would be best. My biggest concern is distracted drivers I see often veering onto shoulder and/or encroaching on oncoming traffic lane.
- Would like to see a connecting trail between Brandon and Sioux falls. Rice street doesn't feel very safe despite "bike lanes."
- Please note my comments above. One other issue is the way some crosswalks are constructed. The unsafe crosswalks are diagonal so that it directs the walker/rider directly into the path of traffic; the crosswalk should instead guide the user directly across the street.